

16432 MARVIN RD

22308134

1/3/2008

duponbj

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

February 10, 2003

MECKLENBURG COUNTY
Health Department

Hersey Hawkins
16432 Marvin Rd.
Charlotte, NC 28277

Dear Mr. Hawkins:

The North Carolina Administrative Code requires routine maintenance and inspections of certain septic tank systems that utilize pumps. Our records indicate that the required inspection of the Type IIIb septic system, which serves as the wastewater treatment and disposal system for the residence located at 16432 Marvin Rd., Charlotte, NC. is due.

> In accordance with Section .1900 of the North Carolina Administrative Code, North Carolina Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section, Subchapter 10A, Sanitation, states in part: " System management in accordance with Tables V(a) and V(b) of this Rule shall be required for all systems installed or repaired after July 1, 1992."

This department will be making inspections on all systems that fall under this requirement. The fee for this service is $85.00. In addition, if you have a well, a bacterial sample will be collected to help assess the quality of your water supply source. The water analysis will be performed at no additional cost.

The inspection program and the water analysis are very important initiatives intended to protect the public's health while improving and preserving our groundwater resources. We highly recommend and prefer that you contact our office to make an appointment for the inspection of your system. If we have not heard from you by February 26, 2003 we will proceed with our inspection activities on your property. You will be apprised of our assessments and recommendations for the continued efficient operation of your septic tank system.

To set up an appointment for an inspection, or if you should have any questions regarding this matter, please feel free to contact me at (704) 336-5571.

Sincerely,

David Cornelius, R.S.I., Coordinator
Managed Systems Program
Individual Water and Wastewater Systems

Enclosure: Inspection Statement

INSPECTION STATEMENT
MECKLENBURG COUNTY HEALTH DEPARTMENT

Hersey Hawkins
16432 Marvin Rd.
Charlotte, NC 28277

Please Make Check Payable To:

Mecklenburg County Health Department
700 N. Tryon Street Suite 211
Charlotte, NC 28202

Note: THIS COMPLETED FORM MUST ACCOMPANY PAYMENT!

DESCRIPTION OF PROPERTY

Name	Site Address	Tax Parcel	File Number	System Type
Hersey Hawkins	16432 Marvin Rd.	22308134	3666B	IIIb
				Total Amount Due: $85.00

Please use the following space below, to make any corrections to property information.

Name _____

Site Address _____

_____

# of Bedrooms _____

BILL INFORMATION

Billing Date: 2/10/03

Payment Due Date: 3/10/03

Direct Questions Concerning This Bill to .....(704) 336-5571

☐ *Please check if you have a well.*

Make Check Payable To Mecklenburg County Health Department
Your Cancelled Check Is Your Receipt

DO NOT SEND CASH

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

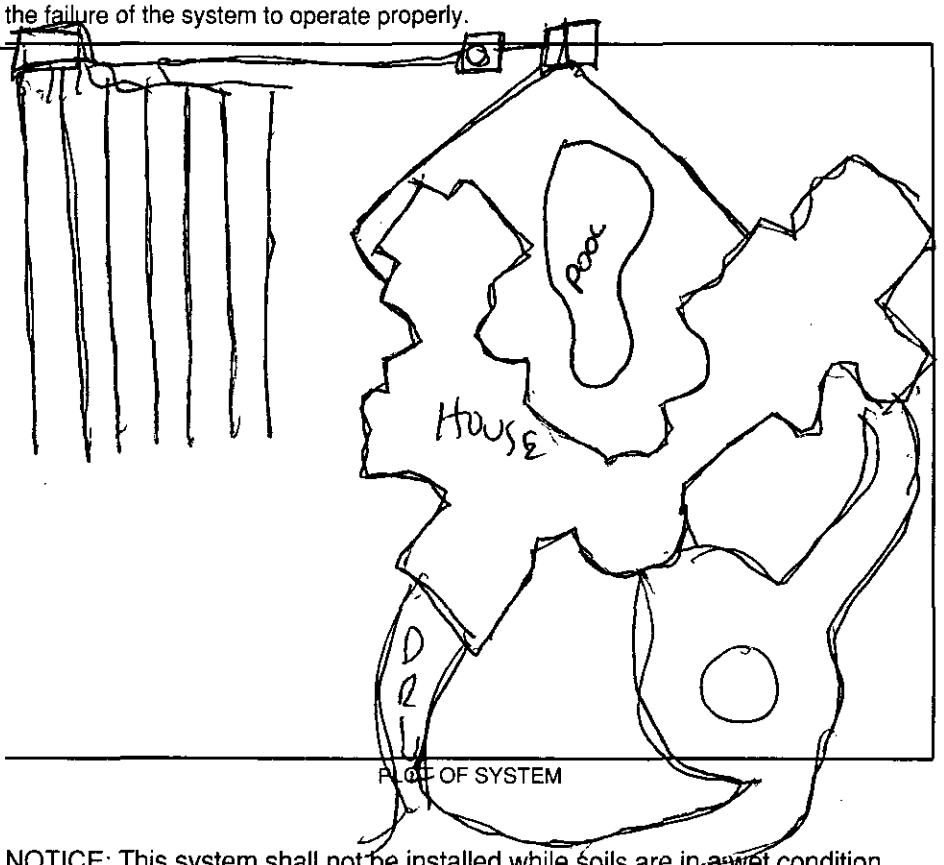
FILE: 3666-R DATE: 6-30-97

TC: 223-081-09

SERIAL Nº 17007

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 10-8-96. All work shall be completed on or before 7-30-97, 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.

PRESSURE MANIFOLD



PLOT OF SYSTEM

Liquid Capacity of Septic Tank 1500 gallons

Liquid Capacity of Dosing Tank 1500 gallons

Tank Construction PCC

Trench Depth 24"

Absorption and/or Nitrification Lines:

Trench Width 3 feet

Trench Walls Scored and Porous yes

Total Line Length 200' feet

Number of Lines 7 x 100

Depth of ~~Stone~~ _____ inches

Distance from House 5'+ feet

Distance from Property Line 10+ feet

Distance from Well 100'+ feet

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

NAME OF OWNER HERSEY HAWKINS

LOCATION OF PROPERTY 16432 MARVIN RD.

Comments: 7 lines @ 100' use innovative system

Environmental Health Specialist

Change in Plot Plat — Const. Auth. & Final FEE

FEE: $200.00 — 0K CK #1797 9-24-96 $150.00 8-1-95 #0516

DATE: 9-24-96 Original Fee Paid

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

1 1 CRT

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

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

FILE #: 3666 B

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 223-081-09 Po

STREET ADDRESS: 16432 Marvin Rd

SUBDIVISION OR MOBILE HOME PARK NAME: Evermay Subdivision

LOT NUMBER: 3

TYPE OF BUILDING (CHECK ONE):

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

HEATED SQUARE FOOTAGE: 14,000

NUMBER OF BEDROOMS: 5 | NUMBER OF OCCUPANTS: 5

FOUNDATION FOR RESIDENCE: X 1/10/97

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

TOWNSHIP (CHECK ONE):

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

CLOSING DATE _____

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

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

WATER SUPPLY (CHECK ONE):
__ COMMUNITY (C)
__ MUNICIPAL (M)
X 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
EXISTING WASTEWATER SYSTEMS __ YES ✓ NO
EASTMENTS OR RIGHT-OF-WAYS ✓ YES __ NO
WELL, SPRINGS OR WATERLINES __ YES ✓ NO
DESIGNATED WETLANDS __ YES ✓ NO

PROPERTY OWNER:	LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:
NAME: (LAST) Kaleel (FIRST) Builders, (MI) Inc	NAME: (LAST) (FIRST) (MI)
ADDRESS: PO Box 21029	DAYTIME PHONE: ( ) —
CITY: Charlotte STATE: NC ZIP: 28277	
DAYTIME PHONE: ( )704 - 541-9153	

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: Teresa A Cole DATE: 9/24/96

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

CERTIFICATE OF COMPLETION/OPERATION PERMIT

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

FILE: 3666B DATE: 11-3-97

TC 223-081-09 ☒ L ☒ CRT

SERIAL Nº 17193

Name of Owner Hersey Hawkins Juris.:

Address of Property 16432 Marvin Rd.

Inspection Data:

Tank Material PCC

Total Length of Drainfield 700'

Number of Lines 7 @ 100

Cover Depth 12"

Water Supply Source well

Distance to Water Source ≥100'

Excavation Inspected 8/7/97

Tank(s) Inspected 8/7/97

Wash Line Inspected —

High Water Alarm Inspected 11/3/97

PLOT

Design 1500 ST, 1000 PT, PRESSURE MANIFOLD, 25% REDUCTION CTR# Bobby McCarver

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 III b - 25% Reduction System
4 bedroom residence

Tom Lyle Barney R.S.
Environmental Health Specialist

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

4001

INDIVIDUAL WATER AND WASTEWATER SYSTEMS PROGRAM
APPLICATION FOR SERVICES

3666B

PA #19 8/14/95 CK # 0516 CAT

Mecklenburg County Health Dept.
Environmental Health Division
c/o Hal Marshall Ctr., Suite 211
700 N. Tryon St.
Charlotte, NC 28202

(704)336-5102

PERSON FILING APPLICATION:

NAME: Moore (last) Herman (first) A. (mi)

ADDRESS: 2809 Cavan Ct. PHONE: (704) 543-6409

CITY: Charlotte STATE: NC ZIPCODE: 28270

Date: 7/24/95

PROPERTY OWNER:

NAME: Evermay LLC (last) (first) (mi)

ADDRESS: 2809 Cavan Ct. PHONE: (704) 543-6409

CITY: Charlotte STATE: NC ZIPCODE: 28270

PROPERTY INFORMATION (FROM ENGINEERING FORM):

