



Redwood County

www.co.redwood.mn.us

Animal Confinement Feedlot Conditional Use Permit Application

Permit #: 18-16

Date: 11-3-16

Proposed Location of Feedlot Operation:

Address: 24308 Ocean Ave City: Morgan State: Mn Zip: 56266
House # Street Name

Parcel #: 69-022-4020 Township: Three Lakes Section: 22 Twp #: 11N Range: 35W

Information about the Operation:

General description of feedlot operation (including type and number of animal units, barns, and manure storage plan):

720 Swine AU / 1 - 102 x 200 Barn with 8' manure pit

Legal Description of Proposed Feedlot Location:

E 1/2 SE 1/4

Information about the Land Owner:

First Name: Alex Last Name: Madsen Phone: 507-430-3899

Address: 40672 240th St City: Morgan State: MN Zip: 56266

If the applicant is not the owner of the land, please specify the type of agreement the applicant has with the owner of the land at the proposed site:

Site / Plan Information:

Zoning District: Ag

Soil Type 1: Norman loam 1 to 3 % slopes

Soil Type 2: Carleton clay loam 0 to 2 % slopes

Water source for the site: Well If other, please explain:

Drainage System: Perimeter tile If other, please explain:

Estimated water use:

Animal 1

Animal Type: Hog Wean-Finish

94 gallons/day/animal x 2400 number of animals on site x 335 number of days present = 755,760 gallons/yr/site

Animal 2

Animal Type:

gallons/day/animal x number of animals on site x number of days present = gallons/yr/site

Animal 3

Animal Type:

gallons/day/animal x number of animals on site x number of days present = gallons/yr/site

Total Gallons: 0

Proposed Building(s) Information: (Please enter dimensions in feet)

Building 1:	Width: 102	Length: 200	Height:	Sidewall Height: 8	Sidewall Thickness: 6" (2x6)
Building 2:	Width:	Length:	Height:	Sidewall Height:	Sidewall Thickness:
Building 3:	Width:	Length:	Height:	Sidewall Height:	Sidewall Thickness:
Building 4:	Width:	Length:	Height:	Sidewall Height:	Sidewall Thickness:

Each building will have a minimum setback from every road right-of-way of: 240 feet

Estimated date for beginning construction: Spring 2017 Estimated completion date: July 2017

General Contractor:

Name: TBD

City:

State: MN

Feedlot Operator:

Complete this section only if the feedlot operator will be different from the "applicant". If the operator is not a natural person(s), you must also provide documentation of the operator's legal identity.

First Name: Last Name: Phone:

Address: City: State: MN Zip:

Applicant Information:

Note: If the applicant is not one natural person, requested information and signature(s) must be provided for each partner/associate/co-applicant and must include documentation of each co-applicant's legal identity and the legal relationship between them. Each partner/associate/co-applicant must sign or affirm the application before it will be accepted for consideration.

First Name: Alex Last Name: Madsen

Business:

Address: 40672 240th St City: Morgan State: MN Zip: 56266

Home Phone: Cell Phone: 507-430-3899

List any additional applicants: Jeff Madsen - current landowner, but will transfer to Alex.

I affirm that the forgoing information is true and accurate. I understand that if any portion of this information is false or materially misleading, any conditional use permit issued in reliance upon this information is voidable at the election of Redwood County.

Applicant(s) Signature(s): Alex Madsen Date: 11-3-16
Jeff Madsen 11-3-16

Office Use Only * The section below is to be filled out by the Environmental Office Staff

CUP permit fee: \$700 Receipt #: 952000

Completed Application Acceptance Date: Date Approved:

Commission Action:

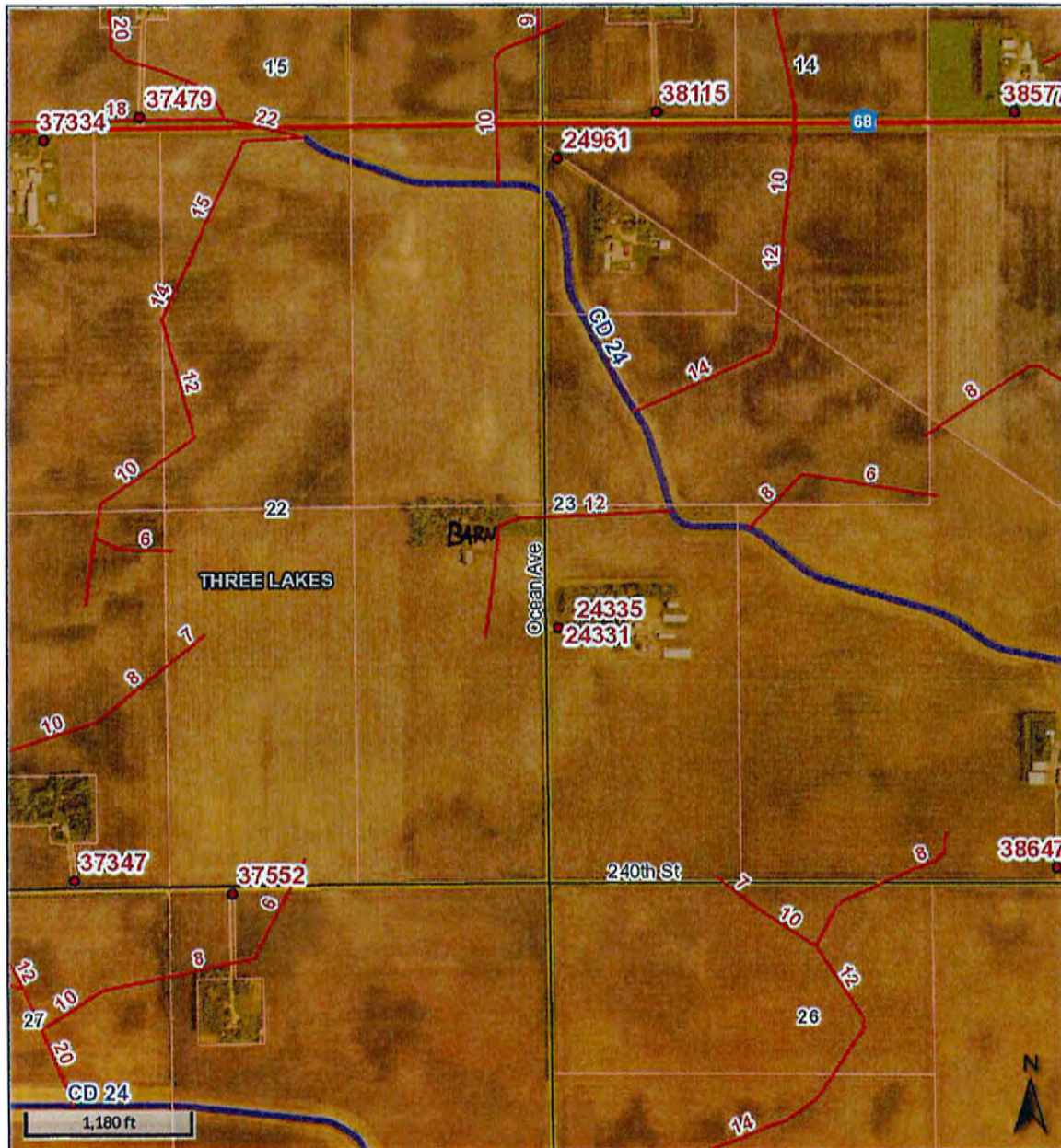
County Board Action:

Approved: Date: Approved: Date:

Disapproved: Date: Disapproved: Date:



Google earth



Overview



Legend

- Municipal Boundaries
- Sections
- Surrounding Counties
- Townships
- County Open Ditch
- County Tile
- Lakes
- Rivers
- Lakes, Reservoirs, and Wetlands
- Address points
- Parcels
- Major Roads**
- <all other values>
- 1
- 2
- Minor Roads
- Shoreland**
- <all other values>
- 150 ft
- 300 ft
- 300 ft LW
- 1000 ft
- FloodPlain**
- Zoning**
- B1
- I1
- R1
- S
- UE
- 2M
- AG



Overview



Legend

-  Municipal Boundaries
-  Sections
-  Surrounding Counties
-  Townships
-  County Open Ditch
-  County Tile
-  Lakes
-  Rivers
-  Address points
-  Parcels
- Major Roads**
-  <all other values>
-  1
-  2
-  Minor Roads

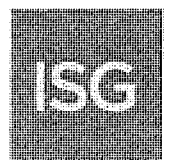
Date created: 11/18/2016
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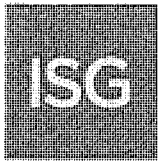
CONSTRUCTION METHODS FOR CONCRETE LINED LIQUID MANURE STORAGE AREA

October 2016 - Project No. 16-19716

Alex Madsen

40672 240th Street
Morgan, MN 56266
SE ¼, Section 22, T111N-R35W
Three Lakes Township, Redwood County





October 11, 2016

Alex Madsen
40672 240th Street
Morgan, MN 56266

**RE: Soil Borings for a 102'x200' Finishing Barn
ISG Project No. 16-19716**

Dear Mr. Madsen:

On September 30, 2016, ISG was present during excavation of 2 observation pits and recorded the soil profiles. A backhoe was used to excavate the 2 test holes. After recording the soil profiles, the holes were backfilled and compacted by placing the soil in the holes to provide the original soil profile.

The seasonal high water table was at 24". The water table will be controlled by using a 4" perforated drain tile installed to gravity-drain to an existing farm tile of sufficient depth. This tile will prevent any ground water intrusion and damage to the concrete pit walls.

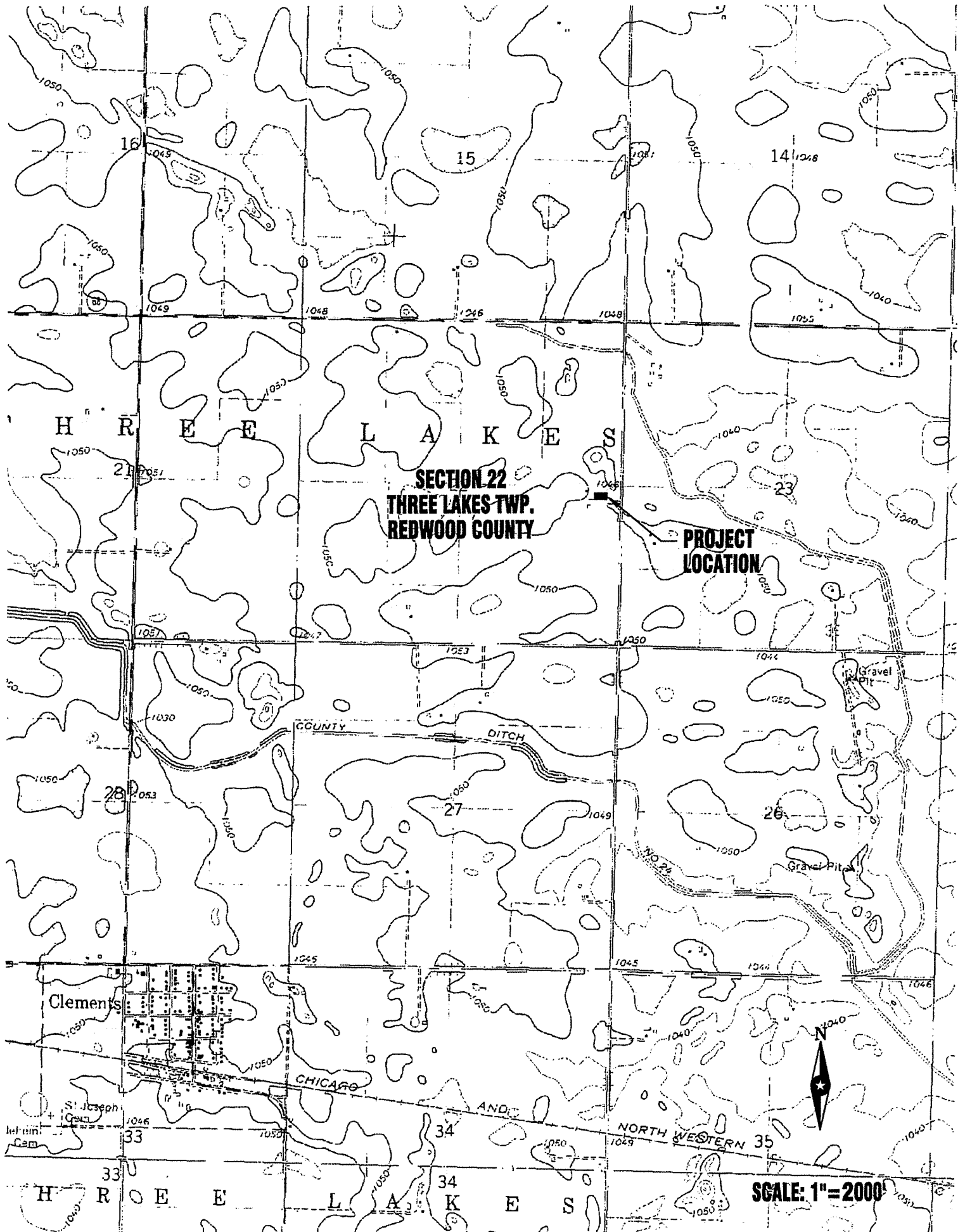
We have reviewed the concrete pit design along with the soils report and find the soils to be acceptable for this project.

If you have any questions, please call.

Sincerely,

A handwritten signature in cursive script that reads "Jason E. Hoehn".

Jason E. Hoehn, P.E.
JEH/mdh



**SECTION 22
THREE LAKES TWP.
REDWOOD COUNTY**

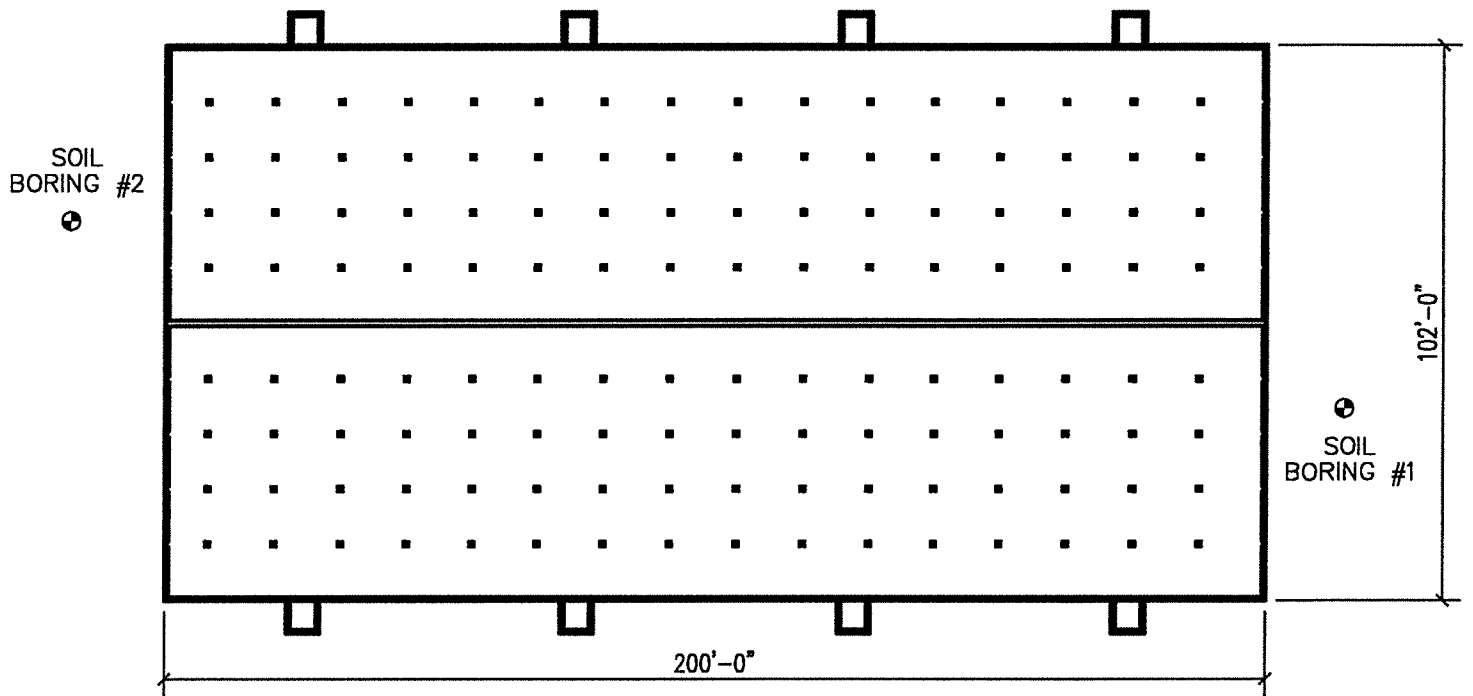
**PROJECT
LOCATION**

Clements

CHICAGO

NORTH WESTERN

SCALE: 1"=2000'



SOIL PROFILE LOCATIONS

ALEX MADSEN
 SECTION 22, THREE LAKES TWP., REDWOOD COUNTY
 PROJECT NO. 16-19716

3 soil only side?

