

11947 PINNACLE POINT LN

02316423

5/31/2007

duponbj

Groundwater and Wastewater Services File Imaging Project
May 2007
Barcode Font = IDAutomationHC39M

Mecklenburg County Public Health Laboratory

Septic Only

Environmental Health Section

5357A

249 Billingsley Road • Charlotte, North Carolina 28211

023-164-83

Microbiological Analyses

Re-inspection

Owner, System or Establishment: Bobby Spivey

Address: 11947 Pinnacle Pointe Ln

Charlotte, NC Zip

Collected By:

Date Collected: Time: AM PM

Sample Source:

Date Delvd. to Lab: Time: AM PM

Delivered By:

Type of Sample

Potable Water

☐ Individual Well ☐ Non-Community

☐ Community ☐ City

☐ Other (specify)

Treatment: ☐ chlorinated ☐ nonchlorinated

☐ Initial Sample ☐ Recheck (chlorinated)

☐ Recheck (nonchlorinated)

☐ Other (specify)

Food (specify):

Analysis Requested: ☐ Total Coliform ☐ Fecal Coliform ☐ Fecal Strep

☐ Sulfate Reducing Bacteria ☐ **Giardia lamblia** (contact laboratory for instructions)

☐ Food Quality Survey ☐ Other (specify)

☐ Foodborne Investigation (specify)

Comments: 9/11/98 - Onsite visit, No one present. There is an area that is damp under rear deck. This damp area is over the panel block system

Laboratory Analysis Report

Method: _____ Membrane Filter _____ Colilert

Total Coliform _____ /100 ml. Non-Coliform _____ /100 ml.

Fecal Coliform _____ /100 ml. Plate Count _____ /gm. or ml.

Fecal Strep _____ /100 ml. Coliform Count _____ /gm. or ml.

Laboratory Comments:

Date Received: Date Reported:

Received By: Analyst: Lab #:

Laboratory Identification #: 37518

L 1.14 1/92

LAB REPORT COPY

Mecklenburg County Public Health Laboratory

Septic Only

Environmental Health Section

249 Billingsley Road • Charlotte, North Carolina 28211

53578

023-164-23

Microbiological Analyses

Re-inspection

Owner, System or Establishment: Bobby Spivey

Address: 11947 Miracle Pointe Ln

Charlotte, NC Zip _____

Collected By: _____

Date Collected: _____ Time: _____ AM PM

Sample Source: _____

Date Delvd. to Lab: _____ Time: _____ AM PM

Delivered By: _____

Type of Sample

Potable Water

☐ Individual Well ☐ Non-Community

☐ Community ☐ City

☐ Other (specify) _____

Treatment: ☐ chlorinated ☐ nonchlorinated

☐ Initial Sample ☐ Recheck (chlorinated)

☐ Recheck (nonchlorinated)

☐ Other (specify) _____

Food (specify):

Analysis Requested: ☐ Total Coliform ☐ Fecal Coliform ☐ Fecal Strep

☐ Sulfate Reducing Bacteria ☐ **Giardia lamblia** (contact laboratory for instructions)

☐ Food Quality Survey ☐ Other (specify) _____

☐ Foodborne Investigation (specify) _____

Comments: 9/11/98 - Onsite visit, No one present. There is an area that is damp under rear deck. This damp area is over the panel block system.

Laboratory Analysis Report

Method: _____ Membrane Filter _____ Colilert

Total Coliform _____ /100 ml. Non-Coliform _____ /100 ml.

Fecal Coliform _____ /100 ml. Plate Count _____ /gm. or ml.

Fecal Strep _____ /100 ml. Coliform Count _____ /gm. or ml.

Laboratory Comments:

Date Received: _____ Date Reported: _____

Received By: _____ Analyst: _____ Lab #: _____

Laboratory Identification #: 37518

L 1.14 1/92

LAB FILE COPY

WELL AND SEPTIC REQUEST

COPY

Mecklenburg County
Health Department

RE-INSPECTION

TAX PARCEL # 223-164-03

ADDRESS OF PROPERTY TO BE SERVICED: 11947 Pinnacle Pointe Ln
Charlotte, NC

OWNER OR AGENCY NAME & ADDRESS: Bobby Spivey

ADDRESS FOR RESULTS TO BE MAILED: Bobby Spivey
Century 21 Murphy-Randolph
8400-F Belhaven Blvd
Charlotte, NC 28216

TELEPHONE NUMBER WHERE YOU CAN BE REACHED(DAY): _____

CHECK ONE: _____(WELL & SEPTIC) _____(WELL ONLY) X (SEPTIC ONLY)

_____ 9-2-98
SIGNATURE OF AUTHORIZED PERSON DATE

Environmental Health Division
700 North Tryon Street • Suite 211 • Charlotte, North Carolina 28202-2236

INSTALLATION, CONSTRUCTION, ALTERATION, AND/OR REPAIR APPROVAL

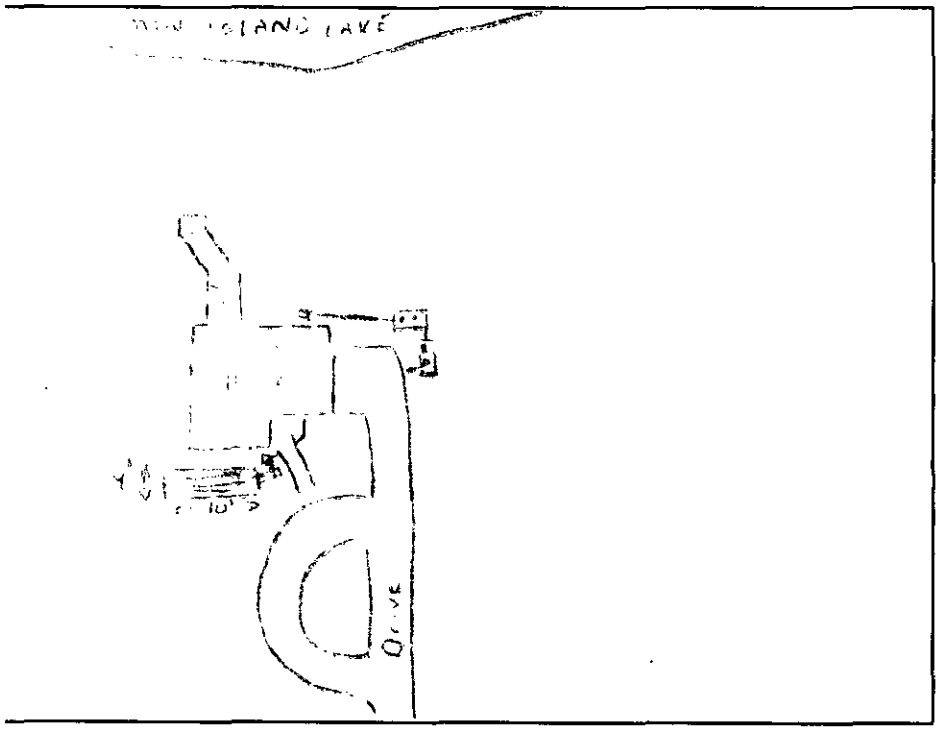
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 53574 DATE: 11-24-98

TC: 023-164-23 ☐ L

SERIAL Nº 17978

Permission is hereby given to _____ Install or Construct, ✓ Alter or Repair the individual septic tank wastewater treatment system with subsurface, soil absorption, effluent discharge as specified herein at the described location. This permit is granted based upon the information supplied in the application dated _____. All work shall be completed on or before 12-21-98, after which date this permit shall be null and void. The system shall meet all of the construction requirements of 15A NCAC 18A. 1900 which are in effect on the date of the granting of this permit. A Certificate of Completion or an Operation Permit must be obtained from the Mecklenburg County Health Department before any system can be covered up or placed into service. The issuance of this permit does not in any way guarantee that the system anticipated to be constructed will operate properly, or relieve any person now or hereafter owning, controlling or using such system from any liability resulting from the failure of the system to operate properly.



PLOT OF SYSTEM

Liquid Capacity of Septic Tank _____ gallons

Liquid Capacity of Dosing Tank _____ gallons

Tank Construction PVC D-Box

Trench Depth as shallow as possible

Absorption and/or Nitrification Lines:

Trench Width 4' feet

Trench Walls Scored and Porous ✓

Total Line Length 120' feet

Number of Lines 2 @ 1

Depth of Stone 24 inches

Distance from House 5 feet

Distance from Property Line 10 feet

Distance from Well N/A feet

NOTICE: This system shall not be installed while soils are in a wet condition.

NAME OF OWNER Gary Bennett Investments

LOCATION OF PROPERTY 11149 Pinnacle Point

Comments: Type II repair (as shown) 4" laterals in trench w/ 24" stone + washed x rock box ret. wall + gravel above for repl. backfill - End loop line above ground level

Kathy B. Hodges
Environmental Health Specialist

WHITE - HEALTH DEPARTMENT's COPY • CANARY - E.H.S. COPY • PINK - OWNER OR AGENT's COPY

FEE: N/A

DATE: _____

APPLICATION FOR IMPROVEMENT PERMIT FOR RESIDENTIAL SITE INDIVIDUAL WATER AND WASTEWATER SYSTEMS PROGRAM

[ ] CRT

TYPE APPLICATION: __ NEW SYSTEM __ EXPANSION/ ALTERATION OF EXISTING SYSTEM X REPAIR OF EXISTING SYSTEM

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT,
HEALTH, AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

FILE #: 5357A

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 023-164-23

STREET ADDRESS: 11947 Pinnacle Point

SUBDIVISION OR MOBILE HOME PARK NAME:

LOT NUMBER: 59

TYPE OF BUILDING (CHECK ONE):

__ SINGLE MOBILE HOME(S)
__ DOUBLE WIDE (D)
✓ HOUSE (H)
__ MODULAR HOME (M)
__ MULTIPLE FAMILY (U)
__ OTHER (O)

TOWNSHIP (CHECK ONE):

__ 0 MECKLENBURG
__ 1 CHARLOTTE
__ 2 DAVIDSON
__ 3 CORNELIUS
__ 4 PINEVILLE
__ 5 MATTHEWS
__ 6 HUNTERSVILLE
__ 7 MINT HILL

HEATED SQUARE FOOTAGE:

NUMBER OF BEDROOMS: 4

NUMBER OF OCCUPANTS:

CLOSING DATE_____

FOUNDATION FOR RESIDENCE:

__ WITHOUT BASEMENT
__ ON SLAB
__ CRAWL SPACE
__ WITH BASEMENT /PLUMBING
✓ WITH BASEMENT /NO PLUMBING

IF EXPANSION/ALTERATION OF EXISTING SYSTEM, DESCRIBE THE PROPOSED BUILDING ADDITION:

WILL THERE BE A HOME BUSINESS IN THE RESIDENCE: __ YES __ NO TYPE: _____

WATER SUPPLY (CHECK ONE):

✓ COMMUNITY (C)
__ MUNICIPAL (M)
__ PRIVATE WELL (P)
__ SHARED WELL (S)
__ OTHER 'SPRINGS' (O)

IF ANY OF THE FOLLOWING ARE LOCATED ON THE PROPERTY, PLEASE SHOW LOCATION ON PLAT:

BURIED CABLES, LANDFILLS, STUMPHOLES	✓ YES __ NO	WELL, SPRINGS OR WATERLINES	✓ YES __ NO
EXISTING WASTEWATER SYSTEMS	✓ YES __ NO	DESIGNATED WETLANDS	__ YES ✓ NO
EASTMENTS OR RIGHT-OF-WAYS	✓ YES __ NO		

PROPERTY OWNER:	LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:
NAME: Lancaster Gary & Bennett (LAST) (FIRST) (MI)	NAME: (LAST) (FIRST) (MI)
ADDRESS: 11947 Pinnacle Point	DAYTIME PHONE: ( ) –
CITY: Charlotte STATE: NC ZIP:	
DAYTIME PHONE: ( ) –	

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? _____

An Improvement Permit is subject to suspension or revocation if site plans or the intended use change or if information submitted in this application is falsified or changed. The undersigned, owner, or legal agent for the owner, of the property described above as the "Job Location" has read the foregoing application, acknowledges that the contents of same are true, and authorizes agents of the Mecklenburg County Health Department to enter onto the property for the purpose of processing this request.

