

13608 SAGE THRASHER LN

19936131

1/9/2008

duponbj

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

Supervisor/Administrative Professional Checklist

New Septic ☐ **New Well** ☐ **Use Existing** ☐ **Alteration** ☐ **Modified Plot Plan** ☑

New Septic Fees Paid:

IP ($250.00) _____ Initials/Date

CA ($200.00) LE 11/12/15 Initials/Date

OP ($200.00) LE 11/12/15 Initials/Date

(CA and OP fees need to be paid before a building permit can be issued)

New Well Fee Paid: $550.00 _____ Initials/Date

Use Existing Fee Paid: $100.00 _____ Initials/Date

Alteration Fee Paid: $300.00 (Total) $200 (If use existing was paid)_____ Initials/Date

Modified Plot Plan Fee Paid: $100.00 _____ Initials/Date

Floor plans need to be submitted and reviewed before CA can be issued. ☐ Reviewed ☑ SAM

Loretta
Please generate CA dated 4/15/2014. Please call Mespadden Custom Homes To collect $400. I did not see any receipts. Collect fees before Approved is issued in POSSE

This site is served by septic and well. Verify each is complete before final hold is released. ☐

Septic file completed. ☐ _____ Well file completed. ☐ _____

Send permit for signature. ☑ Signature received. ☑ 4/17/14

This septic system requires a certified operator contract before final hold is released. ☐

Certified operator contract is on file. ☐ _____

Groundwater & Wastewater Services
Septic Project File & Data Review Worksheet

X34599

GWS File #: 5765B WASPS App #: 6653

Primary ES assigned to project: Phil Walker

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 0.3	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: 7/9/15

OP issued date: 7/9/15

Review performed by: JPM Date performed: 8/3/15

5765B

MECKLENBURG COUNTY
HEALTH DEPARTMENT

Copy #6453

APPLICATION FOR A RESIDENTIAL SITE IMPROVEMENT PERMIT/ CONSTRUCTION AUTHORIZATION FOR AN ON-SITE WASTEWATER SYSTEM, NEW WELL INSTALLATION, OR REPAIR OF EXISTING WELL

1. **SEPTIC / TYPE APPLICATION:** ○ N/A ● NEW SYSTEM ○ ALTERATION ○ REPAIR ⊘ MODIFIED PLOT PLAN

2. **WELL / TYPE APPLICATION:** ● N/A ○ NEW WELL ○ MAJOR REPAIR ○ ABANDONMENT

3. **JOB LOCATION INFORMATION:**

TAX PARCEL NUMBER: 19936131
STREET ADDRESS: 13608 Sage Thrasher Lane
CITY: Charlotte
STATE: NC ZIP: 28278
SUBDIVISION NAME: The Sanctuary
LOT #: 173 LOT SIZE (acres): 7.726
TOWNSHIP:
● MECKLENBURG ○ CORNELIUS ○ HUNTERSVILLE
○ DAVIDSON ○ CHARLOTTE ○ PINEVILLE
○ MATTHEWS ○ MINT HILL

4. **BUILDING INFORMATION:**

BUILDING TYPE:
○ SINGLE MOBILE HOME ○ MODULAR HOME
○ DOUBLE WIDE ○ MULTIPLE FAMILY
● HOUSE ○ OTHER _____
HEATED SQUARE FOOTAGE: 6134
NUMBER OF BEDROOMS: 4
NUMBER OF OCCUPANTS: 2
FOUNDATION TYPE:
○ CONCRETE SLAB ○ BASEMENT WITH PLUMBING
● CRAWL SPACE ○ BASEMENT WITH NO PLUMBING

5. **IF PLANNING TO EXPAND OR ALTER THE EXISTING SEPTIC SYSTEM PLEASE COMPLETE THE FOLLOWING SECTION:** ■ N/A

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

6. **WATER SUPPLY:** ● MUNICIPAL ○ PRIVATE WELL ○ PUBLIC WELL ○ SHARED WELL ○ OTHER _____

7. **PROPOSED USE OF WELL:** ● N/A ○ IRRIGATION ○ POTABLE (DRINKING WATER) ○ OTHER _____

8. **PLEASE INDICATE AND RANK DESIRED SEPTIC SYSTEM TYPE(S) IN ORDER OF PREFERENCE** *(1-MOST DESIRED 5-LEAST DESIRED)*:

☐ N/A ☐ ANY TYPE ☐ CONVENTIONAL ☐ ACCEPTED ☐ INNOVATIVE ☐ ALTERNATIVE ■ OTHER 25% Reduction Repair on Lot

8A. **RANK:** ____ ____ ____ ____ ____

9. **DO ANY OF THE FOLLOWING APPLY TO THE PROPERTY IN QUESTION? IF "YES" PLEASE ATTACH SUPPORTING DOCUMENTATION.**

BURIED CABLES, LANDFILLS, STUMPHOLES	○ YES ● NO	GRADING/SOIL REMOVAL PERFORMED	○ YES ● NO
EXISTING WASTEWATER (SEPTIC) SYSTEMS	○ YES ● NO	JURISDICTIONAL WETLANDS	○ YES ● NO
WELLS, SPRINGS, OR WATER LINES	○ YES ● NO	APPROVAL REQUIRED BY ANY OTHER PUBLIC AGENCY	○ YES ● NO
EASEMENTS OR RIGHT-OF-WAYS	○ YES ● NO	WASTEWATER OTHER THAN DOMESTIC SEWAGE	○ YES ● NO
CHEMICAL/PETROLEUM STORAGE TANKS	○ YES ● NO	KNOWN UNDERGROUND CONTAMINATION	○ YES ● NO
WASTE STORAGE	○ YES ● NO	GROUNDWATER USE RESTRICTIONS/VARIANCES	○ YES ● NO

10. **WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED?** _____ ■ UNKNOWN

11. **WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY?** Already Closed ■ N/A

12. **PROPERTY OWNER:**

NAME: Bill and Debbie Corbin
ADDRESS: 110 Nathaniel Court
CITY: Mooresville
STATE: NC ZIP: 28117
WORK PHONE: 704 450-4194
MOBILE PHONE: " " "
FAX: N/A
E-MAIL: billcorbin2mac.com

13. **OWNER'S LEGAL REPRESENTATIVE, IF APPLICABLE:**

NAME: McSpadden Custom Homes
ADDRESS: 548 Nautical Drive
CITY: Lake Wylie
STATE: SC ZIP: 29710
WORK PHONE: 704 825-7324
MOBILE PHONE: 704 860-5852
FAX: 704-825-7325
E-MAIL: tpeeler@mdcsys.com

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

Revised on: 12/15/10

14. SEPTIC SYSTEM PERMIT APPLICATION:

If the information in this application is falsified, changed, or the site is altered, then the Improvement Permit and Authorization to Construct shall become invalid. I have read this application and certify that the information provided herein is true, complete and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. The permit is valid for either sixty (60) months or is non-expiring depending upon the documentation submitted: complete site plan = 60 months, complete plat = non-expiring.

* _____ (Initial here for septic system applications)

15. WELL PERMIT APPLICATION:

If the information in this application is falsified, changed, or the site is altered, then the Well Permit shall become invalid. I have read this application and certify that the information provided herein is true, complete and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. The permit is valid for a period of twelve (12) months from the date of issuance.

_____ (Initial here for well applications)

16. APPLICATION SIGNATURE SECTION:

ONLY COMPLETE APPLICATIONS WILL BE PROCESSED. A proper signature is required in order to process your application. Please review the application carefully and sign in the space provided below. A PROPOSED PLOT PLAN is required to be submitted with each application.

* _____
Property Owner's or Owner's Legal Representative Signature

* 1-31-2014
Date

OFFICE USE ONLY

○ SURVEY PLAT TO SCALE SUBMITTED ○ SCALED SITE PLAN SUBMITTED ○ UN-SCALED SITE PLAN SUBMITTED

SEPTIC APPLICATION FEE RECEIVED: $ _____ DATE FEE RECEIVED: _____

WELL APPLICATION FEE RECEIVED: $ _____ DATE FEE RECEIVED: _____

APPLICATION PROCESSED BY: Qws

GWS FILE NUMBER ASSIGNED: 576513

APPLICATION ID NUMBER ASSIGNED: 66653

COMMENTS:

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

Revised on: 12/15/10

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date: 11/12/15
Receipt #: 96696
Check / Auth #: CHARGE
Received By: ELLISLW

Amount: 200.00
Tendered: 200.00
Returned: 0.00

Account Information

Account #: X34599
Contractor: MCSPADDEN DEVELOPMENT CORP
Attn:
Address: 548 NAUTICAL DRIVE
Address: SUITE 201
City/State/Zip: LAKE WYLIE, SC 29710

Item	Description	Permit#	Quantity	Unit Price	Total Price
0703	Septic Operational Permit 13608 SAGE THRASHER LANE		1	200.00	200.00

----------Outstanding Balances----------

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance
200.00					

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date: 11/12/15
Receipt #: 96697
Check / Auth #: CHARGE
Received By: ELLISLW

Amount: 200.00
Tendered: 200.00
Returned: 0.00

Account Information

Account #: X34599
Contractor: MCSPADDEN DEVELOPMENT CORP
Attn:
Address: 548 NAUTICAL DRIVE
Address: SUITE 201
City/State/Zip: LAKE WYLIE, SC 29710

Item	Description	Permit#	Quantity	Unit Price	Total Price
0734	Septic Construction Authorizat 13608 SAGE THRASHER LANE		1	200.00	200.00

Outstanding Balances

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance
400.00					

...t of Environment, Health, and Natural Resources
...of Environmental Health
...te Wastewater Section

Sheet: 1 of 2
Property ID: PO 199-371-03
Lot #: 173
File #: 5765B
Code: 1

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: The Sanctuary at Lake Wylie
Address: 10933 Ballantyne Crossing Ave., Charlotte, N. C., 28277
Proposed Facility: Residence Design Flow (.1949): 600gpd
Location of Site: Sage Thrush Lane
Water Supply: [x] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [x] Auger Boring [ ] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

Applicant: Toney Jacobs
Date Evaluated: 1/24/2005
Property Size: .3a. Inv.
Property Recorded:

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, 20	0-8	GR/SCL	FR/SEXP/SS/SP	>49" TO SOIL WETNESS	49	N/A	NONE	PS, IV .3GPD/FT^2
		8-14	SBK/SCL	"					
		14-49	SBK/C	FI/SEXP/S/P					
2	"	0-5	GR/SL	FR/SEXP/NS/NP	>48" TO SOIL WETNESS	48	"	"	"
		5-10	GR/SCL	FR/SEXP/SS/SP					
		10-48	SBK/C	FI/SEXP/S/P					
3	LS, 15	0-6	GR/SCL	FR/SEXP/SS/SP	>42" TO SOIL WETNESS	42	"	"	"
		6-35	SBK/SC	FI/SEXP/S/P					
		35-42	SBK/SCL	FR/SEXP/SS/SP					

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)	TT6	TT6
Site LTAR	.3GPD/FT^2	.3GPD/FT^2

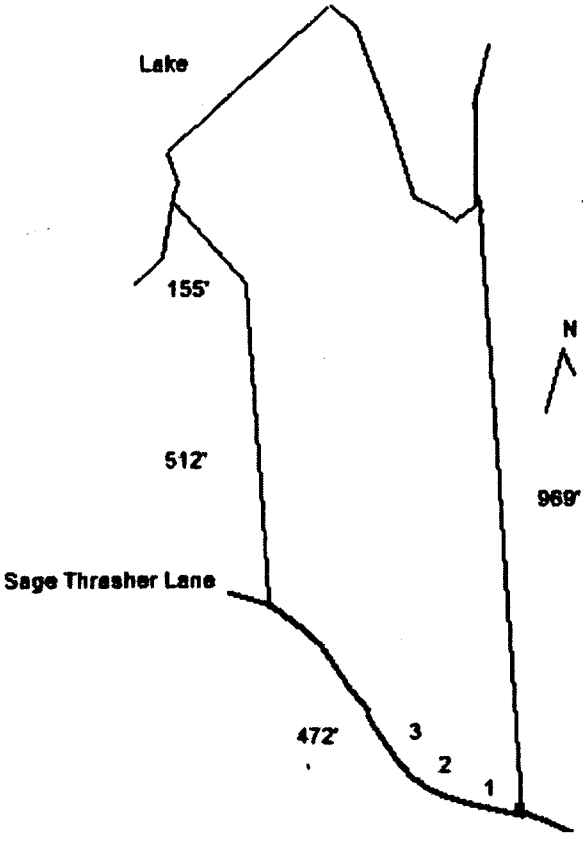
Other Factors (.1946):
Site Classification (.1948): PROVISIONALLY SUITABLE
Evaluated By: W. R. Marlin, LSS, 1/25/2005.
Others Present:

COMMENTS:
100% repair, would need pump

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-Foot 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



Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St. Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-5994

NC DENR
Division of Environmental Health
On-Site Wastewater Section

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

Permit #: 30006853 GWS File #: 5765R Tax Parcel #: 199-381-31

- 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):** 2/25/2019

Type of Installation: Residential - Modified Plot Plan Lot Number: 173

Structure Type: HOUSE Size (ft^2): 6134 # Bedrooms: 5 # Occupants: 2

Building Foundation: Concrete Slab Water Supply: Municipal

II. Initial System Type: Pump to Approved **System Classification:** IIIb

Initial System Specifications:

Design Flow (gpd): 600 LTAR (gpd/ft^2): 0.3 Septic Tank Size (gal): 1500 Pump Tank Size (gal): 1500

Trench Width (ft): 3 Trench Spacing (ft): 9 Absorption Area (ft^2): 1500 Total Trench Length (ft): 500

Maximum Trench Depth (in): 24 Depth of Media (in): 12 Distribution Device: Pressure Manifold

III. Repair System Type: Pump to Approved **System Classification:** IIIb

Repair System Specifications:

Design Flow (gpd): 600 LTAR (gpd/ft^2): 0.3 Septic Tank Size (gal): 1500 Pump Tank Size (gal): 1500

Trench Width (ft): 3 Trench Spacing (ft): 9 Absorption Area (ft^2): 1500 Total Trench Length (ft): 500

Maximum Trench Depth (in): 24 Depth of Media (in): 12 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: Philo Walker Owner/Legal Agent: Bill Corbin

Signature: Philo Walker REHS Signature: Bill Corbin Print Name

Date Issued: 2/25/2014

Bill Corbin
Deborah Corbin
Deborah Corbin

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 #: **30006653** GWS File #: **5765B** Tax Parcel #: **199-361-31**

- 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):** 2/25/2019

Type of Installation: Residential - Modified Plot Plan Lot Number: 173

Structure Type: HOUSE Size (ft^2): 6134 # Bedrooms: 5 # Occupants: 2

Building Foundation: Concrete Slab Water Supply: Municipal

II. Initial System Type: Pump to Approved **System Classification:** IIIb

Initial System Specifications:

Design Flow (gpd):	600	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1500
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	1500	Total Trench Length (ft):	500
Maximum Trench Depth (in):	24	Depth of Media (in):	12	Distribution Device:	Pressure Manifold		

III. Repair System Type: Pump to Approved **System Classification:** IIIb

Repair System Specifications:

Design Flow (gpd):	600	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1500
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	1500	Total Trench Length (ft):	500
Maximum Trench Depth (in):	24	Depth of Media (in):	12	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: Philo Walker Owner/Legal Agent: _____
Print Name

Signature: Philo Walker REHS Signature: _____

Date Issued: 2/25/2014

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 #: **30006653** GWS File #: **5765B**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 5 years by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- 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 located at least 100 ft. (50 ft. minimum) from all private wells.
- All waterlines must be located a minimum of 10 ft. from any part of the septic system.
- Flow from all gutters and downspouts shall be directed not to discharge water onto or across any part of the septic system.
- Foundation drains shall be constructed not to discharge water onto or across any part of the septic system.
- The septic system shall be located at least 25 feet from any foundation drain.
- An approval letter is required by the engineer before operation permit can be issued.

