



Industry Services Division
1400 E Washington Ave
P.O. Box 7162
Madison, WI 53707-7162

County

Manitowoc

Sanitary Permit Number (to be filled in by Co.)

596127 S-82-18

State Transaction Number

2018046

Project Address (if different than mailing address)

Parcel #

013-133-011-00200

Property Location

Govt. Lot _____

SW 1/4, SW 1/4, Section 33
(circle one)

T 21 N; R 24 E or W

Subdivision Name

City of _____

Village of _____

Town of Manitowoc

I. Application Information – Please Print All Information

Property Owner's Name

Daniel Hershburger

Property Owner's Mailing Address

3106 E. County V

City, State

Mishicot, WI

Zip Code

54228

Phone Number

II. Type of Building (check all that apply)

1 or 2 Family Dwelling – Number of Bedrooms 4

Public/Commercial – Describe Use _____

State Owned – Describe Use _____

Lot #

Block #

CSM Number

III. Type of Permit: (Check only one box on line A. Complete line B if applicable)

A. New System Replacement System Treatment/Holding Tank Replacement Only Other Modification to Existing System (explain) _____

B. Permit Renewal Before Expiration Permit Revision Change of Plumber Permit Transfer to New Owner List Previous Permit Number and Date Issued _____

IV. Type of POWTS System/Component/Device: (Check all that apply)

Non-Pressurized In-Ground Pressurized In-Ground At-Grade Mound ≥ 24 in. of suitable soil Mound < 24 in. of suitable soil

Holding Tank Other Dispersal Component (explain) _____ Pretreatment Device (explain) _____

V. Dispersal/Treatment Area Information:

Design Flow (gpd)	Design Soil Application Rate(gpd/sf)	Dispersal Area Required (sf)		Dispersal Area Proposed (sf)	System Elevation
600	1.0/0.6	600		600	652.60
VL. Tank Info	Capacity in Gallons	Total Gallons	# of Units	Manufacturer	Concrete Steel Fiberglass Plastic
	New Tanks	Existing Tanks			
Septic or Holding Tank	1250		1	Murphy PreCast	X
Draining Chamber	300				

VII. Responsibility Statement- I, the undersigned, assume responsibility for installation of the POWTS shown on the attached plans.

Plumber's Name (Print) Nevin Landis Plumber's Signature Nevin Landis MP/MPRS Number 954943 Business Phone Number 920-373-1193

Plumber's Address (Street, City, State, Zip Code)

7423 Fairview Rd. Oconto, WI 54153

VIII. County/Department Use Only

<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Disapproved	Permit Fee \$ 550.00	Date Issued 7/13/18	Issuing Agent Signature Kaila Breckman
<input type="checkbox"/> Owner Given Reason for Denial				

IX. Conditions of Approval/Reasons for Disapproval

County

Attach to complete plans for the system and submit to the County only on paper not less than 8 1/2 x 11 inches in size

11/11/2018

PLANNING & PARK
COMMISSION



Planning & Zoning Department

Manitowoc County Office Complex • 4319 Expo Drive, P.O. Box 935 • Manitowoc WI 54221-0935
Phone: 920.683.4185 • Fax: 920.683.4190 • TTY: 920.683.5168

Sanitary Permit Number: 596127 S-82-18

Permit Issue Date: 7/13/18

MAINTENANCE PROGRAM

Dear Sanitary Permit Applicant:

Owners of all new or replacement private sewage systems installed after August 16, 1983 are required to submit to the Manitowoc County Planning and Zoning Department Office a certification form (to be provided by Manitowoc County Planning and Zoning Department) every three years, signed by the owner and signed by a master plumber, a journeyman plumber or restricted plumber licensed under ch. 145, Stats., a person licensed under s. 146.20, State., (waste hauler) or by an employee of the government unit or state designated by the department, who has inspected the system. The form shall require certification that the system is in proper operating condition and that after inspection, and pumping if necessary, the septic tank is less than 1/3 full of sludge and scum.



Manitowoc County Planning and Zoning Department

4319 Expo Drive, P.O. Box 935

Manitowoc, WI 54221-0935

Planning and Zoning

920-683-4185

Fax

920-683-4190

website: www.co.manitowoc.wi.us

July 13, 2018

OWNER'S NAME: DANIEL HERSHBURGER

LEGAL: SW1/4, SW1/4, S.33, T21N-R24E

MUNICIPALITY: TOWN OF MISHICOT

SYSTEM TYPE: MOUND

PLUMBER: NEVIN LANDIS

PLAN ID.: 2018046

FEE: \$230.00

RE: CONDITIONAL POWTS PLAN APPROVAL

The submittal described above has been reviewed for conformance with applicable Wisconsin Administrative Codes and Wisconsin Statutes. The submittal has been CONDITIONALLY APPROVED. The following conditions shall be met during construction or installation and prior to occupancy or use:

- This system is to be constructed and located in accordance with the enclosed approved plans and with the "Mound Component Manual for Private Onsite Wastewater Systems VERSION 2.0" SBD-10691-P (N.01/01) and the "Pressure Distribution Component Manual for Private Onsite Wastewater Treatment Systems VERSION 2.0" SBD-10706-P (N.01/01).

