



CITY OF CORCORAN
Corcoran City Council Agenda
July 27, 2023 - 7:00 pm

1. **Call to Order / Roll Call**
2. **Pledge of Allegiance**
3. **Agenda Approval**
4. **Commission Representatives***
5. **Open Forum – Public Comment Opportunity**
6. **Presentations/Recognitions**
7. **Consent Agenda**
 - a. November 2022/December 2022 Council Minutes*
 - b. Financial Claims*
 - c. Resolution 2023-60 Police Officer Declaration of PERA Contribution - Darren Bohlsen*
 - d. Resolution 2023-61 Police Officer Declaration of PERA Contribution – Levi Siljander*
 - e. EAW Notice of Decision- Hope*
 - f. Horseshoe Bend Drainage Improvements - Accept Plans/Specs and Authorize Bids*
 - g. Consultant for State Bonding*
 - h. Hackamore Road Improvements – Change Order 1*
 - i. Heidecker Garage CUP/IUP*
 - j. Resignation – City Administrator Jessica Beise*
 - k. Temporary Liquor License-NW Area Jaycees Aug 11-12, 2023*
 - l. Sound Waiver at 9310 Bechtold Road*
 - m. Street Maintenance – Maltene Based Restorative Seal Quote*
8. **Planning Business -- Public Comment Opportunity**
 - a. 116/Hackamore Concept Plan*
 - b. Kariniemi/Jensen Sketch Plan*
9. **Unfinished Business – Public Comment Opportunity**
 - a. Three Rivers Park District Coop*
 - b. Granicus Project Update*
 - c. Council Chambers Sound System*
 - d. City Center Drive
10. **New Business – Public Comment Opportunity**
 - a. City Administrator Search Process*
 - b. Administration Department Reorganization*
 - c. Staff Planning – Organizational Chart*
11. **Staff Reports**
 - a. Planning Projects Update*
 - b. Code Enforcement Report*
 - c. Audit Update*
 - d. Quarter 2 City of Corcoran Budget Report*

HYBRID MEETING OPTION AVAILABLE
The public is invited to attend the regular Council meetings at City Hall.

Meeting Via Telephone/Other Electronic Means

Call-in Instructions:

+1 312 626 6799 US

Enter Meeting ID: 892 1263 6354

Press *9 to speak during the Public Comment Sections in the meeting.

Video Link and Instructions:

<https://us02web.zoom.us/j/89212636354>

visit <http://www.zoom.us> and enter

Meeting ID: 892 1263 6354

Participants can utilize the Raise Hand function to be recognized to speak during the Public Comment sections in the meeting. Participant video feeds will be muted. **In-person comments will be received first, with the hybrid electronic means option following.**

For more information on options to provide public comment visit:

www.corcoranmn.gov



12. **Closed Session**
 - a. City Center Drive Improvements
13. **2023 City Council Schedule***
14. **Adjournment**

***Includes Materials** - *Materials relating to these agenda items can be found in the Council Chambers Agenda Packet book located by the entrance. The complete Council Agenda Packet is available electronically on the City website at www.corcoranmn.gov.*

STAFF REPORT

Agenda Item: 4.

| | |
|---|---|
| Council Meeting: July 27, 2023 | Prepared By: Michelle Friedrich |
| Topic: Commission Representatives | Action Required Informational |

Summary

The advisory commission representatives for the July 27, 2023, Council meeting are as follows:

- Planning Commission: Corrine Brummond
- Parks and Trails Commission: Tom Anderson

Financial/Budget

N/A

Council Action

N/A

Attachments

N/A

STAFF REPORT

Agenda Item: 7a.

| | |
|---|---|
| Council Meeting: July 27, 2023 | Prepared By: Michelle Friedrich |
| Topic: Draft Council Minutes – November 21, 2022 Draft Council Minutes – December 2022 | Action Required: Informational |

Summary

The draft Council Minutes for November 21, 2022, and December 2022 will be emailed on Tuesday, July 25, with hard copies provided to Council the evening of the July 27 meeting.

Attachments (Hard copies will be provided July 27, 2023)

1. Draft Council Minutes – November 21, 2022
2. Draft Council Work Session Minutes – December 8, 2022
3. Draft Council Minutes – December 8, 2022
4. Draft Council Minutes – December 22, 2022

FINANCIAL CLAIMS

CHECK RANGE

FUND #500 ESCROW CLAIMS

| Paid to | Amount | Project name |
|----------------------------------|--------|--------------|
| SEE THE REGISTER FOR #500 CLAIMS | | |

| | | |
|--------------------------------|--------|------|
| Total | \$0.00 | |
| Total Fund #500 = | | \$ - |
| (See attached Payments Detail) | | |

ALL OTHER FINANCIAL CLAIMS

| | | |
|--|---------------|-----------------------|
| Check Register | | \$509,111.43 |
| (See attached Check Detail Registers) | | |
| Total Checks | \$ | 509,111.43 |
| Total of Auto Deductions | \$ | 155,092.16 |
| TOTAL EXPENDITURES FOR APPROVAL | \$ | 664,203.59 |

| Date | Paid to | Amount | Description |
|--------------|--------------------|----------------------|---|
| 7/7/2023 | ADP | \$ 380.68 | Payroll Processing Fee |
| 7/10/2023 | RevTrak | \$ 283.96 | Credit Card Fee |
| 7/11/2023 | InvoiceCloud | \$ 1,468.06 | Credit Card Fee |
| 7/12/2023 | MN Dept of Revenue | \$ 80.66 | Fuel Tax |
| 7/13/2023 | ADP | \$ 117,378.56 | Net Payroll and Taxes |
| 7/14/2023 | RevTrak | \$ 50.00 | Credit Card Fee |
| 7/14/2023 | InvoiceCloud | \$ 90.05 | Credit Card Fee |
| 7/14/2023 | Optum Bank | \$ 4,278.29 | Employee HSA |
| 7/14/2023 | MN PERA | \$ 24,726.05 | Employee Pension |
| 7/17/2023 | Postalia | \$ 800.00 | Postage |
| 7/17/2023 | MN State - Empower | \$ 5,555.85 | Employee Deferred Comp/Healthcare Savings |
| Total | | \$ 155,092.16 | |

| GL Number | Invoice Date | Vendor | Invoice Desc. | Invoice | Chk Date | Amount | Check |
|-----------------|--------------|------------------------------|------------------------------------|----------------|----------|-----------------|-------|
| Check 34048 | | | | | | | |
| 100-41500-50300 | 06/30/23 | ABDO LLP | RECONCILIATION REVIEW - FINANCIAL | 473653 | 07/27/23 | 3,586.25 | 34048 |
| | | | Total For Check 34048 | | | <u>3,586.25</u> | |
| Check 34049 | | | | | | | |
| 100-42100-50438 | 07/16/23 | ALL SEASONS CANINE COUNTRY C | K9 BOARDING | 203189 | 07/27/23 | 75.00 | 34049 |
| | | | Total For Check 34049 | | | <u>75.00</u> | |
| Check 34050 | | | | | | | |
| 100-41920-50210 | 07/16/23 | AMAZON CAPITAL SERVICES | BADGE HOLDER AND REEL/WIRELESS MOU | 1PDP-NYJ9-GVPR | 07/27/23 | 27.00 | 34050 |
| 100-42100-50210 | 07/16/23 | AMAZON CAPITAL SERVICES | BADGE HOLDER AND REEL/WIRELESS MOU | 1PDP-NYJ9-GVPR | 07/27/23 | 50.93 | 34050 |
| | | | Total For Check 34050 | | | <u>77.93</u> | |
| Check 34051 | | | | | | | |
| 100-41900-50212 | 07/10/23 | BEAUDRY OIL COMPANY | UNLEADED 87 | 2376176 | 07/27/23 | 39.05 | 34051 |
| 100-42100-50212 | 07/10/23 | BEAUDRY OIL COMPANY | UNLEADED 87 | 2376176 | 07/27/23 | 1,777.17 | 34051 |
| 100-43100-50212 | 07/10/23 | BEAUDRY OIL COMPANY | UNLEADED 87 | 2376176 | 07/27/23 | 136.71 | 34051 |
| 100-43100-50212 | 07/10/23 | BEAUDRY OIL COMPANY | ULS DYED KODIAK | 2376175 | 07/27/23 | 1,249.76 | 34051 |
| | | | Total For Check 34051 | | | <u>3,202.69</u> | |
| Check 34052 | | | | | | | |
| 416-42100-50550 | 07/07/23 | BLACKFIRE CREATIVE | SQUAD 566 UNIT NUMBER DECALS | 6908 | 07/27/23 | 44.00 | 34052 |
| | | | Total For Check 34052 | | | <u>44.00</u> | |
| Check 34053 | | | | | | | |
| 100-41900-50381 | 07/07/23 | CENTERPOINT ENERGY | GAS BILL JUNE 2023 | 07-2023 | 07/27/23 | 15.00 | 34053 |
| 100-43100-50381 | 07/07/23 | CENTERPOINT ENERGY | GAS BILL JUNE 2023 | 07-2023 | 07/27/23 | 21.14 | 34053 |
| | | | Total For Check 34053 | | | <u>36.14</u> | |
| Check 34054 | | | | | | | |
| 100-43100-50321 | 03/21/23 | CENTURY LINK | LAND LINE 763-420-4061 FINAL PAYME | 03212023 | 07/27/23 | 610.35 | 34054 |
| | | | Total For Check 34054 | | | <u>610.35</u> | |
| Check 34055 | | | | | | | |
| 100-41900-50400 | 07/12/23 | CINTAS - 470 | CITY HALL MATS | 4161391295 | 07/27/23 | 133.06 | 34055 |
| 100-43100-50223 | 07/12/23 | CINTAS - 470 | DISPOSIBLE BATHROOM MAT | 4161391306 | 07/27/23 | 6.00 | 34055 |
| 100-43100-50400 | 07/05/23 | CINTAS - 470 | GRAY MICROFIBER WIPE | 4160538515 | 07/27/23 | 18.20 | 34055 |
| 100-43100-50400 | 07/05/23 | CINTAS - 470 | LG BATH TOWEL | 4160538501 | 07/27/23 | 55.12 | 34055 |
| 100-43100-50400 | 07/05/23 | CINTAS - 470 | SHOP TOWELS/CRT BLUE | 4160538518 | 07/27/23 | 80.82 | 34055 |
| 100-43100-50400 | 06/07/23 | CINTAS - 470 | LG BATH TOWELS | 4157910954 | 07/27/23 | 55.12 | 34055 |
| 100-43100-50400 | 07/12/23 | CINTAS - 470 | CRT BLUE/CABINET | 4161391392 | 07/27/23 | 38.11 | 34055 |
| 100-43100-50400 | 07/12/23 | CINTAS - 470 | LG BATH TOWEL | 4161391351 | 07/27/23 | 55.12 | 34055 |
| 100-43100-50417 | 07/05/23 | CINTAS - 470 | UNIFORMS | 4160538690 | 07/27/23 | 194.17 | 34055 |
| 100-43100-50417 | 07/12/23 | CINTAS - 470 | UNIFORMS | 4161391536 | 07/27/23 | 194.17 | 34055 |
| | | | Total For Check 34055 | | | <u>829.89</u> | |
| Check 34056 | | | | | | | |
| 100-43100-50210 | 07/06/23 | CINTAS - 470 | OFFICE DISINFECTING/LUBRICANT EYE | 5165616449 | 07/27/23 | 51.44 | 34056 |
| | | | Total For Check 34056 | | | <u>51.44</u> | |
| Check 34057 | | | | | | | |
| 100-00000-22205 | 07/14/23 | CITY OF CORCORAN | BP23-0011 STAFF TIME JUNE 2023 | BP23-0011-2 | 07/27/23 | 942.50 | 34057 |
| 100-00000-22205 | 07/14/23 | CITY OF CORCORAN | BP23-0006 STAFF TIME JUNE 2023 | BP23-0006.4 | 07/27/23 | 162.50 | 34057 |
| 100-00000-22205 | 07/14/23 | CITY OF CORCORAN | BP23-0022 STAFF TIME JUNE 2023 | BP23-0022-2 | 07/27/23 | 1,381.25 | 34057 |
| 100-00000-22205 | 07/14/23 | CITY OF CORCORAN | BP23-0021 STAFF TIME JUNE 2023 | BP23-0021 | 07/27/23 | 178.75 | 34057 |
| 100-00000-22205 | 07/14/23 | CITY OF CORCORAN | BP23-0023 STAFF TIME JUNE 2023 | BP23-0023 | 07/27/23 | 65.00 | 34057 |

| GL Number | Invoice Date | Vendor | Invoice Desc. | Invoice | Chk Date | Amount | Check |
|-----------------|--------------|------------------|------------------------------------|--------------|----------|------------------|-------|
| Check 34057 | | | | | | | |
| 100-00000-22205 | 07/14/23 | CITY OF CORCORAN | BP23-0016 STAFF TIME JUNE 2023 | BP23-0016-3 | 07/27/23 | 422.50 | 34057 |
| 100-00000-22205 | 07/14/23 | CITY OF CORCORAN | BP22-0029 STAFF TIME JUNE 2023 | BP22-0029.10 | 07/27/23 | 146.25 | 34057 |
| 100-00000-22205 | 07/14/23 | CITY OF CORCORAN | BP22-0034 STAFF TIME JUNE 2023 | BP22-0034-2 | 07/27/23 | 48.75 | 34057 |
| 100-00000-22205 | 07/14/23 | CITY OF CORCORAN | BP22-0044 STAFF TIME JUNE 2023 | BP22-0044.3 | 07/27/23 | 32.50 | 34057 |
| 100-00000-22205 | 07/14/23 | CITY OF CORCORAN | BP22-0014 STAFF TIME JUNE 2023 | BP22-0014-9 | 07/27/23 | 32.50 | 34057 |
| 100-00000-22205 | 07/14/23 | CITY OF CORCORAN | BP22-0029 SITE PLAN AMENDMENT FEE | BP22-0029.11 | 07/27/23 | 200.00 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | 20130 LARKIN RD STAFF TIME MAY 202 | BP22-0026-6 | 07/27/23 | 65.00 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | BP22-0049 STAFF PLANNER TIME AUGUS | BP22-0049 | 07/27/23 | 65.00 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | BP22-0034 19800 HACKAMORE RD STAFF | BP22-0034 | 07/27/23 | 65.00 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | BP22-0036 19330 CO RD 30 STAFF TIM | BP22-0036 | 07/27/23 | 65.00 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | 20420 DUFFNEY CIR STAFF TIME SEPT | BP22-0033 | 07/27/23 | 227.50 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | 20420 DUFFNEY CIR STAFF TIME OCT 2 | BP22-0033.2 | 07/27/23 | 666.25 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | BP22-0044 19500 STIEG RD STAFF TIM | BP22-0044 | 07/27/23 | 81.25 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | BP22-0044 19500 STIEG RD STAFF TIM | BP22-0044.2 | 07/27/23 | 65.00 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | 20420 DUFFNEY CIR STAFF TIME NOV 2 | BP22-0033.3 | 07/27/23 | 243.75 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | BP22-0037 6801 WILLOW DR STAFF TIM | BP22-0037 | 07/27/23 | 16.25 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | BP22-0031 ST THERESE STAFF TIME NO | BP22-0031 | 07/27/23 | 81.25 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | BP22-0050 STAFF TIME NOV 2022 | BP22-0050 | 07/27/23 | 97.50 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | BP22-0050 STAFF TIME DEC 2022 | BP22-0050-2 | 07/27/23 | 1,153.75 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | BP22-0049 STAFF TIME DEC 2022 | BP22-0049-2 | 07/27/23 | 113.75 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | BP22-0033 20420 DUFFNEY CIR STAFF | BP22-0033.4 | 07/27/23 | 32.50 | 34057 |
| 100-00000-22205 | 07/05/23 | CITY OF CORCORAN | BP22-0049 STAFF TIME JAN 2023 | BP22-0049-3 | 07/27/23 | 861.25 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP22-0050 STAFF TIME JAN 2023 | BP22-0050-3 | 07/27/23 | 113.75 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP22-0029 STAFF TIME JAN 2023 | BP22-0029.6 | 07/27/23 | 97.50 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP23-0003 STAFF TIME JAN 2023 | BP23-0003 | 07/27/23 | 48.75 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP22-0029 STAFF TIME FEB 2023 | BP22-0029.8 | 07/27/23 | 48.75 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP22-0050 STAFF TIME FEB 2023 | BP22-0050-4 | 07/27/23 | 81.25 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP23-0003 STAFF TIME FEB 2023 | BP23-0003.2 | 07/27/23 | 812.50 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP22-0012 STAFF TIME FEB 2023 | BP22-0012 | 07/27/23 | 32.50 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP23-0006 STAFF TIME FEB 2023 | BP23-0006.3 | 07/27/23 | 65.00 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP22-0029 STAFF TIME MAR 2023 | BP22-0029.9 | 07/27/23 | 97.50 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP23-0003 7600 MAPLE HILL RD STAFF | BP23-0003.3 | 07/27/23 | 455.00 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP23-0006 STAFF TIME MAR 2023 | BP23-0006.2 | 07/27/23 | 325.00 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP22-0050 STAFF TIME MAR 2023 | BP22-0050-5 | 07/27/23 | 81.25 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP22-0033 STAFF TIME MAR 2023 | BP22-0033-5 | 07/27/23 | 16.25 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP22-0037 STAFF TIME MAR 2023 | BP22-0037-4 | 07/27/23 | 32.50 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP22-0050 STAFF TIME APR 2023 | BP22-0050-6 | 07/27/23 | 31.00 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP23-0010 52 STIEG RD STAFF TIME A | BP23-0010 | 07/27/23 | 17.75 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP23-0006 STAFF TIME APR 2023 | BP23-0006 | 07/27/23 | 48.75 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP23-0003 7600 STAFF TIME APRIL 20 | BP23-0003-2 | 07/27/23 | 81.25 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP23-0016 7985 EAGLE RIDGE RD STAF | BP23-0016 | 07/27/23 | 243.75 | 34057 |
| 100-00000-22205 | 07/06/23 | CITY OF CORCORAN | BP22-0037 STAFF TIME APR 2023 | BP22-0037-2 | 07/27/23 | 780.00 | 34057 |
| 100-00000-22205 | 07/07/23 | CITY OF CORCORAN | BP23-0009 STAFF TIME APR 2023 | BP23-0009 | 07/27/23 | 16.25 | 34057 |
| 100-00000-22205 | 07/07/23 | CITY OF CORCORAN | BP22-0037 STAFF TIME MAY 2023 | BP22-0037-3 | 07/27/23 | 113.75 | 34057 |
| 100-00000-22205 | 07/07/23 | CITY OF CORCORAN | BP23-0016 STAFF TIME MAY 2023 | BP23-0016-2 | 07/27/23 | 81.25 | 34057 |
| 100-00000-22205 | 07/07/23 | CITY OF CORCORAN | BP23-0010 STAFF TIME MAY 2023 | BP23-0010-2 | 07/27/23 | 1,945.25 | 34057 |
| 100-00000-22205 | 07/07/23 | CITY OF CORCORAN | BP23-0011 STAFF TIME MAY 2023 | BP23-0011 | 07/27/23 | 199.75 | 34057 |
| 100-00000-22205 | 07/07/23 | CITY OF CORCORAN | BP23-0022 STAFF TIME MAY 2023 | BP23-0022 | 07/27/23 | 97.50 | 34057 |
| 100-00000-22205 | 07/07/23 | CITY OF CORCORAN | BP22-0029 STAFF TIME MAY 2023 | BP22-0029.7 | 07/27/23 | 65.00 | 34057 |
| 601-00000-16500 | 07/06/23 | CITY OF CORCORAN | BD INVOICE 00001508 WATER TOWER PR | 00001508 | 07/27/23 | 28,896.35 | 34057 |
| | | | | | | 42,437.60 | |

Total For Check 34057

| GL Number | Invoice Date | Vendor | Invoice Desc. | Invoice | Chk Date | Amount | Check |
|---------------------|--------------|------------------------------|------------------------------------|--------------|----------|------------------|-------|
| Check 34058 | | | | | | | |
| 100-43100-50380 | 07/05/23 | COMCAST - 930899035 | PW INTERNET JULY 2023 | 177218129 | 07/27/23 | 295.05 | 34058 |
| | | | Total For Check 34058 | | | <u>295.05</u> | |
| Check 34059 | | | | | | | |
| 100-43100-50321 | 07/05/23 | COMCAST 0044893 | PHONE SERVICES 07/10/2023-08/09/20 | 07052023 | 07/27/23 | 125.13 | 34059 |
| | | | Total For Check 34059 | | | <u>125.13</u> | |
| Check 34060 | | | | | | | |
| 100-41920-50221 | 07/11/23 | COMPUTER INTEGRATION TECH | LCD MONITOR | 353935 | 07/27/23 | 676.00 | 34060 |
| 100-41920-50300 | 06/30/23 | COMPUTER INTEGRATION TECH | IT SUPPORT SERVICES 6/7/2023-6/28/ | 353171 | 07/27/23 | 2,904.00 | 34060 |
| 100-41920-50300 | 07/14/23 | COMPUTER INTEGRATION TECH | MONTHLY BILLING FOR AUGUST (SIRIS | 354121 | 07/27/23 | 885.00 | 34060 |
| 100-41920-50300 | 07/14/23 | COMPUTER INTEGRATION TECH | MONTHLY BILLING FOR AUGUST (OFFICE | 353633 | 07/27/23 | 1,674.00 | 34060 |
| 100-41920-50300 | 07/14/23 | COMPUTER INTEGRATION TECH | MONTHLY BILLING FOR MANAGED SERVIC | 354346 | 07/27/23 | 4,423.00 | 34060 |
| | | | Total For Check 34060 | | | <u>10,562.00</u> | |
| Check 34061 | | | | | | | |
| 100-45100-50210 | 07/19/23 | COOPER HENSEL | 2023 SUMMER SOCCER REFEREE | 07192023 | 07/27/23 | 30.00 | 34061 |
| | | | Total For Check 34061 | | | <u>30.00</u> | |
| Check 34062 | | | | | | | |
| 100-41900-50210 | 06/30/23 | CULLIGAN BOTTLED WATER | OFFICE WATER | 114X92394002 | 07/27/23 | 73.71 | 34062 |
| | | | Total For Check 34062 | | | <u>73.71</u> | |
| Check 34063 | | | | | | | |
| 100-42100-50400 | 06/30/23 | DEHMER FIRE PROTECTION | ANNUAL INSPECTION | 072023 | 07/27/23 | 257.70 | 34063 |
| | | | Total For Check 34063 | | | <u>257.70</u> | |
| Check 34064 | | | | | | | |
| 422-49400-50210 | 07/14/23 | FERGUSON WATERWORKS #2518 | WATER METERS | 0515307 | 07/27/23 | 1,965.20 | 34064 |
| | | | Total For Check 34064 | | | <u>1,965.20</u> | |
| Check 34065 | | | | | | | |
| 100-00000-22205-130 | 07/12/23 | GBR INTERPRETING & TRANSLATI | TRANSLATION SERVICES | 18643 | 07/27/23 | 120.00 | 34065 |
| 100-00000-22205-130 | 07/07/23 | GBR INTERPRETING & TRANSLATI | TRANSLATION SERVICES | 18609 | 07/27/23 | 100.00 | 34065 |
| | | | Total For Check 34065 | | | <u>220.00</u> | |
| Check 34066 | | | | | | | |
| 601-49400-50380 | 06/30/23 | GOPHER STATE ONE CALL | JUNE 2023 SUPPORT SERVICES | 3060316 | 07/27/23 | 193.72 | 34066 |
| 602-49450-50380 | 06/30/23 | GOPHER STATE ONE CALL | JUNE 2023 SUPPORT SERVICES | 3060316 | 07/27/23 | 193.73 | 34066 |
| | | | Total For Check 34066 | | | <u>387.45</u> | |
| Check 34067 | | | | | | | |
| 415-45200-50210 | 07/07/23 | GROVE NURSERY | MEMORIAL GARDEN PLANTS | 33659300 | 07/27/23 | 482.90 | 34067 |
| | | | Total For Check 34067 | | | <u>482.90</u> | |
| Check 34068 | | | | | | | |
| 100-42100-50305 | 07/07/23 | HENN CO SHERIFF | JAIL CHARGES | 1000209121 | 07/27/23 | 144.00 | 34068 |
| | | | Total For Check 34068 | | | <u>144.00</u> | |
| Check 34069 | | | | | | | |
| 100-42400-50300 | 07/07/23 | HENNEPIN COUNTY ACCOUNTS REC | VIEW RECORDED DOCUMENTS | 1000209342 | 07/27/23 | 2.50 | 34069 |
| | | | Total For Check 34069 | | | <u>2.50</u> | |
| Check 34070 | | | | | | | |
| 100-42100-50323 | 07/03/23 | HENNEPIN COUNTY INFO TECH | PD RADIO FLEET/MESB FEE AND CAD BI | 1000208790 | 07/27/23 | 1,477.97 | 34070 |

| GL Number | Invoice Date | Vendor | Invoice Desc. | Invoice | Chk Date | Amount | Check |
|-----------------------|--------------|------------------------------|------------------------------------|--------------|----------|------------------|-------|
| Check 34070 | | | | | | | |
| 100-43100-50323 | 07/03/23 | HENNEPIN COUNTY INFO TECH | PW RADIO FLEET/MESB FEE | 1000208857 | 07/27/23 | 323.88 | 34070 |
| | | | | | | <u>1,801.85</u> | |
| Total For Check 34070 | | | | | | | |
| Check 34071 | | | | | | | |
| 100-42100-50403 | 07/01/23 | HOLIDAY COMPANIES | JUNE 2023 CAR WASH | 003401072300 | 07/27/23 | 95.00 | 34071 |
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| 100-00000-11501 | 07/13/23 | LANDFORM PROFESSIONAL SERVIC | COOK LAKE HIGHLANDS - NEW HORIZON | 34552 | 07/27/23 | 237.00 | 34074 |
| 100-00000-22205 | 07/18/23 | LANDFORM PROFESSIONAL SERVIC | KARINIEMI JENSEN OSP CONCEPT 23-01 | 34559 | 07/27/23 | 209.25 | 34074 |
| 100-00000-22205 | 07/18/23 | LANDFORM PROFESSIONAL SERVIC | CORCORAN STORAGE II 23-016 | 34561 | 07/27/23 | 742.75 | 34074 |
| 100-00000-22205 | 07/18/23 | LANDFORM PROFESSIONAL SERVIC | LEUER SKETCH PLAN 23-013 | 34562 | 07/27/23 | 158.00 | 34074 |
| 100-00000-22205 | 07/18/23 | LANDFORM PROFESSIONAL SERVIC | PET BARN CPA, PZ, PP, CUP, SP 23-0 | 34563 | 07/27/23 | 197.50 | 34074 |
| 100-00000-22205 | 07/18/23 | LANDFORM PROFESSIONAL SERVIC | KWIK TRIP CUP 23-006 | 34565 | 07/27/23 | 158.00 | 34074 |
| 100-00000-22205 | 07/18/23 | LANDFORM PROFESSIONAL SERVIC | KARINIEMI WICHT SKETCH PLAN 23-004 | 34567 | 07/27/23 | 39.50 | 34074 |
| 100-00000-22205-009 | 07/13/23 | LANDFORM PROFESSIONAL SERVIC | BASS LAKE CROSSING FP, FPUD AND DA | 34568 | 07/27/23 | 864.00 | 34074 |
| 100-00000-22205-009 | 07/13/23 | LANDFORM PROFESSIONAL SERVIC | BASS LAKE CROSSING 2ND FP/FINAL PU | 34539 | 07/27/23 | 533.50 | 34074 |
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| 100-00000-22205-056 | 07/13/23 | LANDFORM PROFESSIONAL SERVIC | TAVERA FP & FPUD 20-042 | 34545 | 07/27/23 | 39.50 | 34074 |
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| 100-00000-22205-058 | 07/13/23 | LANDFORM PROFESSIONAL SERVIC | RAVINIA 13TH FP & FINAL PUD 19-012 | 34542 | 07/27/23 | 557.75 | 34074 |
| 100-00000-22205-062 | 07/13/23 | LANDFORM PROFESSIONAL SERVIC | RAVINIA 7TH ADDITION FINAL PUD/FIN | 34538 | 07/27/23 | 621.50 | 34074 |
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| 100-00000-22205-075 | 07/13/23 | LANDFORM PROFESSIONAL SERVIC | NAPA CUP & SP CITY FILE 21-004 | 34556 | 07/27/23 | 476.00 | 34074 |
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| 100-00000-22205-087 | 07/13/23 | LANDFORM PROFESSIONAL SERVIC | BELLWETHER 3RD FP 19-017 | 34541 | 07/27/23 | 24.25 | 34074 |
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| 100-00000-22205-110 | 07/13/23 | LANDFORM PROFESSIONAL SERVIC | SCHERBER CUP AND SP 21-007 | 34555 | 07/27/23 | 39.50 | 34074 |
| 100-00000-22205-129 | 07/18/23 | LANDFORM PROFESSIONAL SERVIC | HACKAMORE AND 116 SKETCH 23-017 | 34560 | 07/27/23 | 39.50 | 34074 |
| 100-00000-22205-132 | 07/18/23 | LANDFORM PROFESSIONAL SERVIC | WALCOTT GLEN FP/FPUD 22-036 | 34550 | 07/27/23 | 151.75 | 34074 |
| 100-41910-50300 | 07/13/23 | LANDFORM PROFESSIONAL SERVIC | CITY BUSINESS | 34558 | 07/27/23 | 5,161.25 | 34074 |
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| 601-49400-50310 | 07/12/23 | CITY OF MAPLE GROVE | 2ND QUARTER WATER USAGE | 06082023 | 07/27/23 | | |
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| 601-00000-20800 | 07/19/23 | CITY OF MAPLE GROVE | 2ND QTR 2023 MAPLE GROVE WATER CON | 072023 | 07/27/23 | | |
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| 100-43201-50210 | 05/10/23 | MAXIMUM RECYCLING LLC | CLEAN UP DAY, ELECTRONICS - TV/CRT | 6441 | 07/27/23 | | |
| Total For Check 34079 | | | | | | 472.32 | |
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| 100-45100-50210 | 06/29/23 | MENARDS MAPLE GROVE | CABLE TIES | 19003 | 07/27/23 | | |
| 100-45100-50210 | 07/05/23 | MENARDS MAPLE GROVE | WEEDER/MIRACLE GROW LEATHER GLOVES | 19292 | 07/27/23 | 9.99 | 34080 |
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| 100-43100-50225 | 07/11/23 | MID MINNESOTA STORAGE | 40' CONTAINER CUBE | 7151 | 07/27/23 | | |
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| 100-41920-50210 | 07/12/23 | MOTOROLA SOLUTIONS INC | EVIDENCE LIBRARY / ANNUAL DEVICE L | 1411022449 | 07/27/23 | | |
| 416-42100-50210 | 07/17/23 | MOTOROLA SOLUTIONS INC | APX VEHICLE CHARGER | 8281670476 | 07/27/23 | 83.25 | 34084 |
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| 100-42100-50220 | 07/18/23 | NAPA AUTO PARTS - Corcoran | MOTOR OIL | 483859 | 07/27/23 | | |
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| 100-45200-50221 | 07/10/23 | NUTRIEN AG SOLUTIONS, INC. | COPPER SUL CRYST | 51987407 | 07/27/23 | | |
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| 100-43201-50210 | 05/26/23 | RECYCLE TECHNOLOGIES, INC | CLEAN UP DAY MATTRESS/BOX SPRING | 235810 | 07/27/23 | | |

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| 100-43100-50380 | 06/30/23 | REPUBLIC SERVICES | PUBLIC WORKS GARBAGE JUNE 2023 | 0894-006289992 | 07/27/23 | 222.58 | 34088 |
| 100-43201-50300 | 06/30/23 | REPUBLIC SERVICES | CITY RECYCLING JUNE 2023 | 0894-006284803 | 07/27/23 | 872.09 | 34088 |
| 100-45200-50380 | 06/30/23 | REPUBLIC SERVICES | WILDFLOWER PARK GARBAGE JUNE 2023 | 0894-006291199 | 07/27/23 | 68.33 | 34088 |
| 100-45200-50380 | 06/30/23 | REPUBLIC SERVICES | CITY PARK GARBAGE JUNE 2023 | 0894-006288961 | 07/27/23 | 105.75 | 34088 |
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| 100-45100-50210 | 07/19/23 | RILEY FREED | 2023 SUMMER SOCCER REFEREE | 07192023 | 07/27/23 | 30.00 | 34089 |
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| 100-45100-50210 | 07/13/23 | SANDI'S SCREEN PRINTING | 2023 SOCCER SHIRTS | 07132023 | 07/27/23 | 2,356.00 | 34090 |
| 202-42100-50210 | 07/17/23 | SANDI'S SCREEN PRINTING | NIGHT TO UNITE EMPLOYEE SHIRTS | 07172023 | 07/27/23 | 159.00 | 34090 |
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| 100-00000-22205 | 07/06/23 | STANTEC CONSULTING SERVICES | SCHERBER COUNTY ROAD 30 | 2101157 | 07/27/23 | 55.60 | 34091 |
| 100-00000-22205 | 07/06/23 | STANTEC CONSULTING SERVICES | KWIK TRIP CO RD 101 | 2101158 | 07/27/23 | 3,760.30 | 34091 |
| 100-00000-22205 | 07/06/23 | STANTEC CONSULTING SERVICES | REFUGE AT RUSH CREEK WETLAND BANK | 2101160 | 07/27/23 | 87.00 | 34091 |
| 100-00000-22205 | 07/06/23 | STANTEC CONSULTING SERVICES | WCA ESCROWS | 2101168 | 07/27/23 | 5,535.50 | 34091 |
| 100-00000-22205 | 07/06/23 | STANTEC CONSULTING SERVICES | HOPE COMMUNITY DEVELOPMENT PROJECT | 2101141 | 07/27/23 | 12,623.38 | 34091 |
| 100-00000-22205 | 07/06/23 | STANTEC CONSULTING SERVICES | RED BARN PET RETREAT | 2101142 | 07/27/23 | 4,236.90 | 34091 |
| 100-00000-22205 | 07/06/23 | STANTEC CONSULTING SERVICES | KARINIEMI-WICHT DEVELOPMENT PROJEC | 2101156 | 07/27/23 | 683.00 | 34091 |
| 100-00000-22205-013 | 07/06/23 | STANTEC CONSULTING SERVICES | BECHTOLD FARM DEVELOPMENT PROJECT | 2101154 | 07/27/23 | 1,267.42 | 34091 |
| 100-00000-22205-017 | 07/06/23 | STANTEC CONSULTING SERVICES | COOK LAKE TURN LANES | 2101186 | 07/27/23 | 8,814.98 | 34091 |
| 100-00000-22205-017 | 07/06/23 | STANTEC CONSULTING SERVICES | COOK LAKE HIGHLANDS DEVELOPMENT PR | 2101134 | 07/27/23 | 3,745.09 | 34091 |
| 100-00000-22205-024 | 07/06/23 | STANTEC CONSULTING SERVICES | D&D | 2101162 | 07/27/23 | 46.80 | 34091 |
| 100-00000-22205-044 | 07/06/23 | STANTEC CONSULTING SERVICES | KARINIEMI-MEADOWS DEVELOPMENT PROJ | 2101152 | 07/27/23 | 713.08 | 34091 |
| 100-00000-22205-056 | 07/06/23 | STANTEC CONSULTING SERVICES | TAVERA DEVELOPMENT PROJECT | 2101135 | 07/27/23 | 13,424.12 | 34091 |
| 100-00000-22205-058 | 07/06/23 | STANTEC CONSULTING SERVICES | RAVINIA DEVELOPMENT PROJECT | 2101132 | 07/27/23 | 5,741.27 | 34091 |
| 100-00000-22205-075 | 07/06/23 | STANTEC CONSULTING SERVICES | NAPA | 2101161 | 07/27/23 | 111.80 | 34091 |
| 100-00000-22205-076 | 07/06/23 | STANTEC CONSULTING SERVICES | NELSON TRUCKING DEVELOPMENT PROJEC | 2101136 | 07/27/23 | 1,084.00 | 34091 |
| 100-00000-22205-087 | 07/07/23 | STANTEC CONSULTING SERVICES | STIEG ROAD IMPROVEMENTS | 2102046 | 07/27/23 | 23,207.20 | 34091 |
| 100-00000-22205-087 | 07/06/23 | STANTEC CONSULTING SERVICES | BELLWETHER DEVELOPMENT PROJECT | 2101133 | 07/27/23 | 15,853.48 | 34091 |
| 100-00000-22205-087 | 07/06/23 | STANTEC CONSULTING SERVICES | AMBERLY (1,2) BELLWETHER (6,7,9) D | 2101139 | 07/27/23 | 6,998.30 | 34091 |
| 100-00000-22205-098 | 07/07/23 | STANTEC CONSULTING SERVICES | RUSH CREEK RESERVE TURN LANES | 2101862 | 07/27/23 | 262.50 | 34091 |
| 100-00000-22205-098 | 07/06/23 | STANTEC CONSULTING SERVICES | RUSH CREEK RESERVE DEVELOPMENT PRO | 2101137 | 07/27/23 | 5,847.39 | 34091 |
| 100-00000-22205-111 | 07/06/23 | STANTEC CONSULTING SERVICES | GARAGES TOO DEVELOPMENT PROJECT | 2101148 | 07/27/23 | 93.60 | 34091 |
| 100-00000-22205-117 | 07/06/23 | STANTEC CONSULTING SERVICES | ST THERESE SENIOR LIVING | 2101559 | 07/27/23 | 148.00 | 34091 |
| 100-00000-22205-128 | 07/06/23 | STANTEC CONSULTING SERVICES | WRIGHT HENNEPIN SUBSTATION II | 193806199 | 07/27/23 | 37.99 | 34091 |
| 100-00000-22205-131 | 07/06/23 | STANTEC CONSULTING SERVICES | CR 116 & HUNTERS RIDGE TURN LANE I | 2101184 | 07/27/23 | 8,765.88 | 34091 |
| 100-00000-22205-132 | 07/06/23 | STANTEC CONSULTING SERVICES | WALCOTT GLENN DEVELOPMENT PROJECT | 2101138 | 07/27/23 | 8,939.17 | 34091 |
| 100-42400-50303 | 07/06/23 | STANTEC CONSULTING SERVICES | NEW CONSTRUCTION INSPECTION | 2101860 | 07/27/23 | 1,744.40 | 34091 |
| 100-43170-50300 | 07/06/23 | STANTEC CONSULTING SERVICES | HUNTERS RIDGE FEASIBILITY STUDY | 193806257 | 07/27/23 | 512.40 | 34091 |
| 100-43170-50300 | 07/06/23 | STANTEC CONSULTING SERVICES | HORSESHOE BEND DRIVE | 2101178 | 07/27/23 | 2,462.20 | 34091 |
| 100-43170-50300 | 07/07/23 | STANTEC CONSULTING SERVICES | STORMWATER AREA FEE ASSISTANCE | 2101891 | 07/27/23 | 293.00 | 34091 |
| 100-43170-50300 | 07/06/23 | STANTEC CONSULTING SERVICES | GENERAL ENGINEERING SERVICES AND S | 2101131 | 07/27/23 | 12,060.70 | 34091 |
| 100-43170-50300 | 07/06/23 | STANTEC CONSULTING SERVICES | ENGINEERING DESIGN STANDARD | 2101185 | 07/27/23 | 888.00 | 34091 |
| 100-43170-50309 | 07/06/23 | STANTEC CONSULTING SERVICES | WCA ESCROWS | 2101168 | 07/27/23 | 284.00 | 34091 |
| 100-43170-50309 | 07/06/23 | STANTEC CONSULTING SERVICES | GENERAL ENGINEERING SERVICES AND S | 2101131 | 07/27/23 | 1,571.00 | 34091 |

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| 408-48005-50530 | 07/06/23 | STANTEC CONSULTING SERVICES | 66TH STREET DESIGN AND CONSTRUCTIO | 2101166 | 07/27/23 | 130.00 | 34091 |
| 408-48009-50303 | 07/06/23 | STANTEC CONSULTING SERVICES | BRIDGE REPLACEMENT DESIGN - TRAIL | 2101172 | 07/27/23 | 3,414.50 | 34091 |
| 408-48010-50300 | 07/07/23 | STANTEC CONSULTING SERVICES | CITY CENTER DR AND 79TH PLACE CONS | 2101921 | 07/27/23 | 5,543.84 | 34091 |
| 408-48010-50303 | 07/06/23 | STANTEC CONSULTING SERVICES | CITY CENTER DR & 79TH PLACE STREET | 2101180 | 07/27/23 | 51,278.40 | 34091 |
| 601-00000-16500 | 07/06/23 | STANTEC CONSULTING SERVICES | WATER SUPPLY, TREATMENT, AND STORA | 2101176 | 07/27/23 | 15,692.20 | 34091 |
| 601-49400-50300 | 07/06/23 | STANTEC CONSULTING SERVICES | TEST WELL #2 | 2101177 | 07/27/23 | 213.60 | 34091 |
| 601-49400-50300 | 07/06/23 | STANTEC CONSULTING SERVICES | NE CORCORAN WATER SUPPLY TRUNK INF | 2101183 | 07/27/23 | 8,421.60 | 34091 |
| 601-49400-50303 | 07/06/23 | STANTEC CONSULTING SERVICES | NE CORCORAN WATER TOWER | 2101182 | 07/27/23 | 4,554.60 | 34091 |
| 601-49400-50303 | 07/06/23 | STANTEC CONSULTING SERVICES | NEW CONSTRUCTION INSPECTION | 2101860 | 07/27/23 | 1,317.07 | 34091 |
| 602-49450-50303 | 07/06/23 | STANTEC CONSULTING SERVICES | NEW CONSTRUCTION INSPECTION | 2101860 | 07/27/23 | 1,317.08 | 34091 |
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| 100-00000-21710 | 07/11/23 | STEVE WARREN | HRA REIMBURSEMENT | 07112023 | 07/27/23 | 929.19 | 34092 |
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| 100-42100-50417 | 07/06/23 | STREICHER'S POLICE EQUIPMENT | HOLSTERS | I1643025 | 07/27/23 | 584.97 | 34093 |
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| 100-41500-50207 | 07/11/23 | LEAGUE OF MINNESOTA CITIES | LMC TRAINING - PETERSON/UNG | 384967 | 07/27/23 | 30.00 | 34096 |
| 100-42100-50210 | 07/07/23 | HY-VEE | BATTERIES FOR RADAR | 0063 | 07/27/23 | 16.61 | 34096 |
| 100-42100-50300 | 07/09/23 | FLEETIO | SHIFT SCHEDULING MONTHLY SUBSCRIPT | 627003 | 07/27/23 | 60.00 | 34096 |
| 100-42151-50207 | 07/18/23 | ASSOC OF MN EMERGENCY MGRS | AMEM ANNUAL CONFERENCE - BURNS | C-20231246 | 07/27/23 | 300.00 | 34096 |
| 100-42151-50433 | 07/18/23 | ASSOC OF MN EMERGENCY MGRS | AMEM 2023 MEMBERSHIP DUES - EKENBE | 64490700029 | 07/27/23 | 200.00 | 34096 |
| 201-42100-50210 | 06/30/23 | CREDIT CARD PURCHASES | WALMART - DRINKS/WATER FOR EVENTS | 583181670520089 | 07/27/23 | 117.43 | 34096 |
| 201-42100-50210 | 06/22/23 | HY-VEE | HAMEL RODEO BAG SUPPLIES | 0068 | 07/27/23 | 28.18 | 34096 |
| 201-42100-50210 | 07/08/23 | HY-VEE | HAMEL RODEO PARADE CANDY | 007253 | 07/27/23 | 39.00 | 34096 |
| 202-42100-50210 | 07/12/23 | USA INFLATABLES | NIGHT TO UNITE INFLATABLES | 145136 | 07/27/23 | 756.07 | 34096 |
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| 100-41900-50321 | 06/26/23 | VERIZON WIRELESS | PD/CH CELL PHONE 05/27/23-06/26/23 | 9938193048 | 07/27/23 | 210.29 | 34097 |
| 100-42100-50321 | 06/26/23 | VERIZON WIRELESS | PD/CH CELL PHONE 05/27/23-06/26/23 | 9938193048 | 07/27/23 | 552.91 | 34097 |
| 100-42100-50323 | 06/26/23 | VERIZON WIRELESS | PD/CH CELL PHONE 05/27/23-06/26/23 | 9938193048 | 07/27/23 | 480.16 | 34097 |
| | | | | | | <u>1,243.36</u> | |
| Total For Check 34097 | | | | | | | |
| Check 34098 | | | | | | | |
| 601-49400-50300 | 07/13/23 | WATER LABORATORIES, INC. | COLIFORM TEST | 80753 | 07/27/23 | 36.00 | 34098 |
| | | | | | | <u>36.00</u> | |
| Total For Check 34098 | | | | | | | |
| Check 34099 | | | | | | | |
| 100-00000-22205 | 07/10/23 | WRIGHT-HENNEPIN COOP ELECT | UTILITY SERVICES | 35030611723 | 07/27/23 | 250.14 | 34099 |
| 100-00000-22205-007 | 07/10/23 | WRIGHT-HENNEPIN COOP ELECT | UTILITY SERVICES | 35030611723 | 07/27/23 | 262.46 | 34099 |
| 100-00000-22205-056 | 07/10/23 | WRIGHT-HENNEPIN COOP ELECT | UTILITY SERVICES | 35030611723 | 07/27/23 | 442.60 | 34099 |
| 100-00000-22205-065 | 07/10/23 | WRIGHT-HENNEPIN COOP ELECT | UTILITY SERVICES | 35030611723 | 07/27/23 | 1,054.51 | 34099 |

JOURNALIZED
 PAID - CHECK TYPE: PAPER CHECK
 CHECK REGISTER - COUNCIL

| GL Number | Invoice Date | Vendor | Invoice Desc. | Invoice | Chk Date | Amount | Check |
|-----------------------|--------------|----------------------------|------------------------------------|-------------|----------|----------|-------|
| Check 34099 | | | | | | | |
| 100-00000-22205-087 | 07/10/23 | WRIGHT-HENNEPIN COOP ELECT | UTILITY SERVICES | 35030611723 | 07/27/23 | 422.24 | 34099 |
| 100-00000-22205-098 | 07/10/23 | WRIGHT-HENNEPIN COOP ELECT | UTILITY SERVICES | 35030611723 | 07/27/23 | 204.90 | 34099 |
| 100-41900-50381 | 07/10/23 | WRIGHT-HENNEPIN COOP ELECT | UTILITY SERVICES | 35030611723 | 07/27/23 | 1,955.35 | 34099 |
| 100-42151-50381 | 07/10/23 | WRIGHT-HENNEPIN COOP ELECT | UTILITY SERVICES | 35030611723 | 07/27/23 | 60.08 | 34099 |
| 100-43100-50381 | 07/10/23 | WRIGHT-HENNEPIN COOP ELECT | UTILITY SERVICES | 35030611723 | 07/27/23 | 196.69 | 34099 |
| 100-45200-50381 | 07/10/23 | WRIGHT-HENNEPIN COOP ELECT | UTILITY SERVICES | 35030611723 | 07/27/23 | 97.64 | 34099 |
| 601-49400-50380 | 07/10/23 | WRIGHT-HENNEPIN COOP ELECT | UTILITY SERVICES | 35030611723 | 07/27/23 | 91.72 | 34099 |
| 602-49450-50380 | 07/10/23 | WRIGHT-HENNEPIN COOP ELECT | UTILITY SERVICES | 35030611723 | 07/27/23 | 225.83 | 34099 |
| Total For Check 34099 | | | | | | 5,264.16 | |
| Check 34100 | | | | | | | |
| 100-43100-50381 | 06/07/23 | XCEL ENERGY | 9700 CTY RD 19 STREET LIGHT | 831455765 | 07/27/23 | 25.81 | 34100 |
| Total For Check 34100 | | | | | | 25.81 | |
| Check 34101 | | | | | | | |
| 601-49400-50381 | 07/05/23 | XCEL ENERGY | 9820 CO RD 101 WATER METER | 835128139 | 07/27/23 | 19.08 | 34101 |
| Total For Check 34101 | | | | | | 19.08 | |
| Check 34102 | | | | | | | |
| 100-43100-50381 | 07/07/23 | XCEL ENERGY | 9700 CTY RD 19 STREET LIGHT | 835517682 | 07/27/23 | 24.33 | 34102 |
| Total For Check 34102 | | | | | | 24.33 | |
| Check 34103 | | | | | | | |
| 100-41920-50300 | 06/30/23 | Z SYSTEMS, INC | COUNCIL CHAMBERS - ZOOM AUDIO TROU | 84375 | 07/27/23 | 1,650.00 | 34103 |
| Total For Check 34103 | | | | | | 1,650.00 | |

| GL Number | Invoice Date | Vendor | Invoice Desc. | Invoice | Chk Date | Amount Check |
|--------------|--------------|--------|----------------------------------|---------|----------|------------------|
| Fund Totals: | | | | | | |
| | | | Fund 100 GENERAL FUND | | | 245,633.12 |
| | | | Fund 201 RESERVES DONATION FUND | | | 184.61 |
| | | | Fund 202 CITY COMMUNITY EVENTS | | | 915.07 |
| | | | Fund 408 PAVEMENT MANAGEMENT | | | 60,366.74 |
| | | | Fund 415 PARK CAPITAL FUND | | | 482.90 |
| | | | Fund 416 CAPITAL-EQUIPMENT CERTS | | | 127.25 |
| | | | Fund 422 DOWNTOWN IMPROVEMENT | | | 1,965.20 |
| | | | Fund 601 WATER | | | 197,699.90 |
| | | | Fund 602 SEWER | | | 1,736.64 |
| | | | Total For All Funds: | | | <hr/> 509,111.43 |

RESOLUTION NO. 2023-60

Motion By:
Seconded By:

**POLICE OFFICER DECLARATION OF PERA CONTRIBUTIONS
DARREN BOHLSSEN**

WHEREAS, the policy of the State of Minnesota as declared in Minnesota Statutes 353.63 is to give special consideration to employees who perform hazardous work and devote their time and skills to protecting the property and personal safety of others; and

WHEREAS, Minnesota Statutes Section 353.64 permits governmental subdivisions to request coverage in the Public Employees Police and Fire plan for eligible employees of police departments whose position duties meet the requirements stated therein and listed below.

BE IT RESOLVED, that the City of Corcoran of Hennepin County, MN hereby declares that the position titled Police Officer, currently held by Darren Bohlsen, meets all of the following Police and Fire membership requirements:

- 1. Said position requires a license by Minnesota peace officer standards and training board under sections 626.84 to 626.863 and this employee is so licensed;
- 2. Said position’s primary (over 50%) duty is to enforce the general criminal laws of the state;
- 3. Said position charges this employee with prevention and detection of crime;
- 4. Said position gives this employee the full power of arrest and
- 5. Said position is assigned to a designated police or sheriff’s department.

BE IT FURTHER RESOLVED that this governing body hereby requests that the above-named employee be accepted as a member of the Public Employees Police and Fire Plan effective the date of this employee’s initial Police and Fire salary deduction by governmental subdivision.

VOTING AYE

- McKee, Tom
- Bottema, Jon
- Nichols, Jeremy
- Schultz, Alan
- Vehrenkamp, Dean

VOTING NAY

- McKee, Tom
- Bottema, Jon
- Nichols, Jeremy
- Schultz, Alan
- Vehrenkamp, Dean

Whereupon, said Resolution is hereby declared adopted on this 27th day of July, 2023.

Tom McKee – Mayor

ATTEST:

Michelle Friedrich – City Clerk

City Seal

RESOLUTION NO. 2023-61

Motion By:
Seconded By:

**POLICE OFFICER DECLARATION OF PERA CONTRIBUTIONS
LEVI SILJANDER**

WHEREAS, the policy of the State of Minnesota as declared in Minnesota Statutes 353.63 is to give special consideration to employees who perform hazardous work and devote their time and skills to protecting the property and personal safety of others; and

WHEREAS, Minnesota Statutes Section 353.64 permits governmental subdivisions to request coverage in the Public Employees Police and Fire plan for eligible employees of police departments whose position duties meet the requirements stated therein and listed below.

BE IT RESOLVED, that the City of Corcoran of Hennepin County, MN hereby declares that the position titled Police Officer, currently held by Levi Siljander, meets all of the following Police and Fire membership requirements:

1. Said position requires a license by Minnesota peace officer standards and training board under sections 626.84 to 626.863 and this employee is so licensed;
2. Said position's primary (over 50%) duty is to enforce the general criminal laws of the state;
3. Said position charges this employee with prevention and detection of crime;
4. Said position gives this employee the full power of arrest and
5. Said position is assigned to a designated police or sheriff's department.

BE IT FURTHER RESOLVED that this governing body hereby requests that the above-named employee be accepted as a member of the Public Employees Police and Fire Plan effective the date of this employee's initial Police and Fire salary deduction by governmental subdivision.

VOTING AYE

- McKee, Tom**
- Bottema, Jon**
- Nichols, Jeremy**
- Schultz, Alan**
- Vehrenkamp, Dean**

VOTING NAY

- McKee, Tom**
- Bottema, Jon**
- Nichols, Jeremy**
- Schultz, Alan**
- Vehrenkamp, Dean**

Whereupon, said Resolution is hereby declared adopted on this 27th day of July, 2023.

Tom McKee – Mayor

ATTEST:

Michelle Friedrich – City Clerk

City Seal

STAFF REPORT

Agenda Item 7e.

| | |
|---|--|
| City Council Meeting: July 27, 2023 | Prepared By: Natalie Davis McKeown |
| Topic: Environmental Assessment Worksheet (EAW) for “Hope Community” (City File No. 22-074) | Action Required: Approval |

Review Deadline: N/A

1. Request

Hope Community Church submitted a request to initiate a mandatory EAW for a mixed-use development currently known as “Hope Community.” This development would consist of 738 dwelling units in a variety of housing styles in addition to 4 commercial buildings with a combined area of 110,300 square feet. Project components include construction of 2 market-rate apartment buildings, 2 senior apartment buildings providing a continuum of care, 20 senior single-family homes, 54 townhomes units, 2 smaller commercial buildings anticipated for retail/office use, 2 three-story medical buildings, parking areas, expansion of the Hope Community Church Cemetery, a small playground/tot-lot area, access roads, trail facility, sewer/water utility improvements, and stormwater ponds.

The project area is currently utilized for a combination of uses, including Hope Community Church, an accessory daycare to the church, the associated cemetery, a homestead, and agriculture. Additionally, a 1.2-acre parcel within the site was sold to the City for construction of the City’s first water tower. The Minnesota Environmental Review Program rules require a mandatory EAW for new mixed residential and commercial projects of this magnitude. The Council authorized the preparation of the EAW at the January 12, 2023, regular meeting when the concept plan was reviewed. The EAW was ordered for distribution by the Council at the May 25, 2023, meeting.

2. Background

Under Minnesota Environmental Review Program rules, the City is the responsible governmental unit (RGU) tasked with preparing the EAW and determining whether the project has the potential for significant environmental effects.

The purpose of the environmental review process is to provide usable information to the project proposer, government decision-makers, and the public concerning the primary environmental effects of a proposed project. The EAW should identify measures to protect the environment that can later be imposed as conditions of approval in future development applications.

After the EAW comment period, if the Council finds that the EAW identifies significant environmental effects that cannot be mitigated or minimized, the City Council would order the preparation of an Environmental Impact Statement (EIS). An EIS does not necessarily disclose more information about potential impacts; but rather, its main purpose is to examine project alternatives and additional mitigative measures to lessen significant impacts identified in the EAW. Very few projects move to the EIS stage because, in most cases, the EAW does an adequate job of describing the potential impacts and identifying mitigative measures. Neither an EAW nor an EIS are a means to approve or deny a project. An EAW and/or EIS are additional sources of information to guide decisions.

The statutory standard for requiring an EIS is whether the project may result in significant environmental effects; it is not whether the EAW adequately disclosed information about potential impacts. Accordingly, if Council determines that the EAW does not disclose sufficient information about potential impacts, the Council could request additional information before making a decision on the need for an EIS.

In deciding whether a project has the potential for significant environmental effects that would warrant the preparation of an EIS, the City Council must consider the following factors (Minnesota Environmental Review Rules, Section 4410.1700, Subpart 7):

- a. Type, extent, and reversibility of environmental effects;
- b. Cumulative potential effects. The RGU shall consider the following factors: whether the cumulative potential effect is significant, whether the contribution from the project is significant when viewed in connection with other contributions to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effect; and the efforts of the proposer to minimize the contributions from the project;
- c. The extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority. The RGU may rely only on mitigation measures that are specific and can be reasonably expected to effectively mitigate the identified environmental impacts of the project; and
- d. The extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies undertaken by public agencies or the project proposer, including other EISs.

The City Council has three courses of action when reviewing and EAW. These actions include:

1. Require additional information to address possible environmental impacts not adequately discussed in the EAW;
2. Make a finding of “no need” for an EIS; or
3. Order an EIS.

3. Comments Received on the EAW

Section 4410.1600 of the Environmental Rules states that comments received on the EAW shall address the accuracy and completeness of the material, potential environmental impacts that may warrant further investigation before the project is commenced, and the need for an Environmental Impact Statement (EIS).

The 30-day EAW comment period ended on July 6, 2023. The response to the EAW comments was prepared and is attached as the "Record of Decision". This document includes all written comments submitted by governmental agencies as well as responses to their comments.

4. Public Comment Period

The Minnesota EQB advertises the availability of the document, and the City transmits the EAW to a standard list of regional and state agencies for comment. The comment period for an EAW is 30 days. During this time period, the agencies and any member of the general public may comment on the EAW.

The 30-day comment period ended on July 6, 2023. Comments submitted during the 30-day period should address the accuracy and completeness of the material contained in the EAW, potential impacts that may warrant further investigation before the project is commenced and the need for an EIS on the proposed project. After the close of the comment period, City staff worked with Stantec and Landform to prepare responses to the comments for review and consideration by the City council. The response is included in the record of decision. The record of decision is intended to serve as the City's finding of fact of a decision that an EIS does not need to be prepared for this project.

The City received seven comment letters from reviewing agencies. Staff notes that two comment letters were received outside of the official comment period but are included in the record of decision with a note the comments were received after July 6, 2023. None of these letters stated that the EAW was inadequate or incomplete or identified the need for the preparation of an EIS.

5. Development Review Process

If the City Council declares a finding of "no need" for an EIS, the developer could submit a formal development application that addresses any mitigation strategies identified in the EAW.

A formal application for the anticipated Planned Unit Development (PUD) has the following steps in the City entitlement process:

1. Neighborhood meeting.
2. Application for a comprehensive plan amendment, rezoning to a PUD, preliminary PUD plan, and preliminary plat. Notice of the public hearing will be

sent to landowners within 350 feet of the property, published in the newspaper, and posted on the City website. The public hearing is an opportunity for comment.

3. Final plat and final PUD plan for Phase 1 of the project. Future phases will require final plat and final PUD plan approval.

During the formal review process, the City would review and provide recommended changes to the plans submitted by the applicant. This would also start the City work to design any off-site infrastructure improvements that would be needed for this development, including streets and utilities.

In addition to the City's entitlement process, the City will submit a Comprehensive Plan Amendment with the Metropolitan Council for approval and the developer would be required to obtain the permits listed in the EAW.

6. Recommendation

Staff recommends approval of the resolution declaring a finding of "no need" for an EIS, based on the review of the EAW dated May 18, 2023.

Approval of a finding of "no need" for an EIS requires a simple majority vote of the City Council.

Attachments:

1. Resolution 2023-63 Declaring a Finding of "No Need" for an Environmental Impact Statement
2. Record of Decision

RESOLUTION NO. 2023-63

Motion By:
Seconded By:

RESOLUTION DECLARING A FINDING OF “NO NEED” FOR AN ENVIRONMENTAL IMPACT STATEMENT (EIS) BASED UPON THE REVIEW OF THE ENVIRONMENTAL ASSESSMENT WORKSHEET (EAW) FOR “HOPE COMMUNITY” PROPOSED BY HOPE COMMUNITY CHURCH AT THE NORTHWEST CORNER OF COUNTY ROAD 30 AND COUNTY ROAD 116 (PIDS 11-119-23-14-0005; 11-119-23-14-0003; 11-119-23-14-0004; and 11-119-23-11-0012) (CITY FILE 22-074)

WHEREAS, the City Council reviewed the Environmental Assessment Worksheet (EAW) for a mixed-use development on July 27, 2023; and

WHEREAS, pursuant to Minnesota Environmental Review Program Rules 4410.4300, Subpart 14, the City of Corcoran, as the responsible governmental unit (RGU) submitted an EAW for the proposed project on May 30, 2023; and

WHEREAS, the EAW was published on June 6, 2023, edition of the EQB Monitor, which commenced the required 30-day public comment period that ended on July 6, 2023; and

WHEREAS, the RGU received seven comment letters that are incorporated by reference in the Record of Decision and all comments and recommendations received from reviewing agencies and other interested parties have been considered; and

WHEREAS, responses were prepared for comment letters received and the response to comments are provided in the Record of Decision; and

WHEREAS, it has been determined that the proposed project does not present a potential for environmental impacts of such significance that an EIS would be required; and

WHEREAS, pursuant to the Minnesota Rules, Section 4410.1700, the RGU shall base its decision regarding the need for an EIS on the information gathered during the EAW process, the comments received on the EAW, and the criteria established by the EQB to determine whether a project has the potential for significant environmental effects as provided in the Record of Decision, and

NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE CITY COUNCIL OF THE CITY OF CORCORAN, MINNESOTA, that it should and hereby does make the Negative Declaration on the need for an EIS for the proposed mixed-use development, based on the Record of Decision, which is hereby approved, adopted, and incorporated herein.

RESOLUTION NO. 2023-63

VOTING AYE

- McKee, Tom
- Bottema, Jon
- Nichols, Jeremy
- Schultz, Alan
- Vehrenkamp, Dean

VOTING NAY

- McKee, Tom
- Bottema, Jon
- Nichols, Jeremy
- Schultz, Alan
- Vehrenkamp, Dean

Whereupon, said Resolution is hereby declared adopted on this 27th day of July 2023.

Tom McKee - Mayor

ATTEST:

Michelle Friedrich – City Clerk

City Seal

**Hope Community Development Project
Environmental Assessment Worksheet Notice of Decision**

Contents

Record of Decision 2
Response to Comments 3

- Appendix A: Comments and Letters Received During and After Public Comment Period
- Appendix B: Appendix Materials Referred to in Response to Comments
- Appendix C: Resolution Declaring Finding of “No Need”
- Appendix D: Environmental Assessment Worksheet

Record of Decision

Based on the EAW, the Response to Comments and the Findings of Fact, the City of Corcoran City Council concludes the following:

1. All requirements for environmental review of the proposed project have been met.
2. The EAW and the development processes related to the Project have generated information which is adequate to determine whether the Project has the potential for significant environmental effects.
3. Areas where potential environmental effects have been identified have included proper mitigative responses to be included within the final design of the Project. Mitigation will be required to be provided where impacts are expected to result from Project construction, operation or maintenance. Mitigative measures will be required to be incorporated into project design, and have been or will be coordinated with state and federal agencies during the applicable permit process.
4. Based on the criteria in Minnesota Rules part 4410.4300, Subpart 14, the Project does not have the potential for significant environmental effects.
5. An Environmental Impact Statement is not required for the proposed Hope Community Development Project.

Response to Comments

The Hope Community Development Project mandatory Environmental Assessment Worksheet (EAW) was approved for distribution to the Environmental Quality Board (EQB) and persons and agencies on the official EQB distribution list in accordance with EQB rules on May 23, 2023. The EQB published notice of availability in the *EQB Monitor* on June 6, 2023. The 30-day comment period ended on July 6, 2023. The City of Corcoran received five EAW comment letters or emails. The letters and emails are on file at the City of Corcoran.

The following comment letters were sent to the City of Corcoran:

Letter 1: Hennepin County Public Works – Letter dated July 5, 2023 from Ashley Morello, Transportation Planner to Natalie Davis McKeown, City Planner

Letter 2: Minnesota Department of Natural Resources - Letter dated May 5, 2023 from Melissa Collins, Regional Environmental Assessment Ecologist, Ecological and Water Resources to Kendra Lindahl, City Planner

Letter 3: Metropolitan Council - Letter dated July 6, 2023 from Angela Torres, AICP, Senior Manager, Local Planning Assistance to Natalie Davis McKeown, City Planner

Letter 4: Minnesota Department of Agriculture – Email dated June 1, 2023 from Stephan Roos, Environmental Planner, Energy and Environment Section, Agricultural Marketing and Development Division to Natalie Davis McKeown, City Planner

Letter 5: US Army Corps of Engineers – Letter dated June 2, 2023 to Natalie Davis McKeown, City Planner

Letter 6: Minnesota State Historic Preservation Office – Letter dated July 7, 2023 (*received after the close of the 30-day comment period*) from Sarah J. Beimers, Environmental Review Program Manager to Natalie Davis McKeown, City Planner

Letter 7: Three Rivers Park District – Email dated July 14, 2023 (*received after the close of the 30-day comment period*) from Stephan Shurson, Landscape Architect to Natalie David McKeown, City Planner.

The following information and clarifications are provided in response to all EAW comments received during the 30-day comment period. Comments are provided in italicized text.

Letter 1: Hennepin County Public Works

Comment 1: *General/Site Plan:*

- *The site plan should be updated to depict proposed turn lanes as part of this development and programmed turn lanes in the area.*
- *The county requests 130' right-of-way (ROW) for CSAH 30 and 120' ROW for CR 116 to accommodate future trail, drainage and utility needs on these roadways. The final 10' will be accepted in easement to mitigate any setback concerns.*
- *The county requests 25-by-25-foot triangles at the NW quadrant of the CSAH 30/CR 116 intersection, the NW and SW quadrants of the County Road 116/Hunters Ridge/Oswald Farm Rd intersection, and at the NE and NW quadrants of the CSAH 30/new access intersection to accommodate space for utilities and preserve sight distance.*

- *Development should consider including trail on both CSAH 30 and CR 116.*
- *The proposed regional trail should connect to county roadways intersections and be ADA compliant.*
- *Please note that the turn lane design will need to be reviewed and approved by county staff.*
- *Storm water and drainage discharge rates are to be less than existing flow rates. The county storm water system will not take water from new drainage areas. Documentation will need to be submitted demonstrating that peak stormwater discharge rates remain less than the existing condition. Additional treatments may be necessary if flow rates cannot match existing.*
- *Please inform the developer that all construction within county ROW will require an approved Hennepin County permit prior to beginning construction. This includes, but is not limited to, driveway and street access, drainage and utility construction, trail development, and landscaping.*

Response: Thank you for your comment. Site plans will reflect applicable turn lanes and provide for necessary ROW, including trails. It is noted that Hennepin County will need to review and approve plans for construction within Hennepin County ROW; review and approve turn lane designs; and, review documentation demonstrating that peak stormwater discharge rates remain less than the existing condition.

Comment 2: Section 8, Cover Types:

- *On page 10, Table 3 identifies 1.2 acres of wetlands and shallow lakes (<2 meters deep) for before conditions; MPCA will need to review and approve this during the wetland delineation process.*
- *On page 10, Tables 3 and 4, please review and confirm that there is enough storage for the added impervious surface. NPDES permit requires 1 inch of the runoff from new impervious surface waters to be retained on site using volume and rate reduction. The infiltration sizing calculations and an existing drainage map should be included in the appendix.*
- *On page 10, Table 4, consider other types of green infrastructure to add to the project.*
- *On page 11, Table 5, add the approximate number of trees that will be removed.*
- *On page 11, Table 5, assess whether any mature trees can be retained.*

Response: Wetland impacts and water storage will be reviewed during the applicable permitting processes. Preliminary infiltration sizing calculations and an existing drainage map, provided by the project proposer, have been provided in Appendix B. This should be considered preliminary information and subject to change as additional geotechnical data is available and coordination occurs with the watershed. Green infrastructure opportunities have and will continue to be encouraged by the City of Corcoran. The project proposer has considered mature tree preservation in planning the proposed project; however, the number of trees to be removed is unknown at this stage. It is anticipated tree removal will occur near the existing home site and as needed to install water infrastructure (i.e., trunk sewer and trunk water main).

Comment 3: Section 11, Geology, Soils, and Topography/Land Forms:

- *On page 15, provide estimated volume and acreage of soil excavation and/or grading.*
- *On page 15, provide erosion/sedimentation control information related to stormwater runoff.*

- *On page 16, Table 7, the hydrologic soil groups are rated as either C/D. Will the poor soils be amenable to the proposed infiltration ponds?*

Response: As denoted on page 16 of the EAW, the volumes and acreages of soil excavation and grading are unknown at this time. The developer would consider soil suitability for the infiltration ponds. If required, soils would be excavated and replaced or amended. As denoted on page 22 of the EAW, A Stormwater Pollution Prevention Plan (SWPPP) would be prepared as part of the National Pollutant Discharge Elimination System (NPDES) Construction Permit required for the project. The SWPPP would conform to permit requirements and address sediment and erosion control Best Management Practices (BMPs) during construction. Sediment and erosion control BMPs may include bio-rolls, silt fence, rock construction entrances, inlet protection devices, erosion control blankets, erosion stabilization mats, and/or other similar devices to prevent soil erosion and sediment transport. Disturbed areas specified to be revegetated would be restored with final stabilization per permit requirements.

Comment 4: *Section 13, Contamination/Hazardous Materials/Wastes*

- On page 26, consider adding compost disposal.

Response: Comment noted.

Comment 5: *Section 14, Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)*

- *On page 28, review the proposed site plan to consider opportunities to add native plants communities, habitat opportunities for the identified species and promote migratory paths.*
- *On page 32, identify timeline for when the potential effects to the monarch butterfly will be revisited.*

Response: Regarding opportunities to add native plants, this comment has been noted. Potential effects for monarch butterfly will be revisited when construction plans/timeframes are further refined.

Comment 6: *Section 18, Greenhouse gas (GHG) Emissions/ Carbon Footprint:*

- *On page 36, it was assumed that motor vehicles trips are five miles per day, this is too low as average per capita VMT in this area of the county is over 30 miles per day.*

Response: The five miles per day was an assumed value considering many of the residents will be seniors. If Hennepin County has DOT data to support the 30 miles per day/ per person, the calculation could be rerun.

Comment 7: *Infrastructure Feasibility Study*

Section 2.4, Traffic Forecasts

- *Traffic forecasts need to anticipate traffic twenty years out from the build, should include values for 2048 No-Build and 2048 Build, not 2040.*

Section 2.5, Traffic Analysis

- *Provide Synchro reports to better review traffic impacts. County staff may have additional comments after review.*
- *Table 4 and 5, Weekday A.M. Peak hour level of service and weekday P.M. Peak hour level of service results need to provide mitigation measures to address any LOS E or F*

in the Build scenarios. This includes the eastbound left turn lane, eastbound thru lane, and eastbound right turn lane at County Road 116 and Hunters Ridge/Oswald for the 2040 Build for both A.M. and P.M. peak travel times and the southbound left turn lane at the new access at CSAH 30 for the 2028 and 2040 Build scenarios

- *Provide tables depicting 95 percent queue for each movement and scenario, similar to the LOS tables 4 and 5. Table should include storage lengths and confirmation that 95 percent queue does not exceed storage*

Response: In response to the comment regarding Section 2.4: Traffic forecasts were developed using information from the City of Corcoran's Comprehensive Plan, which includes year 2040 traffic forecasts. Therefore, year 2040 forecasts were deemed most appropriate for this study. In response to bullet 1 of the comment regarding Section 2.5, Synchro reports are attached in Appendix B. In response to bullet 2 of the comment regarding Section 2.5, the operational conditions for the minor street movements are due to the amount of volume on the major street, which results in fewer acceptable gaps in traffic. Review of the 95th percentile vehicle queues for these movements indicates the queues are manageable. These movements will be monitored as the area develops to determine if any modifications are needed in the future. In response to bullet 3 of the comment regarding Section 2.5, the 95th percentile queues are shown in Attachment B, Synchro reports. The 95th percentile maximum queues for all movements are contained within the existing turn lanes.

Letter 2: Minnesota Department of Natural Resources

Comment 1: *Page 11, Permits and Approvals. Please include a DNR Water Appropriation Permit in the list of required permits and approvals. Given the depth to the surficial water table throughout the project area, it is possible that construction dewatering will be needed during development construction and installation of utilities.*

Response: Comment noted.

Comment 2: *Page 19, Groundwater. This section identifies the depth to groundwater as 40 to 85 feet below the surface. The hydrologic soil groups and documented wetlands within the project area indicate there is likely a perched surficial water table present at the site due to the presence of glacial till.*

Response: Comment noted.

Comment 3: *Page 20, Wastewater. The proposed plan to add 738 residential units would presumably add a significant number of residential water softeners due to the water hardness levels of the City of Corcoran municipal water supply. Chloride is one of the components of salt, which is used in forms such as sodium chloride (table salt), calcium chloride and magnesium chloride (road salts). Sodium chloride is commonly used in home water softeners and by water treatment plants to treat "hard water". Minnesota generally has groundwater with high levels of calcium and magnesium that must be removed through softening in order to improve taste and prevent lime scale buildup in appliances, pipes and water fixtures. The majority of home water softeners use sodium chloride (NaCl) in a softening process that replaces calcium and magnesium ions with sodium, while the chloride ions are discharged in the wastewater and eventually end up in the environment.*

Each community needs to determine which tool is appropriate for their situation. This the Minnesota Pollution Control's website provides many great resources for cities to use in addressing their high chloride levels. We suggest that as this development moves forward, the City of Corcoran consider what strategies can be used to minimize chloride use.

Response: Comment noted.

Comment 4: *Page 22, Stormwater. We recommend that BWSR-approved, weed-free, native seed mixes be used to the greatest degree possible in project landscaping and stormwater features in order to provide pollinator habitat.*

Response: Comment noted.

Comment 5: *Page 22, Stormwater. The planned increase in impervious surfaces will also increase the amount of road salt used in the project area. Chloride released into local lakes and streams does not break down, and instead accumulates in the environment, potentially reaching levels that are toxic to aquatic wildlife and plants. Consider promoting local business and city participation in the Smart Salting Training offered through the Minnesota Pollution Control Agency. There are a variety of classes available for road applicators, sidewalk applicators, and property managers. More information and resources can be found at this website. Many winter maintenance staff who have attended the Smart Salting training - both from cities and counties and from private companies - have used their knowledge to reduce salt use and save money for their organizations. We also encourage cities and counties to consider how they may participate in the Statewide Chloride Management Plan and provide public outreach to reduce the overuse of chloride. Here are some educational resources for residents as well as a sample ordinance regarding chloride use.*

Response: Comment noted.

Comment 6: *Page 22, Water Appropriation. This section does not address potential dewatering. Please note that any construction dewatering that is anticipated to exceed 10,000 gallons of water per day or one million gallons per year requires a water use (appropriation) permit from the DNR.*

Response: Comment noted.

Comment 7: *Page 27, Rare Features. The loggerhead shrike (*Lanius ludovicianus*), a state-listed endangered bird, has been documented in the vicinity of the project site. Loggerhead shrikes use grasslands that contain short grass and scattered perching sites such as hedgerows, shrubs, or small trees. They can be found in native prairie, pastures, shelterbelts, old fields or orchards, cemeteries, grassy roadsides, and farmyards. Minnesota's Endangered Species Statute (Minnesota Statutes, section 84.0895) and associated Rules (Minnesota Rules, part 6212.1800 to 6212.2300 and 6134) prohibit the take of endangered or threatened plants or animals, including their parts or seeds, without a permit. Given the potential for this species to be found in the vicinity of the project, tree and shrub removal is required to be avoided during the breeding season, April through July. If you cannot avoid tree removal during loggerhead shrike breeding period, a qualified surveyor needs to conduct a survey for active nests before any trees or shrubs will be removed. Surveys must follow the standards contained in the Rare Species Survey Process. Survey results should be sent to the NH Review Team at Reports.NHIS@state.mn.us. The list of approved DNR Animal Surveyors is included with this*

comment letter. Project planning should take into account that the survey needs to be conducted during the appropriate time of the year, which may be limited.

Response: Comment noted.

Comment 8: *Page 34, Dust and Odors. If water for dust control is taken from a for dust control is taken from a lake, river, or stream in volumes that exceed 10,000 gallons per day, or one million gallons per year, then a DNR Water Appropriations Permit will be required. Please do not use products containing chloride for dust suppression in areas that drain to public waters.*

Response: Comment noted.

Letter 3: Metropolitan Council

Comment 1: *Item 6. Project Description (Todd Graham, 651-602-1322)*

The development proposal includes 738 housing units (mainly in multifamily buildings) and up to 110,300 square feet of commercial, retail, and medical office space. Council staff advise that a communitywide forecast adjustment may be needed. Council and City staff can discuss this at the time of the next comprehensive plan amendment. Corcoran is forecasted to gain +1,400 households in the current decade. Considering recent project completions and projects underway, half of this expected growth is previously accounted for. The Hope Community Development is likely to advance Corcoran beyond 3,600 households (the 2030 forecast) in advance of 2030.

Also, Traffic Analysis Zone (TAZ) allocations will need to be updated. TAZ allocations have been prepared by City of Corcoran. The Hope Community site is a small part of TAZ #786. Minimal growth was anticipated in this area. The City's 2040 Comprehensive Plan expects TAZ #786 to gain +15 jobs, +12 households and no population during 2020-40. These expectations will need revision to account for the Hope Community Development proposal.

Response: Comment noted.

Comment 2: *Item 10. Land Use (Freya Thamman 651-602-1750, Colin Kelly 651-602-1361)*

The EAW indicates that the project area is guided Public/Institutional and Mixed Use in the City's 2040 Comprehensive Plan. It indicates that the Public/Institutional guiding includes the existing church and cemetery, and the remaining project area is guided Mixed Use. Some of the planned residential areas are located within the areas guided Public/Institution, which would require a comprehensive plan amendment.

The mixed-use neighborhood includes a variety of housing options, including age-restricted housing and two senior apartment buildings providing a continuum of care. When considering units per acre and allowed residential density ranges shown in the comprehensive plan, please refer to the most recent guidelines on senior housing for housing units and group quarters, which reflect the current Census Bureau definitions:

<https://metro council.org/Handbook/Files/Resources/Fact-Sheet/LAND-USE/Housing-Unit-vs-Group-Quarter.aspx>.

Regional Trails

Diamond Lake Regional Trail is planned to traverse the site east to west. The EAW acknowledges the regional trail in the Land Use section, indicating that: "Three Rivers Park District plans show a portion of the proposed Diamond Lake Regional Trail may be located

through the center of the site.” In discussing the project’s compatibility with nearby land uses, zoning, and plans, the EAW states “the plans may need to be revised to accommodate Three Rivers Park District’s adopted plan for the Diamond Lake Regional Trail.” Prior to any construction activities, the developer should coordinate with Three Rivers Park District, the Regional Park Implementing Agency that will own and operate the future Diamond Lake Regional Trail. The final design for the mixed-use neighborhood must accommodate the planned regional trail.

Response: Comment noted.

Comment 3: *Item 12. Water Resources – Wastewater (Roger Janzig, 651-602-1119)
The Metropolitan Disposal System has adequate capacity for this project location.*

Response: Comment noted.

Comment 4: *Item 12. Water Resources – Water Supply (John Clark, 651-602-1452)
The following comments are offered for water supply:*

- *At present, the water that will be used to supply this development has not been appropriated by the Minnesota Department of Natural Resources (MN DNR). Water supply treatment and well infrastructure are being developed by the community. Water availability and potential impacts to aquifers, nearby infrastructure, and ecosystems will need to be assessed by the regulating agency to understand if local aquifers will be able to meet the community’s water demands.*
- *Specific water demand estimates for the residential and non-residential portions of the development would benefit the project planning, inform the community’s local water supply planning, and help to determine potential resource needs and environmental impacts.*
- *Local water supply plans are an essential part of the community’s comprehensive plan. If the community’s local water supply plan has been updated and approved by the MN DNR as a part of the request for water supply wells and water appropriation permits, please provide that updated plan to the Metropolitan Council as supplemental information or as part of a comprehensive plan amendment.*
- *Wells that have been identified on site, that will no longer be used, should be sealed according to Minnesota Department of Health (MDH) standards and guidance, with appropriate updates to the Minnesota Well Index.*
- *Lawn and landscaping will comprise approximately 20 acres of the new development as proposed. It is likely that much of these 20 acres will be irrigated. Inefficient irrigation of lawns and landscaping using treated municipal water is one of the major drivers of infrastructure expansions for public water supplies, and can unnecessarily stress water resources, particularly during periods of drought. Captured stormwater on site could be used for landscape irrigation as an alternative to treated municipal sources. Additionally, ensuring that installed irrigation systems are using real-time weather data, via “smart” irrigation controllers, include soil moisture sensors, and are regularly audited for leaks and other equipment malfunctions, can help the systems to use only the water necessary for maintaining lawn and landscaped areas. Water efficient turfgrass and landscaping species can also help to lessen water needs on site. The University of Minnesota extension has excellent information that can help developers to choose and install species that require less nutrient and water inputs, lowering maintenance costs, and recover well from drought-stress.*

Response: Comment noted.

Comment 5: Item 20. Transportation – Transit (Victoria Dan, 651-349-7648)

The EAW correctly states that there are no transit routes in the project area (Corcoran is outside the Transit Capital Levy District and therefore does not receive fixed route service). However, alternative transportation is available on Transit Link, a general public dial-a-ride service provided by the Metropolitan Council.

Response: Comments noted.

Letter 4: Minnesota Department of Agriculture

Comment 1: *After reviewing the document I have determined that, although there is permanent conversion of agricultural lands, this project converts land that is within the MUSA line and is in keeping with your current comprehensive plan and zoning ordinance. We have no further comments.*

Response: Comment noted.

Letter 5: Department of the Army, US Army Corps of Engineers, St. Paul District

Comment 1: *We have received your submittal described below. You may contact the Project Manager with questions regarding the evaluation process. The Project Manager may request additional information necessary to evaluate your submittal.*

Response: Comment noted.

Letter 6: Minnesota State Historic Preservation Office (SHPO)

Comment 1: *Due to the nature and location of the proposed project, we recommend that a Phase IA literature search and archaeological assessment be completed by a qualified archaeologist to assess the potential for intact archaeological sites in the project area. If, as a result of this assessment, a Phase I archaeological survey is recommended, this survey should be completed. The survey must meet the requirements of the Secretary of the Interior's Standards for Identification and Evaluation and should include an evaluation of National Register eligibility for any properties that are identified.*

Response: Comment noted. The majority of the site has been actively farmed, and portions of the site have been disturbed for the construction of Hope Community Church and the City's first water tower. The City is unaware of any historical information or records at the City that would suggest a Phase I survey is warranted on the Project site. If SHPO has information to suggest the location of the proposed project warrants an investigation, the City would request that information be provided.

Comment 2: *We will reconsider the need for survey if the project area can be documented as previously surveyed or disturbed. Any previous survey work must meet contemporary standards. **Note:** plowed areas and right-of-way are not automatically considered disturbed. Archaeological sites can remain intact beneath deposited fill, plow zones, and other recent disturbances.*

Response: Comment noted. Based on the available data, the City and Project Proposer do not believe an archaeological survey is necessary. If SHPO has any information that would suggest investigation of the site is warranted, the City would request that the information be provided.

Letter 7: Three Rivers Park District

Comment 1: *As mentioned in the Land Use chapter, (Section 10. a. ii.), a portion of the Three Rivers Park District's Diamond Lake Regional Trail (DLRT) is planned through the site, crossing CSAH 116 at Hunters Ridge and extending west and eventually south, crossing CSAH 30 at a location yet to be determined.*

Response: Comment noted. A proposed trail alignment is shown on the concept plan.

Comment 2: *Development plans should dedicate sufficient right-of-way to accommodate the future trail in accordance with Three Rivers Regional Trail Design Standards. Generally speaking, a minimum 16' to 20' wide corridor is required to accommodate a 10' wide paved bituminous trail, two 3' wide clearzones on either side of the trail and room for trail/road signage. If possible, a wider corridor than this is preferred in order to be able to provide a vegetative buffer between the trail and the surrounding development which will contribute to a more attractive and higher quality user experience.*

Response: Comment noted. The City requires a 20-foot easement for trails and will be required as the project moves forward.

Comment 3: *Though an exact alignment for the DLRT to east of the site is not yet determined, it seems more likely that it will be on the north side of Hunters Ridge. Therefore, locating the trail on the north side of Hope Way is preferred. Consideration should be given to the location of any entrance sign for the development along the north side of Hope Way so it does not interfere with the trail right-of-way area.*

Response: Comment noted. City staff believe the trail is better suited for the south side of Hope Way as shown on the concept plan to minimize the crossing of driveways as well as avoiding an additional road crossing at Hope Way when this road is eventually extended to the west. The project proposer will work with the City and Three Rivers Park District to finalize the trail location.

Comment 4: *Providing a safe crossing of CSAH 116 at Hunters Ridge was identified in the adopted DLRT Master Plan. Given the expected increase of traffic along CSAH 116 in the future, a grade-separated crossing for the trail at this intersection is proposed in the master plan. A trail underpass under CSAH 116 seems more feasible than a trail bridge. Trail development for the DLRT is many years out in the future, but consideration should be made to provide significant right-of-way for a future grade-separated crossing and an accessible approach to an underpass.*

Response: Comment noted. The City looks forward to working with Three Rivers Park District to understand the District's land needs for the grade-separated crossing and to determine the appropriate means to acquire this land.

Appendix A: Comments and Letters

HENNEPIN COUNTY

MINNESOTA

July 5, 2023

Natalie Davis McKeown
City of Corcoran
8200 County Road 116
Corcoran, MN 55340

Re: Hope Community Mixed-Use Development EAW

Ms. Davis McKeown:

Please consider the following county staff comments regarding the EAW for the Hope Community mixed-use development at County State Aid Highway (CSAH) 30 and County Road (CR) 116.

General/Site Plan

- The site plan should be updated to depict proposed turn lanes as part of this development and programmed turn lanes in the area.
- The county requests 130' right-of-way (ROW) for CSAH 30 and 120' ROW for CR 116 to accommodate future trail, drainage and utility needs on these roadways. The final 10' will be accepted in easement to mitigate any setback concerns.
- The county requests 25-by-25-foot triangles at the NW quadrant of the CSAH 30/CR 116 intersection, the NW and SW quadrants of the County Road 116/Hunters Ridge/Oswald Farm Rd intersection, and at the NE and NW quadrants of the CSAH 30/new access intersection to accommodate space for utilities and preserve sight distance.
- Development should consider including trail on both CSAH 30 and CR 116.
- The proposed regional trail should connect to county roadway intersections and be ADA compliant.
- Please note that the turn lane design will need to be reviewed and approved by county staff.
- Storm water and drainage discharge rates are to be less than existing flow rates. The county storm water system will not take water from new drainage areas. Documentation will need to be submitted demonstrating that peak stormwater discharge rates remain less than the existing condition. Additional treatments may be necessary if flow rates cannot match existing.
- Please inform the developer that all construction within county ROW will require an approved Hennepin County permit prior to beginning construction. This includes, but is not limited to, driveway and street access, drainage and utility construction, trail development, and landscaping.



Section 8, Cover Types

- On page 10, Table 3 identifies 1.2 acres of wetlands and shallow lakes (<2 meters deep) for before conditions; MPCA will need to review and approve this during the wetland delineation process.
- On page 10, Tables 3 and 4, please review and confirm that there is enough storage for the added impervious surface. NPDES permit requires 1 inch of the runoff from new impervious surface waters to be retained on site using volume and rate reduction. The infiltration sizing calculations and an existing drainage map should be included in the appendix.
- On page 10, Table 4, consider other types of green infrastructure to add to the project.
- On page 11, Table 5, add the approximate number of trees that will be removed.
- On page 11, Table 5, assess whether any mature trees can be retained.

Section 11, Geology, Soils, and Topography/Land Forms

- On page 15, provide estimated volume and acreage of soil excavation and/or grading.
- On page 15, provide erosion/sedimentation control information related to stormwater runoff.
- On page 16, Table 7, the hydrologic soil groups are rated as either C/D. Will the poor soils be amenable to the proposed infiltration ponds?

Section 12, Water Resources

- On page 17, the surface waters section indicates that no county ditches are within the project area. County staff determines that county ditches and pertinent ROW will be impacted.
- On page 18, Table 10, the project will be required to adhere to specific regulations, including limits on TMDL, TSS and TP. A mitigation plan will need to be drafted, which should include a map depicting existing and proposed drainage.
- On page 21, provide additional requirements for special/impaired waters.
- On page 22, review MPCA regulations for discharge into Wetlands 2 and 3.
- On page 22, confirm whether there are any temporary infiltration basins during construction. This may trigger additional MPCA regulations.
- On page 22, review and confirm that 17.3 acres of impervious surface will be added to the project area. After reviewing the site plan (Figure 3, Appendix A), this estimate seems low.

Section 13, Contamination/Hazardous Materials/Wastes

- On page 26, consider adding compost disposal.

Section 14, Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)

- On page 28, review the proposed site plan to consider opportunities to add native plants communities, habitat opportunities for the identified species and promote migratory paths.
- On page 32, identify timeline for when the potential effects to the monarch butterfly will be revisited.

Section 18, Greenhouse gas (GHG) Emissions/ Carbon Footprint

- On page 36, it was assumed that motor vehicles trips are five miles per day, this is too low as average per capita VMT in this area of the county is over 30 miles per day.

Infrastructure Feasibility Study

Section 2.4, Traffic Forecasts

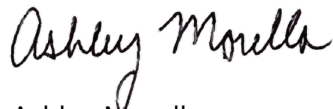
- o Traffic forecasts need to anticipate traffic twenty years out from the build, should include values for 2048 No-Build and 2048 Build, not 2040.

Section 2.5, Traffic Analysis

- o Provide Synchro reports to better review traffic impacts. County staff may have additional comments after review.
- o Table 4 and 5, Weekday A.M. Peak hour level of service and weekday P.M. Peak hour level of service results need to provide mitigation measures to address any LOS E or F in the Build scenarios. This includes the eastbound left turn lane, eastbound thru lane, and eastbound right turn lane at County Road 116 and Hunters Ridge/Oswald for the 2040 Build for both A.M. and P.M. peak travel times and the southbound left turn lane at the new access at CSAH 30 for the 2028 and 2040 Build scenarios
- o Provide tables depicting 95 percent queue for each movement and scenario, similar to the LOS tables 4 and 5. Table should include storage lengths and confirmation that 95 percent queue does not exceed storage

Please contact me at 612-596-0359, ashley.morello@hennepin.us for any further discussion of these items.

Sincerely,



Ashley Morello
Transportation Planner
Hennepin County Public Works

Division of Ecological and Water Resources
Region 3 Headquarters
1200 Warner Road
Saint Paul, MN 55106

Transmitted by Email

July 3, 2023

Natalie Davis McKeown, Planner
City of Corcoran
8200 County Road 116
Corcoran, MN 55340

Dear Natalie Davis McKeown,

Thank you for the opportunity to review the Hope Community Development Environmental Assessment Worksheet (EAW) in Hennepin County. The DNR respectfully submits the following comments for your consideration:

1. Page 11, Permits and Approvals. Please include a DNR Water Appropriation Permit in the list of required permits and approvals. Given the depth to the surficial water table throughout the project area, it is possible that construction dewatering will be needed during development construction and installation of utilities.
2. Page 19, Groundwater. This section identifies the depth to groundwater as 40 to 85 feet below the surface. The hydrologic soil groups and documented wetlands within the project area indicate there is likely a perched surficial water table present at the site due to the presence of glacial till.
3. Page 20, Wastewater. The proposed plan to add 738 residential units would presumably add a significant number of residential water softeners due to the water hardness levels of the City of Corcoran municipal water supply. Chloride is one of the components of salt, which is used in forms such as sodium chloride (table salt), calcium chloride and magnesium chloride (road salts). Sodium chloride is commonly used in home water softeners and by water treatment plants to treat “hard” water. Minnesota generally has groundwater with high levels of calcium and magnesium that must be removed through softening in order to improve taste and prevent lime scale buildup in appliances, pipes and water fixtures. The majority of home water softeners use sodium chloride (NaCl) in a softening process that replaces calcium and magnesium ions with sodium, while the chloride ions are discharged in the wastewater and eventually end up in the environment.

Each community needs to determine which tool is appropriate for their situation. This [website](#) suggests ways for homeowners to optimize their water softener salt use, while the Minnesota Pollution Control’s [website](#) provides many great resources for cities to use in addressing their

high chloride levels. We suggest that as this development moves forward, the City of Corcoran consider what strategies can be used to minimize chloride use.

4. Page 22, Stormwater. We recommend that BWSR-approved, weed-free, native [seed mixes](#) be used to the greatest degree possible in project landscaping and stormwater features in order to provide pollinator habitat.
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We also encourage cities and counties to consider how they may participate in the [Statewide Chloride Management Plan](#) and provide public outreach to reduce the overuse of chloride. Here are some [educational resources](#) for residents as well as a [sample ordinance](#) regarding chloride use.

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Thank you again for the opportunity to review this document. Please let me know if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Melissa Collins". The signature is written in a cursive style and is set against a light blue rectangular background.

Melissa Collins
Regional Environmental Assessment Ecologist | Ecological and Water Resources
Minnesota Department of Natural Resources
Phone: 651-259-5755
Email: melissa.collins@state.mn.us

CC: Josh McKinney, Project Manager

Equal Opportunity Employer



July 6, 2023

Natalie Davis McKeown, City Planner
City of Corcoran
19951 Oswald Farm Road
Corcoran, MN 55374

**RE: City of Corcoran - Environmental Assessment Worksheet (EAW) –
Hope Community Mixed Use Development**
Metropolitan Council Review 22873-1
Metropolitan Council District 1

Dear Natalie Davis:

The Metropolitan Council received the EAW for the Hope Community Mixed Use Development in Corcoran on May 30, 2023. The proposed development consists of 44.5 acres centering around 12 acres of existing development located on the northwest corner of County Road (CR) 116 and CR 30. The existing development includes Hope Community Church, daycare within the church, cemetery, and the City's first water tower (under development). Hope Community Church proposes a mixed-use neighborhood with housing options, including age-restricted and market rate housing, as well as medical office and retail/commercial uses. The proposed development would create a campus that provides housing, particularly for seniors, and a community center with commercial and medical uses.

The staff review finds that the EAW is complete and accurate with respect to regional concerns and does not raise major issues of consistency with Council policies. An Environmental Impact Statement is not necessary for regional purposes. We offer the following comments for your consideration.

Item 6. Project Description (Todd Graham, 651-602-1322)

The development proposal includes 738 housing units (mainly in multifamily buildings) and up to 110,300 square feet of commercial, retail, and medical office space. Council staff advise that a *communitywide* forecast adjustment may be needed. Council and City staff can discuss this at the time of the next comprehensive plan amendment. Corcoran is forecasted to gain +1,400 households in the current decade. Considering recent project completions and projects underway, half of this expected growth is previously accounted for. The Hope Community Development is likely to advance Corcoran beyond 3,600 households (the 2030 forecast) in advance of 2030.

Also, Traffic Analysis Zone (TAZ) allocations will need to be updated. TAZ allocations have been prepared by City of Corcoran. The Hope Community site is a small part of TAZ #786. Minimal growth was anticipated in this area. The City's 2040 Comprehensive Plan expects TAZ #786 to gain +15 jobs, +12 households and no population during 2020-40. These expectations will need revision to account for the Hope Community Development proposal.

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The EAW correctly states that there are no transit routes in the project area (Corcoran is outside the Transit Capital Levy District and therefore does not receive fixed route service). However, alternative transportation is available on Transit Link, a general public dial-a-ride service provided by the Metropolitan Council.

This concludes the Council’s review of the EAW. The Council will not take formal action on the EAW. If you have any questions or need further information, please contact Freya Thamman, Principal Reviewer, at 651-602-1750 or via email at Freya.Thamman@metc.state.mn.us.

Sincerely,

A handwritten signature in black ink, appearing to read 'Angela R. Torres', followed by the word 'for:'.

Angela R. Torres, AICP, Senior Manager
Local Planning Assistance

CC: Tod Sherman, Development Reviews Coordinator, MnDOT - Metro Division
Judy Johnson, Metropolitan Council District 1
Freya Thamman, Sector Representative/Principal Reviewer
Reviews Coordinator

N:\CommDev\LPA\Communities\Corcoran\Letters\Corcoran 2023 Hope Community Church EAW OK w Comments 22873-1_.docx

From: [Roos, Stephan \(MDA\)](#)
To: [Natalie Davis](#)
Subject: Hope Community Mixed-Use Development EAW
Date: Thursday, June 1, 2023 4:06:08 PM
Attachments: [image001.jpg](#)

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Hi Natalie,

Minnesota Department of Agriculture appreciates the opportunity to review and comment on the Hope Community Mixed-Use Development EAW. After reviewing the document I have determined that, although there is permanent conversion of agricultural lands, this project converts land that is within the MUSA line and is in keeping with your current comprehensive plan and zoning ordinance. We have no further comments.

Again, thank you for the opportunity to comment on this EAW,
Steve

Steve Roos

Environmental Planner

Energy and Environment Section
Agricultural Marketing and Development Division
Minnesota Department of Agriculture
625 Robert Street North
Saint Paul, MN 55155-2538
Ph: 651-201-6631 office



www.mda.state.mn.us



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, ST. PAUL DISTRICT
332 MINNESOTA STREET, SUITE E1500
ST. PAUL, MN 55101-1323

06/02/2023

Regulatory File No. MVP-2022-01918-RMH

THIS IS NOT A PERMIT

Natalie Davis McKeown
City of Corcoran
8200 County Road 116
Corcoran, MN 55340

To: Natalie Davis McKeown:

We have received your submittal described below. You may contact the Project Manager with questions regarding the evaluation process. The Project Manager may request additional information necessary to evaluate your submittal.

File Number: MVP-2022-01918-RMH

Applicant: Josh Mckinney

Project Name: Hope Community Mixed-Use Development

Project Location: Section 11 of Township 119 N, Range 23 W, Hennepin County, Minnesota (Latitude: 45.1338228883328; Longitude: -93.5455396670058)

Received Date: 05/31/2023

Project Manager: Raelene Hegge
(651) 290-5355
Raelene.Hegge@usace.army.mil

Additional information about the St. Paul District Regulatory Program can be found on our web site at <http://www.mvp.usace.army.mil/missions/regulatory>.

Please note that initiating work in waters of the United States prior to receiving Department of the Army authorization could constitute a violation of Federal law. If you have any questions, please contact the Project Manager.

Thank you.

U.S. Army Corps of Engineers
St. Paul District
Regulatory Branch

July 7, 2023

Natalie Davis McKeown
Planner, City of Corcoran
8200 County Road 116
Corcoran, MN 55340

RE: Hope Community Mixed-Use Development Environmental Assessment Worksheet
City of Corcoran, Hennepin County
SHPO Number: 2023-2084

Dear Natalie Davis McKeown:

Thank you for providing this office with a copy of the Environmental Assessment Worksheet (EAW) for the above-referenced project.

Due to the nature and location of the proposed project, we recommend that a Phase IA literature search and archaeological assessment be completed by a qualified archaeologist to assess the potential for intact archaeological sites in the project area. If, as a result of this assessment, a Phase I archaeological survey is recommended, this survey should be completed. The survey must meet the requirements of the Secretary of the Interior's Standards for Identification and Evaluation and should include an evaluation of National Register eligibility for any properties that are identified. For a list of consultants who have expressed an interest in undertaking such surveys, please visit the website www.mnhs.org/preservation/directory. To search the directory, use Ctrl + F as a search function and enter "archaeologists" in the text box that pops up. The consultants in these categories will be highlighted; you will need to scroll down to see them all.

We will reconsider the need for survey if the project area can be documented as previously surveyed or disturbed. Any previous survey work must meet contemporary standards. **Note:** plowed areas and right-of-way are not automatically considered disturbed. Archaeological sites can remain intact beneath deposited fill, plow zones, and other recent disturbances.

Please note that this comment letter does not address the requirements of Section 106 of the National Historic Preservation Act of 1966 and 36 CFR § 800. If this project is considered for federal financial assistance, or requires a federal permit or license, then review and consultation with our office will need to be initiated by the lead federal agency. Be advised that comments and recommendations provided by our office for this state-level review may differ from findings and determinations made by the federal agency as part of review and consultation under Section 106.

If you have any questions regarding our review of this project, please contact Kelly Gragg-Johnson, Environmental Review Program Specialist, at 651-201-3285 or kelly.graggjohnson@state.mn.us.

Sincerely,



Sarah J. Beimers
Environmental Review Program Manager

From: Shurson, Stephen <Stephen.Shurson@threeriversparks.org>
Sent: Friday, July 14, 2023 8:47 AM
To: Natalie Davis <ndavis@corcoranmn.gov>
Cc: Rexine, Ann <Ann.Rexine@threeriversparks.org>; Grissman, Kelly <Kelly.Grissman@threeriversparks.org>
Subject: TRPD comments RE: Hope Community Mixed-Use Development EAW (City File 22-074)

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Natalie,

Below are Three Rivers comments regarding the EAW for the Hope Community Mixed-Use Development. Again, I apologize for the delay in responding to the 30-day comment period. Thank you for your considerations.

1. As mentioned in the Land Use chapter, (Section 10. a. ii.), a portion of the Three Rivers Park District's Diamond Lake Regional Trail (DLRT) is planned through the site, crossing CSAH 116 at Hunters Ridge and extending west and eventually south, crossing CSAH 30 at a location yet to be determined.
2. Development plans should dedicate sufficient right-of-way to accommodate the future trail in accordance with Three Rivers Regional Trail Design Standards. Generally speaking, a minimum 16' to 20' wide corridor is required to accommodate a 10' wide paved bituminous trail, two 3' wide clearzones on either side of the trail and room for trail/road signage. If possible, a wider corridor than this is preferred in order to be able to provide a vegetative buffer between the trail and the surrounding development which will contribute to a more attractive and higher quality user experience.
3. Though an exact alignment for the DLRT to east of the site is not yet determined, it seems more likely that it will be on the north side of Hunters Ridge. Therefore, locating the trail on the north side of Hope Way is preferred. Consideration should be given to the location of any entrance sign for the development along the north side of Hope Way so it does not interfere with the trail right-of-way area.
4. Providing a safe crossing of CSAH 116 at Hunters Ridge was identified in the adopted DLRT Master Plan. Given the expected increase of traffic along CSAH 116 in the future, a grade-separated crossing for the trail at this intersection is proposed in the master plan. A trail underpass under CSAH 116 seems more feasible than a trail bridge. Trail development for the DLRT is many years out in the future, but consideration should be made to provide significant right-of-way for a future grade-separated crossing and an accessible approach to an underpass.



Stephen Shurson

Stef-en Sure•son | he/him

Landscape Architect, [Three Rivers Park District](https://www.threeriversparks.org)

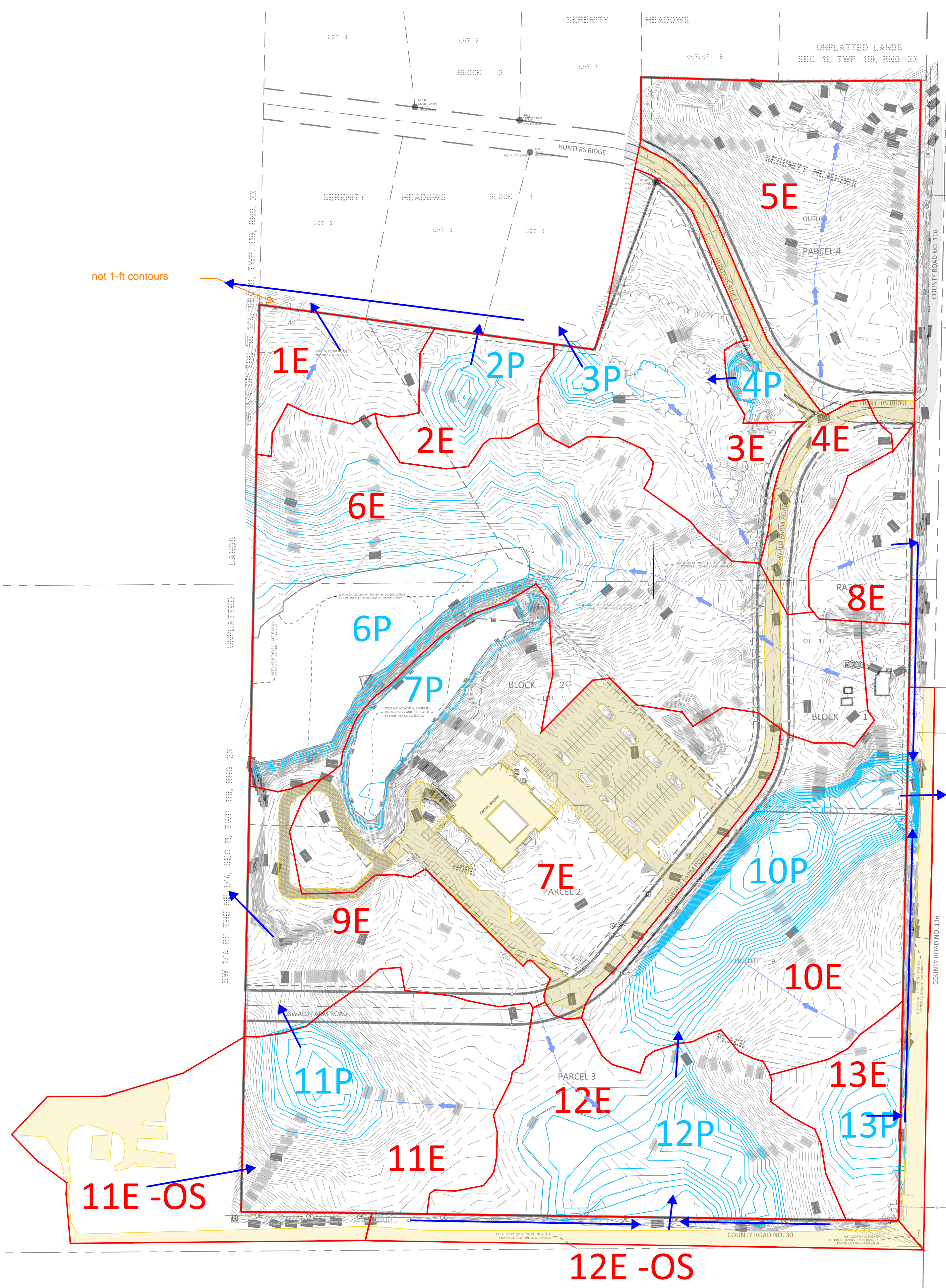
Office: 763-559-6766

Stephen.Shurson@ThreeRiversParks.org

Appendix B: Appendix Materials Referred to in Response to Comments

- Preliminary Infiltration Sizing Calculations and Existing Drainage Map
- Synchro Reports
- Permits Table

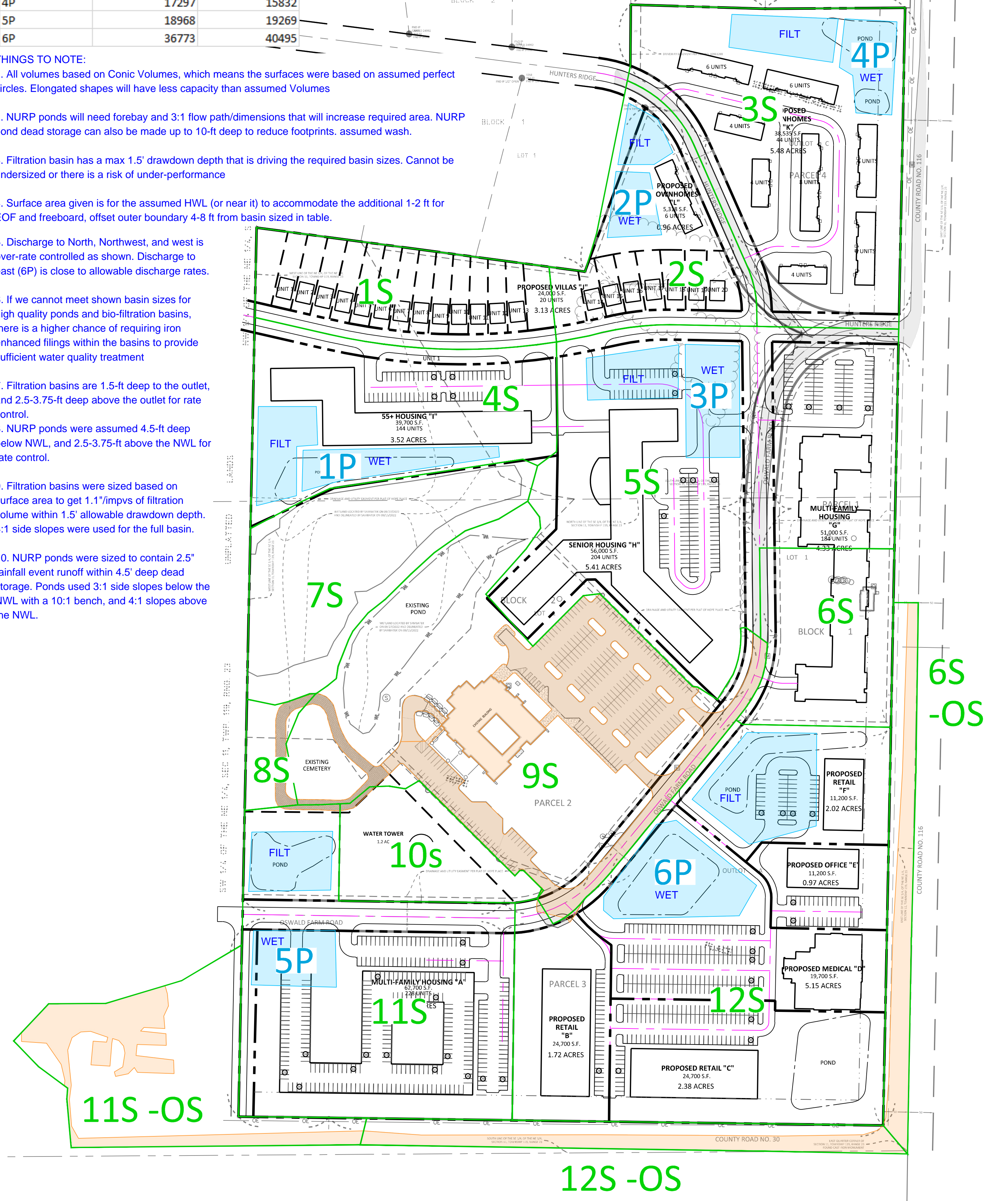
Preliminary Infiltration Sizing Calculations and Existing Drainage Map



| High Water Level Surface Areas | | |
|--------------------------------|----------|------------|
| Basin | Wet Pond | Filtration |
| 1P | 18306 | 17499 |
| 2P | 9758 | 7213 |
| 3P | 25110 | 16777 |
| 4P | 17297 | 15832 |
| 5P | 18968 | 19269 |
| 6P | 36773 | 40495 |

THINGS TO NOTE:

1. All volumes based on Conic Volumes, which means the surfaces were based on assumed perfect circles. Elongated shapes will have less capacity than assumed Volumes
2. NURP ponds will need forebay and 3:1 flow path/dimensions that will increase required area. NURP pond dead storage can also be made up to 10-ft deep to reduce footprints. assumed wash.
3. Filtration basin has a max 1.5' drawdown depth that is driving the required basin sizes. Cannot be undersized or there is a risk of under-performance
4. Surface area given is for the assumed HWL (or near it) to accommodate the additional 1-2 ft for EOF and freeboard, offset outer boundary 4-8 ft from basin sized in table.
5. Discharge to North, Northwest, and west is over-rate controlled as shown. Discharge to east (6P) is close to allowable discharge rates.
6. If we cannot meet shown basin sizes for high quality ponds and bio-filtration basins, there is a higher chance of requiring iron enhanced fillings within the basins to provide sufficient water quality treatment
7. Filtration basins are 1.5-ft deep to the outlet, and 2.5-3.75-ft deep above the outlet for rate control.
8. NURP ponds were assumed 4.5-ft deep below NWL, and 2.5-3.75-ft above the NWL for rate control.
9. Filtration basins were sized based on surface area to get 1.1"/impvs of filtration volume within 1.5' allowable drawdown depth. 4:1 side slopes were used for the full basin.
10. NURP ponds were sized to contain 2.5" rainfall event runoff within 4.5' deep dead storage. Ponds used 3:1 side slopes below the NWL with a 10:1 bench, and 4:1 slopes above the NWL.



| Exsiting | | | | |
|---------------|---------|--------|--------|---------|
| Drainage Area | Area | Impv | Water | Prvs |
| 1E | 65810 | 0 | 0 | 65810 |
| 2E | 60447 | 0 | 0 | 60447 |
| 3E | 182358 | 0 | 0 | 182358 |
| 4E | 86347 | 32104 | 0 | 54243 |
| 5E | 254208 | 3185 | 0 | 251023 |
| 6E | 508312 | 8217 | 55178 | 444917 |
| 7E | 410065 | 153287 | 44975 | 211803 |
| 8E | 56129 | 0 | 0 | 56129 |
| 9E | 136455 | 7547 | 0 | 128908 |
| 10E | 261168 | 0 | 0 | 261168 |
| 11E | 206948 | 0 | 0 | 206948 |
| 12E | 210287 | 0 | 0 | 210287 |
| 13E | 63949 | 0 | 0 | 63949 |
| 10E-OS | 136841 | 43540 | 0 | 93301 |
| 11E-OS | 58308 | 31281 | 0 | 27027 |
| 12E-OS | 54027 | 35102 | 0 | 18925 |
| | 2751659 | 314263 | 100153 | 2337243 |

| Proposed | | | | |
|---------------|---------|--------|---------|----------|
| Drainage Area | Area | % Impv | Impv | Prvs |
| 1S | 111255 | 0.5 | 55628 | 55628 |
| 2S | 120848 | 0.5 | 60424 | 60424 |
| 3S | 264511 | 0.65 | 171932 | 92579 |
| 4S | 171519 | 0.8 | 137215 | 34304 |
| 5S | 402911 | 0.8 | 322329 | 80582 |
| 6S | 95641 | 0.8 | 76513 | 19128 |
| 7S | 137797 | 0 | 55178 | 82619 |
| 8S | 20587 | Ex | 5504 | 15083 |
| 9S | 376608 | Ex | 198262 | 178346 |
| 10S | 66243 | 0.15 | 9936 | 56307 |
| 11S | 273888 | 0.8 | 219110 | 54778 |
| 12S | 490625 | 0.8 | 392500 | 98125 |
| 6S-OS | 136841 | Ex | 43540 | 93301 |
| 11S-OS | 58308 | Ex | 31281 | 27027 |
| 12S-OS | 54027 | Ex | 35102 | 18925 |
| | 2781609 | | 1814454 | 967154.7 |

100-Year Discharge Volumes

| | Existing | Proposed | Req. Storage | Provided BMPs | Provided Flood Storage |
|-----------|----------|----------|--------------|---------------|------------------------|
| North | 2.209 | 3.224 | 1.015 | 4P | 2.016 |
| East | 9.68 | 9.439 | -0.241 | 6P | 6.102 |
| Wetland | 11.560 | 14.823 | 3.263 | 3P, 5P | 5.730 |
| Northwest | 3.225 | 4.481 | 1.256 | 1P, 2P | 3.137 |

Filtration Sizing

| Basin | DAs Treated | New Impv | WQV (1.1) | (1.5' WQ Depth) | | (2.5' Flood Depth*) | |
|-------|-------------|----------|-----------|-----------------|--------|---------------------|--------|
| | | | | Bottom SA | Top SA | Prd Tot Vol | |
| | | sf | cf | sf | sf | cf | cf |
| 1P.F | 1S, 4S | | 192843 | 17677 | 10800 | 17499 | 56061 |
| 2P.F | 2S | | 60424 | 5539 | 3200 | 7213 | 20289 |
| 3P.F | 5S | | 322329 | 29547 | 18300 | 16777 | 89618 |
| 4P.F | 3S | | 171932 | 15760 | 9500 | 15832 | 50129 |
| 5P.F | 11S | | 219110 | 20085 | 12200 | 19269 | 62402 |
| 6P.F | 6S, 12S | | 469013 | 42993 | 26900 | 40495 | 146124 |

*6P.F = 3.75' Flood Depth

Pond Sizing

| Basin | DAs Treated | 2.5" Vol | | (Botton of Wet) | | (4.5' Perm Pool) | | (2.5' Flood Depth*) | |
|-------|-------------|----------|-------|-----------------|--------|------------------|-------------------|---------------------|--|
| | | af | cf | Bottom SA | NWL SA | HWL SA | Prd Tot Flood Vol | cf | |
| 1P.N | 1S, 4S | | 0.923 | 40206 | 6600 | 13824 | 18306 | 40032 | |
| 2P.N | 2S | | 0.336 | 14636 | 2000 | 6570 | 9758 | 20279 | |
| 3P.N | 5S | | 1.441 | 62770 | 10900 | 19807 | 25110 | 56016 | |
| 4P.N | 3S | | 0.857 | 37331 | 6000 | 12949 | 17297 | 37677 | |
| 5P.N | 11S | | 0.979 | 42645 | 7000 | 14400 | 18968 | 41580 | |
| 6P.N* | 6S, 12S | | 2.097 | 91345 | 16600 | 27283 | 36773 | 119664 | |

*6P.N = 3.75' Flood Depth

Notes:

- NURP ponds need forebays, but dead storage can be up to 10-ft deep
- Filt basins have MAX 1.5' drawdown
- Over rate control for N, W, and NW discharge points, but not much wiggle room to E
- Don't want to undersize basins, or may need to incorporate iron enhancements

High Water Level Surface Areas

| Basin | High Water Level Surface Areas | |
|-------|--------------------------------|------------|
| | Wet Pond | Filtration |
| 1P | 18306 | 17499 |
| 2P | 9758 | 7213 |
| 3P | 25110 | 16777 |
| 4P | 17297 | 15832 |
| 5P | 18968 | 19269 |
| 6P | 36773 | 40495 |

Synchro Reports

HCM 6th Signalized Intersection Summary

3: CR 116 & CSAH 30

07/10/2023



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 6 | 499 | 37 | 88 | 120 | 27 | 7 | 60 | 58 | 87 | 302 | 9 |
| Future Volume (veh/h) | 6 | 499 | 37 | 88 | 120 | 27 | 7 | 60 | 58 | 87 | 302 | 9 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 6 | 537 | 40 | 95 | 129 | 0 | 8 | 65 | 62 | 94 | 325 | 10 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 603 | 683 | 579 | 343 | 797 | | 223 | 328 | 278 | 435 | 437 | 371 |
| Arrive On Green | 0.01 | 0.37 | 0.37 | 0.07 | 0.43 | 0.00 | 0.01 | 0.18 | 0.18 | 0.07 | 0.23 | 0.23 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 6 | 537 | 40 | 95 | 129 | 0 | 8 | 65 | 62 | 94 | 325 | 10 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 0.1 | 14.3 | 0.9 | 1.7 | 2.4 | 0.0 | 0.2 | 1.7 | 1.9 | 2.3 | 9.0 | 0.3 |
| Cycle Q Clear(g_c), s | 0.1 | 14.3 | 0.9 | 1.7 | 2.4 | 0.0 | 0.2 | 1.7 | 1.9 | 2.3 | 9.0 | 0.3 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 603 | 683 | 579 | 343 | 797 | | 223 | 328 | 278 | 435 | 437 | 371 |
| V/C Ratio(X) | 0.01 | 0.79 | 0.07 | 0.28 | 0.16 | | 0.04 | 0.20 | 0.22 | 0.22 | 0.74 | 0.03 |
| Avail Cap(c_a), veh/h | 764 | 1855 | 1572 | 440 | 1902 | | 380 | 1294 | 1096 | 501 | 1307 | 1108 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 11.0 | 15.8 | 11.6 | 11.3 | 9.9 | 0.0 | 18.9 | 19.7 | 19.8 | 16.3 | 19.9 | 16.5 |
| Incr Delay (d2), s/veh | 0.0 | 2.1 | 0.0 | 0.4 | 0.1 | 0.0 | 0.1 | 0.3 | 0.4 | 0.2 | 2.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 0.1 | 9.6 | 0.5 | 1.1 | 1.5 | 0.0 | 0.1 | 1.3 | 1.2 | 1.6 | 6.9 | 0.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 11.0 | 17.9 | 11.6 | 11.7 | 10.0 | 0.0 | 19.0 | 20.0 | 20.2 | 16.6 | 22.4 | 16.6 |
| LnGrp LOS | B | B | B | B | A | | B | B | C | B | C | B |
| Approach Vol, veh/h | | 583 | | | 224 | | | 135 | | | 429 | |
| Approach Delay, s/veh | | 17.4 | | | 10.7 | | | 20.0 | | | 21.0 | |
| Approach LOS | | B | | | B | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.3 | 14.3 | 8.4 | 24.9 | 5.1 | 17.6 | 4.9 | 28.3 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.9 | 38.7 | 6.9 | 55.5 | 5.5 | 39.1 | 5.5 | 56.9 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.3 | 3.9 | 3.7 | 16.3 | 2.2 | 11.0 | 2.1 | 4.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.5 | 0.1 | 4.1 | 0.0 | 2.1 | 0.0 | 0.8 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 17.7 |
| HCM 6th LOS | B |

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↕ | ↕ | | ↕ | ↕ | |
| Traffic Vol, veh/h | 8 | 1 | 14 | 1 | 1 | 1 | 13 | 80 | 1 | 1 | 389 | 13 |
| Future Vol, veh/h | 8 | 1 | 14 | 1 | 1 | 1 | 13 | 80 | 1 | 1 | 389 | 13 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 300 | - | - | 300 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 9 | 1 | 15 | 1 | 1 | 1 | 14 | 88 | 1 | 1 | 427 | 14 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 554 | 553 | 434 | 561 | 560 | 89 | 441 | 0 | 0 | 89 | 0 | 0 |
| Stage 1 | 436 | 436 | - | 117 | 117 | - | - | - | - | - | - | - |
| Stage 2 | 118 | 117 | - | 444 | 443 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 443 | 441 | 622 | 438 | 437 | 969 | 1119 | - | - | 1506 | - | - |
| Stage 1 | 599 | 580 | - | 888 | 799 | - | - | - | - | - | - | - |
| Stage 2 | 887 | 799 | - | 593 | 576 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 437 | 435 | 622 | 422 | 431 | 969 | 1119 | - | - | 1506 | - | - |
| Mov Cap-2 Maneuver | 437 | 435 | - | 422 | 431 | - | - | - | - | - | - | - |
| Stage 1 | 591 | 579 | - | 876 | 789 | - | - | - | - | - | - | - |
| Stage 2 | 874 | 789 | - | 577 | 575 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | | | |
|----------------------|------|--|------|--|-----|--|----|--|--|--|
| HCM Control Delay, s | 12.1 | | 11.9 | | 1.1 | | 0 | | | |
| HCM LOS | B | | B | | | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|-------|-------|-------|-----|-----|
| Capacity (veh/h) | 1119 | - | - | 533 | 524 | 1506 | - | - |
| HCM Lane V/C Ratio | 0.013 | - | - | 0.047 | 0.006 | 0.001 | - | - |
| HCM Control Delay (s) | 8.3 | - | - | 12.1 | 11.9 | 7.4 | - | - |
| HCM Lane LOS | A | - | - | B | B | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.1 | 0 | 0 | - | - |

HCM 6th Signalized Intersection Summary
 3: CR 116 & CSAH 30

07/10/2023



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 11 | 283 | 13 | 56 | 488 | 78 | 34 | 295 | 131 | 51 | 83 | 17 |
| Future Volume (veh/h) | 11 | 283 | 13 | 56 | 488 | 78 | 34 | 295 | 131 | 51 | 83 | 17 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 12 | 308 | 14 | 61 | 530 | 0 | 37 | 321 | 142 | 55 | 90 | 18 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 255 | 602 | 510 | 430 | 677 | | 479 | 450 | 381 | 302 | 473 | 401 |
| Arrive On Green | 0.02 | 0.32 | 0.32 | 0.06 | 0.36 | 0.00 | 0.04 | 0.24 | 0.24 | 0.05 | 0.25 | 0.25 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 12 | 308 | 14 | 61 | 530 | 0 | 37 | 321 | 142 | 55 | 90 | 18 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 0.2 | 7.3 | 0.3 | 1.2 | 13.7 | 0.0 | 0.8 | 8.6 | 4.1 | 1.2 | 2.1 | 0.5 |
| Cycle Q Clear(g_c), s | 0.2 | 7.3 | 0.3 | 1.2 | 13.7 | 0.0 | 0.8 | 8.6 | 4.1 | 1.2 | 2.1 | 0.5 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 255 | 602 | 510 | 430 | 677 | | 479 | 450 | 381 | 302 | 473 | 401 |
| V/C Ratio(X) | 0.05 | 0.51 | 0.03 | 0.14 | 0.78 | | 0.08 | 0.71 | 0.37 | 0.18 | 0.19 | 0.04 |
| Avail Cap(c_a), veh/h | 408 | 2249 | 1906 | 511 | 2249 | | 589 | 1384 | 1173 | 396 | 1390 | 1178 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 13.3 | 15.0 | 12.6 | 11.5 | 15.5 | 0.0 | 14.4 | 19.0 | 17.3 | 14.8 | 16.0 | 15.4 |
| Incr Delay (d2), s/veh | 0.1 | 0.7 | 0.0 | 0.1 | 2.0 | 0.0 | 0.1 | 2.1 | 0.6 | 0.3 | 0.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 0.2 | 5.1 | 0.2 | 0.8 | 9.2 | 0.0 | 0.6 | 6.5 | 2.5 | 0.8 | 1.5 | 0.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 13.4 | 15.7 | 12.7 | 11.6 | 17.5 | 0.0 | 14.5 | 21.1 | 17.9 | 15.1 | 16.2 | 15.4 |
| LnGrp LOS | B | B | B | B | B | | B | C | B | B | B | B |
| Approach Vol, veh/h | | 334 | | | 591 | | | 500 | | | | 163 |
| Approach Delay, s/veh | | 15.5 | | | 16.9 | | | 19.7 | | | | 15.7 |
| Approach LOS | | B | | | B | | | B | | | | B |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 7.3 | 17.6 | 7.5 | 22.0 | 6.6 | 18.3 | 5.3 | 24.2 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.7 | 40.3 | 5.5 | 65.5 | 5.5 | 40.5 | 5.5 | 65.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.2 | 10.6 | 3.2 | 9.3 | 2.8 | 4.1 | 2.2 | 15.7 | | | | |
| Green Ext Time (p_c), s | 0.0 | 2.5 | 0.0 | 2.1 | 0.0 | 0.5 | 0.0 | 4.0 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 17.3 |
| HCM 6th LOS | B |

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↕ | ↕ | | ↕ | ↕ | |
| Traffic Vol, veh/h | 13 | 1 | 15 | 3 | 1 | 1 | 17 | 365 | 2 | 1 | 135 | 10 |
| Future Vol, veh/h | 13 | 1 | 15 | 3 | 1 | 1 | 17 | 365 | 2 | 1 | 135 | 10 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 300 | - | - | 300 | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 14 | 1 | 16 | 3 | 1 | 1 | 18 | 384 | 2 | 1 | 142 | 11 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 572 | 572 | 148 | 579 | 576 | 385 | 153 | 0 | 0 | 386 | 0 | 0 |
| Stage 1 | 150 | 150 | - | 421 | 421 | - | - | - | - | - | - | - |
| Stage 2 | 422 | 422 | - | 158 | 155 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 431 | 430 | 899 | 426 | 428 | 663 | 1428 | - | - | 1172 | - | - |
| Stage 1 | 853 | 773 | - | 610 | 589 | - | - | - | - | - | - | - |
| Stage 2 | 609 | 588 | - | 844 | 769 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 425 | 424 | 899 | 414 | 422 | 663 | 1428 | - | - | 1172 | - | - |
| Mov Cap-2 Maneuver | 425 | 424 | - | 414 | 422 | - | - | - | - | - | - | - |
| Stage 1 | 842 | 772 | - | 602 | 581 | - | - | - | - | - | - | - |
| Stage 2 | 599 | 580 | - | 827 | 768 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 11.5 | | 13.1 | | 0.3 | | 0.1 | |
| HCM LOS | B | | B | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1428 | - | - | 584 | 449 | 1172 | - |
| HCM Lane V/C Ratio | 0.013 | - | - | 0.052 | 0.012 | 0.001 | - |
| HCM Control Delay (s) | 7.6 | - | - | 11.5 | 13.1 | 8.1 | - |
| HCM Lane LOS | A | - | - | B | B | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.2 | 0 | 0 | - |

HCM 6th Signalized Intersection Summary

3: CR 116 & CSAH 30

07/10/2023



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 6 | 540 | 40 | 95 | 130 | 29 | 8 | 65 | 63 | 94 | 327 | 10 |
| Future Volume (veh/h) | 6 | 540 | 40 | 95 | 130 | 29 | 8 | 65 | 63 | 94 | 327 | 10 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 6 | 581 | 43 | 102 | 140 | 0 | 9 | 70 | 68 | 101 | 352 | 11 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 611 | 719 | 609 | 322 | 829 | | 208 | 354 | 300 | 433 | 457 | 387 |
| Arrive On Green | 0.01 | 0.38 | 0.38 | 0.07 | 0.44 | 0.00 | 0.01 | 0.19 | 0.19 | 0.07 | 0.24 | 0.24 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 6 | 581 | 43 | 102 | 140 | 0 | 9 | 70 | 68 | 101 | 352 | 11 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 0.1 | 17.1 | 1.1 | 2.0 | 2.8 | 0.0 | 0.2 | 1.9 | 2.2 | 2.7 | 10.8 | 0.3 |
| Cycle Q Clear(g_c), s | 0.1 | 17.1 | 1.1 | 2.0 | 2.8 | 0.0 | 0.2 | 1.9 | 2.2 | 2.7 | 10.8 | 0.3 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 611 | 719 | 609 | 322 | 829 | | 208 | 354 | 300 | 433 | 457 | 387 |
| V/C Ratio(X) | 0.01 | 0.81 | 0.07 | 0.32 | 0.17 | | 0.04 | 0.20 | 0.23 | 0.23 | 0.77 | 0.03 |
| Avail Cap(c_a), veh/h | 742 | 1689 | 1431 | 411 | 1756 | | 332 | 1166 | 988 | 488 | 1196 | 1014 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 11.4 | 16.9 | 12.0 | 12.3 | 10.3 | 0.0 | 20.2 | 21.0 | 21.1 | 17.4 | 21.6 | 17.7 |
| Incr Delay (d2), s/veh | 0.0 | 2.2 | 0.0 | 0.6 | 0.1 | 0.0 | 0.1 | 0.3 | 0.4 | 0.3 | 2.8 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 0.1 | 11.2 | 0.6 | 1.3 | 1.8 | 0.0 | 0.2 | 1.5 | 1.5 | 1.9 | 8.2 | 0.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 11.4 | 19.1 | 12.0 | 12.8 | 10.4 | 0.0 | 20.3 | 21.3 | 21.5 | 17.7 | 24.4 | 17.7 |
| LnGrp LOS | B | B | B | B | B | | C | C | C | B | C | B |
| Approach Vol, veh/h | | 630 | | | 242 | | | 147 | | | 464 | |
| Approach Delay, s/veh | | 18.6 | | | 11.4 | | | 21.3 | | | 22.8 | |
| Approach LOS | | B | | | B | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.6 | 16.1 | 8.6 | 28.1 | 5.2 | 19.5 | 5.0 | 31.7 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 6.0 | 38.3 | 7.2 | 55.5 | 5.0 | 39.3 | 5.0 | 57.7 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.7 | 4.2 | 4.0 | 19.1 | 2.2 | 12.8 | 2.1 | 4.8 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.6 | 0.1 | 4.6 | 0.0 | 2.2 | 0.0 | 0.9 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 19.0 |
| HCM 6th LOS | B |

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↗ | ↑ | ↗ | ↗ | ↑ | ↗ |
| Traffic Vol, veh/h | 9 | 1 | 15 | 1 | 1 | 1 | 14 | 87 | 1 | 1 | 421 | 14 |
| Future Vol, veh/h | 9 | 1 | 15 | 1 | 1 | 1 | 14 | 87 | 1 | 1 | 421 | 14 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 300 | - | 300 | 300 | - | 300 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 10 | 1 | 16 | 1 | 1 | 1 | 15 | 96 | 1 | 1 | 463 | 15 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 593 | 592 | 463 | 607 | 606 | 96 | 478 | 0 | 0 | 97 | 0 | 0 |
| Stage 1 | 465 | 465 | - | 126 | 126 | - | - | - | - | - | - | - |
| Stage 2 | 128 | 127 | - | 481 | 480 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 417 | 419 | 599 | 408 | 411 | 960 | 1084 | - | - | 1496 | - | - |
| Stage 1 | 578 | 563 | - | 878 | 792 | - | - | - | - | - | - | - |
| Stage 2 | 876 | 791 | - | 566 | 554 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 411 | 413 | 599 | 392 | 405 | 960 | 1084 | - | - | 1496 | - | - |
| Mov Cap-2 Maneuver | 411 | 413 | - | 392 | 405 | - | - | - | - | - | - | - |
| Stage 1 | 570 | 562 | - | 866 | 781 | - | - | - | - | - | - | - |
| Stage 2 | 862 | 780 | - | 549 | 553 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|----|--|
| HCM Control Delay, s | 12.5 | | 12.3 | | 1.1 | | 0 | |
| HCM LOS | B | | B | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1084 | - | - | 506 | 495 | 1496 | - |
| HCM Lane V/C Ratio | 0.014 | - | - | 0.054 | 0.007 | 0.001 | - |
| HCM Control Delay (s) | 8.4 | - | - | 12.5 | 12.3 | 7.4 | - |
| HCM Lane LOS | A | - | - | B | B | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.2 | 0 | 0 | - |

