CHIPPEWA COUNTY

PLANNING & ZONING COMMITTEE

SPECIAL MEETING

APRIL 29, 2021

WEBEX CONFERENCE CALL

4:30 PM

THIS MEETING WILL BE HELD VIA TELEPHONE CONFERENCE CALL DUE TO THE COVID-19 PANDEMIC. IF YOU ARE A MEMBER OF THE PUBLIC AND WISH TO SPEAK, PLEASE CALL THE MEETING PHONE NUMBER BELOW AND ENTER THE ACCESS CODE AND PASSWORD. THE COMMITTEE CHAIR WILL ACKNOWLEDGE YOU AT THE APPROPRIATE TIME ON THE AGENDA.

IF YOU NEED TO EITHER MUTE OR UNMUTE YOURSELF DURING THE MEETING PRESS *6.

MEETING PHONE NUMBER: 1-415-655-0001

MEETING ACCESS CODE: 182 014 5738

MEETING PASSWORD: 04292021

1. CALL TO ORDER

2. ROLL CALL

Attendee Name	Organization	Title	Status	Arrived
Chuck Hull	Chippewa County	District 14 (Chair)	Present	
Don Hauser	Chippewa County	District 6 (Vice-Chair)	Present	
Ronald McGill	Chippewa County	District 15	Present	
David Eisenhuth	Chippewa County	District 11	Present	
Dean Gullickson	Chippewa County	District 7	Present	

3. MEMBERS OF THE PUBLIC WISHING TO BE HEARD

None.

4. CONSENT AGENDA

Motion to Approve.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Dean Gullickson, District 7
SECONDER:	Ronald McGill, District 15
AYES:	Hull, Hauser, McGill, Eisenhuth, Gullickson

A. Approve the Agenda

B. Approve the Minutes

Planning & Zoning Committee - Regular Meeting - Apr 22, 2021 4:30 PM

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Dean Gullickson, District 7
SECONDER:	Ronald McGill, District 15
AYES:	Hull, Hauser, McGill, Eisenhuth, Gullickson

C. Next Regular Meeting Date - May 20, 2021 at 4:30 PM

5. PUBLIC HEARINGS - FOR DISCUSSION AND APPROVAL

1. 2021-0007 GIlbertson Farms LLC - Conditional Use Request - Town of Wheaton - Doug Clary
   General discussion and overview of the Livestock Facility Siting request from Gilbertson Farms LLC. Motion by Hauser to close the public hearing. Seconded by Gullickson.

   Motion to approve the CUP as submitted.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Ronald McGill, District 15
SECONDER:	Dean Gullickson, District 7
AYES:	Hull, Hauser, McGill, Eisenhuth, Gullickson

6. AGENDA ITEMS FOR FUTURE CONSIDERATION

None.

7. ADJOURN

Motion to Adjourn.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Dean Gullickson, District 7
SECONDER:	David Eisenhuth, District 11
AYES:	Hull, Hauser, McGill, Eisenhuth, Gullickson

CHIPPEWA COUNTY

PLANNING & ZONING COMMITTEE

REGULAR MEETING

APRIL 22, 2021

WEBEX CONFERENCE CALL

4:30 PM

THIS MEETING WILL BE HELD VIA TELEPHONE CONFERENCE CALL DUE TO THE COVID-19 PANDEMIC. IF YOU ARE A MEMBER OF THE PUBLIC AND WISH TO SPEAK, PLEASE CALL THE MEETING PHONE NUMBER BELOW AND ENTER THE ACCESS CODE AND PASSWORD. THE COMMITTEE CHAIR WILL ACKNOWLEDGE YOU AT THE APPROPRIATE TIME ON THE AGENDA.

IF YOU NEED TO EITHER MUTE OR UNMUTE YOURSELF DURING THE MEETING PRESS *6.

MEETING PHONE NUMBER: 1-415-655-0001

MEETING ACCESS CODE:182 911 7844

MEETING PASSWORD: 04192021

1. CALL TO ORDER

2. ROLL CALL

Attendee Name	Organization	Title	Status	Arrived
Chuck Hull	Chippewa County	District 14 (Chair)	Present	
Don Hauser	Chippewa County	District 6 (Vice-Chair)	Present	
Ronald McGill	Chippewa County	District 15	Present	
David Eisenhuth	Chippewa County	District 11	Present	
Dean Gullickson	Chippewa County	District 7	Present	

3. MEMBERS OF THE PUBLIC WISHING TO BE HEARD

None.

4. CONSENT AGENDA

Motion by Approve.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Dean Gullickson, District 7
SECONDER:	Ronald McGill, District 15
AYES:	Hull, Hauser, McGill, Eisenhuth, Gullickson

1. Approve the Agenda

2. Approve the Minutes

Minutes Acceptance: Minutes of Apr 22, 2021 4:30 PM (Approve the Minutes)

Planning & Zoning Committee - Regular Meeting - Mar 18, 2021 4:30 PM

3. Schedule Next Regular Meeting Date - May 20, 2021 at 4:30 PM

5. PUBLIC HEARINGS - FOR DISCUSSION AND ACTION

1. 2021-0007 - Kinderman Et Al - Rezone - Town of Lafayette - Doug Clary
   Motion to Approve the rezone with the staff recommended conditions.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Ronald McGill, District 15
SECONDER:	Don Hauser, District 6 (Vice-Chair)
AYES:	Hull, Hauser, McGill, Eisenhuth, Gullickson

6. BUSINESS ITEMS

1. Discussion on RiverBelle State Plat - Preliminary Plat Review
   Motion to Approve the Preliminary Plat as presented.

RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	Dean Gullickson, District 7
SECONDER:	Ronald McGill, District 15
AYES:	Hull, Hauser, McGill, Eisenhuth, Gullickson

2. Review and Action on Offers to Purchase Received on Type A Tax Deed Property - Doug Clary
   None

RESULT:	**DISCUSSED**

7. AGENDA ITEMS FOR FUTURE CONSIDERATION

None

8. ADJOURN

Motion to Adjourn at 4:55 PM.

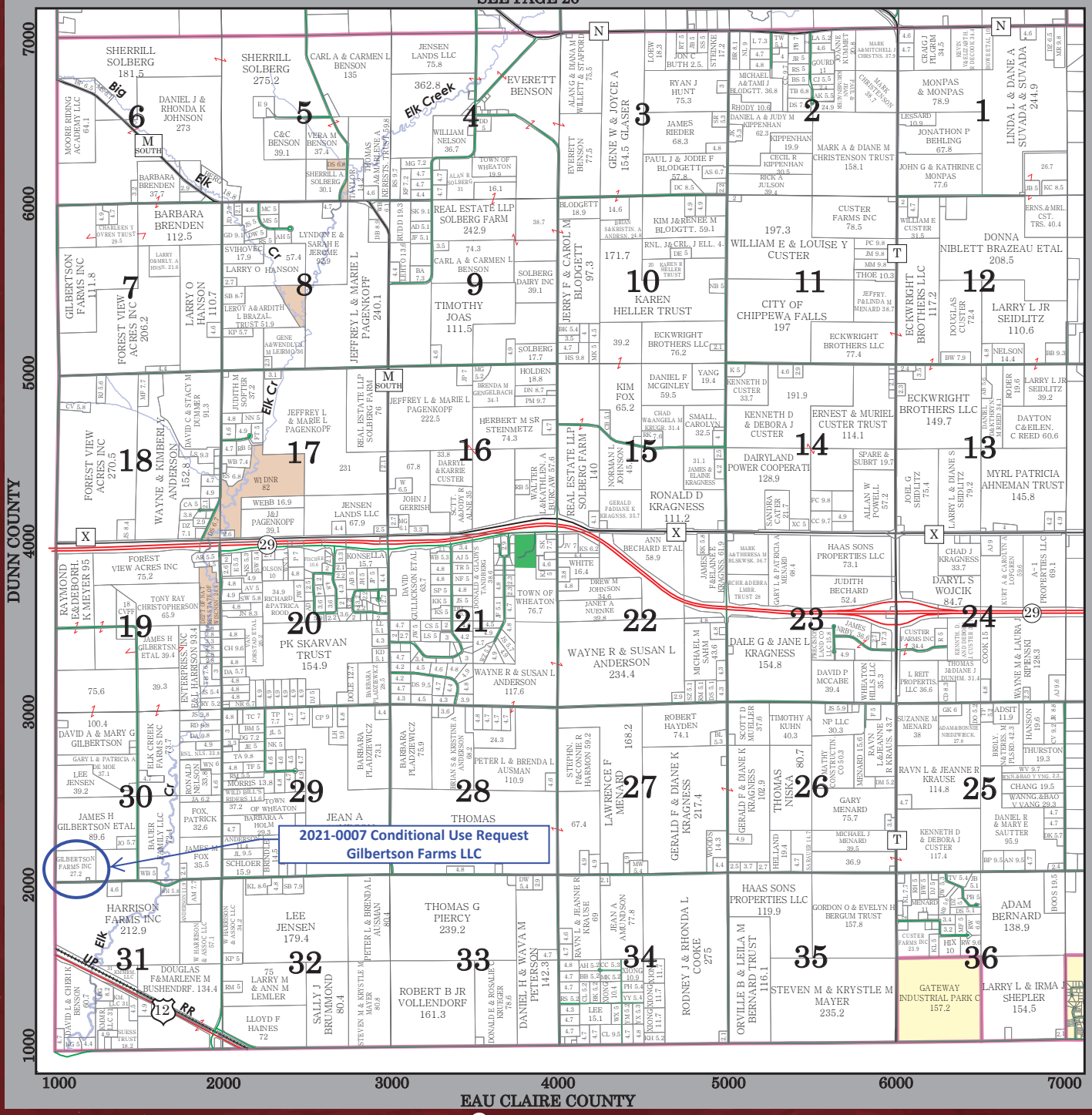
RESULT:	**APPROVED [UNANIMOUS]**
MOVER:	David Eisenhuth, District 11
SECONDER:	Dean Gullickson, District 7
AYES:	Hull, Hauser, McGill, Eisenhuth, Gullickson

Minutes Acceptance: Minutes of Apr 22, 2021 4:30 PM (Approve the Minutes)

WHEATON (W)

T28N R10W

SEE PAGE 26



© 2017 Chippewa County, WI
All acreages are computed & rounded to the closest tenth acre, roadways are excluded from totals. All mapping is for reference only and is not intended, or to be used for any legal purpose.

Attachment: Plat Book - 2810L (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

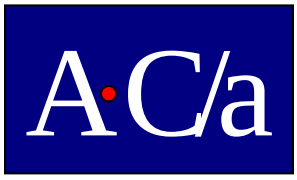
RiverCountry CO-OP
Trend Setters SALON est. 2006
SLEEP INN & SUITES
29 PINES Family Restaurant & Sports Lounge
CENEX
715-723-2828 | 800-828-9395
Bloomer • Boyd • Cadott • Chippewa Falls • Cornell • Eau Claire
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ATCP51 Permit Application
Gilbertson Farms, Inc.

March 2021

Compiled by:



Auth Consulting & Associates, Inc. (AC/a)
406 Technology Drive E, Suite A
Menomonie, WI 54751
715-232-8490 ph
715-232-8492 fx

Attachment: (A) Cover Page (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

ATCP51 Permit Application

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Chapter ATCP 51

APPENDIX A

APPLICATION FORM AND WORKSHEETS

Application for Local Approval
New or Expanded Livestock Facility



Wisconsin Department of Agriculture, Trade and Consumer Protection
2811 Agriculture Drive
P.O. Box 8911
Madison, WI 53708–8911
(608) 224–4622
(608) 224–4500

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Introduction

Use this application form to obtain local approval for a *new* or *expanded* livestock facility (cattle, swine, poultry, sheep or goats) that will exceed 500 "animal units" (or a lower threshold established by local zoning ordinance prior to July 19, 2003).

Some local governments require local approval, but others do not. Check with your local government (county and town or municipality) to see if local approval is required in your area.

In some cases, you may need local approval from more than one local government (for example, the county and the town, or 2 towns if your livestock facility straddles the town line). But the application and approval process should be the same.

The construction of a new or altered *livestock structure* does not, by itself, constitute an "expansion" (unless there will also be an increase in *animal units*). If you already have a permit or local approval, you may not need another approval unless your planned expansion exceeds the number of animals previously authorized by your local government.

Local approval, if required, is governed by statewide uniform standards in Wisconsin Statutes s. 93.90 and Wisconsin Administrative Code chapter *ATCP 51*. This application documents compliance with those standards.

The Livestock Facility

A livestock facility includes livestock, livestock structures, the land on which they are located (it does not include pastures or winter grazing areas). *Related livestock facilities* (see definition below) are treated as a single livestock facility, for purposes of local approval. However:

- *A separate species facility* (see definition below) may be treated as a separate livestock facility, even if it is owned by the same person and located on the same land parcel as another livestock facility.
- A mere acquisition of a neighboring livestock facility does not constitute an *expansion* unless more *animal units* are added to the combined facilities.

Completing the Application

If local approval is required, complete this entire application form (including the worksheets). Follow the instructions in the application form. Attach all of the supplementary documentation required. Your application must be complete, credible and internally consistent.

The application form and worksheets ask for information to show compliance with Wisconsin livestock facility siting standards. A local government has *very limited* authority to modify the standards by local ordinance (modifications, if any, must be reflected in the local version of this application form).

As part of your application, you must specify the number of *animal units* that you will keep at a new or expanded livestock facility. If the local government approves your requested number, this will be the maximum number that you may keep for 90 days or more in any 12–month period.

A local government may require you to submit up to 4 duplicate copies of the complete application, worksheets, maps and other attachments. But you are not required to submit duplicate copies of engineering design specifications.

Worksheets

This application includes the following worksheets:

- *Animal units* (worksheet 1)
- Odor management (worksheet 2)
- Waste and nutrient management (worksheet 3)
- Waste storage facilities (worksheet 4)
- Runoff management (worksheet 5)

Complete the worksheets following all instructions (including those on each worksheet). You may use a convenient automated spreadsheet in place of Tables A and B of worksheet 2 if you prefer (results are identical). The spreadsheet is available at http://www.datcp.state.wi.us.

If the Wisconsin Department of Natural Resources (*DNR*) has issued a Wisconsin Pollutant Discharge Elimination System (*WPDES*) permit for your proposed livestock facility, you can check a box on worksheets 3, 4 and 5, and submit a copy of that permit with the worksheets. A *WPDES* permit does not affect the requirements for completing worksheets 1 and 2.

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Fees

A local government may require a fee to offset its reasonable costs to review and process this application. The fee, if any, must be established by local ordinance and may not exceed $1,000. A local government may NOT charge any other fee, or require you to post any bond or security.

Local Approval Process

If you complete the application properly, the local government MUST APPROVE the proposed livestock facility unless it finds, based on clear and convincing evidence in the local record, that the facility fails to meet the state standards.

Within 45 days after you submit your application, the local government must notify you whether your application is complete. If you failed to complete part of the application, you must submit the missing information. The local government must grant or deny the application within 90 days after it declares the application complete, and issue its decision in writing. The approval must include a duplicate copy of the approved application, marked "approved." The duplicate copy shall include all the worksheets, maps, and other attachments included in the application, with the exception of the engineering design specifications. The local government must make a record of its decision making process, and the evidence supporting its decision. The record must include your application.

Appeal of Local Decision

If you disagree with the local government's decision on your application, you may appeal that decision to the Wisconsin Livestock Facility Siting Review Board ("Board"). Other "aggrieved persons" may also appeal to the Board. An "aggrieved person" includes any person who resides or owns land within 2 miles of your proposed livestock facility.

You must file your appeal within 30 days after the local government issues its decision (or, if you pursue a local administrative appeal process first, within 30 days after that appeal process is complete). The Board will review the local decision based on the evidence in the local record (it will not hold a new hearing or accept new testimony or evidence). You must file your appeal in writing at the following address:

Wisconsin Livestock Facility Siting Review Board
c/o Secretary, Department of Agriculture, Trade and Consumer Protection
P.O. Box 8911
Madison, WI 53708–8911

Terms Used in this Application Form

In this application form, you will see a number of ***italicized*** terms. Those terms are defined below (for more specific definitions, see *ATCP 51*):

"Adjacent" – Located on land parcels that touch each other, or on land parcels that are separated only by a river, stream, or transportation or utility right–of–way.

"Affected Neighbors" – Residences or *high–use buildings* within 2500 feet of any livestock structure at the proposed facility, other than those owned by the applicant or by persons who have agreed to exclude them from the applicant's odor score calculation. The total odor score for a *livestock facility* depends, in part, on the proximity and density of "affected neighbors."

"Animal housing area" – That portion of an animal housing structure to which animals have access, and in which manure may accumulate. "Animal housing area" includes free–stalls and travel lanes. It does NOT include holding areas, feed alleys, storage areas or milking parlors.

"Animal lot" – A feedlot, barnyard or other outdoor facility where livestock are concentrated for feeding or other purposes. Pastures and winter grazing areas are NOT "animal lots." Treat multiple "animal lots" as a single "animal lot" if runoff from the "animal lots" drains to the same treatment area or if runoff from the "animal lot" treatment areas converges or reaches the same surface water within 200 feet of any of those treatment areas.

"Animal units" – Equivalent units of *livestock*. The number of animals constituting an "animal unit" varies by species. For example, one milking dairy cow equals 1.4 "animal units." A beef animal over 600 lbs. equals 1.0 "animal units." A pig over 55 lbs. equals 0.4 "animal units." A laying chicken equals 0.01 "animal unit." The number of "animal units" kept at a *livestock facility* means the largest number of "animal units" that will be at the *livestock facility* on at least 90 days in any 12–month period. Calculate "animal units" according to worksheet 1.

"BARNY runoff model" – The Wisconsin version of a model that is commonly used to predict nutrient runoff from *animal lots*. An Excel computer spreadsheet version is available on the DATCP website (engineering directory).

"Certified agricultural engineering practitioner" – A practitioner who is properly qualified under *ATCP 50.46*.

"Cluster" – Any group of one or more *livestock structures* within a *livestock facility*. If you wish to do so, you may calculate separate odor scores for "clusters" that are separated by more than 750 feet.

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

"Complete application for local approval" – An application that contains everything required under ss. ATCP 51.30(1) to (4).

"DATCP" – Wisconsin Department of Agriculture, Trade and Consumer Protection. The application form cites DATCP rules including Wis. Adm. Code chs. *ATCP 51* (livestock facility siting), *ATCP 50* (soil and water resource management) and *ATCP 17* (livestock premises registration).

"DNR" – Wisconsin Department of Natural Resources. The application form cites DNR rules including Wis. Adm. Code chs. *NR 243* (*WPDES* permits), *NR 811* (community wells) and *NR 812* (private wells).

"Expanded livestock facility" – The entire *livestock facility* created by an *expansion*, including new, existing and altered *livestock structures* (existing structures are subject to less rigorous standards). Your application must indicate the maximum number of *animal units* that you will keep at the "expanded livestock facility."

"Expansion" – An increase in the largest number of *animal units* kept at a *livestock facility* on at least 90 days in any 12–month period. The acquisition of an existing livestock facility, by the operator of an *adjacent* facility, is not an "expansion" unless the operator increases the largest number of *animal units* kept at the combined livestock facilities on at least 90 days in any 12–month period.

"High–use building" – A residential building that has at least 6 distinct dwelling units; a restaurant, hotel, motel, or tourist rooming house; a school building; a hospital or licensed care facility; or a non–farm business or workplace that is open at least 40 hours a week. The odor score for your *livestock facility* depends, in part, on the proximity and density of neighboring "high–use buildings."

"Karst features" – Sinkholes, fractured bedrock or like features that may result in direct pollution runoff to groundwater.

"Livestock" – Cattle, swine, poultry, sheep or goats.

"Livestock facility" – A feedlot, dairy farm, or other operation where *livestock* are or will be fed, confined, maintained, or stabled for a total of 45 days or more in any 12–month period. A "livestock facility" includes all of the tax parcels on which the facility is located, but it does NOT include a parcel used only for *pasture* or as a *winter grazing area*. *Related livestock facilities* are considered a single "livestock facility," except a livestock operator may elect to treat a *separate species facilities* as a separate livestock facility.

"Livestock structure" – A building or structure such as a barn, milking parlor, feed storage facility, feeding facility, *animal lot* or *waste storage structure*. *Pastures*, *winter grazing areas* and machine sheds are NOT "livestock structures."

"Local approval" – A license, permit, special zoning exception, conditional use permit, or other local authorization for a *new or expanded livestock facility*. This application form applies, regardless of the form of local approval. However, this application form does NOT cover any of the following permits (for which separate requirements may apply):

- Building, electrical or plumbing permits (if local standards are consistent with state code).
- Manure storage system permits (*see ATCP 50.56*), UNLESS construction is part of a *new or expanded livestock facility*.
- Permits required by certain local ordinances related to shoreland zoning, floodplain zoning, construction site erosion control or stormwater management.

"New livestock facility" – A *livestock facility* used for the first time, or for the first time in at least 5 years.

"NRCS" – The Natural Resource Conservation Service of the United States Department of Agriculture. Wisconsin livestock siting standards refer to NRCS Technical Guide standards.

"Pasture" – Land on which livestock graze or otherwise seek feed in a manner that maintains the vegetative cover over all of the grazing or feeding area.

"Premises ID" – The unique ID number assigned to your *livestock facility* under the Wisconsin Livestock Premises Registration Program (*ATCP 17*). Go to http://www.datcp.state.wi.us for more information. To register your *livestock facility*, go to http://www.wiid.org/.

"Qualified nutrient management planner" – A person, other than the applicant, who is qualified under *ATCP 50.48*.

"Related livestock facilities" – Two or more *livestock facilities* that are owned or managed by the same person and meet any of the following criteria:

- They are located on the same tax parcel or *adjacent* tax parcels.
- They use any of the same *livestock structures* to collect or store manure.
- They generate manure that is applied to the same parcel of land.

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

"Separate Species Facility" – A distinct part of *a livestock facility* that meets all of the following criteria:

- It has only one of the following types of livestock, and that type is not found in any other part of the *livestock facility*:
  - Cattle
  - Swine
  - Poultry
  - Sheep
  - Goats
- It has no more than 500 *animal units*.
- Its animal housing and manure storage structures, if any, are located at least 750 feet from *livestock structures* that are used by other parts of the *livestock facility*.

"Substantially altered" livestock structure – A *livestock structure* that undergoes a material change in construction or use such as:

- An increase in the capacity of a *waste storage facility.*
- The addition of a liner to a *waste storage facility.*
- An increase of more than 20% in the area or capacity of a *livestock structure* used to house, feed, or confine *livestock* or to store livestock feed.
- An increase of more than 20% in the number of *animal units* that will be kept in a *livestock structure* on at least 90 days in any 12– month period.

"Waste storage structure" – An embankment structure, excavated pit, dugout or fabricated structure that is used to store manure, milking center waste or other organic waste generated by a *livestock facility*. For the purposes of waste storage structure setback (application form, A–2) and worksheet 2, a "waste storage structure" does not include a structure used to collect and store waste under an animal housing facility, or a manure digester consisting of a sealed structure in which manure is subjected to managed biological decomposition.

"Waste storage facility" –– A *waste storage structure* and any attached piping or equipment used to load or unload the structure.

"Winter grazing area" – Cropland or *pasture* where *livestock* feed on dormant vegetation or crop residue, with or without supplementary feed, during the period October 1 to April 30. "Winter grazing area" does *not* include any of the following:

- An area, other than a *pasture*, where *livestock* are kept during the period from May 1 to September 30.
- An area which at any time has an average of more than 4 *animal units* per acre.
- An area from which *livestock* have unrestricted access to navigable waters of the state.
- An area in which manure deposited by *livestock* causes nutrient levels to exceed standards in *ATCP 51.16*.

"WPDES permit" – Wisconsin Pollutant Discharge Elimination System permit issued by DNR for a concentrated animal feeding operation over 1000 *animal units,* or for operations of any size that discharge pollutants directly to waters of the state.

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

arm–lwr– 11/04 January, 2006

Wisconsin Department of Agriculture, Trade and Consumer Protection
2811 Agriculture Drive, PO Box 8911, Madison WI 53708–8911
Phone: (608) 224–4622 or (608) 224–4500

Application for Local Approval

New or Expanded Livestock Facility

Wis. Statutes s. 93.90
Wis. Adm. Code ch. ATCP 51

1. Legal Name of Applicant (Business Entity): Gilbertson Farms, Inc.

2. Type of Business Entity: check one

☐ Individual	☒ Corporation	☐ Partnership	☐ Cooperative	☐ LLC
☐ Trust	☐ Other	Describe:		

3. Other names, if any, under which applicant does business (list all):

4. Contact Individual: Name: Kevin Gilbertson

Phone: 715-271-8140 E–mail: kgilbertson73@gmail.com

5. Business Address: Street Address: 1176 20th Avenue

City/Village/Town:	County:	State:	Zip:
Elk Mound	Chippewa	WI	54739

6. Principal Owners or Officers (list if applicant is an entity other than an individual):

Name: David Gilbertson	Title: President	Phone: 715-879-5251	
Address: 1176 20th Avenue	City: Elk Mound	State: WI	Zip: 54739
Name: Kevin Gilbertson	Title: Vice President	Phone: 715-271-8140	
Address: 1176 20th Avenue	City: Elk Mound	State: WI	Zip: 54739
Name: Mary Gilbertson	Title: Secretary	Phone: 715-8795251	
Address: 1176 20th Avenue	City: Elk Mound	State: WI	Zip: 54739

7. Description of Proposed *Livestock Facility*

Check one: ☐ New *Livestock Facility* ☒ *Expanded Livestock Facility* Premises ID: 002YKTF

Address of Proposed *Livestock Facility*: 1176 20th Avenue

City/Village/Town:	County:	State:	Zip:
Elk Mound	Chippewa	WI	54739

Town #	Range # (E or W)	Section #	¼ Section #
28N	10W	30	SW

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Application (continued)

8. Total *Animal Units*

Enter total *animal units* from **worksheet 1:**

Total *Animal Units*: 910. This is the maximum *livestock facility* size for which the applicant requests approval at this time.

9. Area Map of *Livestock Facility*

Attach a scale map or aerial photo of the proposed *livestock facility* and surrounding area. The map or photo must be appropriately sized and marked, so that it clearly and legibly shows all of the following:

- All existing and proposed *livestock structures*. Label each *livestock structure* to show structure type, and whether existing or proposed.
- The area lying within 2 miles of any of the *livestock structures*. Show all existing buildings, property lines, roadways, and navigable waters lying within that area.
- All residences and *high use buildings* within 2500 ft. of any *livestock structure*. Show which (if any) of those buildings are owned by the applicant, or by persons who have agreed to exclude the buildings from the applicant's odor worksheet calculations.
- Topographic lines at 10 ft. elevation intervals.
- Map scale and north direction indicator.

~ See Attached ~

10. Site Map of *Livestock Facility*

Attach a scale map or aerial photo of the proposed *livestock facility* site. The map or photo shall be appropriately sized and marked, so that it clearly and legibly shows all of the following:

- All existing and proposed *livestock structures*. Label each *livestock structure* to show structure type, and whether existing or proposed.
- The area lying within 1,000 ft. of any of the *livestock structures*. Show all existing buildings, property lines, roadways, navigable waters, and known *karst features* within that area.
- Topographic lines, at 2 ft. elevation intervals, for the area within 300 feet of the *livestock structures*.
- Map scale and north direction indicator.

~ See Attached ~

11. Location of *Livestock Structures*

The applicant certifies that:

- All *livestock structures* comply with applicable local property line and road setbacks (see *ATCP 51.12).*
- All *waste storage structures* comply with setbacks in *ATCP 51.12(2).*
- All *livestock structures* comply with applicable local shoreland, wetland, and floodplain zoning ordinances (copies available from local government).
- Wells comply with the Wisconsin well code (*NR 811* and *812*). *New or substantially altered livestock structures* are separated from existing wells (including neighbors' wells) by setback distances required in *NR 811* and *812*.

~ See Attached ~

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Application (continued)

12. Employee Training Plan

Attach an Employee Training Plan for employees who will work at the *livestock facility.* Applicant determines plan contents, as long as the plan identifies all of the following:

- Training topics including, at a minimum, nutrient management, odor management, runoff management, manure and waste handling, employee safety, and environmental incident response.
- The number and job categories of employees to be trained.
- The form and frequency of training, which at a minimum must include a plan for at least one training per year.
- Training presenters (these may include *livestock facility* managers, consultants or professional educators).
- A system for taking and recording attendance.

~ See Attached ~

13. Environmental Incident Response Plan

~ See Attached ~

Attach an Environmental Incident Response Plan for the *livestock facility.* Applicant determines plans contents, as long as the plan identifies all of the following:

- Types of environmental incidents covered. These must include, at a minimum, overflows and spills from waste storage facilities, catastrophic system failures, manure spills during transport and application, movement of manure during or after application, catastrophic mortality disposal emergency, and odor complaints.
- The name and business telephone number of at least one individual who will handle public questions and concerns related to environmental incidents.
- The names and telephone numbers of first responders (e.g. DNR, fire departments, excavation contractors).
- Incident response procedures, including emergency response, recordkeeping and reporting procedures.

14. Odor Management Plan (*Optional*)

~ No Odor Mgt Plan - See Worksheet 2 ~

An applicant required to complete the odor management worksheet may attach an *optional* odor management plan. The applicant determines plan contents, as long as the plan addresses all of the following: activities to reduce community conflict; practices used to reduce dust; practices used to reduce odor from feed storage leachate; practices used to conserve water; and practices used to reduce odor from dead animals.

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Application (continued)

15. Other Laws

The following laws, among others, may apply to the operation of a *livestock facility*. Local approval of a *livestock facility* siting application is NOT based on these laws, except as specifically provided in *ATCP 51*. However, violations may have other legal consequences:

- Soil conservation and nonpoint pollution laws (contact your county land conservation department). Livestock facilities that have 1,000 or more animal units, or that discharge pollutants directly to waters of the state, must also obtain a *WPDES permit* from *DNR*.
- Pesticide and agricultural chemical laws administered by *DATCP*.
- Animal disease control laws administered by *DATCP*.
- Animal mortality laws administered by *DATCP*.
- Vehicle weight limits and state prohibitions against spilling waste on roads.
- Food safety and animal health licenses administered by *DATCP*. All livestock operations must register, and some (such as dairy farms) must hold a state license.
- Air pollution control regulations administered by *DNR*.
- Building, electrical, plumbing and sanitation codes administered by the Wisconsin Department of Safety and Professional Services. A local authority may disapprove a proposed *livestock facility* that violates a conforming local code.
- Construction site erosion control laws administered by *DNR*.
- Local erosion control and stormwater management ordinances.
- Petroleum storage laws administered by the Wisconsin Department of Safety and Professional Services.
- High capacity well regulations administered by *DNR*.

16. Worksheets

Complete worksheets as required (follow instructions on each worksheet) and attach to application.

Worksheet 1 – **Animal Units**. ~ See Below ~

Worksheet 2 – **Odor Management**. ~ See Below ~

Worksheet 3 – **Waste and Nutrient Management**. If you hold a *WPDES permit* from *DNR* for the same proposed *livestock facility* (for an equal or greater number of *animal units*), check the appropriate box on this worksheet, and submit a copy of the permit with this application. ~ See Below ~

Worksheet 4 – **Waste Storage Facilities**. If you hold a *WPDES permit* from *DNR* for the same proposed *livestock facility* (for an equal or greater number of *animal units*), check the appropriate box on this worksheet, and submit a copy of the permit with this application. ~ See Below ~

Worksheet 5 – **Runoff Management**. If you hold a *WPDES permit* from *DNR* for the same proposed *livestock facility* (for an equal or greater number of *animal units*), check the appropriate box on this worksheet, and submit a copy of the permit with this application. ~ See Below ~

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

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Application (continued)
Authorized Signature: *I certify that the information contained in this application (including worksheets and all attachments) is complete and accurate to the best of my knowledge.* Kevin J. Gilbertson — Signature of Applicant or Authorized Representative 3-24-2021 — Date Kevin J. Gilbertson — Print Name Vice President — Title

For Office Use Only:	
Application #:	
Date Application Received:	
Date Completeness Determined:	**Date Notice Sent to Applicant:**
Date Notice Sent to Adjacent Landowners:	
Decision Date:	
Approved or Disapproved:	
Date Appeal Filed (if any):	

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

arm–lwr– 11/04 January 2006

Wisconsin Department of Agriculture, Trade and Consumer Protection
2811 Agriculture Drive, PO Box 8911, Madison WI 53708–8911
Phone: (608) 224–4622 or (608) 224–4500

Worksheet 1 – *Animal Units*

Instructions: Use this worksheet to determine the number of *animal units* for which you request approval. You may request approval for a number that is large enough to accommodate current and potential future expansions. If the local government approves the requested number of *animal units*, that is the maximum number that you may keep for 90 days or more in any 12–month period. You may not exceed that number without additional approval.

To complete this worksheet:

1. Identify each type of *livestock* that you might keep at the proposed facility. Enter the maximum number of animals of each type that you might keep for at least 90 days in any 12–month period.
2. Multiply the number of animals of each type by the relevant Animal Unit Factor to obtain *animal units* of each type.
3. Sum the *animal units* for all *livestock* types to obtain the Total *Animal Units* for which you request approval.

	***Livestock* Type**	**Animal Unit Factor**	***Animal Units* For Proposed Facility**
Example – Milking & Dry Cows			*1.4 x 800 = 1120 AU*
Dairy Cattle	Milking and Dry Cows	**1.4**	1.4 x 635 = 908
	Heifers (800 lbs. to 1200 lbs.)	**1.1**	1.1 x =
	Heifers (400 lbs. to 800 lbs.)	**0.6**	0.6 x =
	Calves (up to 400 lbs.)	**0.2**	0.2 x 10 = 2
Beef	Steers or Cows (600 lbs. to market)	**1.0**	1.0 x =
	Calves (under 600 lbs.)	**0.5**	0.5 x =
	Bulls (each)	**1.4**	1.4 x =
Swine	Pigs (55 lbs. to market)	**0.4**	0.4 x =
	Pigs (up to 55 lbs.)	**0.1**	0.1 x =
	Sows (each)	**0.4**	0.4 x =
	Boars (each)	**0.5**	0.5 x =
Poultry	Layers (each)	**0.01**	0.01 x =
	Broilers (each)	**0.005**	0.005 x =
	Broilers – continuous overflow watering	**0.01**	0.01 x =
	Layers or Broilers – liquid manure system	**0.033**	0.033 x =
	Ducks – wet lot (each)	**0.2**	0.2 x =
	Ducks – dry lot (each)	**0.01**	0.01 x =
	Turkeys (each)	**0.018**	0.018 x =
Sheep (each)		**0.1**	0.1 x =
Goats (each)		**0.1**	0.1 x =
Total *Animal Units* for Which Applicant Requests Approval			= 910

Ken J. Gilbertson
Signature of Applicant or Authorized Representative

3-24-2021
Date

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Worksheet 2 – Odor Management

Instructions: This worksheet addresses odor from *livestock structures*. You are NOT required to complete this worksheet if any of the following apply (check box if applicable):

☐ I am requesting approval for a *new livestock facility* with fewer than 500 *animal units*.

☐ I am requesting approval for an *expanded livestock facility* with fewer than 1,000 *animal units*.

☐ All *livestock structures* will be at least 2500 ft. from the nearest affected neighbor.

If you checked any of the above boxes, just sign below and submit this page with your application. If you did NOT check any of the above boxes, you must complete this worksheet to calculate the odor score (Box 4) for your proposed *livestock facility*. To meet the odor management standard, you must have a total odor score of 500 or more.

If *livestock structures* are located in *clusters* that are separated by more than 750 feet, you may elect to complete a separate worksheet for each *cluster*. If you choose that option, each *cluster* must meet the odor management standard.

A complete worksheet must include Tables A and B. You may use a convenient automated spreadsheet in place of Tables A and B if you prefer (submit spreadsheet output instead of tables, results will be identical). However, you must still sign and submit this signature page. The spreadsheet is available at the *DATCP* website, http://www.datcp.state.wi.us.

TO COMPLETE THIS WORKSHEET, FOLLOW THESE STEPS:

Step 1: Complete Table A to determine the Predicted Odor from your *livestock structures*. Enter the Predicted Odor in Box 3 below (NOT Box 1).

Step 2: Complete Table B to determine your Separation Score. Enter your Separation Score in Box 1 below. (NOT Box 2).

Step 3: Enter your management credits in Box 2 (maximum 100 points). All applicants may enter 80 points for completing required incident response and employee training plans (described on page A–3). Applicants completing an optional odor management plan (described on page A–3), may add an additional 20 points. Applicants determine plan contents, as long as the plan addresses the required topics.

Step 4: Add Box 1 and Box 2. Subtract Box 3 and enter the total in Box 4. This is your Odor Score.

Box 1		Box 2		Box 3		Box 4
705	+	80	–	53	=	732
Separation Score (from Step 2)		**Management Score** (from Step 3)		**Predicted Odor** (from Step 1)		**Odor Score**

A local government must approve a *livestock facility* with an odor score of 500 or more (Box 4). You may add odor control practices to increase your odor score to 500 or more. A local government may approve, but is not required to approve, a *livestock facility* with an odor score less than 500 but not less than 470.

Ken J. Gilbertson
Signature of Applicant or Authorized Representative

3-9-2021
Date

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Livestock Facility: **Gilbertson Farms, Inc** Odor Score Spreadsheet - Ver. 2.0 **03/02/21**
Location: **Elk Mound, WI**

1. Animal Housing

ID	Manure Management	Generation number	Occupied Area (Ft.^{2})	Dist. to Nearest Neighbor (Ft.)	Control Practice	Reduction Factor	Control Practice	Reduction Factor	Control Practice	Reduction Factor	Predicted Odor
1A	Freestall - Dairy - Scrape (incl. Beef and Heifers on forage ration)	4	6,700	1,609	Diet manipulation	0.8	Cleaning Frequently (3 or more per day)	0.9	None	1	2
1B	Freestall - Dairy - Scrape (incl. Beef and Heifers on forage ration)	4	32,890	1,689	Diet manipulation	0.8	Cleaning Frequently (3 or more per day)	0.9	None	1	9
1C	Freestall - Dairy - Scrape (incl. Beef and Heifers on forage ration)	4	46,440	1,628	Diet manipulation	0.8	Cleaning Frequently (3 or more per day)	0.9	None	1	13
1D											
1E											
1F											
1G											
1H											
1I											
1J											
1K											
1L											

2. Waste Storage

ID	Storage type	Generation number	Surface Area (Ft.^{2})	Dist. to Nearest Neighbor (Ft.)	Control Practice	Reduction Factor	Control Practice	Reduction Factor	Control Practice	Reduction Factor	Predicted Odor
2A	Liquid storage - Long term (pit and tank) Open anaerobic	13	75,500	889	Natural Crust	0.3	None	1	None	1	29
2B											
2C											
2D											
2E											
2F											

3. Animal Lots

ID	Lot type	Generation number	Surface Area (Ft.^{2})	Dist. to Nearest Neighbor (Ft.)	Control Practice	Reduction Factor	Control Practice	Reduction Factor	Control Practice	Reduction Factor	Predicted Odor
3A											
3B											

4. Separation Distance

Weighted Distance to Neighbor	1,233
Direction of Nearest Neighbor	Northeast
Adjusted Weighted Distance	1,233
Density (neighbors within 1,300 ft.)	Low

5. Management

Basic Management Plans	Required
Advanced Odor Management Plan?	No

Total Predicted Odor	53
Separation Score	705
Basic Management Score	80
Advanced Management Score	0
Odor Score	732

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Worksheet 2 (continued)

Table B: Separation Score

INSTRUCTIONS	RESULTS
Step 1: Enter, at right, the result from Table A, Column G (page A–7).	**Distance (ft.) to Nearest *Affected Neighbor*:** 1,233
Step 2: Select multiplier based on the compass direction looking from the *livestock facility* to the nearest *affected neighbor*. Enter at right.	**Multiplier:** 1.0
Step 3: Calculate wind–adjusted separation distance (Distance to nearest *affected neighbor* x multiplier). Enter at right.	**Wind–Adjusted Separation Distance (ft.)** 1,233
Step 4: Determine *affected neighbor* density and enter at right: *Low density* = No more than 5 residences and no *high–use buildings* within 1300 ft of each structure. *High density* = 6 or more residences or at least one *high–use building* within 1300 ft of each structure.	**Low or High Density?** LOW
Step 5: Use results above and Chart 1 to find your Separation Score. Enter at right and on Page A–6 in **Box 1**.	**Separation Score** 705

Compass Direction	Multiplier
North	1.0
Northeast	1.0
East	1.1
Southeast	1.2
South	1.2
Southwest	1.2
West	1.3
Northwest	1.1

Chart 1: Separation Score

Wind–Adjusted Separation Distance (ft.)	Low Density	High Density
0–99	505	503
100–149	506	504
150–199	511	507
200–249	516	510
250–299	521	514
300–349	527	518
350–399	534	523
400–449	541	528
450–499	548	533
500–599	560	542
600–699	577	555
700–799	595	569
800–899	615	585
900–999	636	601
1000–1099	658	619
1100–1199	681	637
1200–1299	705	657
1300–1399	730	
1400–1499	756	
1500–1599	783	
1600–1699	810	
1700–1799	839	
1800–1899	868	
1900–1999	899	
2000–2099	930	
2100–2199	962	
2200–2299	994	
2300–2399	1027	
2400–2499	1061	
2500–2749	1123	
2750–2999	1214	
3000–3249	1309	

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Worksheet 2 (continued)

Chart 2: Odor Generation Numbers

Animal Housing Area Type	Housing/ Management Type Code	Manure Management Method	Odor Generation Number	Exempt Buildings Maximum Size (ft^2) *(May exclude up to 4)*
Dairy Stanchion	DSDC	Daily to weekly cleaning	2	7500
Dairy Free Stall and Beef & Dairy Heifers (Forage Ration)	DBSS	Slatted floor (includes floor and pit below)	6	2500
	DBSC	Scrape	4	3500
	DBAF	Alley flush to storage	10	1500
	DBBP	Bedded pack	2	7500
Beef Finishing (High Energy Ration)	BFSF	Slatted floor (includes floor and pit below)	12	1000
	BFSC	Scrape	8	2000
	BFBP	Bedded pack	4	3500
Pork Gestation/ Farrow/Nursery	PGSF	Slatted floor (includes floor and pit below)	46	N/A
	PGPP	Pull plug to storage	22	N/A
Pork Finishing	PFSF	Slatted floor (includes floor and pit below)	34	N/A
	PFPP	Pull plug to storage	20	N/A
	PFSS	Scrape systems to storage	11	1500
	PFDB	Deep bedded	4	3500
Poultry	PBLT	Broiler (litter)	1	15000
	PDLQ	Ducks (liquid)	20	N/A
	PLAY	Layers	20	N/A
	PTDL	Turkey and Ducks (litter)	2	7500

Type Codes	*Waste Storage Facility* Types *Note: Storage under slatted floor is addressed under animal housing.*	Odor Generation Number
WSSS	Solid (stack)	2
WSLT	Long term (6 months or longer as determined in Column E of worksheet 3)	13
WSST	Short term (less than 6 months as determined in Column E of worksheet 3)	28

Animal Lot Codes	*Animal Lot* Types		Odor Generation Number
ALPV	**Paved**		4
UPDB	**Unpaved**	Dairy/Beef/Sheep/Goats	6
UPSW		Swine/Poultry	11

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Worksheet 2 (continued)

Chart 3: Odor Control Practices

Category	Practice Code	Practice Name (Practices must meet specifications on pages A–11 to A–13)	Multiplier*
		Animal Housing Area	
A	A1	Diet manipulation	0.8
B (Choose only 1)	B1	Bio–filter	0.1
	B2	Vegetable oil sprinkling (for swine only)	0.4
	B3	Fresh water flush	0.4
	B4	Treated water flush	0.7
	B5	Air Dam (for swine only)	0.9
C	C1	Windbreak (includes man–made berms)	0.9
D	D1	Frequent cleaning of animal housing area	0.9
		Waste Storage Facilities	
E (Choose only 1)	E1	Anaerobic digestion	0.2
	E2	Chemical or biological additives	0.8
	E3	Compost	0.2
	E4	Solids Separation and Reduction	0.6
	E5	Water Treatment	0.1
F (Choose only 1)	F1	Aeration	0.3
	F2	Bio–cover	0.4
	F3	Geotextile cover	0.5
	F4	Impermeable cover	0.1
	F5	Natural crust	0.3
	F6	Bottom fill	0.9
G	G1	Windbreak (includes man–made berms)	0.9
		Animal Lots	
H (Choose only 1)	H1	Frequent cleaning of *animal lot*	0.4
	H2	Drag *animal lot*	0.5
I	I1	*Animal lot* moisture control	0.8
J	J1	Windbreak (includes man–made berms)	0.9

*Smaller multiplier = more odor controlled (e.g. a multiplier of 0.4 represents a 60% control).

Innovative Odor Control Practices (all odor sources):
You may take credit for odor control practices not listed in Chart 3 if *DATCP* pre–approves a multiplier for each of those practices. Follow the procedure in *ATCP 51.14(5)(c)* to obtain *DATCP* approval. If you obtain *DATCP* approval, you may include the approved practice and multiplier in odor worksheet calculations in the same manner as for odor control practices listed in Chart 3 (attach *DATCP* approval to your application).

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Worksheet 2 (continued)

Odor Control Practice Specifications

Odor control practices identified in Chart 3 must meet the following specifications:

Animal Housing

Diet manipulation (A1) – Limit protein in animal diet by one of the following means:

- Match nutrient supply with animal requirements.
- Formulate low–protein amino acid supplemented diets.
- Add phytase enzyme ingredients.
- Process ingredients in ways that limit protein content of processed feed.
- Use phase feeding.
- Use split sex feeding.
- Minimize feed wastage.

Bio–filter (B1) – Vent air from *animal housing areas* through a bio–filter consisting of compost and wood chips, mixed at a rate of 30:70 to 50:50 (ratio by weight of compost to wood chips). The mixture must be at least 40% moisture by weight. The bio–filter must be 10" to 18" thick, and must have an area of at least 50 to 85 sq. ft. per 1000 cu. ft. per minute (cfm) of airflow.

Vegetable oil sprinkling (B2) – Sprinkle vegetable oil on floors in *animal housing areas* (swine) each day. Apply oil at start–up rate of approximately 40 milliliters per square meter per day (mL/m^2–day) in the first 1–2 days of each production cycle. During the remainder of each production cycle, apply oil at maintenance rate of 5 mL/m^2–day. Avoid oil applications to pens near fans, to areas near heaters, and to areas surrounding feeders.

Fresh water flush (B3) – Use fresh water to flush manure from floors of *animal housing areas* into collection or *waste storage structures*. Flush at least 3 times a day, and more often if necessary, to prevent manure from drying and sticking to floors. Flush must be adequate to remove manure solids effectively.

Treated water flush (B4) – Use treated manure effluent to flush manure from floors of *animal housing areas* into collection or *waste storage structures*. Flush at least 3 times a day, and more often if necessary, to prevent manure from drying and sticking to floors. Flush with waste storage effluent treated by one of the following means:

- *Solids Separation and Reduction (see E4 below).*
- *Aeration (see F1 below).*
- *Anaerobic digestion (see E1 below).*

Air Dam (B5) – Erect and maintain a wall (typically a 10–foot x 10–foot pipe frame and tarpaulin) placed at the end of a swine–finishing building, immediately downwind of the exhaust to deflect air and odor plume. Replace material used for the barriers (tarpaulins on a frame of solid wood, for example) as needed, which may be from a few years to decades, depending on the material.

Windbreak (C1) – Maintain a solid or porous windbreak, 10 to 50 feet from the odor source, which reduces forward momentum of airflow and vertically disperses the odor plume. The length of a windbreak shall be at least half of the perimeter of the animal housing. A windbreak may be constructed of vegetation or other materials. Vegetation windbreaks must contain at least 3 rows of trees and shrubs, of both fast and slow–growing species, that are well suited for the site. Windbreaks must be designed and constructed according to *NRCS* Technical Guide Standard 380 (June, 2002).

Frequent cleaning of animal housing area (D1) – Scrape and remove manure from *animal housing areas* at least 3 times a day.

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Worksheet 2 (continued)

Waste Storage Facilities

Anaerobic digestion (E1) – Subject manure to managed biological decomposition within a sealed oxygen–free container ("digester"). Anaerobic digestion must meet design and operational standards necessary to achieve adequate odor control, including requirements for solids concentration, flow rates, retention time, and minimum temperatures. Systems must meet the following:

- *Plug flow digester.* Treats manure with a total solids concentration of 8 to 14%. Must be kept in the digester for at least 20 days at a temperature of 95° to 104° F. (35° to 40° C). The digester's ratio of flow path width to fluid depth must be between 3.5:1 and 5:1.
- *Complete mix digester.* Treats manure with a total solids concentration of 2.5 to 10%. Must be kept in the digester for at least 17 days at a temperature of 95° to 104° F. (35° to 40° C.). The digester must have appropriate mixing devices to ensure complete mixing.
- *Fixed film digester.* Treats manure with a total solids concentration of not more than 5%. Must be kept in the digester for 1 to 6 days at a temperature of 59° to 99° F (15° to 39° C). Microbial support material must have at least 3–inch openings.
- *Other systems.* Use proprietary design and performance specifications that are commonly accepted and provide adequate odor mitigation.

Chemical or biological additives (E2) – Apply, to stored manure, chemical or biological additives that are scientifically proven to be effective in reducing odor from that manure when applied under applicable conditions and in applicable amounts.

Compost (E3) – Aerobically treat solid or semi–solid manure to create compost. Compost must have a carbon: nitrogen ratio of 25:1 to 40:1, and must consist of at least 40 to 60% moisture by weight. Composted material must be held at a temperature of more than 130° F. (54° C.) for more than 5 days.

Solids Separation and Reduction (E4) – Reduce the solid content of stored manure to an average of less than 2% solids through separation, multi–tiered pits or other means.

Water Treatment (E5) – Install and use a physical, chemical or biological process that removes the majority of contaminants from the waste stream, resulting in a liquid effluent meeting surface water discharge standards. The remaining solid fraction or sludge must be accounted for based on its form, and the management it is subject to.

Aeration (F1) – Use aeration equipment to maintain aerobic activity in stored manure. Aeration must maintain an average of 2 milligrams of dissolved oxygen per liter of manure stored in the upper foot of manure stored in the aerated structure between April and October.

Bio–cover (F2) – Cover the surface of waste storage structure with an 8″ to 12″ thick blanket of dry wheat, barley or good quality straw. The blanket must cover nearly all of the waste surface between the months of April and October. Add to the blanket as necessary (typically every 6 weeks to 4 months) to maintain the required cover.

Geotextile cover (F3) – Cover the surface of waste storage structure with a geotextile membrane that is at least 2.4 mm thick. The membrane must cover nearly all of waste surface between the months of April and October.

Impermeable cover (F4) – Cover the surface of waste storage structure with an impermeable barrier that prevents gas from escaping. Gas must be drawn off, and either treated or burned.