TAX/PARCEL NUMBER: part of: 223-081-09 PO

STREET ADDRESS: 16432 Mervin Road

Charlotte NC 28277

ZONING: R-3

Township (check one):
☒ 0 Mecklenburg County ☐ 2 Davidson ☐ 4 Pineville ☐ 6 Huntersville
☐ 1 Charlotte ☐ 3 Cornelius ☐ 5 Matthews ☐ 7 Mint Hill

SUBDIVISION OR MOBILE HOME PARK NAME: Evermay

LOT NUMBER: 3 LOT SIZE (in acres): 5.01 acres

TYPE APPLICATION (check one):

☐ SOIL TEST - INDIVIDUAL LOT (D)
☒ NEW CONSTRUCTION ON VACANT LOT - 4 BEDROOMS OR LESS (N)
☐ EXCHANGE MOBILE HOME - SAME # BEDROOMS (Y)
☐ ADDITION - INCREASE ROOMS/OCCUPANCY/MOBILE HOME SIZE (A or M)
☐ COMMERCIAL OR INDUSTRIAL (I)
☐ SOIL TEST DEVELOPMENT (P)
☐ ADDITION - GARAGE OR RENOVATION/NO MAJOR CHANGES (X)
☐ MODIFIED /ALTERNATIVE/ OR RESIDENCE > 4 BEDROOMS (Z)
☐ REPAIR TO SYSTEM (R)

RESIDENTIAL PROPERTY (Type Building, check one):

☐ SINGLE MOBILE HOME (S) ☒ HOUSE (H) ☐ MULTIPLE FAMILY (U)
☐ DOUBLE WIDE (D) ☐ MODULAR HOME (M) ☐ OTHER _____ (O)

NUMBER BEDROOMS: 4 NUMBER OCCUPANTS: 2

SYSTEM CLASSIFICATION:

COMMERCIAL/INDUSTRIAL PROPERTY:

Type Business _____ # Employees ___ Per Shift ___ ___ ___
Industrial Wastes (Y/N) ___
Underground Storage Tanks On Property (Y/N) ___ Type _____

WATER SUPPLY (check one):

☐ Community (C) ☐ Shared Well (S)
☐ Municipal (M) ☐ Other 'spring' (O)
☒ Private Well (P)

FUTURE ADDITIONS - ALL PLANNED ADDITIONS MUST BE ENTERED (check all that apply):

☒ Swimming Pool ☐ Jacuzzi ☐ Stable/Barn ☐ Workshop ☐ None
☒ Garage ☐ Storage Building ☒ Deck/Patio ☐ Bedrooms ☐ Other

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: Herman A. Moore, II Date: 7/24/95

NOTICE:

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department has approved the the Request for the Job Location contained in this document. This approval is granted in accordance with the provisions of Laws And Rules For Sanitary Sewage Collection, Treatment And Disposal in effect 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 permit is not transferable.

...Type III b for a 4 bedroom house

(5) 3'W x 105'L x 24"d x 12"G

☒ IMPROVEMENT PERMIT - VALID 60 MONTHS FROM ISSUANCE
☐ MOBILE HOME EXCHANGE APPROVAL - VALID 6 MONTHS FROM ISSUANCE
☐ ADDITION/RENOVATION APPROVAL - VALID 1 YEAR FROM ISSUANCE

Kenny B. Thompson Jr. R.S. 8-29-95
Environmentalist Date

Director or Authorized Section Head Program Chief 9-6-95
Date

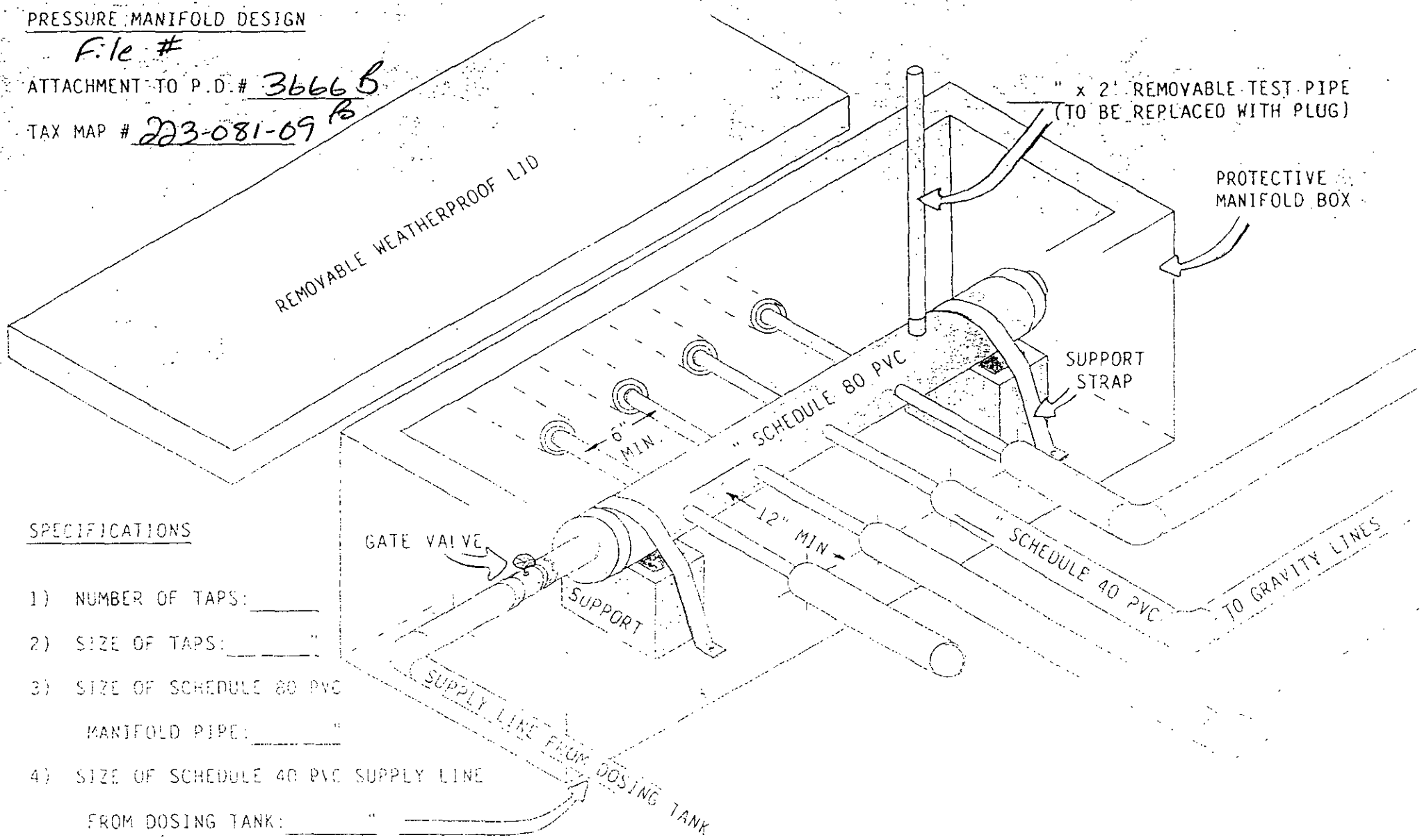
WATER : 22 91

PRESSURE MANIFOLD DESIGN

File #

ATTACHMENT TO P.D.# 3666B

TAX MAP # 223-081-09 B



SPECIFICATIONS

1) NUMBER OF TAPS: _____

2) SIZE OF TAPS: _____"

3) SIZE OF SCHEDULE 80 PVC MANIFOLD PIPE: _____"

4) SIZE OF SCHEDULE 40 PVC SUPPLY LINE FROM DOSING TANK: _____"

FILE COPY

PRESSURE MANIFOLD DESIGN FOR GROUND ABSORPTION SEWAGE SYSTEMS

Steven J. Berkowitz
February, 1986

Large subsurface wastewater systems are being used more frequently as alternatives to discharging systems for many public and private facilities.

Dosing effluent periodically and uniformly throughout the drain field improves absorption field performance and increases field longevity (Otis et al. 1977, Harget et al. 1982). Low-pressure distribution of effluent in small diameter, perforated laterals has become a popular design alternative for achieving uniform distribution. Over 2,000 low-pressure pipe systems are now in use at single-family homes in North Carolina. A comprehensive design and installation manual for residential low-pressure pipe systems is available (Cogger et al. 1982). Design criteria and a simplified design procedure have also been published (Otis 1982). Available information, however, does not adequately address some key design parameters for the more extensive low-pressure pipe networks being planned and installed in North Carolina.

Pressure distribution manifolds feeding conventional gravity drain lines is another alternative being used in North Carolina to improve the distribution of effluent in large subsurface fields. This method is applied where soil conditions are favorable for conventional trenches and where the length of drain pipe required and degree of field slope would make it difficult to achieve uniform distribution between laterals in a low-pressure pipe network. Design criteria for such systems have not been previously available.

This paper sets forth some critical design parameters for pressure manifolds and laterals in large conventional and low-pressure pipe ground absorption sewage systems. The justification for these design parameters is presented elsewhere (Berkowitz, 1985).

PRESSURE MANIFOLDS FOR CONVENTIONAL DRAIN FIELDS

The traditional approach to dividing effluent between conventional trenches is with a gravity distribution box. While relatively simple in concept and design, distribution boxes have proven to be generally ineffective in uniformly distributing effluent, especially when the number of trenches to be dosed is large (Mitchell, 1983).

Pressure manifolds can be designed to more effectively split flow between separate conventional trenches while still under pressure from the dosing tank. Schematics are presented below of pressure manifolds designed for level (Fig. 1) and sloping (Fig. 2) sites.

