

13028 MALLARD CREEK RD

02966189

5/30/2007

duponbj

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

Mecklenburg County
Health Department

February 19th, 1990

Fred Willie Smith
13022 Mallard Creek Road
Charlotte, NC 28213

RE: Property located at 13028 Mallard Creek Road
FILE: 5166A
PARCEL: 02916108

Dear Sir:

At your request a soils investigation was conducted on the property designated above. Results of this investigation showed the site to be classified as UNSUITABLE under criteria as set forth in Section .1900 of the North Carolina Administrative Code, Title 10, Department of Human Resources, Chapter 10, Division of Health Services; Sanitary Engineering Section, Subchapter 10A, Sanitation. A copy of the Site Evaluation Report (Serial Number 17617) is enclosed.

The soil on this property is not suitable for use with any conventional, modified or alternative system of which I am aware. If you wish to exercise your right of appeal concerning the interpretation and enforcement of these rules you may do so in accordance with G.S. 150B and 10 NCAC 1B.

If I can be of assistance, please do not hesitate to call.

Very truly yours,

Gene Vaughan, R.S., Supervisor
On Premises Waste Disposal & Water Supply

Enclosure

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

MECKLENBURG COUNTY HEALTH DEPARTMENT
SITE EVALUATION REPORT
SERIAL NUMBER 17617

File: 5166 A Action: 3

Parcel: PO 029-161-08 ☐ PC

Location: 13028 Mallard Creek Rd.

Subdivision:

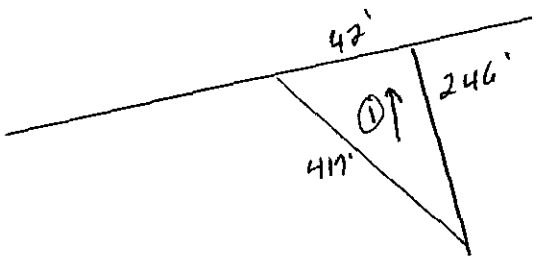
Lot: Block: Acres: .23

Owner: Fred Willie Smith
Address: 13022 Mallard Crk Rd
Charlotte, NC 28213

Comments: _____

Described by: William R. Marks

Date: 2-16-90



Mallard Creek Rd

***** 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 2-90	S PS U	S PS U	S PS U	S PS U	S PS U
Texture	S PS (U) 2-1 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) Some perched water 35-36"	S PS U	S PS U	S PS U	S PS U	S PS U
Depth	S (PS) U 36"+	S PS U	S PS U	S PS U	S PS U	S PS U
Restrictive Horizons	S (PS) U 36"	S PS U	S PS U	S PS U	S PS U	S PS U
Available Space	S PS (U) Restricted	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	Enon - Helena Expansive Clay					
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: 5166A

TC: 029-161-08

☒ PC ☐ REPT

JOB LOCATION

① ADDRESS: 13022 Mallard Crk Rd Charlotte N.C. 28213

② SUBDIVISION: _____ ③ LOT: _____ ④ BLOCK: _____

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

⑥ DEED REFERENCE: BOOK NO.: 1988 PAGE NO.: _____

OWNER

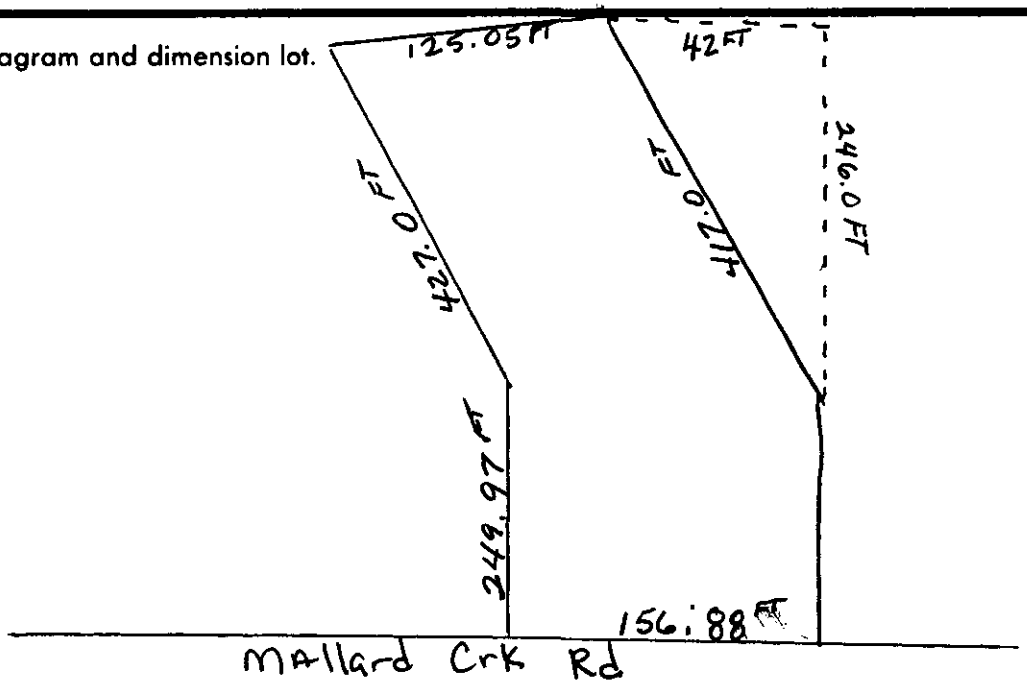
⑦ NAME: Fred (FIRST) willie (MIDDLE) Smith (LAST)

⑧ MAILING ADDRESS: 13022 Mallard Crk Rd

⑨ CITY: Charlotte ⑩ STATE: N.C. ⑪ ZIP: 28213

⑫ PHONE: (WORK) 392-8141 (HOME) 547-0339

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: Fred Smith

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

Date: 2-5-1990

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

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION

CHARGE SLIP

Date: 2/9/90

Name/Company: Inc Smith

Sanitation _____

Vector Control _____

O.P.W.D. ✓

Service: Soil

Perc

516 CA

MECKLENBURG COUNTY
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
PAID

FEB 9 1990

Fee: $ 40.00

NOTICE:

A processing fee of $15.00 will be charged for all returned checks in accordance with N.C. General Statute 25-3-512.

Completed by

Collected by

Mecklenburg County
Health Department

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

LPP System Design File 5166A

Line No.	Hole Size	(Conv)	No. Holes	Head Press.	Flow/ Hole	Hole Spacing	Flow/ Line	Flow/ Foot	Line Length
1	5/32	0.16	10	2.0	0.41	5.0	4.07	0.081	50
2	5/32	0.16	10	2.0	0.41	5.0	4.07	0.081	50
3	5/32	0.16	10	2.0	0.41	5.0	4.07	0.081	50
4	5/32	0.16	10	2.0	0.41	5.0	4.07	0.081	50
5	5/32	0.16	10	2.0	0.41	5.0	4.07	0.081	50
6	5/32	0.16	10	2.0	0.41	5.0	4.07	0.081	50
7	5/32	0.16	10	2.0	0.41	5.0	4.07	0.081	50
8	5/32	0.16	10	2.0	0.41	5.0	4.07	0.081	50
9	5/32	0.16	10	2.0	0.41	5.0	4.07	0.081	50
10	5/32	0.16	10	2.0	0.41	5.0	4.07	0.081	50
11	5/32	0.16	10	2.0	0.41	5.0	4.07	0.081	50
12	5/32	0.16	10	2.0	0.41	5.0	4.07	0.081	50
			120				48.848		600

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

Mecklenburg County
Health Department

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

April 12, 1989

Johnny Patterson
4711 Monmouth Drive
Charlotte, NC 28213

Dear Mr Patterson:

RE: Property located at 13028 Mallard Creek Rd., Charlotte, NC
FILE: 51668
PARCEL: 029 161 08PO

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:

The well should be located 100 feet or no less than 50 feet away from any part of the sewage disposal system and repair area.

Water saving plumbing devices and low flush or microflush toilets must be installed when constructing the residence.

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,

Sylvia D Daniel, R S
Environmental Health Supervisor
Environmental Resources Division

SDD/ir

Enclosures - 3 Septic Tank Agreement Forms
Copy of Plans

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION

CHARGE SLIP

Date 3/13/89

Name/Company [illegible]

Sanitation _____

Vector Control _____

O.I.S.P. ✓

Service: Imp
#5166A

MECKLENBURG COUNTY
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
PAID
MAR 13 1989

Ck #333

Fee: $ 75 — 4175.00

[illegible]
Completed by

[illegible]
Collected

DATE: March 11, 1989

TO: HEALTH DEPARTMENT - ENVIRONMENTAL HEALTH

FROM: COUNTY ENGINEERING

EHD FILE 5166A JURISDICTION CODE _____

PARCEL NUMBER 02916108

ASSIGNED ADDRESS _____

EXISTING ADDRESS 13022 Mallard Creek Road Charlotte, N.C. 28213

PROJECT NAME _____

THE ABOVE DESCRIBED LOCATION HAS BEEN CHECKED CONCERNING:

	APPROVED	NOT APPROVED
1. SUBDIVISION REGULATIONS	☐	☐ *
2. FLOODWAY REGULATIONS	☐	☐ *
3. EROSION CONTROL REGULATIONS	☐	☐ *
4. COMMERCIAL DRAINAGE PLAN	☐	☐ *
	PRESENT	**NOT PRESENT**
5. PUBLIC UTILITY EASEMENT	☐ *	☑
	YES	**NO**
6. PROPERTY FRONTS ON THOROUGHFARE	☑ *	☐
	YES	**NO**
7. DRIVEWAY PERMIT REQUIRED	☑ *	☐

*** If checked, further investigation will be required to determine whether a building permit may be issued by Building Standards for the site.**

REMARKS: _____

_____

_____

NOTE: THIS FORM MUST BE TURNED IN AT THE CASHIERS OFFICE AT BUILDING STANDARDS WHEN PAYING PERMIT FEES.
A CERTIFICATE OF OCCUPANCY WILL NOT BE GRANTED UNTIL THE TRANSPORTATION DIVISION GRANTS FINAL APPROVAL ON DRIVEWAY(S).

