

PERMIT
For
INSTALLATION OF SEWAGE DISPOSAL SYSTEM

Pursuant to Application for Sewage Disposal System number T011130
A permit is hereby issued to:

RAE RYAN

NAME OF APPLICANT

3750 WEST 5TH STREET, #3, CINCINNATI, OH 45227

(513) 946-3208

ADDRESS OF APPLICANT

TELEPHONE NUMBER

GILLEN-VISTA RISE LOT #10, JUNIATA TOWNSHIP, HUNTINGDON COUNTY

PROPERTY ADDRESS OF SITE FOR SEWAGE DISPOSAL SYSTEM

This Permit issued under the provisions of the "Pennsylvania Sewage Facilities Act", the Act of January 24, 1966 (P.L. 1535), as amended, is subject to the following conditions:

1. Except as otherwise provided by the Act or regulations of the Pennsylvania Department of Environmental Resources, no part of the installation shall be covered until inspected by the approving body and approval to cover is granted in writing below.
2. This Permit may be revoked for the reasons set forth in Section 7(b)(6) of the Act.
3. If construction or installation of an individual sewage system or community system and of any building or structure for which such system is to be installed has not commenced within three years after the issuance of a permit for such system, the said permit shall expire, and a new permit shall be obtained prior to the commencement of said construction or installation.

ADDITIONAL CONDITIONS:

***Do not install during wet conditions**

KEEP THIS PERMIT FOR FUTURE REFERENCE

Approval to Cover:

Date of issuance of Permit: 07-14-03

Signature of Enforcement Officer

Juniata Twp

Approving Body

Date

Barry Parker

Signature of Enforcement Officer

The basis for the issuance of this Permit is the information supplied in the Application for Sewage Disposal System and other pertinent data concerning soil absorption tests, topography, lot size, and sub-soil groundwater table elevations. The permit only indicates that the issuing authority is satisfied that the installation of the Sewage Disposal System in accordance with the Rules, Regulations and Standards adopted by the Pennsylvania Department of Environmental Resources under the provisions of the Pennsylvania Sewage Facilities Act, the Act of January 24, 1966 (P.L. 1535), as amended. The issuance of a Permit shall not preclude the enforcement of other health laws, ordinances or regulations in the case of system malfunctions.

TO BE POSTED AT BUILDING SITE

SEWAGE SYSTEM DESIGN

For

Rae Ryan

June 26, 2003

Design prepared by:
John D.R. Gillen, SEO
RD 1, Box 426
Huntingdon, PA 16652
814.641.0309

Design of On-Lot Sewage Disposal System Gravity Distribution In-Ground Trenches

Date: 6/26/03

Permittee: Ms. Rae Ryan Application Number:
Subdivision/Location: Vista Rise lot 10 Site Location: DEP Code Number:
Site Address: TR-434 Township/County: Juniata TWP, Huntingdon County
SEO: Barry Parks

NOTE: This design was based on information pertaining to slope, elevation data, soils, and percolation rate as shown on the site investigation report that is attached as exhibit "A". The designer takes no responsibility for the site evaluation. System design is based on average perk between probe 'P' and 'N'. Trench design is based on SEO field manual instructions found on page II-4. The owner and or contractor must verify the elevation information prior to construction. Not to scale.

DESIGN CRITERIA:

Slope: % 18 Percolation Rate: **51** Min. per inch
Number of Bedrooms: 3 (400gpd flow) Limiting Zone Depth: **80** (inches)

SYSTEM COMPONENTS/ SPECIFICATIONS:

Septic Tank Capacity: 1000 gallons

NOTE: Tanks must be DOUBLE CHAMBER or SERIES WITH SOLIDS RETAINER

Absorption Area REQUIRED: 963.2 sq.ft. PROVIDED: 972 sq.ft.

Diameter of Manifold: 4" inch PVC Lateral Information: Length 54, 54, 54 ft.

Use of three in-ground trenches 6' wide 54' long

DESIGN NOTES

This system is designed to treat the effluent with a dual compartment septic tank, and then a gravity flow in-ground trench system.

HOMEOWNER & INSTALLER

Read all attached information pertaining to installation, isolation distances, and care of system. Installer is responsible to check all elevations prior to installation. This design contains a plat plan (drawing) showing the location of the system. If it does not appear to be correct or you have questions regarding the proper location; contact the Sewage Enforcement Officer and/or the designer PRIOR to installation of the system.