Pressure manifolds must be installed level, although some deviations may not seriously impair flow uniformity. Protective accessible boxes are recommended to be constructed around pressure manifolds installed above the drain field on sloping sites. Note that

---

The Author is: Steven J. Berkowitz, Environmental Engineer, On-Site Sewage Branch, Environmental Health Services Section, Division of Environmental Health, N.C. Dept. of Environment, Health, and Natural Resources, P.O. Box 27687, Raleigh, N.C. 27611-7687

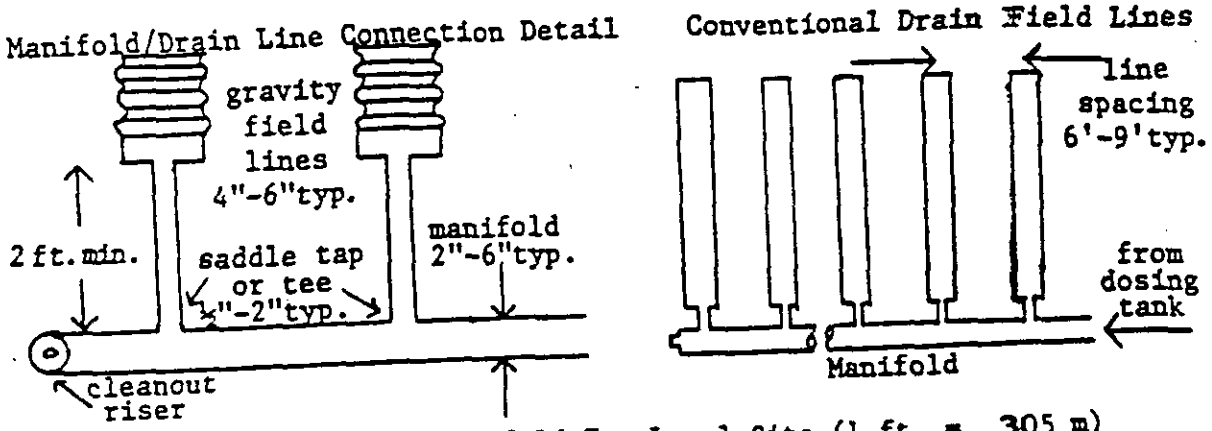


Fig. 1 Pressure Manifold For Level Site (1 ft. = .305 m)

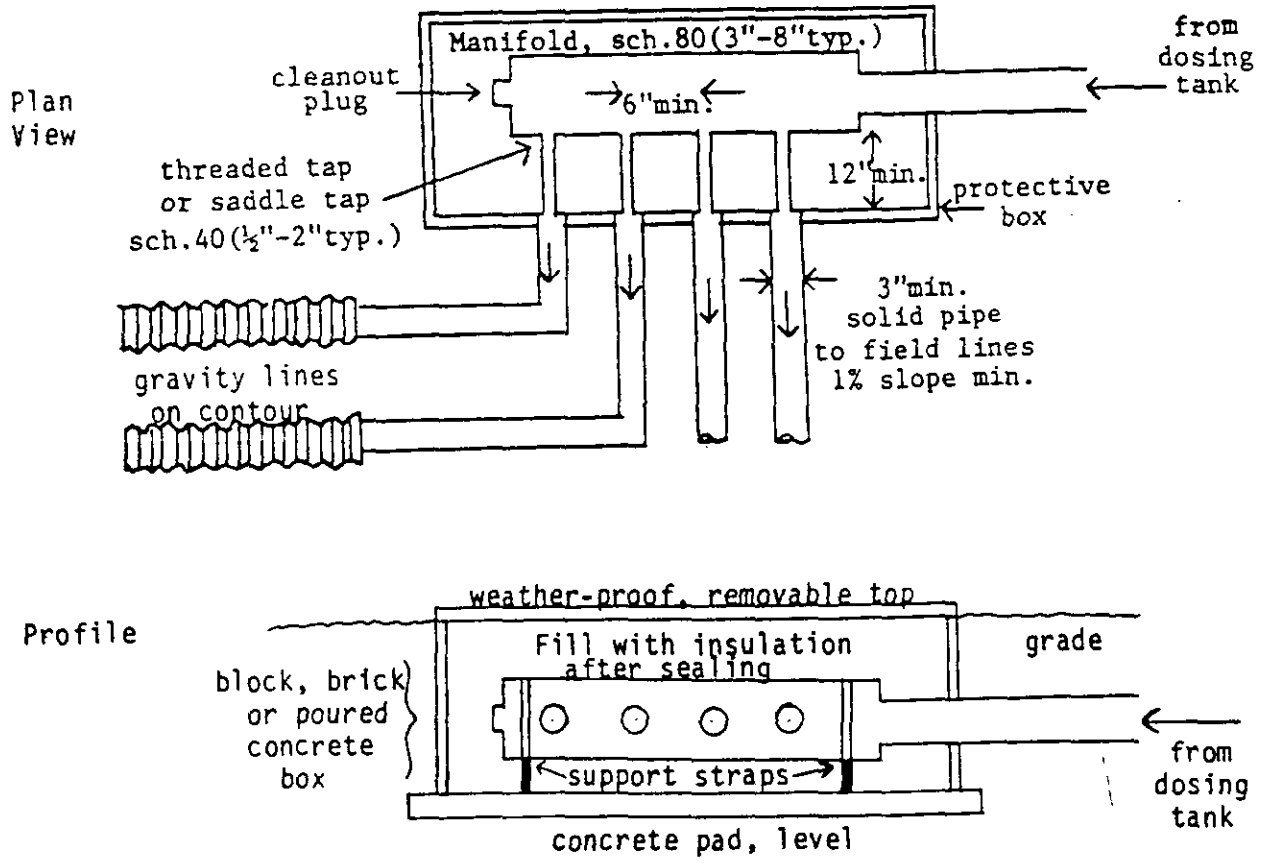


Fig. 2 Pressure Manifold For Sloping Sites

precautions against freezing may be necessary in cold regions if the system is subject to extended periods of disuse unless provisions are made to drain out the manifolds, since they will normally remain about half-full between dosing cycles.

Design criteria for pressure distribution manifolds and laterals are presented in Table 1. Shown are the maximum number of taps by differently sized laterals which can be made out of manifolds of varying sizes, while maintaining no more than a five-percent difference between flow rates into each lateral. An important further assumption is that 1 to 4 feet of pressure head are available at the lateral outlets. Design criteria are presented both for manifolds with lateral taps in one side and for manifolds with lateral taps in adjacent sides.

Recommended design steps utilizing these criteria are as follows:

1. Select Drain Field Configuration: Determine the required field size, number of laterals to be dosed from each pressure manifold, and desired lateral and tap spacing.

2. Choose Lateral Tap Size: For pump dosed systems, pick the largest pressure tap that can be adequately pressurized by a reasonably sized pump. Use the orifice equation[1] to compute required flow per tap, assuming at least 2 feet of pressure head at each lateral opening. Taps less than one-half-inch nominal size are not recommended. For siphon-dosed systems, select a tap size large enough to handle the maximum siphon discharge rate with the head available between the siphon outlet and the pressure manifold, while still maintaining a sufficient pressure head at the minimum siphon discharge rate.

3. Select Manifold Size: Given the desired lateral tap size and spacing, select from Table 1 the minimum size of manifold from which at least the desired number of taps can be made while staying within the five-percent flow variation limit. Selecting the next larger sized manifold will yield an even greater degree of flow distribution uniformity.

---

[1]Orifice equation: $Q = 13\ (d^2)\ (h^{\frac{1}{2}})$

where Q = flow from orifice, gallons per minute
d = diameter of orifice, inches
h = pressure head, feet

Example: Required flow per orifice assuming 2 feet of head and Schedule 40 PVC tap: ½-inch tap--7.1 GPM; 3/4-inch tap--12 GPM; 1-inch tap--20 GPM

ble 1: Pressure Distribution Manifolds for Conventional Septic Systems; Manifold and Lateral Tap Size Criteria[a]

p Separation Distance (Feet)	Manifold Size (Inches)	Lateral Taps out of One Side of Manifold — Lateral Tap Size (inches) — Maximum Number of Taps						Lateral Taps out of Both Sides of Manifold — Lateral Tap Size (inches) — Maximum Number of Tap Pairs					
		½	3/4	1	1¼	1½	2	½	3/4	1	1¼	1½	2
0.5[b]	2	4	2					2					
	3	9	5	3	2			4	2				
	4	16	9	5	3	2		7	4	2			
	6	40+	21	12	7	5	3	18	10	6	3	2	
	8		38	22	12	9	5		17	10	6	4	2
3.0[c]	2	8	2					2					
	3	14	12	3	2			6	2				
	4	21	18	6	3	2		16	5	3			
	6	38	30	26	8	5	3	20+	19	7	3	2	
6.0[c]	2	5	4					4					
	3	9	7	6	2			7	3	2			
	4	14	11	9	4	2		10	9	3			
	6	27	20	17	14	7	3	19	15	13	4	3	
9.0[c]	2	4	3	3				3					
	3	7	6	5	2			6	5	2			
	4	12	9	7	6	3		8	7	6	2		
	6	22	16	13	11	10	4	15	12	10	5	3	

[a]Assumptions: 1 to 4 feet (.3 to 1.2 meters) head at lateral outlets; 5% maximum flow differential maintained between laterals; Hazen-Williams "C" factor of 140; taps are of Schedule 40 PVC and manifolds are of Schedule 80 PVC, with the following actual inside diameters:

	nominal pipe size (inches)							
	½	3/4	1	1¼	1½	2	3	4	6	8
	actual inside diameter: inches (millimeters)									
Taps	.622(19)	.824(25)	1.049(32)	1.38(42)	1.61(49)	2.067(63)				
Manifolds						1.939(59)	2.90(88)	3.826(117)	5.761(176)	7.625(232)

[b]Use for pressure manifold distribution box designed for sloping lots, located above highest field line.

[c]Use for pressure manifold on flat lots, located adjacent to end of each field line.

PRESSURE MANIFOLDS FOR LOW-PRESSURE PIPE DRAIN FIELDS

Low-pressure systems involve distributing effluent throughout the nitrification field within a pressurized manifold and small diameter lateral network. Effluent enters the nitrification trenches from orifices drilled into the distribution laterals (Fig. 3).