SIGNED: B W Christenbury DATE:

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
c/o HAL MARSHALL CTR., SUITE 211, 700 N. TRYON ST., CHARLOTTE, N.C. 28202., (704) 336-5102

FEE: _____ **AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION**
DATE: _____ **VOID SIXTY (60) MONTHS FROM DATE OF ISSUANCE**

DATE: 11.24.98 PERMIT NO: 5357A
PARCEL NO: 023-164-23

JOB LOCATION ADDRESS: 11947 Pinnacle Point
PROPERTY OWNER: Gary & Bennett Lancaster
BUILDING CONTRACTOR: _____
SUBDIVISION NAME: _____
AUTHORIZATION ISSUED BY: Larry B. Thompson Jr. R.S. DATE: 11-24-98
DEHNR AUTHORIZED AGENT

AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NO. 5357A, AND THE ATTACHED SITE PLAN WITH SYSTEM DETAILS. CONSTRUCTION AND INSTALLATION MUST ALSO MEET ALL REQUIREMENTS SET FORTH IN THE RULES GOVERNING SANITARY SEWAGE COLLECTION, TREATMENT, AND DISPOSAL AND ANY OTHER APPLICABLE RULES AND LAWS.

2. AN INSTALLATION, CONSTRUCTION, ALTERATION AND/OR REPAIR APPROVAL MUST BE SECURED **PRIOR** TO INSTALLATION OF THE SEPTIC TANK SYSTEM. THE INSTALLER OF THE SYSTEM SHALL BE A REGISTERED SEPTIC TANK CONTRACTOR WITH MECKLENBURG COUNTY HEALTH DEPARTMENT.

3. ANY ALTERATION IN SITE OR SOIL CONDITIONS (INCLUDING LOCATION OF STRUCTURES AND APPURTENANCES) OR MODIFICATION IN USE, DESIGN WASTEWATER FLOW, OR WASTEWATER CHARACTERISTICS AS SPECIFIED IN THE ASSOCIATED IMPROVEMENT PERMIT AND APPLICATION, MAY SUBJECT THIS AUTHORIZATION AND ASSOCIATED PERMIT(S) TO REVOCATION.

4. OTHER CONDITIONS: See Conditions Of Improvement Permit

OWNER CERTIFICATION

I CERTIFY THAT THERE HAVE BEEN NO ALTERATIONS IN SITE OR SOIL CONDITIONS OR MODIFICATIONS TO FACILITY, WASTEWATER FLOW, OR WASTEWATER CHARACTERISTICS FROM THOSE SPECIFIED IN THE ORIGINAL APPLICATION OR ASSOCIATED IMPROVEMENT PERMIT UNLESS AUTHORIZED IN WRITING BY THE MECKLENBURG COUNTY HEALTH DEPARTMENT. I ALSO UNDERSTAND THAT ANY SUCH ALTERATIONS, MODIFICATIONS, OR FALSE INFORMATION ARE GROUNDS FOR REVOCATION OF PERMITS AND AUTHORIZATION TO CONSTRUCT.

B W Christenbury 12 - 11 - 98
SIGNATURE OF OWNER/OWNER'S REPRESENTATIVE DATE

Permit Number: 5357A

Tax Number: 023-164-23

- The IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change. There is to be NO grading, filling or disturbance of the soil in the area of the septic tank system or repair area.
- CONSTRUCTION AUTHORIZATION must be obtained prior to receiving a Building Permit. The Construction Authorization is NOT transferable. Do not clear, grade, fill or disturb soil prior to obtaining a Construction Authorization.
- Domestic-type wastewater only. No industrial process wastewater may be discharged into the system.

Basement	✓ Yes	___ No	___ Partial Basement	
Type Primary Wastewater System Type (circle one): I II (III) IV V VI	✓ Conventional ✓ Prefabricated, permeable block panel system ___ Shallow Placed Conventional	___ Low Pressure Pipe ___ Large Diameter Pipe ___ Fill ___ Other	___ Innovative or Experimental: ___ IWWS-93-1 ___ IWWS-93-2 ___ IWWS-94-1	
.3 Long-term acceptance rate	480 Max gallons/day wastewater flow	532 Absorption Area (sq ft)	8 Trench spacing (min. on centers)	
N/A Serviced by private well	1500 Gallon septic tank	260 Total trench length (ft)	___ Maximum trench depth (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions)	
4 Bedrooms in residence	1500 Gallon pump tank	N/A Depth of stone		
Any surface waters present:	Type:	Minimum separation distance:		
Site modifications required:				
Additional Conditions:	Repair to existing system - washing machine drainfield (1) 9'x40'x24" long			
Repair Area System Type Type (circle one): I (II) III IV V VI	✓ Conventional ___ Prefabricated, permeable block panel system ___ Shallow Placed Conventional	___ Low Pressure Pipe ___ Large Diameter Pipe ___ Fill ___ Other	___ Innovative or Experimental: ___ IWWS-93-1 ___ IWWS-93-2 ___ IWWS-94-1	
360 Absorption Area (Sq ft) 120 Total Trench Length (Ft)	24" Depth of Stone Trench	N/A Trench spacing (min. on centers)	___ Maximum Trench Depth as shallow as possible	
For existing system, enter the year originally installed: 1991				

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department has approved the Request for th Job Location contained in this document. This approval is granted in accordance with the provisions of Laws and Rules For Sewage, Treatment and Disposal in effec at the time of issuance of the permit and is subject to the following provisions:

- No work shall be conducted on the septic tank system until an Installation, Construction, Alteration and/or Repair Approval is granted by this Department
- This Improvement permit is transferable.

Larry B. Thompson, L.S. 11-24-98

DEHNR Authorized Agent Date

BW Christley

Owner/Agent Signature Date

MECKLENBURG COUNTY
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
c/o HAL MARSHALL CTR.
SUITE 211
700 N. TRYON ST.
CHARLOTTE, N.C. 28202.
(704) 336-5102

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENTAL, HEALTH,
AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

IWWS-100195

INSTALLATION, CONSTRUCTION, ALTERATION, AND/OR REPAIR APPROVAL

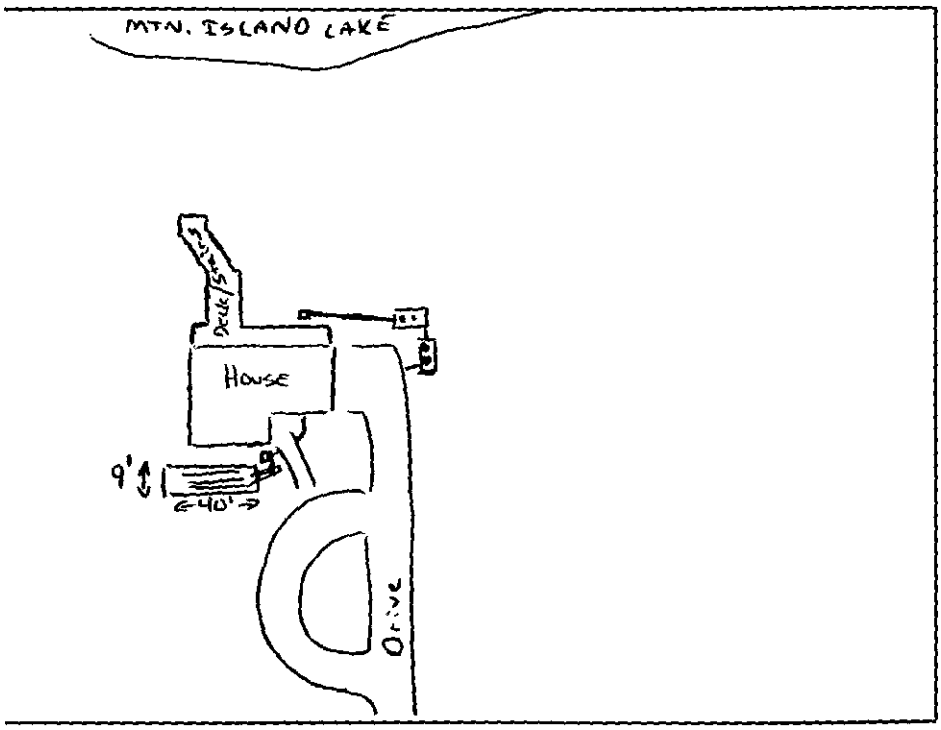
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 5357A DATE: 11-24-98

TC: 023-164-23 ☐ L

SERIAL Nº 17978

Permission is hereby given to _____ Install or Construct, ____✓____ Alter or Repair the individual septic tank wastewater treatment system with subsurface, soil absorption, effluent discharge as specified herein at the described location. This permit is granted based upon the information supplied in the application dated _____. All work shall be completed on or before 12-24-98, after which date this permit shall be null and void. The system shall meet all of the construction requirements of 15A NCAC 18A. 1900 which are in effect on the date of the granting of this permit. A Certificate of Completion or an Operation Permit must be obtained from the Mecklenburg County Health Department before any system can be covered up or placed into service. The issuance of this permit does not in any way guarantee that the system anticipated to be constructed will operate properly, or relieve any person now or hereafter owning, controlling or using such system from any liability resulting from the failure of the system to operate properly.



PLOT OF SYSTEM

Liquid Capacity of Septic Tank _____ gallons

Liquid Capacity of Dosing Tank _____ gallons

Tank Construction PCC° 0-Box washer box w/tee

Trench Depth as shallow as possible

Absorption and/or Nitrification Lines:

Trench Width 9' feet

Trench Walls Scored and Porous Yes

Total Line Length 120 feet

Number of Lines 3 in 1

Depth of Stone 24 inches

Distance from House 5 feet

Distance from Property Line 10 feet

Distance from Well N/A feet
>10 any H2O line

NOTICE: This system shall not be installed while soils are in a wet condition.

NAME OF OWNER Gary & Bennett Lancaster

LOCATION OF PROPERTY 11949 Pinnacle Point

Comments: Type IIa repair (washer bed) 4 bedrooms
(1) 9'w x 40'L x 24" stone - washer box to d-box setup
* Re-level d-box for septic drainfield - find lower line that is wet and restrict flow to it
* Add additional soil cover to lower panel block line.

Larry B. Thompson Jr., R.S.
Environmental Health Specialist

WHITE - HEALTH DEPARTMENT's COPY • CANARY - E.H.S. COPY • PINK - OWNER OR AGENT's COPY

CERTIFICATE OF COMPLETION/OPERATION PERMIT

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 5357 A DATE: 2/17/99

TC: 023-164-23 ☒ L ☐ CRT

SERIAL Nº 17988

Name of Owner Gary + Bennett Lancaster Juris.: Mecklenburg

Address of Property 11947 Pinnacle Point Ln.

Inspection Data:

Tank Material Existing

Total Length of Drainfield 120 ft

Number of Lines 3 @ 40 ft

Cover Depth 12 inches

Water Supply Source Community Well

Distance to Water Source _____

Excavation Inspected 2/16/99

Tank(s) Inspected N/A

Wash Line Inspected 2/16/99

High Water Alarm Inspected N/A

See Installation Permit.

PLOT

Design Repair CTR# Willie Christenbury

The undersigned has inspected the Septic Tank System described above, and certifies it has been

☒ installed or constructed ☐ altered or repaired

☒ in accordance with the permit issued ☐ as detailed in the plot above

and meets the provisions of I5A NCAC 18A. 1900, "Laws And Rules For Sewage Treatment and Disposal Systems" in effect on the date of issuance of the permit. This issuance of this

☐ Certificate of Completion ☒ Operation Permit

does not in any way guarantee that the system will operate properly or relieve any person now or hereafter owning, *controlling, or using such system from any liability resulting from the failure of the system to operate properly.* This document is issued subject to those restrictions and conditions shown on the permit(s) and the provisions of I5A NCAC 18A. 1990 in addition to those listed below under "COMMENTS." This document shall be null and void if any information contained in the application is untrue or if any additions are made to the property which would increase the requirements for said system.

Notice: Disturbance of the designated repair area may result in the suspension/revocation of this permit.

COMMENTS: Type II a repair, 4 bedrooms, Re-adjusted D-box and added soil cover to drainfield area. DD1991

Jeff a. Knight
Environmental Health Specialist

Mecklenburg County services are available without regard to ethnic origin, sex, or disability.

