

9820 BRIEF RD

19713105

LOT19

1/10/2008

duponbj

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

Groundwater & Wastewater Services
Septic Project File & Data Review Worksheet

GWS File #: 6500 WASPS App #: 816

Primary ES assigned to project: DC

Secondary ES assigned to project:

Project Type: New System ☑ Alteration ☐ Repair ☐ Modified Plot Plan ☐

I. File Review:

Rule or Law				
	Permit Application			
.1937(d)	Is the Application complete	Yes ☑	No ☐	N/A ☐
.1937(d)	Is there a Site plan/Plat with application	Yes ☑	No ☐	N/A ☐
.1937(d)	Is the Facility shown?	Yes ☑	No ☐	N/A ☐
.1937(d)	Are appurtenances shown	Yes ☑	No ☐	N/A ☐
	Site Evaluation Information			
.1939 (a)(1)	Topography and Landscape Position Recorded?	Yes ☑	No ☐	N/A ☐
.1940 (a-g)	Slope % Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Texture Class Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Structure type Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Consistence Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Mineralogy Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(3)	Soil Wetness Condition Recorded?	Yes ☐	No ☐	N/A ☑
.1939 (a)(4)	Soil Depth to Rock or Parent Material Recorded When Encountered	Yes ☐	No ☐	N/A ☑
.1939 (a)(5)	Depth to Restrictive Horizons Recorded When Encountered?	Yes ☐	No ☐	N/A ☑
.1939 (a)(6)	Sufficient Available Space Recorded?	Yes ☑	No ☐	N/A ☐
.1937(m)	Are the Profile Locations Shown?			
.1939(a)	Are the S/PS Profiles in system & in repair area?	Yes ☑	No ☐	N/A ☐
& .1945(b)	Number of auger borings made: 3			
	Were sufficient auger borings made?	Yes ☑	No ☐	N/A ☐
.1939(d), .1955, .1956, .1957	LTAR 3	Yes ☑	No ☐	N/A ☐
	Improvement Permit/Construction Authorization			
.1937(g) 130A-336(a)	Proposed System Type stated-Initial	Yes ☑	No ☐	N/A ☐
.1945(b)	Proposed System Type stated-Repair	Yes ☑	No ☐	N/A ☐
130A-336 (a)(3)	System location identifiable by setbacks - Initial	Yes ☑	No ☐	N/A ☐
.1937(g) .1945(b)	System components shown – Initial	Yes ☑	No ☐	N/A ☐
.1945(b)	Repair area shown	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Does System design match facility, flow & WWcharacteristics?	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Is System design consistent with soil/site conditions?	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Is the System located in the approved area?	Yes ☑	No ☐	N/A ☐
130A-336(a)	Is the Design flow (gpd) indicated?	Yes ☑	No ☐	N/A ☐

130A-336(a)	Number of Bedrooms, employees, seats, etc. indicated?	Yes ☑	No ☐	N/A ☐
.1937(g)	Trench depth indicated?	Yes ☑	No ☐	N/A ☐
.1937(g)	Trench width indicated?	Yes ☑	No ☐	N/A ☐
.1937(g)	Trench length indicated?	Yes ☑	No ☐	N/A ☐
130A-336(a)(1)	Proposed/existing well shown?	Yes ☐	No ☐	N/A ☑
130A-336(a)(1)	Property line lengths shown?	Yes ☑	No ☑	N/A ☐
130A-336(a)	Facility/appurtenance setbacks shown from fixed points?	Yes ☑	No ☐	N/A ☐

Operation Permit

.1937(i)	System type as described in table V(a) of rule .1961	Yes ☐	No ☐	N/A ☐
.1937(i)	Conditions for system performance, operation, maintenance, monitoring and reporting.	Yes ☐	No ☐	N/A ☐

II. WASPS Review:

Construction authorization issued	Yes ☐	No ☐	N/A ☐
Installation approval issued	Yes ☐	No ☐	N/A ☐
Operation permit issued	Yes ☐	No ☐	N/A ☐
Other related documentation	Yes ☐	No ☐	N/A ☐

 # Items requiring correction/modification: _____

Comments:

_____

_____

_____

_____

_____

IA issued date: _____

OP issued date: _____

Review performed by: _____ Date performed: 10-29-07

cc

#8116

GWS – RES. APP 07/05

SEPTIC FEE: 200
DATE: 5/15/06
CRT [ ] SC

PERMIT APPLICATION FOR A RESIDENTIAL SITE IMPROVEMENT PERMIT / CONSTRUCTION AUTHORIZATION FOR ON-SITE WASTEWATER SYSTEM NEW WELL INSTALLATION OR REPAIR OF EXISTING WELL MECKLENBURG COUNTY GROUNDWATER & WASTEWATER SERVICES

WELL FEE: _____
DATE: _____
CRT [ ]

FILE # 65008

SEPTIC / TYPE APPLICATION: ☐ NONE ☒ NEW SYSTEM ☐ ALTERATION ☐ REPAIR ☐ MODIFY PLOT PLAN

WELL / TYPE APPLICATION: ☐ NONE ☐ NEW WELL ☐ MAJOR REPAIR ☐ ABANDONMENT

JOB LOCATION INFORMATION:

TAX/PARCEL #: Portion of 19713105
STREET ADDRESS: 9820 Brief Road
CITY: Charlotte
STATE: NC **ZIP:** 28227
SUBDIVISION OR MOBILE HOME PARK NAME: Undecided
LOT #: ~~18~~ 19
TOWNSHIP:

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

BUILDING INFORMATION:

TYPE OF BUILDING:

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

HEATED SQUARE FOOTAGE: n/a
NUMBER OF BEDROOMS: 4
NUMBER OF OCCUPANTS: n/a

FOUNDATION FOR RESIDENCE:

☐ CONCRETE SLAB ☐ BASEMENT WITH PLUMBING
☒ CRAWLSPACE ☐ BASEMENT WITH NO PLUMBING

IF PLANNING TO EXPAND/ALTER THE EXISTING SYSTEM INDICATE THE FOLLOWING CHANGES:

NUMBER OF BEDROOMS TO BE ADDED: NUMBER OF ADDITIONAL *OCCUPANTS IN THE RESIDENCE:*

WILL THERE BE A HOME BUSINESS IN THE RESIDENCE? ☐ YES ☐ NO TYPE:

WATER SUPPLY:

☐ MUNICIPAL (M) ☐ PUBLIC (C) ☐ PRIVATE WELL (P) ☒ SHARED WELL (S) ☐ OTHER 'SPRINGS' (O)

PROPOSED USE OF WELL: ☐ N/A ☐ IRRIGATION ☐ POTABLE ☐ GEOTHERMAL ☐ OTHER

ARE ANY OF THE FOLLOWING LOCATED ON THE PROPERTY? IF SO, PLEASE SHOW LOCATION ON SITE PLAN/PLAT.