The licensed plumber responsible for the installation shall keep a copy of the approved plans with the Department's stamp of approval with all specifications and this letter on-site during construction and all work open for inspection by authorized representatives of the Department. The installer shall notify the appropriate inspector when inspections can be made.

In granting this approval the Division of Safety & Professional Service or Manitowoc County Planning and Zoning reserve the rights to require changes or additions should conditions arise making them necessary for code compliance. As per State Stats 101.12(2), nothing in this review shall relieve the designer of the responsibility for designing a safe building, structure, or component.

This plan approval will expire two years from the approval date, or if a sanitary permit is obtained, plan approval will expire on the day the initial sanitary permit expires. All permits required by the state or the local municipality shall be obtained prior to commencement of construction/installation/operation.

Inquiries concerning this correspondence may be made to me at the telephone number or address listed above.

Sincerely,

Kaila Boeckman
Kaila Boeckman

MOUND AND PRESSURE DISTRIBUTION COMPONENT DESIGN

Residential Application
INDEX AND TITLE PAGE

Project Name: Hershburger

Owner's Name: Richard Anhalt

Owner's Address: 3106 E. CTY V

Mishicot, WI 54228

Legal Description: SW 1/4,SW1/4,S 33,T21N-R24E

Township: Mishicot

County: Manitowoc

Subdivision Name:

Subdivision Name:

Lot Number:

— — — — —

Parcel I.D. Number: 013-133-011-002.00

Page 1	Index and title
Page 2	Data entry
Page 3	Mound drawings
Page 4	Lateral and dose tank
Page 5	System maintenance specifications
Page 6	Management and contingency plan
Page 7	Pump curve and specifications
Page 8	plot plan

Designer: Nevin Landis
Date: 05/02/18

License Number: 954153
Phone Number: 920-373-1193

Signature: Nevin Janolin

Designed Pursuant to the

Mound Component Manual for POWTS Version 2.0 SDB-10691-P (N. 01/01), and both SSWMP Publication 9.6 Design of Pressure Distribution Networks for ST-SAS (01/81) and Pressure Distribution Component Manual Ver. 2.0 SBD-10706-P (N. 01/01)



Mound and Pressure Distribution Component Design

Design Worksheet

Site Information

(R or C)

R	Residential or Commercial Design
400.00	Estimated Wastewater Flow (gpd)
1.50	Peaking Factor (e.g. 1.5 = 150%)
600.00	Design Flow (gpd)
3.00	Site Slope (%)
651.18	Contour Line Elevation (ft)
19.00	Depth to Limiting Factor (in)
0.60	In-situ Soil Application Rate (gpd/ft ²)

Note: Sand fill (D) calculations assume a Table 383-44-3 in-situ soil treatment for fecal coliform of <= 36 inches.

Distribution Cell Information

100.00	Dispersal Cell Length Along Contour (ft) =	6.00	Cell Width (ft)
1.00	Dispersal Cell Design Loading Rate (gpd/ft ²)		
1	Influent Wastewater Quality (1 or 2)		

Are the laterals the highest point in the distribution network?

Y

Enter Y or N

Pressure Distribution Information

(C or E)

c	Center or End Manifold
3.00	Lateral Spacing (ft)
4	Number of Laterals
0.188	Orifice Diameter (in)
3.19	Estimated Orifice Spacing (ft) =
2.00	Forcemain Diameter (in)
80.00	Forcemain Length (ft)
646.00	Pump Tank Elevation (ft)

If N above, enter the elevation (ft) of the highest point.

Does the forcemain drain back?

Y

Enter Y or N

3.25	System Head (ft) x 1.3
6.51	Vertical Lift (ft)
2.56	Friction Loss (ft)
0.00	In-line Filter Loss (ft)
12.32	Total Dynamic Head (ft)

13.05	Forcemain Drainback (gal)
90.47	5x Void Volume (gal)
103.52	Minimum Dose Volume (gal)
39.32	System Demand (gpm)

Lateral Diameter Selection

in. dia.	options	choice
0.75		
1.00		
1.25	x	
1.50	x	x
2.00	x	
3.00	x	

Manifold Diameter Selection

in. dia.	options	choice
1.25		
1.50	x	x
2.00	x	
3.00		

Treatment Tank Information

1250.00	Septic Tank Capacity (gal)
Murphy precast	Manufacturer

Gallons/Inch Calculator (optional)

Total Tank Capacity (gal)
Total Working Liquid Depth (in)
gal/in (enter result in cell B49)