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: Philo Walker

Signature: Philo Walker REHS

Date Issued: 2/25/2014

Owner/Legal Agent: _____
Print Name

Signature: _____

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 #: 30006653 GWS File #: 6765B

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 5 years by our office. The system owner is responsible for any fees, as determined by the Mecklenburg County Board of Commissioners, associated with this inspection.
- 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 located at least 100 ft. (50 ft. minimum) from all private wells.
- All waterlines must be located a minimum of 10 ft. from any part of the septic system.
- Flow from all gutters and downspouts shall be directed not to discharge water onto or across any part of the septic system.
- Foundation drains shall be constructed not to discharge water onto or across any part of the septic system.
- The septic system shall be located at least 25 feet from any foundation drain.
- An approval letter is required by the engineer before operation permit can be issued.

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 FERMIT is transferable.

DENR Authorized Agent: Philip Walker
Signature: Philip Walker REHS
Date Issued: 2/25/2014

Owner/Legal Agent: Bill Corbin Deborah Corbin
Print Name
Signature: Bill Corbin Deborah Corbin

5765B

SOIL & FORESTRY SERVICES

PO Box 832
Mooresville, NC 28115

GWS Septic System Design Review GWS #: 5765B

Approved Disapproved

Design Review: ☑ ☐

Field Review: ☑ ☐

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

A design for a 5 Bedroom Innovative (25%) Septic System using Pressure Manifold distribution serving 13606 Sage Thrasher Lane, Charlotte, NC 28692

Contents:

	Page
Information for the Installer	1
Design Information	
Design Specifications	2-3
Layout Specifications	4
System Flow	5
Repair Flow	6
Site Plan	7
Septic Tank Diagram	8
Pump Tank Diagram	9
Control Panel Specifications	10-13
Pump Specifications	14-15
Calculations	16
Pressure Manifold Specifications	17

April 2014
Design By: W. Overby

[illegible] ABOARD

[illegible] ABOARD [illegible]

[illegible] ☐ ☐

DOB/SS #/AKA/A# _____ ☐ ☐

CMS Life #: _____ Witness Signature

CMS other phone Daytime phone

INFORMATION FOR THE INSTALLER:

- The permit should be read very carefully prior to bidding. The following are details that must be considered along with all other considerations.
- Tanks shall be approved by DEHNR, and certification supplied by the manufacturer.
- Tanks shall be water tested prior to installation.
- The installer shall be responsible to the owner for placement of the tanks and to insure that final grades are returned to the original natural grade, with exception of added structural features.
- The supply trench shall be compacted to eliminate cavities left during initial fill placement.
- Installation of the system shall be during dry conditions in order to protect the soil structure.
- All fittings shall be pressure rated fittings.
- All joints shall be cleaned with PVC pipe cleaner and a heavy bodied glue applied to weld all joints.
- Where required by the county health department, post installation inspections by the designer must be scheduled 5 week days in advance.
- Trenches shall be carefully excavated so the bottom is within 2" from the highest to . the lowest points of elevation within the trench. If the bottom elevation needs adjusting after it has been trenched, it will be done by removing high points rather than filling low points. It is extremely important to insure that trenches are not over excavated during initial trenching. All fine grading within the trench will be hand done with a shovel. No loose material will be left in the trench
- All pipe openings in the tanks shall be properly grouted. This also applies to the joints around the riser.
- All tanks shall be properly back filled and compacted to prevent slump at a later date.
- No heavy equipment shall be used on the field during or after installation. The use of a small loader (i.e. Bobcat) or a trencher (i.e. Ditch Witch 2300/2310) may be used for installation.
- Elevations at pinflag locations should be checked by the installer prior to beginning
- Pumptank riser should be 6" above grade, control panel should be 12" above grade.
- Septic tank riser shall be a minimum of 6" above finished grade.
- System is specified as innovative type with pressure manifold distribution
- Repair is specified as innovative type with pressure manifold distribution
- System trench depth specified at 24 inches.
- See Figure 1. Septic System Layout and House Plan

INNOV SYSTEM
FOR WASTEWATER TREATMENT

Owner:	Bill Corbin
Phone:	
County:	Mecklenburg
Location:	13608 Sage Thrasher Lane Charlotte, NC 28692
Source of Wastewater Flow:	5 Bedroom Single Family Residence
Estimated Daily Wastewater Production:	600 gpd
System Flow:	21.33 gpm

<u>Design Specifications</u>

Drainfield Size:	510 lf
Loading Rate:	0.3 gpd/ft.^{2}
Depth of Gravel in Trench:	n/a
Gravel Size:	n/a
Trench Depth:	24 in
Trench Width:	36 in.
Septic Tank Size:	1500 gal.
Pump Tank Size:	1500 gal.
Estimated Supply Line Length:	650 lf
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	113.10 gal
Dosing Volume:	270.00 gal

Recommended Float Controls:	SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalents
Recommended Control Panel:	SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.
Pressure Head:	2 ft.
Friction Head:	5.46 ft
Elevation Head:	83.00 ft
Total Dynamic Head:	104.03 ft
Threaded Union:	In Tank
Gate Valves:	1 in Tank 1 in manifold box
Check Valves:	In Tank
Anti-Siphon Hole:	Yes
Recommended Pump:	Myers Model P100 Capable of Delivering 104 ft.of Head at 22 gpm Total Flow

13608 Sage Thrasher Lane

INNOVATIVE DESIGN

DESIGN FLOW:	600	gpd
SOIL APPLICATION RATE:	0.3 gpd/ft.^{2}	
TOTAL AREA TRENCH BOTTOM:	1530	sf
TOTAL LATERAL LENGTH:	510	lf
NUMBER OF FIELDS:	1	
LATERAL LENGTH REQUIRED PER FIELD:	500	lf
SUPPLY LINE LENGTH:	650	lf
TOTAL DYNAMIC HEAD:	104.03	gpm
DOSING VOLUME:	270.00	gal
PUMP TANK DRAW DOWN*:	9.3	in
SEPTIC TANK SIZE:	1500 gal.	
PUMP TANK SIZE:	1500 gal.	
RECOMMENDED PUMP:	Myers Model P100 Capable of Delivering 104 ft.of Head at 22 gpm Total Flow	

**Pump tank draw down based on a volume basis of 29 gallons per inch. Draw down may vary among pump tank manufacturers.*

13608 Sage Thrasher Lane

Layout for a 5 bedroom home

Apr-14

LINE #	FLAG COLOR	BS	HI	FS	ELEV	FLAGGED LENGTH	DESIGN LENGTH
TBM		4.5			100.0		
INSTR. 1			104.5				
			SYSTEM				
1	Red			1.10	103.4	175	170
2	Orange			2.40	102.1	172	170
3	Yellow			5.90	98.6	174	170
			REPAIR				
7	Blue			8.80	93.3	171	170
8	Pink			11.40	92.6	172	170
9	Red			14.10	92.4	171	170

	LINE LENGTH	LTAR GPD/FT	SYSTEM TYPE	REDUCTION TYPE	DIST	TRENCH DEPTH
SYSTEM	510	0.300	INNOV	25%	P. MAN	24
REPAIR	510	0.300	INNOV	25%	P.MAN	24

Notes:

**TBM is stump

**TBM is assumed to be 100'

**All measures in feet

**Nitrification lines are demonstrated on contour via colored pin flags

**BS and FS indicate rod readings

13608 Sage Thrasher Lane

SYSTEM FLOW

DESIGN SPECIFICATIONS

Line #	Color	Elev	Length	Hole Size	Flow/Tap	Line gpd	Line Trench Area	Flow/Line	Line LTAR
1	Red	103.4	170	SCH 40 1/2	7.11	90.01	510	0.04	0.1765
2	Orange	102.1	170	SCH 40 1/2	7.11	90.01	510	0.04	0.1765
3	Yellow	98.6	170	SCH 40 1/2	7.11	90.01	510	0.04	0.1765
	total	feet =	510	gal/min =	21.33				

Des. Flow	600
Pump Run	12.66
soil LTAR	0.3
Innov LTAR	0.4

13608 Sage Thrasher Lane

REPAIR (PPBPS)

DESIGN SPECIFICATIONS

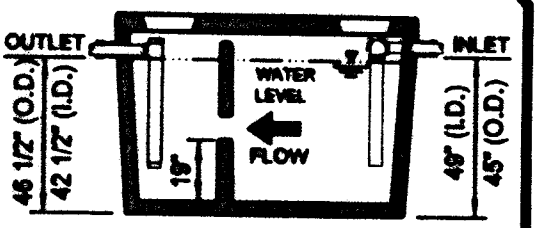
Line #	Color	Elev	Length	Hole Size	Flow/Tap	Line gpd	Line Trench Area	Flow/Line	Line LTAR
4	Blue	93.3	170	SCH 40 1/2	7.11	90.01	510	0.04	0.1765
5	Pink	92.6	170	SCH 40 1/2	7.11	90.01	510	0.04	0.1765
6	Red	92.4	170	SCH 40 1/2	7.11	90.01	510	0.04	0.1765
	total	feet =	510	gal/min =	21.33				

Des. Flow	600
Pump Run	12.66
soil LTAR	0.3
Innov LTAR	0.4

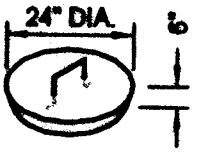
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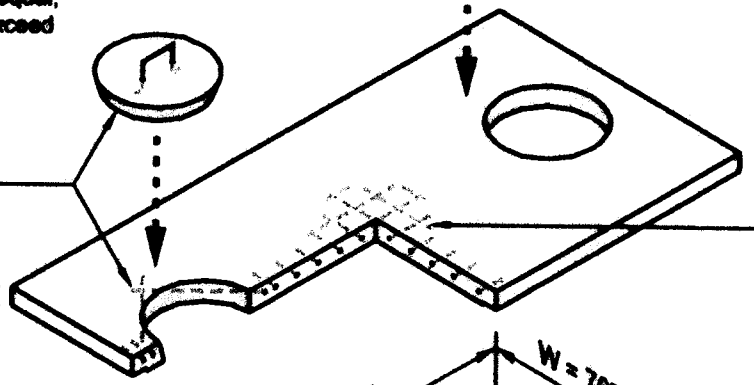
GENERAL NOTES:

1. Design specifications conform to latest ASTM C1227 specifications "Precast Concrete Water and Wastewater Structures"
2. Concrete compressive strength 4,000 psi minimum.
3. Steel reinforcing design to conform to the requirements of ASTM C890 specifications for "Structural Design Loading for Water and Wastewater Structures" and shall utilize grade 60 re-bars conforming to the requirements of ASTM A615 or WWF conforming to the requirements of ASTM A185 or both. Place Additional reinforcing at all openings.
4. Optional EZ set lid cast in place. Supplied by Dellinger Precast. To be field adjusted using approved methods by contractor.
5. Pipe penetration locations as per job requirements. Pipe inlet and outlet locations to have PSX Direct Drive boots or equal. Pipe Inlet locations (typical 3 sides) to be knock out pannels. Effluent Filter supplied by Dellinger. Inlet Tee & Pipe supplied by contractor.
6. Joints to be sealed with ConSeal CS102. butyl rubber joint sealant or equal. Sealant meets or exceeds the requirements of latest federal specification SS-S-0021(210-A), AASHTO M-198B, and ASTM C-990-91.
7. LIR Insert / LIR Eye Pin by M.A Industries or equal, Cast-in by Dellinger Precast. LIRs meet or exceed OSHA requirements.
8. Method of manufacture is Wet Cast.
9. Sections are monolithic. Weights:
   Top Slab 3,134 ± lbs.
   Base Section 9,751 ± lbs.
10. I.D. = Inside dimension
    O.D. = Outside dimension
    L = Length
    W = Width
    H = Height