BURIED CABLES, LANDFILLS, STUMPHOLES	☐ YES	☒ NO	WELLS, SPRINGS, OR WATER LINES	☐ YES	☒ NO
EXISTING WASTEWATER SYSTEMS	☐ YES	☒ NO	*DESIGNATED WETLANDS*	☐ YES	☒ NO
EASEMENTS OR RIGHT-OF-WAYS	☐ YES	☒ NO	GRADING/SOIL REMOVAL PERFORMED	☐ YES	☒ NO

PROPERTY OWNER:

NAME: Angela B. Page
ADDRESS: 9900 Brief Road
CITY: Charlotte
STATE: NC ZIP: 28227
HOME PHONE: 704.545.6375 WORK PHONE:
MOBILE PHONE: FAX:

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME: J. Scot Collins
ADDRESS: 1101 Lester Mullis Road
CITY: Indian Trail
STATE: NC ZIP: 28079
HOME PHONE: 704.248.8493 WORK PHONE: 704.641.4470
MOBILE PHONE: FAX: 704.753.5898

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? n/a
WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY? within 30 days

*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 the Mecklenburg County Health Department to enter onto the property for the purpose of processing this request.

J. Scot Collins 5/15/06
Owner's/Agent's Signature Date

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

*A Well 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 the Mecklenburg County Health Department to enter onto the property for the purpose of processing this request.

Owner's/Agent's Signature Date

MECKLENBURG COUNTY HEALTH DEPARTMENT
GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST., SUITE 211
CHARLOTTE, NC 28202 704-336-5103 / FAX: 704-336-6894

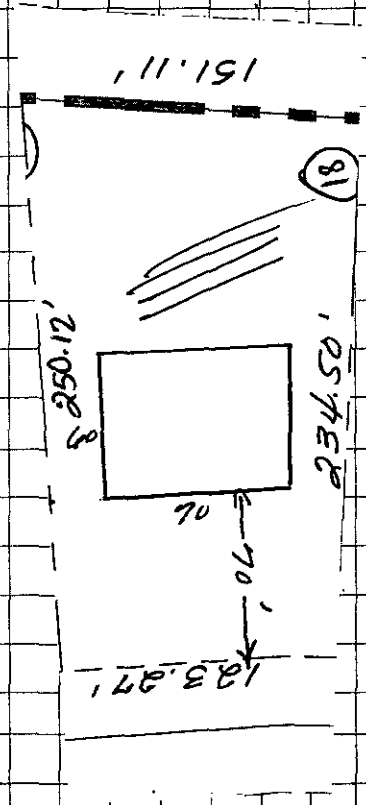
PROPOSED PLOT PLAN

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE (704) 336-5103

FILE: 6500B

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.



APPROVAL DATE _____

OWNER/AGENT SIGNATURE

DATE

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

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

Sheet: 1 of 2
Property ID: PO 197-131-05
Lot #: 21
File #: 6503
Code: 2

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: Angela B. Page
Applicant: J. Scot Collins
Address: 9900 Brief Road, Charlotte, N. C. 28227
Date Evaluated: 6/8/06
Proposed Facility: Residence
Design Flow (.1949): 480gpd
Property Size: .69a
Location of Site: 9820 Brief Road
Property Recorded:
Water Supply: [ ] Public [x] Individual [x] Well [ ] Spring [ ] Other
Evaluation Method: [x] Auger Boring [ ] 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, 6	0-4	GR/CL	FR/SEXP/SS/SP	>48" TO sOIL WETNESS	48+	N/A	NONE	PS, IV
		4-18	SBK/CL	"					.3GPD/FT^2
		18-48	SBK/C	FI/SEXP/S/P					
2	"	0-6	GR/CL	FR/SEXP/SS/SP	>46" TO SOIL WETNESS	46	"	"	PS, IV
		6-46	SBK/C	FI/SEXP/S/P					.275GPD/FT^2
3	"	0-8	GR/CL	FR/SEXP/SS/SP	>48" TO sOIL WETNESS	48+	"	"	PS, IV
		8-48	SBK/C	FI/SEXP/S/P					.3GPD/FT^2

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)	Iva	Iva
Site LTAR	.3GPD/FT^2	.3GPD/FT^2

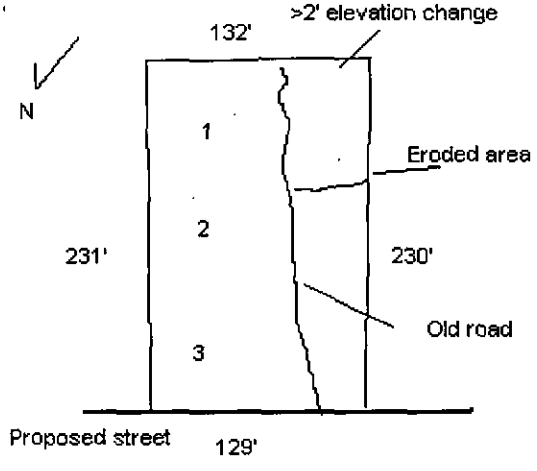
Other Factors (.1946):
Site Classification (.1948): Provisionally Suitable
Evaluated By: W. R. Marlin, LSS, 6/9/2006,
Others Present:
Site Evaluation By: David Cornelius and Kelly Randall

COMMENTS:
100% repair

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				
FP-Flood Plain		CL-Clay Loam		
		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



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

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: **30000820** GWS File #: **6503B** Tax Parcel #: **197-131-05**

- This 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.