SCETCH OF MANIFOLD AND LATERAL PLACEMENT

**Three 54' long 6' wide trenches – approved PVC perforated pipe
- SEE ATTACHED (NOT TO SCALE)**

LOCATION SCETCH

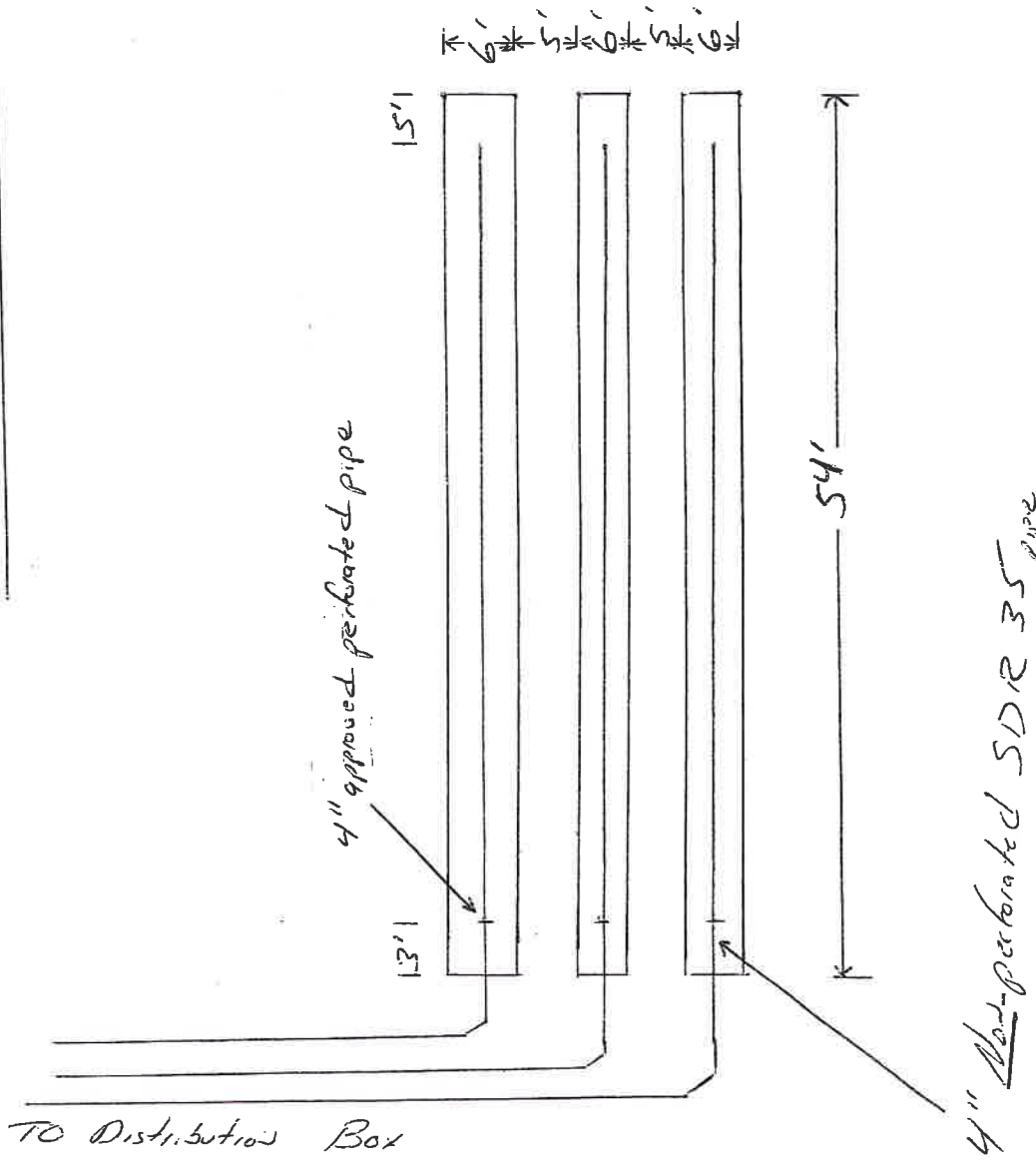
SEE ATTACHED - (NOT TO SCALE)

TREATMENT TANK REQUIREMENTS:

Use minimum 1000-gallon **rectangular** treatment tank(s) required.

Treatment tank must be dual-compartment or 2 tanks placed in series.