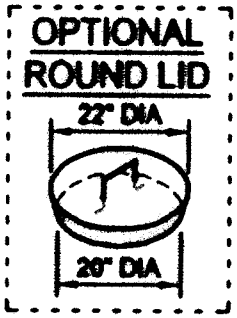


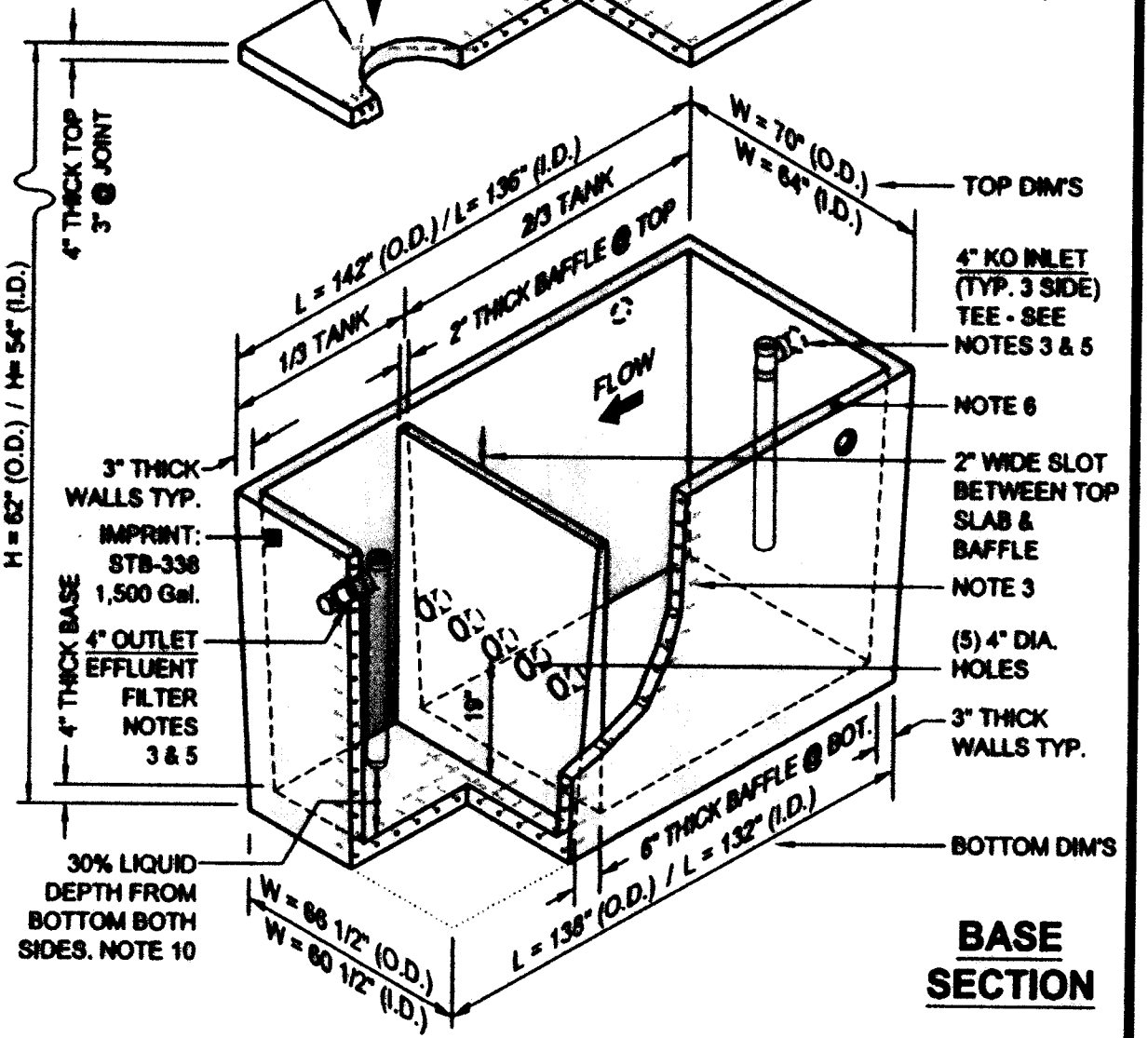
ELEVATION





TOP SLAB





BASE SECTION

DELLINGER PRECAST
4531 North Hwy 16 • Denver, N.C. 28037 • Phone: 800-948-1666 • 704-483-2666 • Fax: 704-483-2363

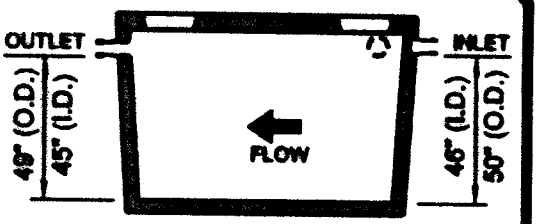
1,500 Gallon (Top Slab) SEPTIC TANK

Scale: Not To Scale
Revision Date: February 2008
Detail # ST-1,500-TS

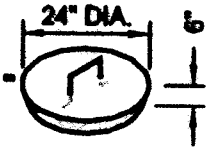
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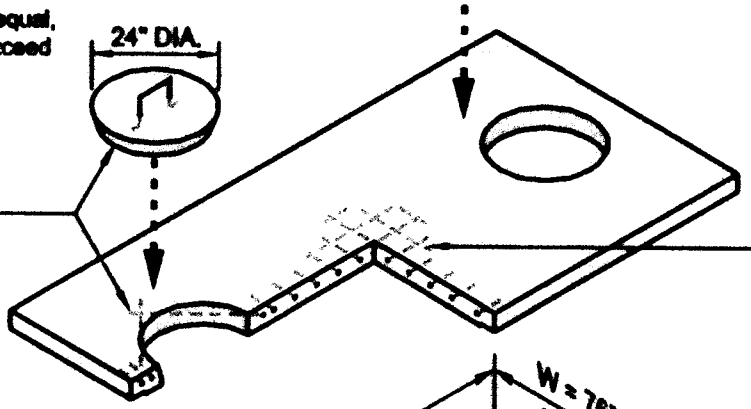
GENERAL NOTES:

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2. Concrete compressive strength 4,000 psi minimum.
3. Steel reinforcing design to conform to the requirements of ASTM C890 specifications for "Structural Design Loading for Water and Wastewater Structures" and shall utilize grade 60 re-bars conforming to the requirements of ASTM A615 or WWF conforming to the requirements of ASTM A185 or both. Place Additional reinforcing at all openings.
4. Optional EZ set lid cast in place. Supplied by Dellinger Precast. To be field adjusted using approved methods by contractor.
5. Pipe penetration locations as per job requirements. Pipe inlet and outlet locations to have PSX Direct Drive boots or equal. Pipe Inlet locations (typical 3 sides) to be knock out pannels. Pipe supplied & installed by contractor.
6. Joints to be sealed with ConSeal CS102. butyl rubber joint sealant or equal. Sealant meets or exceeds the requirements of latest federal specification SS-S-0021(210-A), AASHTO M-198B, and ASTM C-990-91.
7. Lift Insert / Lift Eye Pin by M.A Industries or equal, Cast-in by Dellinger Precast. Lifts meet or exceed OSHA requirements.
8. Method of manufacture is Wet Cast.
9. Sections are monolithic. Weights:
   Top Slab 2,636 ± lbs.
   Base Section 7,453 ± lbs.
10. I.D. = Inside dimension
    O.D. = Outside dimension
    L = Length
    W = Width
    H = Height

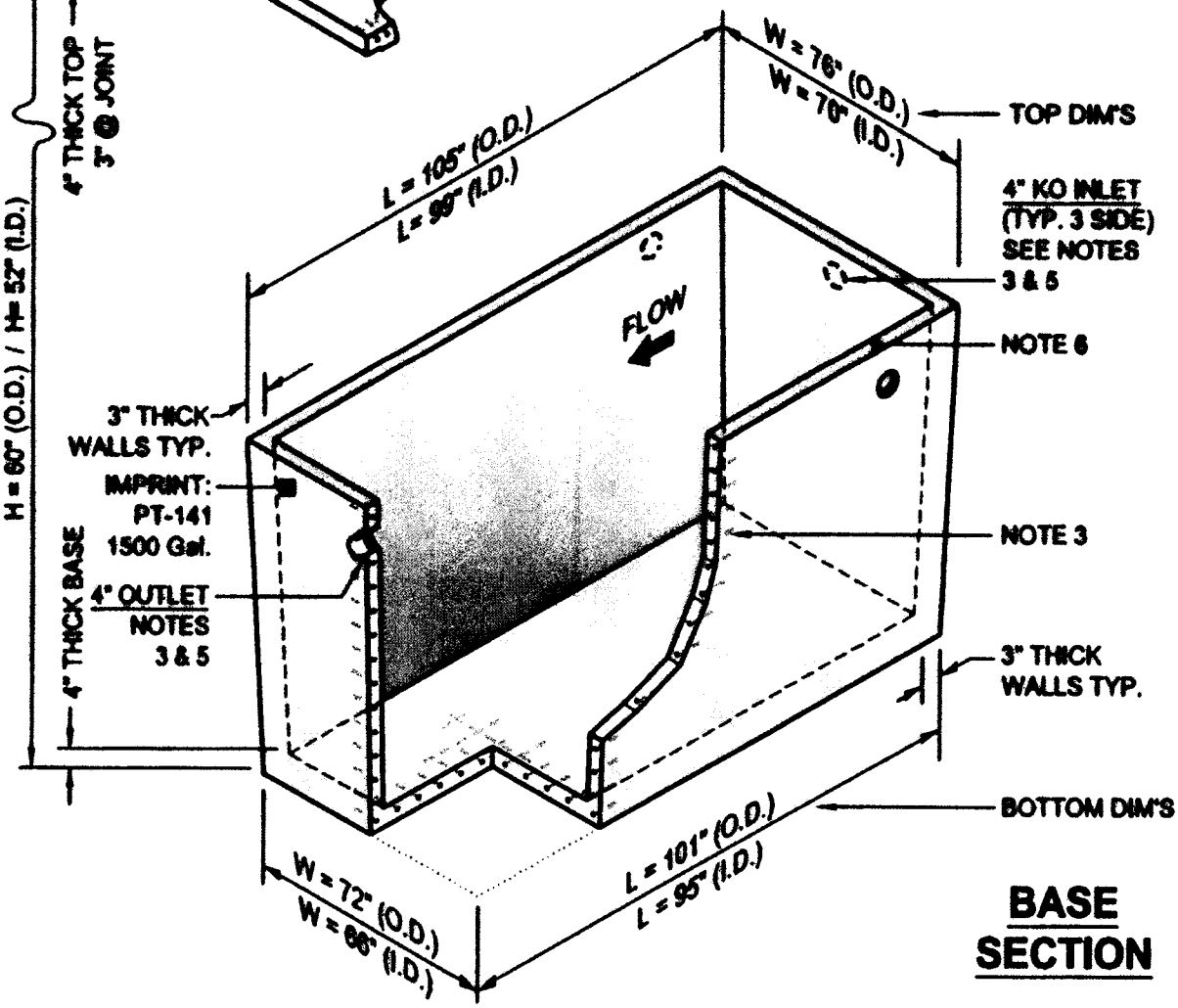


ELEVATION



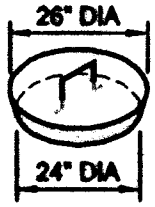


TOP SLAB



BASE SECTION

OPTIONAL ROUND LID



1,500 Gallon (Top Slab) PUMP TANK

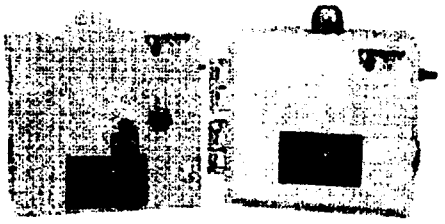
Scale: Not To Scale
Revision Date: February 2008
Detail # PT-1,500-TS

DELLINGER PRECAST
4531 North Hwy 16 • Denver, N.C. 28037 • Phone: 800-948-1666 • 704-483-2868 • Fax: 704-483-2363

MODEL 112 Control Panel

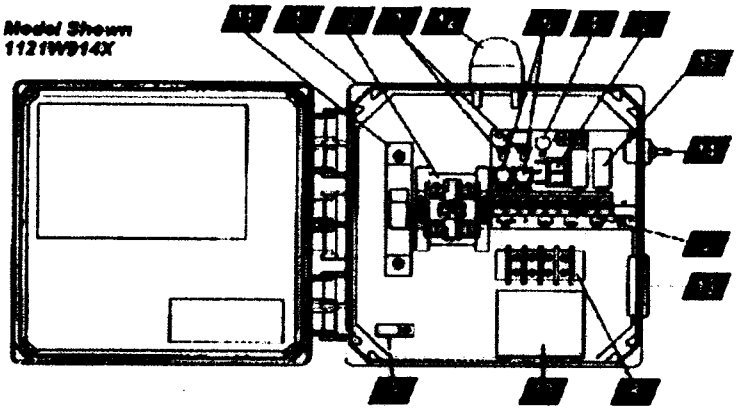
Single phase, simplex motor contactor control.

The Model 112 control panel provides a reliable means of controlling one 120, 208, or 240 VAC single-phase pump in pump chambers, sump pump basins, irrigation systems and lift stations. Two control switches activate a magnetic motor contactor to turn the pump on and off. If an alarm condition occurs, an additional alarm switch activates the audio/visual alarm system.



Indoor *Indoor/outdoor*

Model Shown
112NW914X



1. **Enclosure measures** 8 x 8 x 4 inches (20.32 X 20.32 X 10.16 cm). **Choice of NEMA 1 (steel for indoor use), or NEMA 4X (ultraviolet stabilized** thermoplastic with removable flanges for outdoor or indoor use).

   * Options selected may increase enclosure size and change component layout.
2. **Magnetic Motor Contactor** controls pump by switching hot electrical lines.
3. **HOA Switch** for manual pump control (mounted on circuit board).
4. **Green Pump Run Indicator Light** (mounted on circuit board).
5. **Float Switch Terminal Block** (mounted on circuit board).
6. **Alarm and Control Fuses** (mounted on circuit board).
7. **Alarm and Control Power Indicators** (mounted on circuit board).
8. **Pump Input Power and Pump Connection Terminal Block**
9. **Ground Lug**
10. **Terminal Block Installation Label**
11. **Circuit Breaker** (optional) provides pump disconnect and branch circuit protection.

STANDARD ALARM PACKAGE (other options available)

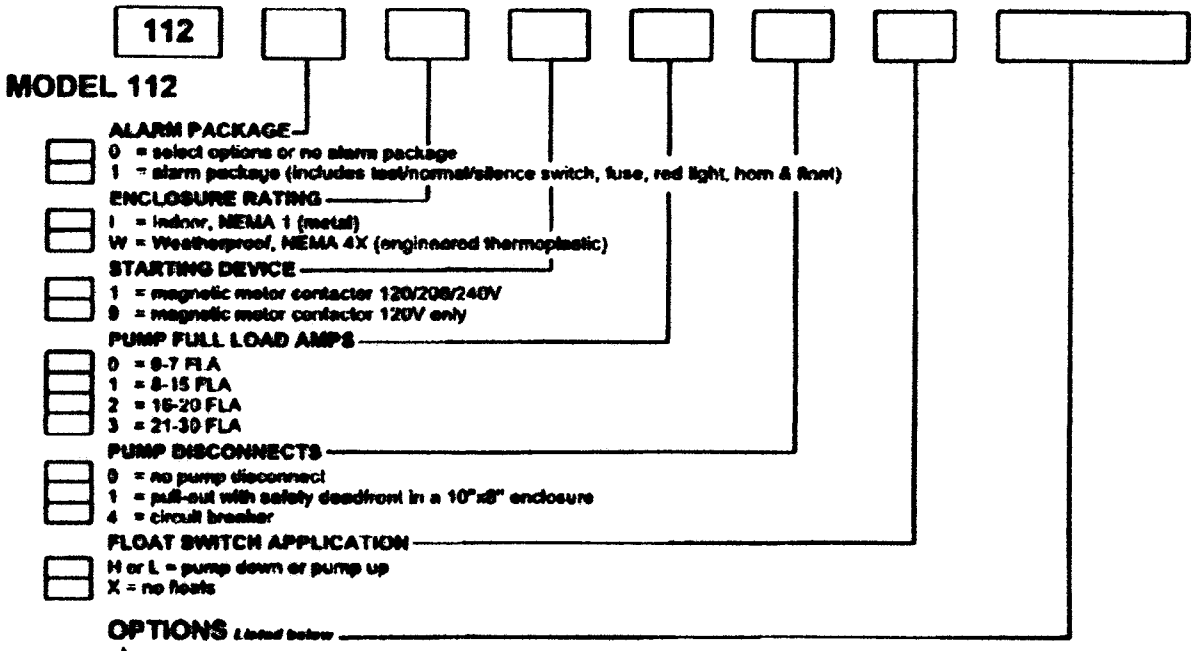
12. **Red Alarm Beacon** provides 360° visual check of alarm condition. **Note:** NEMA 1 style utilizes a door mounted indicator in lieu of a beacon.
13. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating). **Note:** NEMA 1 style utilizes an internally mounted buzzer (83 to 85 decibel) in lieu of horn.
14. **Exterior Horn Test/Normal/Silence Switch** allows alarm horn to be silenced and testing of horn and light to ensure proper operation of alarm system.
15. **Horn Silence Relay** automatically resets alarm after alarm condition has been resolved (mounted on circuit board).