Date: January 2, 1991

From: T J Systems
P.O. Box 73
Scotts, N.C. 28699

To: Tom Van Doorn
c/o CRYOVAC
W.R.Grace & Co.
4425 Randolph Road, Suite 213
Charlotte, N.C. 28211
Phone: 704-364-9611w 803-283-2544h

Subject: Lot 59 Mt. Point
File # : 5357
Parcel : PO 02301136

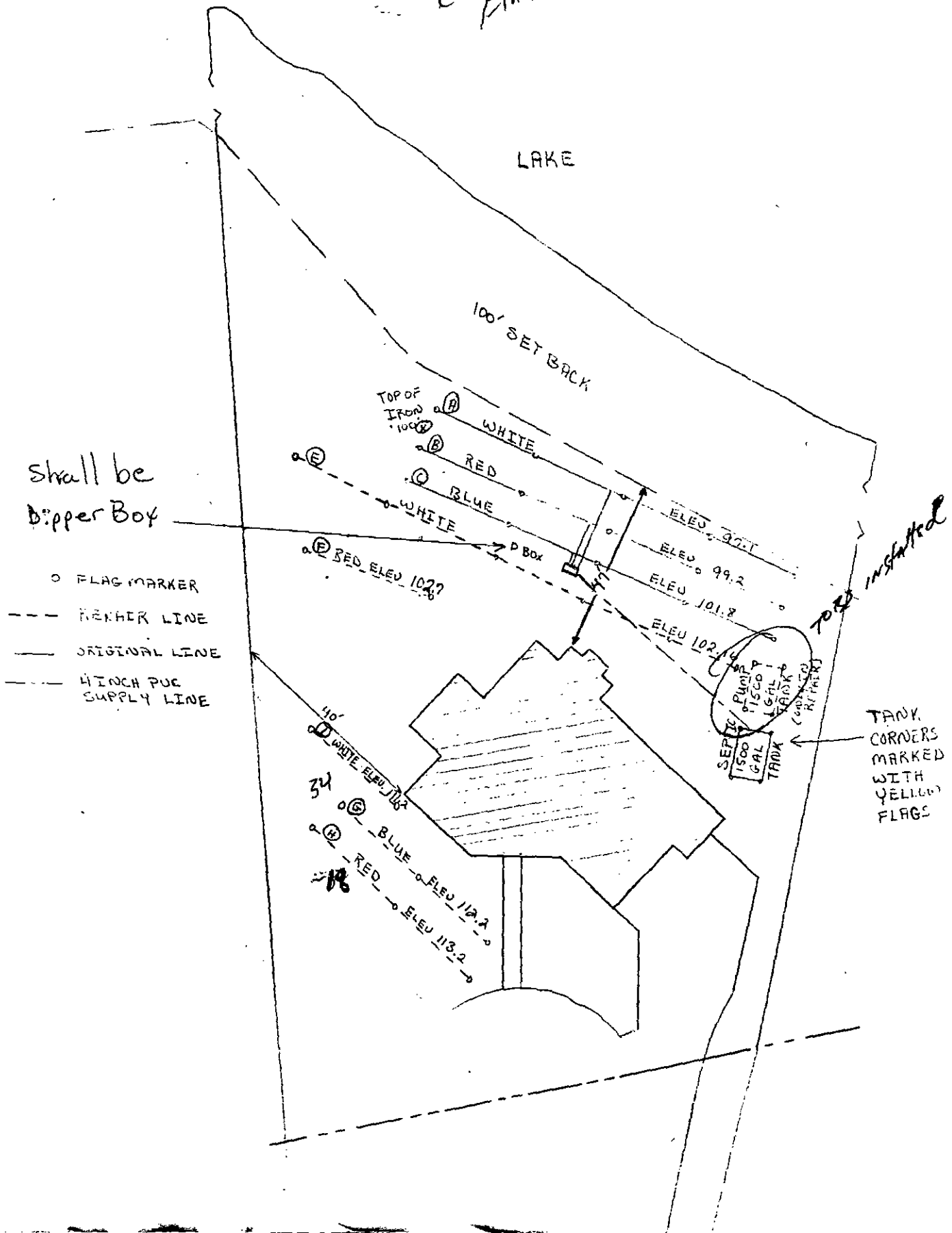
System type: 16 inch T & J Panel System with gravity distribution.

This system is designed for a four bedroom house at an application rate of .3 gpd. 480/.3 = 1600/3 = 533 LF of conventional drainfield multiplied by .5 = 266 LF of 16 inch T & J Panel System. This system shall be installed in accordance with all state and local rules and regulations and in compliance manufacturer's installation guidelines. Soil evaluation was supplied by the county.

Line	# Panel	# Hole Per Panel	Size Hole	Line Head	Line Length	Hole Flow	Per min Line Flow
A	20				89 '		
B	20				89 '		
C	20				89 '		
E	repair				120 '		
F	repair				30 '		
G	repair				45 '		
H	repair				50 '		
I	repair				25 '		
Totals	60				267'		

MECKLENBURG COUNTY
FILE # 5357
LOT 59 MT POINT

1-24-91 TURNED DOWN
Stake Home & Relocate Bound Flags?



SITE EVALUATION REPORT
SERIAL NUMBER 15904

Parcel: 023-113-36 PO

Location:

Subdivision:

Lot: 59 Block: Acres: 1.26

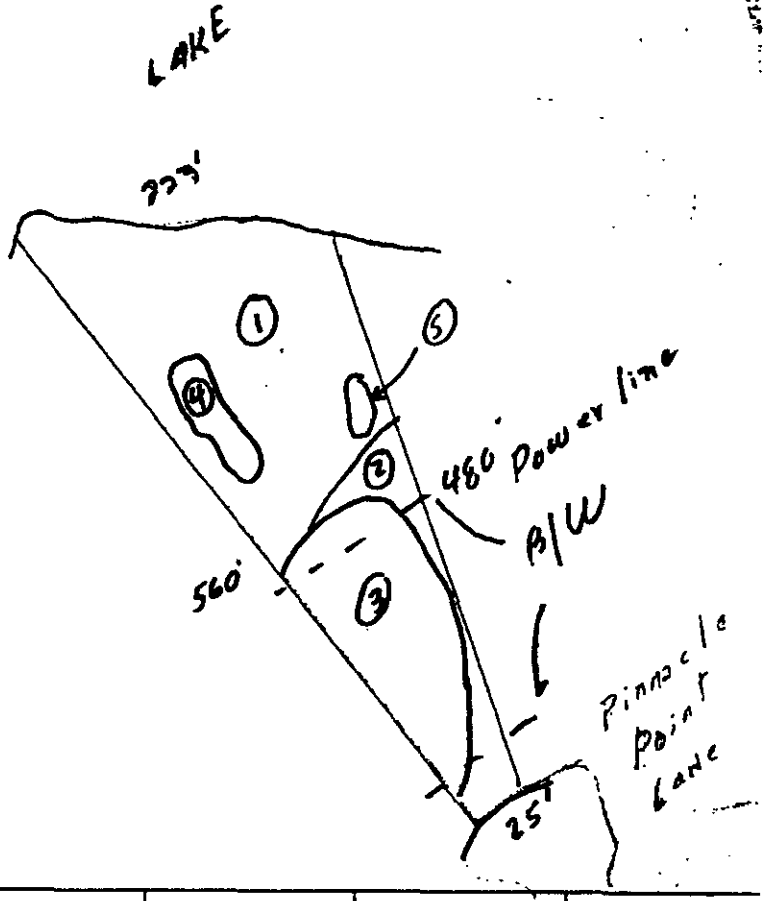
Owner:

Address:

Comments: Recommend system site be approved before lot is cleared

Described by:

Date:



*** EVALUATION KEY ***

S = Suitable U = Unsuitable
PS = Provisionally Suitable
The "Area Classification" below indicates the suitability of areas in the diagram.

FACTORS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6
Topography	S (PS) U 15-30%	(S) PS U 6-15%	(S) PS U 6-15%	S PS (U) complex slopes	S PS U —	S PS U
Texture	S (PS) U clay	S (PS) U clay	S (PS) U clay	S PS U —	S PS U —	S PS U
Structure	S (PS) U 31-41"	S (PS) U 31-41"	S (PS) U 31-41"	S PS U	S PS U —	S PS U
Drainage	S (PS) U >3'	S (PS) U >3'	S (PS) U >3'	S PS U	S PS U —	S PS U
Depth	S (PS) U 36"+	S (PS) U 36"+	S PS (U) 19-26"	S PS U	S PS U —	S PS U
Restrictive Horizons	S (PS) U >3'	S (PS) U >3'	S (PS) U >3'	S PS U —	S PS U —	S PS U
Available Space	S (PS) U very limited	S PS (U) Restricted	S (PS) U limited	S PS U	S PS U —	S PS U
Other (specify)	S PS U	S PS U	S PS U	S PS U	S PS (U) Rock outcrop	S PS U
Soil Group/Series	WH cecil like	WH cecil like	WH Pacolet Like	complex slopes	Rock	
Area Classification	S (PS) U	S PS (U)	S PS (U)	S PS (U)	S PS (U)	S PS U

DESIGN, INSTALLATION AND MAINTENANCE

OF THE

T & J PANEL WASTEWATER TREATMENT SYSTEM

FOR

SANITARIANS

AND

SEPTIC TANK INSTALLERS

Although this manual is sectioned for specific user groups, we at T & J Panel suggest that you familiarize yourself with the complete manual.

Sanitarians

In the early days of the T & J Panel System, when it was still considered an experimental system, the primary reason for permitting the Panel System was because of insufficient space for a conventional system. Now with inclusion in the Sewage Regulations(10NCAC 10A .1956(3)(a)(ii)), the Panel System should be considered when a quality effluent may be needed, space is limited, usable soil is limited, or there are indications that at some future time, space may be needed for other uses. When there is a trend for added development such as additions to homes, pools, or other special landscaping development the T & J Panel System may prevent insufficient space later. As an example, there was a subdivision where three of five homes in the same block added in-ground pools. Each of these pools impacted the existing nitrification lines. As a sanitarian, if you can foresee such a trend developing, discuss the Panel System with the home owner.

As noted in the regulations, the PPBPS is only permitted where soils are suitable for a conventional system, however, only one-half of the space is needed. The Panel System will allow the use of the best soils on the lot. This system may be gravity fed or pumped using the LP Panel System as described. Most of the concepts for a T & J Panel layout are the same as for a conventional system. The biggest differences are areal area needs and quality of effluent being introduced into the soil.

Conversion

A three bedroom house with a 0.4 gpd application rate. (First three steps are the same as the conventional line)

1) 120 gallons per bedroom x 3 bedrooms = 360 gallons per day design flow rate.

2) 360 flow rate/0.4 application rate = 900 sq. ft. of trench bottom.

3) 900 sq. ft./3 ft. wide trench = 300 lineal feet of conventional system.

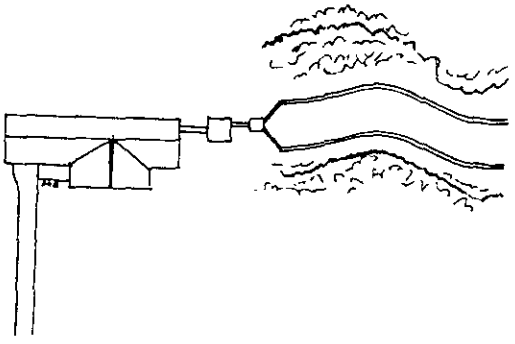
This conventional layout requires 2700 sq. ft. of area on the lot and equal space for repair for a total of 5400 sq. ft. of suitable and usable area. To calculate the T & J Panel System size, the above calculations must be made with an additional fourth step as described in 10NCAC 10A .1956 (3)(a)(ii)(B) for a PPBPS (the T & J Panel System)

4) 300 lineal feet of conventional system x 0.5 for a 16 inch high Panel System = 150 lineal feet of T & J Panel trench.

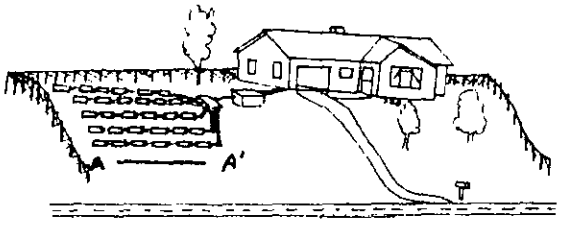
A Panel System requires only a 1200 sq. ft area on the lot for the system and equal area for repair. With the Panel System the installation and repair can go into the same space as the initial area required by a conventional gravel trench system.

Window Effect

Areal space should always be a consideration for any system, however, it is especially notable with the Panel System as with any system that reduces the size of the areal area drainfield. The following is a simplistic example of this concept.