SIGNED: Johnny M Patterson

OPWEAR 02/86

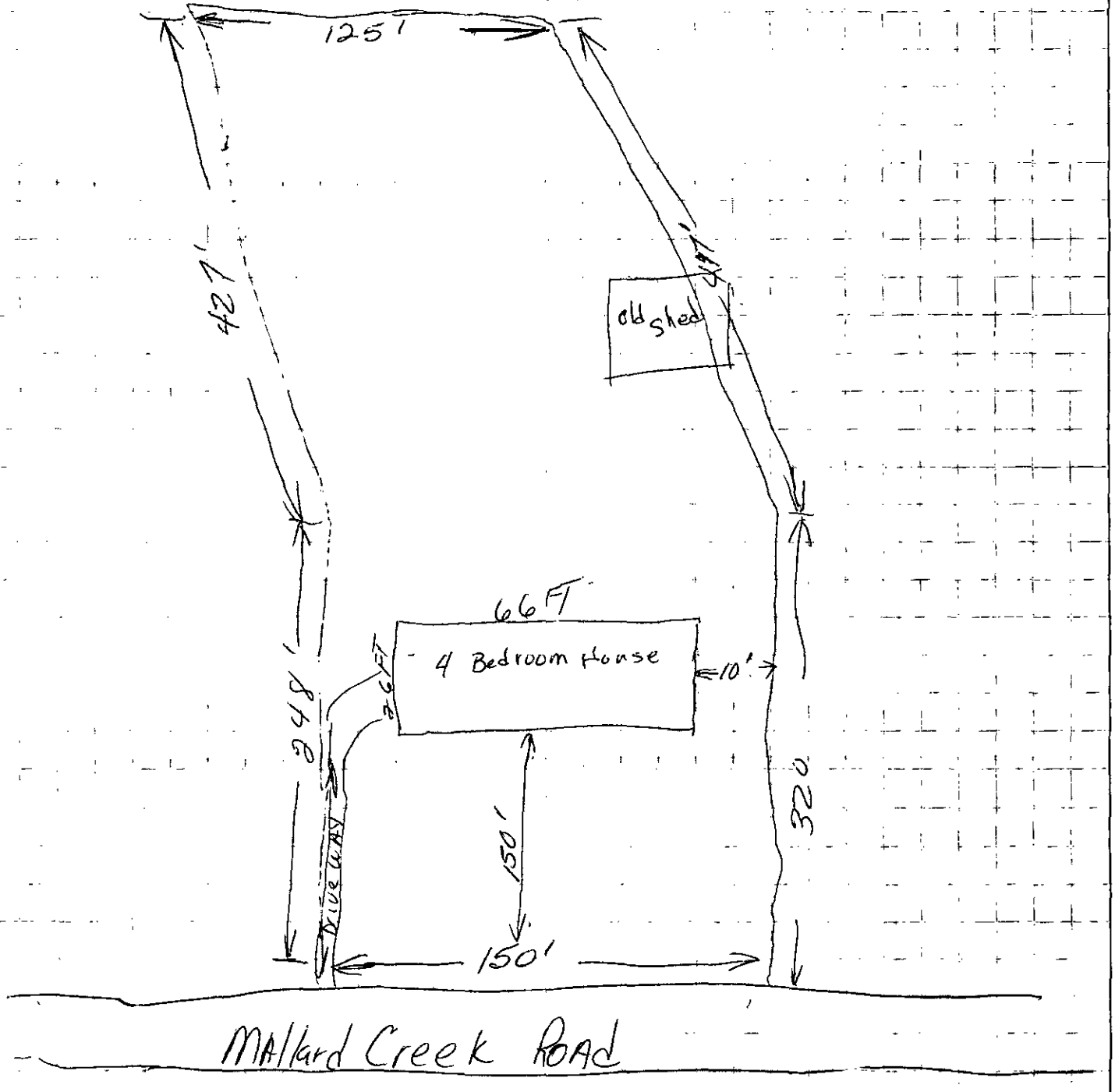
PROPOSED PLOT PLAN

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

FILE: 5166A

TC: _____

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.



Signed: Johnny Matteson

Date: March 11, 1989

APPLICATION FOR AN IMPROVEMENT PERMIT

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

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

(OFFICE USE ONLY)

FILE: 5166A

TC: 029-161-08PO

SERIAL: № 17919 ☐ L ☐ CRT

JOB LOCATION

① ADDRESS: 13028 Mallard Creek Rd. (STREET NO. / STREET) ② FILE: 5166A

③ JURISDICTION: _____ ④ TAX PARCEL NO.: _____

⑤ SUBDIVISION: _____ ⑥ LOT: _____ ⑦ BLOCK: _____

OWNER

⑧ NAME: Johnny Mack Patterson (FIRST / MIDDLE / LAST)

⑨ MAILING ADDRESS: 4711 Monmouth Dr

⑩ CITY: Charlotte N.C. ⑪ STATE: N. C. ⑫ ZIP: 28213

⑬ PHONE: (WORK) 372 1080 EXT 2652 ⑭ (HOME) 597-7006

REQUEST

This request is for a(n):

⑮ ☑ New permit ⑰ ☐ Authorization for mobile home exchange

⑯ ☐ Repair or alteration permit ⑱ ☐ Other (specify) _____

DESIGN CRITERIA

System will serve:

⑲ ☑ Residence ⑳ ☐ Mobile home ㉑ ☐ Business or place of public assembly

㉒ Number of bedrooms? 4 ㉕ Type? _____

㉓ Maximum occupancy? 4 ㉖ Maximum number of employees? _____

㉔ Basement? ☐ yes ☑ no ㉗ Maximum number of seats? _____

WATER SUPPLY

㉘ Water supply from (present or proposed):

A ☑ Individual well

B ☐ Municipal system

C ☐ Community well

D ☐ Community system

㉙ 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: Johnny M Patterson

Date: March 11, 1989

IMPROVEMENT PERMIT

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 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 permit is issued by this Department.

... This permit is not transferable, and shall become null and void 36 months from the date of issuance.

_____ / _____
Environmentalist Date

_____ / _____
Director or Authorized Section Head Date

*This permit must be signed by the Director of Mecklenburg County Health Department or an authorized section head in order to be valid.

Mecklenburg County
Health Department

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

November 17th, 1988

Fred Willie Smith
13022 Mallard Creek Road
Charlotte, NC 28213

RE: Property located at Mallard Creek Road
FILE: 5166A
PARCEL: 02916108

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 results of this investigation showed the property to be classified UNSUITABLE for the installation of such a system. A copy of the Site Evaluation Report (Serial Number 15753) is enclosed.

State regulations provide that sites originally classified unsuitable may be utilized for the installation of alternate or modified sewage disposal systems provided the requirements of 10 NCAC 10A .1948 (c) are met. A reprint of this section is enclosed for your information.

Should you desire to file for permission to install an alternate or modified sewage treatment system on the property, 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. They will be reviewed, and if it is determined that the proposed system may reasonably be expected to function satisfactorily, an Improvement Permit will be issued by the Department upon completion by you, of a formal request for lot reclassification.

If I may be of any assistance, please feel free to call.

Very truly yours,

Sylvia D. Daniel, R.S., Supervisor
On Premises Waste Disposal & Water Supply

Enclosure (2)

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

MECKLENBURG COUNTY ENVIRONMENTAL HEALTH
SITE EVALUATION REPORT
SERIAL NUMBER 15753

File: 5166A Action 2

Parcel: 02916108 ☐ PC

Location: Mallard Creek Road

Subdivision:

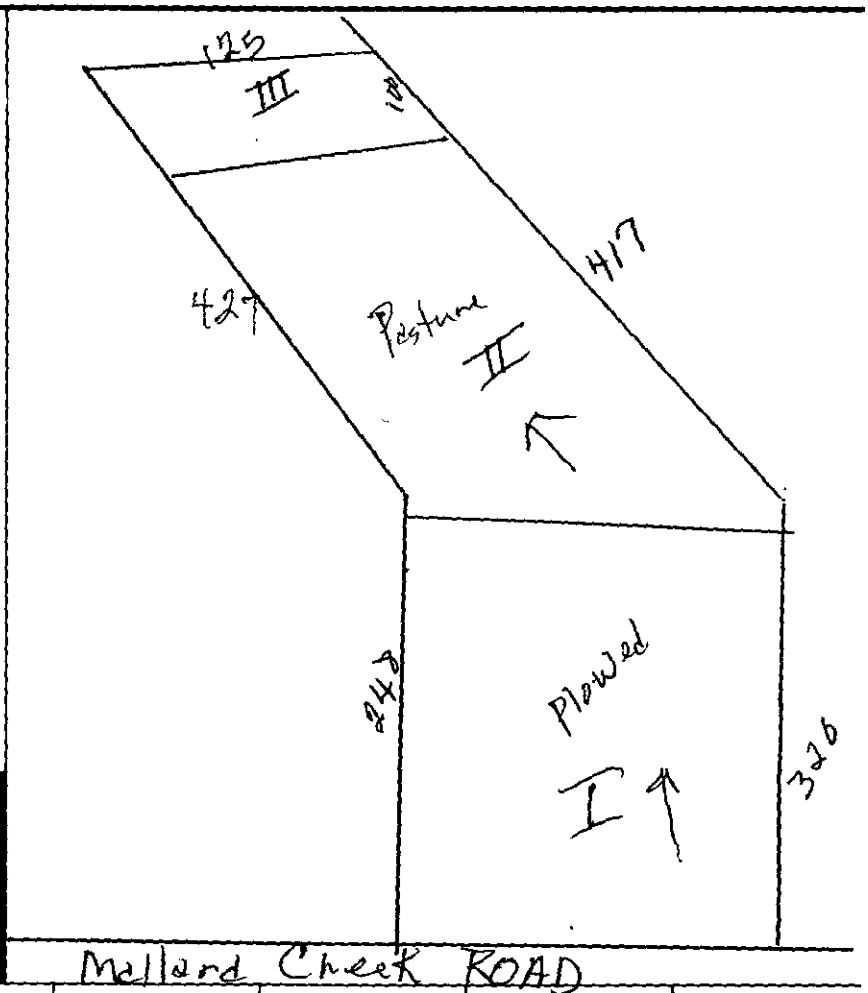
Lot: Block: Acres: 2A

Owner: Fred Willie Smith
Address: 13022 Mallard Creek Road
Charlotte, NC 28213

Comments: The Clay on I-II is very heavy.