FEATURES

- Entire control system (panel and switches) is UL Listed to meet and/or exceed industry safety standards
- Dual safety certification for the United States and Canada
- Standard package includes three 20' Sensor Float® control switches
- Complete with step-by-step installation instructions
- Three-year limited warranty

c UL us
LISTED

SJE Rhombus
PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE (1-218-847-1317)
1-218-847-4617 Fax
email: sje@sjerhombus.com
www.sjerhombus.com



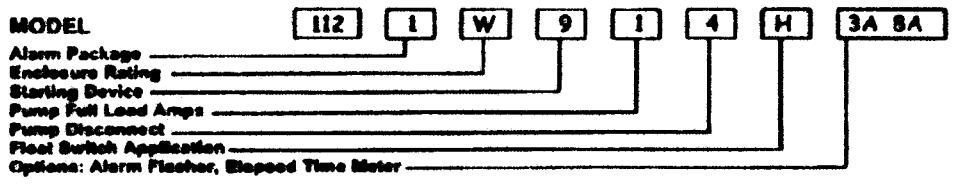
If additional features are required, call the factory for a quote on either a Pre-Line or Engineered Custom control panel system.

	CODE	DESCRIPTION
☐	1A	Red beacon only / no audio *must select 1E if floats included*
☐	1C	Horn only / no visual *must select 1E if floats included*
☐	1E	Alarm float
☐	3A	Alarm flasher
☐ ★	4A	Low level cutout *select option 4D if floats included*
☐ ★	4B	Rod low-level indicator & alarm *must select 4A also*
☐	4D	Low-level float
☐	8A	Auxiliary alarm contact, form C type
☐ ★	8A	Elapsed time meter
☐ ★	8C	Event (cycle) counter
☐	10E	Lockable latch - NEMA 4X
☐	10E	Lockable latch - NEMA 1
☐ ★	10F	Lightning arrester
☐ ★	10K	Anti-condensation heater

	CODE	DESCRIPTION
☐	11C	NEMA 1 alarm panel *must select option 8A*
☐	11D	NEMA 4X alarm panel *must select option 8A*
☐	15A	Control / alarm circuit breaker *Does not include the circuit board as in standard.*
☐	16A	10' cord in lieu of 20'
☐	16B	15' cord in lieu of 20'
☐	16C	30' cord in lieu of 20'
☐	16D	40' cord in lieu of 20'
☐	17A	SJE SignalMaster™ / mounting strap ●
☐	17B	SJE SignalMaster™ / externally weighted ●
☐	17C	Sensor Float® / internally weighted ▲
☐	17D	Sensor Float® / externally weighted ▲
☐	17E	Sensor Float® Mini / pipe clamp ▲
☐	17F	Sensor Float® Mini / externally weighted ▲
☐	19X	Door mounted pump run indicator
☐	21A	Pumpmaster® in lieu of on/off switches ●
☐	21B	PumpMaster® Plus in lieu of on/off switches ●
☐	21C	Super Single® in lieu of on/off switches ▲
☐	21D	Double Float™ in lieu of on/off switches ▲

● Mechanically-activated ▲ Mercury-activated

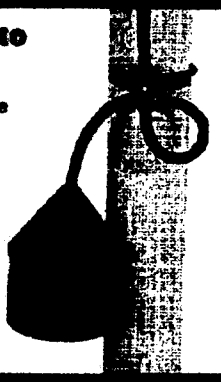
SAMPLE



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SENSOR FLOAT® control switch

Mercury-activated, narrow-angle float switch designed to activate pump control panels and alarms.



This narrow-angle sensing device is used to accurately monitor liquid levels in sewage and non-potable water applications. The Sensor Float® control switch is not sensitive to rotation and is suitable for use with intrinsically safe circuits. Contact SJE-Rhombus regarding specific intrinsically safe applications.

Normally Open Model (high level)
The control switch turns on (closes) when the float tips slightly above horizontal signaling a high level, and turns off (opens) when the float drops slightly below horizontal.

Normally Closed Model (low level)
The control switch turns on (closes) when the float drops slightly below horizontal signaling a low level, and turns off (opens) when the float tips slightly above horizontal.

FEATURES

- Suitable for use with intrinsically safe circuits.
- Not sensitive to rotation.
- Control differential of .5 inches (1 cm) above or below horizontal.
- UL Listed for use in non-potable water and sewage.
- CSA Certified.
- Three-year limited warranty.

OPTIONS

This switch is available:

- for normally open (high level) applications or normally closed (low level) applications.
- in standard cable lengths of 10, 15, 20, or 30 feet and 3, 5, 6, or 10 meters.
- with three mounting options that allow for flexibility in installation:

  Mounting Clamp: for applications where the switch can be attached to a discharge pipe or similar mounting device.

  Internally Weighted: for applications where the switch can be suspended from above.

  Externally Weighted: for applications where the switch can be suspended from above.

SPECIFICATIONS

CABLE: flexible 18 gauge, 2 conductor (UL,CSA) SJOW, water-resistant (CPE) jacket

FLOAT: 3.38 inch diameter x 4.55 inch long (8.58 cm x 11.56 cm), high-impact, corrosion resistant, PVC housing for use in sewage and non-potable water up to 140°F (60°C)

MAXIMUM WATER DEPTH: 30 feet (9 meters), 13 psi

MERCURY TILT SWITCH: single pole, single throw, mercury-to-mercury contacts, hermetically sealed in a steel capsule and epoxy sealed in the float housing

ELECTRICAL: 5 amp, 120/230 VAC, 50/60 Hz

SJE-Rhombus
SJ Electro Systems, Inc.
PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE (1-218-847-1317
1-218-847-4617 Fax
email: sje@sjerhombus.com
www.sjerhombus.com

Sensor Float® control switch installation instructions

⚠WARNING **ELECTRICAL SHOCK HAZARD**
Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes.

⚠WARNING **EXPLOSION OR FIRE HAZARD**
Do not use this product with flammable liquids. Do not install in hazardous locations as defined by National Electrical Code, ANSI/NFPA 70.

Failure to follow these precautions could result in serious injury or death. Replace product immediately if switch cable becomes damaged or severed. Keep these instructions with warranty after installation. This product must be installed in accordance with National Electric Code, ANSI/NFPA 70 so as to prevent moisture from entering or accumulating within boxes, conduit bodies, fittings, float housing, or cable.

MOUNTING THE SWITCH

1. Place the cord into the clamp as shown in Figure B
2. Locate clamp at desired activation level and secure the clamp to the discharge pipe as shown in Figures A and B. Note: Do not install cord under hose clamp.
3. Tighten the hose clamp using a screwdriver. Over tightening may result in damage to the plastic clamp. Make sure the float cable is not allowed to touch the excess hose clamp band during operation.
4. Bring cable leads back to control device and wire according to Figure C.
5. Check installation. Allow system to cycle to insure proper operation.

Note: All hose clamp components are made of 18-8 stainless steel material. See your SJE-Rhombus supplier for replacements

Figure A

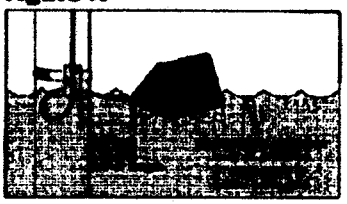
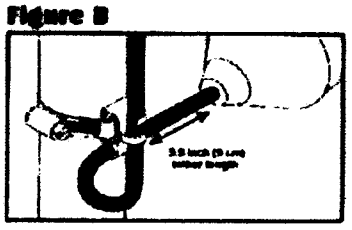


Figure B



INTERNAL WEIGHT

1. Determine desired activation level.
2. Suspend switch 7 inches (18 cm) below desired activation level as shown in Figure D. Switch remains partially submerged during the "on" tipping action. Switch can be totally submerged and still continue to operate properly.
3. Wire cable leads directly into control device as shown in Figure C.
4. Check installation. Allow system to cycle to insure proper operation.

Figure C - Wiring Diagram

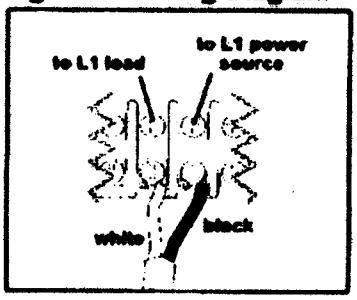
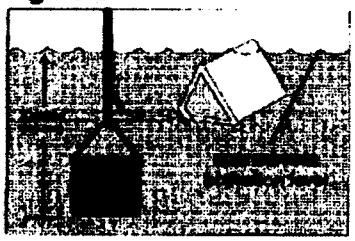


Figure D



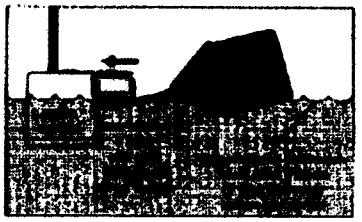
CABLE WEIGHT

1. Determine desired activation level
2. Suspend switch and cable weight at desired activation level as shown in Figure E.
3. Wire cable leads directly into control device as shown in Figure C.
4. Check installation. Allow system to cycle to insure proper operation.

Cable weight is attached to switch cable at the factory. To adjust:

1. Release clip.
2. Adjust cable weight to desired position.
3. Lay switch cable in weight channel.
4. Align clip with weight channel and slide towards switch cable as shown in Figure E.
5. Snap clip snugly up to cable, moving clip to tightest possible position.

Figure E



CONTROLS SJ Rhombus SJ ELECTRO SYSTEMS, INC.
22650 County Highway 6 ■ P.O. Box 1708 ■ Detroit Lakes, Minnesota 56502 USA
1-888-DIAL-SJE (1-888-342-5753) ■ Phone: 218-847-1317 ■ Fax: 218-847-4617
E-mail: sje@sjerhombus.com

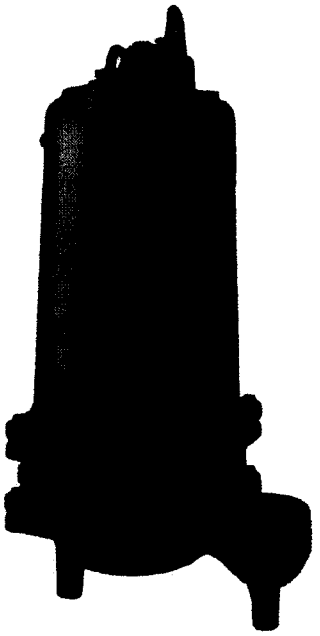
Inst. Instr. P/N 1609640A
Cat. Page P/N 1609569A

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Printed in USA 03/00

MYERS® P50 & P100 SERIES

The Myers® P series effluent pumps are designed specifically for multi-pump pressure collection, septic tank effluent pumping (S.T.E.P.) and high head drainage applications. The high efficiency, single-vane, enclosed impellers provide steep, non-overloading performance curves, which are ideal for these applications. These pumps deliver more capacity at higher heads than most pumps in this class. The combination of the most rugged materials ensure years of trouble-free, dependable service.



APPLICATIONS

Effluent removal, sump drainage, water transfer, flood control

SPECIFICATIONS

Capacities – Up to 60 GPM (227 LPM)
Shut-off Head – Up to 124' (37.8 m)
Max. Spherical Solids – 3/4" (19 mm)
Liquids Handling – Domestic, effluent and drain water
Intermittent Liquid Temperature – Up to 140°F (60°C)
Motor/Electrical Data – 1/2 HP, 115V or 230V, 1Ø; 1 HP, 230V, 1Ø, oil-filled, permanent split capacitor type, 3450 RPM, 60Hz
Acceptable pH Range – 6-9
Specific Gravity – .9-1.1
Viscosity – 28-35 SSU
Discharge, NPT – 1-1/2" (38 mm)
Housing – Cast iron
Minimum Sump Diameter – Simplex: 24" (61 cm); Duplex: 36" (91.4 cm)
Power Cord – 20', 14/3 SJOW, SJOW-A

FEATURES

Rugged and Dependable
Durable, oil-filled motor for continuous bearing lubrication and maximum heat dissipation

Design Meets Demand
Single-vane, enclosed impeller provides steep, non-overloading performance curves for pressure collection and S.T.E.P. applications

Closed Case
Enclosed impeller eliminates jamming between impeller and volute – engineered thermoplastic composition

Powerful Starts
High-torque, permanent split capacitor (PSC) motor; no starting switches or relays to wear out

No Burnout
On-winding current and temperature sensitive overload to protect against costly burnout

Thermal Failsafe
Heat sensor overload protection with automatic reset when motor cools to a safe operating temperature

Twice the Protection
Optional leak probe senses water leakage past seal (dual seal motors only)

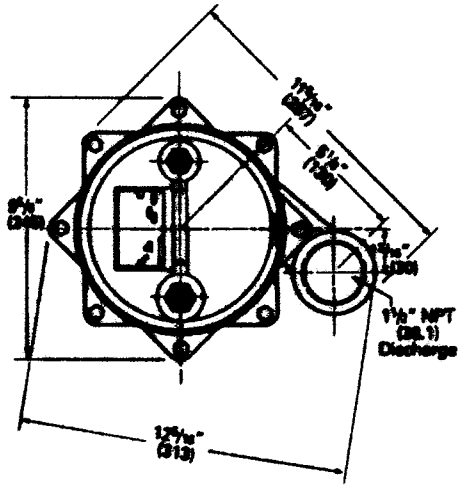
Restore Performance
Original performance standards can be restored by easily replacing a worn volute seal ring

