

PERMIT APPROVAL SPECIFICATIONS
Sanders County Environmental Health Department
1111 Main St. Thompson Falls, MT, 59873 * 406.827.6909



Owner information:

<u>David and Shalea Brabo</u> Name	<u>33</u> <u>24N</u> <u>31W</u> S T R
<u>PO Box 1147</u> Mailing address	<u>05/17/2022 (installer)</u> Date Submitted
<u>Maple Valley, WA 98038</u> City	<u>05/18/2022</u> Date Approved
<u>21-204 supersede</u> Permit Number	<u>05/18/2024</u> Expiration Date

Lot 11, South Hill Ridge Subdivision, Trout Creek
Physical Address

Permit Specifications:

Installation of a pressure dosed, deep absorption trench wastewater treatment system for a **two (2)** 3-bedroom living units. Flow not to exceed 600 GPD of residential strength wastewater.

- 2500-gallon combo septic and dosing tank, a shared 2000-gallon septic tank discharging into a shared 500-gallon dosing tank, or one 1000-gallon septic tank per living unit discharging into a shared 500-gallon dosing tank
- Pump estimated at 46 GPM @ 26 feet TDH with floats set for 200 gallons per dose. Pump specifications and float settings must be verified using field data.
- 2.0-inch schedule 40 PVC transport line, or equivalent replacement
- 2.0-inch schedule 40 PVC manifold
- 1.5-inch schedule 40 PVC laterals, with 5/32-inch orifices spaced 5 feet apart, with at least the first, middle, and last orifices of each lateral facing down into splash guards
- Drainfield per specifications below

Pipe and Gravel

1000 square feet
334 lineal feet
4 laterals @ 84 feet

Gravelless Chambers:

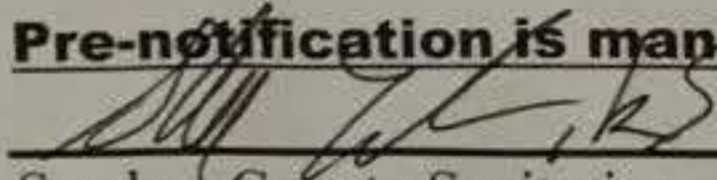
1000 square feet
334 lineal feet
4 laterals @ 84* feet

Install a deep absorption trench system. Backfill with loamy sand, sandy loam, or equivalent.

Pressure dosed trenches are 3 feet wide and a maximum depth of 36 inches.

***Gravelless chamber calculations are based on 3 foot wide chambers. Please follow all Sanders County wastewater regulations & State regulations outlined in Circular DEQ 4, 2013 edition. Install the system as approved on Lot Layout.**

Pre-notification is mandatory 48 hours before backfilling system.



Sanders County Sanitarian

Pump Selection for a Pressurized System - Single Family Residence Project

Parameters

Discharge Assembly Size	2.00	inches
Transport Length	25	feet
Transport Pipe Class	40	
Transport Line Size	2.00	inches
Distributing Valve Model	None	
Max Elevation Lift	15	feet
Manifold Length	21	feet
Manifold Pipe Class	40	
Manifold Pipe Size	2.00	inches
Number of Laterals per Cell	4	
Lateral Length	84	feet
Lateral Pipe Class	40	
Lateral Pipe Size	1.50	inches
Orifice Size	5/32	inches
Orifice Spacing	5	feet
Residual Head	5	feet
Flow Meter	None	inches
'Add-on' Friction Losses	0	feet

Calculations

Minimum Flow Rate per Orifice	0.68	gpm
Number of Orifices per Zone	68	
Total Flow Rate per Zone	46.3	gpm
Number of Laterals per Zone	4	
% Flow Differential 1st/Last Orifice	2.4	%
Transport Velocity	4.4	fps

