Document 2021 GW691

Book 2021 Page 691 Type 43 001 Pages 15
Date 2/19/2021 Time 3:27:29PM
Rec Amt $.00

INDX
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LISA SMITH, COUNTY RECORDER
MADISON COUNTY IOWA

CHEK

REAL ESTATE TRANSFER - GROUNDWATER HAZARD STATEMENT

TO BE COMPLETED BY TRANSFEROR

TRANSFEROR:

Name: Kent Kiburz and Melissa Kiburz

Address: 2303 W. Summit St., Winterset, IA 50273

TRANSFEREE:

Name: Zachary Scadden

Address: 2303 W. Summit St., Winterset, IA 50273

Address of Property Transferred: 2504 250th Lane, Winterset, IA 50273

Number and Street or RR, City, Town or P.O., State Zip

Legal Description of Property: (Attach if necessary)
Parcel "B" located in the Northwest Quarter (¼) of the Northwest Quarter (¼) of Section Twenty-two (22), Township Seventy-five (75) North, Range Twenty-seven (27) West of the 5th Madison County, Iowa, containing 4.810 acres, as shown in Plat of Survey filed in Book 2020, Page 4646 on December 3, 2020, in the Office of the Recorder of Madison County, Iowa.

1. **Wells (check one)**
   - ☒ There are no known wells situated on this property.
   - ☐ There is a well or wells situated on this property. The type(s), location(s) and legal status are stated below or set forth on an attached separate sheet, as necessary.
2. **Solid Waste Disposal (check one)**
   - ☒ There is no known solid waste disposal site on this property.
   - ☐ There is a solid waste disposal site on this property and information related thereto is provided in Attachment #1, attached to this document.
3. **Hazardous Wastes (check one)**
   - ☒ There is no known hazardous waste on this property.
   - ☐ There is hazardous waste on this property and information related thereto is provided in Attachment #1, attached to this document.
4. **Underground Storage Tanks (check one)**
   - ☒ There are no known underground storage tanks on this property. (Note exclusions such as small farm and residential motor fuel tanks, most heating oil tanks, cisterns and septic tanks, in instructions.)
   - ☐ There is an underground storage tank on this property. The type(s), size(s) and any known substance(s) contained are listed below or on an attached separate sheet, as necessary.
5. **Private Burial Site (check one)**
   - ☒ There are no known private burial sites on this property.
   - ☐ There is a private burial site on this property. The location(s) of the site(s) and known identifying

information of the decedent(s) is stated below or on an attached separate sheet, as necessary.

6. Private Sewage Disposal System (check one)

- ☐ All buildings on this property are served by a public or semi-public sewage disposal system.
- ☐ This transaction does not involve the transfer of any building which has or is required by law to have a sewage disposal system.
- ☐ There is a building served by private sewage disposal system on this property or a building without any lawful sewage disposal system. A certified inspector's report is attached which documents the condition of the private sewage disposal system and whether any modifications are required to conform to standards adopted by the Department of Natural Resources. A certified inspection report must be accompanied by this form when recording.
- ☐ There is a building served by private sewage disposal system on this property. Weather or other temporary physical conditions prevent the certified inspection of the private sewage disposal system from being conducted. The buyer has executed a binding acknowledgment with the county board of health to conduct a certified inspection of the private sewage disposal system at the earliest practicable time and to be responsible for any required modifications to the private sewage disposal system as identified by the certified inspection. A copy of the binding acknowledgment is attached to this form.
- ☐ There is a building served by private sewage disposal system on this property. The buyer has executed a binding acknowledgment with the county board of health to install a new private sewage disposal system on this property within an agreed upon time period. A copy of the binding acknowledgment is provided with this form.
- ☐ There is a building served by private sewage disposal system on this property. The building to which the sewage disposal system is connected will be demolished without being occupied. The buyer has executed a binding acknowledgment with the county board of health to demolish the building within an agreed upon time period. A copy of the binding acknowledgment is provided with this form. [Exemption #9]
- ☐ This property is exempt from the private sewage disposal inspection requirements pursuant to the following exemption [Note: for exemption #9 use prior check box]: _____.
- ☒ The private sewage disposal system has been installed within the past two years pursuant to permit number 10'1-20.

Information required by statements checked above should be provided here or on separate sheets attached hereto:

_____

I HEREBY DECLARE THAT I HAVE REVIEWED THE INSTRUCTIONS FOR THIS FORM AND THAT THE INFORMATION STATED ABOVE IS TRUE AND CORRECT.

Signature: _____ Telephone No.: (515) 468-0135
(Transferor)

Madison County
Office of Zoning and
Environmental Health

Authorization to Construct a Private On-site Wastewater

Treatment System (POWTS)

112 N. John Wayne Drive
P.O. Box 152
Winterset, IA 50273-0152
Telephone: (515) 462-2636

Permit Number: 107-20 **Date Issued: 11-20-2020**

Issued to: ~~**Irvella Farm LLC**~~ Kent Kiburz
Address: ~~**2232 170th St**~~
Boone, IA 50036

2504 250th LN\n.
Winterset

Legal Description: Par B 4581A
NW NW PID# 52010224400000
22-75-27 Scott TWP

POWTS Components Specifications: **1250/500 gal. Septic and Pump Tank At-Grade Mound 22ft X 92ft.**

General Conditions:

1. System must be constructed in conformance with attached system layout, profiles, and cross-sections.
2. Structures must be constructed in conformance with 567 IAC Chapter 69 and the Madison County Environmental Health Regulations.
3. Permit shall be null and void if system is not constructed within one year of permit issuance. The Environmental Health Officer must approve any request for extension of permit.
4. The Environmental Health Officer must approve any design modifications to the permitted system prior to construction.
5. Once constructed, all system components must be uncovered for inspection and the system must be approved before it can be put into operation. Notice for inspection must be received with 24 hours in advance (8 a.m. through 4:30 p.m., Monday - Friday). If weather necessitates the need to cover the system components, then the system owner or contractor must notify and follow the procedures given by the Environmental Health Officer.