SOIL BORING REPORT



Test No: 1

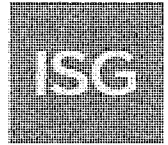
Project Name: Alex Madsen
ISG Project Number: 16-19716
Location: SE 1/4 Section 22
Township: Three Lakes, T111N, R35W
County: Redwood
Description: 102'x200' Finishing Barn

Date: 9/30/2016
Temp: 70 Deg.
Conditions: Sunny
Inspector: Matt Hudson

Assum. Elev.	Depth	USCS Symbol	Description of Materials	WL	SH	Notes
1053.00'	+60"					Proposed Slat Elevation
1048.00'	0"					Existing Grade
		10yr 2/1	Top Soil			
1045.33'	-32"					
1045.00'	-36"					Proposed Pit Floor Elevation
		10yr 4/1	Clay			
1043.58'	-53"					Seasonal High Water Table
		10yr 5/8	Clay			
		10yr 6/2	w/ mottling			
						No Water at Time of Testing
1039.50'	-102"					End of Soil Boring

Nearest Body of Water:	Location: East	Type: Drainage Ditch	Distance: 1,170'	Approx. Elev.: 1034.00'
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SOIL BORING REPORT



Test No: 2

Project Name: Alex Madsen
ISG Project Number: 16-19716
Location: SE 1/4 Section 22
Township: Three Lakes, T111N, R35W
County: Redwood
Description: 102'x200' Finishing Barn

Date: 9/30/2016
Temp: 70 Deg.
Conditions: Sunny
Inspector: Matt Hudson

Assum. Elev.	Depth	USCS Symbol	Description of Materials	WL	SH	Notes
1053.00'	+24"					Proposed Slat Elevation
1051.00'	0"					Existing Grade
		10yr 2/1	Top Soil			
1049.00'	-24"					Seasonal High Water Table
		10yr 5/8 10yr 6/2	Clay w/ mottling			No Water at Time of Testing
1045.00'	-72"					Proposed Pit Floor Elevation
1041.67'	-112"					End of Soil Boring

Nearest Body of Water:	Location: East	Type: Drainage Ditch	Distance: 1,170'	Approx. Elev.: 1034.00'
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CONCRETE LINED STORAGE STRUCTURE

A Concrete lined manure structure is a fabricated structure for the temporary storage of animal or other organic wastes to conserve nutrients, prevent pollution and protect the environment. The following guidelines are provided for your use in operating and maintaining your structure:

- A.** Animal manure shall be handled and utilized as specified in the Manure Management plan.
- B.** Poisonous, noxious or explosive gases produced in the tank must be controlled by ventilation. Evacuate the building if practical during agitation.
- C.** Regular inspection should be made of the structure and its surroundings for leaks, deterioration of grills, slats, covers, and ladders. Deteriorating items should be replaced to avoid future accidents.
- D.** Concrete should be checked for large cracks, which could expose the reinforcing steel to corrosive elements. Joints should be inspected for unusual openings.
- E.** Concrete surfaces should be checked for erosion, scaling and exposed reinforcing steel.
- F.** If any concrete deterioration is evident, call your local MPCA office. Depending on the damage, an engineer may be needed to evaluate the pit and propose a solution.
- G.** Regular inspections should be made of the perimeter tile, shut off valves, and inspection risers to ensure proper operations of the system.

PRE-CONSTRUCTION MEETING

A pre-construction meeting is a meeting that involves the owner, the contractor, the design engineer, the inspector and the MPCA or the County feedlot officer. The object of the meeting is to ensure that the structure is built to comply with the rules of the MPCA and the designed plans. Any questions or comments can be discussed at this meeting. Any changes to the plans or specifications must be submitted to the Engineer and the MPCA / County prior to the start of construction.

The project schedule, proper notifications, contact information for contractors, owners, MPCA and County Feedlot Officer, and any sub-contractor information will be discussed at this meeting.

The Pre-construction meeting shall be scheduled at least one week before construction is to begin on the structure. This will be determined mainly by when the contractor can begin work and the owner and engineer's agreement to the timing of the meeting. A time of day and location for the meeting shall be agreed upon by the contractor, owner, design engineer and inspector. The owner shall be responsible for contacting all of the above and scheduling the meeting.

INSPECTION PLAN

An owner constructing a liquid manure storage area, except for concrete lined manure storage areas with a capacity of 20,000 gallons or less, shall have plans designed by a licensed engineer and inspections completed during the construction process which comply with the following:

- A.** The inspector must be one or more of the following:
 - 1. A professional engineer licensed in the State of Minnesota or a person working under the Professional Engineer's direct supervision;
 - 2. A qualified Natural Resources Conservation Services Staff Person; or
 - 3. If the manure storage area has a concrete liner, an American Concrete Institute or Minnesota Department of Transportation concrete field testing technician grade/level I certified and concrete field inspector level II certified.

- B.** The General Contractor / Owner is required to call the inspector a minimum of 48 hours prior to beginning excavation and 24 hours prior to placing concrete. Contact will be kept with the inspector throughout the project until the concrete lined storage area is complete.

- C.** The General Contractor / Owner is required to call the MPCA / County Feedlot Officer 3 days before any construction activity begins.

- D.** The General Contractor / Owner is required to call the MPCA / County Feedlot Officer 3 days before the perimeter pit walls are backfilled. A final inspection by the MPCA / County Feedlot Officer is required prior to backfill.

- E.** During construction of each manure storage area the inspector shall record observations related to conformance to the design plans and specifications and construction standards of the following:
 - 1. Subgrade conditions prior to liner placement including soil texture, strength and moisture content, and presence of any frozen soils;
 - 2. Location and proper functioning of the perimeter drainage tile system, if required, and inspection/monitoring access;

3. For all concrete-lined manure storage areas:
 - a. Reinforcing steel size, grade, spacing, cover, and that steel is free of loose rust, oil, or other debris;
 - b. Handling, placement, consolidation, and finishing of concrete;
 - c. Curing and protection of concrete after placement, including hot and cold weather protective measures;
 - d. Location, forming, and surface preparation of construction, contraction, and expansion joints;
 - e. Placement of flexible waterstop materials in joints; and
 - f. Application of surface applied or injected crack and joint sealant materials;
4. Repair of construction defects; and
5. Conformance to the liner penetration prohibitions

F. Concrete Testing:

1. A test of concrete shall include all of the following: Cylinders, Slump, Air Content and Temperature. A test shall be taken once every 100 cubic yards of concrete placed and at least one test every 10 or more cubic yards of concrete are placed. Additional testing is required to represent new mixes and different concrete suppliers.
2. Three (3) concrete cylinders shall be taken for each 100 cubic yards of concrete placed but not less than three 3 test cylinders each day that 10 or more cubic yards are placed. Keep one of each three cylinders on the job site and allow to field cure. Within two days, deliver two of the three cylinders to a licensed testing laboratory to be cured and tested at seven 7 days and 28 days. Additional testing and cylinders are required to represent new mixes and different concrete suppliers.
3. Concrete Rebound Hammer tests may be taken after the pit is complete and at least 7 days after the concrete to be tested was poured. Concrete shall be tested according to ASTM C 805.

G. The owner shall ensure that the following information is submitted to the Design Engineer for incorporation into the construction report.

1. The name and qualifications of the inspector;
2. The name of the Concrete Contractor.



Minnesota Pollution Control Agency

520 Lafayette Road North
St. Paul, MN 55155-4194

Liquid Manure Storage Area Construction Inspection Form

Feedlot Program

Doc Type: Inspection

Applicability: This form must be utilized to document construction of a liquid manure storage area (LMSA). Both the required inspector and the contractor that installed the LMSA liner must contribute information to this form.

Return this completed form to the design engineer: The owner must submit a construction report to the Minnesota Pollution Control Agency (MPCA) or county feedlot pollution control officer within 60 days of the completion of any new or modified manure storage area.

I. Facility Information

Name of owner(s):
Legal name of facility:
Permit number:
Location: County Township Sect. 1/4 Sec. 1/4 of 1/4

II. Inspector's Information (inspector must complete Parts 3 to 6 of this form)

Name of inspector:
Phone:
Company/Agency:

Inspector qualifications (check all that apply):

Professional engineer licensed in the state of Minnesota. License No.:
Person working under the direct supervision of a professional engineer. Engineer's name: MN license no.:
Natural Resources Conservation Services staff.
American Concrete Institute (ACI) or Minnesota Department of Transportation (MNDOT) concrete field testing technician Grade/Level I certified and concrete field inspector Level II certified.
Note: For concrete-lined structures only. List certificate no.:

III. Notifications

A. Did the owner notify the design engineer a minimum of three business days prior to commencement of construction?
B. Did the owner notify the MPCA or county feedlot officer a minimum of three business days prior to commencement of construction?
C. Did the owner notify the MPCA or county feedlot officer within three business days following completion of the manure storage area liner?
1. If a concrete-lined structure, did the owner complete the notice before the vertical walls of the concrete structure were backfilled?

IV. Inspection Checklist and Observations

This section (A-H, below) must be completed by the inspector listed in Part II. The liner contractor does not need to complete this section. Attach additional sheets for comments as needed.

	Yes	No	N/A
A. Were subgrade conditions adequate for liner placement, including soil texture, strength, and moisture content, and no frozen soils were present?	<input type="checkbox"/>	<input type="checkbox"/>	
Comments:			
B. Was a perimeter drain tile system specified in the design plans? If yes, answer Questions 1 to 4. If no, go to Question C.	<input type="checkbox"/>	<input type="checkbox"/>	
1. If concrete-lined, is drainage tile located a horizontal distance of at least 1 ft. outside the footing of a concrete-lined structure (unless incorporated into the form material)?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Is a dedicated drain tile system in place for each manure storage area?	<input type="checkbox"/>	<input type="checkbox"/>	
3. Is a dedicated tile riser, manhole, or other access (i.e. daylight) that allows collection of tile-water samples in place and functioning for each dedicated tile system?	<input type="checkbox"/>	<input type="checkbox"/>	
Comments:			
C. Concrete-lined LMSAs only - Did you verify that the following items (1-7 below) were in conformance with the design engineer's plans and specifications:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. Reinforcing steel size, grade, spacing, cover, and that steel was free of loose rust, oil, or other debris?	<input type="checkbox"/>	<input type="checkbox"/>	
2. Concrete quality for air entrainment, temperature, and strength? (include test results with photocopy of laboratory results for strength)	<input type="checkbox"/>	<input type="checkbox"/>	
3. Handling, placement, consolidation, and finishing of concrete?	<input type="checkbox"/>	<input type="checkbox"/>	
4. Curing and protection of concrete after placement, including hot and cold weather protective measures?	<input type="checkbox"/>	<input type="checkbox"/>	
5. Location, forming, and preparation of construction and contraction/expansion joints?	<input type="checkbox"/>	<input type="checkbox"/>	
6. Specified product, placement, and installation of flexible waterstop materials in joints?	<input type="checkbox"/>	<input type="checkbox"/>	
7. Specified product and installation of surface applied or injected crack and joint sealant materials?	<input type="checkbox"/>	<input type="checkbox"/>	
Comments:			
D. Were there any construction defects that needed repair? If yes, describe:	<input type="checkbox"/>	<input type="checkbox"/>	
E. Were any water supply systems, fuel lines, electrical conduit, or other equipment not solely functioning as part of the manure handling or transfer system installed to penetrate the liner of the liquid storage structure?	<input type="checkbox"/>	<input type="checkbox"/>	
F. Was testing completed according to the methods and frequencies specified in the design engineer's quality assurance and quality control plan? (results should be forwarded to the engineer)	<input type="checkbox"/>	<input type="checkbox"/>	
G. Were any engineering changes or modifications made related to the liner specifications, structure location, depth, or separation distance to bedrock? If yes, complete 1 and 2 below:	<input type="checkbox"/>	<input type="checkbox"/>	
1. Describe the changes:			
2. Were these changes approved by the MPCA or county feedlot officer prior to commencement of construction of the change?	<input type="checkbox"/>	<input type="checkbox"/>	
H. Other comments:			

V. Inspector's Certification

I hereby certify that I am the inspector listed in Part II of this form. I hereby certify that the construction of the facilities referenced in this form were completed in accordance with all plans, specifications, reports, permit application submittals, and related communications approved by the MPCA or delegated county feedlot officer. By my signature below, I represent that the information submitted in this form is, to the best of my knowledge and belief, true, accurate, and complete.

Signature of Inspector: _____

Date: _____

VI. Contractor's Information and Certification

Contact name: _____

Phone: _____

Liner Contractor Company: _____

Indicate type of liner installed: Earthen Concrete Steel Tank HDPE, LLDPE, or EPDM GCL (bentonite)
(Check all that apply) Other: _____

I hereby certify that I represent the liner contractor and further certify that the construction of the liner indicated above, was completed in accordance with the design plans and specifications and construction standards.

Signature of Contractor: _____

Date: _____

Second Liner Contractor (if used)

Contact name: _____

Phone: _____

Liner Contractor Company: _____

Indicate type of liner installed: Earthen Concrete Steel Tank HDPE, LLDPE, or EPDM GCL (bentonite)
(Check all that apply) Other: _____

I hereby certify that I represent the liner contractor and further certify that the construction of the liner indicated above, was completed in accordance with the design plans and specifications and construction standards.

Signature of Contractor: _____

Date: _____

OPERATION AND MAINTENANCE PLAN

A plan for operation, inspections, and maintenance of the manure storage area should be created to ensure the quality of the existing pit.

A. Pit Inspections & Maintenance:

1. Routine inspections should be made of the structure and its surroundings for leaks, deterioration of grills, slats, covers, and ladders.
 - a. Monitor the frequency of manure removal from the storage structure and note any significant fluctuations (an increase or decrease) in time between successive manure removal events.
 - b. Control the level of the liquid manure inside such that the maximum operating depth is not exceeded.
 - c. Records shall be kept explaining the type of defects, location, and repair methods. If any leaking is detected, contact your local MPCA office.
 - d. Prior to initial manure loading, consult with the design engineer to determine the need for protecting the foundation and floor slab from freezing temperatures. It may be advisable to add water to the structure to prevent frost damage. It may also be advisable to obtain, and have analyzed, a perimeter tile water sample prior to the addition of manure to the structure.

B. Perimeter Tile Inspections:

1. Routine inspections of the perimeter tile outlets and inspection manholes should be done to ensure proper operations of the tile system. Follow your MPCA / County Livestock Permit requirements for the frequency of tile inspections and testing.
 - a. The tile should be inspected for traces of manure, high flows in a dry period, broken tile, and anything else unusual.
 - b. Records should be kept on the dates the tile was inspected, methods of inspection, and what was observed. If manure is observed in the tile, contact your local MPCA office immediately.