HCM 6th Signalized Intersection Summary

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 12 | 306 | 14 | 61 | 528 | 84 | 37 | 319 | 142 | 55 | 90 | 18 |
| Future Volume (veh/h) | 12 | 306 | 14 | 61 | 528 | 84 | 37 | 319 | 142 | 55 | 90 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 13 | 333 | 15 | 66 | 574 | 0 | 40 | 347 | 154 | 60 | 98 | 20 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 239 | 639 | 542 | 425 | 713 | | 474 | 468 | 396 | 285 | 490 | 415 |
| Arrive On Green | 0.02 | 0.34 | 0.34 | 0.06 | 0.38 | 0.00 | 0.04 | 0.25 | 0.25 | 0.05 | 0.26 | 0.26 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 13 | 333 | 15 | 66 | 574 | 0 | 40 | 347 | 154 | 60 | 98 | 20 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 0.3 | 8.6 | 0.4 | 1.4 | 16.4 | 0.0 | 1.0 | 10.3 | 4.8 | 1.5 | 2.4 | 0.6 |
| Cycle Q Clear(g_c), s | 0.3 | 8.6 | 0.4 | 1.4 | 16.4 | 0.0 | 1.0 | 10.3 | 4.8 | 1.5 | 2.4 | 0.6 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 239 | 639 | 542 | 425 | 713 | | 474 | 468 | 396 | 285 | 490 | 415 |
| V/C Ratio(X) | 0.05 | 0.52 | 0.03 | 0.16 | 0.81 | | 0.08 | 0.74 | 0.39 | 0.21 | 0.20 | 0.05 |
| Avail Cap(c_a), veh/h | 361 | 2035 | 1725 | 483 | 2041 | | 559 | 1262 | 1070 | 366 | 1281 | 1086 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 14.1 | 15.8 | 13.1 | 12.0 | 16.6 | 0.0 | 15.5 | 20.7 | 18.7 | 16.0 | 17.2 | 16.5 |
| Incr Delay (d2), s/veh | 0.1 | 0.7 | 0.0 | 0.2 | 2.2 | 0.0 | 0.1 | 2.3 | 0.6 | 0.4 | 0.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 0.2 | 6.1 | 0.2 | 0.9 | 10.8 | 0.0 | 0.7 | 7.9 | 3.1 | 1.0 | 1.8 | 0.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 14.2 | 16.5 | 13.1 | 12.1 | 18.8 | 0.0 | 15.6 | 23.1 | 19.3 | 16.4 | 17.4 | 16.6 |
| LnGrp LOS | B | B | B | B | B | | B | C | B | B | B | B |
| Approach Vol, veh/h | | 361 | | | 640 | | | 541 | | | 178 | |
| Approach Delay, s/veh | | 16.3 | | | 18.1 | | | 21.4 | | | 17.0 | |
| Approach LOS | | B | | | B | | | C | | | B | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 7.7 | 19.5 | 7.8 | 25.0 | 6.9 | 20.2 | 5.5 | 27.4 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.9 | 40.5 | 5.3 | 65.3 | 5.3 | 41.1 | 5.1 | 65.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 3.5 | 12.3 | 3.4 | 10.6 | 3.0 | 4.4 | 2.3 | 18.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 2.7 | 0.0 | 2.3 | 0.0 | 0.6 | 0.0 | 4.4 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 18.6 |
| HCM 6th LOS | B |

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↕ | ↑ | ↑ | ↕ | ↑ | ↕ |
| Traffic Vol, veh/h | 14 | 1 | 16 | 3 | 1 | 1 | 18 | 395 | 2 | 1 | 146 | 11 |
| Future Vol, veh/h | 14 | 1 | 16 | 3 | 1 | 1 | 18 | 395 | 2 | 1 | 146 | 11 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 300 | - | 300 | 300 | - | 300 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 15 | 1 | 17 | 3 | 1 | 1 | 19 | 416 | 2 | 1 | 154 | 12 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 612 | 612 | 154 | 625 | 622 | 416 | 166 | 0 | 0 | 418 | 0 | 0 |
| Stage 1 | 156 | 156 | - | 454 | 454 | - | - | - | - | - | - | - |
| Stage 2 | 456 | 456 | - | 171 | 168 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 405 | 408 | 892 | 397 | 403 | 637 | 1412 | - | - | 1141 | - | - |
| Stage 1 | 846 | 769 | - | 586 | 569 | - | - | - | - | - | - | - |
| Stage 2 | 584 | 568 | - | 831 | 759 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 399 | 402 | 892 | 384 | 397 | 637 | 1412 | - | - | 1141 | - | - |
| Mov Cap-2 Maneuver | 399 | 402 | - | 384 | 397 | - | - | - | - | - | - | - |
| Stage 1 | 835 | 768 | - | 578 | 562 | - | - | - | - | - | - | - |
| Stage 2 | 574 | 561 | - | 813 | 758 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|-----|--|
| HCM Control Delay, s | 11.9 | | 13.7 | | 0.3 | | 0.1 | |
| HCM LOS | B | | B | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1412 | - | - | 558 | 420 | 1141 | - |
| HCM Lane V/C Ratio | 0.013 | - | - | 0.058 | 0.013 | 0.001 | - |
| HCM Control Delay (s) | 7.6 | - | - | 11.9 | 13.7 | 8.2 | - |
| HCM Lane LOS | A | - | - | B | B | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.2 | 0 | 0 | - |

HCM 6th Signalized Intersection Summary
 3: CR 116 & CSAH 30

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 6 | 618 | 47 | 95 | 231 | 160 | 23 | 83 | 63 | 220 | 345 | 10 |
| Future Volume (veh/h) | 6 | 618 | 47 | 95 | 231 | 160 | 23 | 83 | 63 | 220 | 345 | 10 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 6 | 665 | 51 | 102 | 248 | 0 | 25 | 89 | 68 | 237 | 371 | 11 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 557 | 788 | 667 | 280 | 885 | | 206 | 252 | 213 | 457 | 459 | 389 |
| Arrive On Green | 0.01 | 0.42 | 0.42 | 0.06 | 0.47 | 0.00 | 0.03 | 0.13 | 0.13 | 0.14 | 0.25 | 0.25 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 6 | 665 | 51 | 102 | 248 | 0 | 25 | 89 | 68 | 237 | 371 | 11 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 0.1 | 23.3 | 1.4 | 2.2 | 5.9 | 0.0 | 0.9 | 3.2 | 2.8 | 7.8 | 13.6 | 0.4 |
| Cycle Q Clear(g_c), s | 0.1 | 23.3 | 1.4 | 2.2 | 5.9 | 0.0 | 0.9 | 3.2 | 2.8 | 7.8 | 13.6 | 0.4 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 557 | 788 | 667 | 280 | 885 | | 206 | 252 | 213 | 457 | 459 | 389 |
| V/C Ratio(X) | 0.01 | 0.84 | 0.08 | 0.36 | 0.28 | | 0.12 | 0.35 | 0.32 | 0.52 | 0.81 | 0.03 |
| Avail Cap(c_a), veh/h | 665 | 1474 | 1249 | 357 | 1538 | | 279 | 695 | 589 | 575 | 948 | 804 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 12.0 | 19.0 | 12.6 | 14.5 | 11.7 | 0.0 | 26.2 | 28.7 | 28.6 | 20.9 | 25.9 | 20.9 |
| Incr Delay (d2), s/veh | 0.0 | 2.6 | 0.0 | 0.8 | 0.2 | 0.0 | 0.3 | 0.8 | 0.9 | 0.9 | 3.5 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 0.1 | 14.8 | 0.9 | 1.5 | 4.1 | 0.0 | 0.7 | 2.6 | 2.0 | 5.8 | 10.3 | 0.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 12.0 | 21.6 | 12.7 | 15.3 | 11.8 | 0.0 | 26.5 | 29.5 | 29.4 | 21.8 | 29.4 | 21.0 |
| LnGrp LOS | B | C | B | B | B | | C | C | C | C | C | C |
| Approach Vol, veh/h | | 722 | | | 350 | | | 182 | | | 619 | |
| Approach Delay, s/veh | | 20.9 | | | 12.9 | | | 29.1 | | | 26.3 | |
| Approach LOS | | C | | | B | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 14.6 | 14.3 | 8.9 | 35.2 | 6.5 | 22.4 | 5.1 | 39.0 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 14.9 | 27.1 | 7.5 | 57.5 | 5.0 | 37.0 | 5.0 | 60.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 9.8 | 5.2 | 4.2 | 25.3 | 2.9 | 15.6 | 2.1 | 7.9 | | | | |
| Green Ext Time (p_c), s | 0.3 | 0.6 | 0.1 | 5.4 | 0.0 | 2.3 | 0.0 | 1.6 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 22.0 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 8.2 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↗ | ↑ | ↗ | ↗ | ↑ | ↗ |
| Traffic Vol, veh/h | 60 | 1 | 180 | 1 | 1 | 1 | 170 | 80 | 1 | 1 | 400 | 87 |
| Future Vol, veh/h | 60 | 1 | 180 | 1 | 1 | 1 | 170 | 80 | 1 | 1 | 400 | 87 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 300 | - | 300 | 300 | - | 300 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 66 | 1 | 198 | 1 | 1 | 1 | 187 | 88 | 1 | 1 | 440 | 96 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 906 | 905 | 440 | 1052 | 1000 | 88 | 536 | 0 | 0 | 89 | 0 | 0 |
| Stage 1 | 442 | 442 | - | 462 | 462 | - | - | - | - | - | - | - |
| Stage 2 | 464 | 463 | - | 590 | 538 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 257 | 276 | 617 | 204 | 243 | 970 | 1032 | - | - | 1506 | - | - |
| Stage 1 | 594 | 576 | - | 580 | 565 | - | - | - | - | - | - | - |
| Stage 2 | 578 | 564 | - | 494 | 522 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 220 | 226 | 617 | 119 | 199 | 970 | 1032 | - | - | 1506 | - | - |
| Mov Cap-2 Maneuver | 220 | 226 | - | 119 | 199 | - | - | - | - | - | - | - |
| Stage 1 | 486 | 575 | - | 475 | 463 | - | - | - | - | - | - | - |
| Stage 2 | 472 | 462 | - | 335 | 521 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|----|--|
| HCM Control Delay, s | 26.6 | | 22.7 | | 6.3 | | 0 | |
| HCM LOS | D | | C | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1032 | - | - | 424 | 207 | 1506 | - |
| HCM Lane V/C Ratio | 0.181 | - | - | 0.625 | 0.016 | 0.001 | - |
| HCM Control Delay (s) | 9.3 | - | - | 26.6 | 22.7 | 7.4 | - |
| HCM Lane LOS | A | - | - | D | C | A | - |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 4.1 | 0 | 0 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 3.5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↖ | ↗ | ↗ | ↖ | ↖ | ↖ |
| Traffic Vol, veh/h | 48 | 555 | 137 | 135 | 121 | 25 |
| Future Vol, veh/h | 48 | 555 | 137 | 135 | 121 | 25 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 300 | - | - | 300 | 300 | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 52 | 603 | 149 | 147 | 132 | 27 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 296 | 0 | - | 0 | 856 149 |
| Stage 1 | - | - | - | - | 149 - |
| Stage 2 | - | - | - | - | 707 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1265 | - | - | - | 328 898 |
| Stage 1 | - | - | - | - | 879 - |
| Stage 2 | - | - | - | - | 489 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1265 | - | - | - | 315 898 |
| Mov Cap-2 Maneuver | - | - | - | - | 315 - |
| Stage 1 | - | - | - | - | 843 - |
| Stage 2 | - | - | - | - | 489 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.6 | 0 | 21.8 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 1265 | - | - | - | 315 | 898 |
| HCM Lane V/C Ratio | 0.041 | - | - | - | 0.418 | 0.03 |
| HCM Control Delay (s) | 8 | - | - | - | 24.4 | 9.1 |
| HCM Lane LOS | A | - | - | - | C | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 2 | 0.1 |

HCM 6th Signalized Intersection Summary

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 12 | 417 | 28 | 61 | 584 | 215 | 45 | 338 | 142 | 203 | 111 | 18 |
| Future Volume (veh/h) | 12 | 417 | 28 | 61 | 584 | 215 | 45 | 338 | 142 | 203 | 111 | 18 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 13 | 453 | 30 | 66 | 635 | 0 | 49 | 367 | 154 | 221 | 121 | 20 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 191 | 685 | 580 | 327 | 746 | | 468 | 452 | 383 | 346 | 589 | 499 |
| Arrive On Green | 0.02 | 0.37 | 0.37 | 0.05 | 0.40 | 0.00 | 0.04 | 0.24 | 0.24 | 0.11 | 0.31 | 0.31 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 13 | 453 | 30 | 66 | 635 | 0 | 49 | 367 | 154 | 221 | 121 | 20 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 0.4 | 15.9 | 1.0 | 1.8 | 24.3 | 0.0 | 1.6 | 14.6 | 6.4 | 6.9 | 3.7 | 0.7 |
| Cycle Q Clear(g_c), s | 0.4 | 15.9 | 1.0 | 1.8 | 24.3 | 0.0 | 1.6 | 14.6 | 6.4 | 6.9 | 3.7 | 0.7 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 191 | 685 | 580 | 327 | 746 | | 468 | 452 | 383 | 346 | 589 | 499 |
| V/C Ratio(X) | 0.07 | 0.66 | 0.05 | 0.20 | 0.85 | | 0.10 | 0.81 | 0.40 | 0.64 | 0.21 | 0.04 |
| Avail Cap(c_a), veh/h | 276 | 1598 | 1354 | 361 | 1605 | | 509 | 761 | 645 | 425 | 937 | 794 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 18.2 | 20.9 | 16.1 | 15.7 | 21.5 | 0.0 | 20.8 | 28.1 | 25.0 | 19.5 | 19.7 | 18.7 |
| Incr Delay (d2), s/veh | 0.1 | 1.1 | 0.0 | 0.3 | 2.9 | 0.0 | 0.1 | 3.5 | 0.7 | 2.3 | 0.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 0.3 | 11.0 | 0.6 | 1.3 | 15.7 | 0.0 | 1.2 | 10.9 | 4.3 | 5.2 | 2.9 | 0.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 18.3 | 22.0 | 16.1 | 16.0 | 24.4 | 0.0 | 20.8 | 31.7 | 25.7 | 21.7 | 19.9 | 18.7 |
| LnGrp LOS | B | C | B | B | C | | C | C | C | C | B | B |
| Approach Vol, veh/h | | 496 | | | 701 | | | 570 | | | | 362 |
| Approach Delay, s/veh | | 21.5 | | | 23.6 | | | 29.1 | | | | 20.9 |
| Approach LOS | | C | | | C | | | C | | | | C |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 13.5 | 23.5 | 8.3 | 33.3 | 7.8 | 29.3 | 5.7 | 35.9 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 12.5 | 32.0 | 5.3 | 67.2 | 5.1 | 39.4 | 5.0 | 67.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 8.9 | 16.6 | 3.8 | 17.9 | 3.6 | 5.7 | 2.4 | 26.3 | | | | |
| Green Ext Time (p_c), s | 0.2 | 2.5 | 0.0 | 3.3 | 0.0 | 0.7 | 0.0 | 5.1 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 24.1 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 8 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↗ | ↖ | ↗ | ↖ | ↖ | ↗ |
| Traffic Vol, veh/h | 85 | 1 | 190 | 3 | 1 | 1 | 175 | 379 | 2 | 1 | 141 | 60 |
| Future Vol, veh/h | 85 | 1 | 190 | 3 | 1 | 1 | 175 | 379 | 2 | 1 | 141 | 60 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 300 | - | 300 | 300 | - | 300 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 89 | 1 | 200 | 3 | 1 | 1 | 184 | 399 | 2 | 1 | 148 | 63 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 919 | 919 | 148 | 1049 | 980 | 399 | 211 | 0 | 0 | 401 | 0 | 0 |
| Stage 1 | 150 | 150 | - | 767 | 767 | - | - | - | - | - | - | - |
| Stage 2 | 769 | 769 | - | 282 | 213 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 252 | 271 | 899 | 205 | 250 | 651 | 1360 | - | - | 1158 | - | - |
| Stage 1 | 853 | 773 | - | 395 | 411 | - | - | - | - | - | - | - |
| Stage 2 | 394 | 411 | - | 725 | 726 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 225 | 234 | 899 | 142 | 216 | 651 | 1360 | - | - | 1158 | - | - |
| Mov Cap-2 Maneuver | 225 | 234 | - | 142 | 216 | - | - | - | - | - | - | - |
| Stage 1 | 738 | 772 | - | 342 | 356 | - | - | - | - | - | - | - |
| Stage 2 | 339 | 356 | - | 562 | 725 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|----|--|
| HCM Control Delay, s | 24.8 | | 25.3 | | 2.5 | | 0 | |
| HCM LOS | C | | D | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1360 | - | - | 465 | 183 | 1158 | - |
| HCM Lane V/C Ratio | 0.135 | - | - | 0.625 | 0.029 | 0.001 | - |
| HCM Control Delay (s) | 8.1 | - | - | 24.8 | 25.3 | 8.1 | - |
| HCM Lane LOS | A | - | - | C | D | A | - |
| HCM 95th %tile Q(veh) | 0.5 | - | - | 4.2 | 0.1 | 0 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 5 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↘ | ↗ | ↗ | ↘ | ↘ | ↘ |
| Traffic Vol, veh/h | 27 | 321 | 563 | 111 | 138 | 39 |
| Future Vol, veh/h | 27 | 321 | 563 | 111 | 138 | 39 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 300 | - | - | 300 | 300 | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 349 | 612 | 121 | 150 | 42 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 733 | 0 | - | 0 | 1019 612 |
| Stage 1 | - | - | - | - | 612 - |
| Stage 2 | - | - | - | - | 407 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 872 | - | - | - | 263 493 |
| Stage 1 | - | - | - | - | 541 - |
| Stage 2 | - | - | - | - | 672 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 872 | - | - | - | 254 493 |
| Mov Cap-2 Maneuver | - | - | - | - | 254 - |
| Stage 1 | - | - | - | - | 523 - |
| Stage 2 | - | - | - | - | 672 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.7 | 0 | 32.3 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 872 | - | - | - | 254 | 493 |
| HCM Lane V/C Ratio | 0.034 | - | - | - | 0.591 | 0.086 |
| HCM Control Delay (s) | 9.3 | - | - | - | 37.7 | 13 |
| HCM Lane LOS | A | - | - | - | E | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 3.4 | 0.3 |

HCM 6th Signalized Intersection Summary

3: CR 116 & CSAH 30

07/10/2023



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 8 | 654 | 48 | 115 | 157 | 35 | 9 | 79 | 76 | 114 | 396 | 12 |
| Future Volume (veh/h) | 8 | 654 | 48 | 115 | 157 | 35 | 9 | 79 | 76 | 114 | 396 | 12 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 9 | 703 | 52 | 124 | 169 | 0 | 10 | 85 | 82 | 123 | 426 | 13 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 633 | 814 | 690 | 260 | 902 | | 165 | 398 | 337 | 429 | 508 | 430 |
| Arrive On Green | 0.01 | 0.44 | 0.44 | 0.06 | 0.48 | 0.00 | 0.01 | 0.21 | 0.21 | 0.07 | 0.27 | 0.27 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 9 | 703 | 52 | 124 | 169 | 0 | 10 | 85 | 82 | 123 | 426 | 13 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 0.2 | 27.5 | 1.5 | 3.0 | 4.2 | 0.0 | 0.4 | 3.0 | 3.5 | 4.1 | 17.4 | 0.5 |
| Cycle Q Clear(g_c), s | 0.2 | 27.5 | 1.5 | 3.0 | 4.2 | 0.0 | 0.4 | 3.0 | 3.5 | 4.1 | 17.4 | 0.5 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 633 | 814 | 690 | 260 | 902 | | 165 | 398 | 337 | 429 | 508 | 430 |
| V/C Ratio(X) | 0.01 | 0.86 | 0.08 | 0.48 | 0.19 | | 0.06 | 0.21 | 0.24 | 0.29 | 0.84 | 0.03 |
| Avail Cap(c_a), veh/h | 723 | 1308 | 1108 | 322 | 1366 | | 253 | 849 | 720 | 441 | 880 | 745 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 12.4 | 20.7 | 13.3 | 16.7 | 11.9 | 0.0 | 25.4 | 26.2 | 26.4 | 20.9 | 27.8 | 21.6 |
| Incr Delay (d2), s/veh | 0.0 | 3.6 | 0.0 | 1.4 | 0.1 | 0.0 | 0.2 | 0.3 | 0.4 | 0.4 | 3.8 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 0.2 | 17.5 | 1.0 | 2.1 | 3.0 | 0.0 | 0.3 | 2.4 | 2.4 | 3.1 | 12.6 | 0.3 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 12.5 | 24.3 | 13.4 | 18.0 | 12.0 | 0.0 | 25.6 | 26.5 | 26.8 | 21.3 | 31.6 | 21.7 |
| LnGrp LOS | B | C | B | B | B | | C | C | C | C | C | C |
| Approach Vol, veh/h | | 764 | | | 293 | | | 177 | | | 562 | |
| Approach Delay, s/veh | | 23.4 | | | 14.6 | | | 26.6 | | | 29.1 | |
| Approach LOS | | C | | | B | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 10.3 | 21.7 | 9.2 | 39.7 | 5.5 | 26.4 | 5.4 | 43.5 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 6.3 | 36.7 | 7.5 | 56.5 | 5.0 | 38.0 | 5.0 | 59.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 6.1 | 5.5 | 5.0 | 29.5 | 2.4 | 19.4 | 2.2 | 6.2 | | | | |
| Green Ext Time (p_c), s | 0.0 | 0.7 | 0.1 | 5.7 | 0.0 | 2.6 | 0.0 | 1.0 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 24.1 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 0.9 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↗ | ↖ | ↗ | ↖ | ↖ | ↗ |
| Traffic Vol, veh/h | 10 | 1 | 18 | 1 | 1 | 1 | 17 | 105 | 1 | 1 | 509 | 17 |
| Future Vol, veh/h | 10 | 1 | 18 | 1 | 1 | 1 | 17 | 105 | 1 | 1 | 509 | 17 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 300 | - | 300 | 300 | - | 300 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 11 | 1 | 20 | 1 | 1 | 1 | 19 | 115 | 1 | 1 | 559 | 19 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 716 | 715 | 559 | 734 | 733 | 115 | 578 | 0 | 0 | 116 | 0 | 0 |
| Stage 1 | 561 | 561 | - | 153 | 153 | - | - | - | - | - | - | - |
| Stage 2 | 155 | 154 | - | 581 | 580 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 345 | 356 | 529 | 336 | 348 | 937 | 996 | - | - | 1473 | - | - |
| Stage 1 | 512 | 510 | - | 849 | 771 | - | - | - | - | - | - | - |
| Stage 2 | 847 | 770 | - | 499 | 500 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 338 | 349 | 529 | 318 | 341 | 937 | 996 | - | - | 1473 | - | - |
| Mov Cap-2 Maneuver | 338 | 349 | - | 318 | 341 | - | - | - | - | - | - | - |
| Stage 1 | 502 | 509 | - | 833 | 756 | - | - | - | - | - | - | - |
| Stage 2 | 829 | 755 | - | 479 | 500 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|----|--|
| HCM Control Delay, s | 13.9 | | 13.6 | | 1.2 | | 0 | |
| HCM LOS | B | | B | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 996 | - | - | 436 | 420 | 1473 | - |
| HCM Lane V/C Ratio | 0.019 | - | - | 0.073 | 0.008 | 0.001 | - |
| HCM Control Delay (s) | 8.7 | - | - | 13.9 | 13.6 | 7.4 | - |
| HCM Lane LOS | A | - | - | B | B | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.2 | 0 | 0 | - |

HCM 6th Signalized Intersection Summary
 3: CR 116 & CSAH 30

07/10/2023



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↗ | ↘ | ↖ | ↗ | | ↖ | ↗ | ↘ | ↖ | ↗ | ↘ |
| Traffic Volume (veh/h) | 14 | 371 | 17 | 73 | 639 | 102 | 45 | 386 | 172 | 67 | 109 | 22 |
| Future Volume (veh/h) | 14 | 371 | 17 | 73 | 639 | 102 | 45 | 386 | 172 | 67 | 109 | 22 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 15 | 403 | 18 | 79 | 695 | 0 | 49 | 420 | 187 | 73 | 118 | 24 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 194 | 745 | 631 | 407 | 808 | | 458 | 515 | 437 | 232 | 531 | 450 |
| Arrive On Green | 0.02 | 0.40 | 0.40 | 0.05 | 0.43 | 0.00 | 0.04 | 0.28 | 0.28 | 0.05 | 0.28 | 0.28 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 15 | 403 | 18 | 79 | 695 | 0 | 49 | 420 | 187 | 73 | 118 | 24 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 0.4 | 13.2 | 0.6 | 2.0 | 26.9 | 0.0 | 1.5 | 16.8 | 7.8 | 2.3 | 3.9 | 0.9 |
| Cycle Q Clear(g_c), s | 0.4 | 13.2 | 0.6 | 2.0 | 26.9 | 0.0 | 1.5 | 16.8 | 7.8 | 2.3 | 3.9 | 0.9 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 194 | 745 | 631 | 407 | 808 | | 458 | 515 | 437 | 232 | 531 | 450 |
| V/C Ratio(X) | 0.08 | 0.54 | 0.03 | 0.19 | 0.86 | | 0.11 | 0.82 | 0.43 | 0.31 | 0.22 | 0.05 |
| Avail Cap(c_a), veh/h | 275 | 1538 | 1303 | 442 | 1552 | | 497 | 936 | 793 | 261 | 940 | 797 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 17.5 | 18.5 | 14.7 | 13.8 | 20.6 | 0.0 | 19.3 | 27.1 | 23.9 | 21.0 | 21.9 | 20.9 |
| Incr Delay (d2), s/veh | 0.2 | 0.6 | 0.0 | 0.2 | 2.8 | 0.0 | 0.1 | 3.2 | 0.7 | 0.8 | 0.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 0.3 | 9.4 | 0.3 | 1.4 | 17.0 | 0.0 | 1.1 | 12.2 | 5.2 | 1.7 | 3.0 | 0.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 17.7 | 19.1 | 14.7 | 14.0 | 23.4 | 0.0 | 19.4 | 30.3 | 24.5 | 21.7 | 22.1 | 20.9 |
| LnGrp LOS | B | B | B | B | C | | B | C | C | C | C | C |
| Approach Vol, veh/h | | 436 | | | 774 | | | 656 | | | 215 | |
| Approach Delay, s/veh | | 18.9 | | | 22.4 | | | 27.9 | | | 21.9 | |
| Approach LOS | | B | | | C | | | C | | | C | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 8.5 | 26.6 | 8.6 | 36.4 | 7.8 | 27.3 | 5.9 | 39.1 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 5.3 | 40.1 | 5.7 | 65.9 | 5.1 | 40.3 | 5.1 | 66.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.3 | 18.8 | 4.0 | 15.2 | 3.5 | 5.9 | 2.4 | 28.9 | | | | |
| Green Ext Time (p_c), s | 0.0 | 3.3 | 0.0 | 2.9 | 0.0 | 0.7 | 0.0 | 5.7 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 23.3 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
6: CR 116 & Hunters Ridge

03/29/2023

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↗ | ↖ | ↗ | ↖ | ↖ | ↗ |
| Traffic Vol, veh/h | 17 | 1 | 20 | 4 | 1 | 1 | 22 | 478 | 3 | 1 | 177 | 13 |
| Future Vol, veh/h | 17 | 1 | 20 | 4 | 1 | 1 | 22 | 478 | 3 | 1 | 177 | 13 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 300 | - | 300 | 300 | - | 300 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 18 | 1 | 21 | 4 | 1 | 1 | 23 | 503 | 3 | 1 | 186 | 14 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 740 | 740 | 186 | 755 | 751 | 503 | 200 | 0 | 0 | 506 | 0 | 0 |
| Stage 1 | 188 | 188 | - | 549 | 549 | - | - | - | - | - | - | - |
| Stage 2 | 552 | 552 | - | 206 | 202 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 333 | 345 | 856 | 325 | 340 | 569 | 1372 | - | - | 1059 | - | - |
| Stage 1 | 814 | 745 | - | 520 | 516 | - | - | - | - | - | - | - |
| Stage 2 | 518 | 515 | - | 796 | 734 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 327 | 339 | 856 | 312 | 334 | 569 | 1372 | - | - | 1059 | - | - |
| Mov Cap-2 Maneuver | 327 | 339 | - | 312 | 334 | - | - | - | - | - | - | - |
| Stage 1 | 800 | 744 | - | 511 | 507 | - | - | - | - | - | - | - |
| Stage 2 | 507 | 506 | - | 775 | 733 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|----|--|
| HCM Control Delay, s | 13.1 | | 15.8 | | 0.3 | | 0 | |
| HCM LOS | B | | C | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1372 | - | - | 485 | 341 | 1059 | - |
| HCM Lane V/C Ratio | 0.017 | - | - | 0.082 | 0.019 | 0.001 | - |
| HCM Control Delay (s) | 7.7 | - | - | 13.1 | 15.8 | 8.4 | - |
| HCM Lane LOS | A | - | - | B | C | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.3 | 0.1 | 0 | - |

HCM 6th Signalized Intersection Summary

3: CR 116 & CSAH 30

07/10/2023



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 8 | 732 | 59 | 115 | 266 | 166 | 25 | 97 | 76 | 240 | 414 | 12 |
| Future Volume (veh/h) | 8 | 732 | 59 | 115 | 266 | 166 | 25 | 97 | 76 | 240 | 414 | 12 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 9 | 787 | 63 | 124 | 286 | 0 | 27 | 104 | 82 | 258 | 445 | 13 |
| Peak Hour Factor | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 552 | 873 | 740 | 219 | 952 | | 161 | 298 | 253 | 450 | 507 | 429 |
| Arrive On Green | 0.01 | 0.47 | 0.47 | 0.05 | 0.51 | 0.00 | 0.03 | 0.16 | 0.16 | 0.14 | 0.27 | 0.27 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 9 | 787 | 63 | 124 | 286 | 0 | 27 | 104 | 82 | 258 | 445 | 13 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 0.3 | 38.2 | 2.2 | 3.4 | 8.7 | 0.0 | 1.2 | 4.9 | 4.5 | 11.4 | 22.5 | 0.6 |
| Cycle Q Clear(g_c), s | 0.3 | 38.2 | 2.2 | 3.4 | 8.7 | 0.0 | 1.2 | 4.9 | 4.5 | 11.4 | 22.5 | 0.6 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 552 | 873 | 740 | 219 | 952 | | 161 | 298 | 253 | 450 | 507 | 429 |
| V/C Ratio(X) | 0.02 | 0.90 | 0.09 | 0.56 | 0.30 | | 0.17 | 0.35 | 0.32 | 0.57 | 0.88 | 0.03 |
| Avail Cap(c_a), veh/h | 623 | 1109 | 940 | 242 | 1138 | | 204 | 487 | 413 | 499 | 701 | 594 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 13.6 | 24.2 | 14.6 | 21.3 | 14.0 | 0.0 | 33.9 | 36.9 | 36.7 | 27.2 | 34.4 | 26.4 |
| Incr Delay (d2), s/veh | 0.0 | 8.6 | 0.0 | 2.5 | 0.2 | 0.0 | 0.5 | 0.7 | 0.7 | 1.3 | 9.3 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 0.2 | 25.0 | 1.4 | 2.6 | 6.5 | 0.0 | 1.0 | 4.1 | 3.2 | 8.6 | 16.8 | 0.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 13.6 | 32.8 | 14.7 | 23.8 | 14.2 | 0.0 | 34.4 | 37.6 | 37.5 | 28.4 | 43.7 | 26.5 |
| LnGrp LOS | B | C | B | C | B | | C | D | D | C | D | C |
| Approach Vol, veh/h | | 859 | | | 410 | | | 213 | | | 716 | |
| Approach Delay, s/veh | | 31.3 | | | 17.1 | | | 37.1 | | | 37.9 | |
| Approach LOS | | C | | | B | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 18.1 | 20.2 | 9.8 | 50.5 | 7.1 | 31.2 | 5.6 | 54.7 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 16.3 | 25.7 | 6.5 | 58.5 | 5.0 | 37.0 | 5.0 | 60.0 | | | | |
| Max Q Clear Time (g_c+I1), s | 13.4 | 6.9 | 5.4 | 40.2 | 3.2 | 24.5 | 2.3 | 10.7 | | | | |
| Green Ext Time (p_c), s | 0.2 | 0.7 | 0.0 | 5.8 | 0.0 | 2.3 | 0.0 | 1.9 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 31.4 |
| HCM 6th LOS | C |

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 10.5 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↕ | ↑ | ↑ | ↕ | ↑ | ↕ |
| Traffic Vol, veh/h | 61 | 1 | 183 | 1 | 1 | 1 | 173 | 98 | 1 | 1 | 488 | 90 |
| Future Vol, veh/h | 61 | 1 | 183 | 1 | 1 | 1 | 173 | 98 | 1 | 1 | 488 | 90 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 300 | - | 300 | 300 | - | 300 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 | 91 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 67 | 1 | 201 | 1 | 1 | 1 | 190 | 108 | 1 | 1 | 536 | 99 |

| Major/Minor | Minor2 | | Minor1 | | | Major1 | | Major2 | | | | |
|----------------------|--------|-------|--------|-------|-------|--------|-------|--------|---|-------|---|---|
| Conflicting Flow All | 1028 | 1027 | 536 | 1177 | 1125 | 108 | 635 | 0 | 0 | 109 | 0 | 0 |
| Stage 1 | 538 | 538 | - | 488 | 488 | - | - | - | - | - | - | - |
| Stage 2 | 490 | 489 | - | 689 | 637 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 212 | 234 | 545 | 168 | 205 | 946 | 948 | - | - | 1481 | - | - |
| Stage 1 | 527 | 522 | - | 561 | 550 | - | - | - | - | - | - | - |
| Stage 2 | 560 | 549 | - | 436 | 471 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 178 | 187 | 545 | 89 | 164 | 946 | 948 | - | - | 1481 | - | - |
| Mov Cap-2 Maneuver | 178 | 187 | - | 89 | 164 | - | - | - | - | - | - | - |
| Stage 1 | 422 | 521 | - | 449 | 440 | - | - | - | - | - | - | - |
| Stage 2 | 446 | 439 | - | 274 | 471 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|----|------|-----|----|
| HCM Control Delay, s | 40 | 27.5 | 6.2 | 0 |
| HCM LOS | E | D | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|------|-------|-----|
| Capacity (veh/h) | 948 | - | - | 358 | 163 | 1481 | - |
| HCM Lane V/C Ratio | 0.201 | - | - | 0.752 | 0.02 | 0.001 | - |
| HCM Control Delay (s) | 9.7 | - | - | 40 | 27.5 | 7.4 | - |
| HCM Lane LOS | A | - | - | E | D | A | - |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 5.9 | 0.1 | 0 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 4 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↘ | ↗ | ↗ | ↘ | ↘ | ↘ |
| Traffic Vol, veh/h | 48 | 678 | 168 | 135 | 121 | 25 |
| Future Vol, veh/h | 48 | 678 | 168 | 135 | 121 | 25 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 300 | - | - | 300 | 300 | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 52 | 737 | 183 | 147 | 132 | 27 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 330 | 0 | - | 0 | 1024 183 |
| Stage 1 | - | - | - | - | 183 - |
| Stage 2 | - | - | - | - | 841 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 1229 | - | - | - | 261 859 |
| Stage 1 | - | - | - | - | 848 - |
| Stage 2 | - | - | - | - | 423 - |
| Platoon blocked, % | | - | - | - | |
| Mov Cap-1 Maneuver | 1229 | - | - | - | 250 859 |
| Mov Cap-2 Maneuver | - | - | - | - | 250 - |
| Stage 1 | - | - | - | - | 812 - |
| Stage 2 | - | - | - | - | 423 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 0.5 | 0 | 30 |
| HCM LOS | | | D |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 1229 | - | - | - | 250 | 859 |
| HCM Lane V/C Ratio | 0.042 | - | - | - | 0.526 | 0.032 |
| HCM Control Delay (s) | 8.1 | - | - | - | 34.3 | 9.3 |
| HCM Lane LOS | A | - | - | - | D | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 2.8 | 0.1 |

HCM 6th Signalized Intersection Summary
 3: CR 116 & CSAH 30

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| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 14 | 482 | 33 | 73 | 718 | 233 | 56 | 405 | 172 | 215 | 130 | 22 |
| Future Volume (veh/h) | 14 | 482 | 33 | 73 | 718 | 233 | 56 | 405 | 172 | 215 | 130 | 22 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 15 | 524 | 36 | 79 | 780 | 0 | 61 | 440 | 187 | 234 | 141 | 24 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 145 | 814 | 690 | 321 | 859 | | 449 | 484 | 411 | 273 | 606 | 514 |
| Arrive On Green | 0.02 | 0.44 | 0.44 | 0.04 | 0.46 | 0.00 | 0.04 | 0.26 | 0.26 | 0.10 | 0.32 | 0.32 |
| Sat Flow, veh/h | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Grp Volume(v), veh/h | 15 | 524 | 36 | 79 | 780 | 0 | 61 | 440 | 187 | 234 | 141 | 24 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1870 | 1585 | 1781 | 1870 | 0 | 1781 | 1870 | 1585 | 1781 | 1870 | 1585 |
| Q Serve(g_s), s | 0.5 | 24.5 | 1.5 | 2.7 | 43.1 | 0.0 | 2.8 | 25.4 | 11.0 | 10.4 | 6.1 | 1.2 |
| Cycle Q Clear(g_c), s | 0.5 | 24.5 | 1.5 | 2.7 | 43.1 | 0.0 | 2.8 | 25.4 | 11.0 | 10.4 | 6.1 | 1.2 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 0.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 145 | 814 | 690 | 321 | 859 | | 449 | 484 | 411 | 273 | 606 | 514 |
| V/C Ratio(X) | 0.10 | 0.64 | 0.05 | 0.25 | 0.91 | | 0.14 | 0.91 | 0.46 | 0.86 | 0.23 | 0.05 |
| Avail Cap(c_a), veh/h | 195 | 1137 | 963 | 340 | 1150 | | 462 | 537 | 455 | 273 | 645 | 546 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 24.4 | 24.7 | 18.2 | 18.9 | 27.9 | 0.0 | 28.5 | 40.0 | 34.7 | 28.7 | 27.5 | 25.8 |
| Incr Delay (d2), s/veh | 0.3 | 0.9 | 0.0 | 0.4 | 8.5 | 0.0 | 0.1 | 18.3 | 0.8 | 22.5 | 0.2 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 0.4 | 16.2 | 1.0 | 2.0 | 28.0 | 0.0 | 2.2 | 20.1 | 7.8 | 10.1 | 5.0 | 0.8 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 24.7 | 25.5 | 18.2 | 19.3 | 36.4 | 0.0 | 28.6 | 58.2 | 35.5 | 51.2 | 27.7 | 25.9 |
| LnGrp LOS | C | C | B | B | D | | C | E | D | D | C | C |
| Approach Vol, veh/h | | 575 | | | 859 | | | 688 | | | 399 | |
| Approach Delay, s/veh | | 25.1 | | | 34.8 | | | 49.4 | | | 41.4 | |
| Approach LOS | | C | | | C | | | D | | | D | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 16.0 | 33.4 | 9.1 | 53.0 | 8.7 | 40.6 | 6.4 | 55.7 | | | | |
| Change Period (Y+Rc), s | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | | | | |
| Max Green Setting (Gmax), s | 11.5 | 32.0 | 5.8 | 67.7 | 5.1 | 38.4 | 5.0 | 68.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 12.4 | 27.4 | 4.7 | 26.5 | 4.8 | 8.1 | 2.5 | 45.1 | | | | |
| Green Ext Time (p_c), s | 0.0 | 1.5 | 0.0 | 4.0 | 0.0 | 0.9 | 0.0 | 6.1 | | | | |

Intersection Summary

| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 37.6 |
| HCM 6th LOS | D |

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh | 10.3 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↕ | | | ↕ | | ↗ | ↖ | ↗ | ↖ | ↖ | ↗ |
| Traffic Vol, veh/h | 88 | 1 | 194 | 4 | 1 | 1 | 179 | 462 | 3 | 1 | 172 | 62 |
| Future Vol, veh/h | 88 | 1 | 194 | 4 | 1 | 1 | 179 | 462 | 3 | 1 | 172 | 62 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | 300 | - | 300 | 300 | - | 300 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 93 | 1 | 204 | 4 | 1 | 1 | 188 | 486 | 3 | 1 | 181 | 65 |

| Major/Minor | Minor2 | | Minor1 | | Major1 | | Major2 | | | | | |
|----------------------|--------|-------|--------|-------|--------|-------|--------|---|---|-------|---|---|
| Conflicting Flow All | 1048 | 1048 | 181 | 1180 | 1110 | 486 | 246 | 0 | 0 | 489 | 0 | 0 |
| Stage 1 | 183 | 183 | - | 862 | 862 | - | - | - | - | - | - | - |
| Stage 2 | 865 | 865 | - | 318 | 248 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.12 | 6.52 | 6.22 | 7.12 | 6.52 | 6.22 | 4.12 | - | - | 4.12 | - | - |
| Critical Hdwy Stg 1 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.12 | 5.52 | - | 6.12 | 5.52 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 4.018 | 3.318 | 3.518 | 4.018 | 3.318 | 2.218 | - | - | 2.218 | - | - |
| Pot Cap-1 Maneuver | 206 | 228 | 862 | 167 | 209 | 581 | 1320 | - | - | 1074 | - | - |
| Stage 1 | 819 | 748 | - | 350 | 372 | - | - | - | - | - | - | - |
| Stage 2 | 348 | 371 | - | 693 | 701 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | - | - | - |
| Mov Cap-1 Maneuver | 182 | 195 | 862 | 113 | 179 | 581 | 1320 | - | - | 1074 | - | - |
| Mov Cap-2 Maneuver | 182 | 195 | - | 113 | 179 | - | - | - | - | - | - | - |
| Stage 1 | 703 | 747 | - | 300 | 319 | - | - | - | - | - | - | - |
| Stage 2 | 297 | 318 | - | 528 | 700 | - | - | - | - | - | - | - |

| Approach | EB | | WB | | NB | | SB | |
|----------------------|------|--|------|--|-----|--|----|--|
| HCM Control Delay, s | 36.7 | | 31.9 | | 2.3 | | 0 | |
| HCM LOS | E | | D | | | | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1WBLn1 | SBL | SBT | SBR |
|-----------------------|-------|-----|-----|------------|-------|-------|-----|
| Capacity (veh/h) | 1320 | - | - | 397 | 140 | 1074 | - |
| HCM Lane V/C Ratio | 0.143 | - | - | 0.75 | 0.045 | 0.001 | - |
| HCM Control Delay (s) | 8.2 | - | - | 36.7 | 31.9 | 8.4 | - |
| HCM Lane LOS | A | - | - | E | D | A | - |
| HCM 95th %tile Q(veh) | 0.5 | - | - | 6.1 | 0.1 | 0 | - |

| Intersection | | | | | | |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh | 7.7 | | | | | |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ↘ | ↗ | ↗ | ↘ | ↘ | ↘ |
| Traffic Vol, veh/h | 27 | 391 | 685 | 111 | 138 | 39 |
| Future Vol, veh/h | 27 | 391 | 685 | 111 | 138 | 39 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 300 | - | - | 300 | 300 | 0 |
| Veh in Median Storage, # | - | 0 | 0 | - | 0 | - |
| Grade, % | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 29 | 425 | 745 | 121 | 150 | 42 |

| Major/Minor | Major1 | Major2 | Minor2 | | |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 866 | 0 | - | 0 | 1228 745 |
| Stage 1 | - | - | - | - | 745 - |
| Stage 2 | - | - | - | - | 483 - |
| Critical Hdwy | 4.12 | - | - | - | 6.42 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 - |
| Follow-up Hdwy | 2.218 | - | - | - | 3.518 3.318 |
| Pot Cap-1 Maneuver | 777 | - | - | - | 197 414 |
| Stage 1 | - | - | - | - | 469 - |
| Stage 2 | - | - | - | - | 620 - |
| Platoon blocked, % | - | - | - | - | - |
| Mov Cap-1 Maneuver | 777 | - | - | - | 190 414 |
| Mov Cap-2 Maneuver | - | - | - | - | 190 - |
| Stage 1 | - | - | - | - | 452 - |
| Stage 2 | - | - | - | - | 620 - |

| Approach | EB | WB | SB |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.6 | 0 | 58.8 |
| HCM LOS | | | F |

| Minor Lane/Major Mvmt | EBL | EBT | WBT | WBR | SBLn1 | SBLn2 |
|-----------------------|-------|-----|-----|-----|-------|-------|
| Capacity (veh/h) | 777 | - | - | - | 190 | 414 |
| HCM Lane V/C Ratio | 0.038 | - | - | - | 0.789 | 0.102 |
| HCM Control Delay (s) | 9.8 | - | - | - | 71.3 | 14.7 |
| HCM Lane LOS | A | - | - | - | F | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | - | 5.4 | 0.3 |

Permits and Approvals

| Unit of Government | Type of Application | Status |
|---|---|-----------------|
| Federal | | |
| - | - | - |
| State | | |
| Minnesota Pollution Control Agency (MPCA) | National Pollutant Discharge Elimination System (NPDES) Permit | To be completed |
| MPCA | Sewer Extension Project | To be completed |
| Minnesota Department of Health | Watermain Extension Permit | To be completed |
| Minnesota Department of Natural Resources (DNR) | Water Appropriations Permit, if needed | To be completed |
| County | | |
| Hennepin County | County Road Access Permit | To be completed |
| Local | | |
| City of Corcoran | EAW / EIS Need Decision | Draft prepared |
| City of Corcoran | Wetland Conservation Act (Boundary Approval/Replacement Plan) | To be completed |
| City of Corcoran | Preliminary and Final Plat | To be completed |
| City of Corcoran | Erosion Control, Grading, and Stormwater Permit | To be completed |
| City of Corcoran | Building Permits | To be completed |
| City of Corcoran | Conditional Use Permit Amendment or Use of Planned Use Development (for Cemetery Expansion) | To be completed |
| Elm Creek Watershed Management Commission | Stormwater, Erosion Control, and Site Plan Approval | To be completed |

Appendix C: Resolution Declaring Finding of “No Need”

Appendix D: Environmental Assessment Worksheet



**Hope Community
Development Project
Draft Environmental Assessment
Worksheet**

May 2023

Prepared for:

City of Corcoran
8200 County Road 116
Corcoran, MN 55340

Prepared by:

Stantec Consulting Services Inc.
One Carlson Parkway, Suite 100
Plymouth, Minnesota 55426

Hope Community Development Draft Environmental Assessment Worksheet

Proposer:

Hope Community Church, Brian & Jacque Lothar & Corcoran Investments, LLC

RGU:

City of Corcoran, Minnesota

May 2023

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December 2022 version

Environmental Assessment Worksheet

This most recent Environmental Assessment Worksheet (EAW) form and guidance documents are available at the Environmental Quality Board's website at: <https://www.eqb.state.mn.us/> The EAW form provides information about a project that may have the potential for significant environmental effects. Guidance documents provide additional detail and links to resources for completing the EAW form.

Cumulative potential effects can either be addressed under each applicable EAW Item or can be addressed collectively under EAW Item 21.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. Project Title

Hope Community Mixed-Use Development, City of Corcoran

2. Proposer

Proposer: Hope Community Church
Contact person: Josh McKinney
Title: Project Manager/Principal
Address: 19951 Oswald Farm Road
City, State, ZIP: Corcoran, MN 55374
Phone: 612-440-0934
Fax: N/A
Email: jmckinney@measuregrp.com

3. Responsible Governmental Unit (RGU)

RGU Agency: City of Corcoran
Contact person: Natalie Davis McKeown
Title: Planner
Address: 8200 County Road 116
City, State, ZIP: Corcoran, MN 55340
Phone: 763-338-9288
Fax: N/A
Email: ndavis@corcoranmn.gov

4. Reason for EAW Preparation

| | |
|---|---|
| Required: | Discretionary: |
| <input type="checkbox"/> EIS Scoping | <input type="checkbox"/> Citizen petition |
| <input checked="" type="checkbox"/> Mandatory EAW | <input type="checkbox"/> RGU discretion |
| | <input type="checkbox"/> Proposer initiated |

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):

- 4410.4300, Subp. 32: Mixed residential and industrial-commercial projects.
- 4410.4300, Subp. 19 (D): Residential development.
- 4410.4300, Subp. 14(B)(2): Industrial, commercial, and institutional facilities.

5. Project Location

County: Hennepin

City/Township: Corcoran

PLS Location (¼, ¼, Section, Township, Range): east ½ of northeast ¼ of Section 11, Township 119N, Range 23W

Watershed (81 major watershed scale): Mississippi River (Rush Creek sub watershed of the Elm Creek watershed)

GPS Coordinates: 45.132627, -93.546608

Tax Parcel Number: 1111923140004, 1111923140005, 1111923140003, 1111923110012

At a minimum attach each of the following to the EAW:

- County map showing the general location of the project;
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable); and
- Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan.
- List of data sources, models, and other resources (from the Item-by-Item Guidance: *Climate Adaptation and Resilience* or other) used for information about current Minnesota climate trends and how climate change is anticipated to affect the general location of the project during the life of the project (as detailed below in item 7. Climate Adaptation and Resilience).

6. Project Description

- a. *Provide the brief project summary to be published in the EQB Monitor, (approximately 50 words).*

Hope Community Church proposes a mixed-use development spanning approximately 44.5 acres at the northwest corner of County Road 30 and County Road 116 in Corcoran, MN. The proposed plan reflects 738 housing units (primarily within multifamily buildings) and up to 110,300 square feet of commercial, retail, and medical office space.

- b. *Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities*

Complete Description and Existing Facility

Hope Community Church (“Project Proposer”) proposes the Project currently referred to as “Hope

Community.” This would be a new mixed-use neighborhood that includes a variety of housing options, including age-restricted and market rate housing, as well as space for medical office and retail/commercial uses. The Project would be located in the City of Corcoran in Hennepin County, Minnesota on the northwest corner of County Road 116 and County Road 30 spanning approximately 44.5 acres centering around roughly 12 acres of existing development. The existing development on the site includes Hope Community Church, an accessory daycare that operates within the church, the cemetery associated with the church, and the City’s first water tower (under development).

Agricultural land is present to the west and an existing single-family residential neighborhood exists to the north. The Project Area contains four wetland basins according to the wetland delineation application submitted at the end of 2022 and currently under review with the RGU.

The new development includes two market rate non-age restricted multifamily apartment buildings, two senior apartment buildings providing a continuum of care, 20 senior detached villas, and non-age restricted townhomes (738 residential units total). The project proposes two large medical office buildings and two smaller buildings intended for retail space (up to 110,300 square feet of commercial space total). Additional components of the site include an expansion of the existing cemetery site (an expansion of roughly 0.87 acres) and a playground/tot lot to the east of the senior villas (approximately 0.78 acres).

Construction Activities

- 1) *Construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes.*

Standard construction methods are expected to be used. The Project Area would be graded in phases. It is anticipated that the commercial portion of the site would be mass graded when the first commercial project moves forward. The rest of the sites would be expected to be graded individually. A majority of the existing wetland areas would be protected. There are no known significant natural communities in existence throughout the site today with the majority of the Project Area consisting of cropland. The Project would require the construction of a west/east public street to serve the senior villas and senior multifamily buildings. Oswald Farm Road would be extended to bring the public street to the southwest property line. The City would be completing a utility extension project so that both sewer and water are available at the border of the site. The utilities are being extended for the purpose of the proposed water treatment project and not specifically for the Project, but since the City’s water tower is within this site, a portion of the work would be completed within the Project Area. In addition to sanitary sewer and water, development of the site would include installation of other minor utilities (e.g., cable/internet). Offsite improvements are discussed in Appendix H.

- 2) *Modifications to existing equipment or industrial processes*

No modifications to existing equipment or industrial processes are anticipated.

- 3) *Significant demolition, removal or remodeling of existing structures*

Besides the existing church site within the Project Area, the Project Area is mostly vacant. There is an existing barn and home across from the church near County Road 116. These would be demolished. No remodeling of the existing church and cemetery are proposed.

- 4) *Timing and duration of construction activities*

Construction activities would be expected to begin in fall of 2023 and completed by the end of

2028. The Project Proposer’s anticipated phasing plan is provided below (see Figure 4, Appendix A):

- Phase 1A: Fall 2023 – Spring 2025
 - Includes the multi-family building along County Road 116.
 - The first phase of the senior living housing apartments and villas (east).

- Phase 1B: Spring 2024 - Spring 2025
 - First phase of commercial and medical buildings.
 - Townhomes along County Road 116.

- Phase 2: Spring 2025 – Fall 2027
 - Multi-family building along County Road 30.
 - Final buildout for the commercial/medical buildings.

- Phase 3: 2026 – 2028
 - 2nd phase of the Senior Living (west).

The expected phasing plan is subject to change and would ultimately be driven by the market.

c. Project magnitude

Table 1 summarizes the project magnitude.

Table 1. Project Magnitude

| Description | Number |
|--|---|
| Total Project Acreage | 44.5 acres |
| Linear project length | N/A |
| Number and type of residential units | 738 total - 340 multifamily units - 324 senior multifamily units - 20 senior single-family units - 54 townhome units |
| Residential building area (in square feet) | Market rate multifamily estimate – 376K sq. ft. - MF A – 43,000 SF x 4 stories = 172,000 - MF F – 51,000 SF x 4 stories = 204,000 Senior housing multifamily estimate – 356,400 sq. ft. - SH G – 56,000 SF x 4 stories = 224,000 - SH H – 33,100 SF x 4 stories = 132,400 Townhouses – 38,535 sq. ft. (footprint) Villas – 2,400 sq. ft. (footprint) |
| Commercial building area (in square feet) | Estimated total commercial building area – 110, 300 sq. ft. |
| Industrial building area (in square feet) | 0 sq. ft. |
| Institutional building area (in square feet) | 0 sq. ft. |

| | |
|---------------------------------------|---|
| Other uses – specify (in square feet) | Park/Playground Space – 37,880 sq. ft. (estimated) Cemetery expansion – 33,792 sq. ft. (estimated) |
| Structure height(s) | Commercial maximum – 3 stories. Multifamily maximum – 4 stories. |

- d. **Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.**

The Project is proposed by entities associated with Hope Community Church and would be carried out by a private party. The Project Proposer hopes to create a campus that provides housing, particularly for seniors, and creates a community center with commercial and medical users. The proposed plan would provide beneficial places for multiple age groups to live, work, dine, and worship.

- e. **Are future stages of this development including development on any other property planned or likely to happen?** Yes No

If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

- f. **Is this project a subsequent stage of an earlier project?** Yes No

If yes, briefly describe the past development, timeline and any past environmental review.

Hope Community Church was approved in 2001, and the final plat for Hope Place was completed in 2002. A daycare was approved at Hope Community Church in 2005 and is still in operation as an accessory use. The cemetery was approved in 2012. A plat to carve out a property for the City’s water tower was processed in 2022 and earlier this year. Construction of the water tower would begin this year and is expected to be completed at the end of 2024. Past phases did not trigger environmental reviews, so there is no record of an environmental review completed in the past.

7. Climate Adaptation and Resilience

- a. **Describe the climate trends in the general location of the project (see guidance: Climate Adaptation and Resilience) and how climate change is anticipated to affect that location during the life of the project.**

In general, Minnesota is anticipated to experience an increase in temperature, precipitation, and more frequent extreme precipitation events resulting from climate change. In Minnesota, annual average temperatures have risen three degrees over the past century and up to three degrees in the northern part of the state. The highest average temperature increases have occurred during the winter. Since 1895, temperatures during the winter have increased at a rate two to three times higher than during the summer. In particular, winter warming rates have risen more sharply in recent decades.¹ Current climate warming trends, most notably during the winter, are anticipated to continue.²

Heavy rain events have become more frequent in Minnesota and more intense. From 1973 to 2021, Minnesota experienced 16 mega-rain events³ with a notable increase since 2000. Of these 16 events, three occurred in the 1970s, one in the 1980s, one in the 1990s, six mega-rain events occurred in the 2000s,

¹ MNDNR. Climate Trends. https://www.dnr.state.mn.us/climate/climate_change_info/climate-trends.html

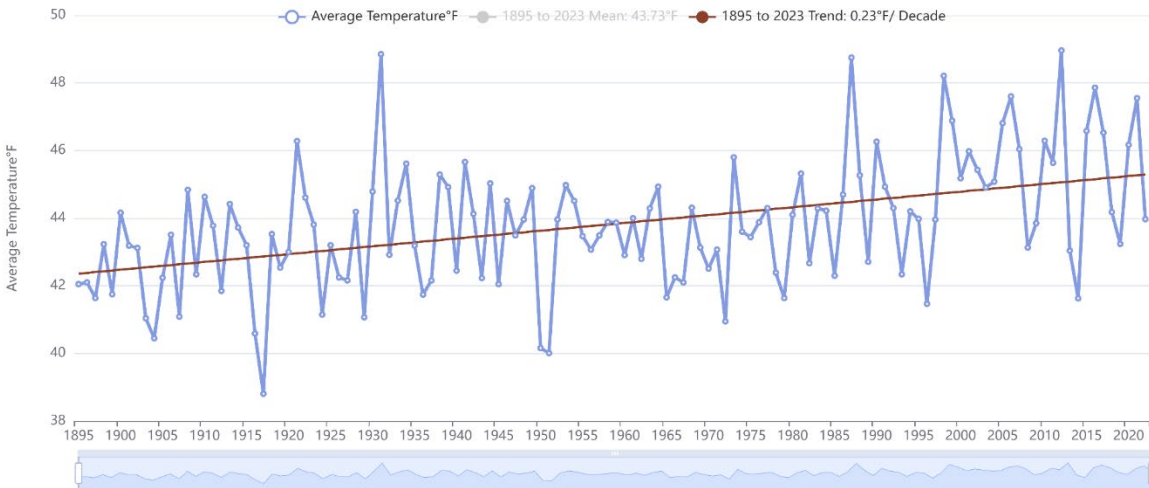
² MnDOT. Minnesota Go Climate Change Report. 2021. <https://www.minnesotago.org/trends/climate-change>

³ Mega-rain events are defined as events in which six inches of rain covers more than 1,000 square miles and the core of the event tops eight inches.

four in the 2010s, and one in 2020. Thus, in the past 21 years (2000 to 2020), almost two times as many mega rain events occurred compared to the prior 27 years (1973 to 1999).⁴

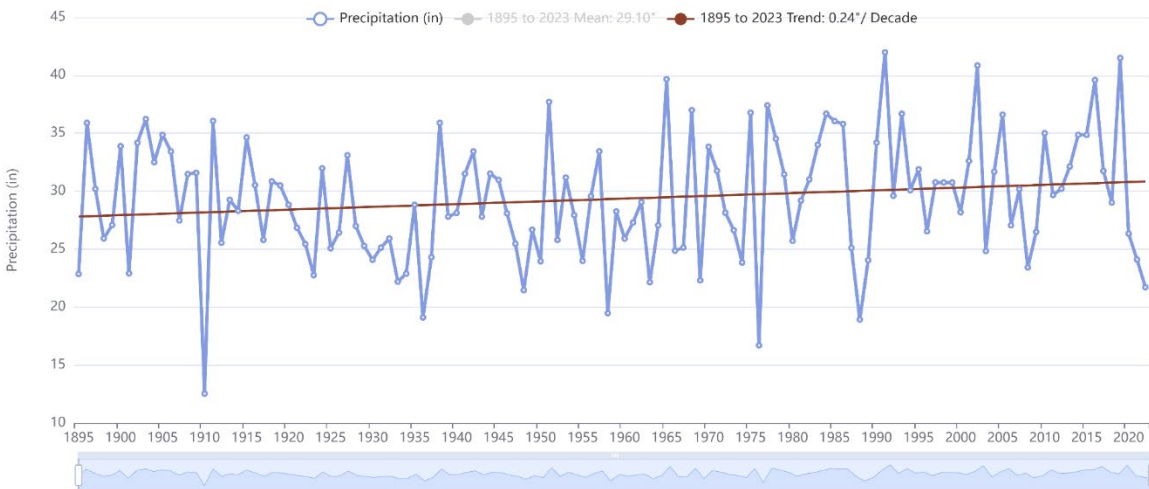
Climate trends for Hennepin County parallel the overall statewide trends, indicating Minnesota’s climate is becoming warmer and wetter. Exhibits 1 and 2 illustrate historical average annual temperature and precipitation trends from 1895 to 2023. During this time period, the County experienced an average annual temperature increase of 0.23 degrees Fahrenheit (°F) per decade and annual precipitation increase of 0.24 inches per decade.

Exhibit 1. Historical Annual Average Temperature in Hennepin County (1895 – 2023)



Source: Minnesota Department of Natural Resources.
<https://arcgis.dnr.state.mn.us/ewr/climateexplorer/main/historical>

Exhibit 2. Historical Annual Average Precipitation in Hennepin County (1895 – 2023)



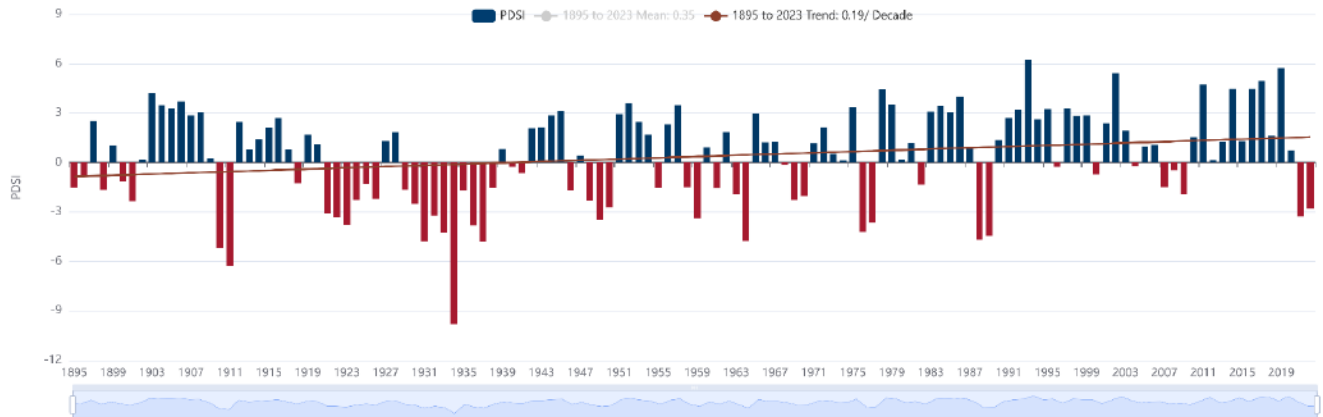
Source: Minnesota Department of Natural Resources.

⁴ Minnesota Department of Natural Resources. Historic Mega-Rain Events in Minnesota.
https://www.dnr.state.mn.us/climate/summaries_and_publications/mega_rain_events.html

<https://arcgis.dnr.state.mn.us/ewr/climateexplorer/main/historical>

The Palmer Drought Severity Index (PDSI) utilizes temperature and precipitation data to estimate relative soil moisture conditions and serve as an indicator of long-term drought conditions. The index ranges from -5 to +5 indicating dry and wet conditions, respectively. PDSI values are reported on a monthly basis. Exhibit 3 shows historic PDSI values for the month of August from 1895 to 2023 for Hennepin County, which indicates an increase of 0.19 per decade. Generally, the PSDI historical data indicates that the region is experiencing a wetter climate.

Exhibit 3. Historical PDSI Values for Hennepin County (1895 – 2023)

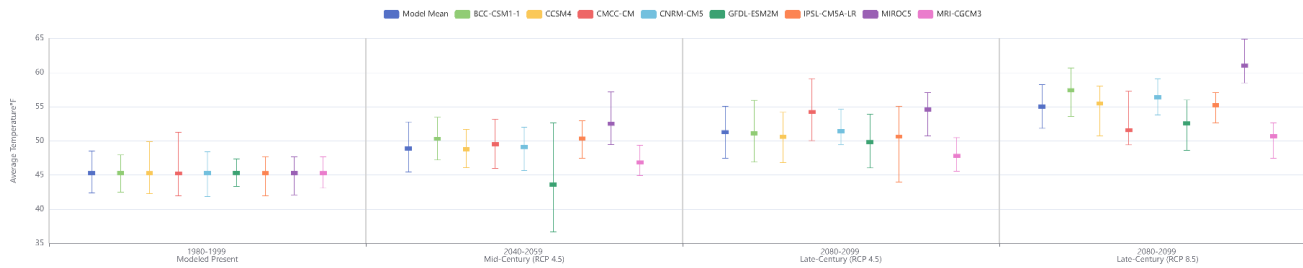


Source: Minnesota Department of Natural Resources.
<https://arcgis.dnr.state.mn.us/ewr/climateexplorer/main/historical>

Projected climate trends indicate that temperatures within the County will continue to increase. Exhibit 4 illustrates projected temperatures for the County. Several climate models are shown in the projected temperature analysis. The model mean, shown in blue, illustrates the average of all models included in the analysis. Exhibit 4 shows the modeled present condition, mid-century (2040-2059) at Representative Concentration Pathway (RCP) 4.5, late-century (2080-2099) at RCP 4.5, and late-century (2080-2099) at RCP 8.5. RCP is a greenhouse gas concentration scenario used by the Intergovernmental Panel on Climate Change in the fifth assessment report. RCP 4.5 is an intermediate scenario in which emissions decline after peaking around 2040 and RCP 8.5 represents a worst-case scenario in which emissions continue rising through the 21st century.

Under the RCP 4.5 scenario, the annual temperature is anticipated to increase within the County from a modeled present mean of 45.28°F (1980-1999) to a mid-century (2040-2059) model mean of 48.87°F and a late-century (2080-2099) model mean of 51.27°F. Under the RCP 8.5 worst-case scenario, the County would experience a late-century (2080-2099) model mean temperature of 55.03°F.

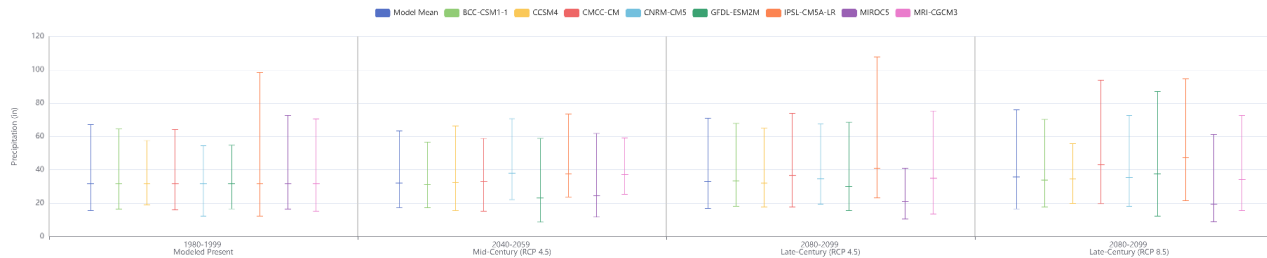
Exhibit 4. Projected Temperatures in Hennepin County



Source: Minnesota Department of Natural Resources. [Minnesota Climate Explorer \(state.mn.us\)](http://state.mn.us). Definitions of the models included in this analysis can be found at [Climate Explorer Metadata | Minnesota DNR \(state.mn.us\)](http://state.mn.us).

Exhibit 5 presents projected average annual precipitation for Hennepin County. Under the RCP 4.5 scenario, the annual precipitation is anticipated to increase within the County from a modeled present mean of 31.61 inches (1980-1999) to a mid-century (2040-2059) model mean of 32.12 inches and a late-century (2080-2099) model mean of 32.94 inches. Under the RCP 8.5 worst-case scenario, the County would experience a late-century (2080-2099) model mean precipitation of 35.70 inches. In comparison to the modeled present mean (1980-1999), the late-century (2080-2099) modeled mean annual precipitation would increase by approximately 1.3 percent under the RCP 4.5 scenario and increase by approximately 4.1 percent under the RCP 8.5 scenario.

Exhibit 5. Projected Precipitation in Hennepin County



Source: Minnesota Department of Natural Resources. [Minnesota Climate Explorer \(state.mn.us\)](http://state.mn.us). Definitions of the models included in this analysis can be found at [Climate Explorer Metadata | Minnesota DNR \(state.mn.us\)](http://state.mn.us).

- b. *For each Resource Category in the table below: Describe how the project’s proposed activities and how the project’s design will interact with those climate trends. Describe proposed adaptations to address the project effects identified.*

Table 2 summarizes climate considerations related to the project and adaptation considerations.

Table 2. Climate Considerations and Adaptations

| Resource Category | Climate Considerations | Project Information | Adaptations |
|---|---|--|---|
| Project Design | Increased heavy rainfall and flooding. | The Project would replace pervious surface area with impervious surface area (structures and pavement). | Stormwater would be directed to several stormwater ponds and filtration basins in the Project Area to provide treatment and rate control, in compliance with local and state standards including Elm Creek Watershed requirements. Increase in rainfall frequency and intensity (as described in Item 7.a.) would be factored into the stormwater design for the Project. |
| Land Use | Heavier rainfall expected to increase risk of localized flooding. | The Project is not located within a Federal Emergency Management Area (FEMA) defined floodplain or floodway. | Increase in rainfall frequency and intensity (as described in Item 7.a.) would be factored into the stormwater design for the Project, referenced in Table 2, Project Design, Adaptations. |
| Water Resources | Address in item 12 | | |
| Contamination/ Hazardous Materials/ Wastes | Protection of water resources and soil from contamination. | The Project would not introduce hazardous materials or waste to the Project Area. | Not applicable (NA). The Project would not include the storage or generation of hazardous materials or waste. |
| Fish, wildlife, plant communities, and sensitive ecological resources (rare features) | Address in item 14. | | |

8. Cover Types

Estimate the acreage of the site with each of the following cover types before and after development.

Table 3. Cover Types

| Cover Types | Before(aces) | After (aces) |
|--|--------------|--------------|
| Wetlands and shallow lakes (<2 meters deep) | 1.2 | 0 |
| Deep lakes (>2 meters deep) | 0 | 0 |
| Wooded/forest | 6.0 | 1.4 |
| Rivers/streams | 0 | 0 |
| Grass/Shrub | 19.8* | 0 |
| Cropland | 15.8 | 0 |
| Livestock rangeland/pastureland | 0 | 0 |
| Lawn/landscaping | 0 | 20.6 |
| Green infrastructure TOTAL (from table below*) | 0 | 2.4 |
| Impervious surface | 1.7 | 17.3 |
| Stormwater Pond (wet sedimentation basin) | 0 | 2.7 |
| Other (describe) | 0 | 0 |
| TOTAL | 44.5 | 44.5 |

Acreages are approximate and based on DNR MLCCS land cover geospatial data.

**Based on visual observations in the field, the “brush/grassland” quantified for the “Before” condition (including that reflected in Figure 5, Appendix A) would likely be better categorized as “cropland” (agricultural use).*

Table 4. Green Infrastructure

| Green Infrastructure* | Before (acreage) | After (acreage) |
|---|------------------|-----------------|
| Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretention areas without underdrains/swales with impermeable check dams) | 0 | 2.4 |
| Constructed tree trenches and tree boxes | 0 | 0 |
| Constructed wetlands | 0 | 0 |
| Constructed green roofs | 0 | 0 |
| Constructed permeable pavements | 0 | 0 |
| Other (describe) Landfill-based geothermal system | 0 | 0 |
| TOTAL* | 0 | 2.4 |

Table 5. Tree Canopy

| Trees | Percent | Number |
|--|---------|---|
| Percent tree canopy removed or number of mature trees removed during development | 77 | |
| Number of new trees planted | | Roughly 886 overstory trees; 399 understory trees/shrubs* |

*The number and type of trees would be negotiated during the Planned Unit Development process.

9. Permits and Approvals Required

List all known local, state and federal permits, approvals, certifications and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure. All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.

Table 6. Permits and Approvals

| Unit of Government | Type of Application | Status |
|---|---|-----------------|
| Federal | | |
| - | - | - |
| State | | |
| Minnesota Pollution Control Agency (MPCA) | National Pollutant Discharge Elimination System (NPDES) Permit | To be completed |
| MPCA | Sewer Extension Permit | To be completed |
| Minnesota Department of Health | Watermain Extension Permit | To be completed |
| County | | |
| Hennepin County | County Road Access Permit | To be completed |
| Local | | |
| City of Corcoran | EAW / EIS Need Decision | Draft prepared |
| City of Corcoran | Wetland Conservation Act (Boundary Approval/Replacement Plan) | To be completed |
| City of Corcoran | Preliminary and Final Plat | To be completed |
| City of Corcoran | Erosion Control, Grading, and Stormwater Permit | To be completed |
| City of Corcoran | Building Permits | To be completed |
| City of Corcoran | Conditional Use Permit Amendment or Use of Planned Use Development (for Cemetery Expansion) | To be completed |
| Elm Creek Watershed Management Commission | Stormwater, Erosion Control, and Site Plan Approval | To be completed |

Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 10-20, or the RGU can address all cumulative potential effects in response to EAW Item No. 22. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 21.

10. Land use

a. Describe:

- i. Existing land use of the site as well as areas adjacent to and near the site, including parks and open space, cemeteries, trails, prime or unique farmlands.**

Existing land use includes a church with an accessory daycare, cemetery, agricultural, a barn, and a single-family home. Areas of the site are vacant. The surrounding uses of the Project include a single-family residential neighborhood to the north and farmland or vacant land to the south, east, and west.

- ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.**

The Project Area has two land use designations shown in the City's 2040 Comprehensive Plan. The parcel that includes the existing church and cemetery is designated as Public/Institutional. The remaining parcels that comprise the Project Area are designated as mixed use.

The City purchased roughly one acre of the site to construct the City's first water tower.

Three Rivers Park District plans show a portion of the proposed Diamond Lake Regional Trail may be located through the center of the site.

The City's Northeast District Plan shows a public street located along the west property line in the southwest portion of the site.

- iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.**

The parcel that includes the church, daycare, and cemetery is zoned Public/Institution. The remaining parcels are zoned General Mixed Use. Wetlands on the site would be subject to a Wetland Overlay district.

- iv. If any critical facilities (i.e. facilities necessary for public health and safety, those storing hazardous materials, or those with housing occupants who may be insufficiently mobile) are proposed in floodplain areas and other areas identified as at risk for localized flooding, describe the risk potential considering changing precipitation and event intensity.**

There are no regulated floodways or floodplains located in the Project Area. Refer to Item 12.a.

- b. Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.**

The Project appears to be compatible overall with nearby land uses, zoning, and most of the plans listed in Item 9.a. However, the plans may need to be revised to accommodate Three Rivers Park District's adopted plan for the Diamond Lake Regional Trail.

- c. **Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 10b above and any risk potential.**

It is understood that the Project Proposer's intent is to maintain and enhance existing vegetative buffers between neighboring uses. This would provide a compatible transition to surrounding uses and mitigate the risk to the existing natural community. Further, the intensity of the Project is intentionally minimized along the Project Area boundaries and includes residential uses. The commercial uses are located in the far southeast corner of the Project Area. For example, a step down in intensity is shown from the senior living apartment buildings to the one-story senior villas up against a significant tree line along the northern property line (which would be preserved with the Project). This provides a compatible transition to the existing single-family neighborhood to the north while preserving desirable natural features of the site. The property to the west of the Project Area is guided as "Mixed Residential" which accommodates the multi-family building located in the southwest corner of the Project as an appropriate use for the long-term, given that a similar use on the neighboring property is expected in the future. Additionally, the Project Proposer has indicated their intent to utilize biofiltration as a primary means of stormwater treatment.

11. Geology, Soils and Topography/Land Forms

- a. **Geology - Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.**

The surficial geology in the Project Area has been mapped by the Minnesota Geological Survey's (MGS) Geologic Atlas of Hennepin County as being sediments consisting of glacial till. Specifically, the Project Area contains loam till and may also contain clay loam till. These sediments are characterized as being calcareous and oxidized olive brown above unoxidized very dark gray. The surface expression is generally rolling and hummocky with numerous ice-walled stagnation plains and ice-block melt-out depressions indicative of ice stagnation. Silt loam deposited in ponded water is thin, patchy, and locally present on the tops of ice-walled stagnation plains. Organic detritus comprised of plant material in post-glacial land surface depressions may exist in areas currently or formerly beneath the water table. (Steenberg et al. 2018a)⁵.

The bedrock geology across the Project Area has been mapped in the MGS Geologic Atlas of Hennepin County as consisting of Jordan Sandstone, the St. Lawrence Formation, and the Mazomanie Formation of the Tunnel City Group, all of which are from the late Cambrian Period. The Jordan Sandstone unit is characterized by medium- to coarse-grained, friable quartzose sandstone. The underlying St. Lawrence Formation is characterized by dolomitic siltstone and shale with interbedded very fine-grained sandstone and shale, while the Mazomanie Formation of the Tunnel City Group is characterized by fine- to medium-grained quartzose sandstone with interbedded dolomitic sandstone. (Steenberg et al. 2018b)⁶. The bedrock topography within the Project Area is mapped to be approximately 800 to 825 feet above mean

⁵ Steenberg, Julia R.; Bauer, Emily J.; Chandler, V.W.; Retzler, Andrew J.; Berthold, Angela J.; Lively, Richard S. 2018a. Minnesota Geological Survey. County Atlas Series. Atlas C-45, Hennepin County. Plate 3 – Surficial Geology. Available at: https://conservancy.umn.edu/bitstream/handle/11299/58491/plate3_surficial.pdf?sequence=99&isAllowed=y. C-45, Geologic Atlas of Hennepin County, Minnesota (umn.edu). Accessed March 2023.

⁶ Steenberg, Julia R.; Bauer, Emily J.; Chandler, V.W.; Retzler, Andrew J.; Berthold, Angela J.; Lively, Richard S. 2018b. Minnesota Geological Survey. County Atlas Series. Atlas C-45, Hennepin County. Plate 2 – Bedrock Geology. Available at: https://conservancy.umn.edu/bitstream/handle/11299/58491/plate2_bedrock.pdf?sequence=100&isAllowed=y. Accessed March 2023.

sea level (amsl) (Steenberg et al. 2018c)⁷. Given the approximate land surface topography of approximately 940 to 956 feet amsl, the depth to bedrock within the Project Area can be placed between approximately 140 feet and 156 feet (DNR undated (a))⁸. No wells were identified within the Project Area according to the Minnesota Department of Health (MDH) Minnesota Well Index (MWI), but two wells located within one-quarter mile of the Project Area to the north along Hillside Drive support these findings: two domestic wells (Unique Wells 140169 and 126438) had available well log and stratigraphic reports that identified the presence of Jordan Sandstone bedrock at 141 feet and 148 feet, respectively (MDH 2021)⁹. The well log reports and stratigraphic reports are available in Appendix C.

According to the Minnesota Department of Natural Resources (DNR), Karst Feature Inventory, there are no known karst or sinkhole features within the Project Area or within the vicinity of the Project Area. The nearest feature is a sinkhole approximately 12 miles to the northeast of the Project Area in Andover, Minnesota (field verified 2017). (DNR undated (b))¹⁰. The first encountered bedrock is the Jordan Sandstone which is not known for karst features and is located at a depth greater than 100 feet below grade. The underlying St. Lawrence Formation is a siliciclastic-dominated bedrock that does contain minor dolostone layers with abundant macropores but is not considered karst because the secondary porosity is unlikely from dissolution (Runkel et al. 2014)¹¹. Static water levels for the wells just north of the Project Area (Unique Wells 140169 and 126438) were reported at 55 feet and 100 feet, respectively. Given that these wells were reported to be completed in the Jordan Sandstone bedrock layer, which is above the St. Lawrence Formation layer in question, and the depth to bedrock is estimated to be 140 to 156 feet, this indicates that the Jordan Sandstone is fully saturated at these locations. Similar conditions are anticipated for the Project Area, therefore, the formation of karst there is unlikely.

⁷ Steenberg, Julia R.; Bauer, Emily J.; Chandler, V.W.; Retzler, Andrew J.; Berthold, Angela J.; Lively, Richard S. 2018c. Minnesota Geological Survey. County Atlas Series. Atlas C-45, Hennepin County. Plate 6 – Depth to Bedrock and Bedrock Topography. Available at: https://conservancy.umn.edu/bitstream/handle/11299/58491/plate4_d2bdrk.pdf?sequence=98&isAllowed=y. Accessed March 2023.

⁸ DNR. undated (a). MnTOPO. Available at: <http://arcgis.dnr.state.mn.us/maps/mntopo/>. Accessed March 2023.

⁹ MDH. 2021. Minnesota Well Index. Available at: <https://www.health.state.mn.us/communities/environment/water/mwi/index.html>. Accessed March 2023.

¹⁰ DNR. undated (b). Karst Feature Inventory. Available at: <https://arcgis.dnr.state.mn.us/portal/apps/webappviewer/index.html?id=9df792d8f86546f2aa9c98b3e31adb62>. Accessed March 2023.

¹¹ Runkel, Anthony C.; Tipping, Robert R.; Green, J.A.; Jones, Perry M.; Meyer, Jessica R.; Parker, Beth L.; Steenberg, Julia R.; Retzler, Andrew J. 2014. Minnesota Geological Survey Open File Report 14-04, Hydrogeologic Properties of the St. Lawrence Aquitard, Southeastern Minnesota. Available at: <https://conservancy.umn.edu/handle/11299/165299>. Accessed March 2023.

- b. Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 12.b.ii.**

Table 7 includes hydrologic soil groups found in the Project Area. The four hydrologic soil groups are:

- **Group A:** Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.
- **Group B:** Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained, or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.
- **Group C:** Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.
- **Group D:** Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high-water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Table 7. Soils within the Project Area

| Map Symbol | Name | Percent Slopes | Hydrologic Soil Group | Approx. Acres | Approx. Percent of Project Area |
|-------------------|--------------------------------|-----------------------|------------------------------|----------------------|--|
| L37B | Angus loam | 2 to 6 | C | 21.0 | 47.3 |
| L44A | Nessel loam | 1 to 3 | C | 6.2 | 13.8 |
| L23A | Cordova loam | 0 to 2 | C/D | 7.1 | 16.1 |
| L22C2 | Lester loam, moderately eroded | 6 to 10 | C | 3.2 | 7.2 |
| L24A | Glencoe clay loam | 0 to 1 | C/D | 0.2 | 0.3 |
| L36A | Hamel, overwash-Hamel complex | 0 to 3 | C/D | 4.0 | 9.0 |
| L45A | Dundas-Cordova complex | 0 to 3 | C/D | 2.2 | 5.0 |
| L21A | Canisteo clay loam | 0 to 2 | C/D | 0.6 | 1.3 |
| Total | | | | 44.5 | 100.0 |

Source: USDA NRCS Hennepin County Soil Survey

The Project Area is generally flat with no slopes greater than ten percent. According to the DNR MnTOPO map, the Project Area ranges from approximately 940 to 956 feet amsl with high and low points scattered throughout the Project Area (DNR undated (a))¹².

Based on the soils report for Hennepin County from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) (Appendix D), there is one soil type within the Project Area that is moderately eroded: Lester loam, six to ten percent slopes (L22C2). This soil type makes up approximately seven acres (13 percent) of the Project Area and is located primarily in the southern half of the Project Area. (USDA NRCS 2023)¹³.

The USDA NRCS soils report for Hennepin County also reports on hydrologic soil groups. Soils within the Project Area have slow to very slow infiltration rates, indicating a high runoff potential (USDA NRCS 2023)⁸. The volumes and acreages of soil excavation and grading are unknown at this time. Hope Community intends to reuse any soil on site and has committed to vegetating soils at risk for erosion.

12. Water Resources

¹² DNR. undated (a). MnTOPO. Available at: <http://arcgis.dnr.state.mn.us/maps/mntopo/>. Accessed March 2023.

¹³ USDA NRCS. 2023. Web Soil Survey. Available at: <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. Accessed March 2023.

a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.

- i. *Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, shoreland classification and floodway/floodplain, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include the presence of aquatic invasive species and the water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.*

Surface Waters

The Project Area is located within the Rush Creek subwatershed of the Elm Creek watershed and is part of the larger upper Mississippi River watershed. No lakes, streams or county ditches are located within the Project Area. No trout streams, wildlife lakes, migratory waterfowl feeding/resting lakes or outstanding resource value waters are located within one mile of the Project Area. No aquatic invasive species are known to be present within one mile of the Project Area.

DNR Public Waters

No DNR Public Waters are located within the Project Area. Two Public Water Watercourses and five Public Water Wetlands are located within one mile of the Project Area (Table 8, Figure 8). Rush Creek is located northwest of the Project Area, and an unnamed tributary to Rush Creek is located southwest of the Project Area. The unnamed tributary flows through a large Public Water Wetland before flowing into Rush Creek. Additionally, four Public Water Wetlands are located southeast of the Project Area.

Table 8. DNR Public Waters within One Mile of the Site

| Waterway | Public Water ID | Type |
|-----------------|------------------------|--|
| Rush Creek | M-062-004 | Public Water Watercourse, Public Ditch/Altered Natural Watercourse |
| Unnamed creek | M-062-004-006 | Public Water Watercourse |
| Unnamed wetland | 27016300 | Public Water Wetland |
| Unnamed wetland | 27031600 | Public Water Wetland |
| Unnamed wetland | 27031400 | Public Water Wetland |
| Unnamed wetland | 27031500 | Public Water Wetland |
| Unnamed wetland | 27044000 | Public Water Wetland |

Wetland Resources

A wetland delineation has been completed for the Project Area. The delineation has been submitted to the Local Government Unit (LGU), undergone Technical Evaluation Panel (TEP) review, and revised with supplemental information. LGU approval was provided in May 2023. The U.S. Army Corps of Engineers conducted a preliminary review of the delineation but has not been requested to prepare a jurisdictional determination thus far.

A total of six wetlands were delineated and are summarized in Table 9 and Figure 9. Note: Only Wetlands 1, 4, 5 and 6 are located within the Project Area. Of these, Wetlands 1 and 6 are farmed wetlands that were identified utilizing the offsite determination guidance, and Wetland 2 is functioning as a stormwater pond.

Wetlands 2, 3, and 4 are indicated on the National Wetlands Inventory (NWI) with Wetland 4 occurring within the Project Area. Wetland types present in the Project Area include seasonally flooded basin, fresh meadow, and shallow open water wetlands.

Table 9. Wetlands Delineated within and adjacent to the Project Area

| Wetland ID | Circular* 39 | Cowardin | Dominant Vegetation | Acres* (within Project Area) |
|------------|--------------|----------|----------------------------------|------------------------------|
| Wetland 1 | Type 1 | PEM1Af | Yellow nut sedge, farmed wetland | 0.89 acres |
| Wetland 2 | Type 5 | PUB1Hx | Cattail | 0 acres |
| Wetland 3 | Type 2 | PEM1B | Reed canary grass | 0 acres |
| Wetland 4 | Type 1 | PEM1A | Reed canary grass | 0.08 acres |
| Wetland 5 | Type 1 | PEM1A | None | 0.03 acres |
| Wetland 6 | Type 1 | PEM1Af | Farmed wetland | 0.23 acres |

*Area of Wetlands 1 & 6 are approximate, as final approval of the level 1 delineation offsite review is still pending.

MPCA 303d Impaired Waters List

Based on a review of the MPCA’s 2022 Impaired Waters List¹⁴, no MPCA 303d Impaired Waters are located within the Project Area. Rush Creek is located less than one mile northwest of the Project Area and is listed as impaired for aquatic life and aquatic recreation as a result of impairments for dissolved oxygen, *E. coli*, fish bioassessments, and benthic macroinvertebrates bioassessments (Table 10, Figure 8).

Table 10. Impaired Waters within One Mile of the Site

| Water Body Name | Section | AUID* | Affected Designated Use | Pollutant or Stressor | TMDL** ID |
|-----------------|-----------------|--------------|----------------------------------|---|------------------|
| Rush Creek | T119, R23W, S11 | 07010206-528 | Aquatic life, Aquatic recreation | Dissolved oxygen, <i>E. coli</i> , fish bioassessments, benthic macroinvertebrates bioassessments | No approved TMDL |

*Assessment Unit Identification (AUID)

**Total Maximum Daily Load (TMDL)

¹⁴ MPCA. Minnesota’s Impaired Waters List. Accessed May 2023. <https://www.pca.state.mn.us/air-water-land-climate/minnesotas-impaired-waters-list>

Floodway/Floodplain

There are no regulated floodways or floodplains located in the Project Area. Several regulated 100-year floodplain areas (one percent annual chance of flooding) and a floodway are located within one mile of the Project Area (Appendix B). The floodway is associated with Rush Creek and is located 0.75 miles northwest of the Project Area. A floodplain associated with Rush Creek and the Public Water Wetland is located a third of a mile west of the Project Area; this floodplain has a small fringe area located in the 500-year floodplain (0.2 percent annual flood hazard zone). Additionally, there is a floodplain located a tenth of a mile to the north, one 0.6 miles to the east, and one 0.3 miles to the southeast of the Project Area. The Project would not encroach into or result in fill within regulated floodplain and floodway areas.

- ii. Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.*

There are no known springs, seeps or karst features present in the Project Area.

- 1) **Depth to groundwater:** In the vicinity of the Project Area, the depth to groundwater ranges from approximately 40 to 85 feet. Wells in the area primarily utilize the Jordan aquifer or groundwater from the sand and gravel till layers above the Jordan aquifer.
- 2) **MDH Wellhead Protection Area:** The Project is not located within an MDH Wellhead Protection Area. The Project Area is an area with low groundwater sensitivity.
- 3) **Onsite or Nearby Wells:** No wells were identified within the Project Area according to the Minnesota Department of Health (MDH) Minnesota Well Index (MWI). Per MDH MWI, there are 11 domestic wells located within 500 feet of the Project Area (Table 11); six wells are located to the north, one well is east, two wells are southeast, and two wells are located southwest of the Project Area (Source: Minnesota Department of Health, Minnesota Well Index, accessed March 16, 2023). Two additional wells have been described by the developer. One associated with the church near the northwest corner of the building. The other associated with the existing home (at Oswald Farm Road/CR 116) located near the southeast corner of the home. A second well associated with this home and located 25 feet south of the existing well was previously capped in recent years.

Table 11. Verified Wells within 500 feet of the Site

| Well ID | Use Type | Location from Site | Status | Depth (ft.) | Static Water Level (ft.) |
|---------|----------|--------------------|--------|-------------|--------------------------|
| 665817 | Domestic | North | Active | 125 | 85 |
| 696183 | Domestic | North | Active | 125 | 55 |
| 661568 | Domestic | North | Active | 125 | 55 |
| 678242 | Domestic | North | Active | 125 | 59 |
| 691852 | Domestic | North | Active | 127 | 60 |
| 709877 | Domestic | North | Active | 80 | 40 |
| 660563 | Domestic | East | Active | 185 | 52 |
| 152502 | Domestic | Southeast | Active | 138 | 60 |
| 772680 | Domestic | Southeast | Active | 135 | 37 |
| 698097 | Domestic | Southwest | Active | 158 | 70 |
| 635280 | Domestic | Southwest | Active | 145 | 66 |

Source: MDH Minnesota Well Index (MWI), <https://www.health.state.mn.us/communities/environment/water/mwi>

b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.

i. Wastewater - For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.

1) *If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.*

Wastewater from the Project would not be pretreated prior to entering the system and would be conveyed by a gravity sanitary sewer system to the Elm Creek Interceptor trunk line where it would eventually be discharged to a publicly owned treatment facility (the Metropolitan wastewater treatment plant, St. Paul, Minnesota). Wastewater would be generated by domestic and municipal uses from the proposed residential, retail, medical development, as well as the existing church on site.

To adequately serve the Project, the City would extend the existing sewer trunk link that is connected to a Metropolitan Council Environmental Services location and conveys wastewater to the Elm Creek Interceptor at the municipal boundary northeast of the Project site. The capacity of the main sanitary pipe, as planned for within the City’s Comprehensive Plan, was designed to accommodate the planned land uses that included a mix of residential, industrial and commercial uses within the northeast planning area. The 2040 Comprehensive Sanitary Sewer Plan accounts for other smaller lines to be connected to this main. Internal to the Project Area, each lot would be

served by a sanitary sewer designed and installed by the developer and permitted by the MPCA. The Project would increase sanitary wastewater flows compared to existing conditions; however, this increase is consistent with the 2040 Comprehensive Sanitary Sewer Plan.

- 2) *If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system. If septic systems are part of the project, describe the availability of septage disposal options within the region to handle the ongoing amounts generated as a result of the project. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion.*

There are two subsurface sewage treatment systems (SSTS) adjacent to the Project Area - one for the church and one for the existing residence (at Oswald Farm Road/CR 116). Both septic systems would be decommissioned, as the church would be connected to the sanitary sewer system and the single-family residence would be removed. MPCA requirements for removing abandoned SSTS would be followed during the decommissioning of the systems.

- 3) *If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects.*

The wastewater discharge from the Project Area would not discharge to a surface water.

- ii. *Stormwater - Describe changes in surface hydrology resulting from change of land cover. Describe the routes and receiving water bodies for runoff from the project site (major downstream water bodies as well as the immediate receiving waters). Discuss environmental effects from stormwater discharges on receiving waters post construction including how the project will affect runoff volume, discharge rate and change in pollutants. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion. For projects requiring NPDES/SDS Construction Stormwater permit coverage, state the total number of acres that will be disturbed by the project and describe the stormwater pollution prevention plan (SWPPP), including specific best management practices to address soil erosion and sedimentation during and after project construction. Discuss permanent stormwater management plans, including methods of achieving volume reduction to restore or maintain the natural hydrology of the site using green infrastructure practices or other stormwater management practices. Identify any receiving waters that have construction-related water impairments or are classified as special as defined in the Construction Stormwater permit. Describe additional requirements for special and/or impaired waters.***

The majority of the Project Area is currently farmland, grassland, and forest which allows stormwater to infiltrate directly into the ground or run into the wetlands onsite. There is one stormwater pond to the northwest of the church facility that provides volume and rate control for runoff from the church buildings and parking lots. The existing residence does not have specialized stormwater treatment; stormwater runs off overland and infiltrates into the ground.

The Project would increase the amount of impervious surface present in the Project Area and the volume of stormwater. Approximately 43 acres (total Project Area minus trees that would be preserved) would be disturbed during the construction of the Project and 17.3 acres of impervious surface would be added to the Project Area, based on the current site plan (Figure 3, Appendix A). The stormwater would be directed to several stormwater ponds and biofiltration basins in the Project Area; these would provide treatment to remove pollutants from the stormwater and control the rate of stormwater runoff being discharged to comply with local and state standards, including Elm Creek Watershed requirements. After stormwater runs through the stormwater ponds and biofiltration basins and has been treated, it would be directed into onsite Wetlands 2 and 3. Currently, Minnesota climate trends are projecting an increase in rainfall frequency and intensity which would be factored into the stormwater design for the site.

A Stormwater Pollution Prevention Plan (SWPPP) would be prepared as part of the National Pollutant Discharge Elimination System (NPDES) Construction Permit required for the project. The SWPPP would conform to permit requirements and address sediment and erosion control Best Management Practices (BMPs) during construction. Sediment and erosion control BMPs may include bio-rolls, silt fence, rock construction entrances, inlet protection devices, erosion control blankets, erosion stabilization mats, and/or other similar devices to prevent soil erosion and sediment transport. Disturbed areas specified to be revegetated would be restored with final stabilization per permit requirements.

- iii. *Water appropriation - Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Discuss how the proposed water use is resilient in the event of changes in total precipitation, large precipitation events, drought, increased temperatures, variable surface water flows and elevations, and longer growing seasons. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation. Describe contingency plans should the appropriation volume increase beyond infrastructure capacity or water supply for the project diminish in quantity or quality, such as reuse of water, connections with another water source, or emergency connections.***

The Project Area would be connected to the public water supply, though the site is not currently publicly serviced. The City of Corcoran is constructing a new Water Treatment Plant (WTP) to serve the growing community. A new City-owned water tower would be constructed in the Project Area (the water tower project would in part be financed with federal funds and a federal environmental review would be completed for that separate project).

Climate Change and Resilience

Climate change trends may affect surface water and groundwater interactions that may lead to long-term uncertainty regarding surface and groundwater levels, resulting in impacts to groundwater supply availability, quality, and quantity. Surface and groundwater quantity is driven by the balance of atmospheric input from precipitation and losses due to evapotranspiration.¹⁵ The City has undertaken an extensive water supply planning process as part

¹⁵ DNR. *Climate's Impact on Water Availability*. Updated October 19, 2021 https://www.dnr.state.mn.us/climate/water_availability.html

of the proposed WTP. The City has completed a Northeast Water Supply Feasibility Study and is closely coordinating with regulatory agencies on the development of the proposed WTP. The City would be subject to the conditions of the DNR Water Appropriation Permit.

iv. Surface Waters

- a) Wetlands - Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed and identify those probable locations.**

Wetland impacts are anticipated as part of the proposed development. The Project design sought to avoid and minimize wetland impacts and mitigate for unavoidable wetland impacts.

The Project Area excludes the adjacent property where Wetlands 2 and 3 are located, the largest wetlands in the immediate area. Direct or indirect impacts are expected to Wetlands 1, 4, 5, & 6 because of grading which would either fill the wetlands or alter the hydrology to the wetlands. Impacts to these wetlands are difficult to avoid due to the size and nature of the wetlands. Wetlands 1 and 6 are farmed wetlands with marginal hydrology. Alterations to the surrounding landscape are likely to adversely impact the hydrology of these wetlands. Similarly, Wetlands 4 and 5 are small and also vulnerable to surrounding landscape alterations. Anticipated wetland impacts could total 1.2 acres.

All necessary wetland permitting would be obtained prior to any wetland impacts occurring. Impacts would be regulated under the Wetland Conservation Act (WCA) as administered by the City of Corcoran as WCA LGU. Additionally, the U.S Army Corps of Engineers would regulate impacts to jurisdictional wetlands under Section 404 of the Clean Water Act. Any wetland impacts requiring mitigation would be mitigated at a 2:1 ratio through the purchase of wetland bank credits. Credits would be purchased from the same Major Watershed and Bank Service Area, as credit availability permits, and would be purchased using the siting prioritization in the WCA.

The City of Corcoran must approve the proposed wetland impacts and plan for replacement before any impacts occur. Additionally, the Corps of Engineers must issue a jurisdictional determination. If any of the impacted wetlands are Corps jurisdictional, a permit would be required.

The wetland impacts are expected to have minimal effect on the host watershed, as the total impact area is not large, and the existing wetlands are low quality farmed wetlands or small seasonally flooded basins. The replacement wetlands in the wetland bank would be much higher quality wetlands and better able to provide ecosystem services than the existing, low-quality wetlands.

b) Other surface waters- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicialditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.

There are not any anticipated impacts or alterations to surface water features as a result of the Project. Appropriate BMPs such as silt fences, inlet protection, and other sediment and erosion control measures would be taken to avoid and minimize sedimentation in downstream waterbodies. The Project would not change the number or type of watercraft on any local waterbodies.

13. Contamination/Hazardous Materials/Wastes

a. Pre-project site conditions - Describe existing contamination or potential environmental hazardson or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.

A review of Minnesota Pollution Control Agency’s (MPCA) *What’s in My Neighborhood* (WIMN) database¹⁶ was conducted to identify documented potentially contaminated sites within or in the vicinity of the Project Area. One site was identified within the Project Area and two sites were identified within one-half mile of the Project Area. Table 12 summarizes MPCA potentially contaminated sites within the Project Area and within a one-half mile buffer of the Project Area. Figure 11, Appendix A illustrates the location of potentially contaminated sites within and in close proximity to the Project.

Table 12. MPCA Potentially Contaminated Sites within a One-Half Mile of the Project Area

| Site Name | Site ID | MPCA Program | Status | Approx. Distance from Project Area (ft.) | Direction in Relation to Project Area |
|--------------------------------|---------|----------------------------------|---|--|---------------------------------------|
| Within the Project Area | | | | | |
| Kiphuth Residence | 187436 | Petroleum Remediation, Leak Site | Inactive (Leak Report 1995, site closed 1997) | 650 | North |

¹⁶ MPCA. Undated. What’s in My Neighborhood. Available at: [What's in My Neighborhood | Minnesota Pollution Control Agency \(state.mn.us\)](https://www.mn.gov/what-in-my-neighborhood). Accessed. April 2022.

| Site Name | Site ID | MPCA Program | Status | Approx. Distance from Project Area (ft.) | Direction in Relation to Project Area |
|---|---------|-------------------------------------|--------------------------------------|--|---------------------------------------|
| Within One-Half Mile of the Project Area | | | | | |
| Hope Community Church Cemetery | 135487 | Construction Stormwater (C00033395) | Active (coverage issuance 2012-2023) | 0 | NA |
| Lithgow Automotive Inc | 95746 | Hazardous Waste (MNR000118828) | Inactive (registered 2003-2020) | 400 | North |

An additional review of the Minnesota Department of Agriculture (MDA) WIMN database¹⁷ was conducted to identify documented potentially contaminated sites within or in the vicinity of the Project Area. No records were identified with the Project Area or within a half-mile buffer.

The MPCA identified the Hope Community Church Cemetery (135487) within the Project Area. During the construction of the Project, this site would be fenced off, contractors would be verbally informed of its existence and the site would be clearly identified in contractors materials including plan sheets, so that the site would not be exposed or exacerbated by the construction of the Project. In the event that potentially contaminated soils or other potentially hazardous materials are encountered during construction, plans would be developed to properly handle and treat contaminated soil and/or groundwater. Any contaminated soils or other potentially hazardous materials encountered during construction would be handled and disposed of in accordance with MPCA and any other applicable requirements.

- a. ***Project related generation/storage of solid wastes - Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.***

Construction Waste

Construction wastes would be typical of multifamily housing, senior living, commercial/retail, and medical office developments. Construction wastes would be primarily non-hazardous and would be managed as municipal solid waste (MSW) or construction/ demolition debris. Hazardous wastes in the form of used oils/lubricants, waste paints, or other materials may be generated during construction. The contractor would be required to manage and dispose of all construction-generated waste in accordance with MPCA requirements and all other applicable regulatory requirements. Construction wastes would either be recycled or stored in approved containers and disposed of in the proper facilities. Any excess soil material that is not suitable for use onsite would become the property of the contractor and would be disposed of properly. All solid waste would be managed according to MPCA and other regulatory requirements.

Operational Waste

The Project would generate solid waste during operation of the development, which is anticipated to include retail, medical, multifamily housing, and single-family housing. Solid waste generated during

¹⁷ MDA. 2022. What's in My Neighborhood? - Agricultural. Available at: <https://app.gisdata.mn.gov/mda-agchem/>. Accessed. April 2022.

operation of the development would be typical of waste generated by these type of land uses and would be primarily managed as mixed MSW. The California Department of Resources Recycling and Recovery (CalRecycle) provides a list of estimated solid waste generate rates for office, industrial, service, and other establishments for general planning purposes¹⁸. For the residential land uses, the following estimated solid waste generation 12 lbs/housing unit/day. This along with an estimated office/warehouse solid waste generation rate of 1.42 lbs/100 square feet/day results in an estimated 2,806 tons of MSW per year. The collection of MSW would be managed by a waste hauler licensed by the City of Corcoran. The Project would adhere to all MPCA requirements and other regulations pertaining to the use, handling, and disposal of solid waste. Recycling areas would be provided in compliance with the Minnesota State Building code.

- b. *Project related use/storage of hazardous materials - Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.***

The Project is not anticipated to include permanent chemicals/hazardous materials storage or use during its operation. No above- or below-ground storage tanks are planned for permanent use within the Project Area. If this changes, a Spill Prevention, Control, and Countermeasures plan would be prepared by a licensed Minnesota Professional Engineer pursuant to federal regulations.

Construction equipment may require the limited use of potentially hazardous materials, such as gasoline or diesel fuels, engine motor oils, hydraulic fluids, and other lubricants. Vehicles responsible for the transportation of hazardous materials would be equipped with spill kits for rapid response to any spills and refueling procedures would be implemented to eliminate leakage. Additionally, all fuels, oils, and lubricants would be stored in containment apparatuses while not in use or when being stored. Construction staff would be trained to spot and appropriately respond to potential spills. In the event that a leak or spill incident occurs, the contractor would be required to respond in accordance with MPCA containment and remedial action procedures. A Spill Prevention, Control, and Countermeasures plan would be prepared by a Minnesota Professional Engineer pursuant to federal regulations.

- c. *Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling.***

It is not anticipated that the Project would generate or require storage of hazardous wastes during its construction or operation. Item 12.c describes the potential storage and use of hazardous materials during construction and operation of the Project.

14. Fish, Wildlife, Plant Communities, and Sensitive Ecological Resources (Rare Features)

- a. *Describe fish and wildlife resources as well as habitats and vegetation on or in near the site.***

¹⁸ CalRecycle. 2019. Estimated Solid Waste Generation Rates. Available at: <https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates>. Accessed April 2022.

The Project resides within Hennepin County and is within an ecological area classified as the Eastern Broadleaf Forest Province, Minnesota and Northeast Iowa Morainal Section, and Big Woods Subsection. Most of the Big Woods Subsection (approximately 75 percent) is cropland, with the remaining land consisting of pasture, upland forest, and wetlands. Historically, oak woodland and maple-basswood forest were common throughout the Big Woods Subsection. Vegetation consisted primarily of deciduous forest species, such as elm (*Ulmus* spp.), American basswood (*Tilia americana*), sugar maple (*Acer saccharum*), ironwood (*Ostrya virginiana*), bur oak (*Quercus macrocarpa*), northern red oak (*Q. rubra*), white oak (*Q. alba*), and aspen (*Populus* spp.). (DNR 2000)¹⁹.

The Project Area and immediately adjacent properties consist of developed land associated with the Hope Community Church, a farmstead, agricultural fields, grass/shrubs, forested areas, wetlands, and ponds (Figure 3, Appendix A). Low density residential areas and a golf course are also nearby. These features could provide habitat for wildlife species, such as deer, raccoons, foxes, coyotes, rabbits, squirrels, mice, passerines and other common birds, raptors, various reptiles, amphibians, and fish.

- b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (x) and/or correspondence number (ERDB____) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.**

State Listed Species and Significant Communities

Under Stantec's Limited License to Use Copyrighted Material (LA-2022-23) related to Rare Features Data, the DNR Natural Heritage Information System (NHIS) was searched in March 2023 to identify species and significant ecological communities within the Project Area and within a one-mile radius of the Project Area. No species records were identified within the Project Area. One species record was identified immediately south of the Project Area: the loggerhead shrike (*Lanius ludovicianus*; endangered).

Loggerhead shrike

The loggerhead shrike is associated with open landscapes, such as native upland grasslands, and is mostly restricted to areas that were historically prairie or oak savanna in the state of Minnesota. Other potential habitats include pastures, old fields, shelterbelts, farmyards, and cemeteries. This bird can be seen perching at a variety of sites, including hedgerows, shrubs, and small trees. Sites with thorned vegetation, such as honey locust (*Gleditsia triacanthos*), black locust (*Robinia pseudoacacia*), and hawthorns (*Crataegus* spp.), or barbed wire are useful as this species is carnivorous and impales prey. Finally, this species can occur in agricultural areas and non-native grasslands where there is short grass vegetation and perching sites available. (DNR 2022a)²⁰.

The Project Area contains grass/shrub habitat that may support the loggerhead shrike. Minimal tree removal is anticipated to be required as part of the Project. Therefore, the Project **may impact** the loggerhead shrike. Coordination with the DNR may be needed to avoid impacts to this species. It is unknown whether the loggerhead shrike has used the subject properties for nesting in the past, or whether it would find the present conditions suitable. Post construction, the Project would include an extensive landscape and planting plan to revegetate the site. Care would be taken to select plant species that are native to the area including approved native seed mixes, or that are hardy and would withstand the

¹⁹ DNR. 2000. Ecological Classification System. Available at: <https://www.dnr.state.mn.us/ecs/index.html>. Accessed March 2023.

²⁰ DNR. 2022a. Rare Species Guide. Available at: <https://www.dnr.state.mn.us/rsg/index.html>. Accessed March 2023.

climate.

Native plant communities and sites of biodiversity and ecological significance

No native plant communities, sites of biodiversity significance, or regionally significant ecological areas (RSEA) were identified within the Project Area. Three RSEA were identified within a one-mile radius of the Project Area. These sites are ranked as either moderate, high, or outstanding in significance. A highly ranked site and a moderately ranked site are located approximately 0.35 miles and 0.75 miles west of the Project Area, respectively, and one outstanding site is located approximately one mile south of the Project Area. None of these sites are anticipated to be impacted as part of the proposed Project.

Federally Listed Species

The United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool (USFWS 2023)²¹ was reviewed in April 2023 to identify federally listed species that have the potential to occur within the Project Area. Four species were identified from this review: the northern long-eared bat (*Myotis septentrionalis*; endangered), the tricolored bat (*Perimyotis subflavus*; proposed endangered), the whooping crane (*Grus americana*; non-essential experimental population), and the monarch butterfly (*Danaus plexippus*; candidate). The IPaC results are included in Appendix E (IPaC).

Northern long-eared bat

Suitable roosting, forage, and travel habitat for northern long-eared bat (NLEB) in the summer consists of a wide variety of contiguous forested and wooded habitats with varying tree density and amounts of canopy closure. While roosting, NLEB is generally found in deep crevices in areas such as forests and woodlots (i.e., live trees and/or snags greater than or equal to three inches in diameter at breast height that have exfoliating bark, cracks, crevices, and/or cavities) as well as linear features such as fence rows, riparian forests, and other wooded corridors. NLEB roosts in both live trees and snags. (Sasse and Perkins 1996²²; Foster and Kurta 1999²³; Owen et al. 2003²⁴). Additional summer habitat for the NLEB consists of areas adjacent to wooded areas, namely emergent wetlands and edges of agricultural fields, old fields, and pastures. The NLEB has also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses. (USFWS 2022a)²⁵. During winter months, NLEB hibernate in caves or abandoned mines (Foster and Kurta 1999)¹⁷.

Hennepin County is listed as a county with documented white-nose syndrome (WNS) (WNS Response Team 2023²⁶ and DNR 2020²⁷). According to the DNR NHIS database, no known roost trees or hibernacula are in the Project Area or within a one-mile radius of the Project Area. The DNR and USFWS maintain a list of townships containing documented NLEB maternity roost trees and/or hibernacula entrances. Based on a review of this list, occupied hibernacula are absent within 0.25 miles and no known

²¹ USFWS. 2023. Information for Planning and Consultation. Available at: <https://ipac.ecosphere.fws.gov/>. Accessed March 2023.

²² Sasse, D.B., and P.J. Pekins. 1996. Summer roosting ecology of northern long-eared bats (*Myotis septentrionalis*) in the White Mountain National Forest. Bats and forests symposium. British Columbia Ministry of Forests Working Paper 23:91-101.

²³ Foster, R.W. and A. Kurta. 1999. Roosting ecology of the northern bat. (*Myotis septentrionalis*) and comparisons with the endangered Indiana bat (*Myotis sodalis*). Journal of Mammalogy 80:659-672.

²⁴ Owen et al. 2003. Homorange size and habitat use by the northern Myotis (*Myotis septentrionalis*). American Midland Naturalist 150: 352-359.

²⁵ USFWS. 2022a. Rangewide-Wide Indiana Bat & Northern Long-Eared Bat Survey Guidelines. Available at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>. Accessed March 2023.

²⁶ WNS Response Team. 2023. Where is WNS Now? Available at: <https://www.whitenosesyndrome.org/where-is-wns>. Accessed March 2023.

²⁷ DNR. 2020. White-nose Syndrome and Minnesota's Bats. Available at: <https://www.dnr.state.mn.us/wns/index.html>. Accessed April 2023.

occupied maternity roost trees occur with 150 feet of the Project (DNR and USFWS 2021)²⁸.

Suitable habitat (contiguous forested area) is absent within the Project Area. The Project Area contains some wind break trees but is primarily shrubs that would not provide suitable roosting habitat. The Project Area also contains emergent wetlands, ponds, agricultural edges, and structures that could be used for foraging or roosting but given the growth of residential and developed areas in and around the Project Area, the use of these areas by the NLEB is unlikely. Tree clearing is anticipated to be required as part of the Project. Hope Community Church intends to complete tree/shrub removal during the inactive season (November 15 to March 31) to avoid the NLEB active season (April 1 to November 15) and NLEB pupping season (June 1 to July 31). In the event any tree clearing occurs during the active season, the Project Proposer commits to hiring a qualified party to determine the presence or absence of the species prior to such activity. Therefore, the Project would have *no effect* on the NLEB.

The reclassification of the NLEB from threatened to endangered and the nullification of the Final 4(d) Rule took effect on March 31, 2023 (USFWS 2023b)²⁹.

Tricolored bat

During the non-hibernating seasons, tricolored bats will roost in live and dead leaf clusters of live or dead deciduous hardwood trees. Tricolored bats have also been observed roosting in artificial structures such as barns, bridges, roofs, and other concrete structures. During the winter, tricolored bats hibernate in caves and mines. If mines or caves are not present within the region, they have been observed hibernating in road-associated culverts, tree cavities, and abandoned water wells. (USFWS 2022b)³⁰.

Suitable habitat in the form of deciduous hardwood trees is present within the Project Area. Minor tree clearing is anticipated for the Project during the bat inactive season. Therefore, the Project may impact this species, but it is recommended that the Project be reassessed for potential effects when a final listing status is determined. If tree clearing during the active season cannot be avoided, the developer would hire a qualified party to determine the presence or absence of the species.

Whooping crane

The whooping crane is a migratory bird species that once nested in northern prairies, but now breeds in remote northern forests in Canada as well as in an experimental population in Wisconsin, preferably within coniferous habitat containing swamps and nearby lakes or ponds. Winter habitat consists of coastal marshes (e.g., Texas, Louisiana, and Florida). The diet of the whooping crane is not well known in summer months, but it is thought to be similar to their wintering diet of shellfish, frogs, snakes, insects, small fish, and plant matter like roots and berries. (National Audubon Society undated)³¹.

The Project is within the range of a known, non-essential experimental population of whooping cranes. If this species is found within Minnesota, it is highly likely to be from this experimental population from Wisconsin that is non-migratory. Whether part of a natural or experimental population, Minnesota is out of the Central Flyway used by this species, so there is no concern for stopover sites within the Project Area. Additionally, Minnesota is not located within a known wintering or breeding ground for this

²⁸ DNR and USFWS. 2021. Townships containing documented northern long-eared bat (NLEB) maternity roost trees and/or hibernacula entrances in Minnesota. Available at: http://files.dnr.state.mn.us/eco/ereview/minnesota_nleb_township_list_and_map.pdf. Accessed March 2023.

²⁹ USFWS. 2023b. Effective date to reclassify northern long-eared bat as endangered extended. Available at: <https://www.fws.gov/press-release/2023-01/effective-date-reclassify-northern-long-eared-bat-endangered-extended>. Accessed January 2023.

³⁰ USFWS. 2022b. Tricolored Bat (*Perimyotis subflavus*). U.S. Fish & Wildlife Service. Available: [Tricolored Bat \(Perimyotis subflavus\) | U.S. Fish & Wildlife Service \(fws.gov\)](https://www.fws.gov/press-release/2022-01/tricolored-bat-perimyotis-subflavus). Accessed January 2023.

³¹ National Audubon Society. undated. Guide to North American Birds: Whooping Crane. Available at: <https://www.audubon.org/field-guide/bird/whooping-crane>. Accessed April 2023.

species. Suitable habitat (prairies, coniferous swamps, lakes, ponds, or coastal marshes) is not present within the Project Area. Wetland features and a small pond are present within the Project Area, but these areas are isolated within an area dominated by active agriculture and development with minimal coniferous tree canopy. Finally, the Project does not overlap any USFWS or National Park Service lands. As such, impacts are not anticipated for this species.

Monarch butterfly

The monarch butterfly is a migratory butterfly that exists in two main populations within the United States divided by the Rocky Mountains: the eastern population that overwinters in the mountains of Mexico, and the western population that overwinters along the southern Pacific coast of California (United States Department of Agriculture [USDA] Forest Service undated)³². Monarch butterflies are a widespread species found in fields, prairies, savannahs, and most places where their host plant, milkweeds (*Asclepias* spp.), occur throughout the United States and southern Canada. This species generally occurs in areas with high densities of nectar sources. During late summer and during migration, adults use nectar species such as black-eyed Susan (*Rudbeckia hirta*), narrow-leaved coneflower (*Echinacea angustifolia*), and rough blazing star (*Liatriis aspera*) (DNR 2022b)³³. However, the presence of milkweeds is required for breeding habitat as it is the only plant on which the larvae can feed (National Wildlife Federation undated)³⁴.

Given the level of disturbance from active agriculture and development, suitable habitat (nectar sources and milkweed) for the monarch butterfly is likely not present or highly limited within the Project Area. Canada goldenrod (*Solidago canadensis*), a nectar source, was identified in the Project Area during the wetland delineation (Fall 2022). Undocumented nectar sources and/or milkweed may also be present in the grassland areas found within the Project Area. Therefore, impacts to the monarch butterfly may occur within the Project Area. It is recommended that the effects be reassessed when a listing status is revisited for this species.

- c. ***Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project including how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.***

State Listed Species and Significant Communities

Loggerhead shrike

Suitable habitat for the loggerhead shrike (grass/shrub) is located within the Project Area. Therefore, the proposed Project may impact this species if it exists on the site.

According to the 2010 State of the Birds Report on Climate Change conducted by the North American Bird Conservation Initiative (NABCI), the effects of warming temperatures on the loggerhead shrike have not been thoroughly investigated, but their assessment indicated a low vulnerability (NABCI 2010)³⁵. However, given the carnivorous diet of this species, it could be impacted by prey availability given the

³² United States Department of Agriculture [USDA] Forest Service. undated. Migration and Overwintering. Available at: https://www.fs.fed.us/wildflowers/pollinators/Monarch_Butterfly/migration/. Accessed November 2021.

³³ DNR. 2022b. Butterfly Gardens. Available at: <https://www.dnr.state.mn.us/gardens/butterfly/index.html>. Accessed March 2022.

³⁴ National Wildlife Federation. undated. Monarch Butterfly. Available at: <https://www.nwf.org/Educational-Resources/Wildlife-Guide/Invertebrates/Monarch-Butterfly>. Accessed December 2021.

³⁵ NABCI, U.S. Committee. 2010. The State of the Birds 2010 Report on Climate Change, United States of America. Washington, DC: U.S. Department of the Interior. http://www.stateofthebirds.org/2010/pdf_files/State_of_the_Birds_FINAL.pdf. Accessed January 2023.

various vulnerabilities of other bird, reptile, insect, and small mammal species to climate change (The Cornell Lab of Ornithology 2023)³⁶.

Native plant communities and sites of biodiversity and ecological significance

No native plant communities, sites of biodiversity significance, or RSEA are located within the Project Area, and no impacts are anticipated for the three RSEA located within one mile of the Project Area.

While no impacts are anticipated on the Project level, as discussed in Section 7 Climate Adaptation and Resilience, the warmer and wetter conditions expected in Minnesota as a result of climate change are expected to impact these communities. These diverse communities are made up of many species, with some having higher tolerances to heat and moisture than others. If the habitat becomes unsuitable for some species, it could change the dynamics within the entire community.

Federally Listed Species

Northern long-eared bat

Contiguous forested habitat is not present within the Project Area, as such, the Project is anticipated to have no effect on the NLEB. The Project Area is over 0.25 miles from a known, occupied hibernaculum. No known maternity roosts occur within 150 feet of the Project and Hope Community Church intends to conduct minimal tree clearing during the NLEB inactive season (November 15 to March 31). If tree clearing during the active season cannot be avoided, the developer would hire a qualified party to determine the presence or absence of the species.

As discussed in Section 7, Minnesota's climate is trending warmer with more extreme precipitation events. Changes in temperature and precipitation may influence the NLEB's available suitable roosting and foraging habitat, as well as prey availability (USFWS 2022c)³⁷. Although a less significant stressor compared to white-nose syndrome, climate change variables may negatively affect the NLEB (USFWS 2022d)³⁸.

Tricolored bat

The Project may impact the tricolored bat due to the presence of suitable habitat (deciduous hardwood trees) within the Project Area and the plan to clear minimal trees. This species is proposed as federally endangered, so impacts should be reassessed when a listing status is finalized.

The tricolored bat is susceptible to climate change. For instance, areas that are experiencing more intense rainfall, such as Minnesota, may also see decreased foraging behavior from the tricolored bat along with decreased insect availability (USFWS 2021)³⁹.

Whooping crane

The Project Area does not contain suitable habitat (prairies, coniferous swamps, lakes, ponds, or coastal marshes) that could support the whooping crane and it is located outside of the Central Flyway used by

³⁶ The Cornell Lab of Ornithology. 2023. All About Birds – Loggerhead Shrike Life History. Available at: https://www.allaboutbirds.org/guide/Loggerhead_Shrike/lifehistory. Accessed January 2023.

³⁷ USFWS. 2022c. Northern Long-Eared Bat Overview. Available at: <https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis>. Accessed September 2022.

³⁸ USFWS 2022d. Proposed Rule 87 FR 16442: Endangered and Threatened Wildlife and Plants; Endangered Species Status for Northern Long-Eared Bat. Available at: <https://www.federalregister.gov/d/2022-06168>. Accessed January 2023.

³⁹ USFWS. 2021. Species Status Assessment Report for the Tricolored Bat (*Perimyotis subflavus*). Version 1.1. Page iii. USFWS Northeast Region. Hadley, MA. Available at: <https://fws.gov/species/tricolored-bat-perimyotis-subflavus>. Accessed February 2023.

this species. Wetland features and a small pond are located in the Project Area, but these areas are isolated in an area dominated by active agriculture and development with minimal coniferous tree canopy. Individuals found in Minnesota would be from a non-essential experimental population in Wisconsin that is non-migratory. Therefore, impacts are not anticipated for the whooping crane as a result of the Project.

According to Audubon, this already rare species is highly vulnerable to climate change; given an imminent 1.5-degree Celsius increase in average global temperature if no action is taken, this species would be on track to lose 86 percent of its breeding range and 19 percent of its wintering range (National Audubon Society undated)⁴⁰.

Monarch butterfly

Impacts to the monarch butterfly may occur within the Project Area due to the presence of Canada goldenrod and additional grassland that may hold undocumented nectar sources and/or milkweed. This species is a candidate for federal listing; therefore, effects should be reconsidered when a listing status is revisited.

As discussed in Section 7, climate change is anticipated to result in increasing temperatures in Minnesota, which may increase the number of days and the area in which monarch butterfly populations will be exposed to unsuitably high temperatures. This can result in them using up fat stores too quickly at their overwintering sites and may result in them incorrectly judging when to enter and exit states of dormancy (diapause). (Kobilinsky 2019)⁴¹.

Invasive Species

Noxious weeds and invasive species in Minnesota are managed through the MDA under Minnesota Statutes Section 18.78, the DNR, and local ordinances. Best management practices (BMPs) during construction activities and operation within the Project Area should be implemented to minimize the introduction or spread of noxious weeds and invasive species. These practices include cleaning vehicles and equipment of mud and dirt from other construction areas, removing seeds that attach to clothing or equipment, minimizing soil disturbance, not moving potentially contaminated materials between sites, and staying on designated roads/trails. (USDA undated⁴² and DNR 2023⁴³).

d. Identify measures that will be taken to avoid, minimize, or mitigate the adverse effects to fish, wildlife, plant communities, ecosystems, and sensitive ecological resources.

Sightings of any rare species during construction or operation of the Project would be reported to the DNR Nongame Wildlife specialist. Hope Community Church would follow the guidance that is received to avoid impacts.

Hope Community Church understands restrictions related to the NLEB and intends to conduct tree clearing during the inactive season (November 15 to March 31) to avoid the NLEB active season (April 1 to November 15) and the NLEB bat pupping season (June 1 to July 31). If tree clearing during the active season cannot be avoided, the developer would hire a qualified party to determine the presence or absence

⁴⁰ National Audubon Society. undated. Guide to North American Birds: Whooping Crane. Available at: <https://www.audubon.org/field-guide/bird/whooping-crane>. Accessed April 2023.

⁴¹ Kobilinsky, Dana. 2019. Watch: Temperature Drives Internal Clock for Monarchs. The Wildlife Society. Available at: <https://wildlife.org/watch-temperature-drives-internal-clock-for-monarchs/>. Accessed September 2022.

⁴² USDA National Invasive Species Information Center. Undated. Best Management Practices. Available at: <https://www.invasivespeciesinfo.gov/subject/best-management-practices>. Accessed January 2023.

⁴³ DNR. 2023. Terrestrial Invasive Species. Available at: <https://www.dnr.state.mn.us/invasives/terrestrial/index.html>. Accessed January 2023.

of the species.

Hope Community Church plans to utilize native seed mixes to buffer wetlands and ponds as part of their landscaping efforts.

15. Historic Properties

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

The Minnesota State Historic Preservation Office (SHPO) was contacted regarding the presence of architectural or archaeological resources. Cultural and archaeological resource are not present within the proposed expansion site.

16. Visual

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

The Project Area and adjacent properties currently consists of a church, cemetery, agriculture, a barn, and a single-family home. The Project Area itself is vacant. No designated scenic views or vistas are present in the vicinity of the Project. The landscape immediately surrounding the site consists of a single-family residential neighborhood to the north and farmland or vacant land to the south, east, and west. The primary visual impact would the transition of views from undeveloped, agricultural and large lot rural residential to buildings, parking lots, and stormwater basins. The Project is not expected to include industries that would emit vapor plumes. The Project Area is zoned by the City of Corcoran as General Mixed Use and Public/Institutional. The Project would be required to adhere to the City of Corcoran's ordinance requirements including building height and form, landscape screening, and lighting. The existing tree lines and vegetation along sections of the Project Area would partially serve as a buffer for nearby residents. Tree removal and wetland impacts would be minimized to the extent possible primarily around the edges of the Project Area. Additional vegetative screening may be added, where appropriate.

17. Air

- a. ***Stationary source emissions - Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.***

The Project is not anticipated to include any stationary sources emissions.

- b. Vehicle emissions - Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.**

The Project Area is located in a Carbon Monoxide (CO) maintenance area. The Project is expected to generate increased vehicular traffic, which would result in a relatively small increase in CO emissions and other vehicle related emissions. The Minnesota Department of Transportation (MnDOT) developed a CO hot spot screening method designed to identify intersections that may result in CO emissions that exceed air quality standards. MnDOT's screening method assumes that intersections with a total daily traffic volume exceeding 82,300 vehicles per day may result in potential CO impacts that exceed air quality standards. A traffic impact study was completed for the Project, which is discussed in Item 20 of this EAW. Based on this study, the roadways in and surrounding the Project Area would not experience traffic volumes exceeding 82,300 vehicles per day. Therefore, it is not anticipated that vehicle emissions generated by the project would have the potential to significantly impact CO air pollution.

- c. Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 17a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.**

The Project is not anticipated to produce dust or odors during its operation, but it may generate temporary dust and odors during construction. Sensitive receptors to these dusts and odors would include residents surrounding the Project Area. Potential odors would likely be associated with exhaust from diesel engines and fuel storage. Dust generated during construction would be minimized through standard dust control measures such as applying water to exposed soils and limiting the duration of exposed soils to the extent possible. Dust levels after construction is complete would be minimal as all surfaces would be paved or revegetated. With these mitigations in place, the quality of life for nearby residences is not anticipated to be affected.

18. Greenhouse Gas (GHG) Emissions/Carbon Footprint

- a. GHG Quantification: For all proposed projects, provide quantification and discussion of project GHG emissions. Include additional rows in the tables as necessary to provide project-specific emission sources. Describe the methods used to quantify emissions. If calculation methods are not readily available to quantify GHG emissions for a source, describe the process used to come to that conclusion and any GHG emission sources not included in the total calculation.**

The GHG emissions for the Project are calculated using the Simplified Greenhouse Gas Emissions Calculator (SGEC) tool and are based on the methodologies for developing a carbon footprint described in Minnesota Environmental Quality Board's (EQB's) Revised EAW Guidance (January 2022). Table 13 shows the emission categories for project carbon footprint calculations, as provided in the EQB Guidance.

Table 13. Emission Categories for Carbon Footprint

| Category | Scope | Project Phase | Type of Emissions |
|-----------------------------|-----------------|-------------------------|---|
| Direct Emissions | Scope 1 | Operations | Combustion (Stationary, Area, Mobile Sources) |
| | Scope 1 | Operations | Non-Combustion Processes |
| | Scope 1 | Construction | Combustion (Mobile Sources) |
| | Scope 1 | Construction | Land-Use |
| Indirect Emissions | Scope 2 | Operations | Off-site Electricity/Steam Production (Market-Based and Location-Based) |
| | Scope 3 | Operations | Off-site Waste Management |
| Atmospheric Removal of GHGs | Scope 1 (Sinks) | Construction/Operations | Land-Use (CO2 removals to terrestrial storage) |

A description of the carbon footprint associated with the Project is provided below.

Construction Emissions

GHG emissions from construction are associated with fuel combustion in the mobile construction equipment and on-road vehicles. The assumed construction schedule is five (5) years to complete the Project. For on-road vehicles (commuting construction workers, dump trucks and semi-trucks), emissions are calculated by estimating the number of vehicles, miles traveled, gallons of fuel used (using default mileage rates), and emission factors from the U.S. EPA’s Emission Factors Hub (<https://www.epa.gov/climateleadership/ghg-emission-factors-hub>, updated April 2022).

For off-road vehicles, the quantity and horsepower of cranes, backhoes, loaders, bulldozers, excavators, and skid steers was estimated based on similar projects. The default fuel consumption rate of 0.05 gallons per horsepower-hour⁴⁴ is used to determine the fuel usage for all equipment. Similar to the on-road vehicles, emission factors from the Emission Factors Hub are used to calculate GHG emissions.

Per EQB’s Revised EAW Guidance, total construction emissions to construct the Project are divided by the lifetime of the project, estimated to be 50 years.

Operational Emissions – Mobile Sources

Average daily trips associated with the proposed Project are provided in Table 14.

Table 14. Average Trips per Day

| Activity | Trips/Day |
|---|-----------|
| Multi-Family Unit Residents | 1,543 |
| Senior Living Residents (includes 55+ housing, senior | 1,628 |

⁴⁴ Based on South Coast Air Quality Management District CEQA Air Quality Handbook, Table A9-3E.

| | |
|---|-------|
| housing, senior villas, and row townhomes) | |
| Retail Facilities (two coffee shops, two fast-casual restaurants, and strip retail) | 2,794 |
| Medical Facilities | 3,181 |
| Deliveries (assumes heavy duty diesel trucks) | 15 |
| Total | 9,161 |

It is conservatively assumed that these trips are five (5) miles each and take place for 365 days per year. Gas mileage for light duty vehicles (residents, retail and medical) is estimated based on the U.S. Department of Transportation’s Bureau of Transportation Average Fuel Efficiency for Light Duty Vehicles. Delivery trucks are assumed to be heavy-duty diesel trucks. Gas mileage for the diesel trucks are based on U.S. Department of Transportation, Federal Highway Administration data from 2019. GHG emissions associated with these trips are calculated using the Emission Factors Hub.

Operational Emissions – Stationary Combustion

The projected natural gas usage for the buildings associated with the Project is estimated using the U.S. Energy Information Administration’s Commercial Buildings Energy Consumption Survey (CBECS, 2012 – released May 2016). The CBECS provides natural gas intensities in standard cubic feet per square foot per year for several different building activity categories.

Natural gas combustion GHG emissions are calculated using emission factors from the Emission Factors Hub.

Operational Emissions – Offsite Electricity Production

Similar to natural gas usage, electricity needs for the proposed buildings are estimated using the CBECS, which provides electricity usage intensity in kilowatt-hours per square foot of building space. GHG emissions occur offsite (Scope 2) when the electricity is generated. The SGEN tool calculates GHG emissions from electricity generation on a regional basis (defined by U.S. EPA using data from the EIA and the North American Electric Reliability Corporation (NERC))⁴⁵, using average emission factors based on the mix of fuels used to generate the electricity in each region. For this project, the Midwest Reliability Organization West (MROW) region is used. The electricity generation in MROW is comprised of approximately 50 percent fossil fuels (coal and natural gas), nine percent nuclear and approximately 40 percent renewables (hydro, wind, and solar).

Operational Emissions - Waste Management

GHG emissions from waste management are associated with the waste generation, transportation to landfill, equipment use at landfill and fugitive landfill methane emissions (based on typical landfill gas collection practices and average landfill moisture conditions). For this Project, emissions are provided for residential waste only. The waste generation for the medical and retail facilities are not included as no reliable waste data source was identified.

Estimates were made for the number of residents per unit for each of the housing types: multi-family housing – four residents, senior housing and 55+ housing – one resident, and villas and row townhomes – two residents. The total number of residents was estimated to be 1,832.

⁴⁵ <https://www.epa.gov/eGRID>

A default waste generation rate of 4.9 pounds per person per day was obtained from the *U.S. EPA's Fact Sheet, 2018 – Municipal Solid Waste Generation, Recycling and Disposal in the United States: Facts and Figures for 2018*. Conservatively applying this rate to the number of residents yields a waste generation rate of 1,638 tons per year.

GHG emissions are estimated based on emission factors from the U.S. EPA's Waste Reduction Model (WARM).

Carbon Sequestration Associated with Land Use Changes

As prescribed by the EQB's Draft EAW Guidance, GHG emissions associated with changes in land use are quantified using the Chapter 6: Land Use, Land-Use Change and Forestry, of the U.S. EPA's Inventory of Sources and Sinks of Greenhouse Gases⁴⁶, which provides an assessment of greenhouse gas fluxes resulting from land use and land use change in the U.S. The term "flux" describes the exchange of carbon dioxide to and from the atmosphere. A negative flux is a removal of carbon dioxide from the atmosphere, or carbon sequestration.