Natural crust (F5) – Maintain a natural crust of dry manure on the surface of stored manure. The natural crust must cover a substantial amount of the surface area of the stored manure, for most of the time between the months of April and October.

Bottom fill (F6) – Add manure to a liquid *manure storage structure* from the bottom so as to limit disturbance to the surface of the stored manure.

Windbreak (G1) – Maintain a solid or porous windbreak, 10 to 50 feet from the odor source, which reduces forward momentum of airflow and vertically disperses the odor plume. The length of a windbreak shall be at least half of the perimeter of the *waste storage facility.* A windbreak may be constructed of vegetation or other materials. Vegetation windbreaks must contain at least 3 rows of trees and shrubs, of both fast and slow–growing species, that are well suited for the site. Windbreaks must be designed and constructed according to *NRCS* Technical Guide Standard 380 (June, 2002).

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Worksheet 2 (continued)

Animal Lots

Frequent cleaning of *animal lot* (H1) – Scrape and remove manure from *animal lot* surfaces at least once every 3 days. You may leave an undisturbed, compacted manure layer (1 to 2 inches thick) on the surface of unpaved *animal lots* to provide good surface sealing.

Drag *animal lot* (H2) – Drag manure in *animal lots* with harrow or disk at least once every 7 days during the months of April though October, to aerate and dry the manure.

***Animal lot* moisture control (I1)** – Prevent runoff water from flowing onto *animal lots* from roofs and other surfaces. Use diversions or roof runoff systems identified in *s. ATCP 50.70 or 50.85. Animal lots* must have a grade of at least one percent to promote drainage and drying.

Windbreak (J1) – Maintain a solid or porous windbreak, 10 to 50 feet from the odor source, which reduces forward momentum of airflow and vertically disperses the odor plume. The length of a windbreak shall be at least half of the perimeter of the *animal lot*. A windbreak may be constructed of vegetation or other materials. Vegetation windbreaks must contain at least 3 rows of trees and shrubs, of both fast and slow–growing species, that are well suited for the site. Windbreaks must be designed and constructed according to *NRCS* Technical Guide Standard 380 (June, 2002).

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Phone: (608) 224–4622 or (608) 224–4500

Worksheet 3 – Waste and Nutrient Management

Part A. Waste Generation and Storage Summary

Instructions: You must complete Parts A and B of this worksheet. If your *livestock facility* will have fewer than 500 *animal units* you may be exempt from Part C, depending on results of Part B. If Part C applies, it must be signed by a *qualified nutrient management planner* (you must also sign).

You are NOT required to complete this worksheet if you already hold a *WPDES permit* for the proposed *livestock facility* (for the same or greater number of *animal units*). Simply check the following box, sign at the bottom of this page, and include a copy of the *WPDES permit* with your application.

☐ I enclose a copy of my *WPDES permit* in place of Worksheet 3.

Specify a single livestock type (dairy, beef, swine, etc.). *Use a separate worksheet for each livestock type.*

Livestock Type: _____

Description of Storage	Column A Waste Storage Capacity (Gallons or Tons)	Column B Source of Waste (Animal Waste, Wastewater, Leachate, etc.)	Column C Average Annual Volume of Waste Produced from Each Source (Gallons or Tons)	Column D Total Average Annual Volume Waste Produced (Gallons or Tons)	Column E Storage Duration in Days (Column A divided by Column D times 365 days)
Example: Unit 1 – lagoon	*5,000,000 gallons*	*Animal waste*	*4,000,000 gallons*	*7,000,000 gallons*	*260 days*
		Wastewater	*1,000,000 gallons*		
		Leachate	*2,000,000 gallons*		
Unit 1 WSF1	4,576,777 Gallons	Animal Waste	4,680,928 Gal.	6,111,728 Gallons	273 Days
		Waste Water	1,430,800 Gal.		
		Leachate/Runoff	0 Gal.		
Unit 2					
Unit 3					

Applicant affirms that the information provided in Part A is accurate.

Ke J. Gilbertson — 3-9-21

Signature of Applicant or Authorized Representative — Date

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Worksheet 3 (continued)

Arm–lwr– 11/04 January 2006

Part B – Land Base for Applying Nutrients

1. Enter total *animal units* in proposed *livestock facility* **(from worksheet 1)**: 908 AU.

2. What percentage of the waste from the *livestock facility* will be:
   a. Applied to land: 100 %. Attach map showing where waste will be applied to land.
   b. Processed and sold as commercial fertilizer, under a fertilizer license: 0 %.
   c. Disposed of in other ways: 0 %. Describe ways: _____

3. Multiply the percent in line 2a by the number of *animal units* in line 1. Result (# of *animal units*): 908 AU

4. Total acres of cropland currently available for land application (owned, rented, or landspreading agreement): 1860 Acres

5. Divide # of acres in line 4 by # of *animal units* in line 3 to obtain ratio of acres to *animal units*: 2.05

6. Is the ratio in line 5 equal to or greater than the applicable ratio in Table 1? No

   If YES, and if the # of *animal units* in line 1 is less than 500, you need NOT complete Part C. Otherwise, complete Part C.

Table 1: Acreage per *Animal Unit*

Animal Type	Acres per *Animal Unit**
Dairy	1.5
Beef	1.5
Swine	1.0
Chickens/Ducks	2.5
Turkeys	5.5
Sheep/Goats	2.0

* NOTE: A *livestock facility* is NOT required to attain or exceed this ratio of acres to *animal units*. But IF your *livestock facility* will attain or exceed this ratio and will have fewer than 500 *animal units*, you need NOT complete Part C of this worksheet.

Applicant affirms that the information provided in Part B is accurate.

Ken J. Gilbert — Signature of Applicant or Authorized Representative

3-9-2021 — Date

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Published under s. 35.93, Wis. Stats., by the Legislative Reference Bureau.

Worksheet 3 (continued)

arm–lwr– 11/04 January 2006

Part C – Nutrient Management Checklist

Instructions: All applicants must submit this checklist unless exempted under Part A or B. The checklist is based on the *NRCS* Technical Guide Nutrient Management Standard 590 (September, 2005).

County Name: Chippewa	Date Submitted: 03-08-21	Township (T. 28N N., S.) – (R. 10W E., W.)
Cropland Acres: (owned, rented, or with manure spreading agreement)	Name of livestock operator submitting checklist:	
1860 Acres	Kevin Gilbertson	

	Yes	NA
1. Are the following field features identified on maps or aerial photos?	X	
a) Field location, soil survey map unit(s), field boundary, and field identification number.	X	
b) Areas prohibited from receiving nutrient applications: Surface water, established concentrated flow channels with perennial cover, permanent non–harvested vegetative buffer, non–farmed wetlands, sinkholes, lands where established vegetation is not removed, nonmetallic mines, and fields eroding at a rate exceeding tolerable soil loss (T).	X	
c) Areas within 50 ft of a potable drinking water well where mechanically–applied manure is prohibited.	X	
d) Areas prohibited from receiving winter nutrient applications: Slopes > 9% (12% if contour–cropped); Surface Water Quality Management Area (SWQMA) defined as land within 1,000 ft of lakes and ponds or within 300 ft of perennial streams draining to these waters, unless manure is deposited through winter gleaning/pasturing of plant residue and not exceeding the N and P requirements of this standard.	X	
e) Areas where winter applications are restricted unless effectively incorporated within 72 hours: Land contributing runoff within 200 ft upslope of direct conduits to groundwater such as a well, sinkhole, fractured bedrock at the surface, tile inlet, or nonmetallic mine.	X	
f) Sites vulnerable to N leaching: Areas within 1,000 ft of a municipal well, and soils listed in Appendix 1 of the Conservation Planning Technical Note WI–1.	X	
2. Are erosion controls implemented so the crop rotation will not exceed T on fields that receive nutrients according to the conservation plan or WI P Index model?	X	
3. Check the methods below used to determine field soil nutrient levels:		
a) Soil samples were collected and analyzed within the last 4 years according to UW Publication A2100 recommendations.	X	
b) For fields not meeting (a.) above, soil test phosphorus levels are assumed to be greater than 100 ppm soil test P. *	X	
c) For fields not meeting (a.) above, preliminary estimates of soil nutrients were determined using limited soil sampling (> 5 acre per sample) but analyzed by a DATCP certified laboratory. *	X	
*For fields with soil nutrient levels determined under (b) or (c), the applicant must collect and analyze soil samples meeting the requirements of A2100 within 12 months of siting approval, and revise the nutrient management plan accordingly.		
4. Using the field's predominant soil series and realistic yield goals, are planned nutrient application rates, timing, and methods of all forms of N, P, and K listed in the plan and consistent with UW Publication A2809, *Soil Test Recommendations for Field, Vegetable and Fruit Crops,* and the 590 standard?	X	
5. Do manure production and collection estimates correspond to the acreage needed in the plan? Are manure application rates realistic for the calibrated equipment used?	X	
6. Is a single phosphorus (P) assessment of either the P Index or soil test P management strategy uniformly applied to all fields within a tract?	X	
7. Are areas of concentrated flow, resulting in reoccurring gullies, planned to be protected with perennial vegetative cover?	X	
8. Will nutrient applications on non–frozen soil within the SWQMA comply with the following?		
a) Unincorporated liquid manure on unsaturated soils will be applied according to Table 1 of the 590 standard to minimize runoff.	X	
b) One or more of the following practices will be used: 1) Install/maintain permanent vegetative buffers, or 2) Maintain greater than 30% crop residue or vegetative coverage on the surface after nutrient application, or 3) Incorporate nutrients leaving adequate residue to meet tolerable soil loss, or 4) Establish fall cover crops promptly following application.	X	
9. Is a narrative included which describes proposed manure collection, transportation, and application methods? SEE NOTE 2 ON ATTACHED SITE MAP FOR NARRATIVE.	X	

I certify that the documentation supporting this checklist is complete and accurate:

Signature of *Qualified Nutrient Management Planner*, other than applicant: _____

(qualified by 1. NAICC–CPCC, 2. ASA–CCA, 3. ASA–Professional Agronomist, 4. SSSA–Soil Scientist)

Signature of Applicant or Authorized Representative: _____

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Arm–lwr– 11/04 January 2006

Wisconsin Department of Agriculture, Trade and Consumer Protection
2811 Agriculture Drive, PO Box 8911, Madison WI 53708–8911
Phone: (608) 224–4622 or (608) 224–4500

Worksheet 4 – *Waste Storage Facilities*

Instructions: This worksheet must be signed by a registered professional engineer or *certified agricultural engineering practitioner*. This worksheet must identify every *waste storage facility* in the proposed *livestock facility* (including storage structures and transfer systems).

You are NOT required to complete this worksheet if you already hold a *WPDES permit* for the proposed *livestock facility* (for the same or greater number of *animal units*). Simply check the following box, sign at the bottom of this page, and include a copy of the *WPDES permit* with your application.

☐ I enclose a copy of my *WPDES permit* in place of Worksheet 4.

***New* or *Substantially Altered* Facilities**: Design specifications for the following *new* or *substantially altered waste storage facilities* comply with *NRCS* Technical Guide Standards 313 (November, 2004) and 634 (November, 2004). [Identify each facility and attach design specifications for each facility.]

~ SEE ATTACHED PLANS ~

Existing Facilities Retained: The following *waste storage facilities* will continue in use without being *substantially altered*. Each facility meets one of the following:

☐ The facility (list each facility _____) was constructed of concrete or steel or both, was constructed within the last 10 years according to then–existing *NRCS* technical standards, and shows no apparent signs of structural failure or significant leakage.

☐ The facility (list each facility _____) was constructed within the last 3 years according to then–existing *NRCS* technical standards, and shows no apparent signs of structural failure or significant leakage.

☐ The facility (list each facility_____) was constructed to *NRCS* technical standards that existed at the time of construction, is in good condition and repair and shows no apparent signs of structural failure or significant leakage.

☒ The facility (list each facility Existing Tank Under B2) is in good condition and repair, shows no apparent signs of structural failure or significant leakage, and is located on a site at which the soils and separation distances to groundwater comply with *NRCS* Technical Guide Manure Storage Facility Standard 313, Table 1 (November, 2004).

☐ The facility (list each facility _____) is in good condition and repair, shows no apparent signs of structural failure or significant leakage, is located entirely above ground, and is located on a site at which the soils comply with *NRCS* Technical Guide Manure Storage Facility Standard 313, Table 5 (November, 2004).

Facilities To Be Abandoned: The following *waste storage facilities* will be closed according to a closure plan that complies with *NRCS* Technical Guide Standard 360 (June, 2001). [Attach closure plan for each facility.]

Total Storage Capacity: The *waste storage facilities* in the proposed *livestock facility* have a combined useable storage capacity of _____ gallons or tons (cannot include required "freeboard" in useable capacity).

4,576,777 GALLONS

WISCONSIN Professional Engineer's Embossed Seal DAVID A McDANIEL 30605 CHIPPEWA FALLS, WI SIGNAL ENGINEER

David McDaniel 30605

Print Name of Engineer (include WI License No.) or *Certified Agricultural Engineering Practitioner*

Signature of Engineer or Practitioner

3-10-21

Date

ACA, 406 Technology Dr E, Menomonie, WI

Name of Firm and Address

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Arm–lwr– 11/04 January 2006

Wisconsin Department of Agriculture, Trade and Consumer Protection
2811 Agriculture Drive, PO Box 8911, Madison WI 53708–8911
Phone: (608) 224–4622 or (608) 224–4500

Worksheet 5 – Runoff Management

THIS LIVESTOCK FACILITY HAS NO ANIMAL LOTS

Instructions: This worksheet must be signed by a registered professional engineer or *certified agricultural engineering practitioner* (you must also sign). Signers attest to statements in this worksheet. You are responsible for compliance.

You are NOT required to complete this worksheet if you already hold a *WPDES permit* for the proposed *livestock facility* (for the same or greater number of *animal units*). Simply check the following box, sign at the bottom of this page, and include a copy of the *WPDES permit* with your application.

☐ I enclose a copy of my *WPDES permit* in place of Worksheet 5.

Animal Lots[1]

1. ***New* or *Substantially Altered Animal Lots*:** All *new* or *substantially altered animal lots* will be constructed according to the attached design specifications that comply with *NRCS* Technical Guide Standard 635 (January, 2002). [Identify *animal lots* and attach design specifications for each *animal lot*.]

2. **Existing *Animal Lots* Near Surface Waters:** The following *animal lots* are located within 300 feet of a stream[2] or 1,000 feet of a lake. According to the *BARNY runoff model*, each of these *animal lots* has (or with minor alterations[3] will have) predicted average annual phosphorus runoff of less than 5 lbs. per year (measured at the end of the treatment area). Runoff does not discharge to any direct conduit to groundwater. [Identify *animal lots* and minor alterations if any.]

3. **Other Existing *Animal Lots*:** The following *animal lots* are NOT located within 300 feet of a stream[2] or 1,000 feet of a lake. According to the *BARNY runoff model*, each *animal lot* has (or with minor alterations[3] will have), a treatment area that reduces phosphorus runoff to an average of less than 15 lbs. per year (measured at the end of the treatment area). Runoff does not discharge to any direct conduit to groundwater. [Identify *animal lots* and minor alterations if any.]

Feed Storage

NO HIGH MOISTURE FEED STORED ON SITE

1. **General.** The operator agrees to manage feed storage to prevent significant discharge of leachate or polluted runoff to waters of the state.

2. **Existing Feed Storage (High Moisture Feed).** Existing paved areas and bunkers that may be used to store or handle high moisture feed (70% or higher moisture content) will meet the following standards:

   a) Surface water runoff will be diverted from entering the paved area or bunker. [4]

   b) Surface discharge of leachate will be collected before it leaves any paved area or bunker, if the paved area covers more than one acre. Collected leachate will be stored and disposed of in a manner that prevents discharge to waters of the state. [5]

[1] Treat multiple lots as one *animal lot* if runoff from the *animals lots* drains to the same treatment area or if runoff from the *animal lot* treatment areas converges or reaches the same surface water within 200 feet of any of those treatment areas.

[2] Indicated by a solid or dashed blue line on a 1:24,000 scale USGS topographic map.

[3] "Minor alterations" are repairs or improvements that do not result in *a substantially altered animal lot*. "Minor alterations" may include conservation practices such as runoff diversions, contouring, and planting vegetation.

[4] Runoff may be diverted by means of earthen diversions, curbs, walls, gutters, waterways or other practices, as appropriate.

[5] Use safe methods to dispose of collected leachate. For example, leachate may be transferred to *waste storage structures* and then applied to land at agronomic rates.

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Worksheet 5 (continued)

3. ***New* or *Substantially Altered* Feed Storage Structures (High Moisture Feed):** *New* or *substantially altered* feed storage structures (buildings, silos, bunkers or paved areas) used to store or handle high moisture feed (70% or higher moisture content) will be designed, constructed and maintained to the following standards [attach design specifications]:
   - **a)** Surface water runoff will be diverted from entering the feed storage structure.[1]
   - **b)** Surface discharge of leachate will be collected before it leaves the feed storage structure.[2]
   - **c)** The top of the feed storage structure floor will be at least 3 vertical feet from groundwater and bedrock.[3]
   - **d)** Any feed storage structure with an area greater than 10,000 sq. ft. will have a subsurface drainage system to collect leachate that may leak through the structure floor. The subsurface drainage system must consist of drainfill material below the surface material, a tile drainage network designed to collect the leachate and deliver it to storage, and a subliner. The tile drainage network must, at a minimum, be installed at the perimeter of the structure only on the downgradient side(s). The sub–liner must, at a minimum, consist of one of the following:
     - Two feet of soil, either in place or installed, having a minimum of 50% fine soil particles (that pass a #200 soil sieve).
     - Two feet of soil, either in place or installed, having a minimum of 30% fine soil particles (that pass a #200 soil sieve) and a minimum PI (plasticity index) of 7.
     - A 40 mil liner of HDPE, EPDM or PVC.
     - A geosynthetic clay liner.
   - **e)** Collected leachate will be stored and disposed of in a manner that prevents discharge to waters of the state.[2]

Nonpoint Pollution Standards

The livestock facility will be designed, constructed and maintained to do all of the following:

1. Divert runoff from contact with *animal lots*, *waste storage facilities*, paved feed storage areas or manure piles within 300 ft. of a stream or 1,000 ft. of a lake.
2. Avoid having any unconfined manure pile within 300 ft. of a stream or 1,000 ft. of a lake.
3. Prevent any overflow of *waste storage facilities*.
4. Restrict livestock access to waters of the state, as necessary to maintain adequate vegetative cover on banks adjoining the water (this does not apply to properly designed, installed and maintained livestock or farm equipment crossings).



K J. Stell — 3-8-2021
Signature of Applicant or Authorized Representative — Date

David McDaniel 30605
Print Name of Engineer (include WI License No.) or Certified Practitioner

David McDaniel — 3.9.21
Signature of Engineer or Practitioner — Date

ACA, 403 Technology Dr E, Menomonie, WI
Name of Firm and Address

[1] Runoff may be diverted by means of earthen diversions, curbs, walls, gutters, waterways or other practices, as appropriate.

[2] Use safe methods to dispose of collected leachate. For example, leachate may be transferred to waste storage and then applied to land at agronomic rates.

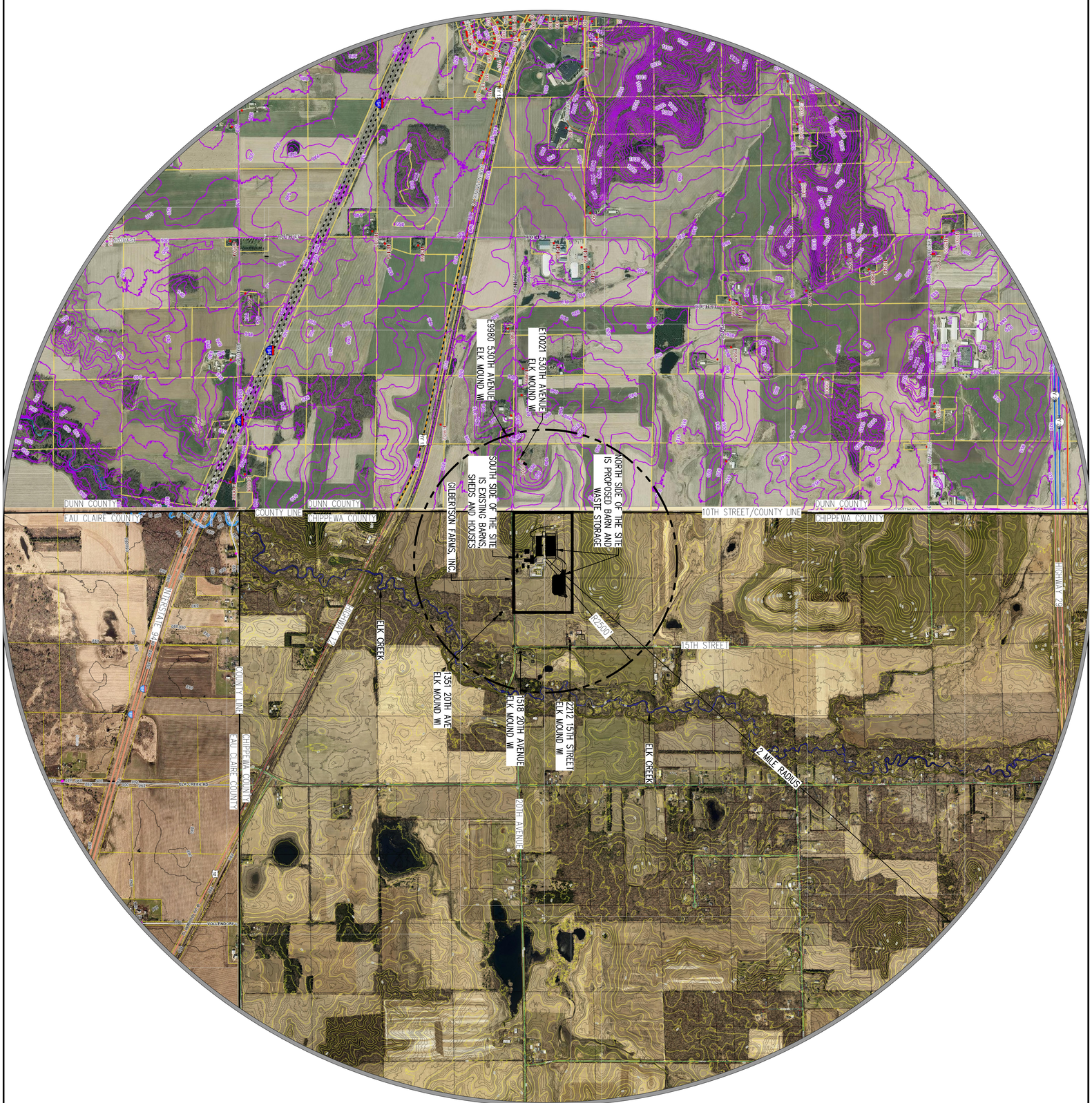
[3] A tile system or curtain drain may be used to intercept lateral groundwater seepage, as necessary, to achieve the required distance to groundwater.

Attachment: (B) ATCP 51 Application (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Maps

Area Map (22x34)
Site Map (11x17)

Attachment: (C) Maps (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)



PROJECT:

GILBERTSON FARMS, INC.
2021 SITE EXPANSION

TOWN OF WHEATON, CHIPPEWA COUNTY, WI

OVERALL SITE PLAN

SHEET NO.

AREA MAP

A·C/a

CORPORATE OFFICE
406 Technology Drive East
Suite A
Menomonie, WI 54751
Tel 715-232-8490

BRANCH OFFICE
2920 Enloe Street
Suite 101
Hudson, WI 54016
Tel 715-381-5277

autheonsulting.com

Auth•Consulting/associates

S&N Land Surveying a division of Auth C/a

DRAWING PHASE:		DRAWN BY: MJB
X	OWNER REVIEW	CHECKED BY: DAM
	AGENCY REVIEW	DATE: 10.22.20
	BID DOCUMENT	DWG FILE: 1289-001 AREA MAP
	FOR CONSTRUCTION	REF FILE: 1289-001 AREA MAP.DWG
	AS-BUILT DOCUMENT	JOB NUMBER: 1289-001 AREA MAP

REVISION DESCRIPTION:	NAME:	DATE:

NOTE:
1. NO KNOWN KARST FEATURES WITHIN THE SITE MAP AREA.
2. MANURE IS SCRAPED TO TANKS UNDER THE BARNS, PUMPS TRANSFER WASTE FROM THOSE TANKS TO THE PROPOSED WASTE STORAGE FACILITY, AND WASTE WILL BE LAND APPLIED UTILIZING DRAGLINES AND TANKERS ACCORDING TO THEIR NUTRIENT MANAGEMENT PLAN.

10TH STREET
APPROX. PROPERTY LINE
350' SETBACK FROM PROPERTY LINE
PROPOSED FREESTALL BARN (B3)
PROPOSED WASTE STORAGE FACILITY (WSF1)
384'
356'
206'
1000'
EX. FREESTALL BARN (B2)
EXISTING WASTE COLLECTION TANK
EX. FEEDPAD
EX. BARN (B1)
EX. SHED
EX. HOUSE
15TH STREET
20TH AVENUE
NORTH
SCALE: 0 60 120 240

DRAWING PHASE:
- OWNER REVIEW
- X AGENCY REVIEW
- BID DOCUMENT
- FOR CONSTRUCTION
- AS-BUILT DOCUMENT

DRAWN BY: MJB
CHECKED BY: DAM
DATE: 10.22.20
DWG FILE: 1289-001 PLANS RECOVER
REF FILE: 1289-001 PLANS RECOVER DRAWING
JOB NUMBER: 1289-001 PLANS RECOVER

NAME:	DATE:	REVISION DESCRIPTION:

CORPORATE OFFICE
400 Technology Drive East
Suite A
Menomonie, WI 54751
Tel 715-232-8490

BRANCH OFFICE
2820 Kabe Street
Suite 101
Hudson, WI 54016
Tel 715-381-5277

authconsulting.com

A·C/a
Auth•Consulting/associates
S&N Land Surveying a division of A·C/a

PROJECT:
GILBERTSON FARMS, INC.
2021 SITE EXPANSION
TOWN OF WHEATON, CHIPPEWA COUNTY, WI

ATCP 51 – SITE MAP

Attachment: (C) Maps (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Employee Training Plan

Attachment: (D) Employee Training Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Employee Training Plan
Gilbertson Farms, Inc.

Table of Contents

Page

Training Goals, Objectives, Activities

Requirements, Standards, Procedures and Practices

Training Content

- Nutrient Management
- Odor Management
- Runoff Management
- Manure and Waste Handling
- Environmental Incident Response
- Employee / Work Place Safety

Employees to be Trained

Frequency and Form of Training

Training Presenters

Record Keeping

Feedback, evaluation and improvement

Example Checklists
- Manure Storage Facility
- Animal Lot
- Feed Storage Facility

Attachment: (D) Employee Training Plan (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Training Goals

This training plan will enable employees and others to follow standards, procedures and practices to ensure that the livestock facility meets permit requirements and achieves other goals in this plan. [May expand to include other relevant goals if desired]

Specifically, training is required as part of the local permit issued in accordance with ATCP 51, Wis. Admin. Code (local siting permit), and this plan for training must include:

- Minimum content of training: nutrient management, odor management, runoff management, manure and waste handling, employee safety, and environmental incident response.
- The number and job categories of employees to be trained.
- The form and frequency of training, which at a minimum must include a plan for at least one training per year.
- Training presenters (these may include *livestock facility* managers, consultants or professional educators).
- A system for taking and recording attendance.

Training Objectives

The training program will enable employees and others to:

1. Understand and follow all standards, procedures and practices related to their assigned duties and tasks.
2. Understand basic permit requirements including more stringent local standards, and follow specific standards, procedures and practices to ensure compliance with these permits.
3. Receive current, science-based information to most effectively address key management issues, with specific focus on nutrient management, odor management, runoff management, manure and waste handling, employee safety, and environmental incident response.
4. Provide feedback concerning future training needs, and participate in the design of annual training activities.

Training Activities

Training activities will be designed to provide the necessary knowledge and skills tailored to specific needs of employees and others. Training approaches will be selected to ensure that information is effectively communicated, and may include classroom sessions, individual reading assignments and field exercises. Annual training activities will be customized to reflect changes in requirements, standards, procedures or practices; accommodate specific training needs; or provide new information critical to sound management of the livestock facility.

Attachment: (D) Employee Training Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Requirements, standards, procedures and practices

Employees and others will be provided training on the requirements of the local siting permit as these relate to their assigned duties and tasks. They will learn the applicable standards, procedures and practices to ensure compliance with permit requirements. They also will learn other standards, procedures and practices that apply to the livestock facility as required by this training plan.

Training will cover the use of checklists and other tools used to inspect and monitor farm operations (see attached sample checklists)

The livestock operator will make available written documentation that describes permit requirements, standards, procedures and practices.

Training Content

Nutrient Management

Standards, procedures and practices are in place for all forms of manure application and must be followed by all employees, farm personnel assistants, and others. Farm A's nutrient management plan is reviewed semi-annually by our crop manager and DNR representative. A copy of the plan will be available for review.

Training may include:

- Conservation planning
- Documenting manure applications – speading logs and inspection sheets
- Recording and analyzing manure sample data
- Review soil fertility, crop rotations and yields

Odor Management

Standards, procedures and practices are in place to minimize odor, and must be followed by employees, farm personnel assistants and others. Among other things, they ensure that odor control practices work properly.

Training may include:

- Overview of odor, its causes and basic control strategies
- Regular cleaning and maintenance procedures to control odor

Attachment: (D) Employee Training Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

- Step-by-step routines to implement control practices (e.g. frequent cleaning) required under a permit
- Responding to odor complaints

Runoff Management

Standards, procedures and practices are in place to control runoff from animal lots and feed storage areas, and must be followed by employees, farm personnel assistants and others. For example, feed storage bunker leachate must collected and pumped to the manure storage facility. In addition, compliance must be maintained with certain performance standards required in the local siting permit.

Training may include:

- Cleaning and regular maintenance of gutters, diversions, drains and sediment basins.
- Proper feed bunker tire and plastic placement and removal
- Leachate collection system operation, including pump operation
- Cleaning of traffic areas and pads
- Maintenance (e.g. regarding, seeding) and mowing of filter strips and other grassed areas.

Manure and Waste Handling

Standards, procedures and practices are in place to ensure proper storage, transfer and hauling of manure and waste. These must be followed by employees, farm personnel assistants and others.

Training may include:

- Review schedule and procedures for inspection and monitoring of manure storage, including frequent monitoring of manure levels
- Identification and use of proper agitation points
- Routine maintenance of vegetative areas
- Review procedures for pump operation, hose placement and pickup, equipment cleanup
- Proper procedures for hauling and applying manure

Attachment: (D) Employee Training Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Employee Safety

Standards, procedures and practices are in place to ensure the health and safety of employees. These must be followed by employees, farm personnel assistants and others.

Training may include:

- Proper animal handling
- Proper equipment operations and certification where needed
- Accident reporting protocols
- Working in confined spaces
- Avoidance of dangerous conditions (including exposure to noxious gases)
- Maintaining fences, grates and protective areas

Environmental Incident Response

Standards, procedures and practices are in place to ensure proper responses in the event of manure spill or other incident. These must be followed by employees, farm personnel assistants and others. A written document with response procedures and emergency contacts is readily available.

Training may include:

- Review of Environmental Incident Response Plan
- Spill reporting and intermediate action steps

Employees To Be Trained

List of all employees to be trained by job category and number of employees in this category:

Managers
Herdsman
Feeders
Milkers
Manure Handlers

Attachment: (D) Employee Training Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Form and Frequency of Training

By position, the training for employees and others may include:

Managers
Describe the form, timing and scope of training appropriate to position's duties and functions such as training on education on nutrient management.

Herdsman
Describe the form, timing and scope of training appropriate to position's duties and functions such as training on cattle care and handling, and loading and transportation

Feeder
Describe the form, timing and scope of training appropriate to position's duties and functions such as training on equipment safety, and operation and maintenance

Milker
Describe the form, timing and scope of training appropriate to position's duties and functions such as training on cattle care and handling, equipment safety, and operation and maintenance

Manure Handler
Describe the form, timing and scope of training appropriate to position's duties and functions such as training on handling procedures and emergency response steps

Training Presenters

Presenters may include:
Managers
Feed Consultants
Agronomy Consultant
University of Wisconsin Extension
Government Agency staff
Professional Associations

Recording Attendance

For each internal training, attendance will be recorded using a sign up sheet which will include the date of the training and the employees who attended. Similar methods will be used to verify other training received.

Attachment: (D) Employee Training Plan (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Monthly Manure Storage Facility Checklist

Farm: Facility ID:
Inspected by: Date:

Manure/Effluent Level
Date: Last Observation Date:
Liquid level, ft: Depth remaining, ft:

[May add other items consistent with operation]

Other Observations	Yes	No	Corrective Action Taken/Planned
Is liquid level marker visible?			
Does adequate freeboard exist (measured from lowest point in dam, berm, or spillway to liquid level)?			
Runoff holding pond: Is sufficient volume available for runoff from 25-yr, 24-hr storm?			
Manure pump/transfer pipes functioning?			
Recycle pumps/transfer pipes functioning?			

Concrete/Steel Tanks	Yes	No	Corrective Action Taken/Planned
Signs of … Cracks or structural damage?			
Leakage?			
Wet spots around base of tank?			
Clean water diversion Are perimeter drains plugged or blocked?			
Is roof water entering storage?			
Is field runoff entering storage?			
Are diversions/waterways maintained?			
Visual appearance and safety Is site neat and recently mowed?			
Is storage visually hidden from public?			
Are mortality or afterbirth observed?			
Are medical consumables observed?			
Is area fenced and properly marked?			
Is escape ladder available?			

Attachment: (D) Employee Training Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Attachment: (D) Employee Training Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Monthly Feed Storage Facility Checklist

Farm: Facility ID:
Inspected by: Date:

% moisture of feed placed in facility:

	Yes	No	Corrective Action Taken/Planned
Surface water diversion is operational?			
Leachate collection system, including pump, is operational?			
Does the collection structure need to be cleaned/pumped?			
Feed is adequately covered?			
Waste feed is properly stored?			

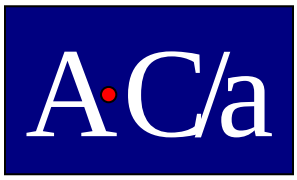
Environmental Incident Response Plan

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Environmental Incident Response Plan
Gilbertson Farms, Inc.

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Compiled by:



Auth Consulting & Associates, Inc. (AC/a)
406 Technology Drive E, Suite A
Menomonie, WI 54751
715-232-8490 ph
715-232-8492 fx

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Environmental Incident Response Plan Summary
- **Contacts**

Incident Response Plan
- **Personal Injury/Fire Emergency**
- **Accidental Entry to Manure Storage or Transfer Facilities**
- **Manure Storage Overflow**
- **Manure Storage Failure**
- **Manure Spill During Transport or Application**
- **Movement of Manure During or After Application**
- **Catastrophic Mortality Disposal**
- **Hazardous Material Spill**

Emergency Accident Plan Incident Worksheet

Odor Management

Odor Monitoring Worksheet

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Environmental Incident Response Plan Summary

Farm Name: Gilbertson Farms, Inc.

Owner/Operators: Kevin Gilbertson

Farm Address: 1176 20th Avenue, Elk Mound, WI 54739

Legal Description: SW1/4 of SW1/4 of Section 30 in the Township of Wheaton (T28N/R10W)

Primary Farm Contacts	Telephone
Kevin Gilbertson	715-271-8140
Farm Office	715-879-5251

Emergency Response	Name	Telephone
Fire/Rescue	Elk Mound Fire District	911 715-879-5432
Police	Chippewa County Sherriff's Department	911 715-726-7701
Veterinarian	Country Doctors	715-235-8555
Manure Hauler	Practical Applications	715-672-7867
Excavator	Brent Wachsmuth	715-456-0361
DNR Hazardous Spill Line		800-943-0003

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Personal Injury/Fire Emergency

Contacts		Telephone
Fire/Rescue		911
Kevin Gilbertson	Farm Emergency Coordinator	715-271-8140

Emergency Information	Location
First Aid Equipment	Farm Office
Fire Suppression Equipment	Farm Office & Vehicles
Hazardous/Flammable Materials on Farm (Fuel & Lubricants)	Fuel Tank Storage

Emergency Actions

1. Determine if nature of emergency and type of assistance required.
2. Call 911.
3. Attempt to stabilize injured person without moving, unless necessary and safe to do so.
4. Start CPR if necessary.
5. Implement evacuation of people and livestock if appropriate.
6. Identify potential locations of hazardous or flammable materials and notify emergency personnel when they arrive.

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Accidental Entry to Manure Storage or Transfer Facilities

Contacts		Telephone
Fire/Rescue		911
Kevin Gilbertson	Farm Emergency Coordinator	715-271-8140

Emergency Information **Location**

Rescue Equipment is located in the office:

- First aid kit

Emergency Actions

1. Call for help.
2. Shut off manure transfer pumps and agitators.
3. Initiate CPR if necessary.
4. Call 911.

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Manure Storage Overflow

Contacts		Telephone
Kevin Gilbertson	Farm Emergency Coordinator	715-271-8140
Manure Hauler	Practical Applications	715-672-7867
Excavator	Brent Wachsmuth	715-456-0361
DNR Hazardous Spill Line		800-943-0003

Emergency Information

- Front end loader is parked at bunker silos.
- Utilize the nearest soil source on the farm for emergency fill.
- Construct temporary manure containment dikes as required to contain the spill.

Emergency Actions

1. Contact Farm Emergency Coordinator.
2. Stop the flow.
3. Assess the situation and make appropriate calls.
4. Notify the DNR spill hotline (800-943-0003).
5. Begin clean-up.
6. If required, call manure hauler to bring pump and tanker, call excavator for backhoe.
7. Construct a temporary dike below the manure storage facility from soil, corn silage or other available materials if manure is flowing toward the culvert under 20th Avenue to prevent flow under road.
8. Use soil fill or corn silage to add temporary fill to the top of the manure storage facility berm to stop the manure overflow, if occurring from a defined location.
9. Place pumps and agitators in the pit and begin loading tankers for land application.
10. Land apply manure on fields approved for manure application in the nutrient management plan. Apply at the established rates. Or transfer manure to neighbor for pre-arranged storage.
11. Collect manure and contaminated soil from overflow area and from behind temporary dike. Land apply materials on fields approved for manure application in the nutrient management plan. Apply at the established rates. Remove temporary dike from the field and temporary fill from the manure storage facility berm.

Manure Storage Leakage

Leakage from base or sidewall of manure storage structure are often seepage rather than flowing leaks. Responses are as follows:

- Dig a small well or ditch to catch all seepage, put in a submersible pump, and pump back into lagoon.
- Other holes may be likewise temporarily plugged using soils.

Contact engineer to develop a plan to repair the facility, and verify repairs are adequate.

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Manure Storage Failure

Contacts		Telephone
Kevin Gilbertson	Farm Emergency Coordinator	715-271-8140
Manure Hauler	Practical Applications	715-672-7867
Excavator	Brent Wachsmuth	715-456-0361
DNR Hazardous Spill Line		800-943-0003

Emergency Information

- Front end loader is parked at bunker silos.
- Utilize the nearest soil source on the farm for emergency fill.
- Construct temporary manure containment dikes as required to contain the spill.

Emergency Actions

1. Contact Farm Emergency Coordinator.
2. Stop all additional flow to storage from transfer systems.
3. Assess the situation and make appropriate calls.
4. Notify the DNR spill hotline (800-943-0003).
5. Begin clean-up.
6. If required, call manure hauler to bring pump and tanker, call excavator for backhoe.
7. Construct a temporary dike below the manure storage facility from soil, corn silage or other available materials if manure is flowing toward the culvert under 20th Avenue to prevent flow under road.
8. Use soil fill or corn silage to add temporary fill to the top of the manure storage facility berm to stop the manure overflow.
9. Place pumps and agitators in the pit and begin loading tankers for land application.
10. Land apply manure on fields approved for manure application in the nutrient management plan. Apply at the established rates. Or transfer manure to neighbor for pre-arranged storage.
11. Collect manure and contaminated soil from overflow area and from behind temporary dike. Land apply materials on fields approved for manure application in the nutrient management plan. Apply at the established rates. Remove temporary dike from the field and temporary fill from the manure storage facility berm.
12. Conduct engineering analysis of manure storage facility and develop repair plan. Obtain necessary approval for repair plan.
13. Repair manure storage facility.
14. Document actions.

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Manure Spill During Transport or Application

Contacts		Telephone
Kevin Gilbertson	Farm Emergency Coordinator	715-271-8140
Police	Chippewa County Sherriff's Dept.	715-726-7701
DNR Hazardous Spill Line		800-943-0003

Emergency Information

- Identify location of spill.
- Clean up equipment needed – skid steer, front end loader, corn silage/bedding, water tanker, or manure spreader.

Emergency Actions

1. Eliminate the source.
    a. Stop manure application or pumps.
    b. Close valves. Separate pipes, creating an air gap and stopping flow.
    c. Transfer manure/liquid to another basin or lagoon.
2. Contain the spill, if possible.
    a. Create a containment dam in the field, ditch or stream.
    b. In a field, use tillage equipment to slow the flow.
    c. Check for tile flows.
    d. Construct temporary holding basin down slope.
    e. If possible, place soil over the point of seepage, ensuring that you do not drive over or compact the seepage point.
3. Assess the extent of spill and note any obvious damages.
    a. Did or could the spill reach any surface waters, well casings, or other sensitive areas.
    b. How much was released? What time?
4. Contact the appropriate agencies, including sheriff's department if traffic control is needed.
5. Clean up the spill and make repairs. Did any damage occur (employee injury, fish kills or property damage)?
6. Land apply materials collected manure and contaminated soil on fields approved for manure application in the nutrient management plan. Apply at established rates.
7. Document and review actions taken to contain or minimize the spill.

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Movement of Manure During or After Application

Contacts		Telephone
Kevin Gilbertson	Farm Emergency Coordinator	715-271-8140
DNR Hazardous Spill Line		800-943-0003

Emergency Actions

1. Stop land applying manure. Assess needs and call for help. Review steps above.
2. If possible, incorporate manure with tillage or till ground down slope of applied manure to reduce runoff.
3. Construct a temporary berm to prevent runoff of manure, if necessary.
4. Evaluate the application rates for fields where runoff occurred. Recalibrate spreader if necessary.

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Catastrophic Mortality Disposal

Contacts		Telephone
Kevin Gilbertson	Farm Emergency Coordinator	715-271-8140
Veterinarian	Country Doctors	715-235-8555
Excavator	Brent Wachsmuth	715-456-0361

Emergency Actions

1. Call veterinarian if death is suspicious or animal displaced unusual symptoms.
2. Remove mortality from the livestock production area. Place in designated mortality storage area (secure from scavengers and having appropriate runoff controls.
3. Contact mortality disposal contractor to arrange pick up within 24 hours.
4. If directed by state veterinarian, implement disease outbreak procedures as required. This may include killing exposed animals, burning carcasses, and burial of ashes in catastrophic mortality burial area.

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Hazardous Material Spill

Contacts		Telephone
Kevin Gilbertson	Farm Emergency Coordinator	715-271-8140
Fire/Rescue/Hazardous Material Response Unit		911
DNR Hazardous Spill Line		800-943-0003

Emergency Actions

1. Identify the hazardous material that has been spilled. Assess need for safety equipment.
2. Stop the flow. Turn off all pumps.
3. Assess the situation and make appropriate calls.
4. Flammable materials: Shut off power to area from the remote location. Eliminate sources of ignition.
5. Evacuate people and livestock as appropriate.
6. Contain the spill and begin cleanup.
7. Prevent hazardous materials from leaving spill site by constructing temporary dikes if necessary.
8. Once the situation has been stabilized, collect hazardous material using approved methods and dispose of contaminated soil according to regulations.
9. Document actions.

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Emergency Accident Plan Incident Worksheet

Incident Date/Time:

Location of Incident:

People/Agencies Involved:

Description of Incident:

Worksheet completed by: Name _____

Signature: _____

Date Completed: _____

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Odor Management

Contacts		Telephone
Kevin Gilbertson	Farm Emergency Coordinator	715-271-8140

Odor Monitoring Program Actions

1. After a complaint is placed, fill out the Odor Monitoring Worksheet. Insert as much detail as possible.
2. Review activities to reduce odors:
    a. Manure agitation.
    b. Inject manure directly into soil.
    c. Clean feed bunkers.
    d. Arrange for timely mortality removal.
3. Steps to establish working relationship with neighbors and community members:
    a. Provide notice to neighbors prior to land application of manure.
    b. Avoid spreading manure during holidays and community events.
    c. Clean roads if operations have deposited manure or soil on it.
    d. Participate in local activities such as 4-H, dairy days, or school events. Host community picnic or open house.
4. Monitor effectiveness of odor control technologies and management.
    a. Record the amount of odor present as determined by managers.
    b. Number of complaints filed.

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Odor Management Worksheet

Date Complaint Received: Time: Form Completed By:

Complaint Received From:

Address:

Phone:

Comments:

Weather Conditions:

Sunny Partly Cloudy Mostly Cloudy Overcast Hazy

Temperature:

Relative Humidity:

Precipitation: None Fog Rain Sleet Snow

Wind Direction: Wind Speed:

N Calm

NW NE Light Breeze

W E Moderate Wind

SW SE Strong Wind

S

Odor Source:

Description:

Nuisance Potential:

Actions taken to reduce conflict:

Attachment: (E) Environmental Incident Response Plan (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Proposed Facilities – Abbreviated Project Manual

Engineering Certification Sheet
Table of Contents
Executive Summary
Plan Sheets

1.0-Title Sheet/Location Map
2.0-Construction Notes
3.0-Overall Site Plan
3.1-Barn Site Plan
3.2-Waste Storage Site Plan
3.3-Driveway/Stormwater Site Plan
4.0-WSF Liner Options
5.0-Sections & Details
5.1-Sections & Details
5.2-Sections & Details
6.0-Erosion Control Details

Attachment: (F) Proposed Facilyt & Executive Summary (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Project Manual
Gilbertson Farms, Inc.
2021 Farm Improvements

January 2021

Compiled by:

Auth Consulting & Associates, Inc. (AC/a)
406 Technology Drive E, Suite A
Menomonie, WI 54751
715-232-8490 ph
715-232-8492 fx

Attachment: (F) Proposed Facilyt & Executive Summary (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Engineering Certification

Prepared for:

Gilbertson Farms, Inc.
1176 20th Avenue
Elk Mound, WI 54739

Prepared by:

Auth Consulting & Associates, Inc. (AC/a)
406 Technology Drive E, Suite A
Menomonie, WI 54751
715-232-8490

To the best of my professional knowledge, judgment, and belief, this design and these construction plans meet all requirements of the NRCS Standards 313, 342, 382, 412, 484, 522, 533 & 634 as well as ACI 350, Appendix H.

Report Prepared by:

Michael Bucher — Date: 4-16-21

WISCONSIN
DAVID A. McDANIEL
30605
CHIPPEWA FALLS, WI
PROFESSIONAL ENGINEER

Checked by:

David McDaniel, PE — Date: 4.16.21

Attachment: (F) Proposed Facilyt & Executive Summary (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Distribution List

No of Copies	Sent To
1	Kevin Gilbertson Gilbertson Farms, Inc. 1176 20th Avenue Elk Mound, WI 54739
1	David Nashold, County Conservationist Chippewa County Land and Water Conservation Department 711 N Bridge Street, Room 011 Chippewa Falls, WI 54729
1	AC/a, Inc. File 1289-001

Attachment: (F) Proposed Facilyt & Executive Summary (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Table of Contents

Executive Summary

Note: The full Project Manual has been submitted to Chippewa County LCF Abbreviated version is being submitted with ATCP51 Permit Application.

Figures

Figure 1-Site Location Map
Figure 2-Topo Map
Figure 3-Wetland Map
Figure 4-Soils Map
Figure 5-Overall Site Plan

Attachments

Attachment A-Operation and Maintenance Plan

Attachment B-Calculations

Attachment C-Construction Inspection Plan

Attachment D-Soil Information & Chippewa County Soil Investigation Report

Attachment E-NRCS Construction Specifications
- 2-Excavation
- 3-Earthfill
- 4-Concrete
- 10-Fences
- 15-Plastic Pipe Conduits
- 204-Earthfill for Waste Storage Facilities
- 634-Waste Transfer Pipe

Plan Sheets

1.0-Title Sheet/Location Map
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4.0-WSF Liner Options
5.0-Sections & Details
5.1-Sections & Details
5.2-Sections & Details
6.0-Erosion Control Details

These documents are to be utilized in conjunction with the Gilbertson Farms, Inc.-2021 Farm Improvements Plan Set, RELEASED FOR REVIEW. _01-08-21_

Attachment: (F) Proposed Facilyt & Executive Summary (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Executive Summary

Background
This project Manual is intended to describe the proposed improvements at Gilbertson Farms, Inc. in the Township of Wheaton, Chippewa County, Wisconsin. The facility is an operating dairy farm. The project location is shown on Figure 1, “Site Location Map”. The site address is:

Gilbertson Farms, Inc.
1176 20th Avenue
Elk Mound, WI 54739
Contact: Kevin Gilbertson

Existing Conditions:
Surface water on the site drains to the southeast to Elk Creek that flows to the Chippewa River which is approximately 8-mile south of the farm. No wetlands are located near the proposed project as shown on Figure 3 “Wetland Map”. Review of NRCS soil survey data indicates that soil at the project site consist primarily of Billett sandy loam, Menahga loamy sand, Meridian loam and Northfield silt loam. NRCS soils data can be found in Figure 4 “Soils Map”.

Soil investigation was completed at the site in April of 2012 and October of 2019 by Chippewa County Land Conservation. The “Soil Investigation Report”, dated January 24, 2020 indicates that 30 test pits were excavated at the proposed location of the waste storage facility and waste transfer systems. Soil borings encountered about 1 to 1.5 feet of loamy sand then 2.6 to 4 feet of loamy sand and clean poorly graded sand and the remainder of the boring was poorly graded sand to the base of the test pits. Test pits extended to depths of over 20 feet. The report indicates ground water is located at an upper elevation of 889.3. Bedrock was not encountered. See Attachment D for “Soils Information and Chippewa County Soil Investigation Report”.

Current Operations:
Currently the existing barns are bedded with sand. Manure in the existing free stall barns is scraped to a tank under the east end of the barn and land applied as needed according to their nutrient management plan.

Proposed Modifications
The proposed modifications for 2021 Farm Improvements detailed in this Project Manual includes:

- A new waste storage facility with a liquid tight concrete liner with waterstop. The proposed waste storage will have a top to bottom volume of approximately 6.3 million gallons. The proposed waste storage facility will provide approximately 10 months of storage for the expanded herd on the farmstead.
- A new barn with solids bedded stalls, and a waste collection tank (11 feet x 48 feet x 8 feet deep) under the low end of the barn, which provides approximately 3 days of storage for the animals in the new barn.
- A new waste transfer system from the robot milkers in the new barn to the new tank under the new barn.