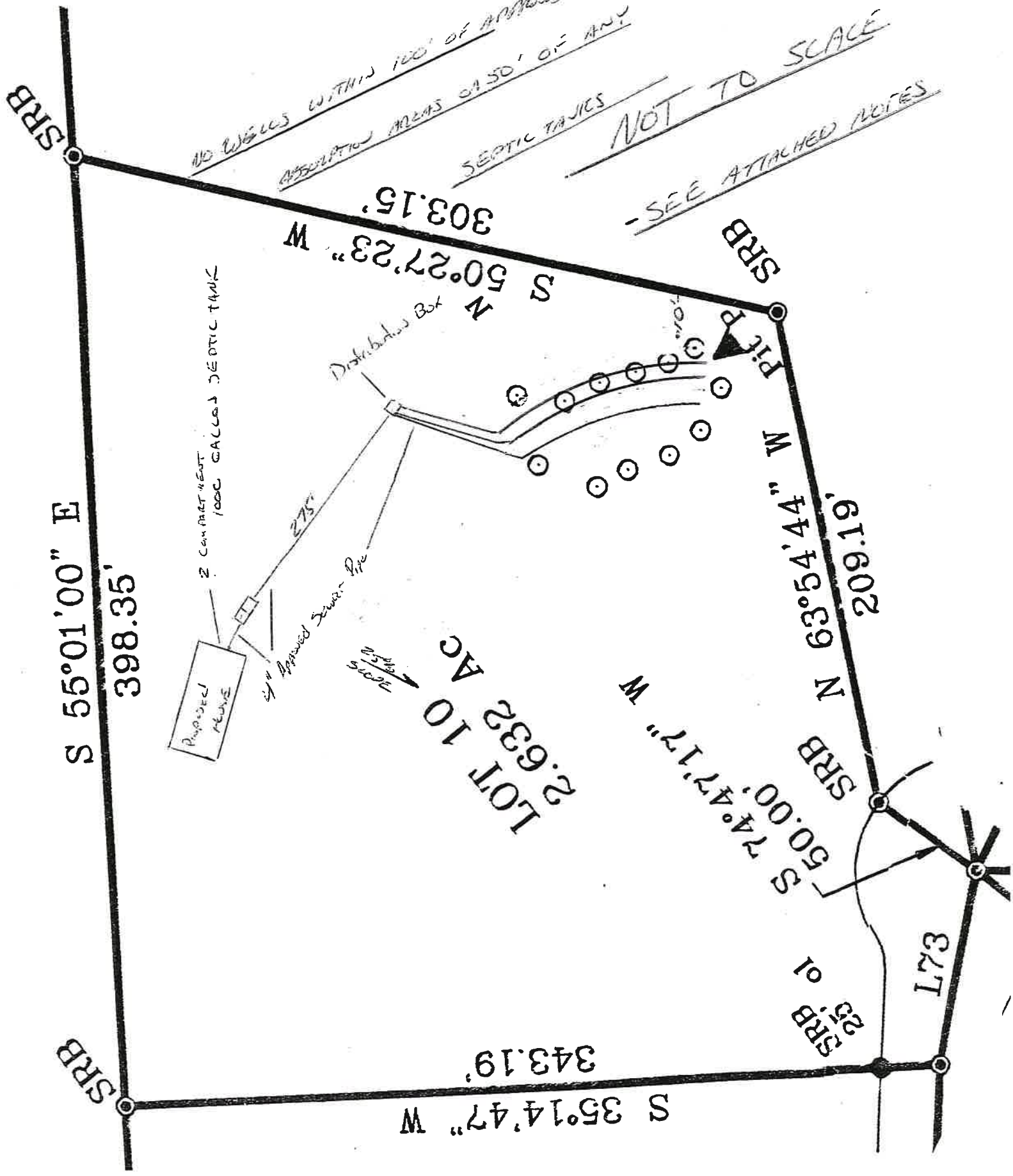
IN GROUND TRENCHES



NOT TO SCALE

INSTALL as shown

NO WELLS WITHIN 100' OF APPROVED
 ABSORPTION AREAS OR 50' OF ANY
 SEPTIC TANKS
 NOT TO SCALE
 -SEE ATTACHED NOTES



S 55°01'00" E
 398.35'

S 50°27'23" W
 303.15'

LOT 10 AC
 2.632 AC

S 63°54'44" W
 209.19'

S 74°47'17" W
 50.00'

S 35°14'47" W
 343.19'

S 35°14'47" W
 343.19'

SRB 25.01

L73

SRB

SRB

PIT P

PROPOSED PLUME

2 COMPARTMENT 1000 GALLON SEPTIC TANK

DISTRIBUTION BOX

4" APPROVED SEWER PIPE

275'

25' @ 5% SLOPE

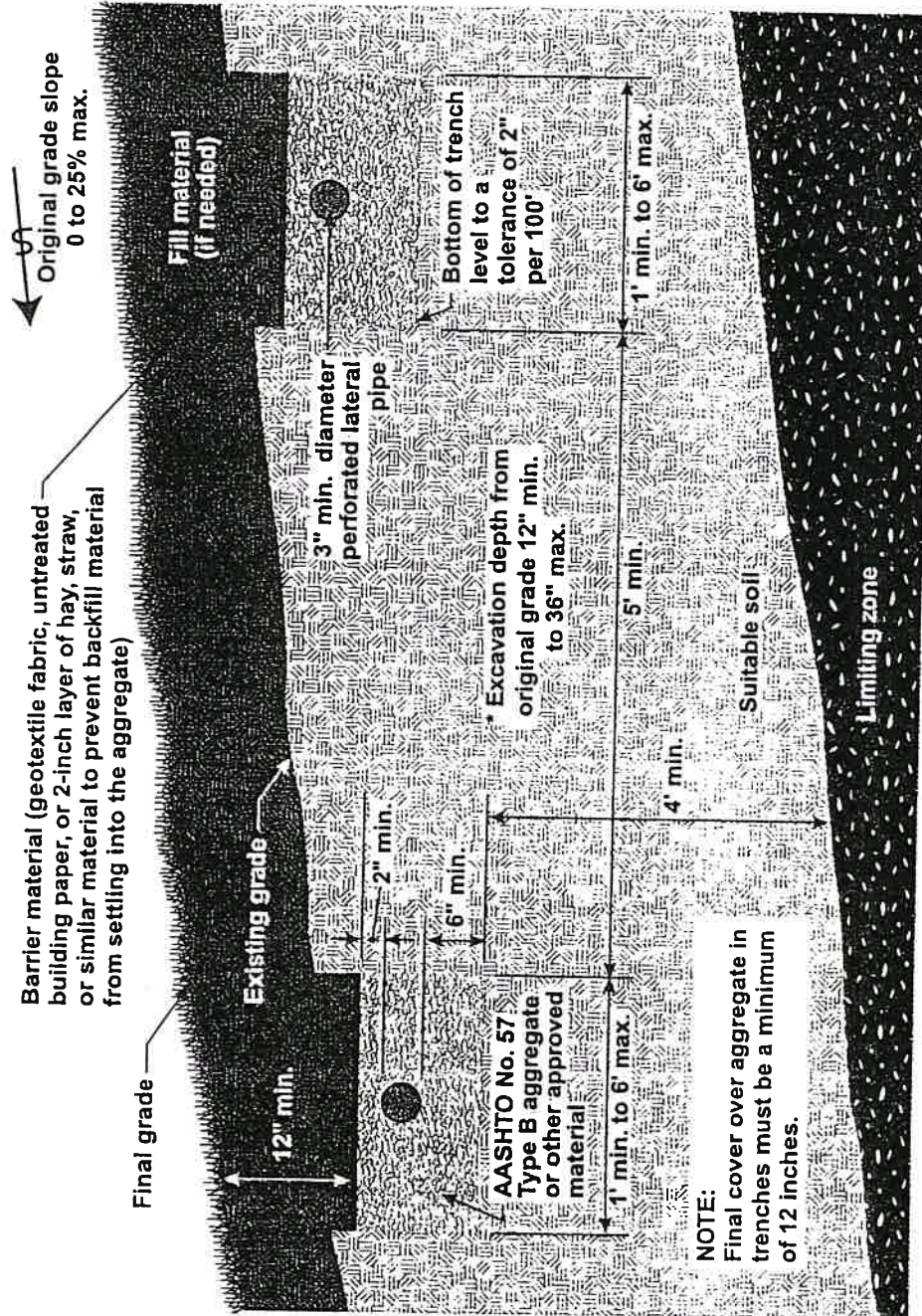
GRAVITY FLOW SYSTEM USING IN-GROUND TRENCHES

NOTES:

- All wells must be minimum 100 feet from any approved effluent absorption areas and 50' minimum from any sewage system tanks.
- 4" approved sewer pipe must have minimum 1/8 inch drop per foot however the grade of the 10 feet preceding the septic tank may not exceed 1/4 inch per foot.
- Cleanouts are required at the junction of the building drain and building sewer.
- Building Sewer cleanouts are required at intervals not more than 100 feet.
- Minimum 1/8 inch drop per foot for 4" approved pipe from septic tank to distribution box and from distribution box to beginning of trench(s) or seepage bed.
- Distribution Box outlets use 4" approved, non-perforated pipe to absorption area, followed by approved perforated pipe within absorption area.
- Install distribution box level with removable cover.
- 1000-Gallon 2 compartment tank must have inspection port over baffle.
- Minimum 6 inches approved aggregate under laterals.
- Laterals shall be level to a tolerance of 4" of fall per 100 feet toward the terminal end of the lateral.
- Minimum depth of aggregate over lateral is 2 inches.
- Bottom of absorption area shall be level to a tolerance of 2 inches per 100 feet.
- See attached for more information.
- For any questions refer to chapter 73 of Pennsylvania DEP Code or contact SEO.

GRAVITY FLOW IN-GROUND TRENCH

This illustration shows some of the regulatory requirements for a gravity flow in-ground trench system.



§ 73.53. Seepage beds.

Whenever seepage beds are employed, they shall meet the requirements of § 73.52(b)(5), (6), (8) and (10)—(16) (relating to standard trenches) in addition to the following specifications:

- (1) The maximum slope of the undisturbed soil of a proposed absorption area where a seepage bed may be permitted is 8.0%.
- (2) The required absorption area may be provided by one or more seepage beds:
 - (i) The individual beds of a single onlot system shall be separated by a minimum of 5 feet.
 - (ii) When elevated sand mound beds are used, the distance between beds shall be measured from the toe of the sand of each bed.
- (3) The bed shall contain a minimum of two laterals or two opposing sets of laterals when pressure distribution is used.
- (4) Laterals shall be equally spaced a maximum of 6 feet on center, except as provided in § 73.44(c)(8) (relating to pressurized distribution design).
- (5) Laterals shall be placed no further than 5 feet nor less than 2 feet from the sidewalls of the bed.
- (6) Laterals shall be placed in the bed so that the first and last discharge holes may be no more than 5 feet nor less than 2 feet from the ends of the bed.

§ 73.52. Standard trenches.

(a) *Design.* The maximum slope of the undisturbed soil of a proposed absorption area where a trench system may be permitted is 25%. For slopes between 15% and 25%, detailed design in relationship to elevation shall be provided. The designer shall inspect the installation and verify that, to the best of his knowledge and belief, the system was installed in accordance with the plans and specifications. Copies of the plans and specifications and the designer's report are to be attached to the applicant's copy, sewage enforcement officer's copy and the Department's copy of the application for sewage permit.

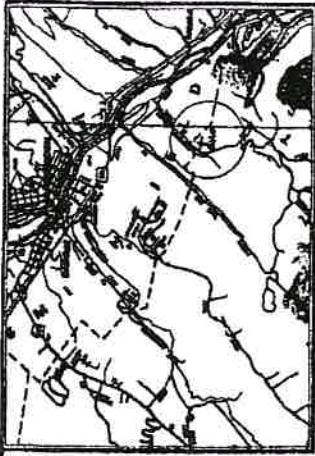
(b) *Construction.* Trenches in an absorption area shall be constructed in accordance with the following:

- (1) There shall be a minimum of two trenches per field.
- (2) Trenches shall follow approximately the ground surface contours so that variations in trench depth shall be minimized.
- (3) There shall be at least 6 feet of soil between the treatment tank or dosing tank and the nearest trench.
- (4) The width of the bottom of the individual trench shall be 12 to 72 inches.
- (5) The depth to the bottom of the absorption area shall be 12 to 36 inches.
- (6) The bottom of the absorption area shall be level to a tolerance of 2 inches per 100 feet.
- (7) The minimum width of undisturbed earth between trenches shall be 5 feet. When elevated sand mound trenches are used, the distance between trenches shall be measured from the toe of the sand of each trench.
- (8) The minimum depth of aggregate material under laterals shall be 6 inches.
- (9) Laterals shall be placed in the center of the trench. The first or last discharge hole of a lateral may be no more than 5 feet nor less than 2 feet from the ends of the trench.
- (10) Laterals shall be level to a maximum tolerance of 4 inches of fall per 100 feet toward the terminal end of the lateral.
- (11) The minimum depth of aggregate material over the laterals shall be 2 inches.
- (12) The depth of aggregate shall be uniform throughout the absorption area.
- (13) The top of the aggregate material shall be covered with geotextile fabric, untreated building paper or a 2-inch layer of hay, straw or similar material to prevent backfill material from settling into the aggregate.
- (14) The minimum depth of earth cover over the aggregate in all installations shall be 12 inches. Where the top of the aggregate is less than 12 inches from the undisturbed soil surface, the soil cover shall extend beyond the absorption area by at least 3 feet on all sides.
- (15) The backfill material shall consist of soil suitable for the growth of vegetation, and be seeded to control erosion.
- (16) Trench laterals shall be fitted with end caps.

§ 73.42. Gravity distribution.