For this Project, GHG emissions were calculated for the following proposed land use changes: Wetland to Settlement (developed areas consisting of a mix of lawns and other grassy areas, trees, landscaping and impervious surfaces), Forest to Settlement, Cropland to Wetland (i.e. stormwater pond), and Cropland to Settlement. The net increase in CO₂e associated with the losses of carbon sinks is estimated at 355 tons per year.

Summary

A summary of GHG emissions are provided in Table 15. Emissions are presented in tons per year of carbon dioxide equivalent, which takes into account each GHG's global warming potential (GWP). Detailed emission calculations are provided in Appendix G Greenhouse Gas Analysis Calculations.

Table 15. GHG Emissions Summary (CO₂e in short tons per year)

| Scope | Source | GHG Emissions (ton/yr of CO ₂ e) |
|---------------------------|--|---|
| Direct Emissions | | |
| Scope 1 | Construction – Mobile Sources | 683 |
| Scope 1 | Operations – Stationary Combustion (Natural Gas) | 1,325 |
| Scope 1 | Operations – Mobile Sources | 7,138 |
| Indirect Emissions | | |
| Scope 2 | Operations – Purchased Electricity | 3,358 |
| Scope 2 | Operations – Waste Management | 954 |

⁴⁶ <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

| Atmospheric Removal of GHGs | | |
|-----------------------------|-----------|--------|
| Scope 1 – Sinks | Land Use* | 355 |
| Total | | 13,813 |

* Positive number reflects net gain in emissions due to loss of carbon sequestration from the land.

b. GHG Assessment

i. Describe any mitigation considered to reduce the project’s GHG emissions.

Mitigation Considerations

The following possible activities may be considered to help mitigate the project’s GHG emissions:

- Minimize grading, incorporating existing topography into the site design.
- Elimination of invasive species and replacing with native grasses and plants.
- Keeping as many existing trees as possible.
- Re-using surface water collected in ponds for irrigation.
- Utilizing best management practices (BMPs) to conserve water, preserve water quality, limit pesticide and fertilizer applications and habitat management.
- Energy efficient lighting in buildings and parking lots.
- Use of energy efficient building materials.
- Installation of energy efficient appliances, windows and heating, ventilation and air conditioning (HVAC) units.
- Use of renewable energy sources

ii. Describe and quantify reductions from selected mitigation, if proposed to reduce the project’s GHG emissions. Explain why the selected mitigation was preferred.

Reductions from Selected Mitigation

The mitigation measures above may help offset the GHG emissions from the Project, but were not explicitly quantified in this analysis. The Project’s GHG emissions (without mitigation) are conservatively estimated to be those presented in Table 15.

iii. Quantify the proposed projects predicted net lifetime GHG emissions (total tons/#of years) and how those predicted emissions may affect achievement of the Minnesota Next Generation Energy Act goals and/or other more stringent state or local GHG reduction goals.

Net Lifetime GHG Emissions and Effect on State and Local Emissions Goals

The project lifetime is estimated at 50 years. Thus, the lifetime emissions associated with the project are approximately 690,648 tons of CO₂e. This conservative total may be offset by the mitigation measures noted above. The project’s GHG emissions would have minimal effect on the State of Minnesota’s or the local area’s GHG reduction goals.

19. Noise

Describe sources, characteristics, duration, quantities, and intensity of noise generated during project

construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

1) *Existing noise levels/sources in the area*

Existing noise sources include vehicle traffic along CSAH 30 and County Road (CR) 116, agricultural land use, and activities associated with Hope Community Church, which is generally situated in the center of the Project Area.

2) *Nearby sensitive receptors*

The noise receptors nearest to the Project Area include the residential areas immediately north of the Project Area on the south side of Hunters Ridge and the residential areas immediately east of the existing Hope Community Church, across CR 116. The closest residential homes are approximately 100-200 feet from the Project Area, along the northern boundary of the Project Area.

3) *Conformance to State noise standards*

The Project would minimize noise disturbances caused by the construction of the Project to the extent possible and would adhere to the noise regulations outlined in Minnesota State Statute 7030.0030 and Corcoran City Ordinances 1060.090 and 82.03 subpart 5 (MPCA 2015 and City of Corcoran Municipal Code 2022)^{16,47}. The regulations state that construction activities are prohibited between 7:00 p.m. and 7:00 a.m. on weekdays and 4:00 p.m. and 8:00 a.m. on weekends and federal holidays. (MPCA 2015)⁶.

4) *Quality of life*

The Project would consist of multifamily housing, senior living, commercial/retail, and medical office uses that would not emit noise levels exceeding state noise standards. Construction of the Project would temporarily result in elevated noise levels. Construction noise would be temporary and would adhere to local ordinance requirements. No construction or operation hours would occur during nighttime hours. Construction equipment would be properly muffled and maintained in working order. This Project is not anticipated to affect the quality of life for nearby residents. The Project would be required to adhere to State and city noise regulations.

20. Transportation

a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.

- 1) Existing parking spaces: 224
Proposed parking spaces: Approximately 1,786
- 2) Total average daily traffic generated: 8,231 trips per day

⁴⁷ MPCA 2015. Noise rules in Minnesota. Available at: [A Guide to Noise Control in Minnesota \(state.mn.us\)](https://www.state.mn.us/mPCA/air/NoiseControl/NoiseControl.html). Accessed March 2022.

- 3) Maximum peak hour traffic generated and time of occurrence: 774 trips during p.m. peak hour (4:30-5:30 p.m.)
- 4) Source of trip generation rates: Trip Generation, Eleventh Edition, published by the Institute of Transportation Engineers
- 5) Availability of transit and/or other alternative transportation modes: There are no transit routes or pedestrian facilities in the Project area.

b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system. If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW. Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual, Chapter 5 (available at: <http://www.dot.state.mn.us/accessmanagement/resources.html>) or a similar local guidance.

A complete Traffic Impact Study with existing and future volumes is included in the Appendix H. This appendix includes relevant figures including existing traffic volumes, future peak traffic volumes, proposed development layout, and access locations.

c. Identify measures that will be taken to minimize or mitigate project related transportation effects.

The following mitigation measures are recommended at each intersection:

- CSAH 30/CR 116
 - Short term – Construct dedicated westbound right lane 300 feet in length.
 - Long term – No additional improvements needed.
- CR 116/Hunters Ridge
 - Short term – Construct planned northbound and southbound left and right turn lanes on CR 116. Widen eastbound and westbound Hunters Ridge approaches to provide a 200-foot left turn lane and a through/right turn lane.
 - Long term – No additional improvements needed.
- CSAH 30/access
 - Short term – Construct 300-foot eastbound left turn and westbound right turn lanes on CSAH 30. Construct southbound approach with 200-foot left turn and right turn lanes.
 - Long term – No additional improvements needed.

21. Cumulative Potential Effects

(Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items)

a. Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.

While the market would ultimately drive the phasing of the Project, it is anticipated that multifamily and senior housing would ultimately lead this development due to current market conditions, and

utility availability. From that point, it is anticipated that the retail and commercial spaces would begin to develop, followed by/or along with subsequent housing phases. There are no other projects in the surrounding area that are known to be in construction, operation, or planned; and therefore, could not be considered in the cumulative potential effects.

- b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.***

As referenced in Item 12.b.iii., the City of Corcoran is constructing a new Water Treatment Plant to serve the growing community. The new City-owned water tower would be constructed in southern portion of the Hope Community Development Project Area. Note: the water tower project would in part be financed with federal funds and a separate (federal) environmental review would be completed for that project. It is the City of Corcoran's intent to have the water tower in operation by year end 2024.

There is one other development that we considered as a part of this response and that is the Amberley and Bellwether developments approximately 0.25-mile to the northeast (north of Hunters Ridge and east of CR 116). This will be a residential development with approximately 400 homes. A majority of the homes are within the Bellwether portion of the developments, which is an age-restricted community. Construction of the development is underway and full build-out is anticipated for 2024. An Environmental Assessment Worksheet was completed for this project when it was known as "Encore" in 2018.

In discussions with City of Corcoran, no other reasonably foreseeable future projects were identified in the Project Area (as described in Item 21.a.).

- c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.***

In reviewing the Hope Community Development Project and the new City-owned water tower project, the cumulative potential effect would be limited to the conversion of agricultural land to non-agricultural land. The water tower project would impact 1.2 acres of agricultural land, that along with the Hope Community Development Project's 16.8 acres of conversion (refer to Table 3 Cover Types) would account for a total conversion of approximately 18 acres in Corcoran, Minnesota.

Similar to the cumulative potential effects of the Hope Community Development Project and the City-water tower project, the previously approved Amberly and Bellwether developments will also result in a conversion of agricultural land. These previously approved developments were part of the Encore EAW completed prior to construction. Agricultural land will be replaced with impervious surface area (i.e., rooftops and paved surfaces). Both developments will manage stormwater per local and state requirements. Additionally, the City worked with the developers to consider landscaping for the built condition. The developments will introduce new traffic to the local roadway system, and their independent traffic analysis, study and recommendations were used to plan for any necessary safety or operation improvements.

22. Other Potential Environmental Effects

If the project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss the how the environment will be affected, and identify measures that

will be taken to minimize and mitigate these effects.

No other potential environmental effects are anticipated that are not addressed by Items 1 through 21.

RGU CERTIFICATION

*(The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.)*

I hereby certify that:

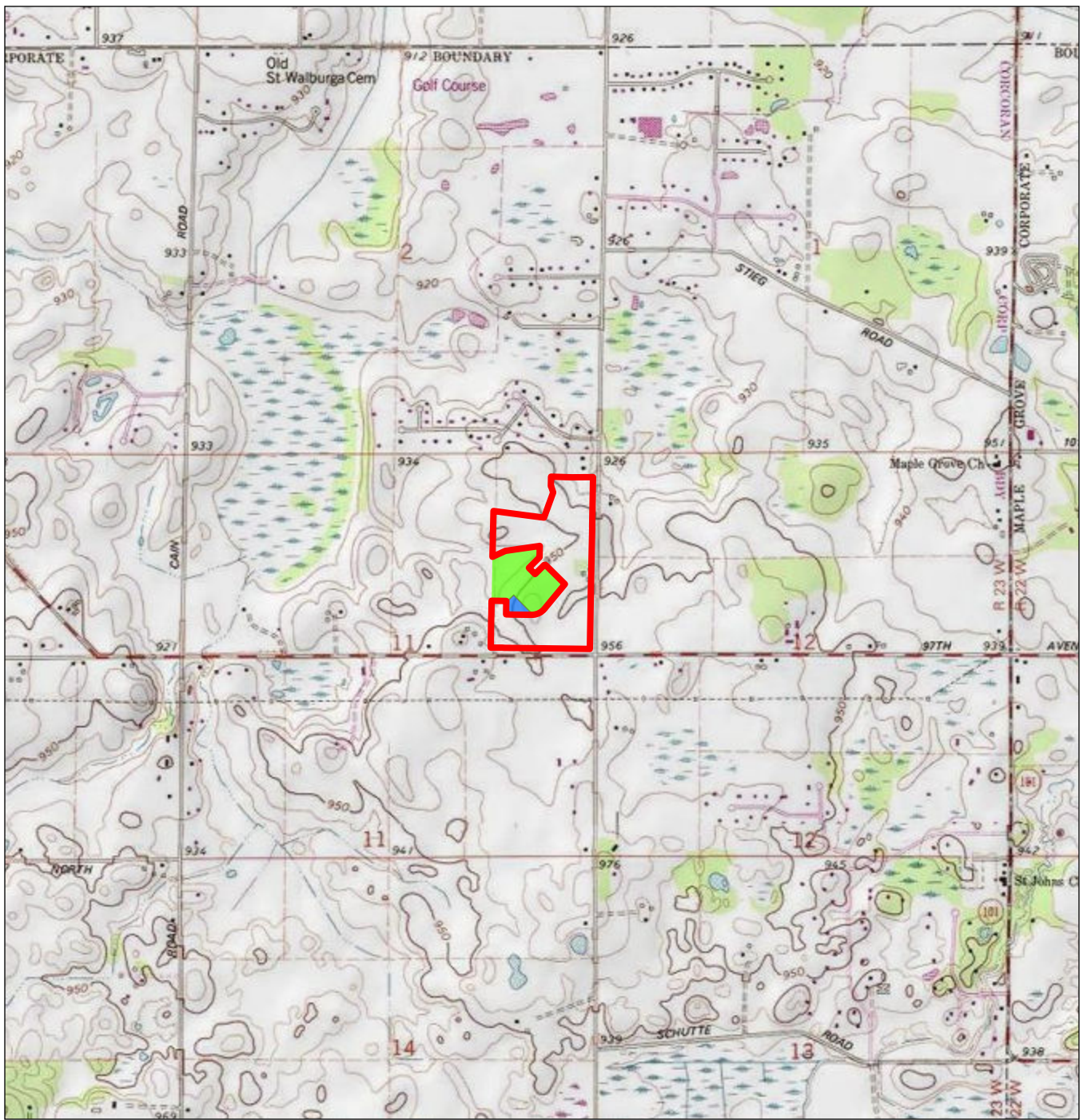
- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature

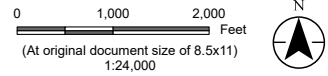


Date 5/30/2023

Title Planner



- Legend**
- Project Area
 - Existing Development
 - Under Seperate Review



Project Location T119N, R23W, S11
 Corcoran, Hennepin Co., MN

Prepared by KJM on 2023-05-16

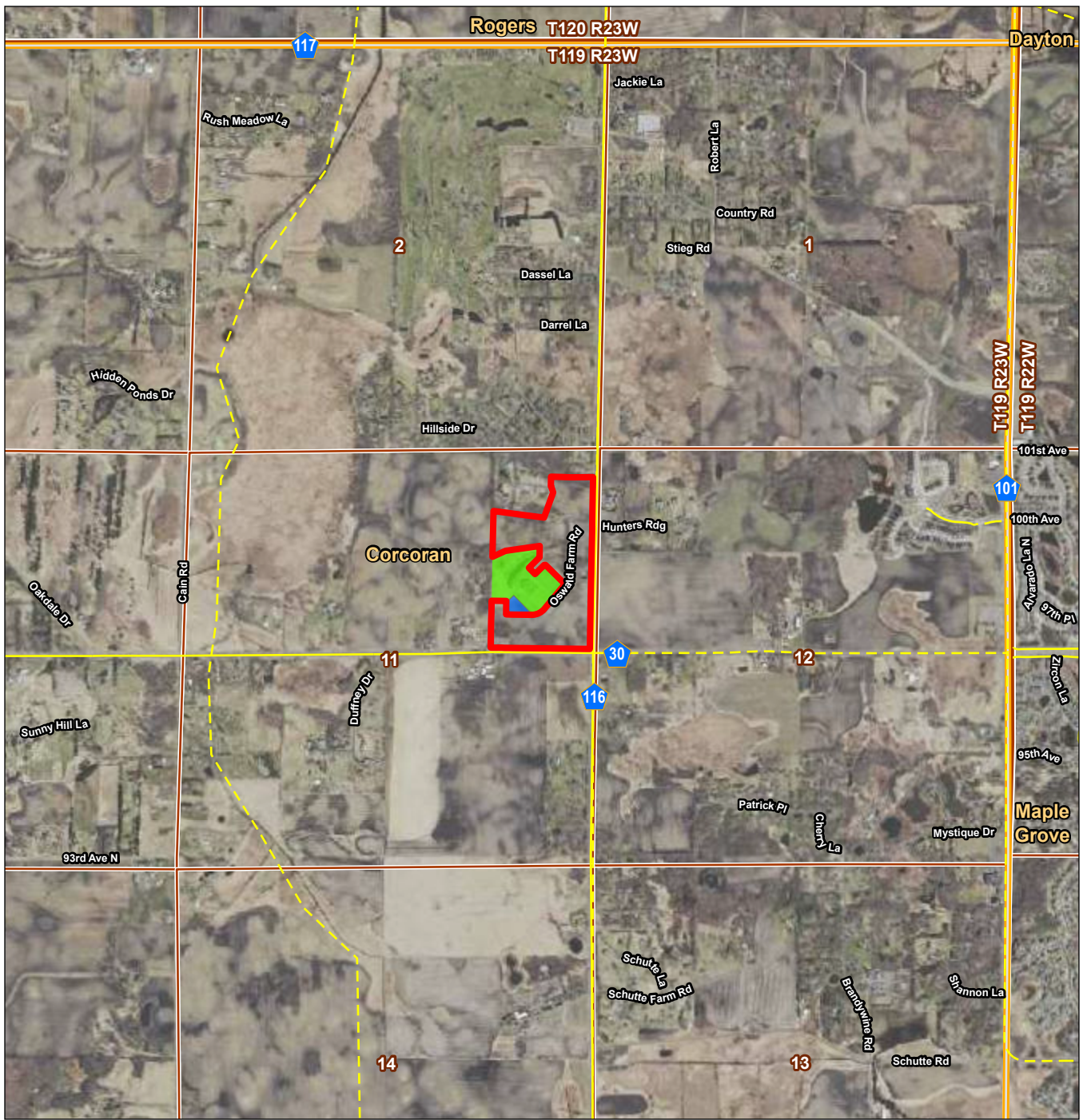
Client/Project City of Corcoran, MN
 Hope Church Development
 EAW

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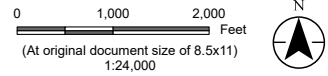
Figure No. 1

Title
Project Location USGS Topo Map

- Notes**
1. Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
 2. Data Sources: Stantec
 3. Background: USGS Rodgers 7.5 Minute Quadrangle



- Legend**
- Project Area
 - Existing Development
 - Under Separate Review
 - Municipal Boundary
 - PLSS Boundary
- Metro Region Trails/Bikeways**
- Trail Status**
- Planned
 - Existing



Project Location T119N, R23W, S11
 Corcoran, Hennepin Co., MN

Client/Project City of Corcoran, MN
 Hope Church Development
 EAW

Figure No. 2

Title Project Location Aerial Map

Prepared by KJM on 2023-05-16
 193806102

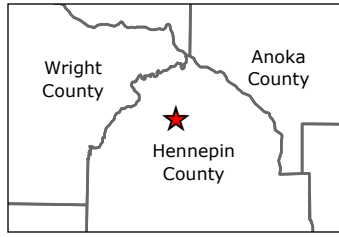
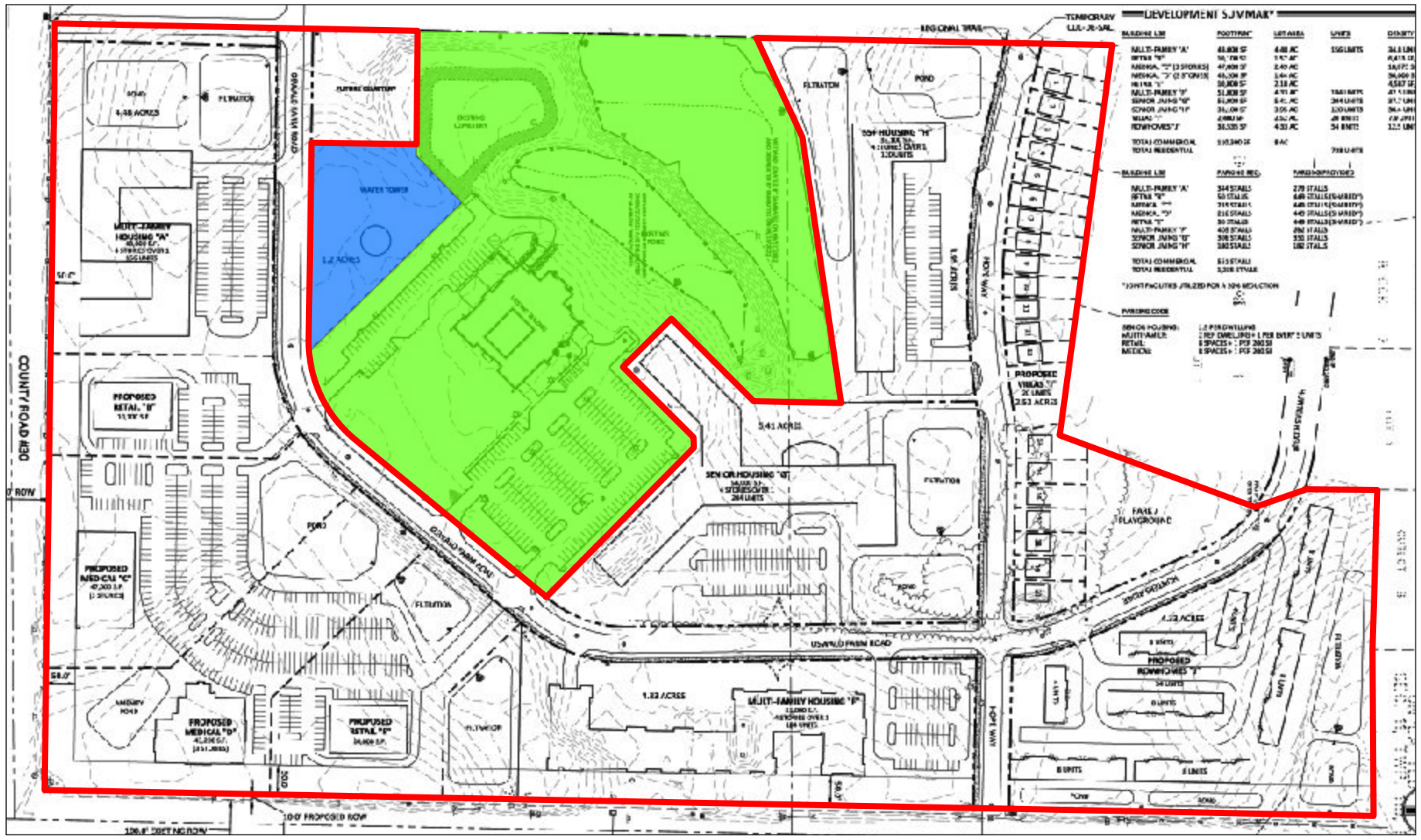
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1. Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
2. Data Sources: Stantec, MnGeo, MnDNR, MnDOT
3. Background: 2020 color 7-county

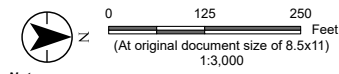
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- Project Area
- Existing Development
- Under Separate Review



- Notes**
- Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
 - Data Sources: Stantec, MnGeo
 - Background: Sambatek

Project Location: T119N, R23W, S11 Corcoran, Hennepin Co., MN
 Prepared by KJM on 2023-05-16

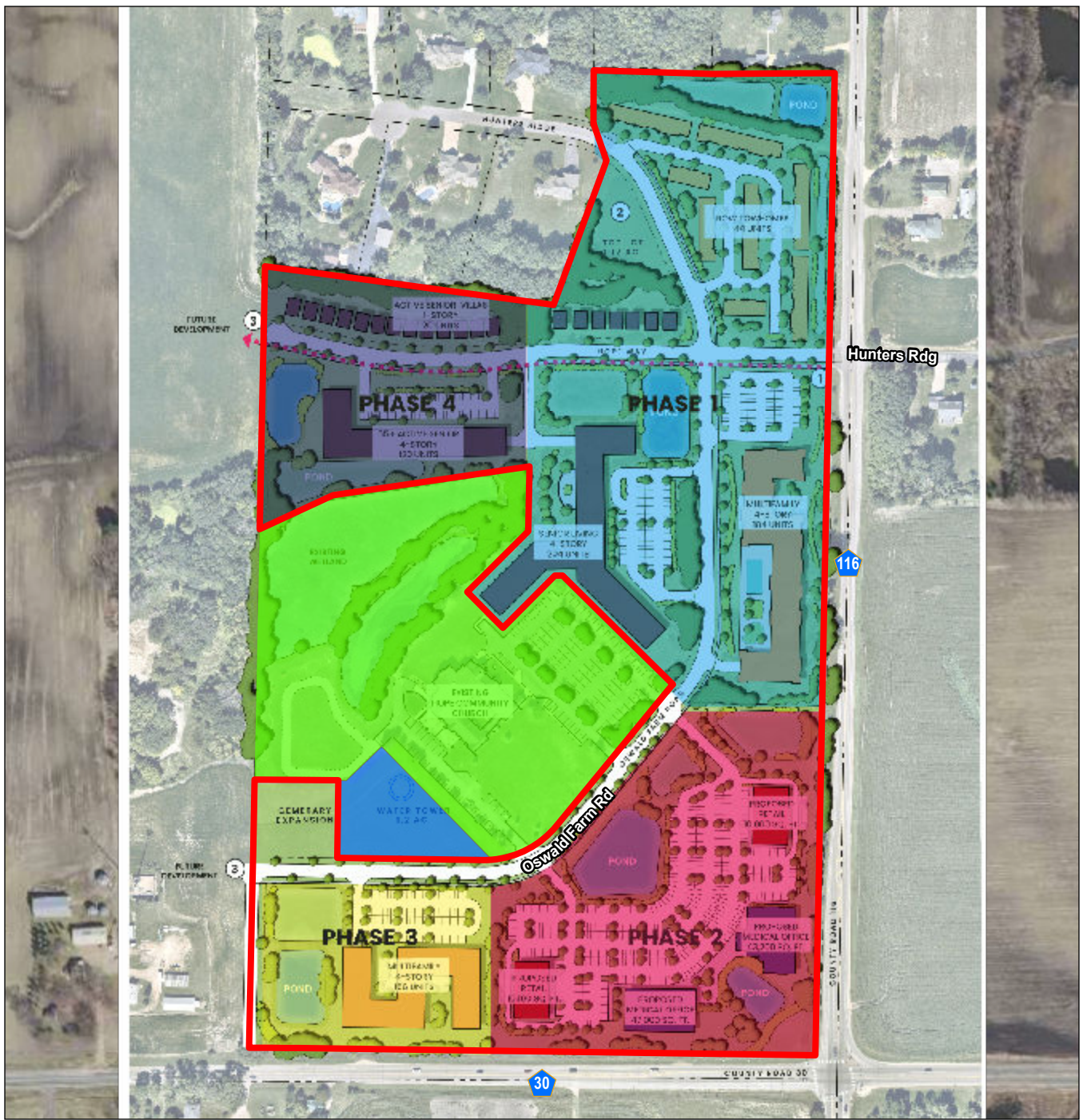
Client/Project: City of Corcoran, MN Hope Church Development
 193806102

Figure No. **3**

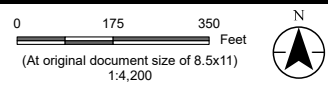
Title: **Site Plan Concept**



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- Legend**
- Project Area
 - Existing Development
 - Under Separate Review



Project Location T119N, R23W, S11 Corcoran, Hennepin Co., MN
Prepared by KJM on 2023-05-16

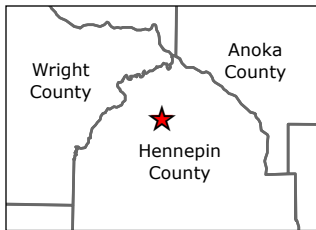
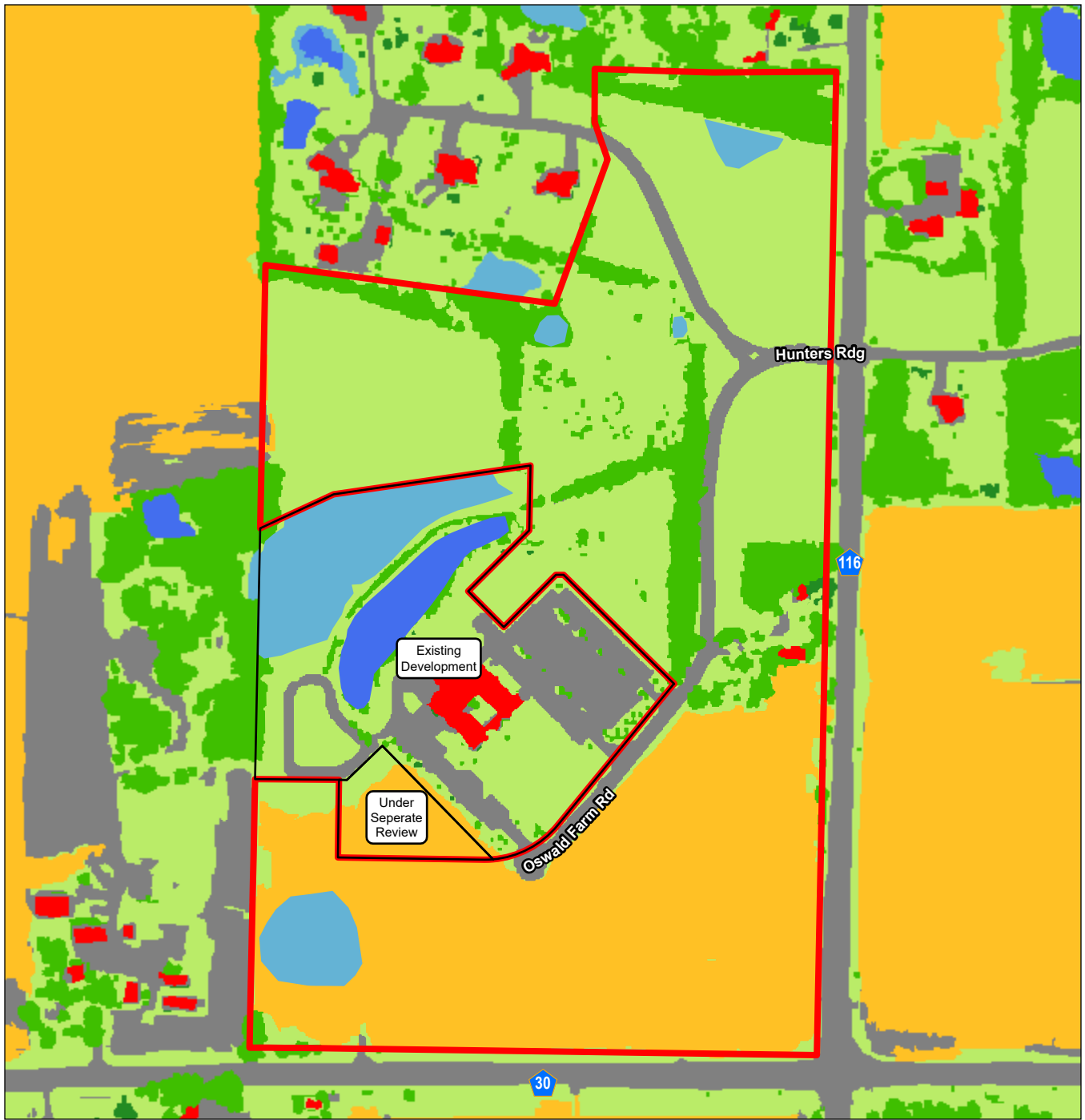
Client/Project City of Corcoran, MN
 Hope Church Development

Figure No. 4
Title Phasing Plan

<ita><und>Notes</und></ita>
 <bol>1. </bol>Coordinate System: NAD 1983 HARN
 Adj MN Hennepin Feet
 <bol>2. </bol>Data Sources: Stantec, Hennepin Co., Sambatek
 <bol>3. </bol>Background: Sambatek & 2020 color 7-county

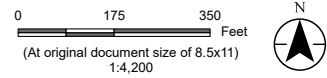
V:\1938\Active\19380610203_data\gis_cad\gis\proleaw\aw.aprx Revised: 2023-05-16 By: kjmueller

V:\1938\Active\19380610203_data\gis_cad\gis\proj\leaw.aprx Revised: 2023-05-16 By: kjmueller



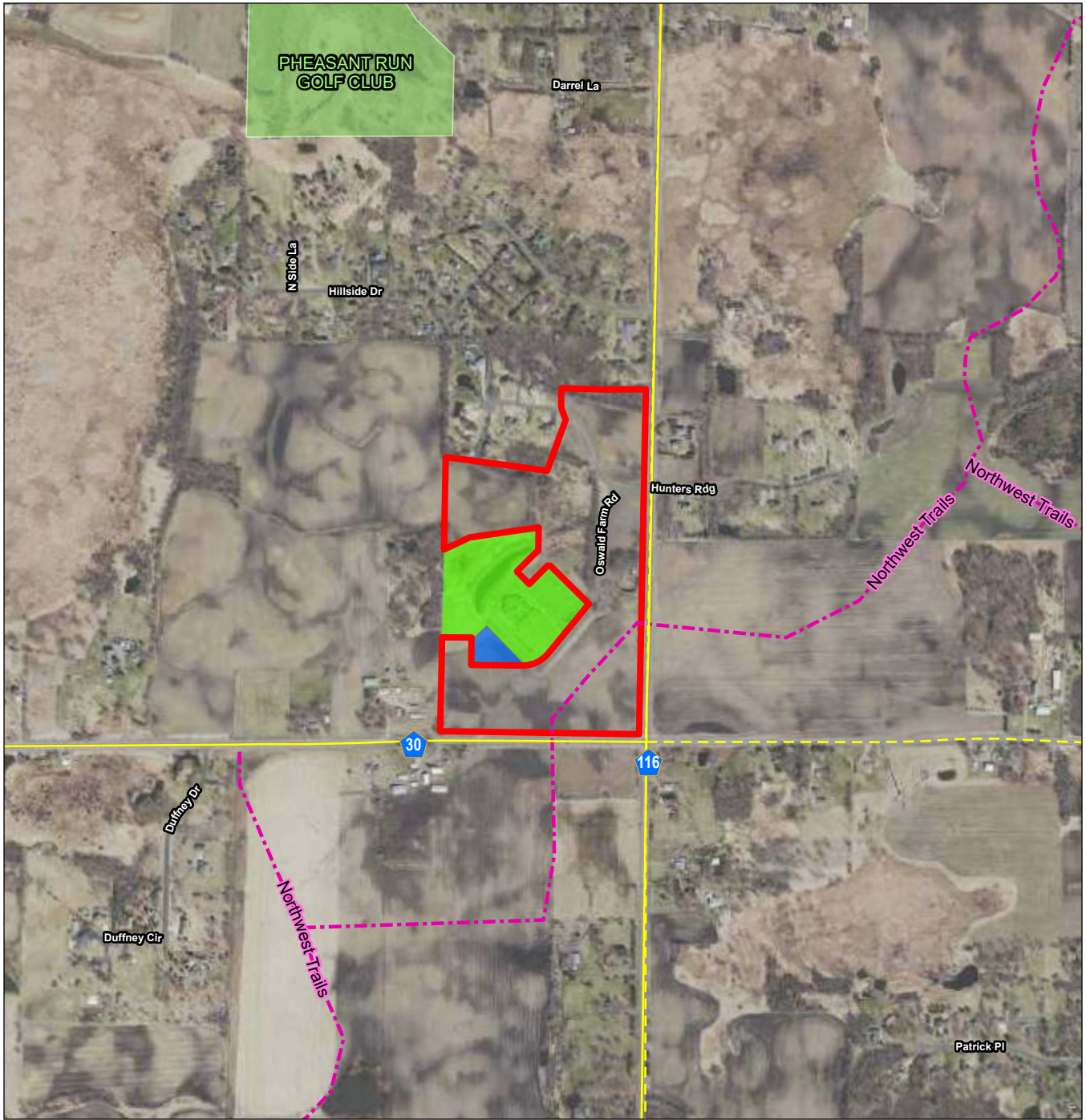
Notes
 1. Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
 2. Data Sources: Stantec, Hennepin Co., MnGeo, MnDOT, UMN - Twin Cities 1-Meter Land Cover (2016)
 3. Background: 2020 color 7-county

- Legend**
- Project Area
 - TCMA Land Cover 2016**
 - Grass/Shrub
 - Buildings
 - Roads/Paved Surfaces
 - Lakes/Ponds
 - Deciduous Tree Canopy
 - Coniferous Tree Canopy
 - Agriculture
 - Emergent Wetland



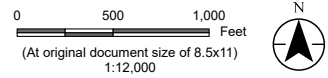
Project Location T119N, R23W, S11 Corcoran, Hennepin Co., MN
Client/Project City of Corcoran, MN Hope Church Development EAW
Figure No. 5
Title Land Cover

Prepared by KJM on 2023-05-16
193806102



Notes
 1. Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
 2. Data Sources: Stantec, MnGeo, MnDOT, MnDNR
 3. Background: 2020 color 7-county

- Legend**
- Project Area
 - Existing Development
 - Under Seperate Review
 - Golf Course
 - Snowmobile Trail
- Metro Region Trails/Bikeways**
- Planned
 - Existing

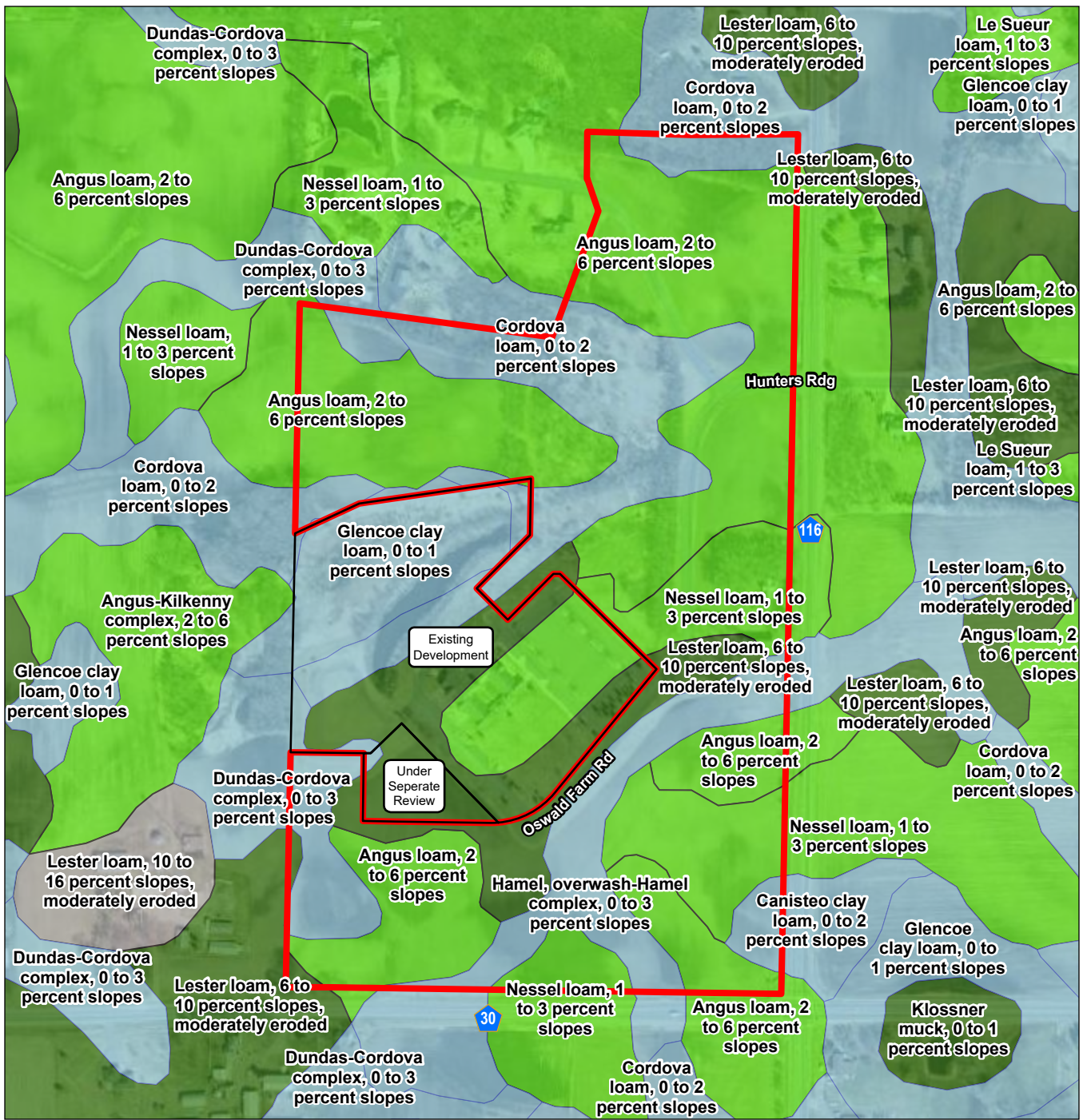


Project Location T119N, R23W, S11 Corcoran, Hennepin Co., MN
 Prepared by KJM on 2023-05-16

Client/Project City of Corcoran, MN
 Hope Church Development
 EAW
 193806102

Figure No. 6

Title
Parks Trails and Other Recreational Areas



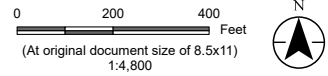
V:\1938\Active\19380610203_data\gis_cad\gis\proleawear.aprx Revised: 2023-05-16 By: kjmueller



Notes
 1. Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
 2. Data Sources: Stantec, MnGeo, MnDOT, NRCS
 3. Background: 2020 color 7-county

Legend

- Project Area
- Farmland Class**
- All areas are prime farmland
- Farmland of statewide importance
- Not prime farmland
- Prime farmland if drained



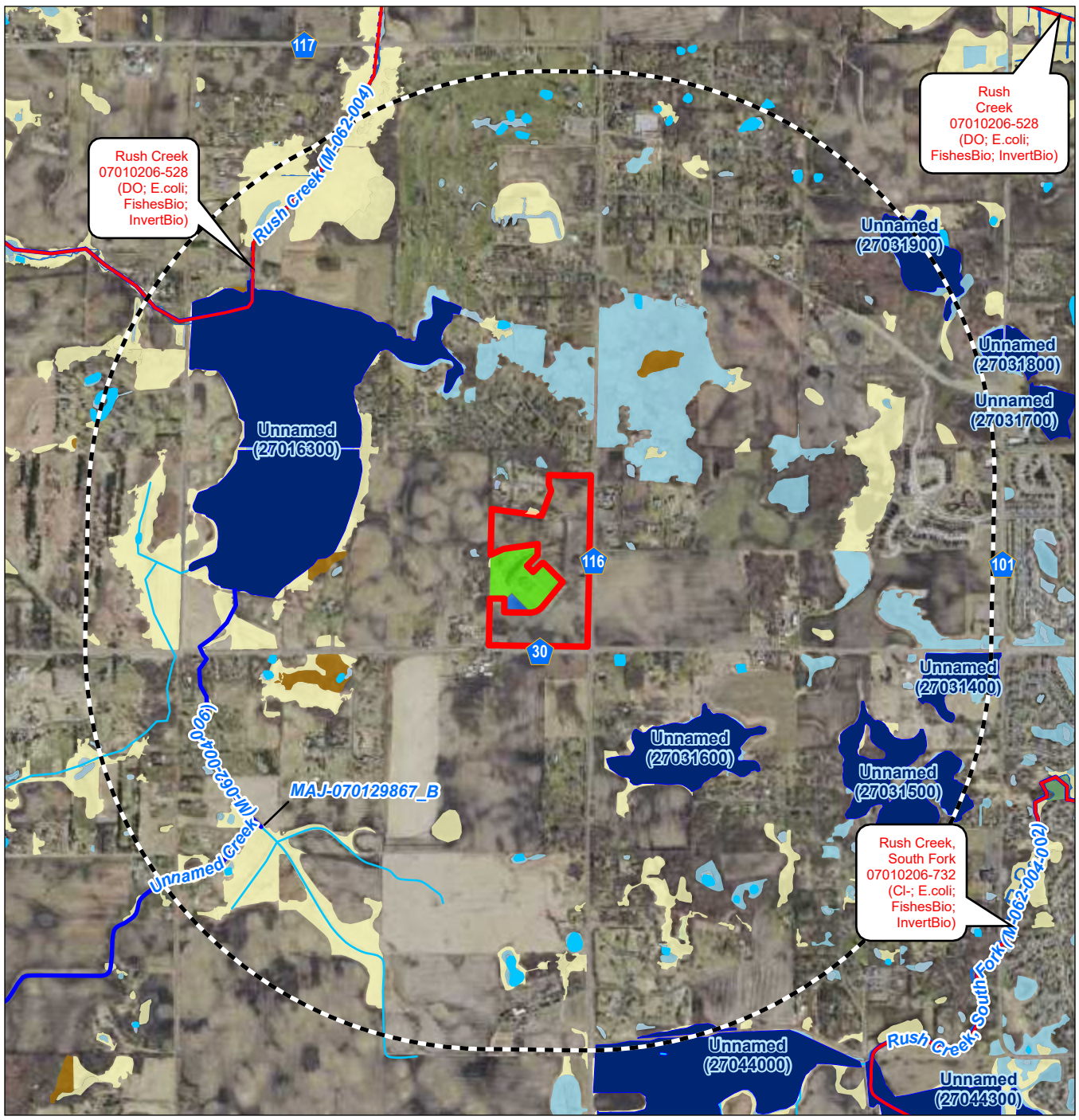
Project Location T119N, R23W, S11 Corcoran, Hennepin Co., MN Prepared by KJM on 2023-05-16

Client/Project City of Corcoran, MN Hope Church Development EAW 193806102

Figure No. 7

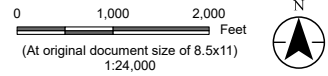
Title Farmland and Soils Classification

Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.



Notes
 1. Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
 2. Data Sources: Stantec, MnGeo, MnDNR, MnDOT
 3. Background: MnGeo 2020 7-county

- Legend**
- 1 Mile Radius
 - Project Area
 - Existing Development
 - Under Seperate Review
 - 2022 MPCA Impaired Streams (Draft)
 - Minnesota Public Waters Delineations
 - Public Water Watercourse
 - Public Ditch/Altered Natural Watercourse
 - Public Waters Basins
 - NHD - Flowline
 - NHD - Waterbody
 - NWI Circular 39 Class**
 - 1 - Seasonally Flooded Basin or Flat
 - 2 - Wet Meadow
 - 3 - Shallow Marsh
 - 4 - Deep Marsh
 - 5 - Shallow Open Water
 - 6 - Shrub Swamp
 - 7 - Wooded Swamp
 - Riverine Systems



Project Location
 T119N, R23W, S11
 Corcoran, Hennepin Co., MN

Client/Project
 City of Corcoran, MN
 Hope Church Development
 EAW

Figure No.
 8

Title
 Water Resources Map

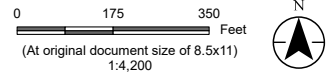
Prepared by KJM on 2023-05-16
 193806102

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Disclaimer: This document has been prepared based on information provided by others as cited in the Notes section. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.



- Legend**
- Wetland Delineations
 - Pending LGU Review
 - Project Area



Project Location T119N, R23W, S11 Corcoran, Hennepin Co., MN *Prepared by* KJM on 2023-05-16

Client/Project City of Corcoran, MN 193806102
 Hope Church Development

EAW
Figure No. 9

Title
Water Resources within the Project Area

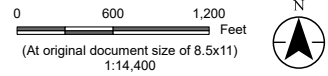
Notes
 1. Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
 2. Data Sources: Stantec, MnGeo, MnDNR, MnDOT, Sambatek
 3. Background: 2020 color 7-county

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- Legend**
- Project Area
 - Existing Development
 - Under Seperate Review
 - 1/2 mi Radius
- MPCA Sites**
- Program Name**
- Hazardous Waste
 - Investigation and Cleanup
 - Stormwater



Project Location T119N, R23W, S11
Corcoran, Hennepin Co., MN

Client/Project City of Corcoran, MN
Hope Church Development
EAW

Figure No. 11

Title
MPCA WIMN Potentially Contaminated Sites

Prepared by KJM on 2023-05-16
193806102

Notes

1. Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
2. Data Sources: Stantec, MnGeo, MnDOT, MPCA
3. Background: MnGeo 2020 7-county

V:\1938\Active\193806102\03_data\gis_cad\gis\proj\leaw\aw.aprx Revised: 2023-05-16 By: kjmueller

National Flood Hazard Layer FIRMMette



93°32'59"W 45°8'13"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- | | | |
|------------------------------------|--|--|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i> |
| | | With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i> |
| | | Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i> |
| | | Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i> |
| | | Area with Flood Risk due to Levee <i>Zone D</i> |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i> |
| | | Effective LOMRs |
| GENERAL STRUCTURES | | Area of Undetermined Flood Hazard <i>Zone D</i> |
| | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |
| OTHER FEATURES | | 20.2 Cross Sections with 1% Annual Chance |
| | | 17.5 Water Surface Elevation |
| | | Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| | | Jurisdiction Boundary |
| MAP PANELS | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |
| | | The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location. |



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **3/15/2023 at 5:01 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

93°32'22"W 45°7'48"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR DRAFT FIRM PANEL LAYOUT

| | |
|------------------------------------|--|
| SPECIAL FLOOD HAZARD AREAS | Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i> |
| | With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> |
| | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i> |
| | Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i> |
| | Area with Reduced Flood Risk due to Levee See Notes <i>Zone X</i> |
| | Area with Flood Risk due to Levee <i>Zone D</i> |
| OTHER AREAS | NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i> |
| | Effective LOMRs |
| | Area of Undetermined Flood Hazard <i>Zone D</i> |
| GENERAL STRUCTURES | Channel, Culvert, or Storm Sewer |
| | Levee, Dike, or Floodwall |
| | 20.2 Cross Sections with 1% Annual Chance |
| | 17.5 Water Surface Elevation |
| | Coastal Transect |
| | Coastal Transect Baseline |
| | Profile Baseline |
| | Hydrographic Feature |
| OTHER FEATURES | Base Flood Elevation Line (BFE) |
| | Limit of Study |
| | Jurisdiction Boundary |

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-6627) or visit the FEMA Flood Map Service Center website at <https://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to the Flood Insurance Study Report for this jurisdiction.

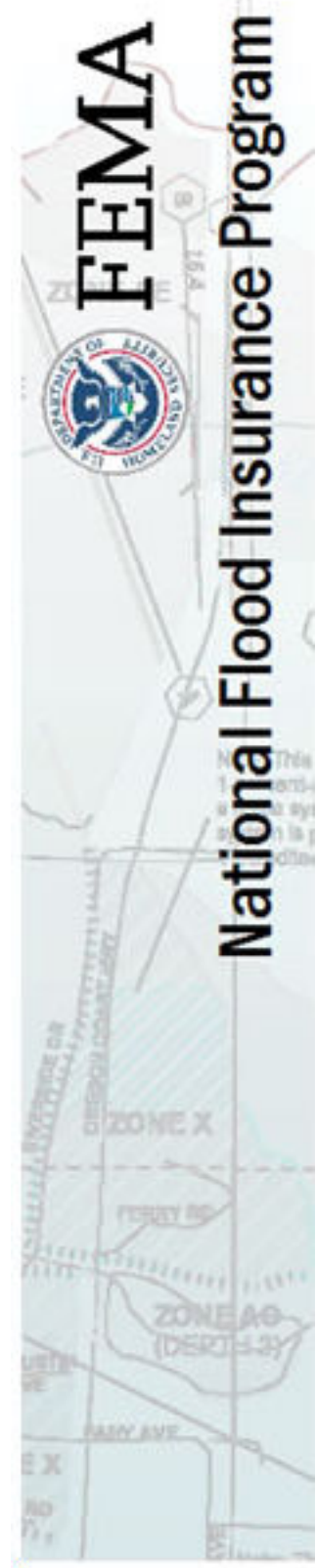
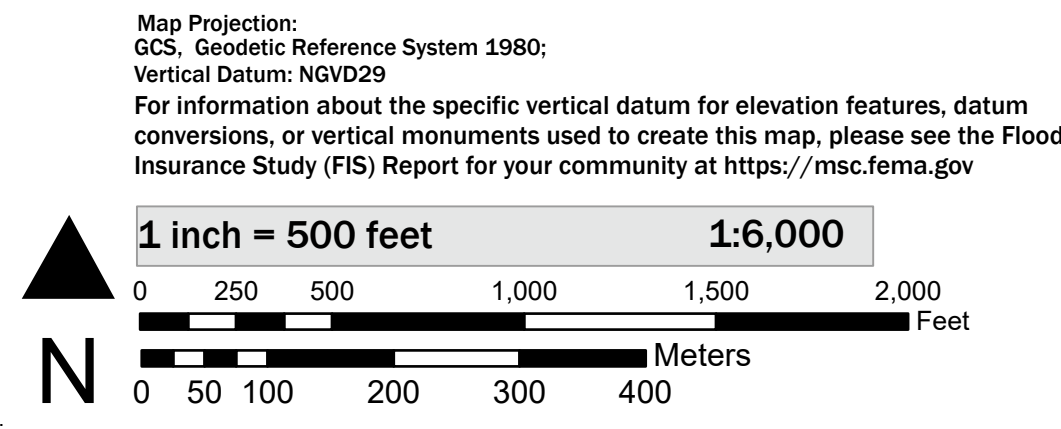
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). The basemap shown is the USGS National Map: Orthoimagery. Last refreshed October, 2020.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on 3/15/2023 5:03 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at <https://www.fema.gov/media-library/assets/documents/118418>

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date.

SCALE



NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

PANEL 43 OF 479

Panel Contains:

| COMMUNITY | NUMBER | PANEL |
|------------------|--------|-------|
| CITY OF CORCORAN | 270155 | 0043 |
| CITY OF ROGERS | 270775 | 0043 |

Minnesota Unique Well No.

126438

County Hennepin
 Quad Rogers
 Quad ID 121A

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes Chapter 1031

Entry Date 08/24/1991
 Update
 Received Date 11/03/2015

| | | | | | | | | | | | | | |
|----------------------------------|-----------------------------|---------------------|---|----------------------|---|----------------|---------------|--|--------------------------------|----------------------------|---------------------|---------------------------|--------|
| Well Name | Township | Range | Dir | Section | Subsection | Use | Status | Well Depth | Depth Completed | Date Well Completed | Lic/Reg. No. | | |
| FULTON, AL | 119 | 23 | W | 2 | DCDDAC | domestic | A | 188 ft. | 188 ft. | 09/28/1977 | 27056 | | |
| Elevation | 945 ft. | Elev. Method | 7.5 minute topographic map (+/- 5 feet) | | | Aquifer | Jordan | Depth to Bedrock | 148 ft | Open Hole | - ft | Static Water Level | 100 ft |
| Field Located By | Minnesota Geological Survey | | | Locate Method | Digitized - scale 1:24,000 or larger (Digitizing) | | | Universal Transverse Mercator (UTM) - NAD83 - Zone 15 - | | | | | |
| Unique No. Verified | Information from neighbor | | | Input Source | Minnesota Geological Survey | | | UTM Easting (X) | 456893 | | | | |
| Geological Interpretation | Andrew Retzler | | | Input Date | 01/01/1990 | | | UTM Northing (Y) | 499851 | | | | |
| Agency (Interpretation) | | | | | | | | Interpretation Method | Geologic study 1:24k to 1:100k | | | | |

| Geological Material | Color | Hardness | Depth (ft.) | | Thickness | Elevation (ft.) | | Stratigraphy | Primary Lithology | Secondary | Minor Lithology |
|---------------------|-------|----------|-------------|-----|-----------|-----------------|-----|------------------|-------------------|-----------|-----------------|
| | | | From | To | | From | To | | | | |
| CLAY | | | 0 | 57 | 57 | 945 | 888 | clay | clay | | |
| SAND | | | 57 | 110 | 53 | 888 | 835 | sand | sand | | |
| CLAY | | | 110 | 148 | 38 | 835 | 797 | clay | clay | | |
| SHALE | | | 148 | 165 | 17 | 797 | 780 | Jordan Sandstone | siltstone | | |
| SANDROCK | | | 165 | 188 | 23 | 780 | 757 | Jordan Sandstone | sandstone | | |

Minnesota Well Index - Stratigraphy Report

126438

Printed on 03/17/2023

126438

County Hennepin
 Quad Rogers
 Quad ID 121A

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
 Minnesota Statutes Chapter 1031

Entry Date 08/24/1991
 Update Date 11/03/2015
 Received Date

| | | | | | | | |
|---|--|--------------------|---------------------------|-----------------------------|--|-----------------------------------|--|
| Well Name FULTON, AL | Township 119 | Range 23 | Dir Section W 2 | Subsection DCDDAC | Well Depth 188 ft. | Depth Completed 188 ft. | Date Well Completed 09/28/1977 |
| Elevation 945 ft. | Elev. Method 7.5 minute topographic map (+/- 5 feet) | | | | Drill Method Non-specified Rotary | Drill Fluid | |
| Address C/W 20042 HILLSIDE DR CORCORAN MN 55374 | | | | | Use domestic | Status Active | |
| Stratigraphy Information | | | | | Well Hydrofractured? Yes <input type="checkbox"/> No <input type="checkbox"/> | From | To |
| Geological Material | From | To (ft.) | Color | Hardness | Casing Type Single casing | Joint Threaded | |
| CLAY | 0 | 57 | | | Drive Shoe? Yes <input type="checkbox"/> No <input type="checkbox"/> | Above/Below | |
| SAND | 57 | 110 | | | Casing Diameter 4 in. | Weight 181 ft. lbs./ft. | |
| CLAY | 110 | 148 | | | Open Hole From ft. To ft. | | |
| SHALE | 148 | 165 | | | Screen? <input checked="" type="checkbox"/> | Type stainless | Make JOHNSON |
| SANDROCK | 165 | 188 | | | Diameter | Slot/Gauze | Length |
| | | | | | 2 in. | ft. | Set 181 ft. 188 ft. |
| | | | | | Static Water Level 100 ft. land surface Measure 09/28/1977 | | |
| | | | | | Pumping Level (below land surface) 110 ft. 3 hrs. Pumping at 20 g.p.m. | | |
| | | | | | Wellhead Completion Pitless adapter manufacturer Model <input type="checkbox"/> Casing Protection <input type="checkbox"/> 12 in. above grade <input type="checkbox"/> At-grade (Environmental Wells and Borings ONLY) | | |
| | | | | | Grouting Information Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified Material Amount From To bentonite ft. ft. | | |
| | | | | | Nearest Known Source of Contamination feet Direction Type Well disinfected upon completion? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | |
| | | | | | Pump <input type="checkbox"/> Not Installed Date Installed 10/13/1977 Manufacturer's name AERMOTOR Model Number HP 0.5 Volt Length of drop pipe 126 ft Capacity g.p. Typ Submersible | | |
| | | | | | Abandoned Does property have any not in use and not sealed well(s)? <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| | | | | | Variance Was a variance granted from the MDH for this well? <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| | | | | | Miscellaneous First Bedrock Jordan Sandstone Aquifer Jordan Last Strat Jordan Sandstone Depth to Bedrock 148 ft Located by Minnesota Geological Survey Locate Method Digitized - scale 1:24,000 or larger (Digitizing Table) System UTM - NAD83, Zone 15, Meters X 456893 Y 4998517 Unique Number Verification Information from Input Date 01/01/1990 | | |
| Remarks | | | | | Angled Drill Hole | | |
| | | | | | Well Contractor Torgerson Well Co. 27056 Licensee Business Lic. or Reg. No. Name of Driller | | |

Minnesota Unique Well No.

140169

County Hennepin
 Quad Rogers
 Quad ID 121A

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes Chapter 1031

Entry Date 08/24/1991
 Update
 Received Date 11/03/2015

| | | | | | | | | | | | | | |
|----------------------------------|-----------------------------|---------------------|---|----------------------|---|----------------|------------------------------|--|------------------------|----------------------------|---------------------|---------------------------|-------|
| Well Name | Township | Range | Dir | Section | Subsection | Use | Status | Well Depth | Depth Completed | Date Well Completed | Lic/Reg. No. | | |
| FELIX, D.E. | 119 | 23 | W | 2 | DDCBDD | domestic | A | 167 ft. | 167 ft. | 05/03/1978 | 27086 | | |
| Elevation | 935 ft. | Elev. Method | 7.5 minute topographic map (+/- 5 feet) | | | Aquifer | Jordan | Depth to Bedrock | 141 ft | Open Hole | - ft | Static Water Level | 55 ft |
| Field Located By | Minnesota Geological Survey | | | Locate Method | Digitized - scale 1:24,000 or larger (Digitizing) | | | Universal Transverse Mercator (UTM) - NAD83 - Zone 15 - | | | | | |
| Unique No. Verified | | | | Input Source | Minnesota Geological Survey | | | UTM Easting (X) | 456996 | | | | |
| Geological Interpretation | Andrew Retzler | | | Input Date | 01/01/1990 | | | UTM Northing (Y) | 499856 | | | | |
| Agency (Interpretation) | | | | | | | Interpretation Method | Geologic study 1:24k to 1:100k | | | | | |

| Geological Material | Color | Hardness | Depth (ft.) | | Thickness | Elevation (ft.) | | Stratigraphy | Primary Lithology | Secondary | Minor Lithology |
|---------------------|---------|----------|-------------|-----|-----------|-----------------|-----|------------------------|-------------------|-----------|-----------------|
| | | | From | To | | From | To | | | | |
| CLAY | YELLOW | MEDIUM | 0 | 30 | 30 | 935 | 905 | clay-yellow | clay | | |
| CLAY | BLUE | MEDIUM | 30 | 60 | 30 | 905 | 875 | clay-gray | clay | | |
| SAND | BROWN | SOFT | 60 | 72 | 12 | 875 | 863 | sand-brown | sand | | |
| CLAY W/ ROCK | RED | MEDIUM | 72 | 141 | 69 | 863 | 794 | pebbly sand/silt/clay- | clay | gravel | |
| SHALE | RED/BLU | MEDIUM | 141 | 155 | 14 | 794 | 780 | Jordan Sandstone | siltstone | | |
| SANDROCK | LT. BRN | SOFT | 155 | 167 | 12 | 780 | 768 | Jordan Sandstone | sandstone | | |

Minnesota Well Index - Stratigraphy Report

140169

Printed on 03/17/2023

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date 08/24/1991

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County Hennepin
 Quad Rogers
 Quad ID 121A

140169

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|---|--------------------|-------------------|-------------|-----|----|-----|--------|------------------|---------|---------------------|---|--|----------------|--|--|--|--|-----|-------------------------------------|--|--|--|---------------------------------|--|--|--|--|---------------------|------|----------|-------|----------|------|---|----|--------|--------|------|----|----|------|--------|------|----|----|-------|------|--------------|----|-----|-----|--------|-------|-----|-----|---------|--------|----------|-----|-----|---------|------|---|-------------------|------------------------|----------------------------|---------|---------|------------|---------------------|----------------------|--------------------|------------|----------|---------------|--|--|--------|-----------------------------|--|-------------|--|--|-----------|--------------------|---------------|--------------|--|--|----------|--------------------|---|--------------------|--|--|-------|------------------------|---------------|----------------------|----------|---------------------|--------------------|--|--|------------------|------------------|----------|--------|--|-----------------------|---------------------|-----------------|-------------------|---------------|-------|----|-------|--|--|-----------------|---------------------------|---------------------|--------------------|---|--------------------------|-----------|----------------------------|------------------------------|-------|--------------------------|-------------------|--|--------------------------|---|--|-----------------------------|--|--|-----------------|---------------|----------------|-----------|--|---------------|----------|--|---------|--|------------------------|------------------------------|-----------------------------------|---|--|--|----------------|------------|---------------------|-----------------|--|--------------|---------------|----------|---------------------|----------------|----------------------|------------------|---|--|-----------------|--|--|----------------------|--------------------------------|----------------|------------|------------------|-------------------------|------------|-----------------------------|--|---------------|---|--|--------|------------------------------|--------------------|----------------------------|--|-----------------------|--------------------------|--|--|------------------------|---------------------|-------------|--|-------------------|----------------------------------|
| <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Well Name</td> <td>Township</td> <td>Range</td> <td>Dir Section</td> <td>Subsection</td> </tr> <tr> <td>FELIX, D.E.</td> <td>119</td> <td>23</td> <td>W 2</td> <td>DDCBDD</td> </tr> <tr> <td>Elevation</td> <td>935 ft.</td> <td>Elev. Method</td> <td colspan="2">7.5 minute topographic map (+/- 5 feet)</td> </tr> <tr> <td colspan="5">Address</td> </tr> <tr> <td>C/W</td> <td colspan="4">20039 HILLSIDE AV CORCORAN MN 55374</td> </tr> <tr> <td colspan="5">Stratigraphy Information</td> </tr> <tr> <td>Geological Material</td> <td>From</td> <td>To (ft.)</td> <td>Color</td> <td>Hardness</td> </tr> <tr> <td>CLAY</td> <td>0</td> <td>30</td> <td>YELLOW</td> <td>MEDIUM</td> </tr> <tr> <td>CLAY</td> <td>30</td> <td>60</td> <td>BLUE</td> <td>MEDIUM</td> </tr> <tr> <td>SAND</td> <td>60</td> <td>72</td> <td>BROWN</td> <td>SOFT</td> </tr> <tr> <td>CLAY W/ ROCK</td> <td>72</td> <td>141</td> <td>RED</td> <td>MEDIUM</td> </tr> <tr> <td>SHALE</td> <td>141</td> <td>155</td> <td>RED/BLU</td> <td>MEDIUM</td> </tr> <tr> <td>SANDROCK</td> <td>155</td> <td>167</td> <td>LT. BRN</td> <td>SOFT</td> </tr> </table> | Well Name | Township | Range | Dir Section | Subsection | FELIX, D.E. | 119 | 23 | W 2 | DDCBDD | Elevation | 935 ft. | Elev. Method | 7.5 minute topographic map (+/- 5 feet) | | Address | | | | | C/W | 20039 HILLSIDE AV CORCORAN MN 55374 | | | | Stratigraphy Information | | | | | Geological Material | From | To (ft.) | Color | Hardness | CLAY | 0 | 30 | YELLOW | MEDIUM | CLAY | 30 | 60 | BLUE | MEDIUM | SAND | 60 | 72 | BROWN | SOFT | CLAY W/ ROCK | 72 | 141 | RED | MEDIUM | SHALE | 141 | 155 | RED/BLU | MEDIUM | SANDROCK | 155 | 167 | LT. BRN | SOFT | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Well Depth</td> <td>Depth Completed</td> <td>Date Well Completed</td> </tr> <tr> <td>167 ft.</td> <td>167 ft.</td> <td>05/03/1978</td> </tr> <tr> <td>Drill Method</td> <td>Non-specified Rotary</td> <td>Drill Fluid</td> </tr> <tr> <td>Use</td> <td>domestic</td> <td>Status</td> </tr> <tr> <td></td> <td></td> <td>Active</td> </tr> <tr> <td>Well Hydrofractured?</td> <td>Yes <input type="checkbox"/> No <input type="checkbox"/></td> <td>From</td> </tr> <tr> <td></td> <td></td> <td>To</td> </tr> <tr> <td>Casing Type</td> <td>Single casing</td> <td>Joint</td> </tr> <tr> <td></td> <td></td> <td>Threaded</td> </tr> <tr> <td>Drive Shoe?</td> <td>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></td> <td>Above/Below</td> </tr> <tr> <td></td> <td></td> <td>1 ft.</td> </tr> <tr> <td>Casing Diameter</td> <td>Weight</td> <td>Hole Diameter</td> </tr> <tr> <td>4 in. To</td> <td>162 ft. 11 lbs./ft.</td> <td>6.7 in. To 162 ft.</td> </tr> <tr> <td></td> <td></td> <td>4 in. To 167 ft.</td> </tr> <tr> <td>Open Hole</td> <td>From ft.</td> <td>To ft.</td> </tr> <tr> <td>Screen? <input checked="" type="checkbox"/></td> <td>Type stainless</td> <td>Make JOHNSON</td> </tr> <tr> <td>Diameter</td> <td>Slot/Gauze</td> <td>Length</td> </tr> <tr> <td>3 in.</td> <td>12</td> <td>5 ft.</td> </tr> <tr> <td></td> <td></td> <td>162 ft. 167 ft.</td> </tr> <tr> <td>Static Water Level</td> <td>55 ft. land surface</td> <td>Measure 05/03/1978</td> </tr> <tr> <td>Pumping Level (below land surface)</td> <td>60 ft. 3 hrs. Pumping at</td> <td>35 g.p.m.</td> </tr> <tr> <td>Wellhead Completion</td> <td>Pitless adapter manufacturer</td> <td>Model</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Casing Protection</td> <td><input checked="" type="checkbox"/> 12 in. above grade</td> </tr> <tr> <td><input type="checkbox"/></td> <td colspan="2">At-grade (Environmental Wells and Borings ONLY)</td> </tr> <tr> <td>Grouting Information</td> <td>Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified</td> <td></td> </tr> <tr> <td>Material</td> <td>Amount</td> <td>From To</td> </tr> <tr> <td>bentonite</td> <td></td> <td>0 ft. 162 ft.</td> </tr> <tr> <td>cuttings</td> <td></td> <td>ft. ft.</td> </tr> <tr> <td>Nearest Known Source of Contamination</td> <td>50 feet East Direction</td> <td>Septic tank/drain field Type</td> </tr> <tr> <td>Well disinfected upon completion?</td> <td><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> <td></td> </tr> <tr> <td>Pump <input type="checkbox"/> Not Installed</td> <td>Date Installed</td> <td>05/04/1978</td> </tr> <tr> <td>Manufacturer's name</td> <td colspan="2">FLINT & WALLING</td> </tr> <tr> <td>Model Number</td> <td>12 BA8 HP 0.5</td> <td>Volt 230</td> </tr> <tr> <td>Length of drop pipe</td> <td>90 ft Capacity</td> <td>g.p. Typ Submersible</td> </tr> <tr> <td>Abandoned</td> <td>Does property have any not in use and not sealed well(s)?</td> <td><input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Variance</td> <td>Was a variance granted from the MDH for this well?</td> <td><input type="checkbox"/> Yes <input type="checkbox"/> No</td> </tr> <tr> <td>Miscellaneous</td> <td>First Bedrock Jordan Sandstone</td> <td>Aquifer Jordan</td> </tr> <tr> <td>Last Strat</td> <td>Jordan Sandstone</td> <td>Depth to Bedrock 141 ft</td> </tr> <tr> <td>Located by</td> <td colspan="2">Minnesota Geological Survey</td> </tr> <tr> <td>Locate Method</td> <td colspan="2">Digitized - scale 1:24,000 or larger (Digitizing Table)</td> </tr> <tr> <td>System</td> <td>UTM - NAD83, Zone 15, Meters</td> <td>X 456996 Y 4998561</td> </tr> <tr> <td>Unique Number Verification</td> <td></td> <td>Input Date 01/01/1990</td> </tr> <tr> <td>Angled Drill Hole</td> <td></td> <td></td> </tr> <tr> <td>Well Contractor</td> <td>Ruppert & Son 27086</td> <td>RUPPERT, G.</td> </tr> <tr> <td></td> <td>Licensee Business</td> <td>Lic. or Reg. No. Name of Driller</td> </tr> </table> | Well Depth | Depth Completed | Date Well Completed | 167 ft. | 167 ft. | 05/03/1978 | Drill Method | Non-specified Rotary | Drill Fluid | Use | domestic | Status | | | Active | Well Hydrofractured? | Yes <input type="checkbox"/> No <input type="checkbox"/> | From | | | To | Casing Type | Single casing | Joint | | | Threaded | Drive Shoe? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Above/Below | | | 1 ft. | Casing Diameter | Weight | Hole Diameter | 4 in. To | 162 ft. 11 lbs./ft. | 6.7 in. To 162 ft. | | | 4 in. To 167 ft. | Open Hole | From ft. | To ft. | Screen? <input checked="" type="checkbox"/> | Type stainless | Make JOHNSON | Diameter | Slot/Gauze | Length | 3 in. | 12 | 5 ft. | | | 162 ft. 167 ft. | Static Water Level | 55 ft. land surface | Measure 05/03/1978 | Pumping Level (below land surface) | 60 ft. 3 hrs. Pumping at | 35 g.p.m. | Wellhead Completion | Pitless adapter manufacturer | Model | <input type="checkbox"/> | Casing Protection | <input checked="" type="checkbox"/> 12 in. above grade | <input type="checkbox"/> | At-grade (Environmental Wells and Borings ONLY) | | Grouting Information | Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified | | Material | Amount | From To | bentonite | | 0 ft. 162 ft. | cuttings | | ft. ft. | Nearest Known Source of Contamination | 50 feet East Direction | Septic tank/drain field Type | Well disinfected upon completion? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | Pump <input type="checkbox"/> Not Installed | Date Installed | 05/04/1978 | Manufacturer's name | FLINT & WALLING | | Model Number | 12 BA8 HP 0.5 | Volt 230 | Length of drop pipe | 90 ft Capacity | g.p. Typ Submersible | Abandoned | Does property have any not in use and not sealed well(s)? | <input type="checkbox"/> Yes <input type="checkbox"/> No | Variance | Was a variance granted from the MDH for this well? | <input type="checkbox"/> Yes <input type="checkbox"/> No | Miscellaneous | First Bedrock Jordan Sandstone | Aquifer Jordan | Last Strat | Jordan Sandstone | Depth to Bedrock 141 ft | Located by | Minnesota Geological Survey | | Locate Method | Digitized - scale 1:24,000 or larger (Digitizing Table) | | System | UTM - NAD83, Zone 15, Meters | X 456996 Y 4998561 | Unique Number Verification | | Input Date 01/01/1990 | Angled Drill Hole | | | Well Contractor | Ruppert & Son 27086 | RUPPERT, G. | | Licensee Business | Lic. or Reg. No. Name of Driller |
| Well Name | Township | Range | Dir Section | Subsection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FELIX, D.E. | 119 | 23 | W 2 | DDCBDD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elevation | 935 ft. | Elev. Method | 7.5 minute topographic map (+/- 5 feet) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Address | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C/W | 20039 HILLSIDE AV CORCORAN MN 55374 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stratigraphy Information | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Geological Material | From | To (ft.) | Color | Hardness | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLAY | 0 | 30 | YELLOW | MEDIUM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLAY | 30 | 60 | BLUE | MEDIUM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SAND | 60 | 72 | BROWN | SOFT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CLAY W/ ROCK | 72 | 141 | RED | MEDIUM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHALE | 141 | 155 | RED/BLU | MEDIUM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SANDROCK | 155 | 167 | LT. BRN | SOFT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Well Depth | Depth Completed | Date Well Completed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 167 ft. | 167 ft. | 05/03/1978 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drill Method | Non-specified Rotary | Drill Fluid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Use | domestic | Status | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Well Hydrofractured? | Yes <input type="checkbox"/> No <input type="checkbox"/> | From | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Casing Type | Single casing | Joint | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Threaded | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drive Shoe? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Above/Below | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Casing Diameter | Weight | Hole Diameter | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 in. To | 162 ft. 11 lbs./ft. | 6.7 in. To 162 ft. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Screen? <input checked="" type="checkbox"/> | Type stainless | Make JOHNSON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diameter | Slot/Gauze | Length | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 in. | 12 | 5 ft. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 162 ft. 167 ft. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Static Water Level | 55 ft. land surface | Measure 05/03/1978 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pumping Level (below land surface) | 60 ft. 3 hrs. Pumping at | 35 g.p.m. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wellhead Completion | Pitless adapter manufacturer | Model | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | Casing Protection | <input checked="" type="checkbox"/> 12 in. above grade | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> | At-grade (Environmental Wells and Borings ONLY) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Grouting Information | Well Grouted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Specified | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Material | Amount | From To | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| bentonite | | 0 ft. 162 ft. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| cuttings | | ft. ft. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nearest Known Source of Contamination | 50 feet East Direction | Septic tank/drain field Type | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Well disinfected upon completion? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pump <input type="checkbox"/> Not Installed | Date Installed | 05/04/1978 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer's name | FLINT & WALLING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model Number | 12 BA8 HP 0.5 | Volt 230 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Length of drop pipe | 90 ft Capacity | g.p. Typ Submersible | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Abandoned | Does property have any not in use and not sealed well(s)? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Variance | Was a variance granted from the MDH for this well? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Miscellaneous | First Bedrock Jordan Sandstone | Aquifer Jordan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Last Strat | Jordan Sandstone | Depth to Bedrock 141 ft | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Located by | Minnesota Geological Survey | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Locate Method | Digitized - scale 1:24,000 or larger (Digitizing Table) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| System | UTM - NAD83, Zone 15, Meters | X 456996 Y 4998561 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Unique Number Verification | | Input Date 01/01/1990 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Angled Drill Hole | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Well Contractor | Ruppert & Son 27086 | RUPPERT, G. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Licensee Business | Lic. or Reg. No. Name of Driller | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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|-----------------------|--|
| <p>Remarks</p> | |
|-----------------------|--|

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Project information

NAME

Hope Community EAW

LOCATION

Hennepin County, Minnesota





DESCRIPTION

None

Local office

Minnesota-Wisconsin Ecological Services Field Office

 (952) 858-0793

 (952) 646-2873

3815 American Blvd East
Bloomington, MN 55425-1659

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
 2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of

Commerce.

The following species are potentially affected by activities in this location:

Mammals

| NAME | STATUS |
|---|---------------------|
| Northern Long-eared Bat <i>Myotis septentrionalis</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045 | Endangered |
| Tricolored Bat <i>Perimyotis subflavus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10515 | Proposed Endangered |

Birds

| NAME | STATUS |
|--|--------|
| Whooping Crane <i>Grus americana</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/758 | EXPN |

Insects

| NAME | STATUS |
|---|-----------|
| Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743 | Candidate |

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON

Bald Eagle *Haliaeetus leucocephalus* Breeds Dec 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Bobolink *Dolichonyx oryzivorus* Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Chimney Swift *Chaetura pelagica* Breeds Mar 15 to Aug 25

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Lesser Yellowlegs *Tringa flavipes* Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9679>

Rusty Blackbird *Euphagus carolinus* Breeds elsewhere

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted

| | |
|---|--|
| Lesser Yellowlegs BCC Rangewide (CON) | ++++ +++++ +++++ IIIII I++++ +++++ +++++ +++++ +++++ +++++ +++++ +++++ +++++ |
| Rusty Blackbird BCC - BCR | ++++ +++++ +++++ ++III +++++ +++++ +++++ +++++ +++++ +++++ +++++ +++++ +++++ |

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability

of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

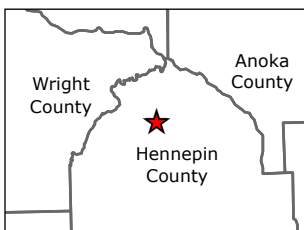
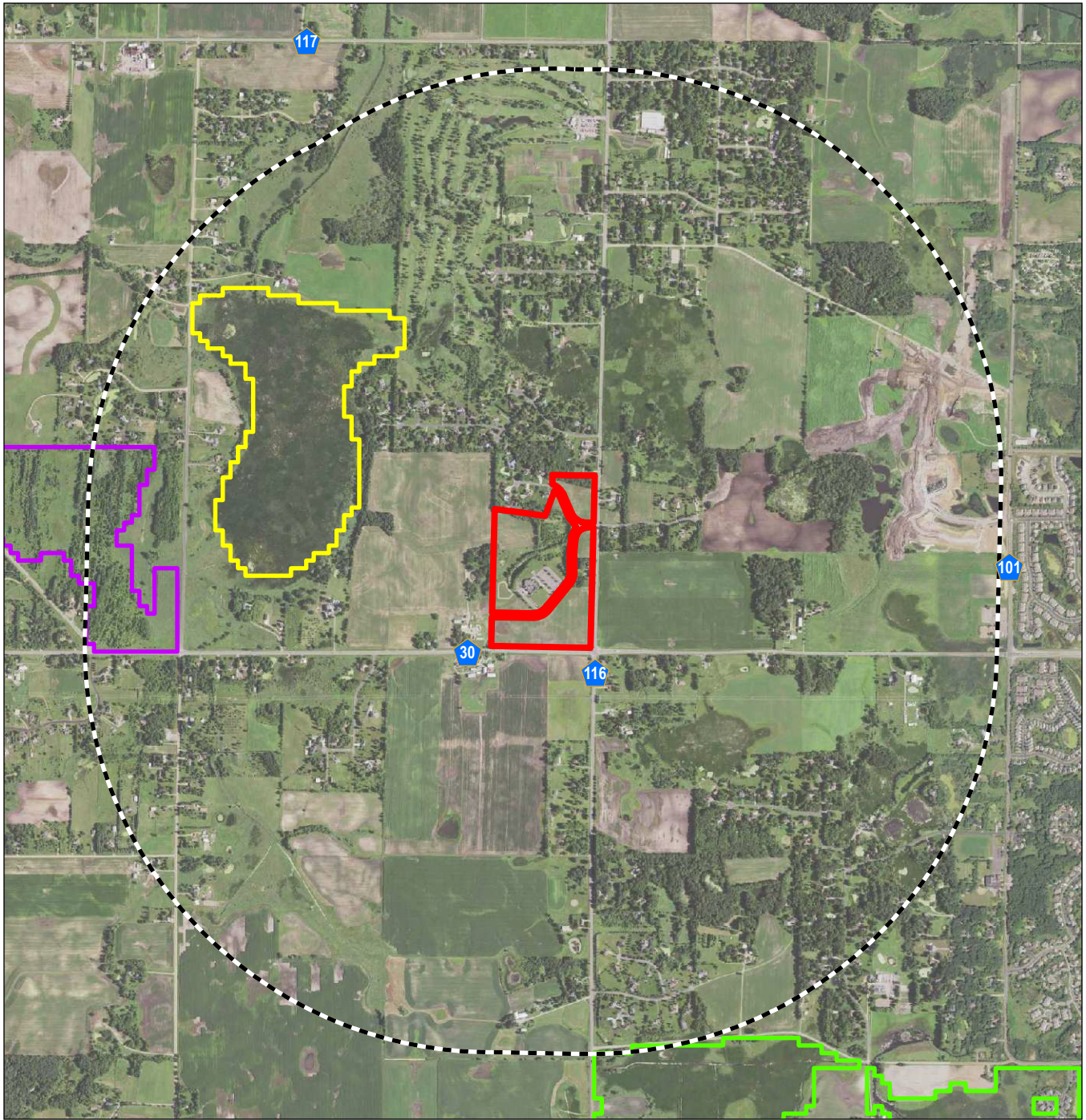
Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

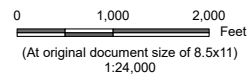
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



- Legend**
- Project Boundary
 - 1 Mile Radius
 - Central Region Regionally Significant Ecological Areas**
 - Moderate
 - High
 - Outstanding



Project Location
Hennepin Co., MN

Prepared by KJM on 2023-03-03

Client/Project
Hope Community
EIW

1
Title
**Unique and Natural Features
Review**

Custom Soil Resource Report for **Hennepin County, Minnesota**



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

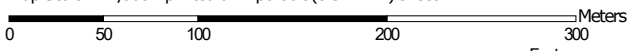
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map




Map Scale: 1:4,000 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hennepin County, Minnesota
 Survey Area Data: Version 18, Sep 6, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 11, 2020—May 19, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|------------------------------------|--|--------------|----------------|
| L21A | Canisteo clay loam, 0 to 2 percent slopes | 0.6 | 1.1% |
| L22C2 | Lester loam, 6 to 10 percent slopes, moderately eroded | 7.0 | 13.0% |
| L23A | Cordova loam, 0 to 2 percent slopes | 8.2 | 15.2% |
| L24A | Glencoe clay loam, 0 to 1 percent slopes | 4.0 | 7.4% |
| L36A | Hamel, overwash-Hamel complex, 0 to 3 percent slopes | 3.8 | 7.0% |
| L37B | Angus loam, 2 to 6 percent slopes | 19.4 | 35.8% |
| L40B | Angus-Kilkenny complex, 2 to 6 percent slopes | 0.0 | 0.0% |
| L44A | Nessel loam, 1 to 3 percent slopes | 8.7 | 16.1% |
| L45A | Dundas-Cordova complex, 0 to 3 percent slopes | 2.4 | 4.4% |
| Totals for Area of Interest | | 54.1 | 100.0% |

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different

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management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Hennepin County, Minnesota

L21A—Canisteo clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2vvdm
Elevation: 690 to 1,840 feet
Mean annual precipitation: 24 to 37 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Canisteo and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canisteo

Setting

Landform: Rims on depressions, ground moraines
Landform position (three-dimensional): Talf
Down-slope shape: Concave, linear
Across-slope shape: Linear
Parent material: Fine-loamy till

Typical profile

Ap - 0 to 9 inches: clay loam
A - 9 to 16 inches: clay loam
AB - 16 to 20 inches: clay loam
Bkg - 20 to 36 inches: clay loam
Cg - 36 to 79 inches: loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 2.00 in/hr)
Depth to water table: About 0 to 8 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: R103XY001MN - Loamy Wet Prairies
Forage suitability group: Level Swale, Calcareous (G103XS009MN)
Other vegetative classification: Level Swale, Calcareous (G103XS009MN)
Hydric soil rating: Yes

Minor Components

Okoboji

Percent of map unit: 13 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R103XY015MN - Depressional Marsh
Other vegetative classification: Ponded If Not Drained (G103XS013MN)
Hydric soil rating: Yes

Harps

Percent of map unit: 5 percent
Landform: Rims on depressions
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R103XY009MN - Calcareous Rim Prairies
Other vegetative classification: Level Swale, Calcareous (G103XS009MN)
Hydric soil rating: Yes

Webster

Percent of map unit: 5 percent
Landform: Ground moraines
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R103XY001MN - Loamy Wet Prairies
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: Yes

Glencoe

Percent of map unit: 2 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R103XY015MN - Depressional Marsh
Other vegetative classification: Ponded If Not Drained (G103XS013MN)
Hydric soil rating: Yes

L22C2—Lester loam, 6 to 10 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2ttc4
Elevation: 690 to 1,840 feet
Mean annual precipitation: 24 to 37 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Lester, moderately eroded, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lester, Moderately Eroded

Setting

Landform: Ground moraines, hillslopes

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Interfluve, rise

Down-slope shape: Convex

Across-slope shape: Linear, convex

Parent material: Fine-loamy till

Typical profile

Ap - 0 to 6 inches: loam

Bt - 6 to 38 inches: clay loam

C - 38 to 79 inches: loam

Properties and qualities

Slope: 6 to 10 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

*Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 2.00 in/hr)*

Depth to water table: About 47 to 63 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 20 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C

Ecological site: R103XY020MN - Loamy Upland Savannas

Forage suitability group: Sloping Upland, Acid (G103XS006MN)

Other vegetative classification: Sloping Upland, Acid (G103XS006MN)

Hydric soil rating: No

Minor Components

Storden, moderately eroded

Percent of map unit: 10 percent

Landform: Ground moraines

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Rise

Down-slope shape: Convex, linear

Across-slope shape: Linear, convex

Ecological site: R103XY020MN - Loamy Upland Savannas

Other vegetative classification: Sloping Upland, Calcareous (G103XS010MN)

Hydric soil rating: No

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Le sueur

Percent of map unit: 3 percent
Landform: Hillslopes, ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: R103XY020MN - Loamy Upland Savannas
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

Hamel

Percent of map unit: 2 percent
Landform: Ground moraines
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Ecological site: F103XY030MN - Wet Footslope/Drainageway Forests
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: Yes

L23A—Cordova loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: h4xf
Elevation: 800 to 1,080 feet
Mean annual precipitation: 23 to 35 inches
Mean annual air temperature: 43 to 50 degrees F
Frost-free period: 124 to 200 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Cordova and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cordova

Setting

Landform: Drainageways on moraines
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Till

Typical profile

Ap,AB - 0 to 13 inches: loam
Btg - 13 to 33 inches: clay loam
Cg - 33 to 80 inches: loam

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Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 6 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Gypsum, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 10.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F103XY027MN - Loamy Wet Forests
Forage suitability group: Level Swale, Neutral (G103XS001MN)
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: Yes

Minor Components

Glencoe, depressional

Percent of map unit: 10 percent
Landform: Depressions on moraines
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R103XY015MN - Depressional Marsh
Other vegetative classification: Ponded If Not Drained (G103XS013MN)
Hydric soil rating: Yes

Nessel

Percent of map unit: 5 percent
Landform: Moraines
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F103XY025MN - Loamy Upland Forests
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

L24A—Glencoe clay loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2tsjr
Elevation: 690 to 1,840 feet
Mean annual precipitation: 24 to 37 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 140 to 180 days

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Farmland classification: Prime farmland if drained

Map Unit Composition

Glencoe and similar soils: 80 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Glencoe

Setting

Landform: Depressions

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Local alluvium over till

Typical profile

Ap - 0 to 9 inches: clay loam

A - 9 to 39 inches: clay loam

Bg - 39 to 50 inches: clay loam

Cg - 50 to 79 inches: clay loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.06 to 2.00 in/hr)

Depth to water table: About 0 to 6 inches

Frequency of flooding: None

Frequency of ponding: Occasional

Calcium carbonate, maximum content: 20 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3w

Hydrologic Soil Group: C/D

Ecological site: R103XY015MN - Depressional Marsh

Forage suitability group: Poned If Not Drained (G103XS013MN)

Other vegetative classification: Poned If Not Drained (G103XS013MN)

Hydric soil rating: Yes

Minor Components

Okoboji

Percent of map unit: 10 percent

Landform: Depressions

Down-slope shape: Concave

Across-slope shape: Concave

Ecological site: R103XY015MN - Depressional Marsh

Other vegetative classification: Poned If Not Drained (G103XS013MN)

Hydric soil rating: Yes

Webster

Percent of map unit: 5 percent

Landform: Ground moraines

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Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R103XY001MN - Loamy Wet Prairies
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: Yes

Canisteo

Percent of map unit: 5 percent
Landform: Rims on depressions, ground moraines
Landform position (three-dimensional): Talf
Down-slope shape: Concave, linear
Across-slope shape: Linear
Ecological site: R103XY001MN - Loamy Wet Prairies
Other vegetative classification: Level Swale, Calcareous (G103XS009MN)
Hydric soil rating: Yes

L36A—Hamel, overwash-Hamel complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tsjx
Elevation: 690 to 1,840 feet
Mean annual precipitation: 24 to 37 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Hamel, overwash, and similar soils: 50 percent
Hamel and similar soils: 43 percent
Minor components: 7 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hamel, Overwash

Setting

Landform: Ground moraines
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Parent material: Colluvium over till

Typical profile

Ap - 0 to 12 inches: loam
A - 12 to 26 inches: loam
Btg - 26 to 48 inches: clay loam
Cg - 48 to 79 inches: clay loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches

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Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 2.00 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F103XY029MN - Footslope/Drainageway Forests
Forage suitability group: Level Swale, Neutral (G103XS001MN)
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: No

Description of Hamel

Setting

Landform: Ground moraines
Landform position (three-dimensional): Dip
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Parent material: Colluvium over till

Typical profile

Ap - 0 to 10 inches: loam
A - 10 to 24 inches: loam
Btg - 24 to 46 inches: clay loam
Cg - 46 to 79 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 2.00 in/hr)
Depth to water table: About 0 to 8 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F103XY030MN - Wet Footslope/Drainageway Forests
Forage suitability group: Level Swale, Neutral (G103XS001MN)
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: Yes

Minor Components

Terril

Percent of map unit: 5 percent
Landform: Ground moraines
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: R103XY011MN - Footslope/Drainageway Prairies
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: No

Glencoe

Percent of map unit: 2 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R103XY015MN - Depressional Marsh
Other vegetative classification: Pondered If Not Drained (G103XS013MN)
Hydric soil rating: Yes

L37B—Angus loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2syrq
Elevation: 690 to 1,840 feet
Mean annual precipitation: 24 to 37 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 140 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Angus and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Angus

Setting

Landform: Hillslopes, ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Parent material: Fine-loamy till

Typical profile

Ap - 0 to 7 inches: loam

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Bt - 7 to 37 inches: clay loam
BC - 37 to 50 inches: clay loam
C - 50 to 79 inches: loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 2.00 in/hr)
Depth to water table: About 39 to 51 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: R103XY020MN - Loamy Upland Savannas
Forage suitability group: Sloping Upland, Acid (G103XS006MN)
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

Minor Components

Angus, moderately eroded

Percent of map unit: 10 percent
Landform: Hillslopes, ground moraines
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Ecological site: R103XY020MN - Loamy Upland Savannas
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

Cordova

Percent of map unit: 5 percent
Landform: Ground moraines
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F103XY027MN - Loamy Wet Forests
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: Yes

Le sueur

Percent of map unit: 5 percent
Landform: Hillslopes, ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex, linear
Across-slope shape: Linear
Ecological site: R103XY020MN - Loamy Upland Savannas

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Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

L40B—Angus-Kilkenny complex, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: h64l
Elevation: 820 to 1,080 feet
Mean annual precipitation: 23 to 35 inches
Mean annual air temperature: 43 to 50 degrees F
Frost-free period: 124 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Angus and similar soils: 45 percent
Kilkenny and similar soils: 40 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Angus

Setting

Landform: Hills on moraines
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Till

Typical profile

Ap - 0 to 8 inches: loam
Bt - 8 to 35 inches: clay loam
BC - 35 to 40 inches: clay loam
C - 40 to 80 inches: loam

Properties and qualities

Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)
Depth to water table: About 43 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Gypsum, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 10.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B

Custom Soil Resource Report

Ecological site: R103XY020MN - Loamy Upland Savannas
Forage suitability group: Sloping Upland, Acid (G103XS006MN)
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

Description of Kilkenny

Setting

Landform: Hills on moraines
Landform position (two-dimensional): Summit
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Glaciofluvial sediments and reworked till over till

Typical profile

Ap - 0 to 11 inches: clay loam
Bt - 11 to 35 inches: clay loam
2Bk,2C - 35 to 80 inches: loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 20 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Gypsum, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F103XY026MN - Clayey Upland Forests
Forage suitability group: Sloping Upland, Acid (G103XS006MN)
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

Minor Components

Lerdal

Percent of map unit: 10 percent
Landform: Moraines
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F103XY026MN - Clayey Upland Forests
Other vegetative classification: Level Swale, Acid (G103XS005MN)
Hydric soil rating: No

Mazaska

Percent of map unit: 5 percent
Landform: Swales on moraines
Down-slope shape: Concave
Across-slope shape: Linear

Custom Soil Resource Report

Ecological site: F103XY028MN - Clayey Wet Forests
Other vegetative classification: Level Swale, Acid (G103XS005MN)
Hydric soil rating: Yes

L44A—Nessel loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: h657
Elevation: 820 to 1,080 feet
Mean annual precipitation: 23 to 35 inches
Mean annual air temperature: 43 to 50 degrees F
Frost-free period: 124 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Nessel and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nessel

Setting

Landform: Moraines
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Till

Typical profile

Ap - 0 to 6 inches: loam
Bt - 6 to 38 inches: clay loam
C - 38 to 80 inches: loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)
Depth to water table: About 30 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Gypsum, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 10.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C
Ecological site: F103XY025MN - Loamy Upland Forests

Custom Soil Resource Report

Forage suitability group: Sloping Upland, Acid (G103XS006MN)
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

Minor Components

Cordova

Percent of map unit: 10 percent
Landform: Drainageways on moraines
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F103XY027MN - Loamy Wet Forests
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: Yes

Angus

Percent of map unit: 5 percent
Landform: Hills on moraines
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R103XY020MN - Loamy Upland Savannas
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

L45A—Dundas-Cordova complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: h660
Elevation: 820 to 1,070 feet
Mean annual precipitation: 23 to 35 inches
Mean annual air temperature: 43 to 50 degrees F
Frost-free period: 124 to 200 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Dundas and similar soils: 65 percent
Cordova and similar soils: 25 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dundas

Setting

Landform: Moraines
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Till

Typical profile

Ap - 0 to 9 inches: silt loam

Custom Soil Resource Report

E - 9 to 15 inches: loam
Btg - 15 to 40 inches: clay loam
Cg - 40 to 80 inches: loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Gypsum, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 10.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: R103XY020MN - Loamy Upland Savannas
Forage suitability group: Level Swale, Neutral (G103XS001MN)
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: No

Description of Cordova

Setting

Landform: Drainageways on moraines
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Till

Typical profile

Ap,AB - 0 to 13 inches: loam
Btg - 13 to 33 inches: clay loam
Cg - 33 to 80 inches: loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 6 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Gypsum, maximum content: 1 percent
Available water supply, 0 to 60 inches: High (about 10.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F103XY027MN - Loamy Wet Forests

Custom Soil Resource Report

Forage suitability group: Level Swale, Neutral (G103XS001MN)
Other vegetative classification: Level Swale, Neutral (G103XS001MN)
Hydric soil rating: Yes

Minor Components

Nessel

Percent of map unit: 5 percent
Landform: Moraines
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F103XY025MN - Loamy Upland Forests
Other vegetative classification: Sloping Upland, Acid (G103XS006MN)
Hydric soil rating: No

Glencoe

Percent of map unit: 5 percent
Landform: Depressions on moraines
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R103XY015MN - Depressional Marsh
Other vegetative classification: Ponded If Not Drained (G103XS013MN)
Hydric soil rating: Yes

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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

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From: [MN MNIT Data Request SHPO](#)
To: [Mueller, Kevin](#)
Cc: [Banks, Benjamin](#); [Bot, Courtnay](#)
Subject: RE: Corcoran EAW Lit Search
Date: Monday, March 20, 2023 6:50:02 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[Stantec Kevin Mueller Project Area ALL Corcoran EAW.zip](#)

Hello Kevin,

Please see attached.

Jim



SHPO Data Requests
Minnesota State Historic Preservation Office
50 Sherburne Avenue, Suite 203
Saint Paul, MN 55155
(651) 201-3299
datarequestshpo@state.mn.us

Notice: This email message simply reports the results of the cultural resources database search you requested. The database search is only for previously known archaeological sites and historic properties. **IN NO CASE DOES THIS DATABASE SEARCH OR EMAIL MESSAGE CONSTITUTE A PROJECT REVIEW UNDER STATE OR FEDERAL PRESERVATION LAWS** – please see our website at <https://mn.gov/admin/shpo/protection/> for further information regarding our Environmental Review Process.

Because the majority of archaeological sites in the state and many historic/architectural properties have not been recorded, important sites or properties may exist within the search area and may be affected by development projects within that area. Additional research, including field surveys, may be necessary to adequately assess the area's potential to contain historic properties or archaeological sites.

Properties that are listed in the National Register of Historic Places (NRHP) or have been determined eligible for listing in the NRHP are indicated on the reports you have received, if any. The following codes may be on those reports:

NR – National Register listed. The properties may be individually listed or may be within the boundaries of a National Register District.

CEF – Considered Eligible Findings are made when a federal agency has recommended that a property is eligible for listing in the National Register and MN SHPO has accepted the recommendation for the purposes of the Environmental Review Process. These properties need to be further assessed before they are officially listed in the National Register.

SEF – Staff eligible Findings are those properties the MN SHPO staff considers eligible for listing in the National Register, in circumstances other than the Environmental Review Process.

DOE – Determination of Eligibility is made by the National Park Service and are those properties that are eligible for listing in the National Register, but have not been officially listed.

CNEF – Considered Not Eligible Findings are made during the course of the Environmental Review Process. For the purposes of the review a property is considered not eligible for listing in the National Register. These properties may

need to be reassessed for eligibility under additional or alternate contexts.

Properties without NR, CEF, SEF, DOE, or CNEF designations in the reports may not have been evaluated and therefore no assumption to their eligibility can be made. Integrity and contexts change over time, therefore any eligibility determination made ten (10) or more years from the date of the current survey are considered out of date and the property will need to be reassessed.

If you require a comprehensive assessment of a project's potential to impact archaeological sites or historic/architectural properties, you may need to hire a qualified archaeologist and/or historian. If you need assistance with a project review, please contact Kelly Gragg-Johnson, Environmental Review Specialist @ 651-201-3285 or by email at kelly.graggjohnson@state.mn.us.

The Minnesota SHPO Archaeology and Historic/Architectural Survey Manuals can be found at <https://mn.gov/admin/shpo/identification-evaluation/>.

Please [subscribe to receive SHPO notices](#) for the most current updates regarding office hours, accessing research files, or changes in submitting materials to the SHPO.

To access historic resource information please visit our webpage on [Using SHPO's Files](#).



From: Mueller, Kevin <kevin.mueller@stantec.com>

Sent: Wednesday, March 15, 2023 11:18 AM

To: MN_MNIT_Data Request SHPO <DataRequestSHPO@state.mn.us>

Cc: Banks, Benjamin <Benjamin.Banks@stantec.com>; Bot, Courtney <Courtney.Bot@stantec.com>

Subject: Corcoran EAW Lit Search

This message may be from an external email source.

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Hello,

I would like to request a records search for the attached project. Would it also be possible to provide the search results in an access database format?

Thank you and please let me know if there are any questions.

Kevin Mueller

GIS Specialist

Mobile: (952) 334-1991

Stantec

One Carlson Parkway, Suite 100

Plymouth MN 55447

**Hope Community Church Development Project
GHG Emissions Summary**

| Scope | Source | CO ₂ (ton/yr) | CH ₄ (ton/yr) | N ₂ O (ton/yr) | CO ₂ e (ton/yr) |
|-------------------------------------|--|-----------------------------|-----------------------------|------------------------------|-------------------------------|
| Direct Emissions | | | | | |
| Scope 1 | Construction - Mobile Sources Onroad - Gasoline and Diesel | 75 | 0.001 | 0.002 | 75 |
| Scope 1 | Construction - Mobile Sources Non-road - Diesel | 591 | 0.05 | 0.05 | 607 |
| Scope 1 | Operations - Stationary Combustion - Natural Gas | 1,302 | 0.02 | 0.002 | 1,325 |
| Scope 1 | Operations - Mobile Sources - Gasoline and Diesel | 7,106 | 0.1 | 0.1 | 7,138 |
| Indirect Emissions | | | | | |
| Scope 2 | Purchased Electricity | 3,281 | 0.3 | 0.05 | 3,358 |
| Scope 2 | Waste - Operations | - | - | - | 954 |
| Atmospheric Removals of GHGs | | | | | |
| Scope 1 - Sinks | Land Use (CO ₂ Removals to Terrestrial Storage) | - | - | - | 355 |
| Total | | 12,356 | 0.6 | 0.20 | 13,813 |



EPA Simplified GHG Emissions Calculator ("the Calculator")

August 2022

The EPA Simplified GHG Emissions Calculator ("the Calculator") is designed as a simplified calculation tool to help organizations estimate and inventory their annual greenhouse gas (GHG) emissions for US-based operations. All methodologies and default values provided are based on the most current Center for Corporate Climate Leadership Greenhouse Gas *Inventory Guidance Documents* and the *Emission Factors Hub*. The Calculator will quantify the direct and indirect emissions from sources at an organization when activity data are entered into the various sections of the workbook for one annual period.

Before entering data, please: 1) Enable Macros and 2) Familiarize yourself with the [Simplified Guide to GHG Management for Organizations](#).

Access the guide: <https://www.epa.gov/climateleadership/ghg-inventory-guidance-low-emitters>

There are three primary steps in completing a GHG inventory. Each emissions source also has these three steps.

(1) **DEFINE:** The first step in completing a GHG inventory is to determine the boundaries and emissions sources included within those boundaries. After you have defined your organizational and operational boundaries, you can use the questions on the "Boundary Questions" worksheet to help you determine which emissions sources are relevant to your business.

[Go to Boundary Questions](#)

(2) **COLLECT:** The second step is to collect data for the defined annual period. This step is typically the most time consuming, since the data can be difficult to gather. This Calculator has help sheets with suggestions and guidance for each emissions source and a general help sheet for data management. **Click the drop down menu boxes below to navigate to these sheets.**

Help - Data Management

(3) **QUANTIFY:** The third step is to calculate emissions. This Calculator is designed to complete the emissions quantification step for you. Once the user enters data in this MS Excel spreadsheet, the emissions will be calculated and totaled on the "Summary" sheet.

Calculator Guidance - Important Information

- (A) Navigate to the data entry sheets using the drop down menu in the dark grey cell below and then clicking on the "Go To Data Entry Sheet" button. On the data entry sheets enter data in ORANGE cells only.
- (B) This Calculator has several "Tool Sheets" with useful reference data such as unit conversions, heat contents, and emission factors. Click on the buttons below to go to the appropriate Tool Sheet.
- (C) Data must be entered in the units specified on the data entry sheets. Use the "Unit Conversions" or "Heat Content" sheets if unit conversion is necessary prior to entering data into the Calculator.
- (D) If more guidance is needed, you can reference the emission factor data sources found on the "Emission Factors" sheet.

| Tool Sheets | Quick Data Entry Navigation |
|---|--------------------------------|
| <p>Unit Conversions</p> <p>Heat Content</p> <p>Emission Factors</p> | <p>Upstream Trans and Dist</p> |

Calculator Notes

Emission sources of all seven major GHGs are accounted for in the inventory and in this Calculator: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). The Calculator allows the user to estimate GHG emissions from scope 1 (direct), scope 2 (indirect), and some scope 3 (other indirect) sources.

The Calculator uses U.S.-specific cross-sector emission factors from the *Emission Factors Hub*. Many industrial sectors also have process-related emissions sources that are specific to their sector. EPA's Greenhouse Gas Reporting Program provides guidance and tools that can aid in the calculation and reporting of these emissions:

<https://www.epa.gov/ghgreporting>

The GHG Protocol also provides guidance on calculating emissions from industrial processes.

Hope Community Church Development

| Source ID | Description | Building Activity | Bldg Square Footage | Natural Gas Combustion (scf/yr) | Electricity Usage (kWh/yr) |
|----------------|---------------------------|-------------------|---------------------|---------------------------------|----------------------------|
| Multi-Family-A | Multi-Family Housing "A" | Lodging | 43,000 | 2,119,900 | 662,200 |
| Retail-B | Proposed Retail "B" | Retail | 10,100 | 342,390 | 142,410 |
| Medical-C | Proposed Medical "C" | Health care | 47,000 | 4,027,900 | 1,179,700 |
| Medical-D | Proposed Medical "D" | Health care | 43,200 | 3,702,240 | 1,084,320 |
| Retail-E | Proposed Retail "E" | Retail | 10,000 | 339,000 | 141,000 |
| Multi-Family-F | Multi-Family Housing "F" | Lodging | 51,000 | 2,514,300 | 785,400 |
| Senior-G | Senior Senior Housing "G" | Lodging | 56,000 | 2,760,800 | 862,400 |
| Senior-H | 55+ Housing "H" | Lodging | 33,100 | 1,631,830 | 509,740 |
| Villas-I | Villas "I" | Lodging | 48,000 | 2,366,400 | 739,200 |
| Rowhomes-J | Rowhomes "J" | Lodging | 38,535 | 1,899,776 | 593,439 |
| | | Total | 379,935 | | |

Mobile Source Information

Construction Duration 5 Years (estimate)
 Project Lifetime 50 Years (estimate)

| Onroad/Off-Road | Vehicle Type ¹ | Number of Vehicles per Day ² | Fuel Type | Vehicle Year ³ | VMT (miles per day, per vehicle) ⁴ | Miles per Gallon ⁵ | Fuel Usage (gal/day, all vehicles) | Days Per Year ⁴ | Miles Traveled (mi/yr, all vehicles) | Fuel Usage (gal/yr, all vehicles) | Miles Traveled (mi) | Fuel Usage (gal) | Emission Factors ⁵ | | | Total Emissions (ton) | | | | Emissions Annualized over Project Lifetime (50 yrs) | | | |
|-----------------|--|---|-----------|---------------------------|---|-------------------------------|------------------------------------|----------------------------|--------------------------------------|-----------------------------------|---------------------|------------------|-------------------------------|--------------|--------------|-----------------------|-----------------|-----------------|------------------|---|--------------------|--------------------|---------------------|
| | | | | | | | | | | | | | CO2 (kg/gal) | CH4 (g/mile) | N2O (g/mile) | CO2 (short ton) | CH4 (short ton) | N2O (short ton) | CO2e (short ton) | CO2 (short ton/yr) | CH4 (short ton/yr) | N2O (short ton/yr) | CO2e (short ton/yr) |
| Onroad | Passenger Cars - Laborers (commute) | 50 | Gas | 2007 | 40 | 22.9 | 87.47 | 260 | 520,000 | 22,742 | 2,600,000 | 113,708 | 8.78 | 0.0072 | 0.0052 | 1,100.50 | 0.0206 | 0.01490 | 1.105 | 22.0 | 0.00041 | 0.00030 | 22.109 |
| | Heavy Duty Trucks - Dump Trucks (onsite and offsite) | 20 | Diesel | 2007 | 30 | 7.5 | 80.11 | 260 | 156,000 | 20,828 | 780,000 | 104,139 | 10.21 | 0.0095 | 0.0431 | 1,172.04 | 0.0082 | 0.0371 | 1.183 | 23.4 | 0.00016 | 0.0007 | 23.666 |
| | Heavy Duty Trucks - Semis (onsite and offsite) | 20 | Diesel | 2007 | 30 | 6.0 | 100.00 | 260 | 156,000 | 26,000 | 780,000 | 130,000 | 10.21 | 0.0095 | 0.0431 | 1,463.10 | 0.0082 | 0.0371 | 1.474 | 29.3 | 0.00016 | 0.0007 | 29.487 |
| | | | | | | | | | | | | | Total | | | | Total | | | | | | |
| | | | | | | | | | | | | | 3,763 | | | | 75.3 | | | | | | |

- Assumed vehicle year 2007 to match the first year a new methodology for gas mileage was developed by the Federal Highway Administration (FHWA). The new category Light duty vehicle, short wheel base replaces the old category Passenger car and includes passenger cars, light trucks, vans and sport utility vehicles with a wheelbase (WB) equal to or less than 121 inches. Model Year 2007 is also assumed for heavy duty trucks to allow for use of more conservative GHG emission factors compared to later years.
- Estimate. Assume passenger cars have 20 mile commute (one-way). Heavy duty trucks vehicle miles traveled includes both onsite and hauling to and from the site during construction.
- Mileage for passenger cars based upon the U.S. Department of Transportation's Bureau of Transportation Average Fuel Efficiency of Light Duty Vehicles (<https://www.bts.gov/content/average-fuel-efficiency-of-light-duty-vehicles>). Mileage for dump trucks and semis based on U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2019 (December 2021), Table VM-1.
- Based on construction schedule of 52 weeks per year, 5 days per week.
- Emission factors based on the U.S. EPA's Emission Factors Hub (<https://www.epa.gov/climateleadership/ghg-emission-factors-hub>, updated April 2022).

| Onroad/Off-road | Vehicle Type | Number of Vehicles ¹ | Fuel type | Engine Size (hp) ¹ | Consumption Rate (gal/hour per hp) ² | Hours per Year ³ | Total Gallons per Year | Total Gallons for Project | Emission Factors ⁴ | | | Total Project Emissions | | | | Emissions Annualized over Project Lifetime (50 yrs) | | | | | |
|-----------------|------------------|---------------------------------|-----------|-------------------------------|---|-----------------------------|------------------------|---------------------------|-------------------------------|-------------|-------------|-------------------------|-----------------|-----------------|------------------|---|--------------------|--------------------|---------------------|--|--|
| | | | | | | | | | CO2 (kg/gal) | CH4 (g/gal) | N2O (g/gal) | CO2 (short ton) | CH4 (short ton) | N2O (short ton) | CO2e (short ton) | CO2 (short ton/yr) | CH4 (short ton/yr) | N2O (short ton/yr) | CO2e (short ton/yr) | | |
| Off-road | Crane | 4 | Diesel | 250 | 0.05 | 2,080 | 104,000 | 520,000 | 10.21 | 0.94 | 0.87 | 5852.39 | 0.539 | 0.499 | 6.014 | 117.0 | 0.0108 | 0.0100 | 120.3 | | |
| | Backhoe | 6 | Diesel | 125 | 0.05 | 2,080 | 78,000 | 390,000 | 10.21 | 0.94 | 0.87 | 4389.29 | 0.404 | 0.374 | 4.511 | 87.8 | 0.0081 | 0.0075 | 90.2 | | |
| | Loader/Bulldozer | 8 | Diesel | 250 | 0.05 | 2,080 | 208,000 | 1,040,000 | 10.21 | 0.94 | 0.87 | 11704.78 | 1.078 | 0.997 | 12.029 | 234.1 | 0.0216 | 0.0199 | 240.6 | | |
| | Excavator | 4 | Diesel | 250 | 0.05 | 2,080 | 104,000 | 520,000 | 10.21 | 0.94 | 0.87 | 5852.39 | 0.539 | 0.499 | 6.014 | 117.0 | 0.0108 | 0.0100 | 120.3 | | |
| | Skid Steer | 6 | Diesel | 50 | 0.05 | 2,080 | 31,200 | 156,000 | 10.21 | 0.94 | 0.87 | 1755.72 | 0.162 | 0.150 | 1.804 | 35.1 | 0.0032 | 0.0030 | 36.1 | | |
| Total | | 28 | | | | | 625,200 | 2,626,000 | | | | | 30,373 | | | | 607.5 | | | | |

- Estimate.
- Off-road mobile source fuel usage based on South Coast Air Quality Management District CEQA Air Quality Handbook, Table A9-3E.
- Based on construction schedule of 52 weeks per year, 5 days per week, 8 hours per day.
- Emission factors based on the U.S. EPA's Emission Factors Hub (<https://www.epa.gov/climateleadership/ghg-emission-factors-hub>, updated April 2022).

Mobile Source - Operations

| Onroad/Off-Road | Vehicle Type ¹ | Vehicle Driver | Daily Trips | Fuel Type | Vehicle Year ² | VMT (miles per trip) ³ | Miles per Gallon ⁴ | Fuel Usage (gal/day, all vehicles) | Days Per Year ⁵ | Miles per Year (per Vehicle) | Miles per Year All Vehicles | Fuel Usage (gallyr, all vehicles) | Emission Factors ⁵ | | | Emissions | | | |
|-----------------|--|------------------------------|-------------|-----------|---------------------------|-----------------------------------|-------------------------------|------------------------------------|----------------------------|------------------------------|-----------------------------|-----------------------------------|-------------------------------|--------------|--------------|--------------------|--------------------|--------------------|---------------------|
| | | | | | | | | | | | | | CO2 (kg/gal) | CH4 (g/mile) | N2O (g/mile) | CO2 (short ton/yr) | CH4 (short ton/yr) | N2O (short ton/yr) | CO2e (short ton/yr) |
| Onroad | Light Duty Vehicle, Short Wheel Base (Passenger Cars, small trucks and SUVs) | Resident | 3171 | Gas | 2007 | 5 | 22.9 | 693.40 | 365 | 1,825 | 5,787,075 | 253,090 | 8.78 | 0.0072 | 0.0052 | 2,449 | 0.05 | 0.03 | 2,461 |
| | | Retail Facilities | 2794 | Gas | 2007 | 5 | 22.9 | 610.96 | 365 | 1,825 | 5,099,050 | 223,001 | 8.78 | 0.0072 | 0.0052 | 2,158 | 0.0405 | 0.02923 | 2,168 |
| | | Medical Facilities | 3181 | Gas | 2007 | 5 | 22.9 | 695.59 | 365 | 1,825 | 5,805,325 | 253,889 | 8.78 | 0.0072 | 0.0052 | 2,457 | 0.0461 | 0.03328 | 2,468 |
| | Heavy Duty Trucks (Deliveries) | Parcel and Supply Deliveries | 15 | Diesel | 2007 | 5 | 7.49 | 10.01 | 365 | 1,825 | 27,375 | 3,655 | 10.21 | 0.0095 | 0.0431 | 41 | 0.000 | 0.001 | 42 |
| Total | | | | | | | | | | | | | | | | | | 7,138 | |

- Assumes members and employees drive gasoline powered light duty vehicles and deliveries are made by heavy duty diesel vehicles.
- Assumed vehicle year 2007 to match the first year a new methodology for gas mileage was developed by the Federal Highway Administration (FHWA). The new category Light duty vehicle, short wheel base replaces the old category Passenger car and includes passenger cars, light trucks, vans and sport utility vehicles with a wheelbase (WB) equal to or less than 121 inches. The new category Light duty vehicle, long wheel base replaces Other 2-axle, 4-tire vehicle and includes large passenger cars, vans, pickup trucks, and sport/utility vehicles with wheelbases (WB) larger than 121 inches.
- Assumes 5 miles per trip for all vehicles.
- Mileage based upon the U.S. Department of Transportation's Bureau of Transportation Average Fuel Efficiency of Light Duty Vehicles (<https://www.bts.gov/content/average-fuel-efficiency-us-light-duty-vehicles>). Mileage for delivery trucks based on U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2019 (December 2021), Table VM-1.
- Assume daily trips take place 365 days per year.

Scope 2 Emissions from Purchase of Electricity

Guidance

The Indirect Emissions from Purchased Electricity Guidance document provides guidance for quantifying two scope 2 emissions totals, using a location-based method and a market-based method.

- (A) Enter total annual electricity purchased in kWh and each eGRID subregion for each facility or site in ORANGE cells of Table 1. (B) If electricity consumption data are not available for a facility, an estimate should be made for completeness. (C) Select "eGRID subregion" from drop box and enter "Electricity Purchased."

(D) See the market-based emission factor hierarchy on the market-based method Help sheet. If any of the first four types of emission factors are applicable, enter the factors in the yellow cells marked as "<enter factor>".

Help - Market-Based Method

Tips: Enter electricity usage by location and then look up the eGRID subregion for each location. If you purchase renewable energy that is less than 100% of your site's electricity, see the example in the market-based method Help sheet.

Table 1. Total Amount of Electricity Purchased by eGRID Subregion

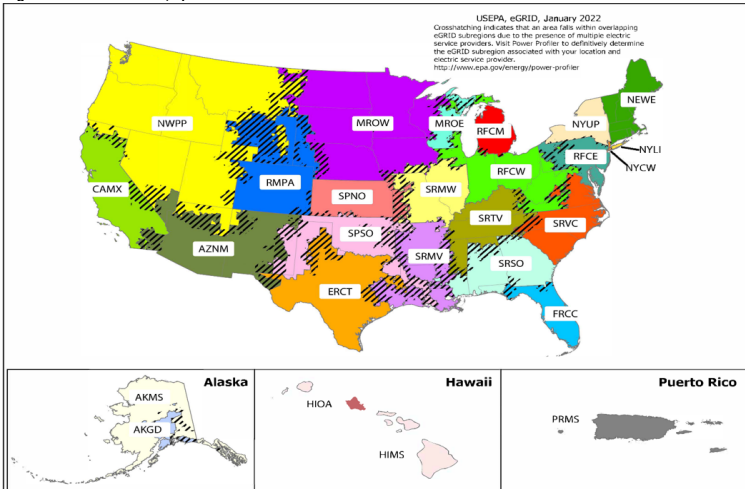
Table with 13 columns: Source ID, Source Description, Source Area (sq ft), eGRID Subregion, Electricity Purchased (kWh), CO2 Emissions (lb/MWh), CH4 Emissions (lb/MWh), N2O Emissions (lb/MWh), CO2 Emissions (lb), CH4 Emissions (lb), N2O Emissions (lb), CO2 Emissions (lb), CH4 Emissions (lb), N2O Emissions (lb). Includes rows for various sources like Bldg-012, Multi-Family, Retail-B, etc.

GHG Emissions

Summary table for GHG Emissions showing CO2 Equivalent Emissions (metric tons) for Location-Based Electricity Emissions (2,998.2) and Market-Based Electricity Emissions (2,998.2).

Notes: 1. CO2, CH4 and N2O emissions are estimated using methodology provided in EPA's Center for Corporate Climate Leadership Greenhouse Gas Inventory Guidance - Indirect Emissions from Purchased Electricity (January 2016).

Figure 1. EPA eGRID2020, April 2022.



Hope Community Church
Greenhouse Gas Emissions Associated with Land Use Changes

| Land Use Change ¹ | Description | Land Use Emissions or Reductions | | | | | | |
|---|--|----------------------------------|---|--|----------------------------------|---|--|------------------------|
| | | Land Area (acres) | Net CO2 Emissions Flux (tons CO2e) ² | Total Area Land Use Change (hectares) ³ | Emission Factor (tons CO2e/acre) | Emissions (tons CO2e, negative value represents sink/removal of carbon) | Project Lifetime Multiplier (assume 50+ years) | Emission Rate (ton/yr) |
| Wetland Remaining Wetland (includes stormwater ponds) | | 4.5 | 15,800,000 | 37,658,000 | 0.17 | 0.8 | 1 | 0.8 |
| Wetland to Settlement | | 0.2 | 300,000 | 46,000 | 2.64 | 0.5 | 1 | 0.5 |
| Forest to Settlement | | 6.9 | 61,500,000 | 541,000 | 46.01 | 317.4 | 1 | 317 |
| Impervious Surface Remaining Impervious Surface | | 5 | 0 | 0 | 0 | 0 | 1 | 0 |
| Cropland to Wetland (Stormwater Pond) | | 4 | 5,000 | 440,000 | 0.005 | 0.02 | 1 | 0.02 |
| Cropland to Settlement | Settlement includes developed areas, including residential, industrial, commercial and institutional land. | 37.3 | 5,900,000 | 2,452,000 | 0.97 | 36.3 | 1 | 36 |
| Total | | 57.9 | | | | | | 355 |

1. Stormwater ponds are not represented in the U.S. Greenhouse Gas Emissions Sources and Sinks: 1990-2020 document. Conservatively assume the stormwater ponds have the same carbon sequestration as wetlands. Settlements

2. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020. Net Flux from Soil, Dead Organic Matter and Biomass Carbon Stock Changes.

Cropland Converted to Settlements: Table 6-125

Wetland Converted to Settlements: Table 6-125

Forest Converted to Settlements: Table 6-125

Cropland Converted to Wetland: Table 6-87 (Note that value "does not exceed <5,000 tons CO2e")

Wetlands Remaining Wetlands: Table 6-1.

3. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020. Land Use and Land-Use Change for the U.S. Managed Land Base for All 50 States, Table 6-5.

Total Organization-Wide On-Road Gasoline Mobile Source Mileage and CH₄/N₂O Emissions

| Vehicle Type | Vehicle Year | Mileage (miles) | CH ₄ (g) | N ₂ O (g) |
|---|--------------|-----------------|---------------------|----------------------|
| Passenger Cars - Gasoline | 1984-93 | 0 | 0.0 | 0.0 |
| | 1994 | 0 | 0.0 | 0.0 |
| | 1995 | 0 | 0.0 | 0.0 |
| | 1996 | 0 | 0.0 | 0.0 |
| | 1997 | 0 | 0.0 | 0.0 |
| | 1998 | 0 | 0.0 | 0.0 |
| | 1999 | 0 | 0.0 | 0.0 |
| | 2000 | 0 | 0.0 | 0.0 |
| | 2001 | 0 | 0.0 | 0.0 |
| | 2002 | 0 | 0.0 | 0.0 |
| | 2003 | 0 | 0.0 | 0.0 |
| | 2004 | 0 | 0.0 | 0.0 |
| | 2005 | 0 | 0.0 | 0.0 |
| | 2006 | 0 | 0.0 | 0.0 |
| | 2007 | 0 | 0.0 | 0.0 |
| | 2008 | 0 | 0.0 | 0.0 |
| | 2009 | 0 | 0.0 | 0.0 |
| | 2010 | 0 | 0.0 | 0.0 |
| | 2011 | 0 | 0.0 | 0.0 |
| | 2012 | 0 | 0.0 | 0.0 |
| 2013 | 0 | 0.0 | 0.0 | |
| 2014 | 0 | 0.0 | 0.0 | |
| 2015 | 0 | 0.0 | 0.0 | |
| 2016 | 0 | 0.0 | 0.0 | |
| 2017 | 0 | 0.0 | 0.0 | |
| 2018 | 0 | 0.0 | 0.0 | |
| 2019 | 0 | 0.0 | 0.0 | |
| Light-Duty Trucks - Gasoline (Vans, Pickup Trucks, SUVs) | 1987-93 | 0 | 0.0 | 0.0 |
| | 1994 | 0 | 0.0 | 0.0 |
| | 1995 | 0 | 0.0 | 0.0 |
| | 1996 | 0 | 0.0 | 0.0 |
| | 1997 | 0 | 0.0 | 0.0 |
| | 1998 | 0 | 0.0 | 0.0 |
| | 1999 | 0 | 0.0 | 0.0 |
| | 2000 | 0 | 0.0 | 0.0 |
| | 2001 | 0 | 0.0 | 0.0 |
| | 2002 | 0 | 0.0 | 0.0 |
| | 2003 | 0 | 0.0 | 0.0 |
| | 2004 | 0 | 0.0 | 0.0 |
| | 2005 | 0 | 0.0 | 0.0 |
| | 2006 | 0 | 0.0 | 0.0 |
| | 2007 | 0 | 0.0 | 0.0 |
| | 2008 | 0 | 0.0 | 0.0 |
| | 2009 | 0 | 0.0 | 0.0 |
| | 2010 | 0 | 0.0 | 0.0 |
| | 2011 | 0 | 0.0 | 0.0 |
| | 2012 | 0 | 0.0 | 0.0 |
| 2013 | 0 | 0.0 | 0.0 | |
| 2014 | 0 | 0.0 | 0.0 | |
| 2015 | 0 | 0.0 | 0.0 | |
| 2016 | 0 | 0.0 | 0.0 | |
| 2017 | 0 | 0.0 | 0.0 | |
| 2018 | 0 | 0.0 | 0.0 | |
| 2019 | 0 | 0.0 | 0.0 | |
| Heavy-Duty Vehicles - Gasoline | 1985-86 | 0 | 0.0 | 0.0 |
| | 1987 | 0 | 0.0 | 0.0 |
| | 1988-1989 | 0 | 0.0 | 0.0 |
| | 1990-1995 | 0 | 0.0 | 0.0 |
| | 1996 | 0 | 0.0 | 0.0 |
| | 1997 | 0 | 0.0 | 0.0 |
| | 1998 | 0 | 0.0 | 0.0 |
| | 1999 | 0 | 0.0 | 0.0 |
| | 2000 | 0 | 0.0 | 0.0 |
| | 2001 | 0 | 0.0 | 0.0 |
| | 2002 | 0 | 0.0 | 0.0 |
| | 2003 | 0 | 0.0 | 0.0 |
| | 2004 | 0 | 0.0 | 0.0 |
| | 2005 | 0 | 0.0 | 0.0 |
| | 2006 | 0 | 0.0 | 0.0 |
| | 2007 | 0 | 0.0 | 0.0 |
| | 2008 | 0 | 0.0 | 0.0 |
| | 2009 | 0 | 0.0 | 0.0 |
| | 2010 | 0 | 0.0 | 0.0 |
| | 2011 | 0 | 0.0 | 0.0 |
| 2012 | 0 | 0.0 | 0.0 | |
| 2013 | 0 | 0.0 | 0.0 | |
| 2014 | 0 | 0.0 | 0.0 | |
| 2015 | 0 | 0.0 | 0.0 | |
| 2016 | 0 | 0.0 | 0.0 | |
| 2017 | 0 | 0.0 | 0.0 | |
| 2018 | 0 | 0.0 | 0.0 | |
| 2019 | 0 | 0.0 | 0.0 | |
| Motorcycles - Gasoline | 1960-1995 | 0 | 0.0 | 0.0 |
| | 1996-2019 | 0 | 0.0 | 0.0 |

Total Organization-Wide On-Road Non-Gasoline Mobile Source Mileage and CH₄/N₂O Emissions

| Vehicle Type | Fuel Type | Vehicle Year | Mileage (miles) | CH ₄ (g) | N ₂ O (g) |
|---------------------------------|-----------|--------------|-----------------|---------------------|----------------------|
| Passenger Cars - Diesel | Diesel | 1960-1982 | 0 | 0 | 0 |
| | | 1983-2006 | 0 | 0 | 0 |
| | | 2007-2019 | 0 | 0 | 0 |
| Light-Duty Trucks - Diesel | Diesel | 1960-1982 | 0 | 0 | 0 |
| | | 1983-2006 | 0 | 0 | 0 |
| | | 2007-2019 | 0 | 0 | 0 |
| Medium- and Heavy-Duty Vehicles | Diesel | 1960-2006 | 0 | 0 | 0 |
| | | 2007-2019 | 0 | 0 | 0 |
| Light-Duty Cars | Methanol | | 0 | 0.0 | 0.0 |
| | Ethanol | | 0 | 0.0 | 0.0 |
| | CNG | | 0 | 0.0 | 0.0 |
| | LPG | | 0 | 0.0 | 0.0 |
| | Biodiesel | | 0 | 0.0 | 0.0 |
| Light-Duty Trucks | Ethanol | | 0 | 0.0 | 0.0 |
| | CNG | | 0 | 0.0 | 0.0 |
| | LPG | | 0 | 0.0 | 0.0 |
| | LNG | | 0 | 0.0 | 0.0 |
| | Biodiesel | | 0 | 0.0 | 0.0 |
| Medium-Duty Trucks | CNG | | 0 | 0.0 | 0.0 |
| | LPG | | 0 | 0.0 | 0.0 |
| | LNG | | 0 | 0.0 | 0.0 |
| | Biodiesel | | 0 | 0.0 | 0.0 |
| Heavy-Duty Trucks | Methanol | | 0 | 0.0 | 0.0 |
| | Ethanol | | 0 | 0.0 | 0.0 |
| | CNG | | 0 | 0.0 | 0.0 |
| | LPG | | 0 | 0.0 | 0.0 |
| | LNG | | 0 | 0.0 | 0.0 |
| Buses | Methanol | | 0 | 0.0 | 0.0 |
| | Ethanol | | 0 | 0.0 | 0.0 |
| | CNG | | 0 | 0.0 | 0.0 |
| | LPG | | 0 | 0.0 | 0.0 |
| | LNG | | 0 | 0.0 | 0.0 |
| | Biodiesel | | 0 | 0.0 | 0.0 |

Total Organization-Wide Non-Road Mobile Source Fuel Usage and CH₄/N₂O Emissions

| Vehicle Type | Fuel Type | Fuel Usage (gallons) | CH ₄ (g) | N ₂ O (g) |
|------------------------------------|---------------------|----------------------|---------------------|----------------------|
| Ships and Boats | Residual Fuel Oil | - | - | - |
| | Gasoline (2 stroke) | - | - | - |
| | Gasoline (4 stroke) | - | - | - |
| | Diesel | - | - | - |
| Locomotives | Diesel | - | - | - |
| Aircraft | Jet Fuel | - | - | - |
| | Aviation Gasoline | - | - | - |
| Agricultural Equipment | Gasoline (2 stroke) | - | - | - |
| | Gasoline (4 stroke) | - | - | - |
| | Diesel | - | - | - |
| | LPG | - | - | - |
| Agricultural Offroad Trucks | Gasoline | - | - | - |
| | Diesel | - | - | - |
| Construction/Mining Equipment | Gasoline (2 stroke) | - | - | - |
| | Gasoline (4 stroke) | - | - | - |
| | Diesel | - | - | - |
| | LPG | - | - | - |
| Construction/Mining Offroad Trucks | Gasoline | - | - | - |
| | Diesel | - | - | - |
| Lawn and Garden Equipment | Gasoline (2 stroke) | - | - | - |
| | Gasoline (4 stroke) | - | - | - |
| | Diesel | - | - | - |
| | LPG | - | - | - |
| Airport Equipment | Gasoline | - | - | - |
| | Diesel | - | - | - |
| | LPG | - | - | - |
| Industrial/Commercial Equipment | Gasoline (2 stroke) | - | - | - |
| | Gasoline (4 stroke) | - | - | - |
| | Diesel | - | - | - |
| | LPG | - | - | - |
| Logging Equipment | Gasoline (2 stroke) | - | - | - |
| | Gasoline (4 stroke) | - | - | - |
| | Diesel | - | - | - |
| Railroad Equipment | Gasoline | - | - | - |
| | Diesel | - | - | - |
| | LPG | - | - | - |
| Recreational Equipment | Gasoline (2 stroke) | - | - | - |
| | Gasoline (4 stroke) | - | - | - |
| | Diesel | - | - | - |
| | LPG | - | - | - |

| | |
|---|------------|
| Total CO₂ Equivalent Emissions (metric tons) - Mobile Sources | 0.0 |
| Total Biomass CO₂ Equivalent Emissions (metric tons) - Mobile Sources | 0.0 |

Notes:
 1. Average mpg values from the U.S. Department of Transportation, Federal Highway Administration, Highway Statistics 2019 (December 2021), Table VM-1.

