Goodhue County
Land Use Management

Building – Environmental Health – Zoning Departments
509 West 5th Street, Red Wing, MN 55066
651-385-3104

To: Planning Advisory Commission
From: Megan Smith, Land Use Management Director
Mtg. Date: September 15, 2025
Report Date: September 5, 2025

PUBLIC HEARING: Request for Conditional Use Permit for Manure Storage
Request submitted by Eric Ryan (Owner) to allow construction of a new manure storage that is proposed to store up to 3.1 million gallons of manure.

ATTACHMENTS AND LINKS:

- Application and submitted project summary
- Site maps prepared by staff

APPLICATION INFORMATION:
Applicant: Eric Ryan (Owner)
Address of Request: 23933 County 9 Blvd, Goodhue, MN 55027
Parcel: 33.024.0401
Zoning: A1- Agricultural Protection
Abbreviated Legal: Part of the SE1/4 of Sec 24 Twp 111 Range 15.
Township Information: Goodhue Township acknowledged the application with a signature

OVERVIEW:
The Planning Advisory Commission will hold a public hearing and consider a request submitted by Eric Ryan, for property located at 23933 County 9 Blvd, Goodhue, MN 55027. Mr. Ryan is requesting a conditional use permit to allow construction of a new manure storage that is 415 feet in length x 218 feet wide x 10 feet deep. The total volume exceeds 500,000 gallons and therefore can only be permitted through a conditional use permit. The proposed capacity is 3,100,000 gallons.

The benefit of larger manure storage is that they allow the farm operator to reduce manure hauling trips, which reduces manure application from daily and weekly, or monthly, or bi-annually, which results in less opportunities of unintentional nutrient runoff, and less odor. It also allows for increased efficiency in the farming operation. The manure will be injected into the ground in the fall and spring during normal conditions.

The farm is permitted for up to 460 animal units.

A variance was granted by the Goodhue County Board of Adjustment on August 25, 2025, to place the manure pit 70 feet from the side yard property line when 100 feet is required, as shown on the site plan.

PROJECT SUMMARY:

Property Information

- The site is currently zoned agricultural use, and is a county registered feedlot.
- The property owner has a home within the project area, and there are 8 additional homes within 1 mile of the site.
- The site is located 3.5 miles east of the city of Goodhue, along Co. Rd. 9
- No wetlands, floodplain, shoreland, or bluff areas exist within the site boundaries.

Proposed Use:

- If approval of the conditional use permit is granted, the use of the property will not change and will remain agricultural.

Accessibility:

- The Right-of-Way authority for County Road 9 is Goodhue County. The site has 3 driveways off of #9, which is atypical.
- The site is located on the corner of Co. #9 and 240th Ave, which is a township road. One driveway exists off of 240th Ave.

Proposed Findings of Fact:

1. The conversion of an earthen lagoon with a concrete one does not appear to impede the normal and orderly development and improvement of surrounding vacant property for uses predominant to the area.

2. The proposed use will comply with Goodhue Co Zoning Ordinance, Article 4, requirements to obtain a conditional use permit.

3. The proposed 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 immediate vicinity.

4. That the establishment of the use will not impede the normal and orderly development and improvement of surrounding vacant property for uses predominant to the area.

5. That adequate utilities, access roads, drainage and other necessary facilities have been or are being provided.

6. That adequate measures have been or will be taken to provide sufficient off-street parking and loading space to serve the proposed use.

7. The use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, not substantially diminish and impair property values within the immediate vicinity. (Article 4, Sec. 5, Subd. 1).

8. That adequate measures have been or will be taken to prevent or control offensive odor, fumes, dust, noise, vibration, so that none of these will constitute a nuisance, and to control lighted signs and other lights in such a manner that no disturbance to neighboring properties will result. (Article 4, Sec. 5, Subd. 1).

STAFF RECOMMENDATION:

LUM Staff recommends the Planning Advisory Commission

- adopt the staff report into the record;
- accept the application, testimony, exhibits, and other evidence presented into the record; and

Recommend the County Board of Commissioners **APPROVE** the map amendment request from Mr. Ryan to allow construction of a new manure storage, with the following conditions:

1. The property owner must be in good standing with the County's feedlot regulations, and maintain an active feedlot registration in accordance with Goodhue Co Zoning Ordinance, Article 13.
2. A building permit mut be approved for the new lagoon
3. The feedlot must comply with all necessary state and federal permits and licensing, including Compliance with Goodhue County Zoning Ordinance: Article 13 confined feedlot regulations, and Article 21, agricultural protection district.
4. The owners will cooperate with inspections of the facility in coordination with Land Use staff, and the Goodhue Co Soil and Water Conservation District.
5. Animal manure, when utilized as domestic fertilizer, shall not be stored for longer than one year and shall be applied at rates not exceeding local agricultural crop nutrient requirements except where allowed by permit.
6. Any animal manure not utilized as domestic fertilizer shall be treated or disposed of in accordance with applicable state rules (MPCA 7020).
7. Owner's duties. The owner of any animal feedlot shall be responsible for the storage, transportation, and disposal of all animal manure generated in a manner consistent with the provisions herein (MPCA 7020).
8. The proposed feedlot use complies with the County's Comprehensive Plan.

RECEIVED
AUG 21 2025
Land Use Management

GOODHUE COUNTY CONDITIONAL/INTERIM USE PERMIT APPLICATION

Parcel # 33.024.0401 Permit# Z25-0039

PROPERTY OWNER INFORMATION

Last Name Ryan	First Eric	E [redacted]	
Street Address 23933 County 9 Blvd		Phone [redacted]	
City Goodhue	State MN	Zip 55027	Attach Legal Description as Exhibit "A" ☐
Authorized Agent		Phone	
Mailing Address of Landowner:			
Mailing Address of Agent:			

PROJECT INFORMATION

Site Address (if different than above):

Lot Size 15.00 Ac	Structure Dimensions (if applicable) 415'x218' x 10'

What is the conditional/interim use permit request for? Manure Storage

Written justification for request including discussion of how any potential conflicts with existing nearby land uses will be minimized

DISCLAIMER AND PROPERTY OWNER SIGNATURE

I hereby swear and affirm that the information supplied to Goodhue County Land Use Management Department is accurate and true. I acknowledge that this application is rendered invalid and void should the County determine that information supplied by me, the applicant in applying for this variance is inaccurate or untrue. I hereby give authorization for the above mentioned agent to represent me and my property in the above mentioned matter.

Signature of Landowner: Eric Ryan Date 7-28-25

Signature of Agent Authorized by Agent:

TOWNSHIP INFORMATION

Township Zoning Permit Attached? ☐ If no please have township complete below:

By signing this form, the Township acknowledges being made aware of the request stated above. In no way does signing this application indicate the Township's official approval or denial of the request.

Signature Robert Hrusch Title Supervisor Date 7-18-2025

Comments: Best Wishes

COUNTY SECTION

COUNTY FEE $400 RECEIPT # 323711957 DATE PAID 8-21-25

Applicant requests a CUP/IUP pursuant to Article ____ Section ____ Subdivision ____ of the Goodhue County Zoning Ordinance

What is the formal wording of the request?

Shoreland ____ Lake/Stream Name ____ Zoning District ____

Date Received ____ Date of Public Hearing ____ DNR Notice ____ City Notice ____

Action Taken: ____ Approve ____ Deny Conditions:

Goodhue County Land Use Management

GOODHUE COUNTY CONDITIONAL/INTERIM USE PERMIT APPLICATION

PROJECT SUMMARY

Please provide answers to the following questions in the spaces below. If additional space is needed, you may provide an attached document.

1. Description of purpose and planned scope of operations (including retail/wholesale activities).
I would like to construct a concrete lined manure storage pit. This will increase efficiency and elimnate nutrient runoff.

2. Planned use of existing buildings and proposed new structures associated with the proposal.
We will monitor current herd size and facilities as well as scrape manure and capture runoff in the new manure pit.

3. Proposed number of non-resident employees.
We have two employees and will continue their employment with the addition of the new manure pit.

4. Proposed hours of operation (time of day, days of the week, time of year) including special events not within the normal operating schedule.
We will pump and inject manure from the new pit in the fall and spring during optimal conditions. Manure will be scraped from current livestock barns into storage daily.

5. Planned maximum capacity/occupancy.
A 3,100,000 gallon manure storage pit

6. Traffic generation and congestion, loading and unloading areas, and site access.
Manure will be hauled over the course of a few days, spring and fall, to allow during cleanout. Tractors will use access to the pit via a driveway on 240th Ave.

7. Off-street parking provisions (number of spaces, location, and surface materials).
not applicable

8. Proposed solid waste disposal provisions.
We will have a roll off dupster available during construction.

9. Proposed sanitary sewage disposal systems, potable water systems, and utility services.
not applicable

10. Existing and proposed exterior lighting.
In the event of low lighting, yard lights and tractor headlights will be used as needed.

11. Existing and proposed exterior signage.
Proper signage will be posted around the manure storage.

12. Existing and proposed exterior storage.

13. Proposed safety and security measures.
A fence will be installed around the entire perimeter of the manure pit.

14. Adequacy of accessibility for emergency services to the site.
A driveway will be built to access the pit.

15. Potential for generation of noise, odor, or dust and proposed mitigation measures.
There will be potential for odor during the emptying out process. It would amount to 4-7 days in the fall. Becuase of the relatively quick nature of the process, we would contact neighbors and avoid any events they may have.

16. Anticipated landscaping, grading, excavation, filling, and vegetation removal activities.
The current 50'x50' pit will be removed. Grass will be seeded down around the new manure pit with proper grading.

17. Existing and proposed surface-water drainage provisions.
Any surface water runoff from exposed feedlot concrete will drain directly into the pit.

18. Description of food and liquor preparation, serving, and handling provisions.
not applicable

19. Provide any other such information you feel is essential to the review of your proposal.
I am second generation dairy farmer with my wife and our six children. This manure pit will allow us to improve land stewardship, increase efficiency, improve road safety, and provide a sustainable business for the next generation.

104 East 3rd Avenue - PO Box 335
Goodhue, MN 55027
651-923-5286 Ext. 4
www.goodhueswcd.org

GOODHUE SOIL & WATER CONSERVATION DISTRICT

Data Collection Sheet for Registration (New and/or Existing sites)

For Delegated Counties

Instructions: Complete this form in order for your county feedlot officer to register your feedlot for you. Your county feedlot officer will enter data from this form into the online registration service to complete the registration process.

Any data collected by the county, beyond what is required for state feedlot registration, will be marked with the following statement: "This data is being collected for County purposes only and is not be required by Minn. Rule Ch. 7020 for feedlot registration."

Important – This is only a data collection sheet and completing it does not fulfill your requirement to register your feedlot. Registration of your feedlot is only complete once your county feedlot officer enters this information into the online registration system. This form will **NOT** be processed if sent to the MPCA. The information entered into the online system will be considered as the official registration information for your feedlot. If you would rather complete the registration process yourself, the online registration service can be found at: https://webapp.pca.state.mn.us/services/login.

Facility name and address

☐ The information below reflects a change to the name of an existing registered facility.

Facility name: Eric Ryan — Registration number: 049-73204

Facility Address: 23933 County 9 Blvd — Parcel ID number: 33-024-0401

City: Goodhue — State: MN — Zip code: 55027

Phone: [redacted] — Email: [redacted]

Ownership information

☐ The information below reflects a change of ownership of an existing registered facility.

Contact Person ☒ Same as feedlot name and address

Name:

Address:

City: — State:

Phone: — Zip:

Email:

Feedlot Owner ☐ Same as feedlot contact

Name:

Address:

City: — State:

Phone: — Zip:

Email:

Facility locational information

County: Goodhue — City/Township: Goodhue

Township (26-71 or 101-168)	Range (1-51)	Section (1-36)	¼ Section (NW, NE, SW, SE)	¼ of ¼ Section (NW, NE, SW, SE)
111	15	24	SE	SE

Any surface waters or tile intakes within 1,000 feet of the facility? (If Yes, indicate types below) ☒ Yes ☐ No

☐ Lake/Pond larger than 25 acres ☐ Wetland ☐ Drainage ditch ☒ River/Stream/Creek ☐ Tile intake

Is any part of the facility within 300 feet of a river/stream? ☒ Yes ☐ No

Any part of the facility located within a delineated flood plain *(100 year flood)*? ☐ Yes ☒ No

Any part of the facility located within designated shoreland? ☐ Yes ☒ No

Any part of the facility within 300 feet of a known sinkhole? ☐ Yes ☒ No

Facility operations information *(indicate components that are currently part of your livestock or poultry operation)*

Animals on pasture for part of the year ☐ Yes ☒ No

Open lots (dirt, concrete, other) that are designed as animal holding areas ☒ Yes ☐ No

Buildings that are designed for animal confinement or as animal holding areas ☒ Yes ☐ No

If yes to either above, what is the shortest distance from an animal holding area to a well? *(including unused or unsealed wells)* 120 feet

A liquid manure storage structure ☒ Yes ☐ No

A manure stockpile (solid manure storage area) ☒ Yes ☐ No

If yes to either above, what is the shortest distance from a manure storage area to a well? *(including unused or unsealed wells)* 210 feet

If you closed a liquid manure storage area or permanent manure stockpile since your last registration, complete the following:

Date closed: ☐ Liquid storage ☐ Solid storage

Date closed: ☐ Liquid storage ☐ Solid storage

Number of animals at the facility Calculate the animal units in column D by multiplying column C by column B.

