

14935 SHOPTON RD W

19907108

1/8/2008

duponbj

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

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

OPERATION PERMIT for an ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

File #: 5594B Permit #: _____ Tax Parcel #: 199-071-06

Property Owner: Sandra E. Stiles

Job Location Address: 14935 Shopton Rd. West

City: Charlotte State: NC Zip Code: _____

Operation Permit Issuance Date: 12-22-06 Contractor Name: Steve Autre

Permitted Design Flow: 360 GPD

Liquid Capacity of Septic Tank: 1500 gallons Autre 11-1-06 STB-829

Liquid Capacity of Dosing Tank: 1000 gallons 11-1-06 PT-78

Effluent Pump Model: _____

Drainfield Installation ☐ N/A

Trench Depth: 48" inches

Trench Width: 3 feet

Line Spacing: 9 feet (O.C.)

Total line length: 225 feet

# of Lines: 2 @ 113 feet

Depth of Media: 12 inches (Type) Quick 4 Chambers

Depth of Cover: 36 inches

Distribution Device: Pressure Manifold 2' of Head

Bed Installation *(For Repair Installations ONLY.)* ☒ N/A

Bed Depth: _____ inches

Bed Width: _____ feet

Total line length: _____ feet

# of Lines: _____ @ _____ feet

Depth of Media: _____ inches (Type) _____

Depth of Cover: _____ inches

Distribution Device: _____

Water Supply Source

☒ Municipal ☐ Private Well ☐ Community Well

☐ Other _____

System Installation Setbacks

Distance from Building Foundation: 5 feet

Distance from Property Line: 10 feet

Distance from Water Supply Source: 10 feet off water line

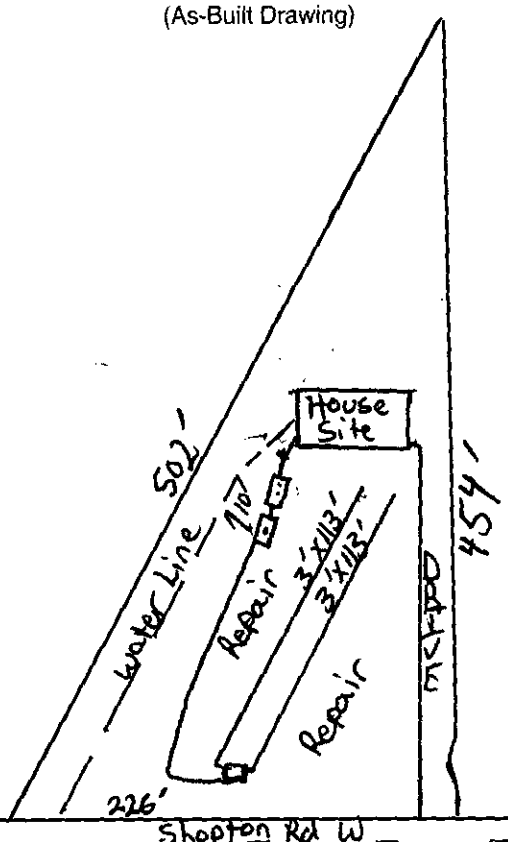
Inspection Dates

Tank(s) Inspected: 12-15-06

Excavation Inspected: 12-15-06

Pump & Controls Inspected: 12-15-06

SKETCH OF SYSTEM INSTALLATION
(As-Built Drawing)



The undersigned has inspected the Septic Tank System described above, and certifies it has been ☒ installed ☐ altered ☐ repaired ☒ as detailed in the plot above ☐ in accordance with the permit issued and meets the provisions of 15A NCAC 18A. 1900, "Laws and Rules for Sewage Treatment and Disposal Systems" in effect on the date of issuance of the permit. The issuance of this 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 15A NCAC 18A. 1900 in addition to those listed below under "Comments." This document shall be null and void if any information contained in the application is untrue or if any additions are made to the property which would increase the requirements for said system.

Notice: Disturbance of the designated repair area may result in the Suspension or Revocation of this permit.

Comments: System Classification & Type: III bg

DENR Authorized Agent: Jeremy Michael Signature: Jeremy Michael

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

INSTALLATION APPROVAL for an
ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

File #: 5594 B Permit #: _____ Tax Parcel #: 199-071-06

Property Owner: Sandra E. Stiles

Job Location Address: 14935 Shopton Rd. West

City: Charlotte State: NC Zip Code: _____

Installation Approval Issuance Date: 12-13-06

Permission is hereby given to ☒ install ☐ alter ☐ repair an on-site wastewater treatment & and disposal system, with subsurface soil absorption and effluent discharge, as specified herein at the described location. This approval is granted based upon the application information submitted to our office. All work shall be completed on or before 1-13-07, after which date this approval 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 granting this approval. 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 of hereafter owning, controlling or using such system from any liability resulting from the failure of the system to operate properly.

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

Permitted Design Flow: 360 GPD

Site LTAR: 0.4 GPD/ft² (For new installations only.)

Liquid Capacity of Septic Tank: 1500 gallons

Liquid Capacity of Dosing Tank: 1000 gallons

Drainfield Design ☐ N/A

Trench Depth: 48 inches per design

Trench Width: 3 feet

Line Spacing: 9 feet (O.C.)

Total line length: 226 feet

# of Lines: 2 @ 113 feet

Depth of Media: 12 inches (Type) Chambers

Distribution Device: Pressure Manifold

Bed Design *(For Repair Installations ONLY.)* ☒ N/A

Bed Depth: _____ inches

Bed Width: _____ feet

Total line length: _____ feet

# of Lines: _____ @ _____ feet

Depth of Media: _____ inches (Type) _____

Distribution Device: _____

Water Supply Source

☒ Municipal ☐ Private Well ☐ Community Well

☐ Other _____

Minimum System Setbacks

Distance from Building Foundation: 5 feet

Distance from Property Line: 10 feet

Distance from Water Supply Source: N/A feet

SKETCH OF SYSTEM LAYOUT
(Proposed Layout)

Install according to consultants design

Trench Depth must be 48 inches

Comments: System Classification & Type: III bg

DENR Authorized Agent: Jeremy Michael Signature: Jeremy Michael

FOR REGISTRATION JUDITH A GIBSON
REGISTER OF DEEDS
MECKLENBURG COUNTY, NC
2007 JAN 19 02:44 PM
BK 21663 PG 209-212 FEE $20 00

INSTRUMENT # 2007012540

2007012540

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

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

FILE #: 5594B

PARCEL #: P0199-071-08

The undersigned, John Kevin & Sandra E. Stiles, owner of property located at 14935 Shopton Road West, (the "site") and described in an instrument recorded in Book RE 10971 at Page 269-271, 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 will apply to the site:

This instrument was prepared by: Sandra Stiles

Mail after recording to: Mecklenburg County Land Use + Environmental Services 700 N. Tryon Street, Suite 211, Charlotte NC 28202

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

-- 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 regulation in effect at the 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 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 15th day of December, 2006.