RIGHT

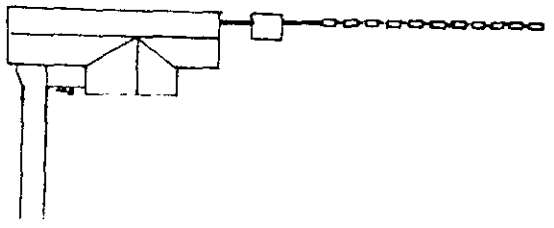


WRONG

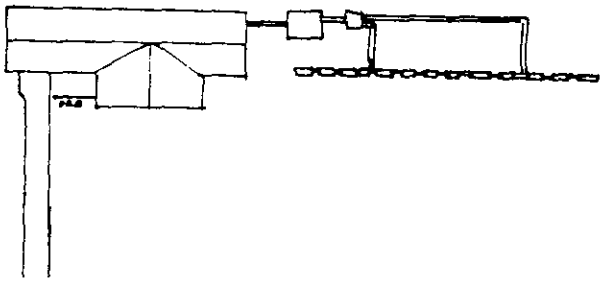
While both systems have the same lineal footage of trench the lower diagram is not a desireable design. The effluent must pass through the area A-A' which can cause a strain on that area and even a failure because of hydraulic overloading.

Distribution

Another extreme would be the use of a long single trench fed from only one end. In the first example, below the areal space is good and the chance of hydraulic overloading is greatly reduced. However downline distribution in the panel line will not give optimum treatment.



WRONG



RIGHT

In the lower example we see that the trench has been feed from multiple points. Because the Panel lines are put in as level as possible, never exceeding 1/4 inch of fall in 10 feet of run, they feed both ways equally. T & J recommends that no gravity line exceed 50 feet, unless it is fed from multiple points. In both of these examples, we are specifying the Panel System, but the logic applies to the conventional system as well.

COUNTY HEALTH DEPARTMENT

(SEPTIC TANK) IMPROVEMENTS PERMIT AND CERTIFICATE OF COMPLETION
(Ground Absorption Sewage Disposal System -- G. S. Chapter 130-A-Article 11)

OWNER OR CONTRACTOR _____ DATE _____ PERMIT NO. _____

PHONE: Business _____ Home _____

LOCATION _____

_____ S. R. No. _____

SUBDIVISION NAME _____ LOT NO. _____ SECTION OR BLOCK NO. _____

House (✓) Mobile Home ( ) Business ( ) Other _____

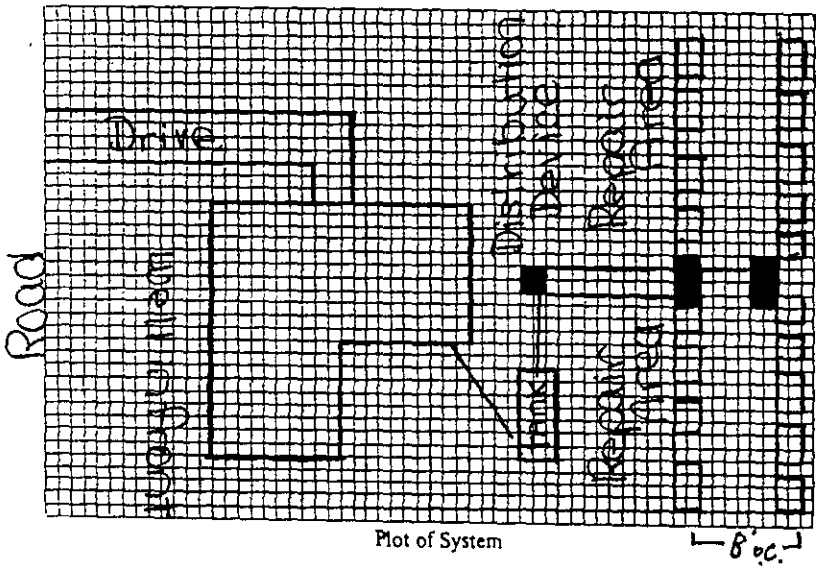
No. Bedrooms 3 No. Bathrooms 2 1/2

Garbage Disposal Unit	N/A	Yes ( )	No ( )
Auto. Dishwasher		Yes (✓)	No ( )
Auto. Wash. Machine		Yes (✓)	No ( )
Site Suitable		Yes (✓)	No ( )

Lot Area _____

Character & Porosity of Soil clay loam over clay
Percolation Rate 8.4 gal/ft²/day
Topography 6% slope
Depth to Water Table > 60"
Rock or other impervious formations none

_____ Basement with Plumbing _____ Basement without Plumbing ✓ No Basement



Plot of System

Size of Tank 1000 Gals.
Nitrification Field:
No. of Lines (2) 75' lines of
Sq. Ft. 900 Linear Ft. 150 panels
Depth of Stone in Lines 24" of sand
Water Supply: Individual (✓)
Public ( )

Installed by _____

I understand and agree to install septic tank system as specified on this Improvements Permit.

Signed: _____

IMPROVEMENTS PERMIT BY _____

COMMENTS: 2 lines with 17 panels each line. flow split by flow divider. 2' wide and 75' long each split in middle by D-box. 25 tons sand

CERTIFICATE OF COMPLETION BY _____ DATE _____

EXISTING SYSTEM CHECKED BY: _____ DATE _____

CONSTRUCTION MUST COMPLY WITH ALL OTHER APPLICABLE STATE AND LOCAL REGULATIONS.

Permit is VOID if any unauthorized changes are made in installation of system and/or if any false information is supplied in making Improvements Permit.

Health Dept. Copy: White Inspection Dept. Copy: Yellow Sanitarian's Copy: Pink Owner's Copy: Gold

COUNTY HEALTH DEPARTMENT

(SEPTIC TANK) IMPROVEMENTS PERMIT AND CERTIFICATE OF COMPLETION
(Ground Absorption Sewage Disposal System -- G. S. Chapter 130-A Article 11)

OWNER OR CONTRACTOR _____ DATE _____ PERMIT NO. _____

PHONE: Business _____ Home _____

LOCATION _____

_____ S. R. No. _____

SUBDIVISION NAME _____ LOT NO. _____ SECTION OR BLOCK NO. _____

House (✓) Mobile Home ( ) Business ( ) Other _____

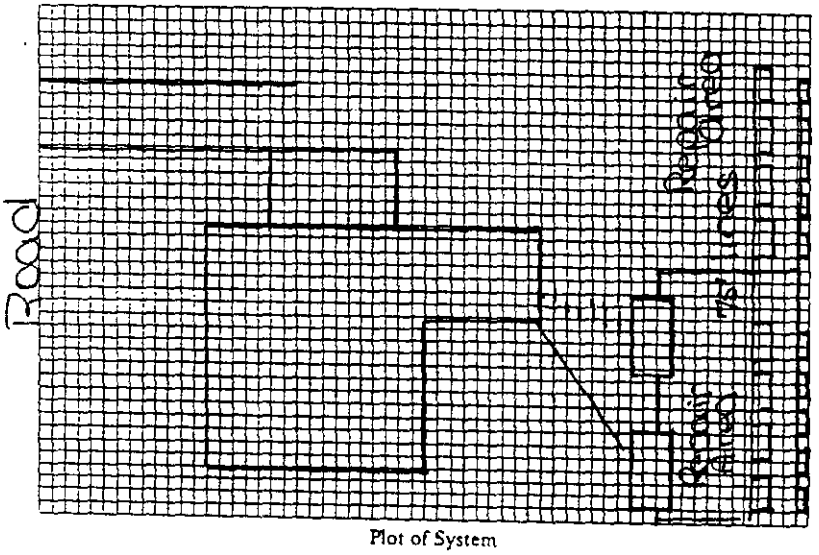
No. Bedrooms 3 No. Bathrooms 2 1/2

Garbage Disposal Unit	N/A	Yes ( )	No ( )
Auto. Dishwasher		Yes (✓)	No ( )
Auto. Wash. Machine		Yes (✓)	No ( )
Site Suitable		Yes (✓)	No ( )

Lot Area 20,000

Character & Porosity of Soil clay loam over clay
Percolation Rate 0.4 gal/ft²/day
Topography 60% slope
Depth to Water Table >10'
Rock or other impervious formations _____

_____ Basement with Plumbing _____ Basement without Plumbing ✓ No Basement Pressure Distribution



Plot of System

Size of Tank 1,000 septic / Gals.
1600 pump
Nitrification Field:
No. of Lines 3 (5') lines of T-J
Sq. Ft. 900 Linear Ft. 150
Depth of Stone in Lines 24" sand
Water Supply: Individual ( )
Public ( )

Installed by _____

I understand and agree to install septic tank system as specified on this Improvements Permit.

Signed: _____

IMPROVEMENTS PERMIT BY _____

COMMENTS: pump sized by head 2-4' at turn up

CERTIFICATE OF COMPLETION BY _____ DATE _____

EXISTING SYSTEM CHECKED BY: _____ DATE _____

CONSTRUCTION MUST COMPLY WITH ALL OTHER APPLICABLE STATE AND LOCAL REGULATIONS.

Permit is VOID if any unauthorized changes are made in installation of system and/or if any false information is supplied in making Improvements Permit.

Health Dept. Copy: White Inspection Dept. Copy: Yellow Sanitarian's Copy: Pink Owner's Copy: Gold

How Many Panels Do You Need?

To calculate the number of 16 inch high panels needed for a 150 foot line, multiply 150'x 12" = 1800" then divide by 52" which is 46 inches for the panel and 6 inches for the space between the panels in the trench. 1800" /52" = 34.6 panels, so you would call for 34 panels. (A material order chart is included in the installer section of this manual.) If there is to be more than one trench, the sizing of the lines should be as equal as possible with as close to the same number of panels in each trench as is practical. A permit will normally show the panel as small blocks on the line. The following two pages are sample copies of permits for Panel systems.

Gravity or Pressure

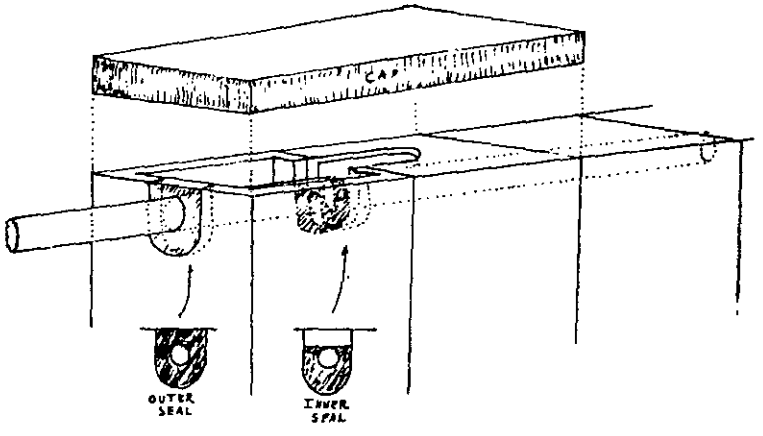
The T & J Panel System can be installed as either gravity or a low pressure distribution system. When designing a pressure system the principles of low pressure distribution are as described in the LPP manual. There is further discussion on pressure systems in the installer section of this manual. One of the attached permits is for a LP Panel drainfield.

Backfill

Backfill sand shall be a clean, washed, medium sand that is naturally occurring and falls within the gradation of ASTM C-33 specification. This specification is one that is used in the ready mix industry and is readily available in all areas. The second type of sand that you will need is a clean particle sand to coat the bottom of each panel's top chamber with a bed of sand one inch thick. This sand is a medium grade of sand blasting sand. Each one hundred pound bag should cover eight panels. Backfill sand calculations should be taken from the material sheet.

Tar Seals

The two drawings below illustrate the inner and outer seal. Note that while the outer seal is a complete seal, the inner seal is only up to the top of the connecting pipe. This is to allow for over flow of the effluent at peak use periods into the lower air chambers. At this point the air chambers become additional storage chambers for the effluent.



Trench Preparation

Trench grade should be established so that backfill cover will be four to six inches over the tops of the panels. (Note on severe slopes system depth should be adjusted to protect against brakeout of effluent) In clay type soils the trench side walls should be raked to bring slicked over areas back as near to original structure as possible. A light dusting of lime on the side walls is required to promote the soil structure.

Final Inspection

The following list of points are things that an inspector should look for before issuing an completion permit.

1) Is depth of the panels within guidelines?