End of Operation and Maintenance Plan

STRUCTURAL NOTES

A. General:

1. Notes and details on the structural drawings take precedence over these structural notes.
2. The contractor shall verify all dimensions, elevations, and site conditions before starting work. The engineer shall be notified of any changes.
3. In no case shall dimensions be scaled from plans, sections, or details on the structural drawings.
4. All materials and workmanship shall conform to the requirements of the following codes:
 - a. International Building Code (IBC)
 - b. Minnesota State Building Code
 - c. American Concrete Institute (ACI)
 - d. Concrete Reinforcing Steel Institute (CRSI)
Manual of Standard Practice

B. Drain Tile:

1. The drain tile shall be heavy-duty perforated polyethylene tubing 4" diameter.
2. The tile shall be covered with a washed aggregate, up to the top of the footing elevation, as shown on the plans.
2. Connect the drain tile to an existing farm tile if available, discharge to surface drainage, or drain to a sump and pump to surface.

C. Temporary Bracing and Backfill:

1. Provide temporary lateral support for all walls where grade varies on the two sides until the permanent structural support system is in place.
3. Backfill only after the floor slats or solid floor has been installed.

D. Footings and Foundations:

1. Soil bearing design value: 2500 PSF (Assumed) on virgin soil or compacted fill for footings.
2. Protect foundation excavations from frost. Do not place concrete on frozen ground.
3. Foundation excavation shall be kept free of loose material and standing water.
4. Anchor bolts shall be ½" diameter with 7" embedment and 2 ¾" projection.

E. Reinforced Concrete:

1. Concrete shall have a minimum 28-day compressive strength of $F'_c = 4000$ psi.
2. Water cement ratio shall be 0.45 maximum.
3. Cement shall conform to ASTM C150, Type I.
4. Coarse aggregate shall be ¾" Max.
5. Ready-mix concrete shall be mixed and delivered in accordance with ASTM C94.
6. Slump shall be a maximum of 6".
7. Air Content shall be between 4%-6%.
8. Concrete work shall conform to all the requirements of ACI 301.
9. Admixtures may be used with prior approval of the engineer for the purpose of increasing the workability but not to reduce the specified minimum cement content. Calcium chloride shall not be used.

F. Reinforcing Steel:

1. Bar reinforcement shall be ASTM A615, Grade 40 or 60.
2. Minimum lap splice or reinforcing bar, based on ACI 318, Class B, shall be as follows unless noted otherwise:
 - a. #3 Bars – 15"
 - b. #4 Bars – 20"
 - c. #5 Bars – 24"
 - d. #6 Bars – 30"
 - e. #7 Bars – 36"
 - f. #8 Bars – 42"

3. Reinforcing steel shall be provided with the following minimum cover unless noted otherwise:
 - a. Concrete placed against earth – 3”
 - b. Formed concrete exposed to earth or weather:
 - 1) #6 Bars through #8 Bars – 2”
 - 2) #5 Bars and smaller – 1 ½”
 - 3) Stirrups & Ties – 1 ½”
4. All reinforcing steel, anchor bolts, dowels, and inserts shall be secured in position with wire positioners, or equal, before placing concrete.
5. Dowels between footings and walls shall be the same grade, size, and spacing as vertical wall reinforcement.
6. All lap splices shall be tied at 3 locations.

G. Tolerances and Quality Control:

1. Column finish elevations shall be + or – ¼” from design elevation.
2. Wall alignment (horizontal) shall deviate no more than ¼” in 10 feet and no more than ¾” over the full length of the wall.
3. Wall bearing ledge elevations shall be + or – ¼” from design from design elevation in 10 feet and no more than ½” over the full length of the wall.
4. Overall foundation length and width dimensions and diagonal dimensions should be within ½” of plan dimensions.
5. Minor honeycombing shall be repaired on the same day that the forms are removed. Major honeycombing (greater than 1 ½” deep) shall be inspected by the engineer and repaired or removed at his direction.
6. Cracks which may extend through the concrete liner must be cleaned and sealed with MasterSeal NP1 Polyurethane Sealant, or approved equal. Larger cracks or defects may need an inspection by the engineer to determine the proper repair.
7. Test Cylinders: Take three (3) test cylinders for each 100 cubic yards of concrete placed but not less than three (3) test cylinders each day that 10 or more cubic yards are placed. Keep one of each three cylinders on the job and allow to field cure. Deliver two of the three cylinders to a licensed testing laboratory to be cured and tested at 7 days and 28 days.

H. Electrical Ground:

1. Install reinforcing bars as shown on the drawing. Verify Electrical Ground requirements with Electrical Contractor. Notify electrical inspector for inspection prior to placing concrete.

I. Cold Weather Concrete:

1. When, for more than 3 successive days, the mean daily temperature drops below 40 degrees Fahrenheit, the contractor shall place and protect the concrete in accordance with ACI 306.

J. Hot Weather Concreting:

1. When it is likely that temperatures between 75 degrees Fahrenheit and 100 degrees Fahrenheit will be approached or exceeded; that low relative humidity is present, or wind velocity will exceed 10 mph, the contractor shall place and protect the concrete in accordance with Chapter 4 & 5 of ACI 305.

K. Waterstops:

1. Waterstop can be 3/8" x 3/4" Bentonite/Butyl rubber, Equal to waterstop – RX, Ultrastop, Swellstop or a 4" ribbed with center bulb PVC Waterstop, Equal to Vinylex RCB -4316. Waterstops shall be placed in all construction joints on the floor and in the perimeter walls. Location and number of construction joints are to be determined by the contractor.

L. Fibermesh:

1. Fibermesh fibers shall be added to the concrete mix at a minimum rate of 2.0 pounds per cubic yard of concrete. The fibermesh shall be fibrillated polypropylene Olefin fibers, 3/4" in length.

CAST-IN-PLACE CONCRETE

This section includes specifications for formwork, reinforcement, accessories, cast-in-place concrete, finishing and curing.

A. Quality Assurance:

1. Construct and erect concrete formwork in accordance with ACI301
2. Perform concrete reinforcing work in accordance with ACI Manual of Practice
3. Perform cast-in-place concrete work in accordance with ACI318

B. Form Materials and Accessories:

1. Plywood: sound undamaged sheets with clean true edges
2. Lumber: grade as required
3. Prefabricated Steel Type: matched, tight fitting, stiffened to support weight of concrete
4. Pan Type: Steel of size and profile required
5. Tubular Column Type: Round, spirally wound laminated materials, inside surface treated with release agent, of size required
6. Form Ties: Snap-off, metal type of adjustable length
7. Form Release Agent: Colorless mineral oil which will not stain concrete or impair natural bonding characteristics of coating intended for use on concrete

C. Reinforcement Materials:

1. Reinforcing Steel: ASTM A615; deformed billet steel bars, plain finish.
2. Cement: ASTM C150, Normal-Type I Portland type.
3. Water: Clean and not detrimental to concrete.

4. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for support of reinforcing.
5. Fabricate concrete reinforcing in accordance with ACI 318 and CRSI.

D. Compounds, Hardeners and Sealer:

1. Curing Compound: ASTM C309, Type 1, Class B type by:
Master Kure by Master Builders Technologies
Super Pliocure by Euclid Chemical Company
Dress and Seal #30 by L & M Construction Chemicals
2. Absorptive Mats: ASTM C171, Burlap-Polyethylene.

E. Concrete Mix:

1. Mix and deliver concrete in accordance with ASTM C94, Alternative 2.
2. Provide concrete of the following specifications:
3. Compressive strength 4000 psi 28 day (floors, walls, piers, and footings).
4. Slump shall be a maximum of 6 inches, 9" with the use of superplasticizers. Testing should follow ASTM C 143.
5. Maximum water/cement ratio: 0.45.
6. Concrete shall be placed according to ASTM C 94 on normal temperature days with an Air Content of 4.0% to 6.0%. Samples shall be obtained and tested in accordance with ASTM C 172.
7. Concrete temperature shall be tested according to ASTM C 1064. Concrete temperature during normal daytime temperatures shall be below 90 Deg. F.

F. Formwork Erection:

1. Erect formwork, shoring and bracing to achieve design requirements.
2. Camber slabs and framing to achieve ACI 301 tolerances.
3. Provide bracing to ensure stability of formwork.
4. Apply form release agent to formwork in accordance with manufacturer's

instructions, prior to placing for accessories and reinforcement.

5. Clean forms as erection proceeds, to remove foreign matter.

G. Inserts, Embedded Components and Openings:

1. Provide formed openings where required for work to be embedded in and passing through concrete members.
2. Coordinate work of other sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.
3. Install concrete accessories straight, level, and plumb.
4. Install waterstops where shown on the plan and at all pit penetrations and cold joints.

H. Reinforcement Placement:

1. Place reinforcement, supported and secured against displacement.
2. Ensure reinforcing is clean, free of loose scale, dirt, or other foreign coatings.

I. Placing Concrete:

1. Place concrete continuously between predetermined expansion, control and construction joints. Screed floors, slabs-on-grade and concrete toppings level.

J. Form Removal:

1. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads. Remove formwork progressively and in accordance with code requirements.

K. Finishing:

1. Uniformly spread, screed, and float concrete.
2. Maintain surface flatness, with maximum variation of 1/4 inch in 10 ft.

L. Curing:

1. Immediately after placement, protect concrete from premature drying.
2. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

M. Concrete Testing:

1. A test of concrete shall include all of the following: Cylinders, Slump, Air Content and Temperature. Each test shall be taken once every 100 cubic yards of concrete placed and at least one test every day 10 or more cubic yards of concrete are placed. Additional testing is required to represent new mixes and different concrete suppliers.
2. Concrete cylinders:
 - a. Take three 3 test cylinders for 100 cubic yards of concrete placed but not less than three 3 test cylinders each day that 10 or more cubic yards are placed. Keep one of each three cylinders on the job site and allow to field cure. Within two days, deliver two of the three cylinders to a licensed testing laboratory to be cured and tested at seven 7 days and 28 days. Additional testing is required to represent new mixes and different concrete suppliers.
3. Concrete Rebound Hammer:
 - a. Rebound hammer tests may be taken after the pit is complete and at least 7 days after the last concrete was poured. Concrete shall be tested according to ASTM C 805.

N. Defective Concrete:

1. Modify or replace concrete not conforming to required lines, details, elevations or strength as directed by Engineer.
2. Cracks which may extend through the concrete liner must be cleaned and sealed with MasterSeal NP1 Polyurethane Sealant, or approved equal. Larger cracks or defects may need an inspection by the Engineer to determine the proper repair.
3. Honeycombing shall be patched with a sand/grout mix or commercial patching products such as TK-Complete Concrete Patch, Meadow-Patch 5 or approved equal.

COLD WEATHER CONCRETING

- A. Cold weather is defined as a period when for more than 3 successive days the mean daily temperature drops below 40°F. When temperatures above 50°F occur during more than half of any 24-hour period, the concrete should no longer be regarded as winter concrete. Cold weather concrete shall be placed, cured, and protected according to ACI 306 COLD WEATHER CONCRETING and these abbreviated specifications taken from ACI 306 COLD WEATHER CONCRETING.
- B. Plans to protect fresh concrete from freezing and to maintain temperatures above the designated minimum for the required time after placing should be made in advance of expected freezing temperatures. Preparation for cold weather concreting consists primarily in insuring that all surfaces to be in contact with newly placed concrete are at a temperature that cannot cause early freezing or seriously delay proper curing (hardening) of the concrete. Originally, the temperature of these contact surfaces, including sub-grade materials, need not be higher than a few degrees above freezing.
- C. In moderately cold weather, when heavy frost or freezing is forecast at the job site, all unformed concrete surfaces should be protected from freezing for at least 24-hrs after it is placed.
- D. During colder weather when mean daily temperatures are generally below 40°F, concrete shall be placed at a temperature not lower than:
1. 60°F when temperature is above 30°F.
 2. 65°F when temperature is 0°F to 30°F.
 3. 70°F when temperature is below 0°F.
 4. Maintain the placed concrete at a minimum temperature of 55°F for that time period indicated in E. below.
 5. Concrete should be placed at or near the lowest allowable temperature and not more than 10°F above the temperatures indicated above.

- E. **Air entrained concrete (5% to 7%) shall be used for cold weather concrete.** Footings and pit floor slabs shall be maintained at a minimum temperature of 55°F for 2 days following placement. Walls shall be maintained at a minimum temperature of 55°F for 3 days following placement.
- F. Heated enclosures, if used, must be strong, windproof, and weatherproof. Heating units should be vented and not permitted to heat or dry the concrete locally.
- G. Generally, the outline below should be followed:
1. Never place concrete on frozen ground or on snow or ice.
 2. Supply the concrete mix at a temperature in accordance with D. above but not less than 55°F.
 3. After placement of the concrete mix, keep the concrete at a temperature of 55°F for 2 days (floors and footings) and 3 days (walls) by the use of insulated blankets, straw, or the use of properly applied heat. Leave forms in-place during these days.
 4. Be particularly concerned with thin concrete, edges, and openings that will be exposed to wind or drafts.
 5. Have the necessary insulating material on site before placement of concrete when cold weather is likely to occur.

HOT WEATHER CONCRETING

Hot Weather is defined as any combination of high air temperature, low relative humidity, and wind velocity tending to impair the quality of fresh or hardened concrete or otherwise resulting in abnormal properties. When any of these conditions are present, the contractor shall place and protect the concrete in accordance with Chapter 4 of ACI 305 as described below:

4.1 General

4.1.1 The requirements for good results in hot weather concrete placing and curing is no different than in other seasons. The same necessities exist:

- a. That concrete be handled and transported with a minimum of segregation and slump loss.
- b. That concrete is placed where it is to remain.
- c. That the concrete be placed in layers shallow enough to assure vibration well into the layer below.
- d. That joints be made on sound, clean concrete.
- e. That finishing operations and their timing be guided only by the readiness of the concrete for them, and nothing else.
- f. That curing be conducted in such a manner that at no time during the prescribed period will the concrete lack ample moisture and temperature control, so that hydration continues to develop the full potential of strength and durability of the concrete.

4.2 Preparations for placing and curing

4.2.1 Preparations for placing and curing in hot weather include recognition at the start of work that certain abnormal conditions will exist which will require some items of preparation that cannot readily be provided the last minute before concrete is placed. If concrete temperatures as placed are expected to be abnormally high, preparation must be made to transport, place, consolidate, and finish the concrete at the fastest possible rate.

4.2.1.1 This means, first, delivery of concrete to the job must be scheduled so it will be placed promptly on arrival, particularly the first batch. Many concrete operations get off to a bad start because concrete was ordered before the job was ready and slump control was lost at this most critical time.

4.2.1.2 Equipment for placing the concrete must have adequate capacity to perform its functions efficiently so there will be no delays at distant portions of the work. There should be ample vibration equipment and manpower to consolidate the concrete quickly after placement and to maintain the rate of

placement in difficult areas. All equipment should be in first class operating condition. Breakdowns or delays that stop or slow the placement can seriously affect the quality of the work. Cold joints may be apparent when forms are removed; vibration failure can cause obvious lack of consolidation.

4.2.1.3 Due to more rapid slump loss in hot weather, the strain on vibrating equipment will be greater. Accordingly, provision should be made for an ample number of standby vibrators, at least one standby for each three vibrators in use. A concrete placing operation is in serious trouble, especially in hot weather, when vibration equipment fails and the standby equipment is inadequate. If possible, arrangements should be made in advance to secure another crane or pump quickly, in event of an equipment breakdown.

4.2.2 When there is to be flatwork on grade, early planning may make it feasible to plan a temporary windbreak or provide shade. In any event, the job should be equipped with ample water supply hose. The subgrade should be moist but free of standing water and soft spots at the time of concreting. Fogging can be used to cool and moisten surrounding air to prevent excessive evaporation from flatwork during finishing. Fog nozzles for this use should produce a fog blanket and they should not be confused with the common garden hose nozzles, which produce an excessive washing spray.