A Animal type	B Animal unit (AU) factor	C Maximum number (head) maintained at anytime in past 5 years	D Animal Units (B x C)
Dairy – mature cow *(milked or dry)* over 1,000 lbs.	1.4	238	333.2
Dairy – mature cow *(milked or dry)* under 1,000 lbs.	1.0		
Dairy – heifer	0.7	150	105
Dairy – calf	0.2	51	10.2
Beef – slaughter steer or stock cow	1.0	12	12
Beef – feeder cattle *(stocker or backgrounding)* or heifer	0.7		
Beef – cow and calf pair	1.2	0	
Beef – calf	0.2		
Veal Calf	0.2		
Bulls or Oxen	2.0		
Swine – over 300 pounds	0.4		
Swine – between 55 and 300 pounds	0.3		
Swine – under 55 pounds *(and separated from sow)*	0.05		
Horse	1.0		
Mini Horses, Ponies	0.4		
Sheep or lamb	0.1		
Goats	0.15		
Goats-small	0.075		
Chickens – all sizes with liquid manure system	0.033		
Chickens – 5 lbs. and over – dry manure system	0.005		
Chickens – under 5 lbs. – dry manure system	0.003		
Chickens – layers 5 lbs. and over – dry manure system	0.005		
Chickens – layers under 5 lbs. – dry manure system	0.003		
Turkeys – over 5 lbs.	0.018		
Turkeys – under 5 lbs.	0.005		
Ducks – dry manure system	0.01		
Ducks – liquid manure system	0.01		
Elk	0.7		
Emus or Ostrich	0.15		
Fowl (pheasants, pigeons, partridges, guineas, and others)	0.003		
Foxes	0.05		
Mink	0.002		
Rabbits	0.005		
☐ Alpacas, ☐ Deer *(pick one)*	0.15		
☐ Llamas, ☐ Reindeer, ☐ Caribou *(pick one)*	0.3		
☐ Donkeys, ☐ Mules, ☐ Camels *(pick one)*	1		
☐ Bison, ☐ Buffalo, ☐ Yak *(pick one)*	1		
☐ Bison calf, ☐ Buffalo calf *(pick one)*	0.2		
☐ Peacocks, ☐ Geese *(pick one)*	0.01		
		Total AU	460.4

Signature (person completing the form) and Submittal

Print name: Eric Ryan Title: _____

Signature: Eric Ryan Date: 8-21-25

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JUL 17 2025

U.S. Department of Agriculture
Natural Resources Conservation Service

MN-CPA-37
August 2017

USDA-NRCS Manure Ownership Transfer Agreement

Producer/USDA-NRCS Contract Holder	Eric Ryan
Address 23933 County 9 BLVD Goodhue, MN 55027	Phone 651-380-6111

Manure Ownership Transfer Agreements are required when the feedlot owner/operator applies manure from their facility onto land that they:

- Do not own, lease, or rent and
- Do not have control over crop and nutrient planning decisions

Livestock producers receiving financial assistance from NRCS with a conservation practice that requires development of a Nutrient Management plan or Comprehensive Nutrient Management Plan (CNMP) must manage or have their manure managed according to NRCS requirements (same as state law). This requirement applies to all land where their manure is applied; regardless of land ownership, manure transfer, or sale to another.

Manure Source to be Transferred		Dairy Tank & Bedpack				
When Transferred (Months)		March	April	May		
Volume Transferred	Units: VARIES	VARIES	VARIES	VARIES		
USDA-NRCS Contract Holder Signature: ERIC RYAN				Date: 3-26-25		

Fields to Receive Manure

Acres Available for Land Application	136.5
☒ Map(s) attached with areas to receive manure identified	
Are these fields also receiving manure from another source?	No
This agreement is valid through:	2030

The undersigned manure recipient agrees to allow manure from the above source to be applied to the fields on the attached map(s) and will manage these manure applications according to NRCS Nutrient Management Requirements for the duration of this agreement.

Manure Recipient	
Address 39181 230th Ave Goodhue MN	Phone
Manure Recipient Signature: Robert Hench	Date: 3-26-2025

U.S. Department of Agriculture
Natural Resources Conservation Service

RECEIVED
JUL 17 2025

MN-CPA-37
August 2017

USDA-NRCS Manure Ownership Transfer Agreement

Producer/USDA-NRCS Contract Holder	Eric Ryan
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Manure Source to be Transferred	Dairy Tank & Bedpack					
When Transferred (Months)		March	April	May		
Volume Transferred	Units: VARIES	VARIES	VARIES	VARIES		
USDA-NRCS Contract Holder Signature: ERIC RYAN				Date: 1-4-25		

Fields to Receive Manure

Acres Available for Land Application	158
☒ Map(s) attached with areas to receive manure identified	
Are these fields also receiving manure from another source?	No
This agreement is valid through:	2030

The undersigned manure recipient agrees to allow manure from the above source to be applied to the fields on the attached map(s) and will manage these manure applications according to NRCS Nutrient Management Requirements for the duration of this agreement.

Manure Recipient	DENNIS R HINSCH
Address 38606 240th Ave Goodhue, MN 55027	Phone 651-380-5899
Manure Recipient Signature: Dennis Hinsch	Date 1-4-25

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AUG 20 2025

Manure Storage, Handling, and Testing Information

MINNESOTA POLLUTION CONTROL AGENCY

Facility Name: Eric Ryan
Owner/Operator Name: Eric Ryan
NPDES or SDS Permit? No
Permit Number: 049-73209
Date Last Revised:
Registration Number:

Version 9.01 Last Updated: 1/13/22

wq-f6-12

Manure Sources	Manure Source #1	Manure Source #2	Manure Source #3	Manure Source #4
Description of Manure Source Group sources with similar nutrient content if they have identical animal type, water usage, feed rations, and manure storage	Milk cow concrete basin	Youngstock & Finisher Stockpile	Heifer & Dry Cow stockpile	Calf huts and Calf barn
Livestock Information				
Predominate Animal Type (Contributing to Manure Source)	Dairy Milk Cow	Beef Feeder (High Forage)	Dairy Dry Cow	Dairy Calf
Average Animal Weight	1,600 lbs	750 lbs	1,400 lbs	150 lbs
Animal Number	190	12	48	15
Length of Time Livestock Spend In Facility	365 days/yr	365 days/yr	365 days/yr	365 days/yr
Additional Animal Type (Contributing to Manure Source)		Dairy Calf	Dairy Heifer	Dairy Calf
Average Animal Weight	lbs	250 lbs	875 lbs	250 lbs
Animal Number		18	150	18
Length of Time Livestock Spend In Facility	days/yr	365 days/yr	365 days/yr	365 days/yr
Storage Information				
Storage Type	Outdoor Concrete Pit/Tank	Stockpile	Stockpile	Stockpile
Capacity	93,500 gals	tons	tons	tons
Storage Length	15 days	30 days	30 days	30 days
Application Methods				
Commercial Applicator (Yes/No or Name)	No	No	No	No
Spreader Type	Solids Spreader	Solids Spreader	Solids Spreader	Solids Spreader
How Volume/Tonnage Determined per Load	Spreader Volume	Spreader Volume	Spreader Volume	Spreader Volume
How Application Rate is Calibrated	Unknown	Unknown	Unknown	Unknown
Manure Analysis - Existing facilities should use actual manure test results				
Sampling Frequency	Every 4 Years	Every 4 Years	Every 4 Years	Every 4 Years
Sampling Methods	Well Agitated Single Sample	Sample from Spreader Load	Sample from Spreader Load	Sample from Spreader Load
Date Last Analyzed	09/11/24	09/11/24	09/11/24	09/11/24
Basis for N,P, & K Values Below	This Year's Sample	This Year's Sample	This Year's Sample	This Year's Sample
Total N - (do not enter lab estimated availability)	37 lbs/1000 gal	8 lbs/ton	8 lbs/ton	8 lbs/ton
Total P_2O_5 - (do not enter lab estimated availability)	14 lbs/1000 gal	3 lbs/ton	3 lbs/ton	3 lbs/ton
Total K_2O - (do not enter lab estimated availability)	26 lbs/1000 gal	12 lbs/ton	12 lbs/ton	12 lbs/ton
Annual Generation - Existing facilities should use actual production values				
Total Manure Produced per Year (Estimated)	1,482,267 gals	82 tons	961 tons	40 tons
Total Manure Produced per Year (Actual)	0 gals	90 tons	1,000 tons	50 tons
Annual N Produced	0 lbs	702 lbs	8,000 lbs	400 lbs
Annual P_2O_5 Produced	0 lbs	288 lbs	3,000 lbs	150 lbs
Annual K_2O Produced	0 lbs	1,080 lbs	12,000 lbs	600 lbs

Average Book Values	
N	31
P_2O_5	15
K_2O	19

Average Book Values	
N	11
P_2O_5	6
K_2O	9

Average Book Values	
N	10
P_2O_5	3
K_2O	7

Average Book Values	
N	10
P_2O_5	3
K_2O	5

Manure Storage, Handling, and Testing Information

Facility Name: Eric Ryan
Owner/Operator Name: Eric Ryan
NPDES Permit Coverage? No
Date Last Revised:
Permit Number: 049-73209
Registration Number:

Manure Sources	Manure Source #5	Manure Source #6	Manure Source #7	Manure Source #8
Description of Manure Source Group sources with similar nutrient content if they have identical animal type, water usage, feed rations, and manure storage	Concrete Lined Basin-New			
Livestock Information				
Predominate Animal Type (Contributing to Manure Source)	Dairy Milk Cow			
Average Animal Weight	1,600 lbs	lbs	lbs	lbs
Animal Number	190			
Length of Time Livestock Spend In Facility	365 days/yr	days/yr	days/yr	days/yr
Additional Animal Type (Contributing to Manure Source)				
Average Animal Weight	lbs	lbs	lbs	lbs
Animal Number				
Length of Time Livestock Spend In Facility	days/yr	days/yr	days/yr	days/yr
Storage Information				
Storage Type	Outdoor Concrete Pit/Tank			
Capacity	3,178,437 gals			
Storage Length	9 months			
Application Methods				
Commercial Applicator (Yes/No or Name)	Yes			
Spreader Type	Towed Hose			
How Volume/Tonnage Determined per Load	Commercial Applicator			
How Application Rate is Calibrated	Unknown			
Manure Analysis - Existing facilities should use actual manure test results				
Sampling Frequency	Every Year			
Sampling Methods	Estimate (New Structure)			
Date Last Analyzed				
Basis for N,P, & K Values Below	Estimate			
Total N - (do not enter lab estimated availability)	31 lbs/1000 gal			
Total P_2O_5 - (do not enter lab estimated availability)	15 lbs/1000 gal			
Total K_2O - (do not enter lab estimated availability)	19 lbs/1000 gal			
Annual Generation - Existing facilities should use actual production values				
Total Manure Produced per Year (Estimated)	1,482,267 gals			
Total Manure Produced per Year (Actual)	gals			
Annual N Produced	45,950 lbs	lbs	lbs	lbs
Annual P_2O_5 Produced	22,234 lbs	lbs	lbs	lbs
Annual K_2O Produced	28,163 lbs	lbs	lbs	lbs

Average Book Values	
N	31
P_2O_5	15
K_2O	19

Average Book Values	
N	
P_2O_5	
K_2O	

Average Book Values	
N	
P_2O_5	
K_2O	

Average Book Values	
N	
P_2O_5	
K_2O	

General Field Information (Fields 1-35)