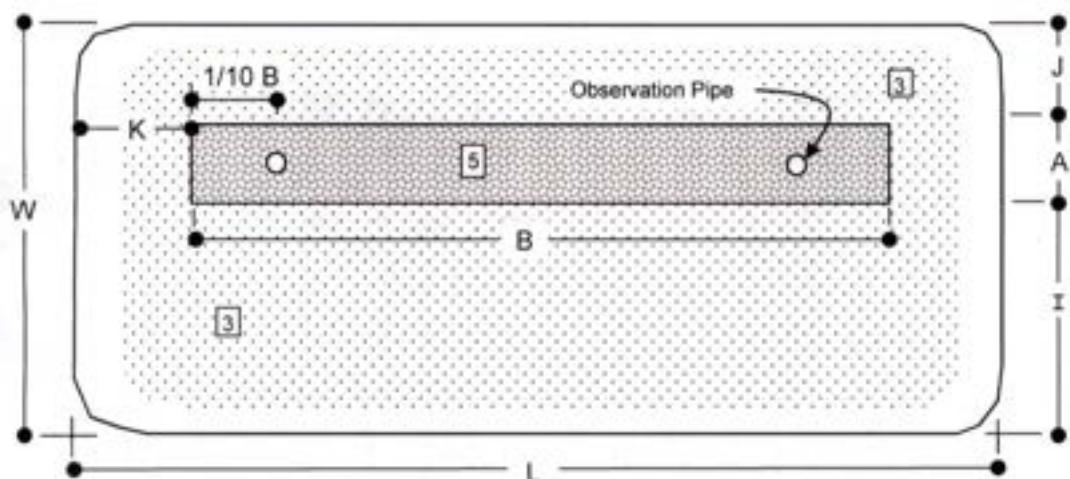
Dose Tank Information

800.00	Dose Tank Capacity (gal)
16.19	Dose Tank Volume (gal/in)
Murphy precast	Manufacturer

Effluent Filter Information

PolyLok Commercial	Filter Manufacturer
525	Filter Model Number

Mound Plan and Cross Section Views



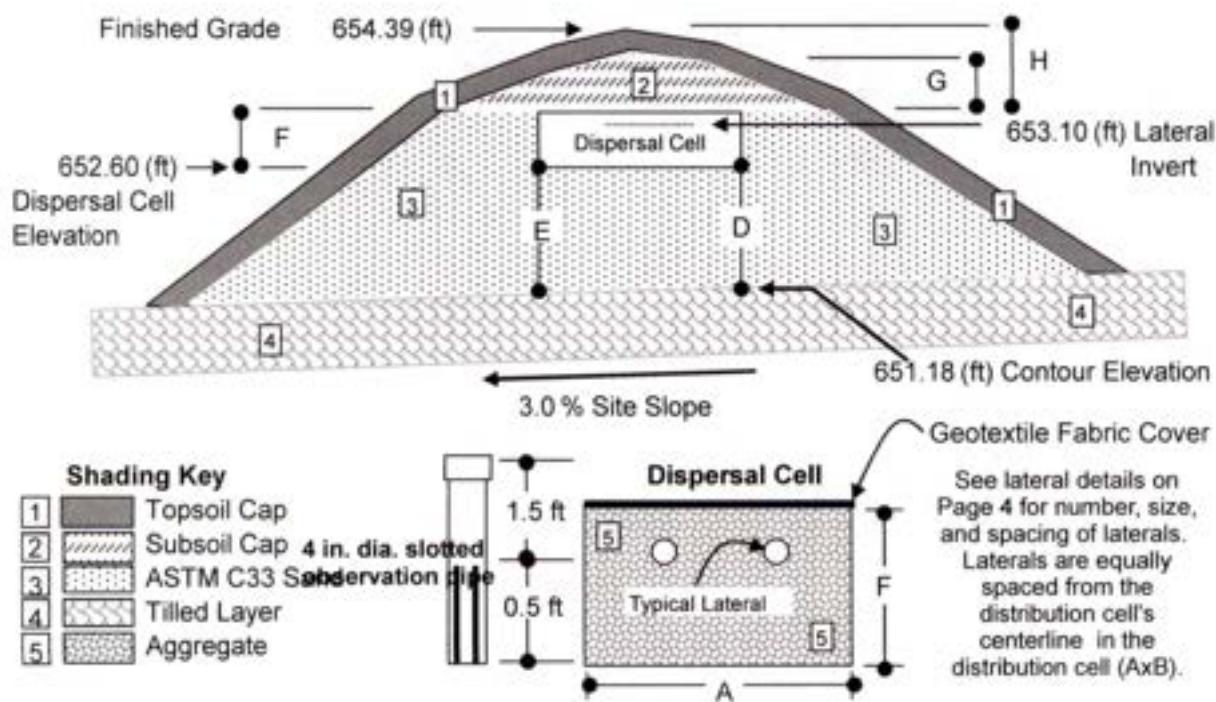
Mound Component Dimensions

A	6.00	ft	E	19.16	in	H	1.00	ft	K	9.90	ft
B	100.00	ft	F	9.50	in	I	9.52	ft	L	119.79	ft
D	17.00	in	G	0.50	ft	J	7.45	ft	W	22.98	ft

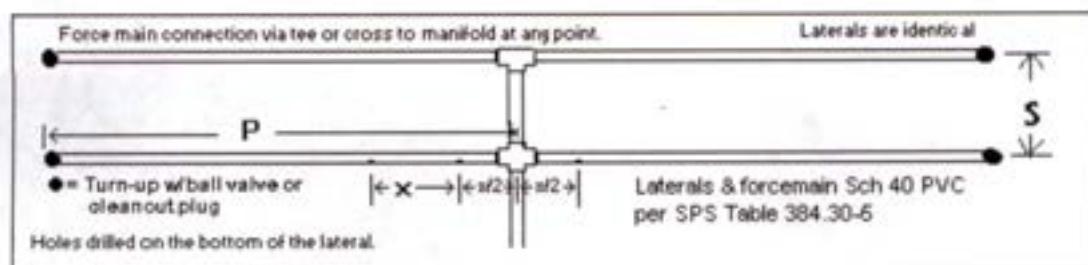
600.00 (ft ²) Dispersal Cell Area	1552.20 (ft ²) Basal Area Available
6.00 (gpd/ft) Linear Loading Rate	10.00 (ft) 1/10 B Obs. Pipe Placement