Attachment: (F) Proposed Facilyt & Executive Summary (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

- A new waste transfer system from the new tank under the new barn to the new waste storage facility.

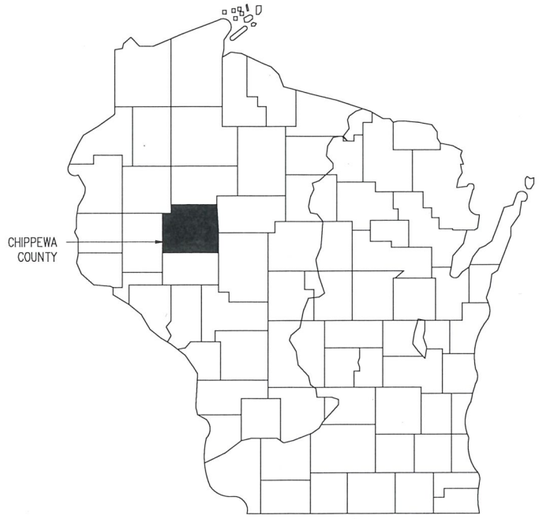
Additional information detailing the operation of the system is included in the attached Operation and Maintenance Plan.

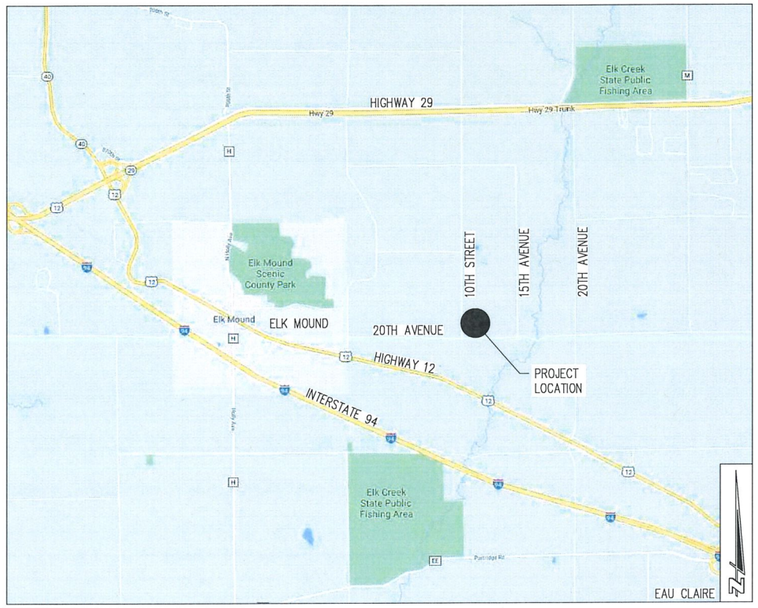
Attachment: (F) Proposed Facilyt & Executive Summary (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

GILBERTSON FARMS, INC.

2021 SITE EXPANSION

TOWN OF ELK MOUND, CHIPPEWA COUNTY, WISCONSIN





LOCATION MAP – CHIPPEWA COUNTY

N.T.S.

PRACTICE:	313/522/634
OWNER:	GILBERTSON FARMS, INC.
ADDRESS:	1176 20TH AVENUE
ADDRESS:	ELK MOUND, WI 54739
TOWNSHIP NAME:	WHEATON
S/T/R:	SECTION 30, T28N, R10W

SHEET INDEX

SHEET	SHEET DESCRIPTION
1.0	TITLE SHEET/LOCATION MAP
2.0	CONSTRUCTION NOTES
3.0	OVERALL SITE PLAN
3.1	BARN SITE PLAN
3.2	WASTE STORAGE SITE PLAN
3.3	DRIVEWAY/STORMWATER SITE PLAN
4.0–4.1	SECTIONS AND PROFILES
5.0–5.2	SECTIONS & DETAILS
6.0	EROSION CONTROL DETAILS

THIS PROJECT HAS BEEN DESIGNED PER THE UNITED STATES NATURAL RESOURCES CONSERVATION SERVICES STANDARDS AND ACI 350, APPENDIX H

- 313 – WASTE STORAGE AREA (OCTOBER 2017)
- 342 – CRITICAL AREA PLANTING (JANUARY 2018)
- 382 – FENCE (JANUARY 2014)
- 412 – GRASSED WATERWAY (JULY 2016)
- 484 – MULCHING (JUNE 2016)
- 522 – POND SEALING OR LINING, CONCRETE (OCTOBER 2017)
- 533 – PUMPING PLANT (JULY 2016)
- 634 – WASTE TRANSFER (JANUARY 2014)

AND WILL BE CONSTRUCTED DURING THE 2021 CONSTRUCTION SEASON

THIS PROJECT SHALL BE CONSTRUCTED ACCORDING TO THE FOLLOWING WISCONSIN NATURAL RESOURCES CONSERVATION SERVICES CONSTRUCTION SPECIFICATIONS

- 2 – EXCAVATION (MAY 2018)
- 3 – EARTHFILL (MAY 2020)
- 4 – CONCRETE (MAY 2020)
- 004–WS – EMBEDDED OR EXPANSIVE WATERSTOP (OCTOBER 2020)
- 10 – FENCES (MAY 2018)
- 15 – PLASTIC PIPE CONDUIT (OCTOBER 2019)
- 204 – EARTHFILL FOR WASTE STORAGE FACILITIES (SEPTEMBER 2018)
- 634 – WASTE TRANSFER PIPE (AUGUST 2016)

CONSTRUCTION NOTES

1. CONTRACTOR/OWNER SHALL INSTALL ALL EROSION CONTROL MATERIALS PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL SALVAGE AND REPLACE TOPSOIL IN ALL DISTURBED AREAS.
3. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED IMMEDIATELY UPON COMPLETION.
4. DISTURBED AREAS AND EMBANKMENTS SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH NRCS, FOTG STANDARD 342, CRITICAL AREA PLANTING.
5. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL ITEMS DURING THE DURATION OF THE PROJECT.
6. ANY PERCHED WATER POCKETS ENCOUNTERED DURING CONSTRUCTION WILL BE DRAINED, EXCAVATED, & INCORPORATED INTO THE SITE GRADING.
7. NO SINKHOLES OR DEPRESSIONS WERE ENCOUNTERED DURING INITIAL SITE SURVEY.

REFERENCE BENCHMARK

THE ELEVATIONS SHOWN ARE ON NAVD 1988 DATUM DERIVED FROM LIDAR AND GPS OBSERVATIONS.



DRAWING PHASE:
- X OWNER REVIEW
- AGENCY REVIEW
- BID DOCUMENT
- FOR CONSTRUCTION
- AS–BUILT DOCUMENT

DRAWN BY: MJB
CHECKED BY: DJM
DATE: 10.22.20
DWG FILE: 1289–001 PLANS
REF FILE: 1289–001 PLANS.DWG
JOB NUMBER: 1289–001 PLANS

NO.	REVISION DESCRIPTION:	NAME:	DATE:

CORPORATE OFFICE
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Menomonie, WI 54751
Tel 715-232-9400

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Suite 101
Hudson, WI 54016
Tel 715-381-5277

authconsulting.com

A·C/a Auth·Consulting/associates
S&W Land Surveying a division of A C/a

PROJECT:
GILBERTSON FARMS, INC.
2021 SITE EXPANSION
TOWN OF ELK MOUND, CHIPPEWA COUNTY, WI

TITLE SHEET

SHEET NO. 1.0

Attachment: (G) Gilbertson Farms LLC - Engineering Plans (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

USE OF EXPANSIVE WATERSTOP MATERIALS IN WASTE MANAGEMENT PRACTICES
(SEE WI CONSTRUCTION SPEC 004-WS EMBEDDED OR EXPANSIVE WATERSTOP 05/2018)

MATERIAL

EXPANSIVE WATERSTOPS SHALL CONSIST OF PREFORMED STRIPS OR MASTIC (CAULK) MADE OF HYDROPHILIC MATERIALS THAT EXPAND WHEN SUBJECTED TO MOISTURE OR THE MATERIAL BEING STORED. THEY SHALL NOT CONTAIN BENTONITE.

THE CONTRACTOR SHALL PROVIDE THE SPECIFICATIONS FOR THE MATERIAL TO BE USED FOR APPROVAL SEVEN (7) DAYS PRIOR TO USE. THE SPECIFICATIONS SHALL INCLUDE THE APPLICABILITY OF THE MATERIAL FOR THE USE INTENDED.

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL PROVIDE A COPY OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS/SPECIFICATIONS FOR APPROVAL SEVEN (7) DAYS PRIOR TO USE.
2. EXPANSIVE WATERSTOP SHALL BE PLACED AT THE LOCATIONS SHOWN ON THE DRAWINGS.
3. THE EXPANSIVE WATERSTOP SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS, INCLUDING BUT NOT LIMITED TO:
   A. CLEANING OF SURFACES
   B. SURFACE PREPARATION
   C. APPLICATION OF ADHESIVES (AND CURING) OR MECHANICAL FASTENING
   D. APPLICATION OF EXPANSIVE WATERSTOP
   E. CURING OF EXPANSIVE WATERSTOP
4. REQUIRED ADHESIVE OR OTHER FORMS OF MECHANICAL FASTENING TO EXISTING CONCRETE SHALL FOLLOW THE MANUFACTURER'S INSTRUCTIONS.
5. ADHESIVE FOR PREFORMED EXPANSIVE WATERSTOP AND THE MASTIC FOR CAULK TYPE EXPANSIVE WATERSTOP SHALL BE ALLOWED TO CURE FOR THE DURATION AS INDICATED BY THE MANUFACTURER PRIOR TO PLACING CONCRETE OVER THE WATERSTOP. THE REQUIRED CURING TIME WILL BE TEMPERATURE DEPENDENT.
6. MASTIC (CAULK) SHALL BE PLACED TO THE BEAD SIZE AS RECOMMENDED BY THE MANUFACTURER BASED ON THE AMOUNT OF CONCRETE COVER PROVIDED.
7. THE EXPANSIVE WATERSTOP SHALL NOT BE ALLOWED TO BECOME WET PRIOR TO PLACING CONCRETE OVER THE WATERSTOP. MATERIAL THAT HAS EXPANDED PRIOR TO CONCRETE PLACEMENT SHALL BE REMOVED AND REPLACED FOLLOWING ALL OF THE INITIAL INSTALLATION REQUIREMENTS.

GENERAL GRADING NOTES

1. EXISTING SITE CONDITIONS REFLECTS TOPOGRAPHICAL INFORMATION PROVIDED BY AC/a & S&N LAND SURVEYING. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS.
2. CONTRACTOR SHALL NOTIFY UTILITIES AND HAVE ALL UTILITIES LOCATED PRIOR TO ANY EXCAVATION.
3. ALL GRADES AND ELEVATIONS SHOWN ARE TO FINISHED GRADES, UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL SALVAGE AND REPLACE TOPSOIL IN ALL DISTURBED AREAS.
5. SALVAGED MATERIALS TO BECOME PROPERTY OF THE OWNER.
6. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE PRIOR APPROVAL OF THE OWNER.
7. CULVERT LENGTHS SHOWN INCLUDE APRON ENDWALLS.
8. CONTRACTOR SHALL MECHANICALLY COMPACT ALL TRENCHES UNDER ALL PAVED, CONCRETE, GRAVEL DRIVES AND BULDING PAD AREAS.
9. ALL FILL MATERIAL FOR THE WASTE STORAGE FACILITY TO BE COMPACTED PER NRCS WISCONSIN CONSTRUCTION SPECIFICATION #204. – EARTHFILL FOR WASTE STORAGE FACILITIES. ALL OTHER FILL MATERIAL TO BE COMPACTED PER NRCS WISCONSIN CONSTRUCTION SPECIFICATION #3. – EARTHFILL, OR AS DIRECTED BY THE ENGINEER. TOPSOIL TO BE REMOVED BEFORE FILL MATERIAL IS PLACED. NO ORGANIC OR FROZEN MATERIALS TO BE PLACED IN FILL AREAS.
10. 5% ADDITIONAL FILL HEIGHT ADDED FOR SETTLEMENT TO WASTE STORAGE POND BERM. FILL HEIGHT MEASURED AT THE CENTERLINE OF THE BERM.

GENERAL EROSION CONTROL NOTES

1. EROSION CONTROL DEVICES SHALL BE IN PLACE BEFORE BEGINNING CONSTRUCTION ACTIVITIES AND CONTINUOUSLY MAINTAINED.
2. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED IMMEDIATELY AFTER FINAL GRADE IS ESTABLISHED IN ANY PARTICULAR AREA. SEEDING AND MULCHING SHALL NOT WAIT UNTIL ALL GRADING IS COMPLETE ON THE ENTIRE SITE.
3. ALL DISTURBED SLOPES STEEPTER THAN 3:1 SHALL BE SEEDED AND PROTECTED WITH EROSION MAT OR SHALL BE SODDED AND STAKED OR HYDROSEEDED AS AN ALTERNATIVE.
4. INSTALL SILT FENCE AS SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER. SEE DETAIL SHEET FOR SILT FENCE INSTALLATION.
5. ALL DITCH CHECKS ARE TO BE EROSION BALES, SEDIMENT LOGS, OR APPROVED EQUAL. SEE DETAIL SHEET FOR INSTALLATION.
6. SEEDING AND MULCHING ARE REQUIRED ON ALL DISTURBED AREAS AND SHALL CONFORM TO NRCS, FOTG STANDARD 342, "CRITICAL AREA PLANTING"; MIXTURE 5 FROM TABLE 5. SEE DETAIL SHEET.
7. A VEHICULAR TRACKING PAD MAY BE REQUIRED AT ENTRANCE ROAD INTO SITE TO CONTAIN SEDIMENT. SEE DETAIL SHEET FOR TRACKING PAD INSTALLATION.
8. ALL EROSION CONTROL MEASURES SHALL BE LEFT IN PLACE AND MAINTAINED UNTIL RESTORATION ON SITE HAS BEEN ESTABLISHED.
9. ANY SOIL STOCKPILES WHICH ARE LEFT MORE THAN 7 DAYS MUST BE PROTECTED BY SEEDING AND MULCHING, EROSION MAT, SILT FENCING, COVERING OR OTHER METHODS. THIS DOES NOT INCLUDE FILL OR TOPSOIL PILES THAT ARE IN ACTIVE USE.
10. SITE MONITORING OF EROSION AND SEDIMENT CONTROL PRACTICES FOR MAINTENANCE NEEDS SHALL BE COMPLETED AT THE INTERVALS SPECIFIED UNTIL THE SITE IS STABILIZED. SITE MONITORING SHALL OCCUR AT LEAST WEEKLY OR WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5 INCHES OR GREATER. A RAINFALL EVENT SHALL BE CONSIDERED TO BE THE TOTAL AMOUNT OF RAINFALL RECORDED IN ANY CONTINUOUS 24 HOUR PERIOD. MONITORING RECORDS SHALL BE KEPT AND CONTAIN, AT A MINIMUM, THE CONDITION OF THE EROSION AND SEDIMENT CONTROL PRACTICES AT THE INTERVALS SPECIFIED AND A DESCRIPTION OF THE MAINTENANCE CONDUCTED TO REPAIR OR REPLACE EROSION AND SEDIMENT CONTROL PRACTICES.
11. OFF-SITE SEDIMENT DEPOSITION RESULTING FROM THE FAILURE OF AN EROSION OR SEDIMENT CONTROL PRACTICE SHALL BE CLEANED UP WITHIN 24 HOURS. OFF-SITE SEDIMENT DEPOSITION RESULTING FROM CONSTRUCTION ACTIVITY, THAT CREATES A NUISANCE, SHALL BE CLEANED UP BY THE END OF THE WORK DAY. IF THE FAILURE OF EROSION OR SEDIMENT CONTROL PRACTICES RESULT IN AN IMMEDIATE THREAT OF SEDIMENT ENTERING PUBLIC SEWERS OR THE WATERS OF THE STATE, PROCEDURES SHALL BE IMPLEMENTED IMMEDIATELY TO REPAIR OR REPLACE THE PRACTICES.

CONSTRUCTION NOTES

1. NOTIFY ENGINEER IF PERCHED WATER OR BEDROCK ENCOUNTERED DURING EXCAVATION.
2. BORINGS DID ENCOUNTER BEDROCK; HOWEVER, ADEQUATE SEPARATION DISTANCES HAVE BEEN MAINTAINED IN DESIGN. IF BEDROCK IS ENCOUNTERED, BEDROCK CAN BE OVER-EXCAVATED TO MAINTAIN REQUIRED SEPARATION TO TOP OF CONCRETE LINER. REPLACE BEDROCK WITH SOIL CONTAINING GREATER THAN 20% FINES. CONSOLIDATED ROCK MATERIAL SHALL HAVE A POSITIVE GRADE AWAY FROM HE STORAGE LAGOON WITH NO PONDING ON THE EXCAVATED SURFACE.
3. REINFORCEMENT STEEL SHALL BE GRADE 60. SEE SPECS FOR ADDITIONAL MATERIAL REQUIREMENTS RELATED TO CONCRETE, STEEL, WATER STOPS, CURING COMPOUND, ETC
4. CONCRETE SHALL BE 4,000 PSI MIX DESIGN PER WI NRCS CONSTRUCTION SPEC 4 "CONCRETE."
5. INSTALL WATER STOPS AT ALL CONTROL JOINTS. ALL WATERSTOPS TO MEET WISCONSIN CONSTRUCTION SPEC 004-WS GREENSTEAK 717 OR EQUIV.
6. FIELD BUTT SPLICES SHALL BE HEAT FUSED WELDED USING A TEFLON COATED THERMOSTATICALLY CONTROLLED WATERSTOP SPLICING IRON AT APPROXIMATELY 380 DEGREES F. FOLLOW APPROVED MANUFACTURER RECOMMENDATIONS. LAPPING OF WATERSTOP, USE OF ADHESIVES, OR SOLVENTS SHALL NOT BE ALLOWED.
7. CENTER WATERSTOP IN JOINT AND SECURE WATER STOP IN CORRECT POSITION USING HOG RINGS OR GROMMETS SPACED AT 12" ON CENTER ALONG THE LENGTH OF THE WATERSTOP AND WIRE TIE TO ADJACENT REINFORCEMENT, PER MANUFACTURER RECOMMENDATIONS.
8. PLACE CONCRETE WITHOUT DISPLACING THE WATERSTOP.
9. VIBRATE CONCRETE AROUND WATERSTOP TO PREVENT VOIDS.
10. AFTER FIRST POUR, CLEAN UNEMBEDDED WATERSTOP WEB TO INSURE FULL CONTACT WITH THE SECOND POUR.
11. WATERSTOP INSTALLATION SHALL BE IN STRICT COMPLIANCE WITH MANUFACTURER'S REQUIREMENTS.

CONCRETE PLACEMENT IN HOT WEATHER
(SEE WI CONSTRUCTION SPEC 4.CONCRETE 12/2017)

THE PLACEMENT OF CONCRETE IN HOT WEATHER SHALL BE AS APPROVED BY THE TECHNICIAN. UNLESS PROVISIONS ARE MADE IMMEDIATELY, THE QUALITY OF FRESHLY MIXED OR HARDENED CONCRETE WILL RESULT IN DETRIMENTAL RESULTS BECAUSE OF THE ACCELERATED THE RATE OF MOISTURE LOSS AND RATE OF CEMENT HYDRATION.

WHEN CONDITIONS AT THE TIME OF PROPOSED PLACEMENT EXIST THAT:

1. YIELD A RATE OF EVAPORATION GREATER THAN 0.10 LB./FT2/HOUR (FORMULA BELOW) OR
2. WHEN TWO OR MORE OF THE FOLLOWING FACTORS ARE EXCEEDED
   a. AMBIENT TEMPERATURE GREATER THAN 80 DEGREES FAHRENHEIT
   b. RELATIVE HUMIDITY LESS THAN 60 PERCENT
   c. WIND VELOCITY(AVERAGE) GREATER THAN 10 MPH

THE TIME BETWEEN THE INTRODUCTION OF THE MIXING WATER TO THE CEMENT AND AGGREGATES AND DISCHARGE SHALL NOT EXCEED 45 MINUTES UNLESS A SET-RETARDING ADMIXTURE IS USED MEETING THE REQUIREMENTS IN SECTION 3 OF WCS-4. CONCRETE SURFACES SHALL NOT BE ALLOWED TO DRY AFTER PLACEMENT AND DURING THE CURING PERIOD. MEASURES SHALL BE TAKEN TO IMMEDIATELY PROTECT AND CURE THE CONCRETE DUE TO RAPID DRYING CONDITIONS.

RECOMMENDED ACTIONS TO REDUCE SURFACE MOISTURE LOSS AND RATE OF CEMENT HYDRATION:

- PLAN PLACEMENT TO EARLY MORNING, LATE AFTERNOON OR EVENING
- USE A FOG SPRAY TO RAISE THE RELATIVE HUMIDITY OF THE AMBIENT AIR.
- MOIST CURE THE CONCRETE SURFACE AS SOON AS THE SURFACES ARE FINISHED AND CONTINUE FOR AT LEAST 24 HOURS.
- SCHEDULE MIXER TRUCKS TO AVOID WAITING TIME SO THE CONCRETE WILL NOT BEGIN TO SET.
- SUSPEND PLACEMENT UNTIL CONDITIONS IMPROVE.

CONCRETE PLACEMENT SHALL BE SUSPENDED WHEN:

1. THE RATE OF EVAPORATION IS GREATER THAN 0.25 LB./FT2/HOUR (FORMULA BELOW) OR
2. WHEN ALL OF THE FACTORS ARE EXCEEDED
   a. THE AMBIENT TEMPERATURE IS GREATER THAN 80 DEGREES FAHRENHEIT
   b. RELATIVE HUMIDITY LESS THAN 40 PERCENT
   c. WIND VELOCITY (AVERAGE) GREATER THAN 15 MPH

FORMULA: THE RATE OF EVAPORATION IS CALCULATED WITH THE FOLLOWING FORMULA OR OTHER PUBLISHED CHARTS/CALCULATORS: (NOMO-GRAPH LOCATED IN PCA DESIGN AND CONTROL OF CONCRETE MIXTURES 14TH EDITION PAGE 235-236). THEY SHOULD BE OBTAINED AT THE TIME OF PROPOSED PLACEMENT OF THE CONCRETE.

$$E = (T_c^{2.5} - rT_a^{2.5})(1+0.4V)\times10^{-6}$$

WHERE:
E = EVAPORATION RATE, lb/ft²/hr
T_c = CONCRETE TEMPERATURE, °F
T_a = AIR TEMPERATURE, °F
r = RELATIVE HUMIDITY PERCENT/100
V = WIND VELOCITY, MPH

NEARBY REPORTING STATIONS CAN BE USED AS THE DATA SOURCE. MEASURED ON-SITE CONDITIONS CAN BE USED IN LIEU OF NEARBY REPORTING STATIONS AS APPROVED BY THE TECHNICIAN. (WIND SPEEDS AT REPORTING STATION ARE TAKEN ABOVE THE GROUND SURFACE, SO V = AVERAGE REPORTED WIND SPEEDS * 0.66)

*EVAPORATION FORMULA REFERENCE: PAGE 368 OF ACI MATERIALS JOURNAL, JULY-AUGUST 1998, "PLASTIC SHRINKAGE CRACKING AND EVAPORATION FORMULAS", BY PAUL J UNO, TITLE NO. 95-M34

CONCRETING IN COLD WEATHER
(SEE WI CONSTRUCTION SPEC 4.CONCRETE 12/2017)

(1) THE FOLLOWING PROVISIONS SHALL APPLY WHEN THE MINIMUM AIR TEMPERATURE AT THE LOCAL JOB SITE IS LESS THAN 35 DEGREES FAHRENHEIT (THE FORECASTED TEMPERATURE, WHICH SHALL BE VERIFIED WITH A MAXIMUM/MINIMUM THERMOMETER AT THE START OF THE MORNING JOB SHIFT).
(I) NO CONCRETE SHALL BE PLACED WITHOUT THE REQUIRED THERMOMETERS AT THE JOB SITE.
(II) THE CONTRACTOR SHALL FURNISH THE TECHNICIAN A RECORD OF DAILY TEMPERATURE DATA INCLUDING:
- OUTSIDE AIR MAXIMUM AND MINIMUM TEMPERATURES AT THE LOCAL JOB SITE, AND
- TEMPERATURES, OF THE AIR ADJACENT TO THE SURFACE OF THE CONCRETE, AT SEVERAL POINTS ALONG THE CONCRETE SURFACE FOR ALL CONCRETE CURING PERIODS.

(III) WHEN THE CEMENT IS INITIALLY ADDED TO THE MIX, THE TEMPERATURE OF THE MIXING WATER SHALL NOT EXCEED 100 DEGREES FAHRENHEIT NOR SHALL THE TEMPERATURE OF THE AGGREGATE EXCEED 100 DEGREES FAHRENHEIT.
(IV) THE TEMPERATURE OF THE CONCRETE AT THE TIME OF PLACEMENT SHALL BE NOT LESS THAN 55 DEGREES FAHRENHEIT OR AT NO TIME DURING ITS PRODUCTION OR TRANSPORT MORE THAN 90 DEGREES FAHRENHEIT.
(V) PLACED CONCRETE MAY BE PROTECTED BY COVERING, HOUSING, INSULATING OR HEATING CONCRETE STRUCTURES.
(VI) THE MINIMUM AIR TEMPERATURE ADJACENT TO THE SURFACE OF THE CONCRETE SHALL BE MAINTAINED ABOVE 40 DEGREES FAHRENHEIT FOR A PERIOD OF AT LEAST 7 ACCUMULATED DAYS. THESE 7 DAYS MUST OCCUR DURING THE FIRST 10 DAYS AFTER THE CONCRETE IS PLACED. AT NO TIME, DURING THE FIRST 10 DAYS AFTER CONCRETE IS PLACED, SHALL THE MINIMUM AIR TEMPERATURE ADJACENT TO THE SURFACE OF THE CONCRETE BE LESS THAN 32 DEGREES FAHRENHEIT UNLESS TYPE III CEMENT OR AN APPROVED ACCELERATING ADMIXTURE IS USED (SEE ITEM (VII) BELOW).
(VII) THE CURING PERIOD MAY BE REDUCED FROM 7 CUMULATIVE DAYS TO 3 CONSECUTIVE DAYS WHEN TYPE III CEMENT OR AN APPROVED ACCELERATING ADMIXTURE IS USED. THE ACCELERATING ADMIXTURE SHALL BE USED AT THE PROPORTIONS RECOMMENDED BY THE MANUFACTURER. THE MINIMUM AIR TEMPERATURE ADJACENT TO THE SURFACE OF THE CONCRETE SHALL BE MAINTAINED ABOVE 40 DEGREES FAHRENHEIT FOR THE 3 DAY CURING PERIOD.
(VIII) COMBUSTION HEATERS SHALL HAVE EXHAUST FLUE GASES VENTED OUT OF THE CONCRETE PROTECTION ENCLOSURE. THE HEAT FROM HEATERS AND DUCTS SHALL BE DIRECTED IN SUCH A MANNER AS TO NOT OVERHEAT OR DRY THE CONCRETE IN LOCALIZED AREAS OR TO DRY THE EXPOSED CONCRETE SURFACE.
(IX) AT THE END OF THE CURING PERIOD, THE CONCRETE SHALL BE ALLOWED TO COOL GRADUALLY. THE MAXIMUM TEMPERATURE DECREASE AT THE CONCRETE SURFACE IN A 24-HOUR PERIOD SHALL NOT EXCEED 40 DEGREES.

EPOXY DOWEL/REBAR INSTALLATION GENERAL NOTES

THE FOLLOWING INFORMATION INCLUDES THE MINIMUM REQUIREMENTS FOR INSTALLATION OF EPOXY DOWELS (POST INSTALLED DOWEL BAR BONDED TO CONCRETE WITH AN EPOXY ADHESIVE DESIGNED FOR SUCH USE). FOLLOW ALL MANUFACTURER'S SPECIFIC REQUIREMENTS FOR INSTALLATION. WHERE CONFLICTS ARISE BETWEEN THE MANUFACTURER'S INSTRUCTIONS AND THE INFORMATION PROVIDED BELOW, THE MANUFACTURER'S INSTRUCTIONS SHALL APPLY. THE EPOXY ADHESIVE SHALL BE A TWO PART EPOXY MEETING THE REQUIREMENTS OF ASTM C881, TYPE IV, GRADE 3, CLASS A, B, C. CLASS A IS FOR USE WHEN THE HARDENED CONCRETE IS BELOW 40° F WITH THE LOWEST ALLOWABLE TEMPERATURE AS DEFINED BY THE MANUFACTURER OF THE PRODUCT. CLASS B IS FOR USE BETWEEN 40° AND 60° F AND CLASS C IS FOR USE ABOVE 60° F WITH THE HIGHEST ALLOWABLE TEMPERATURE AS DEFINED BY THE MANUFACTURER.

1. DRILL HOLE TO REQUIRED DEPTH. GENERALLY 1/16-INCH LARGER IN DIAMETER THAN THE DIAMETER OF THE DOWEL, HOWEVER FOLLOW THE MANUFACTURER'S REQUIREMENTS FOR HOLE SIZE.
2. CONCRETE SHALL BE A MINIMUM OF 21 DAYS OLD PRIOR TO INSTALLATION UNLESS SPECIFICALLY STATED OTHERWISE BY THE MANUFACTURER.
3. HAVE EXTRA DRILL BITS AVAILABLE AS THEY DULL QUICKLY IF THEY ENCOUNTER REBAR OR VERY HARD AGGREGATE.
4. CLEAN HOLE SEVERAL TIMES WITH A BRUSH OF APPROPRIATE DIAMETER AND COMPRESSED AIR. IT GENERALLY TAKES ABOUT 3 REPETITIONS TO REMOVE ALL DUST FROM THE HOLE. AN EXTENSION FOR THE AIR NOZZLE MAY BE NEEDED TO REACH THE BACK OF THE HOLE.
5. INSERT 2-PART EPOXY ADHESIVE PACK INTO APPROPRIATE DISPENSER.
6. INSTALL MIXER NOZZLE TO 2-PART EPOXY ADHESIVE. EXTRA NOZZLES ARE ADVISED SINCE THEY ARE UNUSABLE IF THE MATERIAL HARDENS IN THE NOZZLE.
7. DISCARD THE FIRST AMOUNT DISPENSED UNTIL THE MATERIAL IS WELL MIXED COMING OUT OF THE NOZZLE.
8. INJECT EPOXY ADHESIVE FROM THE BACK OF THE HOLE WITHOUT FORMING AIR VOIDS. SLOWLY WITHDRAW THE MIXER WITH EACH TRIGGER PULL. FILL HOLES APPROXIMATELY 2/3 FULL, OR AS REQUIRED TO ENSURE THAT THE ANNULAR GAP BETWEEN THE DOWEL AND THE CONCRETE IS COMPLETELY FILLED WITH EPOXY ADHESIVE ALONG THE ENTIRE DEPTH OF THE HOLE. AFTER INJECTION IS COMPLETE, DEPRESSURIZE THE DISPENSER TO PREVENT FURTHER DISCHARGE FROM THE MIXER.
9. INSERT CLEAN DOWEL/REBAR INTO HOLE. BE SURE THE DOWEL IS DRY AND FREE OF OIL AND OTHER CONTAMINANTS. TO EASE INSTALLATION, THE DOWELS MAY BE SLOWLY TWISTED AS THEY ARE INSERTED. AFTER INSTALLATION, THE ANNULAR GAP MUST BE COMPLETELY FILLED WITH EPOXY ADHESIVE.
10. OBSERVE THE MANUFACTURER'S GEL TIME, WHICH VARIES ACCORDING TO TEMPERATURE OF THE BASE MATERIAL. MINOR ADJUSTMENTS TO THE DOWEL/REBAR POSITION MAY BE PERFORMED DURING THE GEL TIME.
11. ONCE THE GEL TIME HAS ELAPSED, DO NOT DISTURB THE DOWEL UNTIL THE CURING TIME HAS ELAPSED. DOWELS SHALL BE FIRMLY SUPPORTED DURING THE CURING TIME.
12. APPLY TORQUE AFTER THE CURE TIME HAS PASSED AND THE FIXTURE TO BE ATTACHED HAS BEEN POSITIONED (IF BOLTING ON AN ITEM TO THE DOWEL).

FORM REMOVAL AND CONCRETE REPAIR
(SEE WI CONSTRUCTION SPEC 4.CONCRETE 12/2017)

(1) FORM REMOVAL
(I) FORMS SHALL BE REMOVED WITHOUT DAMAGE TO THE CONCRETE. SUPPORTS SHALL BE REMOVED IN A MANNER THAT PERMITS THE CONCRETE TO TAKE THE STRESSES DUE TO ITS OWN WEIGHT UNIFORMLY AND GRADUALLY. THE MINIMUM PERIOD FROM COMPLETION OF THE CONCRETE PLACEMENT TO THE REMOVAL OF THE FORMS SHALL BE BASED ON EITHER STRENGTH TESTS OR CUMULATIVE TIMES.

- THE STRENGTH OF THE IN-PLACE CONCRETE IS DETERMINED BY TESTING CONCRETE CYLINDERS SPECIFICALLY CAST FOR THIS PURPOSE AND CURED ADJACENT TO THE MEMBER IN ACCORDANCE WITH THE ASTM C 31 METHODS FOR DETERMINING REMOVAL TIME. UNLESS OTHERWISE SPECIFIED, FORMS SUPPORTING THE WEIGHT OF THE CONCRETE MEMBER MAY BE REMOVED AFTER THE CONCRETE STRENGTH IS 70 PERCENT OF THAT SPECIFIED FOR THE 28-DAY COMPRESSIVE STRENGTH.

- THE TOTAL ACCUMULATED TIME, NOT NECESSARILY CONTINUOUS, THAT THE AIR ADJACENT TO THE CONCRETE IS ABOVE 50 DEGREES FAHRENHEIT WILL BE DETERMINED BY THE CONTRACTOR AND ACCEPTED BY THE TECHNICIAN. THE FORMS MAY BE REMOVED AFTER THE TOTAL ACCUMULATED TIME SHOWN IN THE FOLLOWING TABLE:

FORM REMOVAL

FORMS		TIME
SIDE OF SLABS OR BEAMS WITHOUT WATERSTOP		12 HOURS
SIDES OF SLABS OR BEAMS WITH WATERSTOP		16 HOURS
UNDERSIDES OF SLABS OR BEAMS	CLEAR SPAN < 10 FEET	4 DAYS
	10-20 FEET	7 DAYS
	>20 FEET	14 DAYS
SIDES OF WALLS OR COLUMNS	HEIGHT OF FORMS <20FT	24 HOURS
	>20 FEET	72 HOURS

(II) FOR STRUCTURES WHICH ARE NOT REQUIRED TO STORE LIQUID, FORM TIES SHALL BE REMOVED FLUSH WITH OR BELOW THE CONCRETE SURFACE. FOR STRUCTURES WHICH ARE TO BE STORE LIQUID, FORM TIES SHALL BE REMOVED TO A MINIMUM DEPTH OF ½ INCH. ALL CAVITIES OR DEPRESSIONS RESULTING FROM FORM TIE REMOVAL SHALL BE PATCHED IN ACCORDANCE WITH J.(2)(IV).
(III) FORMS SHALL BE REMOVED AND THE CONCRETE INSPECTED BY THE TECHNICIAN BEFORE WALLS ARE BACKFILLED. CONCRETE LOADING SHALL BE IN ACCORDANCE WITH SECTION N, LOADING NEW REINFORCED CONCRETE STRUCTURES.

NOTE:
- CHIPPEWA COUNTY LCFM STAFF TO BE NOTIFIED 48 HOURS PRIOR TO POURING CONCRETE
- ASBUILT CONSTRUCTION DOCUMENTATION REPORT WITH ASBUILT SURVEY TO BE SUBMITTED TO CHIPPEWA COUNTY LCFM

DRAWING PHASE: | DRAWN BY: MJB
X OWNER REVIEW | CHECKED BY: DAM
AGENCY REVIEW | DATE: 10.22.20
BID DOCUMENT | DWG FILE:1289-001 PLANS
FOR CONSTRUCTION | REF FILE: 1289-001 PLANS.DWG
AS-BUILT DOCUMENT | JOB NUMBER:1289-001 PLANS

REVISION DESCRIPTION: | NAME: | DATE:

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A·C/a Auth·Consulting/associates
S&N Land Surveying a division of A·C/a

PROJECT:
GILBERTSON FARMS, INC.
2021 SITE EXPANSION
TOWN OF WHEATON, CHIPPEWA COUNTY, WI

CONSTRUCTION NOTES

Attachment: (G) Gilbertson Farms LLC - Engineering Plans (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

GILBERTSON DAIRY (ESTIMATED EARTHWORK QUANTITIES) DATE: 12/28/2020
(ORIGINAL DESIGN - NEW BARN 1 FT LOWER THEN EXISTING BARN - ELEV. 908.3)

Complete Project Earthwork

CUT/FILL TO F.G.	COMPONENT	CUT	FILL	20% FILL COMPACTION	TOTAL FILL	NET	CUT/FILL
12"	TOPSOIL STRIPPING	15,300 CY	0 CY	0 CY	0 CY	15,300 CY	CUT
F.G.	PROPOSED SITE EXPANSION	28,021 CY	27,948 CY	5,590 CY	33,538 CY	5,517 CY	FILL
6" THICK	GRAVEL FOR ACCESS ROADS	0 CY	1,262 CY	252 CY	1,514 CY	1,514 CY	FILL
12" THICK	TOPSOIL RESPREAD	0 CY	5,845 CY	1,169 CY	7,014 CY	7,014 CY	FILL

Additional Items:

~ THE SITE IS SHORT 5,517 CY OF FILL ONCE COMPACTED.
~THERE IS 8,286 CY OF EXCESS TOP SOIL THAT CAN BE UTILIZED IN WATERWAYS AND WASTE STORAGE OUTER SIDE SLOPES.

GILBERTSON DAIRY (ESTIMATED EARTHWORK QUANTITIES) DATE: 12/28/2020
(NEW BARN RAISED 1 FT - BARNS AT SAME ELEVATION - ELEV. 909.3)

Complete Project Earthwork

CUT/FILL TO F.G.	COMPONENT	CUT	FILL	20% FILL COMPACTION	TOTAL FILL	NET	CUT/FILL
12"	TOPSOIL STRIPPING	15,288 CY	0 CY	0 CY	0 CY	15,288 CY	CUT
F.G.	PROPOSED SITE EXPANSION	27,653 CY	31,247 CY	6,249 CY	37,496 CY	9,843 CY	FILL
6" THICK	GRAVEL FOR ACCESS ROADS	0 CY	1,262 CY	252 CY	1,514 CY	1,514 CY	FILL
12" THICK	TOPSOIL RESPREAD	0 CY	5,829 CY	1,166 CY	6,995 CY	6,995 CY	FILL

GILBERTSON DAIRY (ESTIMATED CONCRETE QUANTITIES)
DATE: 12/22/2020

COMPONENT	AREA (SQFT)
BARN FLOOR CONCRETE	68,650
6" THICK WASTE STORAGE CONCRETE (BOTTOM/RAMP)	42,800
5" THICK WASTE STORAGE CONCRETE (SIDE SLOPES)	29,150

CONCRETE NOTES:

~ ALL AREAS ARE IN SQUARE FEET, AND WERE TAKEN FROM THE SITE PLAN. EXTRA AREA FOR SLOPES WAS NOT ACCOUNTED FOR

ORIGINAL DESIGN WILL BE SHORT 5,517 YD³.

NEW DESIGN (RAISE NEW BARN 1 FT) WILL BE SHORT 9,843 YD³.
IF THE NEW BARN IS RAISED 1 FT (KEEPING BARNS AT THE SAME ELEVATION) IT WILL REQUIRE 4,326 YD³ MORE FILL.

APPROX. PROPERTY LINE

APPROX. PROPERTY LINE

APPROX. PROPERTY LINE

APPROX. PROPERTY LINE

10TH STREET

20TH AVENUE

20TH AVENUE

350' SETBACK FROM PROPERTY LINE

350' SETBACK FROM PROPERTY LINE

350' SETBACK FROM PROPERTY LINE

VEHICULAR TRACKING ENTRANCE
SEE SHEET 6.0

SEE SHEET 3.2

SEE SHEET 3.1

DITCH CHECKS

CULVERT INLET PROTECTION

TOPSOIL STOCKPILE

PROPOSED WASTE STORAGE FACILITY (WSF1)

N=106552.33
E=105699.39

PROPOSED FREESTALL BARN (B3)

EX. FREESTALL BARN (B2)

EX. BARN (B1)

EX. FEEDPAD

EXISTING WASTE COLLECTION TANK UNDER B2

EX. SHED

EX. SHED

EX. SHED

EX. HOUSE

EX. HOUSE

FILL BORROW SITE. SEED AND MULCH WHEN EXCAVATION IS COMPLETE

FILL BORROW SITE. SEED AND MULCH WHEN EXCAVATION IS COMPLETE

SILT FENCE
TURN ENDS UP GRADIENT 1'

LEGEND

- EXISTING 10 FT CONTOURS
- EXISTING 2 FT CONTOURS
- PROPOSED 10 FT CONTOURS
- PROPOSED 2 FT CONTOURS
- WELL LOCATION
- WELL SETBACK
- PROPERTY LINE
- PROPERTY LINE SETBACK
- EXISTING BUILDING OR STRUCTURE
- BENCHMARK
- PROPOSED CONCRETE
- PROPOSED GRAVEL SURFACE
- C.J. = CONTROL JOINT
- 2012 TEST PIT LOCATION
- 2019 TEST PIT LOCATION
- R.O.W = RIGHT OF WAY
- U.N.O = UNLESS NOTED OTHERWISE
- FINISHED GRADE SPOT ELEVATIONS
- SURFACE DRAINAGE DIRECTION
- TOPSOIL STOCKPILE
- APPROXIMATE STOCKPILE LOCATION (STABILIZE THE STOCKPILE WITHIN 1 WEEK)
- SITE FENCE (TURN ENDS UP GRADIENT 1')
- DITCH-CHECK

GENERAL NOTES

1. EXISTING SITE CONDITIONS REFLECTS TOPOGRAPHICAL INFORMATION PROVIDED BY S&N LAND SURVEYING. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS.
2. CONTRACTOR SHALL NOTIFY UTILITIES AND HAVE ALL UTILITIES LOCATED PRIOR TO ANY EXCAVATION.

NORTH

SCALE: 0 50 100 200

DRAWING PHASE:		DRAWN BY: MJB
OWNER REVIEW	X	CHECKED BY: DAM
AGENCY REVIEW		DATE: 10.22.20
BID DOCUMENT		DWG FILE:1289-001 PLANS
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NAME	DATE:	REVISION DESCRIPTION:

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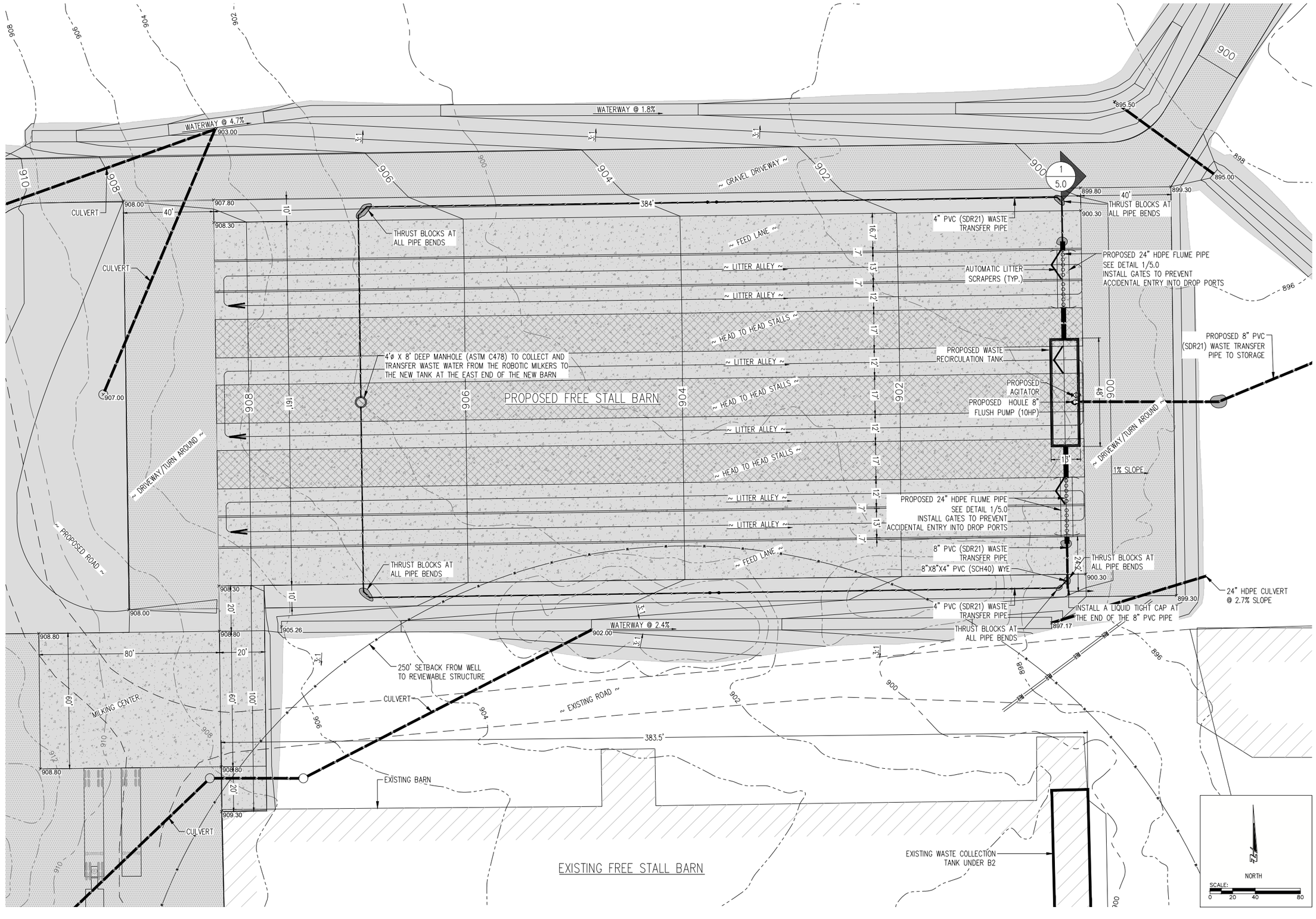
autheconsulting.com

A·C/a
Auth•Consulting/associates
S&N Land Surveying, a division of A C/a

PROJECT:
GILBERTSON FARMS, INC.
2021 SITE EXPANSION
TOWN OF WHEATON, CHIPPEWA COUNTY, WI

OVERALL SITE PLAN/EROSION CONTROL

Attachment: (G) Gilbertson Farms LLC - Engineering Plans (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)



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- AGENCY REVIEW
- BID DOCUMENT
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CHECKED BY: DAM
DATE: 10.22.20
DWG FILE: 1289-001 PLANS
REF FILE: 1289-001 PLANS.DWG
JOB NUMBER: 1289-001 PLANS

DATE:	NAME:	REVISION DESCRIPTION:

CORPORATE OFFICE
406 Technology Drive East
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Menomonie, WI 54751
Tel 715-232-8490
authconsulting.com

BRANCH OFFICE
2820 Kahoe Street
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Hudson, WI 54016
Tel 715-381-5277

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PROJECT:
GILBERTSON FARMS, INC.
2021 SITE EXPANSION
TOWN OF WHEATON, CHIPPEWA COUNTY, WI

BARN SITE PLAN

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WSF LINER

LIQUID TIGHT CONCRETE WITH 5" THICK SIDES AND 6" THICK RAMP & BOTTOM, W/6" PVC WATERSTOP. #4 (GRADE 60) REBAR AT 8" ON CENTER EACH WAY ON SIDE SLOPES. REBAR AT 6" ON CENTER EACH WAY ON RAMP & BOTTOM

SEPARATION DISTANCES:
2.0 FEET TO SUBSURFACE SATURATION
1.5 FEET TO BEDROCK

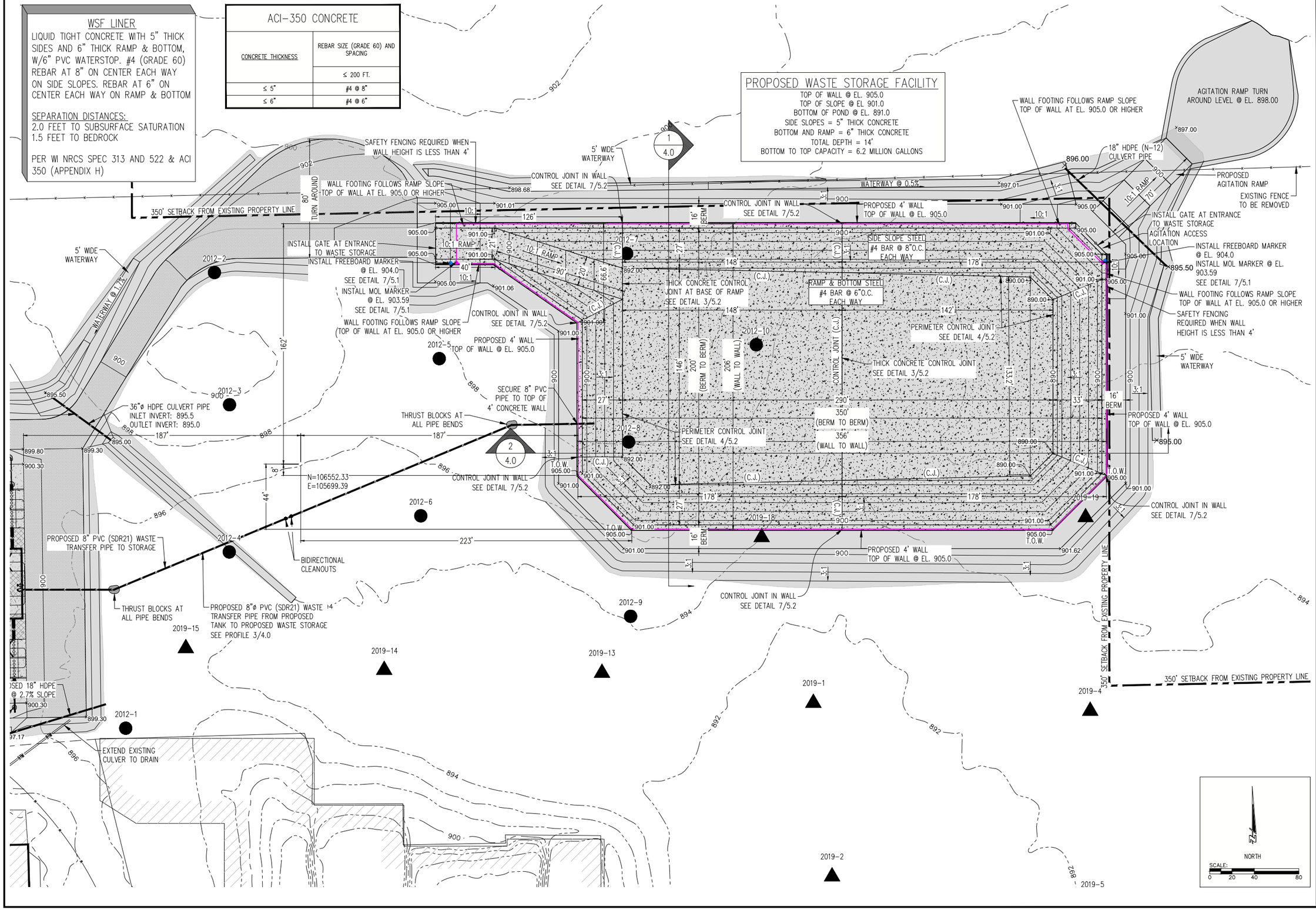
PER WI NRCS SPEC 313 AND 522 & ACI 350 (APPENDIX H)

