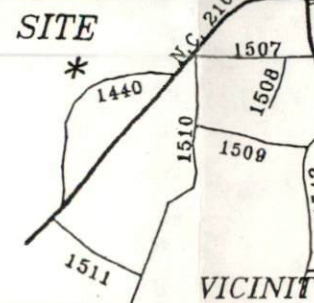
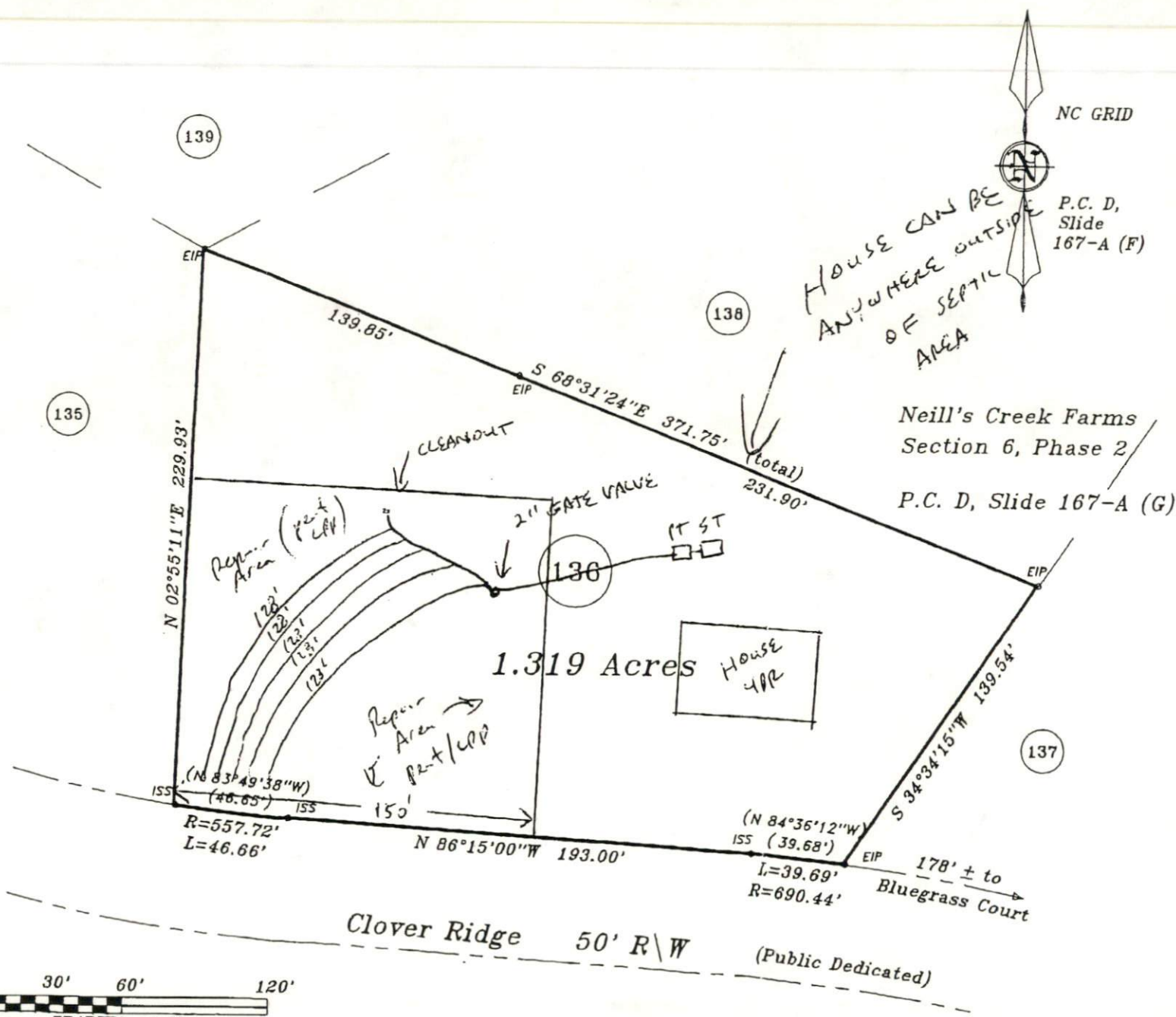