Mound Cross Section View

Aggregate Dispersal Area



Center Connection Lateral Layout Diagram



Number of Laterals

4
1.50 in
49.30 ft
3.00 ft
9.83 gpm
39.32 gpm
12.32 ft

Lateral Diameter

Lateral Length (P)

Lateral Spacing (S)

Lateral Flow Rate

System Flow Rate

Total Dynamic Head

Orifice Diameter

03/16 in
3.40 ft
15
10.00 ft ² /orifice
3.00 ft
1.50 in
4.02 ft/sec

Orifice Spacing (X)

Orifices per Lateral

Orifice Density

Manifold Length

Manifold Diameter

Forcemain Velocity

Dose Tank Information

Murphy precast	Manufacturer
Capacity 800.00	Gallons
Volume 16.19	gal/inch

Dimension	Inches	Gallons
A	34.02	550.77
B	2.00	32.38
C	6.39	103.52
D	7.00	113.33
Total	49.41	800.00

Alarm Manufacturer S.J. Electro

Alarm Model Number 101

Pump Manufacturer Zoeller

Pump Model Number 98

Pump Must Deliver 39.32 gpm at 12.32 ft TDH

Locking cover with warning label and locking device and sealed watertight

4 in. min.

Alternate outlet location

Forcemain diameter 2 in.

Weep hole or anti-siphon device

Pump off elevation (ft)

646.58

Dose tank elevation (ft)

646.00

Note: Switches containing mercury may not be used in this system.

Mound System Maintenance and Operation Specifications

Service Provider's Name
POWTS Regulator's Name

Landis Excavating
Manitowoc County Zoning

Phone 920-373-1193
Phone 920-683-4185

System Flow and Load Parameters

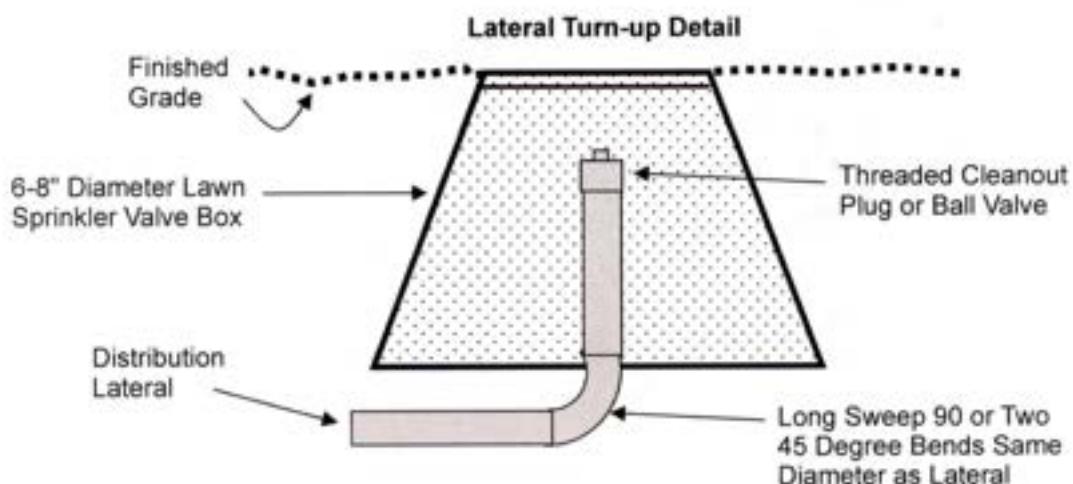
Design Flow - Peak	600	gpd	Maximum Influent Particle Size	1/8	in
Estimated Flow - Average	400	gpd	Maximum BOD5	220	mg/L
Septic Tank Capacity	1200	gal	Maximum TSS	150	mg/L
Soil Absorption Component Size	600	ft ²	Maximum FOG	30	mg/L
Type of Wastewater	Domestic		Maximum Fecal Coliform	>10E4	cfu/100 mL

Service Frequency

Septic and Pump Tank	Inspect and/or service once every 3 years
Effluent Filter	Should inspect and clean at least once every 3 years
Pump and Controls	Test once every 3 years
Alarm	Should test monthly
Pressure System	Laterals should be flushed and pressure tested every 1.5 years
Mound	Inspect for ponding and seepage once every 3 years
Other	

Miscellaneous Construction and Materials Standards

1. Observation pipes are slotted and materials conform to Table SPS 384.30-1, have a watertight cap, and are secured in as shown in the mound component manual.
2. Dispersal cell aggregate conforms to SPS 384.30 (6)(i), Wis. Adm. Code.
3. All gravity and pressure piping materials conform to the requirements in SPS 384, Wis. Adm. Code.
4. Tillage of the basal area is accomplished with a mold board or chisel plow.
5. The mound structure and other disturbed areas will be seeded and mulched to prevent soil erosion and help reduce frost penetration.