4.2.3 Preparation for placing includes proper location and preparation of construction joints. In hot weather, due to faster setting and hardening of the concrete, the timing of clean up by various methods, such as green cutting or surface retardant application, becomes more critical. Preparation must be made for prompt and adequate attention to these matters at the right time.

4.2.4 Work plans should include preparation to limit the temperature of concrete as placed. As the selected limiting temperature, usually but not always between 75 F (24C) and 100 F (38C) is approached and exceeded, it is increasingly likely that the unfavorable effects of high temperature will occur.

4.2.4.1 Whatever temperature limitation is considered worthwhile can be maintained to best advantage if mixers, belts, pump lines, and chutes are shaded. Where they cannot be shaded, they will absorb appreciably less heat from the sun if painted white and kept white. Pump lines and other surfaces can be kept appreciably cooler by covering them with damp burlap, kept damp with soil soaker hose. When daytime temperature and drying conditions may be critical, scheduling concrete placement to begin in the late afternoon will materially improve placing conditions. On massive slabs and pavements this has been found to result in much less thermal shrinkage and cracking. Concrete placed during the early morning may attain an undesirably high temperature, particularly during the middle of the day, when the maximum sun radiation and heat of hydration occur. Such concrete could subsequently be exposed to severe thermal stress on cooling.

4.2.5 Finally, preparation for placing concrete in hot weather includes the special provisions necessary for its hot proper protection and curing, since hot weather causes rapid drying. To avoid serious damage and cracking, facilities must be ready to protect promptly all exposed surfaces from drying. Water curing is much to be preferred for most concrete work, but it is recognized that prompt application of white-pigmented curing compound (ASTM C309) Type 2, is more practical for curing vast areas of flatwork on subgrade. Other alternatives for curing are described in ACI 308. Water curing must be continuous and the continuity of water curing is best assured if provision is made for covering all exposed surfaces, vertical, horizontal, and otherwise, with saturated material (burlap, cotton mats, old carpets, etc.) kept wet with soil soaker hose. This material should be kept in direct contact with the concrete surface at all times. Alternate cycles of wetting and drying promote the development of pattern cracking, and should be avoided. Curing water should not be much colder than the concrete because of temperature change stresses, which could be introduced with resultant cracking.

4.3 Placement and Finishing

4.3.1 Speed-up of placement and finishing materially reduces hot weather difficulties. Delays increase slump loss and invite the addition of water to offset it. Each operation in concrete finishing should be carried out promptly when the concrete is ready for it. It is necessary to make sure that concrete is not placed in the forms faster than it can be properly consolidated by men and equipment, or be properly finished by the men at hand. If the placing rate is not coordinated with available men and equipment, a job will soon be marked with cold joints, poor consolidation, and irregular surface finishes.

4.3.2 Regardless of the thickness of layers of concrete as placed under normal temperatures, each layer may have to be shallower in hot weather to assure coverage of the previous layer while it will still respond readily to vibration. The interval between monolithic wall and deck placements (to let the wall concrete develop its settlement shrinkage) becomes very short in hot weather, especially with warm concrete.

4.3.3 In placing beam and deck concrete, it is necessary in hot weather to keep the operation confined to a small area and to proceed on a front having a minimum amount of exposed surface to which concrete is to be added. A fog nozzle should be used generously to cool the air, to cool the forms and steel immediately ahead, and to lessen rapid evaporation from the concrete surface before and after each finishing operation. Excessive fog spraying (that which would wash the fresh concrete surface or cause water to stand on the surface during floating or troweling) must be avoided.

4.3.3.1 Without such fog spray between the finishing operations in hot weather, particularly if it is windy and humidity is low, water may be evaporated from the surface faster than it will rise naturally to the surface. This will create a growing tension in the surface, which often causes irregular, plastic-shrinkage cracking. Careful use of the fog spray previously mentioned, spreading and removing polyethylene sheeting between finishing operations, or application of monomolecular films after the strike-off, are recommended. Sometimes in relatively massive placement, revibration prior to floating will prevent the development of plastic-shrinkage cracking. When such cracking occurs prior to the final set, the cracks can be closed by striking the surface on each side of the crack with a float. It serves no lasting purpose to merely trowel slurry over them.

4.3.4 In summary, for best assurance of good results with concrete placing in hot weather, the initial concrete placement temperature should be limited to preferably between 75F (24C) and 100F (38C) as discussed in Sections 2.2.2 and 4.2.4. Every effort should be made to keep the concrete temperature uniform. All necessary precautions should be taken to see that concrete is promptly placed on arrival at the job and immediately vibrated after placement. Flatwork should be protected from excessive drying during finishing operations, and each operation should be performed without delay as soon as the concrete is ready for it. Under extreme conditions of high ambient temperature, exposure to direct rays of the sun, low relative humidity, and wind – perhaps aggravated by a slow rate of placement due to complexity of the structure in size and shape – careful and complete adherence to the foregoing practices may not produce the degree of quality desired for the work. Under such circumstances, it has been found worthwhile to restrict concrete placement to late afternoon or evening.

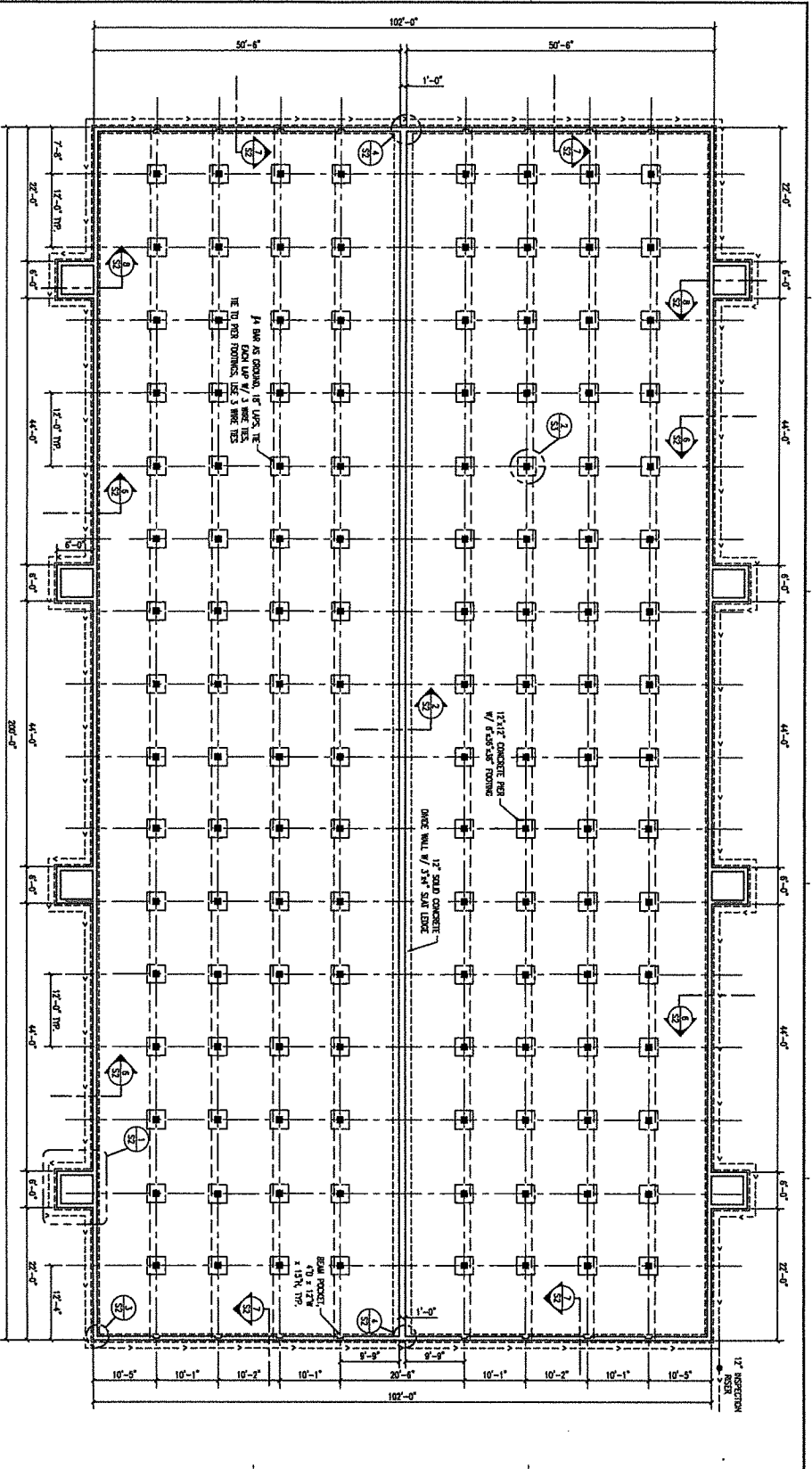
4.4 Curing and Protection

4.4.1 Curing and protection have been largely covered under Section 4.2. It should be emphasized that in hot weather there is great need for continuous curing, preferably by water. The need is greatest during the first few hours, and in fact throughout the first day after concrete is placed. All surfaces should be protected from drying, even intermittently, as this contributes to development of pattern cracking.

4.4.2 For water containment structures absorptive wood forms remaining in place should not be considered as a satisfactory means of curing in hot, drying weather. Forms should be covered and kept moist. The forms should be loosened, as soon as this can be done without damage to the concrete, and provisions made for the curing water to run down inside them. During form removal, care should be taken to provide wet cover to newly exposed surfaces to avoid exposure to hot sun and wind. Form tie cone holes can be filled and any necessary repairs made by uncovering a small portion at a time as necessary to carry on this work. These repairs should be completed in the first few days after stripping, so the repairs and

cone hole fillings can cure with the surrounding concrete. At the end of the prescribed curing period (7 days minimum; 10 is better), the coverage should be left in place without wetting for several (4 days suggested), so that the concrete surface will dry slowly and be less subject to surface shrinkage cracking. The effects of drying are further minimized by closing such structures as tunnels and pipelines against drafts and free circulation of drying air.

4.4.3 In summary, providing proper temperature and moisture conditions for curing of concrete are much more critical and important in hot weather than under normal temperatures. It is, therefore, of first importance that curing be promptly commenced, ample in coverage, and continued without interruption.



PIT PLAN
SCALE 1/8" = 1'-0"

NOTES

IF AN EXISTING FIELD TILE IS FOUND, THE FREEMETER SHALL BE CONNCTED TO THE EXISTING FIELD TILE. A 2" DIA. DRAIN TILE OF THE PRIVATE BE CONNECTED, A 2" DIA. DRAIN TILE OF THE PUBLIC BE CONNECTED TO THE PRIVATE AND THE FIELD TILE. AN INSPECTION RISER IS NOT REQUIRED IF THE TILE DRAUGHTS ON TO THE SAME PROPERTY AS THE BARN.

WATER SUPPLY LINES, FUEL LINES, ELECTRICAL CONDUIT OR OTHER EQUIPMENT NOT SOLELY HANDLING OR TRANSPORTING SYSTEMS MUST NOT BE DESIGNED OR CONSTRUCTED TO PENETRATE THE LINEN OF THIS LOAD BEARING STORAGE AREA.

VOLUME OF PIT
8'-0" DEEP PIT
-1'-3" FREEBOARD
1,000,000 GALLONS - 12 MONTH STORAGE

NOTES

STEEL WALLS
PIT CONTRACTOR SHALL COORDINATE WITH THE STEEL WALL CONTRACTOR FOR DIMENSIONS OF STEEL WALLS AND LOCATIONS OF PAW OPENINGS AND DOOR OPENINGS.

FAN OPENINGS
PIT CONTRACTOR SHALL COORDINATE WITH THE OWNER, BUILDING CONTRACTOR AND EQUIPMENT CONTRACTOR FOR DIMENSIONS AND LOCATIONS OF RECAST CONCRETE BEAMS AND SLATS SHALL BE INSTALLED AND GROUTED PRIOR TO BACKFILL OF THE FREEMETER PIT WALLS.

CONSISTENT SLATS, INTEREST IN FORMING
PIT CONTRACTOR SHALL COORDINATE WITH THE OWNER, BUILDING CONTRACTOR AND EQUIPMENT CONTRACTOR FOR DIMENSIONS AND LOCATIONS OF RECAST CONCRETE BEAMS AND SLATS SHALL BE INSTALLED AND GROUTED PRIOR TO BACKFILL OF THE FREEMETER PIT WALLS.

CONSTRUCTION NOTIFICATIONS

REDWOOD COUNTY

JOE WATCHELL
807-487-6029

3 DAY PRE CONSTRUCTION NOTIFICATION

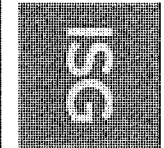
THE OWNER SHALL NOTIFY THE COUNTY OF THE PROJECT AND ANY CONSTRUCTION SCHEDULES.
DATE OF NOTIFICATION: _____

3 DAY POST CONSTRUCTION NOTIFICATION

THE OWNER SHALL NOTIFY THE COUNTY OF THE PROJECT AND ANY CONSTRUCTION SCHEDULES.
DATE OF NOTIFICATION: _____

CONSTRUCTION INSPECTIONS

NOTIFY SGA A MINIMUM OF 24 HOURS PRIOR TO ALL CONCRETE POURES.
 PROJECT MANAGER - WALT HUDSON
503-213-2558



ALEX MADSEN
HOG BARN
102'-0" x 200'-0"

1007 NORTH STREET
SE 1/4 SECTION 22, T11N, R35W
THREE LAKES TWP, REDWOOD CO, MN

DATE: 05/11/18
LIC. NO. 4478

Alex Madsen
ALEX MADSEN

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PROJECT: _____
LIC. NO.: _____

DATE: _____
DESCRIPTION: _____

REVISIONS:

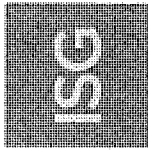
NO.	DATE	DESCRIPTION

CLIENT PROJECT NO.: _____

MTC: _____

FOUNDINGS, FOOTING, PLAN & DETAILS

S1



THIS DOCUMENT IS THE PROPERTY OF INTERSTATE CONCRETE PRODUCTS COMPANY AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT PRIOR WRITTEN CONSENT.