SITE/SOIL EVALUATION FOR ON-SITE WASTEWATER

FACTORS		PROFILES													
		1	2	3	4	5	6	7	8	9	10				
LANDSCAPE POSITION	.1940														
SLOPE (%)	.1940														
HORIZON 1 DEPTH		0-4													
TEXTURE GROUP	.1941(A)(1)	SL													
CONSISTENCE	.1941	VF													
STRUCTURE	.1941(A)(2)	C													
MINERALOGY	.1941(A)(3)	NCH													
HORIZON 2 DEPTH		4-24													
TEXTURE GROUP	.1941(A)(1)	C													
CONSISTENCE	.1941	P													
STRUCTURE	.1941(A)(2)	SBK													
MINERALOGY	.1941(A)(3)	SOH													
HORIZON 3 DEPTH															
TEXTURE GROUP	.1941(A)(1)														
CONSISTENCE	.1941														
STRUCTURE	.1941(A)(2)														
MINERALOGY	.1941(A)(3)														
HORIZON 4 DEPTH															
TEXTURE GROUP	.1941(A)(1)														
CONSISTENCE	.1941														
STRUCTURE	.1941(A)(2)														
MINERALOGY	.1941(A)(3)														
SOIL WETNESS	.1942														
RESTRICTIVE HORIZON	.1944														
SAPROLITE	.1943, 1956														
CLASSIFICATION	.1948	P5													
LONG TERM ACCEPTANCE RANGE	.1955	.2													

Q.L.



Lot 136, Section Neill's Creek Farms Plat Cabinet D

Proprietors
BERNARD and M. GAIL

Black River TWP.

Scale 1" = 60'

Surveyed & Registered Land
STANCIL &
P.O. Box 730, Angier, NC 28520
919-639-XXXX



Flow Chart

length	line	elev.	dis	head	hole size	flow/ hole	# holes	flow/ lat	spacing	1st. and last hole	flag color
128'	5	96.41	1.75	3.75	5/32	0.56	20	11.20	6.0	4.0'	B
128'	4	96.75	1.41	3.41	↓	0.533	22	11.73	5.50	3.5	O
123'	3	97.33	0.83	2.83		0.485	25	12.12	4.75	4.625	B
128'	2	98.75	0.41	2.41		0.447	28	12.52	4.25	6.625	O
128'	1	98.16	0	2.0		0.410	31	12.71	4.0'	4.0'	B

640 LF

Total Dosing Rate 60.28 gpm

* 1st hole measured from manifold; last hole measured from end of lateral

CALCULATIONS

Pump Elevation 96.16
 Design Head 2.0 feet
 Elevation Head 12.0 feet
 Friction Loss 0.62 feet = supply line length 75' x 0.82 / 100'
 Fittings Loss 0.12 feet = 20% of friction loss
 TOTAL DYNAMIC HEAD 14.74 feet

Supply Line Volume: length 75' x 36.7 gallons = 27.53 gallons

Lateral Volume: length 640' x 9.2 gallons = 58.90 gallons

Dosing Volume: 5 x lat. vol 58.90 gal = 294.5 use 400 gallons

Drawdown: dosing vol. 400 gal x liquid depth 4.8 " = 19.2 " pump tank vol. 1000 gal

SOUTHEASTERN SOIL & ENVIRONMENTAL ASSOCIATES, INC.

PO Box 1927
Lilington 27546

LPP System design and specifications

Owner M. Gould
Address 475 Keith Hill Rd
Lilington NC 27546
Phone _____
Type of Structure HSE

County HARNETT
Location Near Creek Farms
Lot 136
Application Rate 0.15 gpd/ft²
Design Flow 480 gpd