Mound System Management Plan

Pursuant to SPS 383.54, Wis. Adm. Code

General

This system shall be operated in accordance with SPS 382-84 Wis. Adm. Code, and shall be maintained in accordance with its' component manuals [SBD-10691-P (N.01/01), SSWMP Publication 9.6 (01/81), and Pressure Distribution Component Manual Ver. 2.0 SBD-10706-P (N. 01/01)] and local or state rules pertaining to system maintenance and maintenance reporting.

No one should ever enter a septic or pump tank since dangerous gases may be present that could cause death.

Septic and pump tank abandonment shall be in accordance with SPS 383.33, Wis. Adm. Code when the tanks are no longer used as POWTS components.

Septic or pump tank manhole risers, access risers and covers should be inspected for water tightness and soundness. Access openings used for service and assessment shall be sealed watertight upon the completion of service. Any opening deemed unsound, defective, or subject to failure must be replaced. Exposed access openings greater than 8-inches in diameter shall be secured by an effective locking device to prevent accidental or unauthorized entry into a tank or component.

Septic Tank

The septic tank shall be maintained by an individual certified to service septic tanks under s. 281.48, Stats. The contents of the septic tank shall be disposed of in accordance with NR 113, Wis. Adm. Code. The operating condition of the septic tank and outlet filter shall be assessed at least once every 3 years by inspection.

The outlet filter shall be cleaned as necessary to ensure proper operation. The filter cartridge should not be removed unless provisions are made to retain solids in the tank that may slough off the filter when removed from its enclosure. If the filter is equipped with an alarm, the filter shall be serviced if the alarm is activated continuously. Intermittent filter alarms may indicate surge flows or an impending continuous alarm.

The septic tank shall have its contents removed when the volume of sludge and scum in the tank exceeds 1/3 the liquid volume of the tank. If the contents of the tank are not removed at the time of a triennial assessment, maintenance personnel shall advise the owner of when the next service needs to be performed to maintain less than maximum scum and sludge accumulation in the tank.

The addition of biological or chemical additives to enhance septic tank performance is generally not required. However, if such products are used they shall be approved for septic tank use by the Department of Commerce.

Pump Tank

The pump (dosing) tank shall be inspected at least once every 3 years. All switches, alarms, and pumps shall be tested to verify proper operation. If an effluent filter is installed within the tank it shall be inspected and serviced as necessary.

Mound and Pressure Distribution System

No trees or shrubs should be planted on the mound. Plantings may be made around the mound's perimeter, and the mound shall be seeded and mulched as necessary to prevent erosion and to provide some protection from frost penetration. Traffic (other than for vegetative maintenance) on the mound is not recommended since soil compaction may hinder aeration of the infiltrative surface within the mound and snow compaction in the winter will promote frost penetration. Cold weather installations (October-February) dictate that the mound be heavily mulched as protection from freezing.

Influent quality into the mound system may not exceed 220 mg/L BOD₅, 150 mg/L TSS, and 30 mg/L FOG for septic tank effluent or 30 mg/L BOD₅, 30 mg/L TSS, 10 mg/L FOG, and 10⁶ cfu/100 mL for highly treated effluent. Influent flow may not exceed maximum design flow specified in the permit for this installation.

The pressure distribution system is provided with a flushing point at the end of each lateral, and it is recommended that each lateral be flushed of accumulated solids at least once every 18 months. When a pressure test is performed it should be compared to the initial test when the system was installed to determine if orifice clogging has occurred and if orifice cleaning is required to maintain equal distribution within the dispersal cell.

Observation pipes within the dispersal cell shall be checked for effluent ponding. Ponding levels shall be reported to the owner, and any levels above 6 inches considered as an impending hydraulic failure requiring additional, more frequent monitoring.

Contingency Plan

If the septic tank or any of its components become defective the tank or component shall be repaired or replaced to keep the system in proper operating condition.