Described by: W. B. Ramsey

Date: 11-16-88



***** 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 (1 FT Cecil 20" 2-1)	S PS (U) 2-4	S PS U 2-4	S (PS) U 2-4	S PS U	S PS U	S PS U
Texture	S PS (U)	S PS (U)	S (PS) U	S PS U	S PS U	S PS U
Structure	S PS (U)	S PS (U)	S (PS) U	S PS U	S PS U	S PS U
Drainage	S PS (U)	S PS (U)	S (PS) U	S PS U	S PS U	S PS U
Depth	S PS (U) 25-30	S PS (U) 20-31"	S PS (U) 20-30	S PS U	S PS U	S PS U
Restrictive Horizons	S (PS) U	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
Group/Series	~~IVe~~ Cecil-Thedell mix	~~IVe~~ Iredell	~~IVe~~ 1-1 mixed			
Classification	S PS (U)	S PS (U)	S PS (U)	S PS U	S PS U	S PS U

APPLICATION FOR SOIL INVESTIGATION

MECKLENBURG COUNTY · ENVIRONMENTAL HEALTH ·

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

(OFFICE USE ONLY)

FILE: 5166A

TC: 029-161-08

☐ PC ☐ REPT

JOB LOCATION

① ADDRESS: 13022 Mallard Crk. Rd. Charlotte NC. 28213

② SUBDIVISION: _____ ③ LOT: _____ ④ BLOCK: _____

⑤ PARCEL REFERENCE: BOOK NO.: ~~13022~~ PAGE NO.: _____ PARCEL NO.: _____

⑥ DEED REFERENCE: BOOK NO.: 1988 PAGE NO.: _____

OWNER

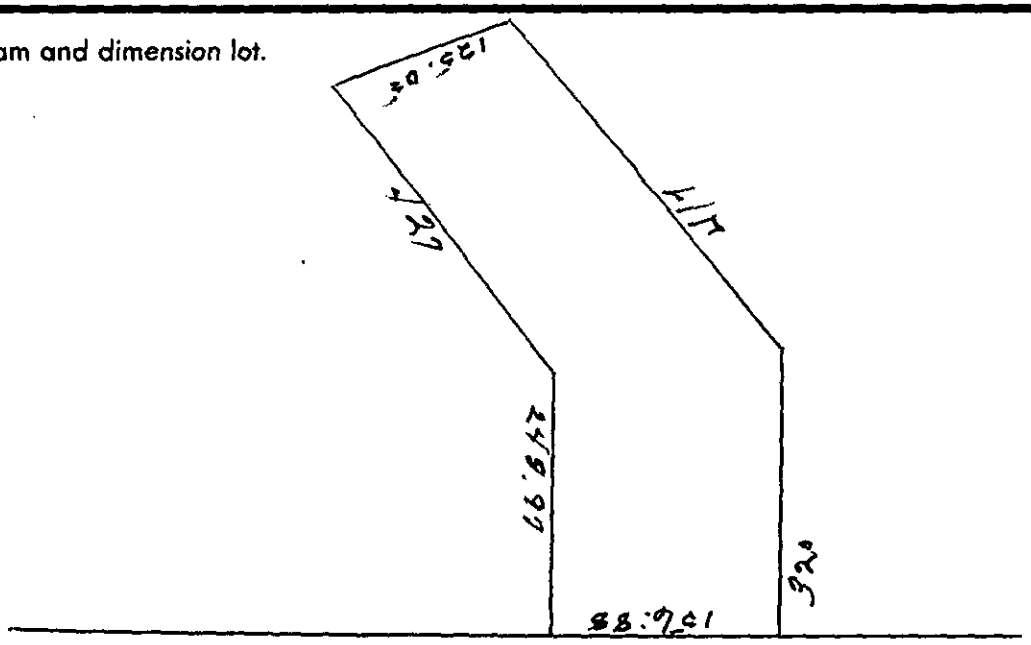
⑦ NAME: Fred (FIRST) Willie (MIDDLE) Smith (LAST)

⑧ MAILING ADDRESS: 13022 Mallard Crk Rd.

⑨ CITY: Charlotte. ⑩ STATE: NC. ⑪ ZIP: 28213

⑫ PHONE: (WORK) 3928141 (HOME) 5470339

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 DEPARTMENT OF ENVIRONMENTAL HEALTH *to enter onto* the property for the purpose of processing this request.

Signed: X Fred Smith

Date: 11-3-88

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

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

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION

CHARGE SLIP

Date 11/3/88

Name/Company Dick Smith

Sanitation _____

Vector Control _____

O.P.W.D. ✓

Service: Pool Test

#-5166A

MECKLENBURG COUNTY
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
PAID

NOV 8 1988

Fee: $60.00 CR# 1432 $60.00

Completed by _____ Collected by _____

472

Book No. 1988

Revenue Stamp affixed $ ———

STATE OF NORTH CAROLINA—Mecklenburg County

THIS DEED, Made this 8th day of August A. D., 1958, by and between FRED SMITH

of the County of Mecklenburg and State of North Carolina, part y of the first part, and FRED SMITH and his wife, CLARA C. SMITH, as tenants by the entirety of the County of Mecklenburg and State of North Carolina, parties of the second part.

WITNESSETH, That the said part y of the first part, in consideration of ONE DOLLAR AND OTHER VALUABLE CONSIDERATION———————————————————————— Dollars to him paid by the parties of the second part, the receipt of which is hereby acknowledged, ha s bargained and sold, and by these presents do es grant, bargain, sell and convey unto the said Fred Smith and his wife, Clara C. Smith, as tenants by the /entirety and their heirs, all that tract and parcel of land, situate, lying and being in MALLARD CREEK Township, Mecklenburg County, State of North Carolina, and more particularly described and defined as follows:

BEGINNING at an iron in the middle of the county road and in the line of the land of Wilbert Holland (now or formerly) and runs thence along the line of said Holland land South ¾ East 551 feet to an ashe; thence along the line of the land of Jehu Graham, North 89 3/4 West 720 feet to a stake or point in said line; thence North 2 East 905 feet to a stake or point in the middle of the county road; and thence along the middle of said road South 65½ East 779.3 feet to the place of beginning. Comprising twelve acres.

Being in all respects the same land as conveyed to the said Fred Smith by deed from Louis B. Vreeland, as Commissioner, dated April 21, 1956 and recorded in the office of the Register of Deeds for Mecklenburg County, North Carolina in Book 1847, page 457, to which said deed and all deeds therein referred to reference is hereby made.

It is the intention by this conveyance to create an estate by the entirety in the grantees, under the authority of the General Statutes of North Carolina.

TO HAVE AND TO HOLD the aforesaid tract and parcel of land and all privileges and appurtenances thereto belonging, to the said Fred Smith and his wife, Clara C. Smith, tenants by the entirety, their heirs and assigns, to them and their only use and behoof forever.

And the said Fred Smith for himself, his heirs, executors and administrators, covenant s with the said part ies of the second part, their heirs and assigns, that he is seized of said premises in fee and has right to convey the same in fee simple, that the same are free and clear from all incumbrances, and that he will warrant and defend the said title to the same against the lawful claims of all persons whomsoever.

IN TESTIMONY WHEREOF, The said part of the first part to these Presents ha hereunto set hand and seal the day and year above written.

Signed, Sealed and Delivered in presence of

Fred Smith (Seal)

(Seal)

Jane S. Elliott (Seal)

STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG } ss.

I, Jane S. Elliott a Notary Public for said County and State, do hereby certify that FRED SMITH personally appeared before me this day, and acknowledged the due execution of the foregoing (or annexed) instrument.

Witness my hand and notarial seal, this 11th day of August A. D., 19 58

Jane S. Elliott, Notary Public

My Commission Expires 2-15-60

STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG } ss.

The foregoing (or annexed) Certificate of Jane S. Elliott, a Notary Public for said County and State, is adjudged to be correct. Let the instrument and the certificate be registered.

This 11th day of August A.D., 19 58

J. Lester Wolfe, Clerk Superior Court, By: Naomi S. Hesse, Deputy, ~~Clerk Superior Court~~

Filed at 2:00 o'clock, P M., on the 11th day of August A.D., 19 58

Recorded at 3:15 o'clock, P M., on the 12th day of August A.D., 19 58.

and verified. J. R. RENFROW, Register of Deeds.