Design Summary

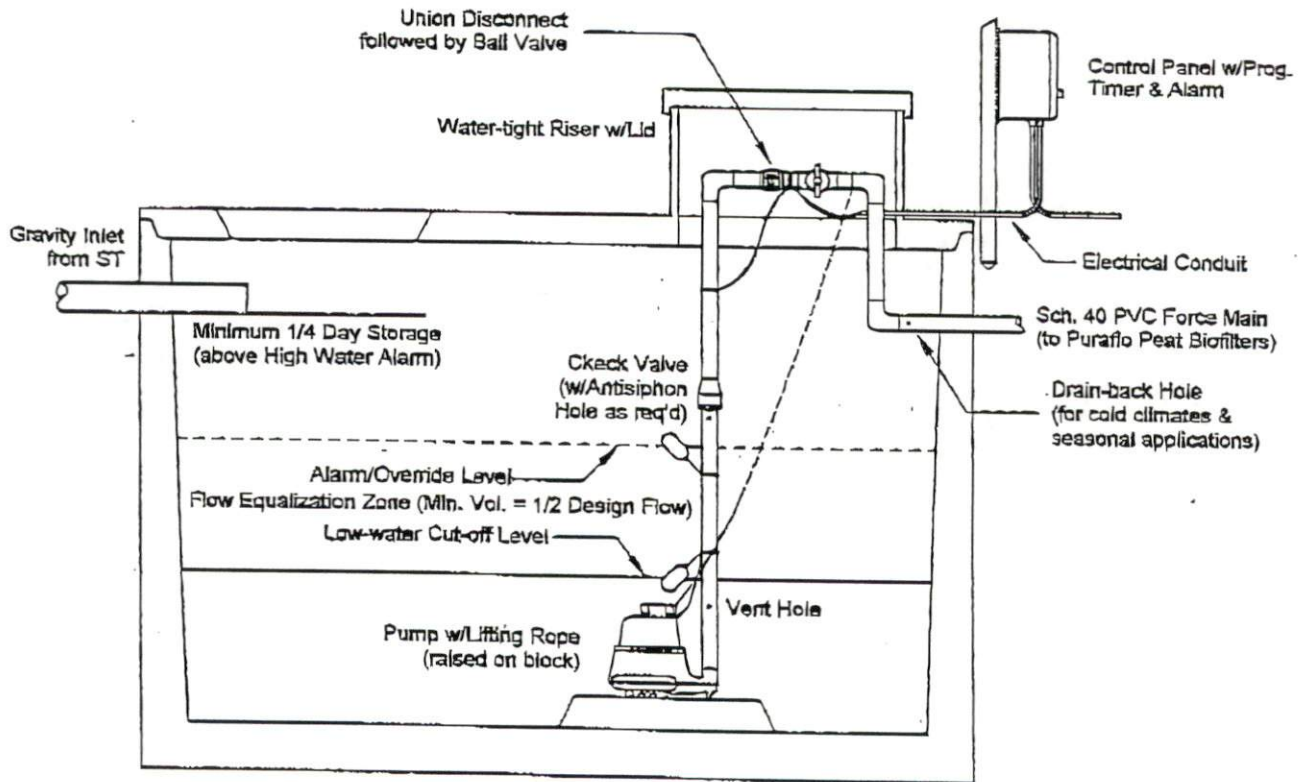
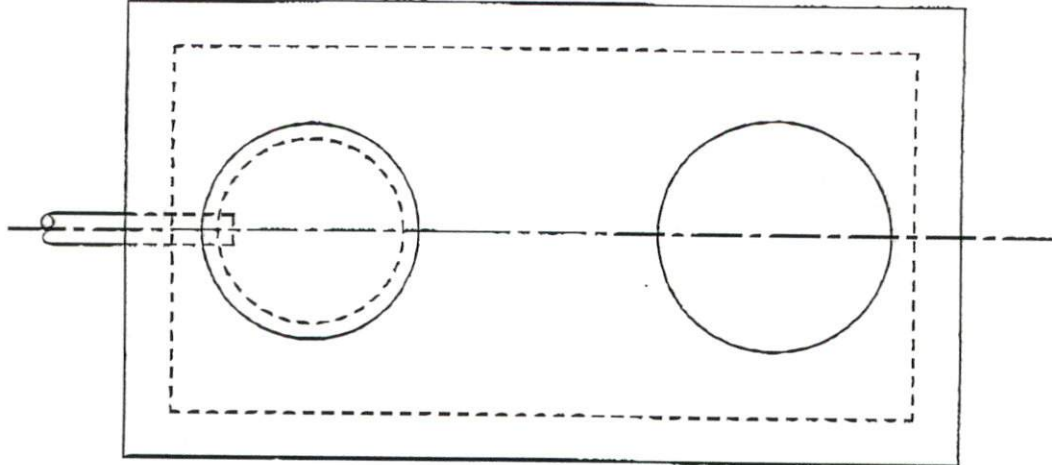
Drainfield 3200 sq. ft.
Laterals 690 in. ft., 1 1/2" diameter Sch. 40 PVC
Configuration 5 LINES AT 128 FEET
Supply line 75 in. ft., 3" diameter Sch. 40 PVC
Manifold 50 in. ft., 3" diameter Sch. 40 PVC
Manifold Placement END Tee UP
Septic Tank 1000 gallons
Pump Tank 1000 gallons Liquid Depth 48 inches
Total Dosing Rate 60.28 gpm Trench Width 24 inches
Dosing Volume 400 gallons Depth of Gravel 12" inches
Drawdown in Pump Tank 19.2 inches Size of Gravel No 5
Total Dynamic Head 19.74 feet