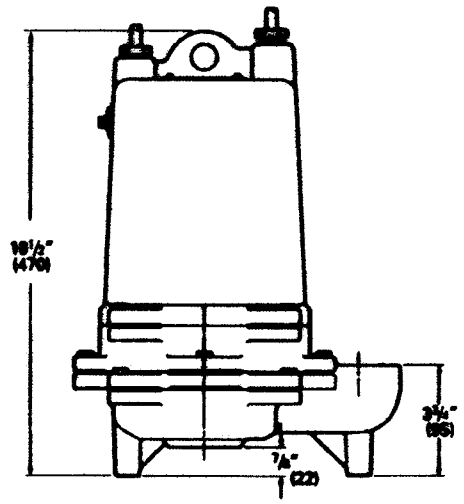
MYERS® P50 & P100 SERIES

ORDERING INFORMATION

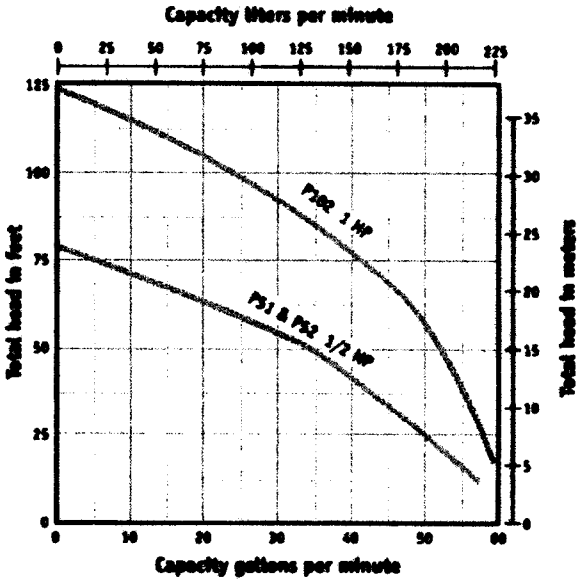
Catalog Number	HP	Volts	Phase/ Cycles	Discharge Size	Switch Type	Cord Length	Approx. Wt. Lbs.
P51	1/2	115	1/60	1-1/2"	Manual	20'	84
P51D	1/2	115	1/60	1-1/2"	Manual	20'	84
P52	1/2	230	1/60	1-1/2"	Manual	20'	84
P52D	1/2	230	1/60	1-1/2"	Manual	20'	84
P102	1	230	1/60	1-1/2"	Manual	20'	87
P102D	1	230	1/60	1-1/2"	Manual	20'	87

DIMENSIONS





PUMP PERFORMANCE



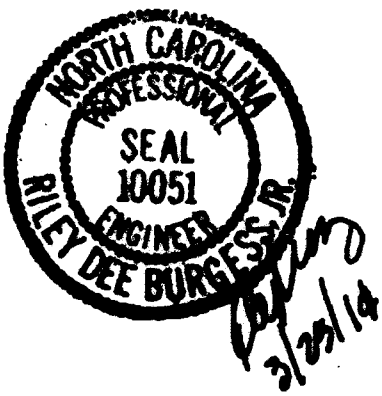
CALCULATIONS

Location	Sage Thrasher Lane	
Project Number		
Lot No:	173	
No. of Bedrooms	5	
Design Flow	600	$gal/_{day}$
LTAR	0.3	$gal/_{ft^2\,day}$
INNOVATIVE? (YES OR NO)	yes	
Supply Line Length	650	ft.
Supply Line Volume	113.1	gal.
Required Feet of Line	500	ft.
Amount of Line from Layout	510	ft.
Gallons per Minute	21.33	$gal/_{min}$
Required Septic Tank Capacity	1500	gal.
Minimum Standard Tank Size	1500 gal.	
Lateral Line Volume	333.03	gal.
Dosing Volume	270.00	gal.
	Note: Dosing Volume at 70% line volume	
Tank Draw Down	9.3	in.
	Generic Draw Down of 29 gal/per in.	
Pump Run Time	12.66	minutes
Elevation Head	83	ft.
Pressure Head	2	ft.
Friction Factor	0.84	ft./100 ft. *(From the Interpolator.)*
Friction Head	5.46	ft.
Total Dynamic Head (+15%)	104.03	ft.

Effluent Pump Myers P100 Series capable of delivering 104 ft of Head at 22 gpm Total Flow.

FRICTION FACTOR INTERPOLATER
2" SCH 40 PVC

GPM	f
20	0.84
25	1.27
30	1.78
35	2.37
40	3.03
45	3.77
50	4.58
60	



3/25/14

PRESSURE MANIFOLD DETAILS
FOR
SAGE THRASHER LAKE

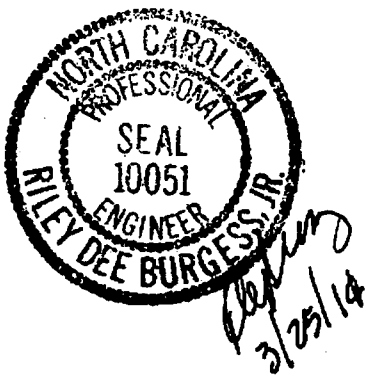
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Effluent Pump Myers P100 Series capable of delivering 104 ft of Head at 22 gpm Total Flow.

FRICTION FACTOR INTERPOLATER
2" SCH 40 PVC

GPM	*f*
20	0.84
	0.88
25	1.27
26	1.56
30	1.78
	1.76
35	2.37
37	2.63
40	3.03
42.4	3.39
45	3.77
46.51	4.01
50	4.58
57.11	5.89
60	6.42



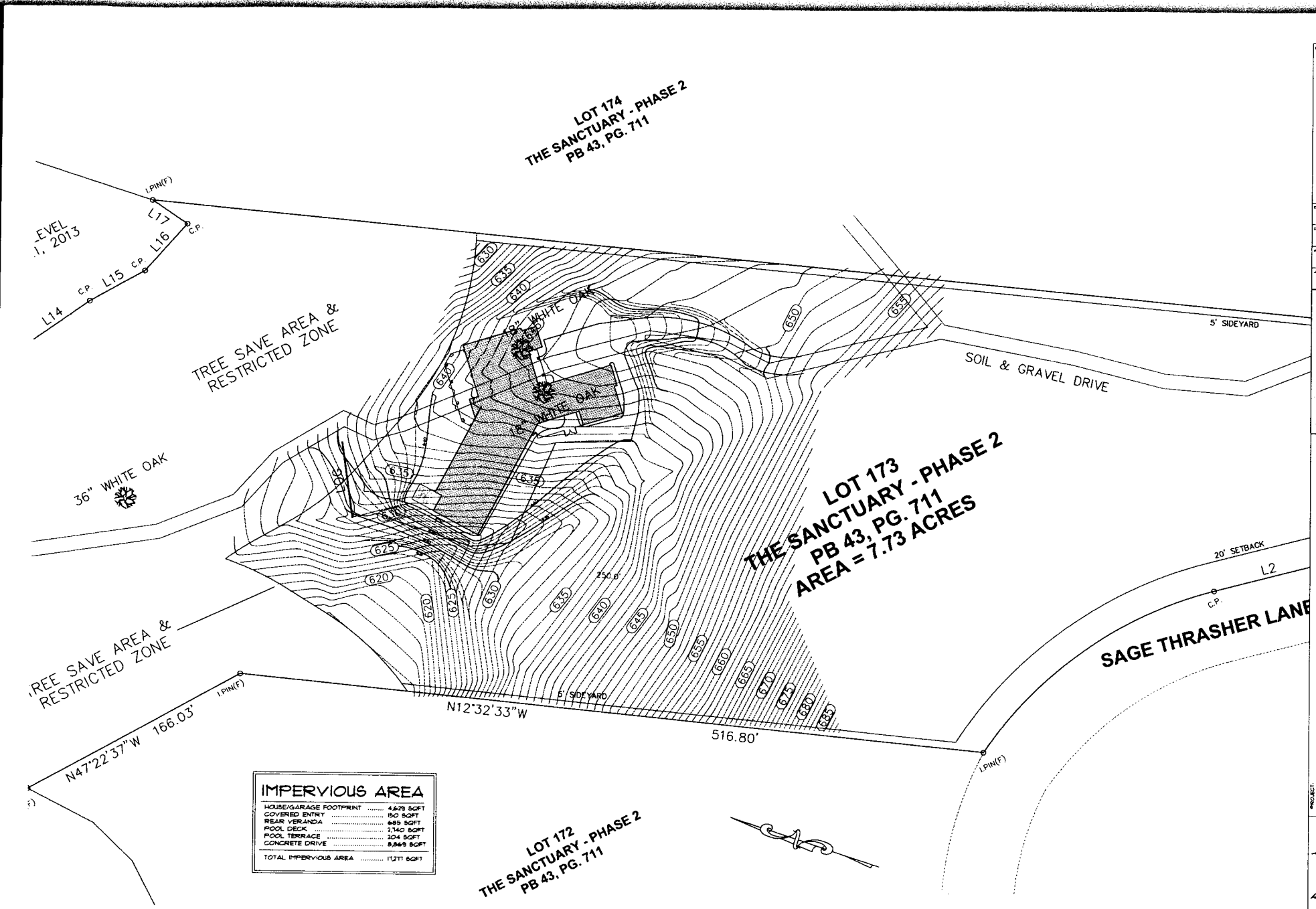
Sage Thrasher Lane

SYSTEM FLOW

DESIGN SPECIFICATIONS

Line #	Color	Elev	Length	Hole Size	Flow/Tap	Line gpd	Line Trench Area	Flow/Line	Line LTAR
1			170	SCH 40 1/2	7.11	90.01	510	0.04	0.1765
2			170	SCH 40 1/2	7.11	90.01	510	0.04	0.1765
3			170	SCH 40 1/2	7.11	90.01	510	0.04	0.1765
	total	feet =	510	gal/min =	21.33				

Des. Flow	600
Pump Run	12.66
soil LTAR	0.3
Innov LTAR	0.4



IMPERVIOUS AREA

HOUSE/GARAGE FOOTPRINT	4,629 SQFT
COVERED ENTRY	150 SQFT
REAR VERANDA	685 SQFT
POOL DECK	2,140 SQFT
POOL TERRACE	204 SQFT
CONCRETE DRIVE	8,869 SQFT
TOTAL IMPERVIOUS AREA	17,271 SQFT

DATE: FEBRUARY 27, 2014
DRAWN BY: K. HOLDRIDGE
APPROVED BY:
JOB NUMBER: 2013-483

Custom Home Offices

PROJECT:

THE CORBIN RESIDENCE

LOT 173 SAGE THRASHER LANE

IN

CHARLOTTE, NORTH CAROLINA

NOTE: GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS AND ANGLES IN FIELD

K&H RESIDENTIAL DESIGN

SHEET

02

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MYERS® P50 & P100 SERIES

PENTAIR

USA
293 WRIGHT STREET, DELAVAN, WI 53115 WWW.FEMEYERS.COM
PH: 888-987-8677 ORDERS FAX: 800-426-9446

CANADA
269 TRILLIUM DRIVE, KITCHENER, ONTARIO, CANADA N2G 4W5
PH: 519-606-5484 ORDERS FAX: 800-426-9446

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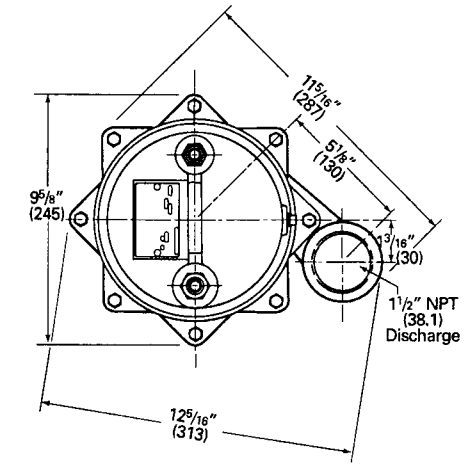
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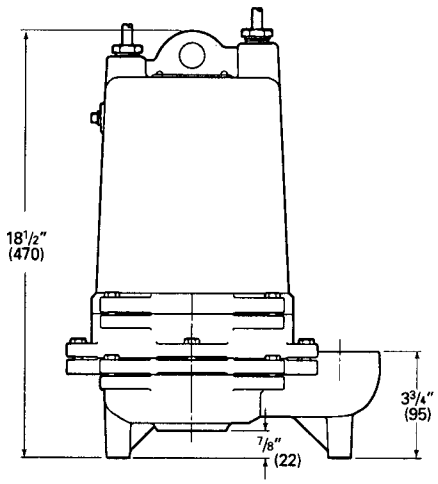
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ORDERING INFORMATION

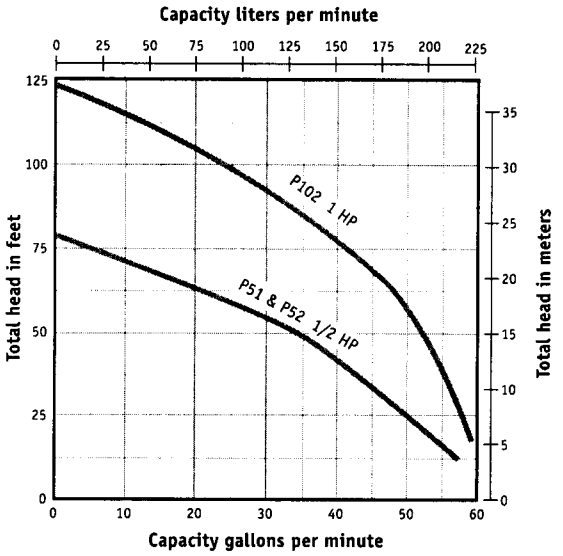
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DIMENSIONS





PUMP PERFORMANCE



MYERS® P50 & P100 SERIES

SPECIFICATIONS

Effluent Pumps – Pump(s) shall be F. E. Myers model P series effluent pumps selected in accordance with the following design criteria:

Number of Pumps:	_____
Primary Design Flow:	_____
Primary Design Head:	_____
Minimum Shut-off Head:	80': (P51/P52) 124': (P102)
Motor Horsepower:	.5: (P51/P52) 1: (P102)
Motor Speed:	3450 RPM
Electrical:	P51: 115V, 1Ø P52/P102: 230V, 1Ø

Pump – The pump shall be designed to handle septic tank effluent and be capable of passing 3/4 inch spherical solids. The pump shall be capable of handling liquids with temperatures to 140°F intermittent and shall be capable of running dry without damage to the seals or bearings.