***Special Conditions*:** **Max. Trench depth 10"**

Environmental Health Officer Assistant
Madison County
Office of Zoning and Environmental Health

Madison County
Office of
Zoning & Environmental Health

Application to Construct
Private Sewage Disposal System (PSDS)

112 N. John Wayne Dr.
P O Box 152
Winterset, IA 50273
Telephone (515) 462-2636

Office Use Only					Temp E911:	
Tracking No.	Date Received	Fee Paid	Check #	Date Issued		Section/Township
10730	11/20/20	150.00	4162	11/23/20		22-Scott

Application will not be accepted until site and soil analysis/percolation information have been received and fee has been paid. For systems requiring an NPDES General Permit #4 (surface discharge), its application must be submitted to this office along with appropriate forms for recording before a permit will be issued.

Please Print All Information.

1. Owner Information (Applicant)		2. Installation Contractor Information	
First Name / Last Name	Iruella Farms LLC William Edward	First Name / Last Name	Travis Witt
Address	2232 170th St	Address	133 S. 10th Ave
City / State / Zip	Boone IA 50036	City / State / Zip	Winterset IA 50273
Phone Number (area code)	515-233-4206	Phone Number (area code) / Cell Phone	Cell Phone 515-971-0549

3. System Requirement Information

IAC CHAPTER 69 DOUBLE COMPARTMENT TANK REQUIRED

	Minimum Tank Size Required
1-3 Bedroom	1250
4 Bedroom	1500
5 Bedroom	1750
6 Bedroom	2000

4. Site and Soil Evaluator (Percolation Test/Soils Analysis)

PERCOLATION/SOILS ANALYSIS MUST BE COMPLETED AND APPROVED PRIOR TO THE ISSUANCE OF PERMIT

Date test taken _____ Test taken by _____
Passed: _____ Failed: _____
Percolation Rate: _____
Soils Loading Rate: _____

5. Type of Submittal

- ☐ New House
- ☒ Existing House
- ☐ Repair, Tank
- ☐ Repair, Treatment Area
- ☐ System Replacement

Previous Permit #:

6. Address Information

911 Address or nearest road: 2504 250th Ct Winterset IA

Legal Description: Part B NW NW 22-75-27 PID# 520102244000000

7. Type of Building (Completed by Owner)

Building Square ft.:	Number of Bedrooms: 3	Number of Bathrooms: 1	Non-Residential uses:
Other buildings served by this system:		Any other circumstances which may affect water usage: Water softeners must be routed to a brine pit independent of septic system.	

Your contractor or system designer should complete the remaining portion of this application.

8. Tanks

	Type:	Size:	Manufacturer:	
Septic Tank	Type: Ind concrete	Size: 1250	Manufacturer: Indiana	
Pump Tank	Type: Concrete	Size: 500	Manufacturer: Indiana	
Additional Tank	Type:	Size:	Manufacturer:	

9.. Secondary Treatment Area

Laterals	Type:	Length of each:	Total number:		Maximum trench Depth:
Sand Filter	Square ft.:	Length:	Width:		
Peat System	Model:	Manufacturer			
Other mound	Description:	22 X 94 ft			

I hereby attest the truth and accuracy of all facts and information presented on this application. Request for inspection of the system must be made 24 hours in advance. Water at the site to test the distribution box must be available. Discharging systems must be covered by a maintenance agreement, which shall be recorded in the Madison County Recorders Office. Discharging systems also require periodic testing as set forth in IAC Chapter 69 and Madison County Environmental Health Regulations.

Applicant Signature: Robert C Duff — Date: 11/20/2020

It is unlawful to start construction, reconstruction, or repair of any PSDS prior to issuance of a PSDS permit by the Environmental Health Officer.

Print Form

ONSITE WASTEWATER SOIL EVALUATION FOR SEPTIC SYSTEM

File # SE2065

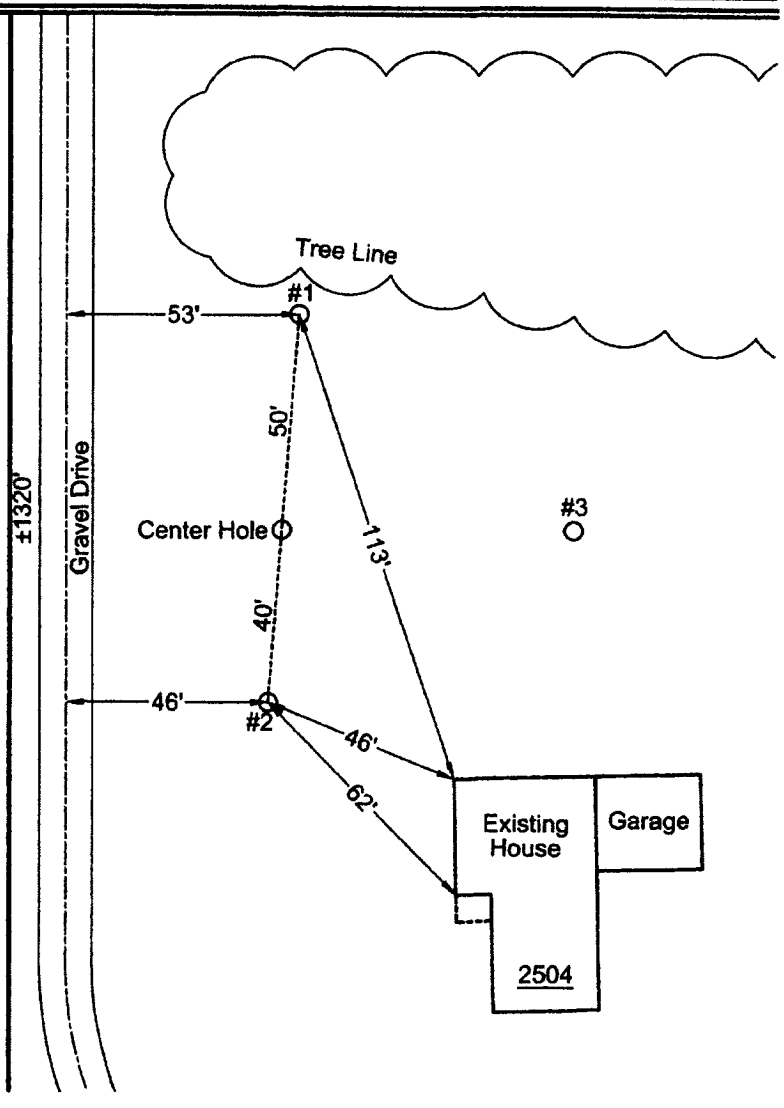
Requestor..: Bob Duff - Covered Bridge Realty
Owner.....: Irvella Farm, LLC
Address.....: 2232 170th St.
Boone, IA 50036