I. This Improvement Permit Shall: Expire in Five (5) Years **Expiration Date (If Applicable):** 10/16/2012

Type of Installation: Residential - New System Lot Number: 16

Structure Type: HOUSE Size (ft^2): 0 # Bedrooms: 4 # Occupants: 3

Building Foundation: Crawl Space Water Supply: Municipal

II. Initial System Type: PPBPS (pressurized) **System Classification:** Va

Initial System Specifications:

Design Flow (gpd): 480 LTAR (gpd/ft^2): 0.3 Septic Tank Size (gal): 1500 Pump Tank Size (gal): 1000

Trench Width (ft): 3 Trench Spacing (ft): 9 Absorption Area (ft^2): 801 Total Trench Length (ft): 267

Maximum Trench Depth (in): 30 Depth of Media (in): N/A Distribution Device: Pressure Manifold

III. Repair System Type: PPBPS (pressurized) **System Classification:** N/A

Repair System Specifications:

Design Flow (gpd): 480 LTAR (gpd/ft^2): 0.3 Septic Tank Size (gal): 1500 Pump Tank Size (gal): 1000

Trench Width (ft): 3 Trench Spacing (ft): 9 Absorption Area (ft^2): 800 Total Trench Length (ft): 267

Maximum Trench Depth (in): 30 Depth of Media (in): N/A Distribution Device: Pressure Manifold

IV. Permit Conditions/Comments:

(Please See the Following Page for Permit Conditions.)

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment, and Disposal Systems* and is subject to the following provisions:

- No work shall be conducted on the septic system until an INSTALLATION APPROVAL is granted by the Department.
- The septic system installer shall be a registered septic contractor with Mecklenburg County Health Department.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

DENR Authorized Agent: David Cornelius Owner/Legal Agent: _____
Print Name

Signature: _____ Signature: _____

Date Issued: 10/16/2007

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

IMPROVEMENT PERMIT for a RESIDENTIAL ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

Permit #: **30000820** GWS File #: **6503B**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every year by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- This type of septic system requires a Certified Operator to maintain the system. A system maintenance contract with a Certified Operator must be on file prior to issuance of an Operation Permit.
- 100% repair area is not required for this property. However, the maximum feasible area shall be allocated for a repair area.
- This Improvement Permit is being issued based on a supplemental soil investigation performed by staff from our office.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- All components of the septic system must be installed in accordance with the required setbacks listed on the corresponding plot plan.
- All components of the septic system must be located at least 100 ft. (50 ft. minimum) from all private wells.
- Install according to plans on file submitted by Dan Spangler. Maintenance contract with certified operator required before CO release.

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department is issuing an IMPROVEMENT PERMIT for the above referenced property. This permit is being issued in accordance with the *Laws and Rules For Sewage Treatment and Disposal Systems* and is subject to the following provisions:

- No work shall be conducted on the septic system until an *INSTALLATION APPROVAL is granted by the* Department.
- The septic system installer shall be a registered septic contractor with Mecklenburg County Health Department.
- The permitted system shall be installed in accordance with the included PLOT PLAN.
- This IMPROVEMENT PERMIT is transferable.

DENR Authorized Agent: David Cornelius

Signature: _____

Date Issued: 10/16/2007

Owner/Legal Agent: _____
Print Name

Signature: _____

DAN SPANGLER
LICENSED SOIL SCIENTIST
802 BRADFORD PLACE
MONROE NC 28110-9355

TO: Reserve Properties Inc.
1101Lester Mullis Road
Indian Trail, NC 28079

FROM: Dan Spangler

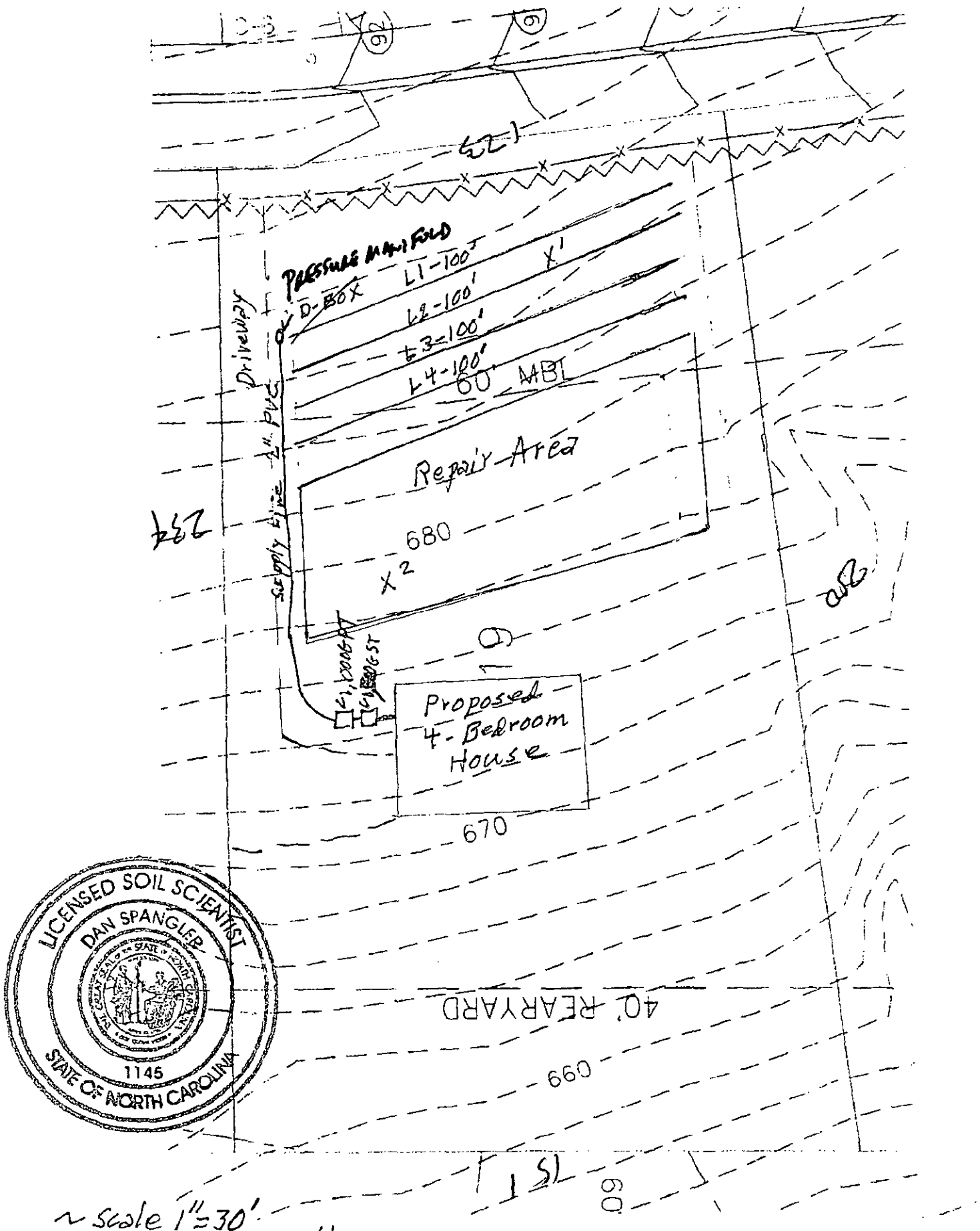
SUBJECT: Revised septic system design on Lot 19 in Irongate Subdivision, Brief Road, Mecklenburg Co., NC.