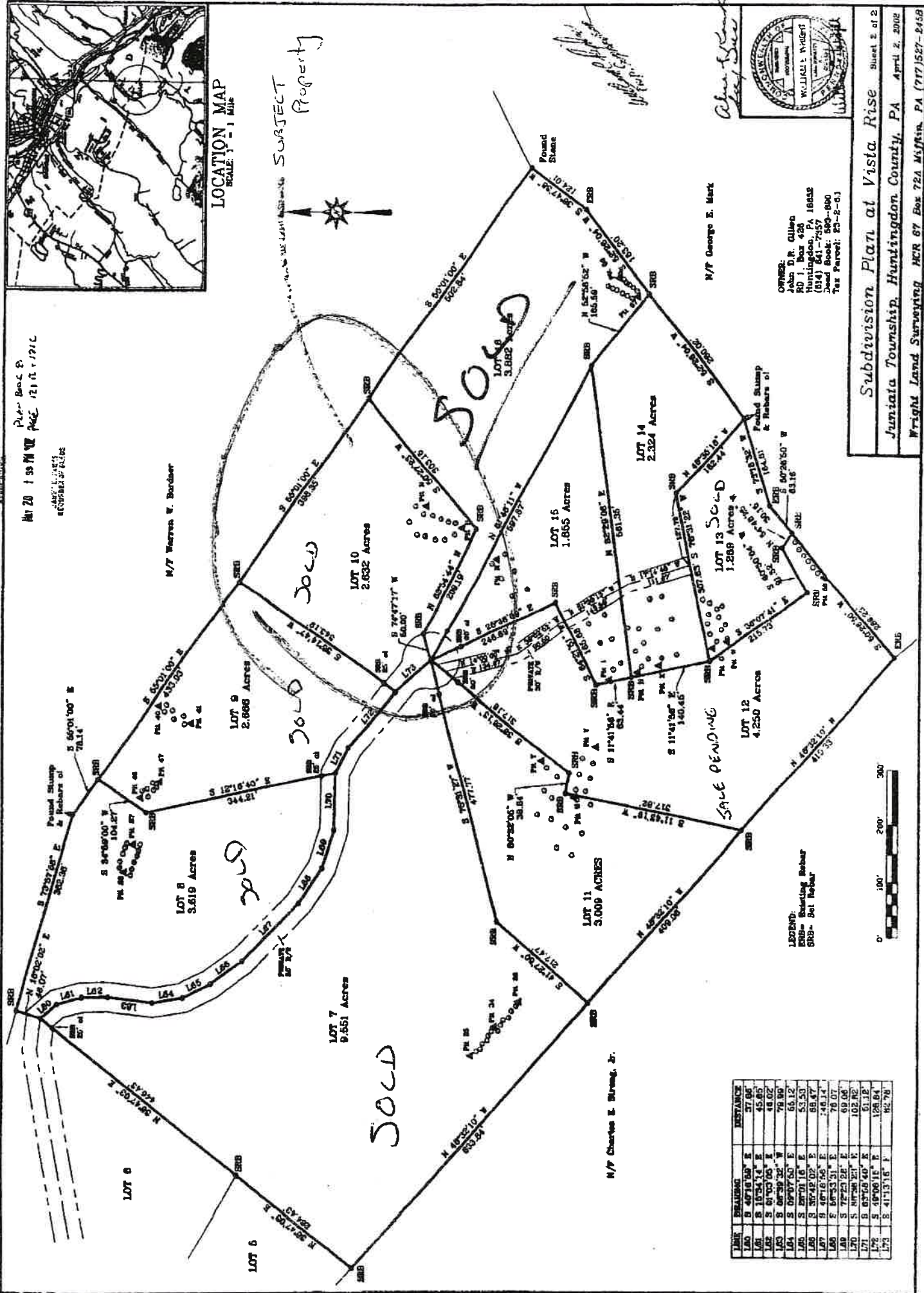
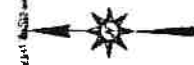
- (a) Gravity distribution may be used in all instances, except where prohibited by § 73.43 (relating to pressurized distribution).
- (b) The distribution system shall be arranged to provide for uniform distribution of the effluent.
- (c) The flow shall be equally divided between individual laterals of a trench system or between seepage beds by use of a distribution box.
- (d) The flow shall be divided between individual laterals in a seepage bed by a distribution box or by an unperforated pipe header connecting all laterals within the bed. Where distribution is via an unperforated pipe header, the terminal ends of all individual laterals shall also be connected with unperforated pipe.
- (e) Distribution boxes shall comply with the following:
- (1) When a distribution box is used, it shall be installed level to provide equal distribution of treatment tank effluent to each line. For testing purposes, the person responsible for the installation shall provide an adequate amount of water to check the level of the inlet and outlet lines.
 - (2) Construction shall comply with the following:
 - (i) ~~Distribution boxes~~ shall have removable covers.
 - (ii) Each lateral shall be connected separately to the distribution box.
 - (iii) The bottom of all outlets shall be at the same elevation, and the bottom of the inlet shall be at least 1 inch above the bottom of the outlet. The bottom of the outlet shall be at least 4 inches above the bottom of the distribution box.
 - (iv) Baffles shall comply with the following:
 - (A) A baffle shall be installed in the distribution box in the event that treatment tank effluent is discharged to the distribution box by a pump or siphon.
 - (B) The baffle shall be perpendicular to the inlet, be secured to the bottom of the box and extend vertically to a point level with the crown of the inlet pipe.
 - (v) A tee or elbow directed toward the bottom of the distribution box may be substituted for the baffle required by subparagraph (iv).
 - (3) Distribution boxes shall be installed on an adequate base of undisturbed or properly compacted earth or aggregate outside of the absorption area. Lightweight nonconcrete distribution boxes shall be anchored or otherwise secured to prevent shifting after installation. Adjustable distribution box weirs may be used on the outlet of the box.
- (f) Laterals shall be a minimum of 3 inches in diameter unless a larger diameter is specified by local plumbing or building codes. Bends used in the disposal field shall be made with standard fittings.
- (g) The maximum length of individual laterals employing gravity distribution is 100 feet.