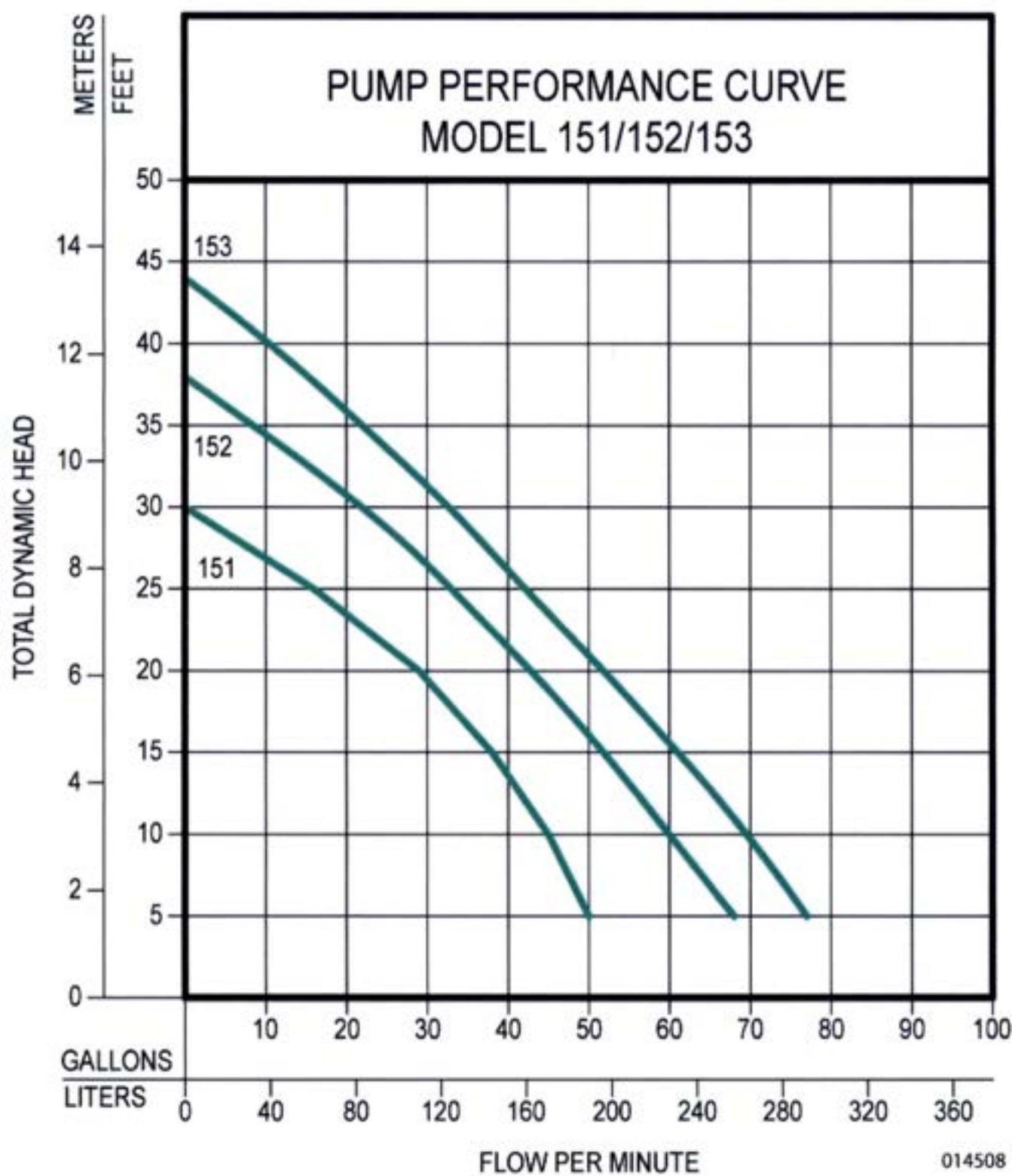
If the dosing tank, pump, pump controls, alarm or related wiring becomes defective the defective component(s) shall be immediately repaired or replaced with a component of the same or equal performance.

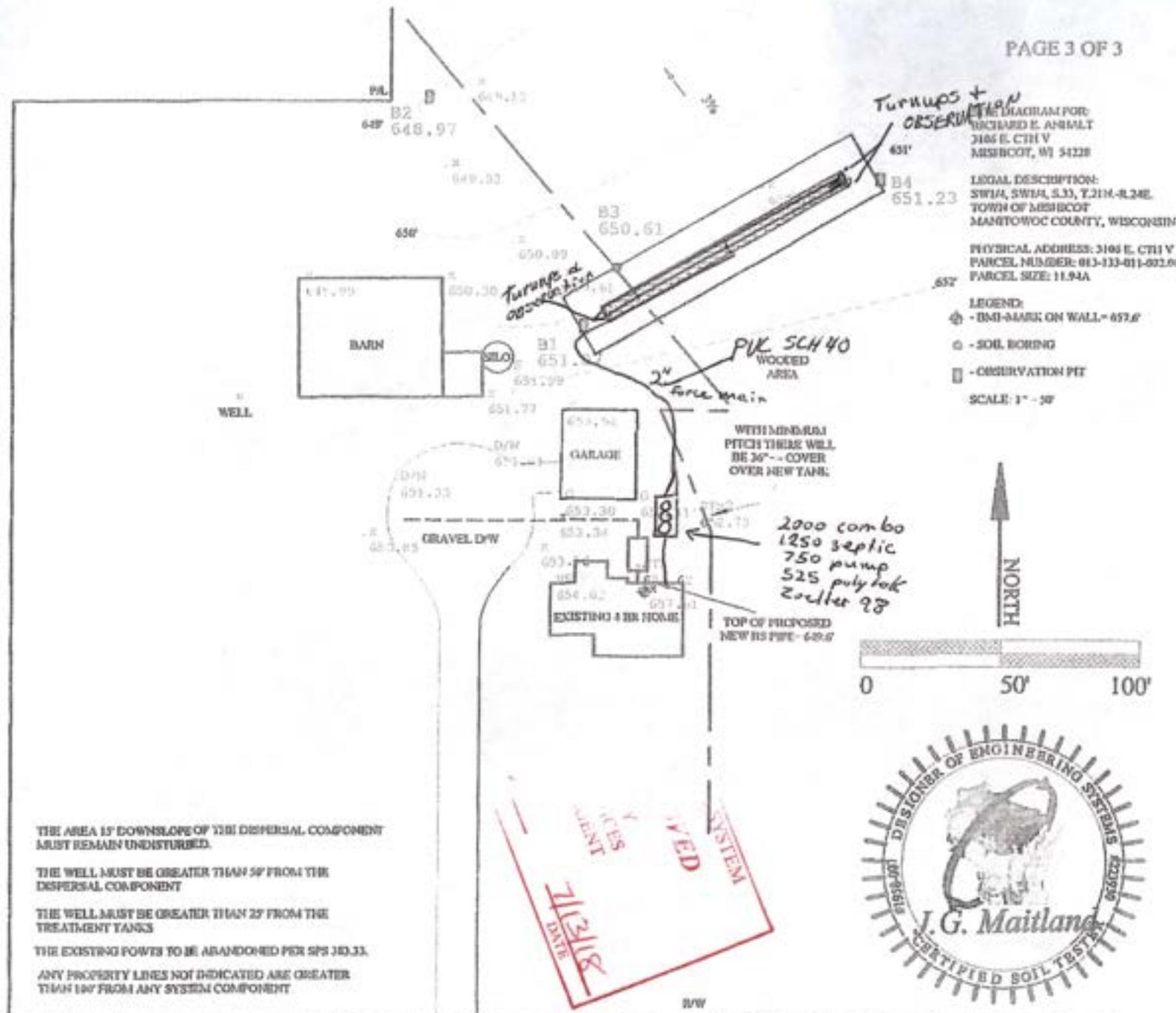
If the mound component fails to accept wastewater or begins to discharge wastewater to the ground surface, it will be repaired or replaced in its' present location by increasing basal area if toe leakage occurs or by removing biologically clogged absorption and dispersal media, and related piping, and replacing said components as deemed necessary to bring the system into proper operating condition.