MINNESOTA POLLUTION CONTROL AGENCY

Unique Field ID Attach Aerial Photo or Map With Location Description (twp-rng-sec)	Field Acreage	Sensitive Features (Identify on Aerial Photo or Sketch) ***Insert a check mark by double-clicking the appropriate cells***												Soils Information (Test required once every 4 yrs)			Irrigation?	Anticipated Manure Application Timing NOTE: NPDES & SDS permitted sites cannot apply liquid manure in the winter (unless emergency)	Winter Application Field Info (If Applicable)	
		Tile Intakes	Drainage Ditch	Lake, River, Stream	Intermittent Stream (If farmed call MPCA)	Wetland (non-farmed)	Coarse-Textured Soil (soil type ends in "sand")	Floodplain	Public Well Management Area	Shallow Bedrock	Sinkhole	Well, Mine, or Quarry	Other Conduit to Water	Year of Soil Test (red if outdated)	Soil Test Phosphorus (P) Field Average (ppm)	Organic Matter			Distance from Field to Waters	Field Slope (%)
Example	80	✔	***You must double-click cells to insert a check mark***											2005	30 Olsen	Med/High	No	Late Fall	800 ft	3%
Home 0	6.9													2024	55 Bray	Med/High	No	Monthly		
Home 1	9.1													2024	86 Bray	Med/High	No	Monthly		
Home 2	16.1				✔									2024	30 Bray	Med/High	No	Monthly		
Home 3	4.1													2024	143 Bray	Med/High	No	Monthly		
Home 4	14.6													2024	59 Bray	Med/High	No	Monthly		
Home 5	11.8													2024	59 Bray	Med/High	No	Monthly		
Home 6	11.7				✔									2024	137 Bray	Med/High	No	Monthly		
Home 7	13.3				✔									2024	26 Bray	Med/High	No	Monthly		
Home 8	17.8				✔									2024	32 Bray	Med/High	No	Monthly		
Home 9	15.1				✔									2024	55 Bray	Med/High	No	Monthly		
Home 10	6.2				✔									2024	100 Bray	Med/High	No	Monthly		
The 80- 1	9.8				✔									2024	32 Bray	Med/High	No	Monthly		
The 80-2	16.8				✔									2024	62 Bray	Med/High	No	Monthly		
The 80-3	8.1													2024	13 Bray	Med/High	No	Monthly		
The 80-4	7.2													2024	28 Bray	Med/High	No	Monthly		
The 80-5	8.6													2024	65 Bray	Med/High	No	Monthly		
The 80-6	8.1										✔			2024	107 Bray	Med/High	No	Monthly		
The 80-7	9.9				✔									2024	50 Bray	Med/High	No	Monthly		
Todds-1	14.9													2024	54 Bray	Med/High	No	Monthly		
Todds-2	13				✔									2024	36 Bray	Med/High	No	Monthly		
Todds-3	9.7													2024	76 Bray	Med/High	No	Monthly		
Todds-4	10.6				✔									2024	30 Bray	Med/High	No	Monthly		
Todds-5	13.2				✔									2024	26 Bray	Med/High	No	Monthly		
Todds-6	9.2													2024	28 Bray	Med/High	No	Monthly		
Todds-7	8.4													2024	102 Bray	Med/High	No	Monthly		
Todds-8	11													2024	41 Bray	Med/High	No	Monthly		
Todds-9	16.4													2024	78 Bray	Med/High	No	Monthly		
Todds-10	17.4													2024	54 Bray	Med/High	No	Monthly		
Todds-11	17.7													2024	52 Bray	Med/High	No	Monthly		
Dennis- 1	11.7				✔												No	Spring		
Dennis- 2	21.8																No	Spring		
Dennis-3	39.6				✔												No	Spring		
Dennis-4	32.4				✔												No	Spring		
Dennis- 5	32.5																No	Spring		
Dennis-6	14.8				✔												No	Spring		

Total Acres (Fields 1 - 35) 490

General Field Information (Fields 36 - 70)

Unique Field ID Attach Aerial Photo or Map With Location Description (twp-rng-sec)	Field Acreage	Sensitive Features (Identify on Aerial Photo or Sketch) ***Insert a check mark by double-clicking the appropriate cells***												Soils Information (Test required once every 4 yrs)				Irrigation?	Anticipated Manure Application Timing NOTE: NPDES & SDS permitted sites cannot apply liquid manure in the winter (unless emergency)	Winter Application Field Info (If Applicable)		
		Tile Intakes	Drainage Ditch	Lake, River, Stream	Intermittent Stream (If farmed call MPCA)	Wetland (non-farmed)	Coarse-Textured Soil (soil type ends in "sand")	Floodplain	Public Well Management Area	Shallow Bedrock	Sinkhole	Well, Mine, or Quarry	Other Conduit to Water	Year of Soil Test	Soil Test Phosphorus (P) Field Average (ppm)		Organic Matter			Distance from Field to Waters	Field Slope (%)
Example	80	✔	***You must double-click cells to insert a check mark***											2005	30	Bray	Med/High	No	Late Fall	800 ft	3%
Dennis-7	14.2																	No	Spring		
Robert- 1	47.4				✔													No	Spring		
Robert-2	85				✔													No	Spring		

Total Acres (Fields 1 - 70) 636

Sensitive Features Management Worksheet

MINNESOTA POLLUTION CONTROL AGENCY

This worksheet identifies all allowable techniques that can be used to provide protection to sensitive features **as required** in Minnesota Rules and/or permit conditions. One of the following measures must be employed for the applicable sensitive feature. Any of the identified practices are acceptable.

Tile Intakes

Option A - Inject or incorporate within 24 hours and prior to rainfall within 300 ft, observe a 25 ft non-manured setback, and avoid long term soil P build-up
Option B - Inject or incorporate within 24 hours and prior to rainfall within 300 ft.
Option C - 35 ft grassed buffer
Option D - 100 ft setback with at least 16.5 ft as grassed buffer

Drainage Ditches

Option A - Inject or incorporate within 24 hours and prior to rainfall within 300 ft, observe a 25 ft non-manured setback, and avoid long term soil P build-up
Option B - 50 ft wide grassed buffer
Option C - 100 ft setback with at least 16.5 ft as grassed buffer
Option D - Protective Berm (prohibits runoff from entering the ditch)

Lakes, Rivers, and Streams

Option A - Inject or incorporate within 24 hours and prior to rainfall within 300 ft, observe a 25 ft non-manured setback, and avoid long term soil P build-up
Option B - 100 ft wide grassed buffer
Option C - 100 ft setback with at least 16.5 ft as grassed buffer

Intermittent Streams and/or Public Waters Wetlands (over 10 acres)

Option A - Inject or incorporate within 24 hours and prior to rainfall within 300 ft, observe a 25 ft non-manured setback, and avoid long term soil P build-up
Option B - 50 ft wide grassed buffer
Option C - 100 ft setback with at least 16.5 ft as grassed buffer

Wells, Mines, or Quarry

Option A - 50 ft setback - minimum (100 ft if NPDES permitted)

Sinkholes

Option A - Inject or incorporate within 24 hours and prior to rainfall upslope and within 300 ft and observe a 50 ft non-manured setback (100 ft non-manured setback for NPDES)
Option B - Berm that prevents runoff from entering the sinkhole

Application of Manure During the Summer Months (June, July, and August) - This also includes September for NPDES permitted sites

Option A - A cover crop will be planted on all fields that receive manure applications during June, July, and August

Other Conduits to Water

Option A - Inject or incorporate within 24 hours and prior to rainfall within 300 ft, observe a 25 ft non-manured setback, and avoid long term soil P build-up
Option B - 50 ft wide grassed buffer
Option C - 100 ft setback with at least 16.5 ft as grassed buffer
Option D - Protective Berm (prohibits runoff from entering the waters)

Early Fall Land Application - Unless otherwise required, this only applies to early fall manure application at NPDES or SDS permitted facilities

Option A - Fall Application onto fields that are dominated by coarse-textured soils shall be delayed until soil temperatures in the upper six (6) inches, are less than 50 degrees Fahrenheit, unless otherwise first approved by the MPCA.

Crop and Nutrient Planning Worksheet (Fields 1-35)

MINNESOTA POLLUTION CONTROL AGENCY

Cropping Year: September 1, 2025 to August 31, 2026 Crop Land Manager's Name: _____

Field Information	Crop Information (Cover crop info is recorded on the land application records form)				Last Year's Manure App (Nutrients for 2025 Crop) (leave blank if none applied)			Nutrient Recommendations and Credits							
								N (lb/ac)						P_2O_5 (lb/ac)	
Field ID	Crop Grown to Utilize the Nutrients Applied 2026 Crop	Expected Yield (per acre) crop receiving nutrients	Crop Most Recently Harvested 2025 Crop	Crop Grown 2 Years Ago 2024 Crop	Last Year's Manure Test N	Animal Type of Manure Applied Last Year	Last Year's Application Rate (per acre) Typically 9/1/24 to 8/31/25	N Recommendation after 2025 crop credits	Legume-N Credit from the 2024 Crop	N Credit from Manure Applied to 2025 Crop	N Credit from Irrigation Water	N Needs after all credits	N Removal after all credits	P_2O_5 Needs (based on soil test data)	P_2O_5 Removal (based on crop uptake)
Home 0	Corn Silage	25 ton	Alfalfa	Alfalfa	37.2	Dairy	10,000 gal	40	0	93	---	0	---	0	95
Home 1	Alfalfa	6 ton	Corn Silage	Corn Silage				---	0	---	---	---	306	0	65
Home 2	Corn Silage	25 ton	Alfalfa	Alfalfa	7.8	Dairy	8 ton	40	0	16	---	24	---	0	95
Home 3	Alfalfa	6 ton	Alfalfa	Corn Silage				---	0	---	---	---	306	0	65
Home 4	Alfalfa	6 ton	Alfalfa	Corn Silage	37.2	Dairy	5,000 gal	---	0	46	---	---	260	0	65
Home 5	Corn Silage	25 ton	Corn Silage	Alfalfa	37.2	Dairy	5,000 gal	195	115	46	---	34	---	0	95
Home 6	Alfalfa	6 ton	Alfalfa	Corn Silage	7.8	Dairy	12 ton	---	0	23	---	---	283	0	65
Home 7	Corn Silage	25 ton	Corn Silage	Alfalfa	37.2	Dairy	10,000 gal	195	115	93	---	0	---	0	95
Home 8	Corn Silage	25 ton	Corn Silage	Corn Silage	37.2	Dairy	5,000 gal	195	0	46	---	149	---	0	95
Home 9	Alfalfa	6 ton	Alfalfa	Grass/Hay	37.2	Dairy	5,000 gal	---	0	46	---	---	260	0	65
Home 10	Corn Silage	25 ton	Corn Silage	Corn Silage	37.2	Dairy	5,000 gal	195	0	46	---	149	---	0	95
The 80- 1	Corn Silage	25 ton	Alfalfa	Alfalfa				40	0	---	---	40	---	0	95
The 80-2	Alfalfa	6 ton	Corn Silage	Corn Silage	7.8	Dairy	8 ton	---	0	16	---	---	290	0	65
The 80-3	Corn Silage	25 ton	Corn Silage	Alfalfa				195	115	---	---	80	---	49	95
The 80-4	Corn Silage	25 ton	Corn Silage	Corn Silage				195	0	---	---	195	---	0	95
The 80-5	Alfalfa	6 ton	Alfalfa	Corn Silage				---	0	---	---	---	306	0	65
The 80-6	Alfalfa	6 ton	Alfalfa	Corn Silage				---	0	---	---	---	306	0	65
The 80-7	Alfalfa	6 ton	Alfalfa	Alfalfa				---	0	---	---	---	306	0	65
Todds-1	Corn Silage	25 ton	Corn Silage	Alfalfa	7.8	Dairy	8 ton	195	115	16	---	64	---	0	95
Todds-2	Corn	220 bu	Alfalfa	Alfalfa				40	0	---	---	40	---	0	75
Todds-3	Alfalfa	6 ton	Corn Silage	Corn Silage				---	0	---	---	---	306	0	65
Todds-4	Alfalfa	6 ton	Corn Silage	Corn Silage				---	0	---	---	---	306	0	65
Todds-5	Corn Silage	25 ton	Corn Silage	Alfalfa				195	115	---	---	80	---	0	95
Todds-6	Alfalfa	6 ton	Alfalfa	Alfalfa	37.2	Dairy	5,000 gal	---	0	46	---	---	260	0	65
Todds-7	Corn Silage	25 ton	Corn Silage	Corn Silage	37.2	Dairy	5,000 gal	195	0	46	---	149	---	0	95
Todds-8	Alfalfa	6 ton	Alfalfa	Alfalfa	37.2	Dairy	5,000 gal	---	0	46	---	---	260	0	65
Todds-9	Corn	220 bu	Corn	Corn				195	0	---	---	195	---	0	75
Todds-10	Alfalfa	6 ton	Alfalfa	Corn				---	0	---	---	---	306	0	65
Todds-11	Alfalfa	6 ton	Alfalfa	Corn				---	0	---	---	---	306	0	65
Dennis- 1	Soybeans	60 bu	Corn	Soybeans				---	0	---	---	---	210	0	49
Dennis- 2	Soybeans	60 bu	Corn	Soybeans				---	0	---	---	---	210	0	49
Dennis-3	Soybeans	60 bu	Corn	Soybeans				---	0	---	---	---	210	0	49
Dennis-4	Soybeans	60 bu	Corn	Soybeans				---	0	---	---	---	210	0	49
Dennis- 5	Soybeans	60 bu	Corn	Soybeans				---	0	---	---	---	210	0	49
Dennis-6	Soybeans	60 bu	Corn	Soybeans				---	0	---	---	---	210	0	49

Crop and Nutrient Planning Worksheet (Fields 36-70)

Note: Fields highlighted with gray are automatically entered from previous information or automatically calculated.