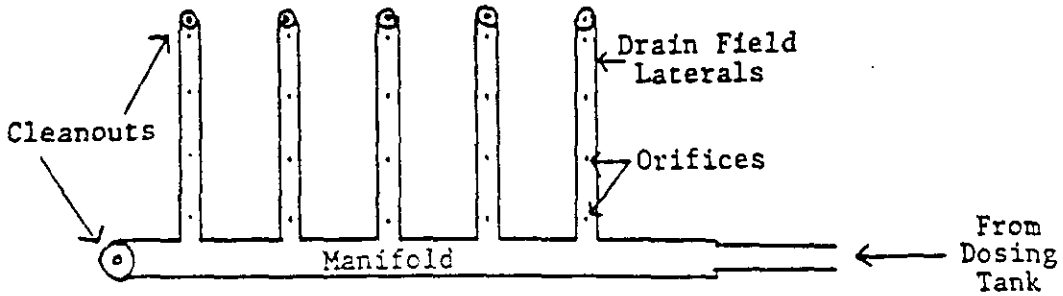


Fig. 3 Low-Pressure Pipe Drain Field

Pressure is generally maintained between 2 and 5 feet in the laterals to facilitate uniform distribution while minimizing scour outside of the orifices.

Critical design parameters for laterals are pipe diameter, lateral length, orifice size, and orifice spacing. In most low-pressure pipe applications in North Carolina, orifices range from 1/8-inch to 1/4-inch, with 5/32-inch orifices now recommended as the minimum size to use. Curves were developed which relate maximum lateral length to pipe diameter, orifice size, and spacing, based on yielding no more than a ten-percent difference between flow rates from each orifice (Fig. 4).

Critical design decisions for low-pressure system manifolds involve selecting the manifold diameter needed relative to the diameter of the laterals served and determining the maximum number of laterals which can be fed off a common supply manifold. Manifold design criteria are presented for the condition that the nitrification field is level and the manifold and laterals are on the same level (e.g.; laterals tee directly off from the manifold). Lateral spacing is assumed to be 5 feet, the most frequently used spacing for low-pressure pipe systems in North Carolina. Results are presented in Fig. 5 showing the maximum number of laterals of different sizes which can be supplied by a common manifold at varying mean lateral flow rates, while maintaining no more than 15-percent difference between flow rates into each lateral.

Results shown in Fig. 5 indicate that relatively few laterals can be served by small manifolds. It is uncertain, however, whether these criteria can be considered directly transferable to the more popular design whereby laterals are above the manifold, connected by short risers which tee off of the manifold and are elbowed or teed into each lateral. Under these conditions, more laterals than shown in Fig. 5 may in fact be fed by a common manifold while still maintaining relatively uniform flow distribution. Further research in this area is needed.

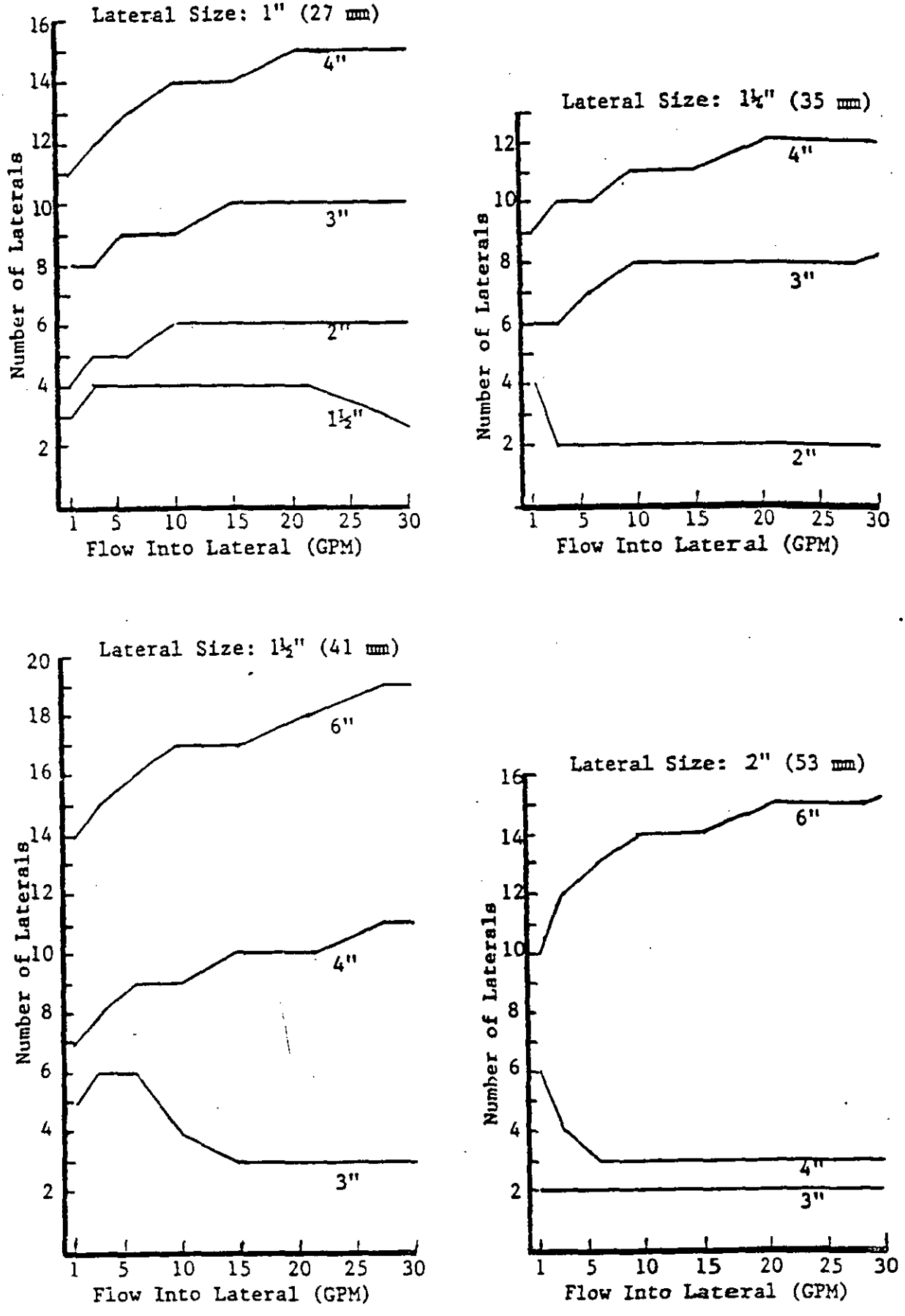


Fig. 5 Maximum Number of Different Sized Laterals For Low-Pressure Pipe Systems With Varying Sizes of Manifolds and Varying Rates of Flow Into Lateral (1 GPM = .0631 l/sec)

Recommended design steps using these criteria are as follows:

1. Select Drain Field Configuration: Determine the desired field size configuration, lengths of laterals, and location of supply manifolds.

2. Choose Orifice Size and Spacing: For pump dosed systems, select the largest orifice size and shortest orifice spacing resulting in a total number of orifices which can be adequately pressurized by a reasonably sized pump. Use the orifice equation to compute required flow per orifice, assuming at least 2 feet of pressure head at each orifice. Taps less than 5/32-inch and spacings greater than 10 feet are not recommended. For siphon-dosed systems, select an orifice size and spacing so that there are enough orifices of sufficient size to handle the maximum siphon discharge rate with the head available between the siphon outlet and the drain field, while still maintaining a sufficient pressure head at the minimum siphon discharge rate.

3. Choose Lateral Diameter: Given the desired lateral length and orifice size and spacing, select from Fig. 4 the minimum size of lateral from which at least the desired size and spacing of orifices can be used while staying within the 10-percent flow variation limit.

4. Select Manifold Size: Given the desired lateral size and lateral design flow rate, select from Fig. 5 the minimum size of manifold from which at least the desired number of laterals can be dosed while staying within the 15-percent flow variation limit.

5. Optimize Design: Repeat steps 1 through 4 above until a practical, workable manifold and lateral network design is obtained.

REFERENCES

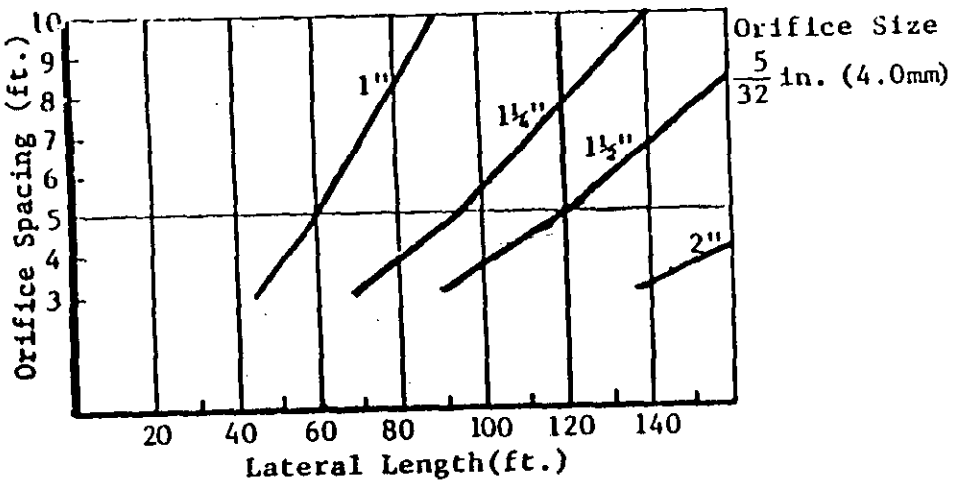
1. Berkowitz, S. J. 1985. Pressure manifold design for large subsurface ground absorption sewage systems. In: On-Site Wastewater Treatment: Proceedings of the fourth national symposium on individual and small community sewage systems. Dec. 10 - 11, 1984. New Orleans. American Society of Agricultural Engineers.