ACI-350 CONCRETE

CONCRETE THICKNESS	REBAR SIZE (GRADE 60) AND SPACING
	≤ 200 FT.
≤ 5"	#4 @ 8"
≤ 6"	#4 @ 6"

PROPOSED WASTE STORAGE FACILITY

TOP OF WALL @ EL. 905.0
TOP OF SLOPE @ EL 901.0
BOTTOM OF POND @ EL. 891.0
SIDE SLOPES = 5" THICK CONCRETE
BOTTOM AND RAMP = 6" THICK CONCRETE
TOTAL DEPTH = 14'
BOTTOM TO TOP CAPACITY = 6.2 MILLION GALLONS



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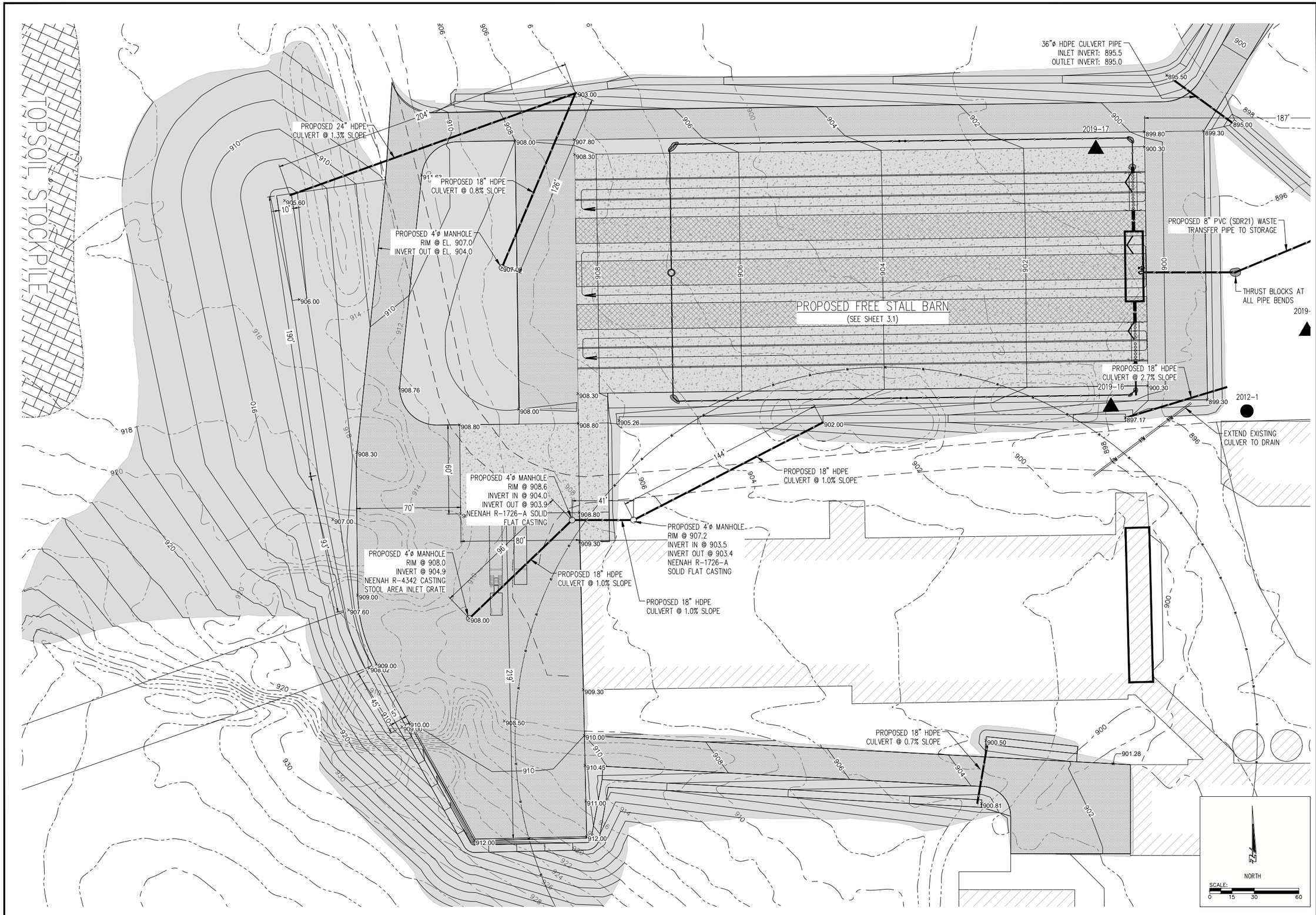
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WASTE STORAGE SITE PLAN

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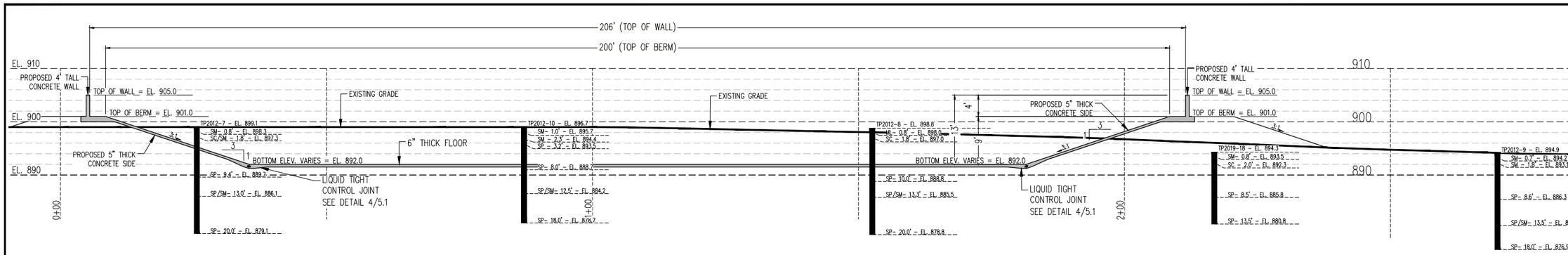
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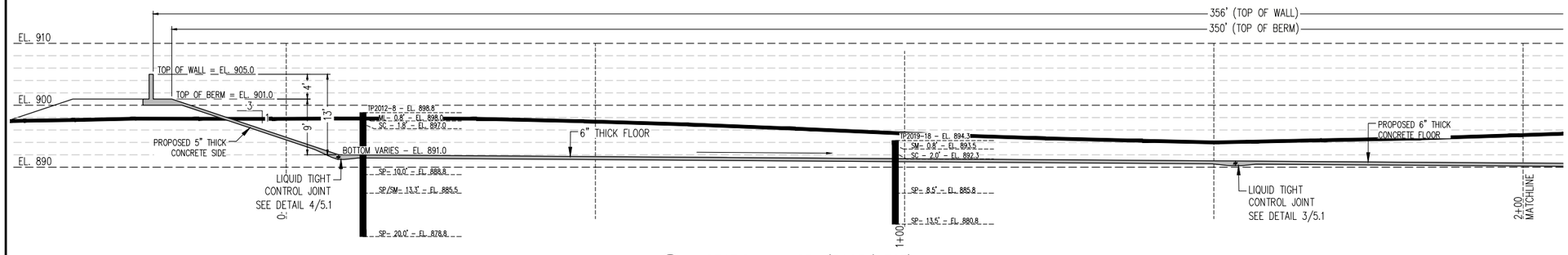
PROJECT:
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2021 SITE EXPANSION
TOWN OF WHEATON, CHIPPEWA COUNTY, WI

DRIVEWAY/STORMWATER SITE PLAN

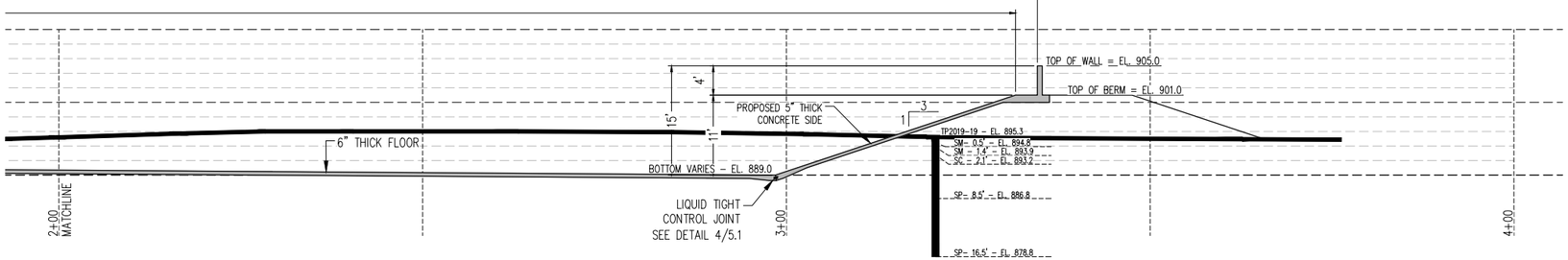
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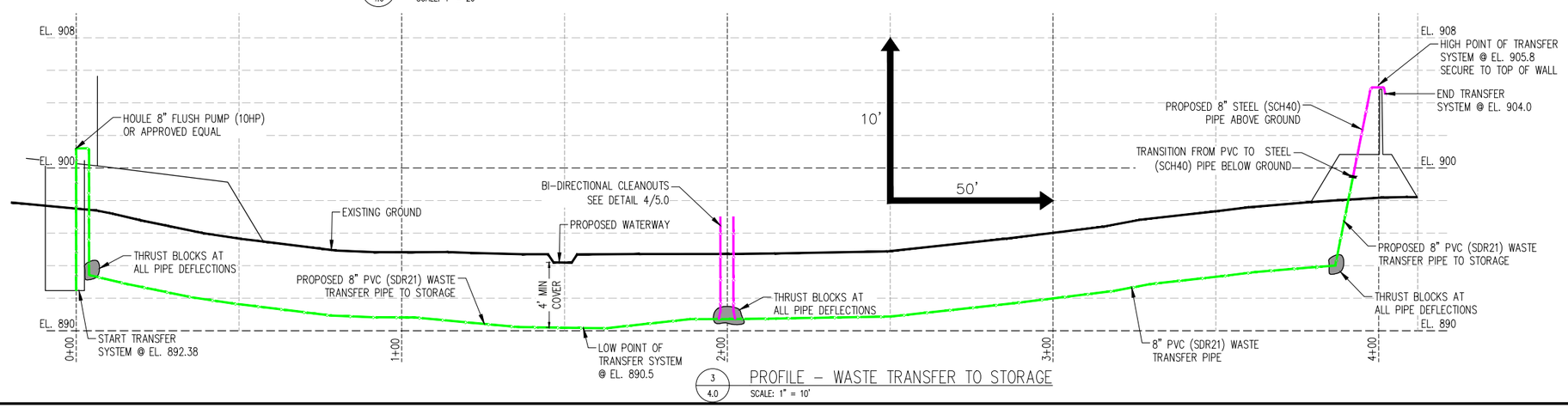
1 / 4.0 SECTION – WSF1 (NORTH/SOUTH)
SCALE: 1" = 20'



2 / 4.0 SECTION – WSF1 (EAST/WEST)
SCALE: 1" = 20'



2 / 4.0 SECTION – WSF1 (EAST/WEST) (CONTINUED)
SCALE: 1" = 20'



3 / 4.0 PROFILE – WASTE TRANSFER TO STORAGE
SCALE: 1" = 10'

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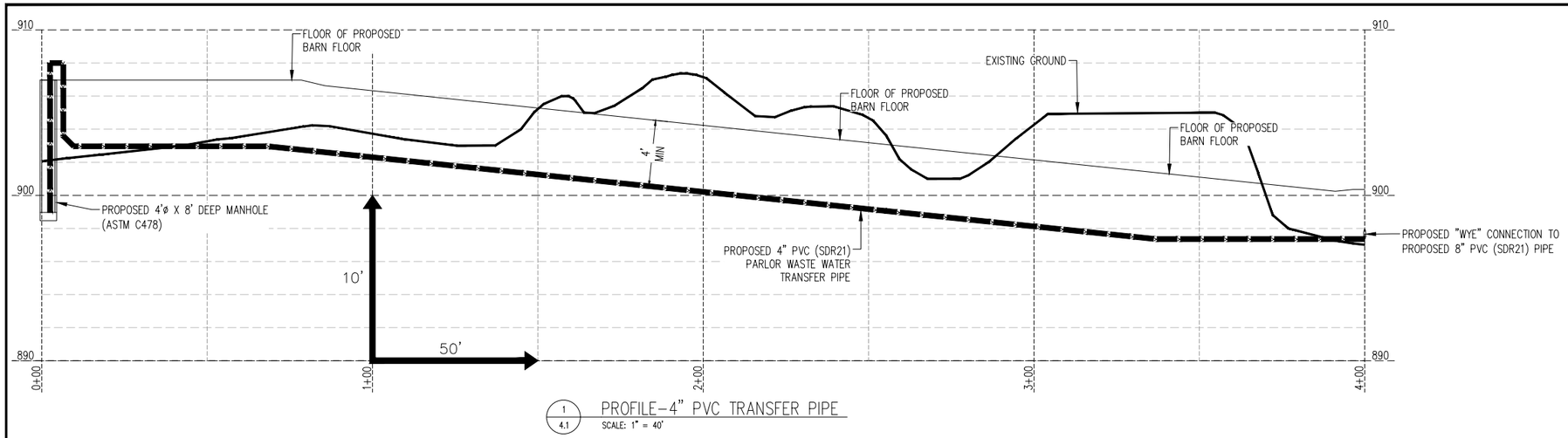
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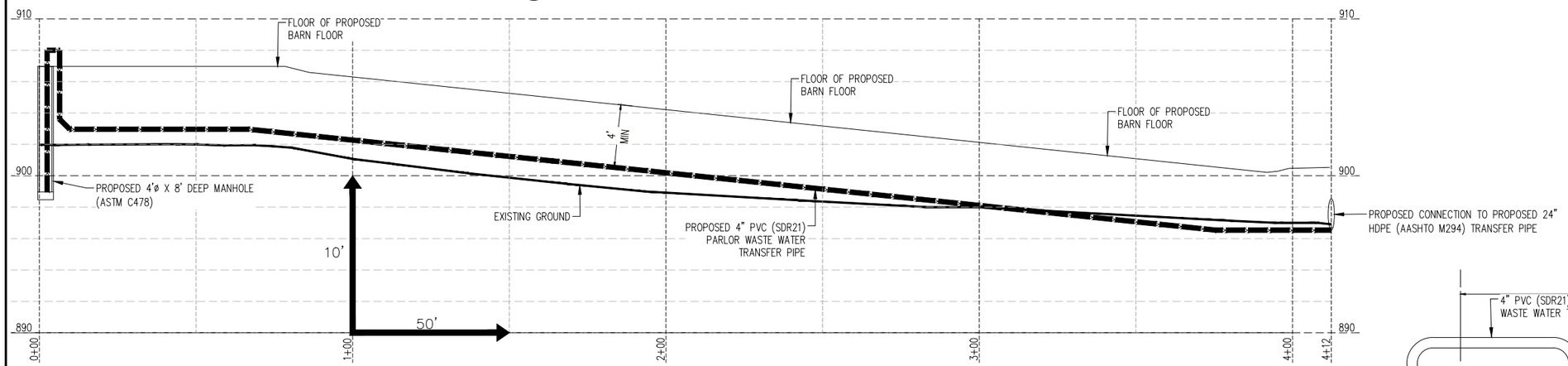
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SECTIONS & PROFILE

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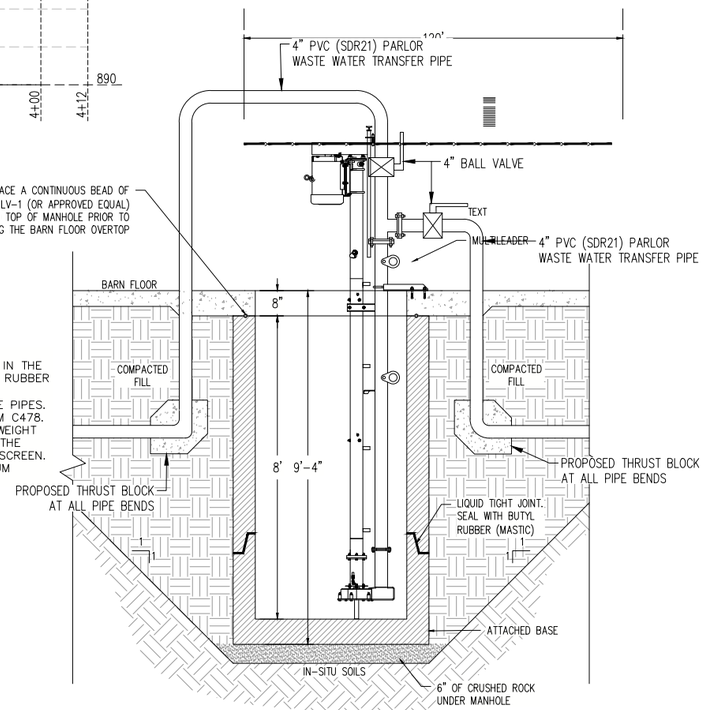


1 / 4.1 PROFILE–4" PVC TRANSFER PIPE
SCALE: 1" = 40'



2 / 4.1 PROFILE–4" PVC TRANSFER PIPE
SCALE: 1" = 40'

NOTE:
- ALL PIPE PENETRATIONS INTO PRECAST TANKS IN THE PROPOSED SAND BUILDING TO BE LIQUID TIGHT RUBBER PSX GASKETS (OR APPROVED EQUAL) TO SEAL BETWEEN ROUND CONCRETE OPENINGS AND THE PIPES.
- PRECAST MANHOLES TO MEET OR EXCEED ASTM C478.
- BEDDING MUST BE CAPABLE OF BEARING THE WEIGHT OF THE TANK. BEDDING MATERIAL MUST HAVE THE ABILITY FOR 100% TO PASS THROUGH ¾ INCH SCREEN. BEDDING THICKNESS MUST BE 4 INCHES MINIMUM COMPACTED.



3 / 4.1 SECTION–PARLOR WASTE WATER MANHOLE
SCALE: 1/4" = 1'

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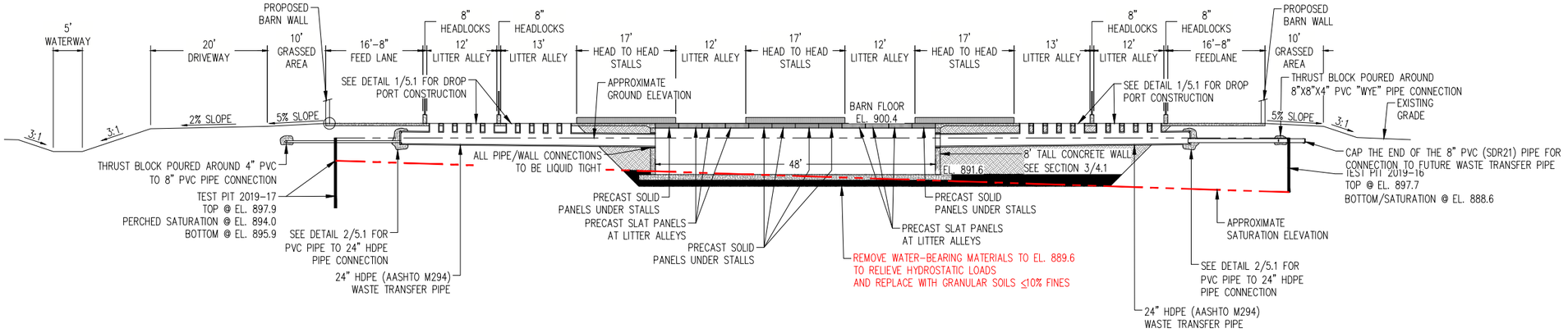
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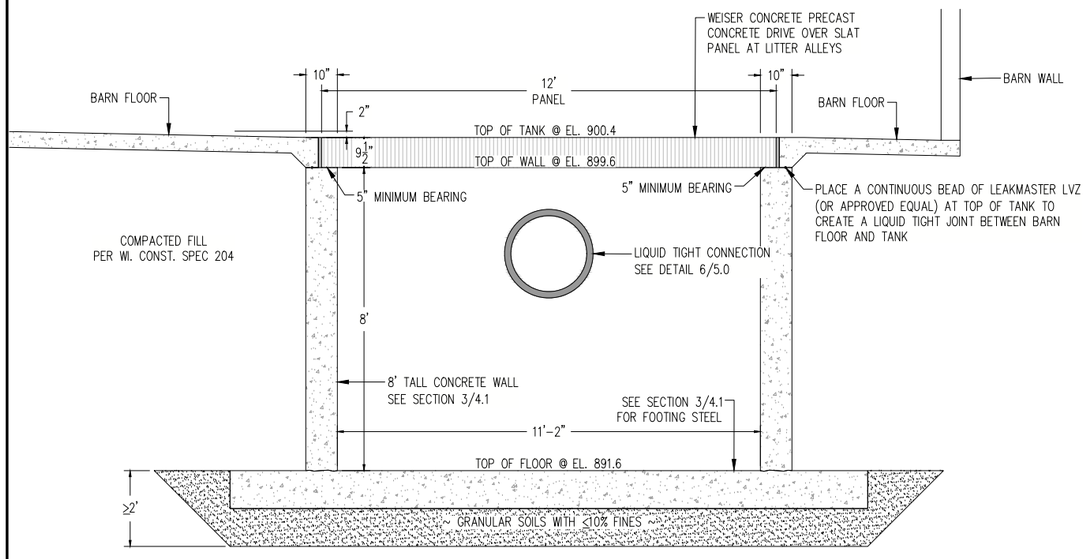
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SECTIONS & PROFILE

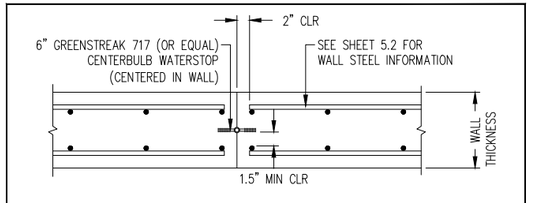
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1 / 5.0 SECTION – WASTE COLLECTION TANK
SCALE: 1/4" = 1'

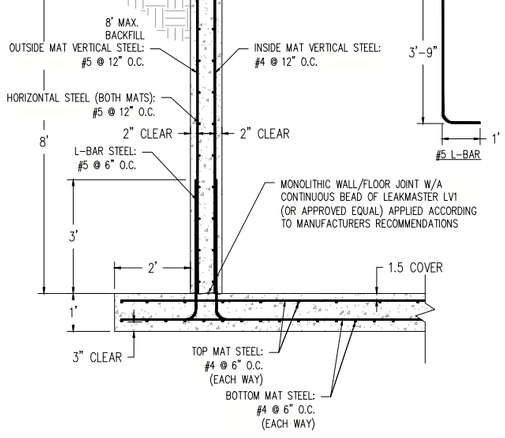


2 / 5.0 SECTION – WASTE COLLECTION TANK
SCALE: 1/4" = 1'

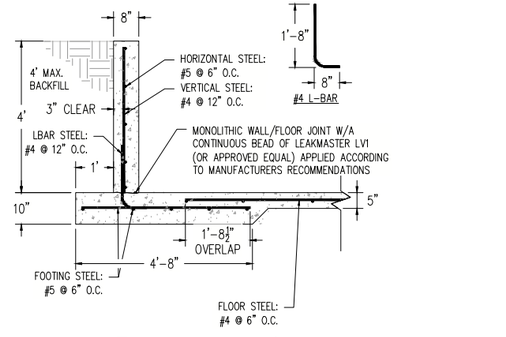


NOTE:
ON VERTICAL WATERSTOPS IN WALL CONTROL JOINTS, IF THERE IS NO EMBEDDED WATERSTOP AT THE WALL BASE, THE WALL JOINT WATERSTOP SHALL BE CAST 4 INCHES INTO THE FOOTING. IF THERE IS AN EMBEDDED WATERSTOP BETWEEN THE FOOTING AND THE BOTTOM OF THE WALL, THE WALL JOINT WATERSTOP SHALL BE WELDED TO A FACTORY FABRICATED INTERSECTION AT THE BASE OF THE WALL.

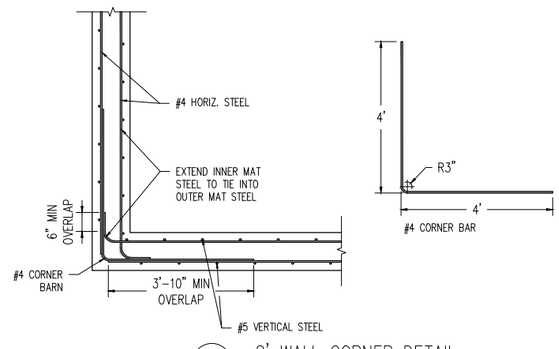
7 / 5.0 VERTICAL WALL WATERSTOP CONTROL JOINTS



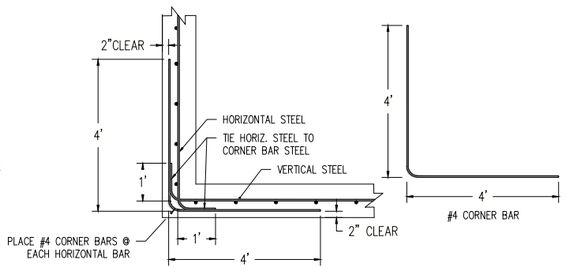
3 / 5.0 SECTION – 8' WALL
SCALE: 1/4" = 1'



4 / 5.0 SECTION – 4' WALL
SCALE: 1/4" = 1'



5 / 5.0 8' WALL CORNER DETAIL
SCALE: 1/4" = 1'



6 / 5.0 4' WALL CORNER DETAIL
SCALE: 1/4" = 1'

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							NAME:
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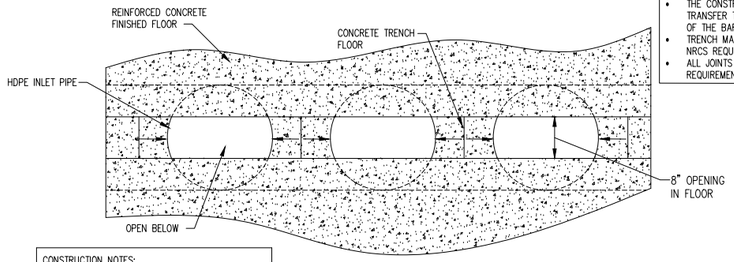
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SECTIONS & DETAILS

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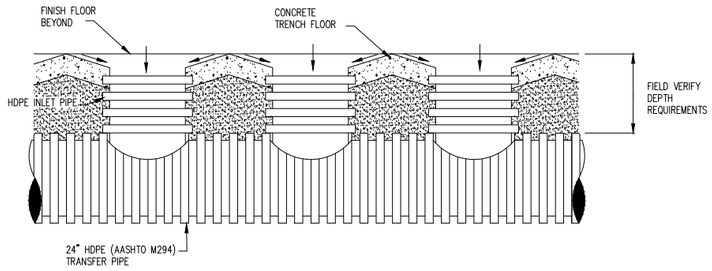


NOTES:
- SEAL ALL HDPE/CONCRETE CONNECTIONS WITH LEAKMASTER LVZ OR APPROVED EQUAL.
- THE CONSTRUCTION REQUIREMENTS FOR THE MANURE MANIFOLD TRANSFER TRENCH ARE DETERMINED BY THE CONCRETE ELEVATIONS OF THE BARN FLOOR AND INVERT OF THE MANURE TRENCH.
- TRENCH MANIFOLD ASSEMBLY FACTORY CONSTRUCTED TO EXCEED NRCS REQUIREMENTS.
- ALL JOINTS ARE FACTORY WELDED & EXCEED 10.8 PSI JOINT REQUIREMENTS.

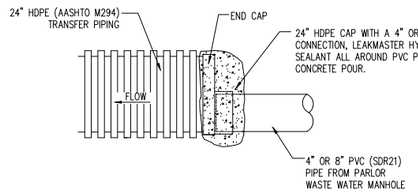
CONSTRUCTION NOTES:
1. NUMBER OF POURS IS CONTRACTORS OPTION.
2. PIPE MUST BE HELD DOWN TO RESIST FLOTATION.
3. PIPE OPENING MAY BE CUT BEFORE OR AFTER CONCRETE IS POURED.

PLAN VIEW

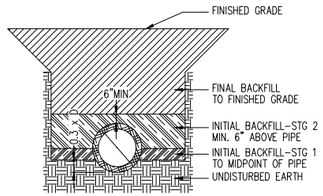
INSTALL GATING AROUND DROP PORTS TO PREVENT ACCIDENTAL ENTRY



1/5.1 DETAIL – DROP PORTS IN 24" HDPE PIPE

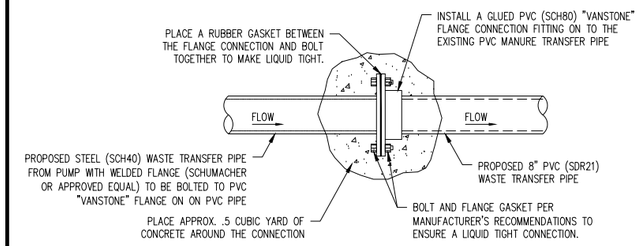


2/5.1 DETAIL – PIPE CONNECTION TO 24" HDPE PIPE

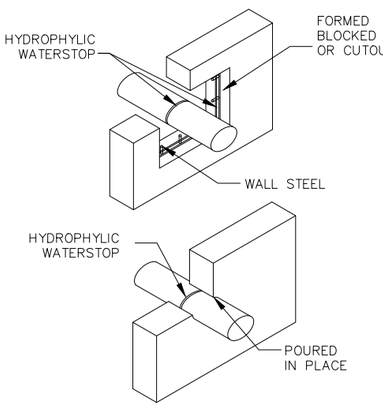


NOTES:
1. COMPACTED EARTH SHALL BE BE FREE OF ROCKS > 1" DIAM AND EARTH CLODS >2" DIAM.
2. EARTH BEDDING SHALL BE COMPACTED TO A DENSITY NOT LESS THAN ADJACENT UNDISTURBED MATERIAL.
3. PIPE SHALL BE LOADED DURING COMPACTION TO PREVENT DISPLACEMENT FROM PLANNED ALIGNMENT.
4. INITIAL BACKFILL SHALL BE FREE OF ROCK OR CLODS > 1" DIAM.
5. FINAL BACKFILL AND MATERIAL WITHIN 2' ABOVE THE TOP OF THE PIPE SHALL NOT CONTAIN ROCKS OR CLODS > 3" DIAM.
6. BACKFILL SHALL BE COMPACTED BY MEANS OF MANUALLY DIRECTED POWER TAMPERS OR PLATE VIBRATORS OR HAND TAMPING IN 6" LIFTS TO 95% STANDARD PROCTOR DENSITY

5/5.1 DETAIL – PIPE BEDDING



9/5.1 PVC TO STEEL PIPE CONNECTION
N.T.S.



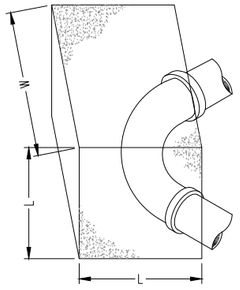
CONSTRUCTION NOTES
1. THESE JOINT DRAWINGS ARE TO BE ADAPTED TO A SPECIFIC STRUCTURE OR SYSTEM.
2. WATERSTOP DIMENSIONS SHALL BE BASED ON MANUFACTURER'S REQUIREMENTS FOR MINIMUM COVER.
3. THE WATERSTOP SHALL BE APPLIED TO EVEN SURFACES, FREE OF DIRT, OIL, OR LAITANCE.
4. THE WATERSTOP MUST BE BONDED TO THE CONCRETE AND/OR PIPE PRIOR TO PLACEMENT OF ADJOINING CONCRETE.
5. THE MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE FOLLOWED FOR WATERSTOP SPLICING AND ADDITIONAL INSTALLATION REQUIREMENTS.

6/5.1 LIQUID TIGHT PIPE PENETRATIONS
N.T.S.

PIPE DIAM (IN)	BEND ANGLE (DEG)	CONC VOL (CY)	L (IN)	W (IN)
12	45	0.25	28	15
12	90	0.47	28	28
12	45	1.5	28	30
12	90	1.9	28	40

ELBOW

3/5.1 THRUST BLOCK DETAIL

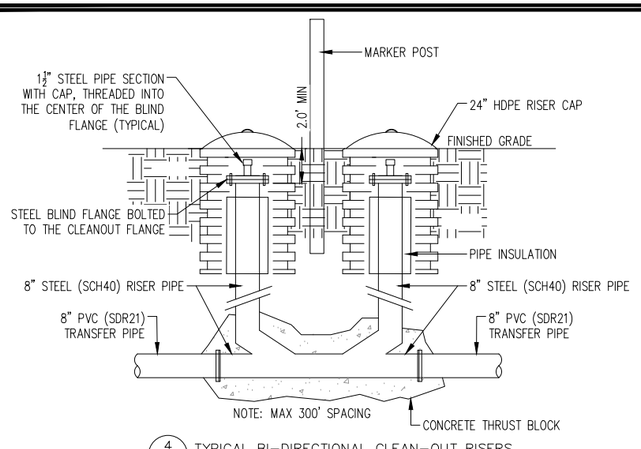


NOTES:

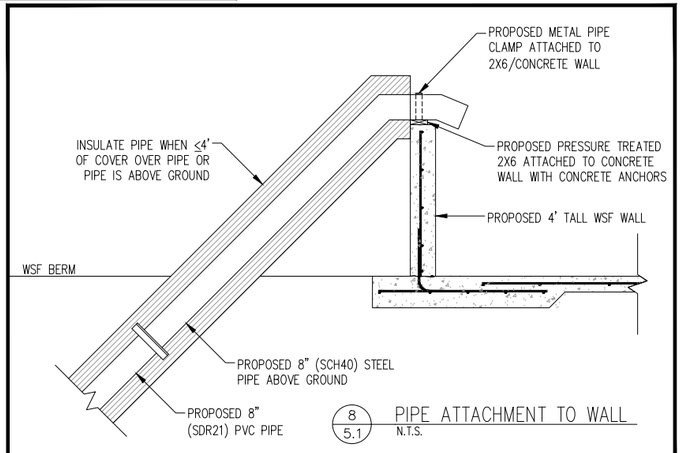
A= MINIMUM BEARING AREA REQUIRED. (W x L)

THRUST BLOCKS SHALL:
- BE CAST IN PLACE
- EXTEND CONCRETE 8" BELOW THE BOTTOM AND ABOVE THE TOP OF PIPE. MIN. LENGTH = PIPE DIAMETER + 16 INCHES
- BE PLACED AGAINST UNDISTURBED OR COMPACTED TRENCH WALL.
- MINIMUM COMPRESSIVE STRENGTH 3500 PSI CONCRETE.

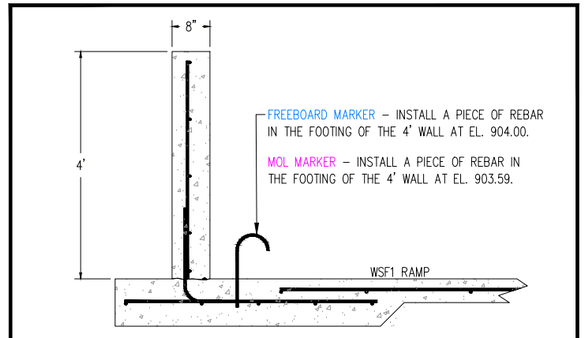
IT IS NOT NECESSARY TO FORM THRUST BLOCKS



4/5.1 TYPICAL BI–DIRECTIONAL CLEAN–OUT RISERS



8/5.1 PIPE ATTACHMENT TO WALL
N.T.S.



7/5.1 MOL MARKER
N.T.S.

		NAME	DATE:
		REVISION DESCRIPTION:	

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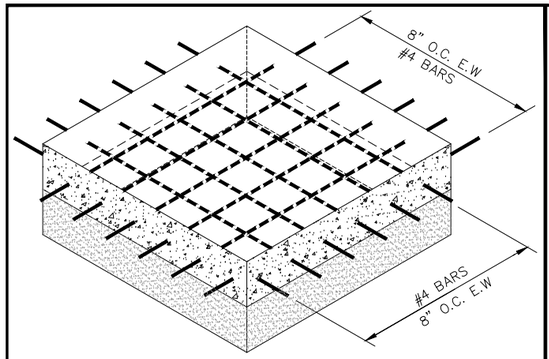
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Auth•Consulting/associates
S&N Land Surveying a division of A C/a

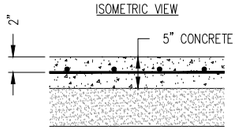
PROJECT:
GILBERTSON FARMS, INC.
2021 SITE EXPANSION
TOWN OF WHEATON, CHIPPEWA COUNTY, WI

SECTIONS & DETAILS

2021-0007 Gilbertson Farms LLC - Conditional Use Request)
Attachment: (G) Gilbertson Farms LLC - Engineering Plans (6320 : 2021-0007



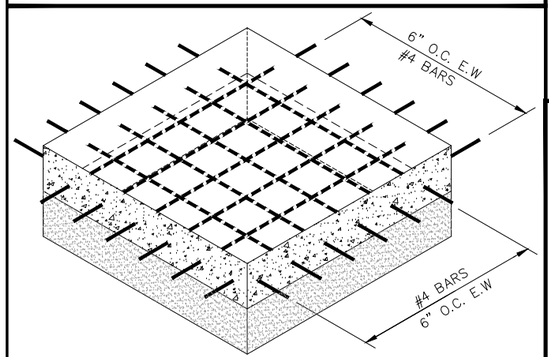
ISOMETRIC VIEW



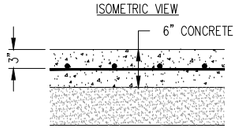
CROSS-SECTION

NOTES:
1. BAR SPLICES SHALL BE 21 INCHES MINIMUM
2. ALL REBAR TO BE GRADE 60

1 / 5.2 5" THICK CONCRETE SLAB REINFORCEMENT (SIDE SLOPES)



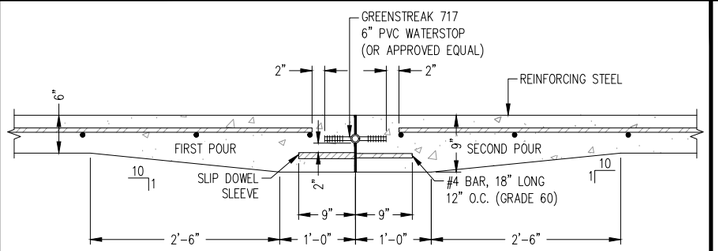
ISOMETRIC VIEW



CROSS-SECTION

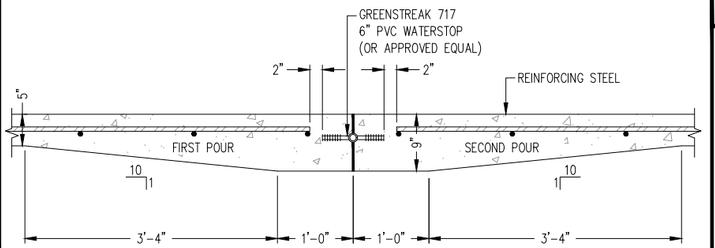
NOTES:
1. BAR SPLICES SHALL BE 21 INCHES MINIMUM
2. ALL REBAR TO BE GRADE 60

2 / 5.2 6" THICK CONCRETE SLAB REINFORCEMENT (FLOOR & RAMP)



NOTES: SLAB THICKNESS AT THE JOINT MUST BE AT LEAST 9" THICK.
WATERSTOP SHALL BE EMBEDDED A MIN 3" INTO CONCRETE

3 / 5.2 PVC WATERSTOP JOINT IN 6" THICK CONCRETE RAMP & FLOOR



NOTES: SLAB THICKNESS AT THE JOINT MUST BE AT LEAST 9" THICK.
WATERSTOP SHALL BE EMBEDDED A MIN 3" INTO CONCRETE

4 / 5.2 PVC WATERSTOP JOINT IN 5" THICK CONCRETE SIDE SLOPES

SAFETY SIGNS ARE TO BE PLACED AT ALL ENTRY POINTS AND AT A TYPICAL SPACING OF APPROXIMATELY 200' AROUND WASTE STORAGE FACILITY.

THE FOLLOWING SIGNS COULD BE UTILIZED:

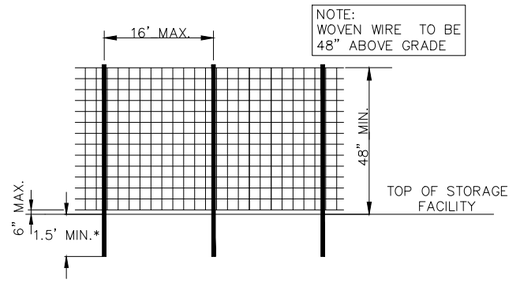
14"x10" HIGH-DENSITY .055 GAUGE POLYETHYLENE GEMPLER'S ITEM #219080 OR APPROVED EQUIVALENT.

DANGER/PELIGRO
CONFINED SPACE
ESPACIO LIMATADO

10"x14" HIGH-DENSITY .055 GUAGE POLYETHYLENE GEMPLER'S ITEM #219141 OR APPROVED EQUIVALENT.

DANGER
LIQUID MANURE STORAGE
PELIGRO
ALMACENAJE DE ESTIERCOL LIQUIDO

5 / 5.2 SIGNAGE

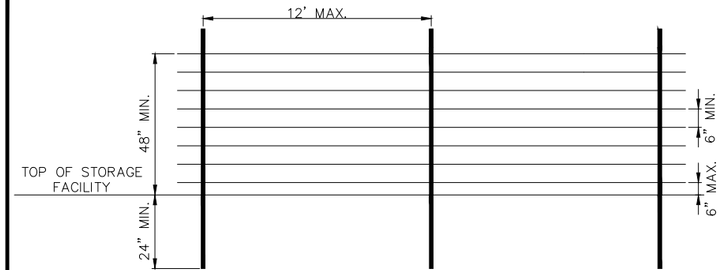


SEE WISCONSIN NRCS CONSTRUCTION SPECIFICATION, (10 FENCES), FOR ADDITIONAL FENCING REQUIREMENTS.

WOVEN WIRE SAFETY FENCE DETAIL

N.T.S.

NOTES:
1. WOOD POSTS ARE TO BE TREATED PINE (MIN. 4" DIA.) ACCORDING TO CONSTRUCTION SPEC 10 FENCE.
2. STEEL POSTS TO BE AT LEAST 1.375"x1.375x0.125" THICK HOT ROLLED CARBON STEEL. THEY SHALL BE PAINTED, ENAMELED AND BAKED; OR THEY MAY BE HOT DIP GALVANIZED. THEY SHALL BE STUDDED TO AID IN WIRE ATTACHMENT.
3. STEEL POSTS TO HAVE MINIMUM LENGTH OF 6.0' WITH A MINIMUM DEPTH OF 1.5.
4. WOOD POSTS TO HAVE MINIMUM LENGTH OF 7.0' WITH A MINIMUM DEPTH OF 2'
5. STANDARD WOVEN WIRE FENCE SHALL MEET NRCS WI SPECIFICATION AND ASTM STANDARD A 116.
6. TOP AND BOTTOM WIRES IN WOVEN WIRE TO BE 10 GAUGE OR HEAVIER.
7. INTERMEDIATE WOVEN WIRE TO BE 14 GAUGE OR HEAVIER.
8. FASTENERS FOR WOOD POSTS TO BE 9-GUAGE, CLASS 3 GALVANIZED STEEL STAPLES. THEY MUST BE 1.75" LONG FOR PINE POSTS OR 1" FOR OAK POSTS.
9. FASTENERS FOR STEEL POSTS TO BE 14-GAUGE, CLASS 3 GALVANIZED WIRE.
10. ADDED BARBED WIRE IS TO BE TWO TWISTED STRANDS OF 12 ½ GAUGE OR HEAVIER. BARBS TO BE 14 GAUGE OR HEAVIER AND ON APPROXIMATELY 5" CENTERS.
11. EVERY HORIZONTAL WIRE TO BE FASTENED TO EACH VERTICAL POST.
12. FENCING TO BE ON OUTSIDE OF POSTS ALONG CURVES AND AREAS BEING PROTECTED.
13. FENCE SHALL NOT ALLOW PASSAGE OF A 6" SPHERE BETWEEN ANY FENCE MEMBER.



HIGH TENSILE WIRE SAFETY FENCE DETAIL

N.T.S.

SEE WISCONSIN NRCS CONSTRUCTION SPECIFICATION, (10 FENCES), FOR ADDITIONAL FENCING REQUIREMENTS.

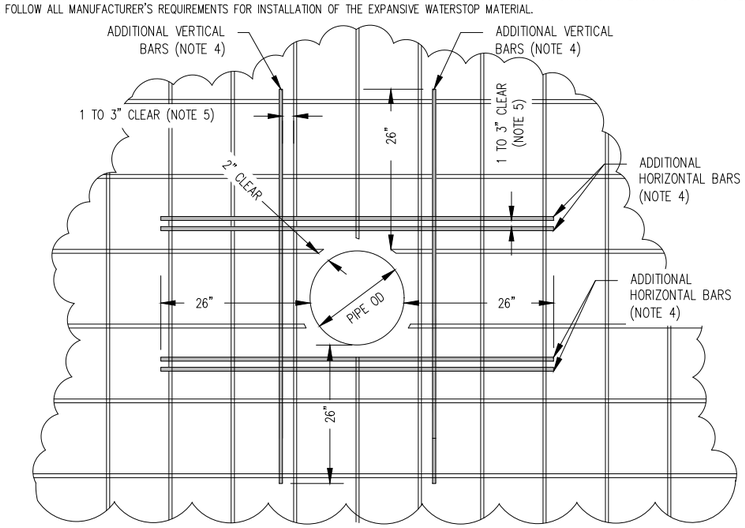
GENERAL FENCING NOTES:
1. WOOD POSTS ARE TO BE TREATED PINE (MIN. 4" DIA.) ACCORDING TO CONSTRUCTION SPEC 10 FENCE.
2. STEEL POSTS TO BE AT LEAST 1.375"x1.375x0.125" THICK HOT ROLLED CARBON STEEL. THEY SHALL BE PAINTED, ENAMELED AND BAKED. OR THEY MAY BE HOT DIP GALVANIZED THEY SHALL BE STUDDED TO AID IN WIRE ATTACHMENT.
3. HIGH TENSILE PERMANENT (NON ELECTRIC) WIRE TO MEET ASTM A 854. IT SHALL BE GALVANIZED SMOOTH HIGH TENSILE CLASS III STEEL, MIN. OF 12.5-GAUGE WITH A TYPE 1 ZINC COATING (GALVANIZED)
4. FASTENERS FOR WOOD POSTS TO BE 9-GUAGE, CLASS 3 GALVANIZED STEEL STAPLES. THEY MUST BE 1.75" LONG FOR PINE POSTS OR 1" FOR OAK POSTS.
5. FASTENERS FOR STEEL POSTS TO BE 14-GAUGE, CLASS 3 GALVANIZED WIRE.
6. EVERY WIRE IS TO BE FASTENED TO EACH VERTICAL POST.
7. FENCING TO BE ON OUTSIDE OF POSTS ALONG CURVES AND AREAS BEING PROTECTED.
8. FENCE SHALL NOT ALLOW PASSAGE OF A 6" SPHERE BETWEEN ANY FENCE MEMBER.
9. STEEL POSTS TO HAVE MINIMUM LENGTH OF 6.0' WITH A MINIMUM DEPTH OF 1.5'.
10. WOOD POSTS TO HAVE MINIMUM LENGTH OF 7.0' WITH A MINIMUM DEPTH OF 2'.

6 / 5.2 FENCING

PIPE PENETRATION DETAIL
PIPE INVERT GREATER THAN 24" ABOVE FOOTING

CONSTRUCTION NOTES:

1. THIS DETAIL IS DESIGNED FOR THE PIPE TO BE CAST IN THE WALL AT THE TIME OF CONSTRUCTION. PIPE MATERIALS SHALL MEET THE REQUIREMENTS OF WISCONSIN NRCS PRACTICE STANDARD 634 "WASTE TRANSFER". PIPE SHALL NOT BE OF ALUMINUM MATERIALS.
2. PIPE PENETRATION SHALL BE NO CLOSER THAN 24" FROM TANK CORNER.
3. PROVIDE 2" CLEAR FROM THE END OF ALL CUT BARS AND OUTSIDE OF PIPE.
4. FOR EACH BAR THAT IS CUT, PROVIDE AN ADDITIONAL BAR OF THE SAME SIZE ON EACH SIDE OF OPENING. FOR THE DETAIL BELOW, 2 HORIZONTAL BARS ARE CUT AND THEREFORE, 2 HORIZONTAL BARS ARE ADDED BOTH ABOVE AND BELOW THE OPENING. LIKEWISE, ONE VERTICAL BAR IS CUT, SO ONE VERTICAL BAR IS ADDED ON EACH SIDE OF THE OPENING. DEPENDING ON THE EXACT LOCATION AND SIZE OF THE OPENING, THE NUMBER OF ADDITIONAL BARS WILL VARY.
5. REBAR CLEARANCE: MINIMUM 2" CLEAR FROM OPENING AND 1" TO 3" CLEAR BETWEEN EXTRA BARS.
6. ADDITIONAL BARS SHALL BE IN SAME PLANE AS REMAINING WALL STEEL.
7. FOR WALLS WITH 2 CURTAINS OF REINFORCING STEEL, THE EXTRA BARS APPLY TO THE STEEL AT BOTH FACES OF THE WALL.
8. CONSULT PUMP SUPPLIER FOR EXACT REQUIRED LOCATION OF ALL PIPE PENETRATIONS.
9. PROVIDE AN EXPANSIVE WATERSTOP AROUND THE PIPE IN ACCORDANCE WITH WISCONSIN STANDARD DRAWING WI-501 AND WISCONSIN CONSTRUCTION SPECIFICATION 004-WS "EMBEDDED OR EXPANSIVE WATERSTOP". FOLLOW ALL MANUFACTURER'S REQUIREMENTS FOR INSTALLATION OF THE EXPANSIVE WATERSTOP MATERIAL.