Drawn By: Louis B. Vreeland

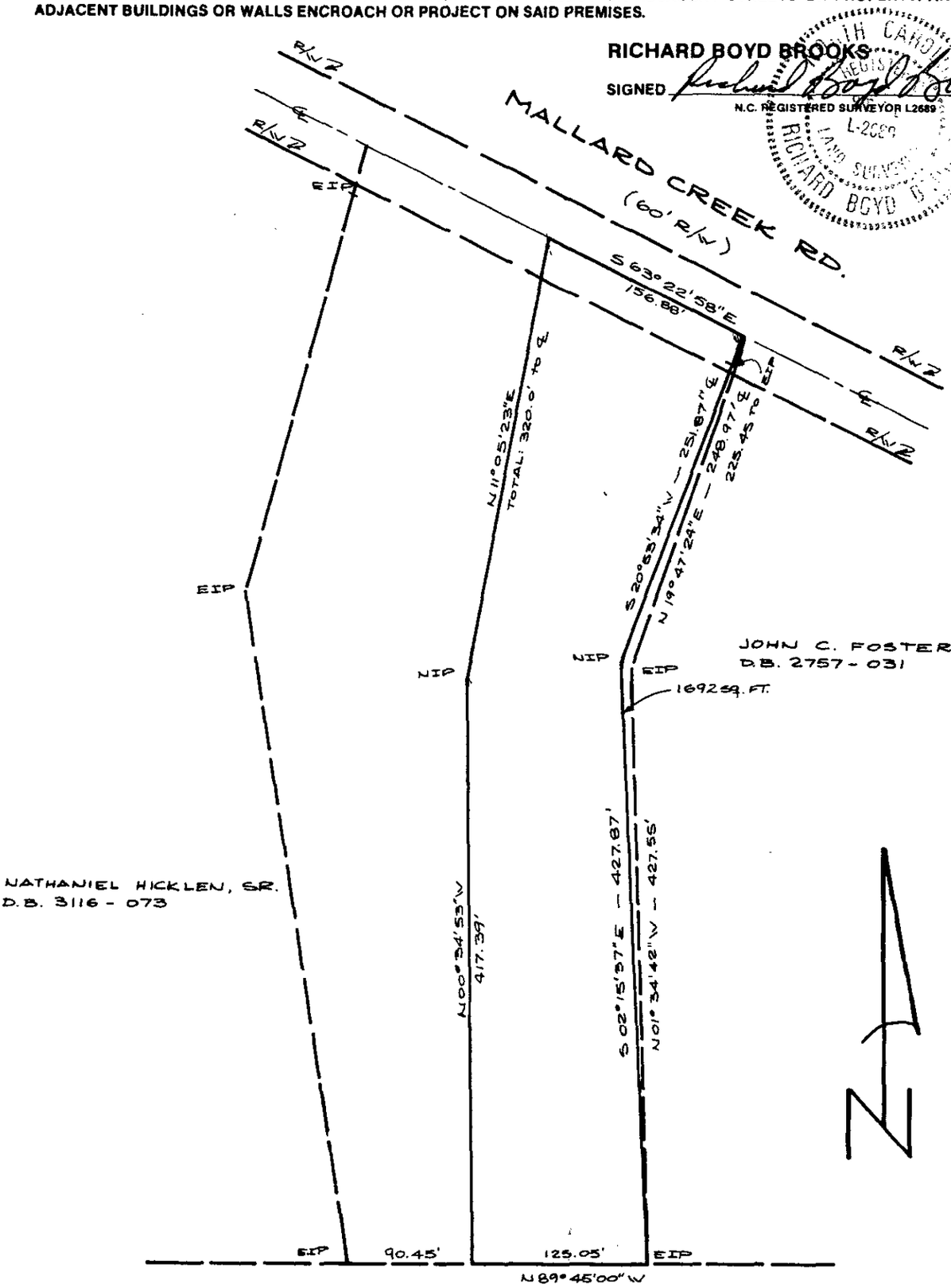
JCP

THIS IS TO CERTIFY THAT ON THE 24th DAY OF OCTOBER 19 88, I SURVEYED THE PROPERTY SHOWN ON THIS PLAT, AND THAT THE PROPERTY LINES, WALLS AND BUILDINGS ARE AS SHOWN HEREON: THAT THE BUILDINGS LOCATED ON SAID LOT DO NOT ENCROACH OR PROJECT ON ADJACENT STREETS OR PROPERTY: AND THAT NO ADJACENT BUILDINGS OR WALLS ENCROACH OR PROJECT ON SAID PREMISES.

RICHARD BOYD BROOKS

SIGNED Richard Boyd Brooks

N.C. REGISTERED SURVEYOR L2689



BOUNDARY SURVEY

OF

2 ACRES

MALLARD CREEK TOWNSHIP, MECKLENBURG COUNTY, N.C.

PROPERTY OF

JOHNNY M. & DORIS J. PATTERSON

SCALE 1" = 100' DEED RECORDED 1988 - 472 MAP RECORDED

JOB # 88099

RECOMMENDED INDIVIDUAL RESIDENCE

LOW PRESSURE PIPING

GROUND ABSORPTION, WASTEWATER

DISPOSAL SYSTEM

for

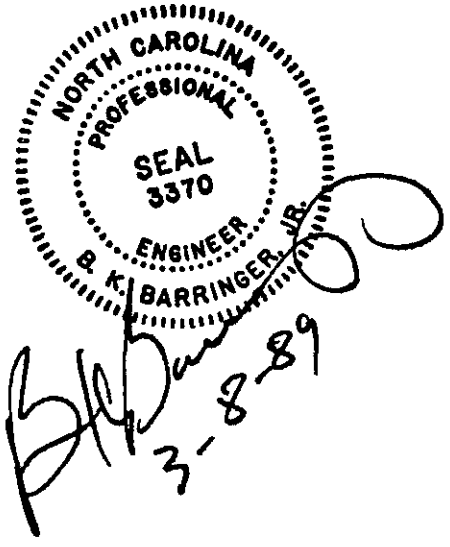
Mallard Creek Road
File: 5166A Parcel #02916108
Mecklenburg County, N.C.
March 8, 1989

Owner: Johnny M. Patterson
4711 Monmouth Drive
Charlotte, NC 28213
Work Phone 372-1080
Home Phone 597-7006

Prepared By:
B. K. Barringer, Jr., P.E.
N. C. Registration No. 3370

104 Westfield Center
Mooresville, N. C. 28115

(704) 664-7888



LOW PRESSURE PIPING SYSTEM

DESIGN CONSIDERATIONS:

PROPOSED FOUR BEDROOM HOME with two baths and a washing machine. The unit will be serviced by a water well located a minimum of 50' from the septic system.

LOCATION: The property is located on Mallard Creek Rd. approximately 1/4 mile east of Odell School Road. THE FIELD HAS BEEN LOCATED AND EACH LATERAL MARKED.

TERRAIN: The property, where the field is to be located, slopes southeast at approximately 5%.

REFERENCE MATERIAL:

(1) DESIGN AND INSTALLATION (Manual)
OF LOW PRESSURE PIPE WASTE WATER TREATMENT SYSTEMS
By: Craig Cogger; Bobby L. Carlisle; Dennis Osborne; Ed Holland Published by: UNC Sea Grant College Pub. UNC-SC-82-03 May, 1982.

(2) LAWS AND RULES FOR GROUND ABSORPTION SEWAGE DISPOSAL SYSTEMS. SECTION .1900 OF THE N.C. Administrative Code: Title 10 Health Services; Environmental Health; Subchapter 10a; Sanitation. Published by: N.C. Dept. of Human Resources; July 1, 1982.

(3) EPA 625/1-80-012 Design Manual
Onsite Wastewater Treatment and Disposal System Oct.,1980; Chapter 7.

RECOMMENDATIONS: Due to shallow soil depth and soil type, a low pressure piping system is recommended for the location.

OWNERSHIP RESPONSIBILITY FOR A LOW PRESSURE PIPING SYSTEM

It must be kept in mind that this system is designed to accept a moderate amount of waste water (which is called the EFFLUENT), in a minimal water absorbing soil.

Conservation measures must be undertaken by all members of the organization to minimize the volume of waste water entering the disposal system, including, but not limited to, the following precautions:

(a) Provide water conserving plumbing fixtures within the facility;

(b) Develop conservative water use habits;

(c) Monitor and maintain the system as necessary for proper operation;

(d) Check and pump the septic tank sludge on a regular basis of approximately every year if garbage disposal is included in the residence, or approximately every three years otherwise.

(e) Make rapid repairs to leaking plumbing fixtures and faucets.

(f) Avoid excessive watering of the lawn in the vicinity of the disposal field.

CONSTRUCTION SEQUENCE AND COMPONENTS OF THE SYSTEM

Furnish and install all items required for a complete system in accordance with plans and specifications; for requirements of the County Dept. of Environmental Health (CDEH); the N. C. Dept. of Environmental Health (NCDEH); the N. C. Building Code, Plumbing Code and Electrical Code; and the National Electric Code. System must be properly installed by a qualified, competent contractor.

COMPONENTS OF SYSTEM

1. Two compartment septic tank
2. Pumping chamber
3. Submersible effluent pump and level controls
4. High water alarm signals (audible and visible)
5. Supply pipe
6. Distribution laterals

Rule of Thumb: "If soil is too wet to plow, it is too wet to disturb for LPP System construction."

(1) Lay out low pressure pipe (LPP) network area with stakes and flagging to ten feet (minimum) beyond the limits of the LPP network. As soon as the absorption area is designated, it should be flagged, roped off and isolated from construction traffic. This barrier should be maintained until the system is accepted by the Owner. Refer to site plan for the size of absorption area. The Engineer has previously flagged the general limits of the nitrification field. See site plans for flag locations.

(2) Clear site of any and all man-made debris, construction materials, etc. Dispose of legally.