_____
(Corporate Name)

By: _____

_____ President

John K. Stiles (SEAL)

Sandra E. Stiles (SEAL)

_____ (SEAL)

_____ (SEAL)

ATTEST:

_____

_____ Secretary

(Corporate Seal)

STATE OF NORTH CAROLINA

COUNTY OF Mecklenburg

I, Cynthia B. Hovis, a Notary Public for said County and State, do hereby certify that John K Stiles & Sandra E. Stiles personally appeared before me this date and acknowledged the due execution of the foregoing instrument.

WITNESS my hand and notarial seal this 15th day of December, 20 06.

Cynthia B. Hovis
Notary Public

My Commission Expires:

August 1, 2009

CYNTHIA B. HOVIS NOTARY PUBLIC MECKLENBURG COUNTY

STATE OF NORTH CAROLINA

COUNTY OF _____

I, _____, a Notary Public for said County and State, do hereby certify that _____ personally came before me this date and acknowledged that he is _____ Secretary of _____, 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 _____ as its _____ Secretary.

WITNESS my hand and notarial seal this _____ day of _____, 20 _____.

_____
Notary Public

My Commission Expires:

_____

REVISED 8-13-02



JUDITH A. GIBSON
REGISTER OF DEEDS, MECKLENBURG
COUNTY & COURTS OFFICE BUILDING
720 EAST FOURTH STREET
CHARLOTTE, NC 28202

PLEASE RETAIN YELLOW TRAILER PAGE

It is part of the recorded document, and must be submitted with original for re-recording and/or cancellation.

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Filed For Registration: 01/19/2007 02:44 PM

Book: RE 21663 Page: 209-212

Document No.: 2007012540

PRMIT 4 PGS $20.00

Recorder: APRIL JONES



2007012540

FEE: 300.00 X32698
DATE: 2/15/05 gc

AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION ACS

PERMIT NUMBER: 5594B
PARCEL NUMBER: ~~PO 199-071-06~~ 08 14935

JOB LOCATION ADDRESS: Shopton Road West
PROPERTY OWNER: Sandra E. Stiles
BUILDING CONTRACTOR: #
SUBDIVISION NAME: #
AUTHORIZATION ISSUED BY: David Cornelius, RS DATE: 12/08/04

David Cornelius, RS 12/8/04
DENR/DEH AUTHORIZED AGENT

AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 5594B, 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 THE 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 CONSTRUCTION AUTHORIZATION AND ASSOCIATED PERMIT(S) TO REVOCATION.

4. THIS CONSTRUCTION AUTHORIZATION AS PROVIDED IN G.S. 130A-335(f) AND G.S. 130A-336(b) SHALL BE VALID FOR A PERIOD EQUAL TO THE VALIDITY OF THE IMPROVEMENT PERMIT, NOT TO EXCEED 60 MONTHS.

5. OTHER CONDITIONS:
   Install Pressure Manifold
   Install according to plans on file submitted by Hal Owens and Associates.

199-071-06

CONDITIONS OF IMPROVEMENT PERMIT / CONSTRUCTION AUTHORIZATON

Permit Number: **5594B** Tax Number: **~~PO~~199-071-06**

- 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

Primary Wastewater System

Type: ☐ 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:

0.4 Long-term acceptance rate (GPD/ft^2)	360 Max gallons/day wastewater flow	675 Absorption Area (ft^2)	9 Trench spacing (min. on centers) (ft)
Serviced by private well: ☐ Yes ☒ No	1500 Gallon septic tank	225 Total trench length (ft)	24 Maximum trench depth (in) (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions.)
3 Bedrooms in residence	1000 Gallon pump tank	na Depth of stone (in)	

Any surface water present: **no** Type: Minimum separation distance (ft):

Additional conditions: **Pressure Manifold**
Install according to plans on file submitted by Hal Owens and Associates.
Recorded Agreement Forms to be on file in this Office

Repair Area System

Type: ☐ 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:

900 Absorption Area (ft^2) 300 Total trench length (ft)	12 Depth of stone (in)	9 Trench spacing (min. on centers) (ft)	24 Maximum trench depth (in)

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. The approval is granted in accordance with the provisions of Laws and Rules For Sewage Treatment, and Disposal Systems 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.

DENR Authorized Agent — Date: 12/8/04

X — Owner/Agent Signature — X — Date: 2.15.05

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 N. TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE: (704) 336-5103
FAX: (704) 336-6894

NC DENR
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

To: David C.

From: Michael Athanas

Report for Stiles. Any questions, just call

Mike.

Hal Owen & Associates of Charlotte

1999 Candlewick Dr.

Fort Mill, S.C. 29715

July 5, 2004

Concur w/
Mike Wilkerson Report
W. A. Marlin 12-9-04

Mr. Bill Marlin
Mecklenburg County Health Dept.
Suite 211
700 N. Tryon St.
Charlotte N.C. 28202

On June 23, 2004 Hal Owen & Associates of Charlotte, Inc. conducted a preliminary soil evaluation on the 1.2 acre tract off Shopton Road West in Mecklenburg County N.C. A backhoe was used to evaluate five pits, which are located on the attached map. The purpose of this evaluation was to determine the suitability of this 1.2 acre tract for the installation of a well and septic system. Site suitability for on-site waste disposal is based on soil characteristics, soil wetness, restrictive horizons, soil depth, topography and available space.

On the attached map, pit locations in green represent provisionally suitable soil for conventional septic systems. Pit locations in red are unsuitable. During my evaluation with Mecklenburg County there were five pits excavated, pits 1 through 4 were provisionally suitable and pit 5 which was unsuitable due to soil texture at appoximately 20 inches and weathered rock (refer to soil profiles below).