Plan Book B
 Map 20 1 38 PM 10
 PAGE 2117-1218
 10/11/12
 10/11/12



LOCATION MAP
 SCALE: 1" = 1 Mile

SUBJECT
 Property



LINE	BEARING	DISTANCE
L60	S 48°18'50" E	37.85
L61	S 15°34'14" E	45.85
L62	S 61°00'00" E	48.02
L63	S 60°39'32" W	78.80
L64	S 09°07'50" E	66.12
L65	S 28°01'15" E	53.53
L66	S 35°42'02" E	68.47
L67	S 48°16'54" E	146.14
L68	S 68°53'31" E	78.07
L69	S 72°23'24" E	60.04
L70	S 81°28'24" E	103.80
L71	S 63°16'40" E	51.15
L72	S 49°06'15" E	128.84
L73	S 41°13'18" E	92.78



OWNER:
 John D.R. O'Brien
 PO 1, Box 458
 Huntingdon, PA 16838
 (814) 841-7957
 Deed Book: 589-890
 Tax Parcel: E5-2-0

Subdivision Plan at Vista Rise
 Sheet 2 of 2
 Juniata Township, Huntingdon County, PA April 2, 2018
 Wright Land Surveying, INC 67 Box 72A Myrtle, PA (717) 527-2458

Calculating Width of Bed or Trench for an In-Ground System

$$\frac{[LZ - (ID + 48)] \times 8.3}{\text{Slope (\%)}} = \text{maximum width of in-ground bed or trench in feet}$$

- LZ = depth of limiting zone in inches
- ID = minimum installation depth in inches to the bottom of the absorption area aggregate in inches
- 48 = the minimum regulatory separation in inches between the bottom of aggregate and the top of the limiting zone
- 8.3 = conversion factor for this formula
- Slope = steepest percent slope over absorption area (The percent slope is expressed as a whole number. Example: 3% = 3)

Example:

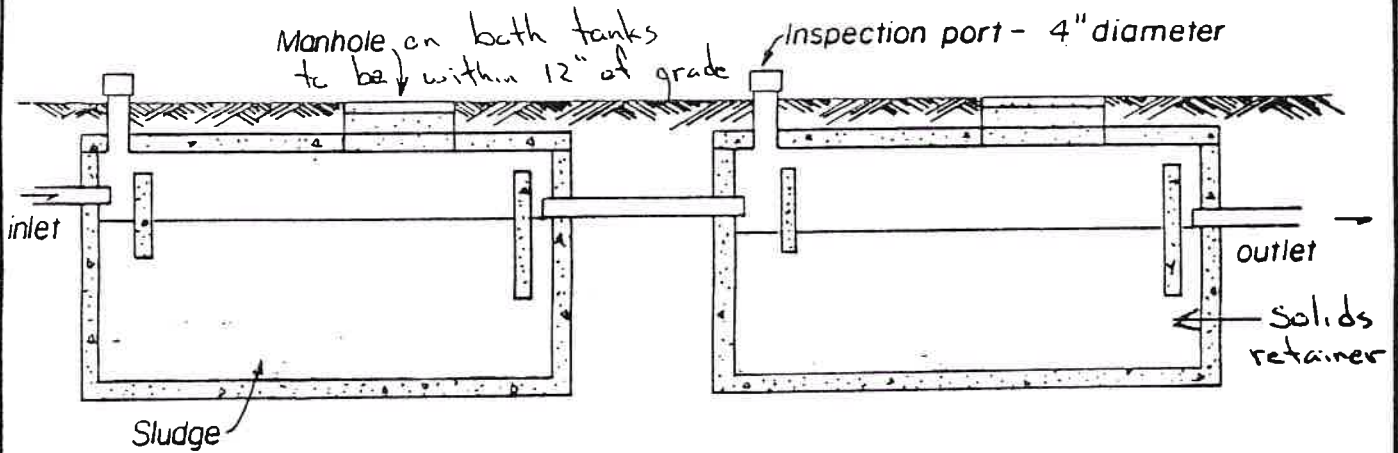
- LZ = 78 in.
- ID = 12 in.
- Slope = 3%
- Absorption area length will be installed along contours

$$\frac{[78 \text{ in.} - (12 \text{ in.} + 48)] \times 8.3}{3} = 49.8 \text{ ft. maximum width}$$

Note: By regulation, the maximum width for a trench is 6 feet; therefore, this example would be for a bed absorption area.