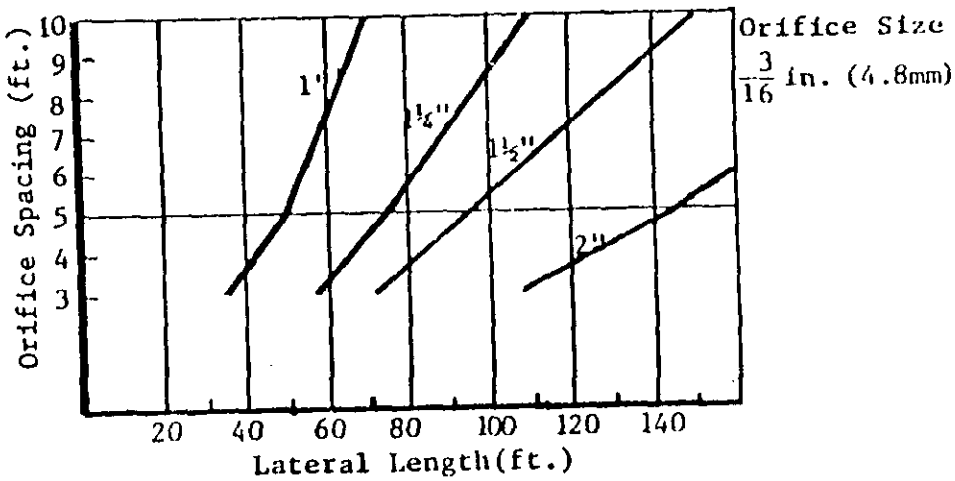
2. Cogger, C., B. L. Carlile, D. Osborne and E. Holland. 1982. Design and installation of low-pressure pipe waste treatment systems. UNC Sea Grant College Pub. UNC-SG-82-03. 31p.

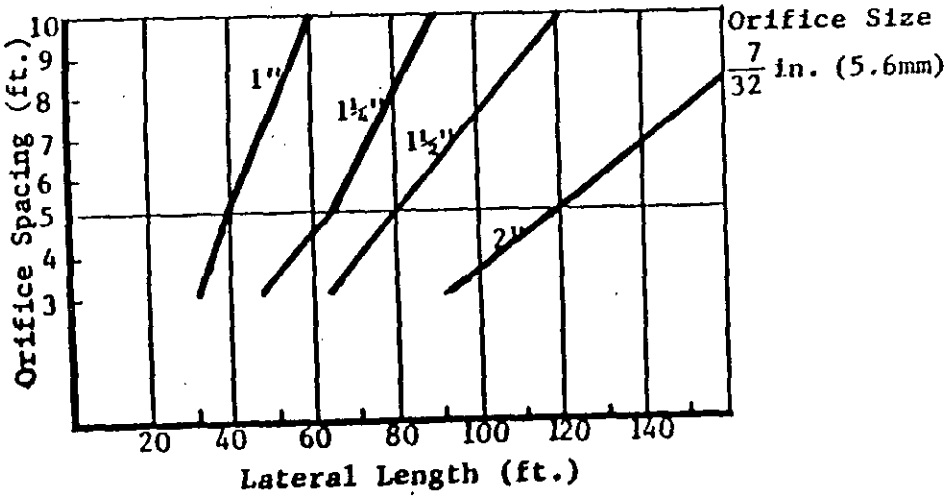
3. Mitchell, D. 1983. Nonuniform distribution by septic tank systems. 1982 southeastern on-site sewage treatment conference. N. C. Div. of Health Services, Raleigh, NC 37-45.

4. Otis, R. J. 1982. Pressure distribution design for septic tank systems. Jour. of the Env. Eng. Div., ASCE 108(1): 123-140.

5. Otis, R. J., J. C. Converse, B. L. Carlile and J. E. Witty. 1977. Effluent distribution. Home Sewage Treatment. ASAE Pub. 5-77. St. Joseph, Mich. 61-85.







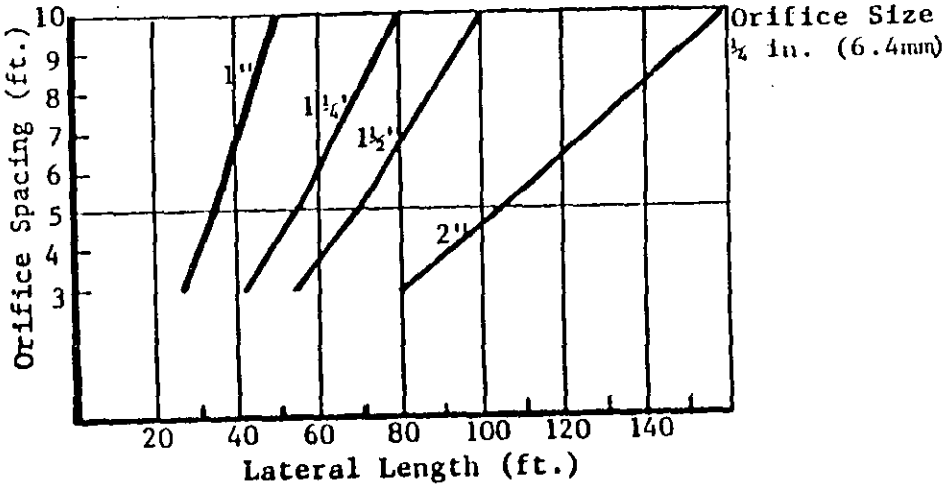


Fig. 4 Maximum Length of Different Sized Laterals For Low-Pressure Pipe Systems With Varying Orifice Sizes and Spacings (1 ft. = .305 m)

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

WASTEWATER TREATMENT AND DISPOSAL SYSTEM DESIGN AGREEMENT: 15A NCAC 18A .1948 AND ANY OF THE FOLLOWING RULES: .1956; .1957(a); .1957(b); or .1957(c); OR .1969

FILE # 3666 B
PARCEL # 223-081-09 PO

The undersigned, Kaleel Builders, Inc., owner of property located at 16432 MARVIN ROAD, LOT 3, CHARLOTTE, NC, (the "site") and described in an instrument recorded in Book 8322 at Page 477, Mecklenburg Public Registry, hereby acknowledges that the undersigned applied to the Mecklenburg County Health Department (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 as 15A NCAC 18A .1900 et seq.; that the Department originally classified the site as "unsuitable" pursuant to the standards set forth in the regulations; that the undersigned requested 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 is allowed by the rules; 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 the responsibility of the designer, owner, developer, installer, or user of the system, as applicable, 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 acknowledges that the following conditions will apply to the site:

- Any changes on the property may make the Improvement Permit Null and void and may make the Improvement Permit subject to revocation.

FILE COPY

FILED FOR REGISTRATION
DATE 10/8/96
AT
BOOK 8771
PAGE 475
JUDITH A. GIBSON
MECKLENBURG COUNTY, N. C.
REGISTER OF DEEDS

This instrument was prepared by: _____

Mail after recording to: _____

- Do not grade, cut, fill, pave, construct a building or deck, dig a well, install a swimming pool or otherwise cover or disturb the soil (except for planting and maintaining grass or other ground covers) in a manner which will adversely affect the repair area or area where the septic tank system is located.

- When a private certified operator is required, no improvement permit for the designated repair shall be issued unless there is a private certified operator to carry out this management program in the service area where the proposed system is to be located. (Refer to Rule .1961, "Maintenance of Sewage Systems," for further information.)

- Additional fees will be required according to the Mecklenburg County user fee schedule applicable at the time for the issuance of a repair permit for any subsequent repairs to the sewage treatment and disposal system or for installation of a replacement system.

- At the time repairs to the sewage treatment and disposal system are to be made or a replacement system installed, the regulations in effect at that time will govern the repairs or installation of a replacement 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.

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 claiming any right, title, or interest in the site.

IN WITNESS WHEREOF, the undersigned has hereunto set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, this 24 day of September, 1996.

Kaleel Builders, Inc.
(Corporate Name)

By: _____
Stephen J. Kaleel
_____ President

ATTEST:
_____
Assistant Secretary

(Corporate Seal)

_____ (SEAL)

_____ (SEAL)

_____ (SEAL)

_____ (SEAL)

STATE OF NORTH CAROLINA
COUNTY OF _____

I, _____, a Notary Public for said County and State, do hereby certify that _____ personally appeared before me this date and acknowledged the due execution of the foregoing instrument.

WITNESS my hand and notarial seal, this _____ day of _____, 199__.

_____
Notary Public

My Commission Expires:
_____

STATE OF NORTH CAROLINA
COUNTY OF Mecklenburg

I, Teresa A. Cole, a Notary Public for said County and State, do hereby certify that Victoria C. Kaleel personally came before me this day and acknowledged that she is Assistant Secretary of Kaleel Builders, Inc., a North Carolina corporation, 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 _____ President, sealed with its corporate seal and attested by she as its Assistant Secretary.

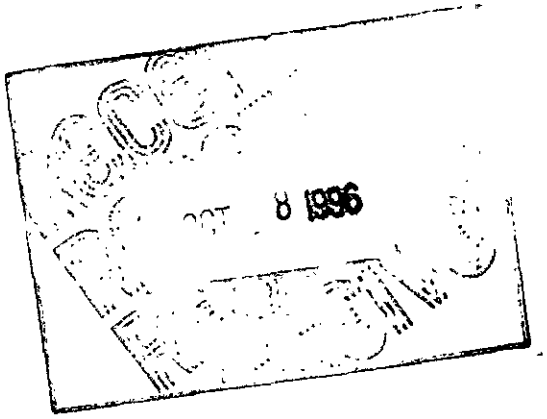
WITNESS my hand and notarial seal, this 24 day of September, 1996.