Pit#1

0-20 10YR 4/3 brown clay; angular blocky (ab); firm; sticky (s), plastic (p)

20-43 10YR 4/2 dark gray brown; clay; massive (m); very firm (vf); (2:1), very sticky (vs), very plastic (vp)

43-73+ 2.5YR 4/4 olive brown; sandy loam saprolite; very friable (vf); m; non-sticky (ns); non-plastic (np)

Pit#2

0-10 10YR 4/6 brown clay; subangular blocky (sab); firm; s; p

10-26 10YR 5/6 yellow brown clay; m; vf; vs; vp; 2:1 mineralogy

26-42 2.5Y 4/4 olive brown; sandy clay loam saprolite; m; friable; ss; sp.

42- 76+ 2.5Y 4/4 olive brown sandy loam saprolite; friable; m; ns; np

DEC-06-2004 05:00 PM MICHAEL ATHANAS 8038024402 P.02

Pit#3

0-15 10YR 4/3 brown clay; sab; firm; s; p

15-34 10YR 5/6 yellow brown clay; m; vs; vp

34-44 2.5Y 4/4 olive brown sandy clay loam saprolite; friable; m; ss; sp

44-80 2.5Y 4/4 olive brown sandy loam saprolite; friable; m; ns; np

Pit#4

0-8 10YR 4/6 brown clay; sab; firm; s; p

8-36 7.5YR 5/8 strong brown; ab; firm; s; p (25-36, structure changed to platy)

36-44 2.5Y 4/4 olive brown sandy clay loam saprolite; m; friable; ss; sp

44-76+ 2.5Y 4/4 olive brown sandy loam saprolite; m; friable; ns; np

Pit#5

0-10 10YR 4/6 brown clay; sab; firm; ss; sp

10-20 7.5YR 5/8 strong brown; m; very firm; vs; vp

20-30 2.5YR 4/4 olive brown sandy clay loam saprolite; m; friable; ss; sp

30+ Weathered rock

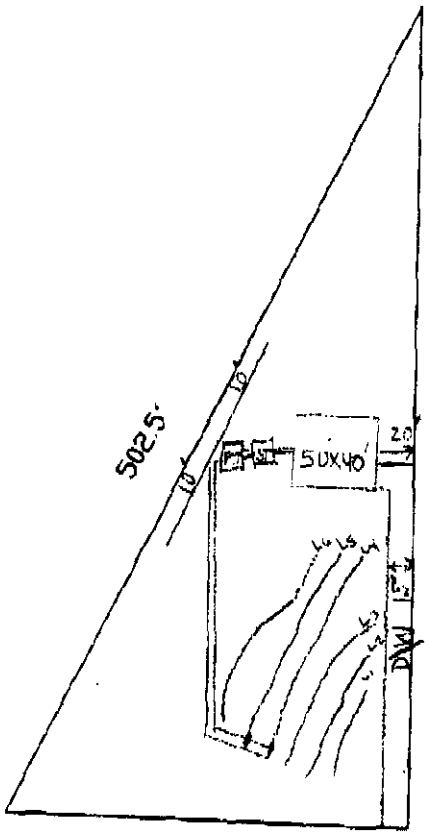
In conclusion, I am incorporating in the design a suggested trench bottom depth of 45 to 48 inches along with a .4 gpd/ft^2 Long Term Application Rate (LTAR) for a three bedroom home. Please refer to attached sheets for design specifications. If there are any further questions, or I can be of further assistance, please feel free to call me at (704) 576-3887.

Sincerely,

Michael Athanas LSS



	Length	Rod	Elev	
L_1	60+	3.9	99.0	Repair
L_2	90+	3.9	99.0	R
L_3	100'	4.1	98.8	R
L_4	113+	4.9	98.0	Intial
L_5	113+	5.2	97.7	Intial
L_6	114'	5.7	97.2	R
S.T.	N/A	6.2	96.7	R
P.T.	N/A	6.2	96.7	R



B_M = CL of Road (Orange flagging)
2.9

25% Reduction: 22.5' Line
Intial System

Repair: Conventional 360+ of Line

Daily Design Flow: 360 gpd
LTAR: .4 gpd/ft²
Number + Length of Laterals: 2@113'
Pressure Manifold: 2 Taps at ½ Sch 40
Elevation: 6' (5' to bottom of tank + 1' to drainfield)
Pressure Head: 2'
Friction Loss: Appox 150' of Pipe @ 2" sch 40 = .74
TDH = 8.74 + 20% For Elbows
TDH = 10.5 ≈ 11

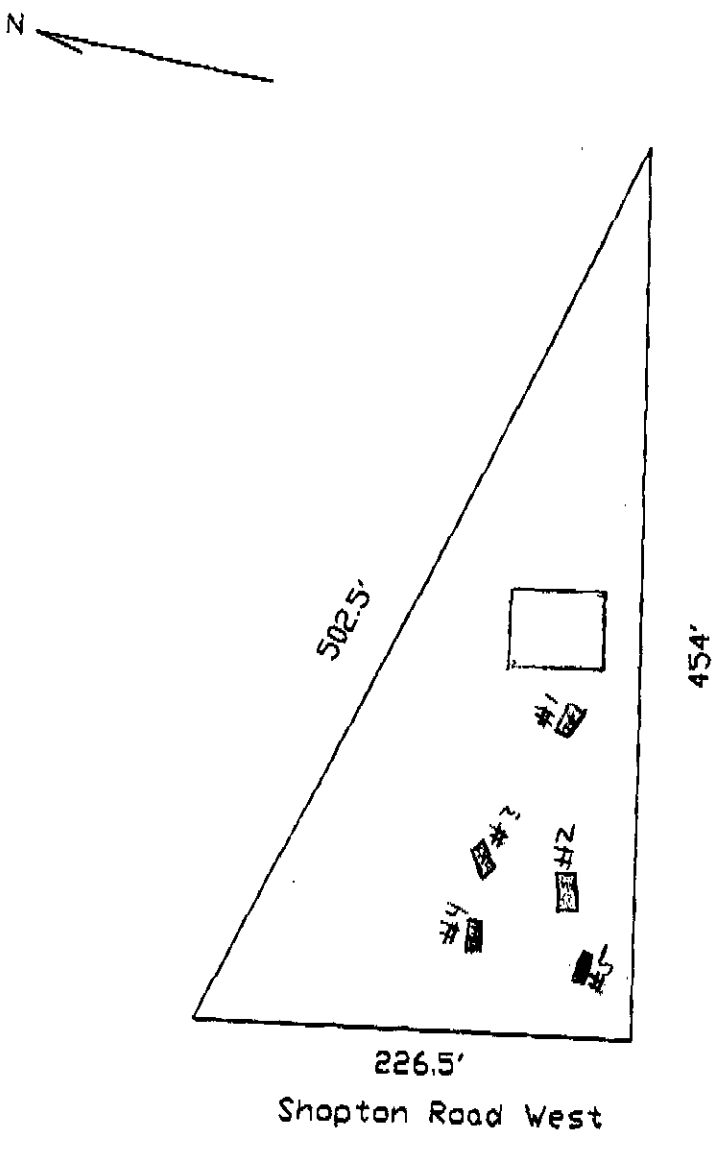
Well Loc: Clients Option, keep 100' From Septic System