DATE: July 31, 2007

Lot 19 has an area that is **SUITABLE** for conventional or Innovative (EZflow) septic system. The soils are group 4 with mean depth to saprolite more than 42 inches and more than 42 inches to a seasonal water table. The septic system for a four bedroom house requires 400 linear feet of lines for the EZflow System. With an LTAR of 0.3 gpd/ft square, design flow of 480 GPD or 400 feet of lateral length of lines for an EZflow System required. The system should be in the front of the lot and have four lines at 100 feet for a total 400 liner feet. The trenches shall be 36 inches wide and not less than nine feet on center. The trench depths may vary between 20 and 28 inches. The repair area is down slope and can have the same EZflow system with four 100 foot lines. (See attached lot map, design specifics, general design information and soil/site evaluation transect.)

The above soils report is my opinion as a licensed soil scientist; however, wastewater treatment systems must be approved by the local health department.

CC: Trevor Thomason
Mecklenburg County Environmental Health



~ scale 1"=30'
X - Soil Boring Location

DESIGN SPECIFICS

Lot 19 Irongate Subdivision

Daily Design Flow:	480 GPD – 4 bedroom house
Septic Tank Size:	1500 gallons (2 compartments)
Pump Tank Size:	1000 gallons (one piece)
Effluent Loading Rate:	Design = 0.3 GPD per ft/sq
	25% reduction for EZflow
Supply Length and Diameter:	Approx. 110ft of 2" Sch. 40
	PVC (please see note)
Number and Size of Laterals:	4 lines @ 100 ft
Trench Depths:	20 to 28 inches
Trench Width:	36 inches
Trench Spacing:	9 feet on center (minimum)
Dosing Volume:	195 gallons per dose
Flow Rate through system:	25 gallons per minute
Elevation Head:	18 feet (may vary, see note)
Pressure Head:	2 feet
Pump Requirements:	25 GPM at 21.7 TDH
Depth of Water Pumped:	9.3 check with tank manufacturer
Pump Run:	7.8 minutes

RE-CALCULATE W/ P.M. DESIGN

* Please note that supply line and elevation head measurements are approximate. It is the contractor's responsibility to confirm these values based upon the actual house and plumbing location. If there is a discrepancy, contact the system designer prior to beginning construction.

Lot 19, Irongate Subdivision, Brief Road

Owner: Reserve Properties Inc.

Tax Map: 19713103 Parcel #: Lot 19 Date: 7/30/07

Line #	Tap Diameter(in)	Tap (Sch)	Tap Flow (gpm)	Line Length (ft)	Flow / foot
1	17-130X		6.25	100	
2	"		6.25	100	
3	"		6.25	100	
4	"		6.25	100	
5			25 GPM		
6					
7					
8					
9					
10					

PRESSURE MANIFOLD REQUIRED FOR SYSTEM.

400 ft of line x 65 gal. per 100 ft = _____ _____ ÷ 100 = 260 gal

75% x 260 gal = 195 gal per dose 25 gal per minute (gpm) = Flow Rate

Friction Head

Loss: 1.28 ft per 100 ft of supply line x 110 ft of supply line ÷ 100 = 1.4 ft

1.4 ft x 1.2 = 1.7 ft of friction head

Manifold Size: — " **Force Main Size:** 2 " PVC

Total Dynamic Head = 18 ft of Elevation head + 2 ft of Pressure head + 1.7 ft of Friction Head = 21.7 TDH

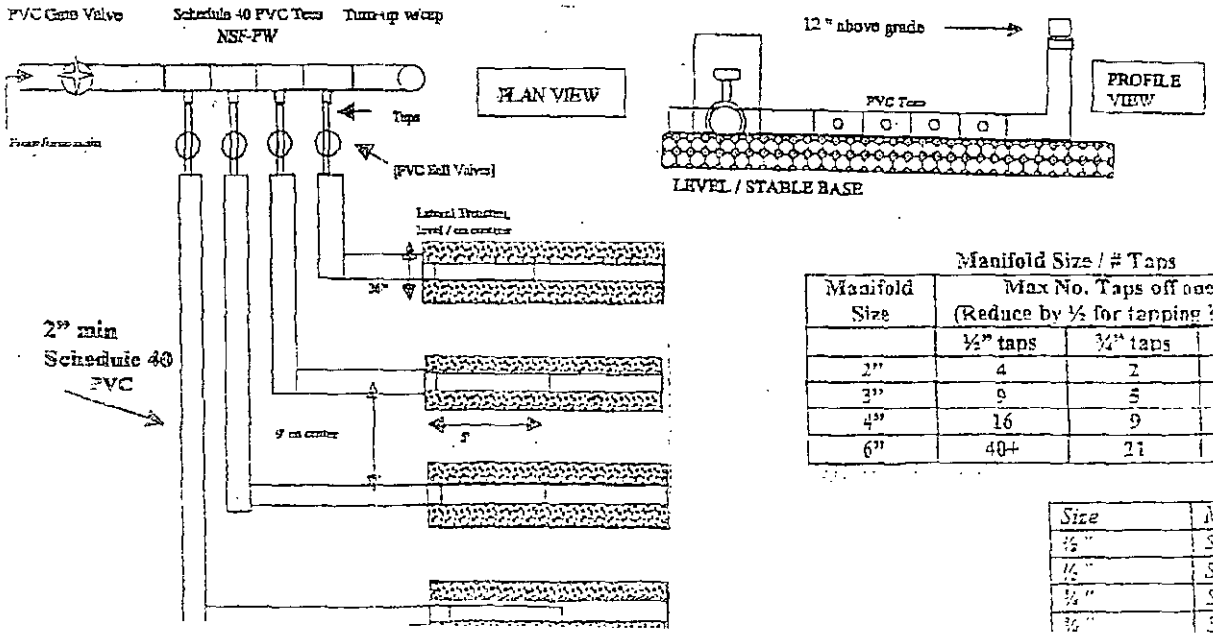
Pump Requirement: 25 GPM @ 21.7 ft of Head