Motor– The pump motor shall be of the submersible type. Single phase motors shall be of the permanent split capacitor type with no relays or starting switches. Stator winding shall be of the open type with Class B insulation rated for 130°C maximum operating temperature. The winding housing will be filled with clean dielectric oil to lubricate bearings, seals, and transfer heat from the windings to the outer shell. The motor assembly shall be of the standard frame design and shall be secured in place by four threaded fasteners allowing for easy field serviceability.

The motor shall be capable of operating over the full range of the performance curve without overloading the motor and causing any objectionable noise or vibration. The motor shall have two bearings to support the rotor; an upper ball bearing to accommodate radial loads and a lower ball bearing to take thrust and radial loads. Ball bearings shall be designed for a B-10 life of 50,000 hours. A heat sensor thermostat and overload shall be attached to the top end of the motor windings and shall be wired in series with the windings to stop the motor if the motor winding temperature reaches 266°F. The overload thermostat shall reset automatically when the motor cools to a safe operating temperature.

Power Cord – The motor power cord shall be 14-3 SJOW/SJOWA or SOOW. The cable jacket shall be sealed at the motor entrance by means of a rubber compression washer and compression nut. A heat shrink tube filled with epoxy shall seal the outer cable jacket and the individual leads to prevent water from entering the motor housing.

Seal Chamber – The motor shall be protected by two (2) rotary shaft seals mounted in tandem with an oil filled chamber separating the seals. The seals shall have carbon and ceramic seal faces diamond lapped to a tolerance of one light band. Metal parts and springs for seals shall be 300 series stainless steel. Two optional electrical sensing probes shall be mounted in the seal chamber to detect any water leakage past the lower seal. The sensing probes shall be connected to a red warning light in the control panel. The warning light shall serve to indicate a seal leak and shall not stop the pump.

Pump Impeller – The pump impeller shall be of the single vane enclosed type. The impeller shall be constructed of an engineered thermoplastic. A stainless steel wear ring shall be molded into the neck of the thermoplastic impeller to provide a sealing surface. A replaceable Buna-N sealing cup shall effect a seal between the volute and impeller in order to maintain high efficiency and prevent recirculation. The impeller shall be threaded onto the 416 stainless steel pump/motor shaft.

Pump and Motor Castings – All casting shall be of high tensile strength Class 30 gray cast iron. Castings shall be treated with phosphate and chromate rinse and painted with a high quality air dry alkyd enamel.

Fasteners – All exposed fasteners shall be of 300 series stainless steel.

EFFLUENT S.T.E.P. PUMPS

MYERS® P50 & P100 SERIES

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Liquids Handling – Domestic, effluent and drain water
Intermittent Liquid Temperature – Up to 140°F (60°C)
Motor/Electrical Data – 1/2 HP, 115V or 230V, 1Ø; 1 HP, 230V, 1Ø, oil-filled, permanent split capacitor type, 3450 RPM, 60Hz
Acceptable pH Range – 6-9
Specific Gravity – .9-1.1
Viscosity – 28-35 SSU
Discharge, NPT – 1-1/2" (38 mm)
Housing – Cast iron
Minimum Sump Diameter – Simplex: 24" (61 cm); Duplex: 36" (91.4 cm)
Power Cord – 20', 14/3 SJOW, SJOW-A

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Rugged and Dependable
Durable, oil-filled motor for continuous bearing lubrication and maximum heat dissipation

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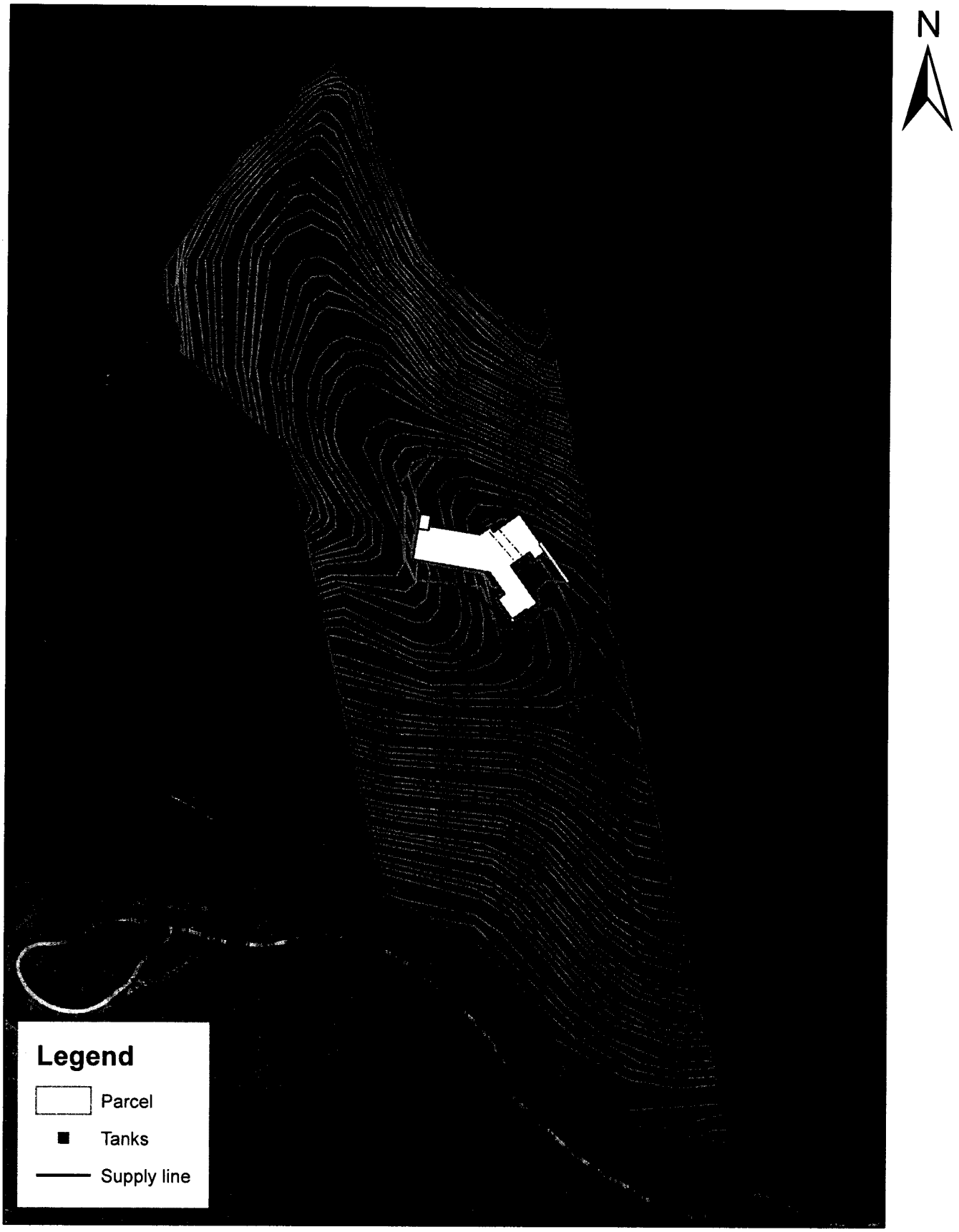
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Heat sensor overload protection with automatic reset when motor cools to a safe operating temperature

Twice the Protection
Optional leak probe senses water leakage past seal (dual seal motors only)

Restore Performance
Original performance standards can be restored by easily replacing a worn volute seal ring

13608 Sage Thrasher Lane
Preliminary Septic Site Plan



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 #: 5765B Permit #: 6653 Tax Parcel #: 19936131

Property Owner: Bill and Debbie Corbin

Job Location Address: 13608 Sage Thrasher Lane

City: Charlotte State: NC Zip Code: 28278

Installation Approval Issuance Date: 7/9/15

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 8/9/15, 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.**

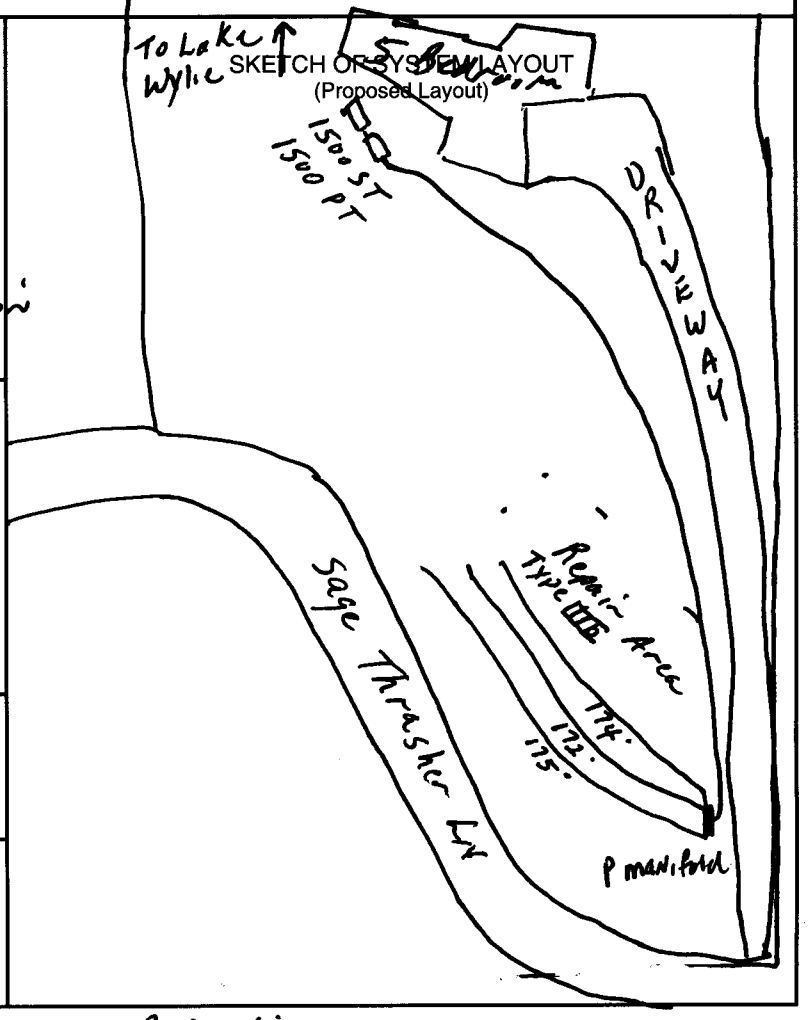
Permitted Design Flow: 600 GPD
Site LTAR: 0.3 GPD/ft² (For new installations only.)
Liquid Capacity of Septic Tank: 1500 gallons
Liquid Capacity of Dosing Tank: 1500 gallons

Drainfield Design ☐ N/A
Trench Depth: 24 inches
Trench Width: 3 feet
Line Spacing: 9 feet (O.C.)
Total line length: 521 feet
# of Lines: 3 @ 175 feet
Depth of Media: 12 inches (Type) 25% Reduction
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: 15 feet
Distance from Property Line: 10 feet
Distance from Water Supply Source: 10 feet



Comments: System Classification & Type: Type IIIb 25% Reduction System
1500 ST, 1500 PT, Pressure manifold, 3 lines @ 175 @ 3' wd 521 LF

DENR Authorized Agent: Philo Walker Signature: Philo Walker REHS

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

Septic System Pre-Construction Meeting Checklist

File # 5765B App # 6653 Tax Parcel # 19936131

Property Owner: Bill & Debbie Corbin

Job Location Address: 13608 Sage Thrasher Lane

City: Charlotte State: NC Zip Code: NC 28278

1. **Does System design match facility, flow & wastewater characteristics?**

   ☑ YES ☐ NO

   Comments: _____

2. **Is there sufficient available space for the septic systems initial and repair areas?**

   ☑ YES ☐ NO

   Comments: _____

   _____

3. **Can the septic system be installed per the permit conditions and drawing on file?**

   ☑ YES ☐ NO

   Comments: _____

   _____

* If "NO" is checked for any of the above the existing permit may need to be revoked.

Permission is hereby given to ☐ install ☐ alter ☐ repair an on-site wastewater treatment & and disposal system, with subsurface soil absorption and effluent discharge meeting all of the construction requirements of 15A NCAC 18A .1900 which are in effect on the date of granting this approval. System shall not be installed while soils are in wet condition.

Philo Walker — Authorized Agent

7/9/15 — Date

Stanley Septic — Others Present

S

FEE: 200.00

DATE:11/12/2015

MECKLENBURG COUNTY
GROUNDWATER & WASTEWATER SERVICES

FILE NUMBER: 5765B

PERMIT NUMBER: 30006653

PARCEL NUMBER: 19936131

JOB LOCATION INFORMATION

ADDRESS: 13608 SAGE THRASHER LN

CITY: CHARLOTTE **STATE: NC** **ZIP:** 28278

ISSUED TO: Bill and Debbie Corbin

CONSTRUCTION AUTHORIZATION ISSUANCE DATE: 4/15/2014

CONSTRUCTION AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 30006653, 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. A PRE-CONSTRUCTION MEETING MUST BE SECURED PRIOR TO INSTALLATION OF THE SEPTIC TANK SYSTEM. THE INSTALLER OF THE SYSTEM SHALL BE A LICENSED SEPTIC TANK CONTRACTOR WITH THE NORTH CAROLINA ONSITE WASTEWATER CONTRACTOR INSPECTOR CERTIFICATION BOARD.

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.

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 #: 5765B Permit #: 6653 Tax Parcel #: 199 36131

Property Owner: Bill and Debbie Corbin

Job Location Address: 13608 Sage Thrasher Lane

City: Charlotte State: NC Zip Code: 28278

Operation Permit Issuance Date: 7/31/15 Contractor Name: Stanley Septic

Permitted Design Flow: 600 GPD

Liquid Capacity of Septic Tank: 1500 gallons

Liquid Capacity of Dosing Tank: 1500 gallons

Effluent Pump Model: WE 1512 HHV, 1.5 hp

Drainfield Installation ☐ N/A

Trench Depth: 24 inches

Trench Width: 3 feet

Line Spacing: 9 feet (O.C.)