Field Information	Crop Information				Last Year's Manure App (Nutrients for 2025 Crop) leave blank if none applied			Nutrient Recommendations and Credits N (lb/ac)						P_2O_5 (lb/ac)	
Field ID	Crop Grown to Utilize the Nutrients Applied 2026 Crop	Expected Yield (per acre) crop receiving nutrients	Crop Most Recently Harvested 2025 Crop	Crop Grown 2 Years Ago 2024 Crop	Last Year's Manure Test N	Animal Type of Manure Applied Last Year	Last Year's Application Rate (per acre) Typically 9/1/24 to 8/31/25	N Recommendation after 2025 crop credits	Legume-N Credit from the 2024 Crop	N Credit from Manure Applied to 2025 Crop	N Credit from Irrigation Water	N Needs after all credits	N Removal after all credits	P_2O_5 Needs (based on soil test data)	P_2O_5 Removal (based on crop uptake)
Dennis-7	Soybeans	60 bu	Corn	Soybeans				---	0	---	---	---	210	0	49
Robert- 1	Soybeans	60 bu	Corn	Soybeans				---	0	---	---	---	210	0	49
Robert-2	Soybeans	60 bu	Corn	Soybeans				---	0	---	---	---	210	0	49

Nutrient Application Planning Worksheet (Fields 1-25)

MINNESOTA POLLUTION CONTROL AGENCY

Manure Source Summary

Source 1:	Milk cow concrete basin (37.2-13.5-26.2)	Source 5:	Concrete Lined Basin-New (31-15-19)	Source 9:	
Source 2:	Youngstock & Finisher Stockpile (7.8-3.2-12)	Source 6:		Source 10:	
Source 3:	Heifer & Dry Cow stockpile (8-3-12)	Source 7:		Source 11:	
Source 4:	Calf huts and Calf barn (8-3-12)	Source 8:		Source 12:	

☐ I will transfer ownership of some of the manure.

Field Information Summary		Crops Grown Summary		Nutrients Needed to Meet Yield Goal (lb/acre) after credits for nutrients from previous crops and manure applications			Manure Application Information (Nutrients for the 2026 Crop) Application Typically 9/1/2025 to 8/31/2026					Nitrogen (lb N/ac)				Phosphorus (lb P_2O_5/ac)			
Field ID	Acres After Setbacks	Crop Grown to Utilize the Nutrients Applied 2026 Crop	Crop Most Recently Harvested 2025 Crop	Nitrogen Needs	Nitrogen (Removal)	Phosphorus (Needs)	Manure Source (1-12)	Method of Application and Incorporation NPDES/SDS permitted sites cannot apply liquid manure in the winter (unless emergency)	Acres Receiving Manure (reduce to split the field)	Manure Application Rate (gals/tons per acre) Calculated Max Rate based on Nitrogen	Manure Application Rate (gals/tons per acre) Planned Rate max used if blank	N from Manure (Available this year)	Total Fertilizer Application (lbs/acre) Starter	Total Fertilizer Application (lbs/acre) Supplemental	Excess Available N (negative for deficiency)	P from Manure (Available this year)	Total Fertilizer Application (lbs/acre) Starter	Total Fertilizer Application (lbs/acre) Supplemental	P in Excess of Removal (negative for deficiency)
Home 0	7	Corn Silage	Alfalfa	0	---	0				---		---	0	0	0	---	0	0	-95
Home 1	9	Alfalfa	Corn Silage	---	306	0				---		---			-306	---			-65
Home 2	16	Corn Silage	Alfalfa	24	---	0	3	Incorp. within 4 days	16	8	7.4	22	0	0	-2	17	0	0	-78
Home 3	4	Alfalfa	Alfalfa	---	306	0				---		---			-306	---			-65
Home 4	15	Alfalfa	Alfalfa	---	260	0				---		---			-260	---			-65
Home 5	12	Corn Silage	Corn Silage	34	---	0	3	Incorp. within 4 days	12	11	11.42	35	0	0	1	26	0	0	-69
Home 6	12	Alfalfa	Alfalfa	---	283	0				---		---			-283	---			-65
Home 7	13	Corn Silage	Corn Silage	0	---	0				---		---	0	0	0	---	0	0	-95
Home 8	18	Corn Silage	Corn Silage	149	---	0	5	Sweep Injection	18	8,739	8500	145	0	0	-4	102	0	0	7
Home 9	15	Alfalfa	Alfalfa	---	260	0				---		---	0	0	-260	---	0	0	-65
Home 10	6	Corn Silage	Corn Silage	149	---	0	5	Sweep Injection	6	8,739	8500	145	0	0	-4	102	0	0	7
The 80- 1	10	Corn Silage	Alfalfa	40	---	0	3	Incorp. within 4 days	10	12	7.4	22	0	0	-18	17	0	0	-78
The 80-2	17	Alfalfa	Corn Silage	---	290	0	5	Sweep Injection	17	17,009	14100	240	0	0	-50	169	0	0	104
The 80-3	8	Corn Silage	Corn Silage	80	---	49	4	Incorp. within 4 days	8	25	11.42	35	0	0	-45	26	0	0	-69
The 80-4	7	Corn Silage	Corn Silage	195	---	0	5	Sweep Injection	7	11,437	10000	170	0	0	-25	120	0	0	25
The 80-5	9	Alfalfa	Alfalfa	---	306	0				---		---			-306	---			-65
The 80-6	8	Alfalfa	Alfalfa	---	306	0				---		---	0	0	-306	---	0	0	-65
The 80-7	10	Alfalfa	Alfalfa	---	306	0				---		---			-306	---			-65
Todds-1	15	Corn Silage	Corn Silage	64	---	0	3	Incorp. within 4 days	15	20	11.42	35	0	0	-29	26	0	0	-69
Todds-2	13	Corn	Alfalfa	40	---	0	3	Incorp. within 4 days	13	12	7.4	22	0	0	-18	17	0	0	-58
Todds-3	10	Alfalfa	Corn Silage	---	306	0	5	Sweep Injection	10	17,947	14100	240	0	0	-66	169	0	0	104
Todds-4	11	Alfalfa	Corn Silage	---	306	0	5	Sweep Injection	11	17,947	14100	240	0	0	-66	169	0	0	104
Todds-5	13	Corn Silage	Corn Silage	80	---	0	2	Incorp. within 4 days	13	23	11.42	39	0	0	-41	28	0	0	-67
Todds-6	9	Alfalfa	Alfalfa	---	260	0				---		---	0	0	-260	---	0	0	-65
Todds-7	8	Corn Silage	Corn Silage	149	---	0	5	Sweep Injection	8	8,739	8500	145	0	0	-4	102	0	0	7

Nutrient Application Planning Worksheet (Fields 26-50)

Field Information Summary		Crops Grown Summary		Nutrients Needed to Meet Yield Goal (lb/acre) after credits for nutrients from previous crops and manure applications			Manure Application Information (Nutrients for the 2026 Crop) Application Typically 9/1/25 to 8/31/2026					Nitrogen (lb N/ac)				Phosphorus (lb P_2O_5/ac)			
Field ID	Acres After Setbacks	Crop Grown to Utilize the Nutrients Applied 2026 Crop	Crop Most Recently Harvested 2025 Crop	Nitrogen Needs	Nitrogen (Removal)	Phosphorus (Needs)	Manure Source (1-12)	Method of Application and Incorporation NPDES/SDS permitted sites cannot apply liquid manure in the winter (unless emergency)	Acres Receiving Manure (reduce to split the field)	Manure Application Rate (gals/tons per acre) Calculated Max Rate based on Nitrogen	Manure Application Rate (gals/tons per acre) Planned Rate max used if blank	N from Manure (Available this year)	Total Fertilizer Application (lbs/acre) Starter	Total Fertilizer Application (lbs/acre) Supplemental	Excess Available N (negative for deficiency)	P from Manure (Available this year)	Total Fertilizer Application (lbs/acre) Starter	Total Fertilizer Application (lbs/acre) Supplemental	P in Excess of Removal (negative for deficiency)
Todds-8	11	Alfalfa	Alfalfa	---	260	0				---		---			-260	---			-65
Todds-9	16	Corn	Corn	195	---	0	5	Sweep Injection	16	11,437	10000	170	0	0	-25	120	0	0	45
Todds-10	17	Alfalfa	Alfalfa	---	306	0				---		---			-306	---			-65
Todds-11	18	Alfalfa	Alfalfa	---	306	0				---		---			-306	---			-65
Dennis- 1	12	Soybeans	Corn	---	210	0				---		---			-210	---			-49
Dennis- 2	22	Soybeans	Corn	---	210	0				---		---			-210	---			-49
Dennis-3	40	Soybeans	Corn	---	210	0				---		---			-210	---			-49
Dennis-4	32	Soybeans	Corn	---	210	0				---		---			-210	---			-49
Dennis- 5	33	Soybeans	Corn	---	210	0				---		---			-210	---			-49
Dennis-6	15	Soybeans	Corn	---	210	0				---		---			-210	---			-49
Dennis-7	14	Soybeans	Corn	---	210	0				---		---			-210	---			-49
Robert- 1	47	Soybeans	Corn	---	210	0				---		---			-210	---			-49
Robert-2	85	Soybeans	Corn	---	210	0				---		---			-210	---			-49

Total Acres (Fields 1 - 50) = 636

☐ I will transfer ownership of the remaining amount of manure.

	Amount Applied	Amount Remaining	Acres Applied
Source 1:		0	0
Source 2:	90	0	13
Source 3:	593	407	66
Source 4:	50	0	8

	Amount Applied	Amount Remaining	Acres Applied
Source 5:	1,034,510	447,757	93
Source 6:	---	---	---
Source 7:	---	---	---
Source 8:	---	---	---

	Amount Applied	Amount Remaining	Acres Applied
Source 9:	---	---	---
Source 10:	---	---	---
Source 11:	---	---	---
Source 12:	---	---	---

Odors From Feedlots Setback Estimation Tool

OFFSET Ver 2.0
University of Minnesota
1/21/2017

Farm Name	Eric Ryan
Address or County	Goodhue County
Evaluator	K. Petit
Date	7/29/2025

Clear All

OFFSET Annoyance-free 92%

Source Edge to Nearest Neighbor (ft)	913
Source Edge to Property Line (ft)	70

Building Sources

Building Type	Width (ft)	Length (ft)	# of Similar Sources	Total Area (sqft)	Control Technology	% air treated
None				0	None	
None				0	None	
None				0	None	
None				0	None	
None				0	None	
None				0	None	
None				0	Biofilter	

