Pass 11/6/08

Groundwater & Wastewater Services
Septic Project File & Data Review Worksheet

GWS File #: 7731 B WASPS App #: 3458

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: 5			
	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: 10-22-08

OP issued date: 10-23-08

Review performed by: _____ Date performed: 5 8 08

BK 10667

FILE NUMBER: 7731B

SEPTIC FEE: 200
DATE: 4/17/08 w/ cert

Revised On: August 31, 2007

APPLICATION NUMBER: 3458

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

WELL FEE: ____
DATE: ____

1. SEPTIC / TYPE APPLICATION: ☐ NONE ☒ NEW SYSTEM ☐ ALTERATION ☐ REPAIR ☐ MODIFIED PLOT PLAN

2. WELL / TYPE APPLICATION: ☒ NONE ☐ NEW WELL ☐ MAJOR REPAIR ☐ ABANDONMENT

3. JOB LOCATION INFORMATION:

TAX PARCEL NUMBER: 139-033-69
STREET ADDRESS: 9939 Stonebridge Way
CITY: Mint Hill
STATE: NC ZIP: 28227
SUBDIVISION NAME: Stonebridge at Mint Hill
LOT #: 67 LOT SIZE (acres): .3
TOWNSHIP:
☐ 0-MECKLENBURG ☐ 3-CORNELIUS ☐ 6-HUNTERSVILLE
☐ 1-CHARLOTTE ☐ 4-PINEVILLE ☒ 7-MINT HILL
☐ 2-DAVIDSON ☐ 5-MATTHEWS

4. BUILDING INFORMATION:

BUILDING TYPE:
☐ SINGLE MOBILE HOME ☐ MODULAR HOME
☐ DOUBLE WIDE ☐ MULTIPLE FAMILY
☒ HOUSE ☐ OTHER
HEATED SQUARE FOOTAGE: 4,060
NUMBER OF BEDROOMS: 5
NUMBER OF OCCUPANTS: 5
FOUNDATION TYPE:
☐ CONCRETE SLAB ☐ BASEMENT WITH PLUMBING
☒ CRAWL SPACE ☐ BASEMENT WITHOUT PLUMBING

5. IF PLANNING TO EXPAND OR ALTER THE EXISTING 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 ☐ PUBLIC WELL ☐ PRIVATE WELL ☐ SHARED WELL ☐ SPRING

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

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

☒ ANY TYPE ☐ CONVENTIONAL ☐ ACCEPTED ☐ INNOVATIVE ☐ ALTERNATIVE ☐ OTHER ____
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

10. PROPERTY OWNER:

NAME: Ryan Homes
ADDRESS: ~~4020 Kinley Ave~~ 10710 Sikes Place
CITY: Char
STATE: NC ZIP: 28277
HOME PHONE: WORK PHONE: 704-815-0190
MOBILE PHONE: FAX: 704-708-5854

11. OWNER'S LEGAL REPRESENTATIVE, IF APPLICABLE:

NAME: Kim Widenhouse
ADDRESS:
CITY:
STATE: ZIP:
HOME PHONE: WORK PHONE:
MOBILE PHONE: 704-791-6852 FAX: 704 [illegible]

12. WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? ____
13 WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY? July 31, 2008

14. SEPTIC SYSTEM PERMIT APPLICATION SIGNATURE SECTION:

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 60 months or is non-expiring depending upon the documentation submitted: complete site plan = 60 months, complete plat = non-expiring.

Kim Widenhouse 4/14/08
Property Owner's or Owner's Legal Representative Signature Date

15. WELL PERMIT APPLICATION SIGNATURE SECTION:

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 12 months from the date of issuance.