Structure: New: ___ Existing: X No. Bedrooms: 3
Lot Size: 39.00 net acres Design flow 450 gpd
Depth to confining layer 48" (mottles)
Maximum depth of trench 12" Soil loading rate 0.45 gpsf

Property Address: 2504 250th Ln., Winterset - Scott Township, Madison County
Legal Description: NW1/4-NW1/4 of Section 22-75-27
Alternative System Recommended:

Pressurized At-grade System in a 12" deep trench. Construct in accordance with IAC Chapter 69. Cover with 12" of loamy top soil and crowned to 18" at the center to allow for settling and water to shed. Minimum 1,250 gallons liquid storage, pump tank, and an effluent filter are required. Minimum 10' separation from buildings, property lines, tile and water lines. See design drawing.

DEPTH IN FEET	Test #1	Center Hole	Test #2	Test #3
1	Dark Brown Silt Loam Blocky, Strong	Dark Brown Silt Loam Blocky, Strong	Dark Brown Silt Loam Blocky, Strong	Dark Brown Silt Loam Blocky, Strong
2	Dark Yellow-Brown Silty Clay Loam Blocky, Moderate	Dark Yellow-Brown Silty Clay Loam Blocky, Moderate	Dark Yellow-Brown Silty Clay Loam Blocky, Moderate	Dark Yellow-Brown Silty Clay Loam Blocky, Moderate
3	Yellow-Brown Silty Clay Loam Blocky, Moderate	Yellow-Brown Silty Clay Loam Blocky, Moderate	Yellow-Brown Silty Clay Loam Blocky, Moderate	Yellow-Brown Silty Clay Loam Blocky, Moderate
4	Mottles	Mottles	Mottles	Mottles
5		Dry		



N

Scale 1" = 40'

The lateral field area shall be protected from all traffic or soil disturbances. The location of property boundaries, buried utilities, well locations, or any easements have not been verified by this engineer. The analyses and recommendations in this report are based in part upon the data obtained from the soil tests performed at the indicated locations, the NRCS Web Soil Survey and National Cooperative Soil Survey, and onsite inspection. Soil textural class was determined by the "Feel Method". This report does not reflect any variations, which may occur between borings or across the site.

LICENSED PROFESSIONAL ENGINEER & LAND SURVEYOR
BRIAN R. CAMPBELL
12846
IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.