Drawdown: 195 gal per dose ÷ 21 gal per inch = 9.3 inch drawdown per dose

Pump: Zoeller 151 or Equivalent

7.8 minute Pump Run Time

General Design Information



Manifold Size / # Taps

Manifold Size	Max No. Taps off one side (Reduce by ½ for tapping both sides)		
	½" taps	¾" taps	1" taps
2"	4	2	
3"	9	5	3
4"	16	9	5
6"	40+	21	12

Flow per Tap

Size	Material	Flow GPM
½"	Sched 80	5.5
½"	Sched 40	7.1
¾"	Sched 80	10.1
¾"	Sched 40	12.5

DAN SPANGLER
802 BRADFORD PLACE, MONROE, NC 28110
MOBILE: (704) 291-1909 OFFICE/ FAX: (704) 282-2319

PROPERTY ID #: 19713103
PROPERTY RECORDED:
COUNTY: Mecklenburg

SOIL/SITE EVALUATION
FOR
ON-SITE WASTEWATER SYSTEM

APPLICANT: Reserve Properties Inc. OWNER: ☐ AGENT: ☐ PHONE: 704-641-5898
ADDRESS: 1101 Lesser Mallis Road DATE EVALUATED: 5/16/07
Indian Trail, NC 28079 PROPOSED FACILITY: 4-Bedroom
PROPERTY SIZE: ~1 Acre
LOCATION OF SITE: Lot 19, Ivongate Subdivision, Brief Road
WATER SUPPLY: On-Site Well ☐ Comm. Well ☐ Public ☐ Other _____ EVALUATION METHOD: Auger Boring ☐ Pit ☐

PROFILE #	.1940 LANDSCP POS./ SLOPE %	HORIZON DEPTH (IN.)	.1941 (a)(1) TEXTURE	.1941 (a)(2) STRUCTURE	.1941 (a)(3) MINEROLOGY		
1	Ridge	A-0-3"	Brown fSL	fr. 2fgr	SO/PO	.1942 WETNESS CONDITION	- 742"
upper	5%	Bt. 3-42"	2.5YR 4/8 C	fr. 3fSBK	SS/SP	.1943/.1956 SAPROLITE	- 742"
part of						.1944 RESTRICTIVE HORIZON	- 742"
SA						.1948 PROFILE CLASSIFICATION	- Suitable
						PROFILE LTAR	- 0.3
						SYSTEM TYPE	- Conv. / Innovative
		COMMENTS: Loc 11					
2	35	A-0-7"	Brown fSL	fr. 2fgr	SO/PO	.1942 WETNESS CONDITION	- 742"
Lower	12%	Bt. 3-42"	2.5YR 4/8 C	fr. 3fSBK	SS/SP	.1943/.1956 SAPROLITE	- 742"
part of						.1944 RESTRICTIVE HORIZON	- 742"
SA						.1948 PROFILE CLASSIFICATION	- Suitable
						PROFILE LTAR	- 0.3
						SYSTEM TYPE	- Conv./Innovative
		COMMENTS: Cecil					
3						.1942 WETNESS CONDITION	-
						.1943/.1956 SAPROLITE	-
						.1944 RESTRICTIVE HORIZON	-
						.1948 PROFILE CLASSIFICATION	-
						PROFILE LTAR	-
						SYSTEM TYPE	-
		COMMENTS:					
4						.1942 WETNESS CONDITION	-
						.1943/.1956 SAPROLITE	-
						.1944 RESTRICTIVE HORIZON	-
						.1948 PROFILE CLASSIFICATION	-
						PROFILE LTAR	-
						SYSTEM TYPE	-
		COMMENTS:					

Irongate Subdivision Design Review

Lot # 19
File # 6500B
App # 816

Date: 8/3/07
Reviewed By: TCT

Comments:

1. Soil report from Bill Marlin indicates no borings were made in the proposed system area. Provide map showing the locations of your boring locations.
2. Bill's borings were done in the rear section of the lot. Two borings were suitable with soil depths >46" and LTAR of 0.275 gpd/ft^2.

Can not complete design review until soil suitability is determined in proposed area or system is moved to area where the soil has been evaluated.

GWS Septic System Design Review

GWS File #: 6500B	**Approved**	**Disapproved**	
Design Review: TCT 8-3-07	☐	☒	FIELD CHECKED OK
Field Review:	☑	☐	

***Projects are not considered "APPROVED" until both sections above are completed and indicate an APPROVED status.**

DAN SPANGLER
LICENSED SOIL SCIENTIST
802 BRADFORD PLACE
MONROE NC 28110-9355

6500B

TO: Reserve Properties Inc.
1101Lester Mullis Road
Indian Trail, NC 28079

FROM: Dan Spangler

SUBJECT: Revised septic system design on Lot 19 in Irongate Subdivision, Brief Road, Mecklenburg Co., NC.