Multiple Septic Tank Hookup

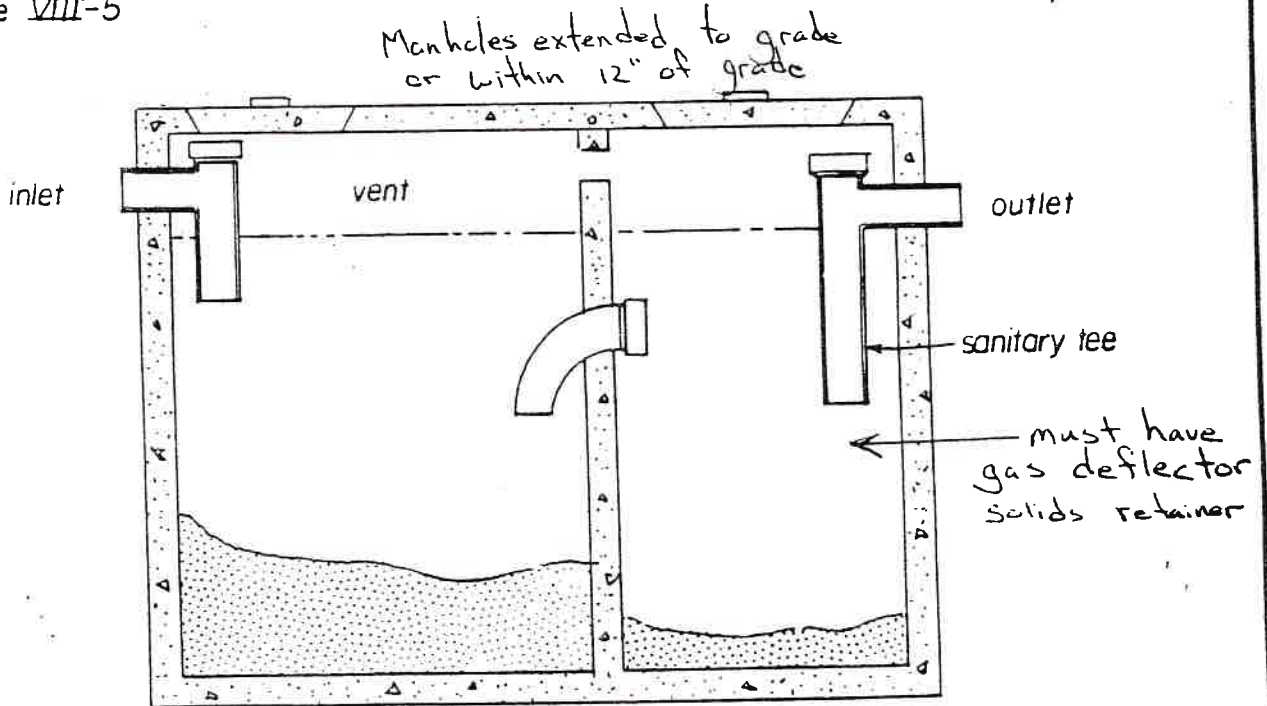
figure VIII-4



Shall be connected in series and shall not exceed four in number in anyone installation

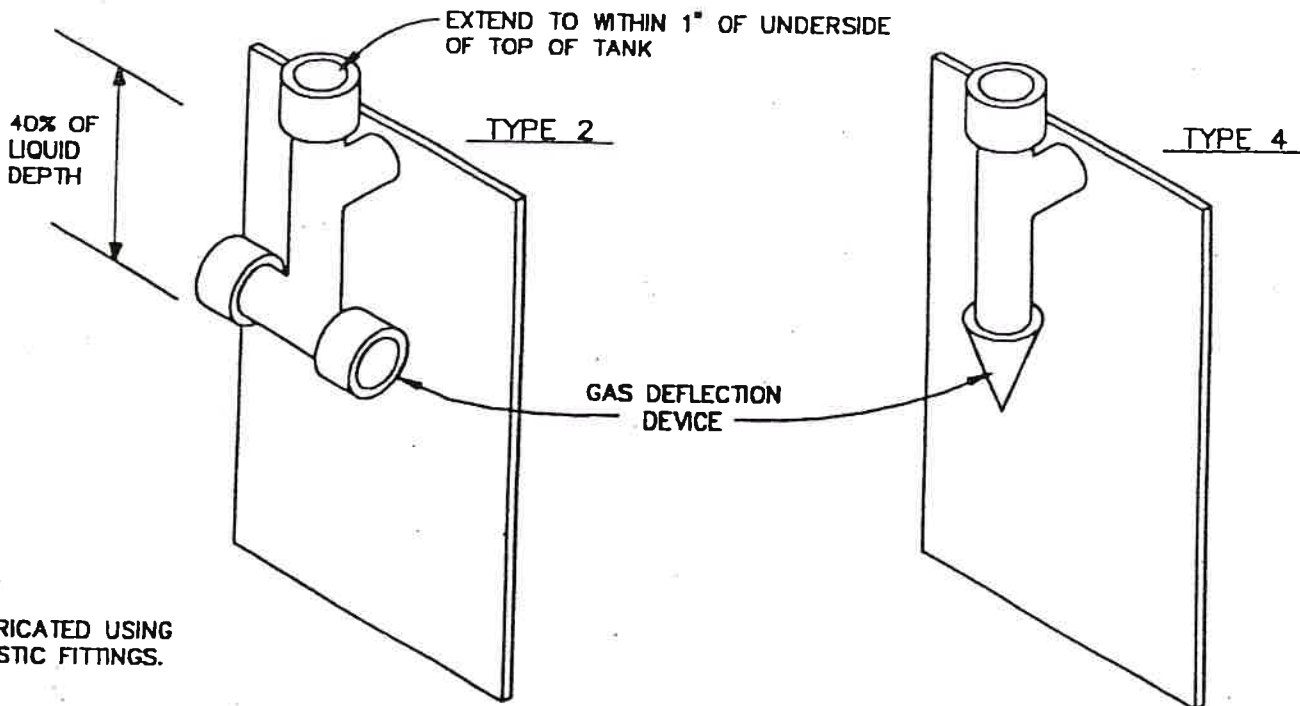
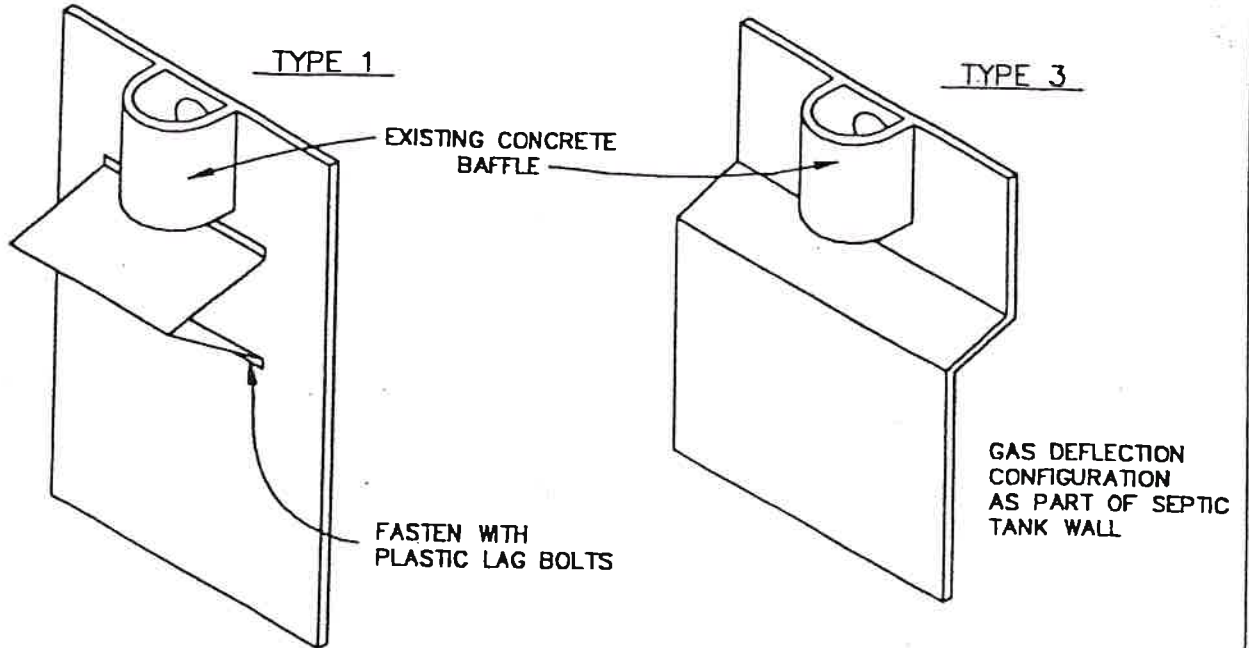
Two-Compartment Tanks