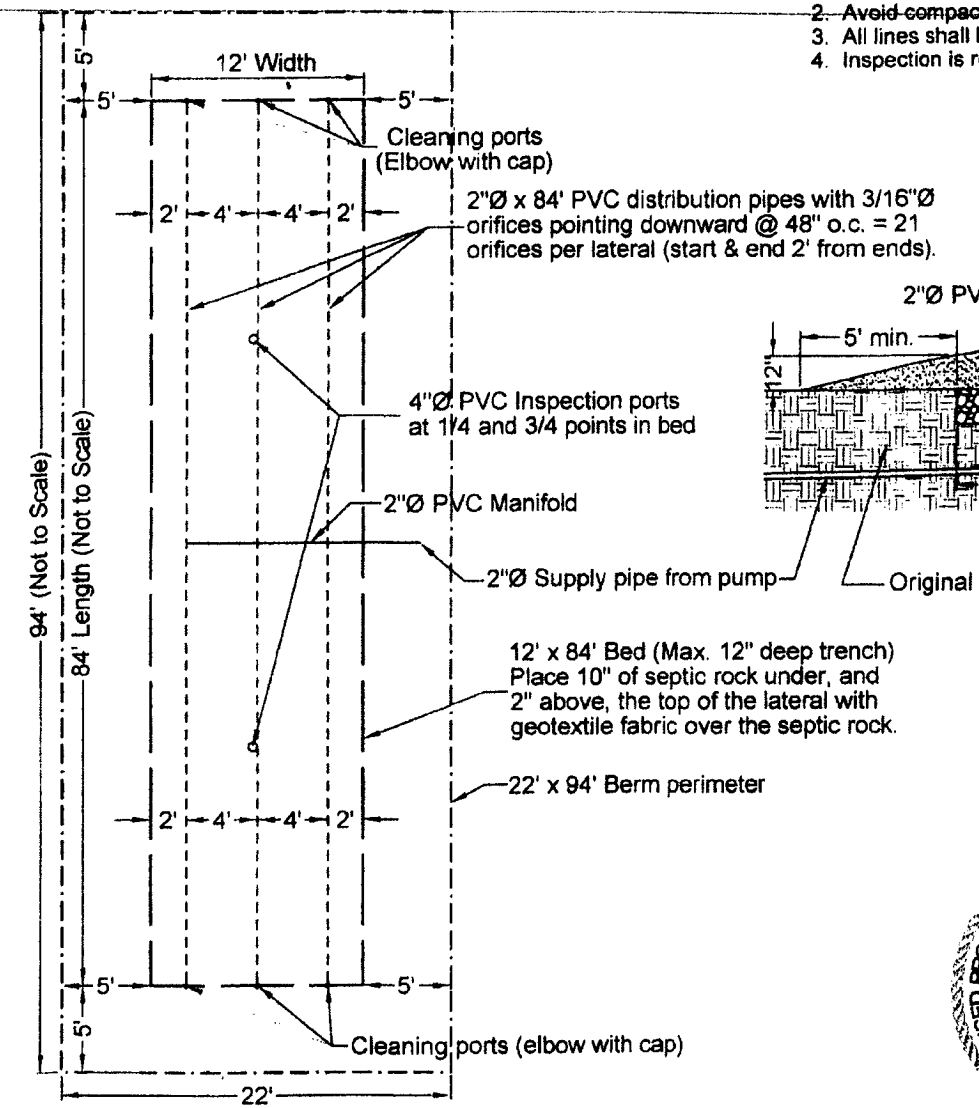
Signed: Brian R Campbell

Brian R. Campbell, PE, PLS - Ph: 515-963-4385

Date....: 10/28/2020 License Number: 12846

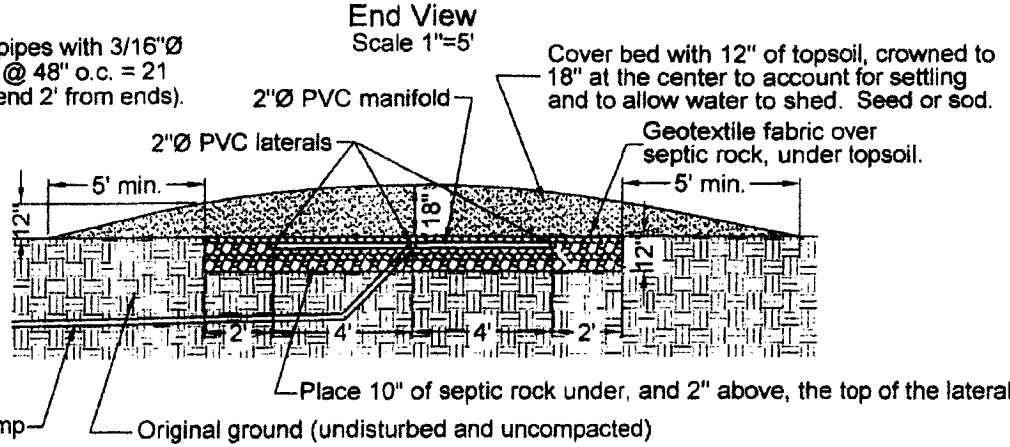
*My license renewal date is December 31, 2021.

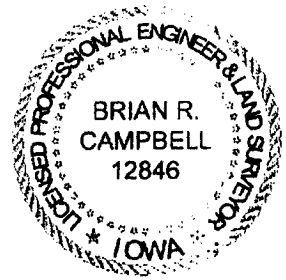
Top View
Scale 1"=10'



NOTES:
1. All pipe shall be rigid PVC, Schedule 40 or stronger. Construct in accordance with IAC Chapter 69 "Private Sewage Disposal Systems" and the manufacturers recommendations and guidelines.
2. Avoid compaction of the proposed At-grade bed area and maintain minimum separation distances.
3. All lines shall have an equal squirt height, minimum 3 feet. Laterals must drain after each dosing.
4. Inspection is required before covering.

End View
Scale 1"=5'





I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.

Signed: Brian R. Campbell

Brian R. Campbell, P.E., P.L.S.

Date....: 10/28/2020 License No....: 12846

*My license renewal date is December 31, 2021.

Campbell Engineering & Surveying
30 NE Tritein Drive, Suite 1
Ankeny, Iowa 50021
Phone.. (515) 963-4385
E-mail.: info@ceslowa.com

FIELD WORK:	BRC/CGC	10/27/2020
DRAWN BY:	BRC	10/28/2020
CHECKED BY:		
REVISED BY:		
REVISED BY:		

At-grade Septic System with Rock and Pipe

NW1/4-NW1/4 of Section 22-75-27
2504 250th Lane., Winterset, IA 50273

Requested By: Bob Huff - Covered Bridge Realty
Owner.....: Irvella Farm, LLC

PROJECT #:
FILE #.....: WT2017-1

SCALE	SHEET
VERT.:	1
HORIZ.:	of 2

Wastewater Treatment Design - Pressurized At-grade System

(Z:\2020 Projects\Word\Wastewater Treatment\WT2017 At-grade\WT2017-2.doc)

10/28/2020

Owner Name.....: Irvella Farm, LLC
Property Address...: 2504 250th Lane., Winterset, IA - Scott Township, Madison County
Legal Description...: NW1/4-NW1/4 of Section 22-75-27

1. **Site Evaluation**

Onsite Soil Evaluation Report dated 10/28/2020; Confining Layer = 48"(mottles); Site Slope = ±2%; Soil Loading Rate, SLR = 0.45 gal/day/ft^2; Design Flow Rate, DFR = 3 bedrooms x 150 gpd/bedroom = 450 gpd

2. **Bed, Absorption Area, and Berm Sizing**

450 gpd/(0.45 gal/day/ft^2) = 1000 ft^2 bed area.
At-grade Mound Height = Bed Depth + Depth of Cover = 1' + 1'(1.5' at crown) = 2' (2.5' at crown)
Total Width = Berm Width + Bed Width + Berm Width = 5' + 12' + 5' = 22 ft
Total Length = Berm Width + Bed Length + Berm Width = 5' + 84' + 5' = 94 ft
Plow or scarify the ground surface below the unexcavated bed and berm to a depth of 8" parallel with the land contour.

3. **Pressurized Distribution System**

Construct the At-grade septic system utilizing a 12' x 84' septic rock bed placed at a maximum depth of 12". The top of the rock bed shall be level. Center-feed 3 - 2"Ø x 84' long PVC distribution pipes in the gravel bed at 4' on-center with a minimum of 2" gravel above, and 10" below, the top of the pipe. Distribution pipes shall be provided with a single row of 3/16"Ø orifices facing downward in a straight line at 48" on-center along the length of the pipe. Each lateral will have 21 orifices, starting and ending 24" from the ends of the lateral. No orifices or perforations shall be permitted within 3" of the end of the outer ends of any of the distribution pipes. Use 2"Ø PVC supply and manifold piping. Cover the top of the gravel with non-woven synthetic drainage fabric. Place 12" of loamy soil cover over the rock and crowned to 18" at the center to shed water and allow for settling. The soil cover must be of a quality to sustain good vegetative cover. The entire berm shall be seeded or sodded with grass. Install silt fencing or silt sock as necessary. All PVC shall be Schedule 40 rigid plastic pipe with nominal diameter sizing. A minimum of 1,250 gallons liquid storage, pump tank, *and an effluent filter are required.*
N = number of orifices = [(length, ft.)/(spacing, ft.)] + 0.5 = (84/3) + 0.5 = 21 per lateral; 63 total orifices
Use 3 - 84' x 2"Ø PVC distribution pipes @ 4' on-center in 12" of septic gravel, center-fed with a 2"Ø manifold.
Drill each lateral with 21 - 3/16"Ø orifices pointed downward @ 48" on-center, starting and ending 24" from the ends.