Pump Zeller Model 161 Check Valve No
Controls Phonix control panel (112) Gate Valve(s) (1) at field
with Alarm included Anti-siphon Hole No
Alarm _____ Curtain Drain No

(Other equipment which meets or exceeds specifications may be substituted)

Notes _____

PURAFLO PEAT BIOFILTER



TYPICAL PUMP TANK DETAIL

(dimensions, construction and installation should conform to applicable local and state regulations)

Power and control cords should be guided out of the pump chamber through a recessed channel or opening that will protect the cords from damage by the concrete lid.

Electrical connections

As noted earlier, the pump and high-water alarm must be placed on separate electrical circuits. (If the pump circuit fails, the alarm must still be able to operate). Follow the manufacturer's recommendations for proper fuses or circuit-breakers.

All electrical connections must be made outside the pumping chamber. Power cords from the pump and controls should be plugged into a NEMA-approved outdoor receptacle mounted outside of the pumping chamber. The receptacle must not be located inside the pumping chamber due to the corrosive and explosive gases that may form from the sewage.

Electrical connections may be made inside the pumping tank only if wired inside a sealed, water-tight box. Some level-control switches have such a

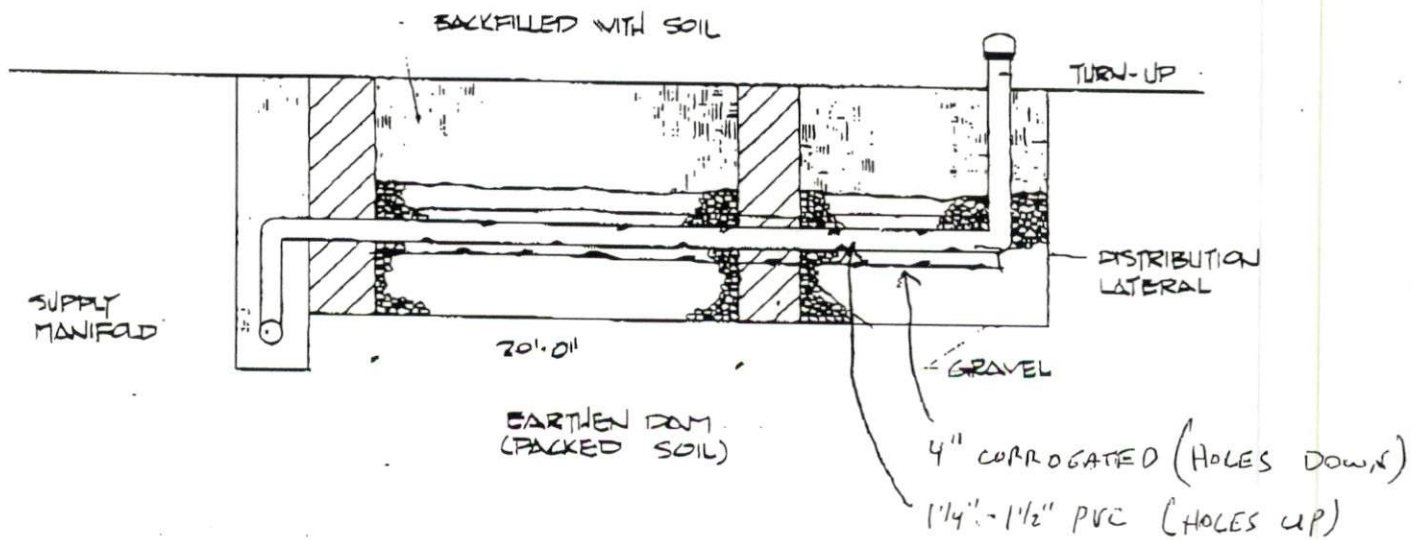
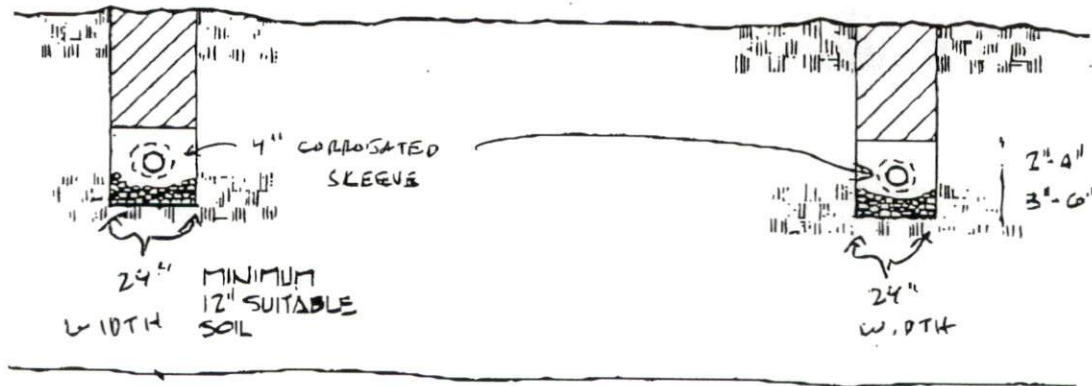
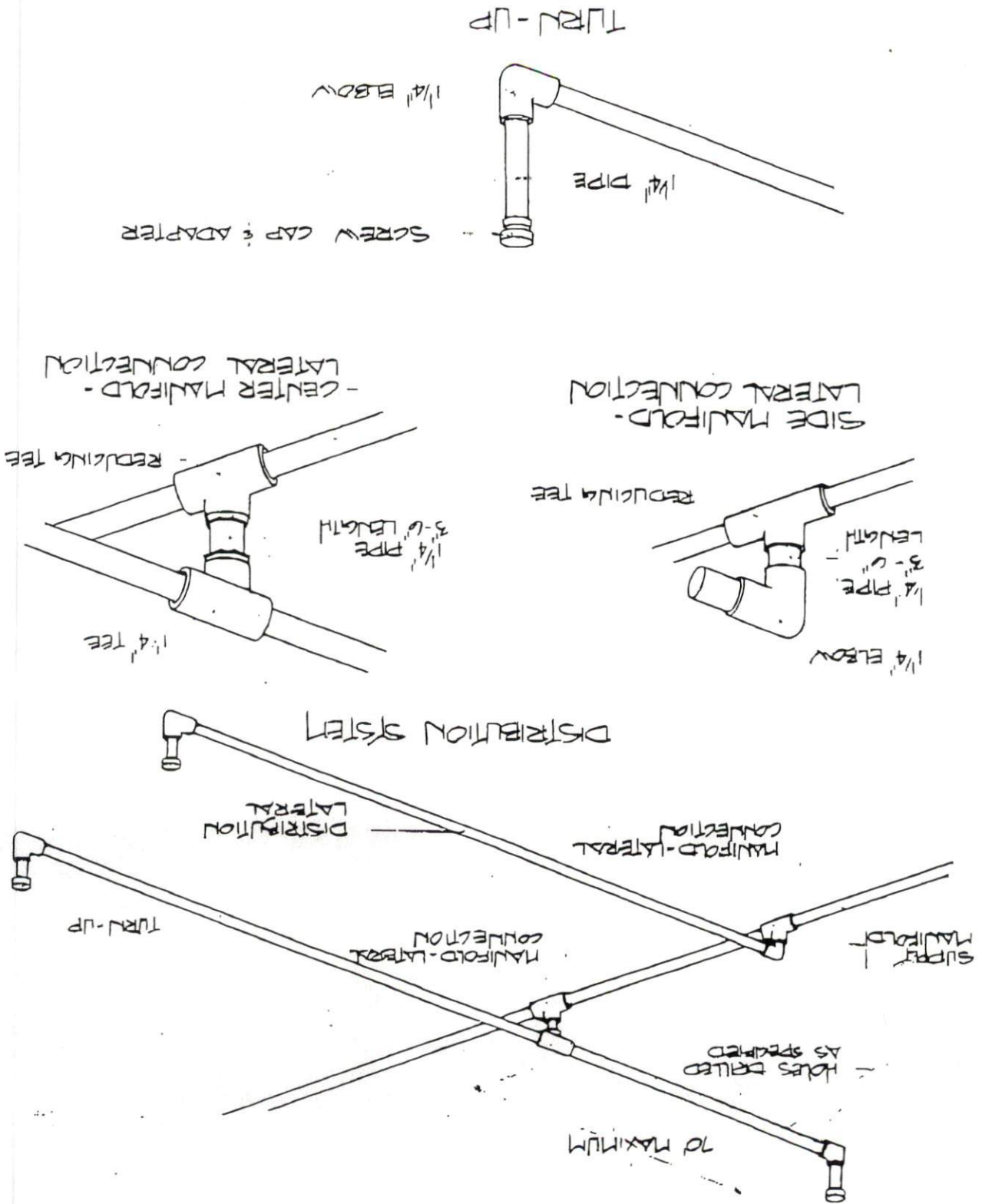