DATE: July 31, 2007

Lot 19 has an area that is **SUITABLE** for conventional or Innovative (EZflow) septic system. The soils are group 4 with mean depth to saprolite more than 42 inches and more than 42 inches to a seasonal water table. The septic system for a four bedroom house requires 400 linear feet of lines for the EZflow System. With an LTAR of 0.3 gpd/ft square, design flow of 480 GPD or 400 feet of lateral length of lines for an EZflow System required. The system should be in the front of the lot and have four lines at 100 feet for a total 400 liner feet. The trenches shall be 36 inches wide and not less than nine feet on center. The trench depths may vary between 20 and 28 inches. The repair area is down slope and can have the same EZflow system with four 100 foot lines. (See attached lot map, design specifics, general design information and soil/site evaluation transect.)

The above soils report is my opinion as a licensed soil scientist; however, wastewater treatment systems must be approved by the local health department.

CC: Trevor Thomason
Mecklenburg County Environmental Health

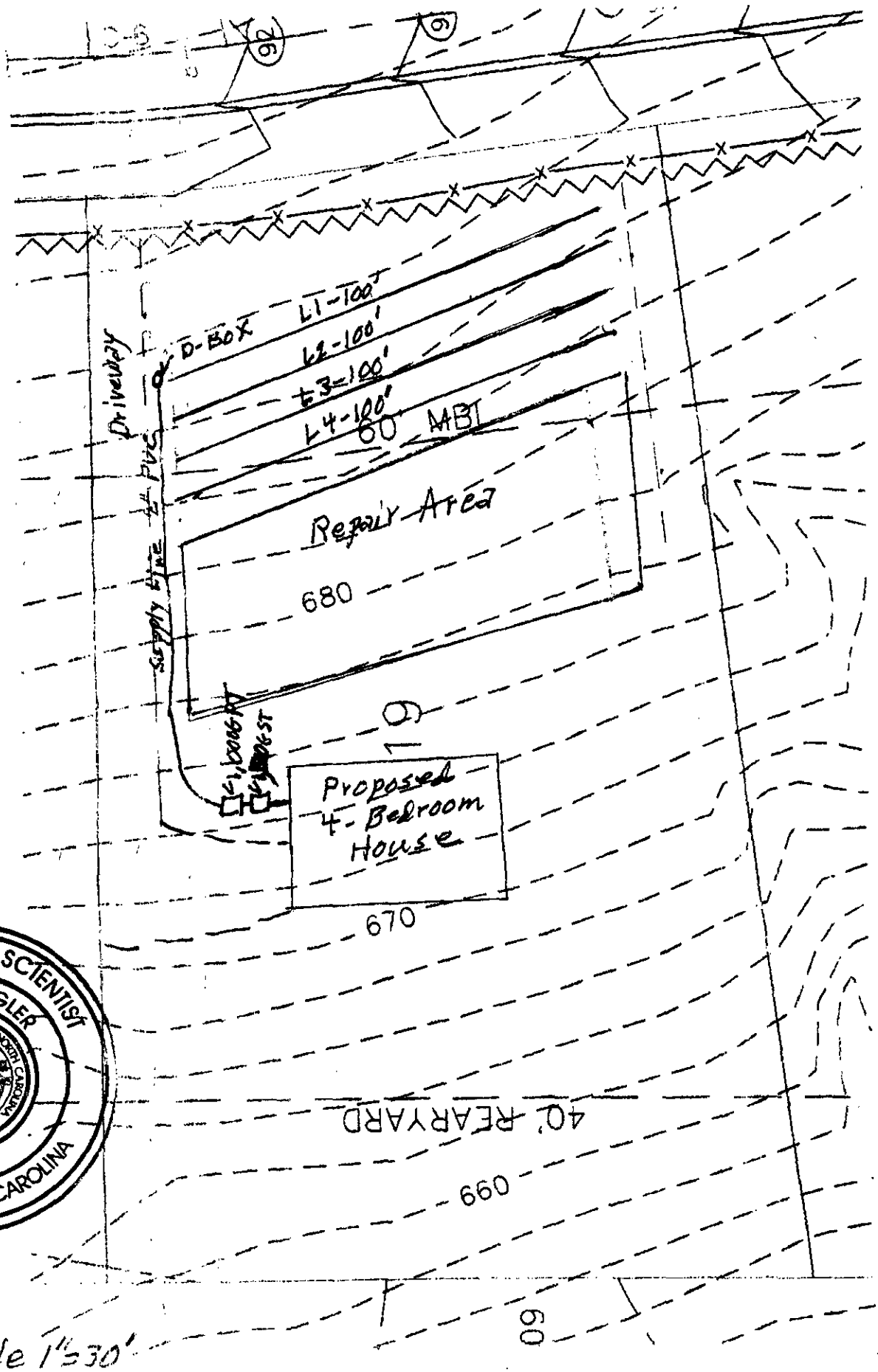
GWS Septic System Design Review

GWS File #: ~~7094-B~~ 6500B **Approved** **Disapproved**

Design Review: TCT 8-3-07 ☐ ☒

Field Review: _____ ☐ ☐

***Projects are not considered "APPROVED" until both sections above are completed and indicate an APPROVED status.**



LICENSED SOIL SCIENTIST
DAN SPANGLER
1145
STATE OF NORTH CAROLINA

DESIGN SPECIFICS

Lot 19 Irongate Subdivision

Daily Design Flow:	**480 GPD – 4 bedroom house**
Septic Tank Size:	**1500 gallons (2 compartments)**
Pump Tank Size:	**1000 gallons (one piece)**
Effluent Loading Rate:	**Design = 0.3 GPD per ft/sq** **25% reduction for EZflow**
Supply Length and Diameter:	**Approx. 110ft of 2" Sch. 40 PVC (please see note)**
Number and Size of Laterals:	**4 lines @ 100 ft**
Trench Depths:	**20 to 28 inches**
Trench Width:	**36 inches**
Trench Spacing:	**9 feet on center (minimum)**
Dosing Volume:	**195 gallons per dose**
Flow Rate through system:	**25 gallons per minute**
Elevation Head:	**18 feet (may vary, see note)**
Pressure Head:	**2 feet**
Pump Requirements:	**25 GPM at 21.7 TDH**
Depth of Water Pumped:	**9.3 check with tank manufacturer**
Pump Run:	**7.8 minutes**

*** Please note that supply line and elevation head measurements are approximate. It is the *contractor's responsibility* to confirm these values based upon the actual house and plumbing location. If there is a discrepancy, contact the system designer prior to beginning *construction.***

Lot 19, Irongate Subdivision, Brief Road

Owner: Reserve Properties Inc.