Total line length: 510 feet

# of Lines: 3 @ 170 feet

Depth of Media: 12 inches (Type) Chambers

Depth of Cover: 12 inches

Distribution Device: pressure manifold

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: 25' feet

Distance from Property Line: 10 feet

Distance from Water Supply Source: 10 feet

Inspection Dates

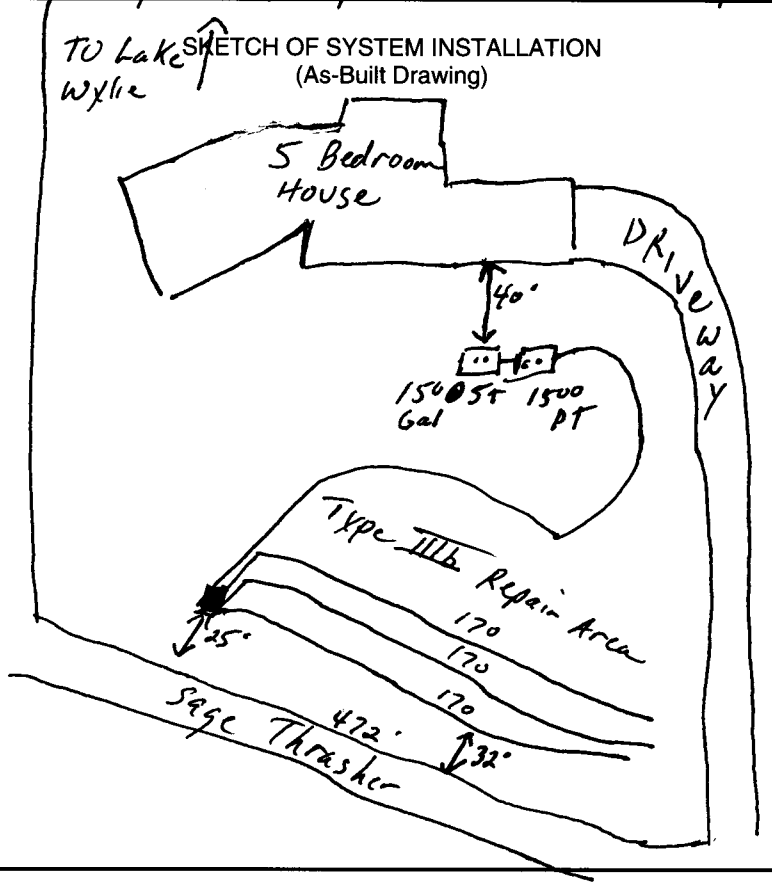
Tank(s) Inspected: 7/9/15

Excavation Inspected: 7/10/14 RSW

Pump & Controls Inspected: 7/31/15

Dellinger Tank, Pump Gould WE 1512 HHV 1.5 hp

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: IIIb Pump to Chambers, IS, P, NA, NA

DENR Authorized Agent: Phido Walker Signature: Phido Walker REHS

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 #: 5765B Permit #: _____ Tax Parcel #: 19936131

Property Owner: Bill + Debbie Corbin

Job Location Address: 13608 Sage Thrasher Lane

City: Charlotte State: NC Zip Code: 28278

OPERATION PERMIT CONDITIONS:

I. Performance: System shall perform in accordance with 15A NCAC 18A .1961.

II. Monitoring: System shall be monitored as required by 15A NCAC 18A .1961.

III. Maintenance: Ground absorption sewage treatment and disposal systems shall be checked, and the contents of the septic tank removed, periodically from all compartments, to ensure proper operation of the system. The contents shall be pumped whenever the solids level is found to be more than 1/3 of the liquid depth in any compartment.

IV. Operation: System shall be operated in accordance with 15A NCAC 18A .1961.

System Classification: III b

*Operation Permits for Type V and VI systems expire five (5) years from the date of issuance (in accordance with Table V(a)). The system owner must contact GWS six (6) months prior to expiration for permit renewal.

Subsurface system operator required: Yes ☐ No ☒

☐ This type of system requires the system owner to maintain a contract with a certified operator to perform system inspection, maintenance, and reporting as required in 15A NCAC 18A .1961. and Table V(a). The system owner is responsible for all fees associated with these services.

☐ System does not require inspection by GWS on a routine frequency.

☒ System requires inspection by GWS once every five (5) years. The system owner is responsible for all fees associated with the inspection.

☐ System requires inspection by GWS once every three (3) years. The system owner is responsible for all fees associated with the inspection.

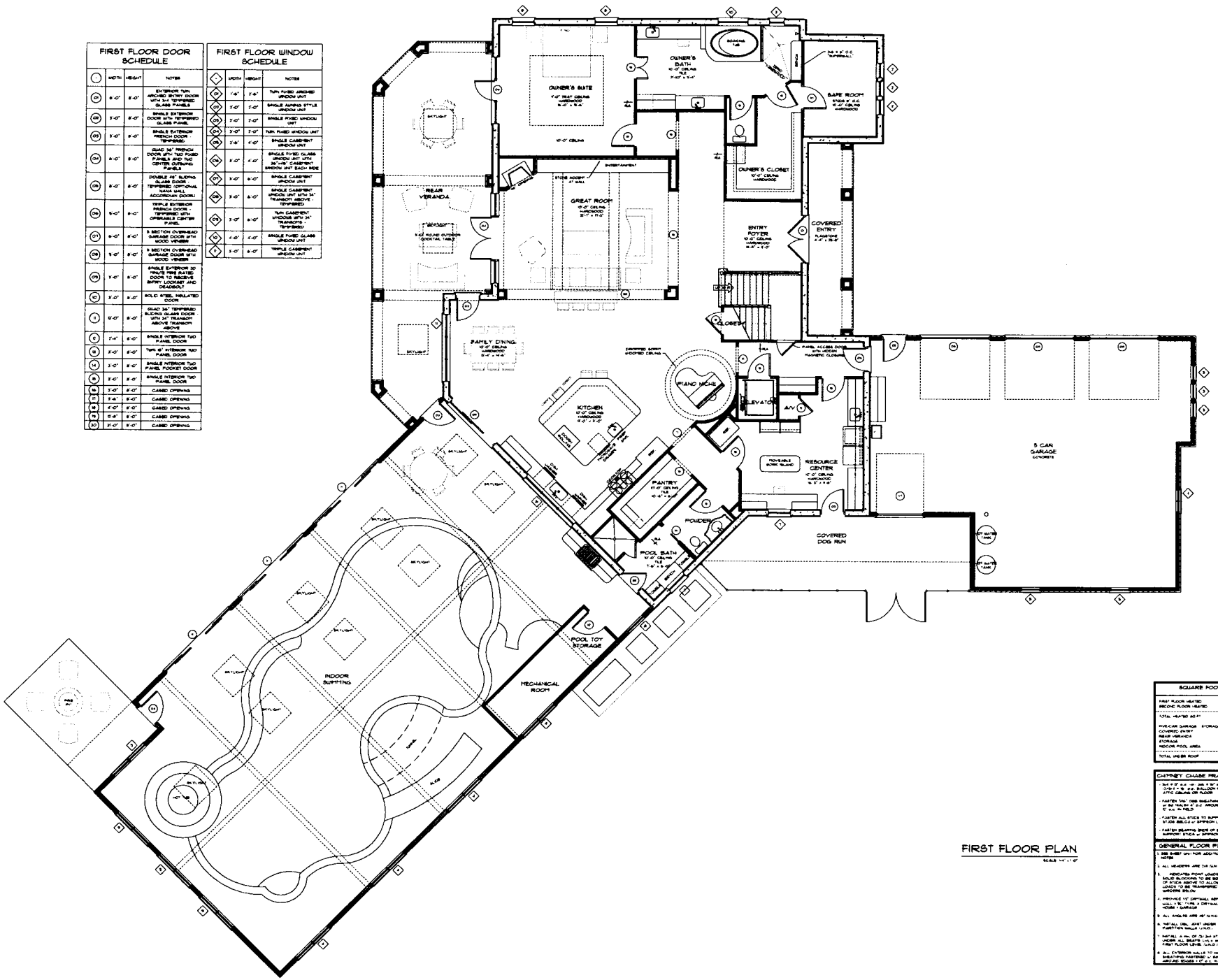
☐ System requires inspection by GWS once every twelve (12) months. The system owner is responsible for all fees associated with the inspection.

☐ System requires inspection by GWS once every six (6) months. The system owner is responsible for all fees associated with the inspection.

V. Other: Pump to chamber septic system

DENR Authorized Agent: Philo Walker Date: 7/31/15

Signature: Philo Walker REHS



FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"

FIRST FLOOR DOOR SCHEDULE

	WIDTH	HEIGHT	NOTES
D1	8'-0"	8'-0"	EXTERIOR TWIN ARCHED ENTRY DOOR WITH 3/4 TEMPERED GLASS PANELS
D2	3'-0"	8'-0"	SINGLE EXTERIOR DOOR WITH TEMPERED GLASS PANEL
D3	3'-0"	8'-0"	SINGLE EXTERIOR FRENCH DOOR - TEMPERED
D4	6'-0"	8'-0"	GLAD 36" FRENCH DOOR WITH TWO FIXED PANELS AND TWO CENTER OUTSWING PANELS
D5	8'-0"	8'-0"	DOUBLE 48" SLIDING GLASS DOOR TEMPERED (OPTIONAL NANA WALL ACCORDIAN DOOR)
D6	9'-0"	8'-0"	TRIPLE EXTERIOR FRENCH DOORS - TEMPERED WITH OPERABLE CENTER PANEL
D7	9'-0"	8'-0"	9 SECTION OVERHEAD GARAGE DOOR WITH WOOD VENEER
D8	9'-0"	8'-0"	9 SECTION OVERHEAD GARAGE DOOR WITH WOOD VENEER
D9	3'-0"	8'-0"	SINGLE EXTERIOR 20 MINUTE FIRE RATED DOOR TO RECEIVE ENTRY LOCKSET AND DEADBOLT
D10	3'-0"	8'-0"	SOLID STEEL INSULATED DOOR
C	8'-0"	8'-0"	GLAD 36" TEMPERED SLIDING GLASS DOOR WITH 24" TRANSOM ABOVE TRANSOM ABOVE
D	7'-4"	8'-0"	SINGLE INTERIOR TWO PANEL DOOR
E	2'-0"	8'-0"	TWIN 18" INTERIOR TWO PANEL DOOR
F	3'-0"	8'-0"	SINGLE INTERIOR TWO PANEL POCKET DOOR
G	2'-0"	8'-0"	SINGLE INTERIOR TWO PANEL DOOR
H	3'-0"	8'-0"	CASED OPENING
I	3'-6"	8'-0"	CASED OPENING
J	4'-0"	8'-0"	CASED OPENING
K	11'-6"	8'-0"	CASED OPENING
L	21'-0"	8'-0"	CASED OPENING

FIRST FLOOR WINDOW SCHEDULE

	WIDTH	HEIGHT	NOTES
W1	1'-6"	7'-6"	TWIN FIXED ARCHED WINDOW UNIT
W2	3'-0"	7'-0"	SINGLE AWNING STYLE WINDOW UNIT
W3	3'-0"	7'-0"	SINGLE FIXED WINDOW UNIT
W4	3'-0"	7'-0"	TWIN FIXED WINDOW UNIT
W5	2'-6"	4'-0"	SINGLE CASEMENT WINDOW UNIT
W6	3'-0"	4'-0"	SINGLE FIXED GLASS WINDOW UNIT WITH 36"x48" CASEMENT WINDOW UNIT EACH SIDE
W7	3'-0"	6'-0"	SINGLE CASEMENT WINDOW UNIT
W8	3'-0"	6'-0"	SINGLE CASEMENT WINDOW UNIT WITH 36" TRANSOM ABOVE - TEMPERED
W9	3'-0"	6'-0"	TWIN CASEMENT WINDOWS WITH 24" TRANSOMS - TEMPERED
W10	4'-0"	4'-0"	SINGLE FIXED GLASS WINDOW UNIT
W11	3'-0"	8'-0"	TRIPLE CASEMENT WINDOW UNIT

SQUARE FOOTAGE

(REVISED 1.30.14)

FIRST FLOOR HEATED	5,284
SECOND FLOOR HEATED	2,116
TOTAL HEATED SQ FT	7,400
FIVE-CAR GARAGE STORAGE	1,138
COVERED ENTRY	442
REAR VERANDA	1,178
STORAGE	482
INDOOR POOL AREA	2,760
TOTAL UNDER ROOF	14,800

CHIMNEY CHASE FRAMING (TYP.)

- 2x4 @ 0" o.c. or 2x6 @ 16" o.c. w/ 1-1/4" x 16" w.p. BULLNOSE FRAMED FROM ATTIC CEILING OR FLOOR
- FASTEN 1/2" CDX SHEATHING ON ALL SIDES OF 2x4 NAILED @ 6" AROUND BOARD & 12" o.c. IN FIELD
- FASTEN ALL STUDS TO SUPPORT BEAM OR STUDS BELOW W/ SIMPSON LSTA24 STRAPS
- FASTEN BEARING SIDE OF BEAMS TO SUPPORT STUDS W/ SIMPSON MTC20 STRAPS

GENERAL FLOOR PLAN NOTES

1. SEE SHEET S1.1 FOR ADDITIONAL FRAMING NOTES
2. ALL HEADERS ARE 2x8 (U.N.O.)
3. INDICATES POINT LOADS (SEE S1.1 SHEET) SOLID BLOCKING TO BE INSTALLED BETWEEN JOISTS FROM FOUNDATION TO ROOF. CONCENTRATED LOADS TO BE TRANSFERRED TO PIERS BELOW
4. PROVIDE 1/2" DRYWALL SEPARATION BETWEEN WALLS & 5/8" TYPE 'X' DRYWALL AT ONE HR. 3RD HOUSE / GARAGE
5. ALL WALLS TO ARE 4½" (U.N.O.)
6. INSTALL CBL JOINT UNDER ALL PARALLEL PARTITION WALLS (U.N.O.)
7. INSTALL 2 ea. 2"x 12" SLAB KICKER ON 2" ON UNDER ALL SHAFTS (U.N.O.) OR BUILT-UP AT THE FIRST FLOOR LEVEL (U.N.O.)
8. ALL EXTERIOR WALLS TO HAVE 1/2" CDX SHEATHING FASTENED @ 6" NAILS & 8" o.c. ABOVE BOARD & 12" o.c. IN FIELD

DATE: FEBRUARY 17, 2014

DRAWN BY: BERG

APPROVED BY:

JOB NUMBER: 2013-453

PROJECT:

THE CORBIN RESIDENCE

LOT 173 SAGE THRASHER LANE IN CHARLOTTE, NORTH CAROLINA

NOTE: GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS AND ANGLES IN FIELD

custom COLLECTION homes

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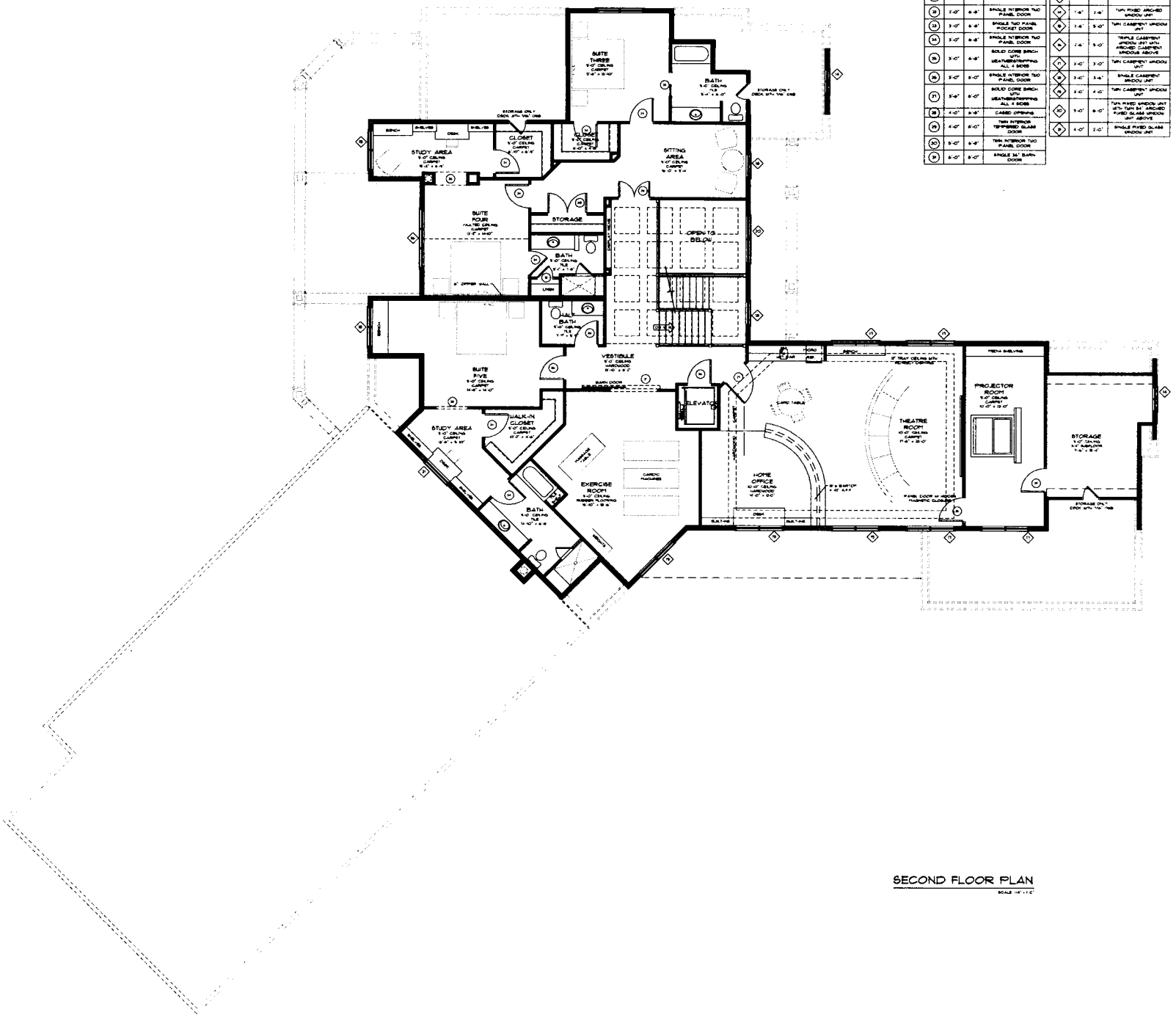
HomeBuilders ASSOCIATION OF CHARLOTTE

MECKLENBURG BUILDING STANDARDS DEPARTMENT

AIBD

SHEET

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SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"

SECOND FLOOR DOOR SCHEDULE

	WIDTH	HEIGHT	NOTES
31	2'-0"	6'-8"	SINGLE INTERIOR TWO PANEL DOOR
33	3'-0"	6'-8"	SINGLE TWO PANEL POCKET DOOR
34	3'-0"	6'-8"	SINGLE INTERIOR TWO PANEL DOOR
35	3'-0"	6'-8"	SOLID CORE BIRCH WITH WEATHERSTRIPPING ALL 4 SIDES
36	3'-0"	6'-0"	SINGLE INTERIOR TWO PANEL DOOR
71	3'-6"	6'-0"	SOLID CORE BIRCH WITH WEATHERSTRIPPING ALL 4 SIDES
38	4'-0"	6'-8"	CASED OPENING
39	4'-0"	8'-0"	TWIN INTERIOR TEMPERED GLASS DOOR
30	5'-0"	6'-8"	TWIN INTERIOR TWO PANEL DOOR
31	6'-0"	8'-0"	SINGLE 36" BARN DOOR

SECOND FLOOR WINDOW SCHEDULE

	WIDTH	HEIGHT	NOTES
A	1'-6"	7'-6"	TWIN FIXED ARCHED WINDOW UNIT
B	1'-6"	5'-0"	TWIN CASEMENT WINDOW UNIT
C	1'-6"	5'-0"	TRIPLE CASEMENT WINDOW UNIT WITH ARCHED CASEMENT WINDOW ABOVE
D	3'-0"	3'-0"	TWIN CASEMENT WINDOW UNIT
E	3'-0"	3'-6"	SINGLE CASEMENT WINDOW UNIT
F	3'-0"	4'-0"	TWIN CASEMENT WINDOW UNIT
G	5'-0"	6'-0"	TWIN FIXED WINDOW UNIT WITH TWIN 5'-0" ARCHED FIXED GLASS WINDOW UNIT ABOVE
H	4'-0"	2'-0"	SINGLE FIXED GLASS WINDOW UNIT

DRAWN BY: BERG

DATE: FEBRUARY 11, 2014

JOB NUMBER: 2013-483

Custom Living Homes

www.mcraedenhomes.com

PROJECT

THE CORBIN RESIDENCE

LOT 173 SAGE THRASHER LANE

IN

CHARLOTTE, NORTH CAROLINA

NOTE: GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS AND ANGLES IN FIELD

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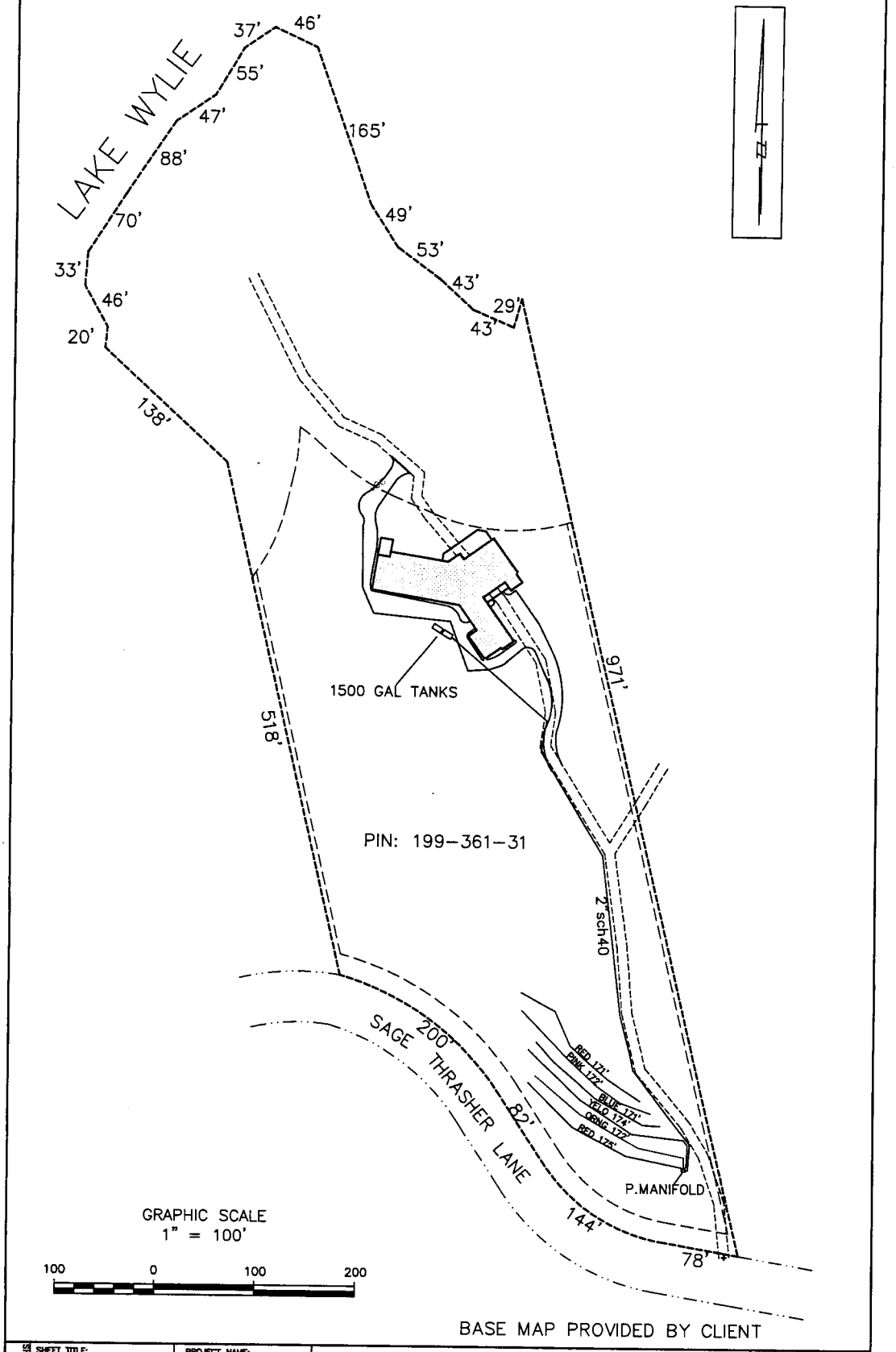
HomeBuilders

MEMBER AIBD

SHEET

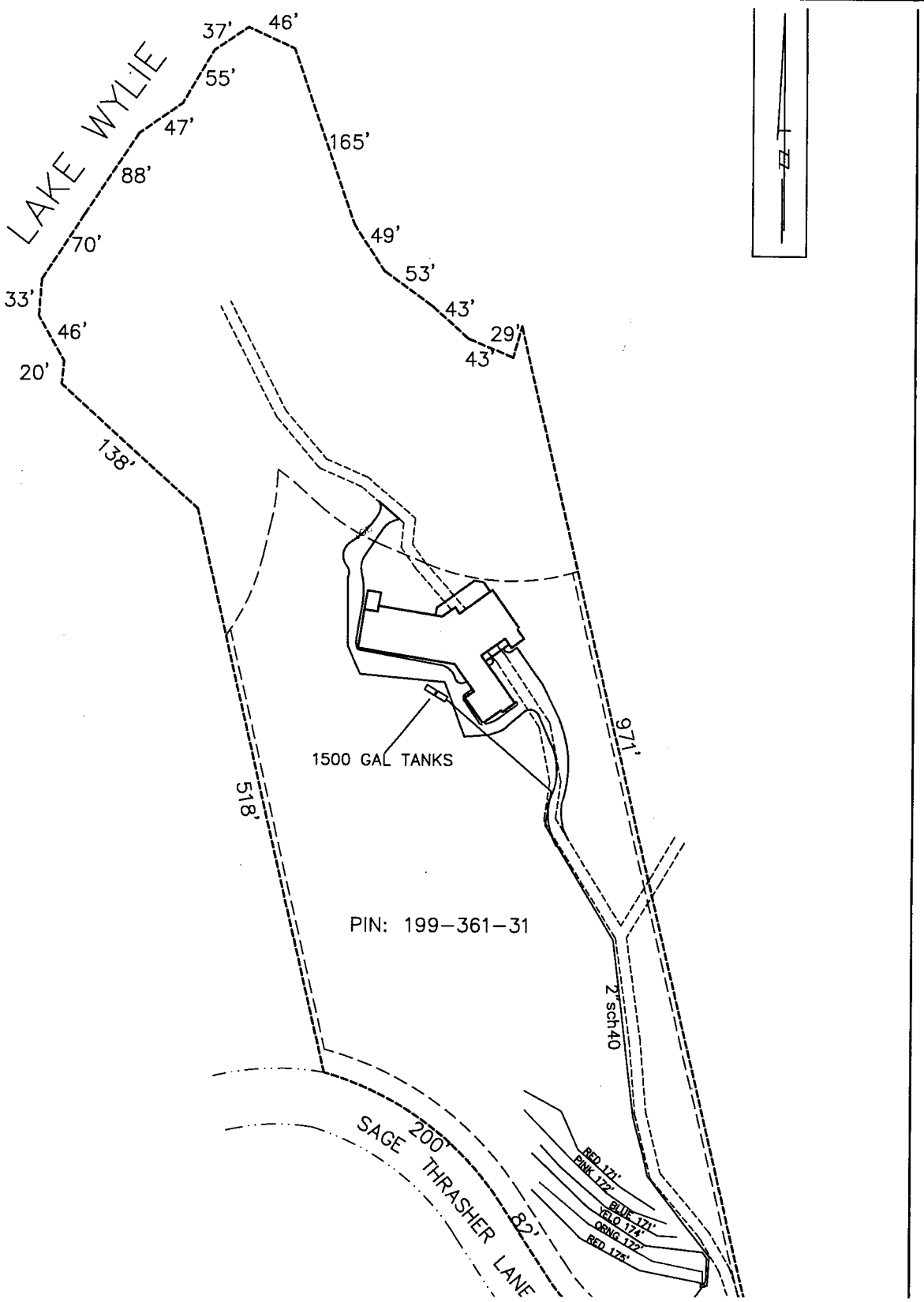
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FIGURE 1. HOUSE PLAN AND SEPTIC LAYOUT
LAYOUT BY S&FS



SHEET 1 OF 1	SHEET TITLE: SEPTIC SYSTEM LAYOUT	PROJECT NAME: BILL CORBIN SAGE THRASHER LANE MECK COUNTY, NC APRIL 2014	Soil & Forestry Services of the Carolinas, PA PO Box 832 – Mooresville, NC 28115 (704) 239-2001

SCALE: 1" = 100'
WO. AR
FIELD WORK: WO
DRAWN: WO
PROJECT MGR.: 14-1019
JOB NO.


LAKE WYLIE
37'
46'
55'
47'
165'
88'
49'
70'
53'
33'
43'
46'
29'
43'
20'
138'
971'
1500 GAL TANKS
518'
PIN: 199-361-31
2" sch40
200'
SAGE THRASHER LANE
82'
RED 171'
PINK 172'
BLUE 171'
YELO 174'
ORNG 172'
RED 175'