____
Property Owner's or Owner's Legal Representative Signature Date

☐ SURVEY PLAT TO SCALE SUBMITTED ☐ SCALED SITE PLAN SUBMITTED ☒ NON-SCALED SITE PLAN SUBMITTED

5 BR

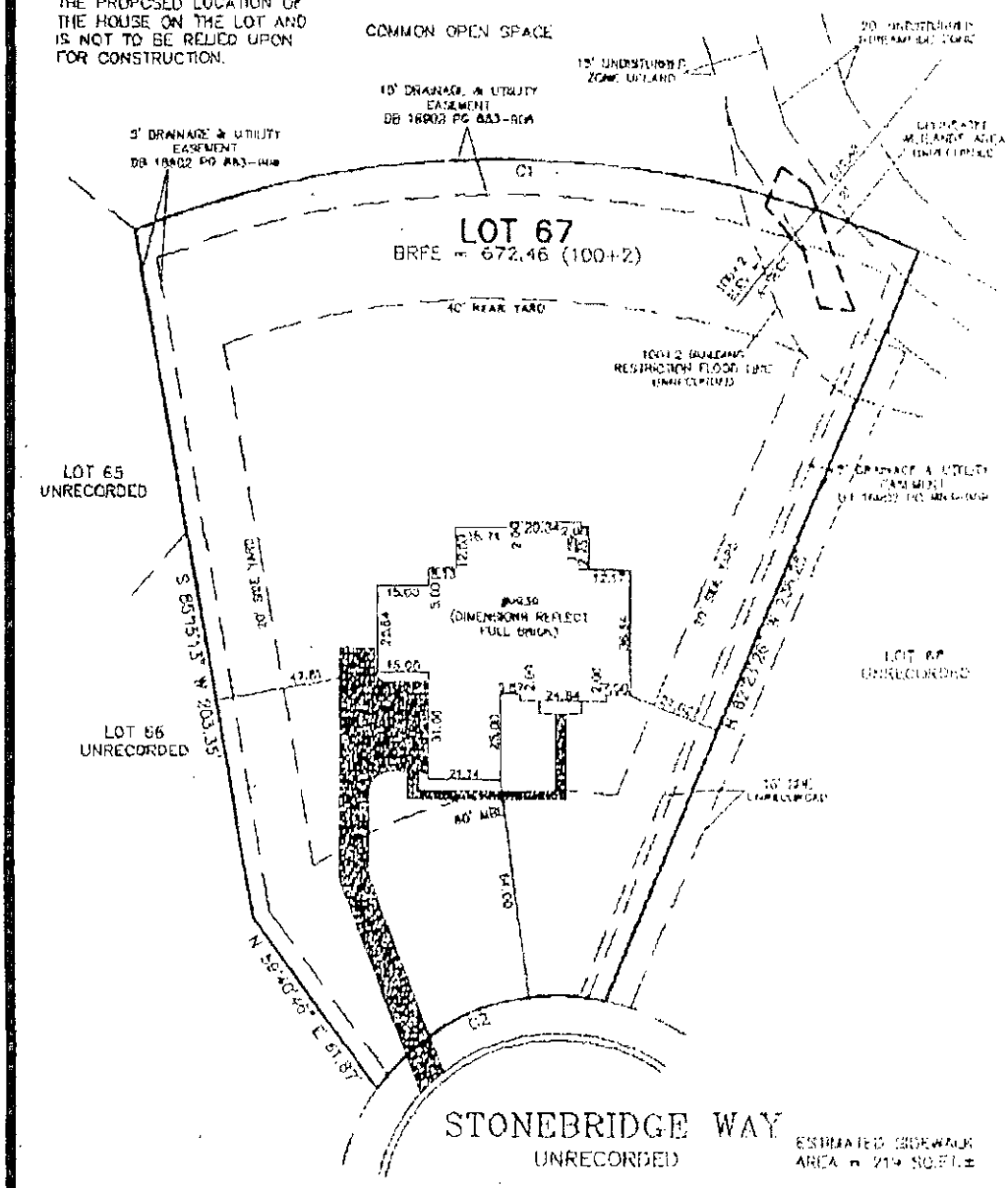
7731B

SITE DEVELOPMENT PLAN

PREPARED BY:

DELTA LAND SERVICES, INC.
1020 CREWS ROAD, SUITE L
MATTHEWS, NORTH CAROLINA 28105
(704) 847-4700

THIS SITE PLAN IS TO SHOW THE PROPOSED LOCATION OF THE HOUSE ON THE LOT AND IS NOT TO BE RELIED UPON FOR CONSTRUCTION.



ESTIMATED SIDEWALK AREA = 214 SQ.FT.±

ESTIMATED DRIVEWAY AREA = 1051 SQ.FT.±

CURVE TABLE					
CURVE	RADIUS	LENGTH	CHORD	BEARING	DELTA
C1	904.00	225.75	225.21	S06°13'43"W	14°18'34"
C2	65.00	76.51	72.01	S16°22'30"E	67°26'53"

NOT FOR RECORDATION, CONVEYANCES OR SALES

Subdivision STONEBRIDGE SUBDIVISION, PHASE 2, MAP 3 UNRECORDED County MECKLENBURG
Address 9939 STONEBRIDGE WAY Owner RYAN
Lot 67 Block ___ Plan COLLINWOOD Elevation C Drive (Left) SIDE (Right) ___ (Courtyard) ___ Deck ___
Patio ___ Fireplace INT Garage (1 Car) ___ (2 Car) ___ (3 Car) X Brick FULL Basement ___ Curtain Wall ___ A...
Crawl ___ Slab ___ Other MORNING ROOM, 8' EXT. FAMILY ROOM, 1ST FLOOR SUITE

