Design Specifications for Lot 25 Rock Ridge Point, Iredell, North Carolina

Daily Design Flow	600	gals
Number of Bedrooms	5	bedrooms
Basement or Crawspace	Basement	
Dellinger Septic Tank Size	1500	gals, Effluent Poly Lock PL68 Filter or equal.
Dellinger Pump Tank Size	1500	gals
Sim/Tech Effluent Filter on Pump Tank	Yes	Connection inside pump tank vault and on supply line.
Primary System Loading Rate (LTAR)	0.30	gpd/ft^2 LTAR including Soils Evaluations were determined by Iredell County. Soils Evaluations and LTAR were not Conducted by Septic Environmental Solutions, Inc.
Number of Lines	6	Total LP PPBPS, See Scaled Dwg.
Primary System	340	ft.
Trench Width	2	ft
Trench Spacing	8	ft
Trench Maximum Depth	36	inches
Pump required	Yes	
Distribution Device	Yes	Gate Valve Box with LPP Panel Distribution
Maintenance Agreement Required	Yes	Contracted by Septic Environmental Solutions, Inc.
Length and Diameter of Supply Line	100	2" SCH 40 PVC
Lateral Diameter	Yes	1 1/4" SCH 40 PVC
Manifold Diameter	Yes	4" SCH 80 PVC
Number of T&J Panels	80	Total,panels for primary system
Flow Rate through System	40	gpm– use 5/32" holes
Elevation Head	9	ft.
Pressure Head	3	ft.
Friction Head	3.03	ft.
20% Contingency	3	ft.
Total Head	18	ft.
Pump Requirements	40	gpm. with 18-ft of Head; Use Goulds WE05H Pump or Equivelent with Compatible Electrical
Dosing Volume	288	s
Pump run time per dose, approximate	7.2	min
Check Valve	Yes	
Siphon Break Hole	Yes	
Repair System Loading Rate	0.30	gpd/ft2
Repair System	Yes	LP PPBPS, See attached dwg.
Total foot of Repair	340	ft