*Keep All Construction Traffic As Close As Possible to Proposed D/W

MECKLENBURG CO., N.C.
Steele Creek Township

SCALE 1" = 100'

Drawn By R.Hovis
Date: 24 June, 2004



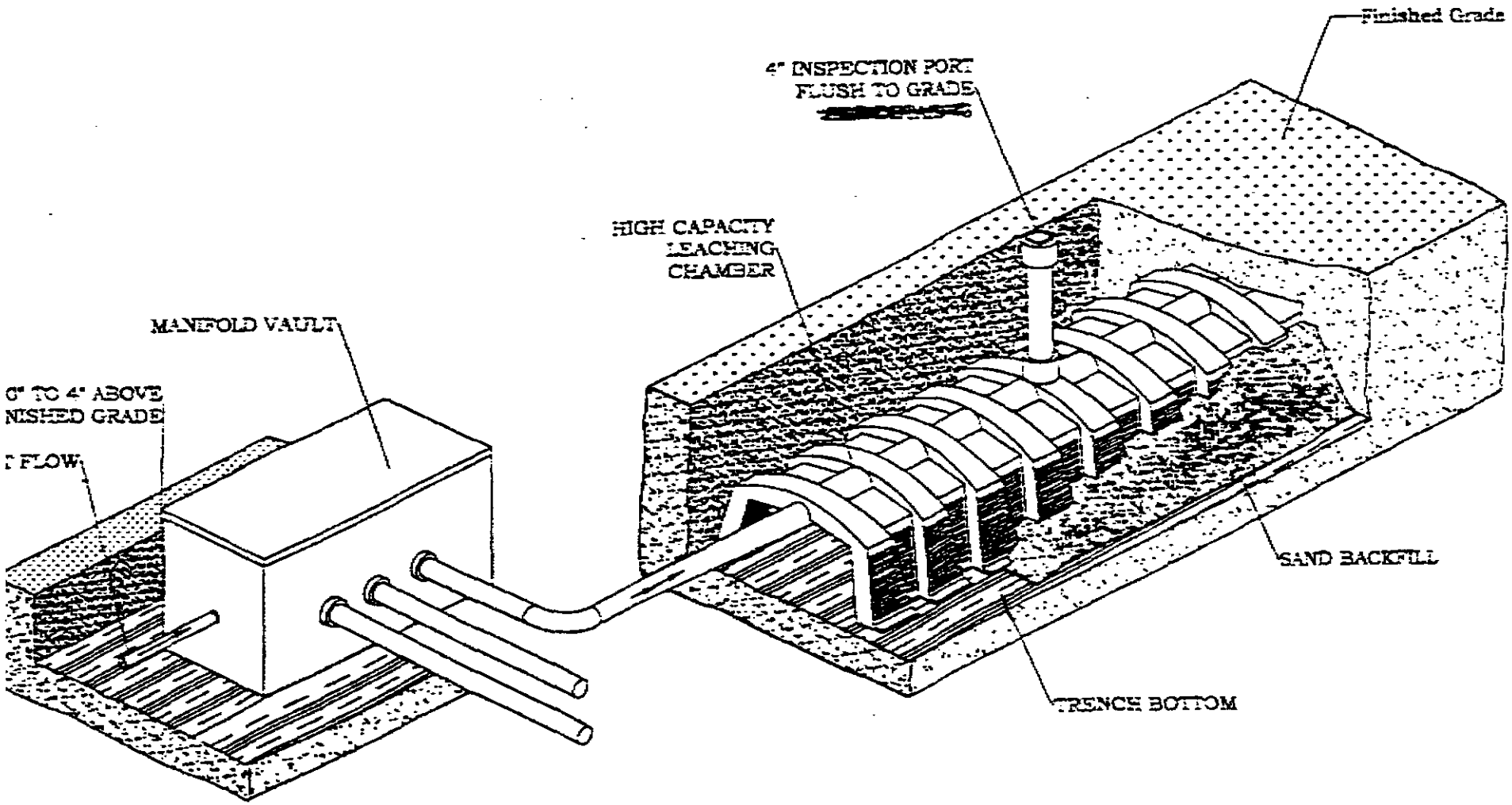
MECKLENBURG CO. , N.C.
Steele Creek Township

SCALE 1" = 100'

Drawn By R.Hovis
Date: 24 June, 2004

DEC-06-2004 05:01 PM MICHAEL ATHANAS 8038024402 P.05

GRAVITY FED LEACHING CHAMBER
FED BY PRESSURE MANIFOLD
DETAIL 1.2A



Profile View of Pressure Manifold for Sloping Site Installation (not to scale)

Plan View of Pressure Manifold for Sloping Site Installation (not to scale)

HAL OWEN & ASSOCIATES, PLLC

DEC-06-2004 05:02 PM MICHAEL ATHANAS 8038024402 P.06

h_f = head loss (feet)
L = pipe length (feet)
Q = flow (GPM)
D = pipe inside diameter (inches)