AREA SOURCES

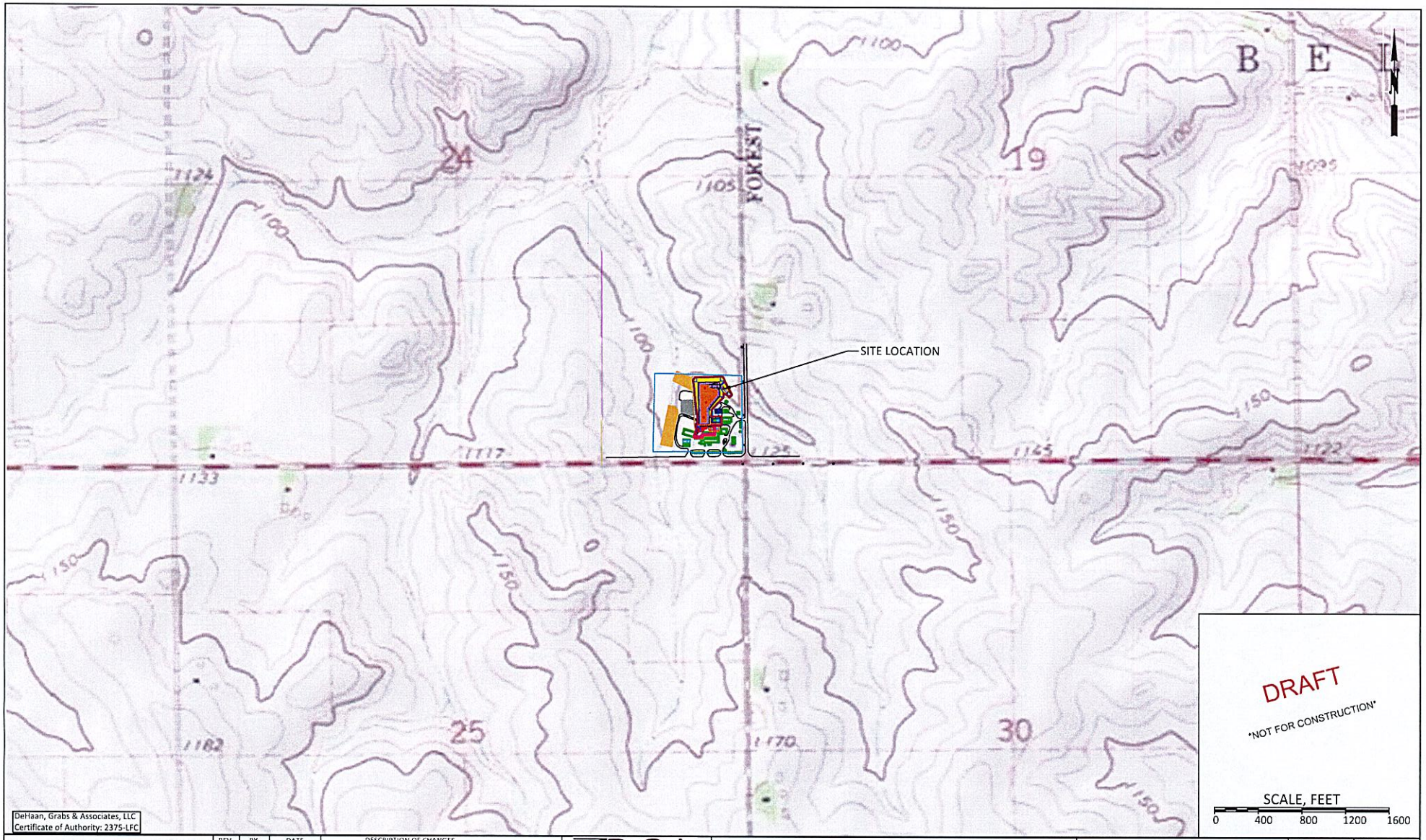
Source Description	Shape	Width (ft) (or Dia)	Length (ft)	Area (sqft)	Control Technology
Earthen manure storage	Rectangle	229	250	57250	None
None	Rectangle			0	None
None	Rectangle			0	None
None	Rectangle			0	None
None	Rectangle			0	None
None	Rectangle			0	None
None	Rectangle			0	None

Building Sources	
Add Source Type	
Name of Source	
Odor Flux (ou/s/m2)	
H2S Flux (ug/s/m2)	
NH3 Flux (ug/s/m2)	
Documentation	
Add a Control Technology	
Name of technology	
Odor reduction (%)	
H2S reduction (%)	
NH3 Reduction (%)	
Documentation	

Area Sources	
Add a Source Type	
Name of Source	
Odor Flux (ou/s/m2)	
H2S Flux (ug/s/m2)	
NH3 Flux (ug/s/m2)	
Documentation	
Add Control Technology	
Name of technology	
Odor reduction (%)	
H2S reduction (%)	
NH3 Reduction (%)	
Documentation	

RECEIVED

AUG 1 9 2025



DRAFT

NOT FOR CONSTRUCTION

DeHaan, Grabs & Associates, LLC
Certificate of Authority: 2375-LFC

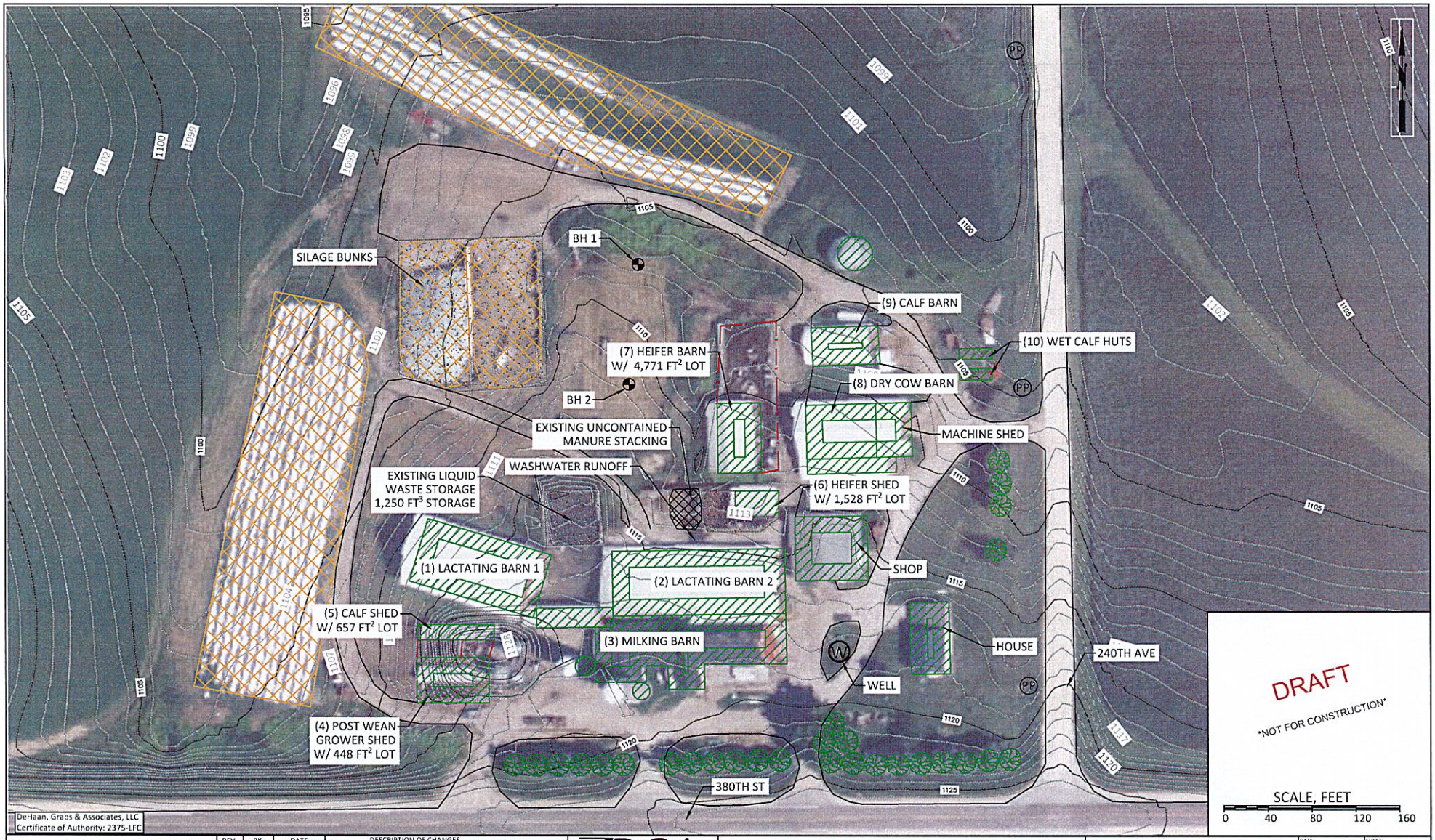
REV.	BY	DATE	DESCRIPTION OF CHANGES

DGA ENGINEERING
4200 21st St. SE #101 Mandan, ND 58554 701.663.1116

ERIC RYAN
DAIRY FACILITY
SE 1/4 SECTION 24, T 111 N, R 15 W
GOODHUE COUNTY, MN

USGS SITE PLAN

DATE:	JAN 6, 2025
SCALE:	1" = 800'
DRAWN BY:	NAP
CHECKED BY:	NAP
SHEET:	C1.1



DeHaan, Grabs & Associates, LLC
Certificate of Authority: 2375-LFC

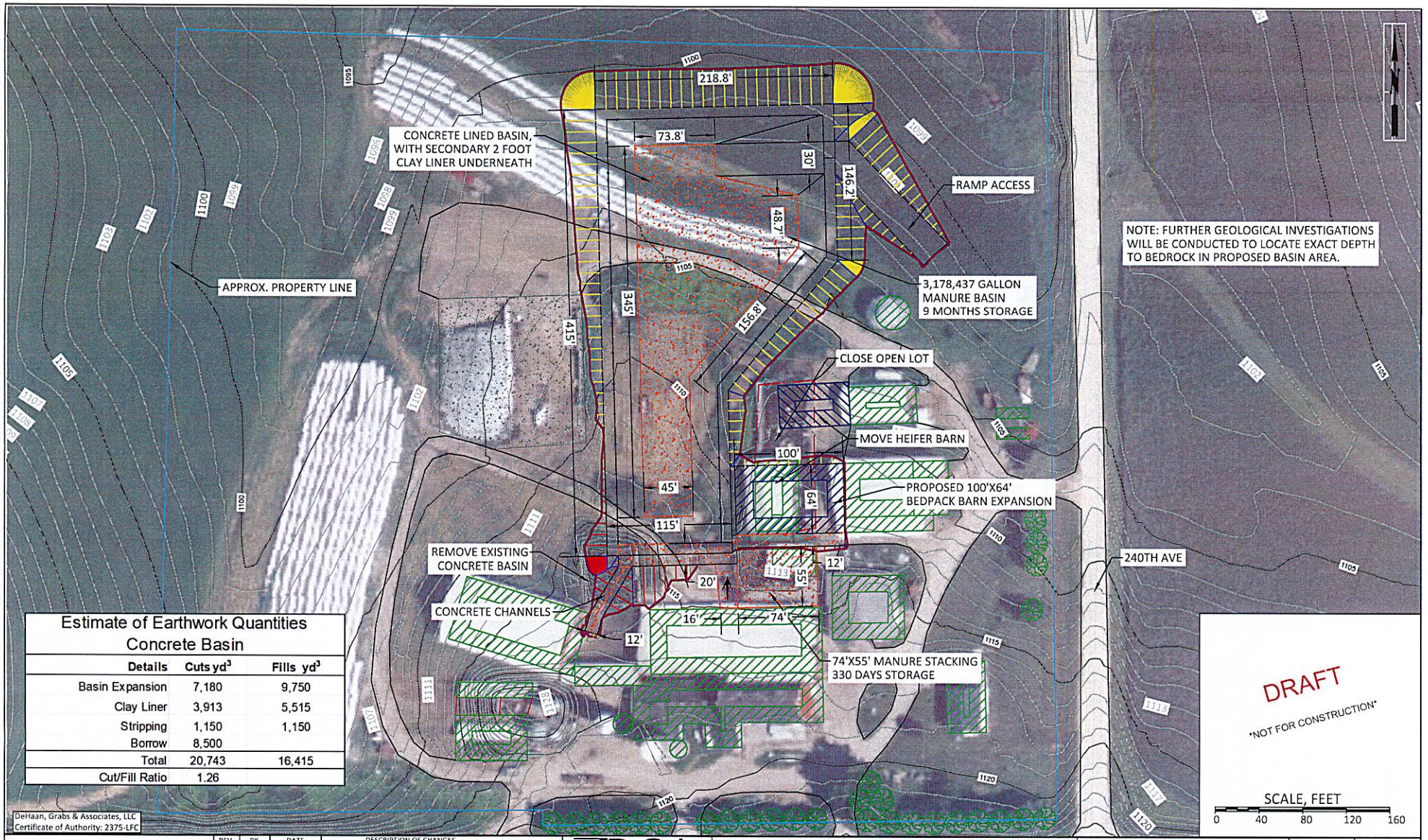
REV.	BY	DATE	DESCRIPTION OF CHANGES

DGA ENGINEERING
#200 2nd St. SE #101 Mandan, ND 58554 701.663.8116

ERIC RYAN
DAIRY FACILITY
SE 1/4 SECTION 24, T 111 N, R 15 W
GOODHUE COUNTY, MN

EXISTING SITE PLAN

DATE: DEC 05, 2024
SCALE: 1" = 80'
DRAWN BY: SAM
CHECKED BY: NAP
SHEET: C2.1



Estimate of Earthwork Quantities
Concrete Basin

Details	Cuts yd³	Fills yd³
Basin Expansion	7,180	9,750
Clay Liner	3,913	5,515
Stripping	1,150	1,150
Borrow	8,500	
Total	20,743	16,415
Cut/Fill Ratio	1.26	