DATE: _____ LC NO. _____

PROJECT: _____

ALEX MADSEN
HOG BARN
102'-0" x 200'-0"

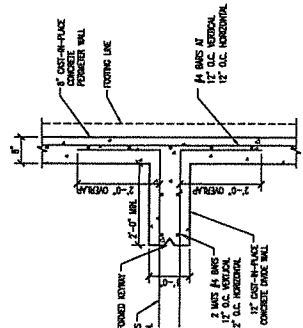
ALEX MADSEN
 40972 240TH STREET
 MORGAN, MN 56266
 TEL: 507-432-1111 FAX: 507-432-1111
 THREE LAKES TRAIL, REDWOOD CO, MN

DESIGNER: _____
 CHECKER: _____
 DATE: _____

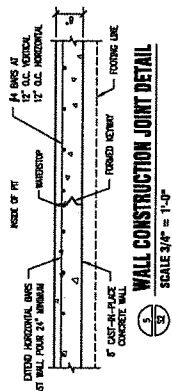
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 FILE NAME 0714 3153
 DRAWN BY: JMS
 REVIEWED BY: JMT
 ORIGINAL ISSUE DATE: 10-11-18
 CLIENT PROJECT NO. _____
 TITLE _____

DETAILS

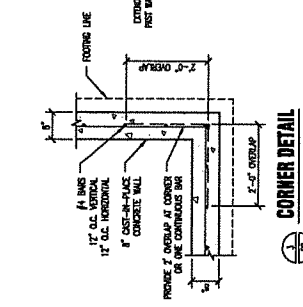
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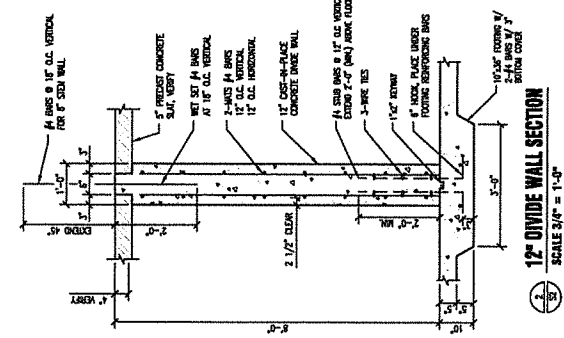
12" DIVIDE WALL DETAIL
 SCALE 3/4" = 1'-0"



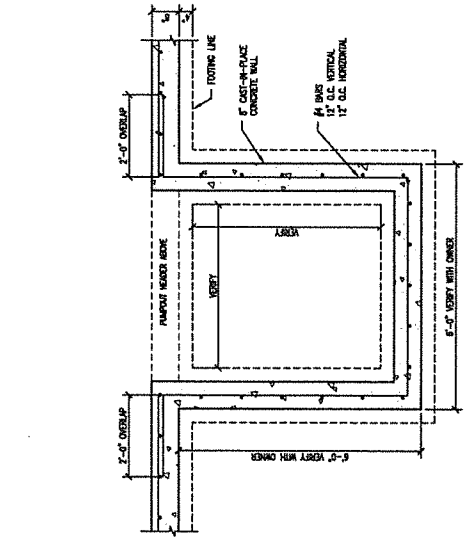
WALL CONSTRUCTION JOINT DETAIL
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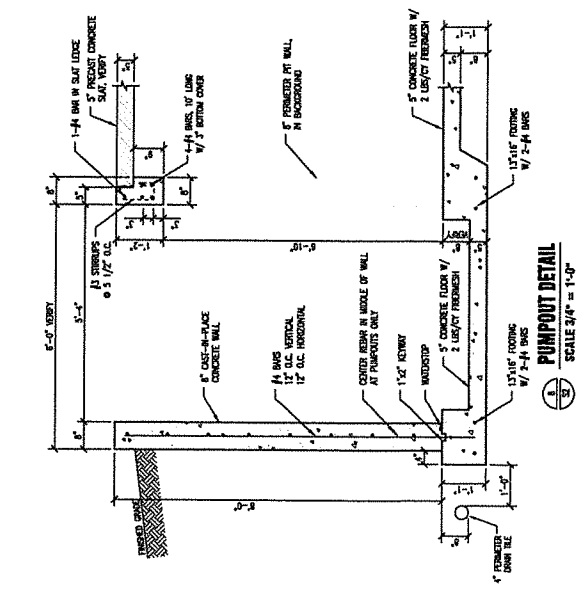
CORNER DETAIL
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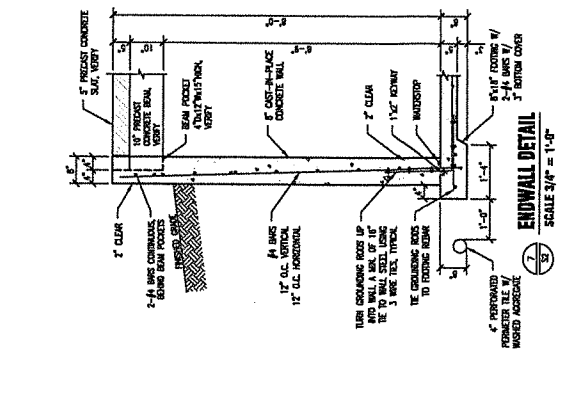
12" DIVIDE WALL SECTION
 SCALE 3/4" = 1'-0"



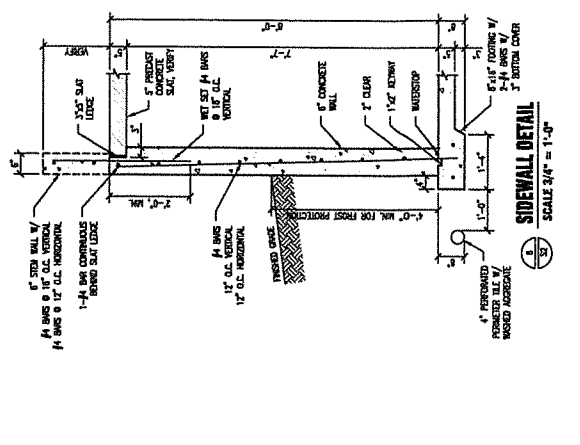
PUMPOUT DETAIL
 SCALE 3/4" = 1'-0"



PUMPOUT DETAIL
 SCALE 3/4" = 1'-0"



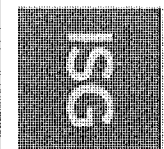
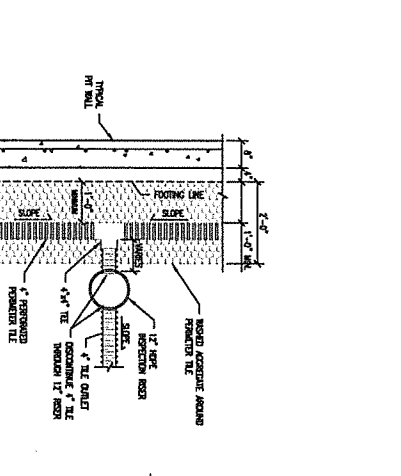
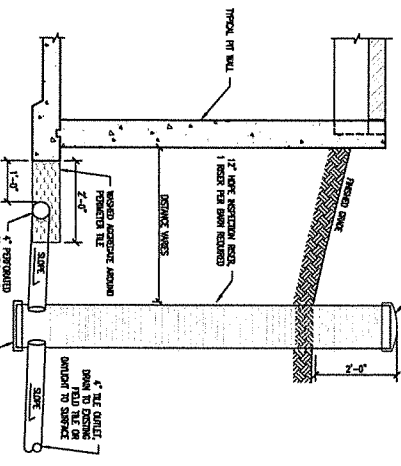
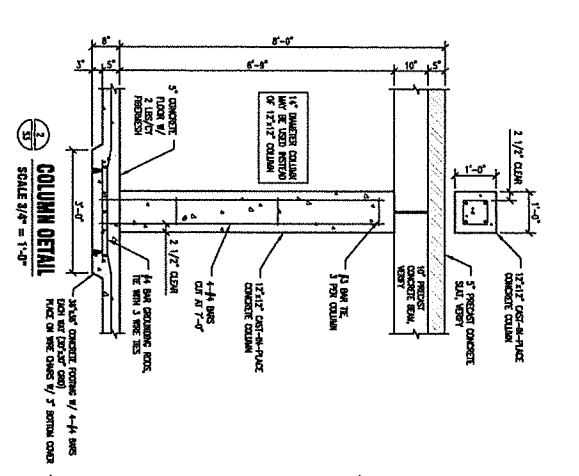
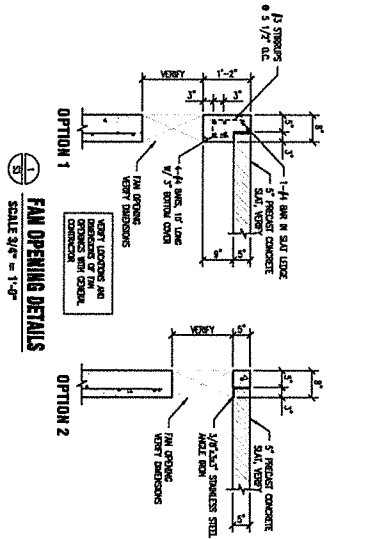
ENDWALL DETAIL
 SCALE 3/4" = 1'-0"



SIDEWALL DETAIL
 SCALE 3/4" = 1'-0"

STRUCTURAL NOTES

- A. GENERAL**
 1. NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER THESE NOTES UNLESS NOTED OTHERWISE.
 2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE STARTING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES.
 3. IN NO CASE SHALL DIMENSIONS BE SCALED FROM THE STRUCTURAL DRAWINGS.
 4. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (IBC).
 5. AIR-ENRICHED CONCRETE SHALL BE USED FOR ALL CONCRETE FIBERED STEEL (FCF) INSTITUTE (CBS) MANUAL OF STANDARD PRACTICE.
- B. REINFORCER GRADUATION**
 1. THE GRADUATION SHALL BE HEAVY DUTY DIAPHRAGM POLYETHYLENE TUBING, 4" DIAMETER.
 2. THE TIE SHALL BE COVERED WITH A WASHED AGGREGATE UP TO THE TOP OF FOOTING.
 3. CONNECT THE GRADUATION TIE TO AN EXISTING FIRM TILE AVAILABLE FOR DISCHARGE TO SURFACE THROUGH THE EXISTING TILE TO A SLUICeway AND PUMP TO THE SURFACE.
- C. TEMPORARY BRACING AND BACCEL**
 1. ALL WALLS WHERE GRADE VARIES ON THE TWO SIDES UNTIL THE PERMANENT BRACING IS IN PLACE.
 2. BACCEL ONLY AFTER THE FORM SLABS OR SOLID FLOOR HAS BEEN INSTALLED.
- D. FOOTINGS AND FOUNDATION**
 1. SOIL BEARING DESIGN VALUE: 2500 PSF (ASSUMED ON VIRGIN SOIL OR COMPACTED FILL).
 2. PROTECT FOUNDATION EXCAVATIONS FROM FROZEN GROUND.
 3. FOUNDATION MATERIAL SHALL BE SET FREE OF LOOSE MATERIAL AND STANDING WATER.
 4. ANCHOR BOLTS SHALL BE 1/2" DIAMETER WITH 7" EMBEDMENT AND 3/4" PROJECTION.
- E. REINFORCED CONCRETE**
 1. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
 2. WATER CEMENT RATIO SHALL BE 0.43 MAXIMUM.
 3. CEANER SHALL CONFORM TO ASTM C150 TYPE 1.
 4. READY-MIX CONCRETE SHALL BE ORDERED AND DELIVERED IN ACCORDANCE WITH ASTM C14.
 5. SLURRY SHALL BE 7" MAXIMUM.
 6. CONCRETE SHALL BE ORDERED WITH 1% AIR ENTRAINMENT.
 7. REQUIREMENTS OF AC 308.
 8. APPROVAL OF THE ENGINEER FOR THE PURPOSE OF INCREASING THE WORKABILITY OF CONCRETE SHALL NOT BE OBTAINED UNLESS CHLORIDE SHALL NOT BE USED.
- F. REINFORCING STEEL**
 1. REINFORCING STEEL SHALL BE ASTM A615, GRADE 40 OR 60.
 2. MINIMUM LAP SPACING OF REINFORCING BAR SHALL BE 48 BAR DIAMETERS UNLESS NOTED OTHERWISE.
 3. #3 BARS: 18"
 4. #4 BARS: 24"
 5. #5 BARS: 30"
 6. #6 BARS: 36"
 7. #7 BARS: 42"
 8. #8 BARS: 48"
 9. #9 BARS: 54"
 10. #10 BARS: 60"
- G. WATERTIGHTNESS**
 1. WATERTIGHTNESS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
 2. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
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 9. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 10. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
- H. ELECTRICAL GROUNDING**
 1. ELECTRICAL GROUNDING SHALL BE AS SHOWN ON THE DRAWINGS. VERIFY ELECTRICAL GROUNDING REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
 2. ALL ELECTRICAL GROUNDING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70.
- I. COLD WEATHER CONCRETE**
 1. WHEN, FOR MORE THAN 3 SUCCESSIVE DAYS, THE MEAN DAILY TEMPERATURE DROPS BELOW 32°F, THE CONTRACTOR SHALL PLACE THE CONCRETE IN ACCORDANCE WITH AC 308.
 2. WHEN IT IS NEARLY THAT TEMPERATURES BETWEEN 32°F AND 10°F, THE CONTRACTOR SHALL PLACE THE CONCRETE IN ACCORDANCE WITH AC 308.
 3. WHEN IT IS NEARLY THAT TEMPERATURES BETWEEN 10°F AND 0°F, THE CONTRACTOR SHALL PLACE THE CONCRETE IN ACCORDANCE WITH AC 308.
 4. WHEN IT IS NEARLY THAT TEMPERATURES BELOW 0°F, THE CONTRACTOR SHALL PLACE THE CONCRETE IN ACCORDANCE WITH AC 308.
- J. WATERTIGHTNESS**
 1. WATERTIGHTNESS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
 2. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 3. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 4. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 5. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 6. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 7. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 8. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 9. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 10. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
- K. WATERTIGHTNESS**
 1. WATERTIGHTNESS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
 2. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 3. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 4. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 5. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 6. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 7. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 8. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 9. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
 10. ALL JOINTS SHALL BE PROTECTED FROM WEATHER.
- L. FIBERESH**
 1. FIBERESH FIBERS SHALL BE ADDED TO THE CONCRETE AT A MINIMUM RATE OF 20 LBS PER CUBIC YARD OF CONCRETE UNLESS NOTED OTHERWISE.
 2. THE FIBERESH SHALL BE FIBRILLATED POLYPROPYLENE OLEFIN FIBERS, 30" IN LENGTH.



DATE: 10/11/18
 PROJECT: ALEX MADSEN HOG BARN 102'-0" x 200'-0"
 DRAWN BY: JASON E. HOBEN
 CHECKED BY: JASON E. HOBEN
 APPROVED BY: JASON E. HOBEN
 LICENSE: 10222
 THE DOCUMENT IS THE PROPERTY OF J.L. SLOCUM INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF J.L. SLOCUM INC.

NO.	DATE	REVISION	DESCRIPTION
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

PROJECT: ALEX MADSEN HOG BARN 102'-0" x 200'-0"
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DETAILS & SPECIFICATIONS

S3



Minnesota Pollution Control Agency

520 Lafayette Road North
St. Paul, MN 55155-4194

Animal Feedlot or Manure Storage Area Permit Application
CSF and Interim Permit Program

Doc Type: Permit Application

Applicability: To obtain a construction short form (CSF) or interim permit, you must complete and submit this form to the Minnesota Pollution Control Agency (MPCA), or to the County Feedlot Officer (CFO) in delegated counties.

Keep a copy of this application form and all submittals for your records.

Feedlot Registration Number: _____

I. Permit type and reason for application

Please indicate which type of feedlot permit you are applying for (choose only one)

- Construction Short Form
Interim (correcting a pollution hazard)

Please indicate the reason for the permit application (choose only one)

- New Permit
Permit Modification
Permit Extension - Current CSF or Interim Permit Number: _____

Indicate below the reason(s) the work may not be completed prior to permit expiration
Estimated amount of time required to complete the work: _____ days _____ months

A permit extension request only requires completion of pages 1 and 6 of this application form (the remaining pages can be left blank).
Note: When the notice to neighbors and property owners is applicable (page 6) the content of the notice must include the date the original permit was issued and the new proposed completion date as well as the normally required information.

II. Owner's name(s) and address(es) - (All partners of a Limited Liability Partnership (LLP) must be listed.)

Primary owner - Will be used as the mailing address
Additional owner - attach additional sheets as necessary
Name: Alex Madsen
Address: 40672 240th St
City: Morgan State: MN
Phone: 507-430-3899 Zip: 56266

Note: The term owner includes all persons having possession, control, or title to an animal feedlot or manure storage area (including lessees or renters). All owners must be listed. Attach to this application the names, addresses, and phone numbers of all additional owners.

III. Facility name and site address

Contact person for day-to-day activities

Site Name: Site 3
Facility is a MN Ag Water Quality Certified Farm (MAWQCP)
Complete if facility address is different than the primary owner address:
Street: 24308 Ocean Ave
City: Morgan State: MN
Phone: 507-430-3899 Zip: 56266

(General letters/notices may be sent by e-mail where one is indicated.)