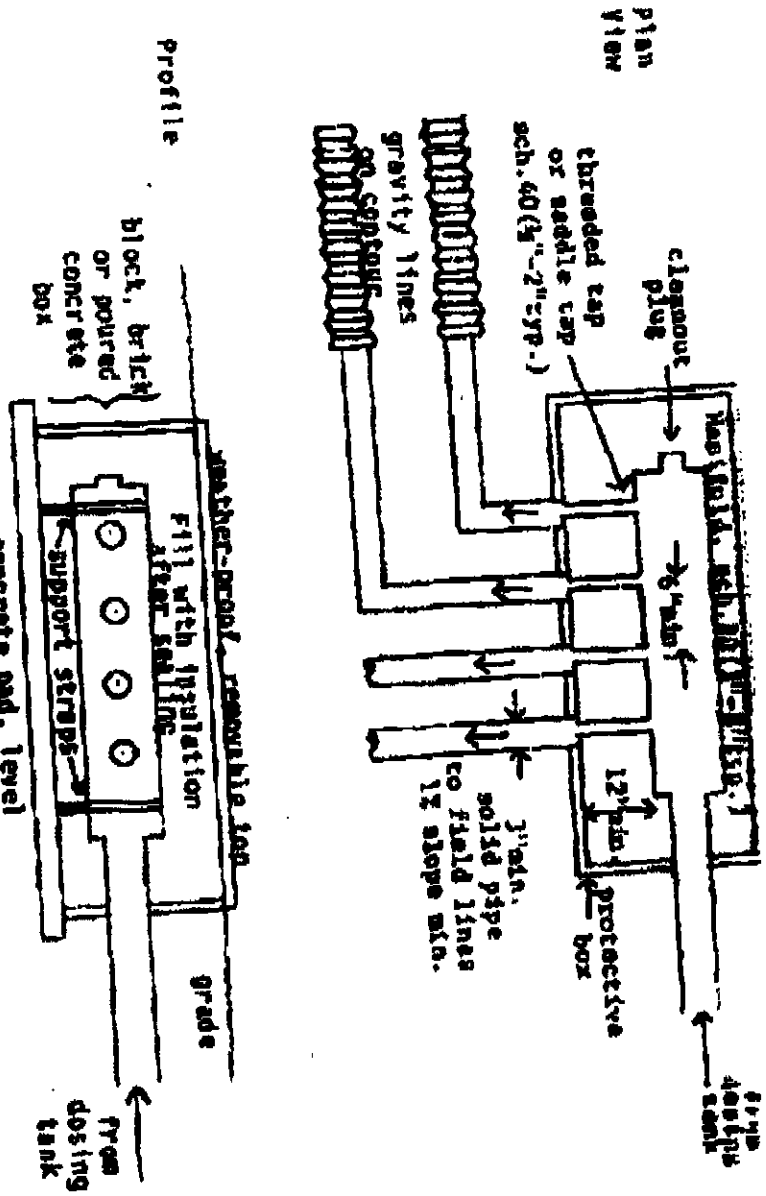


Fig. 2 Pressure Manifold For Sloping Sites

DEC-06-2004 05:02 PM MICHAEL ATHANAS 8038024402 P.07

FRICTION LOSS, IN FEET, THROUGH 100 FEET OF PLASTIC PIPE

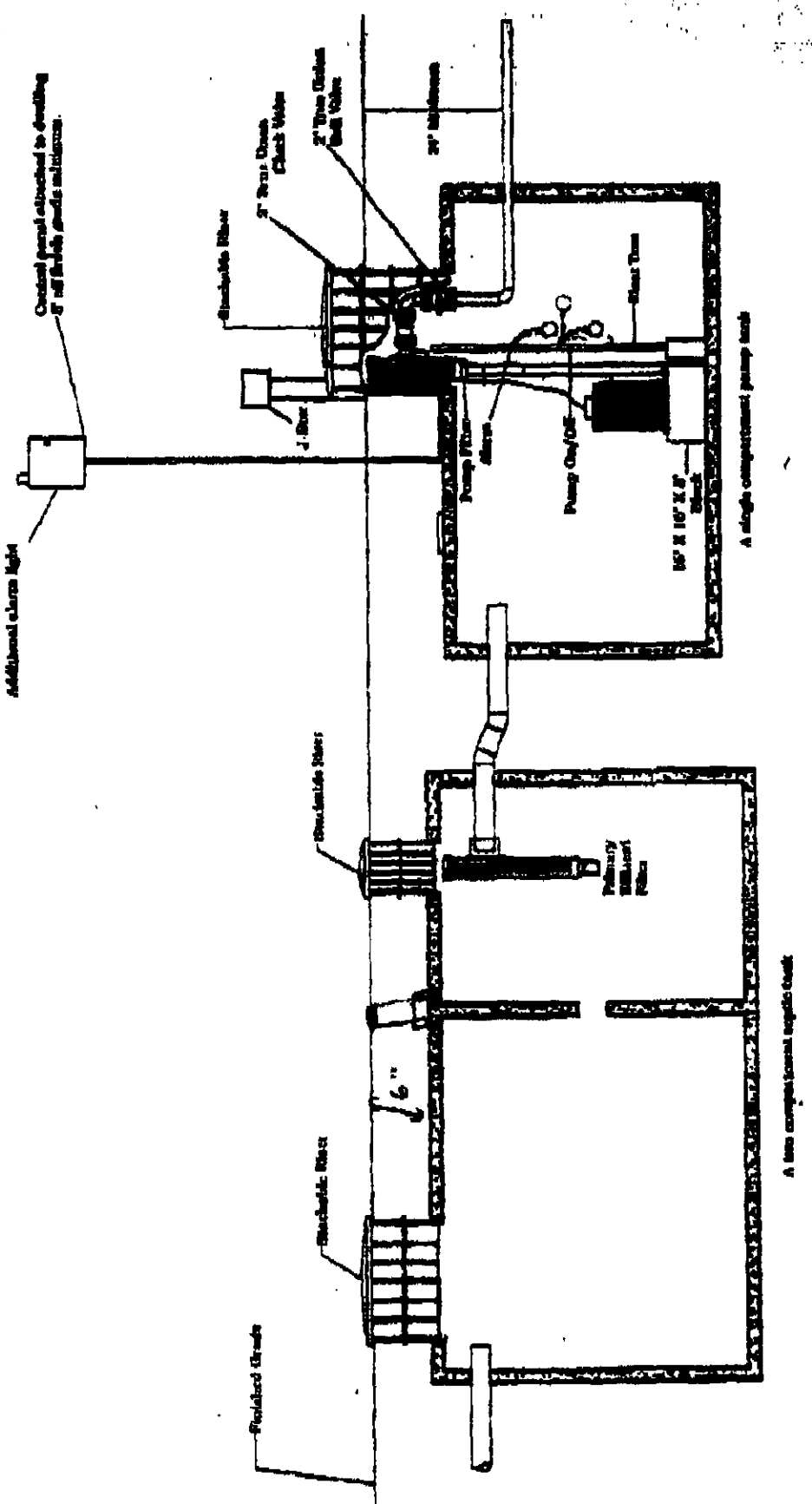
Flow (GPM)	1" 160 PSI	1" Sch. 40	1¼" 160 PSI	1¼" Sch. 40	1½" 160 PSI	1½" Sch. 40	2" 160 PSI	2" Sch. 40	3" 160 PSI	3" Sch. 40	4" 160 PSI	4" Sch. 40	6" 160 PSI	6" Sch. 40
1	.05	.09												
2	.17	.32	.05	.08										
3	.35	.68	.11	.18	.06	.08								
4	.62	1.17	.18	.31	.10	.14								
5	.93	1.76	.28	.46	.14	.22	.05	.06						
6	1.31	2.47	.39	.66	.20	.31	.07	.09						
7	1.74	3.28	.52	.86	.27	.41	.09	.12						
8	2.23	4.20	.66	1.10	.34	.52	.12	.15						
9	2.77	5.22	.83	1.37	.43	.65	.14	.19						
10	3.37	6.35	1.00	1.67	.52	.79	.17	.23						
11	4.01	7.57	1.20	1.98	.62	.94	.21	.28						
12	4.72		1.41	2.34	.73	1.10	.25	.33						
13	5.47		1.63	2.71	.84	1.28	.28	.38						
14	6.27		1.87	3.11	.97	1.47	.33	.43	.05	.06				
15	7.13		2.13	3.54	1.10	1.67	.37	.49	.06	.07				
16			2.39	3.98	1.24	1.88	.42	.56	.06	.08				
17			2.68	4.46	1.39	2.10	.47	.62	.07	.09				
18			2.98	4.95	1.54	2.34	.52	.69	.08	.10				
19			3.29	5.47	1.70	2.58	.57	.77	.09	.11				
20			3.62	6.02	1.87	2.84	.63	.84	.10	.12				
25			5.47		2.83	4.29	.95	1.27	.14	.18				
30			7.67		3.96	6.02	1.34	1.78	.20	.25	.06	.07		
35					5.27		1.78	2.37	.27	.34	.08	.09		
40					6.75		2.27	3.03	.34	.44	.10	.12		
45							2.83	3.77	.43	.55	.13	.15		
50							3.44	4.58	.52	.67	.15	.18		
60							4.81	6.42	.73	.94	.21	.26		
70							6.40		.97	1.25	.28	.33		
80									1.24	1.60	.37	.43	.06	.06
90									1.55	1.99	.46	.53	.07	.07
100									1.88	2.41	.56	.64	.08	.09
125									2.84	3.65	.83	.97	.13	.13
150									3.98	5.11	1.17	1.36	.18	.19
175									5.29	6.80	1.56	1.81	.24	.25
200									6.78		1.99	2.32	.30	.32
225											2.47	2.88	.36	.39
250											3.01	3.50	.46	.48
275											3.59	4.18	.55	.57
300											4.21	4.91	.64	.67
325											4.89	5.69	.74	.77
350											5.60	6.53	.85	.89
375											6.37	7.41	.97	1.01
400											7.17		1.09	1.14
425													1.22	1.27
450													1.36	1.41
475													1.50	1.56
500													1.65	1.72