See Page 5 of this plan for the name and telephone number of your local POWTS regulator and service provider.

Pretreatment Units

The information and schedule of management and maintenance for pretreatment devices such as aerobic treatment units or disinfection units are attached as separate documents and are considered part of the overall management plan for this system.





SOIL EVALUATION REPORT

Kevision

Page 1 of 3Wisconsin Department of Safety & Professional Services
Division of Safety and Buildings

in accordance with DSPS 385, Wis. Admin. Code

WISCONSIN COUNTY
RECEIVED
01092017
PLANNING & PARK
COMMISSION

Attach complete site plan on paper not less than 8 1/2 x 11 inches in size. Plan must include, but not limited to: vertical and horizontal reference point (BM), direction and percent slope, scale or dimensions, north arrow, and location and distance to nearest road.

Please print all information

Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04(1)(m)).

County	MANITOWOC	
Parcel I.D.	013-133-011-002-00	
Reviewed by	Date	
	KB 10/9/17	

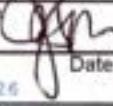
Property Owner				Property Location			
RICHARD E. ANHALT				SW1/4, SW1/4, S33, T21N-R24E			
Property Owner's Mailing Address				Lot #	Block #	Subd. Name or CSM#	
3106 E. CTH V				NA			
City	State	Zip Code	Phone Number	City	Village	Town	Nearest Road
MISHICOT	WI	54228	DEAN 755-4128	MISHICOT		E. CTH V	
<input type="checkbox"/> New Construction	Use:	<input checked="" type="checkbox"/> Residential/Number of Bedrooms	4	Code derived design flow rate			600 GPD
<input type="checkbox"/> Replacement		<input type="checkbox"/> Public or commercial- Describe:					
Parent Material GLACIAL TILL				Flood Plain elevation if applicable NA ft.			
General comments RECOMMEND A 6' X 100' MOUND CELL WITH A MIN. 17" ASTM C33 SAND LIFT. and recommendations:							

1	<input type="checkbox"/> Boring	Ground surface elev. 651.07 ft. Depth to limiting factor 19 in.							Soil Application Rate	
	<input checked="" type="checkbox"/> Pit	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft ²
Ap	0-12	10YR3/2	NONE	HVY SIL	2FGR	MFR	CS	2VF	0.6	0.8
Bt	12-19	5YR4/4	NONE	CL	2VF-FSBK	MFR	CS	1M	0.4	0.6
Bt2	19-24	5YR4/4	5YR4/6 F1F	CL	1FPR	MFR	CS	--	0.0	0.0
Ck	24-30	5YR5/4	5YR4/6 F1F	CL	MSV	MFR	--	--	0.0	0.0

2	<input type="checkbox"/> Boring	Ground surface elev. 648.97 ft. Depth to limiting factor 19 in.							Soil Application Rate	
	<input checked="" type="checkbox"/> Pit	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	GPD/ft ²
Ap	0-10	10YR3/2	NONE	HVY SIL	2FGR	MFR	CS	2VF	0.6	0.8
Bt	10-19	5YR4/4	NONE	CL	2VF-FSBK	MFR	CS	1VF	0.4	0.6
Bt2	19-24	5YR4/4	5YR4/6 F1F	CL	1FPR	MFR	CS	--	0.0	0.0
Ck	24-30	5YR5/4	5YR4/6 F1F	CL	MSV	MFR	--	--	0.0	0.0

* Effluent #1 = BOD5 > 30 <= 220 mg/L and TSS > 30 <= 150 mg/L

* Effluent #2 = BOD5 <= 30 mg/L and TSS <= 30 mg/L

CST Name (Please Print)	Signature	CST Number
JOE MAITLAND		223930
Address	Date Evaluation Conducted	Telephone Number
693 LAHERS-CLANCY RD. GREENLEAF, WI 54126	10/03/17	920 532-0016

3

Bardos et al.