4. **Vertical Inspection and Clean-out Pipes**

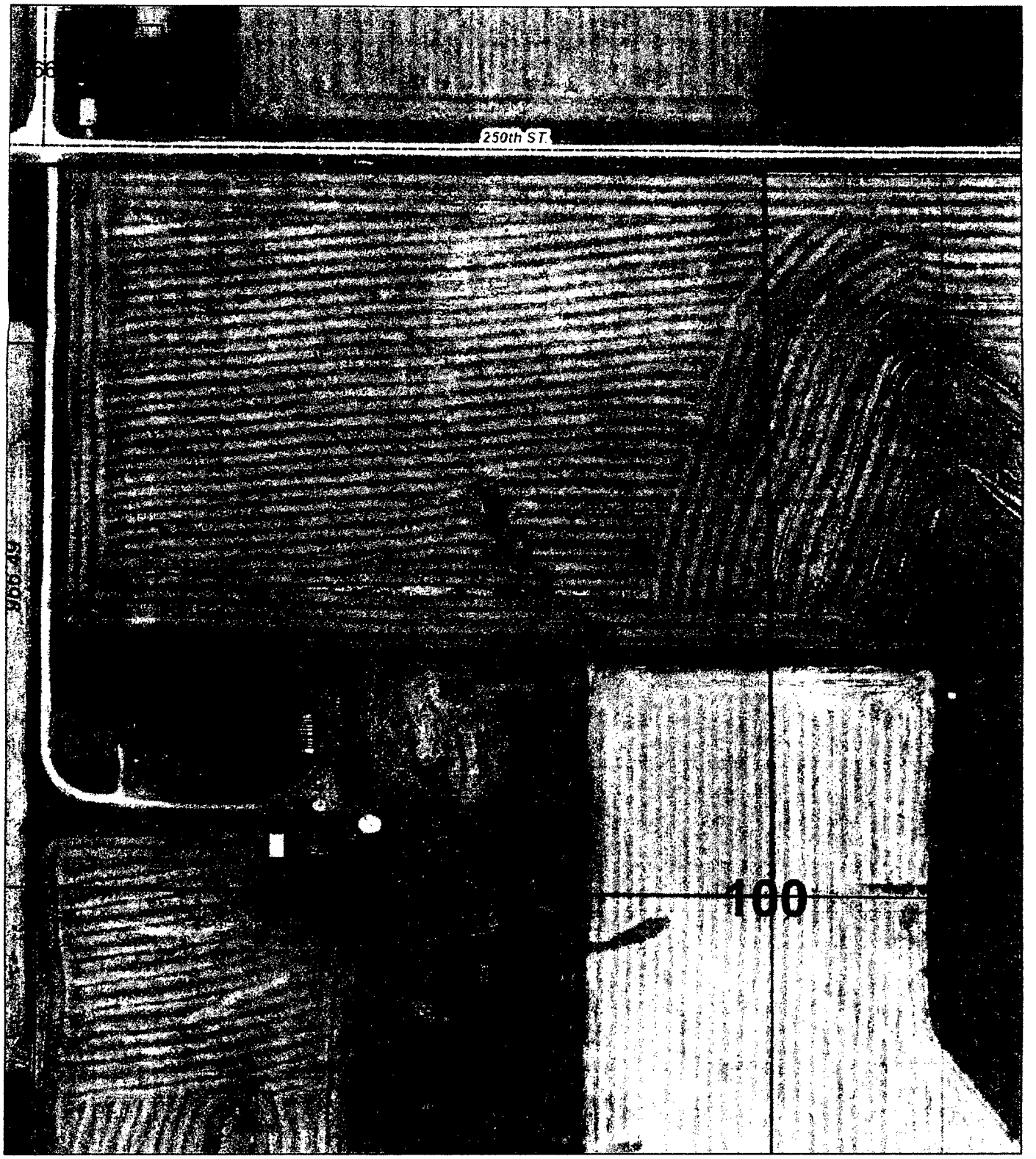
Install two 4"Ø vertical inspection pipes at the 1/4 and 3/4 points of the bed length to provide for observation. Install a turn-up at the end of each distribution pipe for use as a testing and flushing port. Extend pipes up to the top of the mound for easy access.

5. **Dosing Quantity and Pump for Each Mound**

Force main and manifold = ±70' of 2"Ø pipe; Design for distal head pressure, h_d = 3.0 ft. (squirt height)
Dose limit is 20% of Design Flow Rate Volume = 0.20 x 450 = 90 gal.
System vol.= (3 x 84' x 0.174 gal./ft.) ≈ 44 gal.; Net dose vol. = 5 x System vol. = 5 x 44 gal. = 220 gal. > 90 gal.
Main and manifold volume = 70' x 0.174 gal./ft. ≈ 12 gal., Set gross dose volume = 90 + 12 = 102 gal. dose volume
$q = 11.79d^2h_d^{0.5}$; d = orifice diameter = 3/16", h_d = distal head pressure = 3.0 ft. (squirt height) → q = 0.72 gpm/orifice
Force main flow rate = Q_m = (0.72 gpm/orifice x 63) + (1.28 gpm for 1/4" weep hole) ≈ 47 gpm → 50 gpm pump
Elevation Head = 4.5 ft., Pump Pit Loss = 2.5 ft., h_d (squirt height) = 3 ft.
Friction loss: 3(45° bend x 3') + 2(branch tee x 12') + (cross x 4') + 70' pipe + (3 x 84') dist. pipes ≈ 362' eq. pipe length
Friction loss = $L_d(3.55Q_m/C_hD_d^{2.63})^{1.85}$; L_d = Length of force main, feet; Q_m= discharge rate, gpm;
C_h = 150, Hazen-Williams friction factor for plastic pipe; D_d = pipe diameter of force main, inches.
Total friction head loss in pipe and fittings = 362' x $[(3.55 \times 50)/(150 \times 2^{2.63})]^{1.85}$ ≈ 17 ft.
Total Head = 4.5' + 2.5' + 3' + 17' = 27 ft.