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[Back to Summary](#)

Tool Sheet: Emission Factors

All emission factors sourced from EPA's Emission Factors Hub, April 2022. Unless otherwise noted. Fuel emission factors presented represent the combustion-only emissions (e.g., tank-to-wheel)

<https://www.epa.gov/climateleadership/center-corporate-climate-leadership-ghg-emission-factors-hub>

Stationary Combustion Emission Factors (Used for Steam and Stationary Combustion)

| Fuel Type | CO ₂ Factor (kg / mmBtu) | CH ₄ Factor (g / mmBtu) | N ₂ O Factor (g / mmBtu) | CO ₂ Factor (kg / Unit) | CH ₄ Factor (g / unit) | N ₂ O Factor (g / unit) | Unit |
|---------------------------------|--|---------------------------------------|--|---------------------------------------|--------------------------------------|---------------------------------------|------------|
| Natural Gas | 53.06 | 1.0 | 0.10 | 0.05444 | 0.00103 | 0.00010 | scf |
| Distillate Fuel Oil No. 2 | 73.96 | 3.0 | 0.60 | 10.21 | 0.41 | 0.08 | gallons |
| Residual Fuel Oil No. 6 | 75.10 | 3.0 | 0.60 | 11.27 | 0.45 | 0.09 | gallons |
| Kerosene | 75.20 | 3.0 | 0.60 | 10.15 | 0.41 | 0.08 | gallons |
| Liquefied Petroleum Gases (LPG) | 61.71 | 3.0 | 0.60 | 5.68 | 0.28 | 0.06 | gallons |
| Anthracite Coal | 103.69 | 11 | 1.6 | 2.602 | 276 | 40 | short tons |
| Bituminous Coal | 93.28 | 11 | 1.6 | 2.325 | 274 | 40 | short tons |
| Sub-bituminous Coal | 97.17 | 11 | 1.6 | 1.676 | 190 | 28 | short tons |
| Lignite Coal | 97.72 | 11 | 1.6 | 1.389 | 156 | 23 | short tons |
| Mixed (Electric Power Sector) | 95.52 | 11 | 1.6 | | | | |
| Coal Coke | 113.67 | 11 | 1.6 | | | | |
| Wood and Wood Residuals | 0 | 7.2 | 3.6 | 1.640 | 126 | 63 | short tons |
| Landfill Gas | 0 | 3.2 | 0.63 | 0.02525 | 0.001552 | 0.000306 | scf |

Mobile Combustion Emission Factors

CO₂ Emissions for Road Vehicles

| Fuel Type | CO ₂ Emission Factor (kg CO ₂ / unit) | Unit |
|---------------------------------|--|--------|
| Motor Gasoline | 8.78 | gallon |
| Diesel Fuel | 10.21 | gallon |
| Residual Fuel Oil | 11.27 | gallon |
| Aviation Gasoline | 8.31 | gallon |
| Kerosene-Type Jet Fuel | 9.75 | gallon |
| Liquefied Petroleum Gases (LPG) | 5.68 | gallon |
| Ethanol (100%) | 5.75 | gallon |
| Biodiesel (100%) | 9.45 | gallon |
| Liquefied Natural Gas (LNG) | 4.50 | gallon |
| Compressed Natural Gas (CNG) | 0.05444 | scf |

CH₄ and N₂O Emissions for Highway Vehicles

| Vehicle Type | Year | CH ₄ Factor (g / mile) | N ₂ O Factor (g / mile) | Notes |
|-------------------------|---------|--------------------------------------|---------------------------------------|-------|
| Gasoline Passenger Cars | 1984-93 | 0.0704 | 0.0647 | |
| | 1994 | 0.0617 | 0.0603 | |
| | 1995 | 0.0531 | 0.0560 | |
| | 1996 | 0.0434 | 0.0503 | |
| | 1997 | 0.0337 | 0.0446 | |
| | 1998 | 0.0240 | 0.0389 | |
| | 1999 | 0.0215 | 0.0355 | |
| | 2000 | 0.0175 | 0.0304 | |
| | 2001 | 0.0105 | 0.0212 | |
| | 2002 | 0.0102 | 0.0207 | |
| | 2003 | 0.0095 | 0.0181 | |
| | 2004 | 0.0078 | 0.0085 | |
| | 2005 | 0.0075 | 0.0067 | |
| | 2006 | 0.0076 | 0.0075 | |
| | 2007 | 0.0072 | 0.0052 | |
| | 2008 | 0.0072 | 0.0049 | |
| | 2009 | 0.0071 | 0.0046 | |
| | 2010 | 0.0071 | 0.0046 | |
| | 2011 | 0.0071 | 0.0046 | |
| | 2012 | 0.0071 | 0.0046 | |
| 2013 | 0.0071 | 0.0046 | | |
| 2014 | 0.0071 | 0.0046 | | |
| 2015 | 0.0068 | 0.0042 | | |
| 2016 | 0.0065 | 0.0038 | | |
| 2017 | 0.0054 | 0.0018 | | |
| 2018 | 0.0052 | 0.0016 | | |
| 2019 | 0.0051 | 0.0015 | | |

| | | | | |
|---|-----------|--------|--|--|
| Gasoline Light-Duty Trucks (Vans, Pickup Trucks, SUVs) | 1987-93 | 0.0813 | 0.1035 | |
| | 1994 | 0.0646 | 0.0982 | |
| | 1995 | 0.0517 | 0.0908 | |
| | 1996 | 0.0452 | 0.0871 | |
| | 1997 | 0.0452 | 0.0871 | |
| | 1998 | 0.0412 | 0.0787 | |
| | 1999 | 0.0333 | 0.0618 | |
| | 2000 | 0.0340 | 0.0631 | |
| | 2001 | 0.0221 | 0.0379 | |
| | 2002 | 0.0242 | 0.0424 | |
| | 2003 | 0.0221 | 0.0373 | |
| | 2004 | 0.0115 | 0.0088 | |
| | 2005 | 0.0105 | 0.0064 | |
| | 2006 | 0.0108 | 0.0080 | |
| | 2007 | 0.0103 | 0.0061 | |
| | 2008 | 0.0095 | 0.0036 | |
| | 2009 | 0.0095 | 0.0036 | |
| | 2010 | 0.0095 | 0.0035 | |
| | 2011 | 0.0096 | 0.0034 | |
| | 2012 | 0.0096 | 0.0033 | |
| 2013 | 0.0095 | 0.0035 | | |
| 2014 | 0.0095 | 0.0033 | | |
| 2015 | 0.0094 | 0.0031 | | |
| 2016 | 0.0091 | 0.0029 | | |
| 2017 | 0.0084 | 0.0018 | | |
| 2018 | 0.0081 | 0.0015 | | |
| 2019 | 0.0080 | 0.0013 | Assume these CH ₄ and N ₂ O factors for ethanol light-duty vehicles | |
| Gasoline Heavy-Duty Vehicles | 1985-86 | 0.4090 | 0.0515 | |
| | 1987 | 0.3675 | 0.0849 | |
| | 1988-1989 | 0.3492 | 0.0933 | |
| | 1990-1995 | 0.3246 | 0.1142 | |
| | 1996 | 0.1278 | 0.1680 | |
| | 1997 | 0.0924 | 0.1726 | |
| | 1998 | 0.0655 | 0.1750 | |
| | 1999 | 0.0648 | 0.1724 | |
| | 2000 | 0.0630 | 0.1660 | |
| | 2001 | 0.0577 | 0.1468 | |
| | 2002 | 0.0634 | 0.1673 | |
| | 2003 | 0.0602 | 0.1553 | |
| | 2004 | 0.0298 | 0.0164 | |
| | 2005 | 0.0297 | 0.0083 | |
| | 2006 | 0.0299 | 0.0241 | |
| | 2007 | 0.0322 | 0.0015 | |
| | 2008 | 0.0340 | 0.0015 | |
| | 2009 | 0.0339 | 0.0015 | |
| | 2010 | 0.0320 | 0.0015 | |
| | 2011 | 0.0304 | 0.0015 | |
| 2012 | 0.0313 | 0.0015 | | |
| 2013 | 0.0313 | 0.0015 | | |
| 2014 | 0.0315 | 0.0015 | | |
| 2015 | 0.0332 | 0.0021 | | |
| 2016 | 0.0321 | 0.0061 | | |
| 2017 | 0.0329 | 0.0084 | | |
| 2018 | 0.0326 | 0.0082 | | |
| 2019 | 0.0330 | 0.0091 | Assumed these CH ₄ and N ₂ O factors for ethanol heavy-duty vehicles and buses | |
| Gasoline Motorcycles | 1960-1995 | 0.0899 | 0.0087 | |
| | 1996-2019 | 0.0672 | 0.0069 | |

| Vehicle Type | Fuel Type | Vehicle Year | CH ₄ Factor (g / mile) | N ₂ O Factor (g / mile) |
|---------------------------------|-----------|--------------|--------------------------------------|---------------------------------------|
| Passenger Cars | Diesel | 1960-1982 | 0.0006 | 0.0012 |
| | | 1983-2006 | 0.0005 | 0.0010 |
| | | 2007-2019 | 0.0302 | 0.0192 |
| Light-Duty Trucks | Diesel | 1960-1982 | 0.0011 | 0.0017 |
| | | 1983-2006 | 0.0009 | 0.0014 |
| | | 2007-2019 | 0.0290 | 0.0214 |
| Medium- and Heavy-Duty Vehicles | Diesel | 1960-2006 | 0.0051 | 0.0048 |
| | | 2007-2019 | 0.0095 | 0.0431 |
| Light-Duty Cars | Methanol | | 0.0080 | 0.0050 |
| | Ethanol | | 0.0080 | 0.0050 |
| | CNG | | 0.0810 | 0.0050 |
| | LPG | | 0.0080 | 0.0050 |
| | Biodiesel | | 0.0300 | 0.0190 |
| Light-Duty Trucks | Ethanol | | 0.0120 | 0.0090 |
| | CNG | | 0.1210 | 0.0090 |
| | LPG | | 0.0120 | 0.0120 |
| | LNG | | 0.1210 | 0.0090 |
| | Biodiesel | | 0.0290 | 0.0210 |
| Medium-Duty Trucks | CNG | | 4.2000 | 0.0010 |
| | LPG | | 0.0140 | 0.0340 |
| | LNG | | 4.2000 | 0.0010 |
| | Biodiesel | | 0.0090 | 0.0430 |
| Heavy-Duty Trucks | Methanol | | 0.0750 | 0.0280 |
| | Ethanol | | 0.0750 | 0.0280 |
| | CNG | | 3.7000 | 0.0010 |
| | LPG | | 0.0130 | 0.0260 |
| | LNG | | 3.7000 | 0.0010 |
| | Biodiesel | | 0.0090 | 0.0430 |
| Buses | Methanol | | 0.0160 | 0.0320 |
| | Ethanol | | 0.0160 | 0.0320 |
| | CNG | | 10.0000 | 0.0010 |
| | LPG | | 0.0340 | 0.0170 |
| | LNG | | 10.0000 | 0.0010 |
| | Biodiesel | | 0.0090 | 0.0430 |

CH₄ and N₂O Emissions for Non-Road Vehicles

| Vehicle Type (superscript from EF Hub removed) | Fuel Type | CH ₄ Factor (g / gallon) | N ₂ O Factor (g / gallon) |
|---|---------------------|--|---|
| Ships and Boats | Residual Fuel Oil | 1.11 | 0.32 |
| | Gasoline (2 stroke) | 4.58 | 0.08 |
| | Gasoline (4 stroke) | 2.24 | 0.01 |
| | Diesel | 6.41 | 0.17 |
| Locomotives | Diesel | 0.80 | 0.26 |
| Aircraft | Jet Fuel | 0 | 0.30 |
| | Aviation Gasoline | 7.06 | 0.11 |
| Agricultural Equipment | Gasoline (2 stroke) | 9.19 | 0.26 |
| | Gasoline (4 stroke) | 3.33 | 1.83 |
| | Diesel | 0.97 | 0.90 |
| | LPG | 0.42 | 0.60 |
| Agricultural Offroad Trucks | Gasoline | 3.33 | 1.84 |
| | Diesel | 0.99 | 0.92 |
| Construction/Mining Equipment | Gasoline (2 stroke) | 12.11 | 0.34 |
| | Gasoline (4 stroke) | 3.03 | 1.67 |
| | Diesel | 0.94 | 0.87 |
| | LPG | 0.44 | 0.63 |
| Construction/Mining Offroad Trucks | Gasoline | 3.03 | 1.67 |
| | Diesel | 0.99 | 0.92 |
| Lawn and Garden Equipment | Gasoline (2 stroke) | 10.21 | 0.28 |
| | Gasoline (4 stroke) | 2.85 | 1.56 |
| | Diesel | 0.93 | 0.86 |
| | LPG | 0.45 | 0.64 |
| Airport Equipment | Gasoline | 3.88 | 2.13 |
| | Diesel | 0.99 | 0.91 |
| | LPG | 0.45 | 0.64 |
| Industrial/Commercial Equipment | Gasoline (2 stroke) | 9.21 | 0.26 |
| | Gasoline (4 stroke) | 3.04 | 1.67 |
| | Diesel | 0.93 | 0.87 |
| | LPG | 0.45 | 0.64 |
| Logging Equipment | Gasoline (2 stroke) | 12.48 | 0.35 |
| | Gasoline (4 stroke) | 2.85 | 1.57 |
| | Diesel | 0.99 | 0.92 |
| Railroad Equipment | Gasoline | 2.87 | 1.59 |
| | Diesel | 0.83 | 0.78 |
| | LPG | 0.43 | 0.63 |
| Recreational Equipment | Gasoline (2 stroke) | 4.27 | 0.20 |
| | Gasoline (4 stroke) | 4.30 | 2.22 |
| | Diesel | 0.80 | 0.75 |
| | LPG | 0.41 | 0.58 |

Refrigerants and Global Warming Potentials (GWPs)

| Gas | GWP |
|---------------------------------|--------|
| CO ₂ | 1 |
| CH ₄ | 25 |
| N ₂ O | 298 |
| HFC-23 | 14,800 |
| HFC-32 | 675 |
| HFC-41 | 92 |
| HFC-125 | 3,500 |
| HFC-134 | 1,100 |
| HFC-134a | 1,430 |
| HFC-143 | 353 |
| HFC-143a | 4,470 |
| HFC-152 | 53 |
| HFC-152a | 124 |
| HFC-161 | 12 |
| HFC-227ea | 3,220 |
| HFC-236cb | 1,340 |
| HFC-236ea | 1,370 |
| HFC-236fa | 9,810 |
| HFC-245ca | 693 |
| HFC-245fa | 1,030 |
| HFC-365mfc | 794 |
| HFC-43-10mee | 1,640 |
| SF ₆ | 22,800 |
| NF ₃ | 17,200 |
| CF ₄ | 7,390 |
| C ₂ F ₆ | 12,200 |
| C ₃ F ₈ | 8,830 |
| c-C ₄ F ₈ | 10,300 |
| C ₄ F ₁₀ | 8,860 |
| C ₆ F ₁₂ | 9,160 |
| C ₈ F ₁₄ | 9,300 |
| C ₁₀ F ₁₈ | >7,500 |

| ASHRAE # | Blended Refrigerants (ASHRAE #) | |
|----------|---------------------------------|---|
| | Blend GWP | HFC/PFC |
| R-401A | 16 | 53% HCFC-22, 34% HCFC-124, 13% HFC-152a |
| R-401B | 14 | 61% HCFC-22, 28% HCFC-124, 11% HFC-152a |
| R-401C | 19 | 33% HCFC-22, 52% HCFC-124, 15% HFC-152a |
| R-402A | 2,100 | 38% HCFC-22, 6% HFC-125, 2% propane |
| R-402B | 1,330 | 6% HCFC-22, 38% HFC-125, 2% propane |
| R-403B | 3,444 | 56% HCFC-22, 39% PFC-218, 5% propane |
| R-404A | 3,922 | 44% HFC-125, 4% HFC-134a, 52% HFC 143a |
| R-406A | 0 | 55% HCFC-22, 41% HCFC-142b, 4% isobutane |
| R-407A | 2,107 | 20% HFC-32, 40% HFC-125, 40% HFC-134a |
| R-407B | 2,804 | 10% HFC-32, 70% HFC-125, 20% HFC-134a |
| R-407C | 1,774 | 23% HFC-32, 25% HFC-125, 52% HFC-134a |
| R-407D | 1,627 | 15% HFC-32, 15% HFC-125, 70% HFC-134a |
| R-407E | 1,552 | 25% HFC-32, 15% HFC-125, 60% HFC-134a |
| R-408A | 2,301 | 47% HCFC-22, 7% HFC-125, 46% HFC 143a |
| R-409A | 0 | 60% HCFC-22, 25% HCFC-124, 15% HCFC-142b |
| R-410A | 2,088 | 50% HFC-32, 50% HFC-125 |
| R-410B | 2,229 | 45% HFC-32, 55% HFC-125 |
| R-411A | 14 | 87.5% HCFC-22, 11% HFC-152a, 1.5% propylene |
| R-411B | 4 | 94% HCFC-22, 3% HFC-152a, 3% propylene |
| R-413A | 2,053 | 88% HFC-134a, 9% PFC-218, 3% isobutane |
| R-414A | 0 | 51% HCFC-22, 28.5% HCFC-124, 16.5% HCFC-142b |
| R-414B | 0 | 5% HCFC-22, 39% HCFC-124, 9.5% HCFC-142b |
| R-417A | 2,346 | 46.6% HFC-125, 5% HFC-134a, 3.4% butane |
| R-422A | 3,143 | 85.1% HFC-125, 11.5% HFC-134a, 3.4% isobutane |
| R-422D | 2,729 | 65.1% HFC-125, 31.5% HFC-134a, 3.4% isobutane |
| R-423A | 2,280 | 47.5% HFC-227ea, 52.5% HFC-134a |
| R-424A | 2,440 | 50.5% HFC-125, 47% HFC-134a, 2.5% butane/pentane |
| R-426A | 1,508 | 5.1% HFC-125, 93% HFC-134a, 1.9% butane/pentane |
| R-428A | 3,607 | 77.5% HFC-125, 2% HFC-143a, 1.9% isobutane |
| R-434A | 3,245 | 63.2% HFC-125, 16% HFC-134a, 18% HFC-143a, 2.8% isobutane |
| R-500 | 32 | 73.8% CFC-12, 26.2% HFC-152a, 48.8% HCFC-22 |
| R-502 | 0 | 48.8% HCFC-22, 51.2% CFC-115 |
| R-504 | 325 | 48.2% HFC-32, 51.8% CFC-115 |
| R-507 | 3,985 | 5% HFC-125, 5% HFC143a |
| R-508A | 13,214 | 39% HFC-23, 61% PFC-116 |
| R-508B | 13,396 | 46% HFC-23, 54% PFC-116 |

Molecular Weights

| Element | Atomic Weight |
|---------|---------------|
| Carbon | 12.011 |

Electricity Emission Factors (System Average)

CO₂, CH₄ and N₂O Total Output Emission Factors by Subregion eGRID2020, February 2022.

| Subregion | CO ₂ Factor (lb CO ₂ /MWh) | CH ₄ Factor (lb CH ₄ /MWh) | N ₂ O Factor (lb N ₂ O/MWh) |
|----------------------------------|---|---|--|
| AKGD (ASCC Alaska Grid) | 1,097.6 | 0.100 | 0.014 |
| AKMS (ASCC Miscellaneous) | 534.1 | 0.027 | 0.005 |
| AZNM (WECC Southwest) | 846.6 | 0.054 | 0.007 |
| CAMX (WECC California) | 513.5 | 0.032 | 0.004 |
| ERCX (ERCOT All) | 818.6 | 0.052 | 0.007 |
| FRCC (FRCC All) | 835.1 | 0.049 | 0.006 |
| HIMS (HICC Miscellaneous) | 1,143.2 | 0.110 | 0.017 |
| HIOA (HICC Oahu) | 1,653.0 | 0.178 | 0.027 |
| MROE (MRO East) | 1,526.4 | 0.139 | 0.020 |
| MROW (MRO West) | 979.5 | 0.104 | 0.015 |
| NEWE (NPCC New England) | 528.2 | 0.074 | 0.010 |
| NWPP (WECC Northwest) | 600.0 | 0.056 | 0.008 |
| NYCW (NPCC NYC/Westchester) | 634.6 | 0.022 | 0.003 |
| NYLI (NPCC Long Island) | 1,203.9 | 0.138 | 0.018 |
| NYUP (NPCC Upstate NY) | 233.5 | 0.016 | 0.002 |
| PRMS (Puerto Rico Miscellaneous) | 1,602.2 | 0.085 | 0.014 |
| RFCE (RFC East) | 652.5 | 0.045 | 0.006 |
| RFCM (RFC Michigan) | 1,153.1 | 0.101 | 0.014 |
| RFCW (RFC West) | 985.0 | 0.086 | 0.012 |
| RMPA (WECC Rockies) | 1,144.8 | 0.101 | 0.014 |
| SPNO (SPP North) | 954.0 | 0.100 | 0.014 |
| SPSO (SPP South) | 931.8 | 0.060 | 0.009 |
| SRMV (SERC Mississippi Valley) | 740.4 | 0.032 | 0.004 |
| SRMW (SERC Midwest) | 1,480.7 | 0.156 | 0.023 |
| SRSO (SERC South) | 860.2 | 0.060 | 0.009 |
| SRTV (SERC Tennessee Valley) | 834.2 | 0.075 | 0.011 |
| SRVC (SERC Virginia/Carolina) | 623.1 | 0.050 | 0.007 |

Business Travel and Employee Commuting Emission Factors

| Vehicle Type (superscript from EF Hub removed) | CO ₂ Factor (kg / unit) | CH ₄ Factor (g / unit) | N ₂ O Factor (g / unit) | Units |
|---|---------------------------------------|--------------------------------------|---------------------------------------|----------------|
| Passenger Car | 0.332 | 0.007 | 0.007 | vehicle-mile |
| Light-Duty Truck | 0.454 | 0.012 | 0.009 | vehicle-mile |
| Motorcycle | 0.183 | 0.070 | 0.007 | vehicle-mile |
| Intercity Rail - Northeast Corridor | 0.058 | 0.0055 | 0.0007 | passenger-mile |
| Intercity Rail - Other Routes | 0.150 | 0.0117 | 0.0038 | passenger-mile |
| Intercity Rail - National Average | 0.113 | 0.0092 | 0.0026 | passenger-mile |
| Commuter Rail | 0.139 | 0.0112 | 0.0028 | passenger-mile |
| Transit Rail (i.e. Subway, Tram) | 0.099 | 0.0084 | 0.0012 | passenger-mile |
| Bus | 0.056 | 0.0210 | 0.0009 | passenger-mile |
| Short Haul (< 300 miles) | 0.207 | 0.0064 | 0.0066 | passenger-mile |
| Medium Haul (>= 300 miles, < 2300 miles) | 0.129 | 0.0006 | 0.0041 | passenger-mile |
| Long Haul (>= 2300 miles) | 0.163 | 0.0006 | 0.0052 | passenger-mile |

Product Transport Emission Factors

| Vehicle Type (superscript from EF Hub removed) | CO ₂ Factor (kg / unit) | CH ₄ Factor (g / unit) | N ₂ O Factor (g / unit) | Units |
|---|---------------------------------------|--------------------------------------|---------------------------------------|--------------|
| Medium- and Heavy-Duty Truck | 1.450 | 0.013 | 0.034 | vehicle-mile |
| Passenger Car | 0.332 | 0.007 | 0.007 | vehicle-mile |
| Light-Duty Truck | 0.454 | 0.012 | 0.009 | vehicle-mile |
| Medium- and Heavy-Duty Truck | 0.211 | 0.0020 | 0.0049 | ton-mile |
| Rail | 0.022 | 0.0017 | 0.0006 | ton-mile |
| Waterborne Craft | 0.041 | 0.0183 | 0.0008 | ton-mile |
| Aircraft | 1.165 | 0.0000 | 0.0359 | ton-mile |

Fire Suppressant Leak Rates

| Type of Equipment | Leak Rate |
|-------------------|-----------|
| Fixed | 3.5% |
| Portable | 2.5% |

Source:

EPA (2021) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019. Page A-275.

Waste Emission Factors

| WARM Material | Material for SGEC Lookup (red text indicates different name from WARM) | Metric Tons CO ₂ e / Short Ton Material | | | | | |
|--------------------------------------|---|--|------------|-----------|-----------|---|---|
| | | Recycled | Landfilled | Combusted | Composted | Anaerobically Digested (Dry Digestate with Curing) | Anaerobically Digested (Wet Digestate with Curing) |
| Aluminum Cans | Aluminum Cans | 0.06 | 0.02 | 0.01 | NA | NA | NA |
| Aluminum Ingot | Aluminum Ingot | 0.04 | 0.02 | 0.01 | NA | NA | NA |
| Steel Cans | Steel Cans | 0.32 | 0.02 | 0.01 | NA | NA | NA |
| Copper Wire | Copper Wire | 0.18 | 0.02 | 0.01 | NA | NA | NA |
| Glass | Glass | 0.05 | 0.02 | 0.01 | NA | NA | NA |
| HDPE | HDPE | 0.21 | 0.02 | 2.80 | NA | NA | NA |
| LDPE | LDPE | NA | 0.02 | 2.80 | NA | NA | NA |
| PET | PET | 0.23 | 0.02 | 2.05 | NA | NA | NA |
| LLDPE | LLDPE | NA | 0.02 | 2.80 | NA | NA | NA |
| PP | PP | NA | 0.02 | 2.80 | NA | NA | NA |
| PS | PS | NA | 0.02 | 3.02 | NA | NA | NA |
| PVC | PVC | NA | 0.02 | 1.26 | NA | NA | NA |
| PLA | PLA | NA | 0.02 | 0.01 | 0.17 | NA | NA |
| Corrugated Containers | Corrugated Containers | 0.11 | 0.90 | 0.05 | NA | NA | NA |
| Magazines/Third-class mail | Magazines and Third class mail | 0.02 | 0.42 | 0.05 | NA | NA | NA |
| Newspaper | Newspaper | 0.02 | 0.35 | 0.05 | NA | NA | NA |
| Office Paper | Office Paper | 0.02 | 1.25 | 0.05 | NA | NA | NA |
| Phonebooks | Phonebooks | 0.04 | 0.35 | 0.05 | NA | NA | NA |
| Textbooks | Textbooks | 0.04 | 1.25 | 0.05 | NA | NA | NA |
| Dimensional Lumber | Dimensional Lumber | 0.09 | 0.17 | 0.05 | NA | NA | NA |
| Medium-density Fiberboard | Medium density Fiberboard | 0.15 | 0.07 | 0.05 | NA | NA | NA |
| Food Waste (non-meat) | Food Waste non meat | NA | 0.58 | 0.05 | 0.15 | 0.14 | 0.11 |
| Food Waste (meat only) | Food Waste meat only | NA | 0.58 | 0.05 | NA | 0.14 | 0.11 |
| Beef | Beef | NA | 0.58 | 0.05 | 0.15 | 0.14 | 0.11 |
| Poultry | Poultry | NA | 0.58 | 0.05 | 0.15 | 0.14 | 0.11 |
| Grains | Grains | NA | 0.58 | 0.05 | 0.15 | 0.14 | 0.11 |
| Bread | Bread | NA | 0.58 | 0.05 | 0.15 | 0.14 | 0.11 |
| Fruits and Vegetables | Fruits and Vegetables | NA | 0.58 | 0.05 | 0.15 | 0.14 | 0.11 |
| Dairy Products | Dairy Products | NA | 0.58 | 0.05 | 0.15 | 0.14 | 0.11 |
| Yard Trimmings | Yard Trimmings | NA | 0.33 | 0.05 | 0.19 | 0.11 | NA |
| Grass | Grass | NA | 0.26 | 0.05 | 0.19 | 0.09 | NA |
| Leaves | Leaves | NA | 0.26 | 0.05 | 0.19 | 0.13 | NA |
| Branches | Branches | NA | 0.53 | 0.05 | 0.19 | 0.16 | NA |
| Mixed Paper (general) | Mixed Paper general | 0.07 | 0.80 | 0.05 | NA | NA | NA |
| Mixed Paper (primarily residential) | Mixed Paper primarily residential | 0.07 | 0.77 | 0.05 | NA | NA | NA |
| Mixed Paper (primarily from offices) | Mixed Paper primarily from offices | 0.03 | 0.75 | 0.05 | NA | NA | NA |
| Mixed Metals | Mixed Metals | 0.23 | 0.02 | 0.01 | NA | NA | NA |
| Mixed Plastics | Mixed Plastics | 0.22 | 0.02 | 2.34 | NA | NA | NA |
| Mixed Recyclables | Mixed Recyclables | 0.09 | 0.68 | 0.11 | NA | NA | NA |
| Food Waste | Food Waste | NA | 0.58 | 0.05 | 0.15 | NA | NA |
| Mixed Organics | Mixed Organics | NA | 0.48 | 0.05 | 0.17 | NA | NA |
| Mixed MSW | Mixed MSW municipal solid waste | NA | 0.52 | 0.43 | NA | NA | NA |
| Carpet | Carpet | NA | 0.02 | 1.68 | NA | NA | NA |
| Desktop CPUs | Desktop CPUs | NA | 0.02 | 0.40 | NA | NA | NA |
| Portable Electronic Devices | Portable Electronic Devices | NA | 0.02 | 0.89 | NA | NA | NA |
| Flat-panel Displays | Flat panel Displays | NA | 0.02 | 0.74 | NA | NA | NA |
| CRT Displays | CRT Displays | NA | 0.02 | 0.64 | NA | NA | NA |
| Electronic Peripherals | Electronic Peripherals | NA | 0.02 | 2.23 | NA | NA | NA |
| Hard-copy Devices | Hard copy Devices | NA | 0.02 | 1.92 | NA | NA | NA |
| Mixed Electronics | Mixed Electronics | NA | 0.02 | 0.87 | NA | NA | NA |
| Clay Bricks | Clay Bricks | NA | 0.02 | NA | NA | NA | NA |
| Concrete | Concrete | 0.01 | 0.02 | NA | NA | NA | NA |
| Fly Ash | Fly Ash | 0.01 | 0.02 | NA | NA | NA | NA |
| Tires | Tires | 0.10 | 0.02 | 2.21 | NA | NA | NA |
| Asphalt Concrete | Asphalt Concrete | - | 0.02 | NA | NA | NA | NA |
| Asphalt Shingles | Asphalt Shingles | 0.03 | 0.02 | 0.70 | NA | NA | NA |
| Drywall | Drywall | NA | 0.02 | NA | NA | NA | NA |
| Fiberglass Insulation | Fiberglass Insulation | 0.05 | 0.02 | NA | NA | NA | NA |
| Vinyl Flooring | Vinyl Flooring | NA | 0.02 | 0.29 | NA | NA | NA |
| Wood Flooring | Wood Flooring | NA | 0.18 | 0.08 | NA | NA | NA |

Notes: These factors do not include any avoided emissions impact from any of the disposal methods. All the factors presented here include transportation emissions, which are optional in the Scope 3 Calculation Guidance, with an assumed average distance traveled to the processing facility. AR4 GWPs are used to convert all waste emission factors into CO₂e.

Recycling emissions include transport to recycling facility and sorting of recycled materials at material recovery facility.

Landfilling emissions include transport to landfill, equipment use at landfill and fugitive landfill CH₄ emissions. Landfill CH₄ is based on typical landfill gas collection practices and average landfill moisture conditions.

Combustion emissions include transport to combustion facility and combustion-related non-biogenic CO₂ and N₂O

Composting emissions include transport to composting facility, equipment use at composting facility and CH₄ and N₂O emissions during composting.

Scope 3 Emissions from Waste - HELP SHEET

DEFINITION

Scope 3 emissions from waste include the disposal and treatment of waste generated in the reporting company's operations in the reporting year in facilities not owned or controlled by the reporting company. These emission factors align with the requirements of the GHG Protocol Scope 3 Standard. The emission factors do not include any avoided emissions impact from any of the disposal methods. All the factors presented include transportation emissions, which are optional in the Scope 3 Calculation Guidance, with an assumed average distance traveled to the processing facility. AR4 GWPs are used to convert all waste emission factors into CO₂e.

COLLECT

Collect information on the amount of weight disposed at your facilities, by the type of waste (plastics, paper, etc.) and disposal method (recycling, incineration, etc.). Refer to the Emission Factors tab for a complete list of materials and available disposal methods.

Data Collection Checklist

- Weight of waste disposed by material type and disposal method

QUANTIFY

Enter the data into the appropriate orange colored boxes (Tables 1) of the Calculator section titled "Waste." Once the data are entered into the Calculator, the CO₂ equivalent emissions are calculated and summarized in the green colored box.



**Hope Community Church
Development Infrastructure
Feasibility Study**

May 2023

Prepared for:

City of Corcoran, MN
8200 County Road 116
Corcoran, MN 55340

Prepared by:

Stantec Consulting Services Inc.
One Carlson Parkway
Plymouth, MN 55447

Project Number: 193806190_112



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HOPE COMMUNITY CHURCH DEVELOPMENT INFRASTRUCTURE FEASIBILITY STUDY
CITY OF CORCORAN
May 2023

FIGURES

Figure 1 Site Plan

APPENDICES

Appendix A Sewer Comprehensive Plan System
Appendix B NE Water System
Appendix C Stormwater Modeling Guidelines and Floodplain



HOPE COMMUNITY CHURCH DEVELOPMENT INFRASTRUCTURE FEASIBILITY STUDY CITY OF CORCORAN

Introduction
May 2023

1.0 Introduction

Hope Community Church Development representatives have been planning for developing this parcel for over 20 years and has submitted a concept to develop a multi-purpose campus that maintains the church operations and expands the site to include housing for seniors along with more diverse uses such as commercial and medical.

The concept shows that full development provides 738 varied housing units and up to 110,300 square feet of commercial, retail, and medical office space.

This study reviews the City infrastructure components involved in development that consists of transportation, sewer, water and stormwater. Although the City is the lead for the local government process, there are multiple agencies involved with reviewing and issuing permits or approvals for the development including Hennepin County (CR 116 and CR30 access and septic abandonment), Minnesota Pollution Control (MPCA—Construction Stormwater and sewer system), Minnesota Department of Health (MDH--watermain), Elm Creek Water Management Commission (stormwater), and Metropolitan Council Environmental Services (MCES—trunk sewer compliance).

This site has a significant ongoing infrastructure component for water supply, in that the project is scheduled to use the City's Water Treatment Plant and Tower unless a temporary contract amendment with Corcoran and Maple Grove is executed.



2.0 Transportation

2.1 Background

This study examined weekday A.M. and P.M. peak hour traffic impacts of the proposed development at the following intersections:

- CSAH 30/CR 116
- CR 116/Oswald Farm Road
- CSAH 30/access (future)

2.2 Proposed Development Characteristics

For purpose of the traffic impact analysis, the proposed development is assumed to consist of the following uses:

- Rowhomes – 54 dwelling units
- Villas – 20 dwelling units
- Senior housing – 324 dwelling units
- Apartments – 340 dwelling units
- Medical office – 72,160 square feet
- General office – 18,040 square feet
- Coffee shop – 4,000 square feet
- Fast casual restaurant – 4,000 square feet
- Retail – 12,100 square feet

Access will be provided on the north by reconfiguring the connection of Oswald Farm Road and Hunters Ridge and on the south via a new connection to CSAH 30.

2.3 Existing Conditions

The proposed project site is currently partially utilized by Hope Community Church, which will remain at its current location. The site is bounded by CSAH 30 on the south, agricultural land on the west, existing residential uses on the north, and CR 116 on the east.

Near the site location, CSAH 30 and CR 116 are two lane undivided roadways with turn lanes and traffic signal control at major intersections. Oswald Farm Road is a local two-lane roadway.

Existing conditions near the proposed project location are described below.

CSAH 30/CR 116 - This four-way intersection is controlled with a traffic signal. The eastbound, northbound, and southbound approaches provide one left turn lane, one through lane, and one right turn lane. The westbound approach provides one left turn lane and one through/right turn lane with a channelized right turn island.



**HOPE COMMUNITY CHURCH DEVELOPMENT INFRASTRUCTURE FEASIBILITY STUDY
CITY OF CORCORAN**

Transportation
May 2023

CR 116/Oswald Farm - This four-way intersection is controlled on two legs with stop signs on the eastbound and westbound approaches. The northbound and southbound approaches provide one left turn/through lane and one through/right turn lane. The eastbound and westbound approaches provide one left turn/through/right turn lane, with turn lanes under design as part of the Bellwether development.

Weekday traffic volume data was recorded at the existing intersections in February, 2023. Existing traffic volume data is presented later in this report.

2.4 Traffic Forecasts

To adequately address the impacts of the proposed project, forecasts and analyses were completed for the years 2028 and 2040. Specifically, weekday a.m. and p.m. peak hour traffic forecasts were completed for the following scenarios:

- *2023 Existing.* Existing volumes were determined through traffic counts at the subject intersections. The existing volume information includes trips generated by the uses near the project site.
- *2028 No-Build.* Existing volumes at the subject intersections were increased by 1.6 percent per year to determine 2028 No-Build volumes. The 1.6 percent per year growth rate was calculated based on historic traffic volume growth in the project area and traffic forecast information presented in the Corcoran Comprehensive Plan.
- *2028 Build.* Trips generated by the proposed development were added to the 2028 No-Build volumes to determine 2028 Build volumes.
- *2040 No-Build.* Existing volumes at the subject intersections were increased by 1.6 percent per year to determine 2040 No-Build volumes. The 1.6 percent per year growth rate was calculated based on historic traffic volume growth in the project area and traffic forecast information presented in the Corcoran Comprehensive Plan.
- *2040 Build.* Trips generated by the proposed development were added to the 2040 No-Build volumes to determine 2040 Build volumes.

The expected new development trips were calculated based on data presented in Trip Generation, Eleventh Edition, published by the Institute of Transportation Engineers. These calculations represent total trips that will be generated by the proposed development. The gross trip generation totals were reduced by 10 percent to account for internal trips. The resultant trip generation estimates are shown in Table 1.

Table 1: Weekday Trip Generation for Proposed Project

| Land Use (ITE Code) | Size | Weekday AM Peak Hour | | | Weekday PM Peak Hour | | | Weekday Daily |
|------------------------|--------|----------------------|-----|-------|----------------------|-----|-------|------------------|
| | | In | Out | Total | In | Out | Total | Total |
| Rowhomes (215) | 54 DU | 6 | 20 | 26 | 18 | 13 | 31 | 389 |
| Villas (210) | 20 DU | 4 | 10 | 14 | 12 | 7 | 19 | 189 |
| Senior Housing (252) | 324 DU | 22 | 43 | 65 | 46 | 35 | 81 | 1050 |
| Apartments (221) | 340 DU | 29 | 97 | 126 | 81 | 52 | 133 | 1543 |



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|----------------------------------|-----------|------------|------------|------------|------------|------------|------------|-------------|
| Medical Office (720) | 72,160 SF | 177 | 47 | 224 | 85 | 199 | 284 | 2598 |
| General Office (710) | 18,040 SF | 25 | 2 | 27 | 4 | 22 | 26 | 196 |
| Coffee Shop (937) | 4,000 SF | 176 | 168 | 344 | 78 | 78 | 156 | 2134 |
| Fast Casual Restaurant (930) | 4,000 SF | 2 | 4 | 6 | 28 | 22 | 50 | 388 |
| Retail (822) | 12,100 SF | 17 | 11 | 28 | 40 | 40 | 80 | 659 |
| Totals | | 458 | 402 | 860 | 392 | 468 | 860 | 9146 |
| 10% reduction for internal trips | | (46) | (40) | (86) | (39) | (47) | (86) | (915) |
| Net Totals | | 412 | 362 | 774 | 353 | 421 | 774 | 8231 |

Notes: SF=square feet and DU=dwelling units

The coffee shop, restaurant, and retail trips can be categorized in the following trip types:

- *New Trips.* Trips solely to and from the proposed development.
- *Pass-By Trips.* Trips that are attracted from the traffic volume on roadways immediately adjacent to the site.

Based on information published in the *Trip Generation Handbook*, 3rd Edition, by the Institute of Transportation Engineers, the percentage of each trip type is as follows:

- 60% new, 40% pass by

Trip distribution percentages for the subject development trips were established based on the nearby roadway network, existing and expected future traffic patterns, and location of the subject development in relation to major attractions and population concentrations.

The distribution percentages for trips generated by the proposed development are described below:

- 15 percent to/from the north on CR 116
- 70 percent to/from the east on CSAH 30
- 5 percent to/from the west on CSAH 30
- 10 percent to/from the south on CR 116

Development trips from Table 1 were assigned to the surrounding roadway network using the preceding trip distribution percentages. Traffic volumes were established for all the forecasting scenarios described earlier during the weekday a.m. and p.m. peak hours. The resultant peak hour volumes are shown in Tables 2 and 3.

Table 2: Weekday A.M. Peak Hour Traffic Volumes

| CR 116/ Hunters/ Oswald | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 2023 Existing | 8 | 0 | 14 | 1 | 0 | 0 | 13 | 80 | 0 | 1 | 389 | 13 |
| 2028 No-Build | 9 | 0 | 15 | 1 | 0 | 0 | 14 | 87 | 0 | 1 | 421 | 14 |
| 2028 Build | 60 | 0 | 180 | 1 | 0 | 0 | 170 | 80 | 0 | 1 | 400 | 87 |
| 2040 No-Build | 10 | 0 | 18 | 1 | 0 | 0 | 17 | 105 | 0 | 1 | 509 | 17 |
| 2040 Build | 61 | 0 | 183 | 1 | 0 | 0 | 173 | 98 | 0 | 1 | 488 | 90 |
| CSAH 30/CR 116 | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |



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|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 2023 Existing | 6 | 499 | 37 | 88 | 120 | 27 | 7 | 60 | 58 | 87 | 302 | 9 |
| 2028 No-Build | 6 | 540 | 40 | 95 | 130 | 29 | 8 | 65 | 63 | 94 | 327 | 10 |
| 2028 Build | 6 | 618 | 47 | 95 | 231 | 160 | 23 | 83 | 63 | 220 | 345 | 10 |
| 2040 No-Build | 8 | 654 | 48 | 115 | 157 | 35 | 9 | 79 | 76 | 114 | 396 | 12 |
| 2040 Build | 8 | 732 | 59 | 115 | 266 | 166 | 25 | 97 | 76 | 240 | 414 | 12 |
| CSAH 30/access | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| 2023 Existing | - | 542 | - | - | 136 | - | - | - | - | - | - | - |
| 2028 No-Build | - | 587 | - | - | 147 | - | - | - | - | - | - | - |
| 2028 Build | 48 | 555 | - | - | 137 | 135 | - | - | - | 121 | - | 25 |
| 2040 No-Build | - | 710 | - | - | 178 | - | - | - | - | - | - | - |
| 2040 Build | 48 | 678 | - | - | 168 | 135 | - | - | - | 121 | - | 25 |

Table 3: Weekday P.M. Peak Hour Traffic Volumes

| | | | | | | | | | | | | |
|------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| CR 116/ Hunters/ Oswald | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| 2023 Existing | 13 | 0 | 15 | 3 | 0 | 0 | 17 | 365 | 2 | 0 | 135 | 10 |
| 2028 No-Build | 14 | 0 | 16 | 3 | 0 | 0 | 18 | 395 | 2 | 0 | 146 | 11 |
| 2028 Build | 85 | 0 | 190 | 3 | 0 | 0 | 175 | 379 | 2 | 0 | 141 | 60 |
| 2040 No-Build | 17 | 0 | 20 | 4 | 0 | 0 | 22 | 478 | 3 | 0 | 177 | 13 |
| 2040 Build | 88 | 0 | 194 | 4 | 0 | 0 | 179 | 462 | 3 | 0 | 172 | 62 |
| CSAH 30/CR 116 | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| 2023 Existing | 11 | 283 | 13 | 56 | 488 | 78 | 34 | 295 | 131 | 51 | 83 | 17 |
| 2028 No-Build | 12 | 306 | 14 | 61 | 528 | 84 | 37 | 319 | 142 | 55 | 90 | 18 |
| 2028 Build | 12 | 417 | 28 | 61 | 584 | 215 | 45 | 338 | 142 | 203 | 111 | 18 |
| 2040 No-Build | 14 | 371 | 17 | 73 | 639 | 102 | 45 | 386 | 172 | 67 | 109 | 22 |
| 2040 Build | 14 | 482 | 33 | 73 | 718 | 233 | 56 | 405 | 172 | 215 | 130 | 22 |
| CSAH 30/access | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| 2023 Existing | - | 307 | - | - | 539 | - | - | - | - | - | - | - |
| 2028 No-Build | - | 332 | - | - | 584 | - | - | - | - | - | - | - |
| 2028 Build | 27 | 321 | - | - | 563 | 111 | - | - | - | 138 | - | 39 |
| 2040 No-Build | - | 402 | - | - | 706 | - | - | - | - | - | - | - |
| 2040 Build | 2 | 391 | - | - | 685 | 111 | - | - | - | 138 | - | 39 |

2.5 Traffic Analysis

Traffic analyses were completed for the subject intersections for all scenarios described earlier during the weekday a.m. and p.m. peak hours using Synchro software. Initial analysis was completed using existing geometrics and intersection control.

The existing northbound and southbound by-pass lanes on CR 116 at Hunters Ridge/Oswald will be replaced with left and right turn lanes with the 2023 turn lane improvements. The modified geometrics were used for all future analysis scenarios.

Capacity analysis results are presented in terms of level of service (LOS), which is defined in terms of traffic delay at the intersection. LOS ranges from A to F. LOS A represents the best intersection operation, with little delay for each vehicle using the intersection. LOS F represents the worst intersection



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operation with excessive delay. The following is a detailed description of the conditions described by each LOS designation:

- Level of service A corresponds to a free flow condition with motorists virtually unaffected by the intersection control mechanism. For a signalized or an unsignalized intersection, the average delay per vehicle would be approximately 10 seconds or less.
- Level of service B represents stable flow with a high degree of freedom, but with some influence from the intersection control device and the traffic volumes. For a signalized intersection, the average delay ranges from 10 to 20 seconds. An unsignalized intersection would have delays ranging from 10 to 15 seconds for this level.
- Level of service C depicts a restricted flow which remains stable, but with significant influence from the intersection control device and the traffic volumes. The general level of comfort and convenience changes noticeably at this level. The delay ranges from 20 to 35 seconds for a signalized intersection and from 15 to 25 seconds for an unsignalized intersection at this level.
- Level of service D corresponds to high-density flow in which speed and freedom are significantly restricted. Though traffic flow remains stable, reductions in comfort and convenience are experienced. The control delay for this level is 35 to 55 seconds for a signalized intersection and 25 to 35 seconds for an unsignalized intersection.
- Level of service E represents unstable flow of traffic at or near the capacity of the intersection with poor levels of comfort and convenience. The delay ranges from 55 to 80 seconds for a signalized intersection and from 35 to 50 seconds for an unsignalized intersection at this level.
- Level of service F represents forced flow in which the volume of traffic approaching the intersection exceeds the volume that can be served. Characteristics often experienced include long queues, stop-and-go waves, poor travel times, low comfort and convenience, and increased accident exposure. Delays over 80 seconds for a signalized intersection and over 50 seconds for an unsignalized intersection correspond to this level of service.

The LOS results for the study intersections are presented in Tables 4 and 5.

Table 4: Weekday A.M. Peak Hour Level of Service Results

| CR 116/Hunters /Oswald | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | Intersection |
|-------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------------|
| 2023 Existing | B | B | B | B | B | B | A | A | A | A | A | A | A |
| 2028 No-Build | B | B | B | B | B | B | A | A | A | A | A | A | A |
| 2028 Build | D | D | D | C | C | C | A | A | A | A | A | A | A |
| 2040 No-Build | B | B | B | B | B | B | A | A | A | A | A | A | A |
| 2040 Build | E | E | E | D | D | D | A | A | A | A | A | A | B |
| CSAH 30/ CR 116 | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | Intersection |
| 2023 Existing | B | B | B | B | A | A | B | B | C | B | C | B | B |
| 2028 No-Build | B | B | B | B | B | A | C | C | C | B | C | B | B |
| 2028 Build | B | C | B | B | B | A | C | C | C | C | C | C | C |
| 2040 No-Build | B | C | B | B | B | A | C | C | C | C | C | C | C |
| 2040 Build | B | C | B | C | B | A | C | D | D | C | D | C | C |



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| CSAH 30/ access | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | Intersection |
|----------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------------|
| 2023 Existing | - | A | - | - | A | - | - | - | - | - | - | - | A |
| 2028 No-Build | - | A | - | - | A | - | - | - | - | - | - | - | A |
| 2028 Build | A | A | - | - | A | A | - | - | - | C | - | A | A |
| 2040 No-Build | - | A | - | - | A | - | - | - | - | - | - | - | A |
| 2040 Build | A | A | - | - | A | - | - | - | - | D | - | A | A |

Table 5: Weekday P.M. Peak Hour Level of Service Results

| CR 116/Hunters /Oswald | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | Intersection |
|-----------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------------|
| 2023 Existing | B | B | B | B | B | B | A | A | A | A | A | A | A |
| 2028 No-Build | B | B | B | B | B | B | A | A | A | A | A | A | A |
| 2028 Build | C | C | C | D | D | D | A | A | A | A | A | A | A |
| 2040 No-Build | B | B | B | C | C | C | A | A | A | A | A | A | A |
| 2040 Build | E | E | E | D | D | D | A | A | A | A | A | A | B |
| CSAH 30/ CR 116 | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | Intersection |
| 2023 Existing | B | B | B | B | B | A | B | C | B | B | B | B | B |
| 2028 No-Build | B | B | B | B | B | A | B | C | B | B | B | B | B |
| 2028 Build | B | C | B | B | C | A | C | C | C | C | B | B | C |
| 2040 No-Build | B | B | B | B | C | A | B | C | C | C | C | C | C |
| 2040 Build | C | C | B | B | D | A | C | E | D | D | C | C | D |
| CSAH 30/ access | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | Intersection |
| 2023 Existing | - | A | - | - | A | - | - | - | - | - | - | - | A |
| 2028 No-Build | - | A | - | - | A | - | - | - | - | - | - | - | A |
| 2028 Build | A | A | - | - | A | A | - | - | - | E | - | A | A |
| 2040 No-Build | - | A | - | - | A | - | - | - | - | - | - | - | A |
| 2040 Build | A | A | - | - | A | - | - | - | - | F | - | A | A |

Under existing, 2028 No-Build, 2028 Build, and 2040 No-Build conditions, all movements and intersections operate at LOS E or better during the a.m. and p.m. peak hours.

Under 2040 Build conditions, the southbound left turn at the CSAH 30/access intersection operates at LOS F during the p.m. peak hour. The overall intersection operates at LOS A during both the a.m. and p.m. peak hours. All other movements and intersections operate at LOS E or better during the a.m. and p.m. peak hours.

Vehicle queues for exiting movements at the site access points under 2040 Build conditions were reviewed to determine the recommended turn lane lengths. The 95th percentile maximum queue for eastbound movements at the CR 116/Oswald intersection was 81 feet during the a.m. peak hour and 73 feet during the p.m. peak hour. At the CSAH 30/access intersection, the 95th percentile maximum queue for southbound movements was 80 feet during the a.m. peak hour and 107 feet during the p.m. peak hour.

Under existing conditions at the CSAH 30/CR 116 intersection, the westbound right turn movement is accommodated with a channelized island but no dedicated right turn lane. As traffic volumes increase due to background growth and development traffic, the lack of a dedicated right turn lane impacts overall



intersection operations. In order to adequately accommodate traffic volumes, a dedicated westbound right turn lane is recommended at this intersection.

2.6 Findings

The following mitigation measures are recommended at each intersection:

- CSAH 30/CR 116
 - Construct dedicated westbound right lane 300 feet in length.
- CR 116/Hunters Ridge/Oswald Farm
 - Previously programmed northbound and southbound left and right turn lane improvements will provide access at intersection.
 - Widen eastbound Oswald Farm and widen westbound Hunters Ridge to provide a 200 foot left turn lane and through / right lane.
- New CSAH 30 access
 - Construct a 300-foot eastbound left turn and westbound right turn lanes on CSAH 30.
Construct southbound approach with 200-foot left turn and right turn lanes.

County will review their system as part of the EAW process and ensure the County system is adequate to handle increased volumes and patterns.



3.0 Sewer and Water

The development is located near the west boundary of the 2040 MUSA, and trunk utilities will need to be extended to and through the site.

3.1 Sewer

The development can be serviced by extending the trunk main from its planned location at the west boundary of Water Treatment Plant site. Currently the trunk terminates in the Bellwether development and a City project will install the 30-inch line to the east ROW of CR 116. The development will be responsible for extending the sewer trunk from the City's Water Treatment parcel and continue through the site at elevations consistent with the Trunk Sewer Comprehensive Plan.

The alignment is shown within development's street and CR 116 ROWs and alignment and ROW/easement widths will be reviewed with the development construction plan process. Currently the 2040 Comprehensive Plan shows the trunk alignment crosses beneath Hunters Ridge Road just northwest of its junction with Oswald Farm Road (Appendix A) and follows the low area/wetland north of Hope Community Church to the west property boundary. The trunk sewer invert is planned for elevation 905.2 (Node NE 5 at Water Treatment Plant) resulting in a 42-foot cut through the road corridor based on existing topography.

Other factors to be coordinated include the development's construction phasing, the water tower construction activities, and Hope Church operations.

Sewer stubs/laterals will be extended for adjacent properties consistent with City policy. Preliminary finding would be a stub for future installation to service the existing development of Hunters Ridge Road and a stub towards CR 116 for Node NE 6 shown in Appendix A . Offsite work is typically designed and managed by the City under an escrow process. Agency permitting will be extensive and involve MCES, WCA, County, and MPCA.

3.2 Water

Corcoran has authorized contracts for construction of a water treatment plant (WTP) and an elevated storage tank (tower) in the NE Zone with planned operation at the end of 2024. This development is contingent upon an operational system unless a modification of the Corcoran/Maple Grove water supply contract is executed. A 2021 feasibility study for raw water wells and pipes is also included in Appendix B.

For the purposes of this report, the main analysis was executed assuming the WTP and tower are operational, with the tower providing the hydraulic grade line (WTP pumps off). An additional worst-case scenario was evaluated in which both the Tower and WTP are offline, with the existing 16-inch interconnect with Maple Grove providing the hydraulic grade line.



3.2.1 Demands

The demands for the development were estimated using data from the developer-provided site plan. The site plan included numbers of residential units and commercial uses with proposed square footages. Average demands for residential uses were calculated based on the number of units and relative residential densities in accordance with previous Corcoran water studies. Demand estimates for commercial/institutional uses were based on occupied square footage and type of use. The calculated demand for each building shown on the concept site plan was assigned a model node.

The table below presents the average and maximum day demands calculated for each building and assigned to each node within the Hope Community Church Development. A factor of 3.0 was used to calculate maximum day demands from average day demands. Peak hour demands (not shown in the table) were calculated using a factor of 2.0 multiplied by maximum day demands.

| Building | Building Type | Avg Day Flow | Node | Avg Day Demand | Max Day Demand |
|----------|-------------------|--------------|-------|----------------|----------------|
| | | gal/day | | gal/day | gal/day |
| A | Multi-Fam Housing | 28,800 | J-264 | 37,400 | 112,200 |
| B | Retail | 1,600 | | | |
| C | Medical | 7,000 | | | |
| D | Medical | 5,800 | J-265 | 13,400 | 40,200 |
| E | Retail | 1,600 | | | |
| K | Church | 6,000 | | | |
| F | Multi-Fam Housing | 35,100 | J-263 | 81,900 | 245,700 |
| G | Senior Housing | 46,800 | | | |
| H | 55+ Housing | 27,300 | J-261 | 31,800 | 95,400 |
| I | Villas | 4,500 | | | |
| J | Row Homes | 12,400 | J-262 | 12,400 | 37,200 |

The total NE Zone system demands used for each scenario are shown below.

- Average Day – 0.32 MGD
- Maximum Day – 0.95 MGD
- Peak Hour – 1,321 gal/min

3.2.2 Scenario Descriptions

A map of the NE Zone pipe network that was used for this modeling work is shown on Figure 1 of Appendix B. The Hope Community Church Development area watermains are proposed to include 20-inch trunk main and 8-inch water mains. Scenario 1 evaluated predicted pressures and available fire flows within the NE Zone with the tower providing the hydraulic grade and the WTP pumps and connection to Maple Grove turned off. The assumed water levels in the tower were 5 ft below overflow for average day and 10 ft below overflow for maximum day and peak hour demand conditions.

Scenario 2 evaluated predicted pressures and available fire flow within the NE Zone with the 16-inch Maple Grove connection providing the hydraulic grade and the tower and WTP off. The assumed hydraulic grade at the Maple Grove interconnect was 1,093 ft for all demand conditions.



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For fire flow analyses, the industry standard minimum residual pressure of 20 psi was used. For residential areas, a target fire flow of 1,500 gpm is assumed. For commercial/industrial areas, a higher target fire flow of 3,000 gpm is typical. New commercial/industrial buildings may be sprinklered and, as such, most of these buildings will ultimately have a lower acceptable target. However, 3,000 gpm is deemed a reasonable overall target, and allows for some conservatism in this safety-driven parameter. These targets are only estimates for planning purposes and do not represent a rating for the site.

3.2.3 Scenario 1 - Tower On, Maple Grove Off

The results for this scenario for the nodes within the proposed Hope Community Church Development are shown in the table below. The full results for all nodes in the NE Zone with Tower On are shown in Appendix B Table 1. Additionally, the average day pressure results and maximum day available fire flow results for this scenario are mapped in Figures 2 and 3 of Appendix B, respectively.

| Node | Elevation (ft) | Average Day Demand (gpm) | Average Day Pressure (psi) | Max Day Fire Flow (Available) (gpm) |
|-------------|-----------------------|---------------------------------|-----------------------------------|--|
| J-261 | 946 | 22.1 | 68.8 | 2,562 |
| J-262 | 952 | 8.6 | 66.2 | 3,255 |
| J-263 | 950.3 | 56.8 | 66.9 | >5,000 |
| J-264 | 952 | 25.8 | 66.2 | >5,000 |
| J-265 | 952.2 | 9.2 | 66.1 | >5,000 |

As shown above, average day pressures are within the 60-70 psi range. Modeling also indicates that during the peak hour (of maximum day, a condition of rare occurrence), pressure in the development area fall by approximately 7-8 psi. This means the lowest expected pressure within the development is approximately 58.8 psi, which is above the recommended minimum of 35 psi.

The maximum available fire flows along the 20-inch trunk main are over 5,000 gpm. However, J-261, which would supply multistory senior housing and residential villas, is modeled at approximately 2,600 gpm available fire flow, above the 1,500 gpm target.

3.2.4 Scenario 2 - Maple Grove On, Tower Off

The results for this scenario for the nodes within the proposed Hope Community Church Development are shown in the table below. The full results for all nodes in the NE Zone with Maple Grove connection on are shown in Appendix B Table 2. Additionally, the average day pressure results and maximum day available fire flow results for this scenario are mapped in Figures 4 and 5 of Appendix B, respectively.

| Node | Elevation (ft) | Average Day Demand (gpm) | Average Day Pressure (psi) | Max Day Fire Flow (Available) (gpm) |
|-------------|-----------------------|---------------------------------|-----------------------------------|--|
| J-261 | 946 | 22.1 | 63.3 | 1,582 |
| J-262 | 952 | 8.6 | 60.7 | 1,732 |
| J-263 | 950.3 | 56.8 | 61.5 | 2,258 |
| J-264 | 952 | 25.8 | 60.7 | 2,233 |
| J-265 | 952.2 | 9.2 | 60.6 | 2,243 |



As shown above, average day pressures are within the 60-65 psi range. Modeling also indicates that during the peak hour (of maximum day, a condition of rare occurrence), pressures in the development area fall by approximately 7-8 psi. This means the lowest expected pressure within the development is approximately 53 psi, which is above the recommended minimum of 35 psi.

Under this scenario, all of the fire flows within the Hope Community Church Development nodes are below the 3,000-gpm target for commercial uses but exceed the 1,500-gpm target for residential areas.

3.3 Findings

The following mitigation measures are required for sewer and water:

Sewer

- Sewer trunk will need to be extended from the City's Water Treatment Plant site and installed at inverts consistent with the City's 2040 Sewer Comprehensive Plan and shall be responsibility of Developer. Onsite alignment is currently within development roads, and these will be finalized during Construction Plan approval process.
 - ROW and easement needs are based on pipe depth, for example ROW is a minimum of 60 feet for any internal streets with trunk sewer at 30 feet, and combination of ROW and larger easement will be coordinated with City for sewer depths greater than 30 feet.
- A lateral will be extended to north property border within Hunter's Ridge Road for future connection of the existing development.
- Stub will be installed to east boundary of property along CR 116 for future service for Node NE 6 as shown in City NE Sewer Comprehensive Plan.

Water

- This development is contingent upon an operational NE Corcoran treatment plant and tower, unless an amendment to the existing Maple Grove water agreement is obtained.
- Both the Tower and Maple Grove connection can provide average day pressure within an range of 60-70 psi at ground elevation. Supply from Maple Grove will result in slightly less pressure.
- Construction of the water tower shows that target fire flows of 3,000 gpm can be provided to the Hope Community Development Area.
- Extend a 20-inch trunk water main to the tower from the treatment plant and also south from the tower to the CR-30 ROW.



- Loop the west property boundary with 8-inch lateral from Oswald Farm Way to Hope Road for redundancy and water quality, depending on timing and phasing of development.
- A dedicated lot for a future municipal well should be shown to provide a well site consistent with City water supply needs.
- Provide 20 foot easement and install the raw water line along CR 116 for municipal water supply.
- Provide 20 foot easement along CR30 for future raw water supply from the west.

4.0 Water Resources

4.1 Regulatory Overview

Stormwater management regulations in the proposed project area would be guided or directed by Corcoran's Local Surface Water Management Plan (Local Plan) the City's Guidelines, Stormwater Pollution Prevention Plan (SWPPP) and MS4 requirements. Each of these documents has a larger regulatory context:

- The Local Plan reflects the goals, policies and rules of the Elm Creek Watershed Management Commission's Third Generation Watershed Management Plan (Commission's WMP).
- The SWPPP is a requirement of the City's stormwater permit, also known as the Municipal Separate Storm Sewer System (MS4) permit. The MS4 permit is issued by the Minnesota Pollution Control Agency (MPCA) which was reissued in October of 2021.
- Among other goals, both documents include plans to meet pollutant load reductions calculated in the Elm Creek Watershed Total Maximum Daily Load (TMDL) study. TMDL studies are required for surface waters that are designated as impaired – in other words, those that do not meet one or more State water quality standards.
- City guidelines lay out the required modeling parameters, preferred BMPs and some construction materials. City approval is required prior to application for the WMO approval process. Further City review occurs with construction plan approval process.

4.2 Watershed Setting and Land Use

Stormwater is manageable for the site and will be subject to City stormwater guidelines, wetland regulations and Elm Creek Watershed approval.



- Stormwater management for the concept plan is shown on the perimeter of the site with basins on the northwest, west, southeast and southwest. This site has high percentage of impervious and rate control will be accomplished in ponds and filtration basins.
 - Perimeter discharge locations will be reviewed for downstream conveyance capacity.
- The watershed reviews the abstraction and water quality components, along with rate control.
- No FEMA floodplain exists on site (see Figure C-1 in Appendix C) and for reference the nearest floodplain to the west is identified at a 915 elevation as compared to the onsite low area (wetland) at a 940 contour and the northeast low corner is a 935 elevation.
- The urban/rural fringe is challenging for drainage and the City reviews potential offsite drainage impacts for the additional volume associated with increased urbanization (impervious roads and rooftops). The City has required prior developments to study these impacts and also, when necessary, make offsite improvements. This same approach will be applied during the Hope Community approval process when stormwater management and grading plans are available.

4.3 Wetlands

Significant wetlands exist and the formal process will need to be followed and the EAW has a wetland review component. Corcoran is the LGU for the WCA process.

4.4 Roadway Drainage Improvements

- Development should provide treatment for required road improvements when feasible.

4.5 Findings

Stormwater is manageable for the site, although modifications will occur during the City and approval process.

- City stormwater guidelines will be utilized (see Appendix C) that cover modeling and drainage items. These guidelines will be updated with the 2023 Engineering Standards update prior to final plat approval.
- A City stormwater area charge may be in place prior to final plat.
- Modeling and grading plan will be reviewed with the preliminary plat process and strategies for mitigation of offsite volume or conveyance impacts will be determined.
- Hope Development will be required to provide on site stormwater management for offsite road improvements, where feasible.
- Drantile information shall be provided with existing conditions analysis of the site.



5.0 Financing

5.1 Summary

Financing options of the development necessary for infrastructure and to mitigate impacts typically follow the approach of:

- On-site infrastructure is managed by the developer.
- Stormwater fee may be implemented by City prior to final plat.
- All trunk fees (TLAC) and potential stormwater area charge will be due at the time of final plat.
- Off-site projects are typically managed by the by City (engineering, bidding and construction management) through an escrow.

The details of area fees, credits, and infrastructure financial commitments will be identified in the Developer Agreement, which is updated with each phase of the development



6.0 Conclusions and Recommendations

The following infrastructure improvements are feasible and necessary to manage the development. These improvements are consistent with similar requirements for other developments in Corcoran, and have shown to be necessary for managing the additional population:

Transportation

- CSAH 30/CR 116
 - Construct dedicated westbound right lane 300 feet in length.
- CR 116/Hunters Ridge/Oswald Farm
 - Previously programmed northbound and southbound left and right turn lane improvements will provide access at intersection.
 - Widen eastbound Oswald Farm and widen westbound Hunters Ridge to provide a 200 foot left turn lane and through / right lane.
- New CSAH 30 access
 - Construct a 300-foot eastbound left turn and westbound right turn lanes on CSAH 30. Construct southbound approach with 200-foot left turn and right turn lanes.

County will review their system as a responsibility of permitting the improvements and review during the EAW process to ensure the County system is adequate to handle increased volumes and patterns.

Sewer

- Sewer trunk will need to be extended from the City's Water Treatment Plant site and installed at inverts consistent with the City's 2040 Sewer Comprehensive Plan and shall be responsibility of Developer. Onsite alignment is currently within development roads, and these will be finalized during Construction Plan approval process.
 - ROW and easement needs are based on pipe depth, for example ROW is a minimum of 60 feet for any internal streets with trunk sewer at 30 feet, and combination of ROW and larger easement will be coordinated with City for sewer depths greater than 30 feet.
- A lateral will be extended to north property border within Hunter's Ridge Road for future connection of the existing development.
- Stub will be installed to east boundary of property along CR 116 for future service for Node NE 6 as shown in City NE Sewer Comprehensive Plan.



Water

- This development is contingent upon an operational NE Corcoran treatment plant and tower, unless an amendment to the existing Maple Grove water agreement is obtained.
- Both the Tower and Maple Grove connection can provide average day pressure in Hope Community Church's proposed 20-inch and 8-inch water main within an ideal range of 60-70 psi. Supply from Maple Grove will result in slightly less pressure.
- Construction of the water tower shows that target fire flows of 3,000 gpm can be provided to the Hope Community Church Development Area.
- Extend a 20-inch trunk water main to the tower from the treatment plant and also south from the tower to the CR-30 Right of Way.
- Loop the west property boundary with 8-inch lateral from Oswald Farm Way to Hope Road for redundancy and water quality, depending on timing and phasing of development.
- A dedicated lot for a future municipal well should be shown to provide a well site consistent with City water supply needs.
- Provide 20-foot easement and install the raw water line along CR 116 for municipal water supply.
- Provide 20-foot easement along CR30 for future raw water supply from the west.

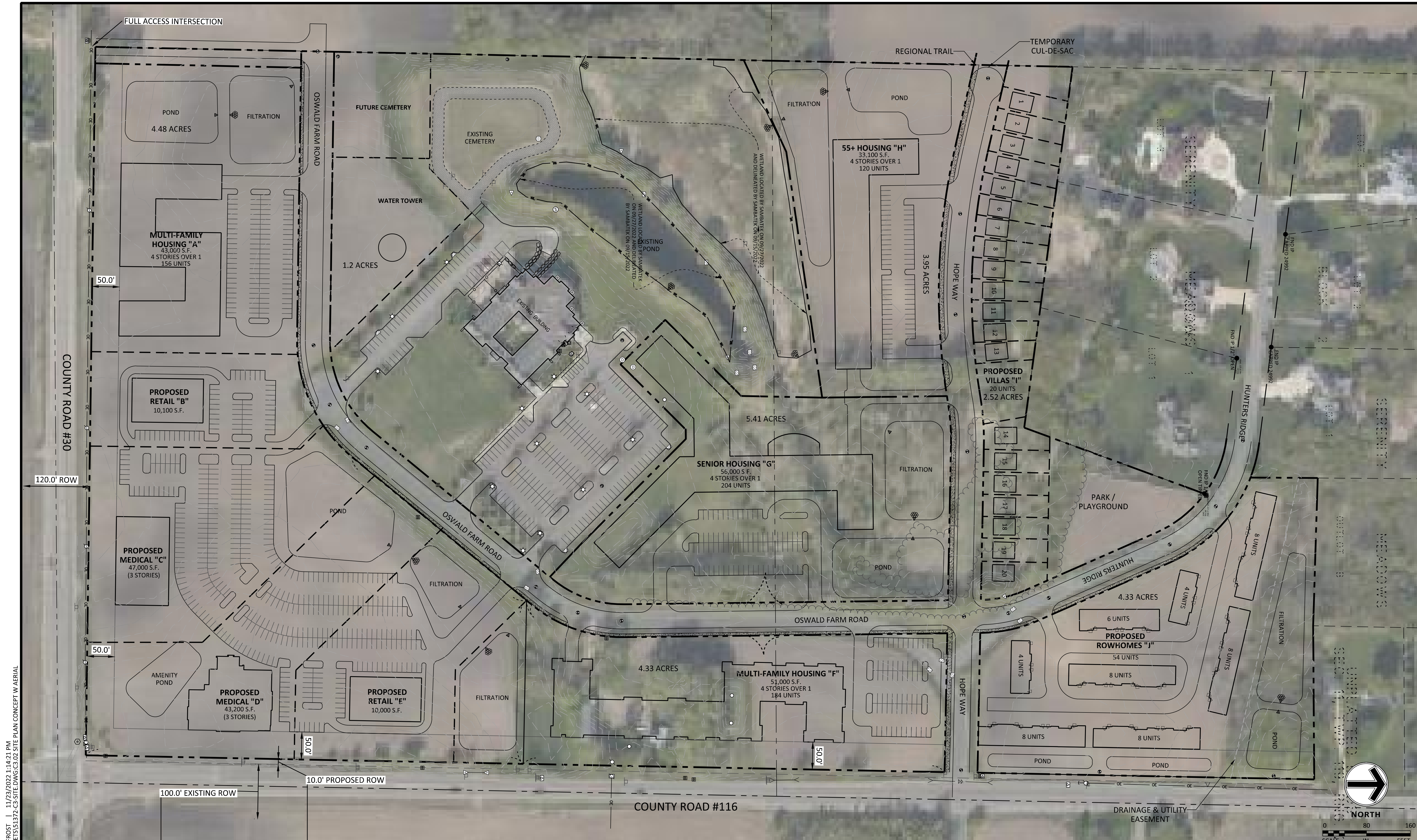
Water Resources

- City stormwater guidelines will be utilized (see Appendix C) that cover modeling and drainage items. These guidelines will be updated with the 2023 Engineering Standards update prior to final plat approval.
- A City stormwater area charge may be in place prior to final plat.
- Modeling and grading plan will be reviewed with the preliminary plat process and strategies for mitigation of offsite volume or conveyance impacts will be determined.
- Hope Development will be required to provide on-site stormwater management for offsite road improvements, where feasible.
- Drainage information shall be provided with existing conditions analysis of the site.



FIGURE

Site Plan



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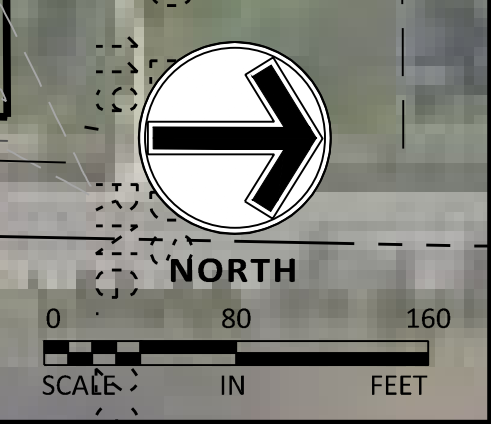
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.
 Print Name: _____
 Date _____ License # _____

| | |
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| PRELIMINARY | DRAWN BY |
| DESIGN REVIEW | DESIGNED BY |
| PERMIT SUBMITTAL | CHECKED BY |
| CONSTRUCTION DOCUMENTS | PROJECT NO. |


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APPENDIX A

Sewer Comprehensive Plan System

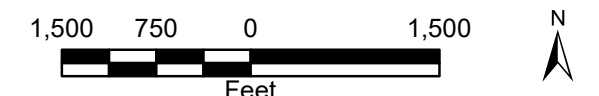


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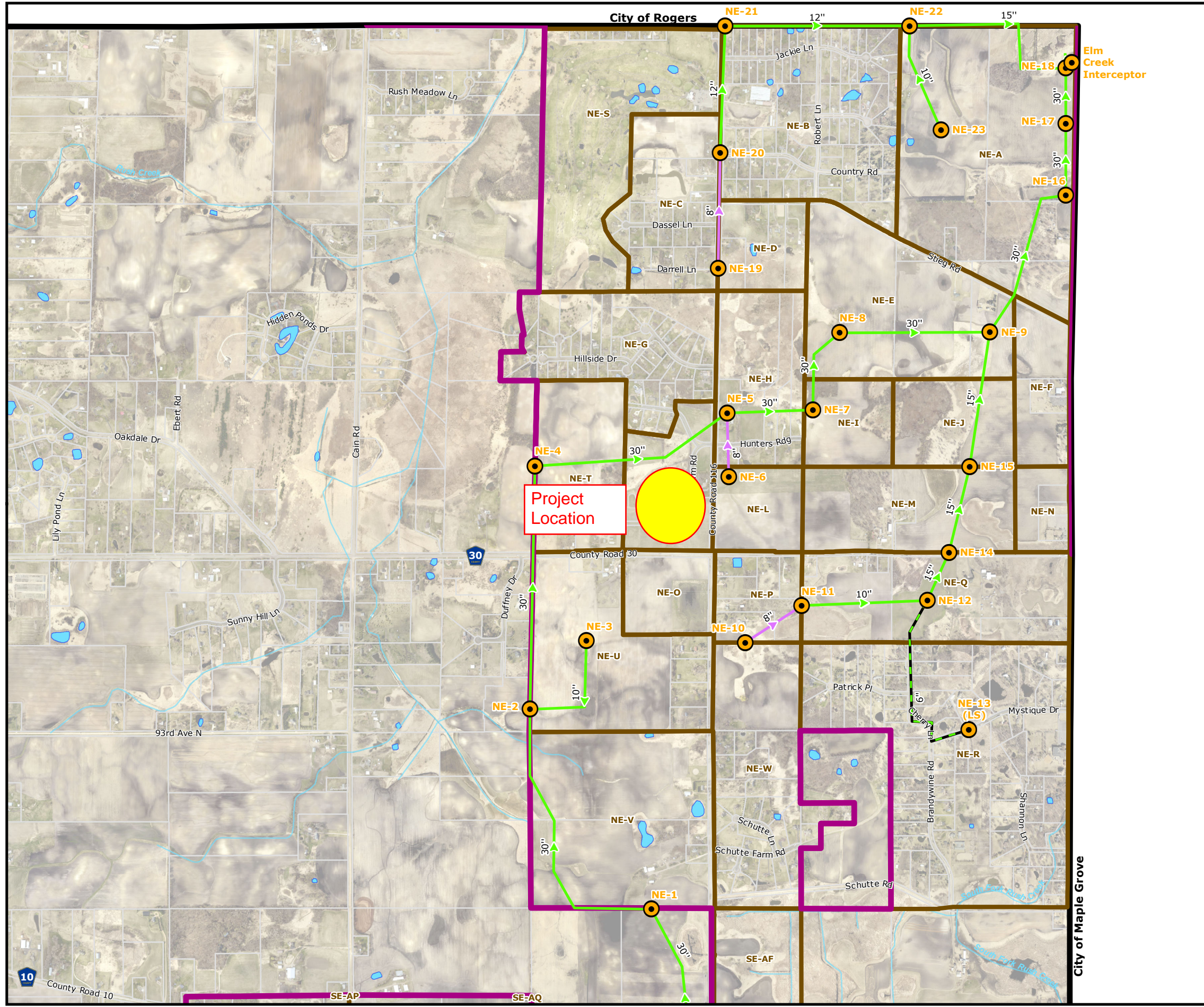
2040 COMPREHENSIVE PLAN

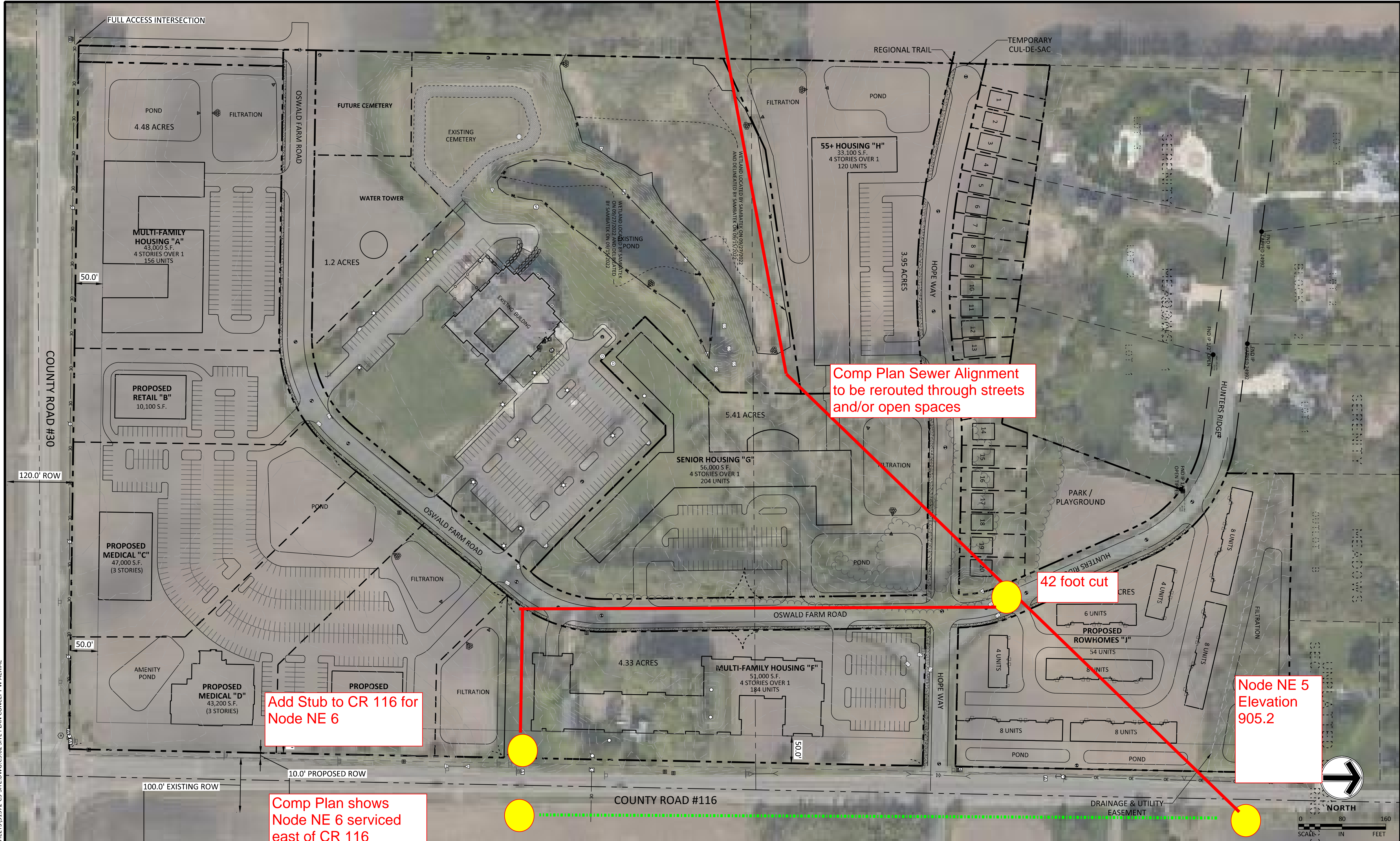
Map 7-2 Proposed Trunk Sanitary Sewer System - NE District

- Proposed Gravity
- Proposed Gravity (Lateral)
- Proposed Forcemain
- Sewer Nodes (LS) = Lift Station
- Sewer Subdistricts
- Municipal Boundary
- 2040 MUSA
- Parcel Boundaries
- Streams
- Lake/Open Water



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| | | | | | |

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

| | |
|------------------------|-------------|
| PRELIMINARY | DRAWN BY |
| DESIGN REVIEW | DESIGNED BY |
| PERMIT SUBMITTAL | CHECKED BY |
| CONSTRUCTION DOCUMENTS | PROJECT NO. |


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Trunk Inverts from Comprehensive Plan

APPENDIX A - ULTIMATE TRUNK SYSTEM DESIGN

| From Point | To Point | Design Flow (mgd) | Existing/Proposed | Pipe Size (in) | Pipe Material | Length (ft) | Upstream | | | Average Slope (%) | Downstream Elev (ft) | Capacity | | | | | Capacity to Design Flow Ratio |
|--------------------|----------|-------------------|-------------------|----------------|---------------|-------------|---------------|------------------|--------------------|-------------------|----------------------|---------------|------|----------------|------|-----------------------|-------------------------------|
| | | | | | | | Rim Elev (ft) | Invert Elev (ft) | Manhole Depth (ft) | | | Inlet Control | | Outlet Control | | Actual Capacity (mgd) | |
| NE DISTRICT | | | | | | | | | | | | | | | | | |
| NE-1 | NE-2 | 4.70 | Prop. | 30 | PVC | 4400 | 938 | 914.7 | 23 | 0.08 | 911.1 | 23.3 | 15.1 | 11.6 | 7.52 | 7.52 | 1.6 |
| NE-3 | NE-2 | 0.72 | Prop. | 10 | PVC | 2000 | 950 | 921.1 | 29 | 0.50 | 911.1 | 1.7 | 1.1 | 1.55 | 1.00 | 1.00 | 1.4 |
| NE-2 | NE-4 | 5.25 | Prop. | 30 | PVC | 4200 | 939 | 911.1 | 28 | 0.08 | 907.8 | 23.3 | 15.1 | 11.6 | 7.52 | 7.52 | 1.4 |
| NE-4 | NE-5 | 5.33 | Prop. | 30 | PVC | 3200 | 930 | 907.8 | 22 | 0.08 | 905.2 | 23.3 | 15.1 | 11.6 | 7.52 | 7.52 | 1.4 |
| NE-6 | NE-5 | 0.15 | Prop. | 8 | PVC | 1000 | 950 | 920.2 | 30 | 1.50 | 905.2 | 1.4 | 0.9 | 1.48 | 0.96 | 0.90 | 5.9 |
| NE-5 | NE-7 | 5.64 | Prop. | 30 | PVC | 1300 | 937 | 905.2 | 32 | 0.08 | 904.2 | 23.3 | 15.1 | 11.6 | 7.52 | 7.52 | 1.3 |
| NE-7 | NE-8 | 5.64 | Prop. | 30 | PVC | 1300 | 920 | 904.2 | 16 | 0.08 | 903.1 | 23.3 | 15.1 | 11.6 | 7.52 | 7.52 | 1.3 |
| NE-8 | NE-9 | 5.88 | Prop. | 30 | PVC | 3000 | 925 | 903.1 | 22 | 0.08 | 900.7 | 23.3 | 15.1 | 11.6 | 7.52 | 7.52 | 1.3 |
| NE-10 | NE-11 | 0.22 | Prop. | 8 | PVC | 1500 | 953 | 929.7 | 23 | 0.40 | 923.7 | 1.4 | 0.9 | 0.8 | 0.50 | 0.50 | 2.2 |
| NE-11 | NE-12 | 0.42 | Prop. | 10 | PVC | 2200 | 952 | 923.7 | 28 | 0.28 | 917.5 | 1.7 | 1.1 | 1.2 | 0.75 | 0.75 | 1.8 |
| NE-13 (LS) | NE-12 | 0.21 | Prop. FM | 6 | HDPE | 3000 | 936 | (905 LS) | (31 LS) | --- | 917.5 | --- | --- | --- | --- | 0.6 | 2.9 |
| NE-12 | NE-14 | 1.05 | Prop. | 15 | PVC | 1500 | 946 | 917.5 | 29 | 0.15 | 915.2 | 4.1 | 2.6 | 2.5 | 1.62 | 1.62 | 1.5 |
| NE-14 | NE-15 | 1.41 | Prop. | 15 | PVC | 1400 | 950 | 915.2 | 35 | 0.25 | 911.7 | 4.1 | 2.6 | 3.2 | 2.09 | 2.09 | 1.5 |
| NE-15 | NE-9 | 1.71 | Prop. | 15 | PVC | 2400 | 945 | 911.7 | 33 | 0.25 | 905.7 | 4.1 | 2.6 | 3.2 | 2.09 | 2.09 | 1.2 |
| NE-9 | NE-16 | 6.99 | Prop. | 30 | PVC | 2600 | 937 | 900.7 | 36 | 0.10 | 898.1 | 23.3 | 15.1 | 13.0 | 8.41 | 8.41 | 1.2 |
| NE-16 | NE-17 | 6.99 | Prop. | 30 | PVC | 1200 | 938 | 898.1 | 40 | 0.10 | 896.9 | 23.3 | 15.1 | 13.0 | 8.41 | 8.41 | 1.2 |
| NE-17 | NE-18 | 6.99 | Prop. | 30 | PVC | 800 | 933 | 896.9 | 36 | 1.00 | 888.9 | 23.3 | 15.1 | 41.1 | 26.6 | 15.1 | 2.2 |
| NE-19 | NE-20 | 0.12 | Prop. | 8 | PVC | 1800 | 919 | 912.4 | 7 | 0.40 | 905.2 | 1.4 | 0.9 | 0.77 | 0.50 | 0.50 | 4.1 |
| NE-20 | NE-21 | 0.68 | Prop. | 12 | PVC | 2000 | 931 | 905.2 | 26 | 0.22 | 900.8 | 2.2 | 1.4 | 1.68 | 1.08 | 1.08 | 1.6 |
| NE-21 | NE-22 | 0.68 | Prop. | 12 | PVC | 2800 | 925 | 900.8 | 24 | 0.22 | 894.6 | 2.2 | 1.4 | 1.68 | 1.08 | 1.08 | 1.6 |
| NE-23 | NE-22 | 0.71 | Prop. | 10 | PVC | 1500 | 928 | 907.1 | 21 | 0.50 | 899.6 | 1.7 | 1.1 | 1.6 | 1.00 | 1.00 | 1.4 |
| NE-22 | NE-18 | 1.30 | Prop. | 15 | PVC | 3200 | 918 | 894.6 | 23 | 0.15 | 889.8 | 4.1 | 2.6 | 2.51 | 1.62 | 1.62 | 1.2 |
| NE-18 | ECL | 7.67 | Ex. | 27 | PVC | 25 | 910 | 888.9 | 21 | 0.18 | 888.9 | 17.7 | 11.4 | 13.2 | 8.52 | 8.52 | 1.1 |

APPENDIX A - ULTIMATE TRUNK SYSTEM DESIGN

| From Point | To Point | Design Flow (mgd) | Existing/Proposed | Pipe Size (in) | Pipe Material | Length (ft) | Upstream | | | Average Slope (%) | Downstream Elev (ft) | Capacity | | | | | Capacity to Design Flow Ratio |
|--------------------|-------------------|-------------------|-------------------|----------------|---------------|-------------|---------------|------------------|--------------------|-------------------|----------------------|---------------|------|----------------|------|-----------------------|-------------------------------|
| | | | | | | | Rim Elev (ft) | Invert Elev (ft) | Manhole Depth (ft) | | | Inlet Control | | Outlet Control | | Actual Capacity (mgd) | |
| SE DISTRICT | | | | | | | | | | | | | | | | | |
| SE-A | M.G. ¹ | 0.02 | Ex. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SE-36 (LS) | SE-37 | 0.72 | Prop. FM | 8 | HDPE | 8000 | 972 | (940 LS) | (32 LS) | --- | 964.6 | --- | --- | --- | --- | 1.1 | 1.5 |
| SE-37 | SE-1 | 0.72 | Prop. | 12 | PVC | 2000 | 980 | 964.6 | 15 | 0.22 | 960.2 | 2.2 | 1.4 | 1.7 | 1.08 | 1.08 | 1.5 |
| SE-1 | SE-2 | 1.14 | Prop. | 15 | PVC | 3500 | 985 | 960.2 | 25 | 0.30 | 949.7 | 4.1 | 2.6 | 3.5 | 2.29 | 2.29 | 2.0 |
| SE-2 | SE-3 | 1.24 | Prop. | 15 | PVC | 1800 | 980 | 949.7 | 30 | 0.25 | 945.2 | 4.1 | 2.6 | 3.2 | 2.09 | 2.09 | 1.7 |
| SE-3 | SE-4 | 1.28 | Prop. | 15 | PVC | 1800 | 968 | 945.2 | 23 | 0.15 | 942.5 | 4.1 | 2.6 | 2.5 | 1.62 | 1.62 | 1.3 |
| SE-4 | SE-5 | 1.48 | Prop. | 18 | PVC | 2000 | 970 | 942.5 | 28 | 0.15 | 939.5 | 6.2 | 4.0 | 4.1 | 2.64 | 2.64 | 1.8 |
| SE-6 | SE-5 | 0.11 | Prop. | 8 | PVC | 800 | 962 | 945.5 | 17 | 0.75 | 939.5 | 1.4 | 0.9 | 1.0 | 0.68 | 0.68 | 6.2 |
| SE-5 | SE-7 | 1.58 | Prop. | 18 | PVC | 2000 | 960 | 939.5 | 21 | 0.12 | 937.1 | 6.2 | 4.0 | 3.6 | 2.36 | 2.36 | 1.5 |
| SE-8 | SE-9 | 0.63 | Prop. | 10 | PVC | 3600 | 980 | 954.2 | 26 | 0.28 | 944.1 | 1.7 | 1.1 | 1.2 | 0.75 | 0.75 | 1.2 |
| SE-9 | SE-7 | 0.63 | Prop. | 12 | PVC | 3200 | 964 | 944.1 | 20 | 0.22 | 937.1 | 2.2 | 1.4 | 1.7 | 1.08 | 1.08 | 1.7 |
| SE-7 | SE-10 | 2.23 | Ex. | 18 | PVC | 685 | 958 | 937.1 | 21 | 0.19 | 935.8 | 6.2 | 4.0 | 4.6 | 2.97 | 2.97 | 1.3 |
| SE-10 | SE-11 | 2.23 | Prop. | 18 | PVC | 1000 | 966 | 935.8 | 30 | 0.44 | 931.4 | 6.2 | 4.0 | 7.0 | 4.52 | 4.00 | 1.8 |
| SE-11 | SE-12 | 2.56 | Prop. | 18 | PVC | 2200 | 946 | 931.4 | 15 | 0.20 | 927.0 | 6.2 | 4.0 | 4.7 | 3.04 | 3.04 | 1.2 |
| SE-13 | SE-14 | 0.43 | Prop. | 10 | PVC | 1500 | 960 | 939.7 | 20 | 0.28 | 935.5 | 1.7 | 1.1 | 1.2 | 0.75 | 0.75 | 1.7 |
| SE-14 | SE-15 | 1.41 | Prop. | 15 | PVC | 2500 | 950 | 935.5 | 14 | 0.15 | 931.8 | 4.1 | 2.6 | 2.5 | 1.62 | 1.62 | 1.2 |
| SE-15 | SE-12 | 1.65 | Prop. | 18 | PVC | 4000 | 944 | 931.8 | 12 | 0.12 | 927.0 | 6.2 | 4.0 | 3.6 | 2.36 | 2.36 | 1.4 |
| SE-16 | SE-17 | 0.10 | Prop. | 8 | PVC | 1400 | 948 | 937.6 | 10 | 0.40 | 932.0 | 1.4 | 0.9 | 0.8 | 0.50 | 0.50 | 4.7 |
| SE-17 | SE-12 | 0.40 | Prop. | 10 | PVC | 1800 | 940 | 932.0 | 8 | 0.28 | 927.0 | 1.7 | 1.1 | 1.2 | 0.75 | 0.75 | 1.9 |
| SE-12 | SE-18 | 4.35 | Prop. | 30 | PVC | 3000 | 941 | 927.0 | 14 | 0.08 | 917.2 | 23.3 | 15.1 | 11.6 | 7.52 | 7.52 | 1.7 |
| SE-18 | NE-1 | 4.37 | Prop. | 30 | PVC | 3200 | 940 | 917.2 | 23 | 0.08 | 914.7 | 23.3 | 15.1 | 11.6 | 7.52 | 7.52 | 1.7 |
| SE-19 | SE-20 | 0.27 | Prop. | 8 | PVC | 3000 | 1000 | 975.0 | 25 | 0.45 | 961.5 | 1.4 | 0.9 | 0.8 | 0.53 | 0.53 | 2.0 |
| SE-21 | SE-20 | 0.69 | Prop. | 12 | PVC | 1200 | 988 | 964.1 | 24 | 0.22 | 961.5 | 2.2 | 1.4 | 1.7 | 1.08 | 1.08 | 1.6 |
| SE-20 | SE-22 | 0.90 | Prop. | 12 | PVC | 3000 | 994 | 961.5 | 33 | 0.40 | 949.5 | 2.2 | 1.4 | 2.3 | 1.46 | 1.40 | 1.6 |
| SE-23 | SE-22 | 0.96 | Ex. | 15 | PVC | 2550 | 966 | 958.5 | 8 | 0.35 | 949.5 | 4.1 | 2.6 | 3.8 | 2.49 | 2.49 | 2.6 |
| SE-22 | SE-24 | 1.71 | Ex. | 15 | PVC | 1700 | 974 | 949.5 | 25 | 0.42 | 942.4 | 4.1 | 2.6 | 4.2 | 2.71 | 2.60 | 1.5 |
| SE-24 | MICES LS | 2.20 | Ex. | 15 | PVC | 2550 | 970 | 942.4 | 28 | 0.44 | 931.2 | 4.1 | 2.6 | 4.3 | 2.77 | 2.60 | 1.2 |

APPENDIX B

NE Water System

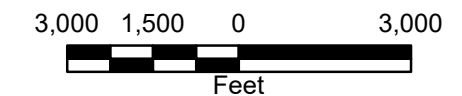


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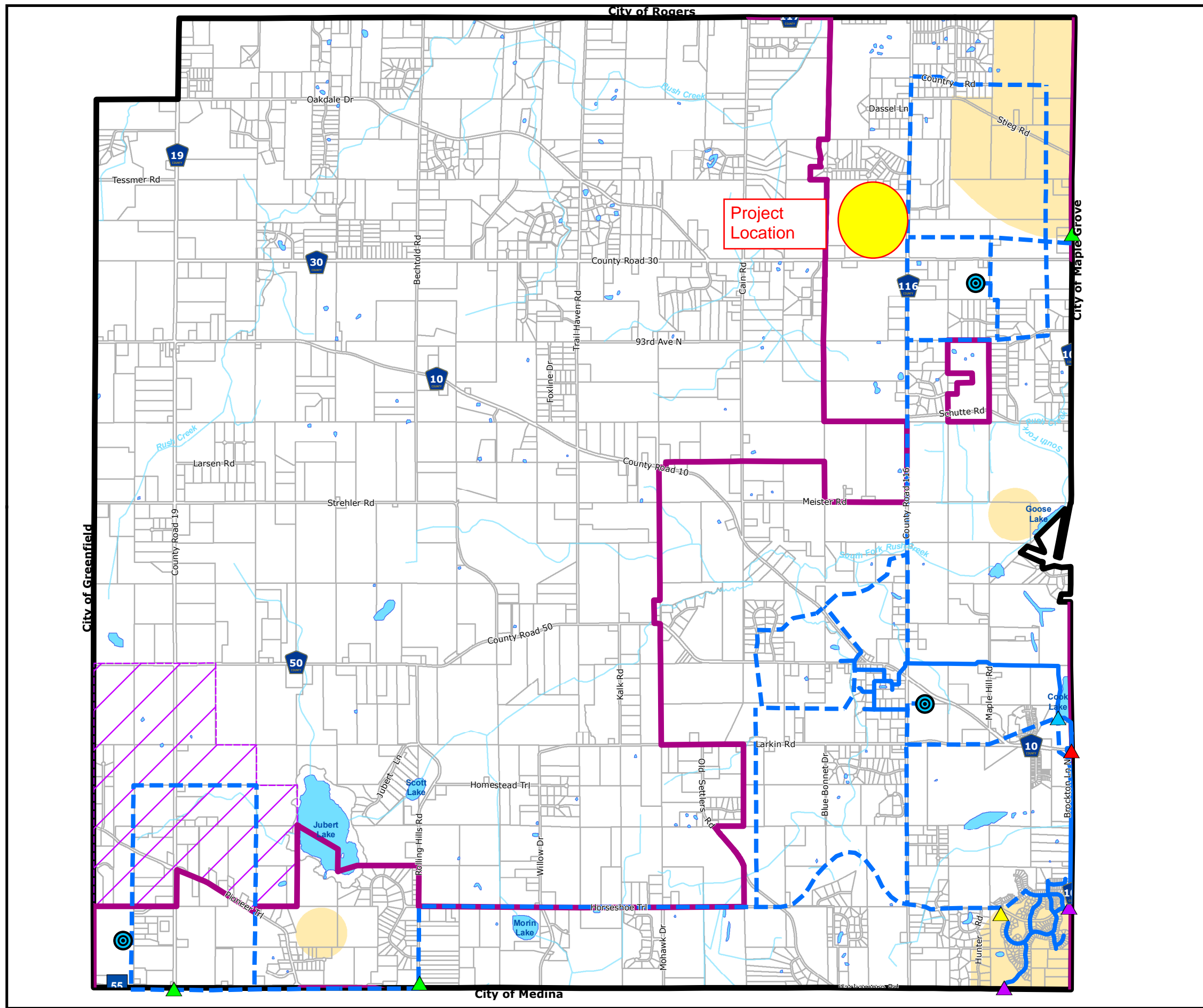
2040 COMPREHENSIVE PLAN

Map 9-2 Trunk Water System

- Existing Watermain
- Proposed Watermain
- Potential Water Tower Locations
- Existing Supply Connection with Neighboring Communities
- Proposed Supply Connection with Neighboring Communities
- Emergency Connection with Neighboring Communities (Normally Closed)
- Potential Water Storage
- Potential Booster Station
- Potential Future Well Exploration Areas
- Municipal Boundary
- 2040 MUSA
- Future MUSA Expansion Area
- Parcel Boundaries
- Streams
- Lake/Open Water



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Water Modeling Results

Table 1
Water Model Results
Scenario 1 - Tower On, Maple Grove Off

| Node Label | Elevation (ft) | Average Day Demand | | | Maximum Day Demand | | | | Peak Hour Demand | | |
|-------------|----------------|--------------------|-----------------|----------------|--------------------|----------------------|----------------|-----------------------------|------------------|----------------------|----------------|
| | | Demand (gpm) | Hydraulic Grade | Pressure (psi) | Demand (gpm) | Hydraulic Grade (ft) | Pressure (psi) | Fire Flow (Available) (gpm) | Demand (gpm) | Hydraulic Grade (ft) | Pressure (psi) |
| Maple Grove | 942 | 0 | 1,105 | 70.5 | 0 | 1,100 | 68.2 | 3,073 | 0 | 1,099 | 67.7 |
| J-95 | 943 | 3.6 | 1,105 | 70.1 | 10.8 | 1,100 | 67.7 | 3,175 | 21.6 | 1,099 | 67.3 |
| J-96 | 945 | 1.6 | 1,105 | 69.2 | 4.8 | 1,100 | 66.9 | 4,251 | 9.6 | 1,099 | 66.4 |
| J-100 | 941 | 0 | 1,105 | 70.9 | 0 | 1,100 | 68.6 | 4,791 | 0 | 1,099 | 68.2 |
| J-101 | 947 | 0 | 1,105 | 68.3 | 0 | 1,100 | 66.1 | 5,000 | 0 | 1,099 | 65.8 |
| J-102 | 953 | 4.8 | 1,105 | 65.7 | 14.4 | 1,100 | 63.5 | 5,000 | 28.8 | 1,099 | 63.2 |
| J-94 | 952 | 3.4 | 1,105 | 66.2 | 10.2 | 1,100 | 63.9 | 3,073 | 20.4 | 1,099 | 63.4 |
| J-103 | 946 | 1.4 | 1,105 | 68.8 | 4.2 | 1,100 | 66.5 | 3,175 | 8.4 | 1,099 | 66 |
| J-158 | 943 | 4.2 | 1,105 | 70.1 | 12.6 | 1,100 | 67.8 | 5,000 | 25.2 | 1,099 | 67.5 |
| J-182 | 930 | 0 | 1,105 | 75.7 | 0 | 1,100 | 73.5 | 5,000 | 0 | 1,099 | 73.3 |
| J-183 | 940 | 0 | 1,105 | 71.4 | 0 | 1,100 | 69.2 | 5,000 | 0 | 1,099 | 69 |
| J-185 | 941 | 3.4 | 1,105 | 70.9 | 10.2 | 1,100 | 68.7 | 5,000 | 20.4 | 1,099 | 68.3 |
| J-186 | 927 | 3 | 1,105 | 77 | 9 | 1,100 | 74.7 | 5,000 | 18 | 1,099 | 74.4 |
| J-187 | 926 | 0 | 1,105 | 77.4 | 0 | 1,100 | 75.1 | 5,000 | 0 | 1,099 | 74.7 |
| J-188 | 940 | 0 | 1,105 | 71.4 | 0 | 1,100 | 69.1 | 4,924 | 0 | 1,099 | 68.7 |
| J-189 | 946 | 4.2 | 1,105 | 68.8 | 12.6 | 1,100 | 66.5 | 4,208 | 25.2 | 1,099 | 66 |
| J-190 | 944 | 2.8 | 1,105 | 69.6 | 8.4 | 1,100 | 67.3 | 4,970 | 16.8 | 1,099 | 66.9 |
| J-191 | 947 | 5.2 | 1,105 | 68.3 | 15.6 | 1,100 | 66 | 4,375 | 31.2 | 1,099 | 65.6 |
| J-192 | 946 | 3.2 | 1,105 | 68.8 | 9.6 | 1,100 | 66.5 | 4,701 | 19.2 | 1,099 | 66 |
| J-245 | 945 | 4.2 | 1,105 | 69.2 | 12.6 | 1,100 | 66.9 | 2,178 | 25.2 | 1,099 | 66.4 |
| J-246 | 938 | 0 | 1,105 | 72.2 | 0 | 1,100 | 69.9 | 1,772 | 0 | 1,099 | 69.5 |
| J-247 | 942 | 1.8 | 1,105 | 70.5 | 5.4 | 1,100 | 68.2 | 3,336 | 10.8 | 1,099 | 67.7 |
| J-248 | 950 | 3.2 | 1,105 | 67 | 9.6 | 1,100 | 64.7 | 3,097 | 19.2 | 1,099 | 64.3 |
| J-249 | 945.5 | 2.2 | 1,105 | 69 | 6.6 | 1,100 | 66.7 | 3,472 | 13.2 | 1,099 | 66.2 |
| J-254 | 950 | 0 | 1,105 | 67.1 | 0 | 1,100 | 64.8 | 5,000 | 0 | 1,100 | 64.7 |
| J-261 | 946 | 22.1 | 1,105 | 68.8 | 66.2 | 1,100 | 66.5 | 2,562 | 132.4 | 1,099 | 66.2 |
| J-262 | 952 | 8.6 | 1,105 | 66.2 | 25.8 | 1,100 | 64 | 3,255 | 51.6 | 1,099 | 63.8 |
| J-263 | 950.3 | 56.8 | 1,105 | 66.9 | 170.4 | 1,100 | 64.7 | 5,000 | 340.8 | 1,100 | 64.6 |
| J-264 | 952 | 25.8 | 1,105 | 66.2 | 77.5 | 1,100 | 64 | 5,000 | 155.1 | 1,100 | 64 |
| J-265 | 952.2 | 9.2 | 1,105 | 66.1 | 27.6 | 1,100 | 63.9 | 5,000 | 51.6 | 1,100 | 63.8 |
| J-267 | 953 | 0 | 1,105 | 65.8 | 0 | 1,100 | 63.6 | 5,000 | 0 | 1,100 | 63.6 |
| J-271 | 943 | 5 | 1,105 | 70.1 | 15 | 1,100 | 67.8 | 3,825 | 30 | 1,099 | 67.3 |
| J-272 | 943 | 4.4 | 1,105 | 70.1 | 13.2 | 1,100 | 67.8 | 3,963 | 26.4 | 1,099 | 67.3 |
| J-273 | 944 | 3.8 | 1,105 | 69.6 | 11.4 | 1,100 | 67.3 | 4,106 | 22.8 | 1,099 | 66.9 |
| J-274 | 945 | 3 | 1,105 | 69.2 | 9 | 1,100 | 66.9 | 5,000 | 18 | 1,099 | 66.5 |
| J-275 | 946 | 3.8 | 1,105 | 68.8 | 11.4 | 1,100 | 66.5 | 4,658 | 22.8 | 1,099 | 66.1 |
| J-276 | 942 | 0 | 1,105 | 70.5 | 0 | 1,100 | 68.2 | 4,783 | 0 | 1,099 | 67.8 |
| J-277 | 944 | 2.2 | 1,105 | 69.6 | 6.6 | 1,100 | 67.3 | 2,979 | 13.2 | 1,099 | 66.9 |
| J-278 | 943 | 0 | 1,105 | 70.1 | 0 | 1,100 | 67.8 | 4,324 | 0 | 1,099 | 67.4 |
| J-279 | 947 | 2 | 1,105 | 68.3 | 6 | 1,100 | 66 | 3,191 | 12 | 1,099 | 65.7 |
| J-280 | 940 | 0 | 1,105 | 71.4 | 0 | 1,100 | 69.1 | 4,473 | 0 | 1,099 | 68.7 |
| J-281 | 945 | 3.6 | 1,105 | 69.2 | 10.8 | 1,100 | 66.9 | 5,000 | 21.6 | 1,099 | 66.6 |
| J-282 | 935 | 2.6 | 1,105 | 73.5 | 7.8 | 1,100 | 71.3 | 3,342 | 15.6 | 1,099 | 71 |
| J-283 | 932 | 0 | 1,105 | 74.8 | 0 | 1,100 | 72.5 | 5,000 | 0 | 1,099 | 72.2 |
| J-284 | 938 | 5 | 1,105 | 72.2 | 15 | 1,100 | 69.9 | 4,497 | 30 | 1,099 | 69.5 |
| J-285 | 944 | 4.6 | 1,105 | 69.6 | 13.8 | 1,100 | 67.4 | 5,000 | 27.6 | 1,099 | 67.1 |
| J-286 | 953 | 3.2 | 1,105 | 65.7 | 9.6 | 1,100 | 63.5 | 5,000 | 19.2 | 1,099 | 63.2 |
| J-287 | 950 | 2.8 | 1,105 | 67 | 8.4 | 1,100 | 64.8 | 2,731 | 16.8 | 1,099 | 64.5 |

Table 2
Water Model Results
Scenario 2 - Tower Off, Maple Grove On

| Node Label | Elevation (ft) | Average Day Demand | | | Maximum Day Demand | | | | Peak Hour Demand | | |
|-------------|----------------|--------------------|----------------------|----------------|--------------------|----------------------|----------------|-----------------------------|------------------|----------------------|----------------|
| | | Demand (gpm) | Hydraulic Grade (ft) | Pressure (psi) | Demand (gpm) | Hydraulic Grade (ft) | Pressure (psi) | Fire Flow (Available) (gpm) | Demand (gpm) | Hydraulic Grade (ft) | Pressure (psi) |
| Maple Grove | 942 | 0 | 1,093 | 65.3 | 0 | 1,092 | 65 | 5,000 | 0 | 1,090 | 64.2 |
| J-95 | 943 | 3.6 | 1,093 | 64.8 | 10.8 | 1,092 | 64.3 | 5,000 | 21.6 | 1,088 | 62.8 |
| J-96 | 945 | 1.6 | 1,093 | 63.8 | 4.8 | 1,090 | 62.6 | 3,190 | 9.6 | 1,081 | 59 |
| J-100 | 941 | 0 | 1,093 | 65.5 | 0 | 1,089 | 64.1 | 2,775 | 0 | 1,079 | 59.9 |
| J-101 | 947 | 0 | 1,092 | 62.9 | 0 | 1,088 | 61.1 | 2,382 | 0 | 1,076 | 55.8 |
| J-102 | 953 | 4.8 | 1,092 | 60.3 | 14.4 | 1,088 | 58.5 | 2,342 | 28.8 | 1,076 | 53.2 |
| J-94 | 952 | 3.4 | 1,093 | 60.9 | 10.2 | 1,092 | 60.6 | 5,000 | 20.4 | 1,089 | 59.4 |
| J-103 | 946 | 1.4 | 1,093 | 63.5 | 4.2 | 1,092 | 63 | 5,000 | 8.4 | 1,088 | 61.5 |
| J-158 | 943 | 4.2 | 1,092 | 64.6 | 12.6 | 1,088 | 62.8 | 2,292 | 25.2 | 1,076 | 57.5 |
| J-182 | 930 | 0 | 1,092 | 70.2 | 0 | 1,088 | 68.4 | 2,281 | 0 | 1,075 | 62.9 |
| J-183 | 940 | 0 | 1,092 | 65.9 | 0 | 1,088 | 64.1 | 2,274 | 0 | 1,075 | 58.6 |
| J-185 | 941 | 3.4 | 1,092 | 65.5 | 10.2 | 1,088 | 63.8 | 2,445 | 20.4 | 1,076 | 58.6 |
| J-186 | 927 | 3 | 1,092 | 71.6 | 9 | 1,089 | 69.9 | 2,521 | 18 | 1,077 | 64.9 |
| J-187 | 926 | 0 | 1,092 | 72 | 0 | 1,089 | 70.5 | 2,650 | 0 | 1,078 | 65.9 |
| J-188 | 940 | 0 | 1,092 | 66 | 0 | 1,089 | 64.5 | 2,731 | 0 | 1,079 | 60.2 |
| J-189 | 946 | 4.2 | 1,093 | 63.4 | 12.6 | 1,090 | 62.2 | 3,251 | 25.2 | 1,081 | 58.6 |
| J-190 | 944 | 2.8 | 1,092 | 64.2 | 8.4 | 1,089 | 62.6 | 2,613 | 16.8 | 1,078 | 57.8 |
| J-191 | 947 | 5.2 | 1,092 | 62.9 | 15.6 | 1,089 | 61.3 | 2,473 | 31.2 | 1,077 | 56.5 |
| J-192 | 946 | 3.2 | 1,092 | 63.4 | 9.6 | 1,089 | 61.8 | 2,700 | 19.2 | 1,078 | 57.3 |
| J-245 | 945 | 4.2 | 1,093 | 63.8 | 12.6 | 1,090 | 62.6 | 1,886 | 25.2 | 1,081 | 59 |
| J-246 | 938 | 0 | 1,093 | 66.9 | 0 | 1,090 | 65.7 | 1,578 | 0 | 1,081 | 62 |
| J-247 | 942 | 1.8 | 1,093 | 65.2 | 5.4 | 1,091 | 64.6 | 4,824 | 10.8 | 1,087 | 62.6 |
| J-248 | 950 | 3.2 | 1,093 | 61.8 | 9.6 | 1,091 | 61 | 3,910 | 19.2 | 1,086 | 58.9 |
| J-249 | 945.5 | 2.2 | 1,093 | 63.7 | 6.6 | 1,091 | 62.9 | 4,350 | 13.2 | 1,086 | 60.6 |
| J-254 | 950 | 0 | 1,092 | 61.6 | 0 | 1,088 | 59.7 | 2,264 | 0 | 1,075 | 54.2 |
| J-261 | 946 | 22.1 | 1,092 | 63.3 | 66.2 | 1,088 | 61.4 | 1,582 | 132.4 | 1,075 | 55.7 |
| J-262 | 952 | 8.6 | 1,092 | 60.7 | 25.8 | 1,088 | 58.9 | 1,732 | 51.6 | 1,075 | 53.3 |
| J-263 | 950.3 | 56.8 | 1,092 | 61.5 | 170.4 | 1,088 | 59.6 | 2,258 | 340.8 | 1,075 | 54.1 |
| J-264 | 952 | 25.8 | 1,092 | 60.7 | 77.5 | 1,088 | 58.9 | 2,233 | 155.1 | 1,075 | 53.3 |
| J-265 | 952.2 | 9.2 | 1,092 | 60.6 | 27.6 | 1,088 | 58.8 | 2,243 | 51.6 | 1,075 | 53.2 |
| J-267 | 953 | 0 | 1,092 | 60.3 | 0 | 1,088 | 58.4 | 2,223 | 0 | 1,075 | 52.9 |
| J-271 | 943 | 5 | 1,093 | 64.7 | 15 | 1,090 | 63.7 | 3,647 | 30 | 1,083 | 60.7 |
| J-272 | 943 | 4.4 | 1,092 | 64.7 | 13.2 | 1,089 | 63.1 | 2,460 | 26.4 | 1,078 | 58.4 |
| J-273 | 944 | 3.8 | 1,092 | 64.2 | 11.4 | 1,089 | 62.6 | 2,448 | 22.8 | 1,077 | 57.8 |
| J-274 | 945 | 3 | 1,092 | 63.8 | 9 | 1,089 | 62.1 | 2,524 | 18 | 1,077 | 57.1 |
| J-275 | 946 | 3.8 | 1,092 | 63.3 | 11.4 | 1,088 | 61.6 | 2,344 | 22.8 | 1,077 | 56.5 |
| J-276 | 942 | 0 | 1,092 | 65.1 | 0 | 1,089 | 63.4 | 2,443 | 0 | 1,077 | 58.3 |
| J-277 | 944 | 2.2 | 1,092 | 64.2 | 6.6 | 1,089 | 62.5 | 1,967 | 13.2 | 1,077 | 57.5 |
| J-278 | 943 | 0 | 1,092 | 64.6 | 0 | 1,088 | 62.9 | 2,298 | 0 | 1,077 | 57.9 |
| J-279 | 947 | 2 | 1,092 | 62.9 | 6 | 1,088 | 61.2 | 2,000 | 12 | 1,077 | 56.1 |
| J-280 | 940 | 0 | 1,092 | 65.9 | 0 | 1,088 | 64.2 | 2,358 | 0 | 1,077 | 59.1 |
| J-281 | 945 | 3.6 | 1,092 | 63.8 | 10.8 | 1,088 | 62 | 2,411 | 21.6 | 1,076 | 56.7 |
| J-282 | 935 | 2.6 | 1,092 | 68.1 | 7.8 | 1,088 | 66.3 | 2,029 | 15.6 | 1,076 | 61.1 |
| J-283 | 932 | 0 | 1,092 | 69.4 | 0 | 1,089 | 67.8 | 2,579 | 0 | 1,078 | 63 |
| J-284 | 938 | 5 | 1,092 | 66.8 | 15 | 1,089 | 65.2 | 2,526 | 30 | 1,077 | 60.2 |
| J-285 | 944 | 4.6 | 1,092 | 64.2 | 13.8 | 1,088 | 62.4 | 2,377 | 27.6 | 1,076 | 57.1 |
| J-286 | 953 | 3.2 | 1,092 | 60.3 | 9.6 | 1,088 | 58.5 | 2,296 | 19.2 | 1,076 | 53.2 |
| J-287 | 950 | 2.8 | 1,092 | 61.6 | 8.4 | 1,088 | 59.8 | 1,712 | 16.8 | 1,076 | 54.5 |

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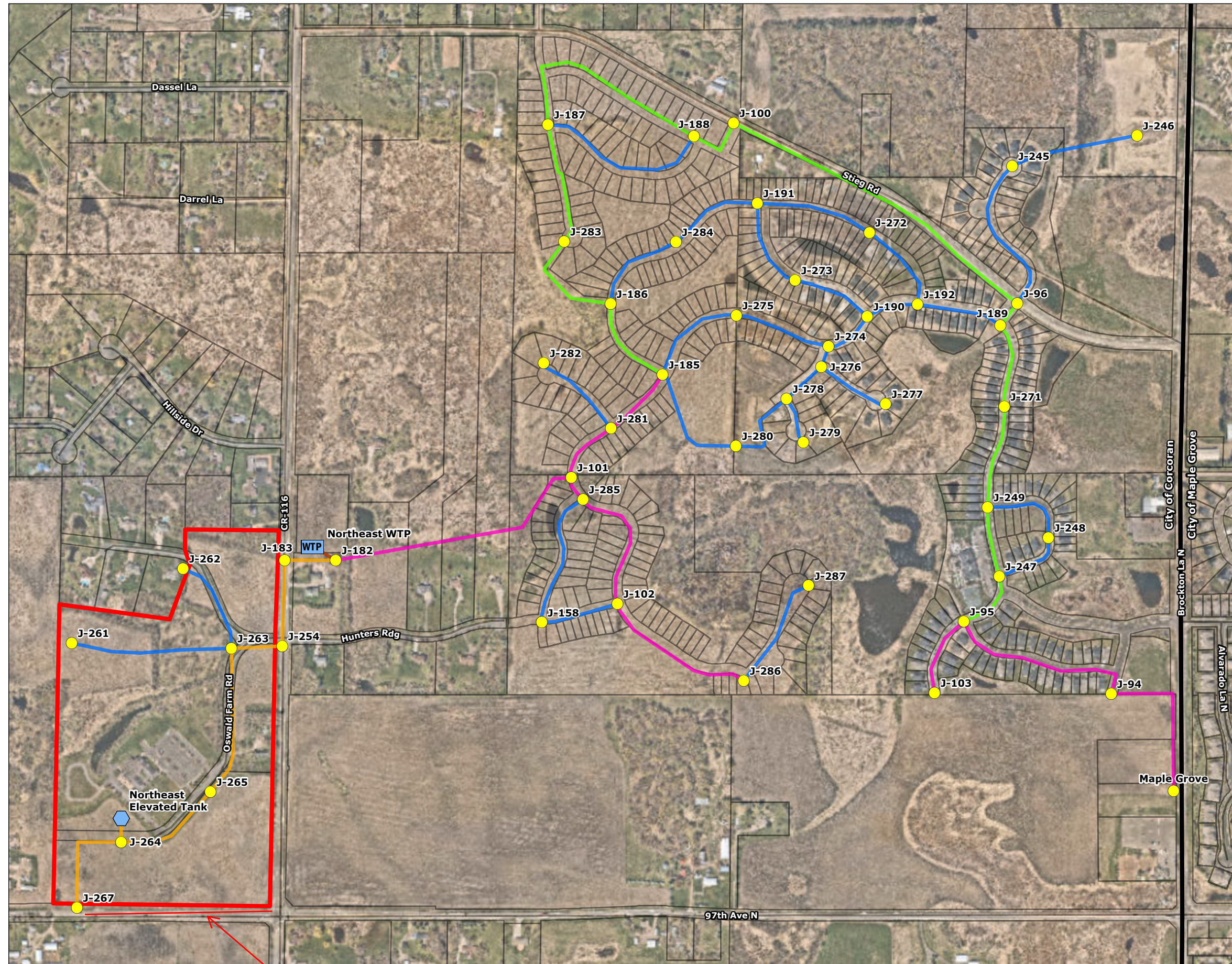


Figure No.

1

Title
Pipe Network

Client/Project
City of Corcoran
Hope Church Development

193806102

Project Location
T119N, R23W, S11
Corcoran, Hennepin Co., MN

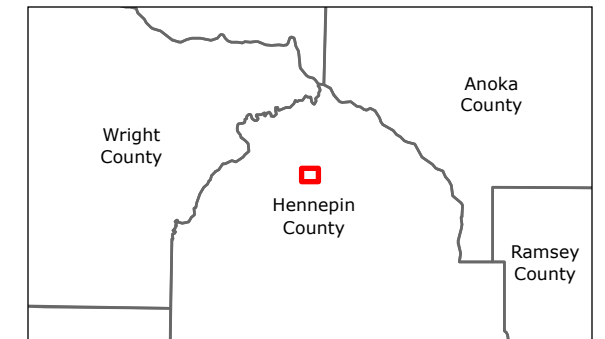
Prepared by BS on 2023-03-30



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Legend

- County Parcels
- Municipal Boundaries
- Hope Community Church
- Development Location
- Water System Facility**
- Water Treatment Plant
- Storage Tank
- Junction
- Water Main Diameter**
- 8 Inch
- 12 Inch
- 16 Inch
- 20 Inch
- 24 Inch



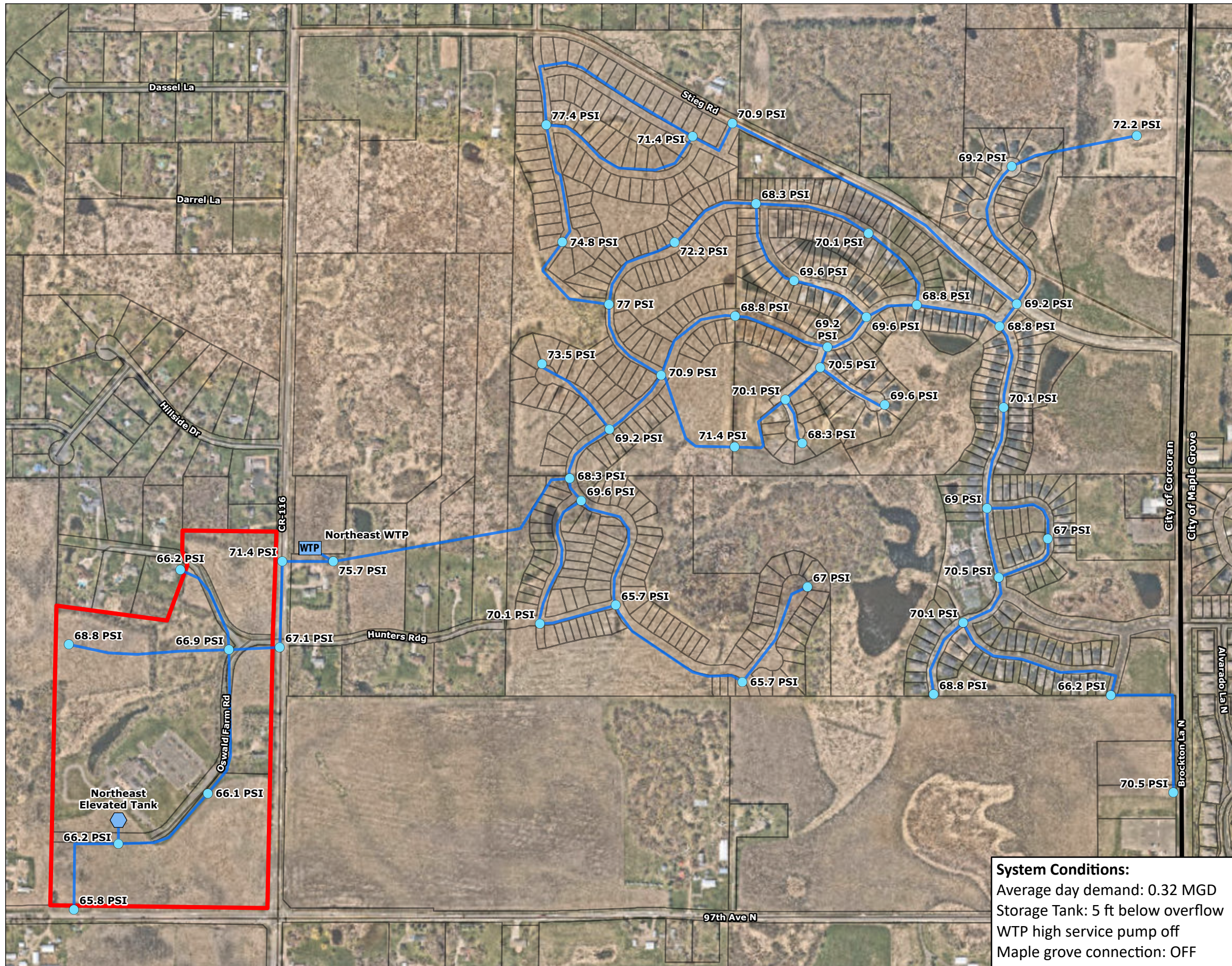
Notes
1. Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
2. Data Sources: Hennepin County
3. Background: Hennepin County 2020 Imagery



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show water loop

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System Conditions:
 Average day demand: 0.32 MGD
 Storage Tank: 5 ft below overflow
 WTP high service pump off
 Maple grove connection: OFF

Figure No.
2

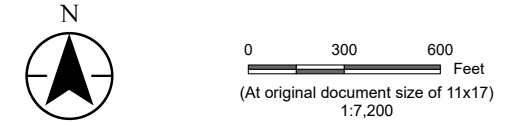
Title
Average Day Water Distribution System Pressure: Tower On

Client/Project
 City of Corcoran
 Hope Church Development

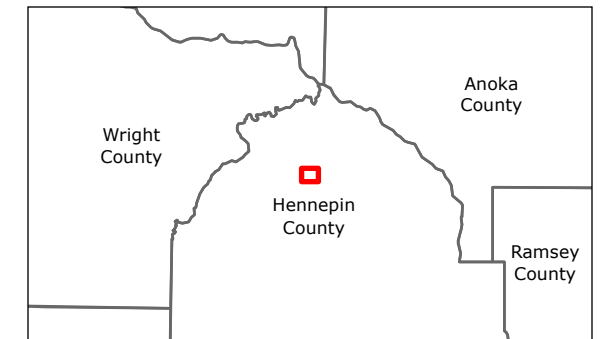
193806102

Project Location
 T119N, R23W, S11
 Corcoran, Hennepin Co., MN

Prepared by BS on 2023-03-30



- Legend**
- County Parcels
 - Municipal Boundaries
 - Hope Community Church
 - Development Location
- Water System Facility**
- WTP Water Treatment Plant
 - Storage Tank
 - Water Main
- Water System Pressure**
- < 35 PSI
 - 35-50 PSI
 - 50-65 PSI
 - 65-80 PSI
 - 80-95 PSI
 - >95 PSI

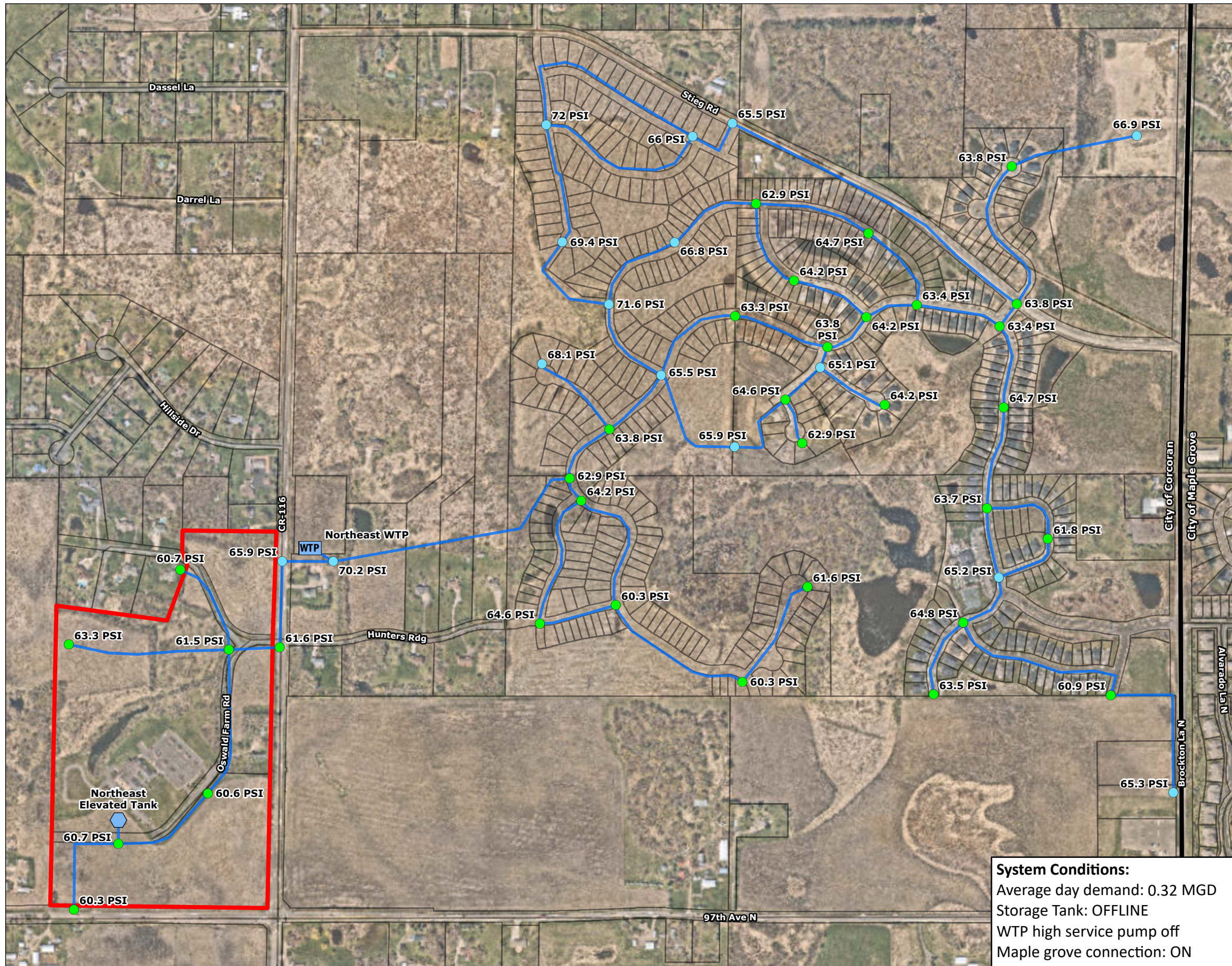


Notes

1. Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
2. Data Sources: Hennepin County
3. Background: Hennepin County 2020 Imagery

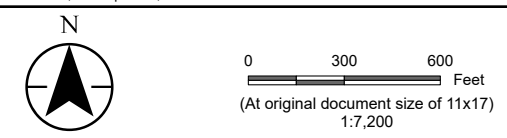


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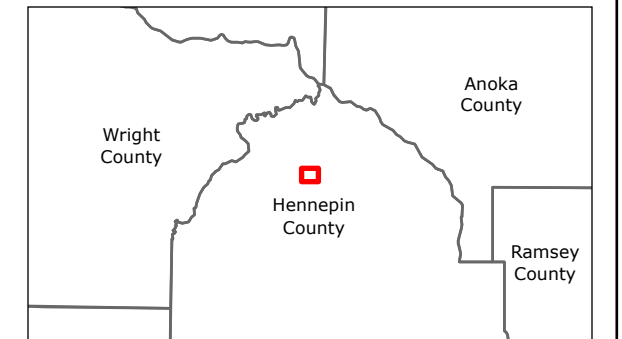


System Conditions:
 Average day demand: 0.32 MGD
 Storage Tank: OFFLINE
 WTP high service pump off
 Maple grove connection: ON

Figure No. **4**
 Title **Average Day Water Distribution System Pressure: Maple Grove On**
 Client/Project City of Corcoran Hope Church Development 193806102
 Project Location T119N, R23W, S11 Corcoran, Hennepin Co., MN Prepared by BS on 2023-03-30



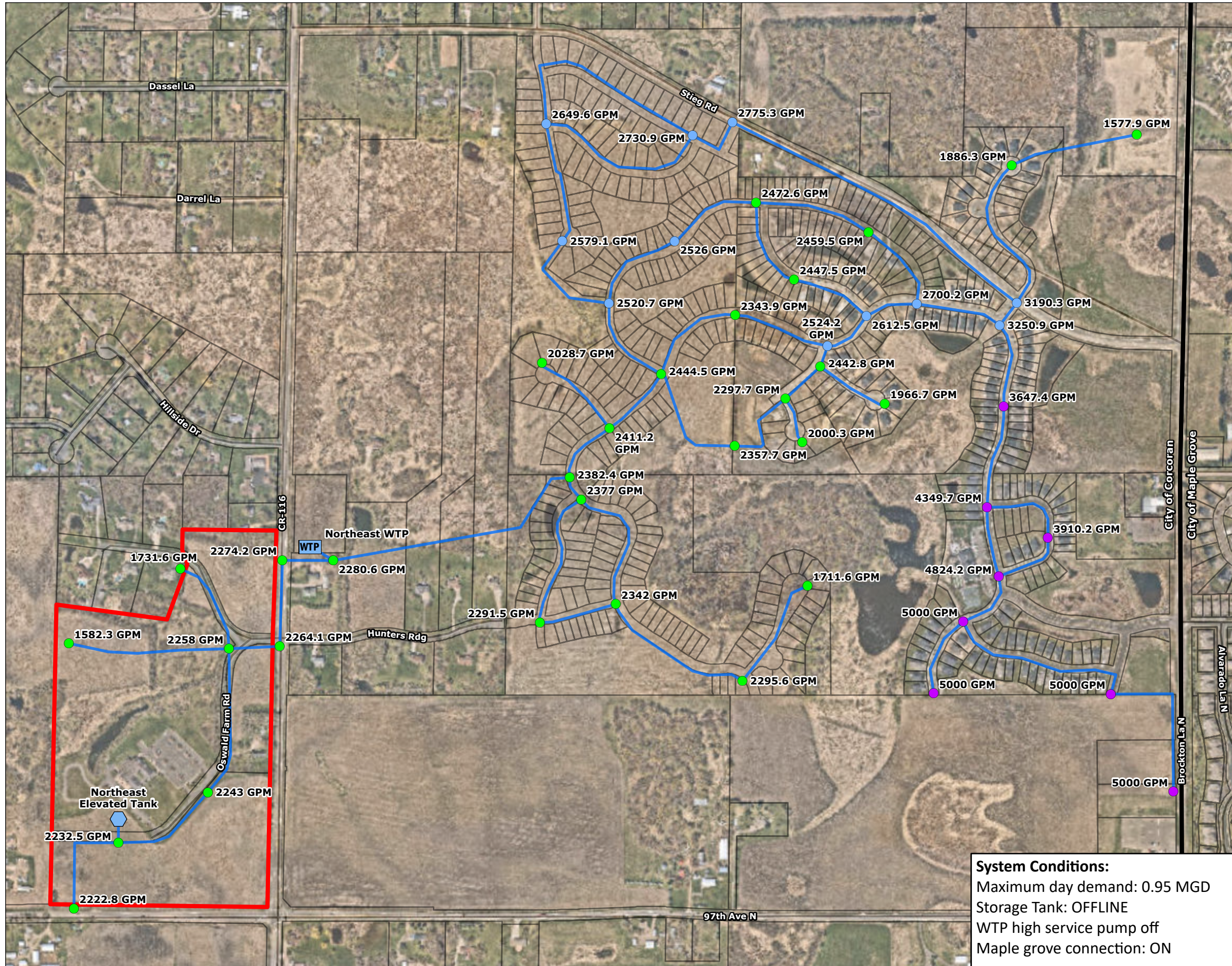
- Legend**
- County Parcels
 - Municipal Boundaries
 - Hope Community Church
 - Development Location
- Water System Facility**
- WTP Water Treatment Plant
 - Storage Tank
 - Water Main
- Water System Pressure**
- <35 PSI
 - 35-50 PSI
 - 50-65 PSI
 - 65-80 PSI
 - 80-95 PSI
 - >95 PSI



Notes
 1. Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
 2. Data Sources: Hennepin County
 3. Background: Hennepin County 2020 Imagery



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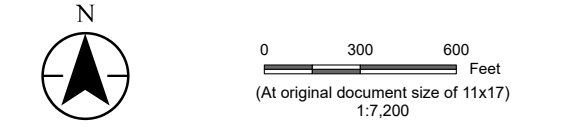


System Conditions:
 Maximum day demand: 0.95 MGD
 Storage Tank: OFFLINE
 WTP high service pump off
 Maple grove connection: ON

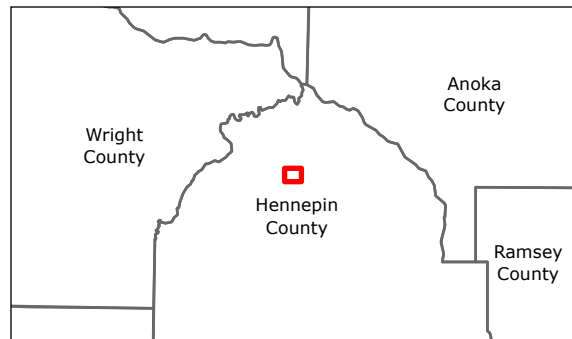
Figure No. **5**
 Title **Maximum Day Available Fire Flow: Maple Grove On**

Client/Project **City of Corcoran** 193806102
Hope Church Development

Project Location **T119N, R23W, S11** Prepared by BS on 2023-03-30
Corcoran, Hennepin Co., MN



- Legend**
- County Parcels
 - Municipal Boundaries
 - Hope Community Church
 - Development Location
- Water System Facility**
- WTP Water Treatment Plant
 - Storage Tank
 - Water Main
- Available Fire Flow**
- 500-1,000 GPM
 - 1,000-2,500 GPM
 - 2,500-3,500 GPM
 - > 3,500 GPM



Notes
 1. Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
 2. Data Sources: Hennepin County
 3. Background: Hennepin County 2020 Imagery



**Well Locations from NE Water Feasibility
2021**



**Feasibility Report
Supplements**
2020 Northeast Water System

June 4, 2021

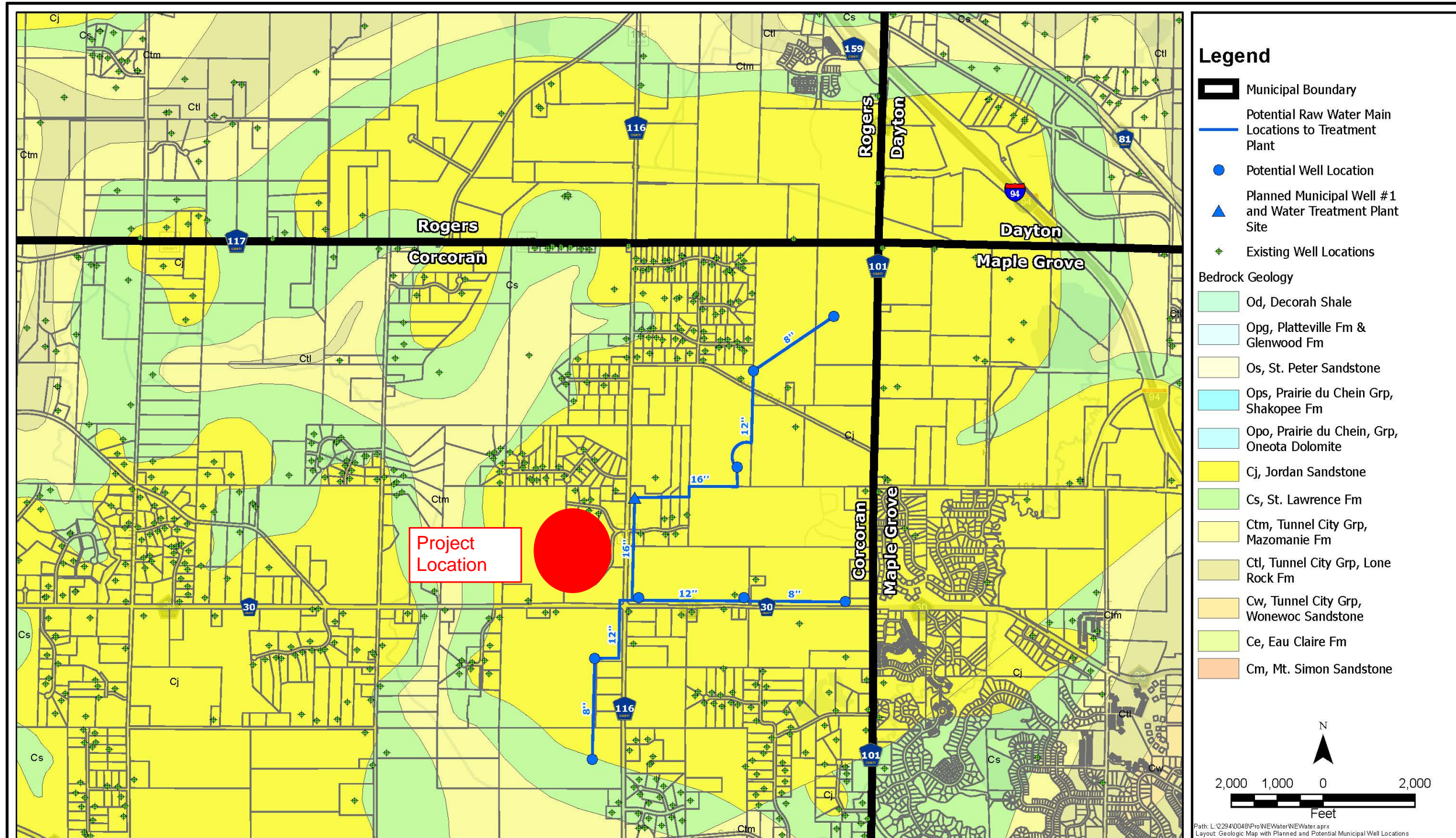
Prepared for:

City of Corcoran



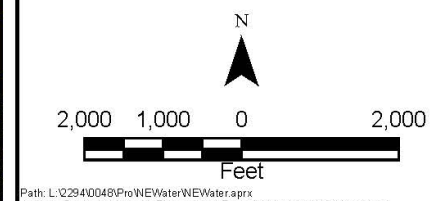
Figure 1 Geologic Map with Planned and Potential Municipal Well Locations





Legend

- Municipal Boundary
 - Potential Raw Water Main Locations to Treatment Plant
 - Potential Well Location
 - Planned Municipal Well #1 and Water Treatment Plant Site
 - Existing Well Locations
- Bedrock Geology**
- Od, Decorah Shale
 - Opg, Platteville Fm & Glenwood Fm
 - Os, St. Peter Sandstone
 - Ops, Prairie du Chein Grp, Shakopee Fm
 - Opo, Prairie du Chein, Grp, Oneota Dolomite
 - Cj, Jordan Sandstone
 - Cs, St. Lawrence Fm
 - Ctm, Tunnel City Grp, Mazomanie Fm
 - Ctl, Tunnel City Grp, Lone Rock Fm
 - Cw, Tunnel City Grp, Wonewoc Sandstone
 - Ce, Eau Claire Fm
 - Cm, Mt. Simon Sandstone



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Layout: Geologic Map with Planned and Potential Municipal Well Locations

CITY OF CORCORAN

Geologic Map with Planned and Potential Municipal Well Locations



MAY 2021

Figure 1



APPENDIX C










Floodplain



City of CORCORAN

2040 COMPREHENSIVE PLAN

Map App C-1 Floodplain

-  Municipal Boundary
-  2040 MUSA
-  Parcel Boundaries
-  Streams
-  Lake/Open Water
-  Floodway
- 100 Year Floodplain**
-  A
-  AE
- 500 Year Floodplain**
-  0.2 PCT ANNUAL CHANCE FLOOD HAZARD

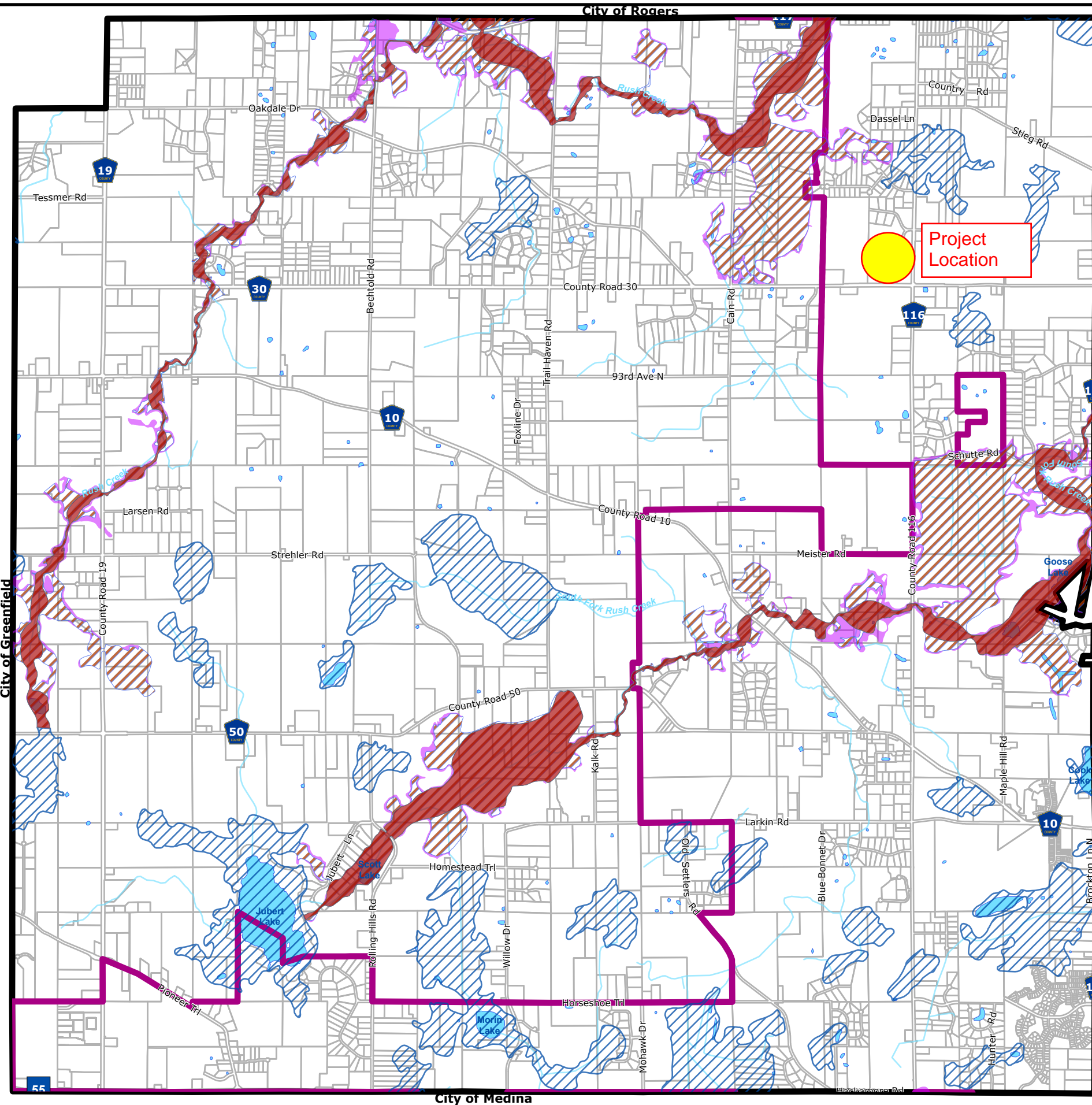
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Feet



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Stormwater Modeling Guidelines

Stormwater Guidelines for Development March 2019

Issue

Cities changing from rural to urban development are challenged by the additional stormwater generated due to construction of impervious surfaces, along with the offsite infrastructure, or lack thereof, to manage effectively. To standardize the modeling and review process, the guidelines below were created for efficiency.