IV. Facility location

County: Redwood

Township name: Three Lakes

Township (26 – 71 or 101 – 168)		Range (1 – 51)		Section (1 – 36)	¼ Section (160 acre) (NW, NE, SW, SE)	¼ of ¼ Section (40 acre) (NW, NE, SW, SE)
T	N	R	W			

V. Sensitive features

1. Is any part of the facility within 1,000 feet of any type of surface waters? Yes No
 If Yes, complete a. and b. below:
 - a. List the name of the surface water feature: _____
 - b. Select the type of surface water feature below:

 Lake/Pond larger than 25 acres Wetland Drainage ditch Other

 River/Stream Is any part of the facility within 300 feet of the river/stream? Yes No

2. Is any part of the facility located within a delineated flood plain (100 year flood)? Yes No

3. Is any part of the facility located within designated shoreland? Yes No

4. Is any part of the facility located within 1,000 feet of a karst feature? (sinkholes, caves, disappearing springs, resurgent springs, karst windows, dry valleys, or blind valleys) Yes No
 If Yes, complete a. and b. below:
 - a. Are there 4 or more sinkholes within 1,000 feet? Yes No
 - b. Is any part of the facility within 300 feet of a known sinkhole? Yes No

5. Is any part of the facility located within 1,000 feet of the following types of wells: Yes No
 If Yes, select the applicable well type below:
 - a community water supply well
 - a well serving a public school as defined under Minn. Stat. § 120A.05
 - a well serving a private school excluding home school sites
 - a well serving a licensed child care center where the well is vulnerable (Minn. R. 4720.5550, subp. 2)

6. Is any part of the facility located within 1,000 feet of an open tile intake? Yes No

VI. Environmental Review (complete when construction or expansion is proposed)

Mandatory environmental review is required when the addition of 1,000 or more animal units (AU) is proposed as part of the construction/expansion at any facility. The threshold when environmental review is mandatory is reduced to 500 AU when any part of the facility is located within a "sensitive area". The facility is within a sensitive area when any of the following apply.

- Any part of the facility is within a delineated floodplain (yes to question 2 above)
- Any part of the facility is within designated shoreland (yes to question 3 above)
- Any part of the facility is within 1,000 feet of a karst feature (yes to question 4 above)
- Any part of the facility is within a vulnerable drinking water supply management area
- Any part of the facility is within a federal, state, or local wild and scenic river district
- Any part of the facility is located within the Minnesota River Project Riverbend area or the Mississippi headwaters area

Additionally mandatory environmental review is required for "Phased actions". Phased actions are defined under Minnesota law (Minn. R. ch. 4410) as two or more projects located in the same geographic area and constructed sequentially within three years of each other by the same proposer. When this is the case, the animal units from all projects are combined to determine if environmental review is required. The following will assist the MPCA to evaluate if your project qualifies as a "phased action".

Do you have ownership interest in another livestock operation that was constructed/expanded within the past three years or are you substantially certain you will be constructing/expanding another livestock operation within the next three years?

Yes No

If Yes, how far away (straight-line distance) is it located from the project proposed in this application? _____ miles

There are also rule provisions to require completion of the environmental review process in the event of a citizen petition or upon the discretion of the MPCA. Please see the MPCA fact sheet entitled "When is Environmental Review Required for Feedlots" (available on the MPCA website at <http://www.pca.state.mn.us/publications/wq-f1-10.pdf>) and/or Minn. R. 4410 for further details.

VII. Animal numbers and animal unit (AU) calculation

Complete the table below to identify the maximum number of animals housed at that facility. All animal numbers and animal sizes used to complete this table should reflect the animal holding capacity of the facility even if the facility does not currently house or propose to house that number of animals. At no time is the number of animals at the facility allowed to exceed the capacity provided below without first obtaining a permit or permit modification.

Current Capacity - List the current head count capacity for each animal type in column 3 below. For sites with a permit, this should match the currently permitted number of animals. Next, multiply the AU Factor in column 2 by the number of animals listed in column 3 to get the *Current AU Capacity* for each animal type (column 4). Finally, add together all AU's in column 4 to get a total at the bottom of the chart. *If this application is for a brand-new feedlot site leave columns 3 and 4 blank. (ie. bare piece of ground)*

Final Capacity - List the final head count capacity for each animal type in column 5 below. This number should include current animals plus or minus any expansion or reduction in each animal type. This should reflect the maximum AU capacity requested with this permit application. Next, multiply the AU Factor in column 2 by the number of animals listed in column 5 to get the *Final AU Capacity* for each animal type (column 6). Finally, add together all AU's in column 6 to get a total at the bottom of the chart.

1. Animal type	2. Animal unit factor	Current facility capacity		Final facility capacity (Current +/- Changes)	
		3. Head count	4. Animal units = column 2 x column 3	5. Head count	6. Animal units = column 2 x column 5
A. Dairy cattle					
Mature cow (milked or dry) over 1,000 lbs.	1.4				
Mature cow (milked or dry) under 1,000 lbs.	1.0				
Heifer	0.7				
Calf	0.2				
B. Veal					
Veal	0.2				
C. Beef cattle					
Slaughter steer/heifer, stock cow, or bull	1.0				
Feeder cattle (stocker or backgrounding), heifer	0.7				
Cow and calf pair	1.2				
Calf (weaned)	0.2				
D. Swine					
Over 300 lbs.	0.4				
Between 55 and 300 lbs.	0.3	0	0	2400	720
Under 55 lbs.	0.05				
E. Horses					
Horse	1.0				
F. Sheep					
Sheep or Lamb	0.1				
G. Chickens with a liquid manure system					
Layer Hens or Broilers	0.033				
H. Chickens with a dry manure system					
Broilers over 5 lbs.	0.005				
Broilers under 5 lbs.	0.003				
Layer Hens over 5 lbs.	0.005				
Layer Hens under 5 lbs.	0.003				
I. Turkeys					
Over 5 lbs.	0.018				
Under 5 lbs.	0.005				
J. Ducks					
Duck (with a liquid manure handling system)	0.01				
Duck (with a dry manure handling system)	0.01				
K. Animals not listed in A to J (AU factor in column 2 = average weight of the animal type divided by 1,000 lbs.)					
Animal type:					
Total animal unit capacity			Current AU capacity		Final AU capacity
Add all numbers in column 4 for Current AU total					
Add all numbers in column 6 for Final AU total					720

VIII. Animal holding areas

Complete the table below for all your animal holding areas.

If you have more than six animal holding areas on your site, continue your list on an additional copy of this page.

Animal holding area ID

List each animal holding area in a separate column

Facility Site Sketch ID (i.e., #1, A, Barn 1)	1					
Status: (check one box only) Proposed - not permitted previously Approved - permitted but not yet operational Existing - current operational component Modifying - change to a permitted component	<input checked="" type="checkbox"/> Proposed <input type="checkbox"/> Approved <input type="checkbox"/> Existing <input type="checkbox"/> Modifying <input type="checkbox"/> Eliminating	<input type="checkbox"/> Proposed <input type="checkbox"/> Approved <input type="checkbox"/> Existing <input type="checkbox"/> Modifying <input type="checkbox"/> Eliminating	<input type="checkbox"/> Proposed <input type="checkbox"/> Approved <input type="checkbox"/> Existing <input type="checkbox"/> Modifying <input type="checkbox"/> Eliminating	<input type="checkbox"/> Proposed <input type="checkbox"/> Approved <input type="checkbox"/> Existing <input type="checkbox"/> Modifying <input type="checkbox"/> Eliminating	<input type="checkbox"/> Proposed <input type="checkbox"/> Approved <input type="checkbox"/> Existing <input type="checkbox"/> Modifying <input type="checkbox"/> Eliminating	<input type="checkbox"/> Proposed <input type="checkbox"/> Approved <input type="checkbox"/> Existing <input type="checkbox"/> Modifying <input type="checkbox"/> Eliminating
Distance to nearest well (ft.)	200					
Pasture Access	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Type of animal holding areas
(indicate dimensions and floor type)

*Write approximate dimensions in feet in the space below
(width x length or area with units for irregular shapes)*

Total confinement barn (slatted floor)	102 x 200					
Total confinement barn (solid floor)						
Partial confinement barn						
Open lot with runoff controls						
Open lot without runoff controls						
Animal Holding Area Floor Type (check all that apply)	<input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Soil <input type="checkbox"/> Other	<input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Soil <input type="checkbox"/> Other	<input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Soil <input type="checkbox"/> Other	<input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Soil <input type="checkbox"/> Other	<input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Soil <input type="checkbox"/> Other	<input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Soil <input type="checkbox"/> Other

Indicate the maximum capacity (number of animals) of each animal holding area

The total number of all animals listed should match the final animal numbers listed on page 3

Mature dairy cows (over 1,000 lbs.)						
Mature dairy cows (under 1,000 lbs.)						
Dairy heifers						
Dairy calves						
Veal						
Slaughter steer/heifer, stock cow or bull						
Feeder cattle-stocker/background/heifer						
Cow and calf pair						
Beef calves (weaned)						
Swine over 300 lbs.						
Swine between 55 and 300 lbs.	2400					
Swine under 55 lbs.						
Horses						
Sheep or lamb						
All chickens with liquid manure system						
Broiler chickens over 5 lbs. - dry system						
Broiler chickens under 5 lbs. - dry system						
Laying hens over 5 lbs. - dry system						
Laying hens under 5 lbs. - dry system						
Turkeys - over 5 lbs.						
Turkeys - under 5 lbs.						
Ducks						
Other:						

IX. Manure handling, feed storage, and dead animal areas

Complete the table below for your manure storage, feed/silage storage areas and dead animal disposal areas on your site. If you have more than six manure storage, feed/silage storage, and dead animal management areas on your site, continue your list on an additional copy of this page.

Manure, feed, or dead animal areas *List each manure handling, feed storage, and dead animal area in a separate column*

Facility Site Sketch ID (i.e., #1, A, Basin 1)	1	2				
Status: (check one box only) Proposed - not permitted previously Approved - permitted but not yet operational Existing - current operational component Modifying - change to a permitted component	<input checked="" type="checkbox"/> Proposed <input type="checkbox"/> Approved <input type="checkbox"/> Existing <input type="checkbox"/> Modifying <input type="checkbox"/> Eliminating	<input checked="" type="checkbox"/> Proposed <input type="checkbox"/> Approved <input type="checkbox"/> Existing <input type="checkbox"/> Modifying <input type="checkbox"/> Eliminating	<input type="checkbox"/> Proposed <input type="checkbox"/> Approved <input type="checkbox"/> Existing <input type="checkbox"/> Modifying <input type="checkbox"/> Eliminating	<input type="checkbox"/> Proposed <input type="checkbox"/> Approved <input type="checkbox"/> Existing <input type="checkbox"/> Modifying <input type="checkbox"/> Eliminating	<input type="checkbox"/> Proposed <input type="checkbox"/> Approved <input type="checkbox"/> Existing <input type="checkbox"/> Modifying <input type="checkbox"/> Eliminating	<input type="checkbox"/> Proposed <input type="checkbox"/> Approved <input type="checkbox"/> Existing <input type="checkbox"/> Modifying <input type="checkbox"/> Eliminating
Distance to nearest well (ft.)	200	100				

Type of liquid manure or process wastewater storage/treatment areas (indicate dimensions) *Write approximate top dimensions in feet in the space below (width x length x depth or volume with units for irregular shapes)*

Earthen or GCL lined basin						
Below barn concrete tank	10x20x9					
In-ground concrete tank/basin (outdoor)						
Above-ground concrete tank						
Synthetic lined (HDPE, EPDM, etc.) basin						
Steel tank (i.e., slurry-store)						
Composite lined (2 liner types) basin/tank						
Vegetated Infiltration Area						
Other (describe):						

Type of solid manure, feed storage, and dead animal areas (indicate dimensions and floor type) *Write approximate dimensions in feet in the space below (width x length or area with units for irregular shapes)*

Permanent Stockpile						
Dead Animal Management Area		10x10				
Covered Feed Storage Area						
Uncovered Feed Storage Area						
Sweet Corn Silage Storage Storage Pad Area						
Tonnage on site at any one time						
Other (describe):						
Stockpile, Feed Storage, or Mortality Area Floor/Liner Type (check all that apply)	<input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Soil <input type="checkbox"/> Other	<input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Soil <input type="checkbox"/> Other	<input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Soil <input type="checkbox"/> Other	<input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Soil <input type="checkbox"/> Other	<input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Soil <input type="checkbox"/> Other	<input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Soil <input type="checkbox"/> Other

X. Changes to groundwater monitoring plan (complete only if applicable)

If groundwater monitoring is required at the facility, this application can request changes to the MPCA-approved groundwater monitoring plan. In order to request changes to the groundwater monitoring plan, please indicate the type of change requested.

- Elimination of monitoring Change to sampling frequency
 Change to sample testing protocol Other

When a change is requested, please include with this permit application documentation from a qualified professional that provides a technical analysis and justification for the requested changes.

XI. Non-delegated county public meeting minutes (complete only if applicable)

A county which has not accepted delegation of the feedlot program must hold a public meeting prior to issuance of a feedlot permit by the MPCA for an animal feedlot with a capacity of 300 or more animal units.

Date meeting has occurred or is scheduled to occur: TBD

Verification of public meeting.

A copy of the meeting minutes must be provided to the MPCA for verification of completion prior to permit issuance.

XII. 500 or more AU: Notice to residents and property owners within 5,000 feet

When required. A notice is required in *either* of the following situations:

- **Construction of a new** feedlot, or manure storage area, which will have a capacity of 500 AU or more.
- **Expansion of an existing** feedlot, or manure storage area, which currently has, or will have upon completion of the expansion, a capacity of 500 AU or more.

Notice methods. The owner shall not less than 20 business days before the anticipated issuance date of the permit, provide notice to each resident and each owner of real property within 5,000 feet of the perimeter of the proposed facility. This notice *must* include, at a minimum, the information provided in Minn. R. 7020.2000, subp.4.

An example notice can be found in the factsheet *Permit Notification Requirements – Feedlots with more than 500 Animal Units* available on the MPCA website <http://www.pca.state.mn.us/feedlots>.

Verification of notice. The MPCA must verify that this notice has been completed prior to permit issuance. Documentation that this notice has been completed can be provided with the permit application (preferred) or submitted at a later date, prior to permit issuance.

When the notice has been completed prior to this application

Please include with this application one of the following to provide verification that the required notice has been completed:

- An affidavit of publication from a newspaper of general circulation used to provide this notification.
- A list of all parties, with their location, that were notified by certified mail and copies of all signed mail return receipts.
- A list of all parties, with their location, that were personally visited with a date and signature from each party and certification signed by a notary public indicating in detail what was discussed.

When the notice has not been completed prior to this application

Please include with this permit application both of the following:

- A copy of the content of the notification
- Date notification is scheduled to occur: _____

Note: The permit cannot be issued prior to receiving verification that the notice has actually taken place. This verification must be one of the three items listed above.

XIII. Certifications and signature

Notification to local officials

The Applicant certifies that, if the application includes construction of a new facility or expansion of an existing facility, all local zoning authorities have been notified in accordance with Minn. R. 7020.2000 subp. 5.

Construction Stormwater (CSW) Requirements

The Applicant certifies that, if construction will disturb 5 or more acres, they have made a separate application for a CSW permit. For construction activities that disturb at least 1 acre but less than 5 acres, the Applicant certifies to comply with the requirements of the current CSW NPDES general permit (Minn. R. 7090.2020 provides permit coverage even though no application has been made).

Need for NPDES or SDS permit

If the MPCA determines that a NPDES or SDS permit is required, the Applicant certifies that this application will serve as an application for a NPDES or SDS permit, as appropriate. The Applicant agrees to submit additional information, as requested by the MPCA, in order to complete the NPDES or SDS permit application process including payment of the applicable permit application fee.