*Use pump which delivers 50 gpm at 27' head; 3' squirt height at ends of lateral; 102 gal. gross dose vol.

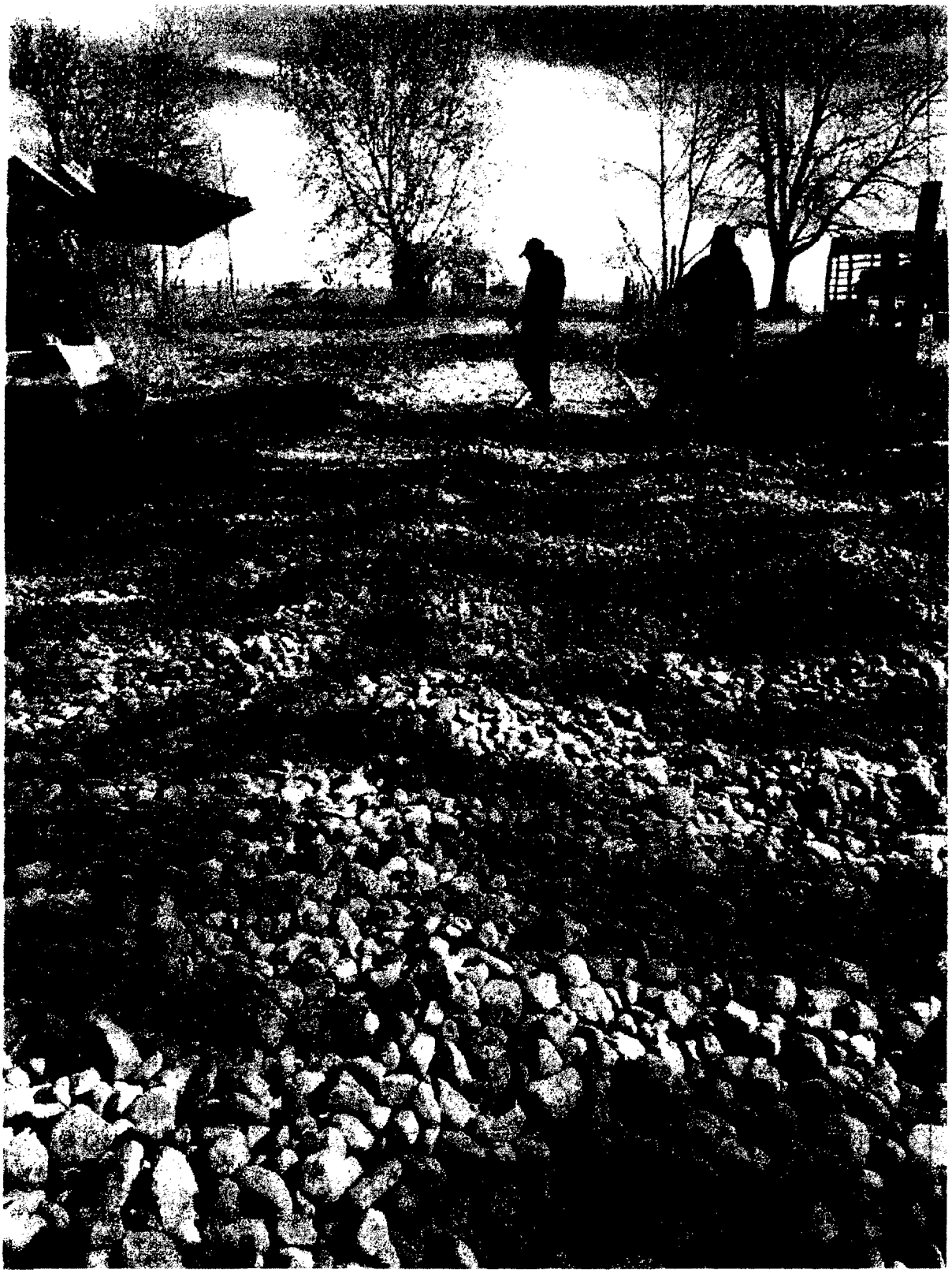
*These are approximations, pump requirements shall be based on the actual configuration of the system.



Parcel ID	520102244000000	**Alternate ID**	n/a	**Owner Address**	IRVELLA FARM, LLC
Sec/Twp/Rng	22-75-27	**Class**	A		2232 170TH ST
Property Address	2504 250TH LN	**Acreage**	~~40~~ 48.1 acres		BOONE, IA 50036
	WINTERSET				
District	SCOTT WINTERSET WFD				
Brief Tax Description	Part of NW NW				
	(Note: Not to be used on legal documents)				