2) Are drain lines level or less than 1/4 inch fall in ten feet?

3) Have seals been properly constructed?

4) Was the proper sand used in the trench backfill?

5) If in clay type soils were the side walls raked and limed?

(For Pumped Systems)

6) Have pump size, head pressure, and dose cycle been properly sized and set?

(Set dose cycle for 3.6 gallons per 16 inch high panel.)

Installer

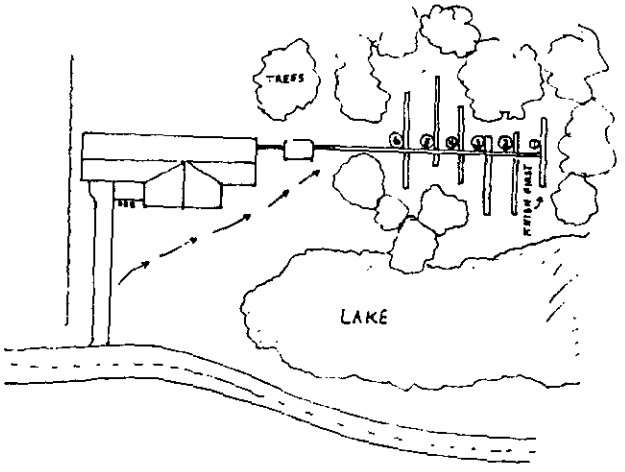
Generally, on level open land, a Panel System can be installed in about the same time as a conventional system; however, traditionally, Panel Systems have been installed where space and topography have restricted use of a conventional system. For this reason Panel System installations have required more time. Many installers enjoy the change of working with panels, not handling gravel, and the satisfaction of knowing a system is being installed where previously a conventional system was not possible.

Ordering Materials

Enclosed on following two pages you will find an order sheet for the T & J Panel System and a materials chart for 16 inch high Panel System. The distributor in your area will lead you through these sheets when ordering or pricing the system. For information on the distributor located closest to you call 1-800-222-2577 (inside N.C.) or 704-872-9566. After ordering, your panels will be shipped to the job site banded together on pallets.

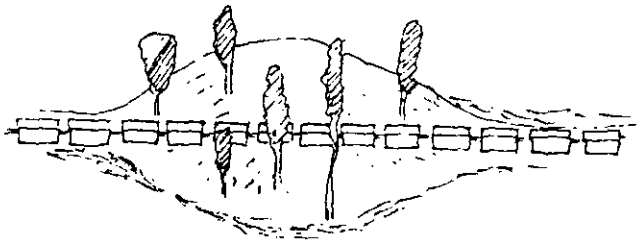
Installation Tips

Installation for multiple line systems should begin in the most confining area and be worked to the more open areas.

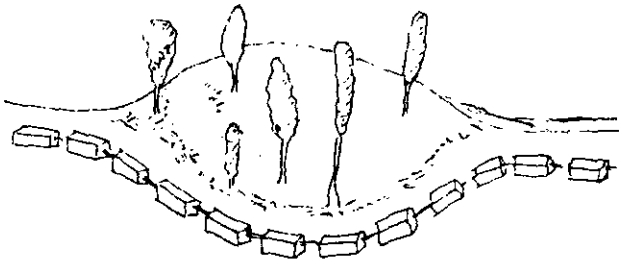


Above is an example of a multiple line installation. As you can see the installation should begin with the line marked 1 and proceed to 2, 3, then 4. This procedure will greatly ease material handling and backfilling. (Note sections of the drainlines should be left uncovered to allow for inspection of lines when area is confined and return access to lines is limited.)

On the following page are two examples of drain lines on sloping lots. The first drawing shows the drainline going through a slope making the center of the line deeper in the ground. This is not a desirable situation. The second drawing shows the drainline going around the slope keeping the trench depth and cover uniform for the entire length of the line. On slopes care should be given to avoid cutting away valuable top soil in an effort to make straight lines. Panel lines can be curved to almost any degree.



Wrong



Right

Digging The Trench

Start by shooting the grade and marking the contour. Then for a 16 inch panel add 28 inches to the shallowest or lowest grade that the trench must cross to obtain the trench bottom grade. Now dig the trench at the elevation derived, checking the grade frequently. The trench should be a minimum of two feet wide. With the trench open all sidewalls shall be raked to bring smeared areas back to their original structure before a light dusting of lime is applied. Now place a 6 inch layer of backfill sand in the trench and level to grade, then place a 1 x 4 or 6 inch board flat on it's side on top of the 6 inch layer of sand. Once more check the grade of the trench by shooting the top of the board. Once the grade boards have been set, the panels may be set into the ditch by hand or using the backhoe. Each panel weights about 155 pounds and placement by hand goes quickly. The panels should be placed about 6 inches apart in the trench to obtain equal spacing. Now place 10 to 12 pounds of clean particle sand (medium sand blasting sand) in the top chamber of each panel to form a bed of sand about one inch thick. Tar seal rope should be placed in the U outs to form seals as shown in earlier drawings. Once the tar rope is in place, a 24 inch section of two inch PR160 pipe is cut to span from the upper middle top chamber of the first panel to the upper middle chamber of the next panel. The tar seal rope that is used should be of tar or butyl that is soft and pliable to obtain a water tight seal. Now that the connection and sealing is complete a block cap is placed on each end of the panel covering all openings.(These will be delivered with the panels.) The cap block may well serve as an inspection port at some future date. The trench is ready to be backfilled to the top of the panel with the same backfill sand used in the trench bottom. With the sand to the top of the panel, trenches should be left for the sanitarian to inspect. Soil cover should be added after the final inspection.

Most Panel Systems are currently used due to space considerations and caution should be taken to preserve suitable soil structure and site conditions.

Materials Chart For 16 Inch Panels

Materials needed per panel:

- Three feet of half inch tar seal rope per panel.
- Two feet of two inch PR160 pipe per panel or same linear feet as line layout of pressure system of one and a quarter inch pipe. Add pipe for tie in of lines to tank and house.
- One hundred pounds of partical sand (sand blasting sand fine texture) per eight panels.
- Same linear feet of one by six boards as line length.
- Bag powder lime when in clay soils.

Panel and C-33 Sand fill

50 LF - 11 panels
8¼ tons sand

60 LF - 14 panels
10 tons sand

70 LF - 16 panels
11½ tons sand

80 LF - 18 panels
13¼ tons sand

90 LF - 21 panels
15 tons sand

100 LF - 23 panels
16½ tons sand

110 LF - 25 panels
18¼ tons sand

120 LF - 27 panels
20 tons sand

130 LF - 30 panels
21½ tons sand

140 LF - 32 panels
23 tons sand

150 LF - 34 panels
25 tons sand

160 LF - 37 panels
26½ tons sand

170 LF - 39 panels
28 tons sand

180 LF - 41 panels
30 tons sand

190 LF - 43 panels
31½ tons sand

200 LF - 46 panels
33 tons sand

T & J Panel Material Worksheet

Homeowner _____ County _____

Address _____

_____

Description of System _____

_____

_____

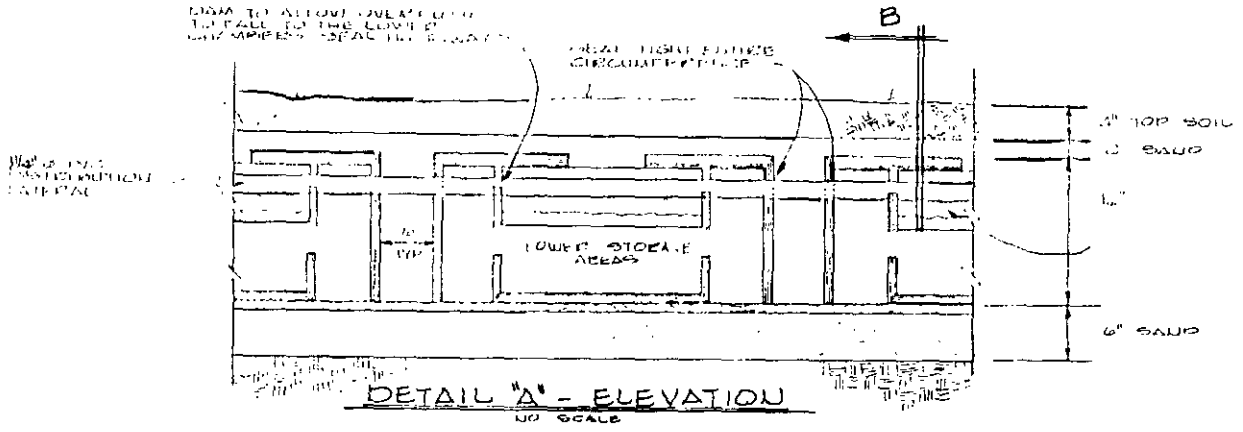
_____	T & J Panels _____ Inch (caps N/C)	_____
_____	2" Pipe	_____
_____	1 1/4" Pipe	_____
_____	Fittings for Pipe	_____
_____	Tar Seal Rope (3' per Panel)	_____
_____	Bag Partical Sand (100 lbs per 8 Panels)	_____
_____	Pallets (Returnable)	_____
_____	Screened Creek Sand (FM 2.3 to 3.0)	_____
_____	1x4 or 1x6 Boards	_____
_____	Power Lime	_____
_____	Sep Tank _____ Gallon	_____
_____	Tar Seal for Tank	_____
_____	4" PVC Pipe Schedule 40	_____
_____	Distrobution Box	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
	Sub-total	_____
	Delivery Charge	_____
	Tax	_____
	Total	_____

Panels With Pressure Distribution

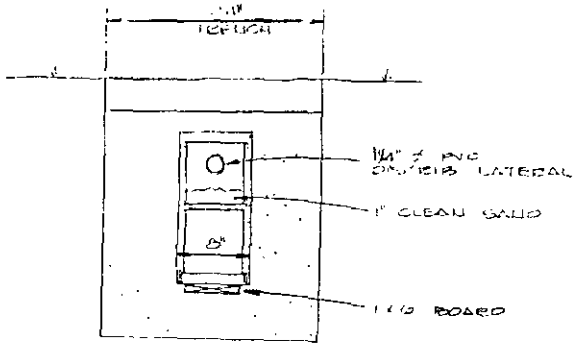
The LP Panel uses Technology similar to that of Low Pressure Pipe (LPP) System. The tables and distribution design described in the LPP manual are applicable to the pressure Panel System. The system should be used with two to four feet of head. In many respects an LP Panel is similar to an LPP with the holes discharging into the panels.

The dosing cycle for the Panel System is designed to pump enough effluent to fill the top chambers of all the panels in the system. The top chamber of a 16 inch panel holds 3.6 gallons. When the system has 34 panels and all the holes are the same size, then you would multiply 34 X 3.6 to get 122 gallon per dose cycle. The holes are drilled in the distribution pipe at the 10 and the 2 o'clock position. These are then placed so that the effluent is pumped into the top center chamber of the panel. If the hole sizing changes then the pump cycle is set by the hole that is discharging the fastest.

All valves and turn ups should be neatly capped, covered, and labled for future service. Pump tanks should be constructed as shown in drawing as to allow for service and or repairs.