Figure 8. Details of absorption trenches

Figure 6. Details of distribution system



TYPE 112 FEATURES

All Type 112 control panels include a 10" x 8" enclosure, 120V control circuit, magnetic motor contactor, pump run light, HOA switch, terminal block, fuses, and control on/off switch.

MODEL NUMBER ORDERING INFORMATION

See sample at bottom of page to help complete your model number.



TYPE 112

ALARM PACKAGE

- 0 - no alarm package
- 1 - alarm package-includes silence & test switches, red light, horn, and alarm float

ENCLOSURE RATING

- I - Indoor (NEMA 1)
- W - Weatherproof (NEMA 4X)

STARTING DEVICE

- 1 - magnetic motor contactor

PUMP FULL LOAD AMPS

If pumps do not have integral overload protection, you must specify overloads as an option.

- 0 - 0-15 FLA
- 1 - 15-20 FLA
- 2 - 20-25 FLA
- 3 - 25-30 FLA
- 4 - 30-40 FLA
- 5 - 40-50 FLA

PUMP DISCONNECT

- 0 - no pump disconnect
- 1 - pull-out with safety deadfront
- 2 - through door fused (fuses not included)
- 3 - through door non-fused
- 4 - circuit breaker

FLOAT SWITCH APPLICATION

Two 20" pipe clamp floats are standard. For alternate float switches see the option pages. Designate H or L for all floats ordered.

- H - pump down/normally open
- L - pump up/normally closed
- X - no alarm or control floats

OPTIONS AVAILABLE - Select the options your application requires, then refer to the option pages. The option pages will provide details and specific numbers needed to complete your model number. Panels ordered with an option or multiple options may require larger enclosure sizes.

Please call the factory if you need help building your model number.

OPTIONS

SEE OPTION PAGES FOR MODEL NUMBERS

- | | |
|---|--|
| <input type="checkbox"/> Alarm Beacon | <input type="checkbox"/> Elapsed Time Meter |
| <input type="checkbox"/> Alarm Bell | <input type="checkbox"/> Event (Cycle) Counter |
| <input type="checkbox"/> Alarm Horn | <input type="checkbox"/> Remote Devices |
| <input type="checkbox"/> Alternate Beacon Color | <input type="checkbox"/> Pump Control Timer |
| <input type="checkbox"/> Red Beacon With Guard | <input type="checkbox"/> Delay Timer |
| <input type="checkbox"/> Flasher | <input type="checkbox"/> Deadfront |
| <input type="checkbox"/> Manual Alarm Reset | <input type="checkbox"/> Lockable Latch |
| <input type="checkbox"/> High and Low Alarm Indicators | <input type="checkbox"/> Pilot Breaker |
| <input type="checkbox"/> Auxiliary Contacts | <input type="checkbox"/> Lightning Arrestor |
| <input type="checkbox"/> Low Level Cutout (redundant off) | <input type="checkbox"/> Surge Protection |
| <input type="checkbox"/> Pump Failure Indicator | <input type="checkbox"/> Overload Protection |
| <input type="checkbox"/> Seal Failure Indicator | <input type="checkbox"/> Overload Reset Through Door |
| <input type="checkbox"/> Thermal Cutout | <input type="checkbox"/> GFI Convenience Receptacle |
| <input type="checkbox"/> Thermal Cutout Indicator | <input type="checkbox"/> Main Disconnect |
| <input type="checkbox"/> Power-On Indicator | <input type="checkbox"/> Alternate Float Switch |
| <input type="checkbox"/> Anti-Condensation Heater | |

Subject to change without notice.

rhombus
TECHNOLOGY

RHOMBUS TECHNOLOGY
P.O. Box 1619 • County Rd 6
Detroit Lakes MN 56502 USA
218-847-4786 • Fax 218-847-4801

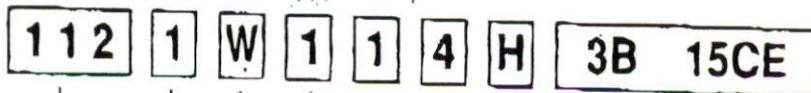


a division of S.J. Electro Systems, Inc.