Note: A watershed approval is required per Elm Creek WMO rules, which also reviews flow rates, water quality and volume management.

Modeling

Watershed Information

- Provide an aerial photo of the development that includes the overall watershed and subwatershed boundaries
- Provide a summary of the acreage to each discharge point leaving the site. Any increase (or decrease) shall be identified.
- Show any floodplain adjacent to project or within the project
- Show downstream water bodies and flow paths
 - Downstream flow paths and water bodies typically need to have elevations, inverts, and condition identified.

Subwatersheds

A HydroCAD model (typically used) has inputs that can vary by user. To minimize resubmittals, review time and effort, the following data shall be utilized.

- Electronic model shall be submitted
- Hydrologic Soil Group (HSG) shall be lowered one category due to the mass grading and compaction of the soils. For example, an existing B soil, shall be modeled as a proposed C soil (unless it remains undisturbed)
- Wetlands, filtration basins, and ponds shall be modeled at CN of 98
- Identify peak rates for storm events and proposed shall be equal or less than existing rates.
 - Note: There are certain conditions where at City's discretion the off-site conditions require a reduction in flow rate from existing rates.
- SWMM (i.e. EPA-, XP-, or PC-) models can be submitted for review, however these increase review time.

Model Setup for Outlet Control Structures, NWLs and Infiltration

- The model's flow control structures (OCS, culverts, etc.) shall match the construction plan information. During the plan and model review both may be modified and revised
- Individual detail plates are required for each OCS, and individual plates shall have inverts identified
- A pond or wetland NWL (and model starting elevation) shall be set at the constructed outlet control elevation.
 - No live storage shall be utilized below the controlling OCS elevation.
 - No live storage shall be used for filtration shelves on ponds below controlling OCS elevation
- If a pond or wetland has an NWL (wet surface), infiltration shall not be used in flood routing.
- If a pond has filtration BMP causing drawdown below the NWL, this drawdown elevation shall not be used as the NWL for flood routing. (Filtration has a slower release time and during wet periods is not available as live storage).

Construction Plans

Catch Basins

- Street drainage shall be sufficient to manage the 10-year event

- Typical a CB inlet capacity is 2 to 2.5 CFS, and CBs shall be spaced accordingly
- Three inches (0.25 feet) of head on a CB will inundate a street centerline (2% slope).
- Spacing is 200 to 250 feet using longitudinal street dimensions of 40 feet from road centerline to half the house footprint (assumes rear half of house drains to rear yard). Dimensions equal 10,000 SF.
- CBs may be required on both sides of ped ramps to capture flows

Natural Drainage Features

- Waterbodies receiving urban drainage (wetlands, ditches, gullies) may need to have OCS installed, erosion protection, or reduced flow rates to allow the feature to function over the long term due to more consistent flows from increased impervious via development
- Offsite work may be necessary and City will assist with coordination, easements, etc.

HWLs and EOFs

- The freeboard requirements are:
 - Low Opening is a minimum of two feet above the HWL
 - Low Opening is a minimum of two feet above the EOF
- EOFs shall be accurately shown and as built are required. The highest point shall be the EOF (for example top of curb) since this is the controlling elevation
 - In certain instances, channel calculations of the swale may be required to show the EOF has capacity to manage estimated flow
- Overland EOFs are preferred, however if a second pipe serves as an EOF then modeling will include a 100-year event using the second pipe (EOF) as the only outlet (primary outlet plugged).

Rear Yards

- Rear yards or swales less than 2% shall have draintile. Typically, every two to three lots will require rear yard CBs.

Sump Connections

- Houses adjoining a wetland or pond do not need individual sump connection
- Others will have access to rear yard stormsewer.

Offsite Impacts

Adjacent Parcels

- City will review adjacent parcels (downstream and upstream) for impacts from volume, point discharge, etc. and may require off site improvements. City will assist in coordination of any off site work.
- Off site water quality improvement projects may be determined by the City for assistance with compliance with City's TMDL approach of implementing improvements upon development.
- FEMA modifications may be necessary due to development and implemented by City.

Reference: Request to Bid – Horseshoe Bend Drive Drainage Improvements

Estimated Project Costs

Below is a breakdown of the estimated project costs with a detailed cost breakdown attached to this memo. These costs are less than the estimated project costs at the time of the feasibility study which was \$267,767.00

| <i>Project</i> | <i>Estimated Cost</i> |
|--|-----------------------|
| Horseshoe Bend Drive Drainage Improvements | \$206,310.50 |
| | |
| Estimated Engineering/Admin | \$51,577.63 |
| Estimated Total Project Costs | \$257,888.13 |

Project Schedule

Below is an outline of the project schedule. Because access to the St. Therese facility will be important through this construction project, the utilities on the project will be constructed in a northern phase and a southern phase to facilitate their construction.

| | |
|--------------------------------|----------------------------------|
| Council Authorizes Ad for Bids | July 27 th , 2023 |
| Bid Opening | September 6 th , 2023 |
| Construction | Fall 2023 |
| Final Restoration | Spring 2024 |

Engineer's Recommendation

We recommend that the City Council review and Accept the Plans and Specification and authorize the advertisement for bids for the Horseshoe Bend Drive Drainage Improvements.

STANTEC CONSULTING SERVICES INC.



Steven Hegland, PE
Project Engineer

Attachments:

- Advertisement for Bid
- Cost Estimate
- Horseshoe Bend Drive Drainage Improvement Plans

**SECTION 00 11 13
ADVERTISEMENT FOR BIDS**

NOTICE TO CONTRACTORS

Electronic Bid Proposals will be received by the City of Corcoran, 8200 County Road 116, Corcoran, Minnesota 55340, on the QuestCDN.com website via the VirtuBid electronic bidding application. Only electronic bids will be accepted for this project. Bids will be received on the QuestCDN.com website, until 1:00 p.m., Wednesday, September 6th, 2023 at which time such bids will be publicly opened electronically and reviewed for the furnishing of all labor, materials, and all else necessary for the following:

HORSESHOEBEND BEND DRIVE DRAINAGE IMPROVEMENTS

The work, in accordance with Drawings and Specifications prepared by Stantec Consulting Services Inc., consists of the following major items of work and approximate quantities:

| | |
|------------------|------------------------------------|
| 350 Square Yards | Bituminous Removal and Replacement |
| 190 Linear Feet | CPEP Pipe Replacement |
| 304 Linear Feet | RCP Pipe Replacement |
| 140 Cubic Yards | Common Excavation |

Together with selective demolition, traffic control, erosion controls, restoration, and other related appurtenances.

Each bid proposal shall be accompanied by a "Bid Security" in the form of a certified check made payable to the City of Corcoran" (OWNER) in the amount not less than five percent (5%) of the total bid, or a surety bond in the same amount, running to the OWNER, with the surety company thereon duly authorized to do business in the State of Minnesota. Such Bid Security to be a guarantee that the bidder will not, without the consent of the OWNER, withdraw their bid for a period of sixty (60) days after the opening of bids, and if awarded a contract, will enter into a contract with the OWNER; and the amount of the certified check will be retained or the bond enforced by the OWNER in case the bidder fails to do so. All bid securities except those of the three lowest bidders will be returned within five days after the opening of bids.

Eligible Bidders for this project must meet the Minimum Criteria as defined in the Responsible Contractor Requirement in accordance with Minnesota Statutes § 16C.285, subdivision 3, and additional criteria required by the OWNER.

Bid Proposals shall be submitted on forms furnished for that purpose. Bids shall be submitted electronically through the QuestCDN website in accordance with the Instructions to Bidders. No bidder shall withdraw their bid, without the consent of the OWNER, for the period of days indicated above after the date for the opening thereof. The OWNER, however, reserves the right to reject any or all bids and to waive any minor irregularities, informalities, or discrepancies. A work history detailing qualifications and past experience must be provided upon request.

The Project Manual is available on QuestCDN (www.questcdn.com). You may download the digital plan documents for \$40.00 by inputting Quest Project #xxxxx on the website's project search page. Please contact QuestCDN at 952-233-1632 or info@questcdn.com for assistance in free membership registration, downloading, and working with this digital project information, and submission of electronic bids.

Direct inquiries to Steve Hegland at (763) 479-4237 or steven.hegland@stantec.com

Steven Hegland Project Engineer
Stantec Consulting Services

PUBLISHED: QuestCDN.com: August 3, 2023
Crow River News August 3, 2023

COST ESTIMATE
CITY OF CORCORAN
HORSESHOE BEND DRIVE DRAINAGE IMPROVEMENTS
227704908
July 19, 2023

| Bid Item | Description | Units | Unit Price | Quantity | Total Cost |
|----------|---|----------|--------------|----------|--|
| 1 | MOBILIZATION AND DEMOBILIZATION | LUMP SUM | \$ 15,000.00 | 1.0 | \$15,000.00 |
| 2 | CLEARING | EACH | \$ 750.00 | 17 | \$12,750.00 |
| 3 | GRUBBING | EACH | \$ 750.00 | 17 | \$12,750.00 |
| 4 | SAWING BITUMINOUS PAVEMENT (FULL DEPTH) | LIN FT | \$ 5.00 | 345 | \$1,725.00 |
| 5 | REMOVE STORM SEWER CULVERT | LIN FT | \$ 25.00 | 339 | \$8,475.00 |
| 6 | REMOVE BITUMINOUS PAVEMENT | SQ YD | \$ 10.00 | 349 | \$3,490.00 |
| 7 | SALVAGE AND RESPREAD LANDSCAPE ROCK | SQ YD | \$ 200.00 | 5 | \$1,000.00 |
| 8 | COMMON EXCAVATION - OFFSITE (LV) | CU YD | \$ 50.00 | 140 | \$7,000.00 |
| 9 | STRIP, STOCKPILE, AND RESPREAD TOPSOIL | LUMP SUM | \$ 3,000.00 | 1 | \$3,000.00 |
| 10 | GEOTEXTILE FABRIC TYPE 4 | SQ YD | \$ 3.00 | 60 | \$180.00 |
| 11 | STREET SWEEPER (WITH PICKUP BROOM) | HOUR | \$ 150.00 | 8 | \$1,200.00 |
| 12 | AGGREGATE BASE CLASS 5, 100% CRUSHED | TON | \$ 35.00 | 18 | \$630.00 |
| 13 | BITUMINOUS MATERIAL FOR TACK COAT | GAL | \$ 10.00 | 20 | \$200.00 |
| 14 | TYPE SP 9.5 WEARING COURSE MIXTURE (3,B) | TON | \$ 150.00 | 40 | \$6,000.00 |
| 15 | TYPE SP 12.5 NON WEARING COURSE MIXTURE (3,B) | TON | \$ 150.00 | 50 | \$7,500.00 |
| 16 | 15" RC PIPE APRON | EACH | \$ 1,500.00 | 4 | \$6,000.00 |
| 17 | 18" RC PIPE APRON | EACH | \$ 1,750.00 | 4 | \$7,000.00 |
| 18 | 21" RC PIPE APRON | EACH | \$ 2,500.00 | 4 | \$10,000.00 |
| 19 | 21" CPEP PIPE APRON | EACH | \$ 750.00 | 8 | \$6,000.00 |
| 20 | 24" CPEP PIPE APRON | EACH | \$ 1,500.00 | 2 | \$3,000.00 |
| 21 | 27" CPEP PIPE APRON | EACH | \$ 2,000.00 | 2 | \$4,000.00 |
| 22 | 21" CPEP | LIN FT | \$ 100.00 | 110 | \$11,000.00 |
| 23 | 24" CPEP | LIN FT | \$ 110.00 | 25 | \$2,750.00 |
| 24 | 27" CPEP | LIN FT | \$ 120.00 | 53 | \$6,360.00 |
| 25 | 15" RC PIPE CULVERT CLASS V | LIN FT | \$ 65.00 | 88 | \$5,720.00 |
| 26 | 18" RC PIPE CULVERT CLASS V | LIN FT | \$ 85.00 | 88 | \$7,480.00 |
| 27 | 21" RC PIPE CULVERT CLASS V | LIN FT | \$ 100.00 | 128 | \$12,800.00 |
| 28 | TRAFFIC CONTROL | LUMP SUM | \$ 5,000.00 | 1 | \$5,000.00 |
| 29 | STORM DRAIN INLET PROTECTION - MAINTAINED | EACH | \$ 200.00 | 12 | \$2,400.00 |
| 30 | SILT FENCE, TYPE MS - MAINTAINED | LIN FT | \$ 5.00 | 300 | \$1,500.00 |
| 31 | SEDIMENT CONTROL LOG TYPE STRAW - MAINTAINED | LIN FT | \$ 5.00 | 80 | \$400.00 |
| 32 | ROLLED EROSION PREVENTION CATEGORY 25 | SQ YD | \$ 5.00 | 1264 | \$6,320.00 |
| 33 | MnDOT SEED MIXTURE 25-141 | SQ YD | \$ 5.00 | 1585 | \$7,925.00 |
| 34 | SUBGRADE EXCAVATION - OFFSITE (EV) | CU YD | \$ 50.00 | 20 | \$1,000.00 |
| | | | | | BASE BID CONSTRUCTION COSTS \$187,555.00 |
| | | | | | 10% CONTINGENCY \$18,755.50 |
| | | | | | TOTAL BASE BID COSTS \$206,310.50 |
| | | | | | 25% ENGINEERING/ADMIN \$51,577.63 |
| | | | | | ESTIMATED PROJECT COSTS \$257,888.13 |

CONSTRUCTION PLANS

FOR

HORSESHOE BEND DRIVE DRAINAGE IMPROVEMENTS

CORCORAN, MN 55340
JULY 2023

OWNER:
CITY OF CORCORAN



8200 COUNTY ROAD 116
CORCORAN, MN 55340

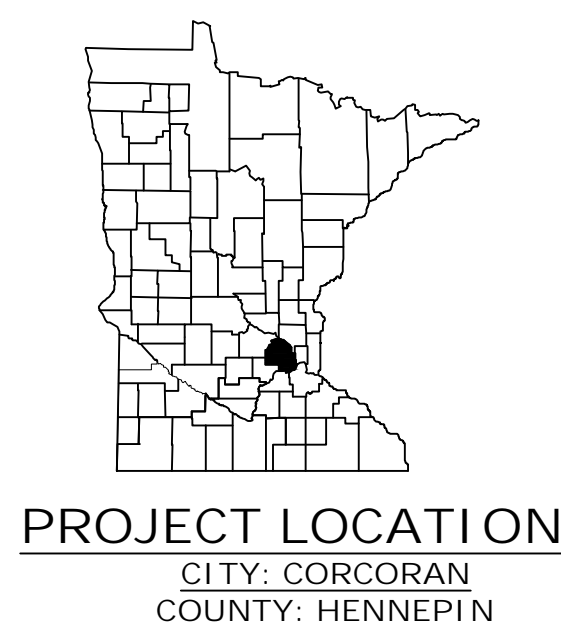
ENGINEER:
STANTEC CONSULTING SERVICES INC.



ONE CARLSON PARKWAY, SUITE 100
PLYMOUTH, MN 55447
CONTACT: STEVEN K. HEGLAND, P.E.
PH: (763) 479-4237



PROJECT LOCATION MAP
NOT TO SCALE



THIS PLAN SET CONTAINS 8 SHEETS

| INDEX | |
|-----------|--------------------------------|
| SHEET NO. | SHEET TITLE |
| 1 | TITLE SHEET |
| 2 | GENERAL NOTES AND LEGEND |
| 3 | EXISTING CONDITIONS & REMOVALS |
| 4-5 | SITE AND GRADING PLAN |
| 6 | DETAILS |
| 7-8 | CROSS SECTIONS |

WARNING:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND/OR RELOCATION OF LINES.

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

CALL BEFORE YOU DIG
GOPHER STATE ONE CALL
TWIN CITY AREA: 651-454-0002
TOLL FREE 1-800-252-1166

Stantec
ONE CARLSON PARKWAY, SUITE 100
PLYMOUTH, MN, 55447
PHONE: 763-479-4200
FAX: 763-479-4242
WWW.STANTEC.COM

CLIENT:
CITY OF CORCORAN
8200 COUNTY ROAD 116
CORCORAN, MN 55340



**HORSESHOE BEND DRIVE
CULVERT CONSTRUCTION
PROJECT**
CORCORAN, MINNESOTA

| PROJECT TITLE | ISSUE NO. | DESCRIPTION | DATE |
|---|-----------|----------------|------------|
| HORSESHOE BEND DRIVE CULVERT CONSTRUCTION PROJECT | 0 | ISSUED FOR BID | 07/05/2023 |

CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Steven Hegland
STEVEN HEGLAND
LICENSE NO.: 52243
DATE: 07/05/2023

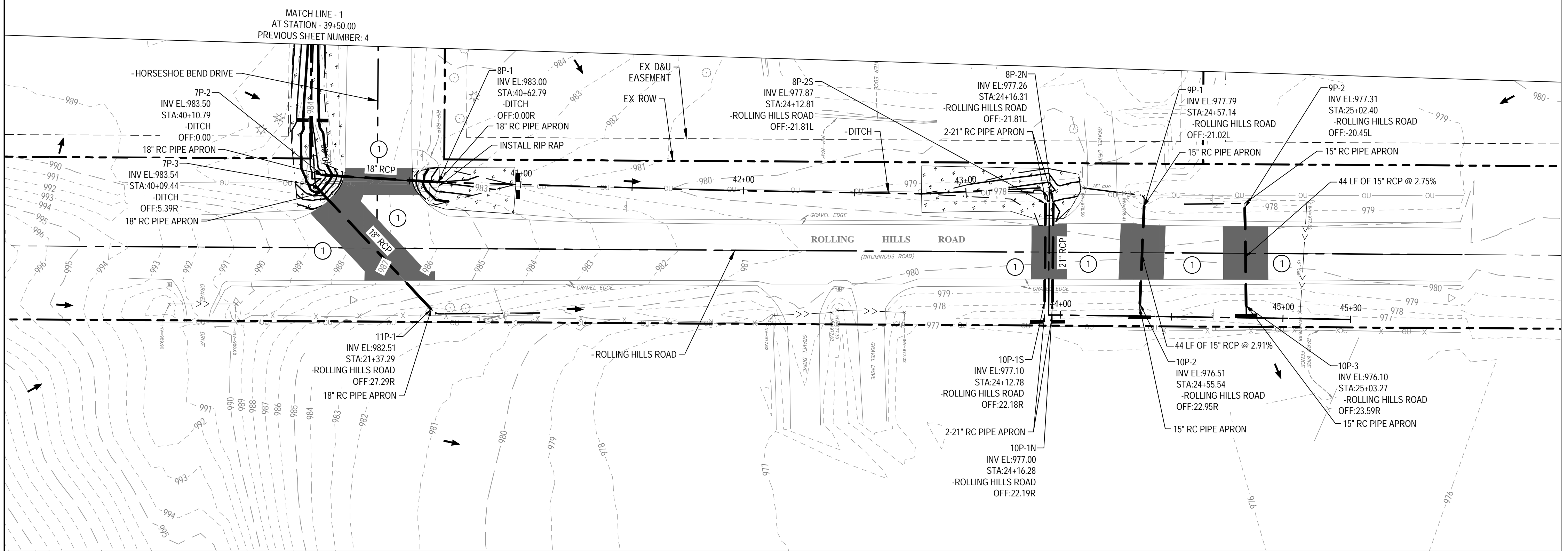
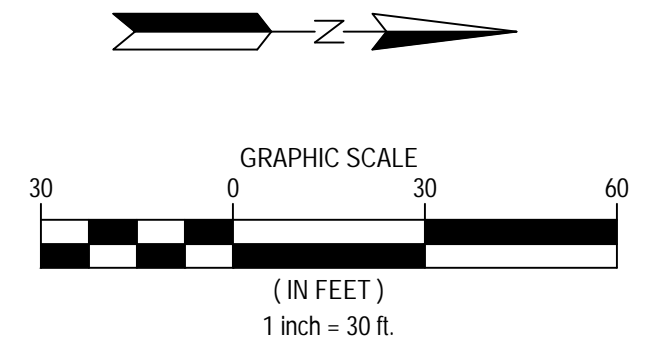
PROJECT NO.: 227704908

| | | |
|-------------|---------------|---------------|
| DWN BY: ADG | CHK'D BY: NPW | APP'D BY: SKH |
|-------------|---------------|---------------|

ISSUE DATE: 07/05/2023
ISSUE NO.: 0

SHEET TITLE:
TITLE SHEET

SHEET NO.: 1 OF 8



LEGEND

- BITUMINOUS ROADWAY PAVEMENT - SEE DETAILS
- BITUMINOUS DRIVEWAY PAVEMENT - SEE DETAILS
- GRAVEL DRIVEWAY RESTORATION - SEE DETAILS
- SEED MIXTURE 25-151
- PROPOSED STORM PIPE
- EXISTING STORM PIPE
- SEDIMENT CONTROL LOG TYPE STRAW
- DRAINAGE FLOW ARROW

NOTES

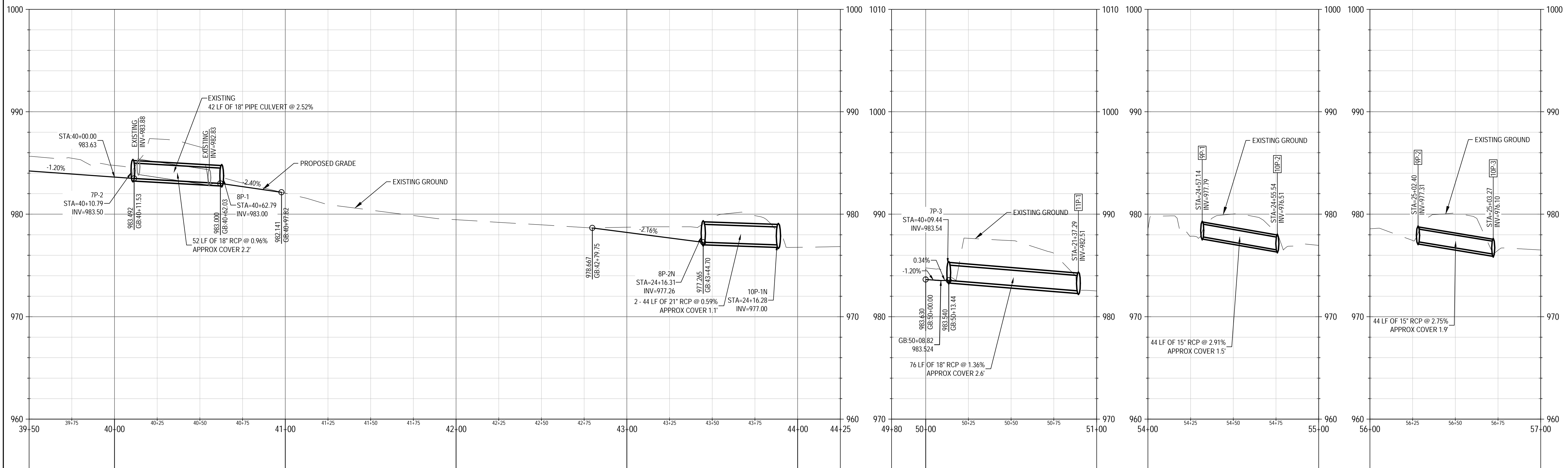
1. MATCH EXISTING
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SALVAGING ALL TOPSOIL FROM THE PROJECT TO BE USED FOR RESTORATION. A MINIMUM OF 6" OF TOPSOIL SHALL BE PLACED ON RESTORED AREA. IF CONTRACTOR WASTES OR CONTAMINATES TOPSOIL WITHIN THE PROJECT, THEY SHALL BE RESPONSIBLE FOR REPLACING WITH APPROPRIATE MATERIAL AT THEIR EXPENSE.
3. EROSION CONTROL BLANKET SHALL BE PLACED ON ALL SLOPES WHICH ARE 4:1 OR STEEPER.

DITCH PROFILE

7P TO 11P PROFILE

9P-1 TO 10P-2 PROFILE

9P-2 TO 10P-3 PROFILE



**HORSESHOE BEND DRIVE
CULVERT CONSTRUCTION
PROJECT**
CORCORAN, MINNESOTA

| | | | |
|----------------|---|-----------|-----|
| PROJECT TITLE: | HORSESHOE BEND DRIVE CULVERT CONSTRUCTION PROJECT CORCORAN, MINNESOTA | | |
| ISSUE NO.: | 0 | | |
| DESCRIPTION: | ISSUED FOR BID | | |
| DATE: | 07/05/2023 | | |
| CERTIFICATION: | I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. | | |
| | | | |
| | STEVEN HEGLAND | | |
| LICENSE NO.: | 52243 | | |
| DATE: | 07/05/2023 | | |
| PROJECT NO.: | 227704908 | | |
| DWN BY: | ADG | CHK'D BY: | NPW |
| APP'D BY: | | SKH | |
| ISSUE DATE: | 07/05/2023 | | |
| ISSUE NO.: | 0 | | |
| SHEET TITLE: | SITE AND GRADING PLAN | | |
| SHEET NO.: | 5 OF 8 | | |



July 20, 2023

Kevin Mattson, PE
Public Works Director
9100 County Road 19
Corcoran, MN 55340

Dear Kevin:

Reference: State Bond Fund Assistance

Stantec is excited to hear that the City of Corcoran was able to secure \$10 million dollars in funds to be allocated towards water infrastructure from the Minnesota Public Facilities Authority (PFA). It is our understanding that PFA is in the process of drafting the bonding appropriations grant agreement between the State and the City, which will spell out compliance items in greater detail. From past experience, we are familiar with typical bond compliance items and have provided this scope of work to assist the City. We believe the following tasks will be needed to ensure compliance with State bonding funds:

Scope of Work

Task 100 – Conduct Environmental Review

With the PFA funds, we anticipate that the environmental assessment or potentially a categorical exclusion will be necessary. We will assist the City in preparing these documents for submittal on behalf of the City. Typically this is desk top work with a site visit, any more field work would be provided in additional scope.

Task 200 – Grant Application and Form Completion

During the PFA process, the City will be required to compile the grant application documents which include information on the City as well as pertinent project information. We will assist the City in compiling and preparing this documentation for submittal to the state agency. Even though the funds have been appropriated at the Legislative level, this grant application is still a necessary part of the process.

Task 300 – Grant Compliance (Prevailing Wages/Reporting)

As the grant is being administered, we will assist the City in ensuring compliance with the grant program. These will include reviewing and documenting the prevailing wage responsibilities of these projects, helping compile annual and final reports on the projects and helping prepare jobs reports for the grant projects.

Reference: Bond Funding Assistance

Fee and Schedule

Project Budget

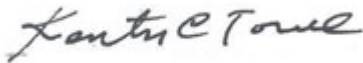
We estimate the fee to provide the scope as described to be approximately \$9,000.

Any changes to the project scope or estimated hours to complete the work will be communicated to the City in a timely fashion. Stantec will not proceed with additional services or services outside of the scope of work contained in this letter without approval from the City.

We hope this letter defines the of scope work and the estimated fee of services to your satisfaction. On behalf of our Stantec team, we thank you for this opportunity to be of service to your community.

Regards,

Stantec Consulting Services Inc.



Kent Torve PE (MN, TX, SD), LEED AP
City Engineer/ Principal
Phone: 612.209.7919
Kent.torve@stantec.com



Steve Hegland, PE (MN)
Client Manager
Phone: 612-741-6548
steven.hegland@stantec.com

By signing this proposal, City of Corcoran authorizes Stantec to proceed with the services herein described and the work will be completed in accordance with the existing Master Service Agreement.

This proposal is accepted and agreed on the _____ day of _____, _____.

Per:

Kevin Mattson, PE Public Works Director

Signature

MEMORANDUM

TO: Mayor and City Council
FROM: Jim Stremel, Senior Project Manager
DATE: July 20, 2023
MEETING: July 27, 2023 City Council
SUBJECT: Hackamore Rd Improvement Project – Change Order No. 1

Background & Progress to Date

The Hackamore Road Improvement Project was officially awarded to Valley Paving, Inc. at the June 6th Council Meeting in the amount of \$5,445,445.00. To date, private utility work has been underway for several weeks and the City's portion of the project began the week of July 17th.

Both cities have been working through and agreed to a joint powers agreement (JPA) where the City of Medina is the lead agency for the project and has entered into the contract for construction as such. The City of Corcoran has finalized agreements with the adjacent developers as well.

Change Order:

There are two main items that warrant a contract change order that include additional street work and a more formal agreement to utilize the staging area adjacent to the project. Both of these items are related to the recent negotiations and agreements with the Lakeview Development Company, LLC.

1. The agreement with the contractor is to utilize an area offsite for material storage and staging. The staging area is located on the north side of Hackamore Rd roughly 1,000 feet east of CR 116 across two properties owned by Lakeview Development Company, LLC. The cities have an existing agreement with the property owner for the use of the property for this purpose and have identified the specific location available for the staging area. The Contractor will be required to adhere to all project specifications related to the maintenance, erosion/sediment control, and restoration in accordance with the specifications in Division 1, section 1806 Storage of Materials.
2. The additional work not included with the original plans and bidding is adjacent one of the future developments east of CR 116 (Lakeview Development property) and generally includes the extension of concrete curb across the remaining length of the property and the accommodation of a new storm sewer system through their property. The storm sewer system is needed to improve the conveyance of drainage from Hackamore Road and will ultimately be connected to a future stormwater treatment system within the development. The additional construction cost to complete concrete curb and ancillary work is

estimated to be \$28,804.00. The cities have agreed to this additional work within the Joint Powers Agreement.

Estimated Project Costs & Funding Review

The as bid/awarded construction cost was \$5,445,445.00 and with the additional work in the amount of \$28,804.00, the revised contract amount will then be \$5,474,249.00.

| | |
|---|-----------------------|
| Original Construction Contract Cost | \$5,445,445.00 |
| + Additional Curb and ancillary work NE of CR116 | \$ 28,804.00 |
| Updated Construction Contract (Change Order 1) | \$5,474,249.00 |

There will be additional engineering work required with the design changes. The proposed curb extension and revisions to the storm sewer alignment will increase the construction cost, but the additional engineering will not result in an exceedance of the current estimated overhead amount. In addition, within the original total project cost, a 10% contingency had been included and the proposed change order can be accounted for within that amount.

Recommended Action

A motion to approve Change Order No. 1 for the Hackamore Road Project in the amount of \$28,804.00.



| SP/SAP S.A.P. 250-119-001 ; 250-103-002 | | Minn. Project No. N/A | | | Change Order No. 1 | |
|--|----------|---|------|------------------------------------|--------------------|--------------------|
| Project Location: Hackamore Road Improvements Project | | | | | | |
| Local Agency: City of Medina; City of Corcoran | | | | Local Project No. N/A | | |
| Contractor: Valley Paving, Inc. | | | | Contract No. 020741-000; 20743-000 | | |
| Contractor Address: 8800 13 th Avenue East Shakopee, MN 55379 | | | | | | |
| Total Change Order Amount: \$28,804.00 | | | | | | |
| Description: There are two primary items included in this change order with the following in detail: | | | | | | |
| <ul style="list-style-type: none"> - An agreement with the contractor to utilize an area offsite for material storage and staging. The staging area is located on the north side of Hackamore Rd roughly 1,000 feet east of CR 116 across two properties owned by Lakeview Development Company, LLC. The cities have an existing agreement with the property owner for the use of the property as a construction staging area and have identified the specific location available for the staging area (see enclosed parcel sketches). The Contractor will be required to adhere to all project specifications related to the maintenance, erosion/sediment control, and restoration in accordance with the specifications in Division 1, section 1806 Storage of Materials. The Contractor will be required to meet City of Corcoran policy and/or ordinances as to the height of stockpiles and duration of storage. A copy of the agreement with the property owner is also enclosed. - The cities of Medina and Corcoran have agreed to a Joint Power Agreement (JPA) where the City of Medina is the lead agency for the project and has entered into a contract for construction with Valley Paving, Inc. as such. Within this JPA, the cities have agreed to additional work including the extension of concrete curb/gutter and various improvements not included with the original project plans as bid. The individual quantity items have already been included in the original project bid; however, the additional work will result in an increase in the contract of the contract amount; a listing of detailed quantities and cost is provided below. | | | | | | |
| Estimate Of Cost: (Include any increases or decreases in contract items, any negotiated or force account items.) | | | | | | |
| Group/Funding Category** | Item No. | Description | Unit | Unit Price | + or - Quantity | + or - Amount \$ |
| STATE AID ROADWAY | 2101.502 | CLEARING | EACH | \$365.00 | 2.0 | \$730.00 |
| STATE AID ROADWAY | 2101.502 | GRUBBING | EACH | \$220.00 | 2.0 | \$440.00 |
| STATE AID ROADWAY | 2101.505 | CLEARING | EACH | \$7,280.00 | 0.2 | \$1,456.00 |
| STATE AID ROADWAY | 2101.505 | GRUBBING | EACH | \$4,160.00 | 0.2 | \$832.00 |
| STATE AID ROADWAY | 2531.503 | CONCRETE CURB & GUTTER DESIGN B618 | LF | \$18.00 | 630 | \$11,340.00 |
| STATE AID ROADWAY | 2360.504 | TYPE SP 9.5 WEAR CRS MIX (2,B) 3.0" THICK | SY | \$23.00 | 220 | \$5,060.00 |
| STATE AID ROADWAY | 2521.518 | 6" CONCRETE WALK | SF | \$13.30 | 80 | \$1,064.00 |
| STATE AID ROADWAY | 2531.618 | TRUNCATED DOMES | SF | \$52.00 | 16 | \$832.00 |
| STATE AID ROADWAY | 2506.502 | CASTING ASSEMBLY | EACH | \$920.00 | 1 | \$920.00 |
| STATE AID ROADWAY | 2506.503 | CONST DRAINAGE STRUCTURE DES 48-4020 | LF | \$735.00 | 8 | \$5,880.00 |
| STATE AID ROADWAY | 2506.602 | CHIMNEY SEAL | EACH | \$250.00 | 1 | \$250.00 |
| Net Change This Change Order | | | | | | \$28,804.00 |

**Group/funding category is required for federal aid projects



Due to this change, the contract time: (check one)

| | |
|--|---|
| <input checked="" type="checkbox"/> Is NOT changed | <input type="checkbox"/> May be revised as provided in MnDOT Specification 1806 |
| Number of Working Days Affected by this Contract Change: | Number of Calendar Days Affected by this Contract Change: |

Approved By Project Engineer: _____ Date: _____

Print Name: _____ Phone: _____

Approved By Contractor: _____ Date: _____

Print Name: _____ Phone: _____

DSAE Portion: The State of Minnesota is not a participant in this contract. Signature by the District State Aid Engineer is for **FUNDING PURPOSES ONLY** and for compliance with State and Federal Aid Rules/Policy. Eligibility does not guarantee funds will be available.

This work is eligible for: ___ Federal Funding ___ State Aid Funding ___ Local funds

District State Aid Engineer: _____ Date: _____

DIVISION 1

GENERAL REQUIREMENTS

| | |
|---|----|
| INTRODUCTION..... | 1 |
| GR - 1 SUMMARY OF WORK | 1 |
| GR - 2 WORK SEQUENCE..... | 1 |
| GR - 3 (1401) INTENT OF CONTRACT..... | 2 |
| GR - 4 (1402) CONTRACT REVISIONS..... | 2 |
| GR - 5 (1403) NOTIFICATION FOR CONTRACT REVISIONS..... | 2 |
| GR - 6 (1404) MAINTENANCE OF TRAFFIC | 2 |
| GR - 7 (1405) USE OF MATERIALS FOUND ON THE PROJECT | 3 |
| GR - 8 (1406) PRESERVATION OF HISTORICAL OBJECTS | 3 |
| GR - 9 (1407) FINAL CLEANUP | 3 |
| GR - 10 (1408) VALUE ENGINEERING INCENTIVE | 3 |
| GR - 11 (1502) PLANS AND WORKING DRAWINGS..... | 4 |
| GR - 12 (1504) COORDINATION OF CONTRACT DOCUMENTS | 5 |
| GR - 13 (1506) SUPERVISION BY CONTRACTOR..... | 6 |
| GR - 14 (1507) UTILITY PROPERTY AND SERVICE..... | 6 |
| GR - 15 (1508) CONSTRUCTION STAKES, LINE, AND GRADES | 7 |
| GR - 16 (1511) INSPECTION OF WORK | 8 |
| GR - 17 (1512) UNACCEPTABLE AND UNAUTHORIZED WORK..... | 8 |
| GR - 18 (1513) RESTRICTIONS ON MOVEMENT AND STORAGE OF HEAVY LOADS AND EQUIPMENT | 9 |
| GR - 19 (1514) MAINTENANCE DURING CONSTRUCTION | 9 |
| GR - 20 (1515) CONTROL OF HAUL ROADS | 9 |
| GR - 21 (1601) SOURCE OF SUPPLY AND QUALITY..... | 9 |
| GR - 22 (1603) MATERIALS: SPECIFICATIONS, SAMPLES, TESTS, AND ACCEPTANCE..... | 9 |
| GR - 23 (1606) STORAGE OF MATERIALS | 9 |
| GR - 24 (1607) HANDLING MATERIALS | 10 |
| GR - 25 (1608) UNACCEPTABLE MATERIALS | 10 |
| GR - 26 (1609) DEPARTMENT PROVIDED MATERIAL..... | 10 |
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DIVISION 1

GENERAL REQUIREMENTS

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DIVISION 1

GENERAL REQUIREMENTS

INTRODUCTION

These General Requirements amend or supplement Division I of the Minnesota Department of Transportation (MnDOT) Standard Specifications for Construction (2020 Edition) & the Supplemental Specifications to the 2020 Standard Specifications for Construction. With the exclusion of *Definitions and Terms, Bidding Requirements and Conditions, and Bidding Requirements and Covenants*, unless specifically stated, provisions of MnDOT Division I which are not amended or supplemented **shall not apply** to this Contract. This project will be administered by two cities, the City of Medina and the City of Corcoran.

GR - 1 SUMMARY OF WORK

The Hackamore Road Improvements Project shall include the furnishing of all labor, materials, tools, and equipment necessary to complete the street reconstruction, turn lane improvements, pedestrian improvements, signal work, storm sewer, grading, and appurtenant work as shown on the Plans and specified herein.

GR - 2 WORK SEQUENCE

The Contractor shall:

1. Perform its work in such a manner as to cause the least interference with adjoining property owners and the general public.
2. For each phase of the project, construct work in a sequence that will allow the utility work to follow immediately upon the removal of the bituminous pavement. Subgrade excavation, subgrade preparation, and placement of aggregate base shall be completed within three weeks of the completion of utility work. Curb and gutter placement, final aggregate base placement, and the first lift of bituminous pavement shall be placed within two weeks of initial aggregate base placement. All restoration work within the boulevard area shall be completed within two weeks of paving the bituminous base course.
3. Limit the area under construction at any given time to minimize the impacts to adjoining properties and limit the duration that activities will disturb residents on each street. The contractor will be limited to a **total of twenty (20) weeks** leading up to substantial completion to minimize the impacts to the adjacent property owners.
4. Specifically for the proposed improvements at CR 116, including the signal replacement and turn lane expansion, the Contractor shall limit the area under construction to a **total of six (6) weeks** leading up to substantial completion for this work. The Contractor can begin the work at the intersection concurrently with any phase as identified in the phasing and detour plans. If Hackamore Road is open to traffic, Hennepin County will only allow operation as an all-way stop for no more than **two (2) weeks**.
5. Limit the area under construction to the area(s) indicated on the phasing plan, unless approved by the Engineer. Under construction is defined as the time period from bituminous removal to placement of the initial aggregate base layer. The contractor shall complete the initial aggregate base placement in each phase, as identified in the phasing plan, prior to moving onto the next phase.

The work on CR 116 can occur concurrently with any of the other phases. Prior to removing traffic control along CR 116, bituminous paving must be complete including the wear course. The

Contractor shall limit the duration of turn lane construction along CR 116 to no more than two (2) weeks from initial bituminous removal to the completion of the bituminous paving.

6. All proposed haul roads must be approved by the Engineer. The Contractor cannot utilize newly paved streets as haul roads. Any damage to existing streets due to unapproved construction use will be repaired at the Contractor's expense.
7. Concrete curb and gutter and bituminous paving crews shall be mobilized to the project whenever a minimum of one working day, but not more than two working days, are satisfactorily prepared for their respective work.

GR - 3 (1401) INTENT OF CONTRACT

The provisions of MnDOT 1401 shall apply.

GR - 4 (1402) CONTRACT REVISIONS

The provisions of MnDOT 1402 are modified and/or supplemented with the following:

Delete Paragraph 1402.6 in its entirety.

GR - 5 (1403) NOTIFICATION FOR CONTRACT REVISIONS

The provisions of MnDOT 1403 are modified and/or supplemented with the following:

Modify the first sentence of MnDOT 1403.6 to read as follows:

If the Contractor disagrees with the Engineer's final written response or the Engineer's response is untimely, the Contractor may pursue a claim in accordance with the General Conditions, Article 12.

GR - 6 (1404) MAINTENANCE OF TRAFFIC

The provisions of MnDOT 1404 are modified and/or supplemented with the following:

Add the following new paragraph to MnDOT 1404.1:

A. Access to Properties

The Contractor shall maintain driveway access to the residents at the end of each day. Each resident must be able to drive their vehicle into the driveway. The only exception is the time after the curb and gutter is poured, and after the driveway is restored. The Contractor shall salvage aggregate or recycled bituminous from the project, or haul approved granular/aggregate material to the project site, at no additional cost to the Owner for use in ramping the driveways to maintain access. No additional compensation will be provided for phasing driveway installations (i.e., half of the driveway at one time) or using high-early concrete (curb or driveway paving) to minimize the time in which a driveway is not accessible.

The Contractor shall accommodate special access needs of the residents (medical needs, working the night shift, etc.) and provide access to driveways and roadways as required.

If access is determined to be unsuitable for individual residences by the Engineer, the Contractor shall make the necessary improvements to reestablish an acceptable access to the property.

The Contractor shall notify the Owner at least one week in advance of any daytime road closures or access restrictions.

The Contractor shall schedule or phase work as outlined in these specifications and the construction plans. If a Contractor deems this unreasonable, the Contractor shall submit a written phasing schedule and emergency response plan for inclement weather conditions for Engineer approval. Phasing plans for consideration shall limit the impact of construction to residents. Additional phasing may be required at the time of construction. No additional compensation shall be granted for any phasing changes made to the project.

The Contractor shall notify the Owner and travelling public at least one week (7 days) in advance of any daytime road closures or access restrictions. The Contractor shall create and place customized advance notice signs at ends and intersections within the Project area, incidental to the traffic control item.

GR - 7 (1405) USE OF MATERIALS FOUND ON THE PROJECT

The provisions of MnDOT 1405 shall apply.

GR - 8 (1406) PRESERVATION OF HISTORICAL OBJECTS

The provisions of MnDOT 1406 shall apply.

GR - 9 (1407) FINAL CLEANUP

The provisions of MnDOT 1407 are modified and/or supplemented with the following:

During the progress of the work, the area affected shall be kept clean and free of all rubbish and surplus materials. All unnecessary construction equipment shall be removed from the site and all damage repaired so that the public and adjacent property owners are inconvenienced as little as possible.

Where materials or debris have washed, flowed into, or have been placed in water courses, ditches, gutters, drains, catch basins, or elsewhere as a result of the Contractor's operations, such material or debris shall be removed and satisfactorily disposed of during progress of work. All ditches, channels, drains, etc. shall be kept in a clean and neat condition.

On or before the completion of work, the Contractor shall, unless otherwise directed in writing, remove all temporary works, tools and machinery, other construction equipment, or stockpiles placed by the Contractor. The Contractor shall remove all rubbish from any grounds which the Contractor occupied and shall leave all the premises and adjacent properties affected by the operation in a neat and restored condition satisfactory to the Engineer.

Street sweeping (with a pickup broom) will be required periodically. Any material deposited on streets adjacent to the project from construction or hauling operations shall be cleaned as directed by the Engineer. If the Contractor fails to clear adjacent roadways within 24 hours of notification, the Engineer shall arrange to have the roadways cleaned by the Owner and bill the Contractor \$500 per occurrence. The \$500 fee for street sweeping will be deducted from project retainage for each occurrence.

GR - 10 (1408) VALUE ENGINEERING INCENTIVE

The provision of MnDOT 1408 are modified and/or supplemented with the following:

MnDOT 1408 is deleted in its entirety and replaced with the following:

1408 VALUE ENGINEERING INCENTIVE

Value engineering provisions allow the Contractor to initiate, develop, and present cost reduction Proposals involving changes in the Contract requirements to the Owner for consideration.

Value engineering provisions only apply if the Contractor specifically submits a Proposal for consideration as a value engineering Proposal.

The cost reduction Proposals shall produce a net savings to the Contract by providing less costly items or methods than those specified in the Contract without impairing essential functions and characteristics.

The Contractor shall submit value engineering Proposals to the Engineer with the following information:

- (1) A statement that the Contractor is submitting a value engineering Proposal
- (2) A description of the Proposal
- (3) An itemization of the proposed changes to the Contract requirements and a recommendation of how to make each change
- (4) An estimate of the reduction in performance costs that will result from adoption of the Proposal
- (5) A prediction of any effect the proposed changes would have on other costs incurred by the Owner
- (6) A statement of the time by which an agreement for adoption of the Proposal must be executed to obtain the maximum cost reduction during the remainder of the Contract, and the reasoning for this time schedule
- (7) The dates of any previous submissions of the Proposal, including project Owner's name, contact information, and actions taken
- (8) A statement as to the effect the Proposal would have on the time for completion of the Contract

The Owner will not assume any liability for not meeting the statement of the time described in the Contractor's value engineering Proposal. The Contractor may withdraw, in whole or in part, any value engineering Proposal not accepted by the Owner within the period identified in the proposal.

The Owner's acceptance or rejection decision on a value engineering Proposal shall be final and the provisions of the General Conditions, Article 12 will not apply.

The Owner will notify the Contractor in writing of its decision regarding each value engineering Proposal. Until the Owner accepts the Proposal, the Contractor shall continue to perform Work in accordance with the requirements of the Contract. If the Owner accepts the Proposal, the Owner will execute a Change Order setting forth the terms, conditions, and costs of the Proposal. If the Contractor performs any Work performed in accordance with the value engineering Proposal before the execution of the Change Order, the Department will consider that "unauthorized Work" as specified in MnDOT 1512 as modified herein.

The Owner reserves the right to reject any value engineering Proposal.

The Owner will not provide an incentive payment to the Contractor as a result of any net savings from the value engineering Proposal. The Owner may include conditions for consideration, approval, and implementation of the cost reduction Proposal in the Change Order.

The Contractor shall design and develop the Proposal at no additional cost to the Owner.

After the Owner accepts the cost reduction Proposal, any restrictions imposed by the Contractor on its use or disclosure of the information submitted shall be void, and the Owner will have the right to use, duplicate, and disclose any data necessary to use the Proposal.

GR - 11 (1502) PLANS AND WORKING DRAWINGS

The provisions of MnDOT 1502 are modified and/or supplemented with the following:

Drawings provided by the Owner will include the information, as applicable to the project, in accordance with MnDOT 1502. The Owner's Standard Plates, MnDOT's Standard Plates, and MnDOT's Standard Plans may provide supplemental information.

GR - 12 (1504) COORDINATION OF CONTRACT DOCUMENTS

The provisions of MnDOT 1504 are modified and/or supplemented with the following:

Delete the second sentence of the first paragraph of MnDOT 1504 and replace with the following:

If discrepancies exist between the Contract documents, the following order of precedence applies:

1. Addenda,
2. Project Manual,
3. Project Plans,
4. Owner's General Specifications and Standard Plates (if applicable),
5. MnDOT Standard Specifications for Construction, and
6. CEAM Standard Specifications.

GR - 13 (1506) SUPERVISION BY CONTRACTOR

The provisions of MnDOT 1506 shall apply.

GR - 14 (1507) UTILITY PROPERTY AND SERVICE

The provisions of MnDOT 1507 are modified and/or supplemented with the following:

The plans show only known underground utilities, public and private, and the locations are approximate. No assurance is given that additional underground facilities do not exist. The utilities are classified as "Level D" unless the plans specifically state otherwise. This utility quality level was determined according to the guidelines of CI/ASCE 38-02, entitled "Standard Guidelines for the Collection and Depiction of Existing Subsurface Data".

State law requires the Contractor to contact Gopher State One Call (811) for utility locations before doing any underground excavation. The Contractor is responsible for ascertaining the actual location of underground utilities.

The following utility owners are known to have existing facilities that may be affected by the Work:

| | |
|----------------------|---|
| CENTERPOINT ENERGY | Paul Jacks 612-321-5077 paul.jacks@centerpointenergy.com |
| MEDIACOM | Thomas Heibel Thomas.heibel@mediacomcc.com |
| XCEL ENERGY | John Pfothenauer 763-493-1876 John.f.pfothenauer@xcelenergy.com |
| CENTURYLINK | RJ Allison (Terra Tech) 612-388--7375 rallison@terratechllc.net |
| WRIGHT HENNEPIN COOP | Bob Fenner 612-751-6989 Bfenner@whe.org |
| ARVIG | Brian Wochnick 218-298-4951 metrosop@arvig.com |
| COMCAST | McClay Lyford 651-925-6372 mcclay_lyford@comcast.com |

| | |
|------------------|--|
| CITY OF MEDINA | Steve Scherer 763-473-8842 steve.scherer@ci.medina.mn.us |
| CITY OF CORCORAN | Kevin Mattson 612-710-0705 kmattson@corcoranmn.gov |
| HENNEPIN COUNTY | Brant Kough 612-596-0339 brant.kough@hennepin.us |

All bidders are responsible for contacting the affected utilities prior to submitting the bid to determine the extent of their facilities within the project area and the scope and anticipated schedule of the facility relocation, removal, or adjustment. The Xcel overhead lines/poles on the south side of Hackamore Road will require relocation. Other utility owners such as CenterPoint Energy, Mediacom, Century Link, Wright Hennepin Coop, Arvig, Zayo, and Comcast are planning a joint trench project on the north side of Hackamore Road.

Prior to commencing construction, the Contractor shall check all existing manholes, catch basins, gate valve boxes, stop boxes, culverts, and storm sewer lines in the construction zones to determine their condition. Failure to report deficiencies in writing, and have such deficiencies acknowledged in writing by the Engineer, will be cause for any required repairs and/or cleaning to be charged to this Contractor.

The Contractor shall coordinate schedules with the work schedules of the utility owners present within the project limits to avoid delays. The location, protection, maintenance and/or repair, if damaged, of all in-place utilities shall be the responsibility of the Contractor.

The Contractor must provide a safe Work place for personnel and the utilities, including the payment of any fee charged by the utility for preparing a safe Work area for the Contractor.

Where construction operations require the interruption of service of a utility, the Contractor shall notify the utility at least 48 hours before the interruption and shall advise the utility of the probable time when the service will be restored.

GR - 15 (1508) CONSTRUCTION STAKES, LINE, AND GRADES

MnDOT 1508 is deleted in its entirety and replaced with the following:

1508 CONSTRUCTION STAKES, LINE AND GRADES

The Contractor shall furnish sufficient staking supplies to adequately stake the requirements of the project; these supplies specifically being 1"x2"x8" wood hubs and 36" pointed wood lath. The Engineer will pick up and provide storage for the supplies throughout the life of the contract. The Contractor shall compensate for the supplies through a store charge account at Engineer's preferred vendor; Contractor shall confirm with Engineer prior to project start for preferred vendor locations. Contractor will have charge account established prior to the Notice to Proceed being issued. **Charge Account estimates for this project is \$3500.00.**

The Engineer will provide horizontal and vertical control construction staking as follows:

1. Offset stakes placed at 25-foot intervals for the first 100 feet out of each manhole, then 100-foot intervals thereafter for sanitary or storm sewer, with a cut sheet indicating horizontal and vertical distances from the stake to the pipe invert.
2. Offset stakes placed at 50-foot intervals, including changes in direction and appurtenances for watermain construction.

3. Curb and Gutter: 3-foot offset stakes placed at 25-foot intervals with a cut sheet indicating a cut/fill to the proposed top of curb.
4. Reference hubs (blue tops) at approximately 100-foot intervals at a measured distance either side of centerline, including cut or fill instructions for subgrade and/or gravel base.

Construction stakes will not be placed by the Owner until a written request is received from the Contractor giving the Engineer 48 hours' notice, describing where and when the Contractor wants the construction stakes placed for the next week's construction.

The Contractor shall preserve all stakes and marks. If the Contractor carelessly or willfully destroys or disturbs any of the field control stakes or marks, the Engineer will deduct the Owner's cost for replacing the damaged stakes or marks from the payment for the Work.

The Engineer shall have the right to order the Contractor to have construction stakes replaced if the Engineer determines that a significant number of stakes have been destroyed.

The Contractor shall not rely solely upon the construction stakes and shall fully review the Contract Documents along with the construction stakes. The Contractor shall notify the Engineer of any discrepancies between the Contract Documents and the construction stakes. The Contractor shall not knowingly take advantage of any such discrepancies.

The Contractor is fully responsible for all measurements made from any offset construction stake or measurements made from any stakes and marks established by the Engineer.

No additional compensation shall be allowed the Contractor for any claims of crews being held up because of lack of line and grade stakes.

GR - 16 (1511) INSPECTION OF WORK

The provisions of MnDOT 1511 are modified and/or supplemented with the following:

Any person representing Federal or State agencies, the Engineer, or Owner shall have the right of entry to inspect the Work being performed by the Contractor. If the case warrants, the Contractor shall provide proper facilities for such access and inspection.

The Contractor shall notify the Engineer anytime they anticipate working on this project. No work will be allowed without notifying the Engineer a minimum of 24 hours beforehand.

GR - 17 (1512) UNACCEPTABLE AND UNAUTHORIZED WORK

The provisions of MnDOT 1512 are modified and/or supplemented with the following:

MnDOT 1512.1 is deleted in its entirety and replaced with the following:

1512.1 UNACCEPTABLE WORK

The Owner will consider all Work and Materials that do not meet the Contract requirements, or do not meet generally accepted industry standards if the Contract does not provide specific standards, to be unacceptable.

Unacceptable Work resulting from poor workmanship, use of nonconforming Materials, damage through carelessness, or any other cause existing before final acceptance of the Work shall be handled in the same manner as Defective Work, in accordance with Article 14 of the General Conditions.

GR - 18 (1513) RESTRICTIONS ON MOVEMENT AND STORAGE OF HEAVY LOADS AND EQUIPMENT

The provisions of MnDOT 1513 are modified and/or supplemented with the following:

The Contractor shall limit the roadways utilized for delivery of equipment and for hauling operations.

The Contractor shall provide and use only rubber tire dozers, front end loaders, and other necessary equipment on all work where street pavements or portions of pavements are undisturbed for the protection of the pavements or in such locations as the Engineer may direct.

No compensation will be allowed to the Contractor for replacement of damaged utilities and resurfacing or replacing damaged pavements.

GR - 19 (1514) MAINTENANCE DURING CONSTRUCTION

The provisions of MnDOT 1514 shall apply.

GR - 20 (1515) CONTROL OF HAUL ROADS

The provisions of MnDOT 1515 shall apply.

GR - 21 (1601) SOURCE OF SUPPLY AND QUALITY

The provisions of MnDOT 1601 shall apply.

GR - 22 (1603) MATERIALS: SPECIFICATIONS, SAMPLES, TESTS, AND ACCEPTANCE

The provisions of MnDOT 1603 are modified and/or supplemented with the following:

Delete the last sentence of the first paragraph of MnDOT 1603.2 and replace with the following:

MnDOT's 2022 SALT Schedule of Materials Control – Local Government Agency will be followed on this project. Initial testing of materials and/or densities, in accordance with the requirements below, will be paid for by the Owner. Any retesting due to failures shall be at the expense of the Contractor. The schedule of Materials Control is available online: https://edocs-public.dot.state.mn.us/edocs_public/DMResultSet/download?docId=19624483.

Add the following new paragraph to MnDOT 1603.2:

Copies of all test results, either passing or failing, shall be provided to the Observer, Owner, and Engineer. Failing test results shall be retested to confirm compliance with the project specifications.

GR - 23 (1606) STORAGE OF MATERIALS

The provisions of MnDOT 1606 are modified and/or supplemented with the following:

The Contractor may have the opportunity to utilize property along the Hackamore Road corridor for staging and storage of materials, specifically the property located on the north side of Hackamore Road roughly 1,000 feet east of CR 116. The property is owned by Lakeview Development Company, LLC and the Contractor must work directly with the owner to secure access and an agreement for use. The Contractor is responsible for erosion control, restoration, and returning the property to a like condition prior to use, incidental to the project.

Any disturbed area shall be cleaned up and fully restored to the pre-existing condition prior to closing out this project. The Contractor shall be required to install protective fencing and silt fence around the storage area. The protection, cleanup, and restoration of the project storage area shall be the Contractor's responsibility; no compensation will be made for this work. It is anticipated that all work, including stockpiling of materials, will be completed within the roadway right-of-way.

GR - 24 (1607) HANDLING MATERIALS

The provisions of MnDOT 1607 shall apply.

GR - 25 (1608) UNACCEPTABLE MATERIALS

The provisions of MnDOT 1608 shall apply.

GR - 26 (1609) DEPARTMENT PROVIDED MATERIAL

The provisions of MnDOT 1609 shall apply.

GR - 27 (1701) LAWS TO BE OBSERVED

The provisions of MnDOT 1701 are modified and/or supplemented with the following:

The Contractor shall not discriminate against prospective employees because of age, race, color, sex, creed, religion, nationality, or disability.

Delete MnDOT 1701.2 in its entirety and replace with the following:

1701.2 WORKER CONDUCT

The Owner intends to provide a workplace free of violence, threats of violence, harassment, and discrimination. The Owner has zero tolerance for violence in the workplace. Contractors shall maintain a workplace free of violence, harassment, and discrimination. The Contractor must immediately remove from the Project any employee of the Contractor or a Subcontractor in violation of these requirements.

Delete MnDOT 1701.3 in its entirety.

Delete MnDOT 1701.5 in its entirety and replace with the following:

1701.5 PROMPT PAYMENT AND RETAINAGE

A. Prompt payment of Subcontractors is required by MINN. STAT. 471.425.

The Contractor must pay a Subcontractor no later than ten days after receiving payment from the Owner for undisputed Work provided by that Subcontractor. If the Contractor fails to pay a Subcontractor on time, then the Contractor must pay interest, at the rate of 1.5 percent per month or any part of a month, to the Subcontractor on the undisputed amount not paid on time. For an unpaid amount under \$100, the Contractor must pay the actual interest penalty (calculated at 1.5 percent per month) or \$10, whichever is greater.

MINN. STAT. 471.425, subdivision 4a. also provides that a Subcontractor who prevails in a civil action to collect interest penalties from a prime Contractor must be awarded its costs and disbursements, including attorney's fees, incurred in bringing the action.

B. Payment of retainage is governed by MINN. STAT. 337.10, and 15.72.

The Contractor may not withhold more than 5 percent in retainage from a Subcontractor, as provided by MINN. STAT. 337.10 subdivision 4(b). The Contractor must pay any retainage no later than 10 Calendar Days after the Contractor receives payment of retainage from the Owner, unless there is a dispute about the Work under a subcontract. If there is a dispute about the Work under a subcontract, the Contractor must pay out retainage to any Subcontractor whose Work is not involved in the dispute and must provide a written statement detailing the amount and reason for the withholding to the affected Subcontractor.

GR - 28 (1702) PERMITS, LICENSES, AND TAXES

The provisions of MnDOT 1702 are modified and/or supplemented with the following:

The following permits will be acquired by the Owner (except as noted). The Contractor is required to follow the provisions of all permits:

Minnesota Pollution Control Agency (MPCA):

This Contract requires a Construction Stormwater General Permit (CSG Permit) administered by the MPCA. The Contractor shall become a co-permittee with the Owner to ensure compliance with the State of Minnesota Construction Stormwater General Permit (MNR100001), which is part of the National Pollutant Discharge Elimination System (NPDES) and the State Disposal System (SDS) Program. This permit establishes conditions for discharging storm water to waters of the State from construction activity disturbing one or more acres of total land area.

By completing the online CSG Permit application, the Contractor must ensure compliance with the terms and conditions of the permit that reference the “operator.”

The Contractor shall cooperate with the Owner to implement a fully-documented inspection and maintenance program for all temporary erosion and sediment control measures as required by the Permit.

Hennepin County:

A Right-of-Way Permit for work within County right-of-way (County Highway 116 & 101) will be required. The permit shall be obtained by the Owner. The Contractor is responsible for registering with Hennepin County and following permit requirements.

Minnesota Department of Natural Resources (DNR):

The Contractor shall acquire a DNR Water Appropriations permit if any dewatering becomes necessary.

GR - 29 (1705) FEDERAL-AID PROVISIONS

The provisions of MnDOT 1705 shall apply only for Federally funded projects.

GR - 30 (1706) EMPLOYEE HEALTH AND WELFARE

The provisions of MnDOT 1706 are modified and/or supplemented with the following:

The Contractor, at their own expense, shall provide and maintain temporary toilet facilities at the site during the construction period sufficient for the scheduled workforce. The Contractor and Engineer shall agree to the location of the temporary toilet facilities.

The Contractor must not use motor vehicle Equipment that has an obstructed rear view unless the vehicle has a reverse alarm that is audible above the surrounding noise level; or an observer signals to the operator that it is safe to reverse.

Areas of special concern include, but are not limited to, excavation stability protection, fall protection, protection from overhead hazards, vehicle backup protection, confined space safety, blasting operations, and personal safety devices.

GR - 31 (1707) PUBLIC CONVENIENCE AND SAFETY

The provisions of MnDOT 1707 are modified and/or supplemented with the following:

Regular working hours will be from 7:00 a.m. to 8:00 p.m., Monday through Friday; and 8:00 a.m. to 5:00 p.m. on Saturday. The Contractor shall not be permitted to work on Sundays or holidays, except in the case of emergencies. Requests for modification of working hours must be approved by the Owner. The Contractor shall submit all requests in writing to the Engineer. The Contractor shall structure the proposed project schedule based on the stated working hours.

The Contractor shall comply with local and state ordinances on noise abatement. All equipment shall have effective mufflers on engine exhaust systems.

The Contractor shall be required to accommodate garbage collection while the project is under construction. Coordination shall include contact with the garbage companies service the area and maintaining access to the individual residences. If the Contractor fails to accommodate garbage collection, the Contractor shall contract independently to have the garbage removed at no cost to the Owner.

The Contractor shall provide any barricades, fences or other means of protection necessary to properly execute the work and adequately protect its employees, employees of the Owner, employees of the Engineer, and members of the public according to federal, state, and local regulators. All utility trenches shall be backfilled at the end of each working day to the satisfaction of the Engineer.

All labor and materials necessary to comply with these provisions are incidental, and no payment shall be made.

The Contractor shall ensure that employees and Subcontractors do not display items such as, but not limited to, flags, banners, and symbols on the Project Site, that may disrupt the proper prosecution of the Work, impede public safety, or create a distraction for the traveling public.

GR - 32 (1708) RAILROAD HIGHWAY PROVISIONS

The provisions of MnDOT 1708 shall apply.

GR - 33 (1709) NAVIGABLE WATERWAYS

The provisions of MnDOT 1709 shall apply.

GR - 34 (1710) TRAFFIC CONTROL DEVICES

The provisions of MnDOT 1710 shall apply.

GR - 35 (1711) USE OF EXPLOSIVES

The provisions of MnDOT 1711 shall apply.

GR - 36 (1712) PROTECTION AND RESTORATION OF PROPERTY

The provisions of MnDOT 1712 are modified and/or supplemented with the following:

The Contractor shall protect, and/or remove and reinstall all fences, street signs, retaining walls, and other items required to construct the proposed improvements. Work associated with protecting, and/or removing and reinstalling fences, street signs, lawn irrigation systems, and other items shall be considered incidental to the project unless specific bid items are included.

The Contractor shall take whatever steps necessary to protect adjoining properties and structures from hazards due to performance of the work. The Contractor is responsible for any and all damage to properties and structures that occur as a result of the Contractor's operations.

The street and utility construction may occur in close proximity to a number of existing structures. The Contractor shall use shoring or other means as necessary to ensure that those structures are protected during construction.

Existing residences may not be of modern construction and are thus sensitive to vibrating equipment. The Contractor shall take care when utilizing vibratory equipment to avoid damage to adjoining structures. Damage to structures resulting from the use of vibratory equipment are the responsibility of the Contractor. In the event of a complaint or perceived problem, a seismograph will be required to be provided at the Contractor's expense.

All labor and materials necessary to comply with the provisions of this section are incidental, and no payment shall be made.

Delete Paragraph MnDOT 1712.1.A in its entirety and replace with the following:

A. Monuments

The Contractor shall preserve all land and property corner monuments, Right-of-way monuments, and vertical and horizontal control point monuments in the vicinity of the Work. The Owner will mark all such monuments the Owner is aware of prior to construction. The Contractor shall notify the Engineer of any monument, whether the Owner has marked them or not, which the Contractor may disturb, in sufficient time to allow the Engineer to establish ties to the corner. The replacement of monuments removed by the Contractor shall be completed by the Owner at the Contractor's expense.

GR - 37 (1713) FOREST PROTECTION

The provisions of MnDOT 1713 shall apply.

GR - 38 (1716) CONTRACTOR'S RESPONSIBILITY FOR WORK

The provisions of MnDOT 1716 are modified and/or supplemented with the following:

The Contractor shall guarantee and maintain the stability of all work, equipment and materials for a period of two years from the date of Notice of Acceptability of Work. The Contractor shall provide as part of the contract security a separate two-year maintenance bond to be dated to begin the date of Notice of Acceptability of Work. The provisions of this paragraph shall not be construed as restricting Contractor's liability for breach of contract by reason of non-conformance with the specification for defects or faulty workmanship.

GR - 39 (1717) AIR, LAND, AND WATER POLLUTION

The provisions of MnDOT 1717 are modified and/or supplemented with the following:

Pollution of natural resources of air, land, and water by operations under this Contract shall be prevented, controlled, and abated in accordance with the rules, regulations, and standards adopted and established by the Minnesota Pollution Control Agency (MPCA) and MnDOT 1717, 2573 and 2575.

Add the following requirements to MnDOT 1717.1.D:

The Contractor shall be responsible for dust control.

Water for construction purposes may be obtained from the City of Medina at 600 Clydesdale Trail (City Public Works Building). The Contractor shall make suitable arrangements with the Public Works Department for the location where water may be obtained. The City will not charge for reasonable amounts of water used for dust control or turf establishment if the Contractor fills at the City's public works garage but reserves the right to charge the cost of any water which is used over these requirements, such cost to be charged against the project. Contact the Director of Public Works for current water rates; no deposit will be required to obtain a meter. The City must be notified forty-eight (48) hours in advance of any water usage.

Add the following requirements to MnDOT 1717.2:

D. MPCA Construction Storm Water Permit

By signing the Proposal and completing the electronic online NPDES CSW permit, the Contractor is a co-permittee with the Owner and must ensure compliance with the terms and conditions of the Construction General Storm Water Permit (MN R100001). The Contractor is responsible for those portions of the permit referencing the "operator". This permit establishes conditions for discharging storm water to waters of the State from construction activities that disturb one acre or more of total land area. A copy of the permit is available at <https://www.pca.state.mn.us/water/construction-stormwater>, or by calling (651) 296-3890. The Owner will apply and pay for the NPDES Permit on this Project.

The Contractor is not authorized to perform any Project Work which disturbs soil or which involves Work in waters of the State until the Permit is in effect and the Owner has received the required documentation.

Contractor must provide an Erosion Control Supervisor as per MnDOT 2573.3. The Contractor is solely responsible for all inspections, maintenance, and records required in Section 11 of the General Permit. Immediately notify the Engineer of site visits by Local Permitting Authorities performed in accordance with Section 24.10 of the Permit. The Contractor must obtain the Engineer's approval before starting any Work required by regulatory authorities which (1) the Contractor believes will result in additional compensation from the Owner; or (2) will impact the design or requirements of the Contract documents or impact traffic.

The Contractor must use Best Management Practices to help minimize turbidity of surface waters and relieve runoff from extreme weather events. The Contractor must report a stormwater sediment release from the Project Site to the Minnesota Duty Office (1-800-422-0798) at the time the Contractor or Owner discovers the release. The Contractor must also immediately contact the Minnesota Duty Officer during any emergency situation involving an uncontrolled stormwater release.

Erosion control shall be placed and maintained by the Contractor as directed by the Engineer. The Contractor shall use the appropriate means of control for individual situations. The erosion control types may include but are not limited to silt fence, fiber blanket, rock construction entrances, diversion ditches, and catch basin inlet protection, all of which will be considered incidental to the project cost unless a bid item is provided in the Bid Form. Failure to maintain the erosion control will be sufficient cause to withhold further payments on the project until the maintenance is complete.

The erosion control measures for the project have been identified in the plan set and the NPDES Stormwater Pollution Prevention Plan (SWPPP); however, modifications can be made depending on actual site conditions.

Emergency Best Management Practices must be enacted to help minimize turbidity of surface waters and relieve runoff from extreme weather events.

Prior to final acceptance of the project or the end of the warranty period, as applicable, the Contractor shall remove all erosion control items.

GR - 40 (1801) SUBLETTING OF CONTRACT

The provisions of MnDOT 1801 are modified and/or supplemented with the following:

Modify the first sentence of the second to the last paragraph of MnDOT 1801 to read as follows:

The Contractor must ensure that the subcontracts at least contain the following (if required by the Contract):

GR - 41 (1802) QUALIFICATIONS OF WORKERS

The provisions of MnDOT 1802 shall apply.

GR - 42 (1804) PROSECUTION OF WORK

The provisions of MnDOT 1804 are modified and/or supplemented with the following:

Delete the first sentence of the first paragraph of MnDOT 1804.1.

Delete the third and fourth paragraphs of MnDOT 1804.1 and replace with the following:

Should the Contractor fail to maintain satisfactory progress, the Engineer will require that the Contractor provide additional resources (e.g., labor, Materials, Equipment) as necessary to bring the Work up to the level of progress required in the current accepted Progress Schedule to ensure completion of the Work within the time(s) specified in the Contract.

GR - 43 (1805) METHODS AND EQUIPMENT

The provisions of MnDOT 1805 shall apply.

GR - 44 (1806) DETERMINATION AND EXTENSION OF CONTRACT TIME

The provisions of MnDOT 1806.1 are deleted in their entirety and replaced with the following:

1806.1 GENERAL

The Contractor shall prosecute the Work continuously and effectively, with the least possible delay, to the end that all Work is completed within the Contract Time.

If the Owner grants an extension of the Contract Time, the extended time for completion will be in full force and effect as though it was originally specified.

The Notice to Proceed is anticipated to be issued by the Owner in **June 2023**. The exact date of issuance will be determined based on the Contractor's schedule. Construction shall start within seven days of receiving the Notice to Proceed.

Limit the area under construction to a total of **twenty (20)** weeks leading up to substantial completion. The Work will be substantially completed on or before **November 3, 2023**.

Substantial completion includes storm sewer installation, placement of the base course(s) of bituminous pavement (Hackamore Road), sidewalk, pedestrian ramps, driveway/trail pavement, signage, temporary striping (Hackamore Road), initial placement of sod/seeding, restoration, and cleanup. Substantial completion as it pertains to the work along CR 116 shall also include the signal system installation, full depth paving, and final striping. Initial placement of sod (or other turf establishment products if applicable) shall occur by the substantial completion date, but the required maintenance may extend beyond that date in accordance with the plans and specifications. The final lift of bituminous cannot be placed on Hackamore Road until after one freeze-thaw cycle, but shall be placed before **June 14, 2024**, unless specifically directed by the Engineer.

The Work will be ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **June 28, 2024**. Final completion includes full turf establishment (completion of maintenance period and acceptance by City), final striping, resolving all punch list items, and any remaining cleanup.

The project schedule has been set to accommodate sufficient time for private utility relocation and weather delays. It is the Contractor's responsibility to complete the project within the assigned schedule. No extension of time will be granted for weather conditions typical to the time of year the work is undertaken.

Provide 48-hour notice prior to installing traffic control signs. The Contractor shall schedule work to occur continuously to avoid delays. The Contractor shall coordinate schedules with all utility owners within the project limits.

Delete MnDOT 1806.2 in its entirety.

GR - 45 (1807) FAILURE TO COMPLETE THE WORK ON TIME

The provisions of MnDOT 1807 are modified and/or supplemented with the following:

Contractor and Owner recognize that time is of the essence and that the Owner will suffer financial loss and other losses if the work is not completed within the times specified by the Owner, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay the Owner as follows:

- The liquidated damages shall be in accordance with Table 1807-1 Schedule of Liquidated Damages for all stated completion dates, as well as any intermediate completion dates.

Liquidated damages will accrue during the period beginning November 6, 2023 and continuing until the bituminous base course, temporary striping, and signage has been placed according to the stipulated schedule for substantial and final completion. In the spring of 2024, liquidated damages will accrue during the period from July 1, 2024 on, if the bituminous wear course and final striping has not been placed according to the stipulated scheduled final completion.

GR - 46 (1901) MEASUREMENT OF QUANTITIES

The provisions of MnDOT 1901 shall apply.

GR - 47 (1902) SCOPE OF PAYMENT

The provisions of MnDOT 1902 are modified and/or supplemented with the following:

Modify the second sentence of MnDOT 1902 to read as follows:

This includes compensation for all risk, loss, damage, and expense incurred by the Contractor for performing the Work required by the Contract subject to the General Conditions.

GR - 48 (1903) COMPENSATION FOR ALTERED QUANTITIES

The provisions of MnDOT 1903 are modified and/or supplemented with the following:

The Owner reserves the right to reduce certain quantities or delete certain items from each section of the bids as the Owner sees fit, either before or after the Award of Contract.

There will be no additional compensation due to remobilization of equipment as necessary to complete punch list items or other items not completed by the Contractor.

There will be no additional compensation due to restocking charges for materials not used on the project.

GR - 49 (1908) FINAL ESTIMATE AND PAYMENT – CONDITIONS AND PROCESS

MnDOT 1908 is deleted in its entirety and replaced with the following:

1908 FINAL ESTIMATE AND PAYMENT – CONDITIONS AND PROCESS

Absent complete and legally effective releases or waivers of all Lien rights arising out of the Work, and of Liens filed in connection with the Work, the Owner may retain out of any monies due said Contractor sums sufficient to cover all unpaid liens/claims.

The Owner cannot make final payment to the Contractor until the Contractor demonstrates that it and all its Subcontractors have complied with the Income Tax withholding requirements of Minnesota Statutes, section 290.92 for wages paid for Work performed under the Contract. To establish compliance, the Contractor must submit a “Contractor Affidavit” either online or in paper form (IC134) to the Minnesota Department of Revenue. The Contractor will receive written certification of compliance when the Department of Revenue determines that all withholding tax returns have been filed and all withholding taxes attributable to the Work performed on the Contract have been paid. The Contractor must then provide this written certification to the Owner to receive final payment.

Every Subcontractor working on the Project must submit an approved “Contractor Affidavit” from the Minnesota Department of Revenue to the Contractor before the Contractor can file its own Contractor Affidavit. The Contractor is advised to obtain the certification from each Subcontractor as soon as the Subcontractor completes Work on the Project. Experience has shown that waiting until the Project is complete to obtain the forms from all Subcontractors is likely to result in significant additional Work for the Contractor as it will be difficult or impossible to collect all forms.

The Department of Revenue, in association with the Department of Employment and Economic Development, offers a free seminar to help contractors understand tax law requirements. The Department strongly urges the Contractor and all Subcontractors to attend the “Employment Taxes & Employer Responsibilities Seminar” or similarly offered classes. You can find a schedule and more information on the Department’s website at: https://www.revenue.state.mn.us/sites/default/files/2022-12/employment%20taxes%20seminar%20flyer_22.pdf.

Complying with this requirement is considered part of the Work under this Contract. The Department will enforce this requirement equally with all other Contract requirements. Contractor delay in complying with this requirement will cause the Department to delay final payment and Contract Acceptance. The Department may also report non-compliance to the Department of Revenue, which may result in enforcement action by the Department of Revenue.

Contractor Affidavit requirements and Form IC134 can be found here:
<https://www.revenue.state.mn.us/contractor-affidavit-requirements>.

GR - 50 (1910) COST ESCALATION

The provisions of MnDOT 1910 shall apply.

STAFF REPORT

Agenda Item 7i.

| | |
|---|--|
| City Council Meeting: July 27, 2023 | Prepared By: Natalie Davis McKeown |
| Topic: Heidecker Garage CUP Conditional Home Occupation License IUP (PID 22-119-23-42-0009) (City File No. 23-009) | Action Required: Approval |

1. Application Request

Tyler Heidecker, the applicant, requests approval of an Interim Use Permit (IUP) for a Conditional Home Occupation License (CHOL) and a conditional use permit to exceed building sidewall height for his property at 7985 Eagle Ridge Rd. He will build the new accessory building for the primary purpose of storing materials related to his home remodeling business. There will be times where the structure will be used for woodworking activities (e.g., cabinet making) related to the business.



Figure 1 Site Location

2. Planning Commission Review

The Planning Commission held a public hearing on this item on July 6, 2023. No public comments were received. The Commission unanimously (5-0) recommended approval with removal of the condition that the building plans needed to be updated to label the building materials as this information was provided in an alternative format by the applicant.

3. Context

Zoning and Land Use

The proposed property is guided for existing residential and zoned UR (Urban Reserve). The property has an existing single-family home with an attached garage. The property is within the Metropolitan Urban Service Area (MUSA) and Phase 4 of the 2040 Staging Plan.

Surrounding Properties

The guiding, zoning, and existing use of the surrounding properties are detailed in the table below. All surrounding properties are within the MUSA.

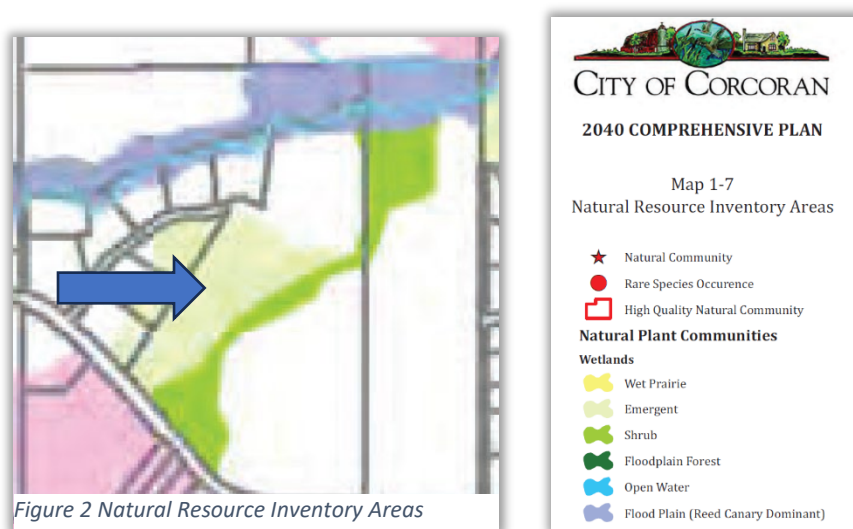
| Direction | Guided | Zoning District | Use | Staging Phase |
|-----------|-------------------------|-----------------|-------------|---------------|
| North | Low Density Residential | UR | Agriculture | Phase 4 |
| East | Low Density Residential | UR | Agriculture | Phase 4 |
| South | Low Density Residential | UR | Agriculture | Phase 4 |
| West | Existing Residential | UR | Residential | Phase 4 |

Natural Characteristics of the Site

The 2040 Comprehensive Plan’s Natural Resource Inventory Areas map shows a Reed Canary Dominant Flood Plain along the rear property line that follows a stream in the area. The natural community is not indicated high-quality on the map. The property contains a portion of a larger wetland complex in the rear yard, but it was determined the proposed location of the structure will not affect this larger complex. A partial wetland delineation was completed for the proposed project area in the front yard of the property. It was determined there is an incidental wetland (i.e., roadside ditch) in the southwest corner of the study area. Due to the incidental nature, this area would not be subject to wetland regulations.

4. Analysis

Planning staff coordinated review of the request for consistency with the Comprehensive Plan, Zoning Ordinance, City Code requirements, and City policies. The



City Engineer's comments are incorporated into this staff report, the detailed comments are included in the attached engineering memo and the approval conditions require compliance with the memo.

The City's discretion in approving or denying an IUP or CUP is limited to whether the proposed request meets the standards outlined in the City Code. If it meets these standards, the City must approve the permit(s).

I. Accessory Structure CUP

The applicant proposes to construct a detached garage of 1,770 square feet within their front yard on a 2.9-acre parcel. This is a revision to the original request for a building of 1,750 square feet. The site plan has not yet been updated to reflect the new footprint, but the applicant did submit revised building plans prior to the public hearing. A condition of approval in the resolution is for the site plan and grading plan to be updated to reflect the revised building footprint.

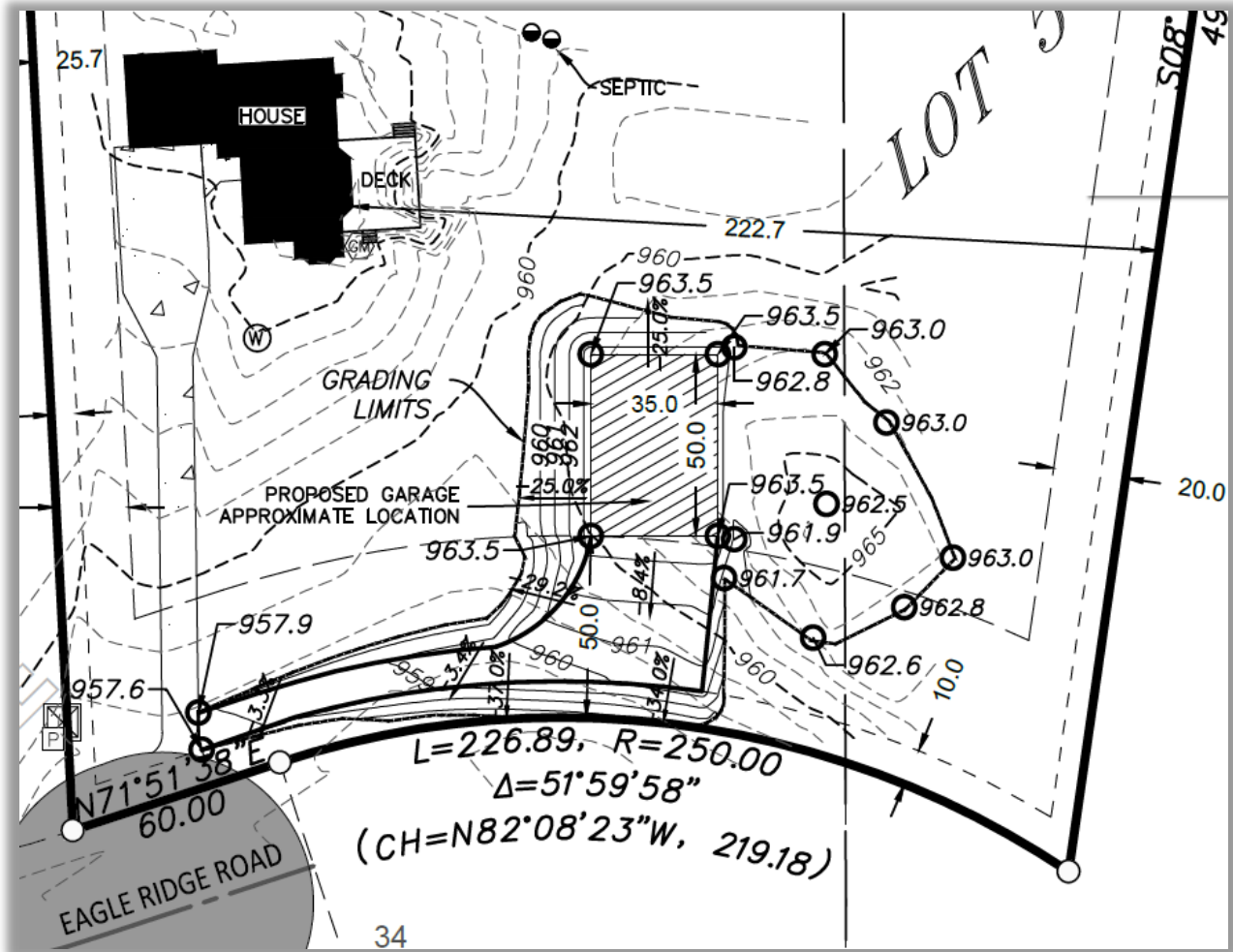


Figure 3 Site Plan

Location and Setbacks

The structure is proposed to be placed in the front yard. This is allowed in the UR district. The structure exceeds the 10' minimum separation from the residence. The structure is closest to the front property line to the south where a 50' setback is required. The structure meets the front setback requirement and far exceeds the side and rear setbacks (20' and 15' respectively).

Size

Section 1030.020 of the Zoning Ordinance allows an accessory building footprint of 1,781 square feet for a lot of this size. There is a temporary structure on the property that is currently being used to store materials and equipment. Temporary structures are not permitted by City Code. There is a condition of approval that the temporary structure be removed. The applicant would still be allowed one additional detached structure not to exceed 200 square feet, but no other structures will be approved as it would most likely exceed the allowed footprint.

Building Height

The building is located in the front yard and is limited to a maximum sidewall height of 10'. To accommodate the garage door necessary to fit the applicant's work equipment, a sidewall height of 13.85' is proposed for the garage which can be granted through a CUP. The building does not exceed the 35' height limit for the district.

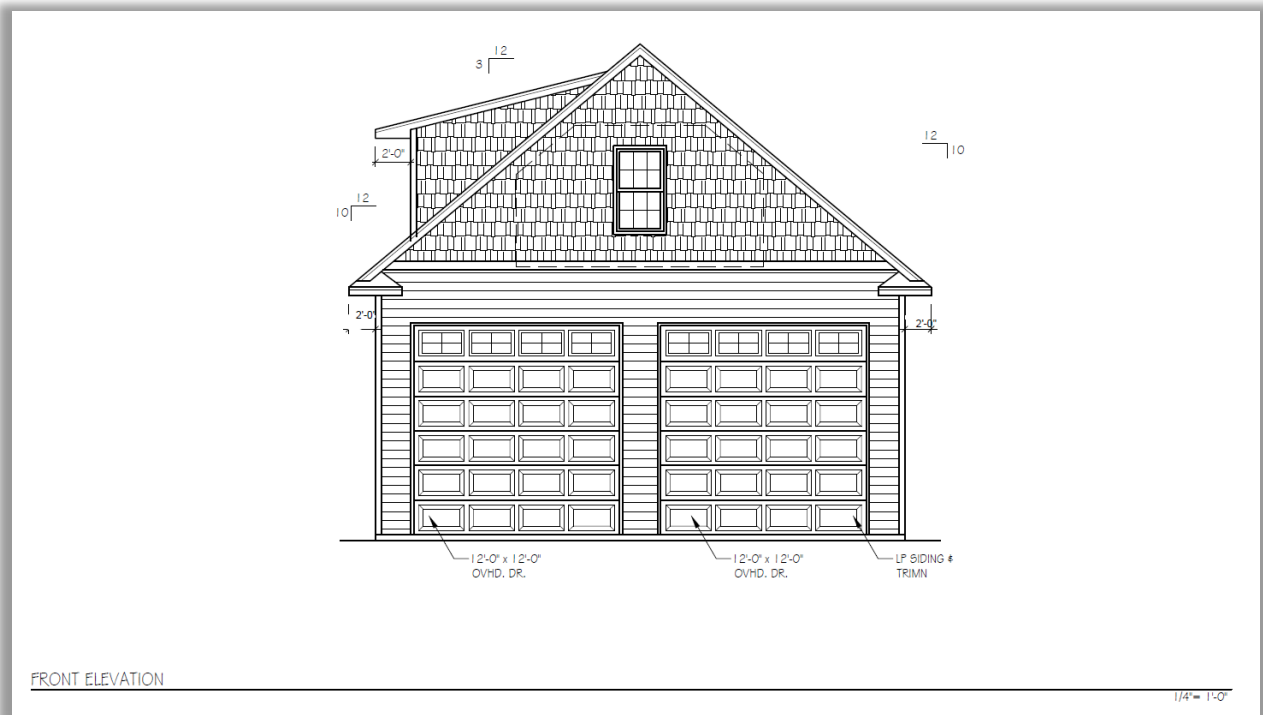


Figure 4 Front Building Elevation

Architectural Standards

The building plans show two dormers on the west elevation of the roof. These are intended to provide interest to the building and light to the storage space on the upper level of the structure. The revised building plans show an exterior staircase for external access to the storage space on the second level.

The building plans indicate the use of LP siding and trim, and the applicant confirmed his intention to use upgraded asphalt/architectural shingles. The color scheme of the siding and roof will utilize neutral brown tones.

The Zoning Ordinance requires eaves (i.e., the underside or soffits on the side) of at least 12" and overhangs (i.e., the edge extending over the front and rear elevations) of at least 24". The plans show eaves and overhangs of 24". This standard is satisfied.

Grading and Drainage

The Engineering Memo notes that the current grading plans appears to block drainage from Eagle Ridge Road. This will need to be corrected to allow flow from an Eagle Ridge Road. This may require a culvert. A condition of approval is for the plans to be revised for review and approval by the City Engineer. Additionally, the grading and drainage details must be revised to reflect the new requested footprint of 1,770 square feet. This is addressed as a condition of approval in the resolution.

Conditional Use Permit Standards

The applicant requests a CUP to exceed the maximum sidewall height as allowed by Section 1030.020, Subd. 5(D). This provision in City Code allows any building to exceed the allowable building height with a CUP. In order to grant a CUP, the following standards must be met:

1. *The proposed use shall be in conformance with all City regulations.*

The proposed use is generally in conformance with the City regulations. The building meets setbacks, footprint, and architectural requirements. The taller building sidewall is required to accommodate the applicant's business equipment.

2. *A certificate of survey shall be required that identifies all existing structures on site, including buildings, septic sites, and wells. In addition, the survey shall include the proposed structure, flood plain, wetlands, and any recorded easements.*

The applicant submitted a certificate of survey and site plan that show the required features. The site plan must be updated to reflect the revised footprint of 1,770 square feet which is handled as a condition of approval.

3. *Applicable criteria as outlined in Section 1070.020 (Conditional Use Permits) of the Corcoran Zoning Ordinance.*

Staff finds that the taller building height would comply with the standards as follows:

- a. *Compliance with and effect upon the Comprehensive Plan, including public facilities and capital improvement plans.*

The proposed taller building would have no impact on the Comprehensive Plan.

- b. *The establishment, maintenance, or operation of the conditional use will promote and enhance the general public welfare and will not be detrimental to or endanger the public health, safety, morals, or comfort.*

The CUP for the taller building would not be detrimental to or endanger the public health, safety, morals, or comfort of the surrounding neighborhood. The building would be below the 35' maximum building height allowed for principal buildings in this district. The building would meet or exceed all setback requirements for the district.

- c. *The conditional use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood.*

Assuming the recommended conditions of approval are adopted, staff does not find reason to believe the CUP for the taller building would be injurious to the use and enjoyment of the surrounding properties for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood. The proposed building is below the 35' maximum building height allowed for principal buildings in this district and meets or exceeds all required setbacks.

- d. *The establishment of the conditional use will not impede the normal and orderly development and improvement of surrounding property for uses permitted in the district.*

The surrounding properties are used for a mix of residential and agricultural uses. The proposed building does not preclude improvement or further development of the surrounding properties.

- e. *Adequate public facilities and services are available or can be reasonably provided to accommodate the proposed use.*

Adequate public facilities are available to accommodate the proposed use. The taller building will not impact the demand for services.

- f. The conditional use shall, in all other respects, conform to the applicable regulations of the district in which it is located.*

If the CUP and IUP are approved with the conditions of approval as recommended by staff, the use will comply with the UR district regulations.

- g. The conditional use and site conform to performance standards as specified by this Chapter.*

The bonus room shown on the 2nd floor of the plans could be used as living space, but the structure has not been reviewed against the accessory dwelling unit (ADU) performance standards. For this reason, a condition of approval is included in the draft resolution prohibiting the use of this space as living space unless an ADU administrative permit is requested and granted. The applicant shared his intent is to use this space is for storage of materials and occasional woodworking. If the CUP and IUP are approved with the conditions of approval as recommended by staff, the use will comply with all applicable performance standards for accessory structures.

- 4. The building materials standards required by this Section have been met.*

As noted previously, the building plans indicate the use of LP siding, and the applicant provided in writing his intention to use upgraded asphalt shingles. These materials comply with the building materials allowed for accessory structures on properties greater than 2 acres. The Council could require that the plans be formally updated to reflect the final roofing materials. However, the Planning Commission was comfortable with the information already provided and recommended removal of this as a condition. The resolution reflects the Planning Commission's recommendation.

- 5. The proposed building will be compatible with surrounding land uses.*

The proposed use is generally in conformance with the City regulations. Conditions of approval will address any regulations that must be resolved.

II. CHOL IUP

The applicant requests approval of his home remodeling business to continue operating out of his home. Section 1030.100 establishes three levels of home occupations:

Allowed, Special, and Conditional. Any home occupation that occurs in an accessory building requires a CHOL which are processed as an IUP. While storage of equipment and materials would not trigger the CHOL by itself, the applicant shared that the first floor of the garage will occasionally be used for woodworking when he needs to construct components (such as cabinets) for a project. This type of business activity within the detached structure requires a CHOL. The City Council must consider the following criteria:

- A. *The nature and general character of the geographic area in which the CHOL property is located. The City may consider, in addition to other factors and not by way of limitation, the existing and condition of gravel and paved roads in the area, existence and proximity of CHOL operations to neighboring residences, size of neighboring lots, and use of neighboring properties.*

The nature and general character of the geographic area is not likely to be negatively affected by the operation of the home business. Eagle Ridge Road is a paved public street with large residential lots. The subject property is surrounded by larger agricultural pieces to the north, west, and south. The business has been in existence (although unregistered with the City) since 2017 without it creating known negative externalities to the surrounding neighborhood. The business has no employees, and customers do not go to the property. Most business activities are completed off-site as is the nature of home remodeling. The remaining business activities will be contained primarily within the proposed accessory building that meets or exceeds all district setback requirements.

The applicant indicates the proposed garage will be primarily used for storage of equipment and materials. The applicant explained to staff on a phone call that he will also use the garage at times as a shop to create products, such as cabinets. These types of activities could potentially be considered “construction activities” and would need to comply with construction hours in Chapter 82.04, Subd. 5. Provided that the woodworking activity is within the building with the doors and windows closed after 7PM on weekdays and after 4PM on weekends and holidays, staff believes the applicant will be able to comply with construction hours even with the use of tools and automatic equipment. A condition of approval included in the IUP is for woodworking and related activities to occur within the structure outside of the City’s construction hours, and the windows and doors to the structure must be closed during this time.

- B. *Consideration shall be made for potential property devaluation of adjacent and surrounding properties.*

The proposed building for the business appears and can be used as a residential accessory structure. Further, the structure will provide screening of equipment

and materials so that these are not visible to nearby properties. Devaluation of the adjacent properties has neither occurred nor is expected.

The narrative indicates the potential for trailers to be stored outside. This can be done as long as the trailers are not visible from the right-of-way or neighboring properties. Further, trailers cannot be stored in a temporary structure as these types of structures are prohibited in City Code. This is included as a condition of approval. To clarify, temporary structures are considered to be structures made of canvas, plastic, or other similar non-permanent building materials and/or does not meet the accessory building requirements of the MN State Building Code.

- C. *Nuisance factors shall be considered, including but not limited to sight, odor, light, glare, and noise, and any other nuisance factors that may result from issuance of the CHOL.*

No exterior lighting is shown on the plan. If a light for the building is proposed, it must comply with standards in Section 1060.040. While single family homes are exempt from these standards, the commercial home occupation shall be subject to these lighting standards. This is included as a condition of approval in the draft resolution.

Some business-related activities, such as woodworking, will generate some noise when manual or automatic tools are utilized. However, the operations will be inside the building and are expected to have limited impact on adjacent properties. This will be further mitigated with the condition of approval that these types of activities must occur indoors with the doors and windows closed outside of the City's construction hours.

- D. Environmental concerns, including but not limited to drainage, wastewater, wells, and wetland issues.

The City Engineer reviewed the overall request and attached conditions to ensure drainage is handled to avoid negative consequences as a result of the proposed structure for the home occupation. No wetland impacts were found as a result of the home occupation or the proposed structure.

- E. Compliance with Section 1030.020 (Accessory Buildings, Structures, Uses, and Equipment) of the Zoning Ordinance and with other relevant Code sections.

If the requested CUP to allow a taller building is approved, the standards in Section 1030.020 will be satisfied.

- F. Impact on the neighboring properties shall be considered before issuing a CHOL.

Staff finds that the proposed CHOL for a home remodeling business that primarily operates off-site with minimal related activities taking place entirely within a garage is unlikely to result in a negative impact to the neighborhood. There are no employees, and no customers will come to the site. The applicant does not anticipate any deliveries that would not otherwise be normal to a residential area. Outside storage of trailers may occur at time, but the applicant will be required to completely screen this from neighboring properties in the right-of-way. Loud and prolonged noises may occur from time to time, but this will be limited to inside the structure with the doors and windows closed outside of the City's construction hours. The impacts on neighboring properties can be mitigated through the proposed conditions of approval.

5. Recommendation

Staff recommends approval of Resolution 2023-62 approving the CUP for a detached garage exceeding a sidewall height of 10' in the front yard and the IUP for a conditional home occupation license.

Attachments:

1. Resolution 2023-62 Approving the CUP and IUP
2. Applicant Narrative
3. Site Plan
4. Building Plans Received 7/18/2023
5. Engineering Memo

RESOLUTION NO. 2023-62

Motion By:
Seconded By:

A RESOLUTION APPROVING A CONDITIONAL USE PERMIT FOR A DETACHED GARAGE WITH INCREASED SIDEWALL HEIGHT AND AN INTERIM USE PERMIT FOR A CONDITIONAL HOME OCCUPATION LICENSE FOR TYLER HEIDECKER AT 7985 EAGLE RIDGE ROAD (PID 22-119-23-42-0009) (CITY FILE 23-009)

WHEREAS, Tyler Heidecker, the applicant and landowner, requested approval of an interim use permit for a conditional home occupation license (CHOL) to allow a home remodeling business and a conditional use permit to allow a taller accessory building at property legally described as follows:

See Attachment A

WHEREAS, the Planning Commission reviewed the interim use permit for a conditional home occupation license and conditional use permit at a duly called Public Hearing and recommends approval, and;

NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE CITY COUNCIL OF THE CITY OF CORCORAN, MINNESOTA, that it should and hereby does approve the request, subject to the following findings and conditions:

1. An interim use permit is approved, in accordance with the application received by the City on April 4, 2023, and additional information received on April 21, 2023, April 25, 2023, May 10, 2023, and July 5, 2023, except as amended by this resolution.
2. The Zoning Ordinance allows Conditional Home Occupation Licenses and the applicant shall comply with all home occupation standards, except as specifically modified per this resolution.
3. The applicant shall comply with all conditions of the City Engineer’s memo dated June 27, 2023.
4. The Interim Use Permit for the Conditional Home Occupation License is issued to Tyler Heidecker for the operation of “Heidecker Home Remodeling”. This permit is non-transferable. The Permit shall terminate upon any one of the following:
 - a. If the business ceases.
 - b. If property ownership changes.
 - c. If ownership of the business changes.
 - d. If the individual to whom a license has been issued ceases to live at the subject premises.
5. The Conditional Home Occupation License is approved based on the finding that the standards in Section 1030.100, Subd. 7 and Section 1070.030 have been met. Specifically:

RESOLUTION NO. 2023-62

- a. The applicant is requesting the conditional home occupation license to operate a home remodeling business from the proposed new accessory building on the property. The business has no employees other than the homeowner.
 - b. There is nothing to indicate that the use of the accessory building would devalue adjacent and surrounding properties.
 - c. The proposed workshop is enclosed and will not generate any nuisance conditions related to odor, light, or glare. Some noise is expected related to woodworking or similar activities.
 - d. There are no environmental concerns, including but not limited to drainage, wastewater, wells and wetland issues related to this project.
 - e. The home occupation appears to have no impact on neighboring properties.
 - f. The application for a CHOL is consistent with the Comprehensive Plan, public facilities, and capital improvement plans. The business will be conducted in an enclosed building and will not generate any nuisance conditions that would endanger the public health, safety, morals or comfort of the community nor will it be injurious to the use and enjoyment of other property in the immediate vicinity. The business does not demand any additional public services or facilities and conforms to the performance standards of the Zoning Ordinance.
6. The home occupation must comply with the following standards:
- a. No new signage for the home occupation is proposed or approved. Any new signage will require an amendment to the Interim Use Permit for the Conditional Home Occupation License.
 - b. Outside storage of construction materials including, but not limited to, piles of dirt, sand, lumber, bricks, concrete blocks, or sod related to the home occupation is prohibited.
 - c. Outside storage of trailers related to the home occupation is allowed in the backyard if not visible to surrounding properties or from the public right-of-way.
 - d. Storage of business materials and equipment is not permitted within a temporary structure defined as a structure made of canvas, plastic, or another similar non-permanent building material and/or does not meet the requirements of the Minnesota State Building Code.
 - e. Woodworking and related work activities must occur within the accessory building with the doors and windows closed during the hours when construction noises are prohibited as provided in Chapter 82.04, Subd. 5(A)(10) of the City Code and as may be amended from time to time.
 - f. No person shall be employed at or report to the home site location who does not reside in the dwelling unit.

RESOLUTION NO. 2023-62

- g. If a light for the accessory building is installed, it must comply with the lighting standards in Section 1060.040 of the City Code for commercial uses.
 - h. The business shall comply with all state, federal, and local regulations.
 - i. The Conditional Home Occupation License shall be issued for 3 years in accordance with the procedures outlined in Section 1030.100 of the Zoning Ordinance. The permit shall be administratively reviewed every 3 years to ensure compliance with conditions of approval and ordinance requirements.
 - j. The City may revoke or modify the CHOL upon a finding that conditions have changed to warrant revocation or modifications of the license.
7. A conditional use permit is approved to allow a 1,770 sq. ft. accessory building with sidewalls taller than 10 feet in the front yard, based on the finding that that conditional use permit standards in section 1070.020 have been met, subject to the following conditions:
- a. The structure cannot be used for living space unless an application for an accessory dwelling unit administrative permit is submitted and approved.
 - b. If septic and water are planned to serve the accessory building, revised plans must be submitted with the building permit and the applicant must obtain the required permits.
 - c. The existing temporary structure must be removed to bring the subject property into compliance with Section 1030 of the Zoning Ordinance. No new temporary structures can be added to the property.
8. Prior to issuance of a building permit, the following must be submitted for review and approval by the City:
- a. The grading and drainage plan must be revised per the Engineering Memo and provided to the City Engineer for review and approval prior to issuance of a building permit.
 - b. The site plan, which includes the grading and drainage plan, must be revised to reflect the revised footprint of the building of 1,770 square feet.
 - c. The applicant/landowner must record the approving resolution at Hennepin County and provide proof of recording to the City.
9. The existing temporary structure must be removed prior to release of the project escrow.

RESOLUTION NO. 2023-62

VOTING AYE

- McKee, Tom
- Bottema, Jon
- Nichols, Jeremy
- Schultz, Alan
- Vehrenkamp, Dean

VOTING NAY

- McKee, Tom
- Bottema, Jon
- Nichols, Jeremy
- Schultz, Alan
- Vehrenkamp, Dean

Whereupon, said Resolution is hereby declared adopted on this 27th day of July 2023.

Tom McKee - Mayor

ATTEST:

Michelle Friedrich – City Clerk

City Seal

RESOLUTION NO. 2023-62

ATTACHEMENT A

Lot 5, Block 1, Eagle Ridge, Hennepin County, Minnesota

-Nature of Request

Requesting this because of the taller height needed for my service work trailer to be backed into the shop. It has a height of

There really is no way to build this in the back yard because there really is no access to drive to the backyard and most of it is a hill

-Impact on adjoining properties and mitigating measures to minimize impact

There are no impacts

-Buildings to be constructed

1 building which will be 35x50

-Intended use of buildings and property

To store, manage and work on service work trailers

-Hours and days of operation

There will be no business run out of the building. Only intended for storing and maintain the work equipment.

-Number of Employees

0

-Size of operation, including number of animals

0

-Impact on traffic, Including type and amount of traffic, access, and parking provisions

None

-Impact on septic system and well

None

-Potential Environmental impacts and measure to avoid or minimize the potential impacts

None

-Proposed measures to provide buffering from proposed use to adjacent properties

None Needed

-Future Expansion plans

None

-Nature of the other uses in the neighborhood

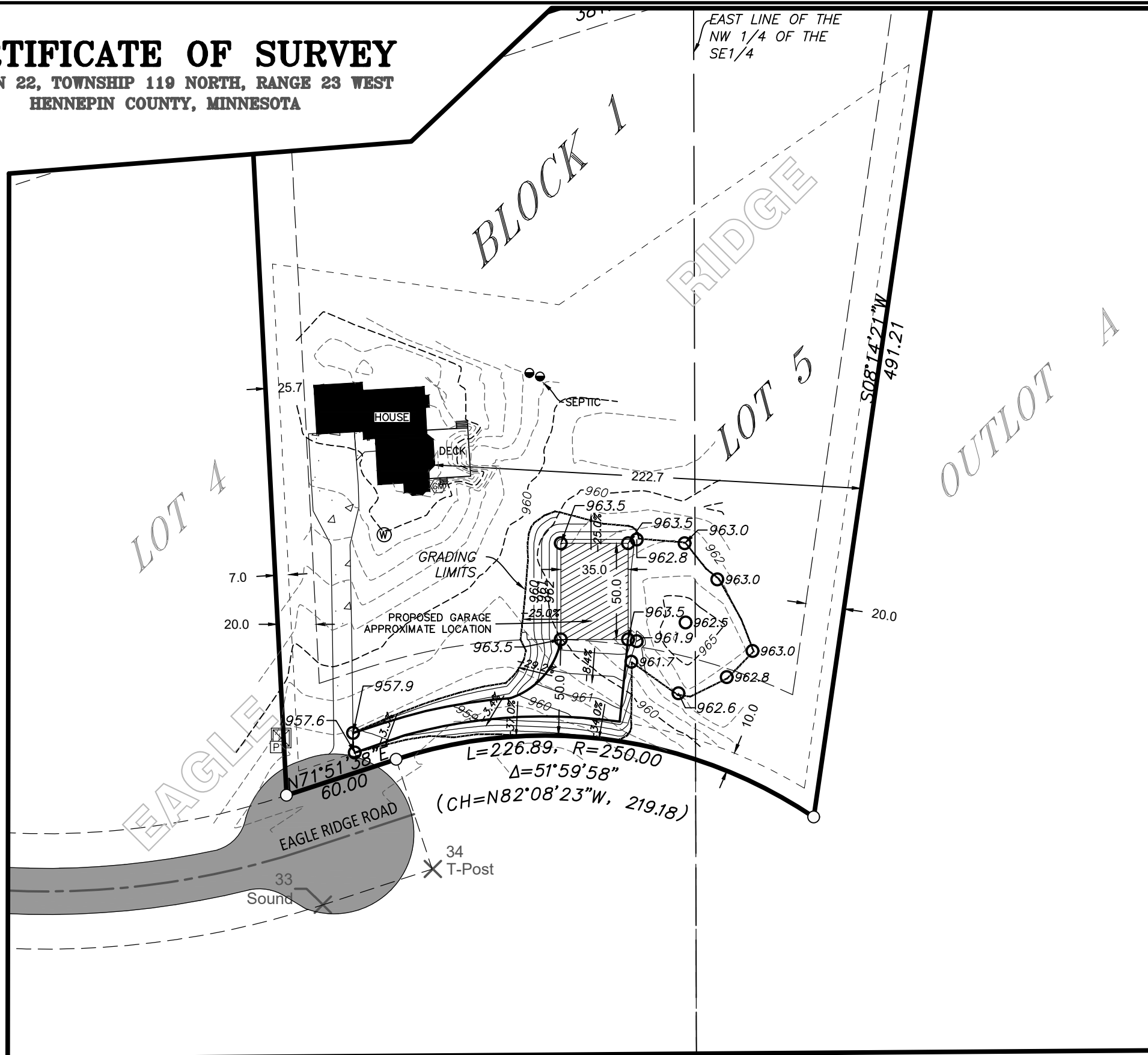
None

Home Occupation Application

1. I run a Remodeling Company, Heidecker Home Services LLC. We are already in business. Have been since 2017
2. My business does not generate any extreme noise odor or light
3. My company does not generate any environmental concerns or issues
4. The home occupation will be located on site in the accessory building and will used 80 percent of the building
5. Special equipment my company requires is a enclosed work trailer and a Skid steer.
6. Any outside storage is only for trailers
7. My company does not require any materials that would need a MSDS sheet
8. My company does not generate any deliveries other than normal.
9. My occupation does not generate more than 10 daily, non-residential trips to and from property
10. There are no customer visits on site
11. Home occupation does not require any additional parking spaces
12. No outside employees are on site or reporting on site for assignments
13. There are no signs displayed for the home occupation
14. No special vehicles are used for the home occupation
15. No federal, state, county local permits or licenses are required

CERTIFICATE OF SURVEY

SECTION 22, TOWNSHIP 119 NORTH, RANGE 23 WEST
HENNEPIN COUNTY, MINNESOTA



LEGAL DESCRIPTION:

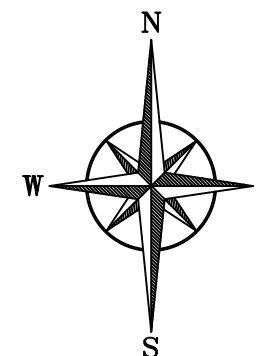
Lot 5, Block 1, Eagle Ridge, Hennepin County, Minnesota

WETLAND DELINEATION:

Provided to NWS by client from Braun Intertec
Project No. B2201828 dated MAY 9th, 2022.

LEGEND

- IRON MONUMENT FOUND
- IRON MONUMENT SET WITH CAP NO. (57991)
- - - - DRAINAGE AND UTILITY EASEMENT PER PLAT OF RECORD
- - - - SETBACK
- - - - GRADING LIMITS
- - - - 1320 - - - - Ex-CONTOUR-MJR
- - - - 1319 - - - - Ex-CONTOUR-MNR
- ~ 1369 ~ CONTOURS MNR - PROPOSED
- ~ 1370 ~ CONTOURS MJR - PROPOSED
- (1371.2) SPOT ELEVATION - PROPOSED



SCALE
1" = 60'



BEARINGS ARE BASED ON NAD83(2011)
HENNEPIN COUNTY COORDINATE SYSTEM

Northwestern Surveying and Engineering, Inc. prepared this survey without the benefit of current title work. The property shown is based on a legal description provided by you the client or a general request at the appropriate County Recorder's office. Easements, site restrictions or adjoining deed conflicts may exist which affect subject property and are not shown by this survey. We reserve the right to revise the survey upon receipt of a current title commitment or title opinion.

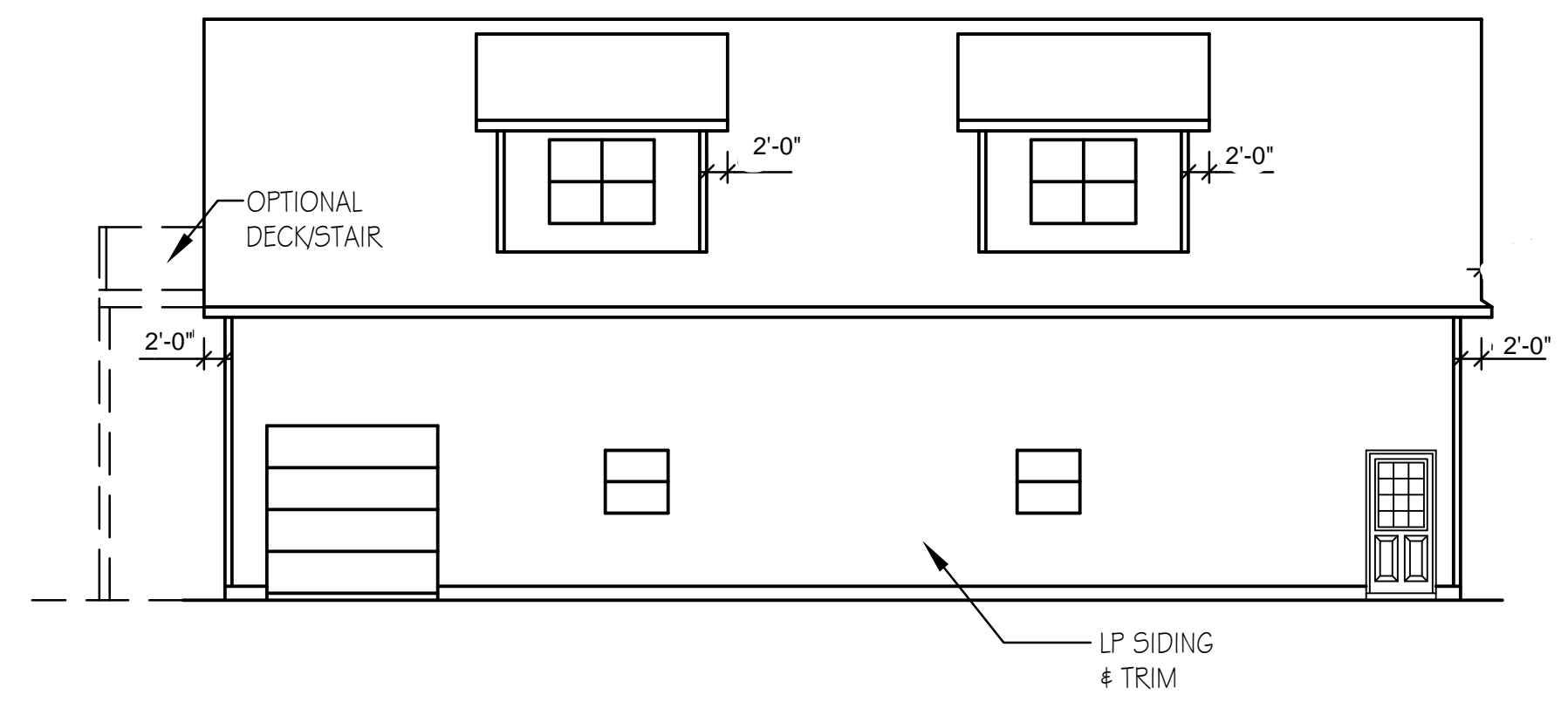


TYLER HEIDECKER
N 1/2 OF THE SE 1/4
SEC. 22-T119N-R23W
HENNEPIN COUNTY, MN

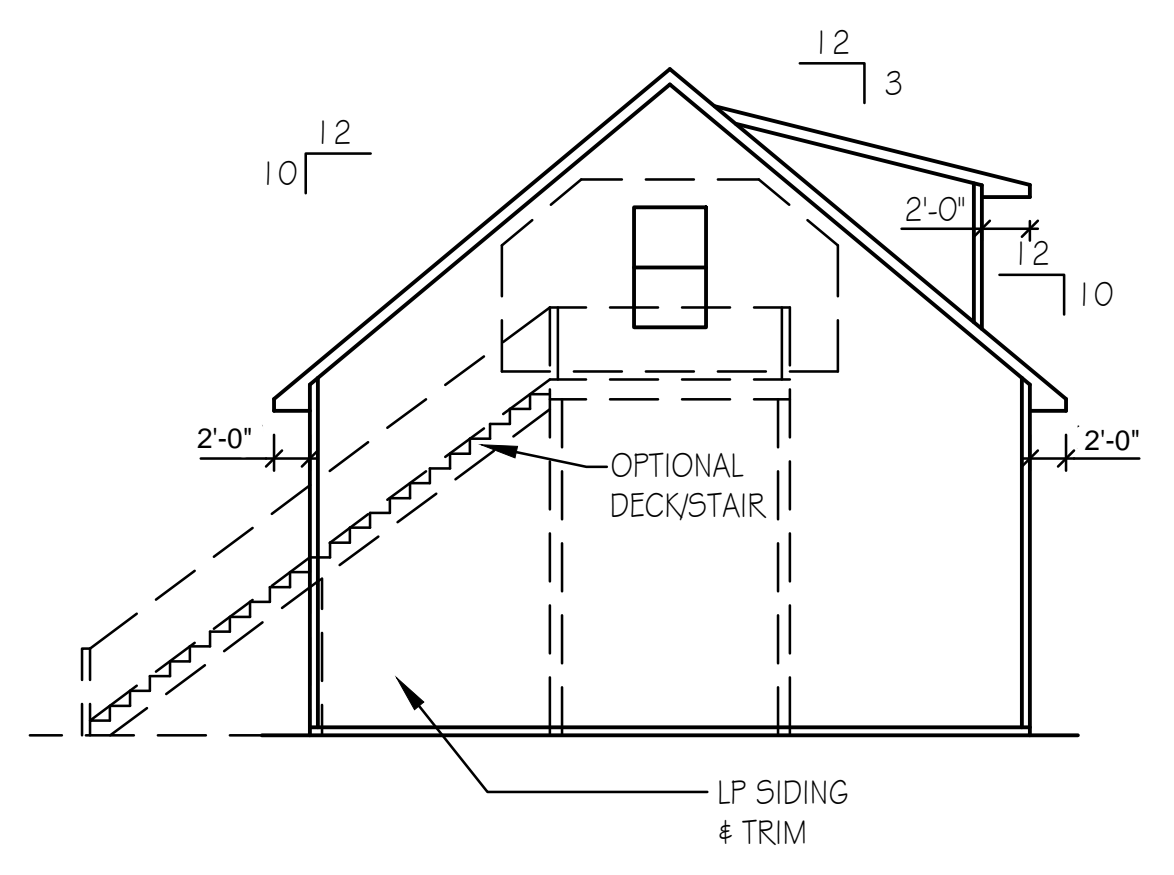
| JOB#: | 23564 | DRAWN BY: | MMB |
|-----------|----------------|------------|-----|
| FILENAME: | 23564 COS DWG | | |
| REV# | DESCRIPTION | DATE | |
| #1 | ADDED SETBACKS | 04/14/2023 | |
| #2 | UPDATED GARAGE | 04/25/2023 | |
| #3 | GRADING PLAN | 05/03/2023 | |

I HEREBY CERTIFY THAT THIS SURVEY, PLAN OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

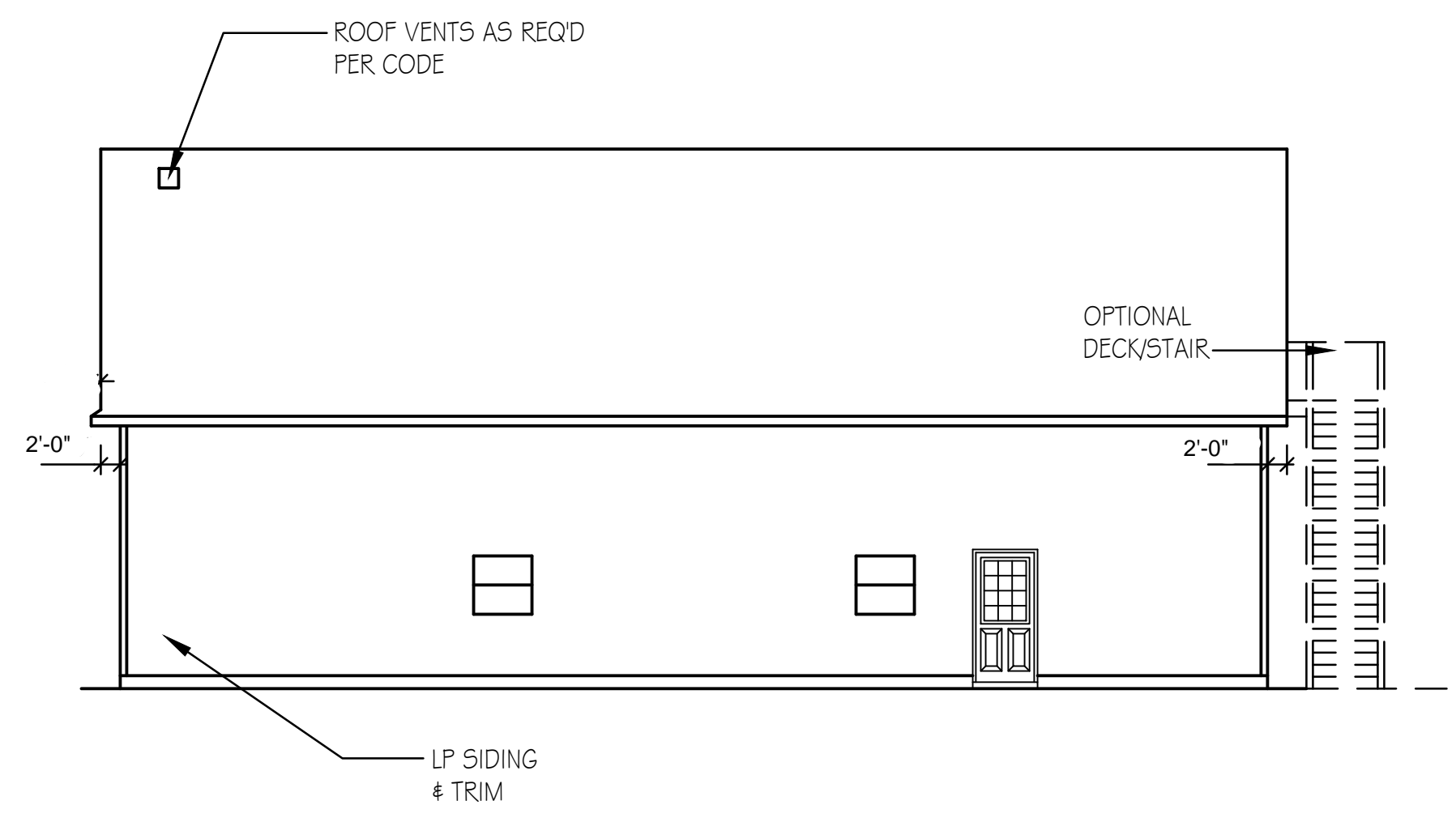
Matthew M. Bomstad
MATTHEW M. BOMSTAD (LIC. NO. 57991) DATE: 05/03/2023



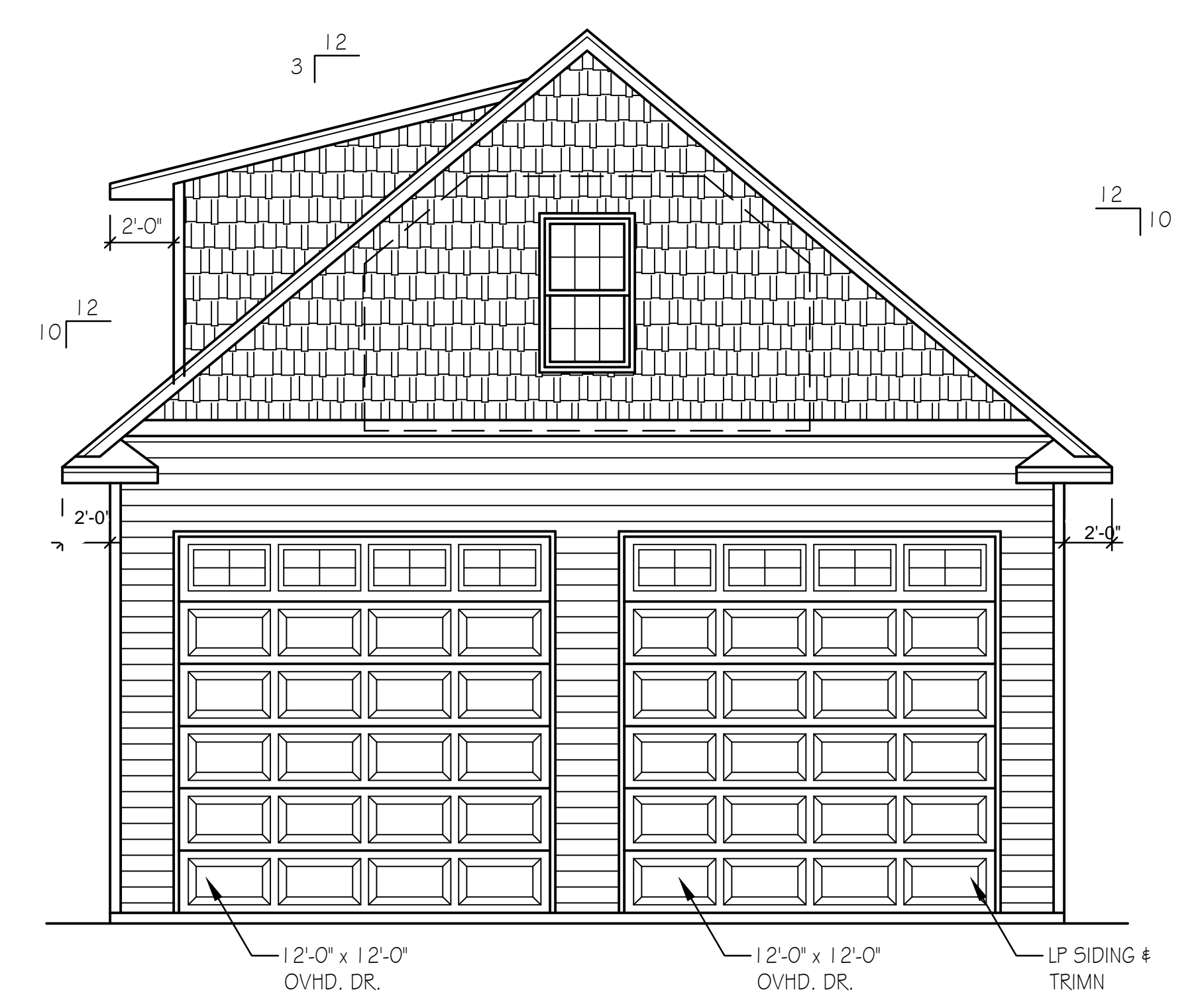
LEFT ELEVATION
 1/8" = 1'-0"



REAR ELEVATION
 1/8" = 1'-0"



RIGHT ELEVATION
 1/8" = 1'-0"



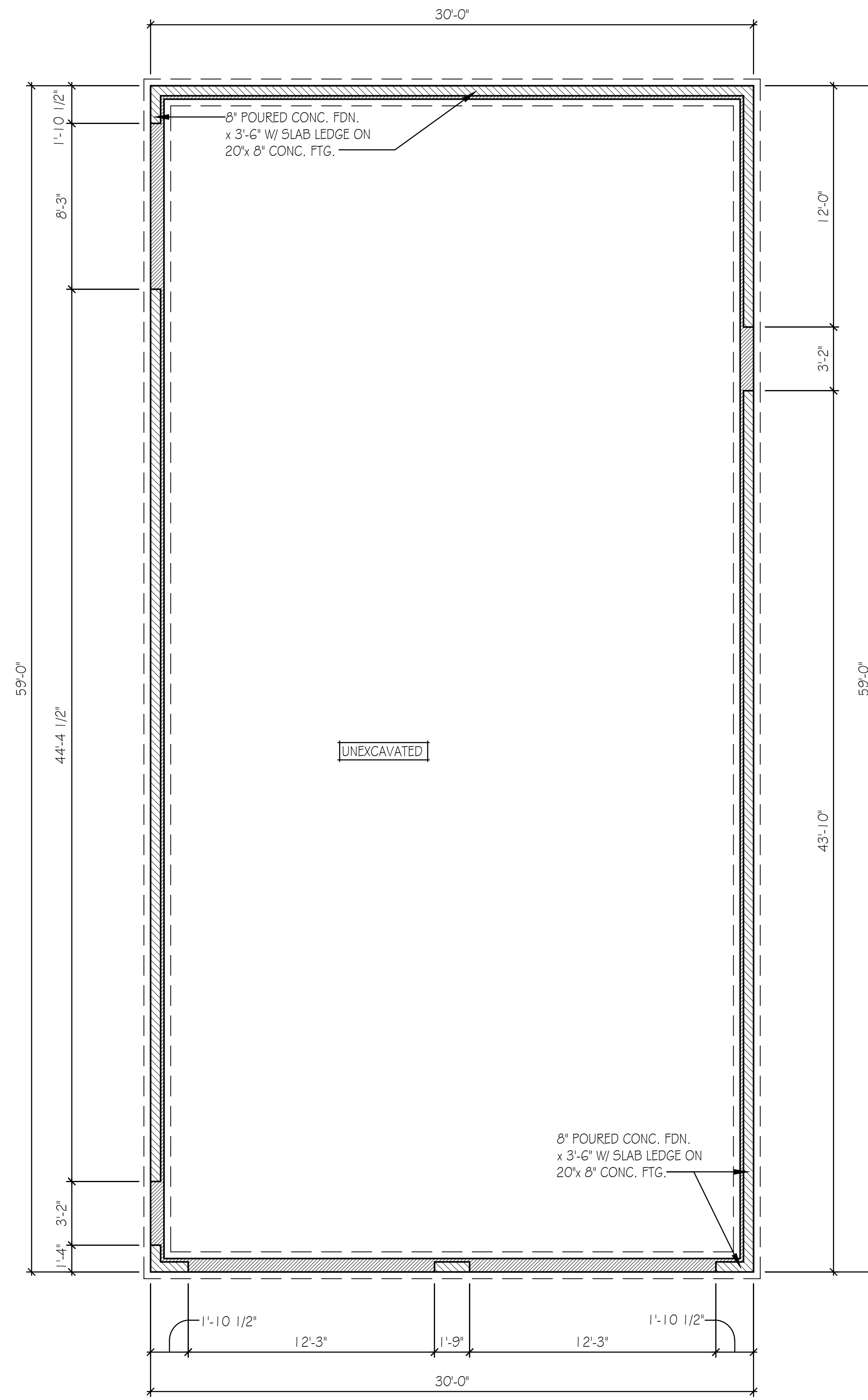
FRONT ELEVATION
 1/4" = 1'-0"

DISCLAIMER
 IN PREPARATION OF THIS PLAN EVERY ATTEMPT HAS BEEN MADE TO AVOID MISTAKES. DESIGNER CANNOT GUARANTEE AGAINST HUMAN ERROR. CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS AND BE RESPONSIBLE FOR THE SAME. THESE DESIGNS, CONCEPTS AND SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND AS SUCH REMAIN THE EXCLUSIVE PROPERTY OF COUNTRY LUMBER AND ARE NOT TO BE COPIED WITHOUT THE WRITTEN CONSENT OF COUNTRY LUMBER.