Applicant Signature

I hereby certify that the design, construction, and operation of the facility will be in accordance with this application and plans, specifications, reports, and related communications approved by the MPCA, and in accordance with applicable permit conditions or regulations/standards of the MPCA. I also certify under penalty of law that this document and all attachments were prepared under my direction or supervision and the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

The person that signs this application must be one of the following:

- A. For a corporation, a principal executive officer of at least the level of vice president
- B. For a partnership, a general partner
- C. For a sole proprietorship, the proprietor

Print name: _____ Print official title: _____

Office phone: _____ Cell phone: _____

Signature: _____ Date: _____

A "wet signature" is required. No reproductions (i.e., copies or scans) of the signature will be accepted.

To sign up for electronic communications including the MPCA feedlot newsletters, please go to the MPCA website at <https://public.govdelivery.com/accounts/MNPCA/subscriber/new>.

Required enclosures (Permit applications submitted without all required enclosures are incomplete.)

- A. A site sketch/aerial photograph indicating the location of the existing and proposed facility components.
- B. A Manure/Nutrient Management Plan (MMP) The following are optional forms to assist with MMP development:
 When all manure is transferred to another entity for utilization, complete a MMP using the optional form below:
 Transferred Ownership MMP: <http://www.pca.state.mn.us/index.php/view-document.html?gid=3763>
 When any portion of manure is applied to land owned, rented, or leased by the applicant(s), or applied to other land where nutrient application decisions are made by the applicant(s), complete a MMP using the optional spreadsheet form below:
 MPCA Manure Management Planner: <http://www.pca.state.mn.us/index.php/view-document.html?gid=3548>
Notes: The transferred ownership MMP form is incorporated into the spreadsheet to account for instances when only some of the manure is transferred.
A paper version is available at: <http://www.pca.state.mn.us/index.php/view-document.html?gid=23197>
- C. Plans and Specifications for construction, modification, or expansion of any liquid manure storage area.
- D. **Conditional - Environmental Assessment Worksheet (EAW) Fee**
 When the project requires environmental review and is located in a county that has not accepted delegation of the county feedlot program, there is a fee of \$4,650 for processing of an Environmental Assessment Worksheet (EAW) that must be included with this permit application. (Check payable to: Minnesota Pollution Control Agency)
- E. **Optional – Verification of the notifications required in part XII of this application.** If not submitted with the application, the MPCA must receive the verification prior to permit issuance. It is strongly recommended that the applicable verifications be included with the permit application.

Permit application submittal

Please mail the completed permit application and all necessary attachments to either the County Feedlot Officer (CFO) or the MPCA as indicated in the chart below. Mailing addresses for the MPCA offices are below.

County	Mail To:	County	Mail To:	County	Mail To:
Aitkin	MPCA – Rochester	Isanti	MPCA – Rochester	Pipestone	CFO – County
Anoka	MPCA – Rochester	Itasca	MPCA – Rochester	Polk	CFO – County
Becker	MPCA – Mankato	Jackson	CFO – County	Pope	CFO – County
Beltrami	MPCA – Mankato	Kanabec	MPCA – Rochester	Ramsey	MPCA – Rochester
Benton	MPCA – Rochester	Kandiyohi	CFO – County	Red Lake	CFO – County
Big Stone	CFO – County	Kittson	CFO – County	Redwood	MPCA – Rochester
Blue Earth	CFO – County	Koochiching	MPCA – Rochester	Renville	CFO – County
Brown	CFO – County	Lac Qui Parle	CFO – County	Rice	CFO – County
Carlton	MPCA – Rochester	Lake	MPCA – Rochester	Rock	CFO – County
Carver	CFO – County	Lake Of The Woods	CFO – County	Roseau	MPCA – Mankato
Cass	MPCA – Rochester	Le Sueur	CFO – County	St. Louis	MPCA – Rochester
Chippewa	MPCA – Rochester	Lincoln	CFO – County	Scott	MPCA – Rochester
Chisago	MPCA – Rochester	Lyon	CFO – County	Sherburne	MPCA – Rochester
Clay	CFO – County	Mahnomen	MPCA – Mankato	Sibley	CFO – County
Clearwater	MPCA – Mankato	Marshall	CFO – County	Stearns	CFO – County
Cook	MPCA – Rochester	Martin	CFO – County	Steele	CFO – County
Cottonwood	CFO – County	McLeod	CFO – County	Stevens	CFO – County
Crow Wing	MPCA – Rochester	Meeker	CFO – County	Swift	CFO – County
Dakota	MPCA – Rochester	Mille Lacs	MPCA – Rochester	Todd	CFO – County
Dodge	CFO – County	Morrison	CFO – County	Traverse	CFO – County
Douglas	CFO – County	Mower	CFO – County	Wabasha	MPCA – Rochester
Faribault	CFO – County	Murray	CFO – County	Wadena	CFO – County
Fillmore	CFO – County	Nicollet	CFO – County	Waseca	CFO – County
Freeborn	CFO – County	Nobles	CFO – County	Washington	MPCA – Rochester
Goodhue	CFO – County	Norman	CFO – County	Watsonwan	CFO – County
Grant	MPCA – Mankato	Olmsted	MPCA – Rochester	Wilkin	MPCA – Mankato
Hennepin	MPCA – Rochester	Otter Tail	MPCA – Mankato	Winona	CFO – County
Houston	CFO – County	Pennington	CFO – County	Wright	CFO – County
Hubbard	MPCA – Mankato	Pine	MPCA – Rochester	Yellow Medicine	CFO – County

MPCA – Rochester Mailing Address

MPCA Feedlot Permit Coordinator
 18 Woodlake Drive SE
 Rochester, MN 55904

MPCA – Mankato Mailing Address

MPCA Feedlot Permit Coordinator
 12 Civic Center Plaza, Suite 2165²
 Mankato, MN 56001

Manure Storage, Handling, and Testing Information

Facility Name: Alex Madsen Farm
 Owner/Operator Name: Alex Madsen

NPDES or SDS Permit? No Permit Number: TBD
 Date Last Revised: 10/31/2016 Registration Number: TBD

Version 6.21 Last Updated: 8/19/15

	Manure Source #1	Manure Source #2	Manure Source #3	Manure Source #4
Description of Manure Source <small>Group sources with similar nutrient content if they have identical animal type, water usage, feed rations, and manure storage</small>	Barn 1			
Livestock Information				
Predominate Animal Type <small>(Contributing to Manure Source)</small>	Swine - Wean/Finish			
Average Animal Weight	140 lbs			
Animal Number	2,400			
Length of Time Livestock Spend in Facility	335 days/yr			
Additional Animal Type <small>(Contributing to Manure Source)</small>				
Average Animal Weight				
Animal Number				
Length of Time Livestock Spend in Facility				
Storage Information				
Storage Type	Underfloor Concrete Pit			
Capacity	990,000 gals			
Storage Length	12 months			
Application Methods				
Commercial Applicator Name (If Used)				
Spreader Type	Liquid Tanker			
How Volume/Tonnage Determined per Load	Spreader Volume			
How Application Rate is Calibrated	Flowmeter			
Manure Analysis				
Sampling Frequency	Every Year			
Sampling Methods	Well Agitated Composite			
Date Last Analyzed				
Basis for N, P, & K Values Below	Book Value			
Total N - (do not enter lab estimated availability)	42 lbs/1000 gal			
Total P ₂ O ₅ - (do not enter lab estimated availability)	34 lbs/1000 gal			
Total K ₂ O - (do not enter lab estimated availability)	24 lbs/1000 gal			
Annual Nutrients Generated				
Total Manure Produced per Year (Estimated)	749,372 gals			
Total Manure Produced per Year (Actual)				
Annual N Produced	31,474 lbs			
Annual P ₂ O ₅ Produced	25,479 lbs			
Annual K ₂ O Produced	17,985 lbs			

Average Book Values		Average Book Values		Average Book Values	
N	42	N		N	
P ₂ O ₅	34	P ₂ O ₅		P ₂ O ₅	
K ₂ O	24	K ₂ O		K ₂ O	

Sensitive Features Management Worksheet

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 will be employed for the applicable sensitive feature. Any of the identified practices are acceptable.

Tile Intakes

I will utilize one of the Options A - D on fields with this feature, or utilize Option E that provides equal or greater water quality protection than Options A - D

- 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
- Option E - Other:

Drainage Ditches

I will utilize one of the Options A - D on fields with this feature, or utilize Option E that provides equal or greater water quality protection than Options A - D

- 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)
- Option E - Other:

Lakes, Rivers, and Streams

NO FIELDS WITH THIS FEATURE

- 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
- Option D - Other:

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

NO FIELDS WITH THIS FEATURE

- 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 - Other:

Wells, Mines, or Quarry

NO FIELDS WITH THIS FEATURE

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

Sinkholes

NO FIELDS WITH THIS FEATURE

- 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



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 will be employed for the applicable sensitive feature. Any of the identified practices are acceptable.

Other Conduits to Water

NO FIELDS WITH THIS FEATURE

- 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)
- Option E - Other: _____

Early Fall Land Application

I will utilize Option A on all applicable fields

This only applies to NPDES or SDS permitted facilities that have indicated manure will be applied in early fall.

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.

Application of Manure During the Summer Months (June, July, and August)

NOT APPLICABLE TO THIS OPERATION

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

Soil Erosion Conservation Measures

NOT APPLICABLE TO THIS OPERATION

Required for any fields used for winter application and for all fields at NPDES permitted sites.

- Option A - Establish grassed waterways
- Option B - Contour stripcropping
- Option C - No-Till cropping
- Option D - Terracing
- Option E - Use rotations that include other than row crops (alfalfa, grass, etc)
- Option F - Chisel or disk tillage with residue
- Option G - Meet tolerable soil erosion rates ("T") as defined by NRCS
- Option H - Field edge buffers
- Option I - Contour buffer strip
- Option J - Sediment control basin
- Option K - Plant a cover crop on bare ground
- Option L - Other: _____

Land Application of Manure Planning Worksheet (Fields 26-50)

Field Information Summary		Soil Testing Summary		Crops Grown Summary		Nutrients Needed From Manure Application to Meet Yield Goal (lb/ac) after accounting for nutrients from fertilizer, previous manure applications, and credits from previous crops				Manure Application Information (Nutrients for the 2018 Crop) Application: Typically 9/1 to 8/31/2018		Nitrogen (lb N/ac)		Phosphorus (lb P ₂ O ₅ /ac)		Potassium (lb K ₂ O/ac)				
Field ID	Acres After Setbacks	Soil Test Phosphorus (P) Field Average (ppm)	Crop Grown to Utilize the Nutrients Applied	Crop Most Recently Harvested	2018 Crop	2017 Crop	Nitrogen Needs	Nitrogen (Removal)	Phosphorus (Removal)	Potassium (Removal)	Manure Source (1-8)	Method of Application and Incorporation <small>NPDES permitted sites cannot apply liquid manure in the winter (unless emergency)</small>	Acres Receiving Manure (from the chosen source)	Max Nitrogen Based Application Rate (gals or tons per acre)	N from Manure (Available this year)	Excess Available N (negative for deficiency)	P from Manure (Available this year)	P in Excess of Removal (negative for deficiency)	K from Manure (Available this year)	K in Excess of Removal (negative for deficiency)

Total Acres in Plan = 377

Table A: Summary of Applied and Remaining Manure and Acres Receiving Manure

[If all transfer ownership of the remaining amount of manure.

Source Description	Amount Applied	Amount Remaining	Acres Applied
Source 1: Barn 1	749,372	0	225
Source 2:	---	---	---
Source 3:	---	---	---
Source 4:	---	---	---

Source Description	Amount Applied	Amount Remaining	Acres Applied
Source 5:	---	---	---
Source 6:	---	---	---
Source 7:	---	---	---
Source 8:	---	---	---

MPCA LAND APPLICATION AGREEMENT
ADDITIONAL MANURE DISPOSAL AREA APPLICATION

The undersigned land owner agrees to allow manure from ALEX MADSEN
livestock feedlot to be spread on 79 acres of his/her land. The land is located in
the N¹/₂ SE¹/₄ one quarter of Section 19, in
THREE LAKES Township, of REDWOOD County. The
undersigned land owner is the holder of MPCA Permit or Certificate of Compliance
Number . (If none is held, please indicate none).

If the land indicated above receives manure from livestock in addition to that from the
feedlot indicated above, please list the number and types of livestock below. (If none,
please indicate none):

Enclose an Agricultural Stabilization and Conservation Service (ASCS) aerial photo of
all areas on which manure will be spread. Outline the areas used.

Eugene Garbhardt
SIGNATURE OF LAND OWNER

EUGENE GARBHART
Name of Land Owner (Please Print)

507 692-2256
Phone Number

35213 State Highway 68
Address

Clement MN. 56224
City, State, Zip Code

Return form to:

Redwood County Environmental Office
PO Box 130
Redwood Falls, MN 56283

OR

Minnesota Pollution Control Agency
Regulatory Compliance Section
Division of Water Quality
520 Lafayette Road North
St. Paul, MN 55155



Overview



Legend

- Municipal Boundaries
- Sections
- Surrounding Counties
- Townships
- Address points
- Parcels
- Major Roads**
- <all other values>
- 1
- 2
- Minor Roads

Parcel ID	69-019-4040	Alternate ID	n/a	Owner Address	GARNHARDT/CAROLE
Sec/Twp/Rng	19-111-35	Class	AGRICULTURE		35213 ST HWY 68
Property Address		Acreage	80		CLEMENTS MN 56224
District	n/a				
Brief Tax Description	N1/2 SE1/4, 80.A				
	(Note: Not to be used on legal documents)				

Gene ~~House~~ 80 79

Date created: 11/3/2016
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MPCA LAND APPLICATION AGREEMENT
ADDITIONAL MANURE DISPOSAL AREA APPLICATION

The undersigned land owner agrees to allow manure from ALEX MADSEN
livestock feedlot to be spread on 149 acres of his/her land. The land is located in
the SW 1/4 one quarter of Section 17, in
THREE LAKES Township, of REDWOOD County. The
undersigned land owner is the holder of MPCA Permit or Certificate of Compliance
Number . (If none is held, please indicate none).

If the land indicated above receives manure from livestock in addition to that from the
feedlot indicated above, please list the number and types of livestock below. (If none,
please indicate none):

Enclose an Agricultural Stabilization and Conservation Service (ASCS) aerial photo of
all areas on which manure will be spread. Outline the areas used.

Carol Garnhardt

SIGNATURE OF LAND OWNER

Carol Garnhardt 507-682-2256

Name of Land Owner (Please Print)

Phone Number

35213 State Highway 68

Address

Comments MN 56227

City, State, Zip Code

Return form to:

Redwood County Environmental Office
PO Box 130
Redwood Falls, MN 56283

OR

Minnesota Pollution Control Agency
Regulatory Compliance Section
Division of Water Quality
520 Lafayette Road North
St. Paul, MN 55155



Overview



Legend

-  Municipal Boundaries
-  Sections
-  Surrounding Counties
-  Townships
-  Address points
-  Parcels
- Major Roads**
-  <all other values>
-  1
-  2
-  Minor Roads

Parcel ID	69-017-3020	Alternate ID	n/a	Owner Address	GARNHARDT/CAROL E/ET'AL
Sec/Twp/Rng	17-111-35	Class	AGRICULTURE		35213 ST HWY 68
Property Address		Acreage	127.85		CLEMENTS MN 56224
District	n/a				
Brief Tax Description	SW1/4 EX TR, 127.85A				
	(Note: Not to be used on legal documents)				

Gene Home 149

Date created: 11/3/2016
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Overview



Legend

-  Municipal Boundaries
-  Sections
-  Surrounding Counties
-  Townships
-  Address points
-  Parcels
- Major Roads**
-  <all other values>
-  1
-  2
-  Minor Roads

Parcel ID	69-017-3040	Alternate ID	n/a	Owner Address	GARNHARDT/CAROL E
Sec/Twp/Rng	17-111-35	Class	AGRICULTURE		35213 ST HWY 68
Property Address	35213 ST HWY 68 CLEM 56224	Acreeage	32.15		CLEMENTS MN 56224
District	n/a				
Brief Tax Description	COM AT SW COR OF SW1/4 TH N 838.2' TH E 940.5' TH N 526' TH E 577.5' TH S 528' TH W 198' TH S 838.2' TH W ALG S LN 1320' TO POB, 32.15A				
	(Note: Not to be used on legal documents)				

Gen Home 149

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MPCA LAND APPLICATION AGREEMENT
ADDITIONAL MANURE DISPOSAL AREA APPLICATION

The undersigned land owner agrees to allow manure from ALEX MADSEN
livestock feedlot to be spread on 140 acres of his/her land. The land is located in
the SE 1/4 one quarter of Section 33, in
MORGAN Township, of REDWOOD County. The
undersigned land owner is the holder of MPCA Permit or Certificate of Compliance
Number . (If none is held, please indicate none).