7 / 5.2 PIPE PENETRATION > 26" OF FOOTING

DRAWING PHASE:
- X OWNER REVIEW
- AGENCY REVIEW
- BID DOCUMENT
- FOR CONSTRUCTION
- AS-BUILT DOCUMENT

DRAWN BY:
CHECKED BY: DAM
DATE: 10.22.20
DWG FILE: 1289-001 PLANS
REF FILE: 1289-001 PLANS.DWG
JOB NUMBER: 1289-001 PLANS

DATE:	NAME:	REVISION DESCRIPTION:

CORPORATE OFFICE
400 Technology Drive East
Suite A
Menomonie, WI 54751
Tel 715-232-8490

BRANCH OFFICE
2820 Kinne Street
Suite 101
Hudson, WI 54016
Tel 715-381-5277

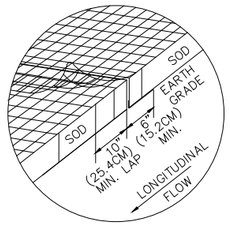
authconsulting.com

A·C/a
Auth·Consulting/associates
S&N Land Surveying, a division of A·C/a

PROJECT:
GILBERTSON FARMS, INC.
2021 SITE EXPANSION
TOWN OF WHEATON, CHIPPEWA COUNTY, WI

SECTIONS & DETAILS

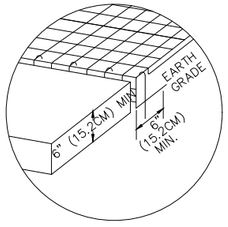
Attachment: (G) Gilbertson Farms LLC - Engineering Plans (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)



JUNCTION SLOT
SOD ONLY

DETAIL A

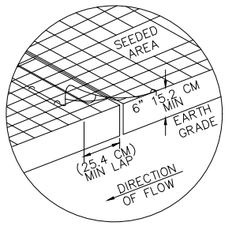
N.T.S.



ANCHOR SLOT
AT BEGINNING AND END OF EROSION MAT

DETAIL B

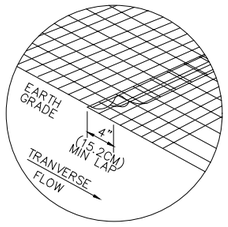
N.T.S.



JUNCTION SLOT
SEED ONLY

DETAIL C

N.T.S.



LAP JOINT
SEED AND SOD

DETAIL D

N.T.S.

GENERAL NOTES EROSION MAT

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

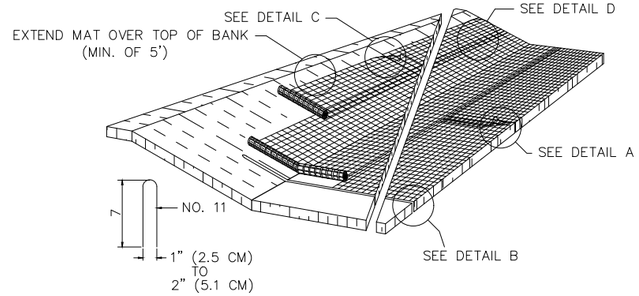
LAP JOINTS SHALL NOT BE PLACED IN THE BOTTOM OF V-SHAPED DITCHES.

JUNCTION SLOTS ON ADJACENT STRIPS OF MATTING SHALL BE STAGGERED A MINIMUM OF 4 FEET (1.219 m) APART.

EDGES OF THE EROSION MAT SHALL BE IMPRESSED IN THE SOIL.

EROSION MAT OVER SEEDING JUNCTION OR ANCHOR SLOTS SHALL BE AT MINIMUM INTERVALS OF 50 FEET.

STAPLE INSTALLATION AND PATTERNS SHALL COMPLY WITH EROSION MAT MANUFACTURER'S SPECIFICATIONS.



DETAIL OF TYPICAL STAPLE

* 6" (15.2 CM MIN. FOR LOOSE SOILS)
12" (30.5 CM MIN FOR LOOSE SOILS)
8" (20.3 CM MIN WHERE BOTH SOD AND MATS ARE BEING USED)

SEEDING REQUIREMENTS:

SEEDING DATES — CENTRAL ZONE

TIME PERIOD	DATES	TYPE OF SEEDING
SPRING	APRIL 15–JUNE 1	PERMANENT
SUMMER	JUNE 2–JULY 31	TEMPORARY*
LATE SUMMER	AUGUST 1–AUGUST 21	PERMANENT
FALL	AUGUST 22–NOVEMBER 1	TEMPORARY*
LATE FALL	NOVEMBER 1–SNOW COVER	DORMANT
WINTER	NO SNOW COVER–APRIL 14	FROST SEED

MATERIALS

APPLY 80–85 LIME AT THE RATE OF 2 TONS PER ACRE. APPLY 150 POUNDS PER ACRE OF 20–10–10 FERTILIZER. MULCH WITH 1 ½ TONS PER ACRE OF STRAW OR HAY REASONABLY FREE FROM GRAIN AND WEED SEED. IF OTHER MULCH MATERIALS ARE USED, THE RATE OF APPLICATION SHALL MEET THE MANUFACTURER'S RECOMMENDATIONS. *SEED A TEMPORARY COVER CROP OF OATS AT A RATE OF 96 POUNDS PER ACRE. A PERMANENT SEEDING SHALL BE COMPLETED DURING THE NEXT ACCEPTABLE TIME PERIOD FOLLOWING A TEMPORARY SEEDING.

MINIMUM PURE LIVE SEED (PLS)** RATE PER ACRE AND TOTAL POUNDS OF SEED NEEDED

SPECIES	RATE (LB/ACRE)
SMOOTH BROMEGRASS	30.0
ALFALFA	14.0

** PLS=(% GERMINATION x % PURITY)

SEEDBED PREPARATION

DURING THE RECOMMENDED SEEDING PERIODS, SEEDBED PREPARATION SHALL IMMEDIATELY FOLLOW CONSTRUCTION ACTIVITIES. PREPARE A FINE, FIRM SEEDBED TO A MINIMUM DEPTH OF 3 INCHES.

SEEDING

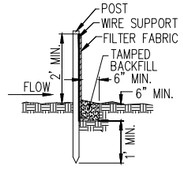
INOCULATE LEGUMES WITH THE SPECIFIC INOCULUM FOR THE SPECIES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHEN USING A HYDROSEEDER, FIVE TIMES THE RECOMMENDED RATE OF INOCULANT SHALL BE ADDED TO THE HYDROSEEDER. INOCULANT SHALL NOT BE MIXED WITH LIQUID FERTILIZER. SEED GRASSES AND LEGUMES NO MORE THAN ¼ INCH DEEP. SEED MAY BE BROADCAST OR DRILLED AS APPROPRIATE TO THE SITE. SEEDING SHALL BE DONE PRIOR TO MULCHING, EXCEPT FOR DORMANT SEEDINGS.

MULCHING

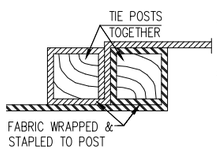
SPREAD MULCH UNIFORMLY. STRAW AND HAY SHALL BE APPLIED AT 1 ½ TO 2 TONS (60–70 BALES) PER ACRE (6–7 STRANDS THICK). STRAW MULCH SHALL BE ANCHORED INTO THE SOIL APPROXIMATELY 2–3" USING A SERRATED DISK. MULCH MAY ALSO BE ANCHORED USING LIQUID TACKIFIERS OR NETTING INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. BEDDING PACK ANIMAL MANURE MAY ALSO BE USED AS MULCH.

DORMANT SEEDING–MULCHING SHALL BE DONE PRIOR TO SEEDING AND IMMEDIATELY AFTER SEEDBED PREPARATION.

STANDARD INSTALLATION



NOTES:
1. MIN. 2"x4" 4' LONG POST TO BE SPACED AT A MAX. OF 8'.
2. WIRE SUPPORT TO BE 14 GAGE MIN. WOVEN WIRE WITH MAX. MESH SPACING OF 6".
3. FILTER FABRIC TO BE MIRAFI 100 OR EQUAL.
4. POSTS DAMAGED ON DRIVING SHALL BE REPLACED.
5. EROSION CONTROL SHALL BE MAINTAINED DAILY.

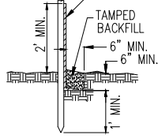


DETAIL FOR JOINING SECTIONS

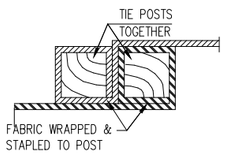
EROSION FENCE WITH WIRE MESH SUPPORT

N.T.S.

STANDARD INSTALLATION



NOTES:
1. MIN. 2"x2" POST TO BE SPACED AT A MAX. OF 5'.
2. FILTER FABRIC TO BE MIRAFI 100 OR EQUAL.
3. POSTS DAMAGED ON DRIVING SHALL BE REPLACED.
4. EROSION CONTROL SHALL BE MAINTAINED DAILY.



DETAIL FOR JOINING SECTIONS

DETAIL FOR INSTALLATION OF EROSION FENCE

N.T.S.

GENERAL NOTES SILT FENCE

DETAIL OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

WHEN POSSIBLE THE SILT FENCE SHOULD BE CONSTRUCTED IN AN ARC OR HORSESHOE SHAPE. WITH THE ENDS POINTING UPSLOPE TO MAXIMIZE BOTH STRENGTH AND EFFECTIVENESS.

CROSS BRACE WITH 2"x4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS AS DIRECTED BY THE EINGINEER.

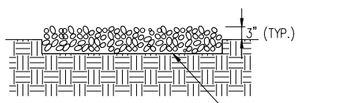
① MINIMUM 14 GAGE WIRE REQUIRED, FOLD FABRIC 3" OVER THE WIRE AND STAPLE OF PLACE WIRE RINGS ON 12" C-C.

② EXCAVATE A TRENCH A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1–1/8"x1–1/8" OF OAK OR HICKORY.

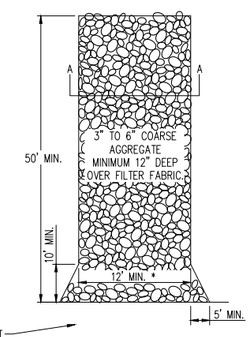
EROSION CONTROL MAT

N.T.S.



SECTION A–A

N.T.S.

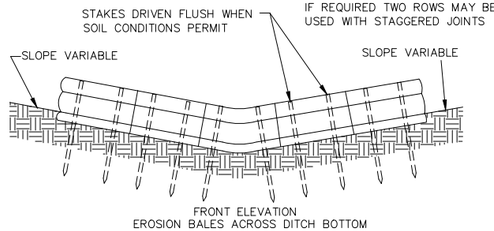


VEHICULAR TRACKING ENTRANCE

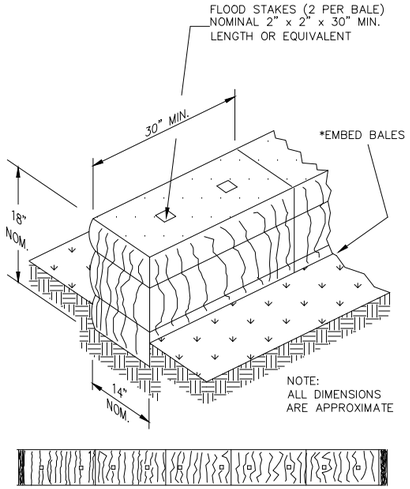
N.T.S.

* MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPENING.

NOTES:
1. TRACKING ENTRANCE SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMMEDIATELY. THIS WORK SHALL BE INCIDENTIAL TO THE CONTRACT.
2. STONE SHALL BE REMOVED AND REPLACED WHEN SOIL FILLS OPENINGS AND/OR DIRECTED BY THE ENGINEER. THIS WORK SHALL BE INCIDENTIAL TO THE CONTRACT.
3. EXISTING PAVEMENT SHALL BE INSPECTED AND CLEANED AT LEAST DAILY. THIS WORK SHALL BE INCIDENTIAL TO THE CONTRACT.



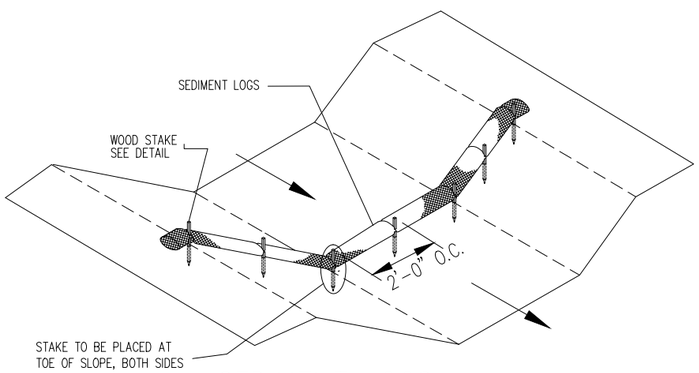
FRONT ELEVATION
EROSION BALES ACROSS DITCH BOTTOM



PLAN VIEW

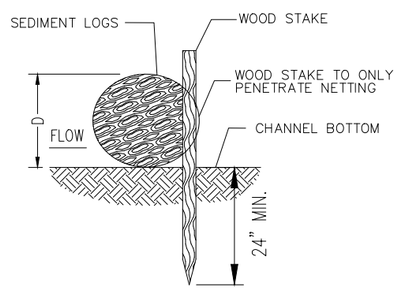
EROSION BALES

N.T.S.



SEDIMENT LOGS

N.T.S.



STAKE DETAILS

N.T.S.

[DISTANCE BETWEEN CHANNEL BOTTOM AND TOP OF INSTALLED SEDIMENT LOGS (D)(FT) / CHANNEL GRADIENT (%)] X 100 = SEDIMENT LOGS SPACING (FT)

DRAWING PHASE: | DRAWN BY: MJB
X OWNER REVIEW | CHECKED BY: DAM
AGENCY REVIEW | DATE: 10.22.20
BID DOCUMENT | DWG FILE: 1289-001 PLANS
FOR CONSTRUCTION | REF FILE: 1289-001 PLANS.DWG
AS-BUILT DOCUMENT | JOB NUMBER: 1289-001 PLANS

DATE:	NAME:	REVISION DESCRIPTION:

CORPORATE OFFICE
406 Technology Drive East
Suite A
Menomonie, WI 54751
Tel 715-232-8490

BRANCH OFFICE
2820 Kahoe Street
Suite 101
Hudson, WI 54016
Tel 715-381-5277

authconsulting.com

A·C/a
Auth·Consulting/associates
S&N Land Surveying a division of A C/a

PROJECT:
GILBERTSON FARMS, INC.
2021 SITE EXPANSION
TOWN OF WHEATON, CHIPPEWA COUNTY, WI

SECTIONS & DETAILS

Attachment: (G) Gilbertson Farms LLC - Engineering Plans (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Existing Waste Collection Tank

Existing Waste Collection Tank Design
Existing Waste Collection Tank Soils Investigation
Existing Waste Collection Tank Asbuilt Documentation

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

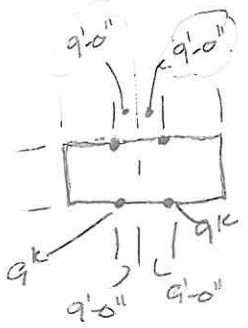
Existing Waste Collection Tank Design

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Chippewa County
Land Conservation Dept.
711 N. Bridge St.
(715) 726-7920 Chippewa Falls, WI 54729-1876

RECEIVED
APR 17 1997
WIESER CONCRETE

15,000#



April 16, 1997

13

Jimmie Harper
Design Built Structures
6036 County Highway S
Chippewa Falls, WI 54729

Re: Requirement for Submittal Animal Waste Ordinance, David Gilbertson

Attached please find a listing of requirements to provide a complete submittal for the manure storage system. While the Wieser system is preapproved for the basic components, all site specific details need to be planned and shown for final approval.

Please contact me if you have any questions.

Sincerely,
David Nashold
David Nashold
Environmental Engineer

enc.

cc: Wieser Concrete:
Eldie Stevens, wo/enc.
Dale Caswell, w/enc.
David Gilbertson, w/enc.

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

DAVE GILBERTSON
GILBERTSON FARMS
1176 - 20th AVE
ELKMOUND, WI
715-879-5251

NRCS 16' x 104' MANURE PIT

5" FLOOR 3/8" REBAR 18" O.C.E.W.
5 BAG WITH FLYASH OR 6 BAG MIX

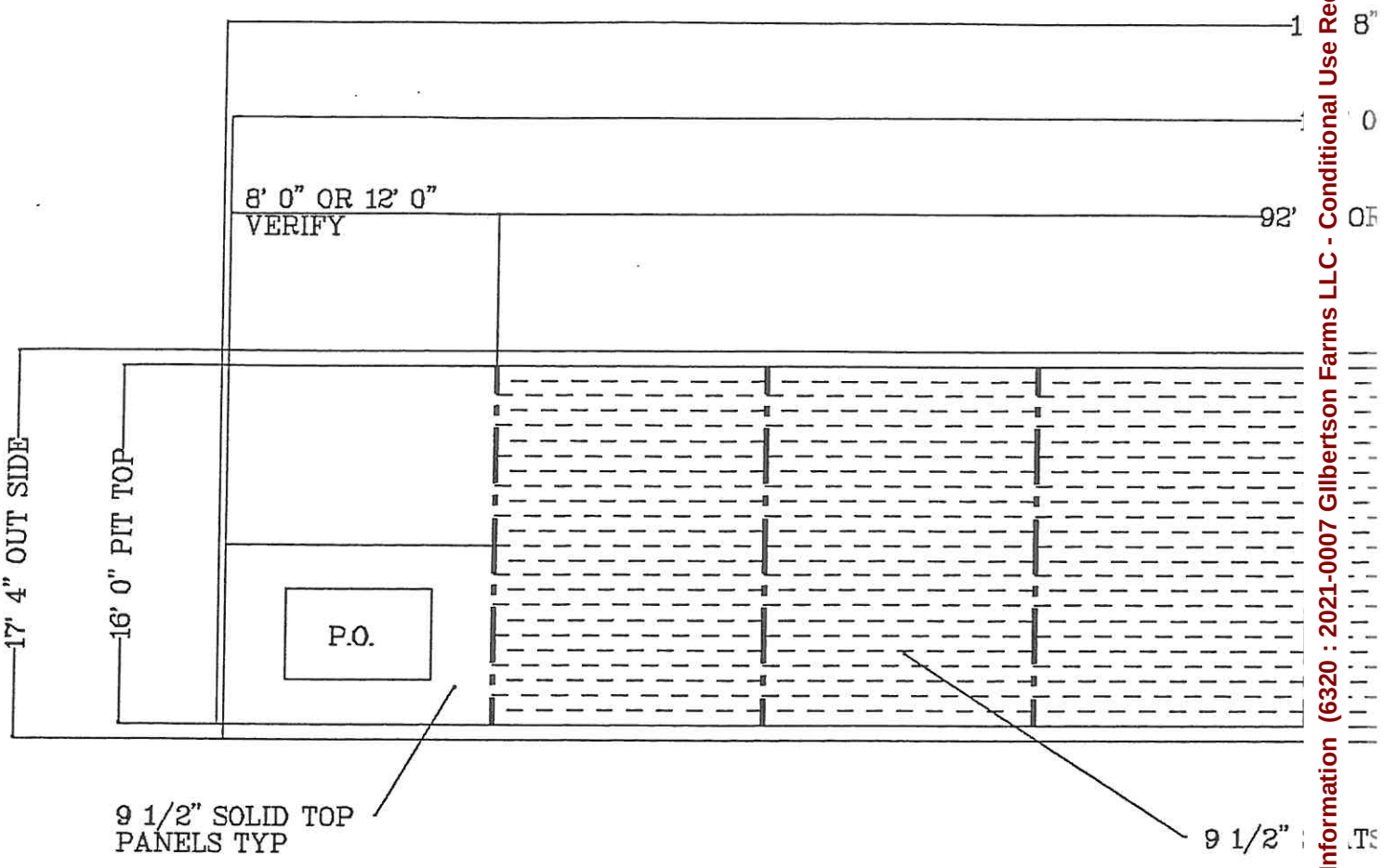
SLATS ARE 9½" THICK LOOK AT DRAWING FOR PROPER ELEVATION, TOP OF SLATS TO BOTTOM OF KEYWAY 12' - 3½"

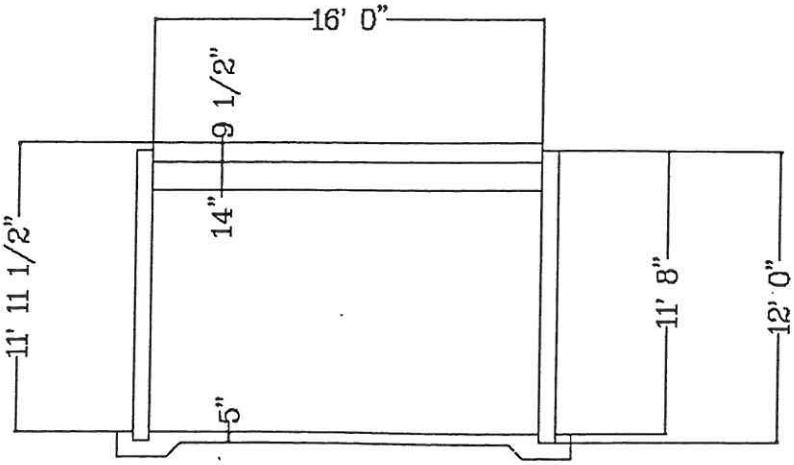
GO EAST OF ELK MOUND ON HWY 12 ABOUT ½ MILE THEN LEFT ON 970th ST. GO ¼ MILE to 1ST RIGHT 530th AVE GO 1¼ m/c to 3RD PLACE ON LEFT.

71 pcs. 3/8" REBAR 17' LONG
80 pcs. 3/8" REBAR 20' LONG
32 pcs. 5/8" REBAR 20' LONG

240' KEYWAY

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)





Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Soils Investigation for Existing Tank

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Chippewa County
Land Conservation Dept.
711 N. Bridge St.
(715) 726-7920 Chippewa Falls, WI 54729-1876

FORM AWO-A, REV MAR97

SOIL INVESTIGATION REPORT
CHIPPEWA COUNTY ANIMAL WASTE ORDINANCE

Property Owner: David Gilbertson
Operated By: David Gilbertson & Sons

Location: SW 1/4, SW 1/4 Sec.30, T28N R10W, Tract No.: T3157

Permit No.: 97-02

Date of Investigation: March 31, 1997

Investigation Team:
David Nashold Land Conservation Department
Mike Swoboda Land Conservation Department

Report Prepared by:
David Nashold
April 3, 1997

I. Purpose:
Subsurface Investigation for manure storage structure

Practice:
To be designed under NRCS Standard No. 313, 1986

II. Background
Mr. Gilbertson is considering construction of a manure storage facility. Strongly considering an under barn tank. Mr. Gilbertson is currently working with Design Built Structures, general contractor and Weiser Concrete, manure tank manufacturer. Current use of the site is crop field.

III. Description of Investigation
Two soil pits were excavated with a backhoe. LCD staff provided detailed logging to approximately 5 feet. A more general soil review recorded to total hole depths of approximately 14 feet. Soil pits were located horizontally and vertically relative to buildings and a noted temporary benchmark.

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

IV. Findings

- See attachments: soil boring logs, location information
- Geologic materials are mostly sand (SP). Likely sources of sand are: erosion from sandstone bedrock in adjacent hills, and glacially deposited outwash. Some strata consisted of silt sized material (ML soils); this material was very moist to saturated. These wet silt strata were sandwiched between moist sands above and below. Neither apparent water table nor bedrock were noted to the depth of the pits.
- The closest existing well is approximately 220 feet from the proposed facility. Ground surface elevation at the well is higher in elevation than at the soil borings.

V. Conclusions

Porosity and attenuation characteristics of soil and geologic material would limit this site to liquid tight manure storage facilities. The noted saturated strata are considered to be seasonal in nature and would not be considered groundwater with respect to vertical separation requirements.

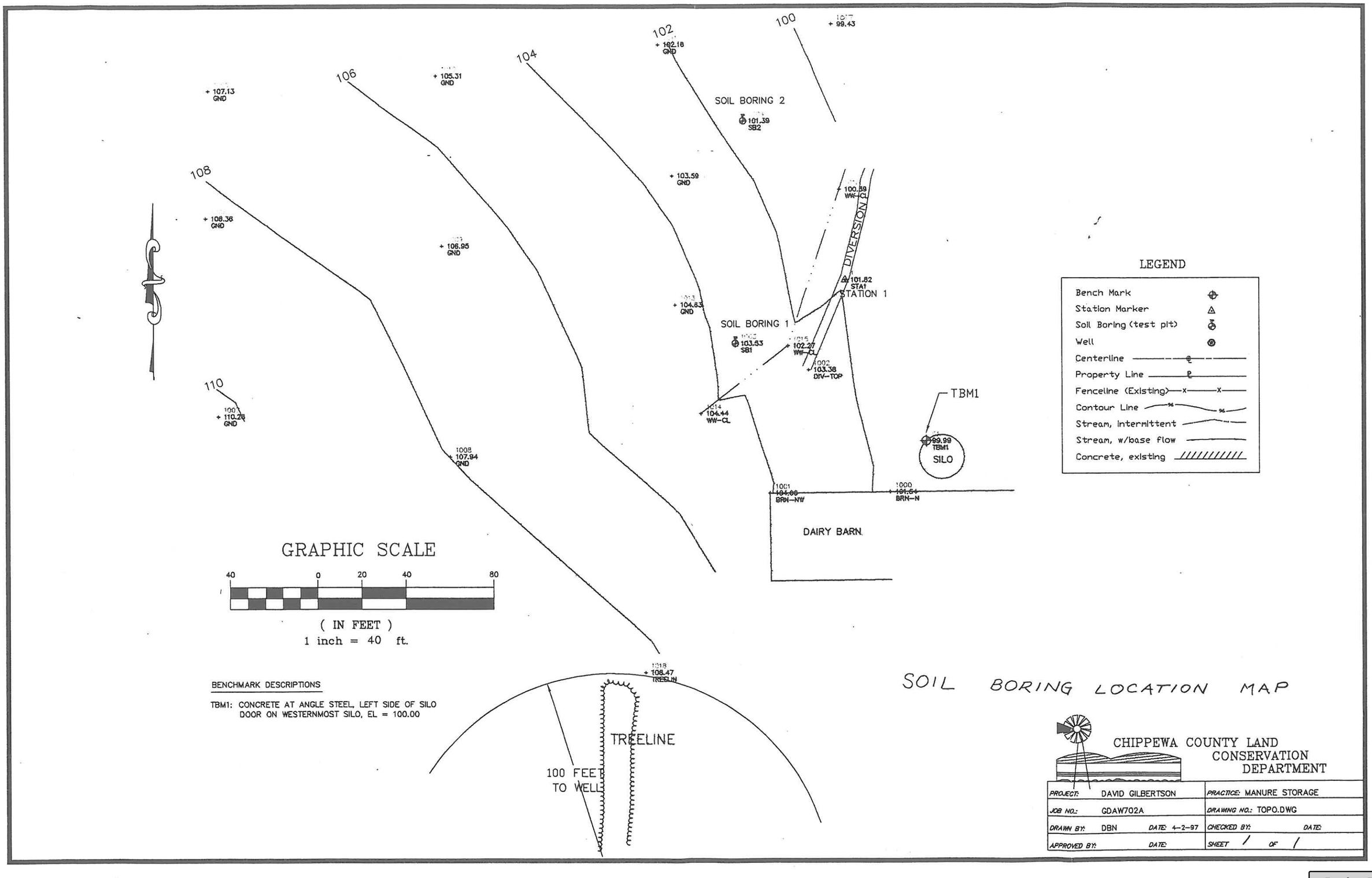
VI. Recommendations

Design of liquid tight facilities with floor elevation at or above elevation 91.0 (relative to benchmark) would be appropriate. The facility must meet all requirements of the Chippewa County Animal Waste Ordinance, standard 313, and all other applicable standards and codes.

Attachments

H:\LANDOWNR\GILB_D\AWO\ENGR\AWO_A.WP

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)



Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

SOIL INVESTIGATION LOG
(For Waste Management Practices)

LANDOWNER DAVID GILBERTSON

LEGAL DESC. SW SW SEC 30 T28N-R9W

COUNTY CLAY

LOGGED BY D. NASH, M. SWOBODA

PRACTICE 313 - UNDER BARN TANK

DATE 3-4-97

HOLE NO. SR#2

ELEVATION 101.4

TOTAL DEPTH 14.0

SAMPLE DEPTHS —

SOIL NAME BET 3/B

POS. IN LANDSCAPE FLAT PLAIN

OBS. WATER DEPTH

EST. HGW DEPTH <87.8 TYPE

DEPTH TO B.R. <87.8 TYPE

DEPTH	USCS	MOISTURE	MUNSELL COLOR MATRIX	MUNSELL COLOR MOTTLE	MOTTLES	STRUCTURE	CONSISTENCY	BOUNDARY	SAMPLE NO.	COMMENTS
		dry moist wet			abundance size type	grade size type		distinct. topog.		
0										
1.2	SM	MOIST	10YR 3/2							TOPSOIL
2.2	SP	MOIST	10YR ?			—				
5.2	SP	MOIST	10YR 4/6			—				
7.6	SP	VMOIST	10YR 6/3			—				
8.5	SP	MOIST				—				
9.0	ML	SAT.	10YR 5/4	BANDED		—				
14.0	SP	MOIST				—				DILATANT
		(NOT VERY)								

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

SOIL INVESTIGATION LOG
(For Waste Management Practices)

LANDOWNER DAVID GILBERTSON
DATE 31 MAR 97
SOIL NAME [illegible]

LEGAL DESC. SW SW SEC 30 T28N R10W
HOLE NO. SB #1
POS. IN LANDSCAPE FLAT PLAIN

COUNTY CHIPPEWA
ELEVATION 103.5
OBS. WATER DEPTH NONE

LOGGED BY D. MASTHOLD, M SWOBODA
TOTAL DEPTH 14.0
EST. HGW DEPTH < 89.5 TYPE

PRACTICE MANURE STORAGE
SAMPLE DEPTHS
DEPTH TO B.R. NONE < 89.5 TYPE

DEPTH	USCS	MOISTURE	MUNSELL COLOR MATRIX	MUNSELL COLOR MOTTLE	MOTTLES	STRUCTURE	CONSISTENCY	BOUNDARY	SAMPLE NO.	COMMENTS
0		dry moist wet			abundance size type	grade size type		distinct. topog.		
1.0	SM	MOIST	10YR 3/2	—	NONE	GRANULAR				TOPSOIL
1.9	SM	V. MOIST	10YR 5/6	—	NONE	SUBANG BLOCK				LITTLE CLAY B HORIZON
11.0	SP	V. MOIST	10YR 4/3	—	NONE	STRUCTURE-LESS.				
12.0	ML	SAT	7.5YR 4/3			NONE				THICK SATURATED ZONE
14.0	SP	MOIST								
	TOTAL									
* SIMILAR SAT. ZONES		@ ±6.0	DEPTH							
		@ ±9.0								

Packet Pg. 89

5.1.i

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

Asbuilt Documentation for Existing Tank

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)

NEL-STRUCT

NELSON STRUCTURAL ENGINEERING

PLANNING • CONSULTING • DESIGN • LICENSED STAMPS

2005 Highland Ave. Eau Claire WI 54701 (715) 836-9794

September 26, 1997

SEP 29 1997

David Nashold
Chippewa County Land Conservation Dept
711 N. Bridge Street
Chippewa Falls, WI 54729

Re: Liquid Waste Tank Installation—Gilbertson Farms

Dear Mr. Nashold:

Enclosed you will find the items you requested at our recent meeting on 9/11/97. Additionally, I would like to highlight some specific points:

1. The installation of the tank is complete without any known deviation from the plans and specs provided by Weiser Concrete. The barn structure is complete without any known deviation from the plans developed by Nelstruct Engineering, from specs provided by Design Built Structures.

2. The final tank elevation is equal to that stated in plan S-2, dated 4/24/97 and last revised 6/8/97, based on grades shot by Design Built Structures after Weiser Concrete installed the tank.

3. Nelstruct Engineering at various stages of the project made site inspections. These include pouring of the tank floor and installation of the tank walls, lid and joint sealing materials.

Sincerely,

Dennis S. Nelson P.E.

Nelstruct Engineering LLC

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

NEL-STRUCT

NELSON STRUCTURAL ENGINEERING

PLANNING • CONSULTING • DESIGN • LICENSED STAMPS

2005 Highland Ave. Eau Claire WI 54701 (715) 836-9794

Nelstruct Engineering will monitor the construction progress at the Dave Gilbertson farm by making site inspections at various stages during the project. Site visits will be made at, but not limited to, the following stages:

- *pouring of tank floor slab
- *tank wall erection
- *pole excavation/footing placement
- *framing/truss placement
- *sheeting/finishing.

Below are calculations estimating the number of storage days for a manure tank of this size:

$$168 \text{ cow} \times \frac{2.5 \text{ ft}^3}{\text{cow/day}}$$

$$= 420 \frac{\text{ft}^3}{\text{day}}$$

$$12' \times 16' \times 104' = 19{,}968 \text{ ft}^3$$

$$\frac{19{,}968}{420} = 47.5 \text{ days}$$

SEP 29 2021

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

SEP 29 1997

OPERATION & MAINTENANCE PLAN
WASTE STORAGE STRUCTURE (313)

The purpose of this plan is to insure the functioning, longevity and safety of the waste storage structure while maintaining environmental quality.

1. The storage structure will be inspected periodically for leaks and structural damage.

2. Safety features such as warning signs, grates, covers and guardrails will be maintained.

3. Lethal gases may be produced in this tank. These gases are heavier than air and will disperse only with forced ventilation. People are not to enter this structure without proper precautions. Should entrance into this structure be absolutely necessary, high capacity ventilation fans will be used to expel gases prior to entering. External breathing equipment may be necessary, Ropes and harnesses are to be attached to the person before entering so they may be quickly removed should they be overcome by gases.

4. Waste accumulation will periodically be removed from the structure. During agitation, additional gasses may be released. Ventilation of these gases will be necessary if the structure is situated such that these gases may vent into an enclosed area.

5. A Nutrient Management Plan (590) will be followed for the spreading of manure. Practices will help to minimize runoff of wastes and to maximize crop utilization of nutrients.

6. Any future alterations to this structure will require a new permit under the ~~St Croix~~ CHIPPEWA County Animal Waste Management Ordinance.

7. Vehicular traffic over the slotted tank tops will be limited to a maximum of 12,000 pounds per axle. (data supplied by Weiser Concrete, 9/16/97)

I understand all requirements of this operation and maintenance plan and agree to follow the items contained herein. I further acknowledge receipt of a copy of this document.

Signed Dale A. Gilbertson Date 9/25/97

Gilbertson Farms

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

NEL-STRUCT

NELSON STRUCTURAL ENGINEERING

PLANNING • CONSULTING • DESIGN • LICENSED STAMPS

2005 Highland Ave. Eau Claire WI 54701 (715) 836-9794

rec'd
11 Sept 97

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- ✓ *tank wall erection
- *pole excavation/footing placement
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Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

CHIPPEWA COUNTY LAND CONSERVATION DEPARTMENT

711 N. Bridge Street
Chippewa Falls, WI 54729
ENGINEERING: David Nashold, Mike Swoboda
VOICE:(715) 726-7923; FAX:(715) 726-7987

F A X C O V E R S H E E T

TO: DALE CASWELL

COMPANY: WEISER CONCRETE PRODUCTS

FAX #: 715 647-5181

SENDER: DAVID NASHOLD # OF PAGES TO FOLLOW: 2 DATE: 23MAY 1997

DALE,

I CAN APPROVE EITHER OF THE FOLLOWING TWO OPTIONS:

A. PVC BASE SEAL - SEE ATTACHED DETAILS, INCLUDING
1. BASE SEAL PLACE ON VERY FIRM BASE OF CONCRETE MUD OR COMPACTED LIMESTONE GRAVEL.

2. BASE SEAL MUST MAKE 90 DEGREE CORNER TO END IN KEYWAY BUTTING WITH CON-SEAL STRIP. PREFORMED JOINT FROM MANUFACTURER FIELD WELDED TO REMAINDER OF BASE SEAL WITH TEFLON COATED WATERSTOP IRON PER MANUFACTURER RECOMMENDATION.

3. AT LOCATION OF THICKENED FOOTING A JOINT FORMER OR GROOVE TOOLED INTO SURFACE TO ASSURE CRACKING AT THICKENED SECTION.

B. PVC-6 INCH BULB TYPE
1. MUST MAKE 90 DEGREE CORNER TO END IN KEYWAY BUTTING WITH CON-SEAL STRIP. MAY BE FIELD SPLICED PER MANUFACTURER RECOMMENDATION.

2. WATERSOP MAY BE HOG-RINGED TO PERPENDICULAR STEEL, BUT NOT REST IMMEDIATELY ON THE STEEL. STEEL TO BE FULLY CUT AT THE CONCRETE JOINT.

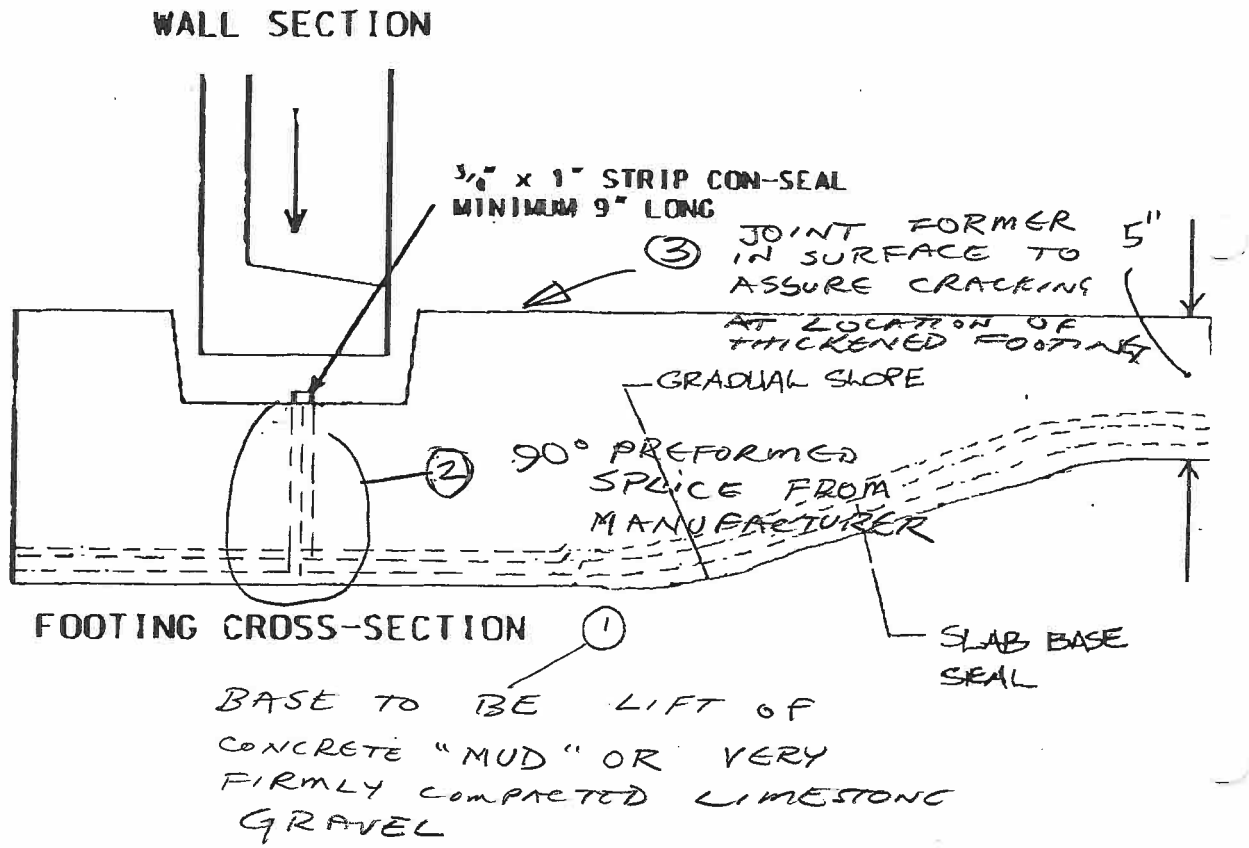
3. AT LOCATION OF THICKENED FOOTING A JOINT FORMER OR GROOVE TOOLED INTO SURFACE TO ASSURE CRACKING AT THICKENED SECTION.

AT LEAST ONE CONTROL JOINT IS REQUIRED TO CUT MAXIMUM LENGTH TO 52 FEET IN LENGTH DIRECTION OF TANK WITH #4 BARS AT 18" O.C..

SINCERELY,
David Nashold
DAVID NASHOLD, P.E.

CC: ED ODGERS, DENNIS NELSON

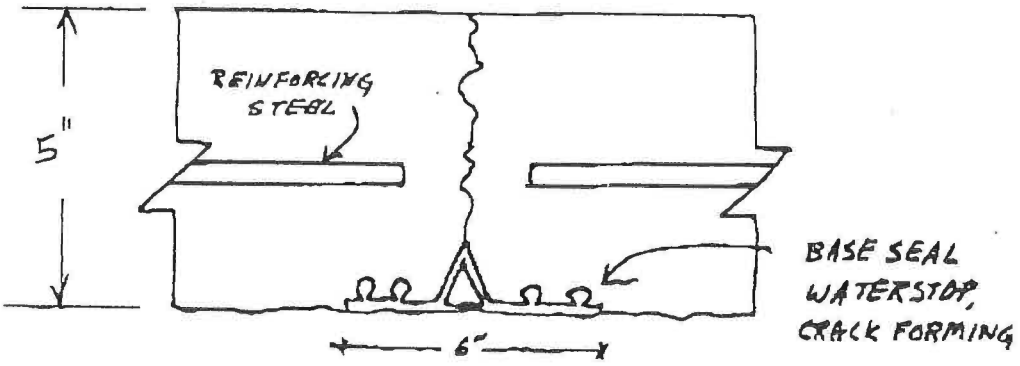
Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)



SPLICES IN BASE SEAL WATERSTOP SHALL BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS

THIS WAS REQUIRED BY LCD. WATERSTOP BEND ② APPEARED TO BE DONE CORRECTLY ; ③ WAS DONE (JOINT FORMED) BUT WAS PROBABLY NOT PREPARED ACCORDINGLY ①.

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 GIlbertson Farms LLC - Conditional Use Request)



CONTROL

Specifications for use in slabs:

-This joint drawing to be adapted for a specific structure or system and is to be accompanied by a joint plan for the structure or system.
-Waterstop must form a continuous seal throughout the structure.
-Waterstop to be free of dirt, oil, and defects.
-Carefully place concrete without displacing waterstop from proper position. Thoroughly and systematically vibrate concrete around waterstop to obtain impervious, void-free concrete in the vicinity of the joint, and to maximize positive contact between concrete and waterstop.
-Base seal to be manufactured of PVC or rubber with a minimum thickness of 1/8"
-Allow minimum clearance of 1.5" between waterstop and reinforcing steel.
-Reinforcing steel shall not pass through control joints.
-Provide factory fabricated waterstop corners and transitions leaving only straight butt joint splices for the field.
-Splice fabrication:
  a. Use teflon covered thermostatically controlled waterstop splicing iron at approximately 360 to 390 deg. F for PVC.
  b. Splices to be dense, homogeneous and non-porous with tensile strength not less than 80% of the parent section and shall permanently retain their flexibility.
  c. Waterstop intersections and directional changes to be miter cut and heat welded with centerbulb, and ribs aligned to maintain continuity.
  d. Adhesives, solvents, and lap joints are not acceptable.
  e. Edge welding is not acceptable.
  f. Welds to exhibit continuous bead of excess melted material.
  g. Allow material to cool before bending or distorting the fabrication.
  h. Splices to be free from defects.
  i. Base seal products may not be welded or joined to other waterstops of different size or configuration.
-Base seal to be placed on plate-compacted smooth surface free of voids or obstructions.
-Where applicable, joint groove to be sawn within 12 hours after pouring, or formed into the concrete before setting occurs.
-Sawn or formed joint grooves must be aligned directly over center bulb of waterstop.

Base Seal available from:
Greenstreak (#772, (#639))
Amico (#8062)

LIQUID TIGHT JOINTS
SLAB - BASE SEAL

OWNER

DESIGNED: CHECKED:

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

I N S T A L L A T I O N M A N U A L

LIQUID MANURE PITS

WIESER CONCRETE PRODUCTS, INC.

FEBRUARY 1, 1990

REVISED: JULY 31, 1990
REVISED: APRIL 10, 1991
REVISED: JUNE 22, 1995
REVISED: FEBRUARY 28, 1997

SEP 29

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

INSTALLATION SHALL COMPLY WITH NATURAL RESOURCES CONSERVATION SERVICE STANDARD 313.

SERVICE LIFE:

Medium - 20 years minimum
Wieser Concrete estimates a life up to 50 years

GENERAL:

Installation shall comply with this manual and the NRCS 313 Standard (where applicable) and local regulations of the state where the structure is located.

LOCATION

The following factors must be considered in selecting a site for waste storage structures: proximity of the structure to the source of wastes, access to other facilities, ease of loading and emptying wastes, appropriate health regulations, and direction of prevailing winds to minimize odors.

Manure storage structures shall be located to minimize the pollution potential to lakes, streams and other surface waters caused by spills due to neglect, oversight or system malfunction.

The minimum distance from any well or reservoir to a liquid tight manure storage structure shall be 100 ft. Storage facilities shall be located to eliminate the possibility of drainage or over-spill from flowing from the structure toward any well. The ground elevation at the well shall be higher than the ground elevation at the storage structure or the topography shaped to direct any drainage or over-spill further away from the well. Other requirements for separation from bedrock and/or groundwater may be specified in local or state regulations, and NRCS Standard 313.

Reception pits, hoppers, tanks, and transfer pipes from which manure is pumped to storage facilities shall conform to the requirements in the NRCS Standard for Waste Transfer (358).

SOIL AND FOUNDATION

Soil profiles obtained by borings or backhoe test pits shall be made to an elevation at least 3 ft below the anticipated floor elevation of the storage structure unless bedrock is encountered above this depth. The soil profiles shall be used to establish the elevation of the structure in accordance with NRCS Standard 313.

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

ENVIRONMENTAL PROTECTION

All disturbed land surfaces shall be vegetated or otherwise stabilized to control soil erosion and sedimentation; landowner responsibility. The location, layout, and design of the facilities should be compatible with the surrounding landscape. Existing landforms and vegetation, along with land shaping and vegetative plantings, shall be considered to minimize an adverse impact upon visual resources.

Facilities must be constructed in areas and in a manner which prevents flooding. Waste storage structures shall not be placed in floodways or channels. Structures located in the flood fringe must comply with the requirements of local and state codes and be protected from inundation by a 100-year frequency regional flood. The floor of all structures shall be a minimum of 2 ft above the 100-year frequency flood elevation.

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

FOUNDATION PREPARATION:

The structure must be constructed on soils which will provide even settlement. Unequal settlement may result from poor quality soils or significant changes in the compressibility of the substrata soils (i.e. rock).

The suitability of foundation soils will be evaluated and approved by a Wieser Concrete Representative prior to placement of any needed sand base or the structure floor slab and footings.

NORMAL INSTALLATION - GOOD QUALITY SOILS

Good quality soils suitable for normal installation include: Clean sand, gravel or sand/gravel mixtures; well-graded sand, silt and clay mixtures (less than 50% fines); and low-plasticity silts and clays with significant sand and gravel or fine silty and clayey sands (more than 50% fines). Unified soil classifications: GP, GW, SP, SW, SC, SW-SC, GM, GP-GM, SM, SW-SM, SP-SM, GC, GW-GM, GP-GC, GW-GC, Gravelly Sandy CL or ML, or Fine SC or SM.

Footings shall be excavated to sizes shown on the plans. Form boards shall not be used to form interior square footings. Form boards shall be used to form the edge of the slab.

Footings shall rest on undisturbed natural soil or well compacted granular fill, compacted by a number of passes to facilitate equipment compaction or hand operated equipment until settlement is no longer visible.

POOR QUALITY SOILS

Soils other than those listed above should be removed to a depth of 2' below the bottom of the slab and footings and replaced with compacted earthfill that meets the gradations and compaction noted above.

ROCK

The entire structure floor shall not be below the existing bedrock surface. If bedrock is encountered within 3 feet of the floor slab elevation, it shall be over excavated and backfilled in accordance with NRCS Standard 313.

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

CONCRETE PLACEMENT:

BASE SLAB SHALL BE INSTALLED AS SHOWN IN THE PLANS AND ACCORDING TO APPLICABLE CONCRETE SPECIFICATIONS.

TOLERANCES

Tolerances shall be checked before precast wall panels are installed. Length for checking tolerance shall be the complete length of the structure -- i.e. tolerances are ± from true line and elevation. If tolerances are not met, Wieser shall be contacted to determine remedial measures. Most critical are tolerances for the wall keyway. Remedial measures may involve saw cutting edge of keyway and grouting base of keyway all as directed by Wieser.

Vertical: ± 0.5 inch main slab
± 0.25 inch wall keyway at any 6'0" interval

Horizontal: ± 2.0 inch edge of slab
± 0.75 inch wall keyway
± 3.0 inch interior footings
± 2.0 inch joints

MATERIALS

See construction plans and specifications.

NOTE: Materials can be cast-in place or precast concrete.

Products damaged during shipping and/or installation shall be evaluated by a Wieser Concrete representative to determine if the material can be field repaired and, if so, what type of repair, if any, must be made before the material can be accepted. The representative should be knowledgeable about the end use of the product, including its environment, and should know which types of repairs are feasible. It is advisable to learn the cause of the damage so that action can be taken to minimize similar damage in the future.

Defects that will not impair the functional use of the structure expected life or integrity of the sealant shall be considered minor defects. Minor defects may be repaired by any method which does not impair the product.

Defects that will impair the functional life of the material or structure will be considered major defects. Precast panels with major defects shall be rejected and replaced. Areas of cast-in-place concrete with major defects shall be removed and replaced.

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Major defects shall be evaluated by a Wieser Concrete Representative, the landowner, and the construction inspector for any cooperating agency. Repair or replacement decisions will be made after consultation and agreement by all parties.

PLACEMENT

Place reinforcing steel and prepare joints as shown in plans.

1. Drive 2" x 4" wood grade stakes at 3'0" on center along the perimeter wall location. Nail Wieser wall panel keyway to grade stakes. Steel grade stakes to be used except when soils are not adequate for support (i.e. sandy conditions). The steel grade stakes are to be removed and patching accomplished by working grout into the stake holes.

2. Mark location of all column lines on exterior wall panel keyway forms. Using a string line and a tape measure locate all interior column locations. Excavate for all interior column footings which will be cast integrally with the floor. Size of footings are shown in the plan.

3. Divide the floor as necessary for construction and/or contraction joints.

4. Drive 1" x 3" wood stakes at selected locations to support the floor screeds. The screeds are normally 1-1/4" to 1-1/2" O.D. steel pipe. The locations of the screeds will be determined in the field. Remove stakes after screeding.

5. Place reinforcing steel in perimeter footing. Wire together and position as required. Support all reinforcing steel rods on "high chairs" or bricks of the proper height. Provide 1'-9" minimum lap of #5 perimeter bars.