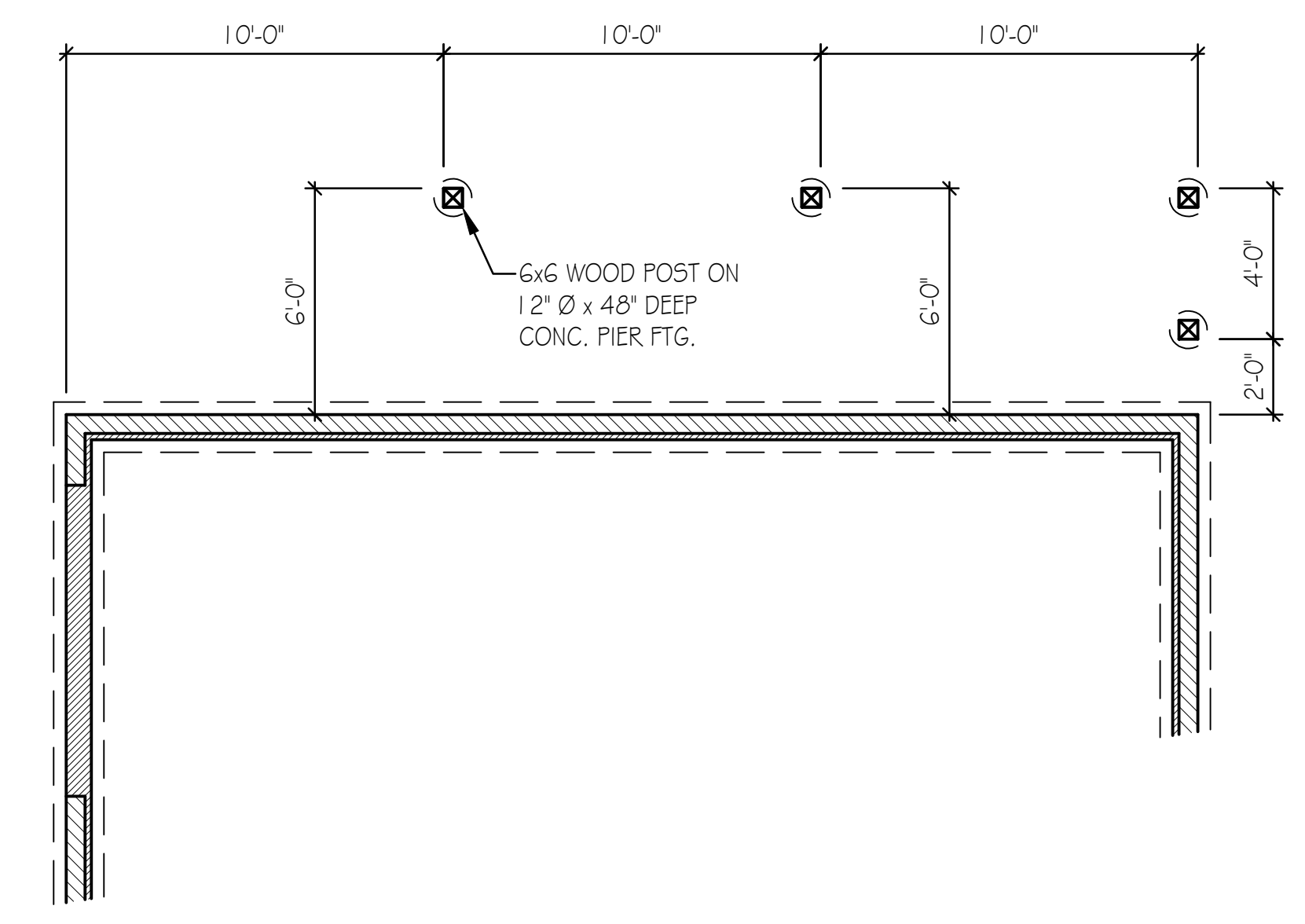
DESIGN FOR:
 HEIDECCKER GARAGE

DESIGN CENTER
 12575 OAK VIEW AVE. BECKER, MN. 55308
 PHONE: (763) 262-4750
 FAX: (763) 262-4755
 1-800-247-0295

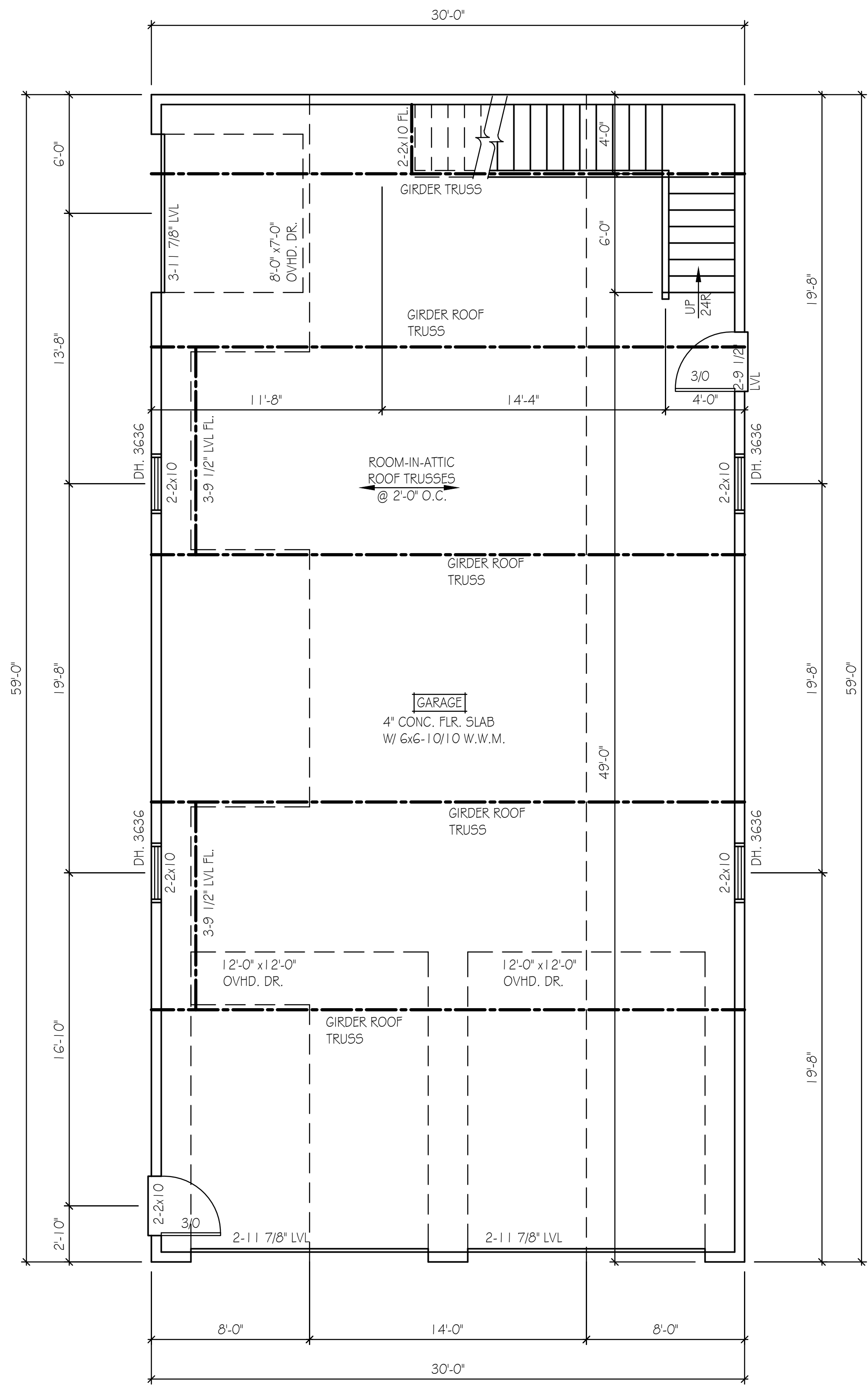
COUNTRY LUMBER
 A DIVISION OF



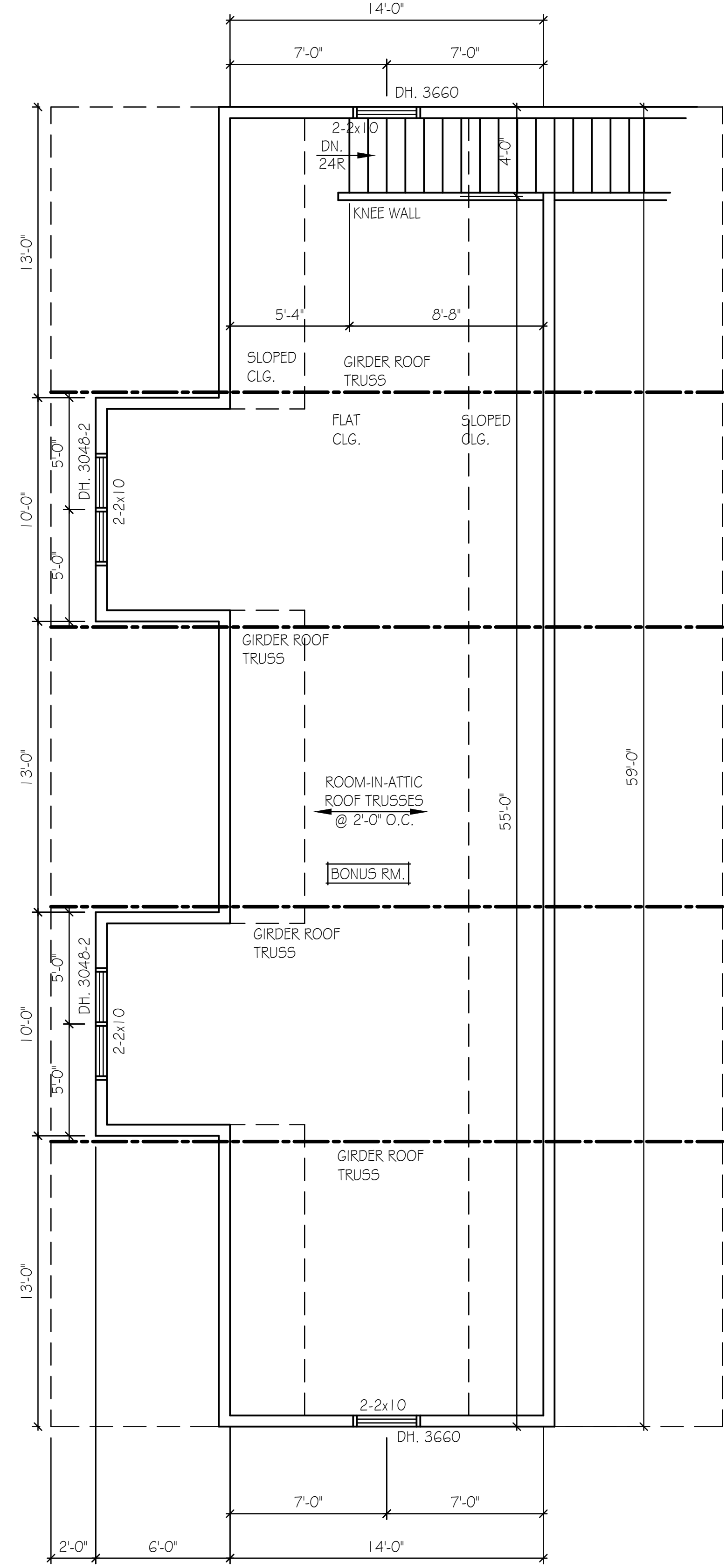
BASEMENT PLAN
1/4" = 1'-0"



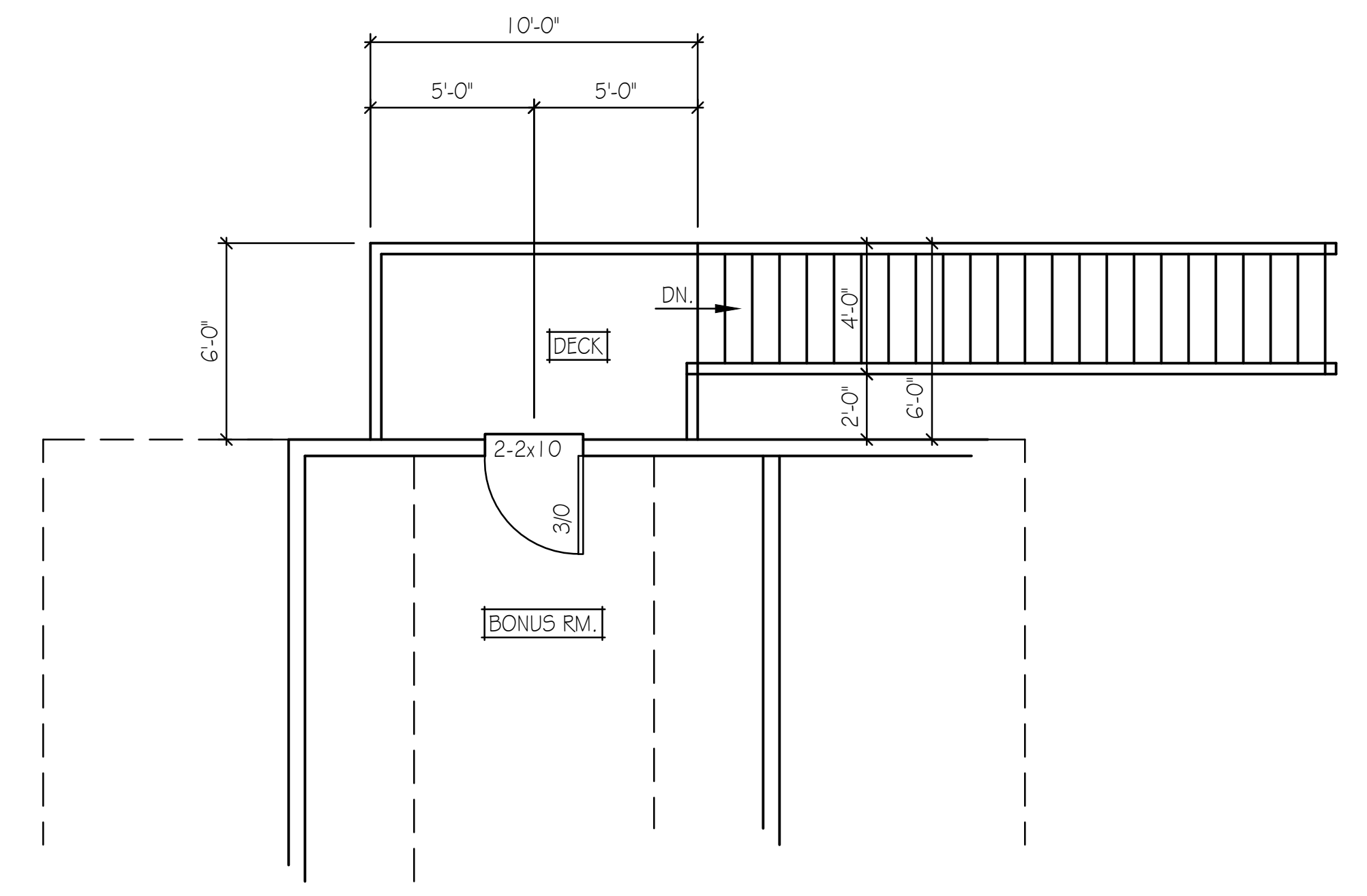
BASEMENT PLAN OPTION EXTERIOR STAIR
1/4" = 1'-0"



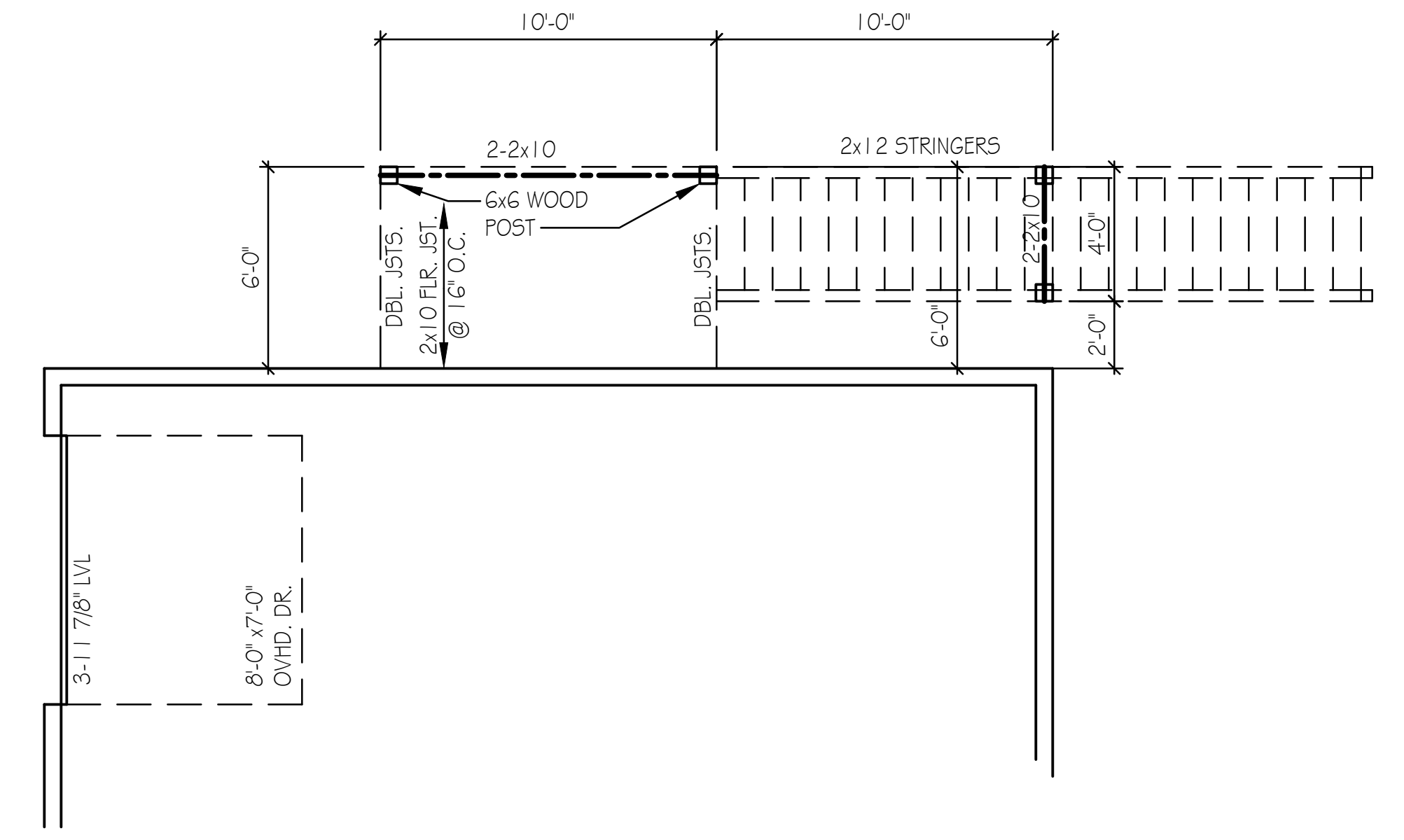
FIRST FLOOR PLAN
1770 SFT. (GARAGE) 1/4" = 1'-0"



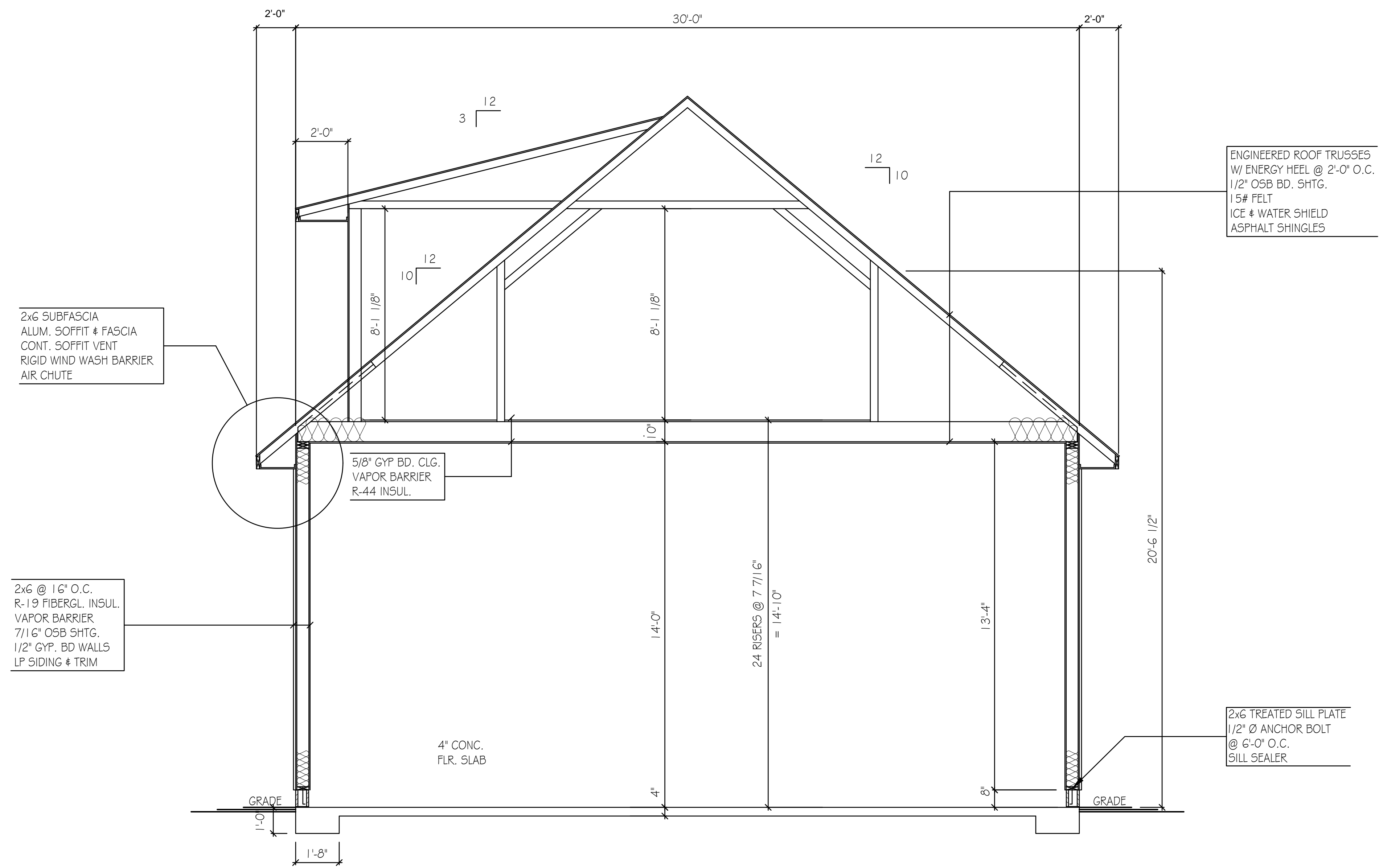
SECOND FLOOR PLAN
826 SFT. (BONUS RM.) 1/4" = 1'-0"



SECOND FLOOR PLAN OPTION EXTERIOR STAIR 1/4" = 1'-0"



FIRST FLOOR PLAN OPTION EXTERIOR STAIR 1/4" = 1'-0"



2x6 SUBFASCIA
ALUM. SOFFIT & FASCIA
CONT. SOFFIT VENT
RIGID WIND WASH BARRIER
AIR CHUTE

2x6 @ 16" O.C.
R-19 FIBERGL. INSUL.
VAPOR BARRIER
7/16" OSB SHTG.
1/2" GYP. BD WALLS
LP SIDING & TRIM

5/8" GYP BD. CLG.
VAPOR BARRIER
R-44 INSUL.

4" CONC.
FLR. SLAB

24 RISERS @ 7 7/16"
= 14'-10"

ENGINEERED ROOF TRUSSES
W/ ENERGY HEEL @ 2'-0" O.C.
1/2" OSB BD. SHTG.
15# FELT
ICE & WATER SHIELD
ASPHALT SHINGLES

2x6 TREATED SILL PLATE
1/2" Ø ANCHOR BOLT
@ 6'-0" O.C.
SILL SEALER

BUILDING SECTION
SEE BUILDERS SPECIFICATION FOR BUILDING MATERIALS

3/8" = 1'-0"

To: Natalie Davis McKeown
Planner

From: Kent Torve, PE
City Engineer

Project: Heidecker CUP/IUP

Date: June 27^h, 2023

Summary:

- The Heidecker CUP/IUP grading plan by Northwestern Surveying and Engineering dated 05/03/2023 was reviewed and the grading comments are as follows:
 - Drainage from Eagle Ridge Road cannot be blocked, therefore a culvert appears necessary and revised plans should be submitted for City review.
 - Grading (fill) is shown within the drainage and utility easement and should be revised to allow flow from Eagle Ridge Road.
 - A low spot may trap drainage along the north side of the new driveway.
- The site completed the WCA process and had a determination of no wetland impacts for the project.

Jessica Beise



July 17, 2023

City of Corcoran
Attn: City Council
8200 County Road 116
Corcoran, MN 55374

Dear Mayor McKee and Councilmembers Bottema, Schultz, Nichols, and Verhenkamp,

It is with a full, but heavy heart that I ask you to consider this letter as my formal resignation. My more than eight years working for my hometown has been a truly incredible experience. I've gotten a chance to make a difference in our community and to build some wonderful professional relationships and cherished friendships.

I have been blessed to work with such committed elected officials, engaged commissioners, and a phenomenal staff of dedicated public servants. We accomplished so much in the last 18 months including obtaining more than \$17 million in state and federal funding for projects, breaking ground on the water supply system, and decreasing the City's tax rate. I'm excited to see all of the work that has been started continue and to see my hometown grow into the community it desires to be.

My contract requires 45 days notice but I would like to give 80 days notice to assist with the preliminary budget process. My last day will be October 5, 2023. I will spend my remaining time working to complete projects and prepare for the transition. Thank you for the opportunity to serve the residents of Corcoran. It's been an honor.

Best Regards,

A handwritten signature in blue ink that reads "Jessica Beise". The signature is fluid and cursive.

Jessica Beise

RESOLUTION NO. 2023-64

Motion By:
Seconded By:

**A RESOLUTION APPROVING 1 DAY TO 4 DAY TEMPORARY ON-SALE LIQUOR LICENSE
IN THE CITY OF CORCORAN, MINNESOTA**

BE IT RESOLVED, by the City Council of the City of Corcoran that the following Liquor License is granted effective for the dates as indicated, to the following Licensee, provided appropriate application and insurance documents.

| <u>LICENSEE</u> | <u>LICENSE</u> | <u>LICENSE EFFECTIVE DATE</u> |
|---|--|--|
| NW Area Jaycees* 13570 Grove Drive #287 Maple Grove, MN 55311 | 1 Day to 4 Day Temporary On-Sale Liquor License | Corcoran Country Daze August 10-13, 2023 (4-day License) <i>Event Location:</i> <i>Corcoran Lions Park</i> <i>7205 County Road 101</i> <i>Corcoran, MN 55340</i> |

VOTING AYE

- McKee, Tom
- Bottema, Jon
- Nichols, Jeremy
- Schultz, Alan
- Vehrenkamp, Dean

VOTING NAY

- McKee, Tom
- Bottema, Jon
- Nichols, Jeremy
- Schultz, Alan
- Vehrenkamp, Dean

Whereupon, said Resolution is hereby declared adopted on this 27th day of July, 2023.

Tom McKee - Mayor

ATTEST:

Michelle Friedrich – City Clerk

City Seal

STAFF REPORT

Agenda Item: 7I.

| | |
|--|--|
| Council Meeting: July 27, 2023 | Prepared By: Deputy Director Burns |
| Topic: Waiver request for amplified sound on September 30, 2023 | Action Required: Approval |

Summary

Resident is requesting a Amplified Sound Waiver on Saturday September 30, 2023, at 9310 Bechtold Road. Request is for amplified sound until 12:00 AM for a wedding gathering of approximately 100 guests with a DJ inside of a barn. This is a private event, with off-street parking and possible one-side street parking on Bechtold Road. If approved, gathering may be shut down for public safety reasons. At this point, the application is approved as submitted.

Financial/Budget

N/A

Options

1. Authorize a waiver for amplified sound until 12:00 AM on Saturday, September 30, 2023.
2. Deny a waiver for amplified sound until 12:00 AM on Saturday August 20, 2023.

Council Action

1. Authorize a waiver for amplified sound until 12:00 AM on Saturday, September 30, 2023, for 9310 Bechtold Road.

Attachments

1. Application for Contract Police Security.



Corcoran Police Department

8200 County Road 116
Corcoran, MN 55340
Phone (763) 420-8966 Fax (763) 420-8965



EVENT REQUEST

Public Event Private Event

In an effort to meet your security needs, we ask that you read the attached City of Corcoran Event Policy. Then fully complete and submit the application at least sixty (60) days prior to your event.

Name of Event: *Long-Vehrenkamp WEDDING* Location of Event: *9310 BECHTOLD ROAD*

Date(s) of Event: *SEPT 30, 2023* Event Sponsor: *PRIVATE*

Event Website: *N/A*

Main Contact Name: *DEAN VEHRENKAMP* Cell Phone No. [REDACTED]

Main Contact Email Address: [REDACTED]

Event Day on site contact: *DEAN* Cell Phone No. [REDACTED]

Expected Attendance: *100*

Event Starting Time: *NOON* Event Ending Time: *MIDNIGHT*

Officers Requested: Yes No

Security Starting Time: *N/A* Security Ending Time: *N/A*

Number of Officers Requested: *N/A* Licensed Officers: *N/A* Reserve Officers: *N/A*

Security Provided by: *N/A* Corcoran Police Private Both CPD / Private

Private Security Info. Name: *N/A*

Contact Person: *N/A* Phone No. *N/A*

POLICE DEPARTMENT

- YES NO
1. Does this event involve the sale or availability of alcoholic beverages to the public? If YES you must obtain a temporary liquor license through City Hall.
 2. Do you anticipate any medical support, security or traffic control services will be required?
 3. Will this event affect traffic in the area? If YES, explain how traffic will be affected?
 4. Does this event involve a **moving route** (parade, race, run/walk, etc.) of any kind, along streets, trails or sidewalks? If YES, attach a map or sketch of your proposed route, indicate the direction of travel and/or provide a written narrative to explain your route.
 5. Will this event involve outdoor music? If YES, please describe: *DJ INSIDE BARN*
 6. Will this event involve any noise requiring exception to the noise ordinance? If YES, please describe: *SAME*
 7. Will this event be on or adjacent to any body of water? If YES, has Water Patrol been notified?

FIRE DEPARTMENT

- YES NO
8. Will there be a pyrotechnic (fireworks) display? If yes, you must apply for a permit from City Hall 30 days prior to the event
 9. Is this event likely to involve a tent more than 200 sq. ft. or a canopy more than 400 sq. ft.? If YES, estimate number of tents and sizes:
 10. Does the proposed event plan to use propane? If YES, for what and where? *GALL OUTSIDE BARN*

CITY AND BUILDING CODES

11. Will there be any temporary electrical wiring or generators used? If yes, you must apply for an electrical permit from the State MN Labor / Industry 763-241-2102 (Generators must be surrounded by barriers with a fire extinguisher readily available.)
12. Will there be a need for portable toilet facilities? *ENDE HAS BEEN NOTIFIED*
13. Does this event involve any hanging banners or signage? If yes, you must apply for a sign permit from City Hall
14. Does this event involve animals? If YES, please describe:
15. Does this event involve amusement attractions (carnival rides, inflatable's, dunk tanks, etc.) If YES, please describe:
16. Will any food or beverages be available or sold at the event? If YES, provide a Hennepin County food permit
17. Will any part of this event be held on city of public property? If YES, please describe:

STAFF REPORT

Agenda Item: 7m.

| | |
|--|--|
| Council Meeting: July 27, 2023 | Prepared By: Jessica Beise |
| Topic: Street Maintenance – Maltene Based Restorative Seal Coat | Action Required: Informational |

Summary

At the June 22, 2023 Council meeting, staff was directed to obtain quotes for maltene based restorative seal coat. Staff is working on compiling the quotes and will bring forward quotes and a preferred vendor.

Attachments

1. Quotes (To be provided prior to the meeting)

STAFF REPORT

Agenda Item 8a.

| | |
|--|--|
| City Council Meeting: July 27, 2023 | Prepared By: Natalie Davis McKeown |
| Topic: Hackamore 116 Sketch Plat (PID 36-119-23-33-0010; 36-119-23-33-0009; and 36-119-23-33-0007) (City File No. 23-017) | Action Required: Direction |

1. Application Request

Gonyea Company, the applicant, requests an opportunity to appear before the City Council to solicit informal comments on a concept plat for 36.74 acres located at the northeast corner of Hackamore Road and County Road 116. The proposal would include a rezoning to the RSF-3 (Single and Two-Family Residential) Zoning District with variances to the side setback and two engineering standards.



Figure 1 Project Location

2. Background

The subject properties include three properties previously used for agriculture. The enclosed Engineering Memo notes a portion of this property will be utilized for construction staging for the Hackamore Road Project. The project area is also subject to a recapture agreement established with Tavera for the installation of a sanitary sewer line that benefits these properties. The City will be responsible for coordinating reimbursement to Lennar at the final platting stage(s).

3. Context

Zoning and Land Use

The proposed property is guided for low density residential and zoned RSF-2 (Single Family Residential 2). There appears to be at least one agricultural structure in the proposed project area. Up until this point, the land use has been agricultural. The property is within the Metropolitan Urban Service Area (MUSA) and Phase 1 of the 2040 Staging Plan.

Surrounding Properties

The guiding, zoning, and existing use of the surrounding properties are detailed in the table below. All surrounding properties are within the MUSA.

| Direction | Guided | Zoning District | Use | Staging Phase |
|-----------|---|--|-------------|------------------------------------|
| North | - Low Density Residential - Existing Residential | - RSF-2 - Urban Reserve | Residential | - Phase 1 - Phase 4 (2035-2040) |
| East | Existing Residential | Urban Reserve | Residential | Phase 4 |
| South | Medina | Medina | Residential | N/A |
| West | Low Density Residential | Planned Unit Development (PUD) - Tavera | Residential | Phase 1 |

Natural Characteristics of the Site

The 2040 Comprehensive Plan’s Natural Resource Inventory Areas map does not show any high-quality natural communities on the subject properties. There is an emergent wetland community indicated on the eastern portion of the project site. A wetland delineation was approved by the City in January 2021 and does not expire until January 2026. The delineation confirmed 10 wetlands throughout the proposed project site. The Hennepin County Natural Resources Map indicates the larger wetland complex in the southeast portion of the site may be a DNR protected water and is identified as Flood Zone A. The enclosed Engineering Memo provides that a Letter of Map Revision was finalized by FEMA in



Figure 2 Hennepin County Natural Resources Map

The delineation confirmed 10 wetlands throughout the proposed project site. The Hennepin County Natural Resources Map indicates the larger wetland complex in the southeast portion of the site may be a DNR protected water and is identified as Flood Zone A. The enclosed Engineering Memo provides that a Letter of Map Revision was finalized by FEMA in

January 2023 which better defined the floodplain within the proposed project area. This process carved out an additional 1.78 acres of upland within the project area. A figure

showing the previous and revised floodplain boundaries within the project area is provided in Attachment of A of the Engineering Memo.

4. Analysis

Planning staff coordinated review of the sketch plat with Public Works and Engineering as well as the Public Safety team. Memos from the City Engineer and Public Safety team are enclosed in this report as well as incorporated into the following analysis as appropriate. The applicant is responsible for reviewing the entirety of both memos and incorporating the feedback as the project moves forward.

Use

The concept plan for “Hackamore 116” proposes a residential neighborhood of 66 lots for single-family homes. The applicant’s narrative indicates the lots are intended to be sold to one or more local builders for the construction of custom homes. Each home and lot will be individually owned and maintained. No neighborhood recreational amenities are proposed. The developer intends to establish a Homeowners Association for the entire neighborhood to meet the applicant’s vision for the neighborhood regarding building types, varied front elevations, house colors, landscaping, and other overall goals for the neighborhood.



Figure 3 Hackamore 116 Sketch Plat

Lot Analysis

The lot standards for the existing RSF-2 district are as follows:

| RSF-2 | Standard |
|---------------------------------------|-----------------|
| Minimum Lot Area | 11,000 sq. ft. |
| Minimum Lot Width | 80 ft. |
| Minimum Principal Structure Setbacks | |
| - Front, Major Roadways | 100 ft. |
| - Front, All Other Streets | 20 ft. |
| - Front Porch (less than 120 sq. ft.) | 15 ft. |
| - Side (living) | 10 ft. |
| - Side (garage)* | 5 ft. |
| - Rear | 30 ft. |
| Maximum Principal Building Height | 35 ft. |

* Minimum separation between structures on adjacent parcels shall be 15 ft.

However, the applicant proposes to rezone the project area to RSF-3. The Zoning Ordinance states that the RSF-3 district “is intended to be the primary single-family zoning district for future residential developments.” The setbacks are the same in RSF-3 as RSF-2, but there are smaller lot size standards for single-family homes as provided in the table below.

| RSF-3 | Standard |
|-------------------|-----------------|
| Minimum Lot Area | 7,500 sq. ft. |
| Minimum Lot Width | 65 ft. |

The concept plan proposes 66 lots with lot widths of 65'. Individual lot areas were not provided, but the plat would be expected to comply with the minimum of 7,500 sq. ft. Measuring a few of the proposed lots suggest the plat will be able to comply with this standard.

The applicant requests a variance for a 7.5' setback to be applied to both the garage and living sides for a minimum separate of 15'. The applicant's argument for the variance is it will provide the most flexibility for builders to place a home on a lot. In exchange, the applicant notes the intention of voluntarily adhering to a 25' front setback. Lots that abut County Road 116 are subject to a 100' setback. The applicant's narrative notes that some of the homes will be as close to 60' from County Road 116, but they will provide the necessary landscaping to obtain this flexibility as permitted by right in City Code. It will be helpful for the Council to provide feedback on the requested rezoning and variance to the side setback of RSF-3.

Density

The concept plan provides an estimated net density of 2.58 units per acre. This number was reached by taking the overall site area of 36.74 acres and deducting the

Hackamore Road right-of-way (ROW) (0.49 acres), the County Road 116 ROW (0.63 acres), the area containing wetlands and land below the 100-year ordinary high-water level (6.88 acres), and the estimated wetland buffers (3.18 acres). The Comprehensive Plan requires a density of 3-5 units per acre in areas guided as low density residential. It is unclear if the current design will ultimately meet a post-development density of 3 units per acre as required, and the applicant's narrative notes that the number of lots may be reduced further as some of the lots may be increased to a width of 75' to accommodate a 60' wide home.

Architectural Design Requirements

All urban residential zoning districts must comply with the design requirements provided in Section 1040.040, Subd. 8 of the Zoning Ordinance. A minimum of 5 different front elevation styles must be provided. Four concept elevations were provided with the application. It should be noted the elevations may change since the builder is not yet determined, and there may be multiple builders. The narrative indicates that most homes have multiple front elevation options. Regardless, an additional example style must be provided with the formal application, and architectural requirements will be confirmed further with each building permit. Homes in proximity to each other shall not look alike in terms of the combination of color of siding, accent, and roofing materials as compared to the two homes on each side and the three homes directly facing the home under consideration.



Figure 4 Example Elevations

The front elevation shall have material consisting of brick, stone, stucco, fiber cement board, redwood, cedar, or something similar. Additionally, the front elevation shall have no more than 75% of any one type of exterior finish unless the finish is brick, stucco, and/or stone. Further, if vinyl siding is proposed, it must be used in combination with the above discussed materials, and a minimum of 3 different variations in color, style, and/or material is required. Not enough information was provided to confirm the submitted elevations comply with these standards. The building materials and percentages would need to be confirmed on the example elevations provided in the preliminary application.

The residential architectural standards require the front elevation to consist of doors, windows, and variations of the wall face with the use of architectural elements such as pilasters or columns, wainscots, or canopies. This appears to be satisfied with the submitted elevations with the use of columns and variations within the rooflines.

Garages must be architecturally styled to match the exterior design of the home and must not comprise more than 55% of the viewable ground floor street-facing linear building frontage. The concept elevations may be able to comply with this standard, but this can be difficult with 3-car garages. The measurement and percentage of the garage structure must be confirmed with the preliminary application.

Allowable roofing materials include asphalt shingles, wood shingles, concrete, clay, ceramic tile, or residential steel roofing with hidden fasteners. Roof overhangs must be at least 12 inches. It appears the submitted concept elevations will be able to comply with these standards.

Each façade that faces a street shall receive equal architectural treatment as the front elevation in terms of materials and articulation. The following lots appear to have multiple facades that are oriented or visible to a public street: 1-11, 21, 22, 29, 32, 49, 59, and 60. Lots 12-16 and 25-27 appear to be oriented to a public street, but these lots appear to be separated from the street through a combination of vegetation, distance, wetlands, and/or stormwater ponds. However, it is unclear how wooded these areas will be and whether these lots will be visible from the street. More information would be needed to determine visibility. It will be helpful for the Council to discuss if lots separated from a public street by vegetation, sufficient distance, wetlands and/or stormwater ponds require equal façade treatment if it is determined the façade is not visible from the public street.

Streets & Access

The sketch plan shows one access to serve the development located on Hackamore Road in the south of the project area. The Engineering Memo provides that turn lanes from Hackamore Road into the proposed development are being installed with the Hackamore Road Project in accordance with an existing agreement with the landowner. All 66 homes would be served by public streets, and there are four cul-de-sacs shown on the sketch plan. The plan also shows a route utilizing the existing driveway on County Road 116; the applicant confirmed this could be used for access to the wetlands and ponds in the area. The concept plan includes a ghost plat of two properties to the north with existing homes that could potentially further subdivide (a 1.88-acre parcel within the current stage of phasing to receive municipal services and a 9.95-acre parcel that is within the 4th stage). The ghost plat shows the potential for an eventual second access to be added at the time these properties subdivide.

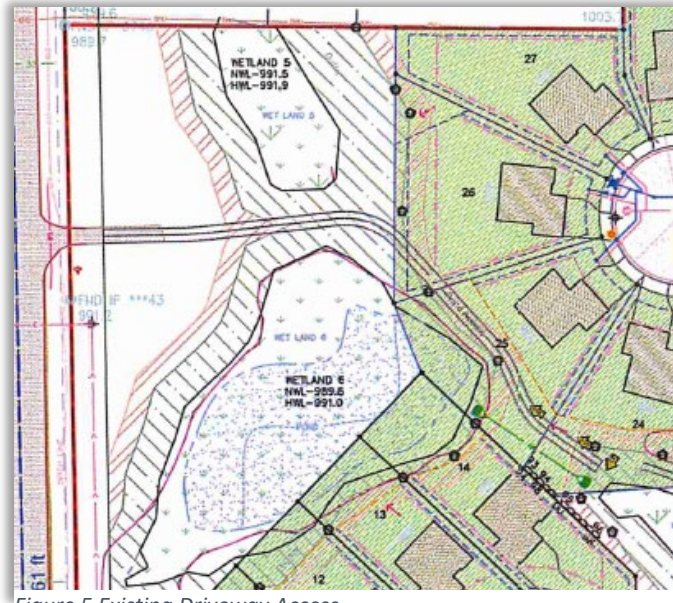


Figure 5 Existing Driveway Access

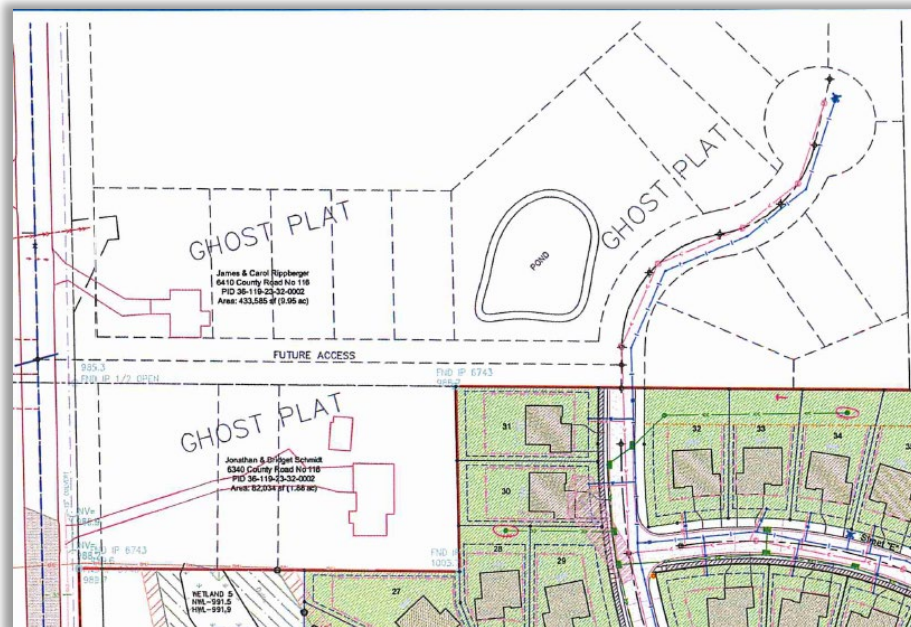


Figure 6 Ghost Plat

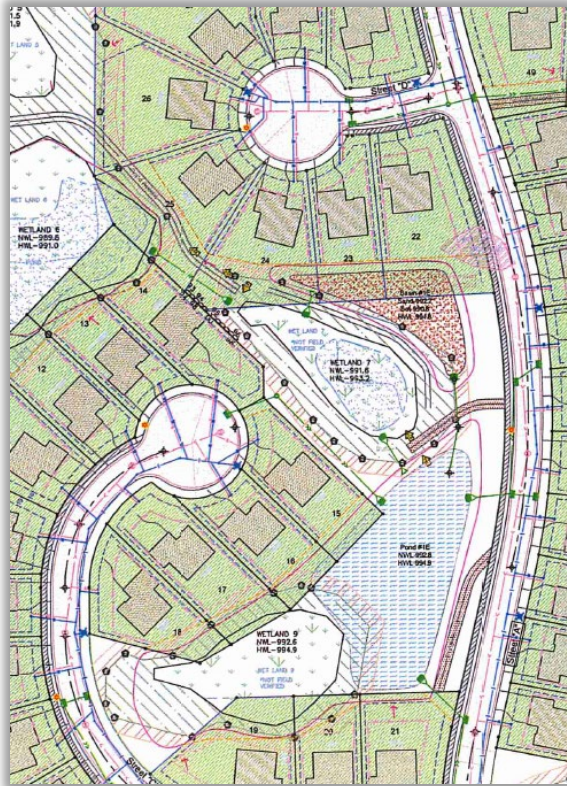


Figure 7 Two Western Cul-De-Sacs

The Southeast District Plan (Appendix B in the Zoning Ordinance) states cul-de-sacs should be avoided in favor of a continuous road network. While natural features and pre-existing conditions may necessitate the occasional use of cul-de-sacs, City staff recommends the two western cul-de-sacs be connected to create a loop. In addition to compliance with the Southeast District Plan, there are Engineering and Public Safety considerations behind creating this connection. Per the Engineering Memo, abutting cul-de-sacs are discouraged due to the additional maintenance and stubbed utilities. The Public Safety Memo argues for connectivity for the sake of emergency access ease throughout the development. This connectivity is seen all the more crucial by Public Safety should there indeed be only one access to serve all 66 homes.

The Engineering Memo states that a feasibility study will be required to review the development impacts on the transportation system. The single access point on Hackamore Road is a concern called out in both the Engineering Memo and Public Safety Memo. Since the project area has frontage along County Road 116, Public Safety opines that a second access on County Road 116 is both possible and necessary at the outset of the development considering the proposed density of homes. The necessity and location of the second access will need to be further reviewed and discussed with City Staff and Hennepin County.

If Hennepin County were to not approve of an access point within the proposed project area, the existing driveway access could be used as an interim emergency access for Public Safety. Under this scenario, the two western cul-de-sacs will need to be connected to create a loop for the emergency access route.

The applicant's narrative indicates the southeast cul-de-sac will need flexibility from the City's Engineering Design Standards that require a 60' ROW and a pavement radius of 50'. Instead, the applicant proposes a 50' ROW with a pavement radius of 42'. This would be a variance request.



Figure 8 Southeast Cul-De-Sac

The applicant’s narrative explains this flexibility is requested due to the constraints placed on the location by the large wetland complex and Hackamore Road. The Engineering Memo does not provide support for deviation from the Engineering Design Standards as these were established to ensure public maintenance and public safety vehicles can safely use these areas. Additionally, these design standards are supported by the school district. The Public Safety Memo strongly urges adherence to City specifications. However, Public Safety provides that an 18’-wide emergency access with bollards in this area could be an acceptable alternative for their needs should the cul-de-sac remain as proposed. The viability of this alternative option would need to be reviewed further with Public Works and Engineering. It will be helpful for the Council to provide feedback on this variance request.

Parking

Parking standards are provided in Section 1060.060 of the Zoning Ordinance. Single-family homes require two parking spaces per unit. The concept elevations show 3-car garages, so the proposed neighborhood would comply/exceed this standard. There is no driveway setback, but driveways are not permitted in drainage and utility easements, which typically span the first 5’ from the side property lines. The concept plan does not provide driveway locations, but it appears they will be able to comply with this standard.

Trails and Parks

A proposed on-road trail is shown along Hackamore Road on the Parks and Trails Plan in the 2040 Comprehensive Plan. This on-road trail is reflected on the proposed sketch plat and is being constructed with the Hackamore Road project. The developer would not get park dedication credit for the on-road trail as it will be located within the City’s ROW.

Lighting

Street lighting will be required as a part of the development. A lighting plan was not provided, but the applicant would be expected to comply with the performance standards in Section 1060.040 of the Zoning Ordinance. Street lighting locations will be reviewed by Public Safety with the final lighting locations determined at the time of final plat.

Landscaping

A landscaping plan was not provided which is typical at the sketch plan stage. The applicant will be expected to comply with the City's landscaping standards in Section 1060.070 of the Zoning Ordinance. Residential developments require one new overstory tree per dwelling unit.

Buffer Ordinance

Assuming the project area is rezoned to RSF-3, a buffer yard would be required to the east, west, and north. A buffer yard class "B" would apply to the east and north. The planted buffer yard options are provided in the table below. This buffer yard must be included on the landscaping plan, but it will not count towards the other minimum landscaping requirements.

| Buffer Yard Class | Width | Overstory Plantings¹ | Understory Plantings¹ | Shrubs^{1,2} | Structures³ |
|--------------------------|--------------|--|---|-----------------------------|-------------------------------|
| B | 10' | 1 | 6 | 6 | Minimum 4' fence |
| | 20' | 3 | 6 | 9 | None |
| | 20' | 1 | 2 | 3 | Minimum 4' fence |
| | 30' | 2 | 4 | 12 | None |
| | 30' | 1 | 2 | 4 | Minimum 4' fence |

¹ Per 100 feet of distance

² Requirement must be met by shrubs, tall native prairie plantings, or a combination deemed acceptable by the City

³ Fences are subject to requirements in Section 1060.080

The buffer yard ordinance allows the City Council to accept wetlands as a natural buffer. The Council should discuss whether this makes sense for Wetlands 2 and 3 along the project borders on the east of the site. Since Tavera is a PUD, it is considered RSF-3 for the sake of the applying this ordinance. This means the minimum front setback must be maintained. This is compatible with the 60' setback proposed by the applicant providing additional landscaping as required by City Code.

Wetlands

As previously noted, a wetland delineation was completed for this property in 2021 and is still valid. Wetlands 1 and 2 in the southeast portion of the site are known to be DNR-protected. The applicant's narrative proposes to fill 3 of the smaller wetlands (Wetland 4 in the northern central area of the site, Wetland 10 centrally located within the project, and Wetland 8 located in the southwest corner of the site near Hackamore).

Wetlands 1 and 2 are labeled as low-quality wetlands on the City's Natural Resources Communities Quality Ranking Map. Per Section 1050.010 of the Zoning Ordinance, low-quality wetlands require a minimum buffer average of 15' (the buffer can be no less than 10' and no wider than 20' for the purposes of calculating the average). The remaining wetlands are not shown on this map. The City assumes wetlands not included on this map to be of medium quality. However, there is a MNRAM process with the State of MN the applicant can pursue to confirm the wetlands are considered low quality to reduce the required buffer area. Otherwise, medium quality wetlands must have an average wetland buffer width of 25' (the buffer can be no less than 20' and no wider than 40' for the purposes of calculating this average). There is an additional 15' structure setback that is applied from the edge of the wetland buffer. Roads and trails and related retaining walls or fences have a 5' setback from the wetland buffer.

It appears the buffer shown on the concept plan may not quite meet the minimum and maximum buffers allowed for the purposes of satisfying the wetland buffer average. Calculations will need to be provided with the preliminary plat to confirm the average buffer requirements are satisfied.

Wetland buffer monuments are required at each lot line where it crosses a wetland buffer, and where needed to indicate the contour of the buffer, with a maximum spacing of 200 feet of wetland edge. For the most part, the concept plan appears to comply with this standard. However, there may be a few areas where monuments will need to be added in the preliminary plat application. For example, the western wetland edges of wetlands 5 and 6 in the northwest corner of the project area do not appear to have any buffer monuments.

The proposed impacts to the 3 affected wetlands must be reviewed and approved through the appropriate WCA permitting process. If for some reason approval is not granted, the site design would need to be modified accordingly to avoid the wetlands and account for the required wetland buffers. Wetland buffers will need to be shown along with the required wetland buffer monuments at the time of preliminary plat. As part of a wetland buffer establishment plan, the applicant must confirm whether they plan to use existing buffers as allowed and defined by City Code or if they plan to establish new buffers. The wetland buffer establishment plan will be reviewed and approved by the City's wetland specialist.

Utilities

The applicant's narrative explains the proposed sanitary sewer design has one manhole (manhole 9) proposed at an invert elevation depth of 5.4 feet where the City Engineering Design Standard is 7.5'. All other invert depths in the neighborhood would meet the minimum standard of 7.5'. The applicant argues that with the inclusion of insulation, the shallower depth of manhole 9 will function properly and has been used elsewhere in the Twin Cities. The Engineering Memo provides the sanitary sewer connection locations will be reviewed as part of the feasibility study to identify potential corridors that could be utilized to construct the system in accordance with City standards. Deviation from this standard would be handled as a variance, and it will be helpful for the Council to provide feedback to the applicant on this request.

The Engineering Memo touches on various other items related to municipal water for the site. It is noted that the development team previously asked the City to review the watermain requirements for the project area during the design of the Hackamore Road Project. The analysis identified that a looped water system with two connections is necessary to adequately supply this development. Additionally, a future water connection corridor was identified as a part of the Hackamore Project and is being preserved. The Memo provides that if Street C remains a cul-de-sac (the furthest southwest cul-de-sac), the watermain should be looped in this area. As part of the feasibility study, Engineering will review the development impacts on the overall public utility system.

Stormwater Management

The Engineering Memo provides several comments on stormwater management for the site and notes a feasibility study will further review the development impacts on the stormwater system. There is a concern that the proposed sand filtration systems shown on the concept plan will have challenges with access and maintenance. If filtration is required by the Elm Creek Watershed Management Commission (ECWMC), the City strongly prefers the utilization of a NURP pond with a filter bench offset to one side of the pond and adequate access. Additionally, the Engineering Memo indicates that increased drainage from Hackamore will enter the site as part of the Hackamore Road Project being constructed cooperatively with Medina. A portion of this runoff will be treated within the proposed development.

A stormwater management plan will be required to confirm compliance with the City of Corcoran and ECWMC regulations. The applicant should refer to the City of Corcoran Stormwater Guidelines for Development Review for standards (enclosed to this report for reference).

As noted in previous concept plan reviews, the City is in the process of establishing a stormwater area charge. This charge may be in place by the time of final plat. If this charge is on the City's fee schedule at the time of final plat, it will be applicable to the project.

Summary of Discussion Points

In summary, it will be helpful for the Council to provide feedback on the following components of the sketch plan:

- Rezoning from RSF-2 to RSF-3.
- Variance to side setback requirement of 10' (living side) and 5' (garage side) to a 7.5' setback on either side.
- If a façade is oriented to a public street but not visible to the street due to vegetation placed within a separation created by a combination of distance, wetlands, and/or stormwater ponds, should the equal architectural treatment clause still apply?
- Access for the development.
- Deviations from the City's Engineering Standards:
 - o 50' cul-de-sac ROW in the southeast corner of the site with a 42' pavement radius where 60' and 50' (respectively) are required.
 - o An invert elevation depth of 5.4' with insulation for manhole 9 where 7.5' is required.
- Use of eastern wetlands in the project area as a natural buffer in place of buffer requirement.

Next Steps

Assuming this project moves forward, the next steps are outlined below:

1. Feasibility study.
2. A land use application for a Rezoning, Preliminary Plat, and Variance.
3. WCA permitting for wetland impacts.
4. A land use application for a Final Plat.
5. Watershed approval of City-approved final grading and stormwater plans.

Recommendation

Staff recommends that the City Council review and discuss the sketch plat and provide the applicant with informal comments. The Council should provide clear direction to the applicant so that they can decide whether to proceed with a formal application. Any comments given by the City Council are advisory in nature and non-binding. While the comments are non-binding, the applicant will consider the input from the City Council when they prepare their formal submittal.

Attachments:

1. Applicant Narrative Dated June 21, 2023.
2. Sketch Plan Exhibits.
3. Public Safety Memo Dated July 20, 2023.
4. Engineering Memo Dated July 19, 2023.
5. City of Corcoran Stormwater Guidelines for Development Review.

Hackamore 116 – Development Narrative

Gonyea Company is excited to provide the concept development application for the Hackamore 116 neighborhood (actual plat/neighborhood name to be determined) located in the northeast corner of the Hackamore Road and County Road 116 intersection. Gonyea Company has a strong history of creating quality neighborhoods in the west metro, including many in the cities of Plymouth and Maple Grove, and we plan to build on that history with the creation of the Hackamore 116 neighborhood. The Hackamore 116 neighborhood as shown includes a total of 66 detached home sites. The lots will be sold to one or more quality local builders for the construction of custom homes.



Development Team

| | |
|---|---|
| <p><u>Developer/Property Owner:</u> Gonyea Company Dave Gonyea Jake Walesch 6885 Sycamore Lane N Suite 110 Maple Grove, Minnesota 55369 Email: jake@jakewalesch.com</p> | <p><u>Civil Engineer and Land Surveyor:</u> Sathre-Berquist, Inc. Robert S. Molstad, P.E. 14000 25th Avenue North Plymouth, Minnesota 55447 Telephone: 952-476-6000 Email: molstad@sathre.com</p> |
| <p><u>Project Manager:</u> Steve Juetten 6885 Sycamore Lane N Suite 110 Maple Grove, Minnesota 55369 Telephone: 612-269-2531 Email: steve@gonyeacompany.com</p> | <p><u>Landscape Design:</u> Pioneer Engineering, P.A. Jenni Thompson, PLA, AICP, JD 2422 Enterprise Drive Mendota Heights, Minnesota 55120 Telephone: 651-681-1914 Email: jthompson@pioneereng.com</p> |
| | <p><u>Soil Sciences</u> Haugo Geo Technical Services Paul Haugo 2825 Cedar Avenue S Minneapolis, Minnesota 55407 Telephone: 612-554-4829 Email: p.haugo@gmail.com</p> |

Concept Site Plan

To accommodate the proposed site plan, a zoning change is necessary that would change the current zoning from RSF-2 to RSF-3. The change will allow for the use of 65-foot-wide lots that will more efficiently utilize the site which contains several wetlands and borders Hackamore Road and County Road 116. There is a possibility that as the design moves from sketch plan to preliminary plat the total number of lots may be reduced by changing some lots to 75 feet wide to accommodate an even larger 60-foot-wide home series.

The home sites are being developed for the construction of single-family homes that will be built by one or more quality builders that have built hundreds of homes throughout the Twin Cities market. Each home and lot will be individually owned and maintained. Examples of the house product are shown on page 3.

The current neighborhood design does not include any neighborhood recreational amenities.

The conceptual site design proposes filling three small wetlands and preserving seven larger wetlands. The design also has a few lots that will have reduced setbacks down to 60 feet from either County Road 116 or Hackamore Road. Additional landscaping as required by City Code will be provided on these lots.

The proposed design includes one cul-de-sac (southeast most cul-de-sac) that requires subdivision flexibility due to the constraints placed on the location by the large wetland and Hackamore Road. The requested flexibility reduces the right of way from 60 feet to 50 feet and reduces the pavement radius from 50 feet to 42 feet.

The proposed sanitary sewer design has one manhole, manhole 9, proposed at an invert elevation depth of 5.4 feet where the City Standard is 7.5 feet. All other invert depths in the neighborhood are at the minimum required 7.5 feet. With the inclusion of insulation, this shallower depth will function properly. This design has been used elsewhere throughout the Twin Cities.

To provide the most flexibility for a builder to place a home on a lot, consideration is being requested for non-street side setbacks to be 7½ feet and 7½ feet rather than 5 feet and 10 feet. This would maintain the desired 15-foot setback between houses. It should be noted that the proposed neighborhood front yard setback is 25 feet.

Housing / Product

Currently the builders have not been chosen for the neighborhood. However, based on past neighborhoods development in the west metro, below are examples of the housing expected. The homes shown below are 50' wide homes. The preliminary plat application is anticipated to have some wider lots that will accommodate 60' wide homes.



4,414 Finished Sq. Ft.



2,981 – 3,125 Finished Sq. Ft.



5,007-5,259 Finished Sq. Ft.



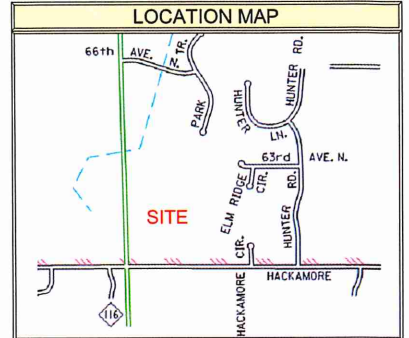
4,335 Finished Sq. Ft.

Most homes come with multiple front elevations and interior room options which allows for a greatly improved street scape.

Homeowner's Association and Restrictive Covenants

A Homeowners Association (HOA) will be created for this neighborhood. The Developer will prepare restrictive covenants and standards that will apply to the entire neighborhood.

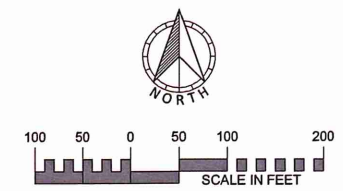
The restrictive covenants will be tailored to the Developer's vision of the neighborhood. Each house will be required to meet the specifics of building types, varied front elevations, house colors, landscaping, and overall goals of the neighborhood.



| PREPARED BY | PREPARED FOR |
|--|--|
| ENGINEER SATHRE-BERGQUIST, INC. 150 SOUTH BROADWAY WAYZATA, MINNESOTA 55391 PHONE: (952) 476-8000 FAX: (952) 476-0104 CONTACT: ROBERT MOLSTAD, PE EMAIL: MOLSTAD@SATHRE.COM | DEVELOPER LAKEVIEW DEVELOPMENT COMPANY, LLC 6885 SYCAMORE LANE NORTH SUITE 110 MAPLE GROVE, MN 55369 CONTACT: STEVE JUETTEN PHONE: (612) 269-2531 EMAIL: STEVE@GONYEACOMPANY.COM |

| PLAN DATA |
|---|
| 65' Wide Single Family Lots - 66 Lots |
| PROPOSED ZONING: PUD |
| PUBLIC STREET ROW = 50 FT (30' B-B STREETS) |
| FRONT YARD SETBACK = 25 FT |
| SIDE YARD SETBACK = 7.5 FT / 7.5 FT |
| CORNER SETBACK = 25 FT |
| MINIMUM REAR YARD SETBACK = 30 FT. |

| DENSITY |
|--|
| Overall Area = 36.74 Acres |
| Gross Density = 66 / 36.74 = 1.79 units/acre |
| Hackamore Road ROW Area = 0.49 Acres |
| CR 116 ROW Area = 0.63 Acres |
| Wetland Area = 6.88 Acres |
| *(Excludes proposed wetland fill area)* |
| Wetland Buffer - 3.18 Acres |
| Net Area = 36.74 - 0.49 - 0.63 - 6.88 - 3.18 = 25.56 acres |
| Net Density = 66 / 25.56 = 2.58 units/acre |



EXISTING UTILITIES SHOWN ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ANY AND ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES ARISING OUT OF HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES.

| DRAWING NAME | NO. | BY | DATE | REVISION |
|--------------|--------|----|------|----------|
| HACKAMORE | | | | |
| DRAWN | XXX | | | |
| CHECKED | XXX | | | |
| DATE | XXXXXX | | | |

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XXX, P.E.
Date: _____ Lic. No. _____

ENGINEERS SURVEYORS
DESIGNERS PLANNERS

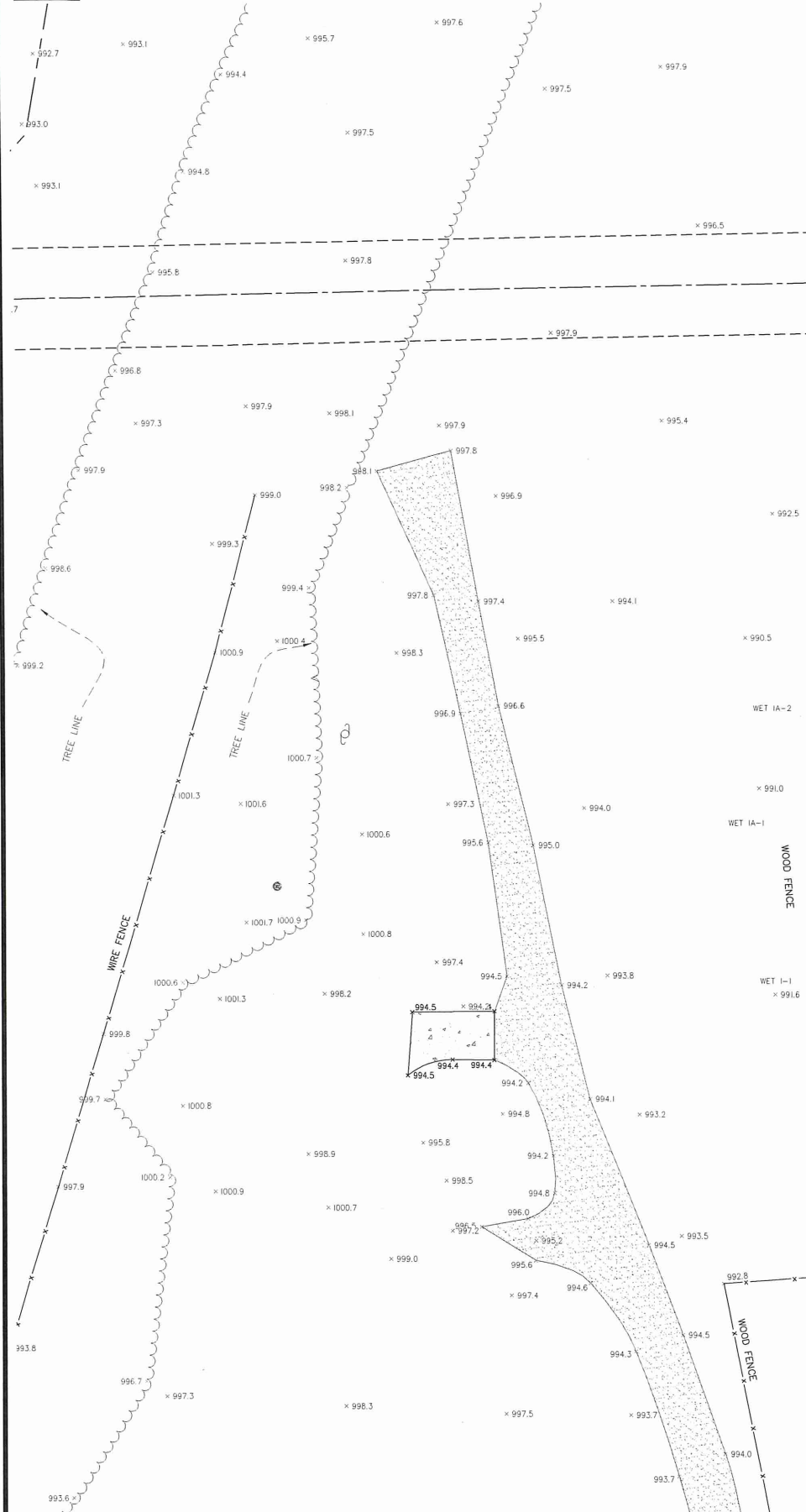
SATHRE-BERGQUIST, INC.
14000 25TH AVENUE NORTH SUITE 120
PLYMOUTH, MN. 55447 (952) 476-8000

CITY PROJECT NO.
CORCORAN,
MINNESOTA

SITE PLAN
HACKAMORE/116 NE
LAKEVIEW DEVELOPMENT COMPANY, LLC.

FILE NO.
3120-068
SP

DETAIL A



DESCRIPTION OF PROPERTY SURVEYED

Parcel 1: The East 450.00 feet, as measured along the north and south lines, of the South 933.80 feet as measured at right angles to the south line, of the Southwest Quarter of the Southwest Quarter (SW 1/4 of SW 14) of Section 36, Township 119, Range 23, Hennepin County, Minnesota. Abstract Property.

ALTA/NSPS OPTIONAL TABLE A NOTES

- 2) Site Address: PARCEL 1 - PID: 3611923330009 - 19710 Hackamore Road, Corcoran, Minnesota 55340
PARCEL 2 - PID: 3611923330010 - 19800 Hackamore Road, Corcoran, Minnesota 55340
PARCEL 3 - PID: 3611923330007 - 6320 County Road No. 116, Corcoran, Minnesota 55340

DETAIL B

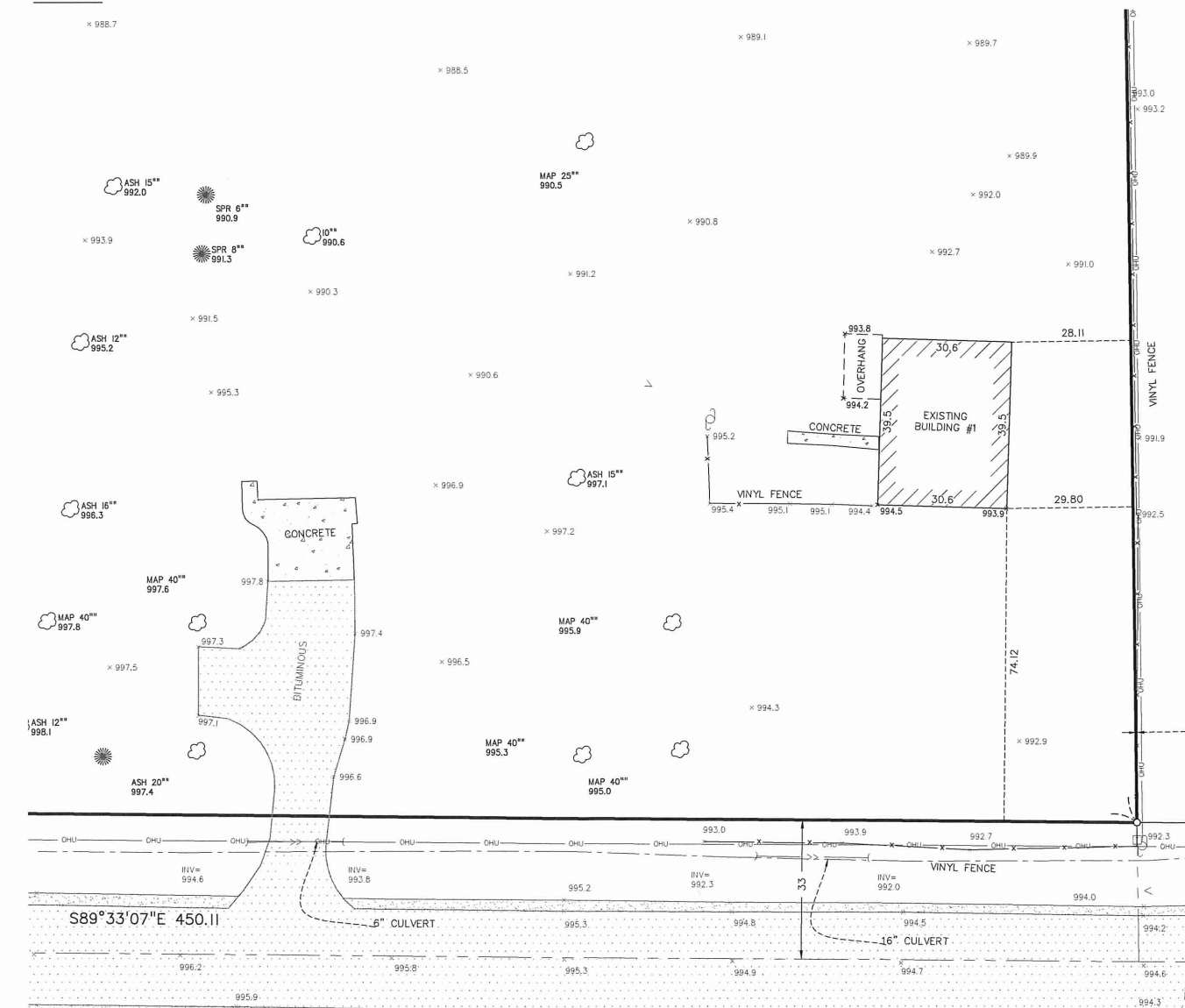


Table with 2 columns: Parcel Area Information and Parcel details. Includes Gross Area, Wet Area, and Net Area for three parcels.

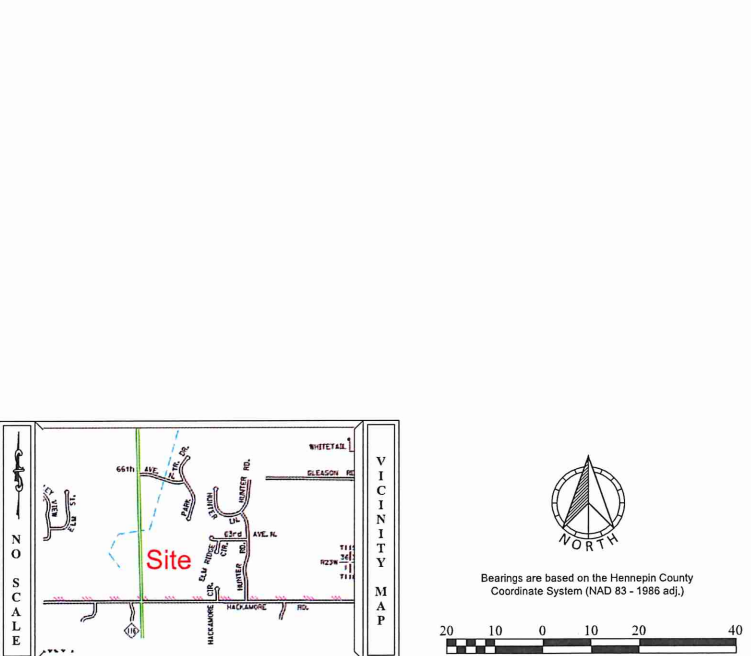
- 4) Parcel Area Information: Parcel 1: Gross Area: 405,457 s.f. - 9,308 acres
Parcel 2: Gross Area: 759,749 s.f. - 17,441 acres
Parcel 3: Gross Area: 435,407 s.f. - 9,996 acres

- 5) Benchmark: Elevations are based on Hennepin County Control Point Name: HACK which has an elevation of: 970.69 feet (NAVD88).
6) Zoning Information: The current Zoning for the subject property is RSF-2 (Single Family Residential 2) per the City of Corcoran's zoning map dated September 2020.

SURVEY REPORT

This map and report was prepared with the benefit of a Commitment for Title Insurance issued by Old Republic National Title Insurance Company, File No. HB-45094, dated November 13, 2020.

- 1) We note the following with regards to Schedule B of the herein referenced Title Commitment:
a) Item no.'s 1-10 are not survey related
b) Item no. 11. NOTE: We have been informed that the property described at Item No. 5 of Schedule A is being platted as a part of the current transaction.



SURVEY LEGEND

Legend table listing symbols for various survey features such as monuments, manholes, fences, and utility lines.

Table with columns: FIELD CREW, NO., BY, DATE, REVISION. Lists survey details and updates.

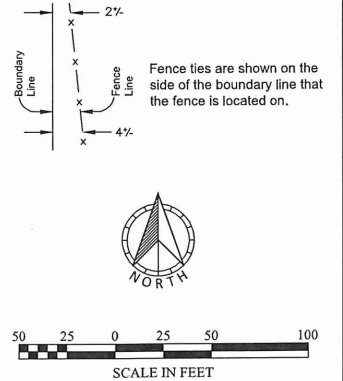
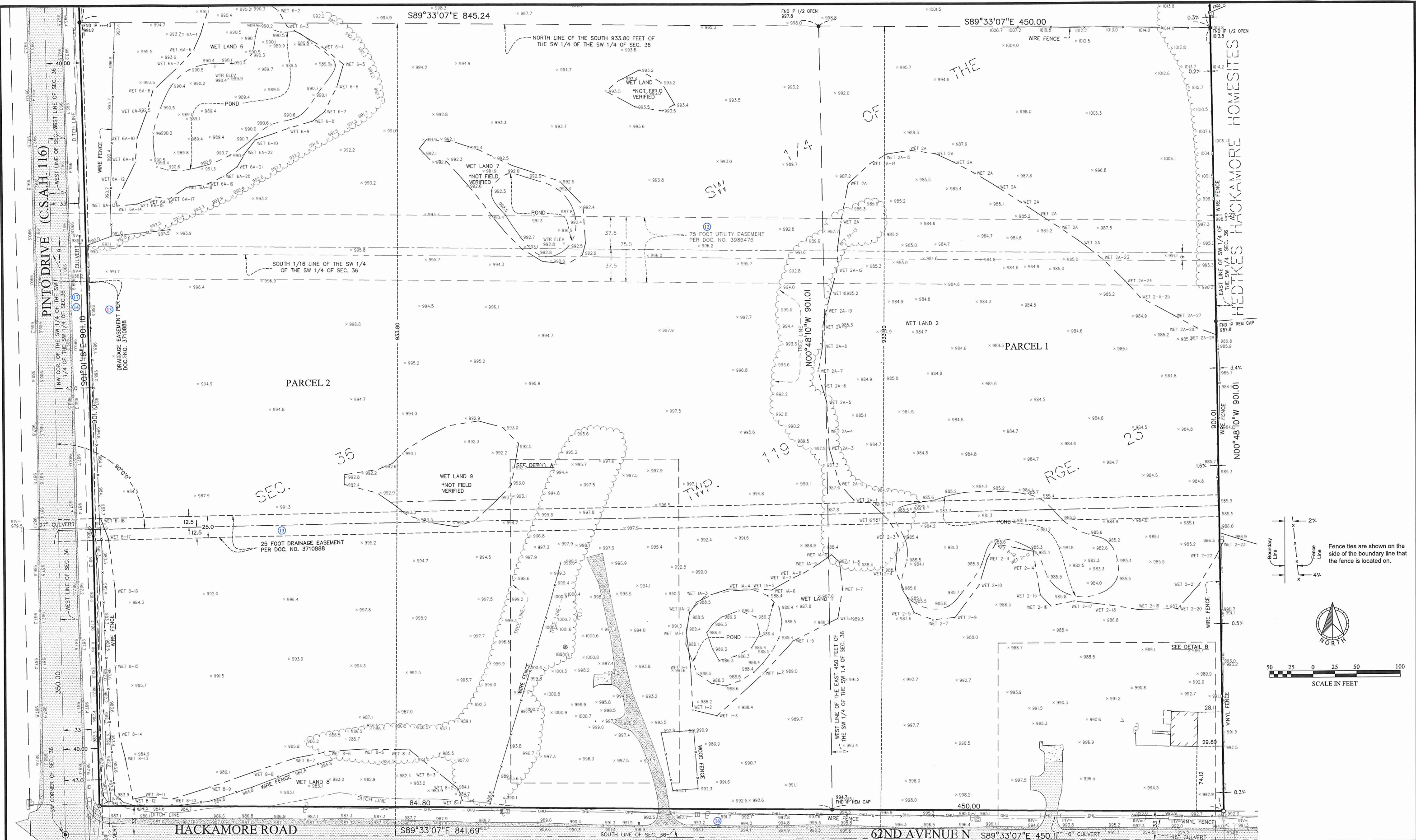
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To: Lakeview Development Company, LLC, Custom Home Builders Title, LLC, and Old Republic National Title Insurance Company: This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys...

Logo for SATHRE-BERGQUIST, INC. with address: 14000 25TH AVENUE NORTH, SUITE 120, PLYMOUTH MN 55447.

TWP:119-RGE.23-SEC.36 Hennepin County CORCORAN, MINNESOTA

CERTIFICATE OF SURVEY PREPARED FOR: Lakeview Development Company, LLC. File No. 3120-068. Includes a large number 1 and 3.



| FIELD CREW | NO. | BY | DATE | REVISION |
|------------|-----|----|------|----------|
| ALL | | | | |
| DRAWN | | | | |
| CMT | | | | |
| CHECKED | | | | |
| DLS | | | | |
| DATE | | | | |
| 2/28/2020 | | | | |

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ENGINEERS SURVEYORS
D.S.I. S. PLANNERS

SATHRE-BERGQUIST, INC.
 14000 25TH AVENUE NORTH, SUITE 120
 PLYMOUTH MN 55447 (952) 476-6000
 WWW.SATHRE.COM

CORCORAN, MINNESOTA

CERTIFICATE OF SURVEY
 PREPARED FOR:
 Lakeview Development Company, LLC

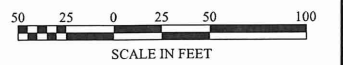
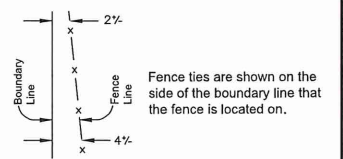
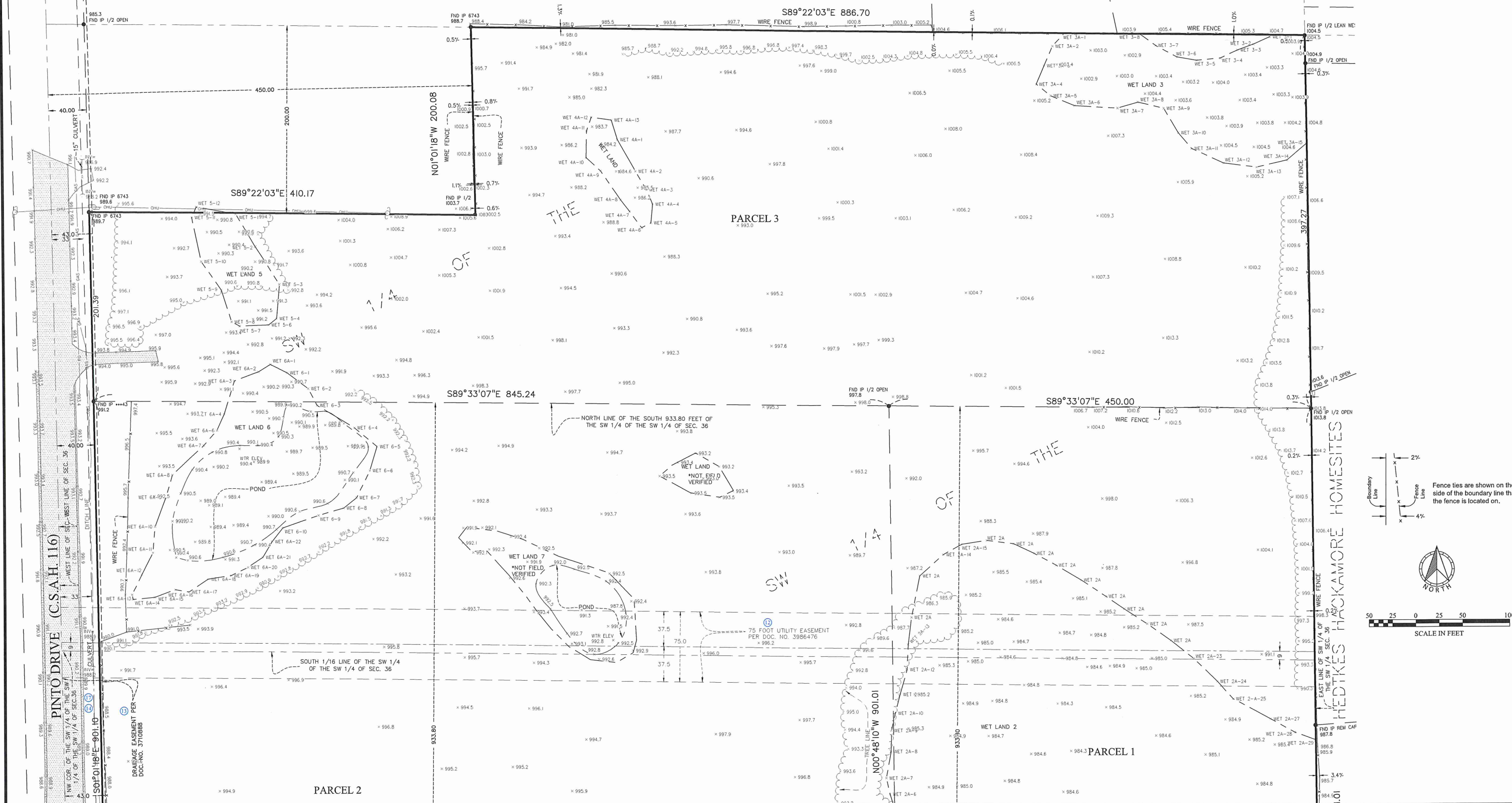
TWP:119-RGE:23-SEC:36
 Hennepin County

FILE NO.
 3120-068

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NW 1/4 OF THE SW 1/4 OF SEC. 36, TWP. 119, RGE. 23

COUNTRY SEASONS ESTATES



| FIELD CREW | NO. | BY | DATE | REVISION |
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| ALL | | | | |
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| 2/28/2020 | | | | |

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ENGINEERS SURVEYORS DESIGNERS PLANNERS

SATHRE-BERGQUIST, INC.

14000 25TH AVENUE NORTH, SUITE 120
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WWW.SATHRE.COM

TWP:119-RGE:23-SEC:36
Hennepin County

**CORCORAN,
MINNESOTA**

CERTIFICATE OF SURVEY

PREPARED FOR:
Lakeview Development Company, LLC

FILE NO.
3120-068

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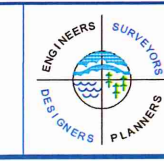
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| DRAWING NAME | NO. | BY | DATE | REVISION |
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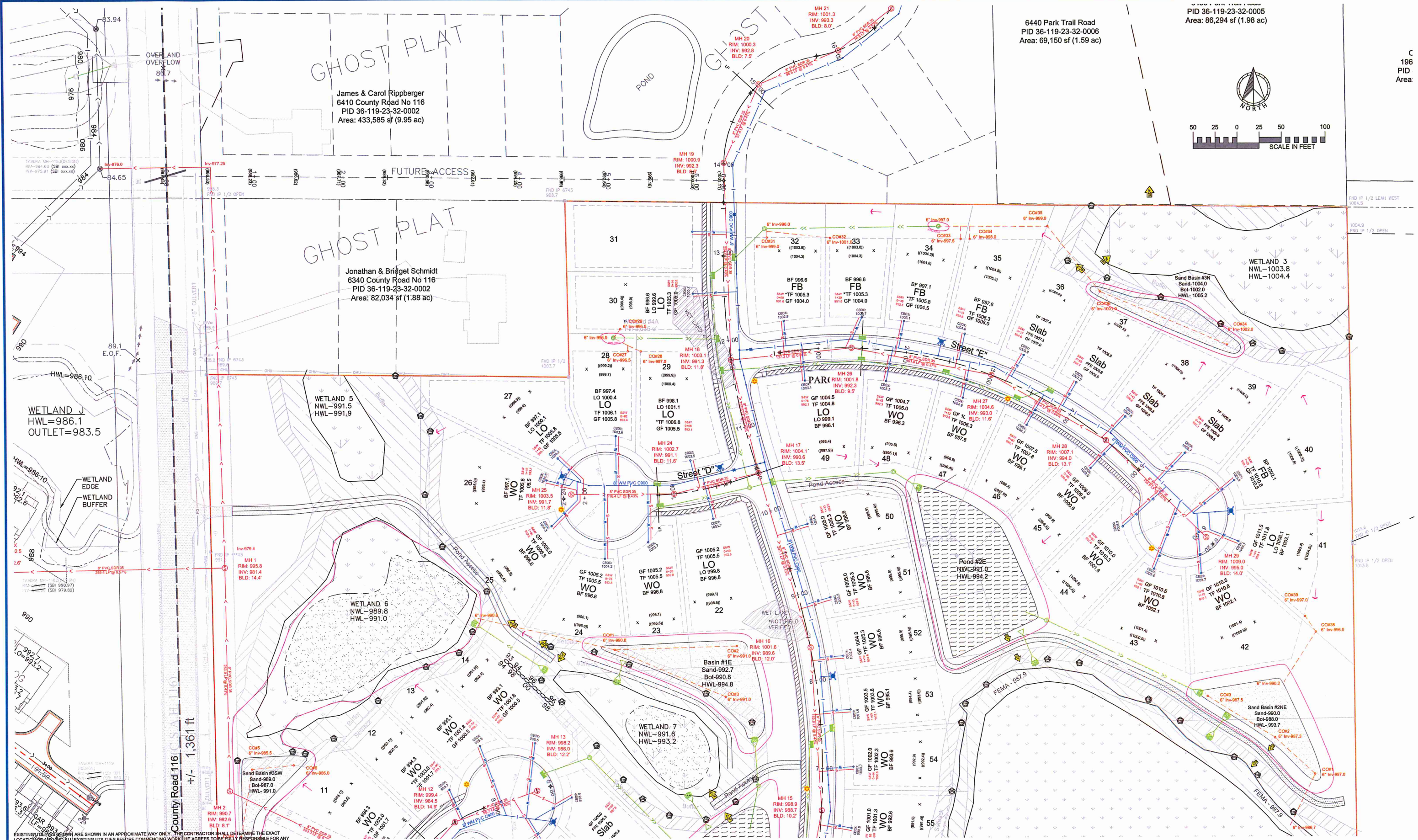


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CITY PROJECT NO.
—
CORCORAN, MINNESOTA

AERIAL PLAN
HACKAMORE/116 NE
LAKEVIEW DEVELOPMENT COMPANY, LLC.

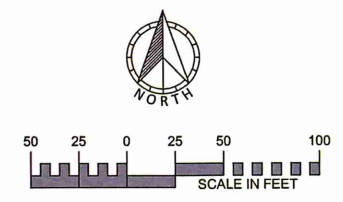
FILE NO.
3120-068
AERIAL



6440 Park Trail Road
 PID 36-119-23-32-0006
 Area: 69,150 sf (1.59 ac)

PID 36-119-23-32-0005
 Area: 86,294 sf (1.98 ac)

C
 196
 PID
 Area:



| DRAWING NAME | NO. | BY | DATE | REVISION |
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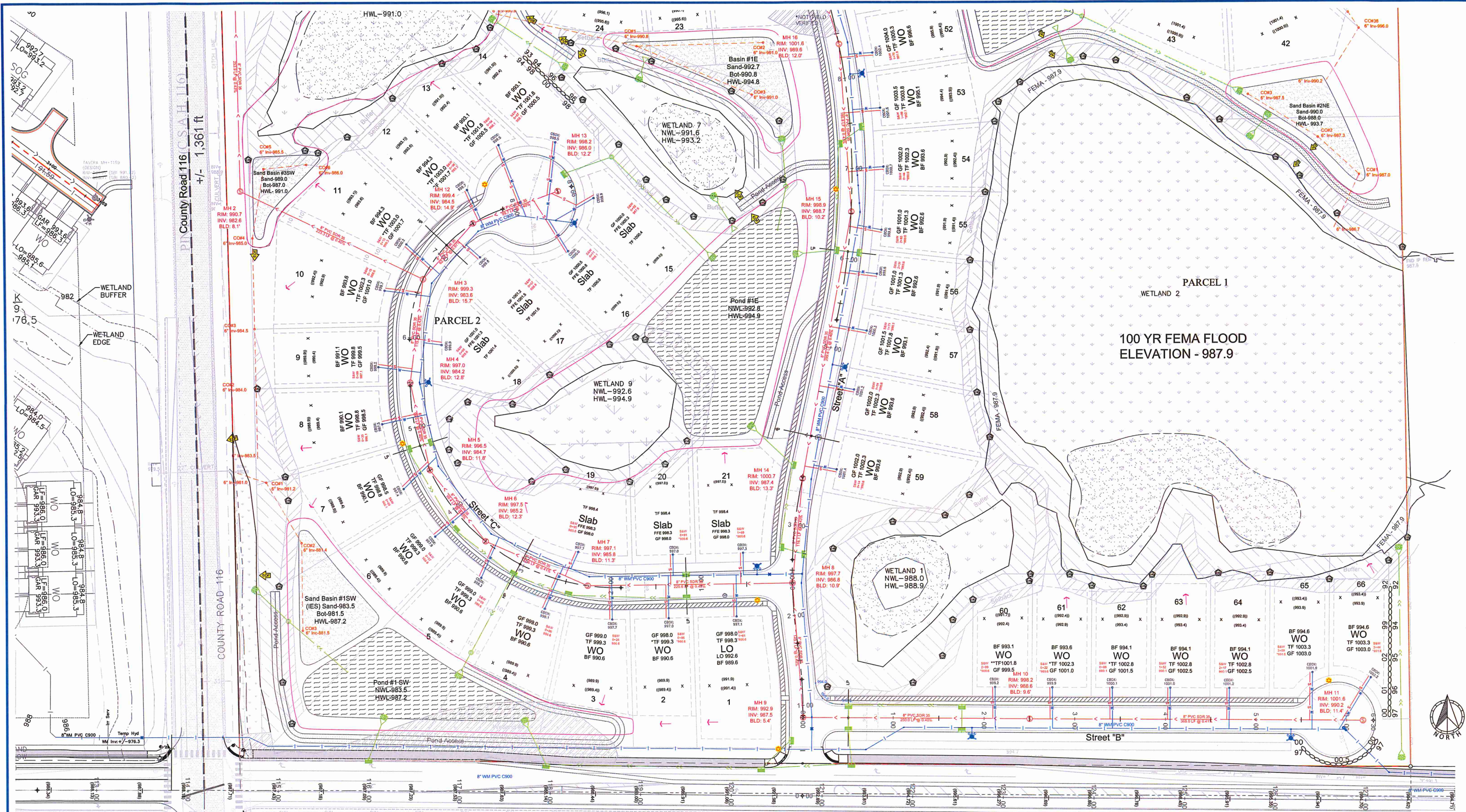
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| | | | |
|---------------------|------------------------------------|----------|----------|
| CITY PROJECT NO. | | FILE NO. | 3120-068 |
| CORCORAN, MINNESOTA | PRELIMINARY S&W PLAN (NORTH) | S&W-N | |
| | HACKAMORE/116 NE | | |
| | LAKEVIEW DEVELOPMENT COMPANY, LLC. | | |

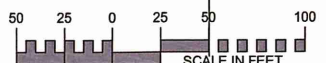


Hackamore Road Improvement Project 2023-xxx

Daniel & Jacalyn Millea
 PID 01-118-23-22-0003
 400 25th Avenue North, Suite 120
 Plymouth, MN 55447

Nancy Jean
 655 Hackamore Road
 PID 01-118-23-22-0003

Harry & Angela Denny
 625 Hackamore Road
 PID 01-118-23-22-0004



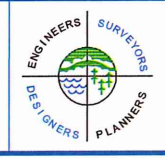
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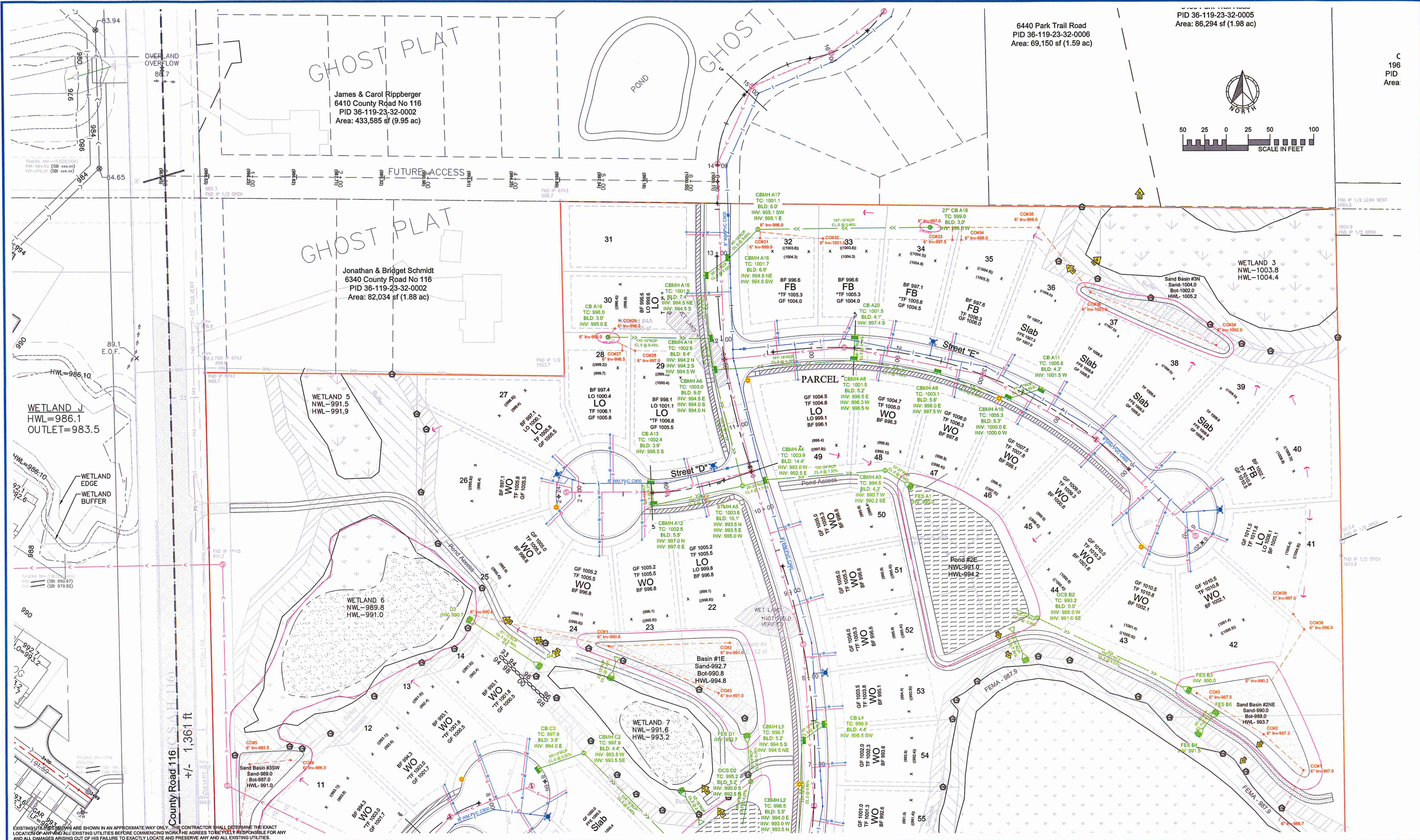


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CITY PROJECT NO. _____
CORCORAN, MINNESOTA

PRELIMINARY S&W PLAN (SOUTH)
HACKAMORE/116 NE
LAKEVIEW DEVELOPMENT COMPANY, LLC.

FILE NO.
 3120-068
 S&W-S



| DRAWING NAME | NO. | BY | DATE | REVISION |
|--------------|-----|----|------|----------|
| HACKAMORE | | | | |
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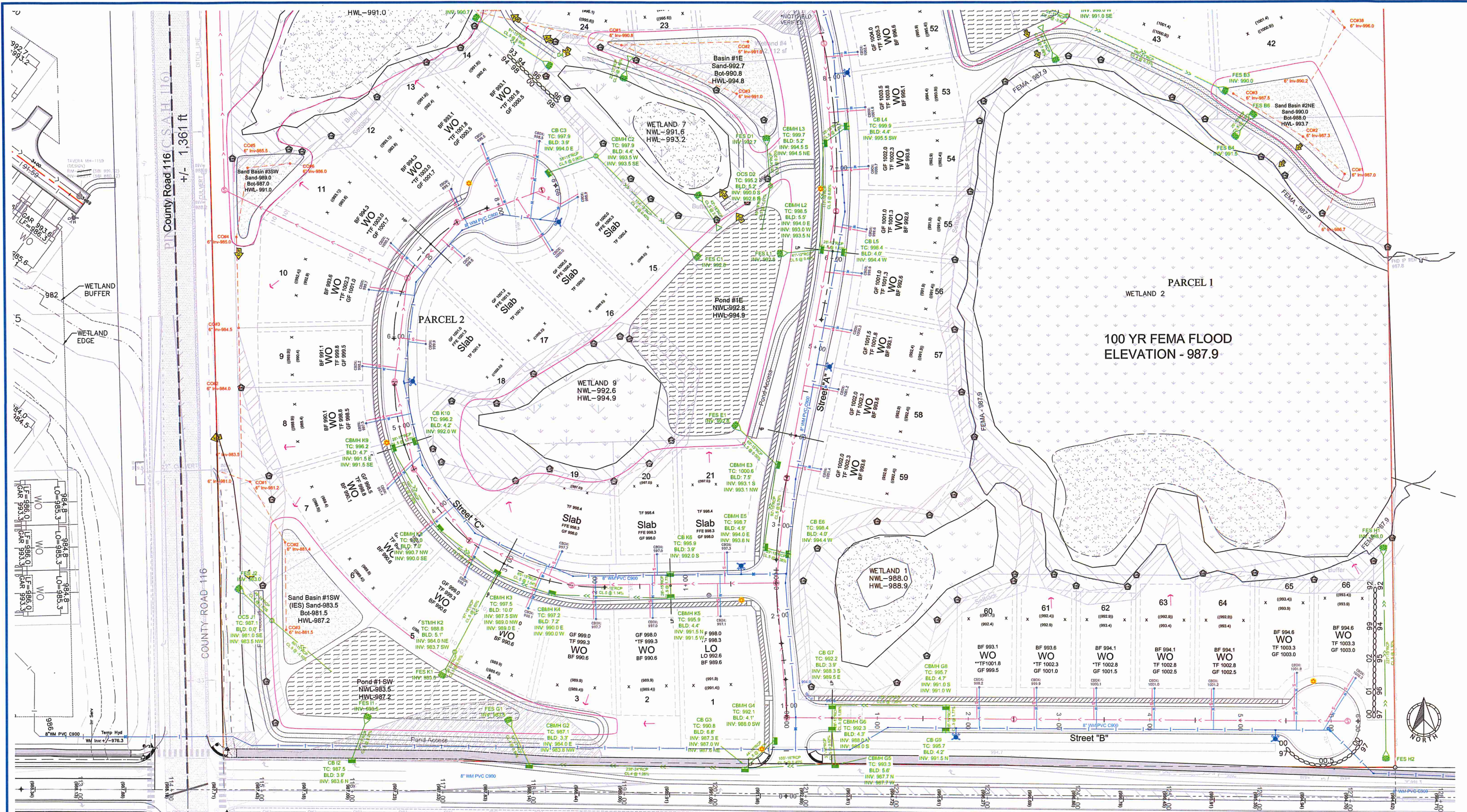
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XXX, P.E.
Date: _____ Lic. No. _____

ENGINEERS SURVEYORS DESIGNERS PLANNERS

SATHRE-BERGQUIST, INC.
14000 25TH AVENUE NORTH SUITE 120
PLYMOUTH, MN. 55447 (952) 476-6000

| | | | |
|----------------------------|--|---|----------------|
| CITY PROJECT NO. | | FILE NO. | 3120-068 |
| CORCORAN, MINNESOTA | PRELIMINARY STORM SEWER (NORTH) | HACKAMORE/116 NE | STORM-N |
| | | LAKEVIEW DEVELOPMENT COMPANY, LLC. | |



Hackamore Road Improvement Project 2023-xxx

Daniel & Jacalyn Millea
 PID 01-118-23-22-0003
 Area: 192,051 sf (4.41 ac)

Nancy Jean
 655 Hackamore Road
 PID 01-118-23-22-0002

Harry & Angela Denny
 625 Hackamore Road
 PID 01-118-23-22-0001



| DRAWING NAME | NO. | BY | DATE | REVISION |
|--------------|-----|----|------|----------|
| HACKAMORE | | | | |
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CITY PROJECT NO. _____
CORCORAN, MINNESOTA

PRELIMINARY STORM SEWER (SOUTH)
HACKAMORE/116 NE
 LAKEVIEW DEVELOPMENT COMPANY, LLC.

FILE NO.
 3120-068
STORM-S



CITY OF CORCORAN

8200 County Road 116, Corcoran, MN 55340

763.420.2288

E-mail - general@corcoranmn.gov / Web Site - www.corcoranmn.gov

Memo

To: Planning (Planners Lindahl and Davis McKeown)
From: Lieutenant Burns
Date: July 20, 2023
Re: City File 23-017 Leuer Sketch Planned Unit Development Plat

A Public Safety plan review meeting was held on July 12, 2023, to review a concept plan received by the City on June 21, 2023, for the properties located on the northeast corner of County Road 116 and Hackamore Road. In attendance were: Lieutenant Ryan Burns, Planner Davis McKeown, Fire Chief Leuer, Fire Chief Malewicki, Fire Chief Farrens, and Building Official Geske. The comments below are based on the preliminary review of the plans and are intended as initial feedback as further plan review will need to be completed as construction plans are finalized.

1. A second entrance to serve the development appears to be both possible and necessary. Based on the proposed density within the project as well as existing and anticipated traffic intensity of the surrounding roadways, a second access should be accommodated on the outset of the development rather than waiting for future platting to the north.
2. For the sake of traffic flow and emergency access, the two west cul-de-sacs should be connected as a loop. This connection is all the more critical should there be only one access point for the development.
3. If Hennepin County does not permit an access from County Road 116 within the proposed project area, the existing driveway on to County Road 116 could serve as an emergency vehicle access as an interim measure until a full second access can be provided by a future development to the north. A route would need to be provided with a width of at least 18'.
 - Under this scenario, connection of the two west cul-de-sacs is necessary for emergency vehicle access to and navigation of the development.
4. It is strongly urged that the applicant be required to adhere to City specifications on the southeast cul-de-sac regarding the minimum right-of-way and paving radius.
 - Another option that would be acceptable to Public Safety is to put an 18'-wide emergency access in this area with bollards.

To: Kevin Mattson, PE, Public Works
Director

From: Kent Torve, PE, City Engineer
Steve Hegland, PE

Project: Hackamore/116 NE Concept

Date: July 19, 2023

Exhibits:

This Memorandum is based on a review of the Hackamore/116 NE site concept plan by Lakeview Development Company with the following documents;

- a. Concept Plan Hackamore / 116 NE site by Sathre Berquist, application dated 6/14/2023. The concept shows 66 single family units.

Comments:General:

1. Comments provided are preliminary based on the Concept Plan provided. Additional comments should be anticipated on future submittals that include more details of the development.
2. In addition to engineering related comments per these plans, the proposed plans are subject to the review of planning, zoning, Public Safety, and all other applicable codes and standards of the City of Corcoran, NPDES, ECWMC, Hennepin County, etc.
3. A feasibility study will be conducted on the development with the preliminary plat approval to review the development impacts on transportation system, stormwater system, and public utility system.
4. A portion of this property will be utilized for construction staging for the Hackamore Road project.

Plat:

5. The applicant shall show all drainage and utility easements and all platting requirements are met per the City Code. Drainage and utility easements shall be provided per City requirements.
6. Easements should be provided over all infrastructure used for the maintenance, conveyance and treatment of stormwater.
7. Easements should be provided over any/all public infrastructure as applicable.
8. Any existing easements should be provided to the City for review. Vacation of existing easements currently in place requires a City process and should be identified in the project schedule.

Transportation

9. Turn lanes from Hackamore Road into the proposed development are being installed with the Hackamore Road project in accordance with an existing agreement with landowner.
10. Abutting cul-de-sacs are discouraged due to the additional maintenance and stubbed utilities. The applicant should review if the cul-de-sacs along the western portion of the development can be removed and the viability of connecting these roadways.
11. The Concept Plan identifies a secondary entrance to the development through a future development to the north. The need for a secondary entrance should be reviewed with Public Safety. If a second

July 2023

Hackamore/116 NE

Kevin Mattson

Page 2 of 3

entrance is necessary, the location should be reviewed with City Staff and Hennepin County to determine the appropriate location within this corridor.

12. The applicant is showing a turnaround in the southeast corner of the development which does not meet City standards. This turnaround should be revised to accommodate City Standards. These turnaround standards were established to ensure that public maintenance and public safety vehicles can safely use these areas and is supported by the school districts.
13. A trail adjacent to this parcel is being constructed with the Hackamore Road project.
14. Appropriate ROW for Hackamore and CR 116 will be dedicated with this project.

Stormwater

15. A stormwater management plan will be required for this development in accordance with City of Corcoran and Elm Creek Watershed Management Commission Standards.
16. Reference the City of Corcoran Stormwater Guidelines for Development Review for standards for stormwater systems and modeling.
17. Wetland delineations for this site have been completed and any impacts will follow WCA protocols.
18. The wetland buffer zones and wetland buffer signage shall be clearly identified and labeled. If existing vegetation is proposed to be used as wetland buffer, these areas shall be reviewed with the City of Corcoran wetland specialist to determine if they are viable candidates.
19. The site discharges west (through a CR 116 culvert), north (towards Gleason Parkway) and east (into the Hackamore Circle / Hunter Road existing development).
 - o Increased Hackamore drainage enters the site as part of the Hackamore Road project being constructed cooperatively with Medina. A portion of this runoff will be treated within this development.
20. Site plans shall identify stormwater access routes to the ponds and all features of the stormwater management system.
21. All drainage swales shall maintain a minimum of 2% slope and all slopes should be 4:1 or flatter unless approved by the city engineer.
22. If filtration is required by ECWMC for the site, the City strongly prefers a NURP pond with filter bench (offset to one side of the pond) be used with adequate maintenance access. The filter bench design is efficient from land use and requires less future maintenance as compared to other treatment options.
23. Due to the rural nature of Corcoran conveyance systems, offsite receiving waters will be evaluated to understand any impacts from additional drainage.
24. The Concept Plan shows several small sand filtration systems which appear to have challenges with access and are problematic for frequent maintenance. These systems should be consolidated with the larger stormwater system.

Floodplain

25. A Letter of Map Revision was finalized by FEMA in January of 2023, which partially encompassed this property. As part of this revision, the floodplain within the development was better defined which created 1.78 acres additional upland within this development. A figure showing the previous and revised floodplain boundaries within this area is provided in Attachment A.

July 2023

Hackamore/116 NE

Kevin Mattson

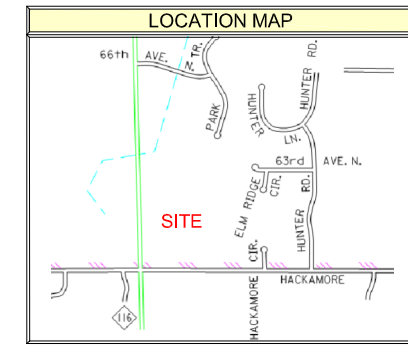
Page 3 of 3

Water

26. The site plan identifies watermain connections at the SW corner of the development and a watermain stub to the SE of the Hackamore/116 NE project which is presumed to be connected to the watermain in Ravinia.
27. During the design of the Hackamore Road Project, the Lakeview Development team asked the City to review the watermain requirements for this proposed development. This review is typically performed with a feasibility study but the developer requested this work to better understand if looping of the watermain to the east would be required. The review of the watermain system is included as Attachment A. The analysis identified that a looped water system with two connection points is necessary to adequately support this development.
28. A corridor for a future water connection along Hackamore Road was identified with the roadway project and is being preserved.
29. If Street C remains as a cul-de-sac, the watermain should be looped.

Sewer

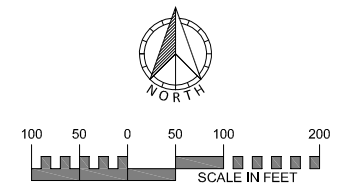
30. At the time of the feasibility study, the sanitary sewer connection locations will be reviewed to identify potential corridors which could be utilized to construct the system in accordance with City standards.



| PREPARED BY | PREPARED FOR |
|--|--|
| ENGINEER SATHRE-BERGQUIST, INC. 150 SOUTH BROADWAY WAYZATA, MINNESOTA 55391 PHONE: (952) 476-6000 FAX: (952) 476-0104 CONTACT: ROBERT MOLSTAD, PE EMAIL: MOLSTAD@SATHRE.COM | DEVELOPER LAKEVIEW DEVELOPMENT COMPANY, LLC. 6885 SYCAMORE LANE NORTH SUITE 110 MAPLE GROVE, MN 55369 CONTACT: STEVE JUETTEN PHONE: (612) 269-2531 EMAIL: STEVE@GONYEACOMPANY.COM |

| PLAN DATA |
|---|
| 65' Wide Single Family Lots - 66 Lots PROPOSED ZONING: PUD PUBLIC STREET ROW = 50 FT (30' B-B STREETS) FRONT YARD SETBACK = 25 FT SIDE YARD SETBACK = 7.5 FT / 7.5 FT CORNER SETBACK = 25 FT MINIMUM REAR YARD SETBACK = 30 FT. |

| DENSITY |
|--|
| Overall Area = 36.74 Acres Gross Density = 66 / 36.74 = 1.79 units/acre Hackamore Road ROW Area = 0.49 Acres CR 116 ROW Area = 0.63 Acres Wetland Area = 6.88 Acres *Excludes proposed wetland fill area* Wetland Buffer - 3.18 Acres Net Area = 36.74 - 0.49 - 0.63 - 6.88 - 3.18 = 25.56 acres Net Density = 66 / 25.56 = 2.58 units/acre |



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XXX, P.E.
 Date: _____ Lic. No. _____

SATHRE-BERGQUIST, INC.
 14000 25TH AVENUE NORTH SUITE 120
 PLYMOUTH, MN. 55447 (952) 476-6000

CITY PROJECT NO.

CORCORAN, MINNESOTA

SITE PLAN
HACKAMORE/116 NE
LAKEVIEW DEVELOPMENT COMPANY, LLC.

FILE NO.
 3120-068
 SP

Attachment A

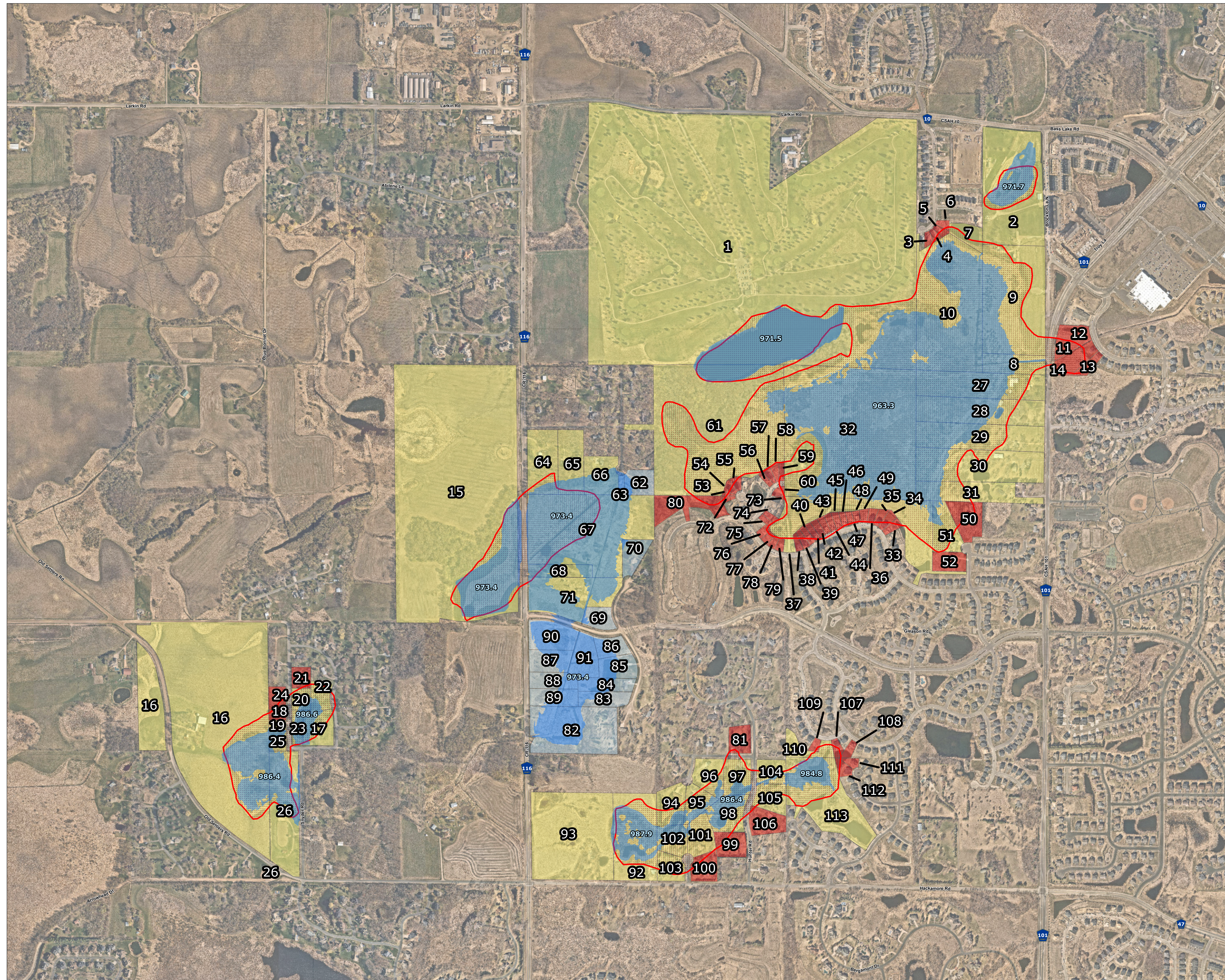


Figure No.

1

Title

Corcoran Floodplain Revisions

Client/Project

City of Corcoran
FEMA LOMR Application

Project Location
T119N, R23W, S25 & S35-S36
Corcoran, Hennepin Co., MN

227701010

Prepared by ARH on 2023-02-24

0 250 500 Feet
1:6,000 (At original document size of 11x17)



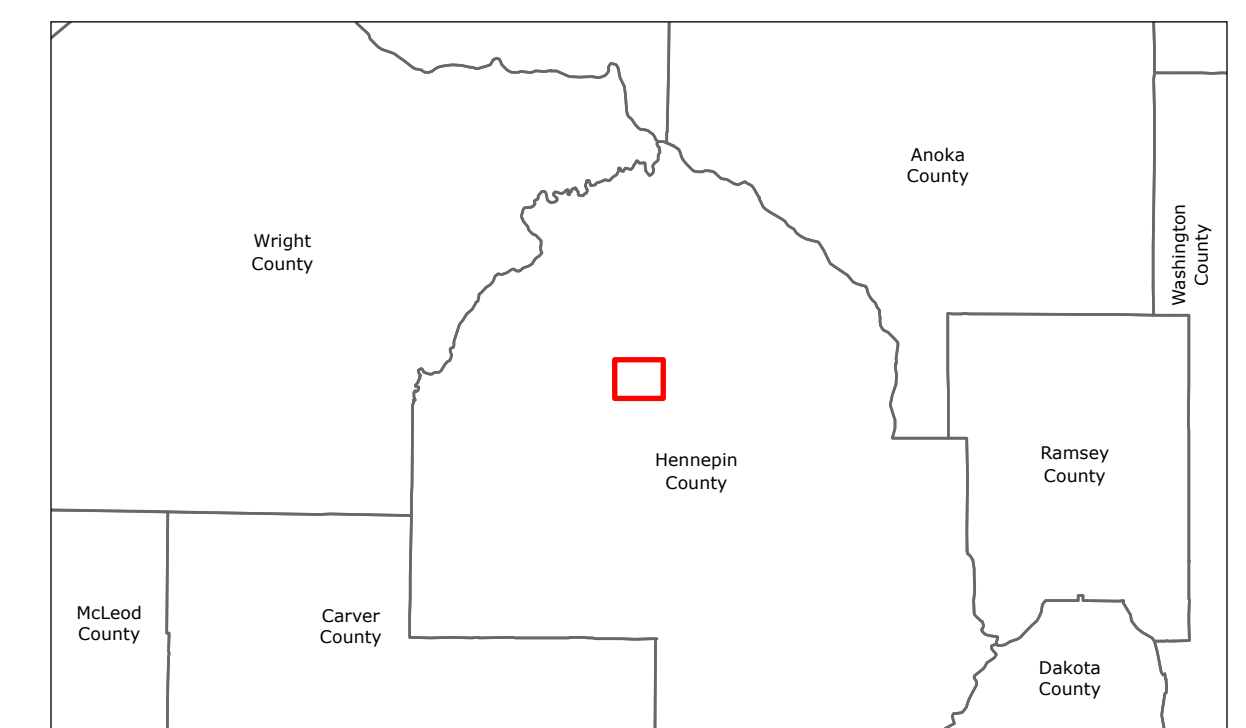
Legend

- Existing 1% Annual Chance Floodplain Boundary
- Proposed 1% Annual Chance Floodplain Boundary

Parcels Inundated by Floodplain

- Both
- Existing
- Proposed

973.9 = 1% HWL



Notes

1. Coordinate System: NAD 1983 UTM Zone 15N
2. Data Sources Include: Hennepin County, MnDOT, FEMA
3. Orthophotography: Hennepin County 2021 Aerial
4. Vertical Datum: NAVD88



V:\2277\active\227701010\03_data\gis\corcoran\corcoran_om.aprx Revised: 2023-02-24 By: dhymn

Attachment B

To: Kevin Mattson
City of Corcoran

From: Louis Sigtermans, PE
Camila Bejarano, EIT
Minneapolis

Project/File: 193806038

Date: March 6, 2023

Reference: Lakeview Development - Water Modeling Analysis**Objective**

At the request of the Lakeview Development team, the City of Corcoran reviewed the water modeling for a potential residential development at the northeast corner of Hackamore Road and County Road 116. The site is currently farmland that would be developed as 70 single-family residential units.

Stantec performed a WaterCAD model analysis to evaluate three water distribution scenarios to serve this development. This memo documents the assumptions, results and analysis of each scenario, and conclusions.

Model Assumptions

Stantec started with the existing model WaterCAD model with modifications to key scenario parameters as described below.

Pipe Network:

- New 8-inch water main within and connecting to the proposed development, varying by scenario (refer to Figure 1 attached). Scenarios are described below.
- Node elevations within the proposed development were obtained from the ground floor (GF) elevations on the provided concept plan.

Demands:

- Average Day:
 - 20,160 gallons per day (gpd) average day demand was calculated for 70 single-family residential units.
 - Total system demand: 0.63 million gallons per day (MGD).
- Maximum Day:
 - 60,480 gpd maximum day demand was calculated for 70 single-family residential units
 - Total system maximum day demand: 1.79 MGD.

Maple Grove Supply:

- Hydraulic grade elevation: 1098 ft MSL

Reference: Lakeview Development Water Modeling Analysis

Fire Flow:

- Fire flow residual pressure cut off: 20 psi

Scenarios

The modeling consisted of three steady-state scenarios to evaluate average day and peak hour pressures and maximum day fire flows within the proposed Lakeview Development. The pipes assumed for each scenario are shown on the figure attached to this memo (Figure 1). Below is a summary of each scenario.

1. 8-inch watermain connected to the 8-inch stub located at the intersection of County Road (CR) 116 and Hackamore Road (J-C25), and a second 8-inch watermain connected to the 12-inch stub at intersection with Hackamore Road and Steeple Chase Lane (J-C20). 8-inch watermain with no internal loops. (Pipe 1 on and Pipes 2-4 off)
2. 8-inch watermain connected to J-C25 and a second 8-inch watermain connected to J-C24 at the Tavera Development. 8-inch watermain with no internal loops. (Pipe 2 on and Pipes 1, 3 and 4 off)
3. 8-inch watermain connected to J-C25 and a second 8-inch watermain connected to J-C20. Two 8-inch internal loops were added to this scenario to eliminate dead ends. (Pipes 1, 3 and 4 on and Pipe 2 off)

Results

Available Fire Flow

Table 1 shows the maximum day fire flow results for each scenario at the nodes within the proposed development.