Teresa A Cole
Notary Public

My Commission Expires:
2/28/98

RBCWM:24751_1/8-30-95

223-081-34



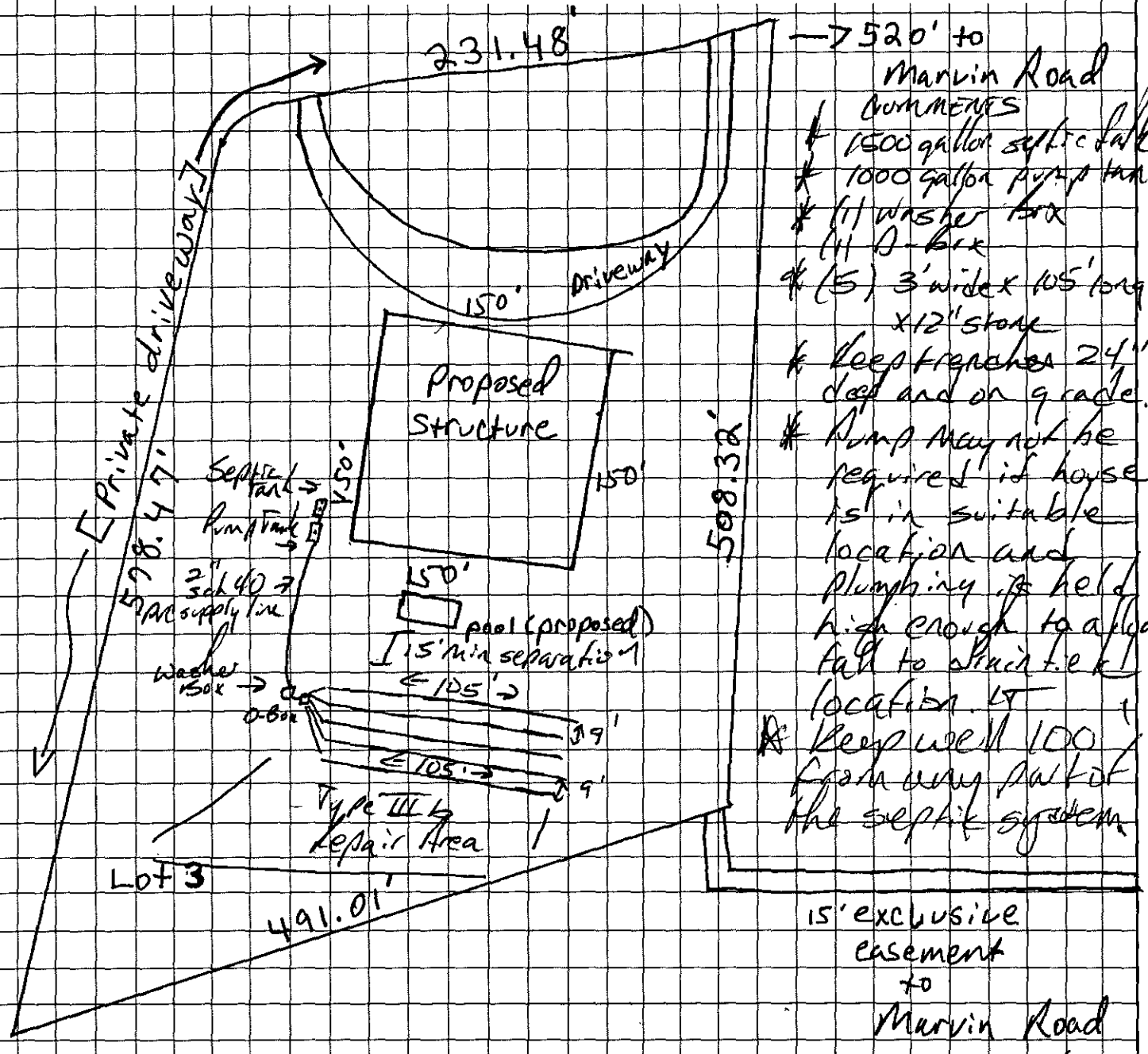
PROPOSED PLOT PLAN

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON STREET
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 3666B

TC: 223-08-09 PC

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.



- 1500 gallon septic tank
- 1000 gallon pump tank
- (1) Washer box
- (1) O-box
- (5) 3' wide x 105' long x 12" stone
- Keep trenches 24" deep and on grade.
- Pump may not be required if house is in suitable location and plumbing is held high enough to allow fall to septic tank location.
- Keep well 100' from any part of the septic system.

Herman A. Moore, Jr.
OWNER/AGENT SIGNATURE

DATE 7/24/95

APPROVAL DATE 8-29-95 J. Thompson

White - Health Department's Copy Canary - E.H.S. Copy Pink - Owner's Copy

All fees Paid $300.00 ck # 1797 Receipt # 5690

4 of 4

CE: AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION
ATE: 9-24-96 VOID SIXTY (60) MONTHS FROM DATE OF ISSUANCE

DATE: 9-23-96 PERMIT NO: 3666 B

PARCEL NO: 223-081-09B

JOB LOCATION ADDRESS: 16432 Mossy Road
PROPERTY OWNER: Kulee Builders
BUILDING CONTRACTOR: Steve Kulee
SUBDIVISION NAME: Everhaven Lot 3
AUTHORIZATION ISSUED BY: Tommy B. Thompson, L.S. DATE: 9-23-96
DEHNR AUTHORIZED AGENT

AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NO. 3666B, 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: Agreement form must be on file before AWSC can be released
Keep well 100' from any portion of the septic system and 50' off house foundation.

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.

X Teresa A Culp
SIGNATURE OF OWNER/OWNER'S REPRESENTATIVE

X 10/8/96
DATE

Change in Plot Plat — Const. Auth. & Final FEE

FEE: $200.00 — 02 CK #1797 9-24-96
DATE: 9-24-96 $150.00 9-1-96 #0516
Original Fee Paid

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

1 1 CRT

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

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

FILE #: 3666 B

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 223-081-09 Po

STREET ADDRESS: 16432 Marvin Rd

SUBDIVISION OR MOBILE HOME PARK NAME: Everray Subdivision

LOT NUMBER: 3

TOWNSHIP (CHECK ONE):

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

CLOSING DATE _____

TYPE OF BUILDING (CHECK ONE):

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

HEATED SQUARE FOOTAGE: 14,000

NUMBER OF BEDROOMS: 8 NUMBER OF OCCUPANTS: 5

FOUNDATION FOR RESIDENCE:

X WITHOUT BASEMENT
X 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 X NO TYPE: _____

WATER SUPPLY (CHECK ONE):

__ COMMUNITY (C)
__ MUNICIPAL (M)
X 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
EXISTING WASTEWATER SYSTEMS ✓ YES __ NO
EASTMENTS OR RIGHT-OF-WAYS ✓ YES __ NO
WELL, SPRINGS OR WATERLINES __ YES ✓ NO
DESIGNATED WETLANDS __ YES ✓ NO

PROPERTY OWNER:	LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:
NAME: Kaleel Builders, Inc (LAST) (FIRST) (MI)	NAME: (LAST) (FIRST) (MI)
ADDRESS: PO Box 21029	DAYTIME PHONE: ( ) —
CITY: Charlotte STATE: NC ZIP: 28277	
DAYTIME PHONE: ( )704 - 541-9153	

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: Teresa A Cole DATE: 9/24/96

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

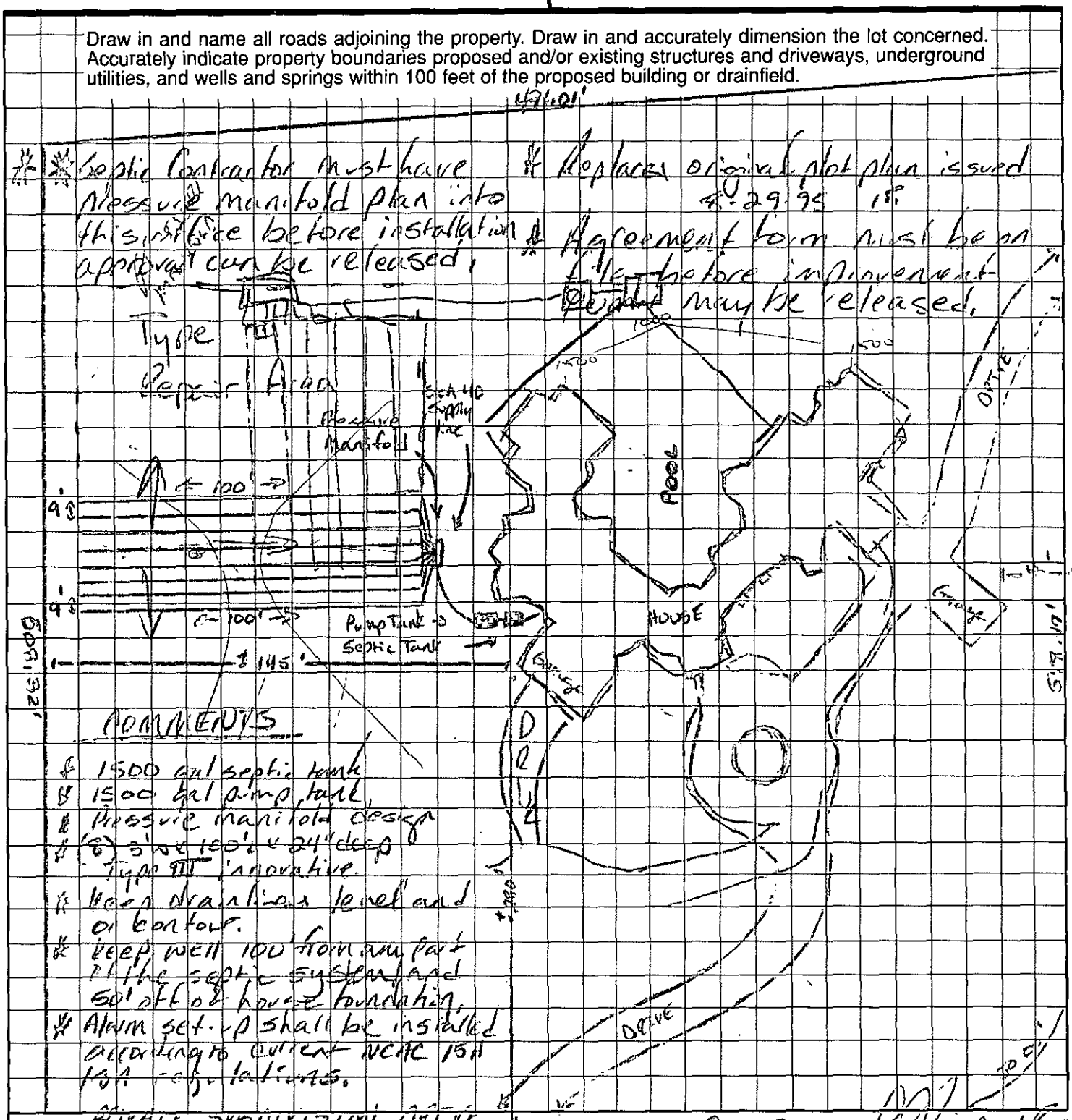
PROPOSED PLOT PLAN

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON STREET
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 31666 B

TC: 223-081-09 PO

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 9-23-96 J. Humphries R.S.