550													1.97	2.05
600													2.31	2.40
650													2.68	2.79
700													3.07	3.20
750													3.49	3.63
800													3.93	4.09
850													4.40	4.58
900													4.89	5.09
950													5.41	5.63

Notes:

160 PSI pipe assumed to be SDR 26

Computed by the Hazen Williams Formula, assuming C = 140:

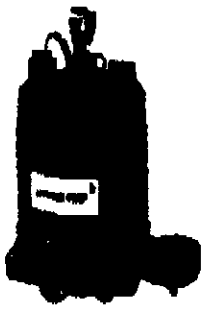
$$h_f = \frac{0.00113\ LQ^{1.86}}{D^{4.87}}$$



HAL OWEN & ASSOCIATES, PLLC

GOULDS PUMPS

Submersible Effluent Pump



WE Series

PROBLEMANCE AVAILABLE FOR RESIDENTIAL APPLICATIONS.

APPLICATIONS

Specifically designed for the following uses:

- Homes
- Farms
- Trailer courts
- Motels
- Schools
- Hospitals
- Industry
- Effluent systems

SPECIFICATIONS

Pump

- Solids handling capabilities: ¾" maximum.
- Discharge size: 2" NPT.
- Capacities: up to 140 GPM.
- Total heads: up to 128 feet TDH.
- Temperature: 104°F (40°C) continuous 140°F (60°C) intermittent.
- See order numbers on reverse side for specific HP, voltage, phase and RPM's available.

FEATURES

■ Impeller: Cast iron, semi-open, non-clog with pump-out vanes for mechanical seal protection. Balanced for smooth operation. Silicon bronze impeller available as an option.

■ Casing: Cast iron volute type for maximum efficiency. 2" NPT discharge.

■ Mechanical Seal: SILICON CARBIDE VS. SILICON CARBIDE sealing faces. Stainless steel metal parts, BUNA-N elastomers.

■ Shaft: Corrosion-resistant, stainless steel. Threaded design. Locknut on all models to guard against component damage on accidental reverse rotation.

■ Fasteners: 300 series stainless steel.

■ Capable of running dry without damage to components.

■ Designed for continuous operation when fully submerged.

MOTORS

■ Fully submerged in high-grade turbine oil for lubrication and efficient heat transfer.

■ Class B insulation on ½-1½ HP models.

■ Class F insulation on 2 HP models.

Single phase (60 Hz):

- Capacitor start motors for maximum starting torque.
- Built-in overload with automatic reset.
- SJTOW or STOW severe duty oil and water resistant power cords.
- ½ and ¾ HP models have NEMA three prong grounding plugs.
- 1 HP and larger units have bare lead cord ends.