Table 1. Maximum Day Available Fire Flow Results (gpm)

| Label | Elevation (ft) | Scenario 1 | Scenario 2 | Scenario 3 |
|-------|----------------|------------|------------|------------|
| J-LV1 | 1,005.0 | 811 | 855 | 1,025 |
| J-LV2 | 1,007.5 | 811 | 835 | 1,008 |
| J-LV3 | 1,014.5 | 696 | 702 | 954 |
| J-LV4 | 1,006.5 | 871 | 848 | 1,007 |
| J-LV5 | 1,000.5 | 1,071 | 872 | 1,097 |
| J-LV6 | 1,005.5 | 1,057 | 860 | 1,052 |
| J-LV7 | 1,003.5 | 1,160 | 840 | 1,187 |
| J-LV8 | 1,002.5 | 1,122 | 885 | 1,108 |

Available fire flow for low density residential is typically recommended to be at least 1,000 gpm. Based on the results from the WaterCAD modeling, fire flow for Scenario 1 ranged from 650-1,200 gpm, with 696 gpm

Reference: Lakeview Development Water Modeling Analysis

being the lowest fire flow located at the dead-end main (J-LV3) within the proposed development. Fire flows for Scenario 2 ranged between 800 and 900 gpm, with 702 gpm being the lowest fire flow.

Scenario 1 resulted in improved available fire flows over Scenario 2 (by approximately 100-250 depending on the node). It is important to note that two dead-ends were modeled for both scenarios. Dead-ends typically experience lower available fire flows.

Available fire flows improved for all nodes, exceeding 1,000 gpm, under Scenario 3. The node J-LV3 was the exception, with the lowest fire flow of 954 gpm. All pipes were looped, and no dead-ends were modeled.

Pressure

Table 2 shows the average day pressure results for each scenario at the nodes within the proposed development.

Table 2. Average Day Pressure Results (psi)

| Label | Elevation (ft) | Scenario 1 | Scenario 2 | Scenario 3 |
|-------|----------------|------------|------------|------------|
| J-LV1 | 1,005.0 | 40 | 40 | 40 |
| J-LV2 | 1,007.5 | 39 | 39 | 39 |
| J-LV3 | 1,014.5 | 36 | 36 | 36 |
| J-LV4 | 1,006.5 | 39 | 39 | 39 |
| J-LV5 | 1,000.5 | 42 | 42 | 42 |
| J-LV6 | 1,005.5 | 40 | 40 | 40 |
| J-LV7 | 1,003.5 | 41 | 40 | 41 |
| J-LV8 | 1,002.5 | 41 | 41 | 41 |

Municipal water systems are typically designed with a minimum pressure of 35 psi at all locations in the service area under normal operating conditions. Based on the results from the WaterCAD modeling, all the nodes within the residential development had an average day pressure more than 35 psi. The lowest pressure was 36 psi located at J-LV3.

The results for peak hour pressures were also relatively similar between all scenarios. Pressures ranged from 24-32 psi, with 24 psi being the lowest pressure at J-LV3. It is important to note that this node is located at the highest ground elevation compared to all other nodes.

Conclusions

Available fire flows within the potential development are anticipated to be less than 1,000 gpm if dead-end mains are implemented (Scenarios 1 and 2). In general, available fire flows at most nodes are higher under Scenario 1 than Scenario 2. If minimum available fire flows near 1,000 gpm are desired at all nodes, Scenario 3 is recommended. Internal looping provides the added benefit of limiting potential stagnant water within mains due to low demands.

Reference: Lakeview Development Water Modeling Analysis

Based on the results, all the nodes within the residential development are expected to maintain the recommended minimum pressure of 35 psi at all locations during average day conditions. The proposed residential development would experience static pressures less than 35 psi during the peak hour demand period because the development is located at a high ground elevation. To improve this, either implementation of the SE Water System booster pump station and storage tank would be required, or these locations could be considered for individual home booster pumps.

Please feel free contact me if you have any questions regarding this analysis.

Sincerely,

STANTEC CONSULTING SERVICES INC.



Louis Sigtermans PE (MN)
Environmental Engineer
Direct: (612) 895-5022
louis.sigtermans@stantec.com

Attachment: Figure 1

V:\1938\Active\19380603\03_data\gis_cad\gis\proj\watercad\mode\imgmemo\watercad\mode\imgmemo.aprx Revised: 2023-03-03 By: atlyams



Figure No.

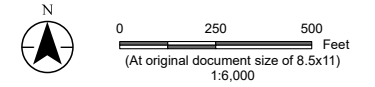
1

Title

Proposed Watermain Scenarios

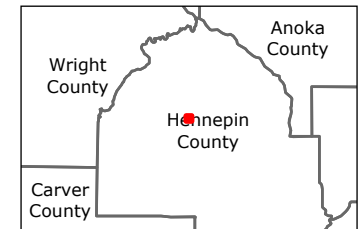
Client/Project 193806038
City of Corcoran
Lakeview Development Water Evaluation

Project Location Prepared by BS on 2023-03-03
T119N, R23W, S36
Corcoran, Hennepin Co., MN



Legend

- Hennepin County Parcels
- Proposed 8-inch Connection
- 8-inch Diameter Watermain
- 12-inch Diameter Watermain
- Nodes



Notes

1. Coordinate System: NAD 1983 HARN Adj MN Hennepin Feet
2. Data Sources: Hennepin County
3. Background: Hennepin County 2021 Imagery



Stormwater Guidelines for Development March 2019

Issue

Cities changing from rural to urban development are challenged by the additional stormwater generated due to construction of impervious surfaces, along with the offsite infrastructure, or lack thereof, to manage effectively. To standardize the modeling and review process, the guidelines below were created for efficiency.

Note: A watershed approval is required per Elm Creek WMO rules, which also reviews flow rates, water quality and volume management.

Modeling

Watershed Information

- Provide an aerial photo of the development that includes the overall watershed and subwatershed boundaries
- Provide a summary of the acreage to each discharge point leaving the site. Any increase (or decrease) shall be identified.
- Show any floodplain adjacent to project or within the project
- Show downstream water bodies and flow paths
 - Downstream flow paths and water bodies typically need to have elevations, inverts, and condition identified.

Subwatersheds

A HydroCAD model (typically used) has inputs that can vary by user. To minimize resubmittals, review time and effort, the following data shall be utilized.

- Electronic model shall be submitted
- Hydrologic Soil Group (HSG) shall be lowered one category due to the mass grading and compaction of the soils. For example, an existing B soil, shall be modeled as a proposed C soil (unless it remains undisturbed)
- Wetlands, filtration basins, and ponds shall be modeled at CN of 98
- Identify peak rates for storm events and proposed shall be equal or less than existing rates.
 - Note: There are certain conditions where at City's discretion the off-site conditions require a reduction in flow rate from existing rates.
- SWMM (i.e. EPA-, XP-, or PC-) models can be submitted for review, however these increase review time.

Model Setup for Outlet Control Structures, NWLs and Infiltration

- The model's flow control structures (OCS, culverts, etc.) shall match the construction plan information. During the plan and model review both may be modified and revised
- Individual detail plates are required for each OCS, and individual plates shall have inverts identified
- A pond or wetland NWL (and model starting elevation) shall be set at the constructed outlet control elevation.
 - No live storage shall be utilized below the controlling OCS elevation.
 - No live storage shall be used for filtration shelves on ponds below controlling OCS elevation
- If a pond or wetland has an NWL (wet surface), infiltration shall not be used in flood routing.
- If a pond has filtration BMP causing drawdown below the NWL, this drawdown elevation shall not be used as the NWL for flood routing. (Filtration has a slower release time and during wet periods is not available as live storage).

Construction Plans

Catch Basins

- Street drainage shall be sufficient to manage the 10-year event

- Typical a CB inlet capacity is 2 to 2.5 CFS, and CBs shall be spaced accordingly
- Three inches (0.25 feet) of head on a CB will inundate a street centerline (2% slope).
- Spacing is 200 to 250 feet using longitudinal street dimensions of 40 feet from road centerline to half the house footprint (assumes rear half of house drains to rear yard). Dimensions equal 10,000 SF.
- CBs may be required on both sides of ped ramps to capture flows

Natural Drainage Features

- Waterbodies receiving urban drainage (wetlands, ditches, gullies) may need to have OCS installed, erosion protection, or reduced flow rates to allow the feature to function over the long term due to more consistent flows from increased impervious via development
- Offsite work may be necessary and City will assist with coordination, easements, etc.

HWLs and EOFs

- The freeboard requirements are:
 - Low Opening is a minimum of two feet above the HWL
 - Low Opening is a minimum of two feet above the EOF
- EOFs shall be accurately shown and as built are required. The highest point shall be the EOF (for example top of curb) since this is the controlling elevation
 - In certain instances, channel calculations of the swale may be required to show the EOF has capacity to manage estimated flow
- Overland EOFs are preferred, however if a second pipe serves as an EOF then modeling will include a 100-year event using the second pipe (EOF) as the only outlet (primary outlet plugged).

Rear Yards

- Rear yards or swales less than 2% shall have draintile. Typically, every two to three lots will require rear yard CBs.

Sump Connections

- Houses adjoining a wetland or pond do not need individual sump connection
- Others will have access to rear yard stormsewer.

Offsite Impacts

Adjacent Parcels

- City will review adjacent parcels (downstream and upstream) for impacts from volume, point discharge, etc. and may require off site improvements. City will assist in coordination of any off site work.
- Off site water quality improvement projects may be determined by the City for assistance with compliance with City's TMDL approach of implementing improvements upon development.
- FEMA modifications may be necessary due to development and implemented by City.

STAFF REPORT

Agenda Item: 8b.

| | |
|---|---|
| City Council Meeting: July 27, 2023 | Prepared By: Nicholas Ouellette through Kendra Lindahl |
| Topic: Sketch Plan for Kariniemi Jensen at 20400 County Road 30 (city file 23-004) | Action Required: Feedback |

Review Deadline: August 26, 2023

1. Request

The applicant, Nate Kariniemi, is requesting an opportunity to appear before the City Council to solicit informal comments on a sketch plan for a proposed subdivision of the parcel located at 20400 County Road 30 (PID 11-119-23-21-0002). The proposal includes subdividing the property into 16 single family residential lots on the south side of the site with a large outlot on the north half of the site proposed as open space.

2. Analysis

The applicant has submitted a narrative and sketch plan detailing the proposed Open Space & Preservation (OS&P) plat subdivision. The sketch plan shows 16 rural residential lots and one outlot.

The sketch plan process provides an opportunity for the applicant to get information from the City that can be incorporated into a formal development application. The next steps would be:

1. Application for Open Space and Preservation Preliminary Plat
2. Application for Final Plat (and development contract)



Context

Zoning and Land Use

The property is guided Rural/Ag Residential and zoned Rural Residential (RR). The site is located outside of the 2040 Metropolitan Urban Service Area (MUSA) boundary.

Surrounding Properties

The properties to the east of the site are zoned Urban Reserve (UR) district and guided Existing Residential and Mixed Residential in the 2040 Comprehensive Plan. Properties to the north, south and west are zoned Rural Residential (RR) district and guided Rural/Ag Residential in the 2040 Comprehensive Plan. The present use of the surrounding properties appears to be agricultural and single family residential.

Natural Characteristics of the Site

The 2040 Comprehensive Plan Natural Resources Inventory Areas Map identifies emergent and shrub wetland natural plant communities in addition to upland savanna/pasture plant communities along the perimeter of the wetland. There appear to be large mature trees on site, particularly surrounding the wetland and in the southwest corner of the parcel.

Sketch Plan

Development Rights

The 81.03-acre site has eight development rights. An OS&P plat with urban street sections is allowed to develop the site at 200% of the development rights which would allow for a total of 16 development rights. The proposed development would exhaust all available development rights for the property. The plan shows one outlot 52.4 acres in size without a development right. This property is intended to be preserved until municipal sanitary sewer and water become available to service the site and the property could then be further subdivided.

There are several agricultural buildings on-site situated around the single family residence. The applicant has not indicated that any existing structures on-site will be preserved. There are existing agricultural buildings located within the proposed right-of-way that must be demolished. The single family residence is located on proposed Lot 10, Block 1. It is possible the residential structure could remain; however, additional details will be required to ensure the building and lot comply with the ordinance standards. The existing accessory structures on proposed Lots 9 and 10, Block 1 may remain only if they do not exceed the accessory structure allowance permitted on the new lot.

Open Space and Preservation Plat (OS&P)

An OS&P plat is necessary to increase the development rights to allow 16 single family lots on the property as shown on the sketch plan. The gross acreage of the proposed OS&P plat is 81.03 acres.

Under an OS&P plat a minimum of 50% of the gross land area must be dedicated as preserved open space and of the 50% gross land dedicated for open space, no less than 50% of the area shall be upland area (i.e. 25% of the net area). The sketch plan appears to show compliance with the open space requirements; however, without a wetland delineation we are unable to determine if the dedicated upland area complies with the minimum upland area required. A ghost plat is required with a formal application and should show how the upland area could be developed and accessed in the future if sewer and water become available to the site.

The required open space is being provided in a single, contiguous outlot. The outlot area includes emergent wetland, shrub wetland and savanna/pasture upland plant communities as identified in the Natural Resource Inventory map from the Comprehensive Plan. The applicant has indicated that the open space outlot will be privately owned and that it will continue to be used as crop land and maintained through typical conservation and agricultural practices. The applicant has expressed flexibility for future ownership of the outlot to meet the City's preference.

The applicant is proposing to increase the existing eight development rights into 16 development rights by utilizing the 200% density bonus available for OS&P plats that develop with an urban street section.

Proposed Lots 7, 8 and 9, Block 1 are proximal to the wetland where significant trees that comprise the savanna/pasture are located. Development on these lots may impact the savanna/pasture plant communities. The objective of the OS&P as stated in the ordinance is to preserve the natural resource areas identified by the Comprehensive Plan. The arrangement of residential lots could possibly be reorganized to reduce the potential impact on existing natural communities.

- The Council should provide direction.

Lot Standards

The sketch plan appears to show compliance with the Rural Residential district lot standards, which requires the following minimum standards:

| | OS&P |
|---------------------------------------|----------------------------|
| Lot Area | 4 acres (<i>maximum</i>) |
| Minimum Lot Width | |
| Minimum Lot Depth | |
| Minimum Principal Structure Setbacks: | |
| Front, From Major Roadways* | 100 feet |
| Front, From all other streets | 25 feet |
| Front Porch (\leq 120 square feet) | 25 feet |
| Side | 10 feet |
| Rear | 25 feet |
| Adjacent to Residential | n/a |
| Maximum Principal Building Height | 35 feet |
| Maximum Impervious Surface Coverage | n/a |

* Major Roadways are Principal Arterial, A Minor Reliever, A Minor Expander and A Minor Connector Roadways as shown on the 2030 Roadway Functional Classification map in the 2030 Comprehensive Plan

The proposed residential lots range in area from 1.0- to 2.2-acres in size and should be able to comply with the lot dimension and setback standards.

Utilities

The entire site is situated outside the MUSA and will be served with well and septic. As noted above, there is no minimum lot size. The applicant must provide information with the preliminary plat that shows primary and secondary septic sites can fit on each individual lot. It may be challenging to find two viable septic sites per lot and leave adequate space for a residential structure. If a centralized wastewater treatment system is proposed a PUD shall be required.

The Comprehensive Plan Proposed Sanitary Sewer System map shows a future trunk sewer system alignment along east property line. The City Engineer's memo notes that plans shall identify future corridors for public sewer and water utilities.

Wetlands

There is at least one large wetland on the site. The applicant must submit a wetland delineation for review and approval by the City. If wetland impacts are proposed additional applications for mitigation would be required. The applicant must comply with the wetland buffer and setback requirements in Section 1050.010 of the Zoning Ordinance. If existing vegetation is proposed to be used as wetland buffers, these areas shall be reviewed by the City to determine if the existing vegetation is acceptable.

Floodplain

The site includes a large area of floodplain that appears to coincide with the location of the large wetland. As part of a formal submittal, the plans will need to indicate the areas that are considered floodway, flood fringe and general floodplain as defined in Section 1050.030 Subd. 3. Based on the revised boundaries of the districts covering the property, the corresponding standards from Section 1050.030 shall apply.

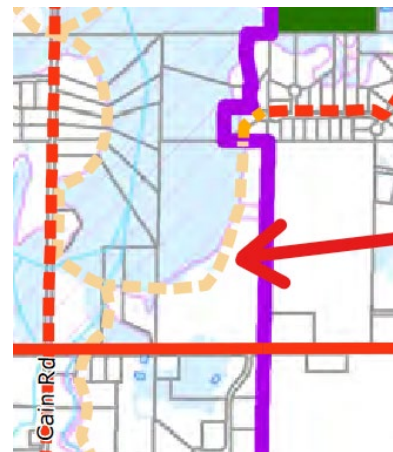
Access

There is an existing driveway providing access to the site from County Road 30. The applicant is proposing one access road to the site that aligns with intersection of Duffney Drive and County Road 30. The existing driveway access will be required to be removed. The City Engineer's memo anticipates that turn lanes will be required into the site from County Road 30; however, the ultimate determination on access location and turn lanes will be made by Hennepin County.

Lots within the development have access from two cul-de-sac roads with a 66-foot right-of-way. The cul-de-sac roads are approximately 575 feet and 875 feet in length and do not exceed maximum permitted length for cul-de-sacs. It is assumed that the northern cul-de-sac may be extended further north to create additional roadway connections in the future when the outlot is developed. The internal "T" intersection could also be reconfigured to a "cross" intersection that provides future connectivity to the parcel to the east.

Trails and Sidewalks

The Parks and Trails plan in the Comprehensive Plan identifies a proposed off-road trail that runs along the perimeter of the wetland through the site and an existing on-road trail along County Road 30. The concept plan shows the approximate location of the off-road trail through the site and is situated within Outlot A. The proposed off-road trail ultimately connects to a City owned parcel west of the site at 10030 Cain Road. A trail easement must be provided for staff review with a formal preliminary plat application. The City could discuss the location of the trail and possible access points throughout the site.



Stormwater

The City Engineer's memo provides detailed comments on stormwater for the proposed sketch plan. A stormwater management plan will be required with a preliminary plat to ensure compliance with City and Watershed standards for stormwater.

OS&P Residential Design Objectives

Residential OS&P developments should be designed to achieve as many of the following objectives provided in Section 940.050, Subd. 1(F) of the Subdivision Ordinance. It is not clear whether the sketch plan has achieved any of the objectives; however, Council may consider encouraging the applicant to achieve any number of the following objectives.

1. *Arrange lots around a central focal point such as:
 - a. *A central green, boulevard or square.*
 - b. *A physical amenity such as a meadow, a strand of trees, a stream or water body, or some other natural feature.**
2. *Locate lots such that at least 50% of the lots within a neighborhood abut open space, or other amenity, on at least one side.*
3. *Preserve views from each building unit and from off-site vantage points to the maximum possible.*
4. *Locate neighborhood recreational open spaces such that they are an integral part of the neighborhood, are suitable for the projected demographic makeup of residents, are at an elevation appropriate to their intended recreational use, have boundaries that are clearly defined and are accessible to all neighborhood residents from a public street or trail. Connect individual home sites with pedestrian corridors or sidewalks to larger open spaces and places of destination on-site and off-site. Open spaces should be accessible to pedestrians at roughly 1,200-foot intervals along public roadways. Pedestrian corridors between lots shall be at least 50 feet in width and buffered from view of adjacent properties.*
5. *Locate lots to preserve woodlands, farmland or other natural features or character, including places of historic, archeological or cultural value. Preserve natural resources as identified in the Comprehensive Plan to the maximum extent possible in a contiguous, connected configuration. Natural open spaces may include, but are not limited to, fields, wetlands, slopes, bluffs, woods, lakes, ponds, streams, shore lands, and other environmentally sensitive areas.*
6. *Provide covenants to create an architectural theme to include items such as landscaping, porches, side or rear loaded or detached garages. A written narrative describing the architectural theme shall be provided with the preliminary plat.*
7. *Locate houses and garages such that the garages do not dominate the streetscape.*

8. *Locate septic systems on the most suitable soils for subsurface septic disposal and in such manner as to provide for cost effective and least disruptive future connection of the wastewater treatment system(s) to urban services.*
9. *Landscape common areas and street rights-of-way with native vegetation with high wildlife conservation value.*

3. Recommendation

Staff recommends that the City Council review and discuss the sketch plan and provide the applicant with informal comments.

Any opinions or comments provided to the applicant by the City Council are considered advisory only and shall not constitute a binding decision on the request.

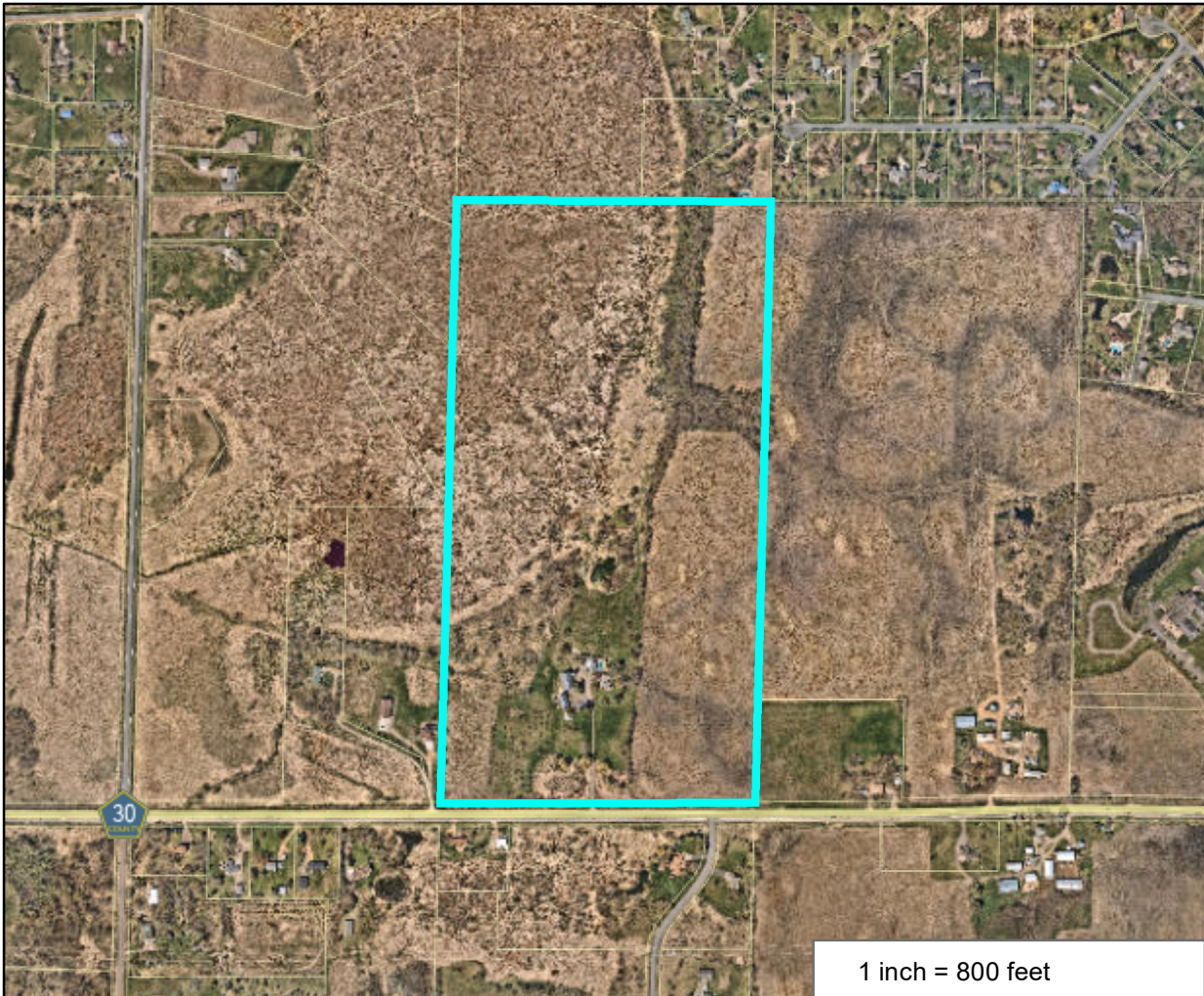
Attachments

1. Site Location Map
2. Sketch Plan dated July 13, 2023
3. Applicant's Narrative dated June 27, 2023
4. City Engineer's Memo dated July 17, 2023
5. Official Zoning Map
6. Parks and Trails Plan
7. Natural Resource Inventory Areas Map
8. Proposed Trunk Sanitary Sewer System Map (NE District)



Hennepin County Property Map

Date: 7/18/2023



PARCEL ID: 1111923210002

OWNER NAME: C M Jensen/C E Jensen Trust

PARCEL ADDRESS: 20400 Co Rd No 30, Corcoran MN 55374

PARCEL AREA: 79.49 acres, 3,462,499 sq ft

A-T-B: Abstract

SALE PRICE:

SALE DATE:

SALE CODE:

ASSESSED 2022, PAYABLE 2023

PROPERTY TYPE: Farm
HOMESTEAD: Homestead
MARKET VALUE: \$733,800
TAX TOTAL: \$6,313.22

ASSESSED 2023, PAYABLE 2024

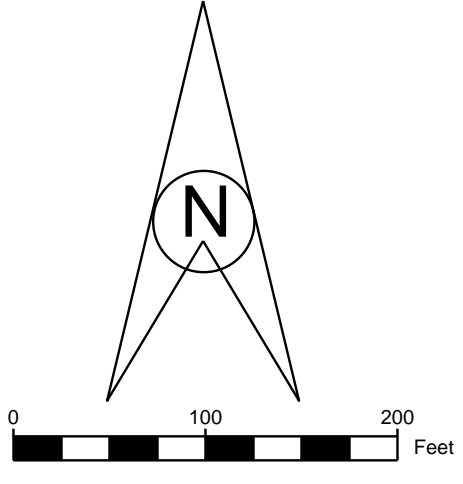
PROPERTY TYPE: Farm
HOMESTEAD: Homestead
MARKET VALUE: \$807,400

Comments:

This data (i) is furnished 'AS IS' with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is not suitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this data.

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Concept Plan

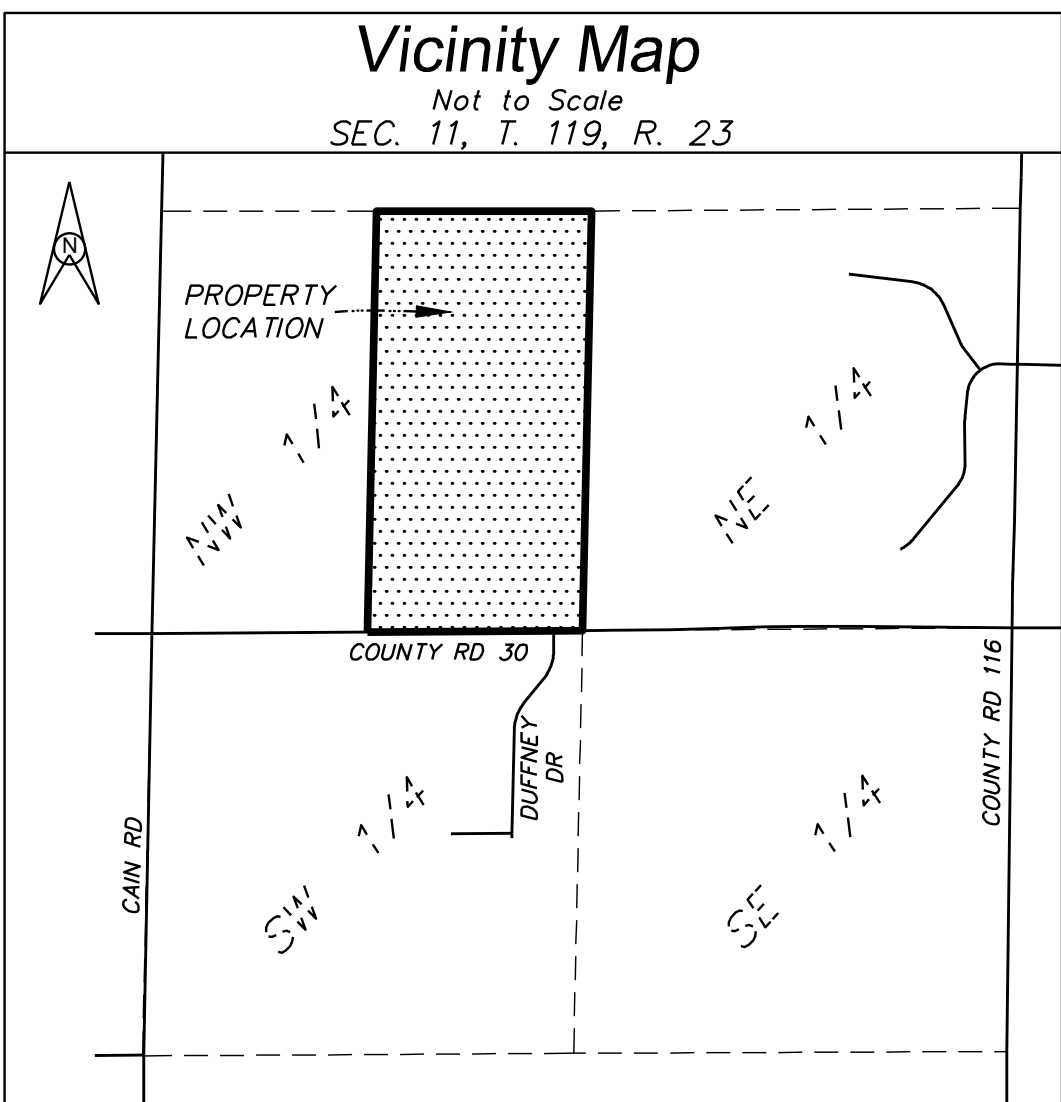
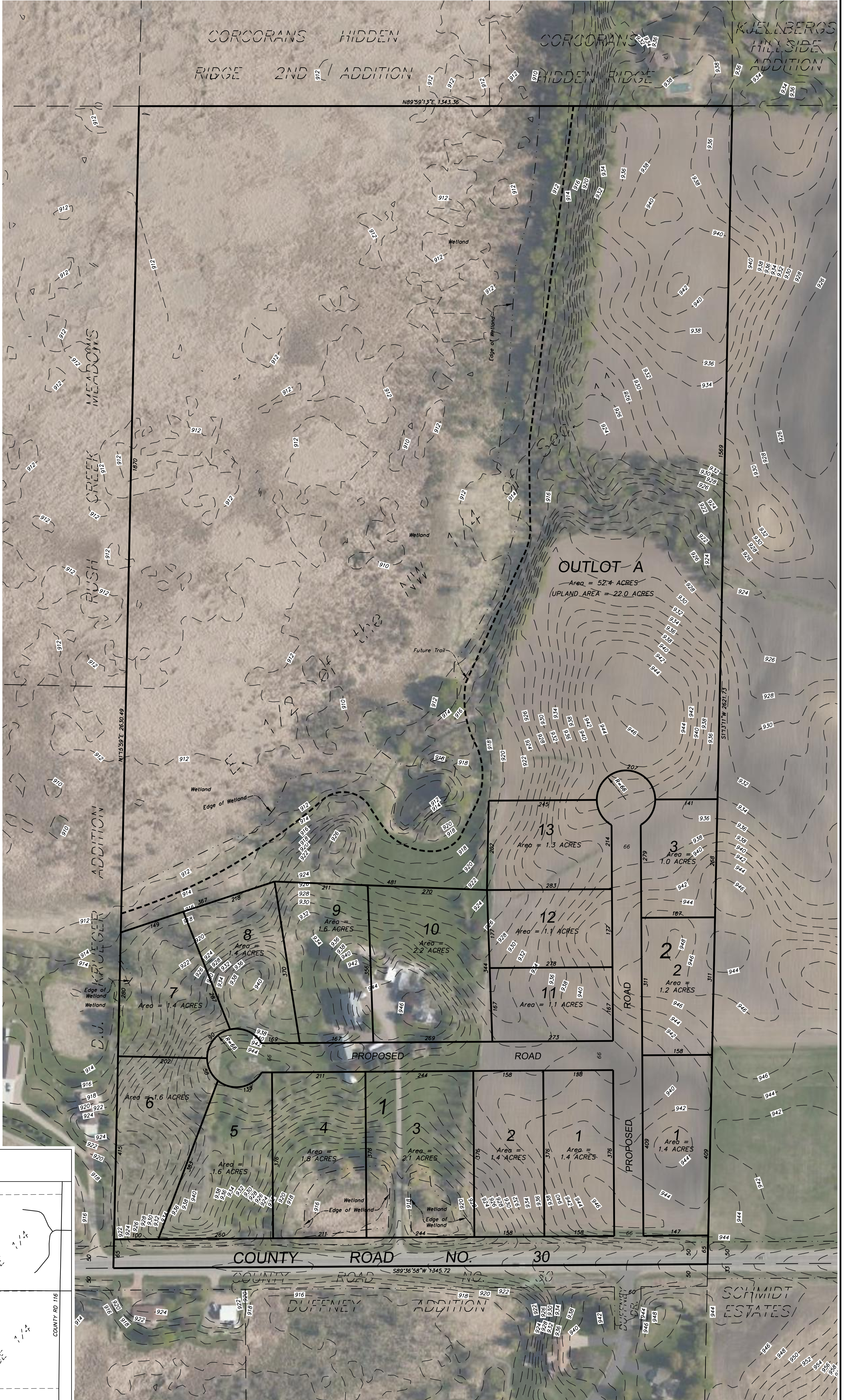


PARCEL ID: 1111923210002
 TOTAL PLAT AREA = 81.03 ACRES
 OPEN SPACE PROVIDED = 52.4 ACRES
 UPLAND OPEN SPACE PROVIDED = 22.0 ACRES
 OS&P OPEN SPACE REQUIRED = 40.52 ACRES
 UPLAND OPEN SPACE REQUIRED = 20.26 ACRES
 EXISTING DEVELOPMENT RIGHTS = 8
 PROPOSED OS&P PLAT WITH AN URBAN ROAD = 200% DENSITY INCREASE = 16 LOTS ALLOWED
 LOTS PROPOSED = 16

PROPERTY DESCRIPTION:

The East Half of the Northwest Quarter of Section 11, Township 119, Range 23, Hennepin County, Minnesota.

Note: Wetlands and Topography shown are based on Hennepin County GIS data.



Concept Plan on the East 1/2 of the NW 1/4 of Section 11, Township 119, Range 23, Hennepin County, Minnesota

Revised: 7-13-23 - N.N.B. - LOT ORIENTATION, R/W, AND ADDED FUTURE TRAIL

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

Paul E. Otto
 License #40062 Date: 7-13-23

Requested By: **Nathan Kariniemi**

Date: 6-1-23 Drawn By: T.J.B. Scale: 1"=100' Checked By: P.E.O.

www.ottoassociates.com
 9 West Division Street
 Buffalo, MN 55313
 (763)682-4727
 Fax: (763)682-3522

● denotes iron monument found
 ○ denotes 1/2 inch by 14 inch iron pipe set and marked by License #40062

Project No. 23-0256

Revised 12/18/20

Please attach a brief description of your project/reason for your request.

The applicant requests feedback on proposed os&p bonus development plat to utilize up to 8 development rights for up to 16 final lots. New access would be requested to be built coming off of CR 30. Open space is available to be reserved to meet the formula.

To: Kevin Mattson, PE
Public Works Director

From: Kent Torge, PE, City Engineer
Steve Hegland, PE

Project: Kariniemi Jensen Concept Plan Review Date: July 17, 2023

Exhibits:

This Memorandum is based on a review of the Kariniemi --Jensen Concept Plan with the following documents;

1. Concept Plan for Nathan Kariniemi by Otto Associates revision dated 7-13-23

Comments:General:

1. Comments provided are high level comments based on the concept plan provided. Additional comments should be anticipated on future submittals that include more details of the development.
2. In addition to engineering related comments per these plans, the proposed plans are subject to additional planning, zoning, Public Safety, and all other applicable codes and standards of the City of Corcoran, NPDES, ECWMC, Hennepin County, etc.

Plat:

1. The applicant shall show all drainage and utility easements and all platting requirements are met per the City Code. Drainage and utility easements shall be provided per City requirements.
2. Easements should be provided over all infrastructure used for the maintenance, conveyance, and treatment of stormwater.
3. Easements should be provided over any/all public infrastructure as applicable.
4. Any existing easements should be provided to the City for review. Vacation of existing easements currently in place requires a City process and should be identified in the project schedule.

Transportation

1. All roadways shall be constructed to City standards. If rural road sections are used, all pipe crossings and ditch drainage shall meet minimum City of Corcoran Standards.
2. It is anticipated that turn lanes from County Road 30 into this site will be required. Hennepin County controls the access and would make that ultimate determination. The developer shall be responsible for securing any offsite easements necessary to complete this work.
3. It is assumed that the northern turnaround adjacent to Outlot A may be extended north in the future to create additional roadway connections.
4. Proposed roadway ROW is shown at 66-feet. Final right of way width shall be reviewed at time of formal application.

July 17, 2023

Kariniemi Jensen

Kevin Mattson

Page 2 of 2

5. Two lots to the west of this development have a small amount of upland available for future development. With this concept plan, no right of way is proposed to these lots which will require them to access from County Road 30 in the future. An extension of a right of way connection to the west should be reviewed.
6. Consider modifying the tee intersection within the development to a cross with an eastern ROW extension to create better road connectivity in the future.

Stormwater

1. A stormwater management plan will be required for this development in accordance with City of Corcoran and Elm Creek Watershed Management Commission Standards.
2. Reference the City of Corcoran Stormwater Guidelines for Development Review for standards for stormwater systems and modeling.
3. FEMA floodplains are present in the northwest portion of this site. This floodplain shall be taken into consideration when developing the stormwater management plan for the site and all grading and site work shall be done in accordance with all applicable regulations for these floodplains.
4. Wetland delineations for this site shall be completed to confirm if and where wetlands are present within the site and follow WCA protocols.
5. The wetland buffer zones and wetland buffer signage shall be clearly identified and labeled. If existing vegetation is proposed to be used as wetland buffer, these areas shall be reviewed with the City of Corcoran wetland specialist to determine if they are viable candidates.
6. Site plans shall identify stormwater access routes to the ponds and all features of the stormwater management system.
7. All drainage swales shall maintain a minimum of 2% slope and all slopes should be 4:1 or flatter unless approved by the city engineer.
8. If filtration is required by ECWMC for the site, the City strongly prefers a NURP pond with filter bench (offset to one side of the pond) be used with adequate maintenance access. The filter bench design is efficient from land use and requires less future maintenance as compared to other treatment options.
9. The site discharges to the west, to the north to a large wetland complex and south through a presumed culvert across County Road 30. All discharge conveyance shall be provided by applicant.
10. Due to the rural nature of Corcoran conveyance systems, offsite receiving waters will be reviewed for any necessary improvements to manage the impacts from additional drainage from development.

Water and Sewer

1. The parcel is out of the MUSA, therefore utilities will be provided by private well and septic systems.
2. The plans shall identify future corridors for public sewer and water. This corridor may need to be adjacent to the roadway since the timing of street reconstruction (typically 30 years) and utility availability may not be the same. The Comprehensive Sewer Plan shows the trunk sewer alignment directly east of this parcel which suggests the public infrastructure system could be available prior to road reconstruction when MCES makes more capacity available.
3. Applicant shall be responsible for verifying septic sites for the proposed development.





























End of Comments

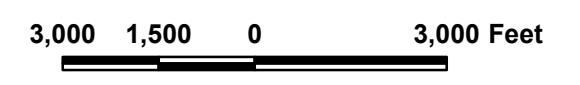


CITY OF CORCORAN

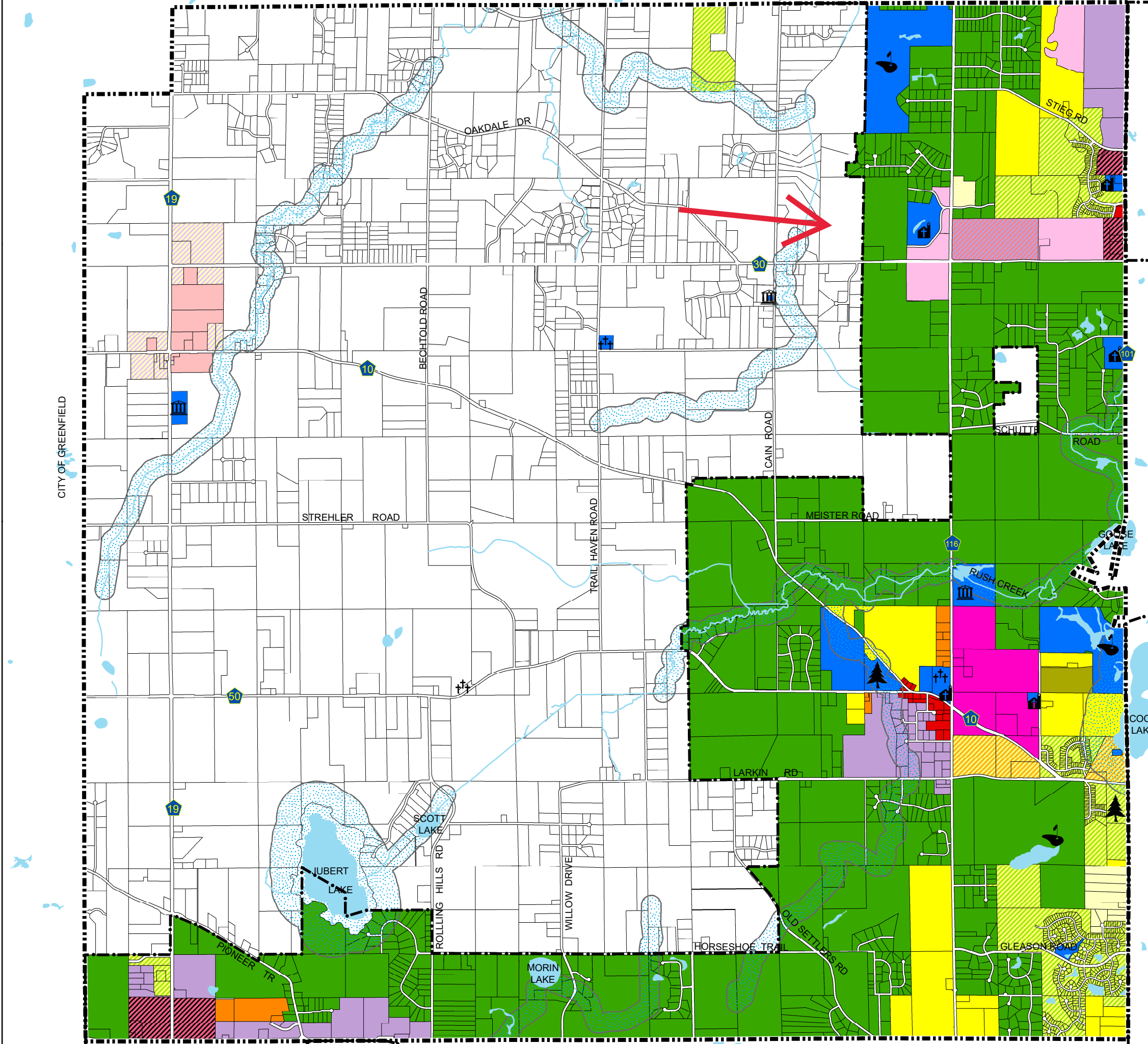
Official Zoning Map

Zoning Districts:

-  UR Urban Reserve
-  RR Rural Residential
-  RSF-1 Single Family Residential 1
-  RSF-2 Single Family Residential 2
-  RSF-3 Single and Two Family Residential 3
-  RMF-1 Medium Density Residential
-  RMF-2 Mixed Residential
-  RMF-3 High Density Residential
-  MP Manufactured Home Park
-  P-1 Public / Institutional
-  TCR Transitional Rural Commercial
-  CR Rural Commercial
-  C-1 Neighborhood Commercial
-  C-2 Community Commercial
-  DMU Downtown Mixed Use
-  GMU General Mixed Use
-  BP Business District
-  I-1 Light Industrial
-  PUD Planned Unit Development
-  Cemetery
-  Church
-  Golf Course
-  Government Building
-  Public Park
-  2040 Metropolitan Urban Service Area
-  City Limit
-  Open Water
-  Shoreland Overlay District



Updated September 2020
Adopted June 2011

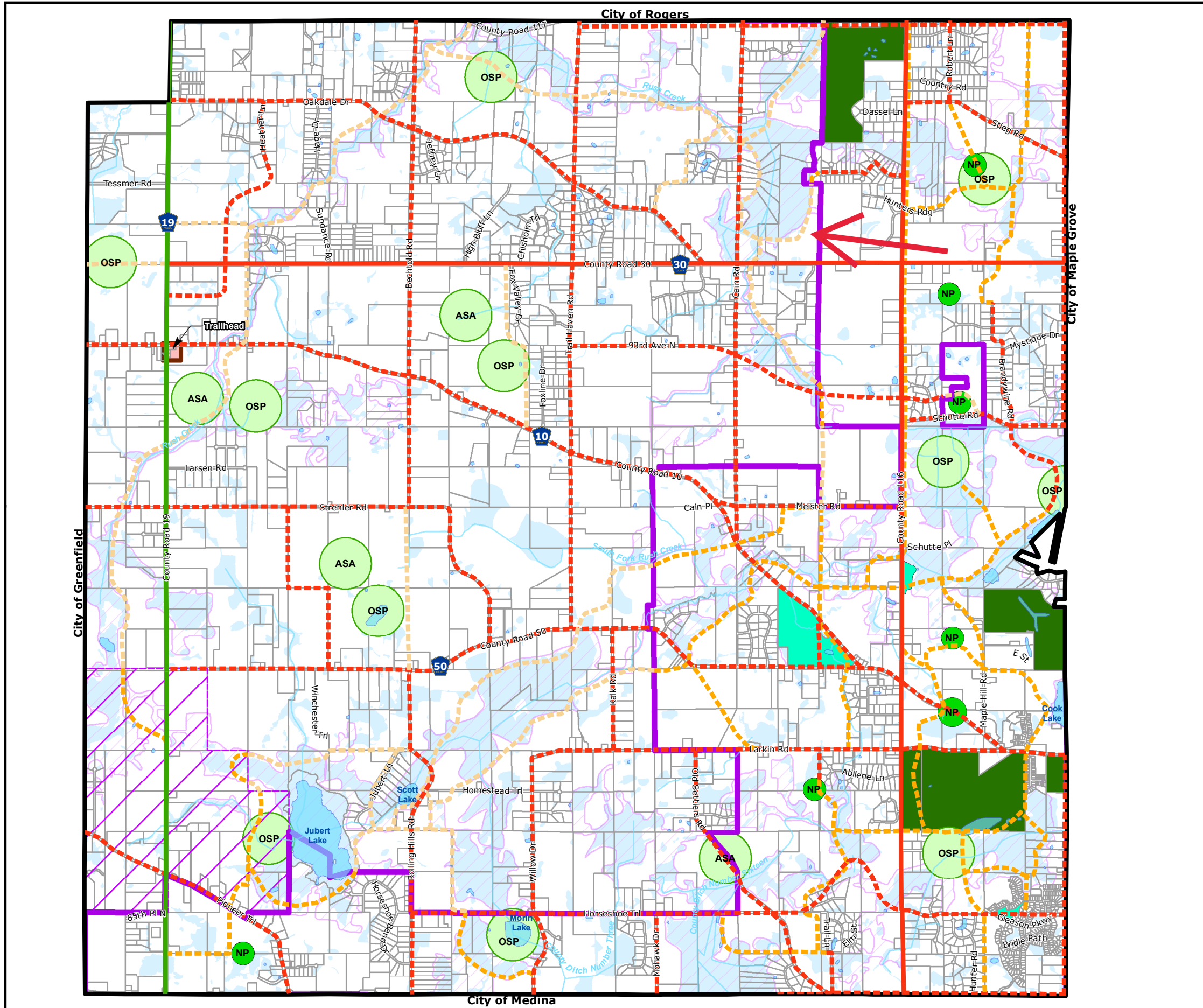




CITY OF CORCORAN

2040 COMPREHENSIVE PLAN

Map 5-1 Parks and Trails Plan

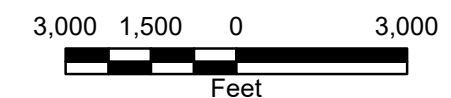


Existing Parks and Trails

- Regional Trail
- Existing On Road Trail
- City Park
- Trailhead
- Private Park/Open Space

Proposed Parks and Trails

- Proposed On Road Trail
- Proposed Off Road Trail
- Proposed Off Road Trail outside 2040 Development Area
- Neighborhood Park
- Community Park
- Greenway Corridor
- Municipal Boundaries
- 2040 MUSA
- Future MUSA Expansion Area
- Parcel Boundaries
- Streams
- Lake/Open Water
- Wetlands



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CITY OF CORCORAN

2040 COMPREHENSIVE PLAN

Map 1-7
Natural Resource Inventory Areas

- ★ Natural Community
- Rare Species Occurrence
- High Quality Natural Community

Natural Plant Communities

Wetlands

- Wet Prairie
- Emergent
- Shrub
- Floodplain Forest
- Open Water
- Flood Plain (Reed Canary Dominant)

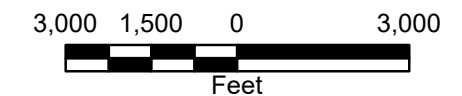
Uplands

- Savanna/Pasture
- Maple/Basswood
- Oak Forest
- Disturbed Woodland
- Old Field

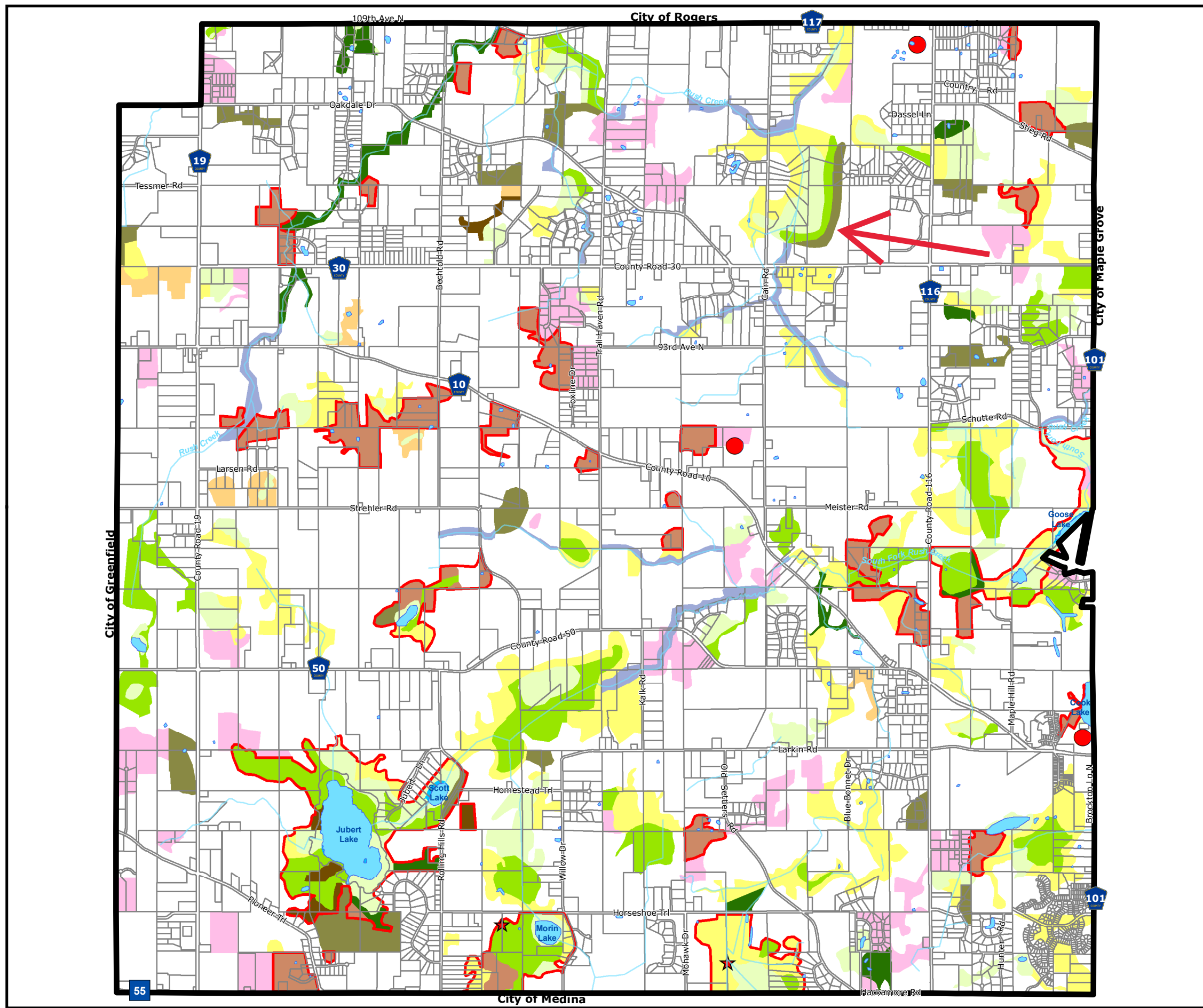
- Municipal Boundary
- Parcel Boundaries
- Streams
- Lake/Open Water

Note: Due to limitations of map scale, distribution and proportion of Natural Community types within each colored area are approximate.

Source: Natural Plant Communities, Rare Species Occurrence (Natural Resource Inventory and Management Plan, Nov. 2001, Bonestroo Rosene Anderlik & Associates)



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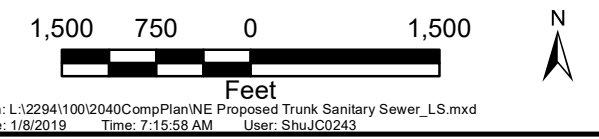
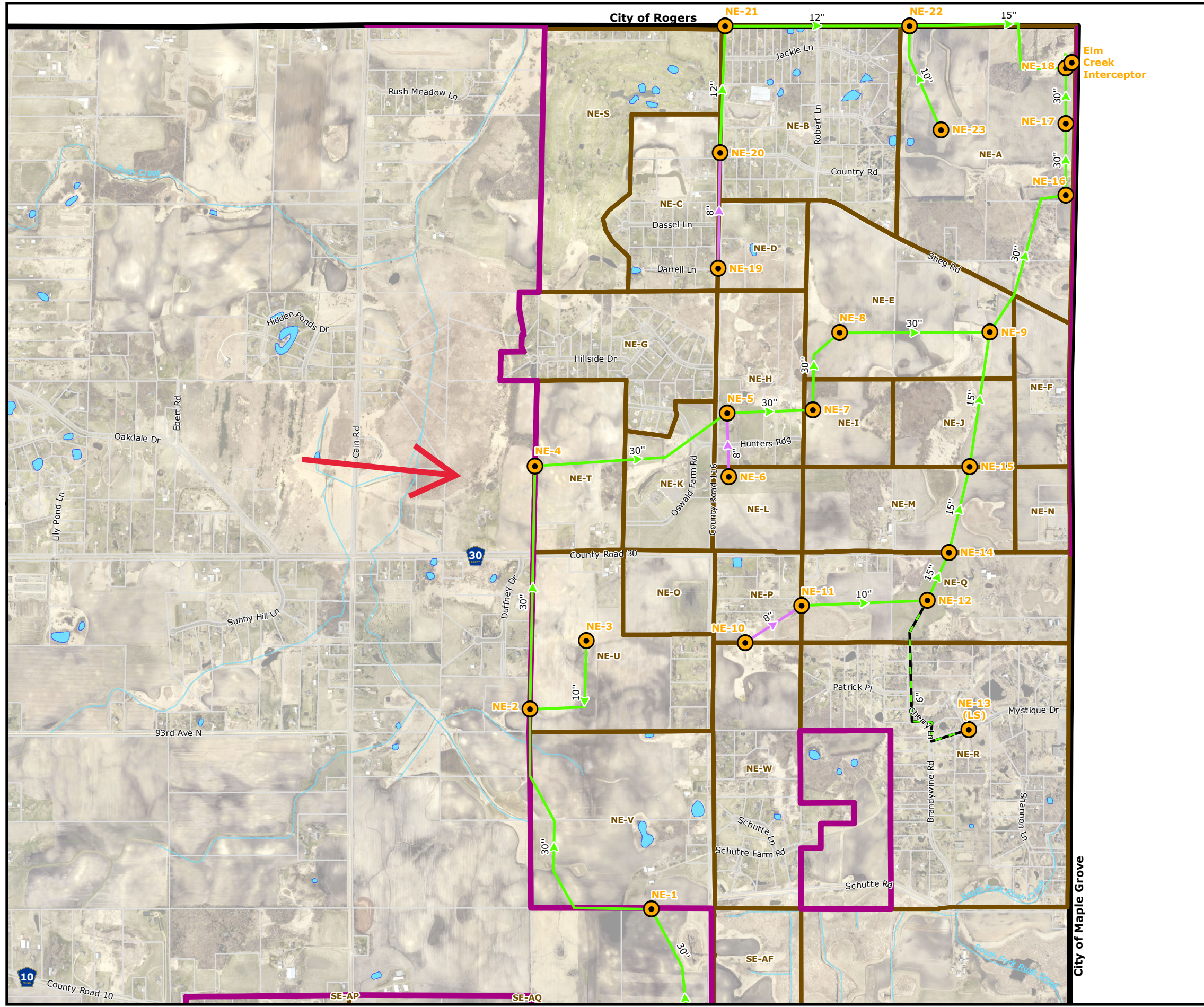


CITY OF CORCORAN

2040 COMPREHENSIVE PLAN

Map 7-2 Proposed Trunk Sanitary Sewer System - NE District

- Proposed Gravity
- Proposed Gravity (Lateral)
- Proposed Forcemain
- Sewer Nodes (LS) = Lift Station
- Sewer Subdistricts
- Municipal Boundary
- 2040 MUSA
- Parcel Boundaries
- Streams
- Lake/Open Water



STAFF REPORT

Agenda Item: 9a.

| | |
|---|--------------------------------------|
| Council Meeting: July 27, 2023 | Prepared By: Jessica Beise |
| Topic: Three Rivers Park District Cooperative Agreement | Action Required: Direction |

Summary

As part of the process to create the Diamond Lake Regional Trail, the City has been working closely with the Three Rivers Park District to develop a cooperative agreement between the two organizations.

The purpose of the agreement is to determine how reimbursement for land, responsibilities of parties, etc. is managed between the City of Corcoran and Three Rivers Park District with regards to the Diamond Lake Regional Trail.

The Parks and Trails Commission, provided feedback regarding the City Park Remaster and the building of the trail on City parcel. Staff has sent those comments to the City Attorney and Three Rivers Park District and will present minor changes if needed. Upon City adoption, the agreement would be presented on August 17 to the Three Rivers Park District Board.

Financial/Budget

The agreement outlines a credit to the City for Three Rivers Park District trail sections as they exceed the City's eight-foot standard trail width. For future sections of trail, the City, Three Rivers Park District would reimburse for the trail easement acquisition.

Options

1. Direct staff execute the process the Diamond Lake Regional Trail Cooperative Agreement.
2. Direct staff execute the process the Diamond Lake Regional Trail Cooperative Agreement with amendments.
3. Direct staff to proceed in a different manner.

Recommendation

Direct staff execute the process the Diamond Lake Regional Trail Cooperative Agreement.

Council Action

Direct staff execute the process the Diamond Lake Regional Trail Cooperative Agreement.

Attachments

1. Diamond Lake Regional Trail Cooperative Agreement.

**CITY OF CORCORAN
AND
THREE RIVERS PARK DISTRICT

DIAMOND LAKE REGIONAL TRAIL
COOPERATIVE AGREEMENT**

This agreement (the "Agreement") is made and entered into this ____ day of _____ 2023, by and between the Three Rivers Park District, a body corporate and politic and a political subdivision of the State of Minnesota ("Park District"), and the City of Corcoran, a Minnesota municipal corporation ("City").

WHEREAS, Park District is a political subdivision of the State of Minnesota authorized by statute to acquire, establish, operate, and maintain park facilities and regional trail systems; and

WHEREAS, City and Park District support the expansion of the regional trail system within the City, and specifically, the Diamond Lake Regional Trail ("Regional Trail") corridor connecting Baker Park Reserve and West Mississippi River Regional Trail; and

WHEREAS, Park District in partnership with the City prepared a master plan for the development of the Regional Trail based on the route conceptually approved by the City on July 22, 2021; and

WHEREAS, the City has approved a resolution of support for the master plan on June 23, 2022; and

WHEREAS, acquisition and development opportunities within the City are imminent and require timely collaboration between the City and Park District to capitalize on opportunities as they present themselves; and

WHEREAS, Park District and City desire to cooperate to acquire property rights, design, construct, operate and maintain the regional trail within the City, each employing their own powers.

NOW THEREFORE, in consideration of the mutual covenants herein, and other good and valuable consideration, the sufficiency of which is hereby acknowledged, City and Park District agree as follows:

- A. Regional Trail Route and Status.** The approved conceptual Regional Trail route is shown on Exhibit A. Both parties agree minor changes in the final Regional Trail route are allowable in order to best capitalize on opportunities to secure land, develop the trail, create a high quality Regional Trail corridor, be fiscally responsible, or similar. City Administrator or designee and Park District Superintendent or designee shall have authority to approve minor changes to the regional trail corridor route. Substantial changes in the route must be approved by both parties and may require a public engagement process.
- B. Property Rights.** City shall acquire and convey to Park District permanent property rights for purposes of establishing a continuous and contiguous Regional Trail corridor where Park District does not already have rights in place. Regional Trail corridor shall be a minimum width of 20 feet unless otherwise agreed upon.

City may fulfill this responsibility through public trailway easements, fee title, or permanent irrevocable permit or any combination thereof (individually and collectively referred to hereafter as 'Easement') provided that a permanent irrevocable permit and license shall only be used in situations where City does not have property rights sufficient to convey fee title or an easement but does have the legal authority to construct, maintain, and operate sidewalks, trails, and other such public ways within the permit area. Non-fee title property rights (i.e. easements and permits) conveyance documents shall generally adhere to typical public trailway easement and permanent irrevocable permit (in the general form attached hereto as Exhibit B) unless otherwise agreed upon by both parties.

In the event City acquires property rights from private parties to fulfill this obligation, Park District will reimburse City for acquired property rights. Reimbursement shall be limited to the amount paid for the property rights or to the amount the City would have received in the event cash in lieu of land was used to meet park dedication requirements provided however, that the reimbursement amount is supported by an MAI appraisal approved by the Park District and funded equally by the parties and that the reimbursement amount is deemed reasonable by the Park District before the property rights are obtained. City shall be responsible for any other acquisition costs. Park District shall not be responsible to reimburse City for acquisition of property rights it already holds, except as identified in Section D of this Agreement. Park District shall not be obligated to proceed with any obligation under this Agreement except to reimburse City for agreed upon property rights reimbursement expenses until City has conveyed to Park District an Easement sufficient to create continuous and contiguous regional trail corridor. Park District shall reimburse City the amount paid for property rights within 180 days of notice by City, unless otherwise agreed upon.

Park District may at its sole discretion also acquire property rights for purposes of creating a continuous and contiguous regional trail corridor from willing sellers. In such cases, City shall approve via resolution Park District's acquisition of property rights so long as the acquisition is consistent with the approved route as shown on Exhibit A, or is otherwise acceptable to City.

In the event City's right to so maintain a regional trail is lost by City-initiated action which results in the vacation, condemnation, or revocation of license or permit (such action a "City Loss of Use"), City will acquire such additional rights, titles and interests as are needed to provide a continuous and contiguous regional trail corridor at City expense. If the City Loss of Use occurs after construction of the regional trail, the City shall reconstruct the regional trail, if necessary, at City expense, subject to credit for any compensation Park District may receive for loss of its regional trail.

In locations where the City meets its Easement responsibilities via an irrevocable permit and license, the City represents that it currently has or will obtain the legal right and authority to construct, maintain, and operate Regional Trail within the permit area.

The parties recognize that certain Trail segments and road/railroad crossings may require agreements with third parties such as the Minnesota Department of Transportation ("MnDOT"). The parties to this Agreement shall cooperate to secure necessary permissions to use such crossings and bridges. In the event that

necessary permissions cannot be secured, this Agreement may be terminated by either party provided that monies due to either party is first paid.

C. Design and Construction. Design and construction of the Regional Trail and associated structures and road crossings shall be in accordance with the Regional Trail Standard Details (Exhibit C) and standards and guidelines adopted by the Park District. The Park District will have final discretion over Regional Trail and safe crossing design and the interpretation and execution of engineering best practices.

i. Design and Construction by Park District. The Park District will coordinate and fund design of Regional Trail and related structures. Park District may, in its sole discretion, contract with consultants to provide professional design services including, but not limited to design development, bidding documents, construction plans and specifications, contract document preparation, construction administration, and project close out. Park District shall submit all Regional Trail plans to City for review and approval, provided however, that approval shall not be unreasonably withheld.

Park District shall be responsible for bidding and construction of the Regional Trail and related structures in accordance with approved construction plans and specifications. Construction shall commence following (1) conveyance to Park District of Easements in accordance with Paragraph B – Property Rights of this Agreement, (2) Park District and City approval of plans and specifications for the Regional Trail, and (3) project funding approval by Park District Board of Commissioners.

ii. Design and Construction by City. In the alternative, City may design and construct the Regional Trail and related structures at Park District expense if first approved by Park District. If such a request is approved by the Park District, in its sole discretion, City shall assume all responsibilities associated with design and construction of Regional Trail and related structures, including, but not limited to design development, bidding documents, construction plans and specifications, contract document preparation, construction administration, and project closeout. City may do no work on the Regional Trail or related structures until it has submitted all Regional Rail plans, including substantial changes, to Park District for review and has received approval from Park District. Park District will delegate authority to approve substantial changes to appropriate staff. Approvals shall not be unreasonably withheld.

If the City's request to design and construct the Regional Trail and related structures is approved by the Park District, City shall be responsible for bidding and construction of the Regional Trail and related structures in accordance with the Park District approved construction plans and specifications. Bids shall utilize unit costs where possible unless otherwise agreed to. City shall be responsible for construction administration including but not limited to construction supervision. City shall provide notice to Park District of the commencement of Regional Trail construction. Park District may observe construction and may consult with City regarding construction issues. City shall inform the Park District of final construction and shall schedule inspection by all parties and other appropriate agencies prior to closing the construction contract. Upon correction of any concerns identified in the inspections, City shall notify Park District in writing indicating completion of the project. Upon completion and once determined to be regionally significant as defined in

Paragraph H, Park District shall assume Park District operations and maintenance responsibilities under this Agreement.

Park District may, at its reasonable discretion, temporarily withhold reimbursement for construction costs as provided by this Agreement for construction of the Regional Trail and related structures completed prior to Park District issuance of Notice to Proceed to City. Park District will issue a Notice to Proceed following (1) conveyance to Park District of Easements in accordance with Paragraph B – Property Rights of this Agreement, (2) Park District approval of construction plans, specifications, and costs for Regional Trail and related structures, and (3) project funding approval by the Park District’s Board of Commissioners.

Park District shall reimburse City for direct costs of design services incurred by the City to design the Regional Trail and related structures and construction paid or owed to the contractor engaged by City to build the Regional Trail and related structures if first approved by the Park District. The Park District and City will establish maximum reimbursement for design and construction of the Regional Trail and related structures upon City’s request to assume said responsibilities. The balance of Regional Trail and related structures costs related to design and construction shall be the responsibility of City.

Park District will not reimburse City for indirect City costs incurred by City including, but not limited to, staff costs, costs of consultants and advisors, legal fees, or any other expense, which do not represent direct approved design or construction costs, including without limitation filing and permit fees, except as provided herein. In the event the City uses its own forces to design and administer the construction of the Regional Trail and related structures, the City may seek reimbursement for direct and reasonable staff costs if first approved by the Park District. City shall provide all records necessary for audit of costs. Reimbursement shall not be due until 1) City has conveyed required Easement to Park District in accordance with Paragraph B – Property Rights of this Agreement, 2) Park District approves the construction plans and specifications, and 3) Regional Trail and related structures are constructed in accordance with the Park District approved construction plans and specification. Park District shall reimburse City within thirty (30) days following receipt of verified statement of direct design and construction expenses for all costs authorized by this Paragraph.

D. Tavera, Rush Creek, Bellwether and Amberly Developments. The City or its designee shall be responsible for the design and construction of the segments through housing developments indicated in Table A below and depicted in Exhibit A. Design and construction will strictly adhere to the terms and conditions of Paragraph C(ii): Design and Construction by City except as provided herein.

These trail segments were designed and/or built prior to the execution of this Agreement, however, they were designed and/or built with the intent of becoming part of the Regional Trail. On behalf of the Park District’s best interests, the City worked to ensure compliance with the master planning work, final agreed upon route by both parties, Park District Regional Trail standards, and Park District design review feedback. As such the Park District shall reimburse the City \$3.40 per linear foot which covers the additional cost of upgrading the City’s planned 8’ wide local trails to meet the 10’ wide Regional

Trail standards.



Table A.

| Segment | Development Name | Approx. Length | Compensation Amount |
|---------|------------------|----------------|---------------------|
| A | Amberly | 1500 ft. | \$ 5,100 |
| B | Bellwether | 4600 ft. | \$ 15,650 |
| C | Rush Creek | 2150 ft. | \$ 7,400 |
| D | Tavera | 7900 ft. | \$ 26,850 |

Reimbursement from the Park District shall occur in 2024 for completed trail segments. Reimbursement for trail segments which have not been completed as of the date of this Agreement shall occur in the calendar year following completion of each subsequent segment provided the City provides at least 6 months' notice of its intent to seek reimbursement to allow for budgeting. The City shall be solely responsible for any and all additional costs to complete the trail upgrades contemplated in this Section D.

E. Existing Local Trail Conveyance. Upon Park District request, the City will convey ownership of existing local trail segments along the Regional Trail corridor to the Park District. The City may also request that the Park District assume ownership of existing local trail segments; however, the Park District shall have no obligation to accept ownership until the existing local trail is regionally significant as defined in Paragraph H.

F. Permits and Assessments. City shall not unreasonably withhold City approvals, City permits, and other official City permissions necessary for the Park District to operate, maintain, reconstruct and construct the Regional Trail. In consideration of the Park District's performance under this Agreement including its maintenance obligations, City hereby agrees that the Park District shall not be subject to assessment by the City pertaining to the installation or maintenance of railway improvements made on the lands included in, or adjacent to, the Regional Trail corridor.

G. Inconsistent Rights. The City, for itself, its successors and assigns, hereby covenants that it will not construct nor grant others the right to construct any structures or improvements within the Easement areas, which are inconsistent with the rights and interests herein granted to Park District.

H. Operation and Maintenance.

i. Operations and Maintenance by City or Designee. The City or designee shall be solely responsible to operate and maintain the Regional Trail until such time as the Regional Trail or segments of the Regional Trail become regionally significant. For purposes of this Agreement, the Regional Trail shall become regionally significant at which time roughly half or more of the visitation is from people living outside of Corcoran, the trail directly connects to existing regional park/trail destinations such as Baker Park Reserve, or the contiguous/continuous trail length outside of Baker Park Reserve equals or exceeds three miles. City's operation and maintenance responsibilities include all routine and preventative maintenance and repair of the Regional Trail and all improvements to ensure the pavement remains in safe, good working order and open for public use. Notwithstanding the foregoing, the parties agree that

the City will have no obligation to perform winter maintenance, to include without limitation snow removal, even if the Regional Trail remains open during winter months.

- ii. **Operations and Maintenance by Park District.** At which time the Regional Trail or segments of the Regional Trail become regionally significant as outlined above, Park District and its agents and licensees shall have the sole and exclusive right and authority to operate and control the Regional Trail and to establish rules and regulations governing its use to the extent not in conflict with ordinances of the City.

Park District will be responsible for the renovation, replacement, repair, maintenance, and upkeep of the Regional Trail except bridges, tunnels and other structures owned by others, and as provided in Section H(i). Park District shall be solely responsible for establishing maintenance standards for the Regional Trail, which will be consistent district wide.

Park District reserves the right to remove any vegetation or object that obstructs the use or safety of the Regional Trail including adjacent safety zones in accordance with Exhibit C – Typical Trail Section.

- I. **Trail Uses and Purposes.** Regional Trail shall be open to the general public and be used exclusively for outdoor recreation and commuter activities, including but not limited to non-motorized uses such as walking, jogging, skating, and biking. The use of electric-assisted bicycles as defined in Minnesota State Law and Other Power Limited Mobility Devices as defined by the American with Disabilities Act and in accordance with Park District Policy are permitted.

In addition, motor vehicles used by the City or Park District for maintenance, law enforcement or other public uses will be permitted on the Regional Trail. Routine maintenance and patrol with motor vehicles will be conducted from adjacent roadways where feasible.

- J. **Winter Use.** As of the date of this Agreement, Park District policy is to leave the Regional Trail open to the public in winter, but perform no winter maintenance. Park District reserves the right to operate and maintain the Regional Trail for winter use in its sole discretion. The City may request a Park District Winter Use Permit to operate and maintain the Regional Trail during winter months. Such permit will require City, among other things, to assume responsibility for trail maintenance, operation and liabilities associated with winter use.

- K. **Signage.** The Park District shall be responsible to furnish, install, and maintain the trail information sign/kiosk program at Park District expense. Signage will indicate that the Regional Trail is owned/operated by the Park District. City may provide additional signage within the Regional Trail corridor, provided however, that Park District shall approve additional signage, and that City shall be responsible for providing and maintaining respective signage. The Park District shall not unreasonably withhold approval of City signage.

The party responsible for trail design, construction and/or reconstruction shall provide all trail regulatory signs as prescribed by the Minnesota Manual on Uniform Traffic Control Devices (Mn MUTCD), as a part of the design and construction of

the Trail. Park District shall be responsible for the maintenance of regulatory signs post-construction at Park District expense.

City shall be responsible for providing and maintaining roadway crossing treatments such as pedestrian striping, road signs and/or other treatments as prescribed by Mn MUTCD, or as appropriate when the Regional Trail crosses a City, County or State roadway and a City obligation to install such treatments exists.

- L. Utilities.** City shall enforce its franchise agreements with utility companies and, where such authority exists, require utility companies to relocate utilities at their own expense.

City shall at all times retain the right to maintain, repair or replace any existing utilities and related facilities in, on, or under said Regional Trail provided that if any such activities by the City shall or are reasonably likely to damage or limit the use of the Regional Trail, the City will give the Park District ninety (90) days prior written notice of the same (except in cases of emergency, where no advance notice shall be required). The City will upon completion of such activities so affecting the Regional Trail or any portion thereof, restore the Regional Trail to its preexisting condition or better. For clarity, this restoration obligation shall require reasonable patching of disturbed pavement, but not reconstruction to restore a seamless product, as agreed upon by both parties prior to completion of the repairs.

City and Park District recognize that prior notice is needed to develop temporary trail detour routes and temporary signage. City and Park District will cooperatively determine and implement a temporary detour route when feasible.

- M. Law Enforcement.** The City will patrol and police the Regional Trail in such manner and by such persons as the City shall deem necessary, and may enforce all rules and ordinances of the City except as provided herein. Notwithstanding anything herein to the contrary, the Park District shall have the right to enforce its rules, regulations and ordinances with respect to the Regional Trail, to the extent the same does not directly conflict with the City's enforcement of the City's rules and ordinances. Neither party shall promulgate any ordinance, rule or regulation which contravenes this Agreement with respect to the Regional Trail.

- N. Indemnification.** Each party is responsible for its own acts and omissions and the results thereof to the extent authorized by law. Minnesota Statutes Chapter 466 and other applicable law govern the parties' liability. To the full extent permitted by law, this Agreement is intended to be and shall be construed as a "cooperative activity" and it is the intent of the parties that they shall be deemed a "single governmental unit" for the purposes of liability, all as set forth in Minnesota Statutes, Section 471.59, Subd. 1a (a); provided further that for purposes of that statute, each party to this Agreement expressly declines responsibility for the acts or omissions of the other party. In addition to the foregoing, nothing herein shall be construed to waive or limit any immunity from, or limitation on, liability available to either party, whether set forth in Minnesota Statutes, Chapter 466 or otherwise.

- O. Successor and Assigns.** The Agreement shall be binding upon the parties hereto and their respective successors and assigns, provided, however, that neither City

nor Park District shall have the right to assign its rights, obligations and interests in or under this Agreement to any other party without the prior written consent of the other party.

- P. Amendment, Modification or Waiver.** No amendment, modification or waiver of any condition, provision or term of this Agreement shall be valid or of any effect unless made in writing and signed by the party or parties to be bound, or its duly authorized representative. Any waiver by either party shall be effective only with respect to the subject matter thereof and the particular occurrence described therein, and shall not affect the rights of either party with respect to any similar or dissimilar occurrences in the future.
- Q. Rights and Remedies Cumulative.** The rights and remedies provided by this Agreement are cumulative and no right or remedy at law or in equity which either party hereto might otherwise have by virtue of a default under this Agreement nor the exercise of any such right or remedy by either party will impair such party's standing to exercise any other right or remedy.
- R. No Agency.** Nothing contained herein and no action by either party hereto will be deemed or construed by such parties or by any third person to create the relationship of principal and agent or a partnership or a joint venture or any other association between or among the parties hereto.
- S. Saving Provision.** If any provision of the Agreement shall be found invalid or unenforceable with respect to any entity or in any jurisdiction, remaining provisions of the Agreement shall not be affected thereby, and such provisions found to be unlawful or unenforceable shall not be affected as to their enforcement or lawfulness as to any other entity or in any other jurisdiction, and to such extent the terms and provisions of this Agreement are intended to be severable.
- T. Termination.** This Agreement may be terminated by Park District or City by mutual agreement or as otherwise provided in this Agreement. This Agreement shall be terminable by either party upon a material breach by the other party.
- The provisions of Section N survive termination with respect to claims that arise from actions or occurrences that occurred prior to termination.
- U. Governing Laws.** This Agreement will be construed in accordance with the laws of the State of Minnesota.
- V. Title and Signing Authority.** City warrants that it will own good and marketable title to all property in which City provides public trailway easement or real property rights to Park District and that the undersigned is authorized to execute this Agreement.
- W. Enforcement.** In the event either party should bring an action to enforce the terms of this Agreement, the prevailing party shall be entitled to recover from the other all of the legal or other expenses of the prevailing party, including reasonable attorneys' fees, and to have the same awarded as part of the judgment in the proceeding in which legal expenses and attorneys' fees were awarded.

X. Notices. Any notice given under this Agreement shall be deemed given on the first business day following the date the same is deposited in the United States Mail (registered or certified) postage prepaid, addressed as follows:

| | |
|--------------------------|---|
| If to the Park District: | Superintendent Three Rivers Park District c/c Legal Counsel 3000 Xenium Lane North Plymouth, MN 55441 |
| If to City: | City Administrator City of Corcoran 8200 County Rd 116 Corcoran, MN 55340 |
| With Copy to: | John Thames, City Attorney 6300 Shingle Creek Parkway Suite 305 Minneapolis, MN 55430 |

IN WITNESS WHEREOF, Park District and City have entered into this Agreement as of the date and year first above written.

Three Rivers Park District, a public corporation and political subdivision of the State of Minnesota

Dated: _____ By: _____
Its Chair – Board of Commissioners

Dated: _____ By: _____
Its Superintendent
And Secretary to the Board

City of Corcoran, a Minnesota municipal corporation

Dated: _____ By: _____
Its Mayor

Dated: _____ By: _____
Its City Administrator

Exhibits

- Exhibit A Conceptual Regional Trail Route**
- Exhibit B Public Trailway Perpetual Easement and
Permanent Irrevocable Permit Agreement**
- Exhibit C Regional Trail Standard Details**

Exhibit A Conceptual Regional Trail Route

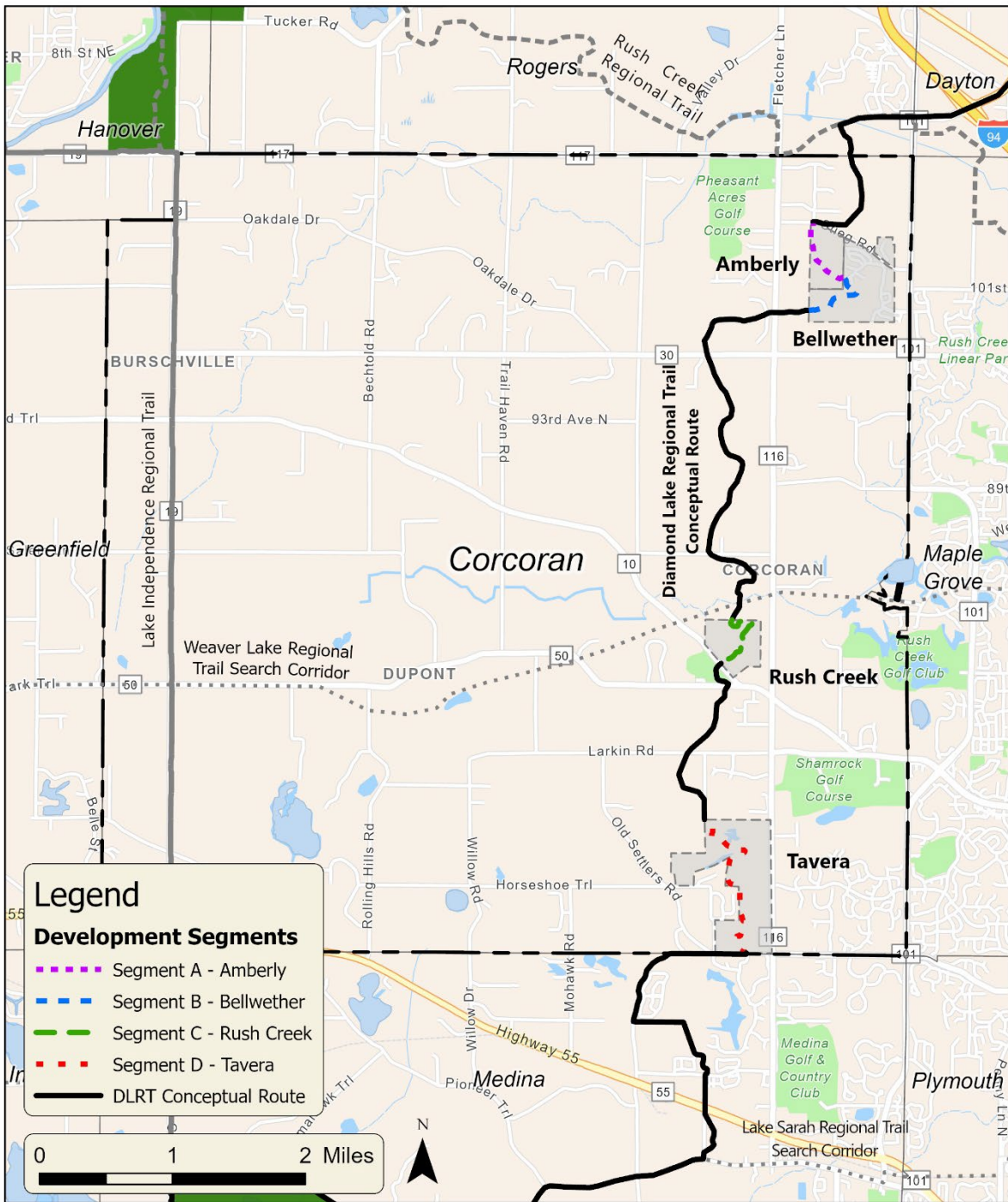


Exhibit B
Public Trailway Perpetual Easement and
Permanent Irrevocable Permit Agreement

PUBLIC TRAILWAY PERPETUAL EASEMENT AND
PERMANENT IRREVOCABLE PERMIT AGREEMENT

This Public Trailway Easement ("Easement") and Permanent Irrevocable Permit ("Permit"), made this _____ day of _____, 202_, between the City of Corcoran, a Minnesota municipal corporation ("Grantor") and Three Rivers Park District, a political subdivision of the State of Minnesota, Hennepin County, Minnesota ("Grantee").

RECITALS

WHEREAS, Grantor and Grantee entered into a Trailway Cooperative Agreement ("Agreement") for _____ Regional Trail ("Trail") dated as of _____, 202_; and

WHEREAS, pursuant to the Agreement, Grantor agreed to convey to Grantee an Easement and/or Permit as further described herein and Grantee agreed to accept Easement and/or Permit according to the terms and conditions contained herein; and

WHEREAS, Grantor is the fee owner of certain real property in Hennepin County, Minnesota, legally described on the attached Exhibit A ("Easement Area"); and

WHEREAS, Grantor is not the fee owner, but has legal authority to construct, maintain and operate sidewalks, trails, and other such publicways and Permit within the area legally described on the attached Exhibit B ("Permit Area"); and

WHEREAS, said Easement provided by the Grantor does not convey ownership of lands within the Easement and Permit Areas to the Grantee.

NOW THEREFORE, in consideration of mutual covenants contained within the Agreement referenced above, and other good and valuable consideration, the sufficiency of which is hereby acknowledged, the Grantor agrees as follows:

TERMS OF PERPETUAL EASEMENT AND PERMANENT AND IRREVOCABLE PERMIT

- 1.) Grant of Easement. Grantor grants and conveys to the Grantee the Easement legally described and depicted on the attached Exhibit A. The easement shall be perpetual, shall run with the land, shall be binding upon Grantor and its successors and assigns and shall be for the benefit of Grantee and its successors and assigns. The easement shall be non-exclusive; provided, however, this easement shall be prior to and superior to any other easement hereinafter granted. Any future easement shall be subject to and subordinate to, and shall not interfere with, the easement without the consent, in writing, of Grantee.
- 2.) Grant of Permit. Grantor grants and conveys to the Grantee the permanent, irrevocable Permit legally described and depicted on the attached Exhibit B. In accordance with the Agreement, the Grantor may substitute a Permit for an Easement only where the Grantor currently does not own property rights sufficient to convey an Easement. The permit shall be permanent, shall be binding upon

Exhibit B
Public Trailway Perpetual Easement and
Permanent Irrevocable Permit Agreement

Grantor and its successors and assigns and shall be for the benefit of Grantee and its successors and assigns. The permit shall be non-exclusive; provided, however, this permit shall be prior to and superior to any other permitted use of the permitted area, hereinafter granted. Any future permit shall be subject to and subordinate to, and shall not interfere with, the permit without the consent, in writing, of Grantee.

- 3.) Scope of Easement and Permit. The perpetual non-exclusive Easement and Permit granted herein includes the right of the Grantee, its contractor, agents, and employees to locate, install, construct, reconstruct, operate, maintain, inspect, alter and repair within the described Easement and Permits Areas any of the following facilities and amenities: public sidewalk or trail, trail signage, informational kiosks, benches, bike racks, fences, trail bridges/tunnels, and any other trail related structure.
- 4.) Trail Use and Purposes. This Easement and Permit is for public trailway purposes only. The Trail shall be open to the general public, and be used exclusively for outdoor recreation and commuting including but not limited to walking, jogging, skating, biking, and uses allowed under State and Federal law including, but not limited to, other personal driven mobility devices (OPDMD's) and electric personal assistive devices. In addition, motor vehicles used for maintenance, law enforcement or other public uses will be permitted within the Easement and Permit Areas.
- 5.) Property Rights and Execution Authority. The Grantor warrants that it 1) owns good and marketable title to the Easement Area, 2) has legal rights to construct, maintain and operate sidewalks, trails and other such publicways within the Permit Area, 3) has the right, title and capacity to convey the Easement and Permit to Grantee, and 4) that the undersigned is authorized to execute this Easement and Permit.
- 6.) Environmental Matters. Grantor shall provide Grantee written documentation of any and all previously and/or currently present hazardous materials, pollutants, or other contaminants within the Easement and Permit Areas (collectively the "Easement Areas") known to the Grantor. Beyond any information contained within the same, Grantor has no additional actual knowledge of adverse environmental conditions within the Easement Areas. Grantor shall indemnify and hold harmless Grantee for any costs, expenses, damages, obligations, including penalties and reasonable attorney's fees, or losses resulting from any claims, actions, suits or proceedings based upon the release or threat of release of any hazardous substances, pollutants, or contaminants which relate to the Easement Areas and which release or threat of release occurred during Grantor's ownership of the Easement Areas prior to the effective date of this Easement and Permit.
- 7.) Binding Effect. The terms and conditions of this instrument shall run with the land and be binding on the Grantor, its successors and assigns.

[Signature pages to follow]

Exhibit B
Public Trailway Perpetual Easement and
Permanent Irrevocable Permit Agreement

Exhibit B
Public Trailway Perpetual Easement and
Permanent Irrevocable Permit Agreement

In witness whereof, the said parties have caused this instrument to be executed on the date and year first written above.

CITY _____

Its Mayor

Its City Administrator

State of Minnesota)
) S.S.
County of Hennepin)

The foregoing instrument was acknowledge before me this _____ day of _____, 20__, by _____ and _____, the Mayor and City Administrator, respectively of the City of _____, a Minnesota municipal corporation, Grantor, on behalf of the same.

Notary Public

Notary Stamp or Seal



Exhibit B
Public Trailway Perpetual Easement and
Permanent Irrevocable Permit Agreement

This instrument drafted by:
Three Rivers Park District
3000 Xenium Lane North
Plymouth, MN 55441

**Exhibit B
Public Trailway Perpetual Easement and
Permanent Irrevocable Permit Agreement**

**EXHIBIT A
PUBLIC TRAILWAY EASEMENT
LEGAL DESCRIPTION**

Hold for Legal Description



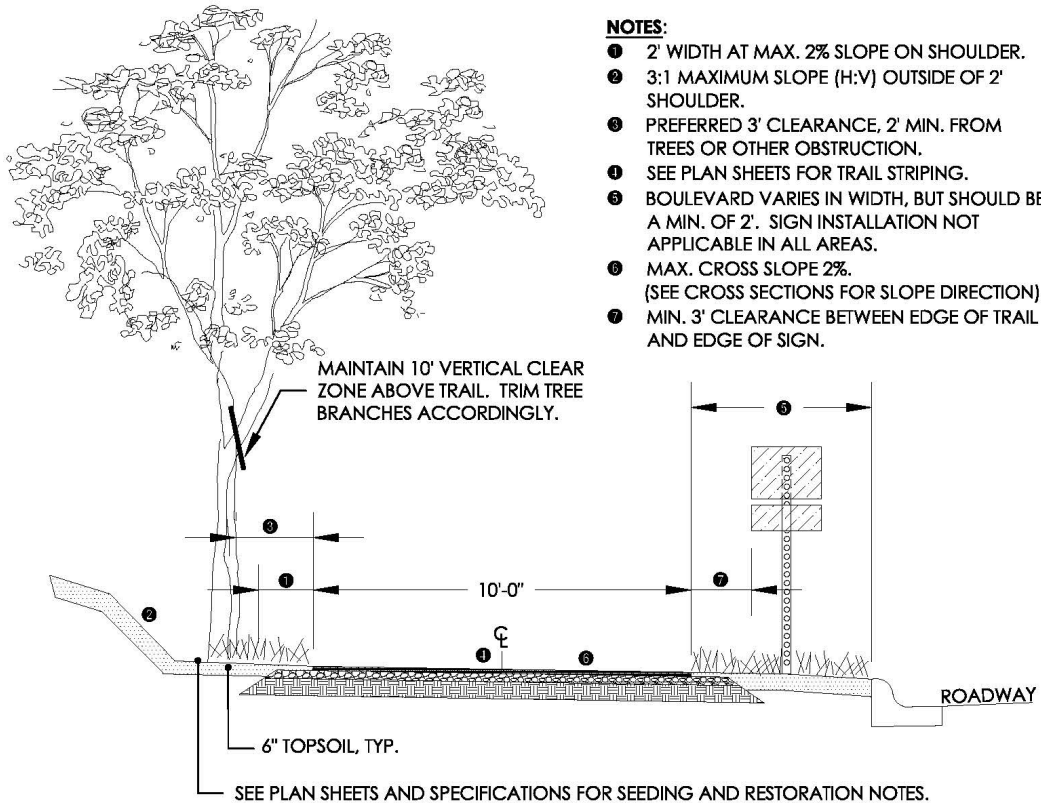
**Exhibit B
Public Trailway Perpetual Easement and
Permanent Irrevocable Permit Agreement**

**EXHIBIT B
PUBLIC TRAILWAY PERMIT
LEGAL DESCRIPTION**

Hold for Legal Description

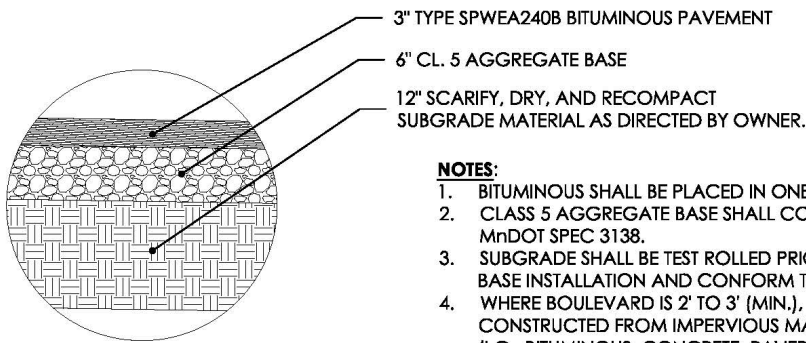
EXHIBIT B
Easement and Limited Use Permit

EXHIBIT C Regional Trail Standard Details



NOTES:

- ① 2' WIDTH AT MAX. 2% SLOPE ON SHOULDER.
- ② 3:1 MAXIMUM SLOPE (H:V) OUTSIDE OF 2' SHOULDER.
- ③ PREFERRED 3' CLEARANCE, 2' MIN. FROM TREES OR OTHER OBSTRUCTION.
- ④ SEE PLAN SHEETS FOR TRAIL STRIPING.
- ⑤ BOULEVARD VARIES IN WIDTH, BUT SHOULD BE A MIN. OF 2'. SIGN INSTALLATION NOT APPLICABLE IN ALL AREAS.
- ⑥ MAX. CROSS SLOPE 2%. (SEE CROSS SECTIONS FOR SLOPE DIRECTION).
- ⑦ MIN. 3' CLEARANCE BETWEEN EDGE OF TRAIL AND EDGE OF SIGN.



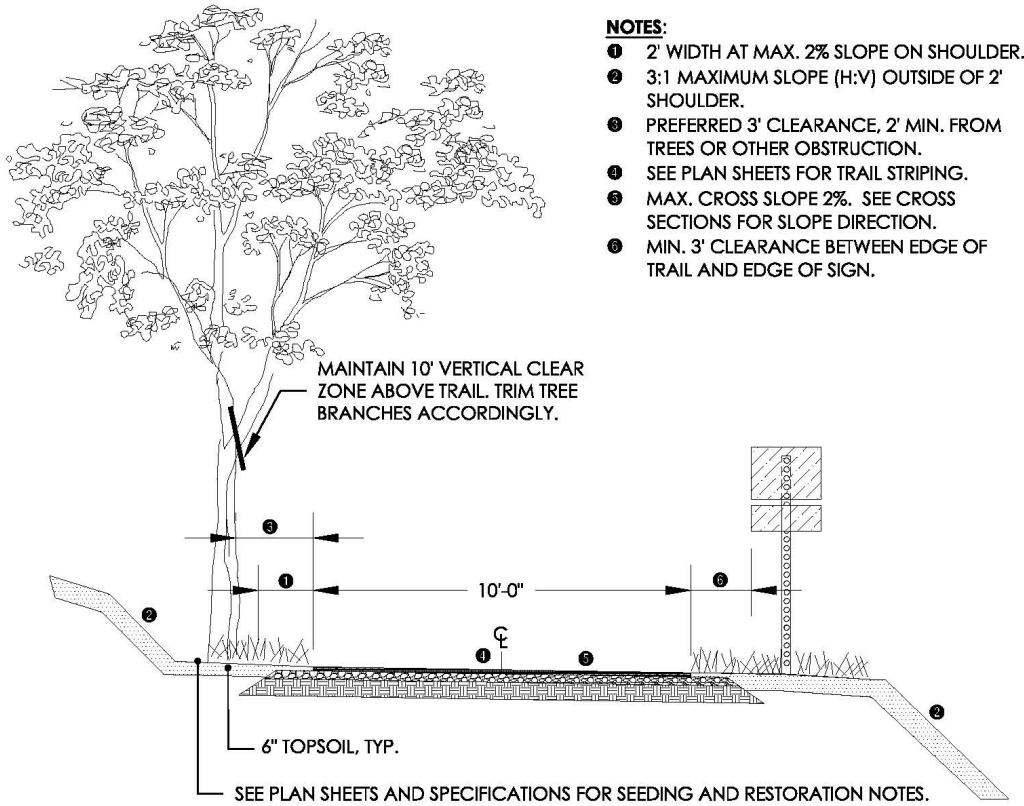
NOTES:

- 1. BITUMINOUS SHALL BE PLACED IN ONE LIFT.
- 2. CLASS 5 AGGREGATE BASE SHALL CONFORM TO MnDOT SPEC 3138.
- 3. SUBGRADE SHALL BE TEST ROLLED PRIOR TO AGGREGATE BASE INSTALLATION AND CONFORM TO MnDOT SPEC 2111.
- 4. WHERE BOULEVARD IS 2' TO 3' (MIN.), BOULEVARD SHALL BE CONSTRUCTED FROM IMPERVIOUS MATERIAL (I.G., BITUMINOUS, CONCRETE, PAVERS, ETC). SPECIAL STRIPING LAYOUT MAY APPLY. (SEE PLAN SHEETS).

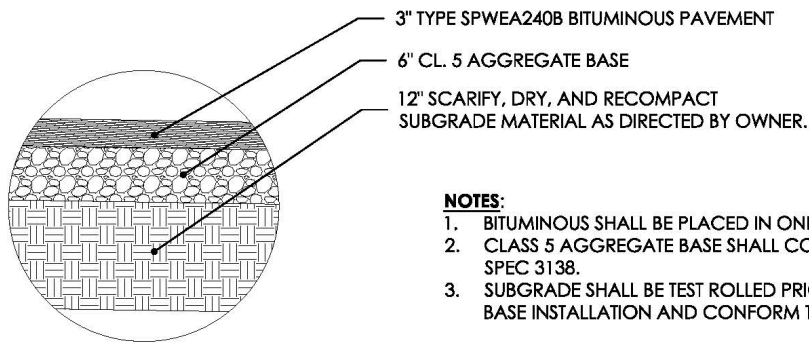
TR-1 TYPICAL TRAIL SECTION 10' URBAN

NTS

EXHIBIT C Regional Trail Standard Details



- NOTES:**
- ① 2' WIDTH AT MAX. 2% SLOPE ON SHOULDER.
 - ② 3:1 MAXIMUM SLOPE (H:V) OUTSIDE OF 2' SHOULDER.
 - ③ PREFERRED 3' CLEARANCE, 2' MIN. FROM TREES OR OTHER OBSTRUCTION.
 - ④ SEE PLAN SHEETS FOR TRAIL STRIPING.
 - ⑤ MAX. CROSS SLOPE 2%. SEE CROSS SECTIONS FOR SLOPE DIRECTION.
 - ⑥ MIN. 3' CLEARANCE BETWEEN EDGE OF TRAIL AND EDGE OF SIGN.



TR-2 TYPICAL TRAIL SECTION 10' OFF-ROAD

NTS

STAFF REPORT

Agenda Item: 9b.

| | |
|--|---|
| Council Meeting: July 27, 2023 | Prepared By: Michelle Friedrich |
| Topic: Granicus Project | Action Required: Approval |

Summary

Granicus Agenda Building Software

Granicus is an agenda building software that offers integration with streaming Council meetings, storing videos, and website hosting and maintenance. At the May 25 meeting, Council reviewed implementation costs for the software solution, an annual year-to-year maintenance estimate, and a 3-year paid in full estimate. Council requested staff obtain a 10-year estimate and review ARPA funding options, which was presented to Council on June 8. Staff was able to determine ARPA funding would cover the cost of implementation this year, with the subscription agreement costs allocated to future General Fund budget years. Council was presented with a 3-year agreement option and a 10-year agreement option.

Financial/Budget for Granicus Agenda Building Software

3-Year Agreement Option:

| Implementation <i>(Paid through ARPA)</i> | 3-Year (Annually) <i>(Paid through General Fund/Budget Annually)</i> | 3-Year (Paid in Full) |
|---|--|------------------------------|
| \$5,500 | Year 1: \$6,714 Year 2: \$7,050 Year 3: \$7,400 | \$20,143 |

10-Year Agreement Option:

| Implementation <i>(Paid through ARPA)</i> | 10-Year Agreement <i>(Paid through General Fund/Budget Annually)</i> |
|---|--|
| \$5,500 | Year 1-Year 10: \$6,714.60 Agreement Total: \$67,146 |

The 3-year paid in full pricing offers the benefit of a 5 percent discount after the post 3-year per paid-in-full term, versus a 7 percent annual increase for the 3-year annual pricing thereafter, incorporating a savings of \$12,142 over a 10-year period. Please note implementation pricing remains the same with each pricing option.

The 10-year paid in full pricing offers the benefit of additional savings of \$10,399 when when compared with the 3-year paid in full option.

To continue workflow and respond as necessary should the pandemic re-emerge, or a new emergency arise, a portion of this project is consistent with the eligibility requirements to access funding of the America Rescue Plan Act (ARPA). Eligible funds could be accessed for the implementation and setup costs of Granicus solutions. The

annual subscription portion would be funded through the General Fund and included in future year budgets beginning in 2024.

Recommendations

Staff recommends moving forward with the Granicus Agenda Building Solutions with either a 3-Year or 10-Year Agreement and include in the General Fund for future budget years, and implementing in 2023 with ARPA funds.

Council Action

1. Authorize staff to proceed with the Granicus Agenda Building Solutions implementation and approve either the 3-year maintenance option, or 10-year maintenance option.
2. Decline implementation of Granicus Agenda Building Solutions software.

Attachments

1. Granicus Agenda Building 3- and 10-Year Agreement Proposal

Granicus Proposal for Corcoran, MN

ORDER DETAILS

Prepared By: Ruth Gonzalez
Phone: 847-809-5692
Email: ruth.gonzalez@granicus.com
Order #: Q-271514
Prepared On: 02 May 2023
Expires On: 23 Jun 2023

ORDER TERMS

Currency: USD
Payment Terms: Net 30 (Payments for subscriptions are due at the beginning of the period of performance.)
Period of Performance: The term of the Agreement will commence on the date this document is signed and will continue for 36 months.

PRICING SUMMARY

The pricing and terms within this Proposal are specific to the products and volumes contained within this Proposal.

| One-Time Fees | | | |
|--|-------------------|---------------|-------------------|
| Solution | Billing Frequency | Quantity/Unit | One-Time Fee |
| Peak - Setup & Configuration | Up Front | 1 Each | \$0.00 |
| Peak Online Group Training | Upon Delivery | 6 Hours | \$0.00 |
| Government Transparency - Setup & Configuration | Up Front | 1 Each | \$0.00 |
| Granicus Encoding Appliance Hardware - SDI (AMAX) (GT) | Upon Delivery | 1 Each | \$4,500.00 |
| Granicus Video - Online Training | Upon Delivery | 6 Hours | \$0.00 |
| Open Platform - Setup and Configuration | Up Front | 1 Hours | \$0.00 |
| Send Agenda (Peak) Set up and Config | Up Front | 1 Each | \$0.00 |
| Open Platform - Setup and Configuration | Up Front | 1 Hours | \$0.00 |
| Granicus Encoding Appliance Hardware - Setup & Config | Upon Delivery | 1 Each | \$875.00 |
| US Shipping Charge C - Large Item | Upon Delivery | 1 Each | \$125.00 |
| govDelivery for Integrations Set Up and Config | Up Front | 1 Each | \$0.00 |
| SUBTOTAL: | | | \$5,500.00 |

| New Subscription Fees | | | | | |
|---|------------------------------|--------------------------|----------------------|-------------------|---------------------|
| Solution | Period of Performance | Billing Frequency | Quantity/Unit | Annual Fee | Prorated Fee |
| Peak Agenda Management | 01 Jun 2023 - 31 May 2026 | Annual | 1 Each | \$3,135.00 | \$9,405.00 |
| Government Transparency Suite | 01 Jun 2023 - 31 May 2026 | Annual | 1 Each | \$2,439.60 | \$7,318.80 |
| Open Platform Suite | 01 Jun 2023 - 31 May 2026 | Annual | 1 Each | \$0.00 | \$0.00 |
| Send Agenda (Peak) | 01 Jun 2023 - 31 May 2026 | Annual | 1 Each | \$0.00 | \$0.00 |
| Open Platform Suite | 01 Jun 2023 - 31 May 2026 | Annual | 1 Each | \$0.00 | \$0.00 |
| govDelivery for Integrations | 01 Jun 2023 - 31 May 2026 | Annual | 1 Each | \$0.00 | \$0.00 |
| Granicus Encoding Appliance Software (GT) | 01 Jun 2023 - 31 May 2026 | Annual | 1 Each | \$1,140.00 | \$3,420.00 |
| SUBTOTAL: | | | | \$6,714.60 | \$20,143.80 |

FUTURE YEAR PRICING

| Solution(s) | Period of Performance | |
|---|-----------------------|-------------------|
| | Year 2 | Year 3 |
| Peak Agenda Management | \$3,291.75 | \$3,456.34 |
| Government Transparency Suite | \$2,561.58 | \$2,689.66 |
| Open Platform Suite | \$0.00 | \$0.00 |
| Send Agenda (Peak) | \$0.00 | \$0.00 |
| Open Platform Suite | \$0.00 | \$0.00 |
| govDelivery for Integrations | \$0.00 | \$0.00 |
| Granicus Encoding Appliance Software (GT) | \$1,197.00 | \$1,256.85 |
| SUBTOTAL: | \$7,050.33 | \$7,402.85 |

PRODUCT DESCRIPTIONS

| Solution | Description |
|-------------------------------|--|
| Peak Agenda Management | Peak Agenda Management is a Software-as-a-Service (SaaS) solution that enables government organizations to simplify the agenda management and minutes recording process of the clerk's office. Peak Agenda Management allows clerks to streamline the way they compile and produce agendas and record minutes for public meetings and includes: <ul style="list-style-type: none"> • Unlimited user accounts • Unlimited meeting bodies and meeting types • Access to up to one (1) Peak Agenda Management site |
| Government Transparency Suite | Government Transparency are the live in-meeting functions. Streaming of an event, pushing of documents, and indexing of events. |
| Open Platform Suite | Open Platform is access to MediaManager, upload of archives, ability to post agendas/documents, and index of archives. These are able to be published and accessible through a searchable viewpage. |
| Send Agenda (Peak) | Send Agenda is dependent on an active subscription to the relevant govMeetings agenda. |
| Peak - Setup & Configuration | Setup and Configuration for Peak Agenda Management includes implementation of: <ul style="list-style-type: none"> • Up to one (1) meeting body's Standard Agenda, Cover Page and Minutes report template • Up to one (1) public view page portal |
| Peak Online Group Training | Online Group Training for Peak Agenda Management allows clients to have up to six (6) users participate in online group sessions with a Granicus trainer and other client users to learn how to use the system. |
| Open Platform Suite | Open Platform is access to MediaManager, upload of archives, ability to post agendas/documents, and index of archives. These are able to be published and accessible through a searchable viewpage. |

| Solution | Description |
|--|--|
| Government Transparency - Setup & Configuration | Setup and Configuration for Government Transparency Suite includes implementation of: <ul style="list-style-type: none"> • Up to one (1) View Page and Player template • Up to one (1) Live Manager configuration |
| Granicus Encoding Appliance Hardware - SDI (AMAX) (GT) | AMAX Encoder with Osprey SDI Card. Used to pass commands and data from LiveManager that include Start/Stop of webcast, indexing, and document display. Also serves to distribute video and captions to be distributed to the CDN or Performance Accelerator. |
| Granicus Video - Online Training | Granicus Video - Online Training |
| Open Platform - Setup and Configuration | Setup and configuration for Open Platform |
| govDelivery for Integrations | Send notification bulletins directly to constituents who subscribe to receive updates directly through Granicus (powered by govDelivery). Receive a monthly metrics report delivered via email to show subscriber growth and engagement activity for the past month of bulletin sends, and grow subscribers through access to the Granicus Advanced Network. Note: govDelivery integrations is dependent on an active subscription to the relevant govMeetings agenda or govAccess CMS solutions. |
| Open Platform - Setup and Configuration | Setup and configuration for Open Platform |
| Granicus Encoding Appliance Software (GT) | Granicus Encoding Appliance Software (GT) This includes the LiveManager Software solution where webcasts are started/stopped, agendas amended and indexed, votes and attendance recorded, and minutes created. |
| Granicus Encoding Appliance Hardware - Setup & Config | Remote configuration and deployment of an encoding appliance. |
| US Shipping Charge C - Large Item | US shipping of a large item |

GRANICUS ADVANCED NETWORK AND SUBSCRIBER INFORMATION

- **Granicus Communications Suite Subscriber Information.**
 - Data provided by the Client and contact information gathered through the Client's own web properties or activities will remain the property of the Client ('Direct Subscriber'), including any and all personally identifiable information (PII). Granicus will not release the data without the express written permission of the Client, unless required by law.
 - Granicus shall: (i) not disclose the Client's data except to any third parties as necessary to operate the Granicus Products and Services (provided that the Client hereby grants to Granicus a perpetual, non-cancelable, worldwide, non-exclusive license to utilize any data, on an anonymous or aggregate basis only, that arises from the use of the Granicus Products by the Client, whether disclosed on, subsequent to, or prior to the Effective Date, to improve the functionality of the Granicus Products and any other legitimate business purpose, including the right to sublicense such data to third parties, subject to all legal restrictions regarding the use and disclosure of such information).
- **Data obtained through the Granicus Advanced Network.**
 - Granicus offers a SaaS product, known as the Communications Cloud, that offers Direct Subscribers recommendations to subscribe to other Granicus Client's digital communication (the 'Advanced Network'). When a Direct Subscriber signs up through one of the recommendations of the Advanced Network, that subscriber is a 'Network Subscriber' to the agency it subscribed to through the Advanced Network.
 - Network Subscribers are available for use while the Client is under an active subscription with Granicus. Network Subscribers will not transfer to the Client upon termination of any Granicus Order, SOW, or Exhibit. The Client shall not use or transfer any of the Network Subscribers after termination of its Order, SOW, or Exhibit placed under this agreement. All information related to Network Subscribers must be destroyed by the Client within 15 calendar days of the Order, SOW, or Exhibit placed under this agreement terminating.
 - Opt-In. During the last 10 calendar days of the Client's subscription, the Client may send an opt-in email to Network Subscribers that shall include an explanation of the Client's relationship with Granicus terminating and that the Network Subscribers may visit the Client's website to subscribe to further updates from the Client in the future. Any Network Subscriber that does not opt-in will not be transferred with the subscriber list provided to the Client upon termination.

UPDATES TO SHARED SHORT CODES FOR SMS/TEXT MESSAGING (US CLIENTS ONLY):

- Granicus will be migrating all clients with SMS/Text Messaging Solutions using a shared short code option to a unique standard toll-free number within the United States (International numbers not supported). Short Codes are recommended for Text-to-Subscribe functionalities, if enabled where available, for an additional fee.
- Client must have explicit opt-in for all destinations sent to and adhere to all CTIA guidelines for the duration of its use.

TERMS & CONDITIONS

- This quote, and all products and services delivered hereunder are governed by the terms located at <https://granicus.com/legal/licensing>, including any product-specific terms included therein (the "License Agreement"). If your organization and Granicus has entered into a separate agreement or is utilizing a contract vehicle for this transaction, the terms of the License Agreement are incorporated into such separate agreement or contract vehicle by reference, with any directly conflicting terms and conditions being resolved in favor of the separate agreement or contract vehicle to the extent applicable.
- If submitting a Purchase Order, please include the following language: The pricing, terms and conditions of quote Q-271514 dated 02 May 2023 are incorporated into this Purchase Order by reference and shall take precedence over any terms and conditions included in this Purchase Order.
- This quote is exclusive of applicable state, local, and federal taxes, which, if any, will be included in the invoice. It is the responsibility of Corcoran, MN to provide applicable exemption certificate(s).
- Any lapse in payment may result in suspension of service and will require the payment of a setup fee to reinstate the subscription.
- Granicus will provide a three (3) year warranty with respect to required hardware. Within the three (3) year warranty period, Granicus shall repair or replace any required hardware provided directly from Granicus that fails to function properly due to normal wear and tear, defective workmanship, or defective materials.

BILLING INFORMATION

| | | | |
|-------------------------|--|--|-----------------------|
| Billing Contact: | | Purchase Order Required? | [] - No [] - Yes |
| Billing Address: | | PO Number: <i>If PO required</i> | |
| Billing Email: | | Billing Phone: | |

If submitting a Purchase Order, please include the following language:

The pricing, terms, and conditions of quote Q-271514 dated 02 May 2023 are incorporated into this Purchase Order by reference and shall take precedence over any terms and conditions included in this Purchase Order.

AGREEMENT AND ACCEPTANCE

By signing this document, the undersigned certifies they have authority to enter the agreement. The undersigned also understands the services and terms.

| Corcoran, MN | |
|-------------------|--|
| Signature: | |
| Name: | |
| Title: | |
| Date: | |

Granicus Proposal for Corcoran, MN

ORDER DETAILS

Prepared By: Stephanie Serbedzija
Phone: (224) 284-1107
Email: stephanie.serbedzija@granicus.com
Order #: Q-284018
Prepared On: 30 May 2023
Expires On: 21 Jul 2023

ORDER TERMS

Currency: USD
Payment Terms: Net 30 (Payments for subscriptions are due at the beginning of the period of performance.)
Period of Performance: The term of the Agreement will commence on the date this document is signed and will continue for 120 months.

The subscription includes the following domain(s) and subdomain(s):
<https://www.corcoranmn.gov/>

PRICING SUMMARY

The pricing and terms within this Proposal are specific to the products and volumes contained within this Proposal.

| One-Time Fees | | | |
|-----------------------------------|-----------------------|---------------|-------------------|
| Solution | Billing Frequency | Quantity/Unit | One-Time Fee |
| Granicus Web - Essentials Package | Milestones - 40/30/30 | 1 Each | \$7,110.00 |
| SUBTOTAL: | | | \$7,110.00 |

| New Subscription Fees | | | |
|-------------------------|-------------------|---------------|-------------------|
| Solution | Billing Frequency | Quantity/Unit | Annual Fee |
| OpenCities SaaS License | Annual | 1 Each | \$5,400.00 |
| SUBTOTAL: | | | \$5,400.00 |

| Communications Cloud Tier: |
|----------------------------|
| for up to 4000 subscribers |

FUTURE YEAR PRICING

| Period of Performance | | | | | | | | | |
|----------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Solution(s) | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |
| OpenCities Saas License | \$5,670.00 | \$5,953.50 | \$6,251.18 | \$6,563.73 | \$6,563.73 | \$6,563.73 | \$6,563.73 | \$6,563.73 | \$6,563.73 |
| SUBTOTAL: | \$5,670.00 | \$5,953.50 | \$6,251.18 | \$6,563.73 | \$6,563.73 | \$6,563.73 | \$6,563.73 | \$6,563.73 | \$6,563.73 |

PRODUCT DESCRIPTIONS

| Solution | Description |
|--|---|
| <p>Granicus Web - Essentials Package</p> | <p>The Essentials package provides a citizen-focused website based on best practices & patterns out-of-the-box using proven pre-configured layouts. This implementation level is recommended for organizations that need a rapid implementation timeline or those with a small implementation team that does not have the capacity to engage in a traditional UX Design process.</p> <p>This package includes:</p> <ul style="list-style-type: none"> • Professional Project <ul style="list-style-type: none"> ◦ Management - Weekly / bi-weekly communication • One (1) homepage layout from Granicus responsive design library • One (1) Information Architecture (IA) Package (basic) <ul style="list-style-type: none"> ◦ Best practices review • One (1) Content Rationalization Package (basic) <ul style="list-style-type: none"> ◦ Best practices review, one (1) hour session ◦ Site scrape loaded into AIM framework document • One (1) Visual Design Package <ul style="list-style-type: none"> ◦ One (1) homepage design mockup – based on logo + 3 colors ◦ Interior page sample ◦ Mobile version sample ◦ One (1) round of design revisions • Development/CMS Implementation • Content Migration - up to fifty (50) pages • QA & Accessibility Report • Remote Training - Delivered in three (3) non-consecutive sessions <ul style="list-style-type: none"> ◦ eight (8) hours total - Up to ten (10) people |

| Solution | Description |
|-------------------------|---|
| OpenCities SaaS License | <p>The OpenCities platform allows you to launch modern, easy to use websites that evolve to put the needs of your community at the center. The SaaS License includes:</p> <ul style="list-style-type: none"> • All OpenCities out of the box functionality (excluding optional/premium modules priced separately) • Platform setup and full project management • Managed cloud hosting via Microsoft AzureGov • Ongoing security updates • Ongoing product updates and enhancements • WCAG AA Accessibility maintained perpetually • 99.9% up-time guarantee and 24/7 support for Priority 1 issues (per SLA) • Comprehensive SLA and Support Ticketing system <p>See subscription agreement for details.</p> |

TERMS & CONDITIONS

- This quote, and all products and services delivered hereunder are governed by the terms located at <https://granicus.com/legal/licensing>, including any product-specific terms included therein (the "License Agreement"). If your organization and Granicus has entered into a separate agreement or is utilizing a contract vehicle for this transaction, the terms of the License Agreement are incorporated into such separate agreement or contract vehicle by reference, with any directly conflicting terms and conditions being resolved in favor of the separate agreement or contract vehicle to the extent applicable.
- If submitting a Purchase Order, please include the following language: The pricing, terms and conditions of quote Q-284018 dated 30 May 2023 are incorporated into this Purchase Order by reference and shall take precedence over any terms and conditions included in this Purchase Order.
- This quote is exclusive of applicable state, local, and federal taxes, which, if any, will be included in the invoice. It is the responsibility of Corcoran, MN to provide applicable exemption certificate(s).
- Any lapse in payment may result in suspension of service and will require the payment of a setup fee to reinstate the subscription.

BILLING INFORMATION

| | | | |
|-------------------------|--|--|---|
| Billing Contact: | | Purchase Order Required? | [<input type="checkbox"/>] - No [<input type="checkbox"/>] - Yes |
| Billing Address: | | PO Number: <i>If PO required</i> | |
| Billing Email: | | Billing Phone: | |

If submitting a Purchase Order, please include the following language:

The pricing, terms, and conditions of quote Q-284018 dated 30 May 2023 are incorporated into this Purchase Order by reference and shall take precedence over any terms and conditions included in this Purchase Order.

AGREEMENT AND ACCEPTANCE

By signing this document, the undersigned certifies they have authority to enter the agreement. The undersigned also understands the services and terms.

| Corcoran, MN | |
|-------------------|--|
| Signature: | |
| Name: | |
| Title: | |
| Date: | |

| City | Products | Tenure |
|-----------------|---|----------|
| Minneapolis | Communications and SMS module, Short Term Rental - Host Compliance | 21 years |
| Brooklyn Park | Communications and SMS module, Video streaming services | 14 years |
| Maple Grove | Video streaming | 14 years |
| Eden Prairie | Website, Communication, SMS, Video streaming | 15 years |
| Bloomington | Peak, Civic Engagement HQ, Communications Core | 14 years |
| Edina | Novus Agenda, Video Streaming, Engagement HQ | 16 years |
| Plymouth | Purchased Peak in Q1 2023. Website, Communication Core, Video services | 14 years |
| Minnetonka | Purchased Peak in Q4 2022. Video streaming, FOIA software, Boards & Commission module, GovQA CRM, Website, Communications, SMS, Engagement HQ | 15 years |
| Brooklyn Center | Website, Communications, Novus Agenda | 14 years |
| St. Louis Park | Website, Communications, SMS, Video | 15 years |
| Richfield, | Communications, GovQA, Novus Agenda | 7 years |
| Golden Valley | Peak, Video streaming, Communications Core | 15 years |
| Hopkins | Video streaming | 11 years |
| New Hope | Video streaming | 15 years |
| Crystal | Video streaming | 15 years |
| Rogers | Novus Agenda | 5 years |
| Robbinsdale | Website, and Video streaming | 15 years |
| Osseo | Video streaming | 15 years |
| Orono | Video streaming, looking to also purchase Peak Agenda in May 2023 | 9 years |

STAFF REPORT

Agenda Item: 9c.

| | |
|--|---|
| Council Meeting: July 27, 2023 | Prepared By: Michelle Friedrich |
| Topic: Council Sound System | Action Required: Approval |

Summary

At the June 22, 2023 Council meeting, staff was directed to obtain quotes for a Council sound system.

To continue workflow and respond as necessary should the pandemic re-emerge, or a new emergency arise, this project is consistent with the eligibility requirements to access funding of the America Rescue Plan Act (ARPA). Eligible funds could be accessed for the implementation and setup costs of the Council sound system.

Recommendations

Staff recommends moving forward a Council sound system and utilizing available ARPA funds.

Council Action

1. Authorize staff to proceed with implementing a sound system in Council Chambers utilizing ARPA funds.
2. Decline implementation of a sound system in Council Chambers.

Attachments

1. Z-Systems Quote for Council Sound System



Z Systems, inc

3724 Oregon Ave S
 Saint Louis Park, MN 55426
 Tel. 952.974.3140
 Fax. 952.974.3141
www.zsyst.com

Purchase Agreement

Date: 07/19/23 **Quote #:** ZSYQ2168
P.O. #: **FOB:** Mfr's Dock
Terms: 1% 10 Net 30
Project: Audiovisual System Upgrades Q3 '23
Expiration 8/19/2023 **Rep:** freddieg
Ship To:
 Attn: Michelle Friedrich
 Corcoran, City of
 8200 County Road 116
 Corcoran, MN 55340

Sold To:
Michelle Friedrich
 Corcoran, City of
 8200 County Road 116
 Corcoran, MN 55340

| Item | Qty | Description | Unit Cost | Total |
|----------------------|-----|---|------------|------------|
| | | Equipment | | \$3,798.79 |
| AT-USB-EX100-KIT | 1 | Atlona USB 2.0 Extender Kit over Category Cable, up to 100 meters | \$424.80 | \$424.80 |
| AT-AVA-EX70-KIT | 1 | Atlona Avance 4K/UHD PoE HDMI Transmitter and Receiver Kit | \$384.00 | \$384.00 |
| TA-CVS4 | 4 | TANNOY 4" Coaxial In-Ceiling Loudspeaker for Installation Applications | \$108.36 | \$433.44 |
| LAB-CA1202 | 1 | Lab Gruppen 2 x 120W Commercial Amplifier with Energy Star Certification | \$393.96 | \$393.96 |
| SR-FS-SYSTEM-DC-15 U | 1 | SnapOne "Strong™ FS Series Rack System with DC Fans - 24" Depth 15U" | \$643.08 | \$643.08 |
| AT-RON-442 | 1 | Atlona 4K HDR Two-Output HDMI Distribution Amplifier | \$289.20 | \$289.20 |
| Materials | 1 | Misc Installation Materials and Installation Supplies (lot). | \$1,230.31 | \$1,230.31 |
| | | Labor | | \$7,352.94 |
| Installation | 1 | Installation Labor (lot). - Per Scope Above. | \$7,352.94 | \$7,352.94 |
| | | Service Contract Options | | \$6,997.14 |
| | | <p><i>As mentioned below, Silver level service includes on-site, per-incident support/troubleshooting (but doesn't cover new equipment needed to repair system, or replace non functioning equipment), and the Bronze level includes only remote support. Z Systems will install network-controllable power outlets for some equipment if service contracts are purchased, so that we are able to power cycle equipment remotely, in order to expedite service.</i></p> <p><i>Equipment covered in the service contract would be:</i></p> <ul style="list-style-type: none"> - All new equipment in council chambers video system sold by Z Systems in 2020 - All new equipment in Police training room/EOC system sold by Z Systems in 2020 - New additions to council chambers video system sold by Z Systems in 2023 - Other minor additions to council chambers video system that occurred between 2020 and 2023 - All equipment listed above. | | |
| | 1 | Z Systems Annual Service and Support Contract - Silver Level - Remote and On-Site Support | \$6,997.14 | \$6,997.14 |
| | | Includes email, telephone, remote access, and on-site troubleshooting services and installation of software updates. | | |
| | | Does not include software, software updates, parts, repair costs, hardware warranties, manufacturer support and/or software assurance | | |

| Item | Qty | Description | Unit Cost | Total |
|-----------|-----|--|------------|--------|
| SC-Silver | | contracts. Equipment To Be Covered: See above | | |
| SC-Bronze | 0 | Z Systems Annual Support Contract - Bronze Level - Remote Support Includes email, telephone, and remote access troubleshooting services and installation of software updates when practical. Does not include on-site troubleshooting and diagnosis, software, software updates, parts, repair costs, hardware warranties, manufacturer support and/or software assurance contracts. Equipment To Be Covered: See above | \$2,675.71 | \$0.00 |

Please contact me if I can be of further assistance.

As an authorized representative of the organization listed above, I hereby order and agree to purchase these products and/or services from Z Systems based on the terms and conditions set forth in this agreement and the document 'Z SYSTEMS INC. Terms and Conditions' which can be found at zsyst.com/terms. All pricing quoted is subject to change / management approval at time of order entry/acceptance. Any returns, if accepted by our vendors, will be subject to a 20% restocking fee.

| | |
|------------------|-------------|
| Subtotal | \$18,148.87 |
| Sales Tax | \$0.00 |

SIGNATURE: _____

| | |
|--------------|--------------------|
| Total | \$18,148.87 |
|--------------|--------------------|

STAFF REPORT

Agenda Item: 9d.

| | |
|--|---------------------------------------|
| Council Meeting: July 27, 2023 | Prepared By: Jessica Beise |
| Topic: City Center Drive and 79 th Place Improvements Bid Alternate Discussion | Action Required: Discussion |

Summary

At the July 13, 2023 meeting staff presented the plans and specifications for the City Center Drive and 79th Place Utility and Street Improvement project. Discussion and feedback was provided to staff and authorization to bid the project was provided.

At the July 20th Parks and Trails Commission meeting, there was some discussion of hanging baskets and if a bid alternate could be made to price the hanging baskets on the pole. As there is limited time to make add bid alternates, staff would like to understand if Council would like to pursue a bid alternate for hanging.

Financial/Budget

The City Center Drive and 79th Place Utility and Street Improvements project is funded through a combination of development funds, bonds, and municipal state aid funds. ARPA funds may be utilized for the utility connections.

Options

1. Provide direction on authorizing bid alternates.

Recommendation

1. Provide direction on authorizing bid alternates.

Council Action

Provide direction on authorizing bid alternates.

Attachments

N/A

STAFF REPORT

Agenda Item: 10a.

| | |
|--|--------------------------------------|
| Council Meeting: July 27, 2023 | Prepared By: Jessica Beise |
| Topic: City Administrator Recruitment Process | Action Required: Direction |

Summary

I have tendered my resignation effective July 17, 2023. This was a difficult decision as I have enjoyed my time in Corcoran for the last eight years and all the experiences of working in municipal government setting. The exceptional people and team I have been able to work with each and every day truly will be missed.

As you are aware, the workload on the team is exceptionally high, and the Council should proceed as soon as possible with replacing the position. The Council should discuss the job search process and direct staff on how to proceed. Council should also discuss appointing an interim administrator.

As a comprehensive search has been the preferred process and the current recruitment contract has not yet expired, it is highly recommended to continue working with David Drown and Associates, an executive recruiter, to assist with the recruitment process as staff workload continues to be challenging. The work of an executive recruiter includes meeting with Council and staff to develop the position profile, posting the position and seeking qualified candidates, evaluating candidates, developing an initial recommended list for consideration, assisting in the selection of semi-finalists, assisting in interviewing finalists, and contract assistance with the preferred candidate. Representatives from David Drown and Associates have been contacted and are working to prepare a timeline for the City for the recruitment process.

Financial/Budget

The current contract with David Drown and Associates has not expired, however, some expenses may be required not included as part of the initial contract. It is likely the process may take several months and budget savings from the position not being filled will cover a portion or all of those costs.

Options

1. Direct staff to review next steps with David Drown and Associates to resume the executive recruitment process for City Administrator.
2. Direct staff to proceed in a different manner.

Recommendation

Proceed with existing contract with David Drown and Associates to resume the executive recruitment process for City Administrator.

Council Action

Direct staff on action related to a recruitment process for the position of City Administrator.

Attachments

None

STAFF REPORT

Agenda Item: 10b.

| | |
|---|--------------------------------------|
| Council Meeting: July 27, 2023 | Prepared By: Jessica Beise |
| Topic: Administration Department Reorganization – Job Descriptions Administrative Services Director, Planner, Recreation Supervisor, Program Coordinator | Action Required: Approval |

Summary

On July 14, 2022, Council approved a reorganization of the Administration Department. Staff have been working to refine our staffing plan and have recognized the need to create a more efficient reporting structure. Currently, the Administrative Services Director, Director of Public Safety, Director of Public Works, the Planner, Planning Technician, Recreation Supervisor, Program Coordinator, Contract Planner, and Contract Code Enforcement staff report directly to the City Administrator. Staff is recommending the Planner, Planning Technician, Recreation Supervisor, Program Coordinator, Contract Planner, and Contract Code Enforcement positions report to the Administrative Services Director. With this reorganization the Administrative Services Director job description has been updated to include the additional responsibilities and a regrade from a Grade 16 to Grade 18. This city's other director level positions pay are at a Grade 19.

During staff's reorganization review it was discovered the following job positions were approved by Council on November 22, 2021, but the following job descriptions were omitted:

- Planner
- Recreation Supervisor
- Program Coordinator

Financial/Budget

A wage increase for the Administrative Services Director to recognize the additional responsibilities and grade change. This will be absorbed in the 2023 budget.

Recommendation

Staff recommends approval of Resolution 2023-65 Amending the Organizational Structure of the Administration Department and Approving Job Descriptions.

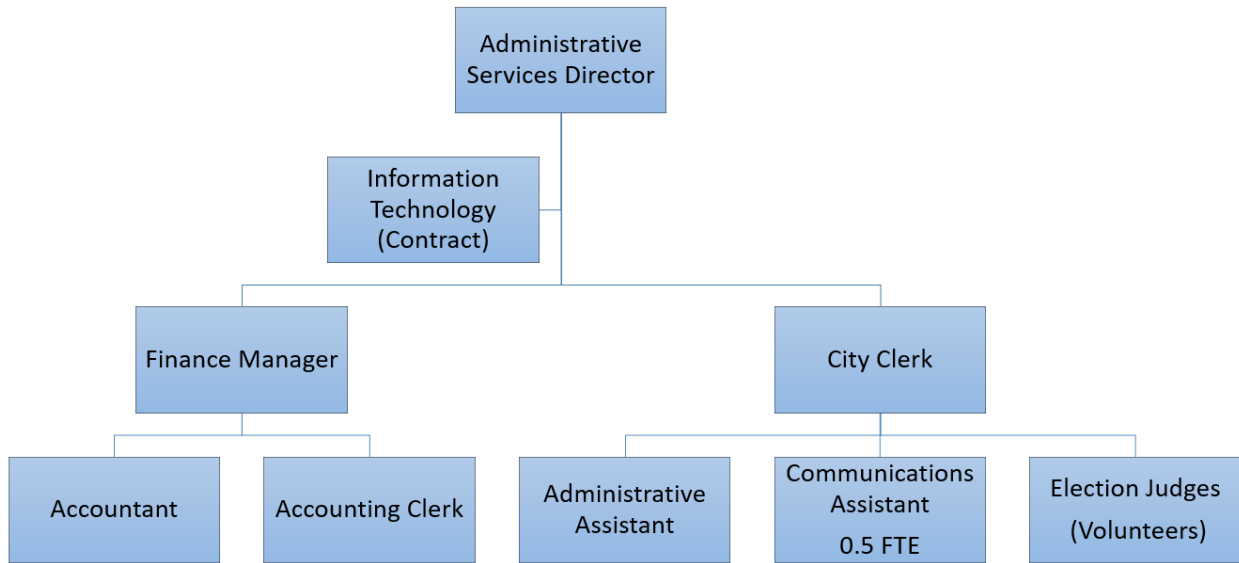
Council Action (Hard copy to be emailed on Tuesday, July 25.)

1. Approve Resolution 2023-65 Amending the Organizational Structure of the Administration Department and Approving Job Descriptions
2. Decline Resolution 2023-65 Amending the Organizational Structure of the Administration Department and Approving Job Descriptions

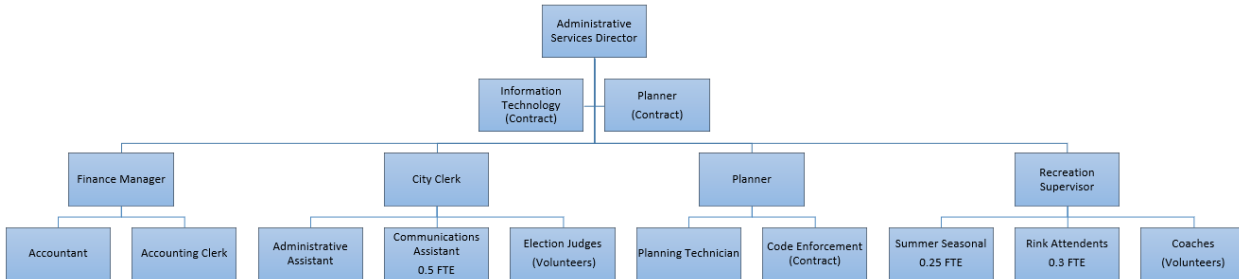
Attachments

1. Administration Department current and proposed organizational chart
2. Administrative Services Director job description – clean and red-lined
3. Planner job description – clean and red-lined
4. Recreation Supervisor job description – clean and red-lined
5. Program Coordinator job description – clean and red-lined
6. Resolution 2023-65 Amending the Organizational Structure of the Administration Department and Approving Job Descriptions **(Hard copy to be emailed on Tuesday, July 25.)**

Current Administration Department



Proposed Administration Department



ADMINISTRATIVE SERVICES DIRECTOR

City of Corcoran

| | |
|------------------------|------------------------------|
| Department | Administration |
| Reports To | City Administrator |
| Points | 525 |
| Grade | 18 |
| FLSA | Exempt |
| Bargaining Unit | Confidential Employee |
| Revision Date | July 2023 |

Description

The Administrative Services Director is the department head for the Administration Department and is responsible to coordinate and execute administrative duties of the city. The Administrative Services Director performs complex professional work planning, organizing, and directing activities of finance, payroll, accounting, information technology, human resources, City Council operations, elections, data practices, communications, city administration, and related work as apparent or assigned. Supervision of the Finance Manager, City Clerk, Planner, contract planner, Recreation Supervisor, contract information technology staff, and departmental supervision exercised over all personnel within the department. The Administrative Services Director works in partnership with the City Administrator to develop organizational policies, processes, and systems and to assist in carrying out city objectives.