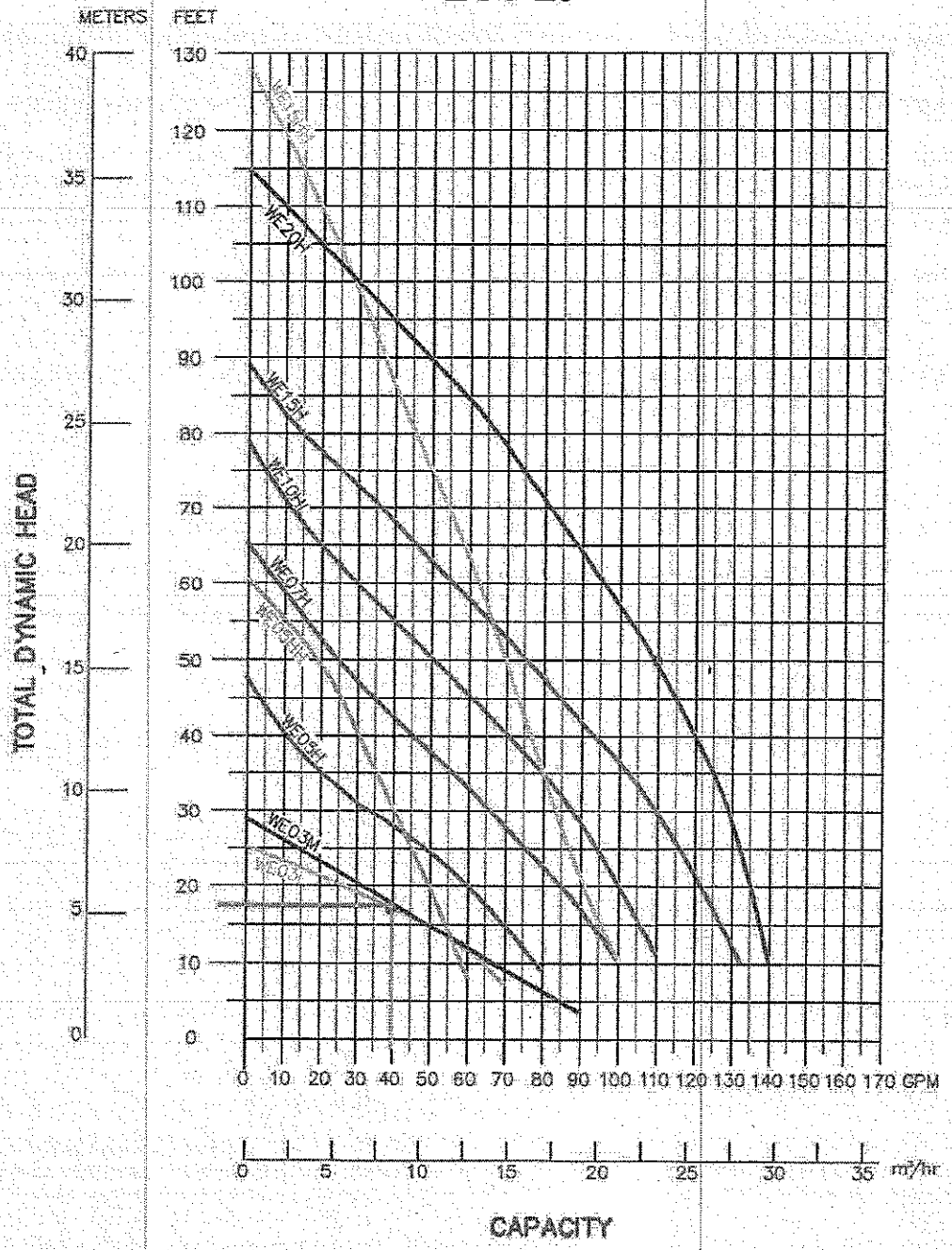
Approved
MD
2/24/16

Before placement of cap block, one panel on each line near the center of the field should be observed filling to make certain that it does not overflow top chamber into air chambers of panel. If overflow occures, reduce floats by 25 gallons and reset until no overflow is observed.

LPPPPBPS Design Worksheet (Primary System)						File #/Name:	Rock Ridge			
System Requirements						Tax #:	4636135048.000			
Number of bedrooms	5					Lot	25			
Craw Space/Basement	Craw Space									
Daily Design Flow	600	gpd				Address:	Iredell County			
LTAR	0.300	gpd/ft.^2				Consultant:	Septic Environmental Solutions Inc.			
Linear footage	666.67	ft. (Conventional)				Phone:	704-502-5588, Fax 704-684-1469			
Linear footage	333.33	ft. (50% Reduction)								
Trench Maximum Depth	36	inches								
Laterals	Length (ft)	# Panels	Calculated							
Line # 1	70	16	16							
Line # 2	70	16	16							
Line # 3	50	12	12							
Line # 4	50	12	12							
Line # 5	50	12	12							
Line # 6	50	12	12							
Line # 7		0	0							
Line # 8		0	0							
Line # 9		0	0							
Line # 10		0	0							
Line # 11		0	0							
Line # 12		0	0							
Totals	340	80	80							
	*Lines longer than 70 ft. must be center-fed to comply with sewage rules.									
Absorption Area										
Length (ft)	Width (ft)	Spacing	Area (ft^2)							
340	2	8	3000+							
System Pressure Head	3	ft.	Value selected by system designer (must be between 2-5 ft.)							
Orifice Diameter	5/32	in.	Size selected by system designer (1/8 in. minimum)							
Flow Rate per Orifice/Panel	0.5	gpm	Determined from orifice flow design table (use table from Flow Rate tab)							
Total System Flow Rate	40	gpm	Total number of panels required multiplied by the orifice flow rate							
System Dose Volume	288	gal.	Total number of panels required multiplied by 3.6 gal./panel							
Doses Per Day		cycles	Number of dose cycles per day based on daily design flow. Daily design flow divided by system dose volume.							
Pump Run Time	7.20	min.	System dose volume divided by the total system flow rate							
Pump Tank Volume / Inch	29	gal./in.	1,000 gal. Pump tank, volume is approximately 21 gallons per inch. 1,500 gal. pump tank, volume is approximately							
			29 gallons per inch. Contractor is responsible in verifying tank gallons per inch.							
Pump Tank Drawdown	9.93	in.	System Dose Volume divided by gallons per inch for the designed tank size.							
Supply Line Length	100.00	ft								
Elevation head+pump height	9.00	ft.								
Friction Head	3.03	ft.								
20% Contingency	3.01	ft.								
Total Head	18.0									
Comments:										
1. Install system using 2 ft. wide trenches.										
2. Install drainlines on 8 ft. centers (to be specified by the designer) and must be level and on contour.										
3. System design requires effluent pump for distribution.			Yes							

T&J Panel Summary Table	
Linear Feet	# Panels
20	5
30	7
40	9
50	11
60	14
70	16
80	18
90	21
100	23
110	25
120	17
130	30
140	32
150	34
160	37
170	39
180	41
190	43
200	46

PUMP CURVE
LOT 25



GOULDS PUMP PERFORANCE CURVES
Submersible Effluent Pump WE Series

ROCKRIDGE POINT SUBDIVISION