Three phase (60 Hz):

- Class 10 overload protection must be provided in separately ordered starter unit.
- STOW power cords all have bare lead cord ends.

■ Designed for Continuous Operation: Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage when fully submerged.

■ Bearings: Upper and lower heavy duty ball bearing construction.

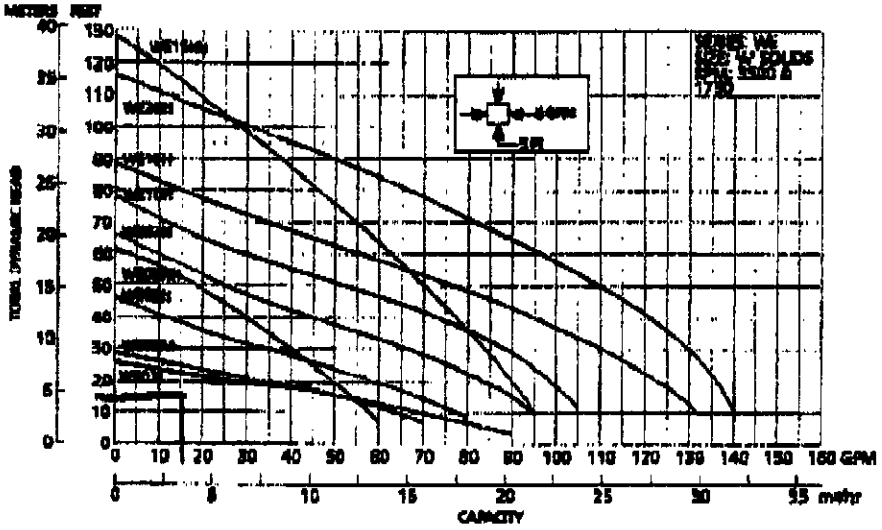
■ Power Cable: Severe duty sized, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking. Standard cord is 20'. Optional lengths are available.

■ O-rings: Assure positive sealing against contaminants and oil leakage.

AGENCY LISTINGS



Goulds Pumps is ISO-9001 Registered.



Goulds Pumps

ITT Industries

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Effective July, 2003
63885

www.goulds.com

Soil Science Investigations • Septic System Designs • Wetland Consulting

DEC-06-2004 05:04 PM MICHAEL ATHANAS 8038024402 P.09

Department of Environment, Health, and Natural Resources
Division of Environmental Health
On-site Wastewater Section

Sheet: 1 of 2
Property ID: PO 199-071-06
Lot #:
File #: 5594B
Code: 3

ACS

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: Sandra E. Stiles
Applicant:
Address: 14925 Shopton Road West, Charlotte, N. C. 28278
Date Evaluated: 04/30/2002
Proposed Facility: Residence
Design Flow (.1949): 360gpd
Property Size: 1.17a
Location of Site: Shopton Road West
Property Recorded:
Water Supply: [ ] Public [ ] Individual [x] Well [ ] Spring [ ] Other
Evaluation Method: [ ] Auger Boring [x] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 .1941 Structure/ Texture	.1941 Consistence Mineralogy	OTHER PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
1	LS, 5	0-13	GR/SCL	FR/SEXP/SS/SP	2.5Y4/1@30"	30	US	NONE	US
		13-30	SBK/ABK/C	VFI/EXP/VS/VP					
		30-50	M/SCL	FR/FI/SEXP/SS/SP					
2	"	0-9	GR/CL	FR/SEXP/SS/SP	2.5Y7/1@25"	33	"	"	"
		9-33	ABK/C	VFI/EXP/VS/VP					
		33-50	M/SC	FI/VFI/EXP/VS/VP					
		50-60"	M/SL	FR/SEXP/NS/NP					
3	"	0-6	GR/SCL	"	>68" TO SOIL WETNESS	44	"	"	"
		6-21	SBK/ABK/SC	VFI/EXP/VS/VP					
		21-44	SBK/ABK/C	"					
		44-68	M/SL	FR/SEXP/NS/NP					

Description	Initial System	Repair System
Available Space (.1945)	US	US
System Type(s)		
Site LTAR		

Other Factors (.1946):
Site Classification (.1948): UNSUITABLE
Evaluated By: W. R. Marlin, LSS, 5/3/2004, W. R. Marlin
Others Present: M. Lambert, S. Stiles

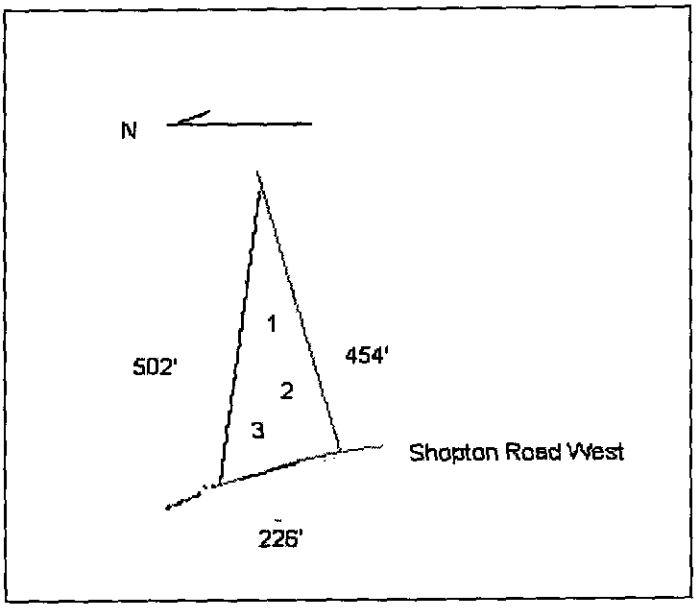
COMMENTS:

100% repair, subject property does not appear to have been recorded as a separate tract

Landscape Position	Group	Texture	.1955 LTAR	Structure
R-Ridge	I	S-Sand	1.2 - 0.8	SG-Single Grain
SS-Shoulder Slope		LS-Loamy Sand		M-Massive
LS-Linear Slope				CR-Crumb
FS-Food Slope	II	SL-Sandy Loam	0.8 - 0.6	GR-Granular
NS-Nose Slope		L-Loam		SBK-Subangular Blocky
HS-Head Slope				ABK-Angular Blocky
CC-Concave Slope	III	SI-Silt	0.6 - 0.3	PL-Platy
CV-Convex Slope		SICL-Silty Clay Loam		PR-Prismatic
T-Terrace		CL-Clay Loam		
FP-Flood Plain		SCL-Sandy Clay Loam		
	IV	SC-Sandy Clay	0.4 - 0.1	
		SIC-Silty Clay		
		C-Clay		