Essential Duties and Responsibilities

- Serve on the leadership team for the City of Corcoran.
 - Demonstrate by example the service excellence and integrity expected from all city staff.
 - Develop respectful and cooperative work relationships with co-workers, the public and outside contacts /constituencies in a manner that helps establish, maintain, and enhance Corcoran’s reputation as a well-managed city.
- Serve as Acting City Administrator in the absence of the City Administrator.
- Supervise Finance Manager, City Clerk, Planner, Recreation Supervisor, and collateral staff.
 - Coordinate and supervise the Finance Manager City Clerk, Planner, Recreation Supervisor, and their activities.
 - Perform a variety of supervisory tasks including interviewing candidates, recommending person(s) to be hired, determines work assignments, scheduling, conducts performance appraisals and disciplinary matters.
 - Establish a team environment that encourages open communication and empowers staff to take ownership in position and organization in a manner that supports the vision and direction of the City and enhances employee satisfaction.
 - Oversee contract information technology services. Prepare and manage the Administration Department budget.
- Serve as the Human Resource Director
 - Oversee all aspects of human resource management including job postings, establish hiring criteria, interviewing, administer scoring exams, prepare eligibility lists, personnel related compliance programs (EEO/AA, FLSA, ADA, Veteran’s Preference, FMLA etc.) employee benefits program coordination, drug and alcohol testing, and other human resource programs.

ADMINISTRATIVE SERVICES DIRECTOR

- Oversee risk management functions, including safety and Workers' Compensation, ensure appropriate processing of claims, correcting of violations, and return to work process.
 - Coordinate with departments to administer the City's performance evaluation programs and human resource records retention program.
 - Assist the City Administrator in the administration and development of city policies, recruitment, and selection of employees.
 - Ensures compliance with all applicable local, state, and federal laws affecting human resources.
 - Advise supervisors on disciplinary matters and counseling employees; advise on policies and procedures; answer questions, mediate disputes, investigate complaints.
 - Participates in labor negotiations by preparing impact analysis and recommends the City position on contract matters.
 - Oversee the employee recognition program.
 - Coordinate employee training opportunities.
 - Coordinates the City's Safety Committee.
 - Work with the Leadership Team to implement organization wide culture initiatives.
- Coordinate key City contracts including information technology and recycling.
 - Serve as the liaison for the Charter Commission. Coordinate meetings, prepare correspondence and staff the Charter Commission meetings.
 - Implement the City's Communication strategies. Work with the City Administrator and City Clerk to compose and execute a communication strategy and guides the creation of City's digital and non-digital communication.
 - Perform other duties and activities as assigned.

Minimum Qualifications

Bachelor's degree in business, accounting, public administration, or closely related field; five or more progressively responsible years of related experience, or equivalent.

Valid driver's license.

Desired Qualifications

Two years of experience as a City Clerk or Finance Manager; two years of experience working for a municipal government, a master's degree in business, accounting, public administration or closely related field, certification by the Minnesota Clerks and Finance Officers Association as a Minnesota Certified Municipal Clerk, experience managing or assisting with the management of federal, state, and local elections, experience supervising full-time employees.

Knowledge, Skills, and Abilities Required for Successful Job Performance

- Customer service skills including demonstrated ability to build positive relationships with employees and managers.

ADMINISTRATIVE SERVICES DIRECTOR

- Knowledge of the functions and responsibilities of city departments, staff, and key community members.
- Knowledge of public information laws, rules, and regulations applicable to city government.
- Knowledge of and ability to operate accounting software and standard office software, including strong Excel skills sufficient to manipulate data, draft reports and maintain records.
- Ability to analyze and resolve problems.
- Ability to perform research, assemble information, and prepare reports and studies.
- Ability to exercise initiative, discretion, and independence of judgment.
- Ability to work effectively under pressure and to competently handle numerous diverse tasks in a single time-period.
- Ability to plan and perform duties with minimal supervision.
- The ability to work independently and to prioritize work requests; ability to plan coordinate and prioritize workload to meet project deadlines.
- Verbal and high-level written communication skills sufficient to effectively present information and respond to questions from a wide variety of audiences, and reading comprehension skills sufficient to read, understand and interpret complex and varied work-related materials.
- Knowledge of data privacy laws and ability to maintain highest confidentiality when dealing with sensitive or private information.
- Promote and adhere to the City of Corcoran workplace values of accountability, teamwork, and commitment to the city's goals and measures.

Physical and Mental Requirements

Physical effort is light, with lifting or carrying up to 25 pounds intermittently. Report preparation and word processing will at times require extended use of a keyboard. Work interruptions are frequent. The Administrative Services Director must be able to use judgment to respond to situations occurring during the absence of the Administrator. Travel within the City or region to attend meetings is likely. There is occasional exposure to field or construction site conditions when visiting or meeting at properties within the City.

Working Conditions

Work is performed in a normal office environment. Attendance at evening meetings is required. The Administrative Services Director may be the person to whom a complaint is delivered by a citizen or referred by an employee and work may involve dealing with and calming individuals who are emotionally charged over an issue.

Some requirements in this job description may exclude individuals who pose a direct threat or significant risk to the health and safety of themselves or other employees. All requirements are subject to modification to reasonably accommodate individuals with disabilities.

Requirements are representative of minimum levels of knowledge, skills, and experience required. To perform this job successfully, the worker must possess the abilities and aptitudes to perform each duty proficiently.

This document does not create an employment contract, implied or otherwise, other than an "at will" employment relationship. The City Administrator retains the discretion to add duties or change the duties of this position at any time.

ADMINISTRATIVE SERVICES DIRECTOR

City of Corcoran

| | |
|------------------------|------------------------------|
| Department | Administration |
| Reports To | City Administrator |
| Points | 525 |
| Grade | 18 |
| FLSA | Exempt |
| Bargaining Unit | Confidential Employee |
| Revision Date | July 2023 |

Description

The Administrative Services Director is the department head for the Administration Department and is responsible to coordinate and execute administrative duties of the city. The Administrative Services Director is also **performs complex professional work planning, organizing, and directing activities of responsible for the areas of finance, payroll, accounting, information technology, human resources, City Council operations, elections, data practices, communications, city administration, and other functions as assigned related work as apparent or assigned. Supervision of the Finance Manager, City Clerk, Planner, contract planner, Recreation Supervisor, and contract information technology staff, and departmental supervision exercised over all personnel within the department. The Administrative Services Director works in partnership with the City Administrator to develop organizational policies, processes, and systems and to assist in carrying out city objectives.**

Scope of Impact:

~~The Administrative Services Director is responsible for the operations of the administration department which includes supervision of the Finance Manager and City Clerk and contract information technology services. The position oversees the functions of human resource management, including recruitment and file management.~~

Essential Duties and Responsibilities

- Serve on the leadership team for the City of Corcoran.
 - Demonstrate by example the service excellence and integrity expected from all city staff;
 - Develop respectful and cooperative work relationships with co-workers, the public and outside contacts /constituencies in a manner that helps establish, maintain, and enhance Corcoran's reputation as a well-managed city.
- Serve as Acting City Administrator in the absence of the City Administrator.
- ~~Supervise the City Clerk and Finance Divisions~~ **Supervise the Finance Manager, City Clerk, Planner, Recreation Supervisor, and collateral staff.**
 - Coordinate and supervise the Finance Manager City Clerk, Planner, Recreation Supervisor, and their activities.
 - Perform a variety of supervisory tasks including interviewing candidates, recommending person(s) to be hired, determines work assignments, scheduling, conducts performance appraisals and disciplinary matters.
 - Establishes a team environment that encourages open communication and empowers staff to take ownership in position and organization in a manner that supports the vision and direction of the City and enhances employee satisfaction.

ADMINISTRATIVE SERVICES DIRECTOR

- Oversees contract information technology services. Prepares and manages the Administration Department budget.
- Serve as the Human Resource Director
 - Oversee all aspects of human resource management including **job postings, establish hiring criteria, interviewing, administer scoring exams, prepare eligibility lists, workers compensation and personnel related compliance programs (EEO/AA, FLSA, ADA, Veteran's Preference, FMLA coordination etc.)** employee benefits program coordination, drug and alcohol testing, and other human resource programs
 - **Oversee risk management functions, including safety and Workers' Compensation, ensure appropriate processing of claims, correcting of violations, and return to work process.**
 - Coordinate with departments to administer the City's performance evaluation programs and human resource records retention program.
 - Assist the City Administrator in **the administration and development of personnel city policies, development** recruitment, and selection of employees.
 - Ensures compliance with all applicable local, state, and federal laws affecting human resources;
 - **Advise supervisors on disciplinary matters and counseling employees; advise on policies and procedures; answer questions, mediate disputes, investigate complaints.**
 - Participates in labor negotiations by preparing impact analysis and recommends the City position on contract matters.
 - Oversee the employee recognition program.
 - **Coordinate employee training opportunities.**
 - Coordinates the City's Safety Committee.
 - Work with the Leadership Team to implement organization wide culture initiatives.
- Coordinate key City contracts including information technology and recycling.
- Serve as the liaison for the Charter Commission. Coordinates meetings, prepares correspondence and staffs the Charter Commission meetings.
- Implement the City's Communication strategies. Work with the City Administrator and City Clerk to compose and execute a communication strategy and guides the creation of City's digital and non-digital communication.
- Perform other duties and activities as assigned.

Minimum Qualifications

Bachelor's degree in business, accounting, public administration or closely related field; ~~four~~ **five** or more progressively responsible years of related experience, or equivalent.

Valid driver's license.

Desired Qualifications

Two years of experience as a City Clerk or Finance Manager; two years of experience working for a municipal government, a master's degree in business, accounting, public administration or closely

ADMINISTRATIVE SERVICES DIRECTOR

related field, certification by the Minnesota Clerks and Finance Officers Association as a Minnesota Certified Municipal Clerk, experience managing or assisting with the management of federal, state, and local elections, experience supervising full-time employees.

Knowledge, Skills, and Abilities Required for Successful Job Performance

- Customer service skills including demonstrated ability to build positive relationships with employees and managers.
- Knowledge of the functions and responsibilities of city departments, staff, and key community members.
- Knowledge of public information laws, rules, and regulations applicable to city government.
- Knowledge of and ability to operate accounting software and standard office software, including strong Excel skills sufficient to manipulate data, draft reports and maintain records.
- Ability to analyze and resolve problems.
- Ability to perform research, assemble information, and prepare reports and studies.
- Ability to exercise initiative, discretion, and independence of judgment.
- Ability to work effectively under pressure and to competently handle numerous diverse tasks in a single time-period.
- Ability to plan and perform duties with minimal supervision.
- The ability to work independently and to prioritize work requests; ability to plan coordinate and prioritize workload to meet project deadlines.
- Verbal and high-level written communication skills sufficient to effectively present information and respond to questions from a wide variety of audiences, and reading comprehension skills sufficient to read, understand and interpret complex and varied work-related materials.
- Knowledge of data privacy laws and ability to maintain highest confidentiality when dealing with sensitive or private information.
- Promote and adhere to the City of Corcoran workplace values of accountability, teamwork, and commitment to the city's goals and measures.

Physical and Mental Requirements

Physical effort is light, with lifting or carrying up to 25 pounds intermittently. Report preparation and word processing will at times require extended use of a keyboard. Work interruptions are frequent. The Administrative Services Director must be able to use judgment to respond to situations occurring during the absence of the Administrator. **Travel within the City or region to attend meetings is likely. There is occasional exposure to field or construction site conditions when visiting or meeting at properties within the City.**

Working Conditions

Work is performed in a normal office environment. Attendance at evening meetings is required. ~~Work may involve dealing with and calming individuals who are emotionally charged over an issue.~~ **The Administrative Services Director may be the person to whom a complaint is delivered by a citizen or referred by an employee and work may involve dealing with and calming individuals who are emotionally charged over an issue.**

ADMINISTRATIVE SERVICES DIRECTOR

Some requirements in this job description may exclude individuals who pose a direct threat or significant risk to the health and safety of themselves or other employees. All requirements are subject to modification to reasonably accommodate individuals with disabilities.

Requirements are representative of minimum levels of knowledge, skills, and experience required. To perform this job successfully, the worker must possess the abilities and aptitudes to perform each duty proficiently.

This document does not create an employment contract, implied or otherwise, other than an "at will" employment relationship. The City Administrator retains the discretion to add duties or change the duties of this position at any time.

PLANNER

City of Corcoran

| | |
|-------------------------|---|
| Department: | Administration |
| Reports To: | Administrative Services Director |
| Points: | 311 |
| Grade: | 11 |
| FLSA: | Non-Exempt |
| Bargaining Unit: | NA |
| Revision Date: | July 2023 |

Description

The Planner serves as a primary point of contact for citizens with questions about city codes, planning applications, and planning processes. The Planner implements the City's Comprehensive Plan and Zoning Ordinance by coordinating and monitoring development projects to ensure all applicable City official adopted plans, studies, policies, and ordinances and permits applications are complied with. The Planner coordinates the City's code enforcement efforts. The Planner works under the supervision of the Administrative Services Director and is expected to perform assigned duties without a need for significant work direction on daily tasks. The Planner is the City Liaison to the Planning Commission which will require occasional evening work hours. The position is responsible for supervising the planning technician position and providing work direction as needed to the contract code enforcement position.

Essential Duties and Responsibilities

- Community Development/Zoning Administration (Land Use and Planning)
 - Process land use applications, including receiving, setting up project files, distribution, public hearing notices, developing or producing city checklists and reports per city, county, state, and federal requirements.
 - Prepare planning reports and supporting data, including recommendations.
 - Prepare and update planning policies and programs (i.e., comprehensive plans, zoning, sign and subdivision ordinances).
 - Present items as required to the Planning Commission, Parks and Trails Commission, and City Council.
 - Assist in the development of the City's Comprehensive Plan.
 - Maintain land use and planning files.
 - Explain zoning ordinance and city code requirements to residents, property owners, businesses, and interested citizens; develops and maintains handouts explaining policies and procedures.
 - Prepare and administer grants by identifying sources, completing applications, and following grant requirements.
 - Issue Administrative permits, complete inspections, reports, presentations, and special projects as needed, conferring with Contract City Planner and Engineer as needed.
 - Administer the Home Occupation Program and Rental Program.
 - Coordinate and facilitate community neighborhood meetings.
 - Create and maintain City maps using the City's GIS software.

- Act as liaison to the Planning Commission
 - Attend the monthly meetings.
 - Research and compile information on project questions or concerns.

- Manage the Code Enforcement contract ensuring that code enforcement activities continue.
 - Coordinate complaints and work with residents, property owners, businesses, and interested citizens to find solutions and options to resolving compliance problems within the city code.
 - Coordinate with City employees and contract services to resolve zoning and code violations.
 - Assist with court proceedings to resolve zoning ordinance and city code violations as required and prepare citation and background information as needed.
 - Prepare and make public presentations to report on activities, community issues, and related projects when called upon.

- Perform other duties and activities as assigned.

Minimum Qualifications

Bachelor's degree with coursework in housing, urban studies, public affairs/administration, planning or related field or equivalent combination of education and experience.

Valid driver's license.

Desired Qualifications

Experience in municipal planning and knowledge of governmental practices and policies, including working with boards and commissions.

Knowledge, Skills, and Abilities Required for Successful Job Performance

- Ability to analyze and resolve problems.
- Customer service skills including demonstrated ability to build positive relationships and work well with employees, contractors, and the public.
- Strong interpersonal and communication skills in dealing with difficult situations and people.
- Ability to quickly learn, understand, interpret, and apply City codes and zoning ordinances as well as all applicable federal and state laws.
- Knowledge of the functions and responsibilities of City Departments, staff, and key community members.
- Ability to perform in a professional and courteous manner in responding to requests from the public and other staff members.
- Ability to maintain a positive attitude toward work, the public, and coworkers.
- Knowledge of and ability to operate standard office software sufficient to manipulate data, draft reports and maintain records.
- Verbal and high-level written communication skills sufficient to effectively present information and respond to questions from a wide variety of audiences, and reading comprehension skills sufficient to read, understand and interpret complex and varied work-related materials.
- Ability to understand and carry out verbal and/or written instructions efficiently and effectively.

PLANNER

- Problem-solving skills to gather relevant information to solve practical problems and address citizen inquiries and concerns.
- Demonstrates the desired standard of conduct and work performance including confidentiality and privacy requirements of City employees.
- Ability to work independently, manage time, prioritize work, and meet project deadlines without constant supervision.
- Ability to work with neighboring municipalities and outside professional organizations to continue to learn and bring efficiencies within our organization.
- Ability to perform research, assemble information, and prepare reports and studies.
- Promote and adhere to the City of Corcoran workplace values of accountability, teamwork, and commitment to the City's goals and measures.

Physical and Mental Requirements

Physical effort is light, with lifting or carrying up to 25 pounds intermittently. Report preparation and word processing will at times require extended use of a keyboard. Work interruptions are frequent.

Working Conditions

Work is performed in a normal office environment. May be the first person to whom a complaint is delivered by a citizen and may involve dealing with and calming individuals who are emotionally charged over an issue. Work includes driving within the City of Corcoran to observe conditions that require attention and visiting sites related to applications or complaints.

Some requirements in this job description may exclude individuals who pose a direct threat or significant risk to the health and safety of themselves or other employees. All requirements are subject to modification to reasonably accommodate individuals with disabilities.

Requirements are representative of minimum levels of knowledge, skills, and experience required. To perform this job successfully, the worker must possess the abilities and aptitudes to perform each duty proficiently.

This document does not create an employment contract, implied or otherwise, other than an "at will" employment relationship. The City Administrator retains the discretion to add duties or change the duties of this position at any time.

PLANNER

City of Corcoran

| | |
|-------------------------|--|
| Department: | Administration |
| Reports To: | City Administrator Administrative Services Director |
| Points: | 311 |
| Grade: | 11 |
| FLSA: | Non-Exempt |
| Bargaining Unit: | NA |
| Revision Date: | March 2020 July 2023 |

Job Summary: Description

The Planner serves as a primary point of contact for citizens with questions about city codes, planning applications, and planning processes. The Planner implements the City's Comprehensive Plan and Zoning Ordinance by coordinating and monitoring development projects to ensure all applicable City official adopted plans, studies, policies, ordinances, and permit applications are complied with. The Planner coordinates the City's code enforcement efforts. The Planner works under the supervision of the ~~City Administrator~~ Administrative Services Director and is expected to perform assigned duties without a need for significant work direction on daily tasks. The Planner is the City Liaison to the Planning Commission which will require occasional evening work hours. ~~Supervisory responsibility~~ The position includes ~~oversight of the part-time planning administrative assistant position as well as providing work direction for contract code enforcement~~ is responsible for supervising the planning technician position and providing work direction as needed to the contract code enforcement position.

Scope of Impact:

~~The Planner works under the supervision of the City Administrator and is expected to perform assigned duties without a need for significant work direction on daily tasks. The Planner is the City Liaison to the Planning Commission which will require some nighttime work hours. Supervisory responsibility includes oversight of the part-time planning administrative assistant position as well as providing work direction for contract code enforcement.~~

Essential Duties and Responsibilities Community Development/Zoning Administration (Land Use and Planning)

- Process land use applications, including receiving, setting up project files, distribution, public hearing notices, developing or producing city checklists and reports per city, county, state, and federal requirements.
- Prepare planning reports and supporting data, including recommendations.
- Prepare and update planning policies and programs (i.e., comprehensive plans, zoning, sign and subdivision ordinances).
- Present items as required to the Planning Commission, Parks and Trails Commission, and City Council.
- Assist in the development of the City's Comprehensive Plan.
- Maintain land use and planning files.
- Explain zoning ordinance and city code requirements to residents, property owners, businesses, and interested citizens; develops and maintains handouts explaining policies and procedures.
- Prepare and administer grants by identifying sources, completing applications, and following grant requirements. Issue Administrative permits, complete inspections, reports, presentations, and special projects as needed, conferring with Contract City Planner and Engineer as needed.

PLANNER

-
- Work with the City Finance Department to develop a clear, comprehensive, and accurate annual operating budget.
- Administer the Home Occupation Program. and Rental Program.Coordinate and facilitate community neighborhood meetings.

Act as liaison to the Planning Commission

- Attend the monthly meetings.
- Research and compile information on project questions or concerns.

- Manage the Code Enforcement contract ensuring that Code Enforcement activities continue.
 - Coordinate complaints and works with residents, property owners, businesses, and interested citizens to find solutions and options to resolving compliance problems within the city code,
 - Coordinate with City employees and contract services to resolve zoning and code violations.
 - Assist with court proceedings to resolve zoning ordinance and city code violations as required, and prepare citation and background information as needed.
- Prepare and make public presentations to report on activities, community issues, and related projects when called upon.
- Create and maintain City maps using the City's GIS software.

Performs other duties and activities as assigned.

Minimum Qualifications

Bachelor's degree with coursework in housing, urban studies, public affairs/administration, planning or related field or equivalent combination of education and experience.

Valid driver's license.

Desired Qualifications

Desired qualifications include Experience in municipal planning and knowledge of governmental practices and policies, including working with boards and commissions.

Knowledge, Skills, and Abilities Required for Successful Job Performance:

- Ability to analyze and resolve problems.
-
- Customer service skills including demonstrated ability to build positive relationships and work well with employees, contractors, and the public.
- Strong interpersonal and communication skills in dealing with difficult situations and people.
- Ability to quickly learn, understand, interpret, and apply City codes and zoning ordinances as well as all applicable federal and state laws.
- Knowledge of the functions and responsibilities of City Departments, staff, and key community members.

PLANNER

- Ability to perform in a professional and courteous manner in responding to requests from the public and other staff members.
- Ability to maintain a positive attitude toward work, the public, and coworkers.
- Knowledge of and ability to operate standard office software sufficient to manipulate data, draft reports and maintain records.
- The ability to work independently **manage time, prioritize work, and meet project deadlines without constant supervision.**
- Verbal and high-level written communication skills sufficient to effectively present information and respond to questions from a wide variety of audiences, and reading comprehension skills sufficient to read, understand and interpret complex and varied work-related materials.
- —
- Ability to understand and carry out verbal and/or written instructions efficiently and effectively.
- **Problem-solving skills to gather relevant information to solve practical problems and address citizen inquiries and concerns.**
- **Demonstrates the desired standard of conduct and work performance including confidentiality and privacy requirements of City employees.**
- **Ability to work independently,**
- **Ability to work with neighboring municipalities and outside professional organizations to continue to learn and bring efficiencies within our organization.**
- **Ability to perform research, assemble information, and prepare reports and studies.**
- **Ability to exercise initiative, discretion, and independence of judgment.**
- **Ability to work effectively under pressure and to competently handle numerous diverse tasks in a single time-period.**
- **Promote and adhere to the City of Corcoran workplace values of accountability, teamwork, and commitment to the City's goals and measures.**

Physical and Mental Requirements

Physical effort is light, with lifting or carrying up to 25 pounds intermittently. Report preparation and word processing will at times require extended use of a keyboard. Work interruptions are frequent.

Working Conditions

Work is performed in a normal office environment. May be the first person to whom a complaint is delivered by a citizen and may involve dealing with and calming individuals who are emotionally charged over an issue. Work includes driving within the City of Corcoran to observe conditions that require attention and visiting sites related to applications or complaints.

Some requirements in this job description may exclude individuals who pose a direct threat or significant risk to the health and safety of themselves or other employees. All requirements are subject to modification to reasonably accommodate individuals with disabilities.

Requirements are representative of minimum levels of knowledge, skills, and experience required. To perform this job successfully, the worker must possess the abilities and aptitudes to perform each duty proficiently.

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RECREATION SUPERVISOR

City of
Corcoran

| | |
|-----------------|----------------------------------|
| Department | Administration |
| Reports To | Administrative Services Director |
| Points | 274 |
| Grade | 10 |
| FLSA | Non-Exempt |
| Bargaining Unit | N/A |
| Revision Date | July 2023 |

Description

The Recreation Supervisor is responsible for coordinating and supervising recreation, community activities, and assisting in parks and trails planning for the City of Corcoran. They are responsible for planning and overseeing a variety of youth and adult recreation programs and community events. This includes registration, scheduling, supervising seasonal employees and volunteers and overall coordination. The Recreation Supervisor serves as the liaison to the Parks and Trails Commission. They will assist in the design and development of the park system.

Essential Duties and Responsibilities

- Develop, implement, supervise, and evaluate recreation programs, activities, and services that meet the needs of the public meeting long and short-term goals of the city.
 - Obtain and organize inventory and supplies for recreation programs.
 - Work with outside vendors for apparel, equipment, photography, and registration needs.
 - Monitor and maintain registration software, refund requests, and late registrations.
 - Collaborate and coordinate with city departments to ensure park and recreation needs and activities are accomplished.
 - Assist in the coordination of community events such as Country Daze and Night to Unite.
 - Conduct research to identify, evaluate, and make recommendations on current recreation programs that are of value and interest to the community or a modification of an existing program.
 - Assist the public with general information via phone calls, email, and in person.
- Create, monitor, and review recreation programming and facility rental budgets.
 - Work with the City Finance Department to develop a clear, comprehensive, and accurate annual operating budget, which defines the city's Parks and Recreation Division current and future needs, general operation, and recreation programming.
 - Analyze and adjust annual budget to ensure cost-effectiveness and maximize available resources.
 - Plan, oversee, assist, and implement revenue generation opportunities from sources other than tax levies through user fees, matching grants, corporate and civic sponsorships, and rentals.
 - Evaluate adequacy of park rental prices on the City's fee schedule on an on-going basis.
 - Prepare and administer grants by identifying sources, completing applications, and following grant requirements.

RECREATION SUPERVISOR

- Supervise staff and volunteers in the Parks and Recreation Division.
 - Assist Human Resource drafting job descriptions, hiring announcements, and interviewing applicants for seasonal recreation and volunteer positions.
 - Conduct staff training, and supervise seasonal employees to include, the Program Coordinator, Ice Rink Attendants, referees, and volunteer positions.
 - Oversee the scheduling and tasking of duties of the Program Coordinator, Ice Rink Attendants, referees, and volunteers to successfully accomplish goals associated with each position.
 - Adjust schedule to backfill recreation employees shifts, as needed.

- Serve as the staff liaison to the Parks and Trails Commission.
 - Draft and assemble proposals, reports, memos, and agenda packet documents.
 - Attend and draft minutes from the public meetings.
 - Research and compile information on project questions or concerns.
 - Coordinates the creation and retention of agenda packets and minutes in accordance with the State Records Retention Schedule.
 - Update the Commission during meetings on department projects and updates.

- Monitor trends to identify and propose parks and trails related ideas that meet community needs.
 - Assist in evaluating parks and trails, and facility, design proposals.
 - Identify, organize, and engage resident groups and outside agencies. Coordinate input, arrange and facilitate public meetings, prepare, and present information, and identify community needs by collecting and compiling data from a variety of sources.
 - Assist with analyzing accessibility of facilities and make access improvement recommendations.
 - Gather technical information to assist in developing request for proposals for park projects.
 - Act as a point of contact on assigned proposals.
 - Oversee park facilities policies and reservations in cooperation with the Public Works staff. Supervise public use of park facilities in cooperation with Public Works staff to ensure pavilion, athletic fields, and courts are in a safe, usable condition.
 - Notify the public and in-house users of any field closures.
 - Maintain park signage to include proper posting, policies and regulations pertaining to parks, facilities, and field usage that enhance user safety and enjoyment.
 - Monitor and maintain facility rental agreements and refunds/damage deposit returns.
 - Maintain control of Field and Pavilion Reservation Agreements in accordance with the State Records Retention Schedule.

- Performs other duties and activities as assigned.

Minimum Qualifications

- Bachelor's degree in Recreation, Parks and Leisure Service, or related field.
- Two years of experience in Park and Recreation to include supervisory experience, or equivalent experience.
- 1-2 years of experience coordinating youth and adult sports programs and events.
- Ability to work a flexible schedule including evenings and weekends.
- Must obtain and maintain first aid and CPR certifications.

RECREATION SUPERVISOR

Desired Qualifications

- 4 years of experience coordinating youth and adult sports programs and events.

Knowledge, Skills, and Abilities Required for Successful Job Performance

- Customer service skills including demonstrated ability to build positive relationships and work well with employees, contractors, and the public.
- Ability to understand and carry out verbal and/or written instructions efficiently and effectively.
- Knowledge of and ability to operate standard office software sufficient to manipulate data, draft reports and maintain records.
- Problem-solving skills to gather relevant information to solve practical problems and address citizen inquiries and concerns.
- Verbal and high-level written communication skills sufficient to effectively present information and respond to questions from a wide variety of audiences, and reading comprehension skills sufficient to read, understand and interpret complex and varied work-related materials.
- Demonstrates the desired standard of conduct and work performance including confidentiality and privacy requirements of city employees.
- Ability to analyze and resolve problems.
- Ability to work independently, manage time, prioritize work, and meet project deadlines without constant supervision.
- Ability to work with neighboring municipalities and outside professional organizations to continue to learn and bring efficiencies within our organization.
- Ability to perform research, assemble information, and prepare reports and studies.
- Ability to exercise initiative, discretion, and independence of judgment.
- Ability to work effectively under pressure and to competently handle numerous diverse tasks in a single time-period.
- Promote and adhere to the City of Corcoran workplace values of accountability, teamwork, and commitment to the city's goals and measures.

Physical and Mental Requirements

Physical effort is medium, with lifting or carrying up to 50 pounds intermittently. Frequent walking, standing, reaching, sitting, and bending.

Working Conditions

Work is performed both inside and outside an office environment. Working conditions can be dependent on weather forecasts and may include occasional inclement weather including heat, humidity, cold, rain, and wind. There is exposure to a variety of weather conditions, dirt, grease, noise, biting insects and unpleasant odors. Some work requires wearing safety apparel. May work varied hours, including evenings and weekends, to attend events, observe or participate in program coordination, and respond to user needs.

RECREATION SUPERVISOR

Some requirements in this job description may exclude individuals who pose a direct threat or significant risk to the health and safety of themselves or other employees. All requirements are subject to modification to reasonably accommodate individuals with disabilities.

Requirements are representative of minimum levels of knowledge, skills, and experience required. To perform this job successfully, the worker must possess the abilities and aptitudes to perform each duty proficiently.

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RECREATION SUPERVISOR

City of Corcoran

| | |
|-----------------|---|
| Department | Parks and Recreation Administration |
| Reports To | City Administrator Administrative Services Director |
| Points | 274 |
| Grade | 10 |
| FLSA | Non-Exempt |
| Bargaining Unit | N/A |
| Revision Date | October 2021 July 2023 |

~~Job Summary:~~ **Description**

The Recreation Supervisor is responsible for coordinating and supervising recreation, community activities, and assisting in parks and trails planning for the City of Corcoran. **They are responsible for planning and overseeing a variety of youth and adult recreation programs and community events. This includes registration, scheduling, supervising seasonal employees and volunteers and overall coordination. The Recreation Supervisor serves as the liaison to the Parks and Trails Commission. They will assist in the design and development of the park system.**

Scope of Impact:

~~The Recreation Supervisor is responsible for planning and overseeing a variety of youth and adult programs and community events. This includes registration, scheduling, staff supervision, and overall coordination. The Recreation Supervisor serves as the liaison to the Parks and Trails Commission and assists in the design and development of the park system.~~

Essential Duties and Responsibilities

- ~~Plans, designs, initiates,~~ **Develop, implement,** supervise, and evaluate recreation programs, activities, and services ~~that provide high quality leisure opportunities for all segments of Corcoran's population. that meet the needs of the public meeting long and short-term goals of the city.~~
 - ~~Assist in obtaining and organizing~~ **Obtain and organize** inventory and supplies **for recreation programs.**
 - ~~Oversees vendor relations~~ **Work with outside vendors** for apparel, equipment, photography, and registration needs.
 - Monitor and maintain registration software, refund requests, and late registrations.
 - **Collaborate and coordinate with city departments to ensure park and recreation needs and activities are accomplished.**
 - ~~Serves as the liaison~~ **Assist in the coordination** ~~for~~ of community events such as Country Daze and Night to Unite.
 - Conduct research to identify, **evaluate, and make recommendations on current recreation programs that are** of value and interest to the community **or a modification of an existing program.** ~~evaluates program effectiveness and viability; makes recommendations on new programs or modifications of existing programs to meet community needs.~~
 - **Assist the public with general information via phone calls, email, and in person.**
- Create, monitor, and review recreation programming and facility rental budgets.

RECREATION SUPERVISOR

- **Work with the City Finance Department to develop** a clear, comprehensive, and accurate annual operating budget, which defines the city's ~~Parks and~~ Parks and Recreation **Division** current and future needs, general operation, and **recreation** programming.
- Analyze and adjust annual budget to ensure cost-effectiveness and maximize available resources.
- Plan, oversee, assist, and implement revenue generation opportunities from sources other than tax levies through user fees, matching grants, corporate and civic sponsorships, and rentals.
- Evaluate adequacy of park rental prices on the City's fee schedule on an on-going basis.
- Prepare and administer grants by identifying sources, completing applications, and following grant requirements.
- Supervise staff and volunteers in the Parks and Recreation **Division** ~~as well as Ice Rink Attendants.~~
 - ~~Prepares and coordinates the posting of~~ **Assist Human Resource drafting** job descriptions and hiring announcements, **and interviewing applicants** on various platforms for seasonal **recreation** and volunteer positions.
 - ~~Supervises the hiring process including interviewing,~~ **Conduct staff** training, ~~and onboarding of~~ **and supervise seasonal employees to include,** the Program Coordinator, Ice Rink Attendants, referees, and volunteer positions.
 - ~~Processes background checks for potential employees as requested by department heads or City Administrator; communicates results to the appropriate individuals upon completion;~~
 - Oversee the scheduling **and tasking of duties** of the Program Coordinator, Ice Rink Attendants, referees, and volunteers ~~and assists with direction of tasks and functions~~ to successfully accomplish goals associated with each position.
 - **Adjust schedule to backfill recreation employees shifts, as needed.**
- Serve as the staff liaison to the Parks and Trails Commission.
 - Draft and assemble proposals, reports, memos, and agenda packet documents.
 - Attend and draft minutes from the public meetings.
 - Research and compile information on project questions or concerns.
 - Coordinates the creation and retention of agenda packets and minutes in accordance with the State Records Retention Schedule.
 - Update the Commission during meetings on department projects and updates.
- Monitor trends ~~and needs of the city~~ to identify and ~~coordinate~~ **propose parks and trails related ideas** that meet community ~~demands~~ **needs**.
 - **Assist in evaluating** parks **and trails**, and facility, design proposals.
 - Identify, organize, and engage resident groups **and outside agencies**. Coordinate input, arrange and facilitate public meetings, prepare and present information, and identify community needs by collecting and compiling data from a variety of sources.
 - **Assist with analyzing** accessibility of facilities and **make access improvement recommendations.** ~~updates to improve access;~~
 - Gather technical information to **assist in developing** request for proposals for park projects.

RECREATION SUPERVISOR

- Act as the central a point of contact on assigned proposals.
- ~~Prepares and maintains a variety of reports, correspondence, and documentation to ensure quality programs and services.~~
 - ~~Provides information and responds to questions and feedback from the public;~~
 - ~~Communicates regularly with neighboring jurisdictions to monitor user fees and rules, remain informed about programs of regional impact, and consider opportunities for cooperation;~~
 - ~~Serves as liaison to other community event organizers, governmental parks and recreation departments, and park districts.~~
 - Oversee park facilities policies and reservations in cooperation with the Public Works Department staff. Supervise public use of park facilities in cooperation with Public Works staff to ensure pavilion, athletic fields, and courts are in a safe, usable condition.
 - Notify the public and in-house users of temporary any field closures.
 - Assists in developing and Maintaining park signage to include proper posting, policies and regulations pertaining to parks, facilities, and field usage that enhance user safety and enjoyment.
 - ~~Develops positive relationships with individuals and groups utilizing the facilities and programs within the policies, procedures, and ordinances established by the city;~~
 - Monitor and maintain facility rental software, facility rental agreements and refunds/damage deposit returns. and facility rental agreements.
 - Maintain control of Field and Pavilion Reservation Agreements in accordance with the State Records Retention Schedule.
 - ~~Promotes and provides updates to the community on upcoming programs, events, and projects. Manages writing, editing, and digital media content of the city's social media outlets;~~
 - ~~Coordinates the marketing and promotion of programs and events through appropriate channels including the newsletter, community outreach, social media, website, email blasts, and occasionally working at events as a representative of the city.~~
- Performs other duties and activities as assigned.

Minimum Qualifications

- Bachelor's degree in Recreation, Parks and Leisure Service, or related field. And
- Two years of experience in Park and Recreation to include supervisory experience, or equivalent experience. supervising staff, recreation activities, project management, or similar. Must be able to successfully pass background and reference checks.
- 1-2 years of experience coordinating youth and adult sports programs and events.
- Ability to work a flexible schedule including evenings and weekends.
- Must obtain and maintain first aid and CPR certifications prior to the start of programming.

Desired Qualifications

- Experience with RegWerks and RevTrak software.
- 4 years of experience coordinating youth and adult sports programs and events.

RECREATION SUPERVISOR

- ~~Certified Park and Recreation Professional (CPRP).~~

Knowledge, Skills and Abilities Required for Successful Job Performance

- ~~General customer service skills including ability to communicate rules and directions to others.~~
- ~~Ability to effectively communicate pertinent information to City Administrator, Public Works Superintendent, and the City Hall staff when necessary.~~
- Customer service skills including demonstrated ability to build positive relationships and work well with employees, contractors, and the public.
- Ability to understand and carry out verbal and/or written instructions efficiently and effectively. ~~and to read and understand printed material.~~
- ~~Ability to work effectively with children and adults.~~
- ~~Basic computer processing skills including MS Office.~~
- ~~Ability to plan hours and work independently without constant supervision.~~
- Knowledge of and ability to operate standard office software sufficient to manipulate data, draft reports and maintain records.
- Problem-solving skills to gather relevant information to solve practical problems and address citizen inquiries and concerns.
- Verbal and high-level written communication skills sufficient to effectively present information and respond to questions from a wide variety of audiences, and reading comprehension skills sufficient to read, understand and interpret complex and varied work-related materials.
- Demonstrates the desired standard of conduct and work performance including confidentiality and privacy requirements of city employees.
- Ability to analyze and resolve problems.
- Ability to work independently, manage time, prioritize work, and meet project deadlines without constant supervision.
- Ability to work with neighboring municipalities and outside professional organizations to continue to learn and bring efficiencies within our organization.
- Ability to perform research, assemble information, and prepare reports and studies.
- Ability to exercise initiative, discretion, and independence of judgment.
- Ability to work effectively under pressure and to competently handle numerous diverse tasks in a single time-period.
- Promote and adhere to the City of Corcoran workplace values of accountability, teamwork, and commitment to the city's goals and measures.

Physical and Mental Requirements

Physical effort is medium, with lifting or carrying up to 50 pounds intermittently. Frequent walking, standing, reaching, sitting, and bending.

Working Conditions

Work is performed both inside ~~and outside~~ an office ~~and at park facilities~~ ~~environment~~. Working conditions ~~are~~ **can be** dependent on weather forecasts and may include occasional inclement weather including heat, humidity, cold, rain, and wind. **There is exposure to a variety of weather conditions, dirt, grease, noise, biting insects and unpleasant odors. Some work requires wearing safety apparel.** May work varied hours, including evenings and weekends, to attend events, observe or participate in program coordination, **and respond to user needs.**

RECREATION SUPERVISOR

Some requirements in this job description may exclude individuals who pose a direct threat or significant risk to the health and safety of themselves or other employees. All requirements are subject to modification to reasonably accommodate individuals with disabilities.

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Employee Signature and Date:

Supervisor and / or Department Head Signature and Date:

PROGRAM COORDINATOR

City of Corcoran

| | |
|------------------------|------------------------------|
| Department | Administration |
| Reports To | Recreation Supervisor |
| Points | 174 |
| Grade | 4 |
| FLSA | Seasonal Part-time |
| Bargaining Unit | NA |
| Revision Date | July 2023 |

Description

Plan, organize and coordinate the development and implementation of citywide recreation programs, activities, and special events at the direction of the Recreation Supervisor. The Program Coordinator receives work direction from the Recreation Supervisor.

Essential Duties and Responsibilities

- Under the direction of the Recreation Supervisor, the Program Coordinator organizes, supervises, and evaluates a variety of recreation programs.
- Work independently and is responsible for overseeing programs at designated locations. Includes setting up and taking down of equipment at facilities and areas for special events.
- Responsible for assignment of and return of program equipment and supplies.
- Keep supervisor and other city staff informed on a timely basis of any development issues and concerns which may be needed to manage the division in an effective manner.
- Books facility rentals, attend to facility user's needs, including permits. email event schedule weekly to Public Works Department.
- Collaborate with City Communications staff to publicizes recreation programs and other offerings.
- Assist with the maintenance of playing fields (i.e., assembling and removing soccer nets, painting soccer field lines, etc.).
- Performs other duties and activities as assigned.

Minimum Qualifications

- 18 years of age or older
- Valid driver's license
- High School Diploma or GED
- Ability to work a flexible schedule including evenings

Desired Qualifications

- Experience in event and program planning
- College student or graduate in the field of Recreation, Parks and Leisure Services, or a related field
- Certification in CPR/First Aid

Knowledge, Skills, and Abilities Required for Successful Job Performance

- Customer service skills including demonstrated ability to build positive relationships with city staff, employees, supervisors, elected officials, participants, and the public.
- Knowledge of the functions and responsibilities of City Departments, staff, and key community members.

PROGRAM COORDINATOR

- Ability to take general direction and complete assignments in a timely and accurate manner.
- Skilled in the use of common computer programs and standard office equipment.
- Excellent planning, organizing, implementation, and communication skills.
- Promote and adhere to the City of Corcoran workplace values of accountability, teamwork, and commitment to the city's goals and measures.

Physical and Mental Requirements

Physical effort is medium, with lifting or carrying up to 50 pounds intermittently. Frequent walking, standing, reaching, sitting, and bending.

Working Conditions:

Work is performed both inside and outside an office environment. Working conditions can be dependent on weather forecasts and may include occasional inclement weather including heat, humidity, cold, rain, and wind. There is exposure to a variety of weather conditions, dirt, grease, noise, biting insects and unpleasant odors. Some work requires wearing safety apparel. May work varied hours, including evenings and weekends, to attend events, observe or participate in program coordination, and respond to user needs.

Some requirements in this job description may exclude individuals who pose a direct threat or significant risk to the health and safety of themselves or other employees. All requirements are subject to modification to reasonably accommodate individuals with disabilities.

Requirements are representative of minimum levels of knowledge, skills, and experience required. To perform this job successfully, the worker must possess the abilities and aptitudes to perform each duty proficiently.

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PROGRAM COORDINATOR

City of Corcoran

| | |
|------------------------|--|
| Department | Parks and Recreation Administration |
| Reports To | Recreation Supervisor |
| Points | 174 |
| Grade | 4 |
| FLSA | Part Time, Seasonal |
| Bargaining Unit | NA |
| Revision Date | July 2023 |

Description Plan, organize and coordinate the development and implementation of citywide recreation programs, activities and special events at the direction of the Recreation Supervisor. The Program Coordinator receives work direction from the Recreation Supervisor.

Essential Duties and Responsibilities

- Under the direction of the Recreation Supervisor, the Program Coordinator organizes, supervises, and evaluates a variety of recreation programs.
 - Work independently and is responsible for overseeing programs at designated locations. Includes setting up and taking down of equipment at facilities and areas for special events.
 - Responsible for assignment of and return of program equipment and supplies.
 - Keep supervisor and other city staff informed on a timely basis of any development issues and concerns which may be needed to manage the division in an effective manner.
 - Books facility rentals, attend to facility user's needs, including permits. email event schedule weekly to Public Works Department.
 - Collaborate with City Communications staff to publicizes recreation programs and other offerings.
 - Assist with the maintenance of playing fields (i.e. assembling and removing soccer nets, painting soccer field lines, etc.).
- Performs other duties and activities as assigned.

Minimum Qualifications

- 18 years of age or older
- Valid driver's license
- High School Diploma or GED
- Ability to work a flexible schedule including evenings

Desired Qualifications:

- Experience in event and program planning
- College student or graduate in the field of Recreation, Parks and Leisure Services, or a related field.
- Certification in CPR/First Aid

Knowledge, Skills and Abilities Required for Successful Job Performance:

- Customer service skills including demonstrated ability to build positive relationships with city staff, employees, supervisors, elected officials, participants, and the public;
- Knowledge of the functions and responsibilities of City Departments, staff, and key community members;
- Ability to take general direction and complete assignments in a timely and accurate manner;
-
- Skilled in the use of common computer programs and standard office equipment.
- Excellent planning, organizing, implementation, and communication skills.

PROGRAM COORDINATOR

-
- Promote and adhere to the City of Corcoran workplace values of accountability, teamwork, and commitment to the city's goals and measures.

Physical and Mental Requirements

Physical effort is medium, with lifting or carrying up to 50 pounds intermittently. Frequent walking, standing, reaching, sitting, and bending.

Working Conditions:

Work is performed both inside **and outside** an office **environment**. Working conditions **can be** dependent on weather forecasts and may include occasional inclement weather including heat, humidity, cold, rain, and wind. **There is exposure to a variety of weather conditions, dirt, grease, noise, biting insects and unpleasant odors. Some work requires wearing safety apparel.** May work varied hours, including evenings and weekends, to attend events, observe or participate in program coordination, **and respond to user needs.**

Some requirements in this job description may exclude individuals who pose a direct threat or significant risk to the health and safety of themselves or other employees. All requirements are subject to modification to reasonably accommodate individuals with disabilities.

Requirements are representative of minimum levels of knowledge, skills, and experience required. To perform this job successfully, the worker must possess the abilities and aptitudes to perform each duty proficiently.

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STAFF REPORT

Agenda Item:10c.

| | |
|--|--------------------------------------|
| Council Meeting: July 27, 2023 | Prepared By: Jessica Beise |
| Topic: Staff Planning – Organizational Chart | Action Required: Approval |

Summary:

The City of Corcoran has experienced significant growth in the past several years. With the growth of our community staffing needs continue to change.

In 2019, the City operated with 23 full-time (FT) employees and 26 full-time equivalents (FTE) with a population of approximately 6,300. In 2022, staffing increased to 32 FT and 36 FTE as the population grew to approximately 7,400.

The purpose of sharing the current and future organizational chart is not to obtain approval of staff plans, but to show the upcoming staffing needs based on approvals taking place today. As the City continues to grow staff will work to update the City organizational chart biannually. The request for additional staff will continue to follow the City's current process of making requests to Council through a Staff Report.

Financial/Budget:

None. Information only.

Recommendation:

None.

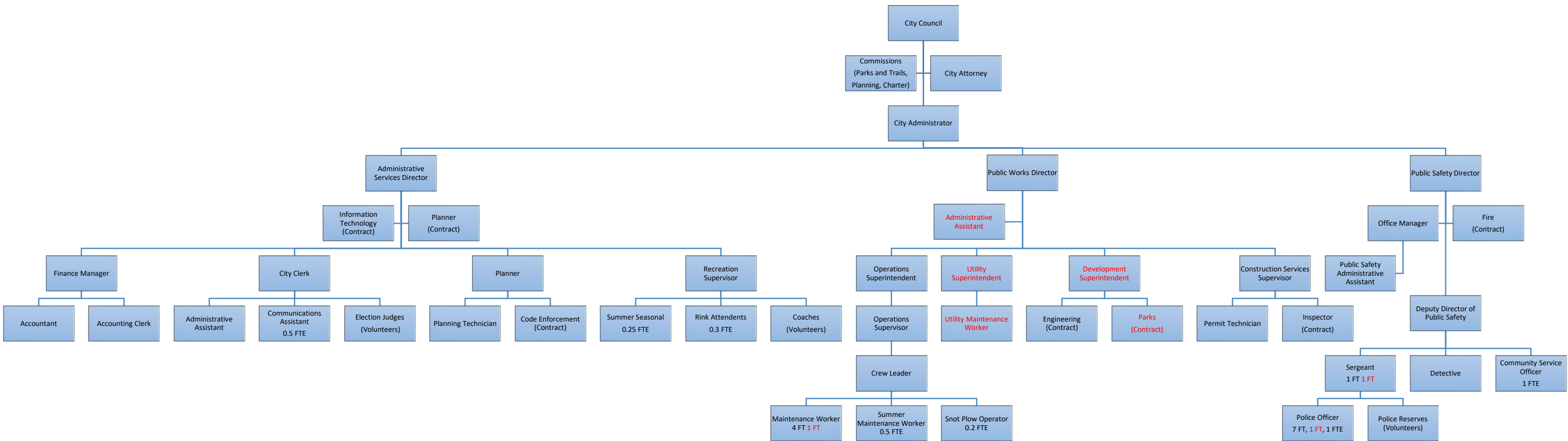
Council Action:

1. Discuss the organizational charts provide any feedback.

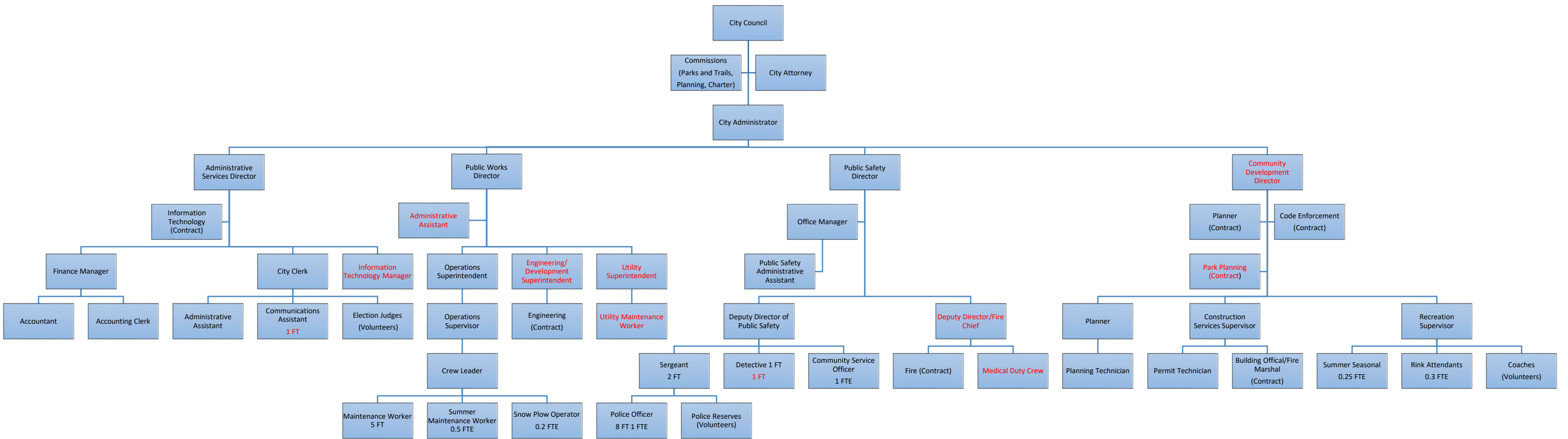
Attachments:

1. City Organizational Chart Current
2. City Organizational Chart Future

City of Corcoran Organizational Chart Current



City of Corcoran Organizational Chart Future





CITY OF CORCORAN

8200 County Road 116 • Corcoran, MN 55340
763-420-2288 • www.corcoranmn.gov

MEMO

Meeting Date: July 27, 2023
To: City Council
From: Dwight Klingbeil, Planning Technician
Re: Active Corcoran Planning Applications

Projects/comments in blue italics are new.

The following is a status summary of active planning projects:

1. **Rental Ordinance (City File No. 22-046).** Staff and City Council continue to work through the draft ordinance and planning for administrative implementation. *After several discussions and revisions, this Ordinance was adopted at the June 22, 2023, Council Meeting.*
2. **Hope Community Sketch Plat (PID 11-119-23-14-0003) (City File No. 22-074).** Brian Lothar submitted a concept plan application for a proposed residential and mixed-use development on the properties surrounding Hope Community Church. The concept includes medical offices, retail space, market rate apartments, townhomes, senior villas, and some assisted living units. The Council authorized EAW distribution at the May 25, 2023, regular meeting. *The comment period for the EAW concluded on July 6 and the Notice of Decision is scheduled for the July 27, 2023, Council meeting.*
3. **“Kwik Trip CUP, Lot Line Adjustment, and Site Plan” (PID 12-119-23-14-0006; 12- 119-23-14-0004) (City File No. 23-006).** Kwik Trip Inc. submitted a Site Plan, Lot Line Adjustment and CUP application for the two parcels north of Mama G’s. The application was determined to be incomplete for City review and is not currently scheduled for review by the City Council. A feasibility study was required to evaluate the infrastructure needs of the project. The infrastructure feasibility study has been distributed to the applicant. This item is not currently scheduled for any upcoming meetings.
4. **“Red Barn Pet Retreat” (PID 01-119-23-44-0045) (City File No. 23-008)** Daniel Benjamin submitted an application for the expansion of his business, “Red Barn Pet Retreat” to a site on the Northwest corner of Stieg Road and County Road 101. This application includes a Comprehensive Plan Amendment, Rezoning, Preliminary Plat, Conditional Use Permit, Variance, and a Site Plan.

Due to last minute additions and insufficient materials, this item was continued at the July 6, 2023, Planning Commission meeting. The applicant was not able to meet the deadline for the August Planning Commission meeting and has requested that the review period be extended another 90 days.

5. **Heidecker Garage (PID 22-119-23-42-0009) (City File No. 23-009)** Tyler Heidecker applied for a Conditional Use Permit and an Interim Use Permit to construct a detached garage of 1750 square feet on his property at 7985 Eagle Ridge Road. The IUP will allow for storage of business equipment within the structure. *After the Public Hearing on July 6, the Planning Commission recommended approval of the Conditional Use Permit and the Interim Use Permit. This item is scheduled for the July 27, 2023, Council meeting.*
6. **Expansion of Nonconforming Residential Structures Zoning Ordinance Amendment (Citywide) (City File No. 23-011).** Council directed staff to move forward with a minor zoning ordinance amendment which would allow some expansions of legal nonconforming residential structures to be approved administratively. *This item was adopted at the June 22, 2023 Council meeting.*
7. **Leuer Sketch Plat (PID 25-119-23-11-0001) (City File No. 23-013)** Bergeron Homes and Development, Inc. submitted a sketch plat for a residential development consisting of 75 single-family lots at the Geur farm directly west of Cook Lake, otherwise known as the “Leuer property.” The sketch plat includes minimum lot-widths of 55 feet, with 24 lots being at least 70 feet wide. *The applicant received Council feedback at the June 22, 2023, meeting and is not scheduled for any upcoming meetings.*
8. **Bennett Garage CUP (PID 05-119-23-34-0019) (City File No. 23-014)** Lee Bennett submitted a Conditional Use Permit application for a detached garage with sidewalls exceeding 10 feet in height in the front yard of 10208 Hage Drive. *This item is complete for review and is scheduled for the August 3, 2023, Planning Commission Meeting.*
9. **Sunram IUP (PID 26-119-23-21-0006) (City File No. 23-015)** Ryan Sunram applied for an Interim Use Permit to allow staging and stockpiling soil for construction projects at 20305 County Road 50. *This item is being reviewed for completeness. If complete, this item could be reviewed as early as September by the Planning Commission and City Council.*
10. **Corcoran Storage II (PID 31-119-23-33-0001) (City File No. 23-016)** Scherber and Associates, LLC. applied for a Site Plan, Conditional Use Permit, Variance, and a Rezoning to allow a 6-building storage facility at 23730 Highway 55. *This item is complete for review and is scheduled for the August 3, 2023, Planning Commission meeting.*
11. **NE Hackamore 116 Sketch Plat (PID 36-119-23-33-0010) (City File No. 23-017)** Gonyea Company and Lakeview Development submitted a sketch plat application for a home development on the northeast corner of Hackamore Road and County Road 116. *The concept is to rezone 36.75 acres from Single Family Residential 2 (RSF-2) to Single Family and Two Family Residential (RSF-3) to allow the development of 66 single family homes with a minimum lot*

width of 65'. This item is scheduled for the July 27, 2023, Council Meeting.

12. **Kariniemi/Jensen Concept Plan (PID 11-119-23-21-0002) (City File No. 23-018)**
Nate Kariniemi submitted a concept plan for a proposed Open Space and Preservation plat subdivision at 20400 County Road 30. The concept consists of 16 single-family lots ranging from 1-2.2 acres and a 52.4-acre outlot. This item is scheduled for the July 27, 2023, Council meeting.

STAFF REPORT

Agenda Item: 11b.

| | |
|---|--|
| City Council Meeting: July 27, 2023 | Prepared By: Dwight Klingbeil |
| Topic: 2023 Code Compliance Summary | Action Required: Informational |

Background

The City of Corcoran code compliance helps enforce the laws and ordinances of the City regarding zoning and property maintenance issues. Code compliance is conducted on a complaint basis. If the City receives a call with a complaint about a property, the Code Compliance Official will inspect the site following the process outlined below. Generally, the City receives a call from a resident describing a violation on a property in their area or one that they frequently drive by. In all cases with code compliance, the goal is to work with the property owner to bring their property into compliance with the City Code.

1. Analysis

The Corcoran code compliance process is as follows:

1. A complaint is received by the City.
2. The subject property inspected by the Code Compliance Official or designee to verify whether it is compliant with City Code. Photographs are taken to verify any issues.
3. A first notice of violation letter is submitted to the property owner which describes the violation, steps (if necessary) to abate the violation and estimated date for a property compliance reinspection.
 - a. Some first notice letters are informational for property owners to avoid future compliance issues, such as dumping lawn clippings in a wetland buffer or pushing snow across a public right-of-way.
4. The Code Compliance Official (or designee) reinspects the property to determine whether or not the violation has been abated. If so, the case is closed.
5. If the issue was not addressed, a formal violation notice is submitted to the property owner which describes the violation, steps to abate the violation and estimated date for a second property compliance reinspection.
6. The formal violation notice is forwarded to the City Attorney for prosecution if the subject property is not in compliance on the date of the second reinspection if the property owner has not entered into an alternative abatement plan with the City.

The first notice of violation letter was implemented in early 2022 as a new tool for code compliance. The intent of the first notice letter is to engage property owners with code violations in a less aggressive manner than a citation and to clearly define the code violation with steps necessary to resolve the issue. Relevant department contacts are provided if the property owner needs to apply for a permit or zoning application. After the reinspection, the Code Compliance Official reaches out to the property owner to follow up on the status of the violation, close the case, or note the necessary steps to complete abatement.

Previously, a citation was sent to property owners that required compliance (or agreement of an abatement plan) by a certain date or the matter would be presented to the City Attorney to seek compliance through appropriate criminal or civil remedies. The first notice letter has been a successful tool in creating a dialogue with property owners to better understand the code violation issue and offer solutions to bring their property into compliance. The first notice letter also works well for informational purposes to notify property owners of minor violations or remind them of pertinent nuisance standards. Instances such as this may not necessitate reinspection and the information provided can help avoid future violations.

2. 2023 Code Compliance Overview

Code compliance statistics to date (01/01/2023 to 7/21/2023):

| | |
|---|----|
| Total Inspections | 47 |
| New Inspections | 20 |
| Necessitated Intervention | 17 |
| First Notice Letters | 15 |
| Property owners working with CE to reach compliance | 15 |
| Violations resolved | 10 |
| Formal violations and Inspection Reports | 7 |

From January 1, 2023, to July 21, 2023, Code Enforcement has conducted 45 inspections, including 18 new inspections. Of the 18 new inspections, 15 necessitated interventions from the city. The department sent 13 first notice letters and coordinated with 10 of these property owners. There have been 7 formal violations issued this year, 4 of which come from 2023 cases. The other 3 are violations of outstanding properties from previous years.

Of the 15 properties requiring intervention: 7 have been resolved, 5 are working to reach compliance, and 3 are currently outstanding. There have been a variety of violation types, with some properties having multiple violations. Of the 15 interventions from 2023:

- Four violations were related to Building Nuisances. Building nuisances received a First Notice Letter in effort to open a dialogue with the homeowner and find a path toward compliance. This method has been successful with each building nuisance violation being abated or actively working toward abatement.
- Three notices were issued for Weed Violations. Weed and tall grass violations receive a formal violation notice upon the first inspection of the nuisance due to the time sensitive nature in which weed, and tall grass violations must be abated. For example, Canadian Thistle is a noxious weed should be abated as quickly as possible to reduce further seed dispersal.
- Three notices were issued for Home Occupation Violations. First notice letters are sent to the property owner to open a dialogue and understand the business operations.
- Two or less notices for each of the following: Animal Nuisance, operating outside of allowed Construction Hours, Parking and Loading, Public Obstruction, and Storage Nuisance.
- There have also been numerous sign violations that are not reflected in the data of this section. For these violations, Code Enforcement reaches out to the contact number on the sign to coordinate abatement. Abatement typically involves removal of the sign or applying for a sign permit.

Aside from new cases, Code Enforcement has also worked on 7 compliance issues from previous years. Four properties were reinspected multiple times to provide the City Attorney with compliance updates when property owners were due in court for prosecution. Two of these violations have been resolved with the other 2 being long-term abatement projects. These larger abatement projects have been making slow improvements, but Code Enforcement continues to schedule regular check-ins with the property owners to ensure continued improvement.

3. Summary

First notice letters and open dialogue strategies were introduced in 2022 and saw positive changes to the Code Enforcement process, this has continued into 2023. Continued dialogue with property owners has seen more positive interactions and willingness to work toward compliance. The Code Enforcement staff continue to believe this strategy is more effective for long term code compliance. Working with property owners on abatement plans is still the main goal rather than abatement prescribed through the courts.

STAFF REPORT

Agenda Item: 11c.

| | |
|--|---|
| Council Meeting: July 27, 2023 | Prepared By: Maggie Ung |
| Topic: Finance Assistance Update | Action Required: None - Informational |

Summary

On May 25, 2023, City Council authorized staff to request audit and escrow reconciliation assistance from Abdo Financial Solutions.

Staff would like to provide an update on the process. When the City implemented our financial software BS&A, the data transfer caused a significant discrepancy in the City's current finances. Abdo is working through this discrepancy and has put in over 13.25 hours. To date, approximately \$4,200 has been spent out of the \$17,000 requested.

If funds remain after the audit assistance, Abdo Financial Solutions will assist in reconciling the City's escrow activities.

STAFF REPORT

Agenda Item 11d.

| | |
|---|---|
| Council Meeting: July 27, 2023 | Prepared By: Maggie Ung |
| Topic: Financial Performance Report | Action Required: None - Informational |

Summary

Attached to this report is the unaudited Financial Performance Report, which shows the status of the budget through June 2023 along with a projected financial position for 2023. 2023 will be audited in mid-2024 and will provide the final 2023 financial performance of the City.

The report also shows a projected year-end balance for 2022. The audit will provide the final 2022 financial performance of the City, which will be presented after the financial assistance is completed.

Overall, the report shows a projected surplus of \$113,303.45 in the General Fund for 2023. The major factor attributed to the surplus is due to delays in budgeted staff start date. Budgeted staff that has not yet been hired includes Development Superintendent, Public Works Maintenance Worker, and Public Works Administrative Assistant. These positions are anticipated to be filled by year-end.

Financial/Budget

2023 is anticipated to be audited mid-2024. Surplus funds may be allocated to different uses or used to build up the City's reserve funds.

Council Action

None

Attachments

1. Financial Performance Report

CITY OF CORCORAN
2023 PERFORMANCE REPORT - GENERAL FUND
 PERIOD ENDING 06/30/2023
 UNAUDITED

| GL NUMBER | DESCRIPTION | END BALANCE 12/31/2022 | YTD BALANCE 06/30/2023 | 2023 AMENDED BUDGET | AVAILABLE BALANCE | % BUDGET REMAINING | YEAR END PROJECTION | VARIANCE BUDGET VS. YEP | COMMENTS |
|-----------------------|----------------------------------|---------------------------|---------------------------|------------------------|----------------------|-----------------------|------------------------|----------------------------|---|
| Revenues | | | | | | | | | |
| 100-00000-31000 | GENERAL PROPERTY TAXES | 5,099,598.42 | 2,700,000.00 | 6,354,020.00 | 3,654,020.00 | 57.51% | 6,354,020.00 | 0.00 | |
| 100-00000-31020 | DELINQUENT PROPERTY TAXES | 49,456.12 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-00000-31040 | FISCAL DISPARITIES | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-00000-32100 | BUSINESS LICENSE & PERMITS | 576.00 | 450.00 | 10,350.00 | 9,900.00 | 95.65% | 10,350.00 | 0.00 | |
| 100-00000-32110 | ALCOHOL/TOBACCO LICENSES | 15,675.00 | 15,475.00 | 15,500.00 | 25.00 | 0.16% | 15,475.00 | 25.00 | |
| 100-00000-32210 | BUILDING PERMITS | 631,355.43 | 468,397.02 | 1,300,000.00 | 831,602.98 | 63.97% | 818,700.00 | 481,300.00 | Moved revenue to new line items |
| 100-00000-32220 | GAS INSTALLATION PERMITS | 13,200.00 | 6,200.00 | 0.00 | (6,200.00) | 0.00% | 17,100.00 | (17,100.00) | Moved revenue from building permits |
| 100-00000-32230 | PLUMBING CONNECTION PERMITS | 27,340.00 | 19,882.75 | 0.00 | (19,882.75) | 0.00% | 35,500.00 | (35,500.00) | Moved revenue from building permits |
| 100-00000-32240 | ANIMAL LICENSES | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-00000-32260 | SIGN PERMITS | 750.00 | 405.00 | 0.00 | (405.00) | 0.00% | 500.00 | (500.00) | |
| 100-00000-32270 | MECHANICAL PERMITS | 39,675.00 | 27,675.00 | 0.00 | (27,675.00) | 0.00% | 51,400.00 | (51,400.00) | Moved revenue from building permits |
| 100-00000-32290 | WETLAND PERMIT FEES | 800.00 | 0.00 | 1,000.00 | 1,000.00 | 100.00% | 1,000.00 | 0.00 | |
| 100-00000-33400 | STATE GRANTS AND AIDS | 40,499.19 | 44,605.58 | 40,000.00 | (4,605.58) | -11.51% | 40,000.00 | 0.00 | |
| 100-00000-33402 | HOMESTEAD CREDIT | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-00000-33416 | POLICE TRAINING REIMBURSEMENT | 10,148.17 | 0.00 | 12,500.00 | 12,500.00 | 100.00% | 12,500.00 | 0.00 | |
| 100-00000-33418 | MUN STATE AID STREETS - MAINT | 157,694.40 | 400,439.20 | 150,000.00 | (250,439.20) | -166.96% | 400,439.20 | (250,439.20) | |
| 100-00000-33423 | POLICE STATE AID | 62,602.70 | 0.00 | 80,000.00 | 80,000.00 | 100.00% | 80,000.00 | 0.00 | |
| 100-00000-33426 | AGRICULTURAL MARKET VALUE CREDIT | 28,649.29 | 0.00 | 20,000.00 | 20,000.00 | 100.00% | 20,000.00 | 0.00 | |
| 100-00000-33429 | STATE AID - PERA | 0.00 | 0.00 | 1,845.00 | 1,845.00 | 100.00% | 1,845.00 | 0.00 | |
| 100-00000-33615 | COUNTY RECYCLING GRANT | 13,845.64 | 0.00 | 13,900.00 | 13,900.00 | 100.00% | 13,900.00 | 0.00 | |
| 100-00000-33620 | OTHER COUNTY GRANTS AND AIDS | 42,203.36 | 320.00 | 10,000.00 | 9,680.00 | 100.00% | 10,000.00 | 0.00 | |
| 100-00000-33640 | TOWARD ZERO DEATH GRANT | 13,286.23 | 11,385.88 | 10,000.00 | (1,385.88) | -13.86% | 11,385.88 | (1,385.88) | |
| 100-00000-34100 | CHARGES FOR SERVICES | 10,282.15 | 320.00 | 300.00 | (20.00) | -6.67% | 400.00 | (100.00) | |
| 100-00000-34101 | FACILITY RENTAL | (357.00) | 0.00 | 2,000.00 | 2,000.00 | 100.00% | 0.00 | 2,000.00 | |
| 100-00000-34103 | ZONING & SUBDIVISION FEES | 64,580.00 | 26,300.00 | 55,000.00 | 28,700.00 | 52.18% | 55,000.00 | 0.00 | |
| 100-00000-34104 | BUILDING PERMIT PLAN CHECK FEE | 246,161.63 | 265,941.44 | 0.00 | (265,941.44) | 0.00% | 319,200.00 | (319,200.00) | Moved revenue from building permits |
| 100-00000-34105 | COPIES/MAPS | 2,332.00 | 24.25 | 2,000.00 | 1,975.75 | 98.79% | 2,000.00 | 0.00 | |
| 100-00000-34107 | ASSESSMENT SEARCHES | 0.00 | 0.00 | 30.00 | 30.00 | 100.00% | 30.00 | 0.00 | |
| 100-00000-34108 | TIF ADMINISTRATION | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-00000-34109 | OTHER BUILDING RELATED FEES | 44,065.28 | 49,143.99 | 0.00 | (49,143.99) | 0.00% | 57,100.00 | (57,100.00) | Moved revenue from building permits |
| 100-00000-34110 | CITY PLANNER REVIEW FEE | 19,577.50 | 5,655.00 | 50,000.00 | 44,345.00 | 88.69% | 30,000.00 | 20,000.00 | |
| 100-00000-34200 | PUBLIC SAFETY PERMITS | 4,280.00 | 1,020.00 | 4,000.00 | 2,980.00 | 74.50% | 4,000.00 | 0.00 | |
| 100-00000-34201 | SPECIAL POLICE SERVICES | 9,015.00 | 1,210.00 | 5,000.00 | 3,790.00 | 75.80% | 23,000.00 | (18,000.00) | Event pay - pending reimbursement from other entities |
| 100-00000-34203 | POLICE REPORTS | 836.00 | 297.00 | 300.00 | 3.00 | 1.00% | 300.00 | 0.00 | |
| 100-00000-34300 | PUBLIC WORKS PERMITS AND FEES | 17,135.00 | 7,500.00 | 16,500.00 | 9,000.00 | 54.55% | 16,500.00 | 0.00 | |
| 100-00000-34301 | DUST CONTROL | 2,901.69 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-00000-34303 | ICE & SNOW REMOVAL | 0.00 | 0.00 | 6,000.00 | 6,000.00 | 100.00% | 6,000.00 | 0.00 | |
| 100-00000-34310 | PUBLIC WORKS REVIEW FEE | 0.00 | 0.00 | 88,200.00 | 88,200.00 | 100.00% | 44,100.00 | 44,100.00 | |
| 100-00000-34400 | RECYCLING | 2,390.94 | 0.00 | 5,000.00 | 5,000.00 | 100.00% | 5,000.00 | 0.00 | |
| 100-00000-34403 | REFUSE COLLECTION CHARGES | 5,661.91 | 5,294.00 | 4,500.00 | (794.00) | -17.64% | 5,294.00 | (794.00) | |
| 100-00000-34700 | PARK RENTAL | 2,616.00 | 5,095.20 | 0.00 | (5,095.20) | 0.00% | 5,095.20 | (5,095.20) | |
| 100-00000-34790 | RECREATION PROGRAMMING | 51,940.09 | 41,365.00 | 46,735.00 | 5,370.00 | 11.49% | 46,735.00 | 0.00 | |
| 100-00000-35100 | FINES | 21,978.80 | 11,197.72 | 25,000.00 | 13,802.28 | 93.52% | 25,000.00 | 0.00 | |
| 100-00000-36100 | SPECIAL ASSESSMENTS | 60.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-00000-36200 | MISCELLANEOUS REVENUES | 34,074.76 | 2,382.00 | 4,000.00 | 1,618.00 | 40.45% | 4,000.00 | 0.00 | |
| 100-00000-36210 | INTEREST EARNINGS | 40,300.00 | 1.42 | 11,500.00 | 11,498.58 | 99.99% | 11,500.00 | 0.00 | |
| 100-00000-36220 | RENTS AND ROYALTIES | 0.00 | 0.00 | 7,000.00 | 7,000.00 | 100.00% | 7,000.00 | 0.00 | |
| 100-00000-36230 | DONATIONS | 1,250.00 | 1,020.00 | 1,000.00 | (20.00) | -2.00% | 1,020.00 | (20.00) | |
| 100-00000-36232 | DEVELOPER CONTRIBUTION | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-00000-36400 | REFUNDS/REIMBURSEMENTS | 232,505.20 | 1,646.52 | 5,000.00 | 3,353.48 | 67.07% | 5,000.00 | 0.00 | |
| 100-00000-38050 | CABLE FRANCHISE FEE | 62,153.07 | 0.00 | 59,000.00 | 59,000.00 | 100.00% | 59,000.00 | 0.00 | |
| 100-00000-39101 | SALE OF ASSETS | 63,858.06 | 1,265.00 | 0.00 | (1,265.00) | 0.00% | 1,265.00 | (1,265.00) | |
| 100-00000-39203 | TRANSFER FROM OTHER FUND | 449,092.00 | 0.00 | 535,500.00 | 535,500.00 | 100.00% | 535,500.00 | 0.00 | |
| TOTAL REVENUES | | 7,636,045.03 | 4,121,913.97 | 8,952,680.00 | 4,830,766.03 | 53.96% | 9,163,154.28 | (210,474.28) | |

CITY OF CORCORAN
2023 PERFORMANCE REPORT - GENERAL FUND
 PERIOD ENDING 06/30/2023
 UNAUDITED

| GL NUMBER | DESCRIPTION | END BALANCE 12/31/2022 | YTD BALANCE 06/30/2023 | 2023 AMENDED BUDGET | AVAILABLE BALANCE | % BUDGET REMAINING | YEAR END PROJECTION | VARIANCE BUDGET VS. YEP | COMMENTS |
|--|-------------------------------------|---------------------------|---------------------------|------------------------|----------------------|-----------------------|------------------------|----------------------------|--|
| Expenditures | | | | | | | | | |
| Dept 41110 - CITY COUNCIL | | | | | | | | | |
| 100-41110-50101 | FULL-TIME EMPLOYEES - REGULAR | 19,260.00 | 9,630.00 | 19,260.00 | 9,630.00 | 50.00% | 19,260.00 | 0.00 | |
| 100-41110-50122 | FICA | 1,194.12 | 597.06 | 1,200.00 | 602.94 | 50.25% | 1,200.00 | 0.00 | |
| 100-41110-50126 | MEDICARE | 279.27 | 139.66 | 280.00 | 140.34 | 50.12% | 280.00 | 0.00 | |
| 100-41110-50207 | TRAINING AND INSTRUCTIONAL SUPPLIES | 2,600.00 | 1,900.00 | 5,000.00 | 3,100.00 | 62.00% | 5,000.00 | 0.00 | |
| 100-41110-50210 | OPERATING SUPPLIES | 829.31 | 437.44 | 2,000.00 | 1,562.56 | 78.13% | 2,000.00 | 0.00 | |
| 100-41110-50320 | COMMUNICATIONS (GENERAL) | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-41110-50365 | WORKER'S COMPENSATION INSURANCE | 102.00 | 101.00 | 150.00 | 49.00 | 32.67% | 101.00 | 49.00 | |
| Total Dept 41110 - CITY COUNCIL | | 24,264.70 | 12,805.16 | 27,890.00 | 15,084.84 | 54.09% | 27,841.00 | 49.00 | |
| Dept 41130 - COMMUNICATION | | | | | | | | | |
| 100-41130-50325 | OTHER COMMUNICATION | 119.99 | 1,869.99 | 3,000.00 | 1,130.01 | 37.67% | 1,869.99 | 1,130.01 | |
| 100-41130-50350 | GENERAL NOTICES AND PUB INFO | 8,314.34 | 5,150.78 | 10,000.00 | 4,849.22 | 48.49% | 10,000.00 | 0.00 | |
| Total Dept 41130 - COMMUNICATION | | 8,434.33 | 7,020.77 | 13,000.00 | 5,979.23 | 45.99% | 11,869.99 | 1,130.01 | |
| Dept 41320 - CITY ADMINISTRATOR | | | | | | | | | |
| 100-41320-50101 | FULL-TIME EMPLOYEES - REGULAR | 131,412.62 | 73,120.00 | 152,000.00 | 78,880.00 | 51.89% | 152,000.00 | 0.00 | |
| 100-41320-50121 | PERA | 9,855.93 | 5,484.00 | 11,400.00 | 5,916.00 | 51.89% | 11,400.00 | 0.00 | |
| 100-41320-50122 | FICA | 7,087.88 | 3,981.94 | 9,500.00 | 5,518.06 | 58.08% | 9,500.00 | 0.00 | |
| 100-41320-50126 | MEDICARE | 1,657.66 | 931.26 | 2,300.00 | 1,368.74 | 59.51% | 2,300.00 | 0.00 | |
| 100-41320-50130 | EMPLOYER PAID INSURANCE | 14,094.94 | 10,279.41 | 21,300.00 | 11,020.59 | 51.74% | 21,300.00 | 0.00 | |
| 100-41320-50207 | TRAINING AND INSTRUCTIONAL SUPPLIES | 1,910.52 | 10.67 | 5,000.00 | 4,989.33 | 99.79% | 5,000.00 | 0.00 | |
| 100-41320-50210 | OPERATING SUPPLIES | 528.35 | 0.00 | 1,200.00 | 1,200.00 | 100.00% | 0.00 | 1,200.00 | Expense was moved, inactive account |
| 100-41320-50300 | PROFESSIONAL SERVICES | 21,000.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-41320-50321 | TELEPHONE | 550.00 | 0.00 | 600.00 | 600.00 | 100.00% | 500.00 | 100.00 | |
| 100-41320-50331 | TRAVEL EXPENSE | 184.99 | 91.63 | 600.00 | 508.37 | 84.73% | 250.00 | 350.00 | |
| 100-41320-50365 | WORKER'S COMPENSATION INSURANCE | 1,085.00 | 1,566.00 | 1,000.00 | (566.00) | -56.60% | 1,566.00 | (566.00) | |
| 100-41320-50433 | DUES AND MEMBERSHIPS | 1,370.98 | 1,421.10 | 1,400.00 | (21.10) | -1.51% | 1,421.10 | (21.10) | |
| Total Dept 41320 - CITY ADMINISTRATOR | | 190,738.87 | 96,886.01 | 206,300.00 | 109,413.99 | 53.04% | 205,237.10 | 1,062.90 | |
| Dept 41400 - ADMINISTRATION | | | | | | | | | |
| 100-41400-50101 | FULL-TIME EMPLOYEES - REGULAR | 117,616.03 | 119,903.14 | 249,800.00 | 129,896.86 | 52.00% | 249,800.00 | 0.00 | |
| 100-41400-50102 | FULL-TIME EMPLOYEES - OVERTIME | 9,093.45 | 6,252.47 | 2,500.00 | (3,752.47) | -150.10% | 9,600.00 | (7,100.00) | based on average from previous years |
| 100-41400-50111 | PART-TIME EMPLOYEES - REGULAR | 0.00 | 5,281.57 | 30,400.00 | 25,118.43 | 82.63% | 30,400.00 | 0.00 | |
| 100-41400-50112 | PART-TIME EMPLOYEES - OVERTIME | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-41400-50121 | PERA | 9,457.66 | 9,850.34 | 21,200.00 | 11,349.66 | 53.54% | 21,200.00 | 0.00 | |
| 100-41400-50122 | FICA | 8,324.60 | 8,514.67 | 17,600.00 | 9,085.33 | 51.62% | 17,600.00 | 0.00 | |
| 100-41400-50126 | MEDICARE | 1,946.93 | 1,991.33 | 4,100.00 | 2,108.67 | 51.43% | 4,100.00 | 0.00 | |
| 100-41400-50130 | EMPLOYER PAID INSURANCE | 35,987.19 | 22,840.86 | 56,300.00 | 33,459.14 | 59.43% | 56,300.00 | 0.00 | |
| 100-41400-50140 | UNEMPLOYMENT COMPENSATION | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-41400-50207 | TRAINING AND INSTRUCTIONAL SUPPLIES | 963.72 | 474.34 | 5,000.00 | 4,525.66 | 90.51% | 2,000.00 | 3,000.00 | |
| 100-41400-50300 | PROFESSIONAL SERVICES | 6,238.44 | 222.58 | 0.00 | (222.58) | 0.00% | 222.58 | (222.58) | |
| 100-41400-50321 | TELEPHONE | 50.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-41400-50331 | TRAVEL EXPENSE | 65.69 | 641.69 | 1,000.00 | 358.31 | 35.83% | 1,000.00 | 0.00 | |
| 100-41400-50365 | WORKER'S COMPENSATION INSURANCE | 1,636.21 | 1,851.00 | 3,000.00 | 1,149.00 | 38.30% | 1,851.00 | 1,149.00 | Part of budgeted is for Finance division |
| 100-41400-50433 | DUES AND MEMBERSHIPS | 170.00 | 125.00 | 1,500.00 | 1,375.00 | 91.67% | 250.00 | 1,250.00 | |
| Total Dept 41400 - ADMINISTRATION | | 191,549.92 | 177,948.99 | 392,400.00 | 214,451.01 | 54.65% | 394,323.58 | (1,923.58) | |
| Dept 41410 - ELECTIONS | | | | | | | | | |
| 100-41410-50114 | TEMPORARY/SEASONAL EMPLOYEES | 11,399.46 | 0.00 | 500.00 | 500.00 | 100.00% | 500.00 | 0.00 | |
| 100-41410-50210 | OPERATING SUPPLIES | 5,090.43 | 10.89 | 3,000.00 | 2,989.11 | 99.64% | 3,000.00 | 0.00 | |
| 100-41410-50331 | TRAVEL EXPENSE | 0.00 | 0.00 | 300.00 | 300.00 | 100.00% | 300.00 | 0.00 | |
| 100-41410-50430 | MISCELLANEOUS EXPENSE | 0.00 | 0.00 | 100.00 | 100.00 | 100.00% | 100.00 | 0.00 | |
| Total Dept 41410 - ELECTIONS | | 16,489.89 | 10.89 | 3,900.00 | 3,889.11 | 99.72% | 3,900.00 | 0.00 | |

CITY OF CORCORAN
2023 PERFORMANCE REPORT - GENERAL FUND
 PERIOD ENDING 06/30/2023
 UNAUDITED

| GL NUMBER | DESCRIPTION | END BALANCE 12/31/2022 | YTD BALANCE 06/30/2023 | 2023 AMENDED BUDGET | AVAILABLE BALANCE | % BUDGET REMAINING | YEAR END PROJECTION | VARIANCE BUDGET VS. YEP | COMMENTS |
|--|--|---------------------------|---------------------------|------------------------|----------------------|-----------------------|------------------------|----------------------------|---|
| Dept 41500 - FINANCE | | | | | | | | | |
| 100-41500-50101 | FULL-TIME EMPLOYEES - REGULAR | 155,141.97 | 105,415.12 | 224,100.00 | 118,684.88 | 52.96% | 224,100.00 | 0.00 | |
| 100-41500-50102 | FULL-TIME EMPLOYEES - OVERTIME | 1,601.98 | 29.18 | 1,000.00 | 970.82 | 97.08% | 1,000.00 | 0.00 | |
| 100-41500-50121 | PERA | 11,808.76 | 7,908.32 | 16,900.00 | 8,991.68 | 53.21% | 16,900.00 | 0.00 | |
| 100-41500-50122 | FICA | 9,836.81 | 6,619.15 | 14,000.00 | 7,380.85 | 52.72% | 14,000.00 | 0.00 | |
| 100-41500-50126 | MEDICARE | 2,300.55 | 1,548.03 | 3,300.00 | 1,751.97 | 53.09% | 3,300.00 | 0.00 | |
| 100-41500-50130 | EMPLOYER PAID INSURANCE | 25,393.11 | 20,653.36 | 63,300.00 | 42,646.64 | 67.37% | 63,300.00 | 0.00 | |
| 100-41500-50207 | TRAINING AND INSTRUCTIONAL SUPPLIES | 1,719.53 | 610.67 | 3,500.00 | 2,889.33 | 82.55% | 3,500.00 | 0.00 | |
| 100-41500-50300 | PROFESSIONAL SERVICES | 44,544.26 | 2,100.00 | 47,250.00 | 45,150.00 | 95.56% | 47,250.00 | 0.00 | |
| 100-41500-50331 | TRAVEL EXPENSE | 0.00 | 0.00 | 500.00 | 500.00 | 100.00% | 500.00 | 0.00 | |
| 100-41500-50365 | WORKER'S COMPENSATION INSURANCE | 1,373.00 | 1,983.00 | 0.00 | (1,983.00) | 0.00% | 1,983.00 | (1,983.00) | Was budgeted under Administration |
| 100-41500-50433 | DUES AND MEMBERSHIPS | 210.00 | 380.00 | 1,000.00 | 620.00 | 62.00% | 500.00 | 500.00 | |
| Total Dept 41500 - FINANCE | | 253,929.97 | 147,246.83 | 374,850.00 | 227,603.17 | 60.72% | 376,333.00 | (1,483.00) | |
| Dept 41550 - ASSESSING | | | | | | | | | |
| 100-41550-50210 | OPERATING SUPPLIES | 13.40 | 0.00 | 300.00 | 300.00 | 100.00% | 300.00 | 0.00 | |
| 100-41550-50300 | PROFESSIONAL SERVICES | 118,000.00 | 0.00 | 120,000.00 | 120,000.00 | 100.00% | 150,000.00 | (30,000.00) | Actuals came in higher than anticipated |
| Total Dept 41550 - ASSESSING | | 118,013.40 | 0.00 | 120,300.00 | 120,300.00 | 100.00% | 150,300.00 | (30,000.00) | |
| Dept 41600 - LEGAL | | | | | | | | | |
| 100-41600-50300 | PROFESSIONAL SERVICES | 51,930.71 | 28,405.50 | 45,000.00 | 16,594.50 | 36.88% | 50,000.00 | (5,000.00) | |
| Total Dept 41600 - LEGAL | | 51,930.71 | 28,405.50 | 45,000.00 | 16,594.50 | 36.88% | 50,000.00 | (5,000.00) | |
| Dept 41900 - CENTRAL SERVICES | | | | | | | | | |
| 100-41900-50200 | OFFICE SUPPLIES | 4,770.72 | 1,883.40 | 5,000.00 | 3,116.60 | 62.33% | 5,000.00 | 0.00 | |
| 100-41900-50210 | OPERATING SUPPLIES | 28,237.51 | 13,124.50 | 35,500.00 | 22,375.50 | 63.03% | 30,000.00 | 5,500.00 | |
| 100-41900-50212 | MOTOR FUELS | 265.11 | 402.42 | 500.00 | 97.58 | 19.52% | 700.00 | (200.00) | Increase in staff and fuel cost |
| 100-41900-50221 | REPAIR AND MAINTENANCE SUPPLIES - EQUIP. | 613.86 | 8.33 | 0.00 | (8.33) | 0.00% | 8.33 | (8.33) | |
| 100-41900-50300 | PROFESSIONAL SERVICES | 43,796.19 | 7,577.90 | 30,000.00 | 22,422.10 | 74.74% | 40,000.00 | (10,000.00) | |
| 100-41900-50321 | TELEPHONE | 5,622.09 | 3,823.44 | 4,000.00 | 176.56 | 4.41% | 4,000.00 | 0.00 | |
| 100-41900-50322 | POSTAGE | 3,462.64 | 128.85 | 4,000.00 | 3,871.15 | 96.78% | 4,000.00 | 0.00 | |
| 100-41900-50350 | GENERAL NOTICES AND PUB INFO | 245.37 | 771.72 | 1,000.00 | 228.28 | 22.83% | 1,000.00 | 0.00 | |
| 100-41900-50360 | INSURANCE | 96,778.00 | 128,705.00 | 108,000.00 | (20,705.00) | -19.17% | 128,705.00 | (20,705.00) | Actuals came in higher than anticipated |
| 100-41900-50380 | UTILITY SERVICES | 9,472.42 | 3,586.75 | 15,000.00 | 11,413.25 | 76.09% | 15,000.00 | 0.00 | |
| 100-41900-50381 | ELECTRIC UTILITIES | 19,420.38 | 14,627.81 | 19,000.00 | 4,372.19 | 23.01% | 19,000.00 | 0.00 | |
| 100-41900-50382 | WATER & SEWER | 329.39 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-41900-50400 | REPAIR AND MAINTENANCE - CONTRACT | 2,789.89 | 1,510.14 | 14,000.00 | 12,489.86 | 89.21% | 14,000.00 | 0.00 | |
| 100-41900-50401 | REPAIR AND MAINTENANCE - BUILDING | 17,713.58 | 10,255.58 | 18,000.00 | 7,744.42 | 43.02% | 18,000.00 | 0.00 | |
| 100-41900-50403 | REPAIR AND MAINTENANCE - VEHICLE | 4,543.54 | 40.00 | 1,500.00 | 1,460.00 | 97.33% | 1,500.00 | 0.00 | |
| 100-41900-50404 | REPAIR AND MAINTENANCE - MACHINERY/EQUIP | 8,136.80 | 1,292.29 | 2,000.00 | 707.71 | 35.39% | 2,000.00 | 0.00 | |
| 100-41900-50413 | OFFICE EQUIPMENT RENTAL | 425.97 | 283.98 | 600.00 | 316.02 | 52.67% | 600.00 | 0.00 | |
| 100-41900-50430 | MISCELLANEOUS EXPENSE | 18,806.57 | 3,000.00 | 20,000.00 | 17,000.00 | 85.00% | 20,000.00 | 0.00 | |
| 100-41900-50431 | BANKING CHARGES | 20.00 | 0.00 | 400.00 | 400.00 | 100.00% | 400.00 | 0.00 | |
| 100-41900-50432 | CREDIT CARD FEES | 4,893.36 | 0.00 | 8,000.00 | 8,000.00 | 100.00% | 8,000.00 | 0.00 | |
| 100-41900-50433 | DUES AND MEMBERSHIPS | 25,373.28 | 26,433.81 | 25,300.00 | (1,133.81) | -4.48% | 25,300.00 | 0.00 | |
| 100-41900-50700 | TRANSFERS | 794,568.87 | 0.00 | 360,000.00 | 360,000.00 | 100.00% | 360,000.00 | 0.00 | 2022 amount included prior year corrections/transfers |
| Total Dept 41900 - CENTRAL SERVICES | | 1,090,285.54 | 217,455.92 | 671,800.00 | 454,344.08 | 67.63% | 697,213.33 | (25,413.33) | |
| Dept 41910 - PLANNING & ZONING | | | | | | | | | |
| 100-41910-50101 | FULL-TIME EMPLOYEES - REGULAR | 73,205.52 | 47,616.15 | 111,100.00 | 63,483.85 | 57.14% | 111,100.00 | 0.00 | |
| 100-41910-50102 | FULL-TIME EMPLOYEES - OVERTIME | 0.00 | 86.55 | 1,000.00 | 913.45 | 91.35% | 1,000.00 | 0.00 | |
| 100-41910-50111 | PART-TIME EMPLOYEES - REGULAR | 21,757.35 | 4,356.89 | 4,300.00 | (56.89) | -1.32% | 4,356.89 | (56.89) | |
| 100-41910-50121 | PERA | 7,108.07 | 3,897.17 | 8,800.00 | 4,902.83 | 55.71% | 8,800.00 | 0.00 | |
| 100-41910-50122 | FICA | 5,158.61 | 2,858.92 | 7,300.00 | 4,441.08 | 60.84% | 7,300.00 | 0.00 | |
| 100-41910-50126 | MEDICARE | 1,207.22 | 668.58 | 1,700.00 | 1,031.42 | 60.67% | 1,700.00 | 0.00 | |
| 100-41910-50130 | EMPLOYER PAID INSURANCE | 14,507.79 | 14,941.07 | 25,000.00 | 10,058.93 | 40.24% | 25,000.00 | 0.00 | |
| 100-41910-50207 | TRAINING AND INSTRUCTIONAL SUPPLIES | 757.51 | 531.00 | 1,500.00 | 969.00 | 64.60% | 1,500.00 | 0.00 | |
| 100-41910-50210 | OPERATING SUPPLIES | 84.96 | 0.00 | 500.00 | 500.00 | 100.00% | 500.00 | 0.00 | |
| 100-41910-50300 | PROFESSIONAL SERVICES | 99,212.22 | 36,116.75 | 70,000.00 | 33,883.25 | 48.40% | 70,000.00 | 0.00 | |

CITY OF CORCORAN
2023 PERFORMANCE REPORT - GENERAL FUND
 PERIOD ENDING 06/30/2023
 UNAUDITED

| GL NUMBER | DESCRIPTION | END BALANCE 12/31/2022 | YTD BALANCE 06/30/2023 | 2023 AMENDED BUDGET | AVAILABLE BALANCE | % BUDGET REMAINING | YEAR END PROJECTION | VARIANCE BUDGET VS. YEP | COMMENTS |
|--|--|---------------------------|---------------------------|------------------------|----------------------|-----------------------|------------------------|----------------------------|---|
| 100-41910-50350 | GENERAL NOTICES AND PUB INFO | 1,539.08 | 734.45 | 750.00 | 15.55 | 2.07% | 750.00 | 0.00 | |
| 100-41910-50365 | WORKER'S COMPENSATION INSURANCE | 996.00 | 247.00 | 500.00 | 253.00 | 50.60% | 247.00 | 253.00 | Billed amount came in lower than budgeted. |
| 100-41910-50430 | MISCELLANEOUS EXPENSE | 142.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-41910-50433 | DUES AND MEMBERSHIPS | 164.00 | 99.00 | 250.00 | 151.00 | 60.40% | 250.00 | 0.00 | |
| Total Dept 41910 - PLANNING & ZONING | | 225,840.33 | 112,153.53 | 232,700.00 | 120,546.47 | 51.80% | 232,503.89 | 196.11 | |
| Dept 41920 - INFORMATION TECHNOLOGY | | | | | | | | | |
| 100-41920-50210 | OPERATING SUPPLIES | 55,825.39 | 28,598.87 | 40,000.00 | 11,401.13 | 28.50% | 40,000.00 | 0.00 | |
| 100-41920-50221 | REPAIR AND MAINTENANCE SUPPLIES - EQUIP. | 43,380.16 | 9,666.53 | 45,000.00 | 35,333.47 | 78.52% | 45,000.00 | 0.00 | |
| 100-41920-50300 | PROFESSIONAL SERVICES | 140,283.50 | 53,813.36 | 140,000.00 | 86,186.64 | 61.56% | 140,000.00 | 0.00 | |
| Total Dept 41920 - INFORMATION TECHNOLOGY | | 239,489.05 | 92,078.76 | 225,000.00 | 132,921.24 | 59.08% | 225,000.00 | 0.00 | |
| Dept 42100 - POLICE | | | | | | | | | |
| 100-42100-50101 | FULL-TIME EMPLOYEES - REGULAR | 974,611.43 | 574,365.41 | 1,189,700.00 | 615,334.59 | 51.72% | 1,189,700.00 | 0.00 | |
| 100-42100-50102 | FULL-TIME EMPLOYEES - OVERTIME | 43,512.26 | 18,319.53 | 39,400.00 | 21,080.47 | 53.50% | 39,400.00 | 0.00 | |
| 100-42100-50103 | FULL-TIME EMPLOYEES - EVENT PAY | 27,668.07 | 18,790.88 | 18,000.00 | (790.88) | -4.39% | 23,000.00 | (5,000.00) | More officers working event, offsets with revenue |
| 100-42100-50111 | PART-TIME EMPLOYEES - REGULAR | 69,320.80 | 32,503.13 | 134,100.00 | 101,596.87 | 75.76% | 134,100.00 | 0.00 | |
| 100-42100-50112 | PART-TIME EMPLOYEES - OVERTIME | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-42100-50113 | PART-TIME EMPLOYEES - EVENT PAY | 10,114.13 | 1,836.25 | 15,000.00 | 13,163.75 | 87.76% | 15,000.00 | 0.00 | |
| 100-42100-50121 | PERA | 189,867.10 | 110,546.62 | 228,700.00 | 118,153.38 | 51.66% | 228,700.00 | 0.00 | |
| 100-42100-50122 | FICA | 2,649.89 | 1,479.11 | 5,900.00 | 4,420.89 | 74.93% | 5,900.00 | 0.00 | |
| 100-42100-50126 | MEDICARE | 16,078.20 | 9,214.59 | 19,800.00 | 10,585.41 | 53.46% | 19,800.00 | 0.00 | |
| 100-42100-50130 | EMPLOYER PAID INSURANCE | 208,857.63 | 95,619.38 | 216,700.00 | 121,080.62 | 55.87% | 216,700.00 | 0.00 | |
| 100-42100-50140 | UNEMPLOYMENT COMPENSATION | 0.00 | 100.00 | 0.00 | (100.00) | 0.00% | 100.00 | (100.00) | |
| 100-42100-50200 | OFFICE SUPPLIES | 2,104.69 | 527.92 | 3,600.00 | 3,072.08 | 85.34% | 3,600.00 | 0.00 | |
| 100-42100-50207 | TRAINING AND INSTRUCTIONAL SUPPLIES | 33,907.14 | 30,072.12 | 38,000.00 | 7,927.88 | 20.86% | 38,000.00 | 0.00 | |
| 100-42100-50209 | POLICE RESERVES | 3,427.88 | 1,309.50 | 3,500.00 | 2,190.50 | 62.59% | 3,500.00 | 0.00 | |
| 100-42100-50210 | OPERATING SUPPLIES | 29,647.65 | 26,376.69 | 21,000.00 | (5,376.69) | -25.60% | 23,000.00 | (2,000.00) | |
| 100-42100-50212 | MOTOR FUELS | 42,817.18 | 17,960.39 | 27,000.00 | 9,039.61 | 33.48% | 27,000.00 | 0.00 | |
| 100-42100-50220 | REPAIR AND MAINTENANCE SUPPLIES | 13,988.71 | 8,658.90 | 8,000.00 | (658.90) | -8.24% | 11,000.00 | (3,000.00) | |
| 100-42100-50223 | BUILDING REPAIR SUPPLIES | 7,447.38 | 1,340.68 | 7,500.00 | 6,159.32 | 82.12% | 7,500.00 | 0.00 | |
| 100-42100-50300 | PROFESSIONAL SERVICES | 24,844.32 | 22,883.90 | 30,000.00 | 7,116.10 | 23.72% | 30,000.00 | 0.00 | |
| 100-42100-50304 | LEGAL FEES | 43,455.39 | 21,747.99 | 25,500.00 | 3,752.01 | 14.71% | 25,500.00 | 0.00 | |
| 100-42100-50305 | PRISONER | 2,955.51 | 1,574.94 | 4,000.00 | 2,425.06 | 60.63% | 4,000.00 | 0.00 | |
| 100-42100-50321 | TELEPHONE | 18,967.96 | 5,577.46 | 12,500.00 | 6,922.54 | 55.38% | 12,500.00 | 0.00 | |
| 100-42100-50322 | POSTAGE | 21.60 | 28.23 | 100.00 | 71.77 | 71.77% | 100.00 | 0.00 | |
| 100-42100-50323 | RADIO UNITS | 18,579.35 | 8,766.21 | 23,500.00 | 14,733.79 | 62.70% | 23,500.00 | 0.00 | |
| 100-42100-50350 | GENERAL NOTICES AND PUB INFO | 294.85 | 0.00 | 800.00 | 800.00 | 100.00% | 800.00 | 0.00 | |
| 100-42100-50365 | WORKER'S COMPENSATION INSURANCE | 138,953.00 | 135,658.00 | 150,000.00 | 14,342.00 | 9.56% | 135,658.00 | 14,342.00 | Billed amount came in lower than budgeted. |
| 100-42100-50400 | REPAIR AND MAINTENANCE - CONTRACT | 229.87 | 1,595.09 | 500.00 | (1,095.09) | -219.02% | 2,500.00 | (2,000.00) | |
| 100-42100-50403 | REPAIR AND MAINTENANCE - VEHICLE | 4,711.99 | 7,219.99 | 7,700.00 | 480.01 | 6.23% | 9,000.00 | (1,300.00) | |
| 100-42100-50417 | UNIFORMS | 27,768.72 | 12,589.16 | 26,000.00 | 13,410.84 | 51.58% | 26,000.00 | 0.00 | |
| 100-42100-50430 | MISCELLANEOUS EXPENSE | 40,983.95 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-42100-50433 | DUES AND MEMBERSHIPS | 2,932.10 | 2,506.50 | 3,500.00 | 993.50 | 28.39% | 3,500.00 | 0.00 | |
| 100-42100-50438 | POLICE K9 | 615.98 | 1,409.17 | 0.00 | (1,409.17) | 0.00% | 1,500.00 | (1,500.00) | |
| Total Dept 42100 - POLICE | | 2,001,334.73 | 1,170,577.74 | 2,260,000.00 | 1,089,422.26 | 48.20% | 2,260,558.00 | (558.00) | |
| Dept 42102 - POLICE ADMINISTRATION | | | | | | | | | |
| 100-42102-50101 | FULL-TIME EMPLOYEES - REGULAR | 122,533.19 | 67,240.03 | 140,300.00 | 73,059.97 | 52.07% | 140,300.00 | 0.00 | |
| 100-42102-50102 | FULL-TIME EMPLOYEES - OVERTIME | 398.49 | 0.00 | 500.00 | 500.00 | 100.00% | 500.00 | 0.00 | |
| 100-42102-50111 | PART-TIME EMPLOYEES - REGULAR | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-42102-50121 | PERA | 8,834.94 | 5,043.00 | 10,600.00 | 5,557.00 | 52.42% | 10,600.00 | 0.00 | |
| 100-42102-50122 | FICA | 7,938.69 | 4,325.00 | 8,800.00 | 4,475.00 | 50.85% | 8,800.00 | 0.00 | |
| 100-42102-50126 | MEDICARE | 1,856.43 | 1,011.49 | 2,100.00 | 1,088.51 | 51.83% | 2,100.00 | 0.00 | |
| 100-42102-50130 | EMPLOYER PAID INSURANCE | 26,440.88 | 12,976.13 | 25,900.00 | 12,923.87 | 49.90% | 25,900.00 | 0.00 | |
| 100-42102-50365 | WORKER'S COMPENSATION INSURANCE | 1,095.00 | 1,581.00 | 0.00 | (1,581.00) | 0.00% | 1,581.00 | (1,581.00) | |
| Total Dept 42102 - POLICE ADMINISTRATION | | 169,097.62 | 92,176.65 | 188,200.00 | 96,023.35 | 51.02% | 189,781.00 | (1,581.00) | |

CITY OF CORCORAN
2023 PERFORMANCE REPORT - GENERAL FUND
 PERIOD ENDING 06/30/2023
 UNAUDITED

| GL NUMBER | DESCRIPTION | END BALANCE 12/31/2022 | YTD BALANCE 06/30/2023 | 2023 AMENDED BUDGET | AVAILABLE BALANCE | % BUDGET REMAINING | YEAR END PROJECTION | VARIANCE BUDGET VS. YEP | COMMENTS |
|--|--|---------------------------|---------------------------|------------------------|----------------------|-----------------------|------------------------|----------------------------|---|
| Dept 42151 - EMERGENCY MANAGEMENT | | | | | | | | | |
| 100-42151-50207 | TRAINING AND INSTRUCTIONAL SUPPLIES | 166.39 | 0.00 | 3,000.00 | 3,000.00 | 100.00% | 3,000.00 | 0.00 | |
| 100-42151-50210 | OPERATING SUPPLIES | 5,181.83 | 220.83 | 5,450.00 | 5,229.17 | 95.95% | 5,450.00 | 0.00 | |
| 100-42151-50381 | ELECTRIC UTILITIES | 1,168.18 | 622.04 | 1,000.00 | 377.96 | 37.80% | 1,000.00 | 0.00 | |
| 100-42151-50404 | REPAIR AND MAINTENANCE - MACHINERY/EQUIP | 830.25 | 871.74 | 1,700.00 | 828.26 | 48.72% | 1,700.00 | 0.00 | |
| 100-42151-50433 | DUES AND MEMBERSHIPS | 100.00 | 0.00 | 500.00 | 500.00 | 100.00% | 500.00 | 0.00 | |
| Total Dept 42151 - EMERGENCY MANAGEMENT | | 7,446.65 | 1,714.61 | 11,650.00 | 9,935.39 | 85.28% | 11,650.00 | 0.00 | |
| Dept 42200 - FIRE | | | | | | | | | |
| 100-42200-50101 | FULL-TIME EMPLOYEES - REGULAR | 0.00 | 0.00 | 18,700.00 | 18,700.00 | 100.00% | 18,700.00 | 0.00 | |
| 100-42200-50121 | PERA | 0.00 | 0.00 | 3,400.00 | 3,400.00 | 100.00% | 3,400.00 | 0.00 | |
| 100-42200-50122 | FICA | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-42200-50126 | MEDICARE | 0.00 | 0.00 | 300.00 | 300.00 | 100.00% | 300.00 | 0.00 | |
| 100-42200-50130 | EMPLOYER PAID INSURANCE | 0.00 | 0.00 | 3,500.00 | 3,500.00 | 100.00% | 3,500.00 | 0.00 | |
| 100-42200-50207 | TRAINING AND INSTRUCTIONAL SUPPLIES | 0.00 | 0.00 | 1,000.00 | 1,000.00 | 100.00% | 1,000.00 | 0.00 | |
| 100-42200-50210 | OPERATING SUPPLIES | 0.00 | 0.00 | 5,000.00 | 5,000.00 | 100.00% | 5,000.00 | 0.00 | |
| 100-42200-50300 | PROFESSIONAL SERVICES | 445,933.67 | 285,020.91 | 569,630.00 | 284,609.09 | 49.96% | 569,630.00 | 0.00 | |
| 100-42200-50321 | TELEPHONE | 0.00 | 0.00 | 150.00 | 150.00 | 100.00% | 150.00 | 0.00 | |
| 100-42200-50323 | RADIO UNITS | 0.00 | 0.00 | 300.00 | 300.00 | 100.00% | 300.00 | 0.00 | |
| 100-42200-50365 | WORKER'S COMPENSATION INSURANCE | 0.00 | 0.00 | 3,500.00 | 3,500.00 | 100.00% | 3,500.00 | 0.00 | |
| 100-42200-50403 | REPAIR AND MAINTENANCE - VEHICLE | 0.00 | 0.00 | 1,200.00 | 1,200.00 | 100.00% | 1,200.00 | 0.00 | |
| 100-42200-50417 | UNIFORMS | 0.00 | 0.00 | 1,500.00 | 1,500.00 | 100.00% | 1,500.00 | 0.00 | |
| 100-42200-50433 | DUES AND MEMBERSHIPS | 0.00 | 0.00 | 500.00 | 500.00 | 100.00% | 500.00 | 0.00 | |
| 100-42200-50580 | OTHER EQUIPMENT | 0.00 | 0.00 | 10,000.00 | 10,000.00 | 100.00% | 10,000.00 | 0.00 | |
| Total Dept 42200 - FIRE | | 445,933.67 | 285,020.91 | 618,680.00 | 333,659.09 | 53.93% | 618,680.00 | 0.00 | |
| Dept 42400 - BUILDING INSPECTION | | | | | | | | | |
| 100-42400-50101 | FULL-TIME EMPLOYEES - REGULAR | 120,831.41 | 89,427.12 | 197,100.00 | 107,672.88 | 54.63% | 197,100.00 | 0.00 | |
| 100-42400-50102 | FULL-TIME EMPLOYEES - OVERTIME | 886.22 | 383.04 | 1,000.00 | 616.96 | 61.70% | 1,000.00 | 0.00 | |
| 100-42400-50121 | PERA | 8,493.16 | 6,735.81 | 14,900.00 | 8,164.19 | 54.79% | 14,900.00 | 0.00 | |
| 100-42400-50122 | FICA | 8,053.89 | 5,951.59 | 12,300.00 | 6,348.41 | 51.61% | 12,300.00 | 0.00 | |
| 100-42400-50126 | MEDICARE | 1,893.59 | 1,352.97 | 2,900.00 | 1,547.03 | 53.35% | 2,900.00 | 0.00 | |
| 100-42400-50130 | EMPLOYER PAID INSURANCE | 13,598.48 | 8,882.77 | 32,700.00 | 23,817.23 | 72.84% | 32,700.00 | 0.00 | |
| 100-42400-50207 | TRAINING AND INSTRUCTIONAL SUPPLIES | 1,167.51 | 880.82 | 1,000.00 | 119.18 | 11.92% | 1,000.00 | 0.00 | |
| 100-42400-50300 | PROFESSIONAL SERVICES | 223,322.32 | 69,216.81 | 400,000.00 | 330,783.19 | 82.70% | 400,000.00 | 0.00 | |
| 100-42400-50303 | ENGINEERING FEES | 32,425.50 | 14,030.60 | 30,000.00 | 15,969.40 | 53.23% | 30,000.00 | 0.00 | |
| 100-42400-50331 | TRAVEL EXPENSE | 129.50 | 60.28 | 0.00 | (60.28) | 0.00% | 60.28 | (60.28) | |
| 100-42400-50365 | WORKER'S COMPENSATION INSURANCE | 1,493.00 | 806.00 | 0.00 | (806.00) | 0.00% | 806.00 | (806.00) | |
| 100-42400-50432 | CREDIT CARD FEES | 430.62 | 217.35 | 0.00 | (217.35) | 0.00% | 217.35 | (217.35) | |
| 100-42400-50433 | DUES AND MEMBERSHIPS | 65.00 | 108.55 | 0.00 | (108.55) | 0.00% | 108.55 | (108.55) | |
| Total Dept 42400 - BUILDING INSPECTION | | 412,790.20 | 198,053.71 | 691,900.00 | 493,846.29 | 71.38% | 693,092.18 | (1,192.18) | |
| Dept 42401 - CODE ENFORCEMENT | | | | | | | | | |
| 100-42401-50101 | FULL-TIME EMPLOYEES - REGULAR | 0.00 | 7,732.97 | 28,000.00 | 20,267.03 | 72.38% | 28,000.00 | 0.00 | |
| 100-42401-50102 | FULL-TIME EMPLOYEES - OVERTIME | 0.00 | 86.55 | 1,000.00 | 913.45 | 91.35% | 1,000.00 | 0.00 | |
| 100-42401-50121 | PERA | 0.00 | 593.77 | 2,200.00 | 1,606.23 | 73.01% | 2,200.00 | 0.00 | |
| 100-42401-50122 | FICA | 0.00 | 523.09 | 1,800.00 | 1,276.91 | 70.94% | 1,800.00 | 0.00 | |
| 100-42401-50126 | MEDICARE | 0.00 | 122.36 | 500.00 | 377.64 | 75.53% | 500.00 | 0.00 | |
| 100-42401-50130 | EMPLOYER PAID INSURANCE | 350.00 | 1,182.51 | 3,800.00 | 2,617.49 | 68.88% | 3,800.00 | 0.00 | |
| 100-42401-50207 | TRAINING AND INSTRUCTIONAL SUPPLIES | 0.00 | 0.00 | 1,500.00 | 1,500.00 | 100.00% | 1,500.00 | 0.00 | |
| 100-42401-50212 | MOTOR FUELS | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-42401-50300 | PROFESSIONAL SERVICES | 23,450.75 | 10,634.50 | 15,000.00 | 4,365.50 | 29.10% | 17,000.00 | (2,000.00) | Year end projection includes the creation of a \$6,000 rental map from Stantec that was approved by Council and not previously budgeted. Expected that conversion fees for single-family rental licenses will help go towards funding this. |
| 100-42401-50365 | WORKER'S COMPENSATION INSURANCE | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-42401-50417 | UNIFORMS | 0.00 | 0.00 | 100.00 | 100.00 | 100.00% | 100.00 | 0.00 | |
| 100-42401-50433 | DUES AND MEMBERSHIPS | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| Total Dept 42401 - CODE ENFORCEMENT | | 23,800.75 | 20,875.75 | 53,900.00 | 33,024.25 | 61.27% | 55,900.00 | (2,000.00) | |

CITY OF CORCORAN
2023 PERFORMANCE REPORT - GENERAL FUND
 PERIOD ENDING 06/30/2023
 UNAUDITED

| GL NUMBER | DESCRIPTION | END BALANCE 12/31/2022 | YTD BALANCE 06/30/2023 | 2023 AMENDED BUDGET | AVAILABLE BALANCE | % BUDGET REMAINING | YEAR END PROJECTION | VARIANCE BUDGET VS. YEP | COMMENTS |
|--|-------------------------------------|---------------------------|---------------------------|------------------------|----------------------|-----------------------|------------------------|----------------------------|--|
| Dept 43100 - HIGHWAYS, STREETS & ROADWAYS | | | | | | | | | |
| 100-43100-50101 | FULL-TIME EMPLOYEES - REGULAR | 609,889.83 | 268,883.00 | 701,400.00 | 432,517.00 | 61.66% | 701,400.00 | 0.00 | |
| 100-43100-50102 | FULL-TIME EMPLOYEES - OVERTIME | 70,928.59 | 47,631.17 | 52,500.00 | 4,868.83 | 9.27% | 52,500.00 | 0.00 | |
| 100-43100-50111 | PART-TIME EMPLOYEES - REGULAR | 30,211.98 | 5,684.28 | 7,100.00 | 1,415.72 | 19.94% | 7,100.00 | 0.00 | |
| 100-43100-50112 | PART-TIME EMPLOYEES - OVERTIME | 23.14 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-43100-50121 | PERA | 48,747.33 | 23,769.63 | 56,600.00 | 32,830.37 | 58.00% | 56,600.00 | 0.00 | |
| 100-43100-50122 | FICA | 44,374.04 | 19,051.04 | 47,200.00 | 28,148.96 | 59.64% | 47,200.00 | 0.00 | |
| 100-43100-50126 | MEDICARE | 10,140.39 | 4,455.55 | 11,100.00 | 6,644.45 | 59.86% | 11,100.00 | 0.00 | |
| 100-43100-50130 | EMPLOYER PAID INSURANCE | 126,506.84 | 57,051.28 | 150,000.00 | 92,948.72 | 61.97% | 150,000.00 | 0.00 | |
| 100-43100-50140 | UNEMPLOYMENT COMPENSATION | 0.00 | 7,726.35 | 0.00 | (7,726.35) | 0.00% | 7,726.35 | (7,726.35) | |
| 100-43100-50200 | OFFICE SUPPLIES | 669.22 | 0.00 | 1,000.00 | 1,000.00 | 100.00% | 1,000.00 | 0.00 | |
| 100-43100-50207 | TRAINING AND INSTRUCTIONAL SUPPLIES | 1,156.38 | 565.55 | 7,500.00 | 6,934.45 | 92.46% | 7,500.00 | 0.00 | |
| 100-43100-50210 | OPERATING SUPPLIES | 18,752.28 | 5,198.20 | 43,500.00 | 38,301.80 | 88.05% | 43,500.00 | 0.00 | |
| 100-43100-50212 | MOTOR FUELS | 60,164.31 | 27,689.81 | 60,000.00 | 32,310.19 | 53.85% | 60,000.00 | 0.00 | |
| 100-43100-50220 | REPAIR AND MAINTENANCE SUPPLIES | 41,960.17 | 17,577.91 | 70,000.00 | 52,422.09 | 74.89% | 70,000.00 | 0.00 | |
| 100-43100-50223 | BUILDING REPAIR SUPPLIES | 11,518.73 | 2,362.65 | 15,000.00 | 12,637.35 | 84.25% | 15,000.00 | 0.00 | |
| 100-43100-50225 | LANDSCAPE/DITCH MATERIALS | 68,199.05 | 10,943.47 | 50,000.00 | 39,056.53 | 78.11% | 50,000.00 | 0.00 | |
| 100-43100-50226 | SIGN REPAIR MATERIALS | 5,170.56 | 0.00 | 10,000.00 | 10,000.00 | 100.00% | 10,000.00 | 0.00 | |
| 100-43100-50300 | PROFESSIONAL SERVICES | 731.77 | 495.00 | 0.00 | (495.00) | 0.00% | 495.00 | (495.00) | |
| 100-43100-50321 | TELEPHONE | 6,401.00 | 3,432.86 | 11,500.00 | 8,067.14 | 70.15% | 11,500.00 | 0.00 | |
| 100-43100-50323 | RADIO UNITS | 3,397.68 | 1,619.40 | 4,000.00 | 2,380.60 | 59.52% | 4,000.00 | 0.00 | |
| 100-43100-50350 | GENERAL NOTICES AND PUB INFO | 431.40 | 0.00 | 500.00 | 500.00 | 100.00% | 500.00 | 0.00 | |
| 100-43100-50365 | WORKER'S COMPENSATION INSURANCE | 41,503.79 | 34,469.00 | 35,000.00 | 531.00 | 1.52% | 35,000.00 | 0.00 | |
| 100-43100-50380 | UTILITY SERVICES | 16,495.61 | 9,333.68 | 22,000.00 | 12,666.32 | 57.57% | 22,000.00 | 0.00 | |
| 100-43100-50381 | ELECTRIC UTILITIES | 18,997.74 | 8,388.06 | 10,000.00 | 1,611.94 | 16.12% | 20,000.00 | (10,000.00) | Higher than anticipated electric bills |
| 100-43100-50400 | REPAIR AND MAINTENANCE - CONTRACT | 6,854.03 | 4,618.47 | 7,500.00 | 2,881.53 | 38.42% | 7,500.00 | 0.00 | |
| 100-43100-50401 | REPAIR AND MAINTENANCE - BUILDING | 4,319.18 | 1,609.24 | 10,000.00 | 8,390.76 | 83.91% | 10,000.00 | 0.00 | |
| 100-43100-50403 | REPAIR AND MAINTENANCE - VEHICLE | 1,778.72 | 270.00 | 10,000.00 | 9,730.00 | 97.30% | 10,000.00 | 0.00 | |
| 100-43100-50417 | UNIFORMS | 10,844.66 | 4,336.53 | 12,500.00 | 8,163.47 | 65.31% | 12,500.00 | 0.00 | |
| 100-43100-50430 | MISCELLANEOUS EXPENSE | 108,072.98 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-43100-50433 | DUES AND MEMBERSHIPS | 372.50 | 0.00 | 500.00 | 500.00 | 100.00% | 500.00 | 0.00 | |
| 100-43100-50811 | INSURANCE REFUNDS | 35,519.05 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| Total Dept 43100 - HIGHWAYS, STREETS & ROADWAYS | | 1,404,132.95 | 567,162.13 | 1,406,400.00 | 839,237.87 | 59.67% | 1,424,621.35 | (18,221.35) | |
| Dept 43121 - PAVED STREETS | | | | | | | | | |
| 100-43121-50224 | STREET MAINTENANCE MATERIALS | 6,263.20 | 8,618.70 | 15,000.00 | 6,381.30 | 42.54% | 15,000.00 | 0.00 | |
| 100-43121-50400 | REPAIR AND MAINTENANCE - CONTRACT | 243,266.23 | 3,250.00 | 290,000.00 | 286,750.00 | 98.88% | 290,000.00 | 0.00 | |
| Total Dept 43121 - PAVED STREETS | | 249,529.43 | 11,868.70 | 305,000.00 | 293,131.30 | 96.11% | 305,000.00 | 0.00 | |
| Dept 43122 - UNPAVED STREETS | | | | | | | | | |
| 100-43122-50224 | STREET MAINTENANCE MATERIALS | 92,394.92 | 113,687.40 | 112,500.00 | (1,187.40) | -1.06% | 113,687.40 | (1,187.40) | |
| 100-43122-50400 | REPAIR AND MAINTENANCE - CONTRACT | 222,672.37 | 81,839.37 | 232,500.00 | 150,660.63 | 64.80% | 232,500.00 | 0.00 | |
| Total Dept 43122 - UNPAVED STREETS | | 315,067.29 | 195,526.77 | 345,000.00 | 149,473.23 | 43.33% | 346,187.40 | (1,187.40) | |
| Dept 43125 - ICE & SNOW REMOVAL | | | | | | | | | |
| 100-43125-50210 | OPERATING SUPPLIES | 45,351.38 | 18,271.01 | 55,000.00 | 36,728.99 | 66.78% | 55,000.00 | 0.00 | |
| 100-43125-50300 | PROFESSIONAL SERVICES | 650.00 | 0.00 | 2,100.00 | 2,100.00 | 100.00% | 2,100.00 | 0.00 | |
| Total Dept 43125 - ICE & SNOW REMOVAL | | 46,001.38 | 18,271.01 | 57,100.00 | 38,828.99 | 68.00% | 57,100.00 | 0.00 | |

CITY OF CORCORAN
2023 PERFORMANCE REPORT - GENERAL FUND
 PERIOD ENDING 06/30/2023
 UNAUDITED

| GL NUMBER | DESCRIPTION | END BALANCE 12/31/2022 | YTD BALANCE 06/30/2023 | 2023 AMENDED BUDGET | AVAILABLE BALANCE | % BUDGET REMAINING | YEAR END PROJECTION | VARIANCE BUDGET VS. YEP | COMMENTS |
|---------------------------------------|--|---------------------------|---------------------------|------------------------|----------------------|-----------------------|------------------------|----------------------------|----------|
| Dept 43170 - ENGINEERING | | | | | | | | | |
| 100-43170-50101 | FULL-TIME EMPLOYEES - REGULAR | 0.00 | 28,834.24 | 185,700.00 | 156,865.76 | 84.47% | 185,700.00 | 0.00 | |
| 100-43170-50102 | FULL-TIME EMPLOYEES - OVERTIME | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-43170-50111 | PART-TIME EMPLOYEES - REGULAR | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-43170-50121 | PERA | 0.00 | 2,162.54 | 14,000.00 | 11,837.46 | 84.55% | 14,000.00 | 0.00 | |
| 100-43170-50122 | FICA | 0.00 | 1,754.39 | 11,600.00 | 9,845.61 | 84.88% | 11,600.00 | 0.00 | |
| 100-43170-50126 | MEDICARE | 0.00 | 410.23 | 2,700.00 | 2,289.77 | 84.81% | 2,700.00 | 0.00 | |
| 100-43170-50130 | EMPLOYER PAID INSURANCE | 0.00 | 1,488.52 | 34,700.00 | 33,211.48 | 95.71% | 34,700.00 | 0.00 | |
| 100-43170-50300 | PROFESSIONAL SERVICES | 75,961.00 | 41,018.30 | 80,000.00 | 38,981.70 | 48.73% | 80,000.00 | 0.00 | |
| 100-43170-50309 | WATERSHED LGU | 11,965.25 | 4,612.30 | 10,000.00 | 5,387.70 | 53.88% | 10,000.00 | 0.00 | |
| Total Dept 43170 - ENGINEERING | | 87,926.25 | 80,280.52 | 338,700.00 | 258,419.48 | 76.30% | 338,700.00 | 0.00 | |
| Dept 43201 - RECYCLING | | | | | | | | | |
| 100-43201-50210 | OPERATING SUPPLIES | 3,987.32 | 3,342.05 | 3,500.00 | 157.95 | 4.51% | 3,500.00 | 0.00 | |
| 100-43201-50300 | PROFESSIONAL SERVICES | 8,522.80 | 4,360.45 | 10,000.00 | 5,639.55 | 56.40% | 10,000.00 | 0.00 | |
| Total Dept 43201 - RECYCLING | | 12,510.12 | 7,702.50 | 13,500.00 | 5,797.50 | 42.94% | 13,500.00 | 0.00 | |
| Dept 45100 - RECREATION | | | | | | | | | |
| 100-45100-50101 | FULL-TIME EMPLOYEES - REGULAR | 34,102.21 | 18,365.00 | 38,800.00 | 20,435.00 | 52.67% | 38,800.00 | 0.00 | |
| 100-45100-50102 | FULL-TIME EMPLOYEES - OVERTIME | 0.00 | 13.77 | 0.00 | (13.77) | 0.00% | 13.77 | (13.77) | |
| 100-45100-50111 | PART-TIME EMPLOYEES - REGULAR | 0.00 | 0.00 | 27,000.00 | 27,000.00 | 100.00% | 27,000.00 | 0.00 | |
| 100-45100-50121 | PERA | 2,557.66 | 1,378.41 | 3,000.00 | 1,621.59 | 54.05% | 3,000.00 | 0.00 | |
| 100-45100-50122 | FICA | 2,251.87 | 1,201.56 | 4,200.00 | 2,998.44 | 71.39% | 4,200.00 | 0.00 | |
| 100-45100-50126 | MEDICARE | 526.61 | 281.01 | 1,000.00 | 718.99 | 71.90% | 1,000.00 | 0.00 | |
| 100-45100-50130 | EMPLOYER PAID INSURANCE | 4,658.26 | 2,294.16 | 8,800.00 | 6,505.84 | 73.93% | 8,800.00 | 0.00 | |
| 100-45100-50207 | TRAINING AND INSTRUCTIONAL SUPPLIES | 536.73 | 2,248.97 | 17,770.00 | 15,521.03 | 87.34% | 17,770.00 | 0.00 | |
| 100-45100-50210 | OPERATING SUPPLIES | 21,010.89 | 12,001.75 | 21,430.00 | 9,428.25 | 44.00% | 21,430.00 | 0.00 | |
| 100-45100-50300 | PROFESSIONAL SERVICES | 2,087.22 | 2,514.22 | 3,360.00 | 845.78 | 25.17% | 3,360.00 | 0.00 | |
| 100-45100-50321 | TELEPHONE | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-45100-50365 | WORKER'S COMPENSATION INSURANCE | 3,940.00 | 4,082.00 | 0.00 | (4,082.00) | 0.00% | 4,082.00 | (4,082.00) | |
| 100-45100-50417 | UNIFORMS | 0.00 | 129.00 | 150.00 | 21.00 | 14.00% | 150.00 | 0.00 | |
| 100-45100-50433 | DUES AND MEMBERSHIPS | 285.00 | 485.00 | 500.00 | 15.00 | 3.00% | 500.00 | 0.00 | |
| Total Dept 45100 - RECREATION | | 71,956.45 | 44,994.85 | 126,010.00 | 81,015.15 | 64.29% | 130,105.77 | (4,095.77) | |
| Dept 45200 - PARKS | | | | | | | | | |
| 100-45200-50101 | FULL-TIME EMPLOYEES - REGULAR | 47,440.15 | 25,287.76 | 38,800.00 | 13,512.24 | 34.83% | 38,800.00 | 0.00 | |
| 100-45200-50102 | FULL-TIME EMPLOYEES - OVERTIME | 0.00 | 13.78 | 1,000.00 | 986.22 | 98.62% | 1,000.00 | 0.00 | |
| 100-45200-50111 | PART-TIME EMPLOYEES - REGULAR | 0.00 | 9,192.66 | 19,700.00 | 10,507.34 | 53.34% | 19,700.00 | 0.00 | |
| 100-45200-50121 | PERA | 2,432.93 | 1,378.42 | 3,000.00 | 1,621.58 | 54.05% | 3,000.00 | 0.00 | |
| 100-45200-50122 | FICA | 3,160.27 | 2,200.80 | 3,700.00 | 1,499.20 | 40.52% | 3,700.00 | 0.00 | |
| 100-45200-50126 | MEDICARE | 721.40 | 514.70 | 900.00 | 385.30 | 42.81% | 900.00 | 0.00 | |
| 100-45200-50130 | EMPLOYER PAID INSURANCE | 9,856.14 | 4,791.42 | 8,800.00 | 4,008.58 | 45.55% | 8,800.00 | 0.00 | |
| 100-45200-50140 | UNEMPLOYMENT COMPENSATION | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-45200-50207 | TRAINING AND INSTRUCTIONAL SUPPLIES | 0.00 | 0.00 | 100.00 | 100.00 | 100.00% | 100.00 | 0.00 | |
| 100-45200-50210 | OPERATING SUPPLIES | 16,912.64 | 6,472.30 | 30,000.00 | 23,527.70 | 78.43% | 30,000.00 | 0.00 | |
| 100-45200-50221 | REPAIR AND MAINTENANCE SUPPLIES - EQUIP. | 27,440.50 | 5,305.19 | 50,000.00 | 44,694.81 | 89.39% | 50,000.00 | 0.00 | |
| 100-45200-50300 | PROFESSIONAL SERVICES | 3,673.50 | 750.06 | 1,000.00 | 249.94 | 24.99% | 1,000.00 | 0.00 | |
| 100-45200-50321 | TELEPHONE | 1,229.47 | 0.00 | 2,000.00 | 2,000.00 | 100.00% | 2,000.00 | 0.00 | |
| 100-45200-50365 | WORKER'S COMPENSATION INSURANCE | 9,184.00 | 9,935.00 | 14,000.00 | 4,065.00 | 29.04% | 14,000.00 | 0.00 | |
| 100-45200-50380 | UTILITY SERVICES | 8,544.67 | 1,390.32 | 6,500.00 | 5,109.68 | 78.61% | 6,500.00 | 0.00 | |
| 100-45200-50381 | ELECTRIC UTILITIES | 1,835.95 | 1,178.59 | 1,500.00 | 321.41 | 21.43% | 1,500.00 | 0.00 | |
| 100-45200-50382 | WATER & SEWER | 162.73 | 123.23 | 2,500.00 | 2,376.77 | 95.07% | 2,500.00 | 0.00 | |
| 100-45200-50417 | UNIFORMS | 0.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-45200-50433 | DUES AND MEMBERSHIPS | 150.00 | 0.00 | 0.00 | 0.00 | 100.00% | 0.00 | 0.00 | |
| 100-45200-50530 | IMPROVEMENTS OTHER THAN BLDGS | 40,499.19 | 46,953.24 | 40,000.00 | (6,953.24) | -17.38% | 46,953.24 | (6,953.24) | |
| Total Dept 45200 - PARKS | | 173,243.54 | 115,487.47 | 223,500.00 | 108,012.53 | 48.33% | 230,453.24 | (6,953.24) | |
| TOTAL EXPENDITURES | | 7,831,737.74 | 3,701,725.68 | 8,952,680.00 | 5,250,954.32 | 58.65% | 9,049,850.83 | (97,170.83) | |

CITY OF CORCORAN
2023 PERFORMANCE REPORT - GENERAL FUND
 PERIOD ENDING 06/30/2023
 UNAUDITED

| GL NUMBER | DESCRIPTION | END BALANCE 12/31/2022 | YTD BALANCE 06/30/2023 | 2023 AMENDED BUDGET | AVAILABLE BALANCE | % BUDGET REMAINING | YEAR END PROJECTION | VARIANCE BUDGET VS. YEP | COMMENTS |
|---------------------------------|-------------|---------------------------|---------------------------|------------------------|----------------------|-----------------------|------------------------|----------------------------|----------|
| Fund 100 - GENERAL FUND: | | | | | | | | | |
| TOTAL REVENUES | | 7,636,045.03 | 4,121,913.97 | 8,952,680.00 | 4,830,766.03 | 53.96% | 9,163,154.28 | | |
| TOTAL EXPENDITURES | | 7,831,737.74 | 3,701,725.68 | 8,952,680.00 | 5,250,954.32 | 58.65% | 9,049,850.83 | | |
| NET OF REVENUES & EXPENDITURES | | (195,692.71) | 420,188.29 | 0.00 | (420,188.29) | 0.00% | 113,303.45 | | |

City of Corcoran 2023 City Council Schedule

Agenda Item: 13.

Below is a tentative schedule for City Council meetings. The items and schedule are subject to change.

August 10, 2023 Work Session

- Logo Update

August 10, 2023

- Draft 2024-25 CIP and Pre Orders
- Public Hearing: Controlled Substance Ordinance (Jess to confirm)
- Discussion Adult Use Cannabis Regulation
 - Controlled Substance Regulation THC
- Public Hearing: Adopt Interim Moritorium Ordinance (Jess to confirm)
- Discussion Adult Use Cannabis Regulation
 - Moritorium Discussion
- Trail Haven Bridge Replacement – Pay Request 2*
- Organics Recycling Requirements

August 24, 2023 Work Session

- Draft 2024 Budget

August 24, 2023

- Planning Project Update
- Paula Steelman – Years of Service Recognition (15 Years)
- Red Barn Pet Retreat CPA, RZ, PP, CUP and SP (city file 23-008)
- Park Signs Plan

September 12, 2023 – Annual Charter Commission Meeting

- 4 Year Mayoral Term (Staff)
- Voter Information Information (Staff)
- Terms and Appointments (Staff)
- Stagger Commission Terms (Guenthner)
- Ward Information (Tucker)
- Joint Council Meeting (Staff)

September 14, 2023 Work Session

- Underlying Zoning Districts

September 14, 2023

- Preliminary Budget and Levy
- Fund Creation – Internal Revenue Account – Recruitment and Retention
- Levy Insert

September 28, 2023

- Progress Report – 2023 Goals and Measurables
- Planning Project Update

October 12, 2023

-

October 26, 2023

- Planning Project Update
- Robbie Kottke - Years of Service Recognition (5 Years)

November 9, 2023

- Discuss the Assessor Contract – Need to Give Notice of Renewal by March 1, 2024 – If RFP Start in December

November 20, 2023 (Monday Meeting Due to Holiday)

December 18, 2023 (Monday Meeting - Only Meeting in December)

Additional Future Meetings