(3) Construct upslope interceptor ditch (grassed swale)

and/or curtain drain as called for on the site plan and details and maintain.

(4) Prior to actually beginning construction of the system, carefully locate, lay out and identify and disposal site, manifolds and the lateral piping networks, using a tripod mounted engineer's leveling instrument to accurately establish each lateral along a level contour. Note: Lateral pipe runs which conflict with cut-off-in-place stumps or trees shall "snake" by with a 12" minimum trench clearance and then continue along its projection run. (The 5' minimum trench separation must be maintained.)

(5) Excavate for and construct curtain drain (if shown on the plan.)

(6) Excavate lateral network trenches 12" wide by 16" deep (see detail). Remove loose soil from bottom of trench. At 20' intervals, leave undisturbed earthen dam in bottom of the trench 6" high and 12" long. Next, excavate for manifold piping.

(7) Install small stone (3/8" to 1" size) in bottom of the lateral trench to the proper depth of approximately 12" below finish ground level. Rake the stone level and smooth in preparation to receive the PVC lateral.

(8) Prior to installation of PVC manifold and lateral piping, fabricate lateral piping with 5/32" orifices (holes) at scheduled locations along the bottom of the pipe. (See chart.) All joints in lateral and the manifold piping shall be water tight connections to insure that the only source of the water seepage from the system is through the orifices as designed. See layout, details, and data sheet. Carefully install manifold and lateral network according to the attached designed layout using care to insure that holes shall be located at required intervals and as shown on the "typical section through the lateral trench." A larger diameter protective sleeve with cap or approved box with lid shall be placed over the turned up lateral and positioned level with the ground surface (so as not to be damaged by mowing machine.)

(9) Carefully backfill lateral trench with washed stone (size 3/8" to 1") to a depth of 10" below finish grade, avoiding displacement of piping. Then backfill to finish grade with clean (debris free) earth.

(10) Carefully backfill manifold trenches to finish grade with clean (debris free earth (no stone).

(11) Leave absorption area with a raked surface, ready for grassing.

(12) The installation contractor shall stabilize the area of construction by planting and seeding with Kentucky 31 tall fescue

and shall keep the planted area watered and mulched until such time that a hardy stand of grass is established. (See Grassing Specification.)

(13) The septic tank shall consist of a 1,500 gallon capacity, reinforced, precast concrete tank with full baffle and shall have easy access to each chamber from ground level for checking and pumping. The first chamber of the septic tank shall consist 2/3 to 3/4 of the volume of the total tank and the baffle shall contain a horizontal opening across the tank at about midway its height. Locate the septic tank at such height as to provide approximately 8" of cover soil over top of the tank.

(14) The dosing tank shall consist of a 1,000 gallon capacity, reinforced, precast concrete tank without baffle and shall have a concrete mounting pad (concrete blocks) for accommodating the pump. Provide access for entry into the tank directly over the pump location, and extending 6" above final grade. Use a 30" diameter concrete well casing and concrete well cap.

(15) All piping and fittings shall be PR160 PVC. Glue for all PVC pipe joints shall be as recommended by the pipe manufacturer.

(16) PUMP: The submerged pump shall be Model WHRH5 manufactured by F.E.Meyers Co., Ashland, OH, or equal, 1/2hp, 115v/1ph; 12 amps; capable of pumping 49.2 gallons per minute at an 19.1' head.

(17) PUMP ON-OFF water level control switch shall by Myers, Model MLC-20, mercury switch, with three prong, piggy back plug.

(18) HIGH WATER ALARM SWITCH shall be equal to Myers, model FLCA-30, mercury switch, red colored ball with support bracket.

(19) HIGH WATER ALARM CONTROL BOX shall be equal to Myers, model FLCA CA-SS4 with connection box having buzzer alarm, on, off, test switch with terminal block for all connections. Control box shall be supplied by two separate 115 volt circuits, one plug circuit, and one alarm circuit.

(20) A "HOME OWNER'S WARNING SIGN" shall be located within the house to inform the owner of what action to take in case the "High Water Alarm" is activated. This sign shall contain the name, address, telephone number, and emergency telephone number of the person to contract immediately upon malfunction of the system.

(21) PUMP AND CONTROLS: Details of pump installation are shown on the plan. The pump must be placed on two concrete blocks next to each other on the bottom of the tank. This prevents the pumping of any solid particles which can clog the LPP system. A piece of nylon rope or other non corrodible material should be attached to the pump and to the outlet pipe for lifting the pump

in and out of the chamber. (The PVC outlet pipe is too fragile to support the pump.)

Controls are fastened to the outlet pipe with clamps or brackets supplied by the manufacturer. The lower level control or "pump-off" must be positioned above the pump, so that the pump remains submerged at all times. The supper level control "pump-on" is positioned to pump a specified volume of effluent. The high water control float is then mounted about 3" above the upper pump-on control. (Note: Care must be taken to insure that floats do not become fouled by other components in the tank such as the electric power cord or the lifting rope.)

The pump outlet pipe should be connected to the supply manifold with a threaded PVC union (or dresser coupling) to allow quick removal. The gate valve must also be installed in the supply line (within the pump chamber) to allow final adjustment of the pressure. If effluent will be pumped down hill, a 1/4" siphon-breaker hole must be drilled in the bottom of the supply line before it leaves the pump tank. This breaks any vacuum in the system and prevents the inadvertent siphoning of effluent out of the tank. <u>This hole is very important.</u>

(22) <u>ELECTRICAL CONNECTIONS:</u> The pump and high water alarm must be placed on separate electrical circuits. (If the pump circuit fails, the alarm must still be able to operate.) Follow the manufacturers' recommendations for the proper fuses or circuit-breakers. All electrical connections must be made outside the pumping chamber. Power cords from the pumps and controls should be plugged into a NEMA approved outdoor receptacle mounted outside of the pumping chamber. The receptacle must not be located inside the pumping chamber due to the corrosive and explosive gasses that may form from the sewage.

Electrical connections may be made inside the pumping tank only if wired inside a sealed, water tight box. Some level control switches have a box built into the housing,k but are more expensive than the plug-in devices.

Wiring between the pumping chamber and the house should meet State and local code requirements. A lightning arrester is recommended to protect the pump and controls from electrical surges.

(23) <u>PROPER OPERATION CHECK:</u> After all components have been installed and connected, the system should be checked for proper operation. With electrical power turned off, fill the pumping chamber with water from a garden hose (or allow effluent to accumulate) until the liquid rises to the level of the high-water alarm float. Turn on the electrical power. The alarm light should go on in the house, and the pump should start operating. The alarm light should go off when the liquid level falls below the high-water float. The pump should turn off when the liquid reaches the lowest float control. Be sure the pump is still completely submerged.

(24) PRESSURE HEAD ADJUSTMENT: The pressure head must be adjusted to match that specified in the design. The pressure head is measured as the height liquid will rise above the turn-up elbow when the pump is running. To adjust the head:

(a) Glue a 4' length of pipe (preferably clear) to a threaded adapter that will screw onto the turn-up adapters. (Call this the "test tube".)

(b) Replace the turn-up cap with the "test tube".

(c) Turn the power on to allow liquid to rise in the "test tube".

(d) Adjust the gate valve in the pumping tank until the effluent reaches the desired height in the "test tube". Remember to include the distance below the ground surface to the lateral line when measuring the height. Refer to the flow calculation chart relative pressure head (h) for each line. This is the height above the lateral liquid should be in the temporary "test tube".

(25) FINAL LANDSCAPING: After the LPP is installed, the following should be checked to insure that the system will not be overloaded with excess rain water and run off:

(a) The distribution field is shaped to shed rain water and is free of low area.

(b) Curtain drains, grassy swales or ditches for diverting ground and surface water are properly installed.

(c) Gutter and downspout drains are directed away from the system.

Any problems should be corrected before approving the system.

Finally, the entire area should be planted with grass according to specifications.

DESIGN SPECIFICATIONS - LOW PRESSURE PIPING SYSTEM

J. Mac Patterson
Mecklenburg County

Mallard Creek Road
March 8, 1989

Daily design waste flow:	480 gpd
Septic tank size:	1,500 gal. (2 compartment)
Pumping tank size:	1,000 gal.
Effluent loading rate:	0.16 gpd/sf
Total absorption areas:	3,000 sf active 3,000 sf repair
Total linear feet and diameter of laterals	600 ft. of 1-1/4" dia. PVC
Total length and diameter of supply manifold:	400 lf - 2" dia. PVC
Number and length of laterals:	6 laterals at 100'
Manifold placement:	Middle of field
Hole size:	5/32"
Hole spacing:	5'0"
Total number of holes:	120
Flow rate through the system:	49.2 gpm
Elevation head (pump to end of manifold):	5.0'
Pressure head:	2.0 ft.
Friction head:	19.1
Total head:	26.1'
Pump requirements:	49.2 gpm at 26.1; use Myers 1/2 hp WHRH5 pump
Dosing volume:	270 gal.
Depth of water pumped per dose:	12.4"
Pump run per dose:	5.4 min.
Check valve:	yes
Syphon break hole:	yes

SEEDING SPECIFICATIONS

3:1 SLOPES OR FLATTER

1. Apply agricultural lime at the rate of 30 lbs/1000 sf.
2. Apply 10-10-10 commercial fertilizer at the rate of 20 lb/1000 sf.
3. Seed in accordance with the following schedule and application rate:

DATE	TYPE	PLANTING RATE
8/15 - 11/1	Tall Fescue	200 lb/ac or 7 lb/1000 sf
11/1 - 3/1*	Tall Fescue and	200 lb/ac or 7 lb/1000 sf
	Abruzzi Rye	25 lb/ac or 1/2 lb/1000 sf
3/1 - 4/15	Tall Fescue	200 lb/ac or 7 lb/1000 sf
4/15 - 7/30	Mulled Common or Bermuda Grass	30 lb/ac or 1 lb/1000 sf
7/15 - 8/15	Tall Fescue and	200 lb/ac or 7 lb/1000 sf
	Browntop Millet or	35 lb/ac or 7/8 lb/1000 sf
	Sorghum-Sudan Hybrids	30 lb/ac or 3/4 lb/1000 sf

4. Mulch with straw applied at the rate of 75-100 lb/1000 sf.

* Heavily mulched during January - March period.

