

Pressure Bed Design

Property Owner: Todd Jellum Date: 10/14/2019

Site Address: 41902 251st PL. McGregor MN 55760 PID: 14-1-071900

Comments: _____

instructions: = req'd input = input or default = calculated field *** = installer info

- 1) 3 bedroom Type I Residential System
- 2) 450 GPD design flow
- 3) No Garbage disposal or pumped to septic
Install Jacobson 1650 Compartment tank with Effluent Filter and alarm
- 4) *** 1120 Gallon septic tank (minimum) Tank options: none
- 5) 0.78 GPD/ft² Soil Loading Rate 577 ft² bed req'd, or 577 ft² LUG minimum
(must match soil boring log)
- 6) *** 16.0 ft desired bed width, leads to a 36.1 ft bed length
(25' maximum)
- 7) *** 3.0 ft lateral spacing 3.0 ft perforation spacing (maximum 3 for both)
 end feed manifold connection
- 8) *** 5 laterals 34.1 feet long 12.0 perfs / lateral 60 perfs total
(1/2 perf means the first perf starts at the middle feed manifold)
- 9) *** 7/32 inch perfs at 1 feet residual head gives 0.56 gpm flow rate per perforation
(If bed has > 1' of cover, increase residual head for cleanout req's)
for this perf size & spacing, & pipe size on line 12, max perfs/lateral = 14, line #8 must be less --> OK
- 10) 6 doses per day (4 minimum)
- 11) 75 gallons per dose (treatment volume)
- 12) 1.25 inch diameter laterals (or smaller) will meet "5x pipe volume"
*** 1.25 inch diameter laterals (or smaller) must be used to meet "4x pipe volume" requirement
1.50 inch diameter laterals (or smaller) will meet "3x pipe volume"
- 13) *** 20 feet of 2.0 inch supply line leads to 3 gallons of drainback volume
("top feed" to control the drainback)
- 14) 78 gallons TOTAL pump out volume (treatment + drainback)
- 15) 10 feet vertical lift from pump to dispersal area, leads to a
- 16) *** 34 GPM @ 16 feet of head, Pump requirement
(>50 gpm may require additional 3-6' head allowance for discharge assy)