Tax Map: 197/3/03 Parcel #: Lot 19 Date: 7/30/07

Line #	Tap Diameter(in)	Tap (Sch)	Tap Flow (gpm)	Line Length (ft)	Flow / foot
1	D-Box		6.25	100	
2	"		6.25	100	
3	"		6.25	100	
4	"		6.25	100	
5			25 GPM		
6					
7					
8					
9					
10					

USE PRESSURE MANIFOLD

400 ft of line x 65 gal. per 100 ft = _____ _____ ÷ 100 = 260 gal
75% x 260 gal = 195 **gal per dose** 25 gal per minute (gpm) = **Flow Rate**

Friction Head
Loss: 1.78 ft per 100 ft of supply line x 110 ft of supply line ÷ 100 = 1.4 ft
1.4 ft x 1.2 = 1.7 ft of friction head

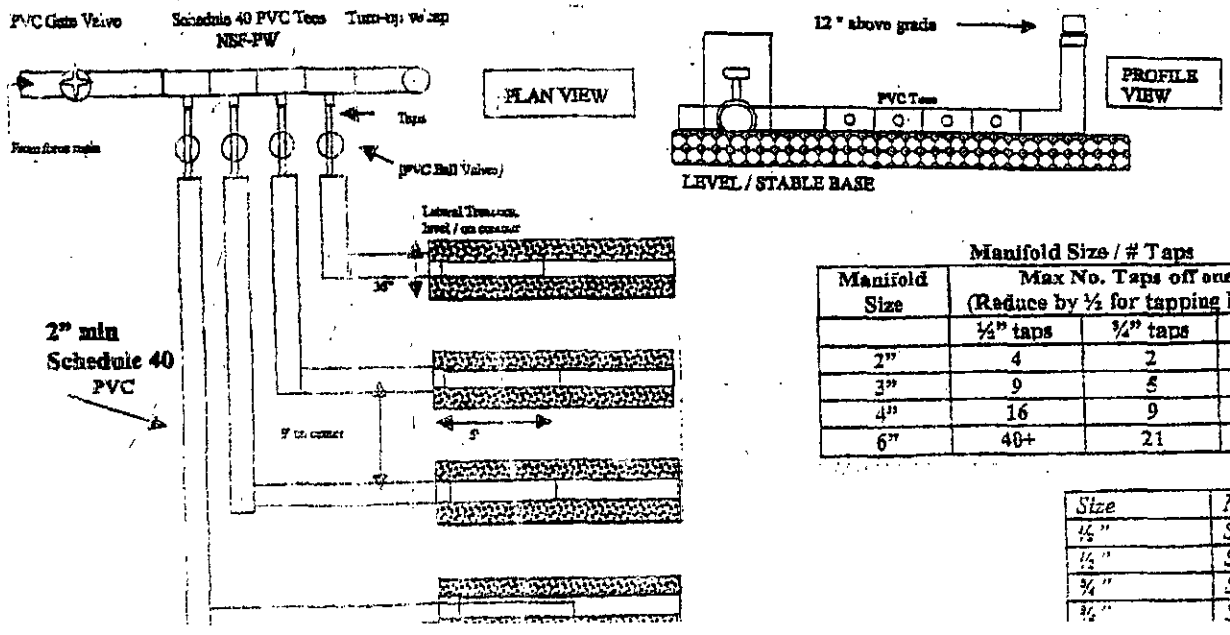
Manifold Size: — " **Force Main Size:** 2 " PVC
Total Dynamic Head = 18 ft of Elevation head + 2 ft of Pressure head + 1.7 ft of Friction Head = 21.7 TDH

Pump Requirement: 25 GPM @ 21.7 ft of Head
Drawdown: 195 gal per dose ÷ 21 gal per inch = 9.3 inch drawdown per dose

Pump: Zoeller 151 or Equivalent

7.8 minute Pump Run Time

General Design Information



Manifold Size / # Taps

Manifold Size	Max No. Taps off one side (Reduce by ½ for tapping both sides)		
	½" taps	¾" taps	1" taps
2"	4	2	
3"	9	5	3
4"	16	9	5
6"	40+	21	12

Flow per Tap

Size	Material	Flow GPM
½"	Sched 80	5.5
½"	Sched 40	7.1
¾"	Sched 80	10.1
¾"	Sched 40	12.5

DAN SPANGLER
802 BRADFORD PLACE, MONROE, NC 28110
MOBILE: (704) 291-1909 OFFICE/ FAX: (704) 282-2319

PROPERTY ID #: 1713103
PROPERTY RECORDED:
COUNTY: Mecklenburg

SOIL/SITE EVALUATION
FOR
ON-SITE WASTEWATER SYSTEM

APPLICANT: Reserve Properties Inc. OWNER: ☐ AGENT: ☐ PHONE: 704-641-5898
ADDRESS: 1101 Lester Mullis Road DATE EVALUATED: 5/16/07
Indian Trail, NC 28079 PROPOSED FACILITY: 4-Bedroom
PROPERTY SIZE: ~1 Acre
LOCATION OF SITE: Lot 19, Ivongate Subdivision, Brief Road
WATER SUPPLY: On-Site Well ☐ Comm. Well ☐ Public ☐ Other _____ EVALUATION METHOD: Auger Boring ☐ Pit