SLOPES GREATER THAN 3:1 TO 2:1 SLOPES

1. Apply agricultural lime at the rate of 50 lb/1000 sf.
2. Apply 10-10-10 commercial fertilizer at the rate of 20 lb/1000 sf.
3. Seed in accordance with the following schedule & application rate:

DATE	TYPE	PLANTING RATE
3/1 - 6/1	Sericea Lespediza (scarified) and	50 lb/ac or 11 lb/1000 sf
3 - 4	Add Tall Fescue or	150 lb/ac or 3-1/2 lb/1000 sf
3 - 6	Add Weeping Lovegrass	5 lb/ac or 1/8 lb/1000 sf
6 - 9/1**	Tall Fescue and	60 lb/ac or 1-1/2 lb/1000 sf
	Brown Top Millet	35 lb/ac or 7/8 lb/1000 sf
	or Sorghum	30 lb/ac o 3/4 lb/1000 sf
	Sudan Hybrids	
9 - 3/1	Sericea Lespediza (unhulled-unscarified)	70 lb/ac or 1-3/4 lb/1000 sf
	Tall Fescue	150 lb/ac or 3-1/2 lb/1000 sf
	Millet or Sudan	20 lb/ac or 1/2 lb/1000 sf

** Temporary - Reseed September 1 at recommended rates..

4. Mulch with 3" straw applied at the rate of 50-90 lb/1000 sf and anchor with asphalt emulsion tack coat applied at the rate of 14-28 gal/1000 sf or 800-1200 gal/ac.

Total head:	26.1'
Pump requirements:	49.2 gpm at 26.1; use Myers 1/2 hp WHRHS pump
Dosing volume:	270 gal.
Depth of water pumped per dose:	12.4"
Pump run per dose:	5.4 min.
Check valve:	yes
Syphon break hole:	yes

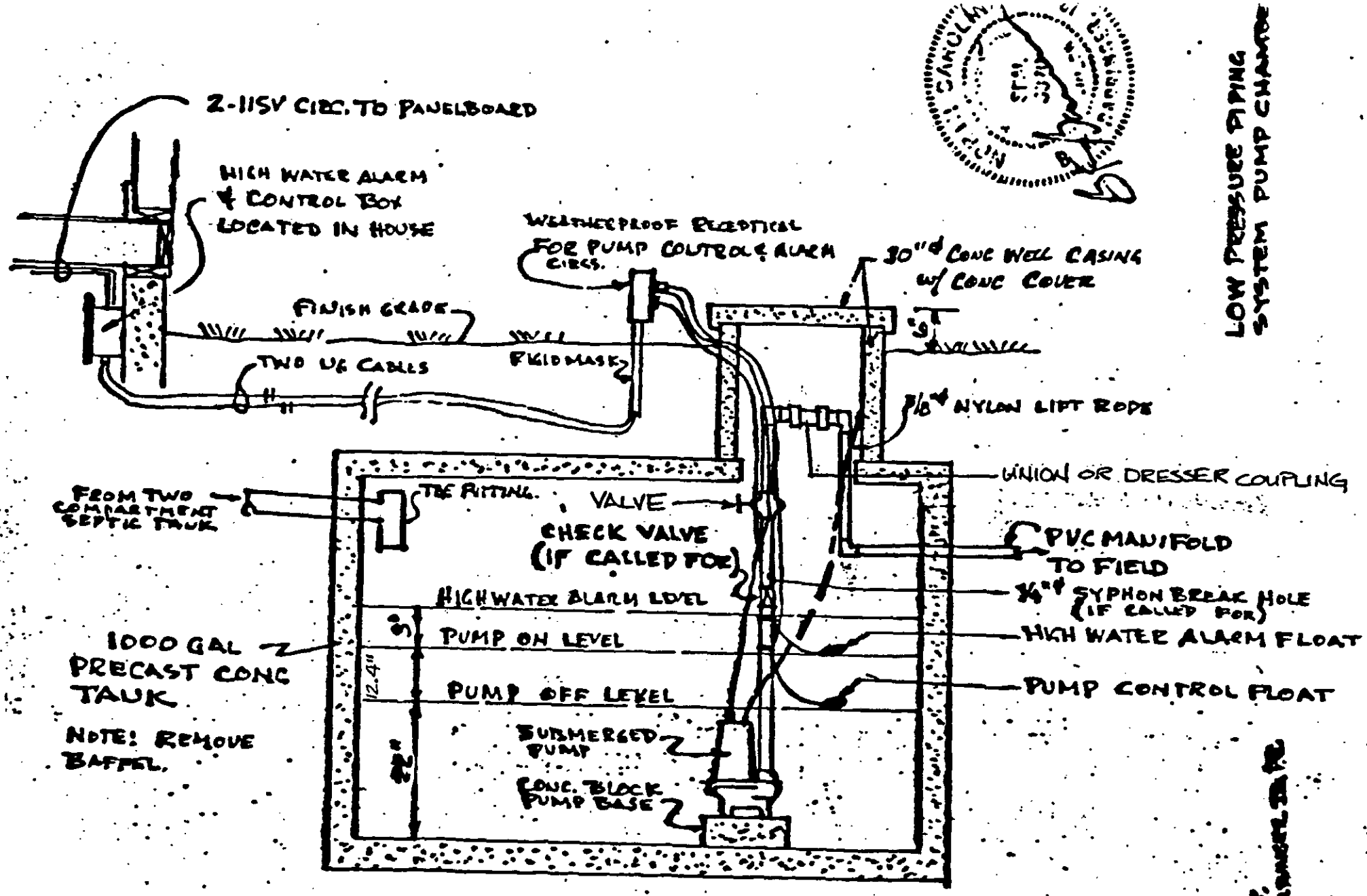
LINE, ORIFICE SIZE & SPACING

LATERAL	LENGTH	ORIFICE SIZE	DIST FROM MANIFOLD TO FIRST ORIFICE	ORIFICE SPACING	DIST FROM LAST ORIFICE TO END OF LATERAL	NUMBER OF ORIFICES PER LINE
A	50	5/32"	2'-0"	5'-0"	3'-0"	10
B	↑	↑	3'-0	5'-0"	2'-0"	10
C			3'-0"	5'-0"	2'-0"	10
D			2'-0"	5'-0"	3'-0"	10
E			2'-0"	5'-0"	3'-0"	10
F			3'-0"	5'-0"	2'-0"	10
G			3'-0"	5'-0"	2'-0"	10
H			2'-0"	5'-0"	3'-0"	10
I			2'-0"	5'-0"	3'-0"	10
J			3'-0"	5'-0"	2'-0"	10
K	↓	↓	3'-0"	5'-0"	2'-0"	10
L	50	5/32"	2'-0"	5'-0"	3'-0"	10

B.K. Barringer / Associates
154 East Iredell Avenue
Mooresville North Carolina 28115
704/663-1859

NORTH CAROLINA PROFESSIONAL SEAL 3370 ENGINEER B. K. BARRINGER, JR.