DeHaan, Grabs & Associates, LLC
Certificate of Authority: 2375-LFC

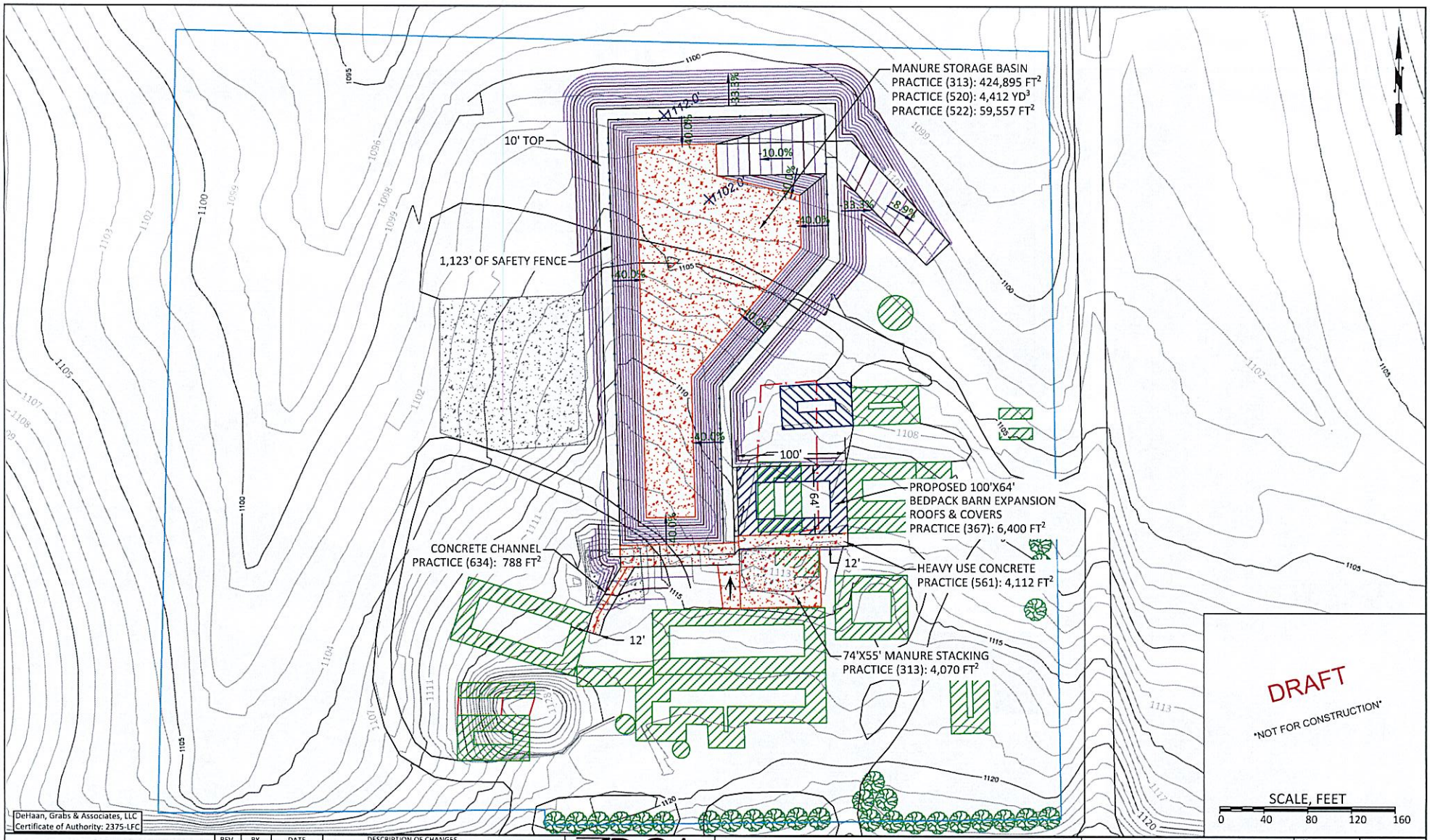
REV.	BY	DATE	DESCRIPTION OF CHANGES
1	SAM	07/10/25	POND REDESIGN

DGA ENGINEERING
4200 21st St. SE #101 Mandan, ND 58554 701.663.1116

ERIC RYAN
DAIRY FACILITY
SE 1/4 SECTION 24, T 111 N, R 15 W
GOODHUE COUNTY, MN

PROPOSED SITE PLAN

DATE: DEC 05, 2024
SCALE: 1" = 80'
DRAWN BY: SAM
CHECKED BY: NAP
SHEET: C3.1



DeHaan, Grabs & Associates, LLC
Certificate of Authority: 2375-LFC

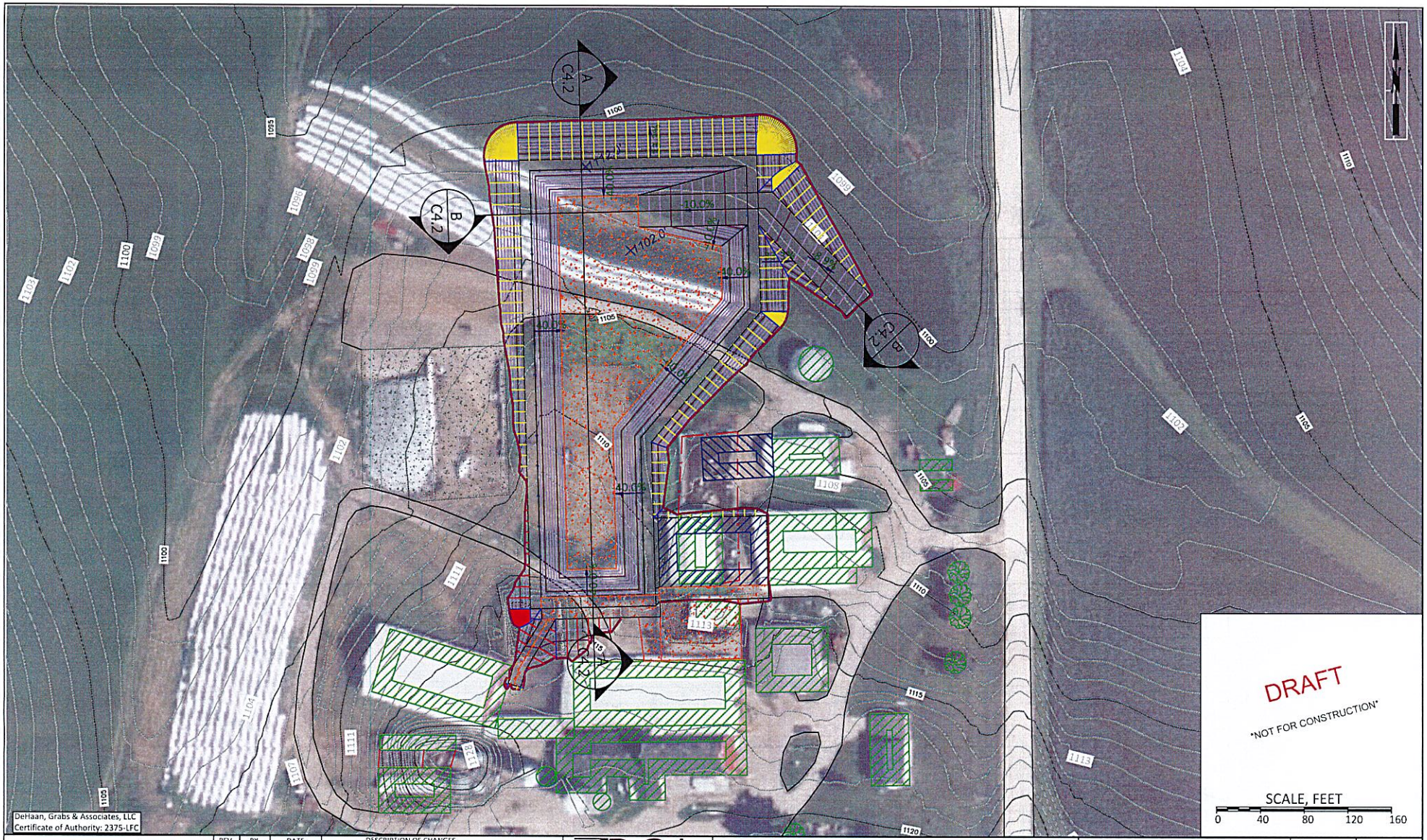
REV.	BY	DATE	DESCRIPTION OF CHANGES
1	SAM	07/10/25	POND REDESIGN

DGA ENGINEERING
4200 2nd St. SE #104 Mandan, ND 58554 701.663.1116

ERIC RYAN
DAIRY FACILITY
SE 1/4 SECTION 24, T 111 N, R 15 W
GOODHUE COUNTY, MN

PROPOSED DETAILED
SITE PLAN

DATE: DEC 05, 2024
SCALE: 1" = 80'
DRAWN BY: SAM
CHECKED BY: NAP
SHEET: C3.2



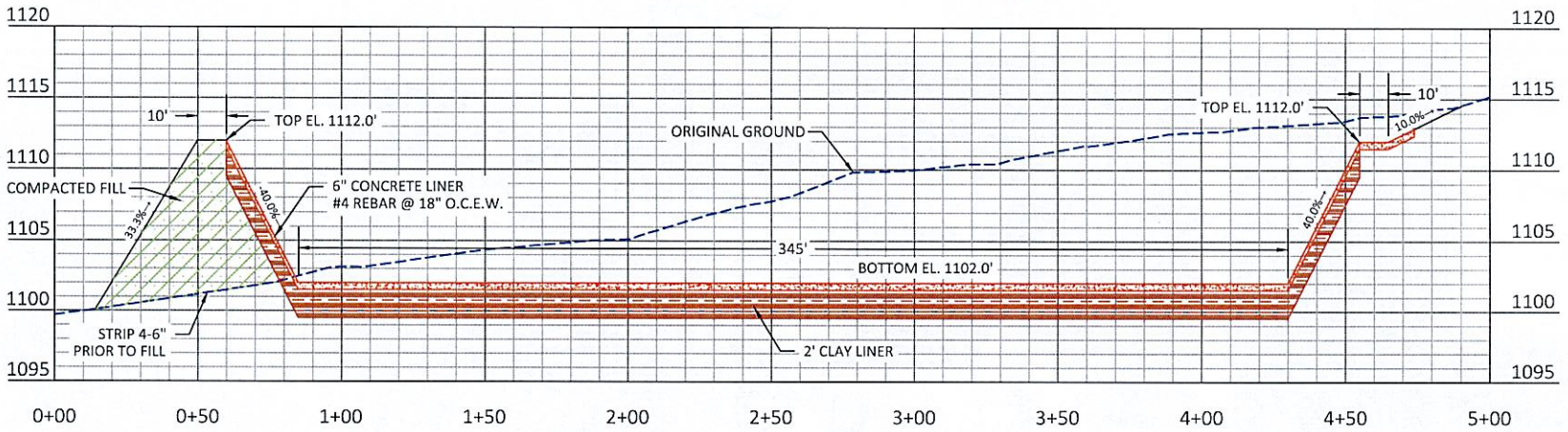
REV.	BY	DATE	DESCRIPTION OF CHANGES

DGA ENGINEERING
4200 21st St. SE #105 Mandan, ND 58554 701.663.1116

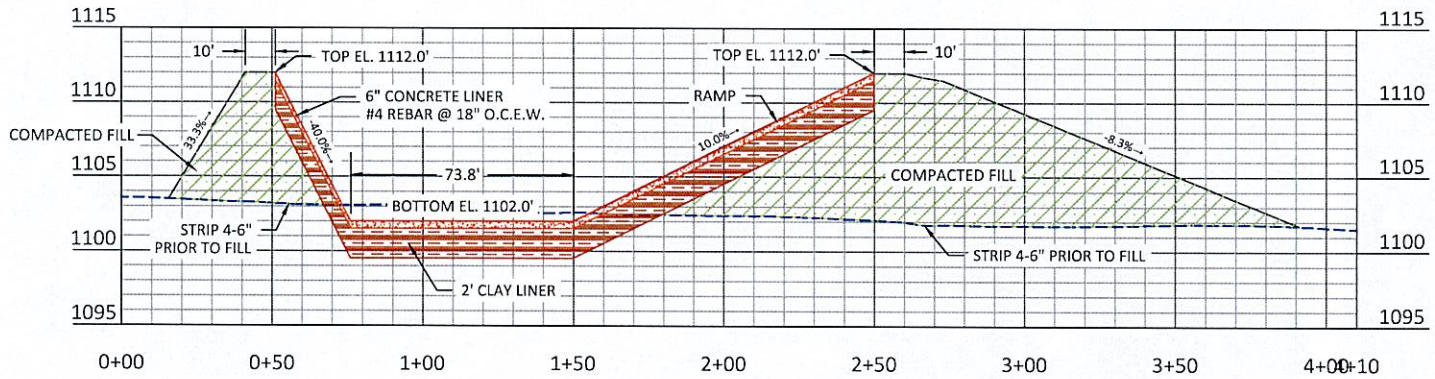
ERIC RYAN
DAIRY FACILITY
SE 1/4 SECTION 24, T 111 N, R 15 W
GOODHUE COUNTY, MN

PROPOSED PROFILES & CROSS SECTIONS

DATE:	AUG 18, 2025
SCALE:	1" = 80'
DRAWN BY:	SAM
CHECKED BY:	NAP
SHEET:	C4.1



A-A / C4.1 POND N-S CROSS SECTION



B-B / C4.1 POND W-E W/ RAMP CROSS SECTION

VERTICAL SCALE, FEET
0 4 8 12 16
HORIZONTAL SCALE, FEET
0 20 40 60 80

SCALE:
VERTICAL: 1" = 8'
HORIZONTAL: 1" = 40'