figure VIII-5



SOLIDS RETAINER

INSTALL AT OUTLET OF EACH SEPTIC TANK



DEVICE MAY REDUCE THE AMOUNT OF SUSPENDED SOLIDS DISCHARGED TO THE ABSORPTION AREA BY AS MUCH AS 35%.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER QUALITY PROTECTION

**SITE INVESTIGATION AND PERCOLATION
TEST REPORT FOR ON-LOT DISPOSAL OF SEWAGE**

ER-BWQ-290 Appendix A

Application No. _____ Municipality Donata County Montgomery
 Site Location R18 Subdivision Name Gilman
 SUITABLE Soil Type Becks Slope 12 % Depth to Limiting Zone 21 Ave. Perc. Rate 35
 UNSUITABLE Mottling Seeps or Poned Water Bedrock Fractures Coarse Fragments
 Perc. Rate Slope Unstabilized Fill Floodplain Other _____

INSTRUCTIONS FOR COMPLETION OF THIS FORM ARE LOCATED ON THE REVERSE

SOILS DESCRIPTION:

Soils Description Completed by: BJP Date: 6-27-01

Inches	TO	Description of Horizon	Depth to limiting Zone:
<u>36</u> 0	<u>6</u>	<u>dark brown silty loam 30% CF</u>	
<u>6</u>	<u>22</u>	<u>med. brown silty clay loam 40% CF. ECF > 21"</u>	
<u>34</u> 0	<u>21</u>	<u>similar to 36 ECF > 21"</u>	
<u>0</u>	<u>TO</u>		<u>_____</u> inches

PERCOLATION TEST:

Percolation Test Completed by: BJP Date: 7-19-01

Weather Conditions: Below 40°F 40°F or above Dry Rain, Sleet, Snow (last 24 hours)
 Soil Conditions: Wet Dry Frozen

Hole No.	***		Reading Interval	Reading No. 1: Inches of drop	Reading No. 2: Inches of drop	Reading No. 3: Inches of drop	Reading No. 4: Inches of drop	Reading No. 5: Inches of drop	Reading No. 6: Inches of drop	Reading No. 7: Inches of drop	Reading No. 8: Inches of drop
	Yes	No									
<u>1</u>	<u>1</u>		<u>10/30</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>				
<u>2</u>	<u>1</u>		<u>10/30</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>				
<u>3</u>	<u>1</u>		<u>10/30</u>	<u>1/2</u>	<u>1/2</u>	<u>1/2</u>	<u>1/2</u>				
<u>4</u>	<u>1</u>		<u>10/30</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>				
<u>5</u>	<u>1</u>		<u>10/30</u>	<u>1/2</u>	<u>1/2</u>	<u>1/2</u>	<u>1/2</u>				
<u>6</u>	<u>1</u>		<u>10/30</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>				

***Water remaining in the hole at the end of the final 30-minute presoak? Yes, use 30-minute interval; No, use 10-minute interval.

Calculation of Average Percolation Rate:

Hole No.	Drop during final period	Perc. Rate as Minutes/Inch	Depth of Hole
<u>1</u>	<u>1</u>	<u>30</u>	<u>13</u>
<u>2</u>	<u>1</u>	<u>30</u>	<u>13</u>
<u>3</u>	<u>1/2</u>	<u>60</u>	<u>13</u>
<u>4</u>	<u>2</u>	<u>15</u>	<u>13</u>
<u>5</u>	<u>1/2</u>	<u>60</u>	<u>13</u>
<u>6</u>	<u>3</u>	<u>10</u>	<u>13</u>
TOTAL OF MIN./IN →		<u>205</u>	<u>34.2</u>
TOTAL NO. OF HOLES →			

The information provided is the true and correct result of tests conducted by me, performed under my personal supervision, or verified in a manner approved by the Department.

(S) Barry Parker
Sewage Enforcement Officer

Min
Inch