PROFILE #	.1940 LANDSCP POS./ SLOPE %	HORIZON DEPTH (IN.)	.1941 (a)(1) TEXTURE	(a)(2) STRUCTURE	(a)(3) MINEROLOGY		
1	Ridge	A-0-3"	Brown FSL	fr. 2fgr	SO/PO	.1942 WETNESS CONDITION	- 742"
	6%	Bt. 3-44"	2.5YR 4/6 C	fi. 3fSBK	SS/SP	.1943/.1956 SAPROLITE	- 742"
						.1944 RESTRICTIVE HORIZON	- 742"
						.1948 PROFILE CLASSIFICATION	- Suitable
						PROFILE LTAR	- 0.3
						SYSTEM TYPE	- Conv. / Innovativ
		COMMENTS: Loc 11					
2	25	A-0-2"	Brown FSL	fi. 2fgr	SO/PO	.1942 WETNESS CONDITION	- 742"
	12%	Bt. 3-44"	2.5YR 4/6 C	fi. 3fSBK	SS/SP	.1943/.1956 SAPROLITE	- 742"
						.1944 RESTRICTIVE HORIZON	- 742"
						.1948 PROFILE CLASSIFICATION	- Suitable
						PROFILE LTAR	- 0.3
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						PROFILE LTAR	-
						SYSTEM TYPE	-
		COMMENTS:					

MECKLENBURG COUNTY
Land Use & Environmental Services Agency
Groundwater & Wastewater Services

Fax Coversheet

****NOTICE****

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To: Joe Collins

Fax #: 704-753-5898

Phone #:

From: David Cornelius

Date: 1/18/07

Number of pages transmitted: 3 (including coversheet)

Comments: Lot #19 Denial Letter

If you do not receive all pages of this fax please call (704) 336-5103.

☒ Original will not follow

☐ Original will follow via: ☐ U.S. Mail ☐ Hand Delivery ☐ _____

700 North Tryon Street • Suite 211 • Charlotte, North Carolina 28202-2236
Office #: (704) 336-5103 • Fax #: (704) 336-6894

MECKLENBURG COUNTY
Health Department

August 18, 2006

J. Scott Collins
1101 Lester Mullis Road
Indian Trail, NC 28079

Re: Application for improvement permit for
Property Site: 9820 Brief Rd. Lot #~~18~~ 19
Health Department file number: **6500B**

Dear Property Owner or Owner's Agent:

The Mecklenburg County Health Department, Environmental Health Division on June 18, 2006 evaluated the above-referenced property at the site designated on the plat that accompanied your improvement permit application. According to your application the site is to serve 4 bedroom home, with a daily design flow of 480 gallons per day. The evaluation was done in accordance with the laws and rules governing wastewater systems in North Carolina General Statute 130A-333 and related statutes and Title 15A, Subchapter 18A, of the North Carolina Administrative Code, Rule .1900 and related rules.

Based on the criteria set out in Title 15A, Subchapter 18A, of the North Carolina Administrative Code, Rules .1940 through .1948, the evaluation indicated that the site is **UNSUITABLE** for a ground absorption sewage system. Therefore, your request for an improvement permit is **DENIED.** A copy of the site evaluation is enclosed. The site is unsuitable based on the following:

- ☐ Unsuitable soil topography and/or landscape position (Rule .1940)
- ☐ Unsuitable soil characteristics (structure or clay mineralogy) (Rule .1941)
- ☐ Unsuitable soil wetness condition (Rule .1942)
- ☐ Unsuitable soil depth (Rule .1943)
- ☐ Presence of restrictive horizon (Rule .1944)
- ☒ Insufficient space for septic system and repair area (Rule .1945)
- ☒ Unsuitable for meeting required setbacks (Rule .1950)
- ☐ Other (Rule .1946)

These severe soil or site limitations could cause premature system failure, leading to the discharge of untreated sewage on the ground surface, into surface waters, directly to ground water or inside your structure.

The site evaluation included consideration of possible site modifications, and modified, innovative or alternative systems. However, the Health Department has determined that none of the above options will overcome the severe conditions on this site. A possible option might be a system designed to dispose of sewage to another area of suitable soil or offsite to additional property.

For the reasons set out above, the property is currently classified **UNSUITABLE,** and an improvement permit shall not be issued for this site in accordance with Rule .1948 (c).

However, the site classified as **UNSUITABLE** may be classified as **PROVISIONALLY SUITABLE** if written documentation is provided that meets the requirements of Rule .1948(d). A copy of this rule is enclosed. You may hire a consultant to assist you if you wish to try to develop a plan under which your site could be reclassified as **PROVISIONALLY SUITABLE.**

You have a right to an informal review of this decision. You may request an informal review by the soil scientist or environmental health supervisor at the local health department. You may also request an informal review by the N. C. Department of Environment and Natural Resources regional soil specialist. A request for informal review must be made in writing to the local health department.

You also have a right to a formal appeal of this decision. To pursue a formal appeal, you must file a petition for a contested case hearing with the Office of Administrative Hearings, 6714 Mail Center, Raleigh, NC 27699-6714. To get a copy of a petition form, you may write the Office of Administrative Hearings or call the office at (919) 733-0926 or from the OAH web site at www.oah.state.nc.us/form.htm. The petition for a contested case hearing must be filed in accordance with the provision of North Carolina General Statutes 130A-24 and 150B-23 and all other applicable provisions of Chapter 150B. N. C. General Statue 130A-335(g) provides that your hearing would be held in the county where your property is located.

Please note: If you wish to pursue a formal appeal, you must file the petition form with the Office of Administrative Hearings **WITHIN 30 DAYS OF THE DATE OF THIS LETTER.** The date of this letter is August 18, 2006. Meeting the 30-day deadline is critical to your right to a formal appeal. Beginning a formal appeal within 30 days will not interfere with any informal review that you might request. Do not wait for the outcome of any informal review if you wish to file a formal appeal.

If you file a petition for a contested case hearing with the Office of Administrative Hearings, you are required by law (N.C. General Statute 150B-23) to send a copy of your petition to the North Carolina Department of Environment and Natural Resources. Send the copy to: Office of General Counsel, N. C. Department of Environment and Natural Resources, 1601 Mail Service Center, Raleigh, NC. 27699-1601. Do **NOT** send the copy of the petition to your local health department. Sending a copy of your petition to the local health department will **NOT** satisfy the legal requirement in N.C. General Statute 150B-23 that you send a copy to the Office of General Counsel, NCDENR.

You may call or write the local health department if you need any additional information or assistance.

Sincerely,

David Cornelius, R.S.
Authorized Agent - DENR

Encl: (2)