PATTERSON 3-7-89

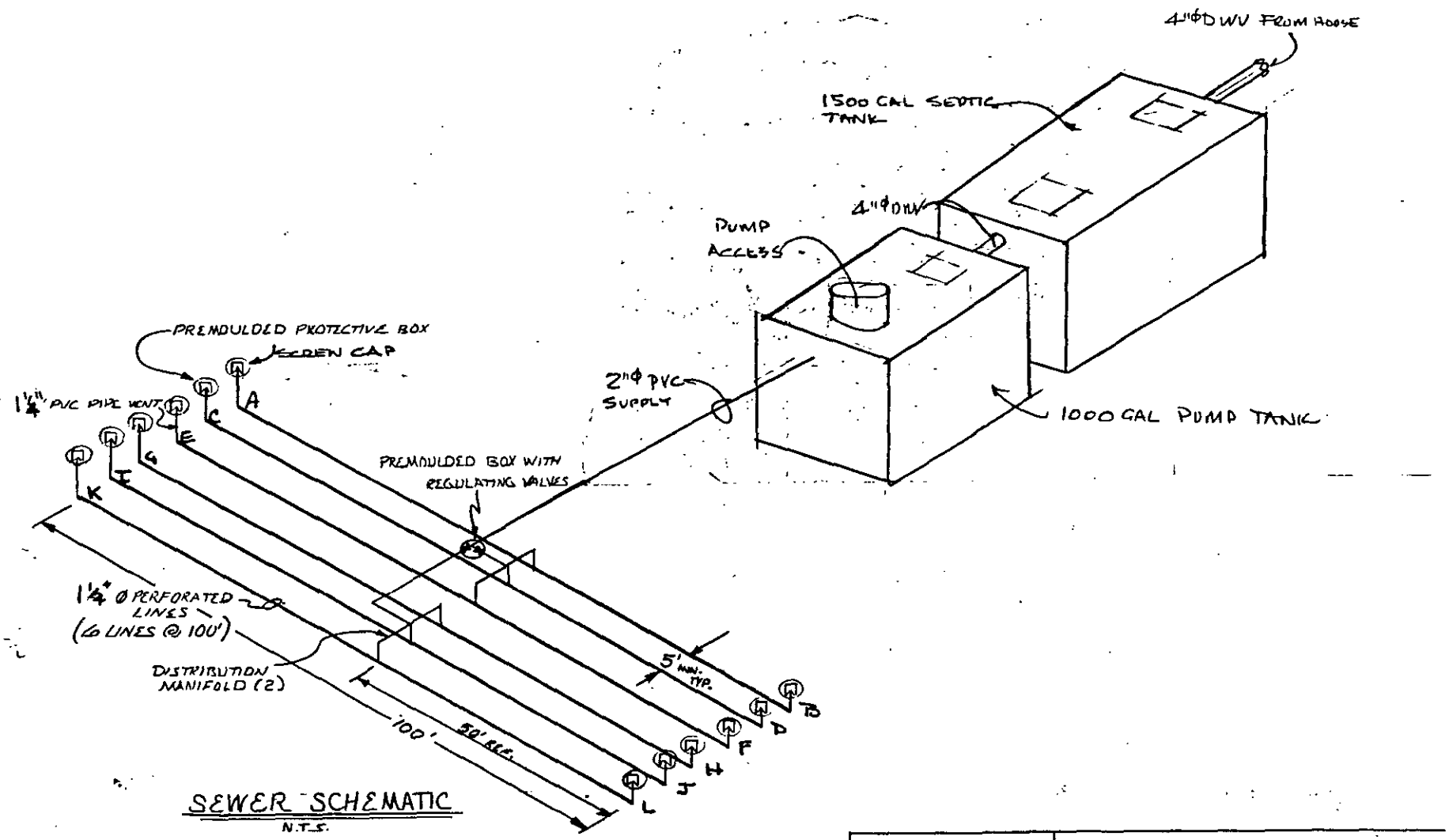


PUMPING CHAMBER DIAGRAM

NO SCALE

1000 GAL TANK

LOW PRESSURE PIPING SYSTEM PUMP CHAMBER



SEWER SCHEMATIC

N.T.S.

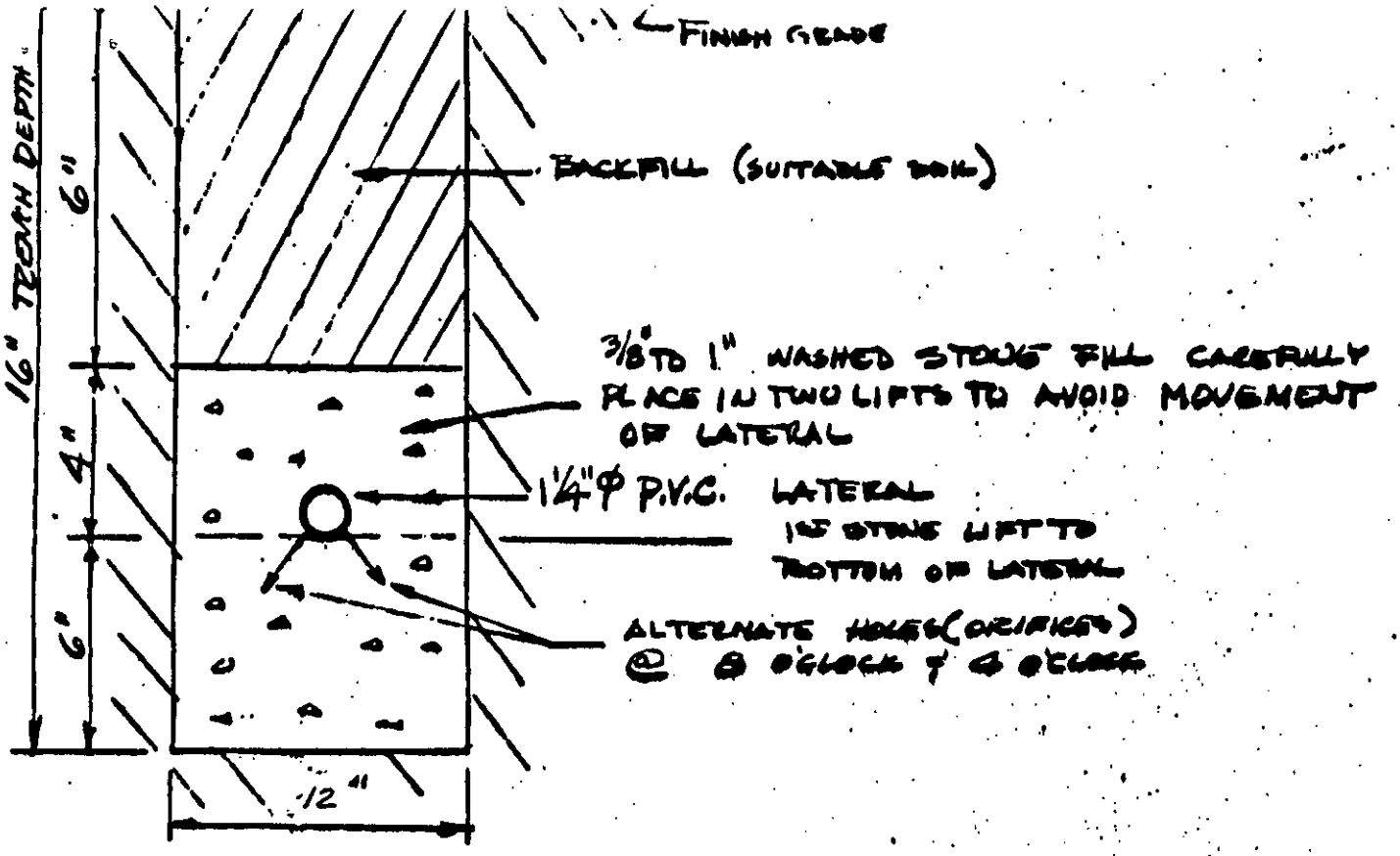
B.K. Barringer, Jr. P.E.
104 Westfield Center
MOORESVILLE, NORTH CAROLINA 28115

NORTH CAROLINA SEAL 3370 ENGINEER B. K. BARRINGER JR.

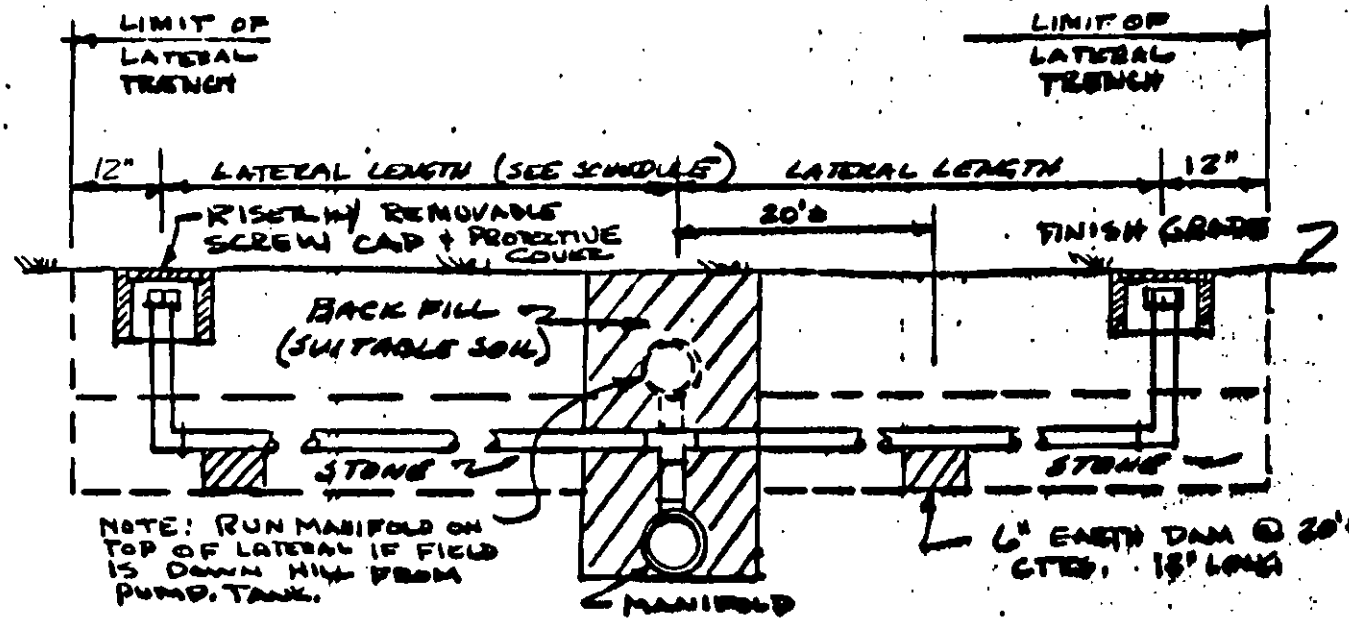
MACK PATTERSON PROPERTY

MALLARD CREEK ROAD
MECKLENBURG CO., NORTH CAROLINA

SEWER SCHEMATIC	03-07-1989
REVISIONS	SHEET 2 OF

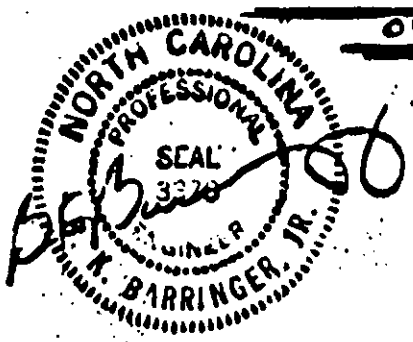


SECTION OF LATERAL TRENCH - NO SCALE



SECTION OF MANIFOLD & ELEVATION OF LATERAL & TRENCH

NO SCALE



TYPICAL DETAILS FOR LOW PRESSURE PIPING SYSTEM

B.K. BARRINGER JR. PE.