Consistence Moist	Consistence Wet	Mineralogy
VFR-Very Friable	NS-Non-Sticky	SEXP-Slightly Expansive
FR-Friable	SS-Slightly Sticky	EXP-Expansive
FI-Firm	S-Sticky	
VFI-Very Firm	VS-Very Sticky	
EFI-Extremely Firm	NP-Non-Plastic	
	SP-Slightly Plastic	
	P-Plastic	
	VP-Very Plastic	

Sketch of Soil Evaluation Locations



#1733

FEE: 200.00
DATE: 4/27/04
Check 8138 JKA

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

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 #: 55948

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: Out of 199-071-06 PO

STREET ADDRESS: Shopton Rd West

SUBDIVISION OR MOBILE HOME PARK NAME:

LOT NUMBER:

TYPE OF BUILDING (CHECK ONE):

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

TOWNSHIP (CHECK ONE):

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

HEATED SQUARE FOOTAGE: 2400

NUMBER OF BEDROOMS: 2 NUMBER OF OCCUPANTS: 3

CLOSING DATE_____

FOUNDATION FOR RESIDENCE:

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

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

n/a

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

WATER SUPPLY (CHECK ONE):

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

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

BURIED CABLES, LANDFILLS, STUMPHOLES __ YES ✓ NO
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) Stiles (FIRST) Sandra (MI) E.	NAME: (LAST) (FIRST) (MI)
ADDRESS: 14925 Shopton Rd West	DAYTIME PHONE: ( ) -
CITY: Charlotte STATE: NC ZIP: 28278	
DAYTIME PHONE: 704 588-7565 or 704-377-4653	

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 12-15-99

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 Sandra Stiles DATE: 4-9-04

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

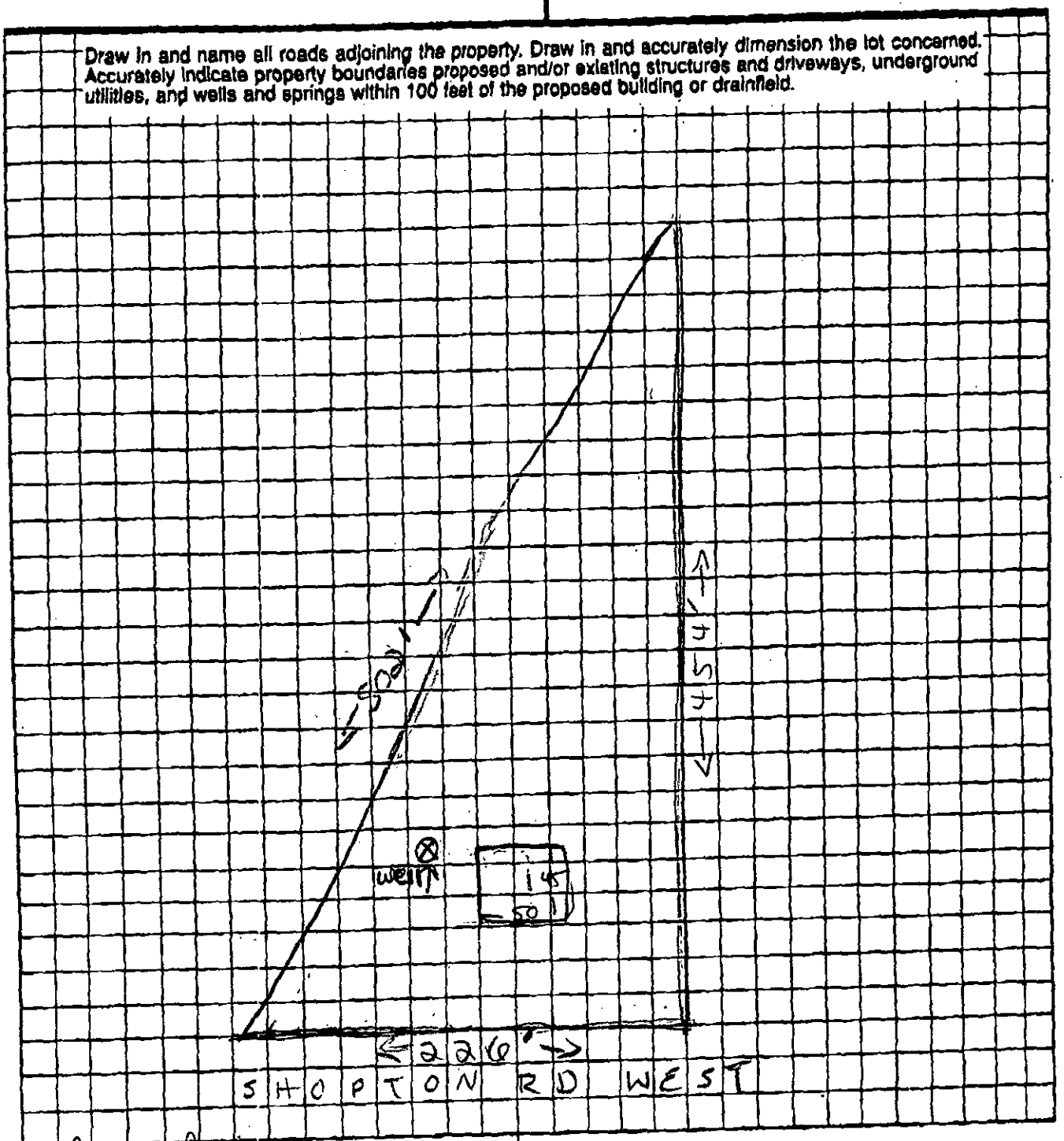
PROPOSED PLOT PLAN

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

FILE: 5594B

TC: 199-071-06P0

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.



Sandra Stiles
OWNER/AGENT SIGNATURE

DATE 4-9-04

APPROVAL DATE _____

White - Health Department's Copy

Canary - E.H.S. Copy

Pink - Owner's Copy