OWNER/AGENT SIGNATURE

DATE 10/8/96

White - Health Department's Copy Canary - E.H.S. Copy Pink - Owner's Copy

Permit Number: 3666 B

Tax Number: 223-081-09 10

- 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: (System with 25% reduction than conventional) ___ IWWS-93-1 ___ IWWS-93-2 ___ IWWS-94-1	
3 Long-term acceptance rate	960 Max gallons/day wastewater flow	2400 Absorption Area (sq ft)	9' Trench spacing (min. on centers)	
Yes Serviced by private well	1500 Gallon septic tank	800 Total trench length (ft)	24" Maximum trench depth (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions)	
8 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:	Keep well 100' from any portion of the septic system and its repair area - Keep well 50' off of house foundation. Agreement form must be on file before improvement permit is released.			
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	
2400 Absorption Area (Sq ft) 800 Total Trench Length (Ft)	N/A Depth of Stone Trench	9' Trench spacing (min. on centers)	24" Maximum Trench Depth	
For existing system, enter the year originally installed:				

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department has approved the Request for the 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 effect 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 Jr. L.S. 9-23-96
DEHNR Authorized Agent Date

X Teresa A Cole 10/8/96
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

Permit Number: 2666 Tax Number: [illegible]

- 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: (system with 25% reduction from conventional)
___ IWWS-93-1
___ IWWS-93-2
___ IWWS-94-1

3 Long-term acceptance rate	960 Max gallons/day wastewater flow	2400 Absorption Area (sq ft)	9' Trench spacing (min. on centers)
Yes Serviced by private well	1500 Gallon septic tank	800 Total trench length (ft)	24" Maximum trench depth (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions)
8 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: Keep well 100' from any portion of the septic system and its repair area - Keep well 50' off of house foundation. Agreement form must be on file before improvement permit is released.

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

2400 Absorption Area (Sq ft) 800 Total Trench Length (Ft)	N/A Depth of Stone Trench	9' Trench spacing (min. on centers)	24" Maximum Trench Depth

For existing system, enter the year originally installed:

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department has approved the Request for the 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 effect 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 Jr. R.S. 9-23-96
DEHNR Authorized Agent Date

X Teresa A. Cole 10/8/96
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

MECKLENBURG COUNTY HEALTH DEPARTMENT DHO

SITE EVALUATION REPORT

SERIAL NUMBER 028666

File: 3666 B Action 1

Parcel: PO 223-081-09 ☐ PC

Location: 16432 Marvin Road

Subdivision:

Lot: 3 Block: Acres: Approx .35±-

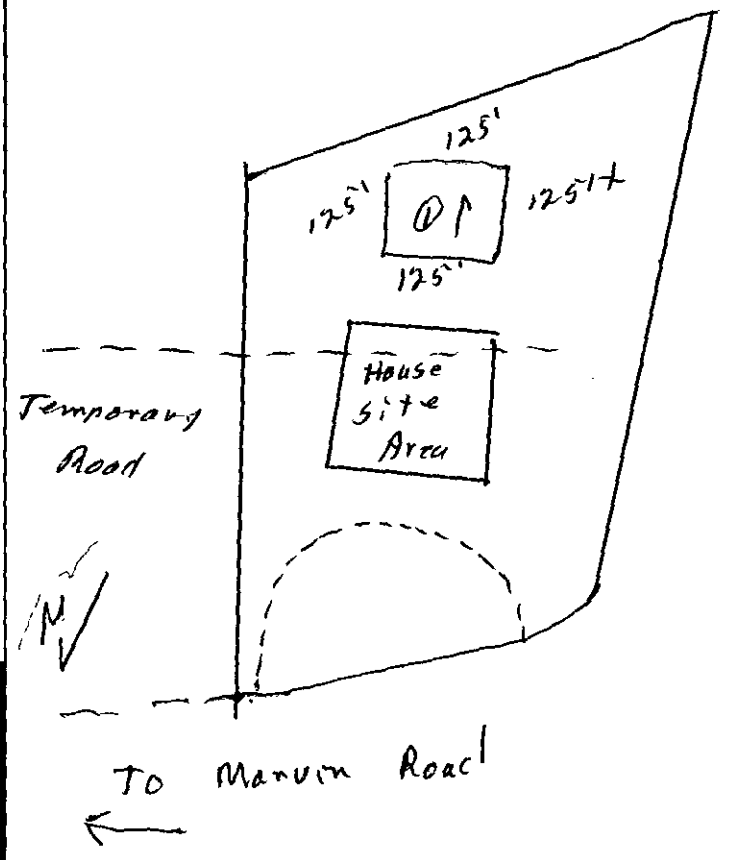
Owner: Evenmey LLC

Address: 2809 Carvan Ct.
Charlotte, N.C. 28270

Comments: 100% Repair
3gal/ft²/day LTAA
system would probably
need pump

Described by: William A. Marks

Date: 6-24-95



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

S = Suitable U = Unsuitable

PS = Provisionally Suitable

The "Area Classification" below indicates the suitability of areas in the diagram.

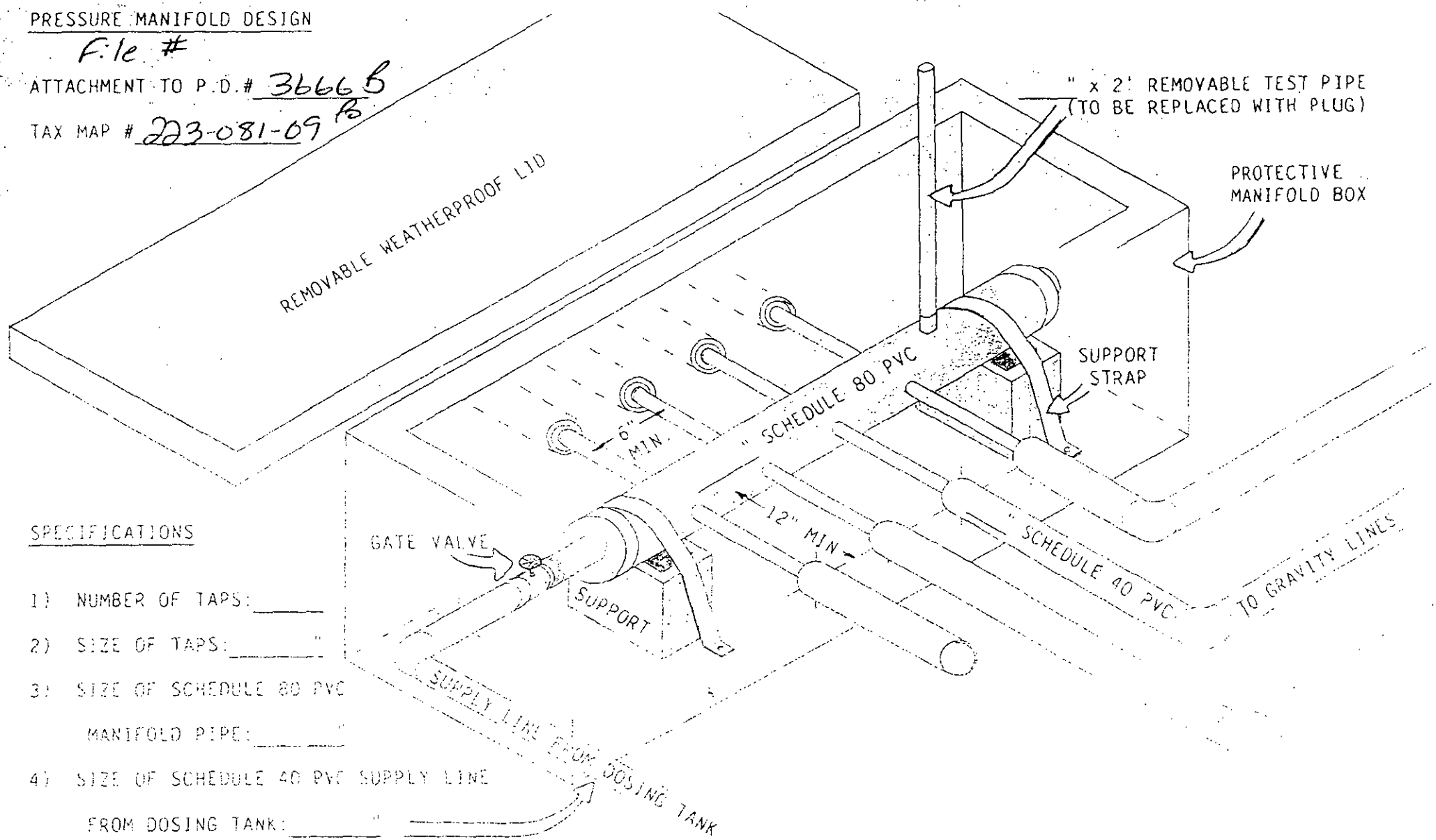
FACTORS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6
Topography	(S) PS U 2-8%	S PS U	S PS U	S PS U	S PS U	S PS U
Texture	S (PS) U slight Exp. clay	S PS U	S PS U	S PS U	S PS U	S PS U
Structure	S (PS) U Blocky	S PS U	S PS U	S PS U	S PS U	S PS U
Drainage	S ~~PS~~ U 46" soil wetness	S PS U	S PS U	S PS U	S PS U	S PS U
Depth	S (PS) U 40-48"	S PS U	S PS U	S PS U	S PS U	S PS U
Restrictive Horizons	(S) PS U 46"	S PS U	S PS U	S PS U	S PS U	S PS U
Available Space	S (PS) U	S PS U	S PS U	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	S PS U
Soil Group/Series	Cecil-Like IV					
Area Classification	S (PS) U	S PS U	S PS U	S PS U	S PS U	S PS U