Boring # Ground surface elev. 650.61 ft. Depth to limiting factor 19 in.

4

Beijing

Figure 1

Ground surface elev. 1000 ft. Depth to limiting factor 720 in.

800

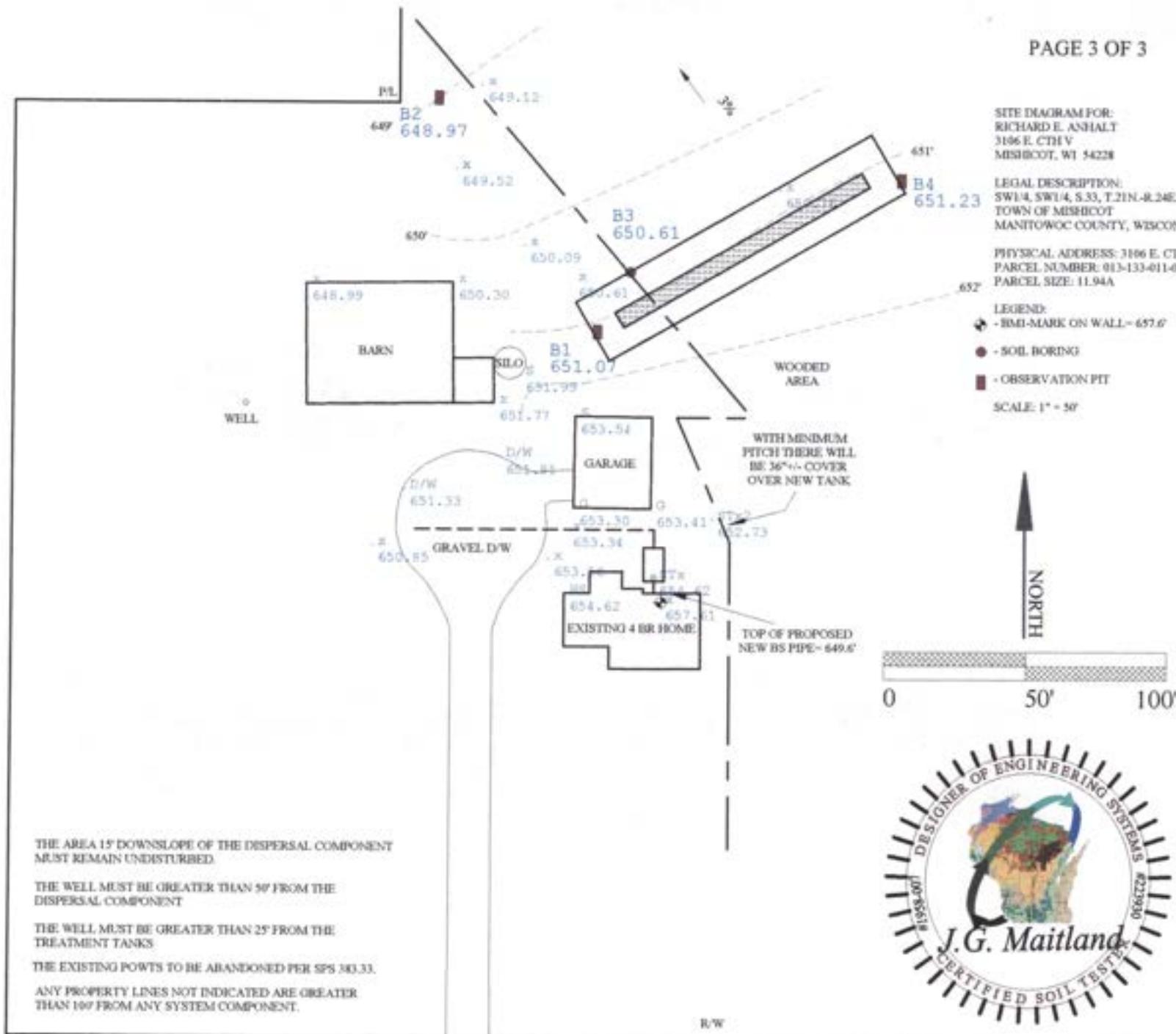
Reading 1

Ground surface elev. _____ ft. Depth to limiting factor _____ in.

• Effluent #1 = BOD5 > 30 <= 220 mg/L and TSS >30 <= 150 mg/L

*Effluent #2=BOD5<=30mg/L and TSS<=30mg/L

The Department of Commerce is an equal opportunity service provider and employer. If you need assistance to access services or need material in an alternate format, please contact the department at 608-266-3151 or TTY 608-264-8777.



THE AREA 15' DOWNSLOPE OF THE DISPERSAL COMPONENT
MUST REMAIN UNDISTURBED.

THE WELL MUST BE GREATER THAN 50' FROM THE
DISPERSEL COMPONENT

THE WELL MUST BE GREATER THAN 25' FROM THE TREATMENT TANKS

THE EXISTING POWTS TO BE ABANDONED PER SPS 383.31.

ANY PROPERTY LINES NOT INDICATED ARE GREATER THAN 100' FROM ANY SYSTEM COMPONENT.

四

E. CTH "V"