DRAFT
"NOT FOR CONSTRUCTION"

SCALE, FEET
0 40 80 120 160

DeHaan, Grabs & Associates, LLC
Certificate of Authority: 2375-LFC

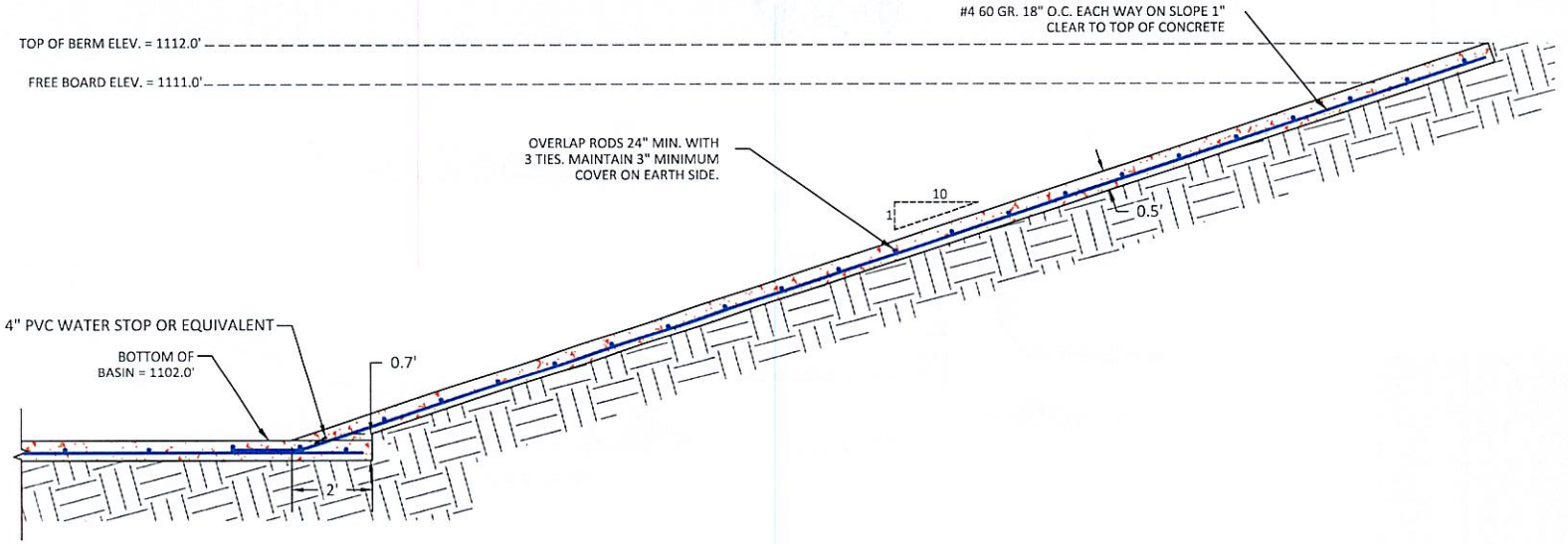
REV.	BY	DATE	DESCRIPTION OF CHANGES

DGA ENGINEERING
4200 2nd St. SE #101 Mandan, ND 58554 701.663.3196

ERIC RYAN
DAIRY FACILITY
SE 1/4 SECTION 24, T 111 N, R 15 W
GOODHUE COUNTY, MN

PROPOSED POND
CROSS SECTIONS

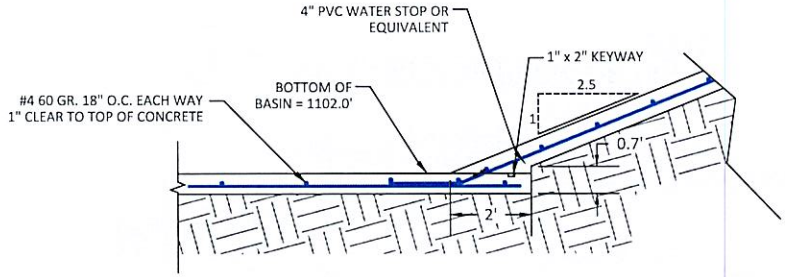
DATE: AUG 18, 2025
SCALE: 1" = 80'
DRAWN BY: SAM
CHECKED BY: NAP
SHEET: C4.2



1. CONCRETE: ***(UNLESS OTHERWISE NOTED)***
   A. CONCRETE WALLS, FLOORS & COLUMNS: 4000 PSI MINIMUM 28 DAY STRENGTH
   B. CONCRETE FOOTINGS: 4000 PSI MINIMUM 28 DAY STRENGTH
   C. ALL CONCRETE TO BE AIR ENTRAINED
   D. 3"-4" CONCRETE SLUMP ON HORIZONTAL POURS PRIOR TO ADDITIVES
   E. 5" MAXIMUM CONCRETE SLUMP ON VERTICAL POURS PRIOR TO ADDITIVES
   F. REFER TO ENGINEER SPECIFICATIONS FOR ADDITIONAL CONCRETE CONSTRUCTION REQUIREMENTS
2. REINFORCING STEEL: ***(UNLESS OTHERWISE NOTED)***
   A. ALL REBAR GRADE 60
   B. LAP ALL REINFORCING BAR SPLICES A MIN. OF 40 DIAMETERS
   C. BASIN FLOOR: #4 REBAR @ 18" O.C. EACH WAY
   D. STEEL COVER
   A.A. BEAMS, COLUMNS, WALLS: 2" CLEAR
   A.B. BARS NEXT TO SOIL, FLOORS AND FOOTINGS: 3" CLEAR
   A.C. BARS EXPOSED TO WEATHER: 1.5" FOR #3 TO 2" FOR #5
   A.D. BARS NOT EXPOSED TO SOIL OR WEATHER: 0.75"
3. COLD JOINTS ***(UNLESS OTHERWISE NOTED)***
   A. PIT SLAB (SEE DETAIL)
4. CONTROL JOINTS ***(UNLESS OTHERWISE NOTED)***
   A. PIT SLAB (NONE)
5. MISC. ***(UNLESS OTHERWISE NOTED)***
   A. WATERSTOP TO BE USED ON ALL EXTERIOR PIT SLAB (SEE DETAILS)

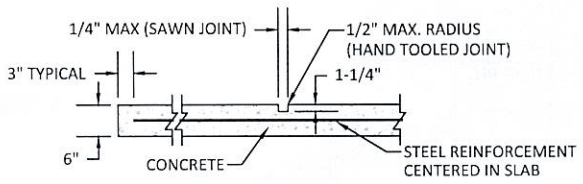
1 BASIN RAMP SECTION

1"=3'



2 TYPICAL BASIN BOTTOM SECTION

1"=3'



3 CONSTRUCTION JOINT DETAIL

Scale: NTS

DRAFT

NOT FOR CONSTRUCTION

DeHaan, Grabs & Associates, LLC
Certificate of Authority: 2375-LFC

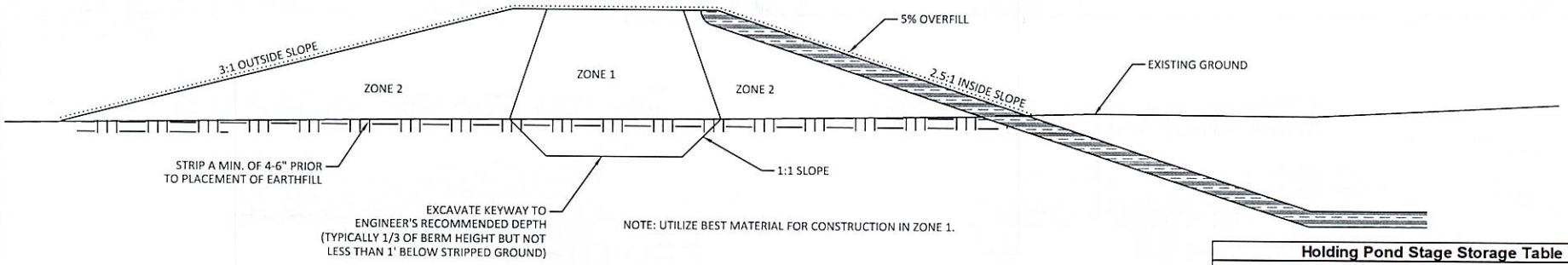
REV.	BY	DATE	DESCRIPTION OF CHANGES

DGA ENGINEERING
4200 21st St. SE #101 Mandan, ND 58554 701.663.3116

ERIC RYAN
DAIRY FACILITY
SE 1/4 SECTION 24, T 111 N, R 15 W
GOODHUE COUNTY, MN

BASIN CONCRETE DETAILS

DATE: AUG 18, 2025
SCALE: AS SHOWN
DRAWN BY: SAM
CHECKED BY: NAP
SHEET: C4.3

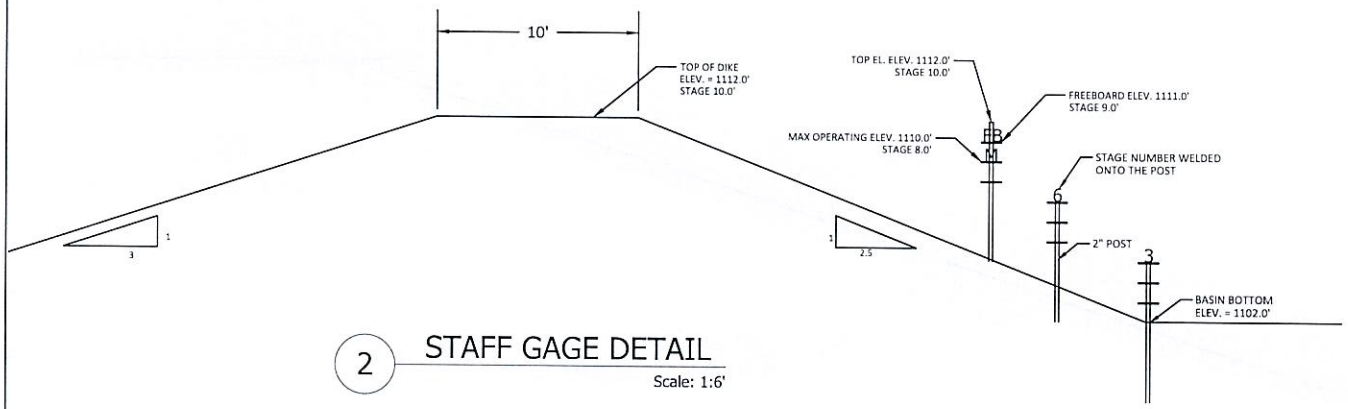


1 TYP. MAXIMUM BERM DETAILS

Scale: 1:6'