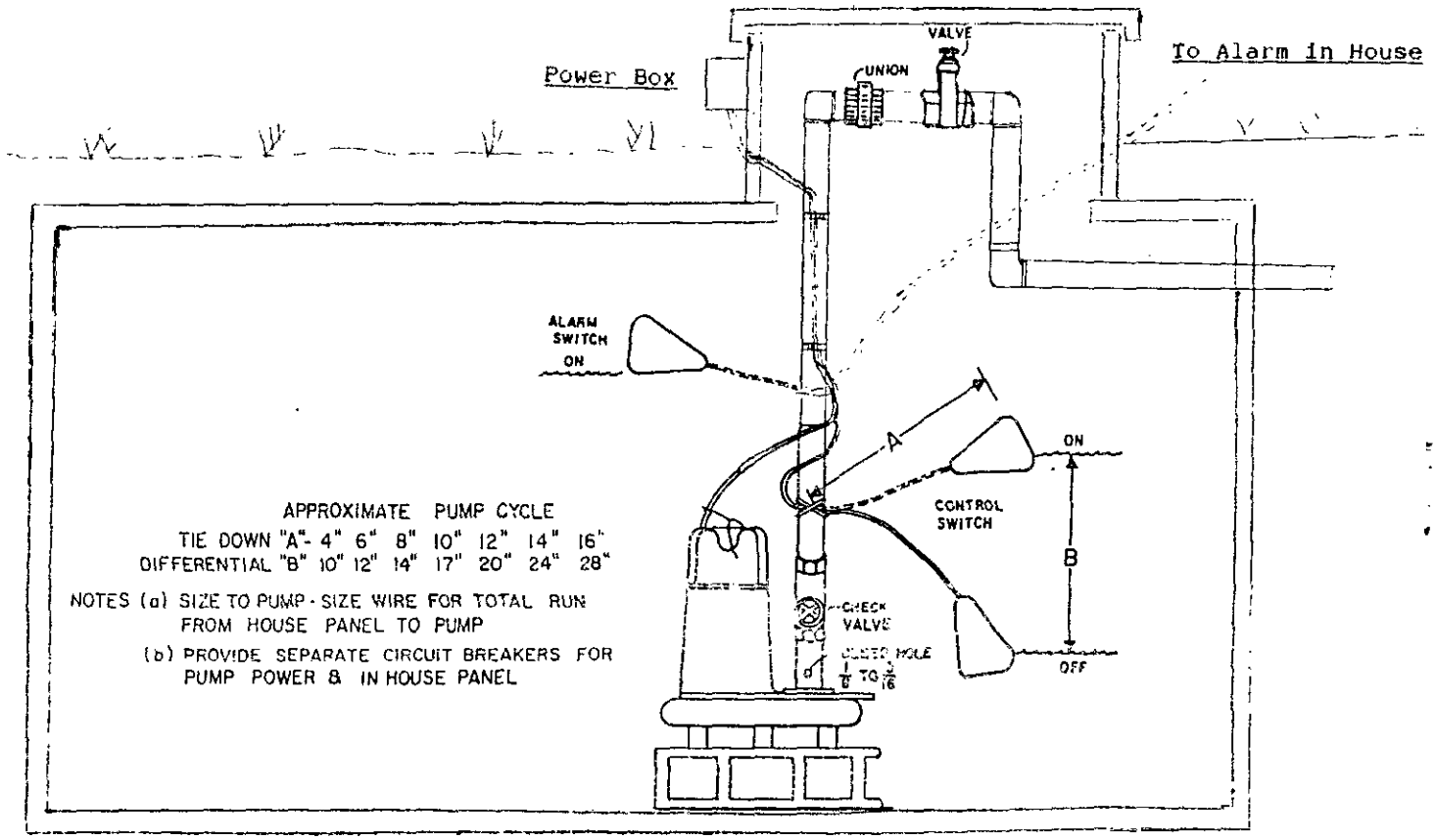


DETAIL "A" - ELEVATION
NO SCALE

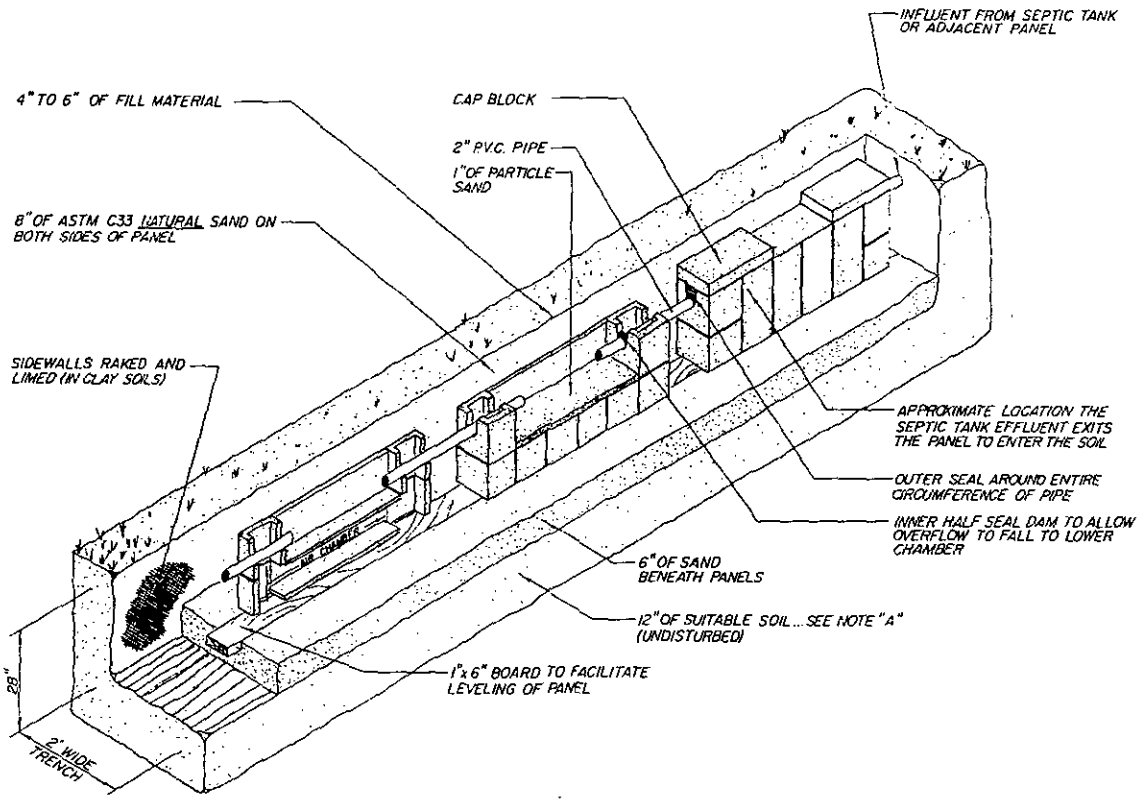


DETAIL "B" - SECTION
NO SCALE

Pump Tank Drawing

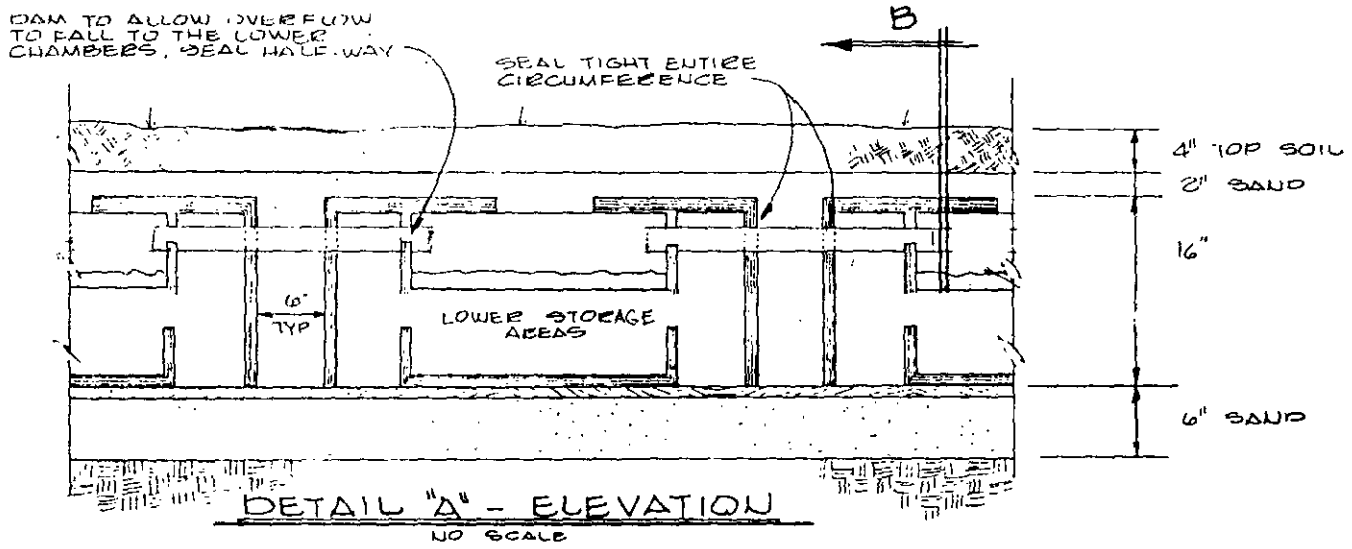


Isometric Drawing of a Segment of 16" T&J Panel Drainfield

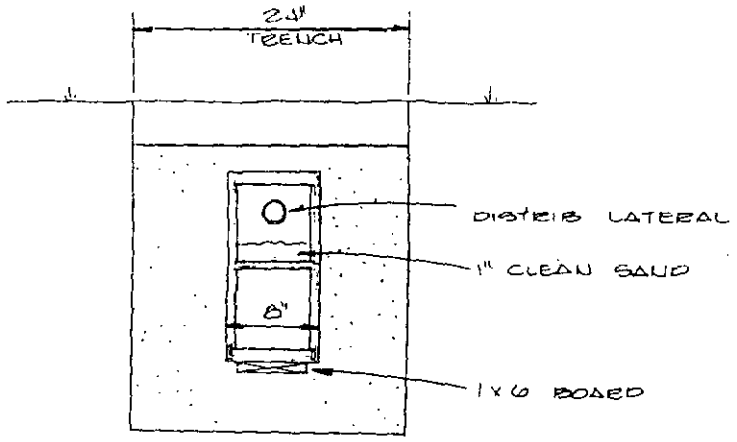


THE T. & J. PANEL
WASTE WATER TREATMENT SYSTEM
PATENT NUMBER 4013559

P.O. Box 288 • Statesville, North Carolina 28677
N.C. WATS 1-800-222-2577 • (704)872-9566



DETAIL "A" - ELEVATION
NO SCALE



DETAIL "B" - SECTION
NO SCALE

PANEL, gravity

CERTIFICATE OF COMPLETION/OPERATION PERMIT

MECKLENBURG COUNTY · ENVIRONMENTAL HEALTH ·
1200 BLYTHE BOULEVARD
CHARLOTTE, NC 28203
PHONE (704) 376-4603

FILE: 5357 A DATE: 6/14/91

TC: 023-011-35 PL CRT

SERIAL № 12336

Name of Owner Tom VanDoorn Juris.:

Address of Property 11947 Pinnacle Point Ln. (Lot 59)

Inspection Data:

Tank Material PCC

Total Length of Drainfield 266'

Number of Lines 3 @ 89'

Cover Depth 6"

Water Supply Source C/well

Distance to Water Source >50

Excavation Inspected Y

Tank(s) Inspected Y, Y

Wash Line Inspected —

High Water Alarm Inspected Not install.

* This system was cut through by a power company, (Line A) of primary sys. 5 panels were replaced by contractor (203) on. 10/4/91. T.W. Repair occurred prior to occupancy. T.W.

PLOT

Design: 1,500 ST, 1,500 PT, ( ) Repair only | mod 532 SFT, 24" sand CTR# 203 Cecil like

The undersigned has inspected the Septic Tank System described above, and certifies it has been

- ☑ installed or constructed
- ☑ in accordance with the permit issued
- ☐ altered or repaired
- ☐ as detailed in the plot above

and meets the provisions of 10 NCAC 10A .1900, "Laws And Rules For Sanitary Sewage Collection, Treatment, And Disposal" in effect on the date of issuance of the permit. The issuance of this

- ☑ Certificate of Completion
- ☐ Operation Permit

does not in any way guarantee that the system will operate properly or relieve any person now or hereafter owning, controlling, or using such system from any liability resulting from the failure of the system to operate properly. This document is issued subject to those restrictions and conditions shown on the permit(s) and the provisions of 10 NCAC 10A .1900 in addition to those listed below under "COMMENTS." This document shall be null and void if any information contained in the application is untrue or if any additions are made to the property which would increase the requirements for said system.

COMMENTS: 4bedrm. Panel block, (3) 2'x89'x24" sand. Pump tank installed for repair if needed. Installed without Installation Permit.

Tim Whitaker, R.S.
Environmentalist

Mecklenburg County services are available without regard to ethnic origin, sex, or disability.

INSTALLATION, CONSTRUCTION, ALTERATION, AND/OR REPAIR PERMIT

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
1200 BLYTHE BOULEVARD
CHARLOTTE, NC 28203
PHONE (704) 376-4603

FILE: 5357 A DATE: 6/14/91

TC: 073-011-35 90 L

SERIAL Nº 15038

Permission is hereby given to ✓ (Install) or Construct, _____ Alter or Repair the individual septic tank wastewater treatment system with subsurface, soil absorption, effluent discharge as specified herein at the described location. This permit is granted based upon the information supplied in the application dated 1/2/91. All work shall be completed on or before N A, after which date this permit shall be null and void. The system shall meet all of the construction requirements of 10 NCAC 10A .1900 which are in effect on the date of the granting of this permit. A Certificate of Completion or an Operation Permit must be obtained from the Mecklenburg County Health Department before any system can be covered up or placed into service. The issuance of this permit does not in any way guarantee that the system anticipated to be constructed will operate properly, or relieve any person now or hereafter owning, controlling or using such system from any liability resulting from the failure of the system to operate properly.