6. Install rebar size shown on plans. Provide a minimum overlap of 13" at splices in the floor slab steel. Support all reinforcing steel rods on "high chairs" or concrete bricks of the proper weight.

7. Concrete method of placement depends on site conditions. Concrete may be deposited directly from ready mix truck to slab, or by buckets using crane or by pumping. If direct dump from truck is used, the rebar shall be removed before truck drives onto site. Repair any damage done to base material and replace the rebar in the slab area before depositing concrete where ready mix truck has disturbed the site. Concrete slab shall be a minimum of 5 inches thick, shall contain 4% to 7% entrained air, shall have a slump of

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

4 inches or less and shall have a minimum compressive strength of 3500 psi at 28 days. *(Each state may have their own specification that must be followed.)

8. Slab shall be screeded and then finished with a magnesium float. Exterior edge adjacent to Wieser keyway may be hand floated to a uniform level surface.

9. COLD WEATHER PROCEDURE: For the purpose of this specification cold weather is defined as a period when, for more than 3 consecutive days, the average daily air temperature is less than 40 degrees F. Procecure shall be in accordance to NRCS concrete specifications.

10. HOT WEATHER PROCEDURE: For the purpose of this specification hot weather is defined as any combination of high temperature, (generally above 80 degrees F), low relative humidity, and wind velocity tending to impair the concrete quality. Procedures shall be in accordance with NRCS concrete specification.

11. Remove the Wieser panel perimeter keyway after first marking the exact location of each interior column in the same manner as in Item 2 above.

12. Control joints will be made by saw cutting or the use of joint former strips.

13. Seal the floor joints as shown in the plans. The joints shall be clean and dry before placing the backer rod and sealant. All joint sealant manufacturers recommendations for concrete curing, installation, and sealant curing are to be followed.

14. A minimum of 7 days curing is required for the concrete, prior to truck or equipment contact. The concrete lip, where trucks and equipment make initial contact with the slab will be protected.

15. Curing compound shall be applied in accordance with the NRCS concrete specification. The material is ASTM C309 Type 2 (white pigment) curing compound.

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

STRUCTURE ERECTION:

1. Install interior columns. They are self supporting for installation. Provide a thin layer of neat cement grout under each column base to assure full surface contact with the floor slab (footing). Cement grout shall consist of equal parts of cement and sand with just enough water to make a workable mixture but not fluid.

2. Prior to installing panels, the keyway is to be free of dirt, debris, form oil, curing compound, etc. Install wall panels starting at one corner and working around the perimeter. (See Item 3 below). As beam lines are encountered, install beams over columns and wall panels and add slatted floors over beams as installation progresses.

3. Wall panels shall be bolted together as shown in the plans. Wall panels may be shimmed (with Vers-A-Shim high impact plastic shims)at least 1/4" but not greater than 1". Apply one Con-Seal Butyl Resin Concrete Sealant (CS102 or CS202) strip to each joint. Locate the Con-Seal strip approximately in the center of the space between the bolt and wall panel edge. Strip shall extend from bottom of base slab key to top of panel. Conseal strip shall be 3/4 in. thick x 1 in. wide and then compressed to 3/8" to 1/2" (manufacturer recommendations) by tightening the two panel connection bolts. To insure the protection and performance of the sealant, the last wall panel will be installed at the corner only.

4. During the erection of the structure and before backfilling, seal the base of the panels (junction of wall panels and floor) by first removing any debris or dirt and then filling the keyway void with a mixture of one part Portland Cement and three parts sand (by volume) mixed with enough water to make the mixture workable, but not fluid. Trowel to a smooth surface. Sealing (grouting) can be done more than one time during construction.

5. Grout solid the beam dowel holes and the beam pockets as shown in the plans. Grout before backfilling and use same grout as Item 4 above.

6. Cure grout by spraying with a commercial membrane curing compound. Protect with hay or straw from cold temperatures as in concrete placement, Item 9.

7. Field penetrations in vertical wall panels are to be made in panel skin only.

NOTE: All wall panels and columns to be grouted to ensure uniform load distribution. Columns leveled by shims shall have the grout worked under the base to ensure contact for load distribution. The exposed grout surface shall be troweled to conform to the column base.

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

BACKFILLING:

MATERIALS

Backfill the structure with clean sand, 3/4" or 1-1/2" gravel, or sand-gravel mixtures (maximum 5% fines) or well-graded sand, silt, and clay mixtures (less than 50% fines). Unified soil classification is: GP, GW, SP, SW, SC, SW-SC, GM, GP-GM, SM, SW-SM, SP-SM, GC, GW-GM, GP-GC, GW-GC.

PROCEDURE

DO NOT BACKFILL UNTIL 72 HOURS AFTER STRUCTURE HAS BEEN GROUTED.

A) Backfill a layer uniformly around structure and then compact (to avoid racking structure). Compact the layer before adding next layer, (again uniformly around structure). Compaction shall be "lightly compacted". This includes compaction by use of typical farm machinery. Continue backfilling until entire structure is backfilled. Structure is designed for underground use only. Maximum exposure of top of wall panel shall be 1 ft ±.

B) Restrict machinery compaction and utilize hand operated compaction within 2 feet of wall.

C) Minimum top width shall be 6' horizontal and side slopes (2:1) for embankment fill around the structure.

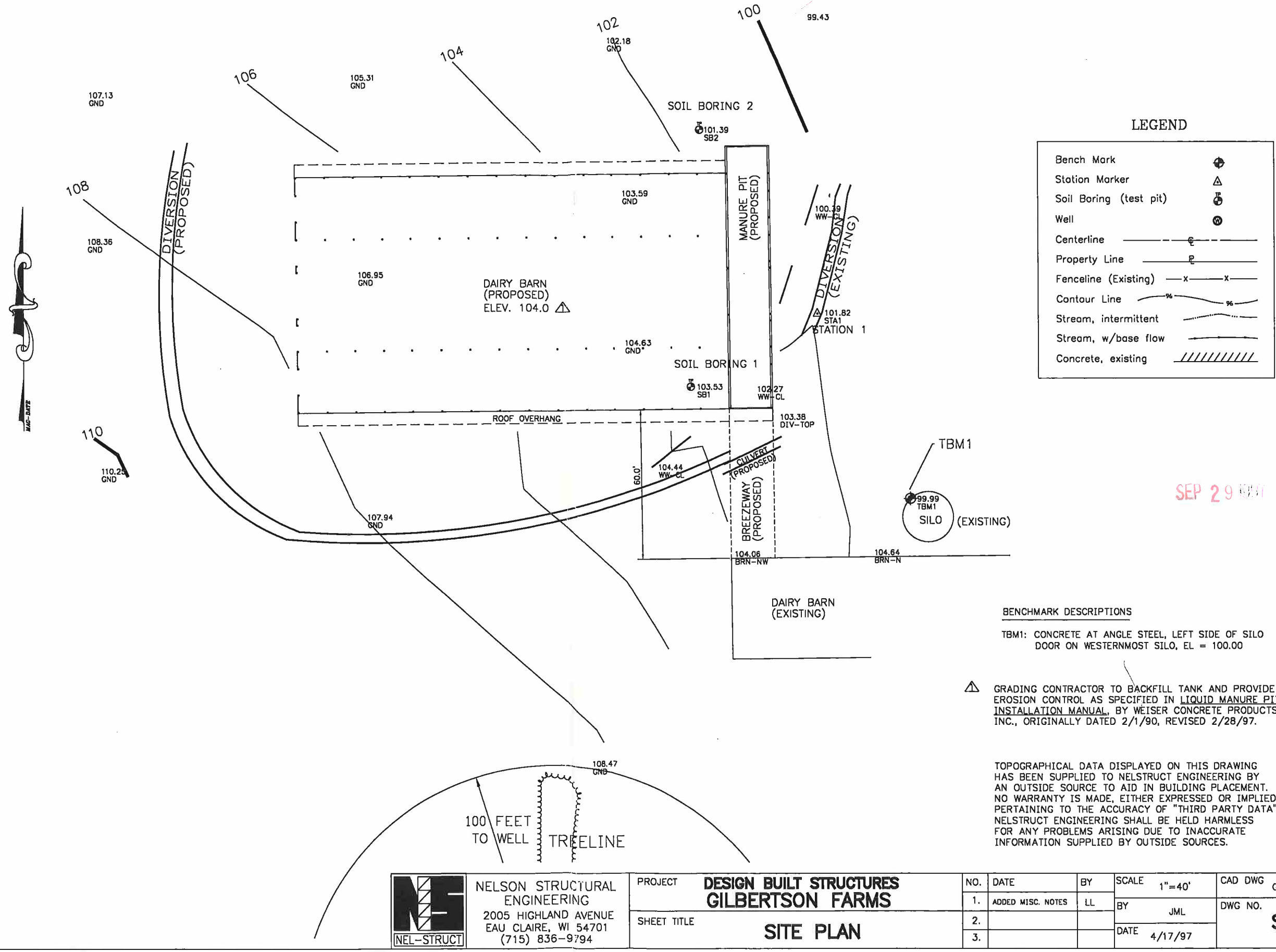
D) Slope protection must be done by seeding or gravel surface to prevent erosion.

SLOPE SAFETY: Excavation must be done by a qualified excavator. The bank must be cut down or excavated wider to provide safety for the workers and inspectors in he hole. The excavator must comply to OSHA regulations.

SUPERSTRUCTURE:

A building may be erected on this structure. See plans for vertical loadings permitted to be applied to the structure by the building. Lateral forces caused by wind on the building must be transmitted by the pit structure to the adjacent earth backfill. Building types and framing vary, therefore, attachments of the building to the structure and means of load transfer shall be approved by Wieser on an individual basis.

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)



LEGEND

- Bench Mark
- Station Marker
- Soil Boring (test pit)
- Well
- Centerline
- Property Line
- Fenceline (Existing)
- Contour Line
- Stream, intermittent
- Stream, w/base flow
- Concrete, existing

SEP 29

BENCHMARK DESCRIPTIONS

TBM1: CONCRETE AT ANGLE STEEL, LEFT SIDE OF SILO DOOR ON WESTERNMOST SILO, EL = 100.00

⚠ GRADING CONTRACTOR TO BACKFILL TANK AND PROVIDE EROSION CONTROL AS SPECIFIED IN LIQUID MANURE PIT INSTALLATION MANUAL, BY WEISER CONCRETE PRODUCTS INC., ORIGINALLY DATED 2/1/90, REVISED 2/28/97.

TOPOGRAPHICAL DATA DISPLAYED ON THIS DRAWING HAS BEEN SUPPLIED TO NELSTRUCT ENGINEERING BY AN OUTSIDE SOURCE TO AID IN BUILDING PLACEMENT. NO WARRANTY IS MADE, EITHER EXPRESSED OR IMPLIED, PERTAINING TO THE ACCURACY OF "THIRD PARTY DATA". NELSTRUCT ENGINEERING SHALL BE HELD HARMLESS FOR ANY PROBLEMS ARISING DUE TO INACCURATE INFORMATION SUPPLIED BY OUTSIDE SOURCES.

NEL-STRUCT
NELSON STRUCTURAL ENGINEERING
2005 HIGHLAND AVENUE
EAU CLAIRE, WI 54701
(715) 836-9794

PROJECT **DESIGN BUILT STRUCTURES GILBERTSON FARMS**

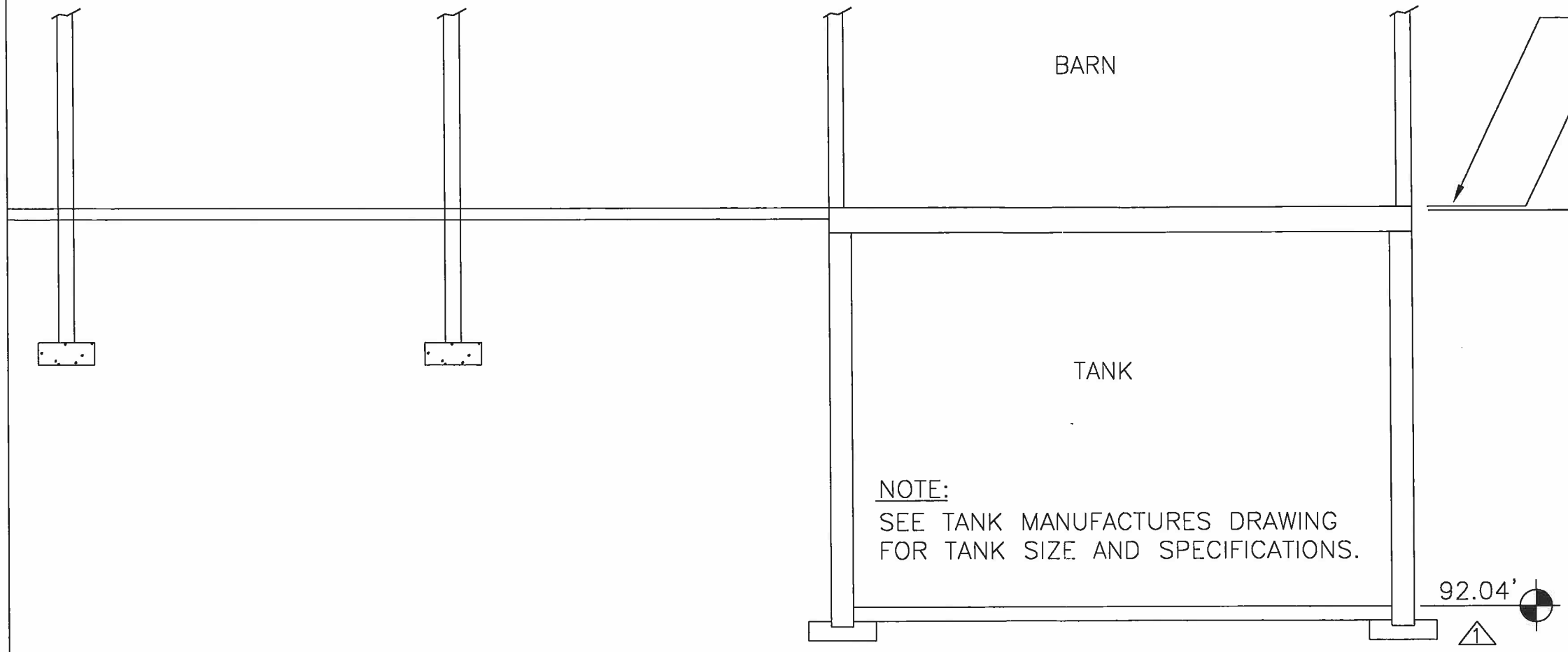
SHEET TITLE **SITE PLAN**

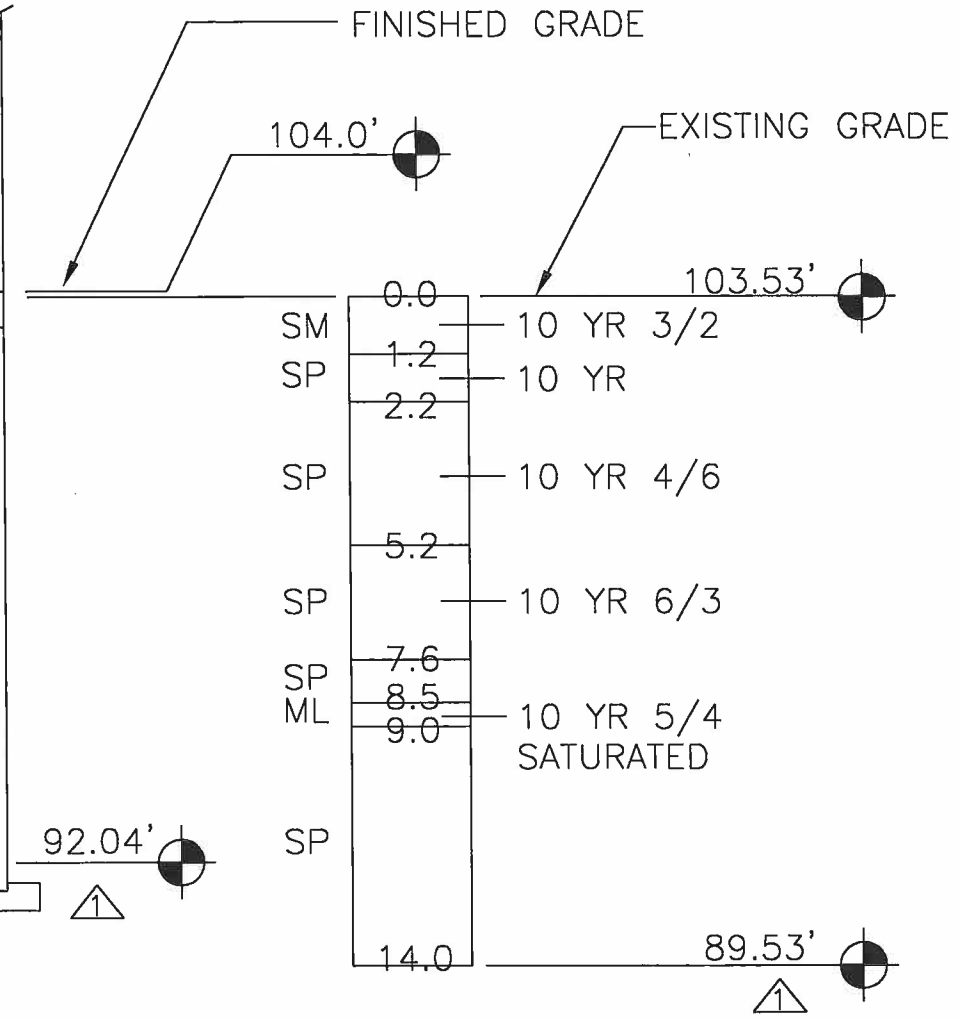
NO.	DATE	BY
1.	ADDED MISC. NOTES	LL
2.		
3.		

SCALE 1"=40'
BY JML
DATE 4/17/97
CAD DWG GILB-SITE
DWG NO. **S-1**

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

ELEVATIONS ARE REFERENCED TO BENCHMARK TBM#1
SEE SITE PLAN FOR BENCHMARK DESCRIPTION AND LOCATION.





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1
2
I CERTIFY THIS TANK INSTALLATION TO BE IN COMPLIANCE WITH ARTICLE 313, DATED 2/86, AS PROVIDED TO NELSTRUCT ENGINEERING BY THE CHIPPEWA COUNTY LAND CONSERVATION DEPARTMENT.

SEP 29 1997

NEL-STRUCT

NELSON STRUCTURAL ENGINEERING
2005 HIGHLAND AVENUE
EAU CLAIRE, WI 54701
(715) 836-9794

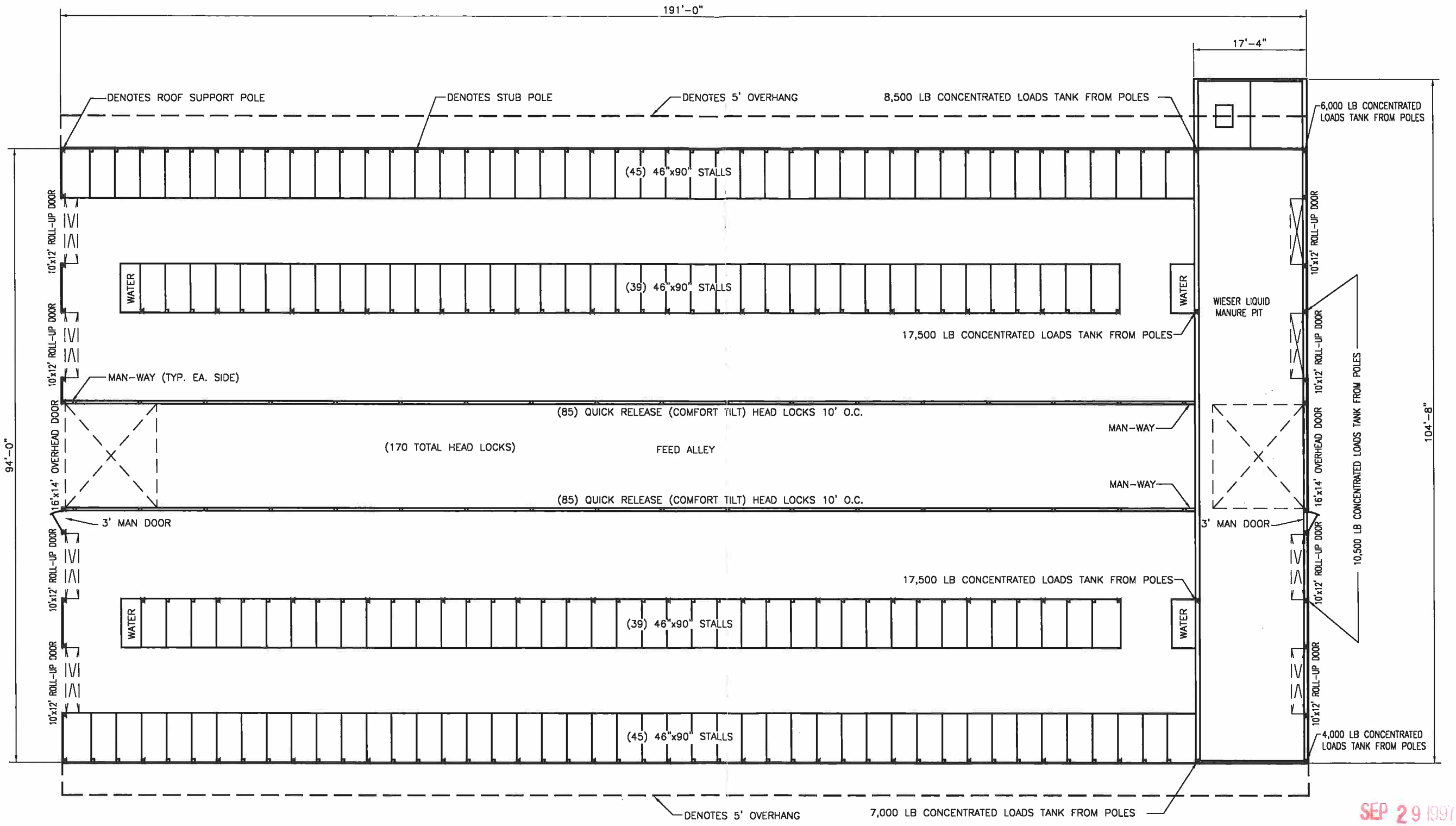
PROJECT **DESIGN BUILT STRUCTURES**
GILBERTSON FARMS

SHEET TITLE **TANK SITE PROFILE**

NO.	DATE	BY
1.	ADDED MISC. NOTES	LL
2.	REV 1 6/8/97	JML
3.		

SCALE 1/4"=1'-0"
BY LL
DATE 4/24/97
CAD DWG GILB-PROFILE
DWG NO. **S-2**

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)



SEP 29 1997

NOTE:
TANK DESIGN WILL SUPPORT THE ABOVE CONCENTRATED LOADS AS SHOWN

SIGNATURE OF TANK DESIGNER

NEL-STRUCT
NELSON STRUCTURAL ENGINEERING
2005 HIGHLAND AVENUE
EAU CLAIRE, WI 54701
(715) 836-9794

PROJECT **DESIGN BUILT STRUCTURES GILBERTSON FARMS**

SHEET TITLE **FLOOR PLAN**

NO.	DATE	BY
1.		
2.		
3.		

SCALE 1/16"=1'-0"
BY LL
DATE 4/24/97
CAD DWG GILB-PLAN
DWG NO. P-1

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

WIESER'S

Liquid Manure Pit

SEP 29 1997



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

Date 3/10/89 Minn. Reg. No. 847

Wieser's Liquid Manure Pit			
Var. Length & Width	SCALE	DRAWN BY K.P.W.	
		REVISED	
TITLE SHEET			
DATE 3/10/89 7/31/90 revised	APPROVED BY	DRAWING NUMBER	

MADE IN U.S.A.

5.1.i

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Packet Pg. 112

GENERAL NOTES:

STANDARD: USE NRCS 313 - WASTE STORAGE STRUCTURES
SERVICE LIFE: MEDIUM 20 YEARS TO 50 YEARS
LOADINGS: RESTRAINED WALLS NRCS 313 TABLE 1 - FRAME TANKS
ABOVE SEASONAL HIGH WATER TABLE
GRANULAR BACKFILL
EQUIVALENT FLUID PRESSURE = 60 PSF
EQUIPMENT SURCHARGE = 100 PSF *NOTE BELOW
DEAD LOAD = ACTUAL
LIVE LOAD = 150 PSF
LIVE LOAD FOR SLATS:
LARGEST OF 150 PSF or
CATTLE 250#/' FOR 2 RIBS & 125#/' FULL LENGTH
CALF 150#/' FOR 2 RIBS & 75#/' FULL LENGTH
HOG 170#/' FOR 2 RIBS & 85#/' FULL LENGTH
HANDLING LOADS FOR PRECAST INCL. 50% IMPACT
USE 8"x16" COLUMNS AT ALL BEAM SPLICE LOCATIONS
ALLOWABLE SUPERIMPOSED BLDG. DEAD LOAD & SNOW LOAD TOTAL ON SIDEWALL 1350 #/'

DESIGNED FOR USE ONLY WITH BACKFILL ON OUTSIDE OF STRUCTURE - MAX. WALL PAN. EXPOSURE 1' ±

DESIGN: ACI 318 MODIFIED -
$P_{max.} = .50 P_b$
ULTIMATE STRENGTH DESIGN 1.8 LOAD FACTOR FOR ALL LOADS
β MAX. = 145

MATERIALS: AIR ENTRAINED CONC. 4 TO 7% f'_c = 5,000 PSI @ 28 DAYS ALL PRECAST
f'_c @ FORM STRIPPING = 3,000 PSI MIN. (BASE SLAB AND FOOTINGS f'_c = 3500 PSI @ 28 DAYS)
GRADE 60 REBARS PER ACI 318 - 83
WELDED WIRE FABRIC PER ACI 318 - 83
STANDARD MACHINE BOLTS FOR PANEL CONNECTION
A36 STEEL ANGLES @ CORNER PANEL CONNECTIONS AND PUMPOUT COVER STIFFENERS.
COMMERCIAL GRADE CARBON STEEL FOR SKID RESISTENT RAISED PATTERN PUMP OUT COVER
CON-SEAL JOINT SEALER
DUR-O-WEB SHEAR REINFORCEMENT
SOIL FOR FOOTING BEARING = 3,000 PSF MIN.

BACKFILL: & GRANULAR UNDER BASE SLAB
CLEAN SAND, GRAVEL, OR SAND-GRAVEL MIXTURES (MAXIMUM 5% FINES) GP, GW, SP, SW OR WELL GRADED SAND, SILT, AND CLAY MIXTURES (LESS THAN 50% FINES) SC, SW-SC, GM, GP-GM, SM, SW-SM, SP-SM, GC, GW-GM, GP-GC, GW-GC
PLACE BACKFILL IN LAYERS OF APPROX. 2' TO 3' THICKNESS. COMPLETE A LAYER UNIFORMLY AROUND PIT BEFORE ADDING NEXT LAYER. SPECIFIC COMPACTION OF BACKFILL IS NOT REQD.

* NOTE: LATERAL PRESSURE ON WALL - FARM EQUIPMENT MAY BE OPERATED ADJACENT TO STRUCTURE

INDEX:

PG. 1 : GENERAL NOTES & INDEX
PG. 2 : FLOOR & FOOTING DETAIL
PG. 3 : CROSS SECTIONS
PG. 4 : STANDARD WALL PANEL
PG. 5 : BEAM SUPPORT WALL PANELS
PG. 6 : 4' STANDARD PANEL & PANEL CON. DETAILS
PG. 7 : COLUMNS
PG. 8 : BEAMS
PG. 8A : BEAMS (OPTIONAL SHEAR REINF.)
PG. 9 : CATTLE AND PUMP OUT SLAT
PG. 10 : HOG & CALF SLAT
PG. 11 : ERECTION DETAILS
PG. 12 : ERECTION ISOMETRIC
PG. 13 : COMPLETED ISOMETRIC
PG 10A: DRIVE THRU PANEL DEC 9, 1993
PG 10B: FREE STALL PANEL DEC 9, 1993
PG 6A: 8'-0" DEEP WALL PANEL 13 SEPT 96
PG 6B: 8'-0" DEEP WALL PANEL 13 SEPT 96

WISCONSIN BERNARD J. KNIPPEL 13700 MINNESOTA PROFESSIONAL ENGINEER

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

Date 3/10/89 Signature Reg. No. 8976

34PR97 REVISED
revised

Wieser's Liquid Manure Pit		
	SCALE	DRAWN BY K.P.W.
		REVISED
GENERAL NOTES & INDEX		
DATE 3/10/89 7/3/90	APPROVED BY	DRAWING NUMBER 1

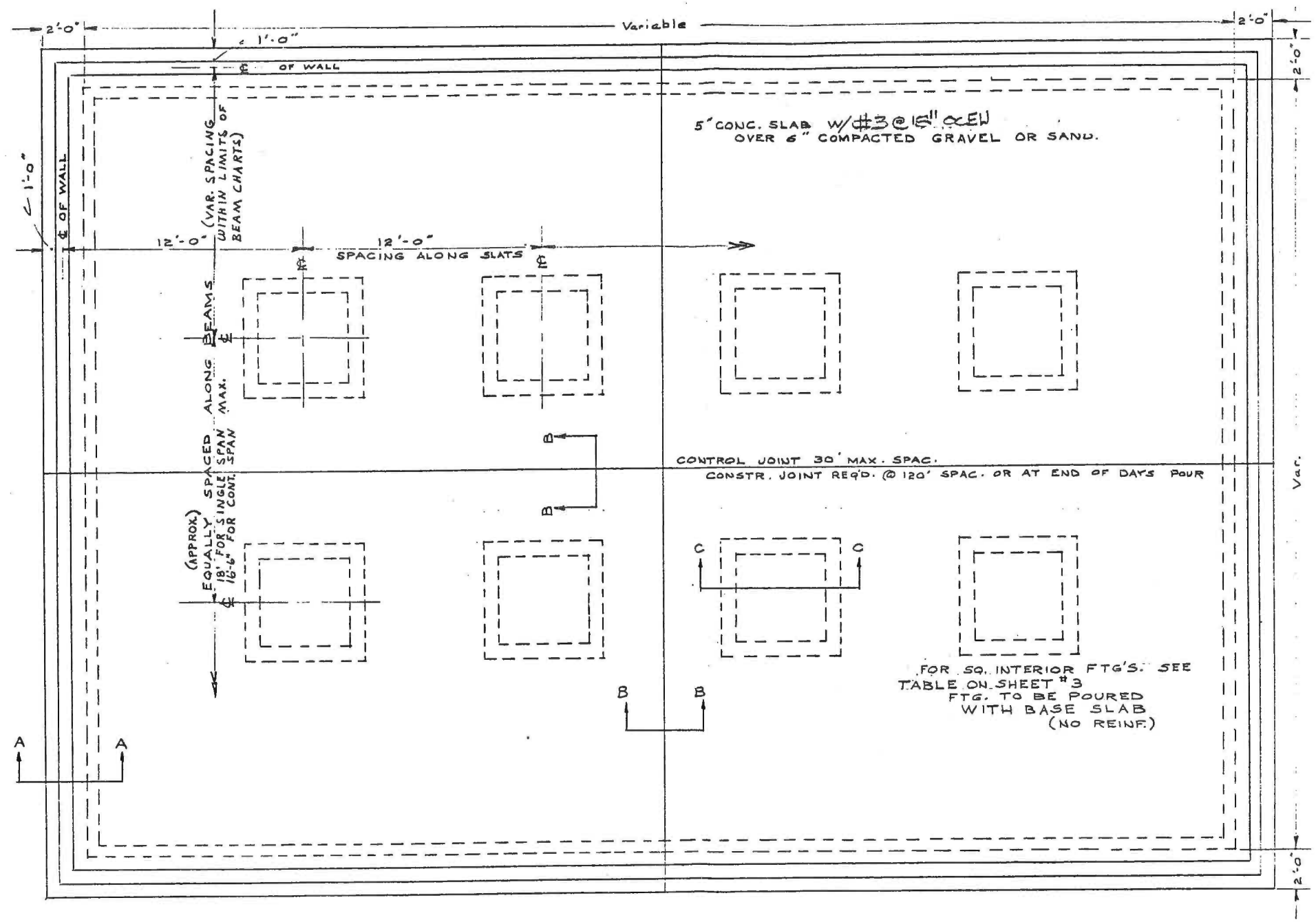
K+E ALBANENE N 10 5455 ARCHITECTS' STANDARD FORM

MADE IN U.S.A.

5.1.i

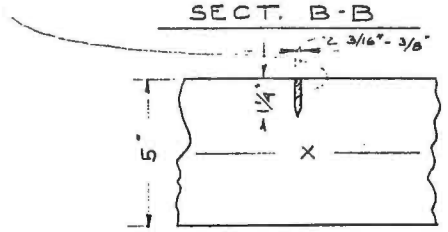
Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Packet Pg. 113

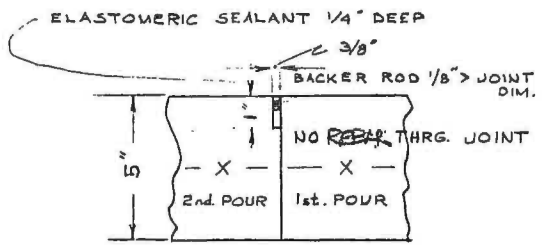


PLASTIC ZIP STRIP JOINT FORMER TOP 1/4" SEALED W/ELASTOMERIC JOINT SEALER.

SECT. B-B

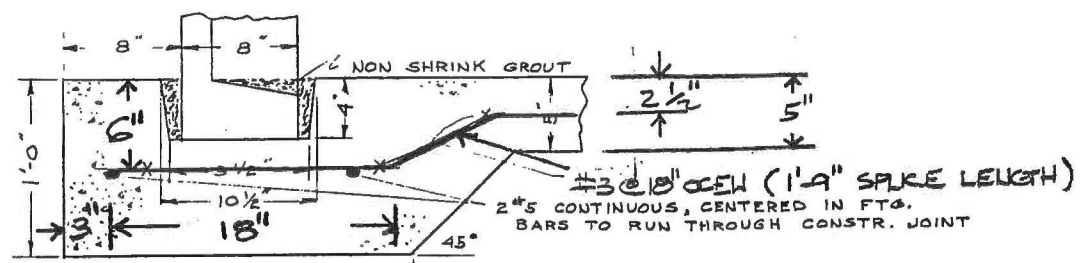


CONTROL JOINT



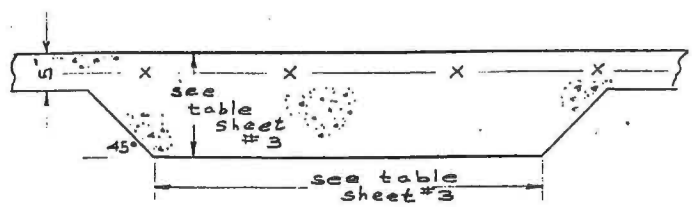
CONSTRUCTION JOINT

SECT. A-A



FTG. SHALL REST ON UNDIST. NAT. GROUND OR COMPACTED GRAVEL FILL.

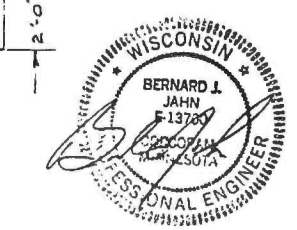
SECTION C-C



FTG. SHALL REST ON UNDIST. NATURAL GROUND OR COMPACTED GRAVEL FILL.

3 APR 97 REVISED

revised



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Date 3/10/89 Minn. Reg. No. 8476

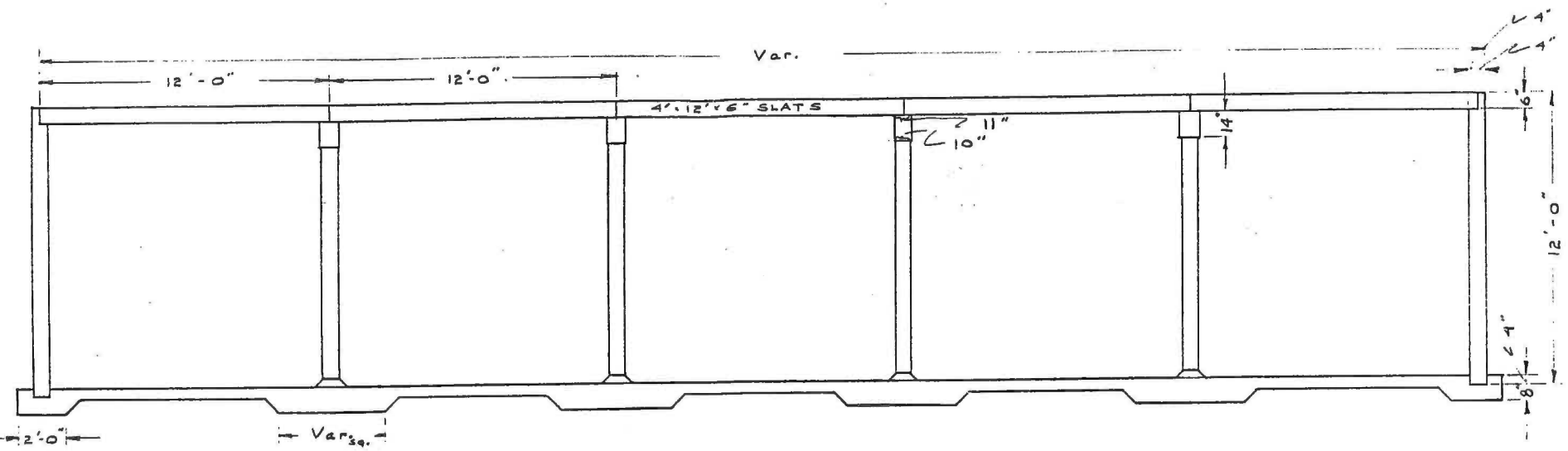
Wieser's Liquid Manure Pit		
	SCALE	DRAWN BY K.P.W.
		REVISED
FLOOR & FTG. DETAIL		
DATE 3/10/89 7/31/90	APPROVED BY	DRAWING NUMBER 2

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Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

LONGITUDINAL SECTION VIEW



2 Span. Cont. Beam			Simple Beam	
Tab. Lgth.'	Ctr. Load K	End Load K	Tab. Lgth.'	End Load K
14	21.8	7.3	8	3.6
15	23.4	7.9	9	10.9
16	25.0	8.4	10	12.2
17	26.7	8.9	11	13.5
18	28.3	9.5	12	14.8
19	29.9	10.0	13	16.1
20	31.6	10.6	14	17.4
21	33.2	11.1	15	18.7
22	34.8	11.7	16	20.0
23	36.4	12.2	17	21.3
24	38.1	12.7	18	22.6
25	39.7	13.3		
26	41.3	13.9		
27	43.0	14.4		
28	44.7	14.9		
29	46.2	15.5		
30	47.9	16.1		
31	49.6	16.6		
32	51.1	17.1		
33	52.8	17.7		

Footing Size	Capacity K
3'x3'x10"	19.6
3'-6"x3'-6"x1'-0"	27.0
4'x4'x1'-2"	34.9
4'-6"x4'-6"x1'-4"	43.8
5'x5'x1'-6"	53.8
5'-6"x5'-6"x1'-8"	64.0
6'x6'x1'-10"	75.4
6'-6"x6'-8"x2'-0"	87.5
7'x7'x2'-2"	100.3
7'-6"x7'-6"x2'-4"	113.3
8'x8'x2'-6"	127.9

* 5'x5'x9½" 99K
Tabulated Footing Sizes

Add Loads = Pick Ftg.
Example: End of 30' Cont. Bm & 12' Simple Bm
16.1+14.8 = 30.9K ∴ Use 4'x4'x1'-2" Ftg.

Ctr. of 24' Cont Bm & 7.2K Bldg. Ld.
38.1+7.2 = 45.3K ∴ Use 5'x5'x1'-6" Ftg.

Ctr. of 28' Cont Bm. = 44.7K ∴ Use 5'x5'x1'-6" Ftg.

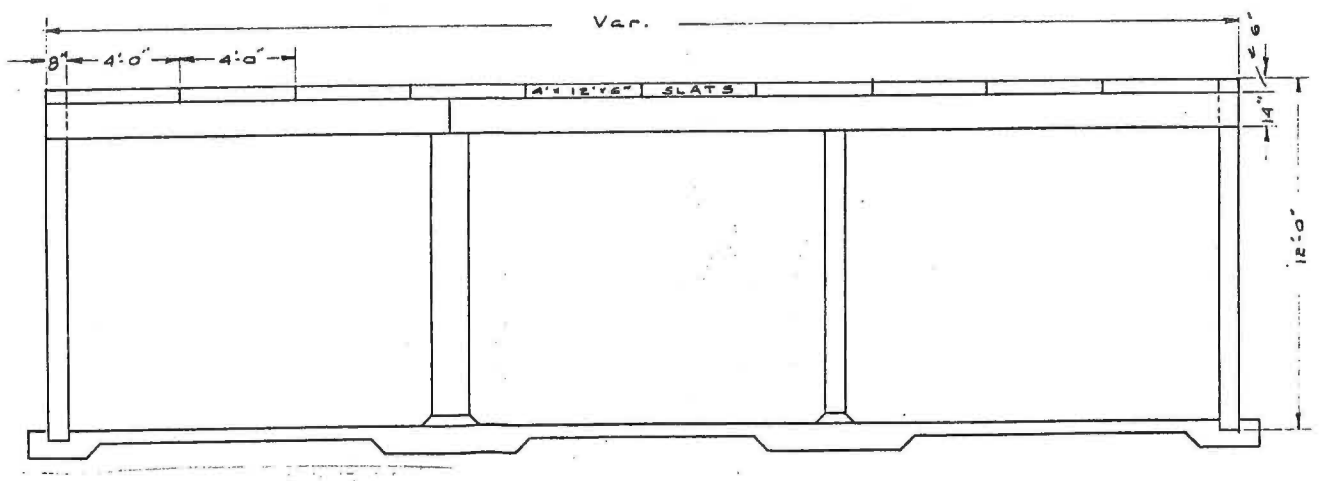
12' Spl. Bm + 16' Simp. Bm + 28.8K Bldg. Ld.
14.8+20.0+28.8 = 63.6K ∴ Use 5'-6"x5'-6"x1'-8" Ftg.

End of 2-12' Simple Beams
14.8+14.8 = 29.6K ∴ Use 4'x4'x1'-2" Ftg.

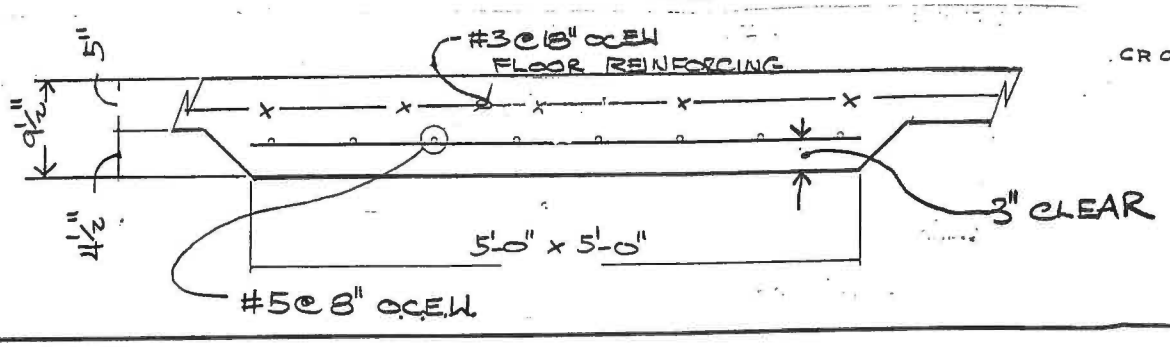
Bldg Loads: Examples Only
24 x 24 x 50 = 28.8K
20 x 20 x 50 = 20.0K
16 x 16 x 50 = 12.8K
12 x 12 x 50 = 7.2K

Actual Load Will Be From Bldg. Design

Example Are Contributary Area x 50 psf.

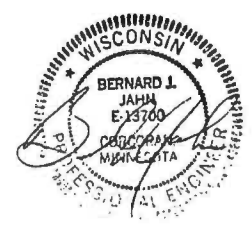


*REINFORCED FOOTING FOR POST



CROSS SECTION VIEW

3 APR97 REVISED
revised



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

3/10/89 Minn. Reg. No. 8976

Wieser's Liquid Manure Pit			
	SCALE	DRAWN BY K.P.W.	
		REVISED	
CROSS SECT.			
DATE 3/10/89 7/31/90	APPROVED BY	DRAWING NUMBER 3	

K-E ALBANENE N Y 10 5455 ARCHITECTS' STANDARD FORM

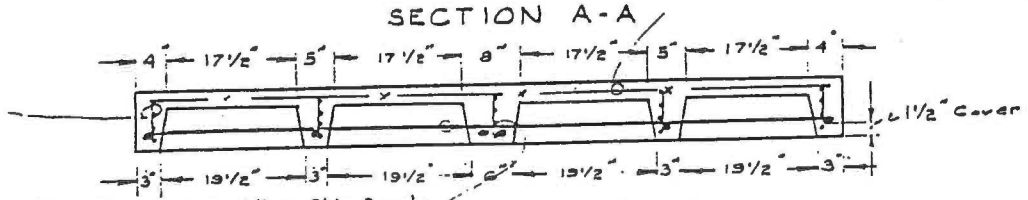
MADE IN U.S.A.

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

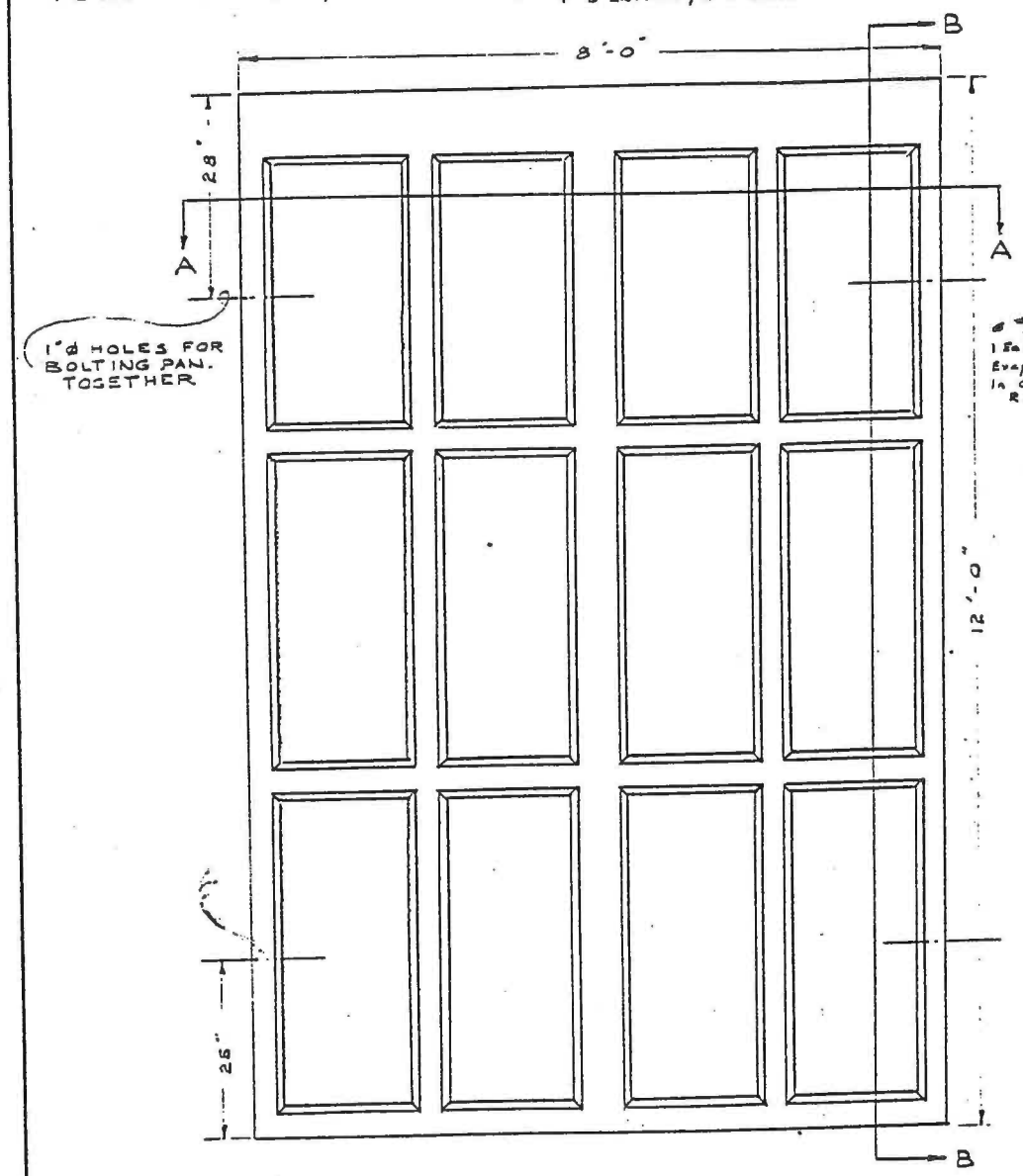
Dur-O-Web Or Equal
5 Gage Vert @ 3" c-depth
10 Gage Side Rods
1 Line Per Web - 5 Lines Tot.
Use 3' Lgth. @ Ea. End Of Pan.

OPTIONS: 4'-4 - W2.1 - W2.1 WWF
6'-6 - W2.9 - W2.9 WWF
CENTER IN SKIN.