Kiburz 12/20

Permit # 107-20 2504 250th Ln. 11/4/2020



Permit # 107-20 2504 250th Ln. 11/4/ 2020

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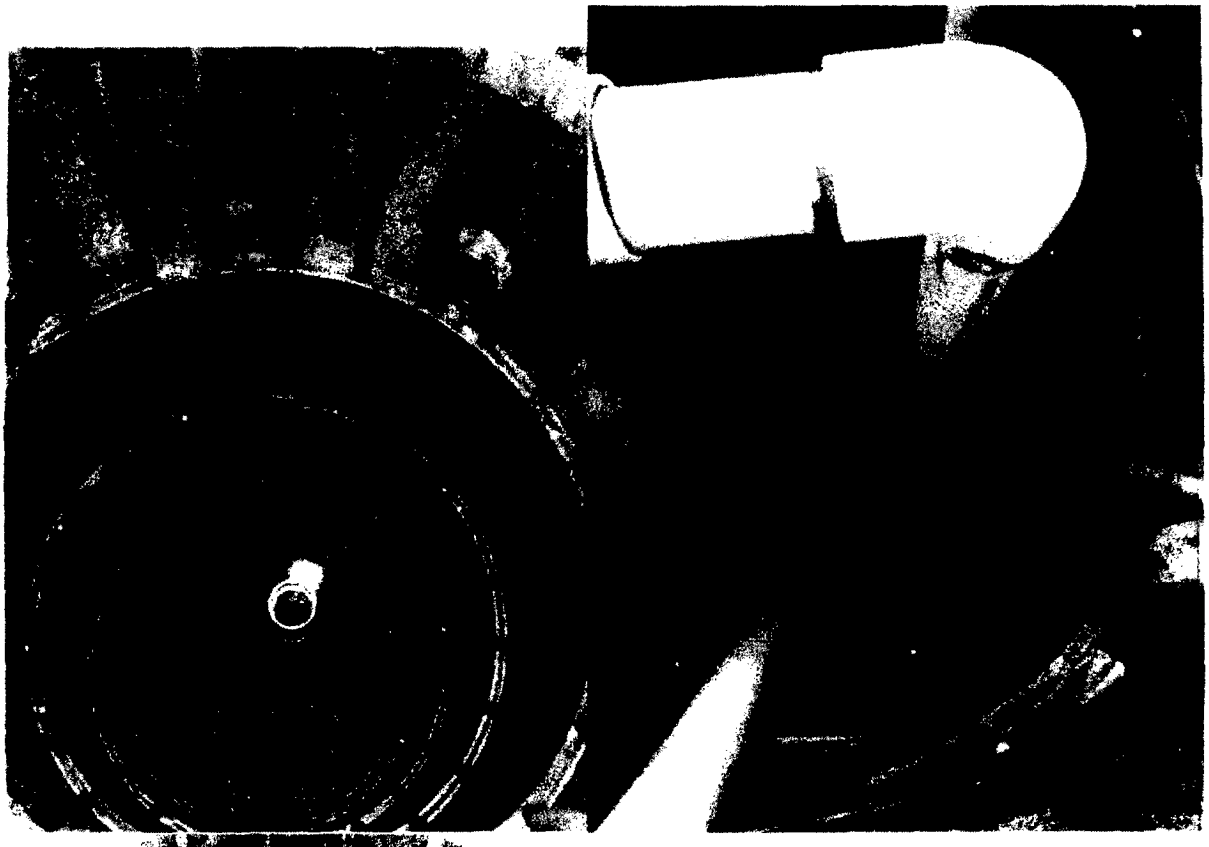

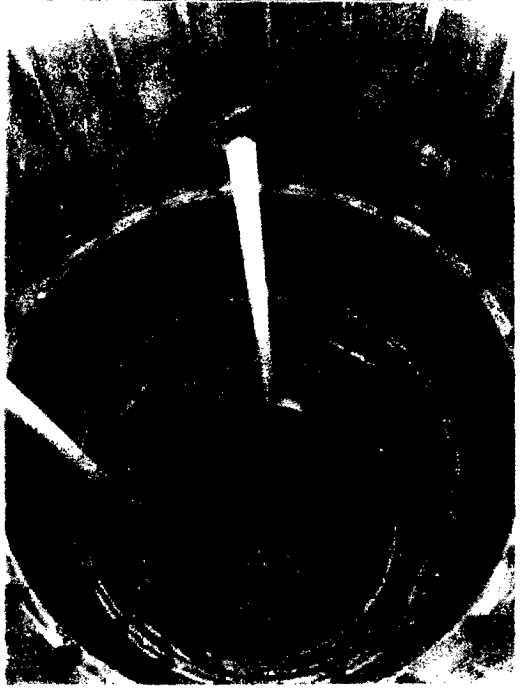

MADISON COUNTY ENVIRONMENTAL HEALTH DEPARTMENT
PRIVATE SEWAGE SYSTEM INSPECTION REPORT
SUBSURFACE SOIL ABSORPTION-AT GRADE

GENERAL INFORMATION

Owner: Irvella Farms	Contractor: Huffwell
Address: 2504 25th Rd	Inspector: Knox
Inspection Date: 11-4-20	☒ Approved ☐ Denied

S = Satisfactory U = Unsatisfactory NA = Not Applicable

S	U	NA	SITE PREPARATION	
☒	☐	☐	**Septic Permit Issued**	# 137-20
☒	☐	☐	**Soils Analysist**	ID
☒	☐	☐	**System Exposed for Inspection**	

S	U	NA	SETBACKS	
				Minimum Setbacks to Closed/Open Portions of Septic System
☐	☐	☒	Private Water Well	50'/100'
☐	☐	☒	Shallow Public Water Well	200'/400'
☐	☐	☒	Deep Public Water Well	100'/200'
☐	☐	☒	Heat Pump Borehole	50'/100'
☐	☐	☒	Lake or Reservoir	50'/100'
☐	☐	☒	Stream or Pond	25'/25'
☐	☐	☒	Edge of Drainage Ditch	10'/10'
☐	☐	☒	Dwelling or Other Structure	10'/10'
☒	☐	☐	Property Lines	10'/10' (unless an easement signed & recorded)
☒	☐	☐	Other Subsurface Treatment Systems	5'/10'
☒	☐	☐	Water Line Under Pressure	10'/10'
☒	☐	☐	Suction Water Line	50'/100'
☒	☐	☐	Foundation Drain or Subsurface Tiles	10'/10'

S	U	NA	SEWER PIPE FROM BUILDING TO PRIMARY TREATMENT	
☒	☐	☐	**Minimum Setbacks to Wells**	Private Wells 10' / Public Wells 25'
☒	☐	☐	**Material**	Sch.40 Plastic Pipe (or SDR 26 or Stronger) or Cast Iron
☒	☐	☐	**Cleanouts**	At Building & every 100' & each >45° Direction Change