1003345 • Printed in USA

SAMPLE: MODEL #1121W114H3B15CE



TYPE

ALARM PACKAGE

ENCLOSURE RATING

STARTING DEVICE

PUMP FULL LOAD AMPS

PUMP DISCONNECT

FLOAT SWITCH APPLICATION

PILOT BREAKERS
Control Breaker
Alarm Breaker

ALARM ACCESSORIES
Manual Alarm Reset



SINGLE-PHASE SIMPLEX
Motor Contactor Control
TYPE 112

Type 112 control panels are single-phase, simplex pump control systems.

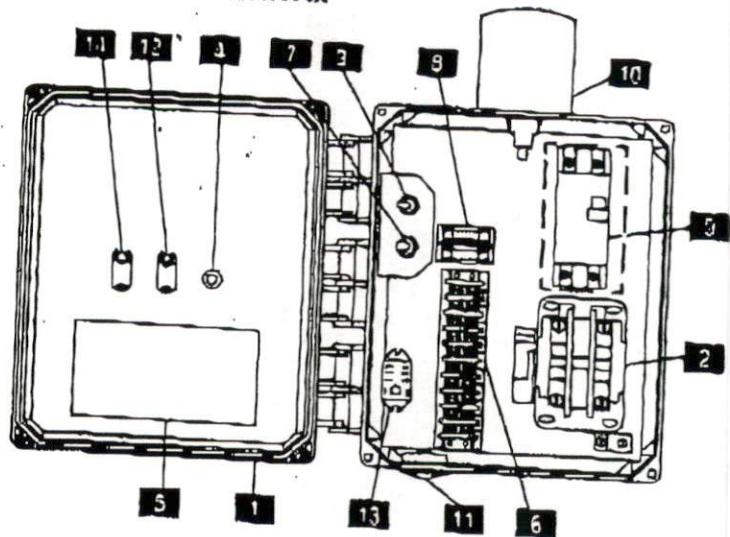
The Rhombus Type 112 control panel provides residential and commercial customers with a reliable means of controlling one single-phase pump in water and sewage installations. Two control switches activate a magnetic motor contactor to turn the pump on and off. If an alarm condition occurs, an additional alarm switch activates the audio/visual alarm system. Common applications include pump chambers, sump pump basins, irrigation systems, and lift stations.



TYPE 112 FEATURES

- **Float Switches (optional)** - complete package assures quality of entire control/alarm system.
- **UL Labeled - ENTIRE control system (panel and switches)** meets and/or exceeds industry standards for safety.
- **Installation Instructions** - complete step-by-step instructions are included for easy installation.
- **2 YEAR LIMITED WARRANTY** - ensures commitment to customer satisfaction.
- **Enclosure** - comes with removable mounting flanges. Choice of Nema 1 - engineered thermoplastic for indoor use, or Nema 4X - weathertight engineered thermoplastic for outdoor use.
- **Magnetic Motor Contactor** - controls the pump by switching both electrical lines.
- **HOA Switch** - offers manual control of the pump.
- **Green Pump Run Indicator Light**
- **Schematic/Wiring Diagram**
- **Terminal Block**
- **Control ON/OFF Switch**
- **Control and Alarm Fuses**
- **Circuit Breaker (optional)** - provides pump disconnect.

Model Shown 1121W114X



ALARM PACKAGE (OPTIONAL)

- **10 Alarm Beacon** - large red light provides 360° visual check of alarm condition.
- **11 Alarm Horn** - loud horn provides audio warning of alarm condition.
- **12 Horn Silence Switch** - exterior switch allows alarm horn to be silenced.
- **13 Horn Silence Relay** - automatically resets alarm after alarm condition has been resolved.
- **14 Test Switch** - exterior switch allows testing of horn and light to assure proper operation of alarm system.