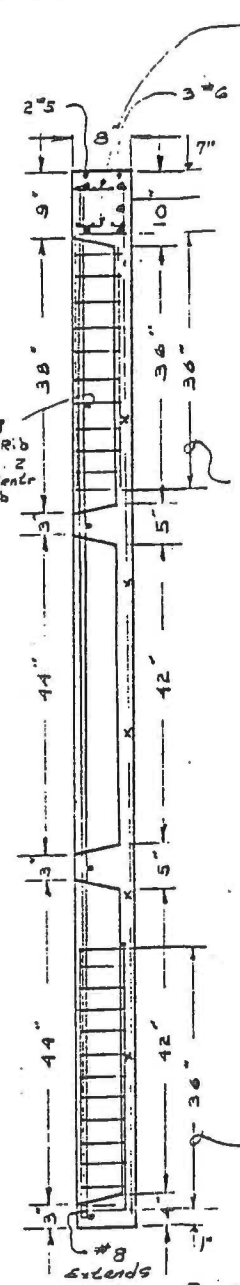
SECTION A-A

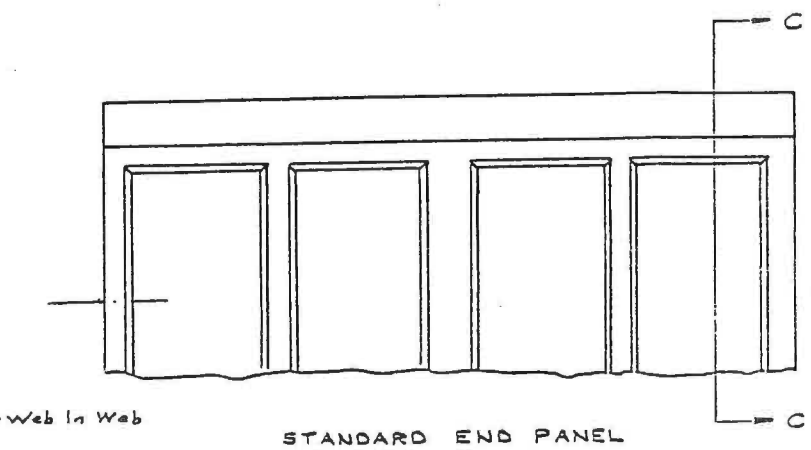


1"ø Ea. Dist. Rib Except Top Rib In Side Panel (1"ø Ea. Web, 2"ø Center Web

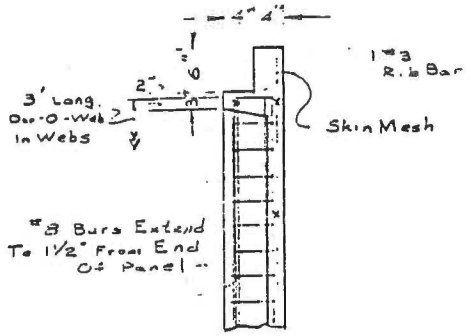


STANDARD SIDE PANEL





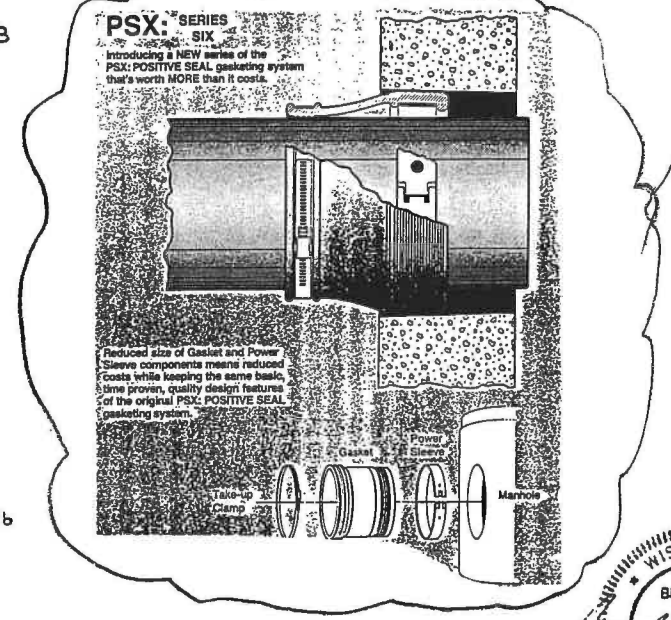
STANDARD END PANEL



SECTION C-C

REIN. SAME AS IN SIDE PAN. W/EXCEPTIONS NOTED

SECTION B-B



FOR HOLE PENETRATIONS IN SKIN ONLY

WISCONSIN
BERNARD J. JAWL
E-23703
MINNESOTA
PROFESSIONAL ENGINEER

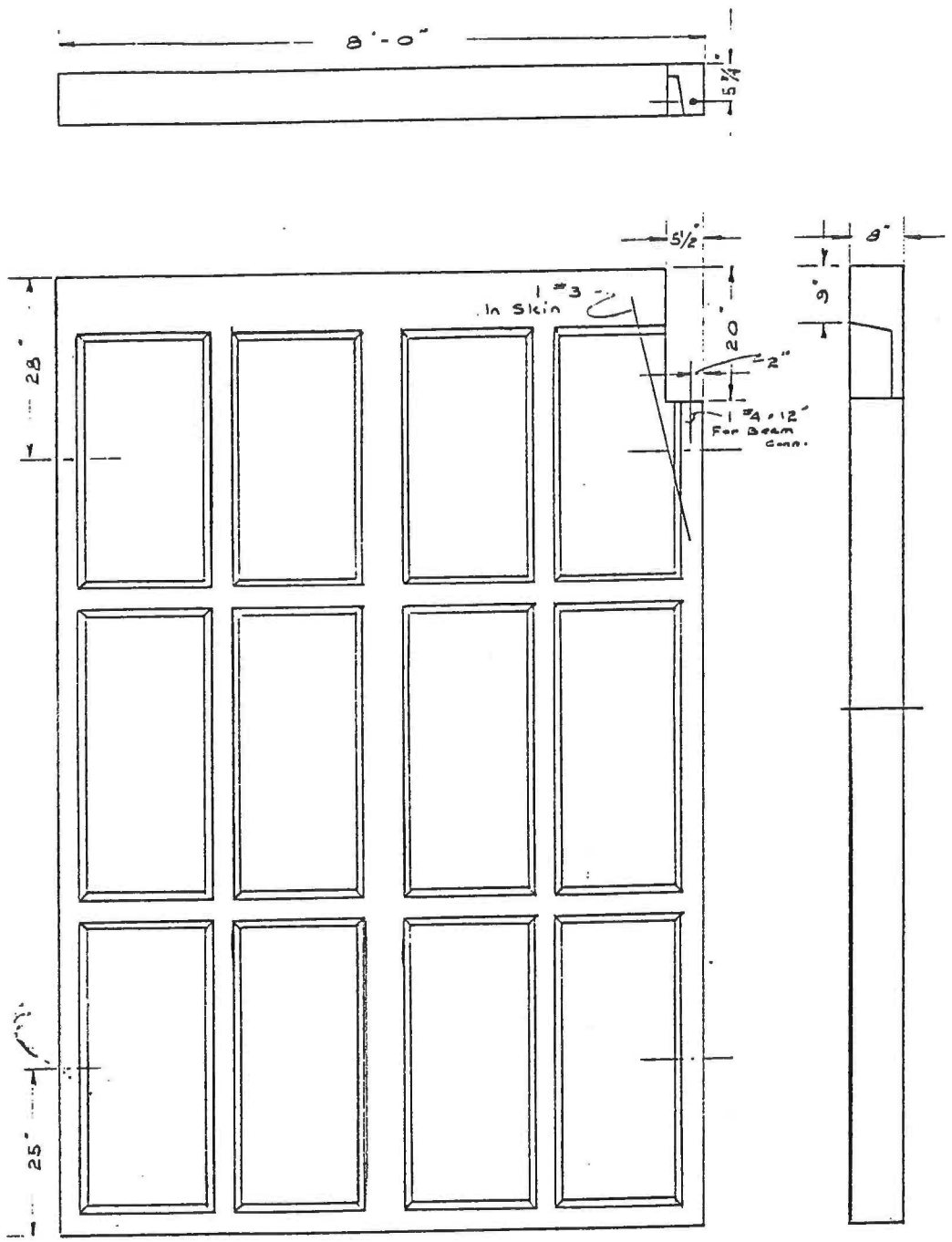
I hereby certify that this plan specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

3/10/89 Minn. Reg. No. 8477

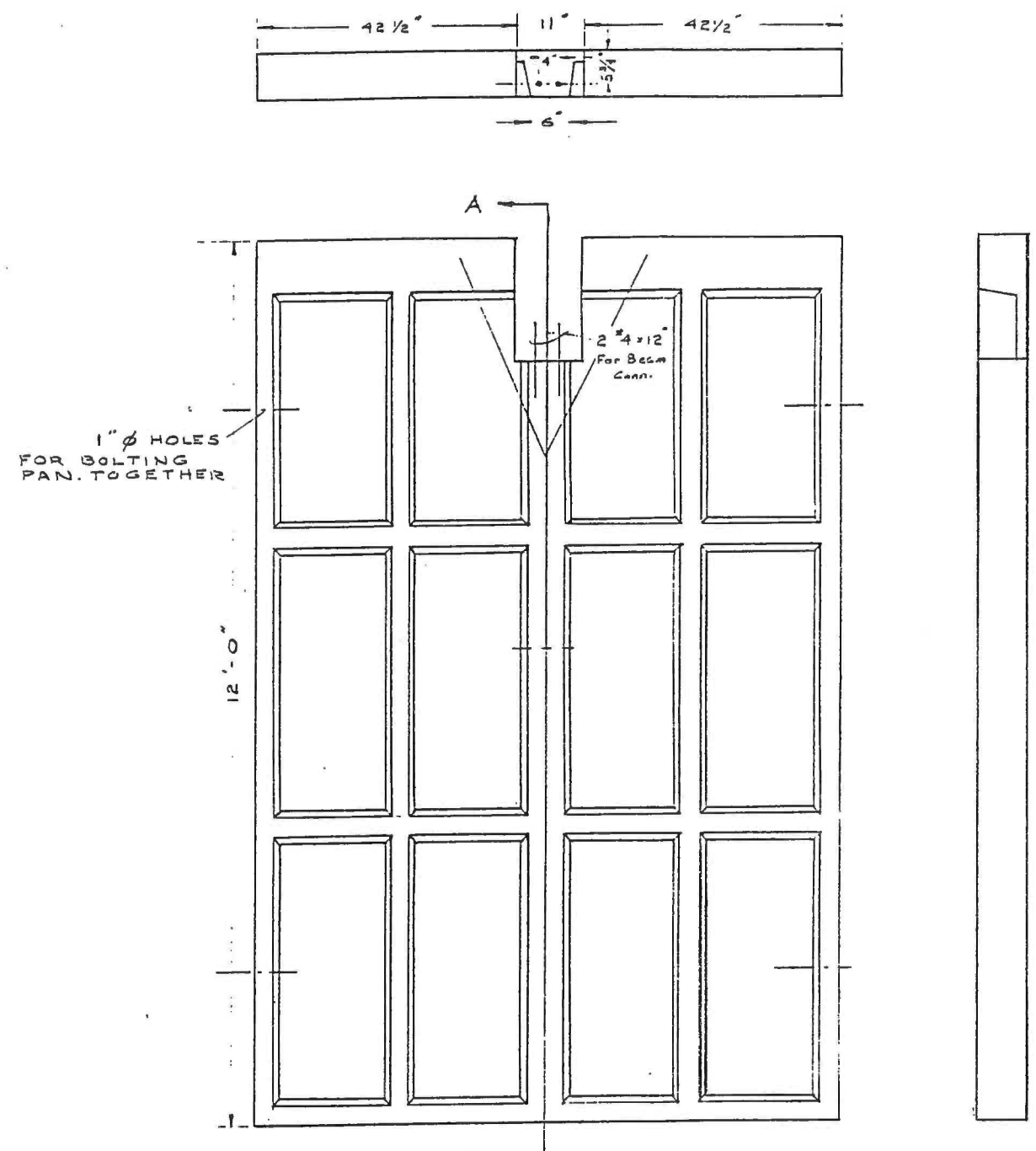
3 APR97 REVISED
revised

Wieser's Liquid Manure Pit		
	SCALE	DRAWN BY K.P.W.
		REVISED
STND. WALL PAN.		
DATE 3/10/89 7/21/92	APPROVED BY	DRAWING NUMBER 4

MADE IN U.S.A.



STANDARD SIDE PANEL W/RT. HAND BEAM POCKET
LT. HAND OPPOSITE.



STANDARD SIDE PAN. W/CENTER BEAM POCKET.

SECTION A-A

REINFORCING SAME AS PANELS WITHOUT BEAM POCKETS
(EXCEPT AS NOTED)

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

Date 3/10/99 Minn. Reg. No. 8477 revised

Wieser Liquid Manure Pit		
BEAM POCKET DETAILS CENTER & EDGE	SCALE	DRAWN BY K.P.M. REVISED
BEAM SUPPORT PAN.		
DATE 3/10/99 7/31/00	APPROVED BY	DRAWING NUMBER 5

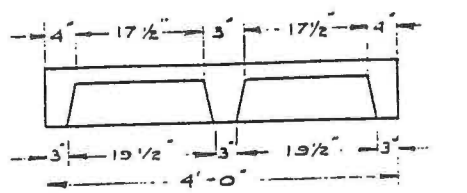
K·E ALBANENE N.Y. 12058 ARCHITECTS' STANDARD FORM

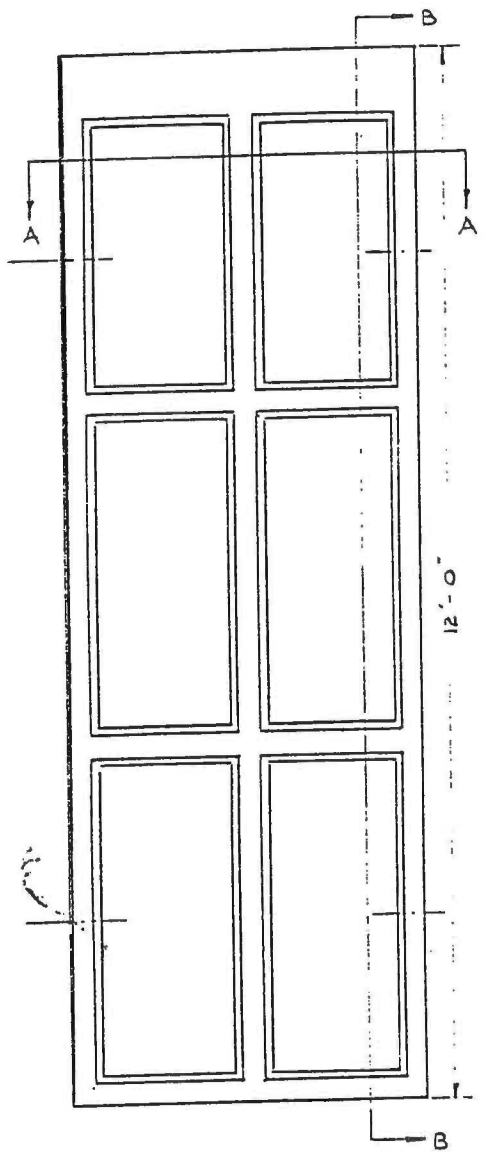
MADE IN U.S.A.

5.1.i

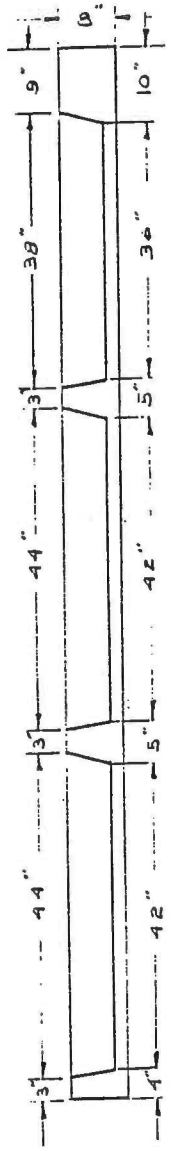
Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Packet Pg. 117

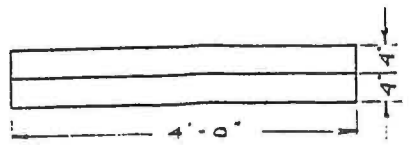


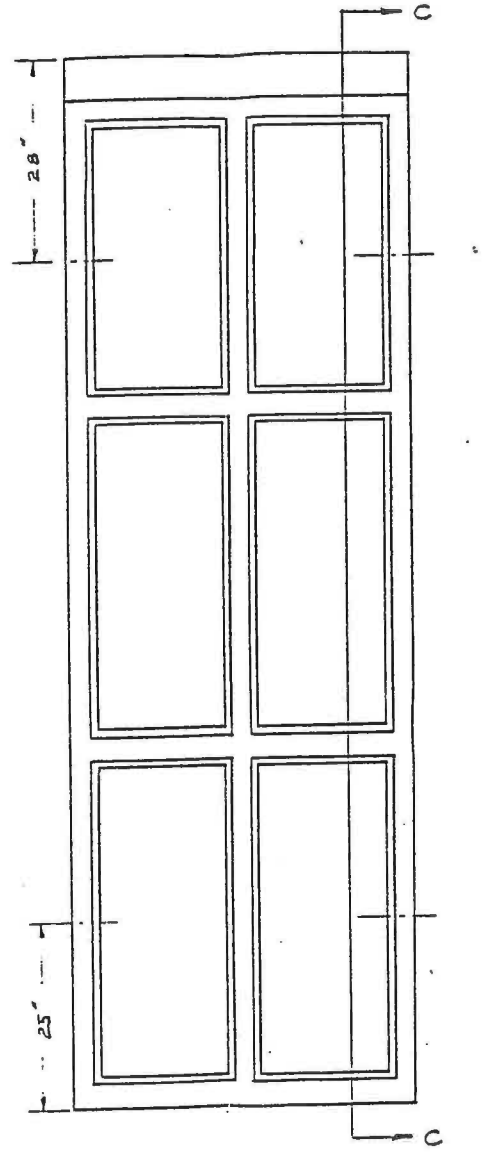


4' SIDE PANEL

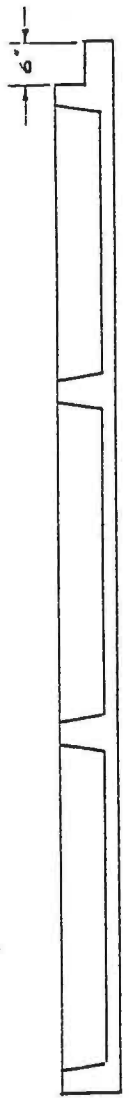


SECT. B-B

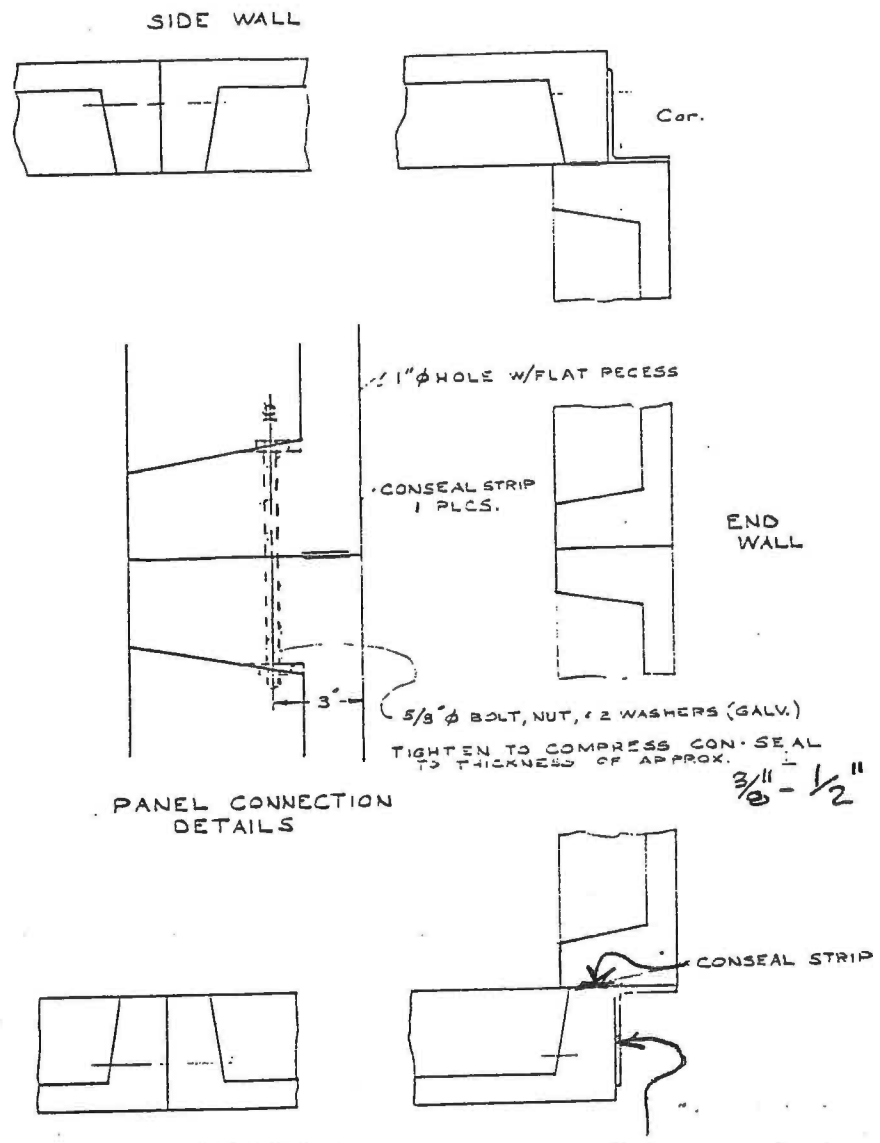




4' END PANEL



SECT. C-C



* SAME REINFORCING AS STANDARD PANELS

WISCONSIN
BERNARD L. JAHN
E-13700
CORCORAN, MINNESOTA
PROFESSIONAL ENGINEER

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

Date 3/14/97 Mine. Reg. No. 13700

revised

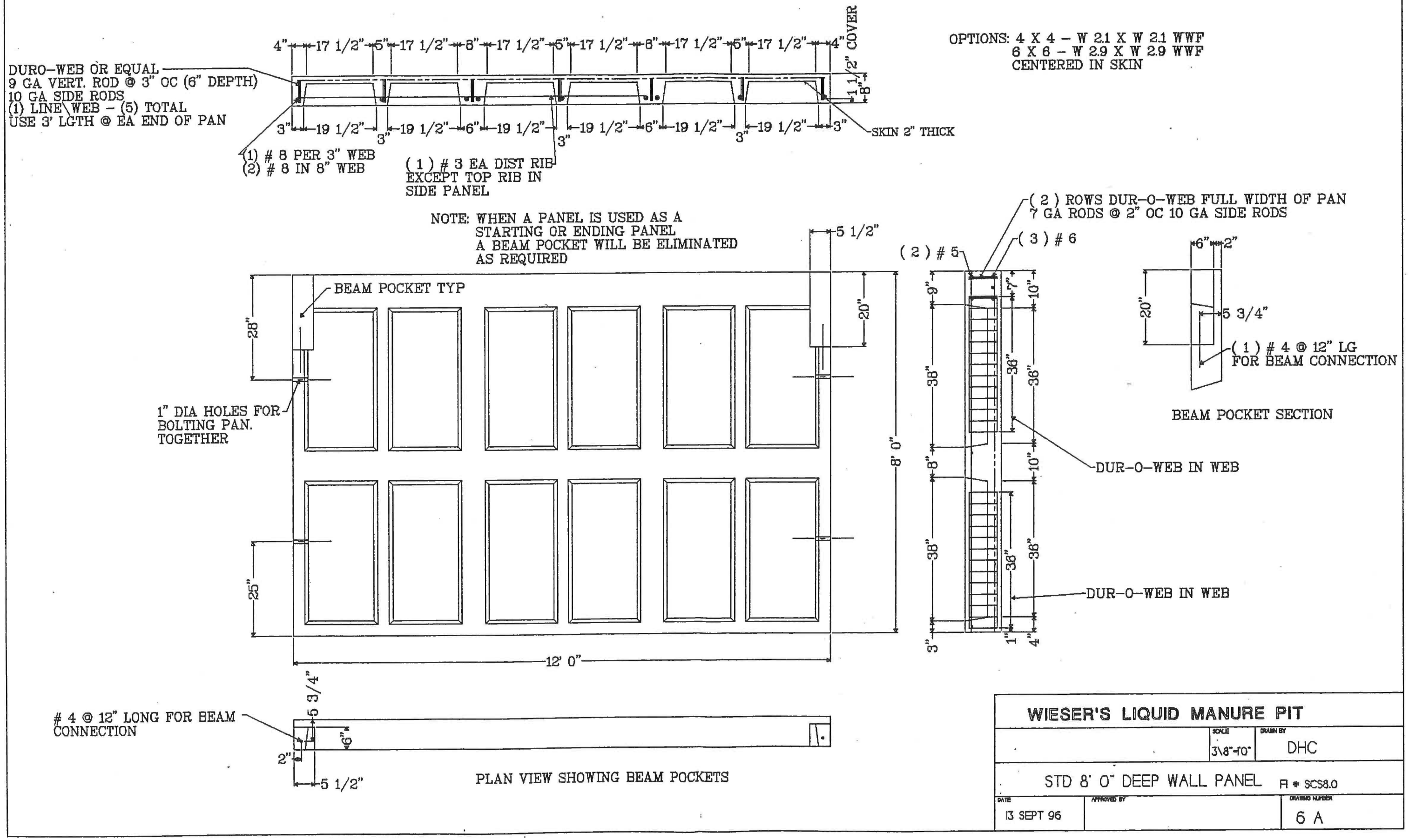
3APR97 REVISED

Wieser's Liquid Manure Pit		
4' STANDARD & END PAN. PANEL CONNECTION DET.	SCALE	DRAWN BY K.P.W. REVISED
4' PAN. & PAN. CON. DET.		
DATE 3/10/93 7/31/93	APPROVED BY	DRAWING NUMBER 6

MADE IN U.S.A.

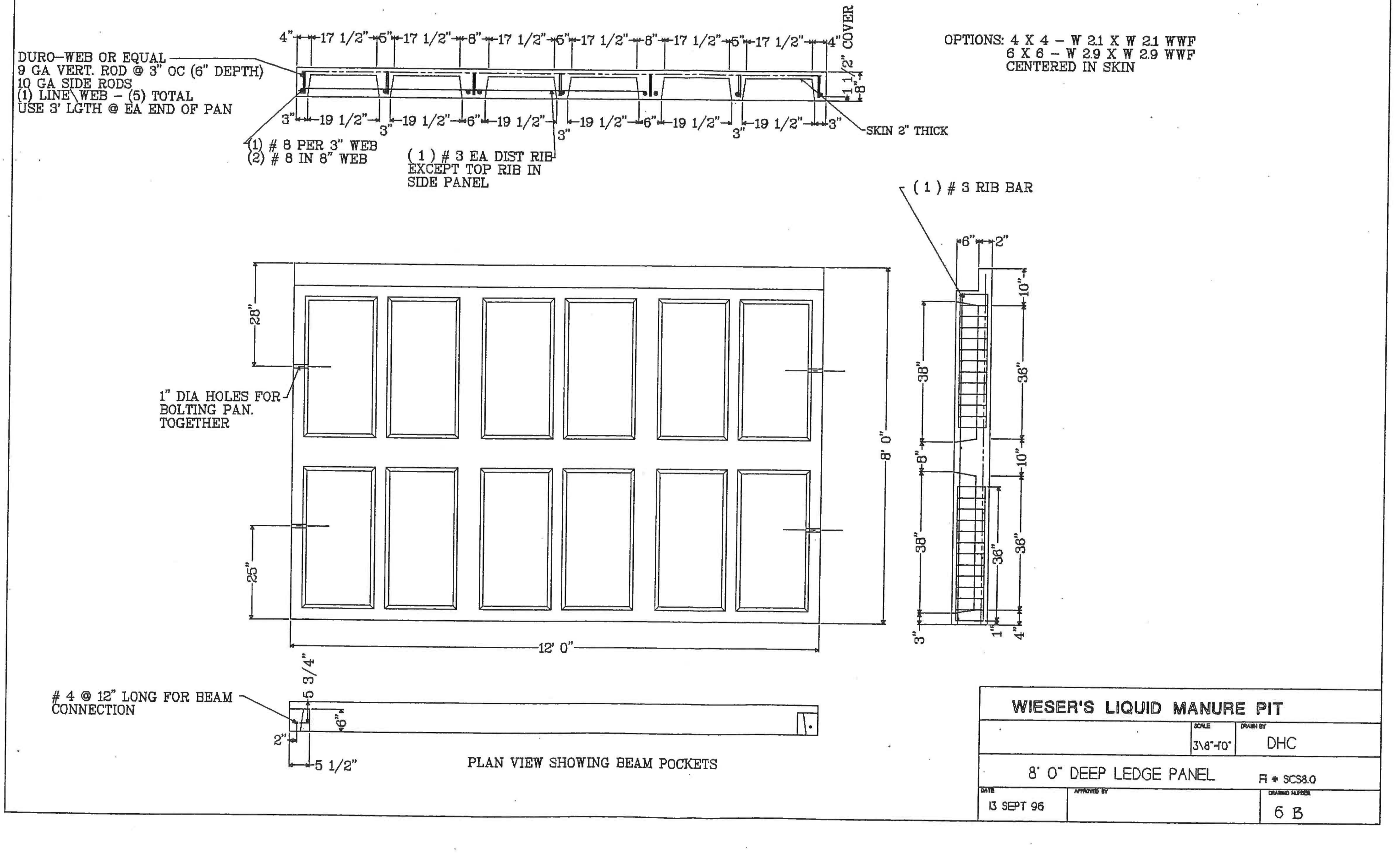
K·E ALBANENE ™ 10 5455 ARCHITECTS' STANDARD FORM

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)



WIESER'S LIQUID MANURE PIT		
	SCALE 3\8"-1'0"	DRAWN BY DHC
STD 8' 0" DEEP WALL PANEL		FI * SCS8.0
DATE 13 SEPT 96	APPROVED BY	DRAWING NUMBER 6 A

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)



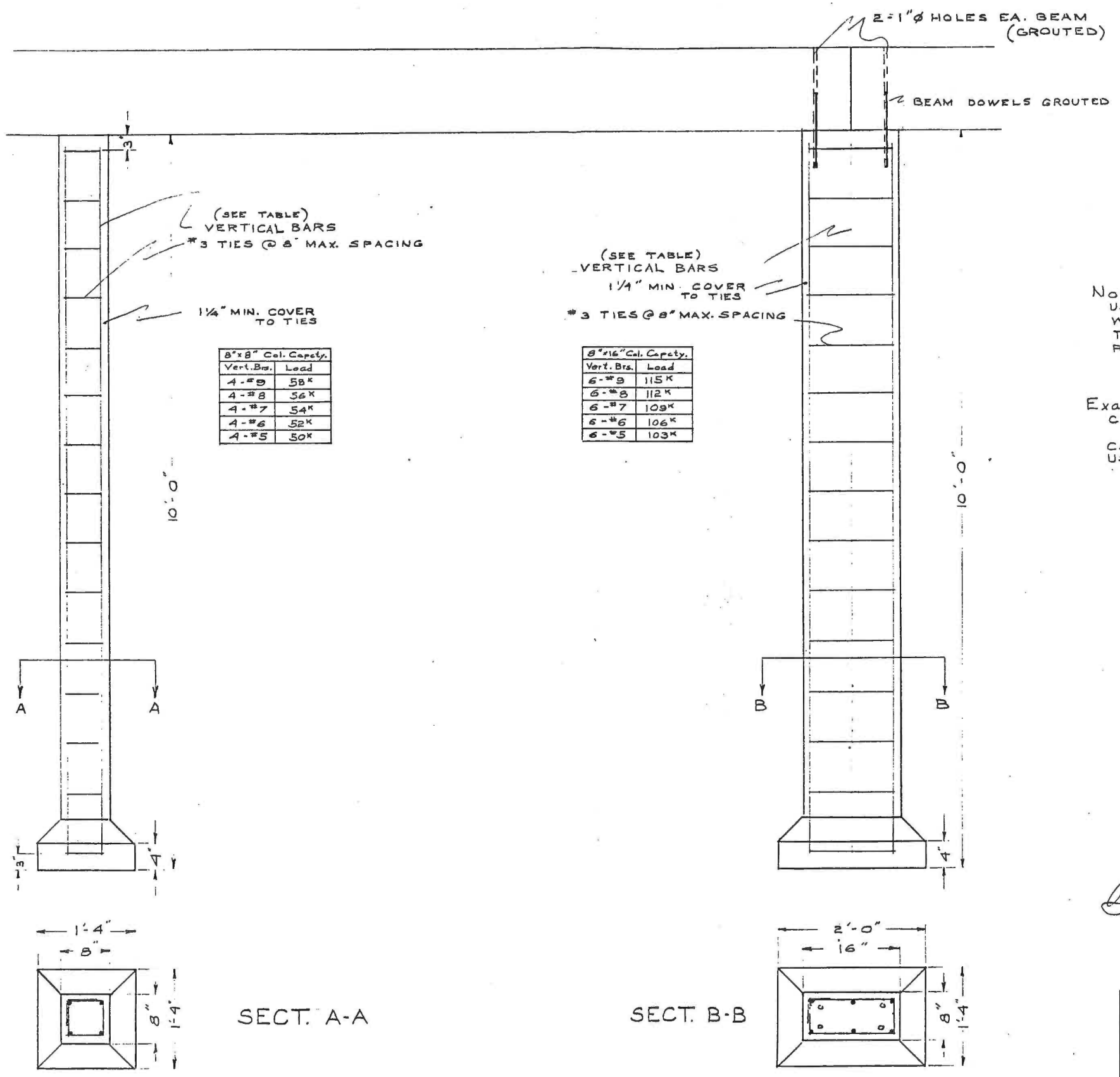
PLAN VIEW SHOWING BEAM POCKETS

WIESER'S LIQUID MANURE PIT		
	SCALE: 3\8"-1'0"	DRAWN BY: DHC
8' 0" DEEP LEDGE PANEL		FI * SCS8.0
DATE: 13 SEPT 96	APPROVED BY:	DRAWING NUMBER: 6 B

5.1.i

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Packet Pg. 120



8"x8" Col. Capcty.	
Vert. Brs.	Load
4-#9	58K
4-#8	56K
4-#7	54K
4-#6	52K
4-#5	50K

8"x16" Col. Capcty.	
Vert. Brs.	Load
6-#9	115K
6-#8	112K
6-#7	109K
6-#6	106K
6-#5	103K

SECT. A-A

SECT. B-B

Notes:
USE COLUMN SIZE & VERTICAL BARS WITH CAPACITY THAT CORRESPONDS TO LOAD REQUIRED FROM BEAM REACTIONS TABULATED ON SHT. #3

Example:
CENTER COLUMN OF 24' CONT. BEAM
+ 15K BLDG. LD.
CAPACITY REQD. = 38.1 + 15 = 53.1K
USE 8"x8" COL. W/4 #7 VERTICAL BARS

WISCONSIN
BERNARD J. JAHN
E-13700
MINNESOTA
PROFESSIONAL ENGINEER

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

Date 3/10/89 Minn. Reg. No. 8476

revised

Wieser's Liquid Manure Pit		
BEAMS COLUMNS	SCALE	DRAWN BY K.P.W.
		REVISED
COLUMNS		
DATE 3/10/89 7/31/00	APPROVED BY	DRAWING NUMBER 7

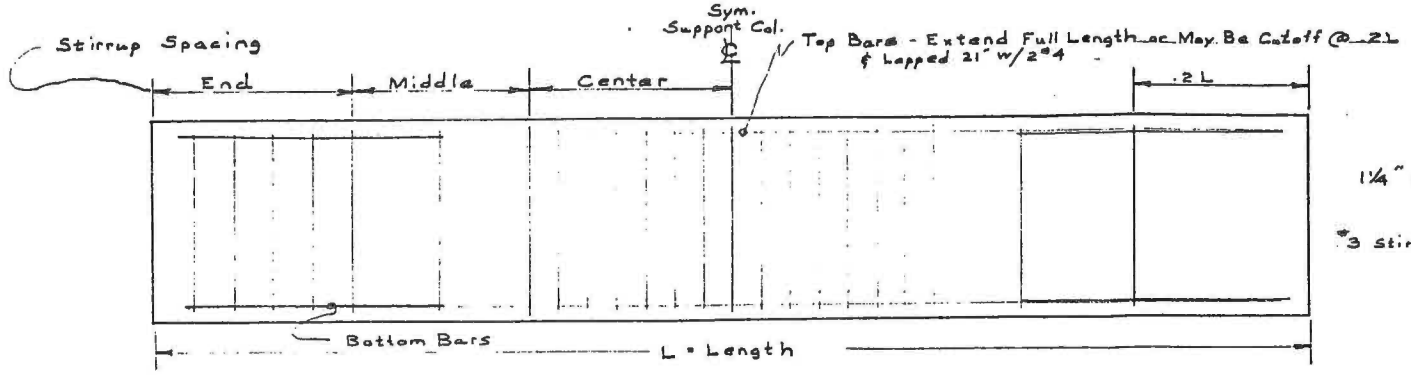
K-E ALBANENE NO 10 5485 ARCHITECTS' STANDARD FORM

MADE IN U.S.A.

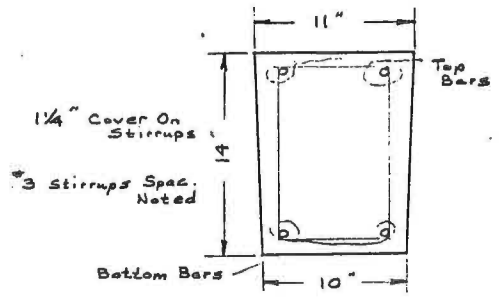
5.1.i

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Packet Pg. 121

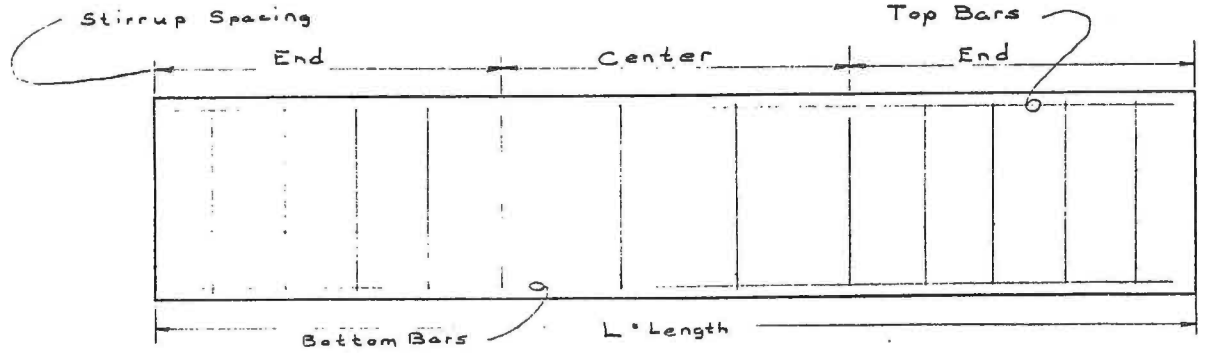


2 SPAN CONTINUOUS BEAM

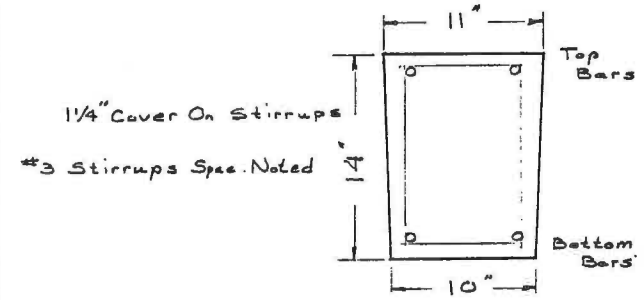


Beam Lgth. L ft.	Bottom Bars	Top Bars	End Stirrup Spac in.	Middle Stirrup Spac. in.	Center Stirrup Spac. in.
14	2 #5	2 #5	4 Sp @ 6	2 Sp @ 12	6 Sp @ 6
15	〃	2 #5	5 Sp @ 6	〃	6 Sp @ 6
16	〃	2 #6	〃	〃	7 Sp @ 6
17	〃	〃	〃	〃	9 Sp @ 6
18	2 #5	2 #6	5 Sp @ 6	〃	8 Sp @ 6
19	2 #6	2 #7	6 Sp @ 6	〃	9 Sp @ 6
20	〃	〃	〃	〃	10 Sp @ 6
21	2 #6	2 #7	6 Sp @ 6	〃	11 Sp @ 6
22	2 #7	2 #8	7 Sp @ 6	〃	11 Sp @ 6
23	〃	2 #8	7 Sp @ 6	〃	12 Sp @ 6
24	〃	2 #9	8 Sp @ 6	〃	12 Sp @ 6
25	2 #7	〃	8 Sp @ 6	〃	13 Sp @ 6
26	3 #6	2 #9	9 Sp @ 6	〃	13 Sp @ 6
27	2 #8	3 #8	9 Sp @ 6	〃	14 Sp @ 6
28	2 #9	3 #8	10 Sp @ 6	〃	14 Sp @ 6
29	2 #9	3 #9	10 Sp @ 6	〃	15 Sp @ 6
30	〃	〃	11 Sp @ 6	〃	15 Sp @ 6
31	2 #9	3 #9	〃	〃	2 @ 5 11 @ 6
32	3 #9	2 #9 1 #10	〃	〃	6 @ 5 12 @ 6
33	3 #9	2 #9 1 #10	11 Sp @ 6	2 Sp @ 12	6 @ 5 13 @ 6

5" Spac. Is Close To ℄



SINGLE SPAN BEAM

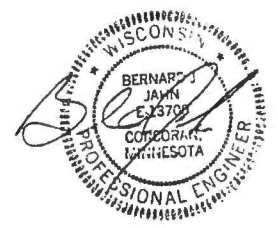


Beam Lgth. L - ft.	Bottom Bars	Top Bars	End Stirrup Spac in	Center Stirrup Spac in
8	2 #5	2 #4	5 Sp @ 6	3 Sp @ 12
9	2 #6	〉	6 Sp @ 6	〃
10	2 #7	〃	7 Sp @ 6	〃
11	3 #6	〃	8 Sp @ 6	〃
12	2 #8	〃	9 Sp @ 6	〃
13	2 #9	〃	10 Sp @ 6	〃
14	3 #8	2 #4	11 Sp @ 6	〃
15	3 #9	2 #6	12 Sp @ 6	〃
16	3 #9	3 #7	14 Sp @ 2½	〃
17	3 #10	3 #9	19 Sp @ 1¼	〃
18	3 #10	3 #10	19 Sp @ 2½	3 Sp @ 12

2 @ End Then 7 Sp @ 6"

2 @ End Then 7 Sp @ 6"

2 @ End Then 8 Sp @ 6"



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Date 3/10/89 Minn. Reg. No. 8476

revised

Wieser's Liquid Manure Pit

2 SPAN CONT. BEAM
SINGLE SPAN BEAM

SCALE

DRAWN BY K.P.W.

REVISED

BEAMS

DATE 3/10/89 7/31/90

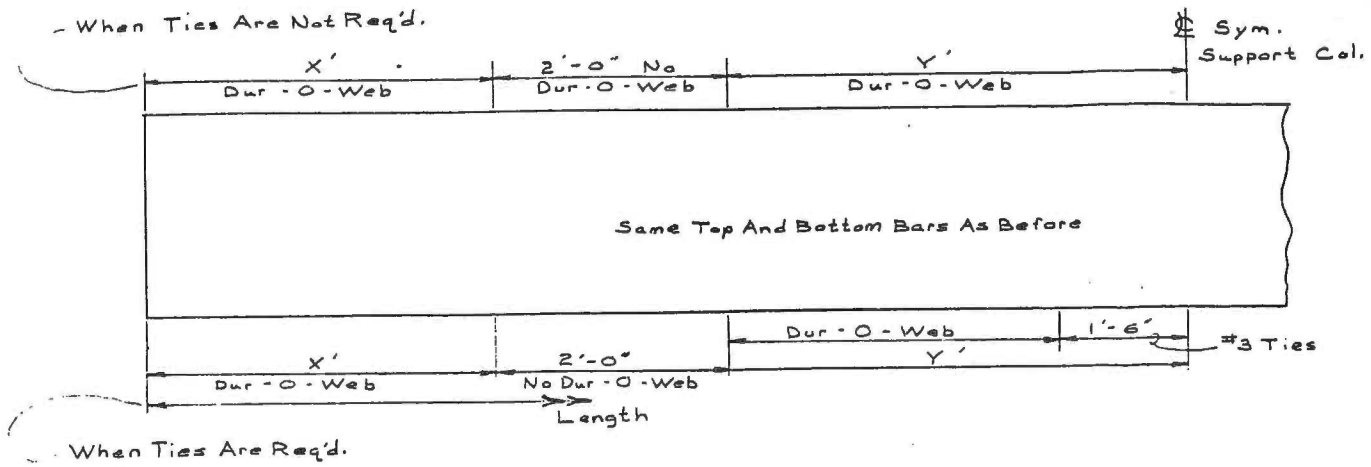
APPROVED BY

DRAWING NUMBER 8

K·E ALBARENE ® 10 5455 ARCHITECTS' STANDARD FORM

MADE IN U.S.A.

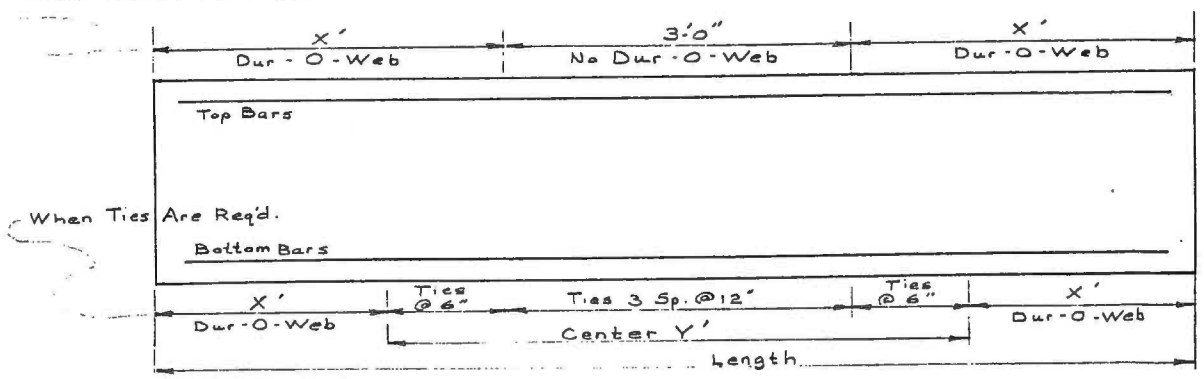
Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)



2 SPAN CONTINUOUS BEAM

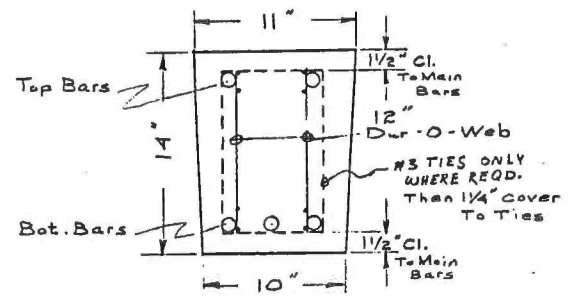
*OPTIOAL WEB REINFORCING

Beam Lgth.'	2 Lines Dur-O-Web @ End Of Beams: Vert Bars Gage Sp.	Side Rod Gage	Lgth. X'	2 Lines Dur-O-Web @ Center Of Beams: Vert. Bars Gage Sp.	Side Rod Gage	Lgth. X'	#3 Closed Ties ℄ ft. Y'
14	6@6"	10	2'-0"	6@6"	10	3'-0"	Not Req'd
15	〃	〃	2'-6"	〃	〃	3'-0"	〃
16	〃	〃	〃	〃	〃	3'-6"	〃
17	〃	〃	〃	〃	〃	4'-0"	〃
18	〃	〃	2'-6"	〃	〃	4'-6"	〃
19	〃	〃	3'-0"	6@5"	10	4'-6"	〃
20	〃	〃	〃	¼@6"	9	5'-0"	〃
21	〃	〃	3'-0"	〃	〃	5'-6"	〃
22	〃	〃	3'-6"	¼@6"	〃	5'-6"	〃
23	〃	〃	3'-6"	¼@5"	〃	6'-0"	〃
24	〃	〃	4'-0"	¼@4"	〃	6'-0"	〃
25	〃	〃	4'-0"	¼@4"	〃	6'-6"	〃
26	〃	〃	4'-6"	¼@3"	〃	6'-6"	Not Req'd.
27	〃	〃	4'-6"	〃	〃	7'-0"	Ties@6"
28	6@6"	10	5'-0"	〃	〃	7'-0"	〃
29	¼@6"	9	5'-0"	¼@3"	〃	7'-6"	〃
30	〃	〃	5'-6"	¼@2"	〃	7'-6"	Ties@6"
31	〃	〃	〃	〃	〃	8'-0"	Ties@3"
32	¼@6"	〃	〃	〃	〃	8'-6"	〃
33	¼@5"	9	5'-6"	¼@2"	9	9'-0"	Ties@5"



SINGLE SPAN BEAM

* OPTIONAL WEB REINFORCING



Beam Lgth.'	2 Lines Dur-O-Web: Vert. Bars Gage Sp.	Side Rod Gage	Lgth. X'	#3 Closed Ties Y'
8	6@6"	10	2'-6"	Not Req'd.
9	〃	〃	3'-0"	〃
10	〃	〃	3'-6"	〃
11	〃	〃	4'-0"	〃
12	6@6"	10	4'-6"	〃
13	¼@6"	9	5'-0"	〃
14	¼@6"	〃	5'-6"	Not Req'd.
15	¼@5"	〃	5'-0"	5'
16	¼@4"	〃	4'-0"	8'
17	¼@3"	〃	4'-0"	9'
18	¼@3"	9	3'-6"	11'

WISCONSIN
BERNARD J. JAHN
E-17709
DURAND
MINNESOTA
PROFESSIONAL ENGINEER

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

Date 7/10/90 Minn. Reg. No. 8476

revised

Wieser's Liquid Manure Pit

2 SPAN CONT. BEAM
SINGLE SPAN BEAM

SCALE

DRAWN BY K.P.W.