S	U	NA	PRIMARY TREATMENT – SEPTIC TANK	
☒	☐	☐	**Gallon Capacity**	☐1250 ☒1500 ☐1750 ☐2000 ☐ Other
☒	☐	☐	**Watertight Material**	☒Concrete ☐ Fiberglass ☐ Plastic (ribbed const.)
☒	☐	☐	**Manufacturer**	
☒	☐	☐	**Compartments**	At least 2 Compartments or 2 tanks in series
☒	☐	☐	**Influent Compartment**	1/2 to 2/3 of total tank capacity
☒	☐	☐	**Effluent Compartment**	1/3 to 1/2 of total tank capacity
☒	☐	☐	**Inlet**	2" to 4" higher than outlet
☒	☐	☐	**Baffles**	4" Diameter Schedule 40 plastic tees
☒	☐	☐	**Effluent Screen**	Meets NSF Standard 46 or equivalent

☒☐☐	**Watertight Risers**	Minimum 18" Diameter at or above ground surface
☒☐☐	**Inlet/Outlet Connections**	Self-sealing gaskets formed or cast into tank material
☒☐☐	**Schedule 40 Pipe**	At least 5' past outlet & 2' past disturbed ground

S	U	NA	DOSING
☐	☒	☐	**Pump Dosing Required for at grade systems**
☒	☐	☐	**Dosing Volume** three to ten times the distribution pipe network volume, but not more than 25 percent of the design flow shall be applied to the soil in one dose.
☒	☐	☐	**Dosing Pump** shall be capable fo maintaining a squirt height of 3 feet above the pipe at the outer ends of the distribution lines. All lines shall have an equal squirt height for equal distribution.

S	U	NA	At Grade System
☒	☐	☐	**Placement** Constructed on undisturbed naturally occuring soil
☒	☐	☐	**Surface or subsurface obstructions** not permitted within 25 feet downgradient of at grade system on slope greater than 5% slope.
☒	☐	☐	**Certified Engineers Design installed.**
☒	☐	☐	Minimum of 3 feet of undisturbed naturally occurring soils between the bottom of the gravel in the at-grade system and the highest elevation of the limiting conditions defined in Paragraph 69.11(1)"c"
☒	☐	☐	**At-grade system installed up to 12 inches deep (Or per engineer spec.)**
☒	☐	☐	Gravel meets specifications in 69.9(4)"a". EPS aggregate or chambers are acceptable alternatives.
☒	☐	☐	**Bed installed with the long dimension parallel to the land cotour.**
☒	☐	☐	Soils under or within 15 feet of any at-grade system may be disturbed. On sloping site, no soils shall be disturbed within 10 feet uphill of the system and within 15 feet downhill of the system plus an additional 5 feet for every 5 percent slope downhill.
☒	☐	☐	**Area plowed to a minimum depth of 7-9 inches, parallel to the land contour, with the plow throwing the soil up slope to provide a proper interface between the fill and the natural soil. Chisel teeth on a backhoe bucket shall be at least as long as the depth of plowing. Tree stumps should be cut flush with the surface of the ground and roots should not be pulled.**
☒	☐	☐	One foot of loamy cover material shall be installed over the rock bed. Cover shall extend at least 5 feet from the ends of the rock bed and be sloped to divert surface water. Side slopes shall not be steeper than 4:1. The upper 6 inches of the loamy soil cover must be topsoil borrow.
☒	☐	☐	**Distribution pipe shall be rigid plastic pipe, Schedule 40 or 80 with a 1 inch nominal diameter or equivalent design that ensures proper distribution.**
☒	☐	☐	The distribution pipe shall be provided with a single row of ¼-inch perforations in a straight line 30 inches on center along the length of the pipe or an equivalent design that ensures uniform distribution. All joints and connections shall be solvent-cemented.
☒	☐	☐	**Distribution pipe laid in gravel meeting specs per IAC 567 Ch. 69 or per engineers design.**
☒	☐	☐	The outer ends of all pressure distribution lines shall be turned up, with a long 90-degree elbow or two 45-degree elbows to allow for cleaning. The outer ends will have a screw-on cap and cover. The cover shall be accessible from the ground surface without excavation.
☒	☐	☐	**The central pressure manifold should consist of 11/2 or 2-inch solid plastic pipe using a tee for connecting the distribution lines or an equivalent design that ensures uniform distribution.**
☒	☐	☐	The top of the gravel or eps shall be covered with synthetic drainage fabric. Unbacked, rolled 3.5-inch thick fiberglass insulation, untreated building paper, or other suitable material may be used with approval of the administrative authority. Plastic or treated building paper shall not be used.
☒	☐	☐	**After installation of the distribution system, the distribution system shall be pressure-tested before it is covered with gravel. The entire at-grade system is to be covered with topsoil native to the site or of similar characteristics to support vegetation found in the area. The entire at-grade system shall be crowned by providing 12**

inches of topsoil on the side slopes, with a minimum of 18 inches of topsoil over the center of the at-grade system. The entire at-grade system shall be seeded, sodded or otherwise provided with a grass cover to ensure stability of the installation.
☒☐☐ Area surrounding the at-grade system shall be graded to provide for diversion of surface runoff water
☒☐☐ Pump dosing shall be required for at-grade systems
☒☐☐ The dosing volume shall be three to ten times the distribution piping network volume, but not more than 25 percent of the design flow shall be applied to the soil in one dose. (per engineer specs)
☒☐☐ The dosing pump shall be capable of maintaining a squirt height of 3 feet above the pipe at the outer ends of the distribution lines. All lines shall have an equal squirt height above the pipe to maintain equal distribution.

Additional Comments:

This report indicates the condition of the installed private sewage system at the time of inspection & does not guarantee the future condition or proper function of the system. To the best of my knowledge, all listed local & state ordinances have been adhered to.

Robin Knox 11-4-20

Inspector Date

Permit #107-20

2504 250th Ln.

11-4-20