PRESSURE MANIFOLD DESIGN

File #

ATTACHMENT TO P.D.# 3666B

TAX MAP # 223-081-09 B



SPECIFICATIONS

1) NUMBER OF TAPS: _____

2) SIZE OF TAPS: _____"

3) SIZE OF SCHEDULE 80 PVC MANIFOLD PIPE: _____"

4) SIZE OF SCHEDULE 40 PVC SUPPLY LINE FROM DOSING TANK: _____"

FILE COPY


GUEST HOUSE
FF @ 1054
FAMILY HOUSE
FF @ 1054
GARAGE
FF @ 1054
GUEST HOUSE
FF @ 1057
1054
1052
1050
1048
1046
1044
1042
1040
1038
1036
1034
1032
1030
1028
1026
1024
1022
1020
1018
1016
1014
1012
1010
1008
1006
1004
1002
1000
998
996
994
992
990
988
986
984
982
980
978
976
974
972
970
968
966
964
962
960
958
956
954
952
950
948
946
944
942
940
938
936
934
932
930
928
926
924
922
920
918
916
914
912
910
908
906
904
902
900
898
896
894
892
890
888
886
884
882
880
878
876
874
872
870
868
866
864
862
860
858
856
854
852
850
848
846
844
842
840
838
836
834
832
830
828
826
824
822
820
818
816
814
812
810
808
806
804
802
800
798
796
794
792
790
788
786
784
782
780
778
776
774
772
770
768
766
764
762
760
758
756
754
752
750
748
746
744
742
740
738
736
734
732
730
728
726
724
722
720
718
716
714
712
710
708
706
704
702
700
698
696
694
692
690
688
686
684
682
680
678
676
674
672
670
668
666
664
662
660
658
656
654
652
650
648
646
644
642
640
638
636
634
632
630
628
626
624
622
620
618
616
614
612
610
608
606
604
602
600
598
596
594
592
590
588
586
584
582
580
578
576
574
572
570
568
566
564
562
560
558
556
554
552
550
548
546
544
542
540
538
536
534
532
530
528
526
524
522
520
518
516
514
512
510
508
506
504
502
500
498
496
494
492
490
488
486
484
482
480
478
476
474
472
470
468
466
464
462
460
458
456
454
452
450
448
446
444
442
440
438
436
434
432
430
428
426
424
422
420
418
416
414
412
410
408
406
404
402
400
398
396
394
392
390
388
386
384
382
380
378
376
374
372
370
368
366
364
362
360
358
356
354
352
350
348
346
344
342
340
338
336
334
332
330
328
326
324
322
320
318
316
314
312
310
308
306
304
302
300
298
296
294
292
290
288
286
284
282
280
278
276
274
272
270
268
266
264
262
260
258
256
254
252
250
248
246
244
242
240
238
236
234
232
230
228
226
224
222
220
218
216
214
212
210
208
206
204
202
200
198
196
194
192
190
188
186
184
182
180
178
176
174
172
170
168
166
164
162
160
158
156
154
152
150
148
146
144
142
140
138
136
134
132
130
128
126
124
122
120
118
116
114
112
110
108
106
104
102
100
98
96
94
92
90
88
86
84
82
80
78
76
74
72
70
68
66
64
62
60
58
56
54
52
50
48
46
44
42
40
38
36
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0

KALEEL BUILDERS, INC.

P.O. BOX 21029
CHARLOTTE, NC 28277

(704) 541-9153
FAX: (704) 541-9154

TO: Kelly Randell Fax: 336-6894

Meck Co. Health Dept.

FROM: Teresa Cole

Kaleel Builders, Inc.

DATE 1/27/97

RE 16432 Marvin Road

Lot 3 - Evermay

Pages including this transmittal 1

Please change the number of bedrooms on this file to 6. Please call to confirm this fax, and to let me know if I need to come down for any paperwork.

Thank you!

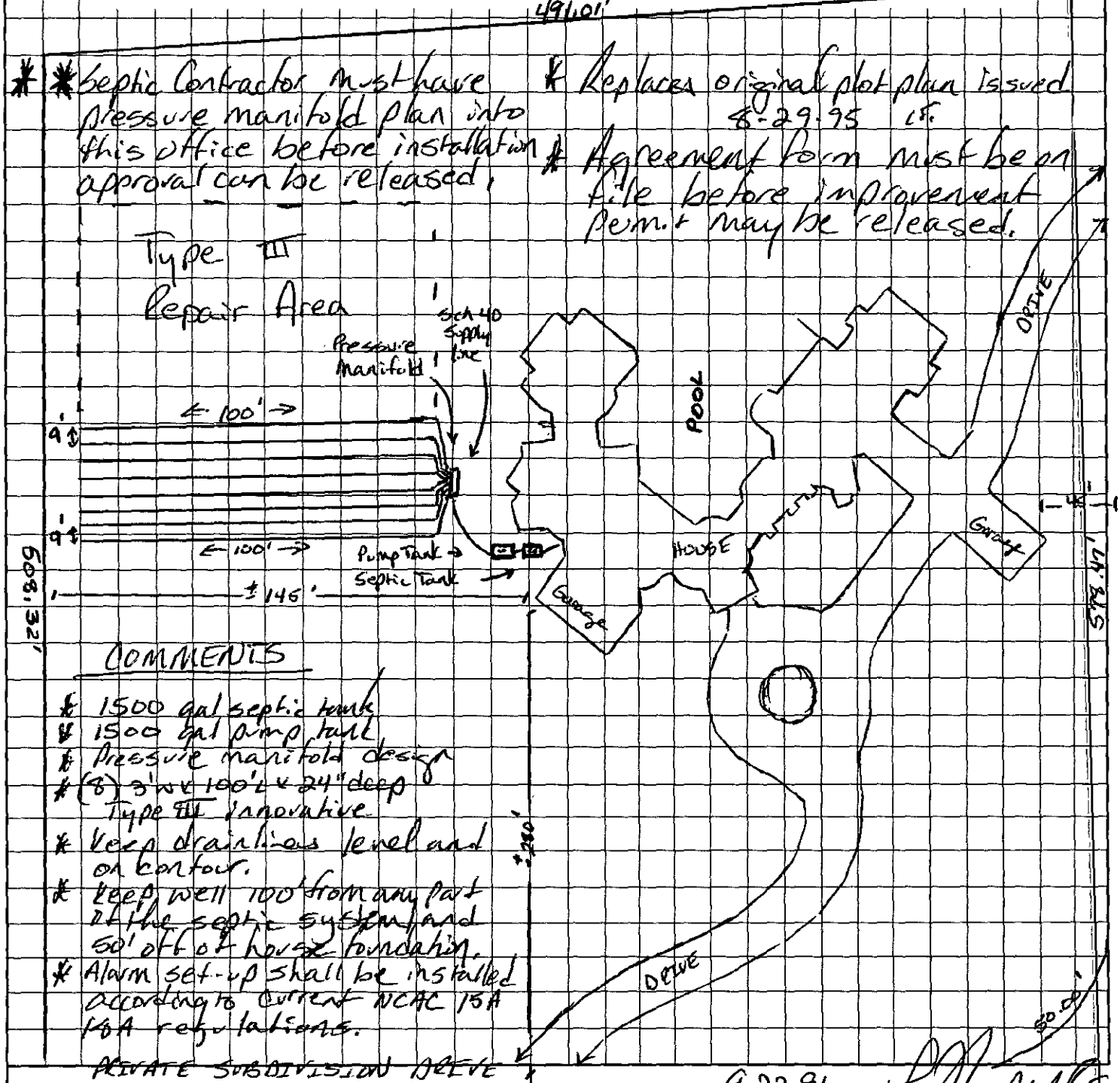
PROPOSED PLOT PLAN

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON STREET
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 3666 B

TC: 223-081-09 Po

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.



* * Septic Contractor must have pressure manifold plan into this office before installation approval can be released.

* Replaces original plot plan issued 8-29-95 cf.

* Agreement form must be on file before improvement perm.t may be released.

COMMENTS

* 1500 gal septic tank
* 1500 gal pump tank
* Pressure manifold design
* (8) 3'w x 100'L x 24" deep Type III innovative
* Keep drainlines level and on contour.
* Keep well 100' from any part of the septic system and 50' off of house foundation.
* Alarm set-up shall be installed according to current NCAC 15A 18A regulations.

Theresa A Cole
OWNER/AGENT SIGNATURE

DATE 10/8/96

APPROVAL DATE 9-23-96 J. Thompson R.S.

White - Health Department's Copy Canary - E.H.S. Copy Pink - Owner's Copy