* INSTALL ACCORDING TO APPROVED PLAN.

Liquid Capacity of Septic Tank 1,500 gallons

Liquid Capacity of Dosing Tank 1,500 gallons

Tank Construction PCC

Absorption and/or Nitrification Lines:

Trench Width 2' feet

Total Line Length 266' feet

Number of Lines (3) 89'

Depth of ~~Stone~~ Sand 24" inches

Distance from House 15' feet

Distance from Property Line 10' feet

Distance from Well > 50' feet

PLOT OF SYSTEM

NAME OF OWNER Tom VAN DOORN

LOCATION OF PROPERTY 11947 PINNACLE POINT LN. (Lot 59)

Comments: 4 bedrm. PANEL block SYS. gravity.
This permit issued for purpose of RECORDS.

Division or Section Head

Tim Whitaker, R.S.
Environmentalist

* If this permit is for the installation or construction of a new system, it must be signed by the division or a section head of the Mecklenburg County Health Department in order to be valid. Only the signature of the Environmentalist is required where an existing system is being altered or repaired.

WHITE - HEALTH DEPARTMENT'S COPY • CANARY - ENVIRONMENTALIST'S COPY • PINK - OWNER OR AGENT'S COPY

BK: 06446 PG: 0402/0402 #:0120 6.00

REGISTERED FEB/01/1991 11:17AM ANNE A. POWERS REGISTER OF DEEDS MECK. CO. N.C.

FILE NO. 5307A

COPY

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

ACKNOWLEDGEMENT OF REQUEST BY OWNER FOR RECLASSIFICATION OF SITE FROM "UNSUITABLE" TO "PROVISIONALLY SUITABLE" UNDER 10 NCAC 10A .1948(c)

The undersigned, Tom Van Doorn

owner of property located at 11947 Pinnacle Point Ln., Charlotte, NC

("the site") and described in an instrument recorded in Book 6076 at Page 864, Mecklenburg Public Registry,

hereby acknowledges that he applied to the Mecklenburg County Department of Environmental Health ("the Department") for a permit to install a septic tank sewage disposal system on the site; that the Department evaluated the site for suitability for such a system in accordance with the regulations promulgated by the North Carolina Commission for Health Services at 10 NCAC 10A .1934 et seq; that the Department originally classified the site as "unsuitable" pursuant to the standards set forth in the regulations; that the undersigned requested pursuant to 10 NCAC 10A .1948(c) that the Department reclassify the site as "provisionally suitable" in light of the particular septic tank system proposed by the undersigned; that the Department considered various studies, data and other information which indicate to the Department that the septic tank system proposed by the undersigned can reasonably be expected to function satisfactorily and thus that the findings specified in 10 NCAC 10A .1948(c)(1), (2), and (3) can be made; and that the Department therefore reclassified the site as "provisionally suitable" and issued an appropriate permit for such proposed septic tank system.

The undersigned further acknowledges that the proper design, construction, operation and maintenance of such septic tank system is his responsibility and that neither the Department nor its officials, employees or agents warrant or guarantee that the said system installed pursuant to the permit issued by the Department will function in a satisfactory manner for any given period of time or that the Department, its officials, employees or agents assume any liability for any damages of any kind which are caused, or which may be caused, by a malfunction of such system.

The undersigned further agrees for himself, his heirs and assigns that he shall indemnify and hold harmless the Department, its employees and officials, as well as Mecklenburg County and its employees and officials, for any damages or other claims of any person or persons whatsoever arising out of the installation, operation, or failure of said septic tank system.

The undersigned further agrees for his heirs and assigns that, in the event any septic tank system installed under authority of the aforesaid permit fails to perform adequately in any respect, he will take whatever measures are required to correct same; or if such is impossible will discontinue use of said system immediately.

Use of the singular masculine pronoun forms herein shall be deemed to also include the plural and feminine forms as the context may require.

This document shall be placed on the public records of the Register of Deeds of Mecklenburg County and indexed therein under the grantor index in the name or names of the undersigned, and the foregoing acknowledgements shall henceforth be binding on all persons having any right, title, or interest in the site.

This 1st day of February, 1991.

Tom Van Doorn (SEAL)

(SEAL)

STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

I, Ernest Neal, a Notary Public for said County and State, do hereby certify that Tom Van Doorn personally appeared before me this date and acknowledged the execution of the foregoing instrument.

WITNESS my hand and notarial seal, this 1st day of February, 1991.

Ernest Neal
Notary Public

My Commission Expires July 27, 19[illegible]

Commission Expires _____

STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

I, _____, a Notary Public for said County and State, do hereby certify that _____ personally came before me this day and acknowledged that he is _____ and that by authority duly given and as the act and deed of said corporation, the foregoing instrument was signed in its name by its _____, sealed with its corporate seal and attested by _____.

WITNESS my hand and notarial seal, this _____ day of _____, 19__.

_____
Notary Public

Commission Expires _____

Mecklenburg County
Health Department

February 1, 1991

Tom Van Doorn
c/o CRYOVAC
W. R. Grace & Co.
Charlotte, NC 28211

RE: Property located at 11947 Pinnacle Point Lane (lot 59)
FILE: 5357A
PARCEL: 023-161-02

Gentlemen:

Receipt of your plans for a modified waste disposal system for the property referenced above is acknowledged.

Your plans for the modified system for the above property as submitted are approved with the following comments:

- Water saving plumbing devices and low flush toilets should be installed when constructing the residence.
- Occupants to utilize maximum water conservation measures wherever possible.
- Effectively rake and lime all trench sidewalls
- Landscaping of repair area to be undisturbed. No grading, shaping, or altering in anyway.

Upon execution and recording with the Register of Deeds Office, Mecklenburg County, of the enclosed "Septic Tank Agreement Form", an Improvements Permit may be issued by this office.

Sincerely,

Gene Vaughan, R.S., Supervisor
Individual Water and Wastewater Systems

GV/kjb

Enclosures - 3 Septic Tank Agreement Forms

Environmental Health Division
1200 Blythe Boulevard • Charlotte, North Carolina 28203 • (704) 376-4603

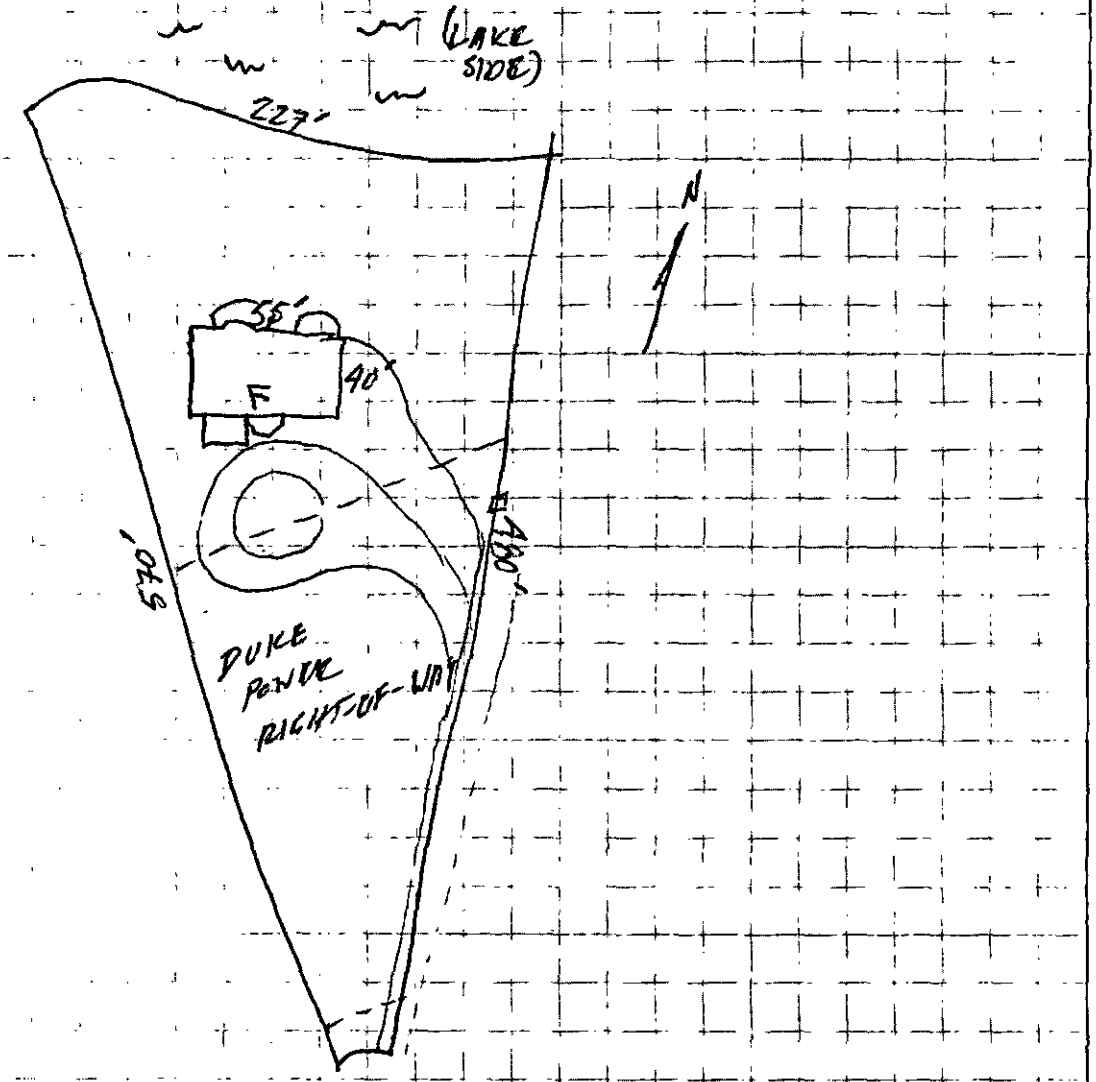
PROPOSED PLOT PLAN

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
1200 BLYTHE BOULEVARD
CHARLOTTE, NC 28203
PHONE (704) 376-4603

FILE: 5357A

TC: 023-011-35PO

Draw in and name all roads adjoining the property. Draw in and accurately dimension the lot concerned. Accurately indicate property boundaries, proposed and/or existing structures and driveways, underground utilities, and wells and springs within 100 feet of the proposed building or drainfield.



APPROVAL DATE _____

White - Health Department's Copy Canary - Environmentalist's Copy Pink - Owner's Copy

Mecklenburg County
Health Department

Basil G. Deltu, M.D., M.P.H.
Health Director

May 25th, 1989

Crescent Land & Timber Corp.
2305 Randolph Road, Suite C
Charlotte, NC 28207

RE: Property located at Pinnacle Point Lane 59
FILE: 5357A
PARCEL: 02301135 PO

Dear Sir:

At your request, a field investigation was conducted on the property designated above for the purpose of determining site suitability for the installation of a ground absorption sewage disposal system. The property was found to contain a limited area of soils which were classified as provisionally suitable for such an installation. A copy of the Site Evaluation Report (Serial Number 15904) is enclosed for your information.

Should you desire to file for permission to install a ground absorption sewage disposal system, please submit an Application For An Improvement Permit with an ACCURATELY dimensioned plot plan detailing the location of current and/or proposed buildings, wells and sewage disposal systems to this office. The plan will be reviewed and if it is found that the area of provisionally suitable soils is adequate for the proposed construction, an Improvement Permit will be issued by this Department.

If I may be of assistance, please do not hesitate to contact me.