Holding Pond Stage Storage Table

Elevation (ft)	Stage (ft)	Area (ft^2)	Volume (ft^3)	Cum. Volume (ft^3)	Cum. Volume (acre-feet)	
1112.0	10.0	57,355	28,279	424,895	9.8	Top
1111.5	9.5	55,762	27,484	396,616	9.1	
1111.0	9.0	54,176	26,698	369,132	8.5	Freeboard
1110.5	8.5	52,618	25,922	342,433	7.9	
1110.0	8.0	51,070	25,154	316,511	7.3	Maximum Operating El.
1109.5	7.5	49,548	24,396	291,357	6.7	
1109.0	7.0	48,036	23,646	266,961	6.1	
1108.5	6.5	46,548	22,906	243,315	5.6	
1108.0	6.0	45,074	22,174	220,409	5.1	
1107.5	5.5	43,623	21,452	198,235	4.6	
1107.0	5.0	42,184	20,739	176,783	4.1	
1106.5	4.5	40,770	20,035	156,045	3.6	
1106.0	4.0	39,368	19,339	136,010	3.1	
1105.5	3.5	37,989	18,653	116,671	2.7	
1105.0	3.0	36,622	17,976	98,018	2.3	
1104.5	2.5	35,282	17,308	80,042	1.8	
1104.0	2.0	33,950	16,648	62,734	1.4	
1103.5	1.5	32,643	16,000	46,085	1.1	
1103.0	1.0	31,356	15,359	30,085	0.7	Sludge El.
1102.5	0.5	30,078	14,727	14,727	0.3	
1102.0	0.0	28,828	0	0	0.0	Bottom



2 STAGE GAGE DETAIL

Scale: 1:6'

DRAFT

"NOT FOR CONSTRUCTION"

DeHaan, Grabs & Associates, LLC
Certificate of Authority: 2375-LFC

REV.	BY	DATE	DESCRIPTION OF CHANGES

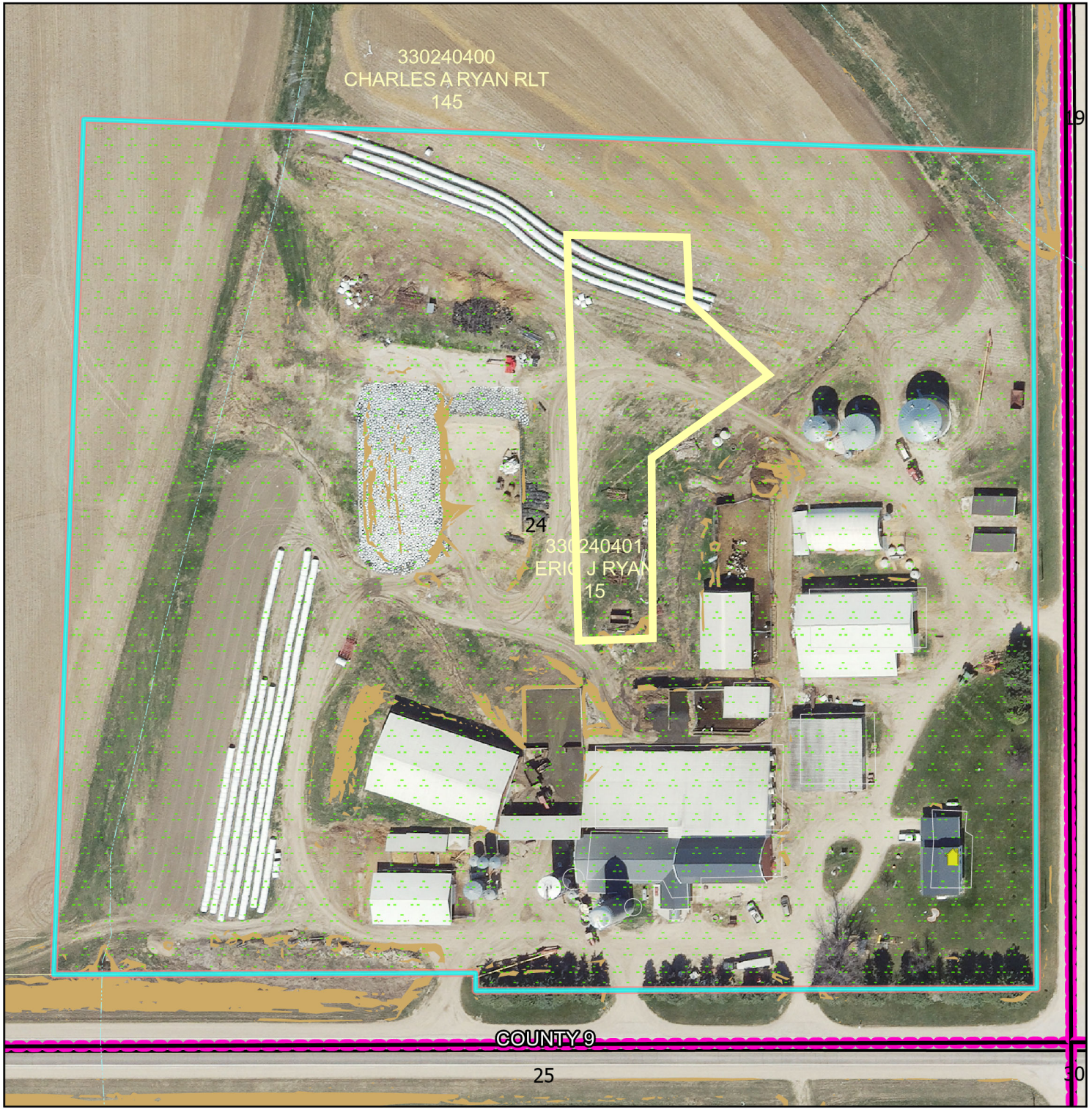
DGA ENGINEERING
4200 21st St. N. #101 Moorhead, MN 56554 701.663.1896

ERIC RYAN
DAIRY FACILITY
SE 1/4 SECTION 24, T 111 N, R 15 W
GOODHUE COUNTY, MN

MAX BERM & STAFF GAUGE DETAILS

DATE: AUG 18, 2025
SCALE: AS SHOWN
DRAWN BY: SAM
CHECKED BY: NAP
SHEET: C5.1

MAP 01: PROPERTY OVERVIEW



PLANNING COMISSION

Public Hearing
September 15, 2025

Eric Ryan (Owner)
A-1 Zoned District.

The SE1/4 of Sec 24 Twp 111 Range 15
in Goodhue Township.

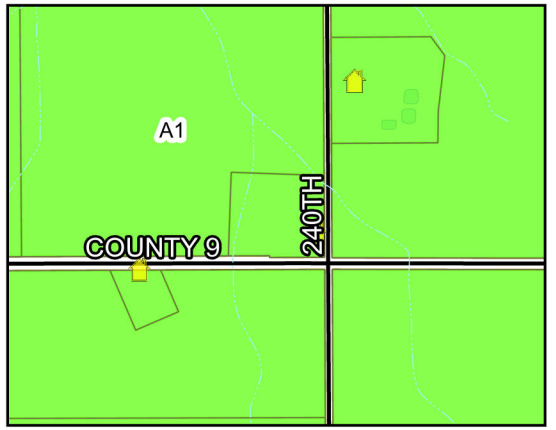
Request for CUP to build a manure storage that
is proposed to be 3.1 million gallons.

Legend

- Intermittent Streams
- Protected Streams
- Lakes & Other Water Bodies
- Shoreland
- Historic Districts
- Parcels
- Registered Feedlots
- Dwellings
- Municipalities

Bluff Impact Zones (% slope)
- 20
- 30

FEMA Flood Zones
- 2% Annual Chance
- A
- AE
- AO
- X



0 45 90 180 270
US Feet

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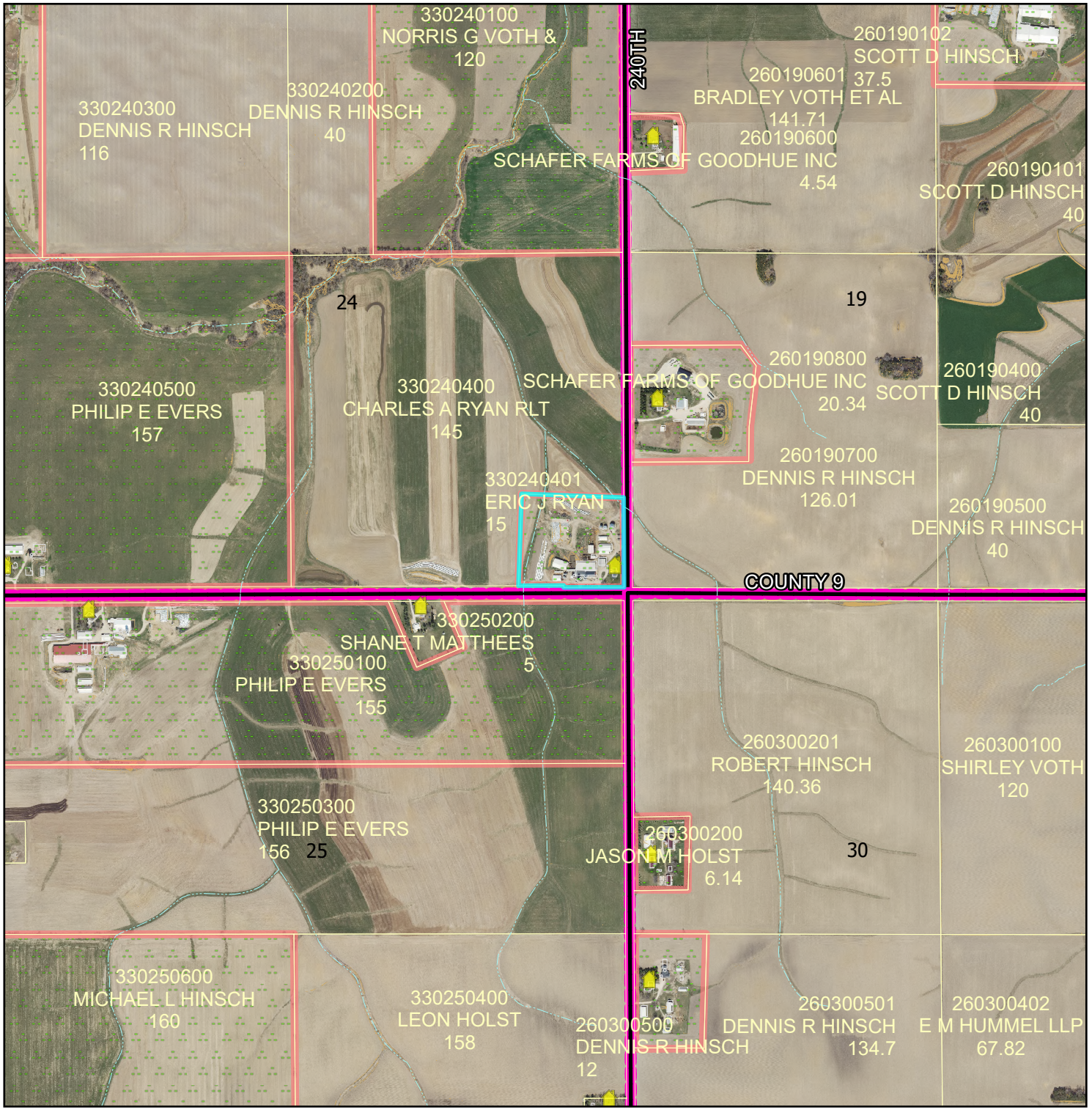
N

2024 Aerial Imagery
Map Created August, 2025 by LUM

MAP 02: VICINITY MAP



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- 30

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- 2% Annual Chance
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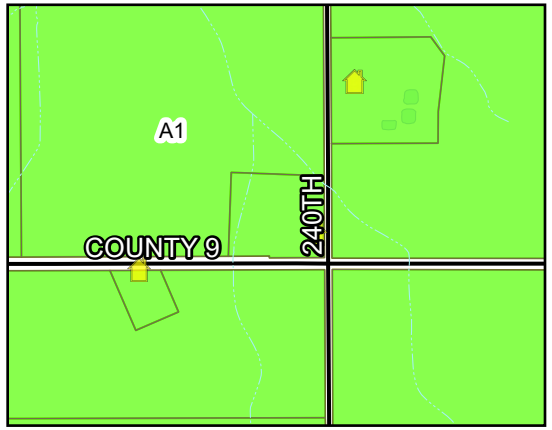
- AE
- AO
- X



0 420 840 1,680 2,520 US Feet

N

2024 Aerial Imagery
Map Created August, 2025 by LUM