If the land indicated above receives manure from livestock in addition to that from the
feedlot indicated above, please list the number and types of livestock below. (If none,
please indicate none):

Enclose an Agricultural Stabilization and Conservation Service (ASCS) aerial photo of
all areas on which manure will be spread. Outline the areas used.

William Madsen

SIGNATURE OF LAND OWNER

WILLIAM MADSEN

Name of Land Owner (Please Print)

507 249 3832

Phone Number

407 LINDSEY AVE BOX 275
Address

Morgan Mn 56266
City, State, Zip Code

Return form to:

Redwood County Environmental Office
PO Box 130
Redwood Falls, MN 56283

OR

Minnesota Pollution Control Agency
Regulatory Compliance Section
Division of Water Quality
520 Lafayette Road North
St. Paul, MN 55155



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- Major Roads
 - <all other values>
 - 1
 - 2
 - Minor Roads

Parcel ID	59-033-4020	Alternate ID	n/a	Owner Address	MADSEN/WILLIAM A & JANET E
Sec/Twp/Rng	33-111-34	Class	AGRICULTURE		PO BOX 275
Property Address		Acreage	145.92		MORGAN MN 56266-0275
District	n/a				
Brief Tax Description	LOTS 5 & 6 & LOT D EX CHURCH, 145.92A				
	(Note: Not to be used on legal documents)				

Not on map

Date created: 11/3/2016
 Last Data Uploaded: 11/1/2016 10:11:33 AM

MPCA LAND APPLICATION AGREEMENT
ADDITIONAL MANURE DISPOSAL AREA APPLICATION

The undersigned land owner agrees to allow manure from Alex Madsen
livestock feedlot to be spread on 70 acres of his/her land. The land is located in
the NE 1/4 one quarter of Section 30, in
MORGAN Township, of REDWOOD County. The
undersigned land owner is the holder of MPCA Permit or Certificate of Compliance
Number . (If none is held, please indicate none).

If the land indicated above receives manure from livestock in addition to that from the
feedlot indicated above, please list the number and types of livestock below. (If none,
please indicate none):

Enclose an Agricultural Stabilization and Conservation Service (ASCS) aerial photo of
all areas on which manure will be spread. Outline the areas used.

William Madsen
SIGNATURE OF LAND OWNER

WILLIAM MADSEN
Name of Land Owner (Please Print)

507 249 3832
Phone Number

407 LINDSEY AVE BOX 275
Address

Morgan Mn 56266
City, State, Zip Code

Return form to:

Redwood County Environmental Office
PO Box 130
Redwood Falls, MN 56283

OR

Minnesota Pollution Control Agency
Regulatory Compliance Section
Division of Water Quality
520 Lafayette Road North
St. Paul, MN 55155



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-  Parcels
- Major Roads**
-  <all other values>
-  1
-  2
-  Minor Roads

Parcel ID	59-030-1030	Alternate ID	n/a	Owner Address	MADSEN FARMS INC
Sec/Twp/Rng	30-111-34	Class	AGRICULTURE		PO BOX 275
Property Address		Acreage	54.93		MORGAN MN 56266-0275
District	n/a				
Brief Tax Description	N1/2 NE1/4 EXTRS, 54.93A				
	(Note: Not to be used on legal documents)				

Kielgard Farm west 73 170

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 The Schneider Corporation

MPCA LAND APPLICATION AGREEMENT
ADDITIONAL MANURE DISPOSAL AREA APPLICATION

The undersigned land owner agrees to allow manure from ALEX MADSEN
livestock feedlot to be spread on 76 acres of his/her land. The land is located in
the E 1/2 NW 1/4 one quarter of Section 16, in
BROOKVILLE Township, of REDWOOD County. The
undersigned land owner is the holder of MPCA Permit or Certificate of Compliance
Number /. (If none is held, please indicate none).

If the land indicated above receives manure from livestock in addition to that from the
feedlot indicated above, please list the number and types of livestock below. (If none,
please indicate none):

/
/
/

Enclose an Agricultural Stabilization and Conservation Service (ASCS) aerial photo of
all areas on which manure will be spread. Outline the areas used.

William Madsen
SIGNATURE OF LAND OWNER

WILLIAM MADSEN
Name of Land Owner (Please Print)

507 249 3832
Phone Number

407 LINDSEY AVE Box 275
Address

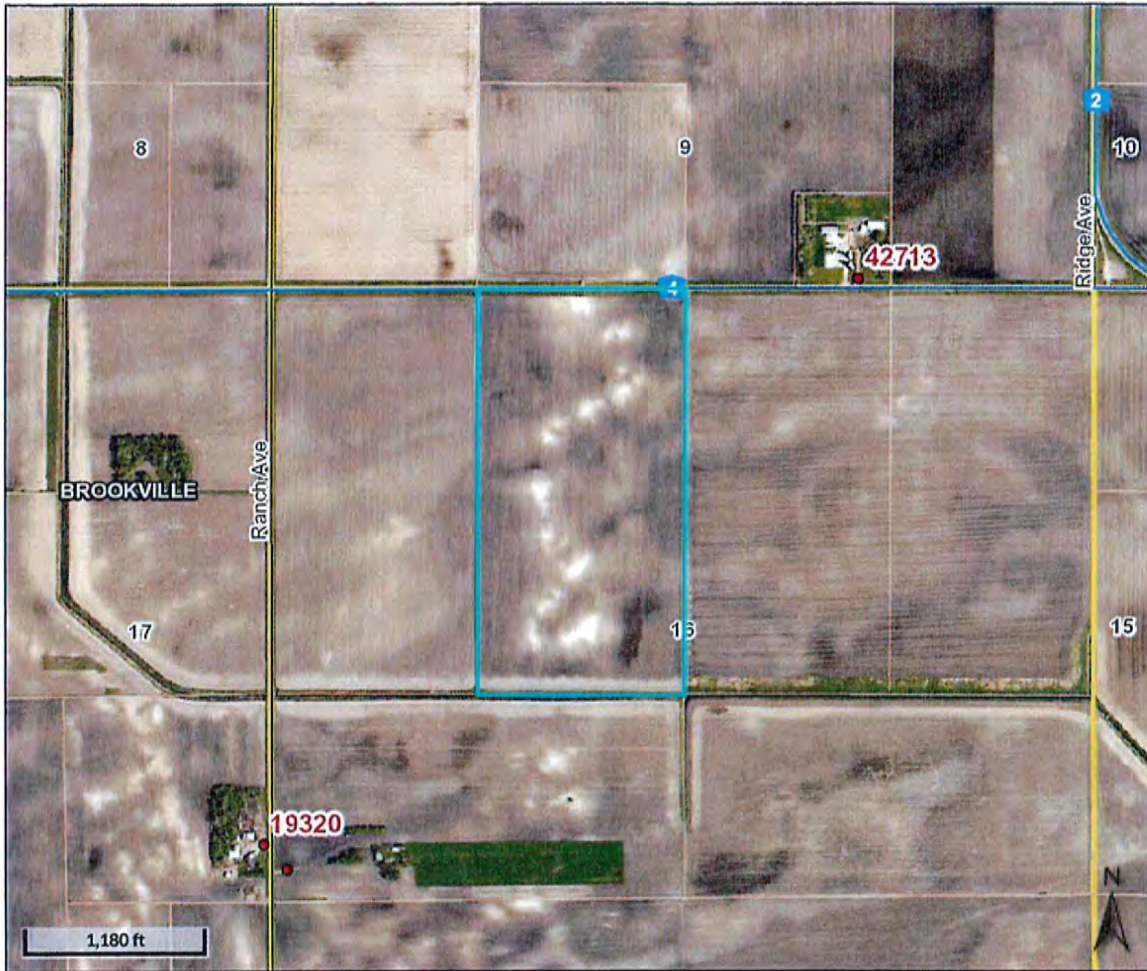
Morgan Mn 56266
City, State, Zip Code

Return form to:

Redwood County Environmental Office
PO Box 130
Redwood Falls, MN 56283

OR

Minnesota Pollution Control Agency
Regulatory Compliance Section
Division of Water Quality
520 Lafayette Road North
St. Paul, MN 55155



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-  Parcels
- Major Roads**
-  <all other values>
-  1
-  2
-  Minor Roads

Parcel ID	50-016-2020	Alternate ID	n/a	Owner Address	MADSEN/WILLIAM A & JANET E
Sec/Twp/Rng	16-110-34	Class	AGRICULTURE		PO BOX 275
Property Address		Acreage	80		MORGAN MN 56266-0275
District	n/a				
Brief Tax Description	E1/2 OF NW1/4 80. A				
	(Note: Not to be used on legal documents)				

Full 80 76

Date created: 11/3/2016
 Last Data Uploaded: 11/1/2016 10:11:33 AM

 Developed by
 The Schneider Corporation

Conditions for Permit No. 18-16 (Alex Madsen)

1. The permit holder shall comply with all applicable laws, rules, and regulations, including but not limited to Redwood County Ordinance, as hereafter amended from time to time.
2. The permit holder shall allow the Redwood County Environmental Office to inspect the site for all purposes permitted by law whenever deemed necessary by the Redwood County Environmental Office.
3. All waste, refuse, and the like generated by or from the conditional use must be disposed of in the manner provided by the applicable local, state, and federal statutes, rules, and regulations. A copy of all disposal records and receipts must be kept on file for no less than five (5) years and shall be provided to the Redwood County Environmental Office upon request.
4. The permit holder shall contact all relevant local, state, and federal authorities/entities and inquire as to whether a permit and/or license is required. If a permit and/or license is required, the permit holder shall apply for and obtain any and all required permits and/or licenses. A copy of all such permits and/or licenses shall be provided to the Redwood County Environmental Office upon request.
5. The permit holder shall take appropriate and reasonable measures to assure that all surface water runoff satisfies all applicable local, state, and federal discharge standards.
6. The permit holder shall not allow the conditional use to be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted.
7. The permit holder shall not allow the conditional use to impede the normal and orderly development and improvement of surrounding vacant property for uses predominant to the area.
8. Adequate utilities, access roads, drainage, and other necessary facilities shall be provided and continue to be provided by the permit holder now and in the future.
9. Adequate measures shall be taken to prevent or control offensive odor, fumes, dust, and vibration, so that none of the foregoing will constitute a nuisance now or in the future.
10. The manner in which manure is stored and disposed of shall comply with all applicable local, state, and federal laws, rules, and regulations. If manure is applied to land, it shall be applied to land at agronomic rates. When applied to land, manure will be injected or incorporated within 24 hours. The permit holder shall retain a record of all locations where manure is applied to land. Such records shall be maintained for a period of no less than five (5) years, measured from the date the manure is applied to land. Such records shall be submitted to the Redwood County Environmental Office upon request.
11. The permit holder shall report any changes in spread agreements or spread areas to the Redwood County Environmental Office within thirty (30) days subsequent to any such change.
12. The County Board of Commissioners may at any time impose additional conditions as necessary and appropriate including but not limited to: the planting of trees and shrubs for use as a windbreak

for the feedlot operation; the furnishing and placing in a dedicated account, to be administered by the County, an annual payment for reclamation purposes based upon the number of Animal Units involved; and restrictions on the days on which a manure storage structure may be disturbed or manure may be transferred, applied, incorporated, or injected.

13. Dead livestock shall be stored and rendered in such a manner as to not create a nuisance. Disposal of dead livestock by burial is strictly prohibited. Dead hogs may be composted according to the Redwood County Swine Composting Protocol, which is attached hereto and incorporated into Conditional Use Permit #18-16.
14. The permit holder shall construct the manure storage structure/concrete pit(s) to meet or exceed the minimum requirements set forth in the plans and specifications prepared by Jason E. Hoehn and signed by him on October 10, 2016, attached to the permit holder's application.
15. A perimeter tile line shall be installed around the outside of the base of the pit(s) walls and an inspection manhole shall be provided where the perimeter tile branches out into the local drain tile system.
16. The permit holder shall install a warning sign at all entrances to the concrete pits. These signs shall warn the reader of the dangers of entering the pits.
17. The Redwood County Environmental Office shall be contacted for two on-site inspections during the construction of the pits: once when the floor is ready to be poured, and once when the walls are ready to be poured.
18. No construction on the pit shall be done between October 15th and April 15th, except by approval of the Zoning Administrator.
19. The barn and all appurtenant structures will be set back at least 50 feet from any county tile line.
20. The land on which the feedlot is to be built will be transferred into Alex Madsen's ownership prior to beginning construction of the feedlot.
21. The Redwood County Planning Commission shall review the conditional use permit and shall be authorized to take any and all necessary action(s), including but not limited to revoking the conditional use permit and/or requiring the permit holder to reapply for a conditional use permit, if: 1) The Redwood County Environmental Office acquires information previously unavailable that indicates the terms and conditions of the permit do not accurately represent the actual circumstances of the permitted facility or the conditional use; 2) It is discovered subsequent to the issuance of the permit the permit holder failed to disclose all facts relevant to the issuance of the permit or submitted false or misleading information to the Redwood County Environmental Office, the Redwood County Planning Commission, or the Redwood County Board of Commissioners; 3) The Redwood County Environmental Office determines the permitted facility or conditional use endangers human health or the environment; and/or (4) The permit holder violates any of the herein described conditions, the Redwood County Ordinances, State statutes, or Federal laws.



REDWOOD COUNTY ENVIRONMENTAL OFFICE

*Planning & Zoning • Parks & Trails • GIS
Aquatic Invasive Species • Septic Inspector
Drainage Inspector • Agricultural Inspector*

PO BOX 130
REDWOOD FALLS
MINNESOTA 56283
PH: 507-637-4023

REDWOOD COUNTY PLANNING COMMISSION

Alex Madsen

Conditional Use Permit Application #18-16

November 28th, 2016

FINDINGS OF FACT

ORDINANCE CRITERIA – The Planning Commission may recommend the granting of a Conditional Use Permit in any district provided the proposed use is listed as a conditional use for the district and upon a showing that the standards and criteria stated in this Ordinance will be satisfied and that the use is in harmony with the general purposes and intent of this Ordinance and the Comprehensive Plan.

In determining whether the proposed use is in harmony with the general purposes and intent of the Ordinance and the Comprehensive Plan, the Planning Commission shall consider and make findings on the following questions:

- 1) Will the conditional use be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, or substantially diminish and impair property values within the immediate vicinity?

Yes _____ No _____

Why?: _____

- 2) Will the establishment of the conditional use impede on the normal and orderly development and improvement of surrounding vacant property for uses predominant to the area?

Yes _____ No _____

Why?: _____

3) Are there, or will there be provided, adequate utilities, access roads, drainage, and other necessary facilities?

Yes _____ No _____

Why?: _____

4) Have adequate measures been taken, or will adequate measures be taken, to provide sufficient off-street parking and loading space to serve the proposed use of the property?

Yes _____ No _____

Why?: _____

5) Have adequate measures been taken, or will adequate measures be taken, to prevent or control offensive odor, fumes, dust, noise and 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?

Yes _____ No _____

Why?: _____

6) Will the proposed use have an impact (adverse) on the health, safety, and general welfare of the residents in the surrounding neighborhood?

Yes _____ No _____

Why?: _____

NAME: _____

DATE: _____