ACKLENBURG COUNTY ENVIRONMENTAL HEALTH
SITE EVALUATION REPORT
SERIAL NUMBER 15753

File: 5166A Action 2

Parcel: 02916108

Location: Mallard Creek Road

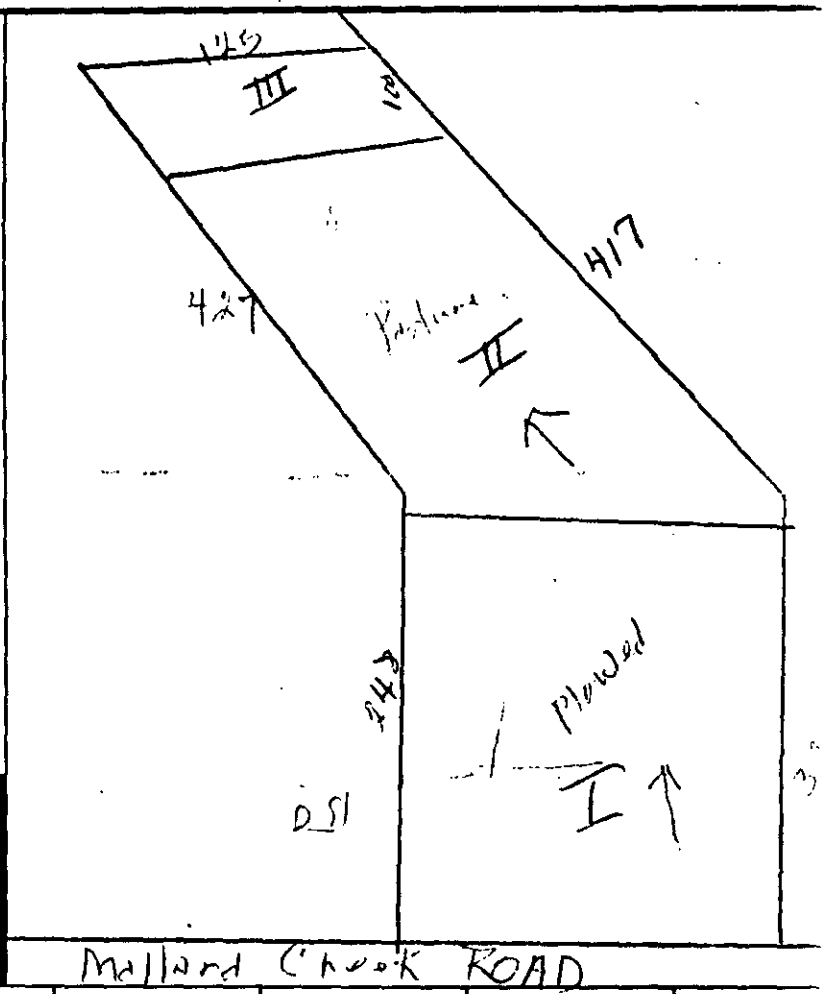
Subdivision:

Lot: Block: Acres: 2A

Owner: Fred Willie Smith
Address: 13022 Mallard Creek Road
Charlotte, NC 28213

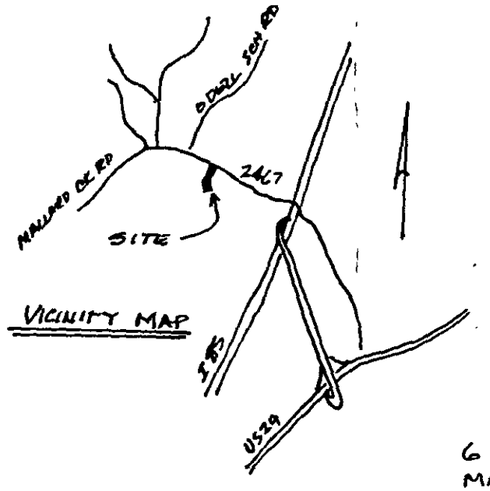
Comments: The Clay on I-II is very Heavy.

Described by: W. B. Ramsey
Date: 11-16-88



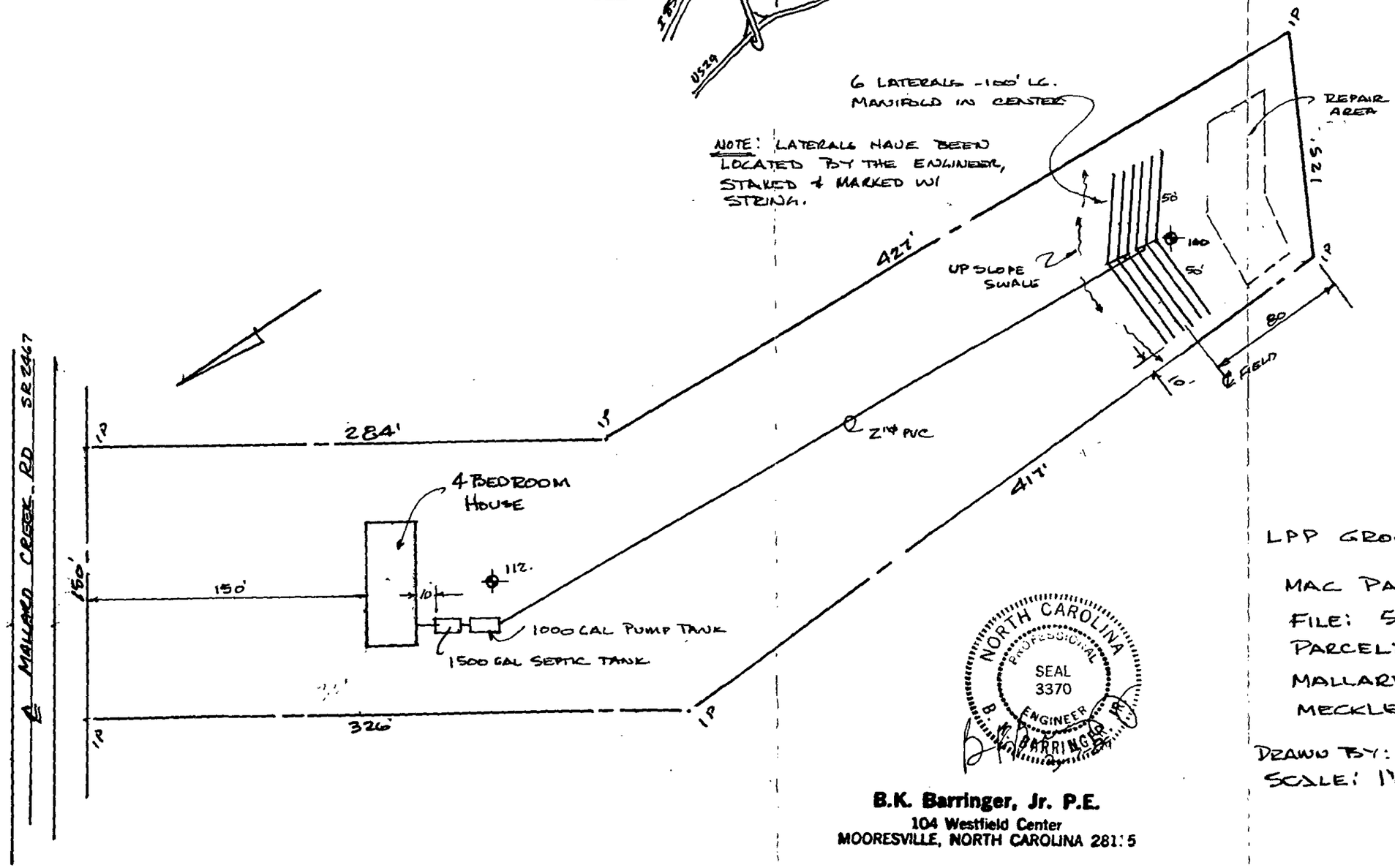
*** EVALUATION KEY ***
S = Suitable U = Unsuitable
PS = Provisionally Suitable
The "Area Classification" below indicates the suitability of areas in the diagram.

FACTORS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6
Topography (IFTC Cecil 20"2-1)	S PS (U) 2-4	S PS U 2-4	S (PS) U 2-4	S PS U	S PS U	S PS U
Texture	S PS (U)	S PS (U)	S (PS) U	S PS U	S PS U	S PS U
Structure	S PS (U)	S PS (U)	S (PS) U	S PS U	S PS U	S PS U
Drainage	S PS (U)	S PS (U)	S (PS) U	S PS U	S PS U	S PS U
Depth	S PS (U) 26-30	S PS (U) 20-31"	S PS (U) 20-30	S PS U	S PS U	S PS U
Restrictive Horizons	S (PS) U	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	IVe Cecil-Iredell mix	IVe Iredell	IVe 1-1 mixed			
Area Classification	S PS (U)	S PS (U)	S PS (U)	S PS U	S PS U	S PS U



VICINITY MAP

NOTE: LATERALS HAVE BEEN LOCATED BY THE ENGINEER, STAKED & MARKED W/ STRING.



NORTH CAROLINA PROFESSIONAL SEAL 3370 ENGINEER B. K. BARRINGER JR.

B.K. Barringer, Jr. P.E.
104 Westfield Center
MOORESVILLE, NORTH CAROLINA 28115

LPP GROUND ABSORPTION SYSTEM
FOR
MAC PATTERSON.
FILE: 5166A
PARCEL: 02916108
MALLARD CREEK RD.
MECKLENBURG CO. N.C.

DRAWN BY: BKB DATE: 3-7-89
SCALE: 1" = 60'