REVISED

Optional Web Reinforcing

DATE 3/10/89 7/31/90

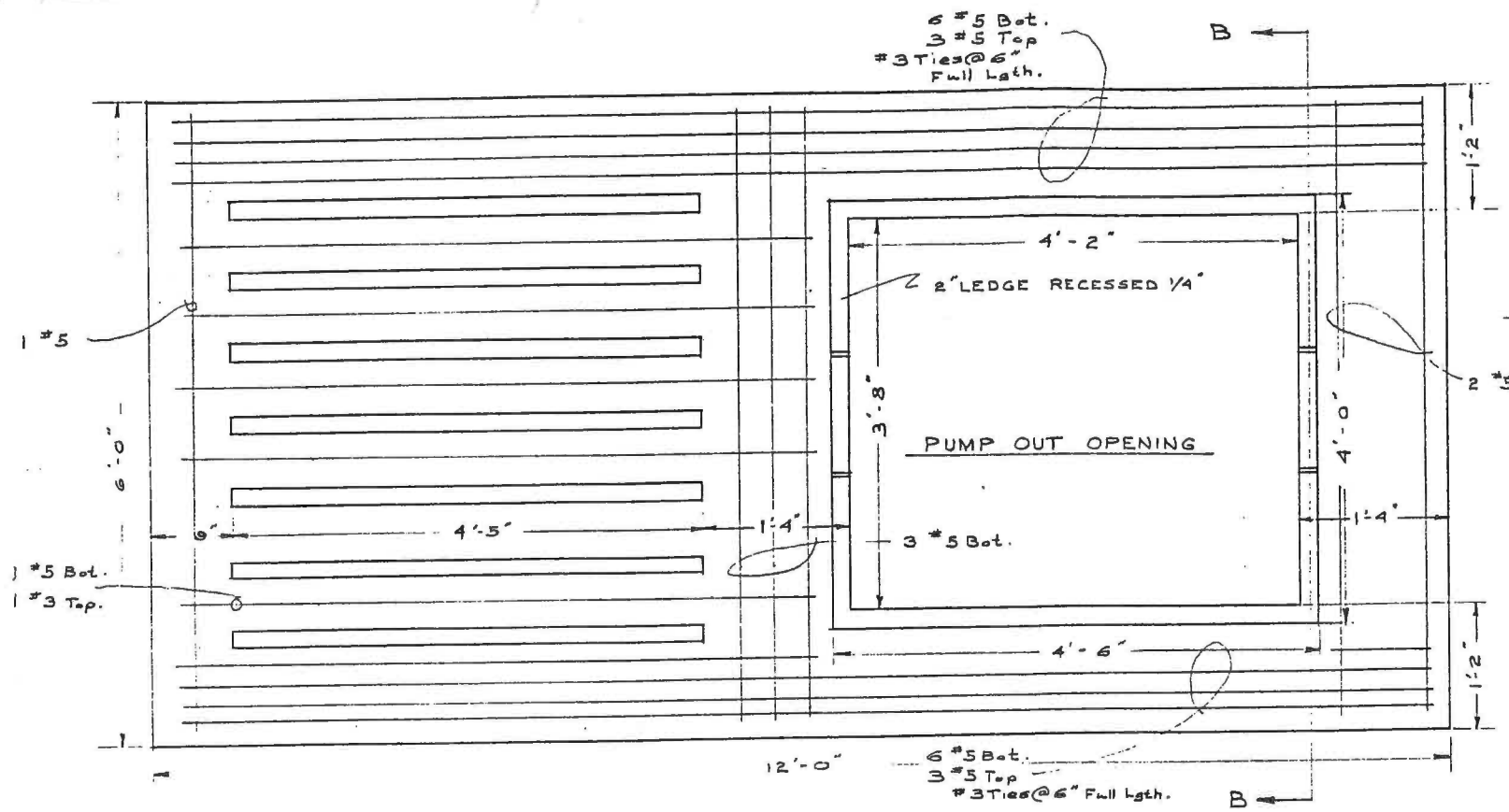
APPROVED BY

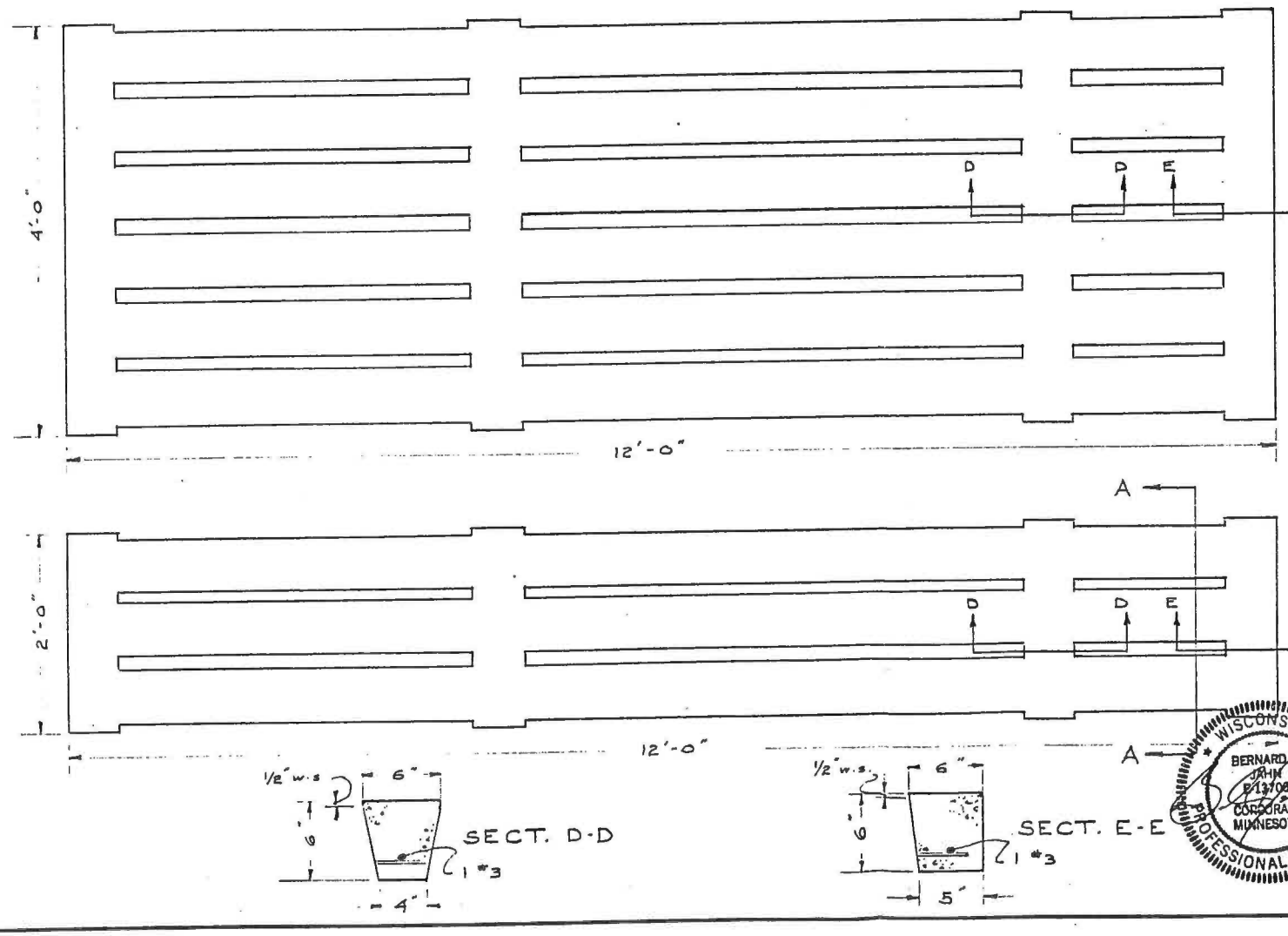
DRAWING NUMBER 8A

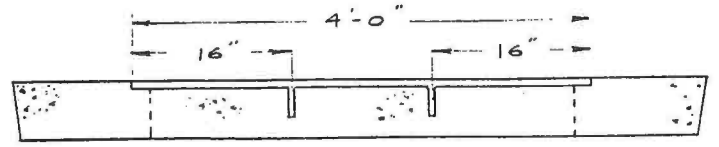
K-E ALBANENE IN 10 5459 ARCHITECTS' STANDARD FORM

MADE IN U.S.A.

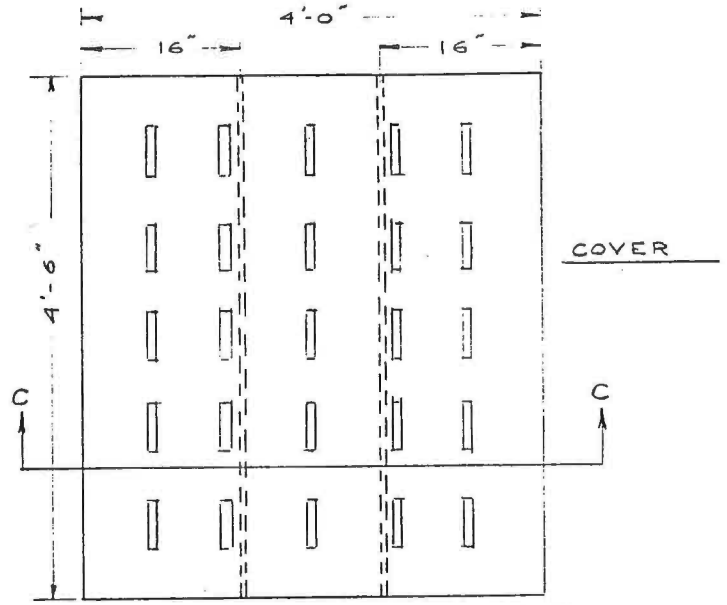
Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)



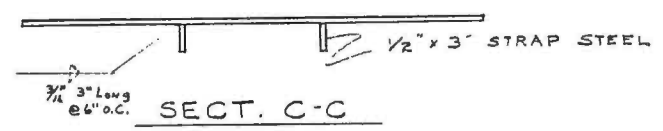




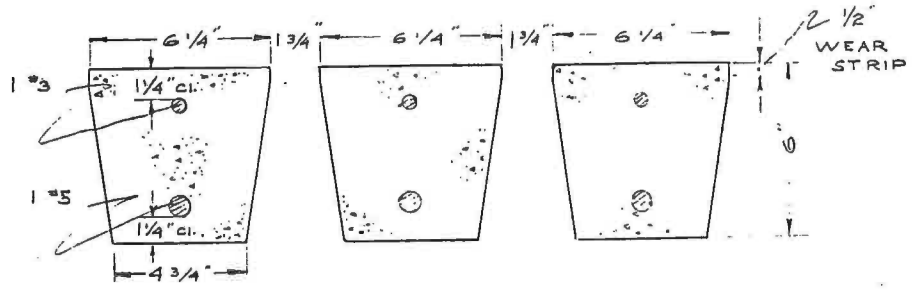
SECT. B-B



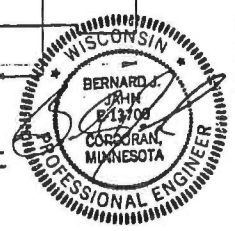
3/16" THICK STEEL PUMP OUT COVER W/1 3/4" x 5" DRAIN SLOTS



SECT. C-C



SECTION A-A



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

Date 7/10/90 Minn. Reg. No. 8[illegible]

revised

Wieser's Liquid Manure Pit

CATTLE SLAT 2'&4'
PUMP OUT SLAT 6'

SCALE

DRAWN BY K.P.W.

REVISED

CATTLE & P.O. SLAT

DATE	APPROVED BY	DRAWING NUMBER
3/10/89 7/31/90		9

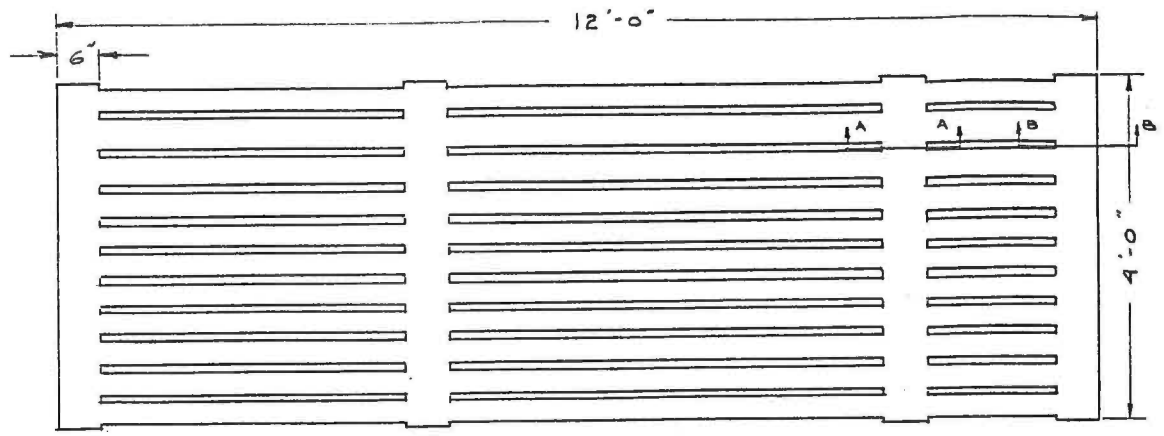
K·E ALBANENE ^ 10 5455 ARCHITECTS' STANDARD FORM

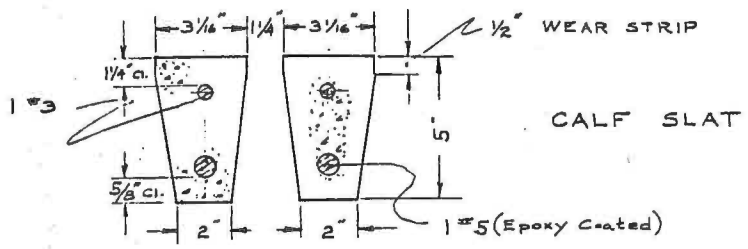
MADE IN U.S.A.

5.1.i

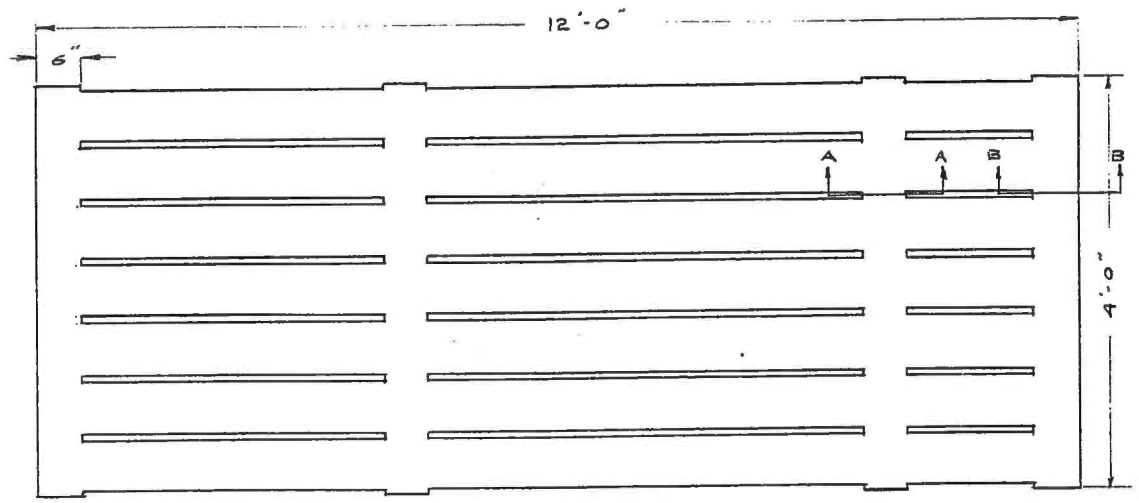
Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)

Packet Pg. 124

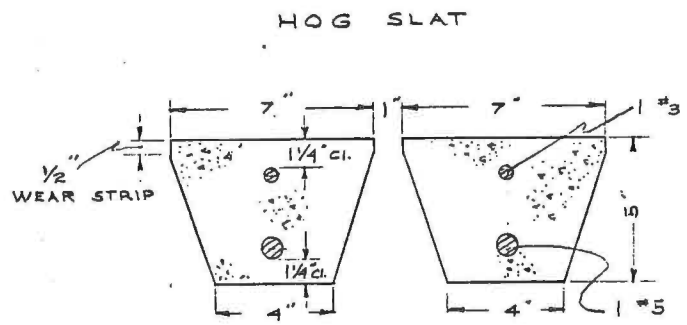


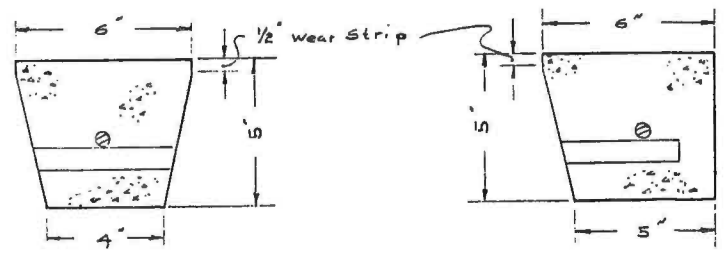


CALF SLAT



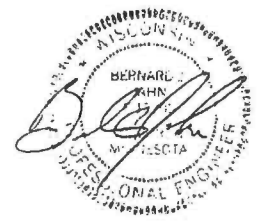
HOG SLAT





SECTION A-A

SECTION B-B



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

Date 3/10/89 Signature, Reg. No. 5427

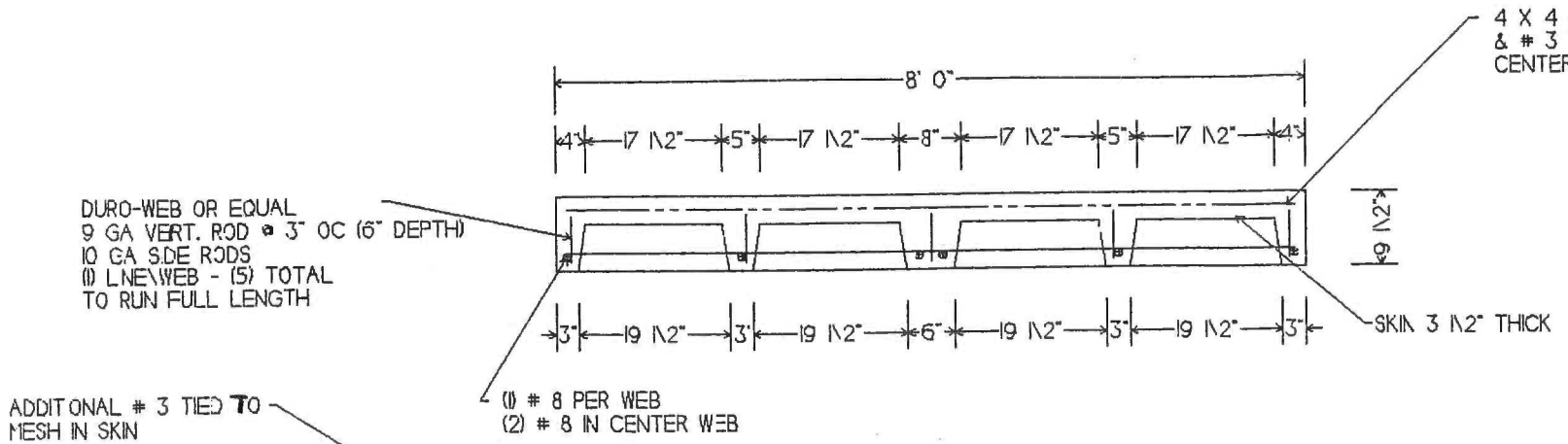
Wieser's Liquid Manure Pit		
HOG SLAT CALF SLAT	SCALE	DRAWN BY K.P.W. REVISED
HOG & CALF SLAT		
DATE 3/10/89 7/31/89	APPROVED BY	DRAWING NUMBER 10

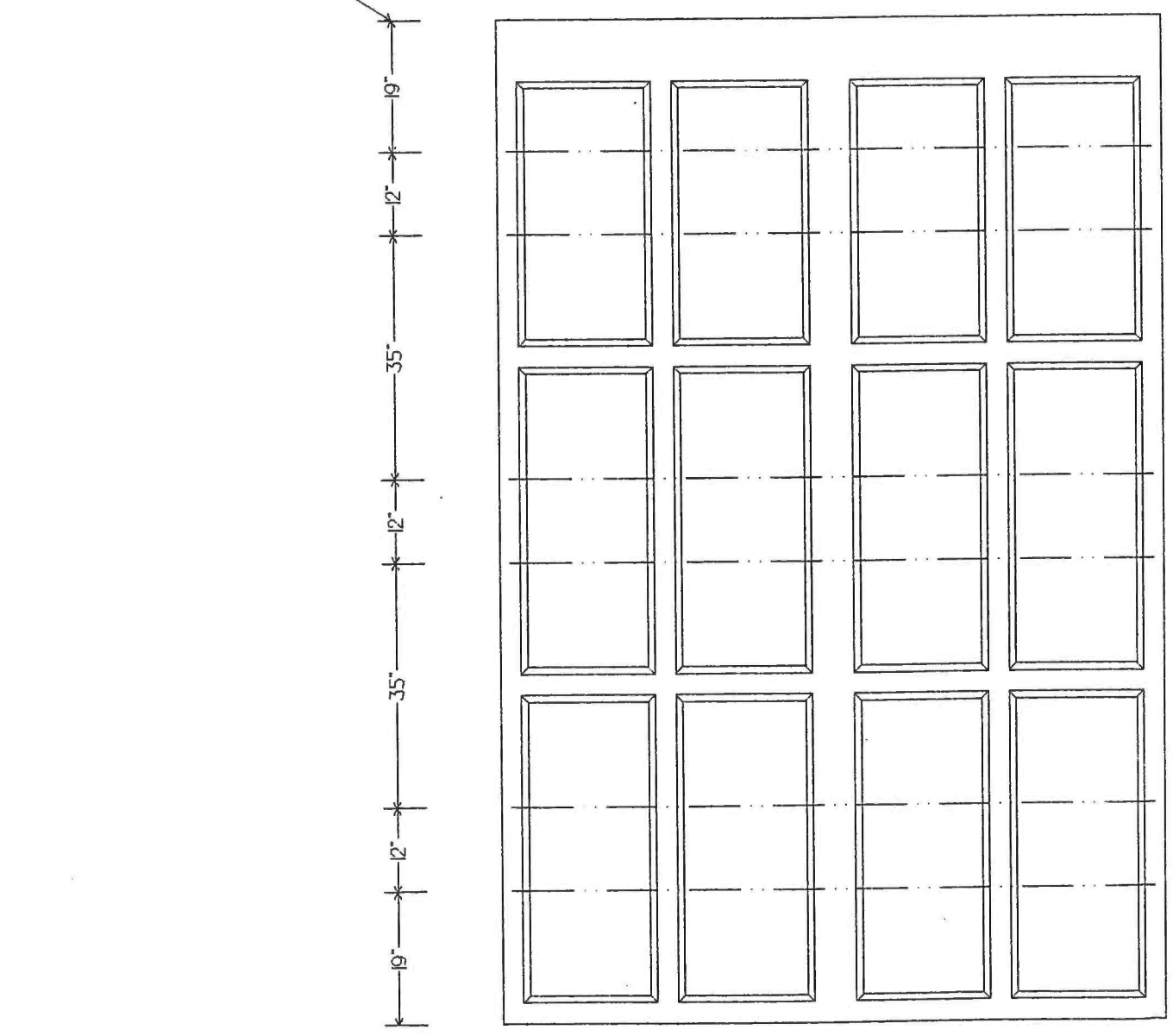
revised

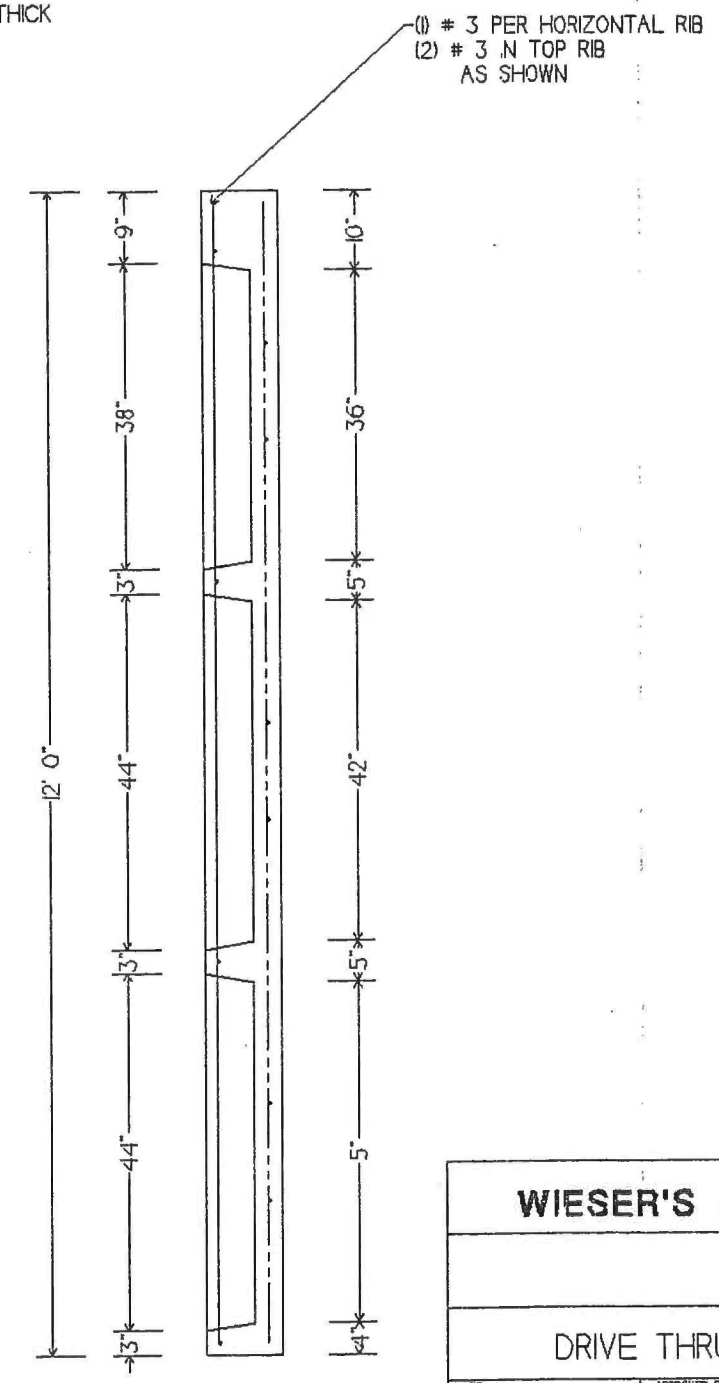
K&E ALBANENE (R) 10 5455
ARCHITECTS' STANDARD FORM

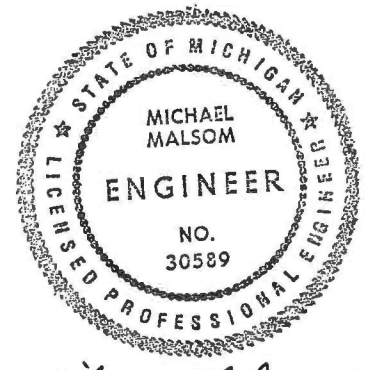
MADE IN U.S.A.

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)





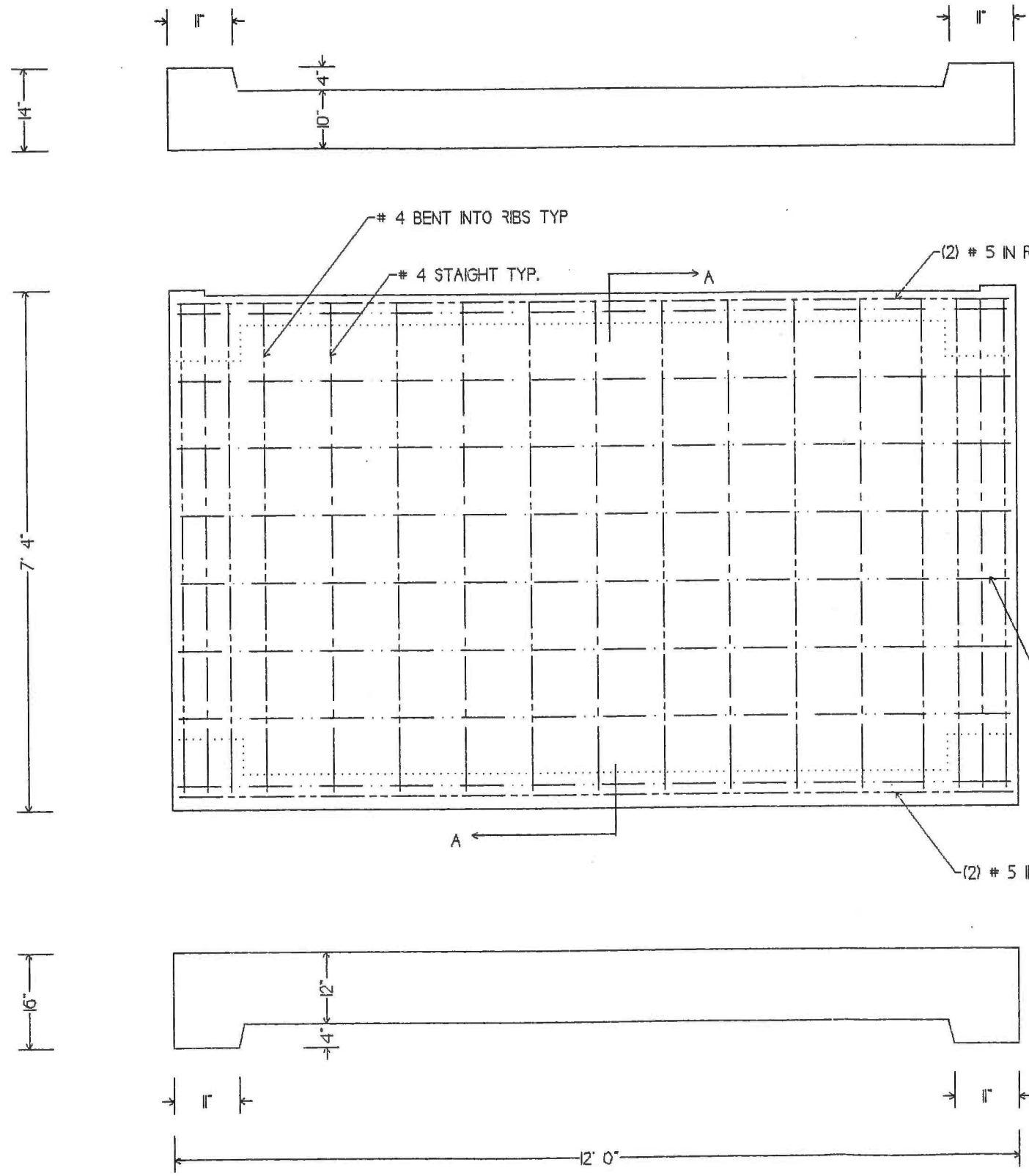


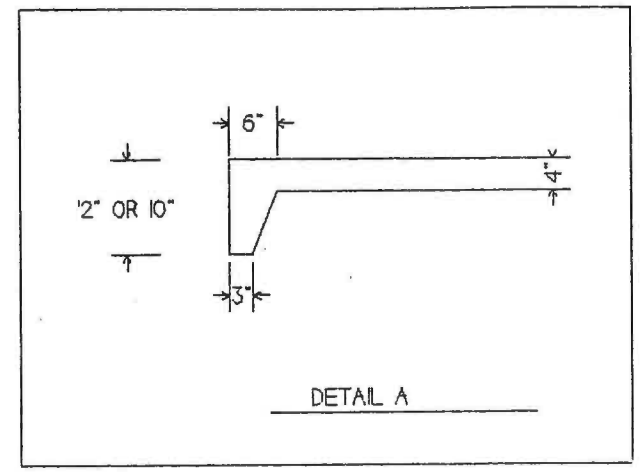


Mike Malsom

WIESER'S LIQUID MANURE PIT		
	SCALE 1/2"=1'-0"	DRAWN BY DHC
DRIVE THRU PANEL		
DATE DEC. 9. 1993	APPROVED BY	DRAWING NUMBER 10 A

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)



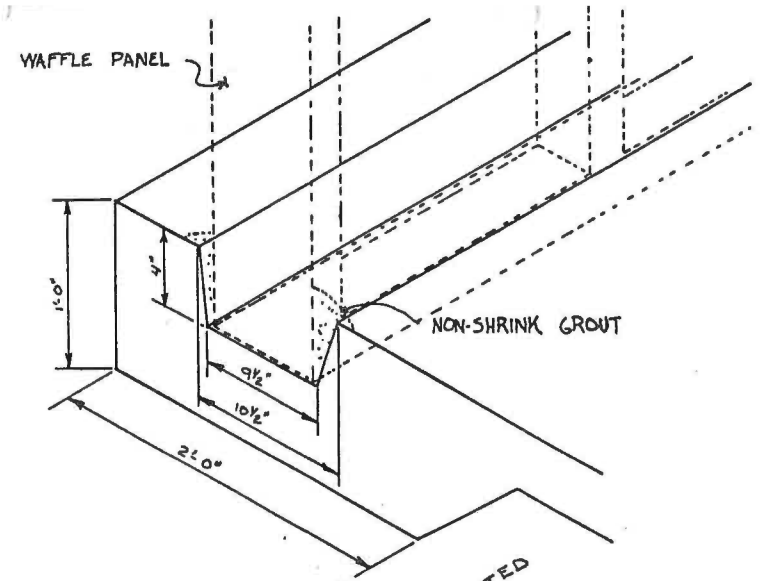


STATE OF MICHIGAN
MICHAEL MALSOM
ENGINEER
NO. 30589
LICENSED PROFESSIONAL ENGINEER

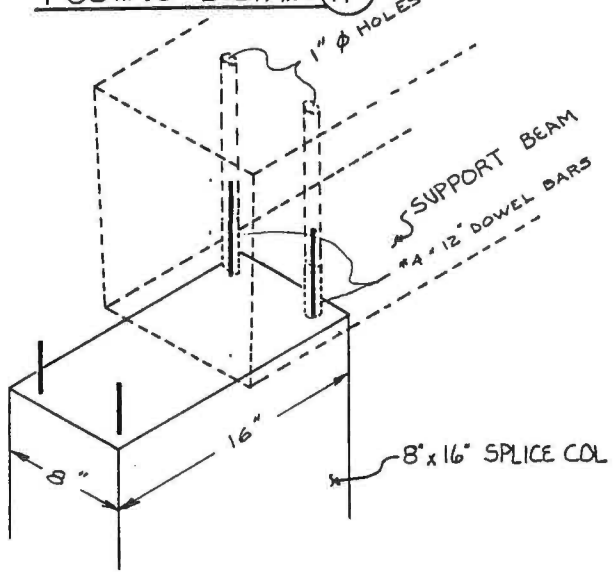
Mike Malsom

WIESER'S LIQUID MANURE PIT		
	SCALE: 1\2"=1' 0"	DRAWN BY: DHC
FREE STALL PANEL		
DATE: DEC. 9, 1993	APPROVED BY:	DRAWING NUMBER: 10 B

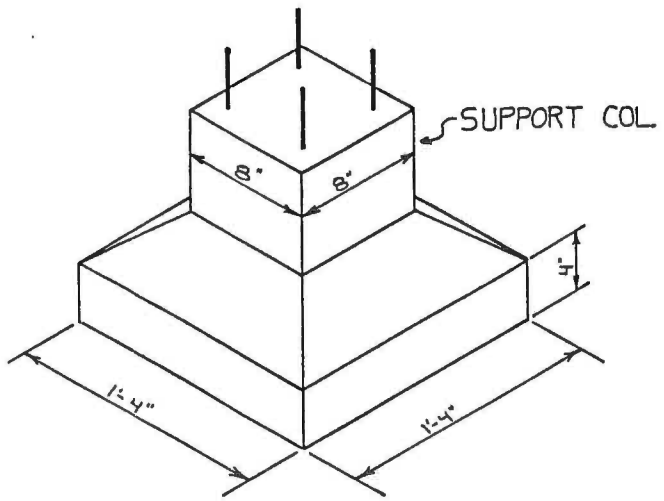
Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)



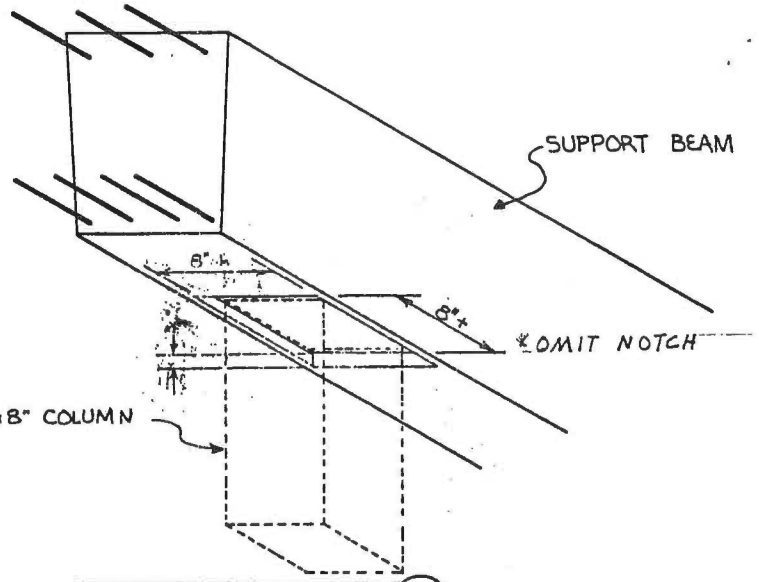
FOOTING DETAIL (A)



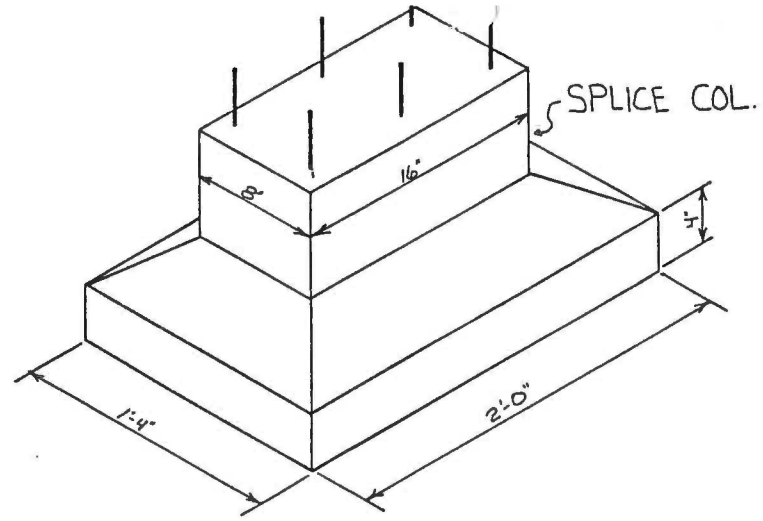
SPLICE COLUMN AT BEAM (D)



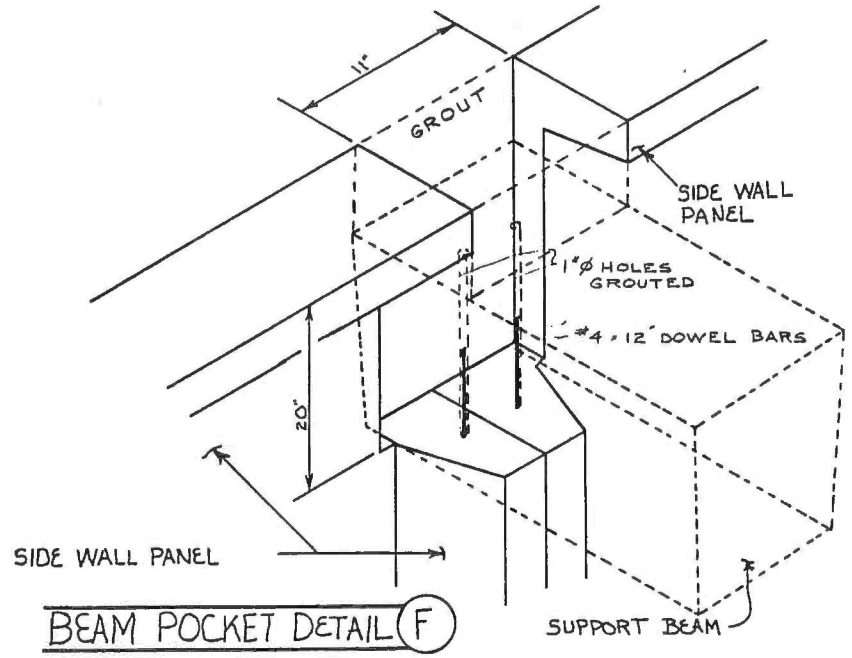
COLUMN BASE (B)



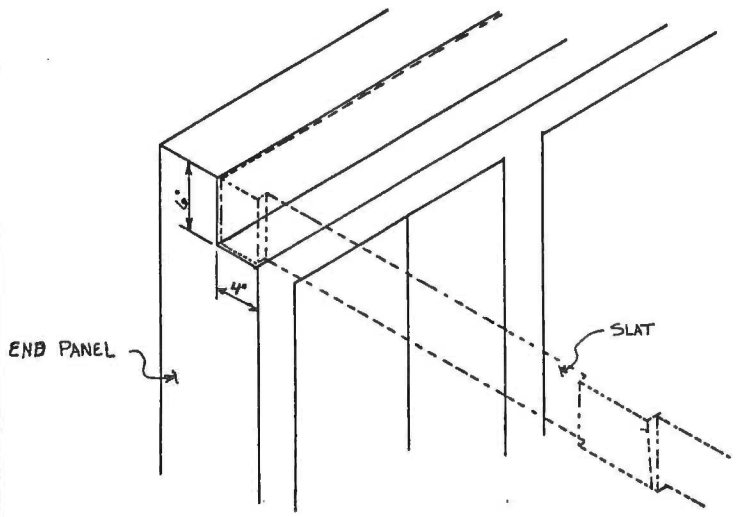
COLUMN AT BEAM (E)



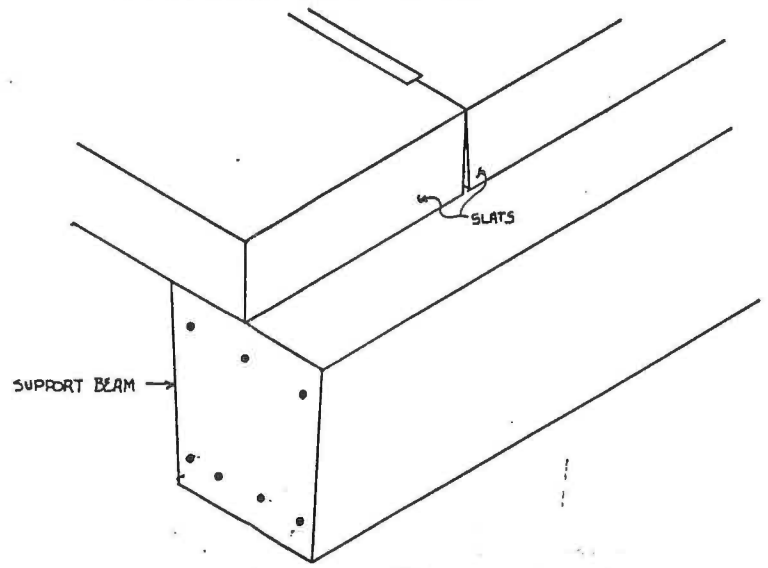
COLUMN BASE (C)



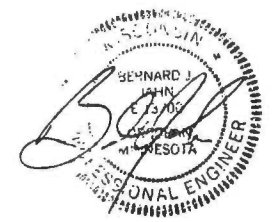
BEAM POCKET DETAIL (F)



END WALL DETAIL (G)



SLAT ON BEAM (H)



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

Date 3/10/88 Regn. Reg. No. 8472

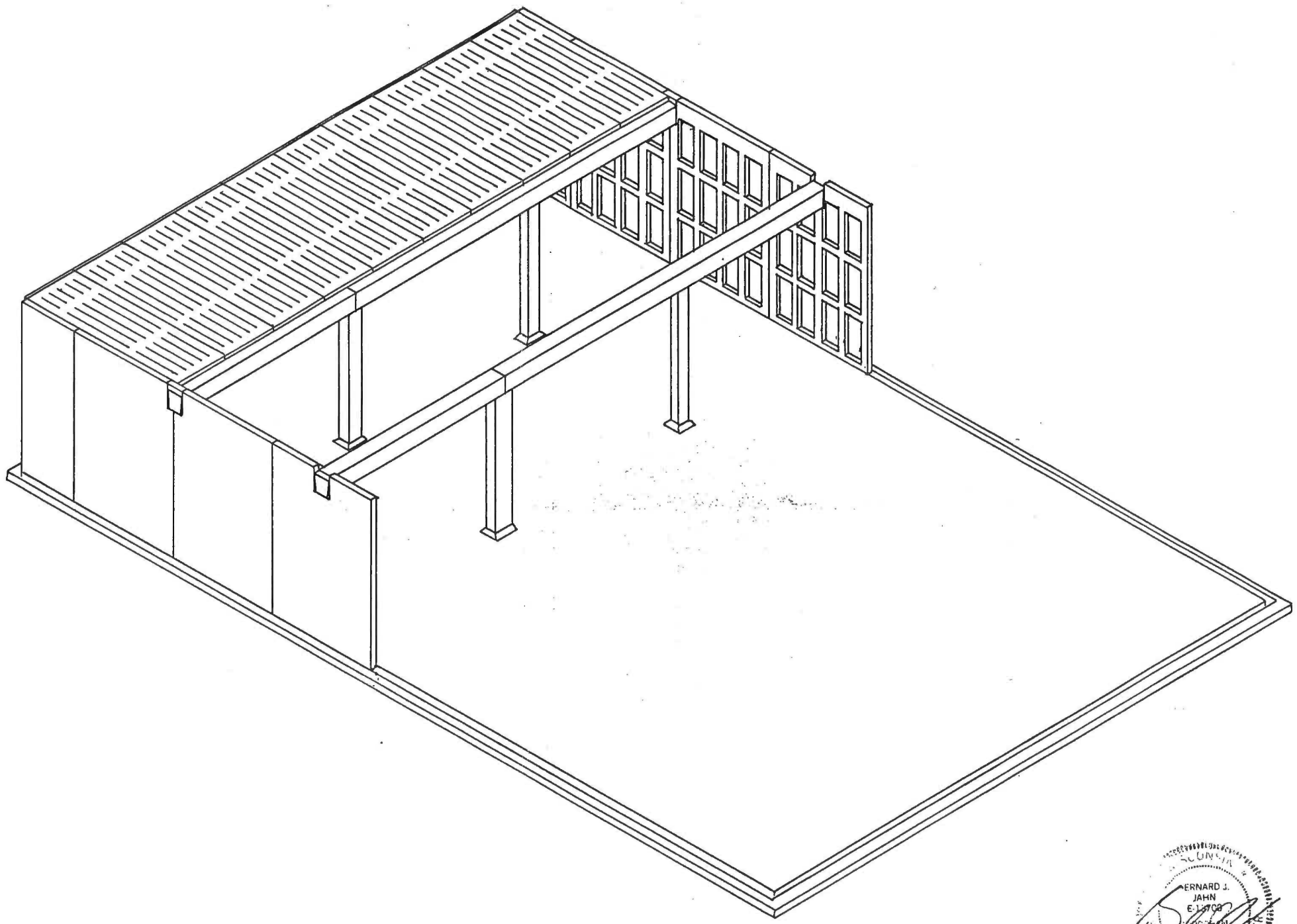
revised

STANDARD PIT DETAILS		
ERECTION DETAILS	SCALE	DRAWN BY C. FLAUST REVISED
Wieser's Liquid Manure Pit		
DATE 12-19-89 7/31/90	APPROVED BY	DRAWING NUMBER 11

K+E ALBANENE © 10 8455
ARCHITECTS' STANDARD FORM

MADE IN U.S.A.

Attachment: (H) Existing Waste Collection Tank Information (6320 : 2021-0007 Gilbertson Farms LLC - Conditional Use Request)



revised

BERNARD J. JAHN
E-19708
REGISTERED
MINNESOTA
PROFESSIONAL ENGINEER

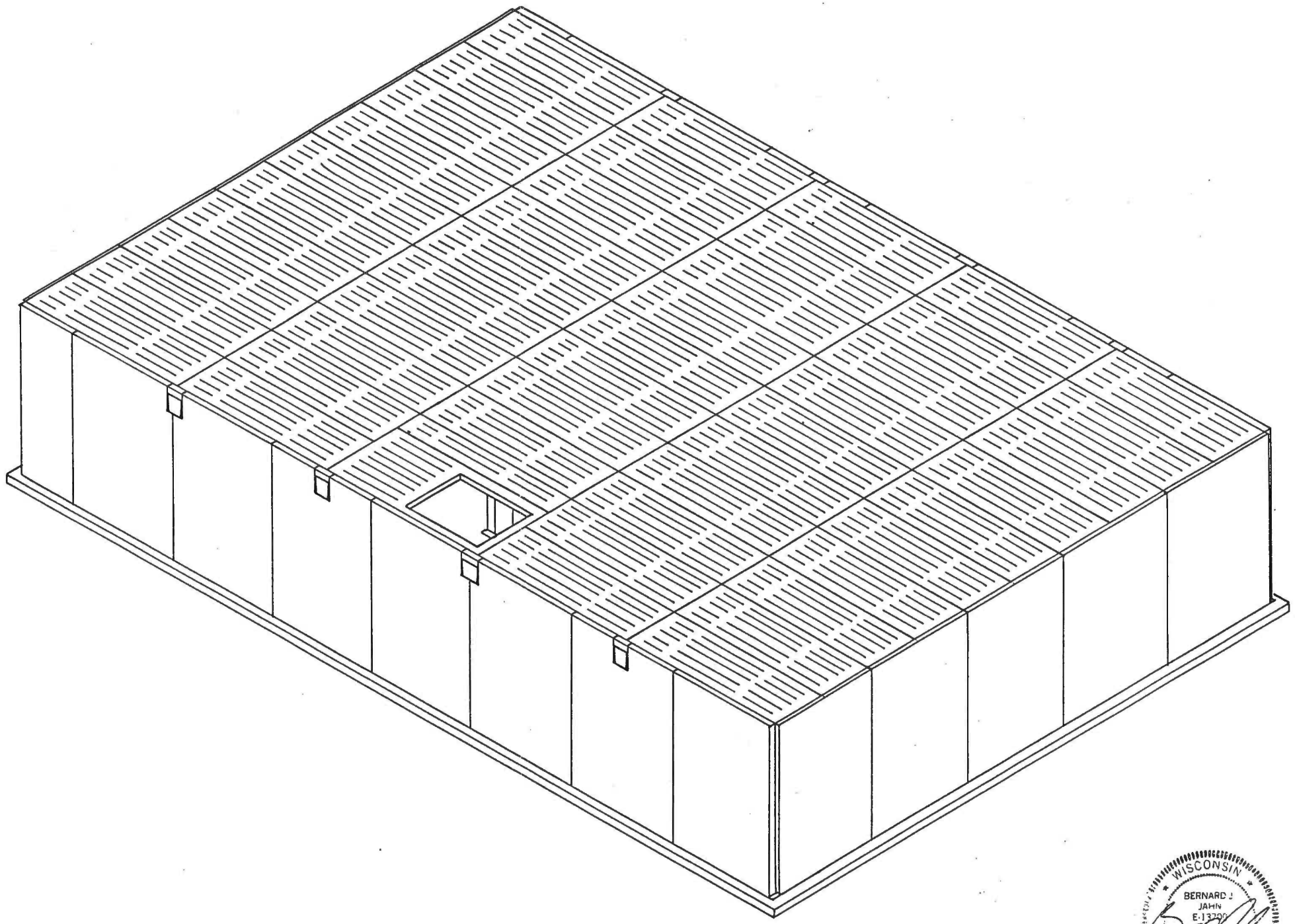
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Date 3/10/89 Minn. Reg. No. 8497

Wieser's Liquid Manure Pit		
	SCALE	DRAWN BY
		REVISED
ERECTION ISOMETRIC		
DATE 3/10/89 7/31/90	APPROVED BY	DRAWING NUMBER 12

K+E ALBANENE © 10 8488 ARCHITECTS' STANDARD FORM

MADE IN U.S.A.



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

Date 3/14/89 Sign Reg. No. 8626

Wieser's Liquid Manure Pit		
	SCALE	DRAWN BY
		REVISED
COMPLETED ISOM.		
DATE 3/10/89 7/31/90	APPROVED BY	DRAWING NUMBER 13

revised

MADE IN U.S.A.

K·E ALBANENE ® 10 5488 ARCHITECTS' STANDARD FORM