Frictional Head Losses

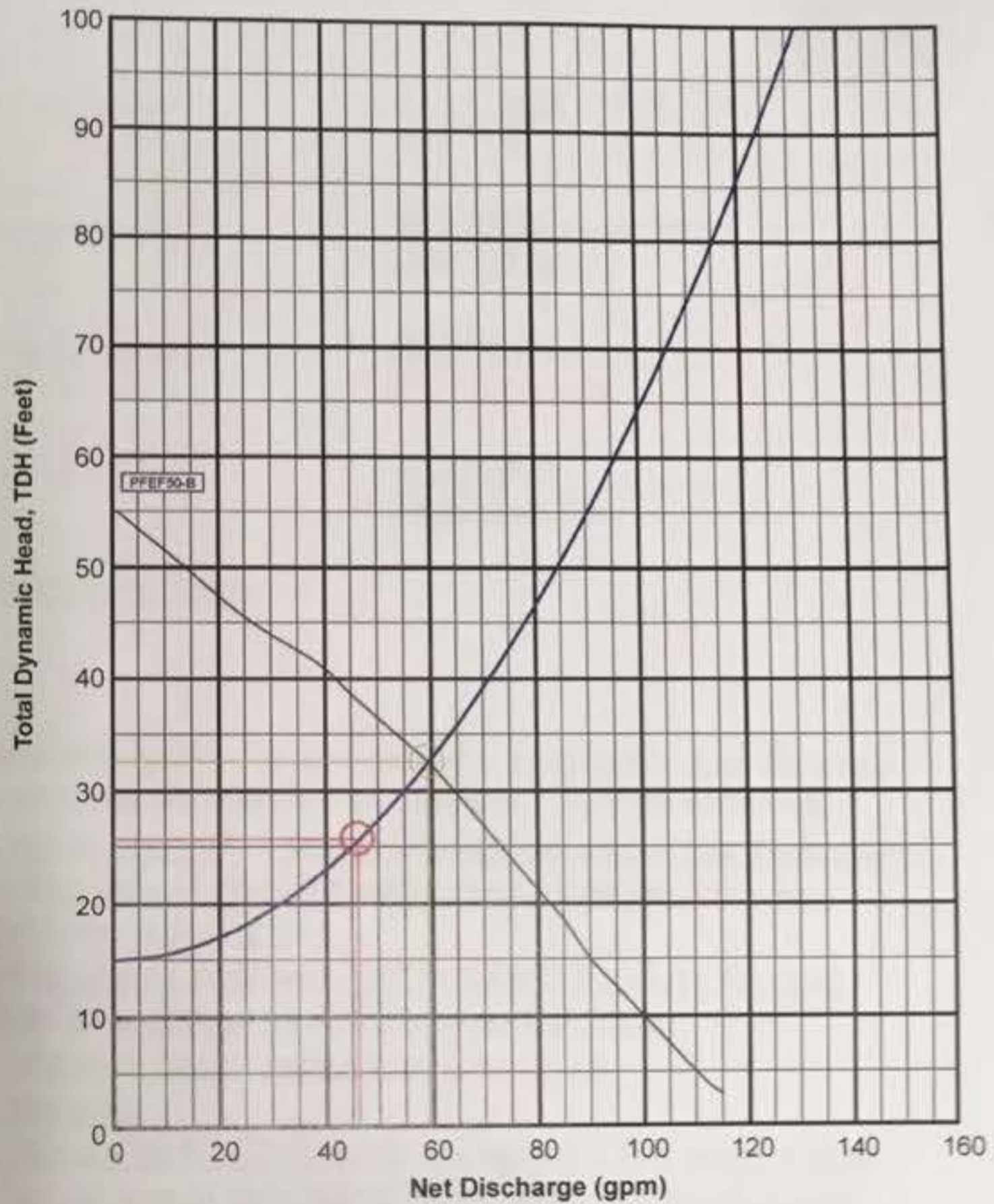
Loss through Discharge	4.3	feet
Loss in Transport	0.9	feet
Loss through Valve	0.0	feet
Loss in Manifold	0.2	feet
Loss in Laterals	0.3	feet
Loss through Flowmeter	0.0	feet
'Add-on' Friction Losses	0.0	feet

Pipe Volumes

Vol of Transport Line	4.4	gals
Vol of Manifold	3.7	gals
Vol of Laterals per Zone	35.5	gals
Total Volume	43.6	gals

Minimum Pump Requirements

Design Flow Rate	46.3	gpm
Total Dynamic Head	25.6	feet



PumpData

PFEF50 Effluent Pump
1/2HP, 115/230V 1Ø

Legend

System Curve:	—
Pump Curve:	—
Pump Optimal Range:	—
Operating Point:	○
Design Point:	○