Very truly yours,

Jim Ericson, R.S., Supervisor
On Premises Waste Disposal & Water Supply

Enclosure

MECKLENBURG COUNTY ENVIRONMENTAL HEALTH
SITE EVALUATION REPORT
SERIAL NUMBER 15904

File: 5357A Action 1

Parcel: 02301135 PO ☐ PC

Location: Pinnacle Point Lane

Subdivision:

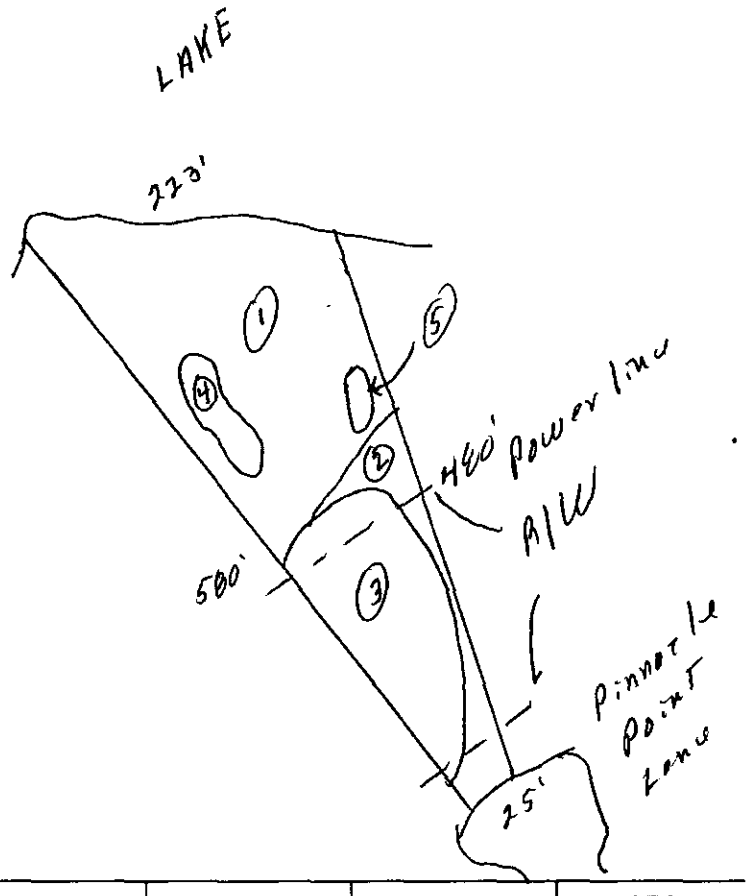
Lot: 59 Block: Acres: 1.26

Owner: Crescent Land & Timber Corp.
Address: 2305 Randolph Road, Suite C
Charlotte, NC 28207

Comments: Recommend system site be approved before lot is closed

Described by: William A. Mullis

Date: 5-25-89



***** EVALUATION KEY *****

S = Suitable U = Unsuitable
PS = Provisionally Suitable
The "Area Classification" below indicates the suitability of areas in the diagram.

FACTORS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6
Topography	S (PS) U 15-30%	(S) PS U 6-15%	(S) PS U 6-15%	S PS (U) complex slopes	S PS U	S PS U
Texture	S (PS) U clay	S (PS) U clay	S (PS) U clay	S PS U —	S PS U —	S PS U
Structure	S (PS) U blocky	S (PS) U blocky	S (PS) U blocky	S PS U —	S PS U —	S PS U
Drainage	S (PS) U 7.36" to water	S (PS) U 7.36" to water	S (PS) U 7.36" to water	S PS U —	S PS U —	S PS U
Depth	S (PS) U 36"+	S (PS) U 36"+	S PS (U) 19-26"	S PS U —	S PS U —	S PS U
Restrictive Horizons	S (PS) U 7.36"	S (PS) U 7.36"	S (PS) U 7.36"	S PS U —	S PS U —	S PS U
Available Space	S (PS) U very limited	S PS (U) Restricted	S (PS) U limited	S PS U	S PS U —	S PS U
Other (specify)	S PS U	S PS U	S PS U	S PS U	S PS (U) Rock outcrop	S PS U
Soil Group/Series	IVA Cecil-Like	IVA Cecil-Like	IVA Pacolet-Like	complex slopes	Rock	
Area Classification	S (PS) U	S PS (U)	S PS (U)	S PS (U)	S PS (U)	S PS U

APPLICATION FOR SOIL INVESTIGATION

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
1200 BLYTHE BOULEVARD
CHARLOTTE, NC 28203
PHONE (704) 376-4603

(OFFICE USE ONLY)

FILE: 5357A

TC: _____

☐ PC ☐ REPT

JOB LOCATION

① ADDRESS: Pinnacle Point Lane

② SUBDIVISION: Mountain Point Ph. 2 ③ LOT: 59 ④ BLOCK: _____

⑤ PARCEL REFERENCE: BOOK NO.: 023 PAGE NO.: 13 PARCEL NO.: _____

⑥ DEED REFERENCE: BOOK NO.: 436 426 (LMI-90) PAGE NO.: 204 354

OWNER

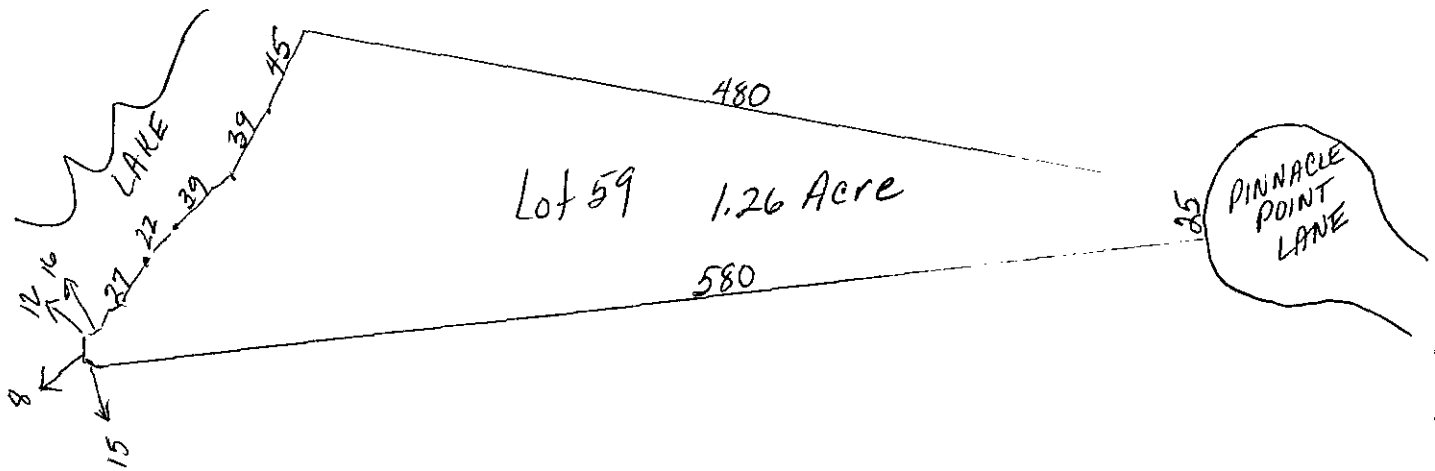
⑦ NAME: Crescent Land & Timber Corp. (c/o Lana Hathaway, LandCraft Properties)
(FIRST) (MIDDLE) (LAST)

⑧ MAILING ADDRESS: 2305 Randolph Road, Suite C

⑨ CITY: Charlotte, ⑩ STATE: N.C. ⑪ ZIP: 28207

⑫ PHONE: (WORK) (704) 332-9340 (HOME) (704) 892-9811

⑬ Accurately diagram and dimension lot.



⑭ The undersigned, owner of the property described above as the "JOB LOCATION" has read the foregoing application, acknowledges that the contents of same are true, and authorizes agents of the MECKLENBURG COUNTY HEALTH DEPARTMENT to enter onto the property for the purpose of processing this request.

Signed: Ethelene S. Williams

Date: March 23, 1989

Mecklenburg County services are available without regard to ethnic origin, sex, or disability.

WHITE - HEALTH DEPARTMENT'S COPY • CANARY - ENVIRONMENTALIST'S COPY • PINK - OWNER'S COPY

APPLICATION FOR SOIL INVESTIGATION

ENVIRONMENTAL HEALTH DIVISION

PAID

JAN 11 1989

#45

MECKLENBURG COUNTY · ENVIRONMENTAL HEALTH ·

1200 BLYTHE BOULEVARD
CHARLOTTE, NC 28203
PHONE (704) 376-4603

(OFFICE USE ONLY)

FILE: 5357A

TC: _____

☐ PC ☐ REPT

JOB LOCATION

① ADDRESS: PINNACLE POINT LANE

② SUBDIVISION: MOUNTAIN POINT PH. 2 ③ LOT: 59 ④ BLOCK: _____

⑤ PARCEL REFERENCE: BOOK NO.: 023 PAGE NO.: 13 PARCEL NO.: _____

⑥ DEED REFERENCE: BOOK NO.: 436, 426 (LMI-90) PAGE NO.: 204, 354

OWNER

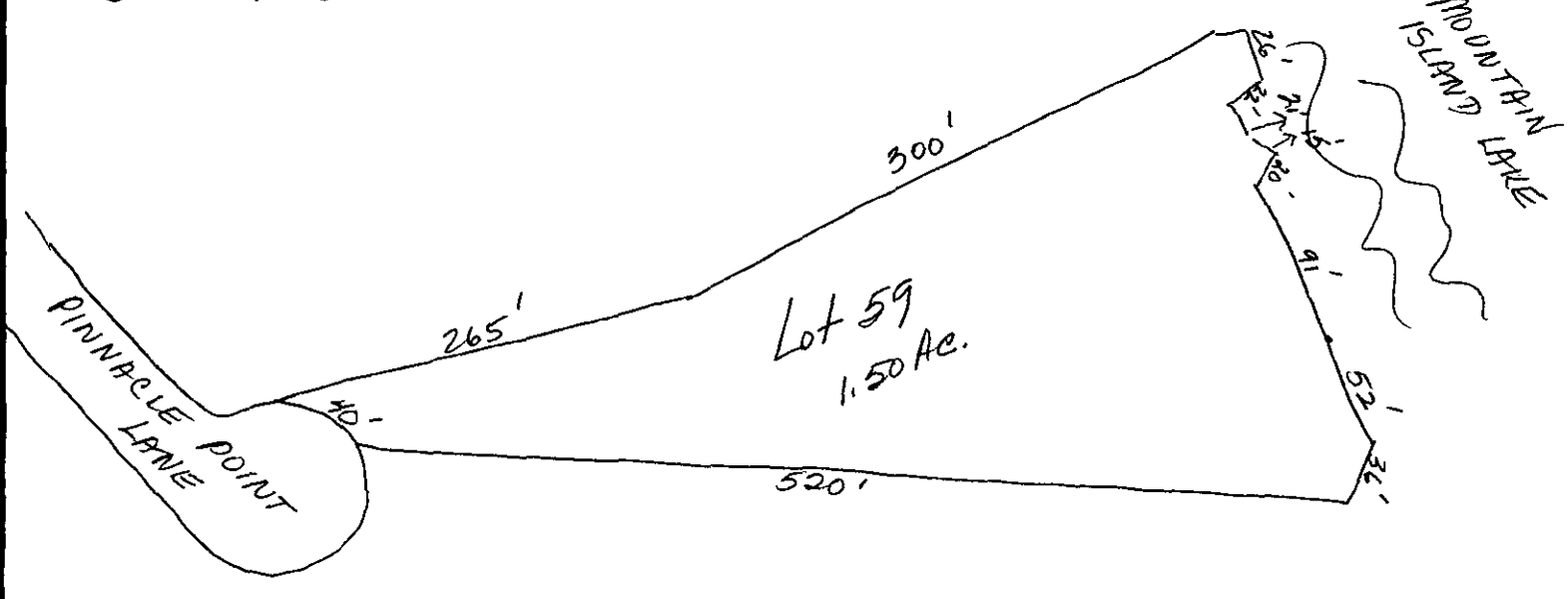
⑦ NAME: Crescent Land & Timber Corp. (c/o Lana Hathaway)
(FIRST) (MIDDLE) (LAST)

⑧ MAILING ADDRESS: 2305 Randolph Road, Suite C

⑨ CITY: Charlotte ⑩ STATE: N.C. ⑪ ZIP: 28207

⑫ PHONE: (WORK) (704) 332-9340 (HOME) (704) 892-9811

⑬ Accurately diagram and dimension lot.



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Signed: Miles J Boyer, V.P.

Mecklenburg County services are available without regard to ethnic origin, sex, or disability.

Date: 1/11/89

WHITE - ENVIRONMENTAL HEALTH DEPARTMENT'S COPY ● CANARY - ENVIRONMENTALIST'S COPY ● PINK - OWNER'S COPY