REVISED: PLOT PLAN DWN: CDT CKD: [illegible] DATE: 04/09/07

J:\STONEBRIDGE\SB-0067.DWG - CDT

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

Sheet: 1 of 2
Property ID: 139-033-69
Lot #: 67
File #: 7731B
AppID: 3458

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: Ryan Homes
Applicant: Kim Widenhouse
Address: 10710 Sikes Place, Charlotte, N. C. 28277
Date Evaluated: 4/24/2008
Proposed Facility: Residence
Design Flow (.1949) 600gpd
Property Size: .93a
Location of Site: 9939 Stonebridge Way
Property Recorded:
Water Supply: [x] Public [ ] Individual [ ] 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	b PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
1	LS, 8	0-6	GR/CL	FR/SEXP/SS/SP	>51" TO SOIL WETNESS	51	N/A	NONE	PS, IV
		6-51	SBK/C	FI/SEXP/S/P					.3GPD/FT^2
2	"	0-4	GR/CL	FR/SEXP/SS/SP	>49" TO SOIL WETNESS	49	"	"	"
		4-49	SBK/C	FI/SEXP/S/P					
3	LS, 10	0-5	GR/CL	FR/SEXP/SS/SP	>47" TO SOIL WETNESS	47	"	"	"
		5-19	SBK/C	FI/SEXP/S/P					
		19-47	SBK/CL	FR/SEXP/SS/SP					
4	LS, 6	0-3	GR/CL	"	>43" TO SOIL WETNESS	43	"	"	"
		3-35	SBK/C	FI/SEXP/S/P					
		35-43	SBK/CL	FR/SEXP/SS/SP					
5	"	0-3	GR/CL	"	>41" TO SOIL WETNESS	41	"	"	"
		3-37	SBK/C	FI/SEXP/S/P					
		37-41	SBK/CL	FR/SEXP/SS/SP					
					SITE LTAR .3GPD/FT^2				

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)	IIIg	Iva
Site LTAR	0.3	0.3

Other Factors (.1946):
Soil Evaluation By: W. R. Marlin, LSS, 4/25/2008,
Others Present:
Site Classification (.1948): Provisionally Suitable
Site Evaluation By: David Cornelius, RS
Others Present:

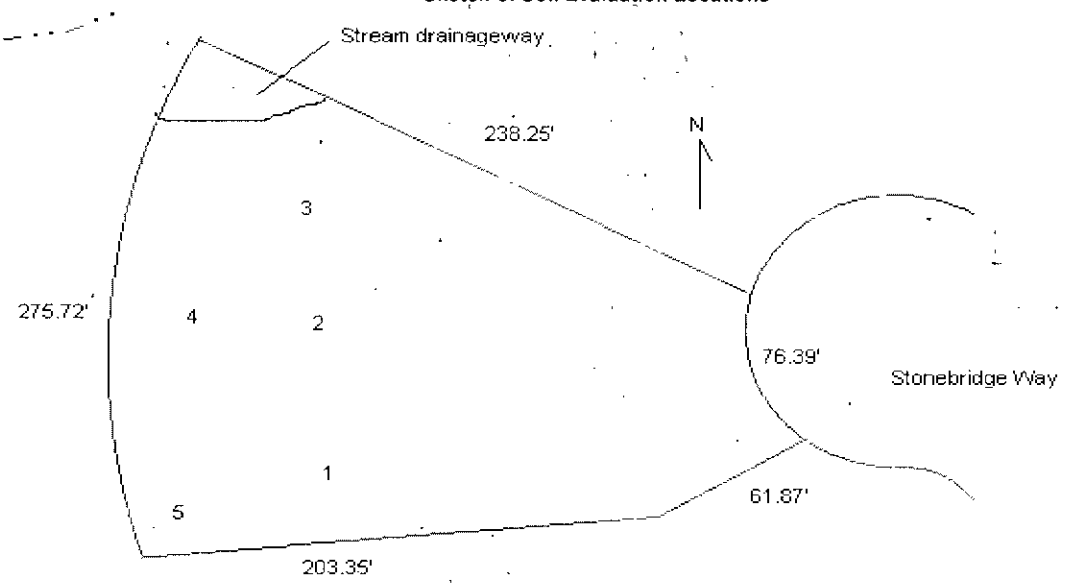
David Cornelius, RS

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-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				
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 #: **30003458** GWS File #: **7731B** Tax Parcel #: **139-032-25**

- 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):** 5/8/2013

Type of Installation: Residential - New System Lot Number: 67

Structure Type: HOUSE Size (ft^2): 4000 # Bedrooms: 5 # Occupants: 5

Building Foundation: Crawl Space Water Supply: Municipal

II. Initial System Type: Innovative **System Classification:** IIIg

Initial System Specifications:

Design Flow (gpd):	600	LTAR (gpd/ft^2):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	N/A
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	1500	Total Trench Length (ft):	500
Maximum Trench Depth (in):	29	Depth of Media (in):	N/A	Distribution Device:	Distribution Box		

III. Repair System Type: Low Pressure Pipe (LPP) **System Classification:** IVa

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):	8	Trench Spacing (ft):	5	Absorption Area (ft^2):	2000	Total Trench Length (ft):	250
Maximum Trench Depth (in):	29	Depth of Media (in):	6	Distribution Device:	Manifold (LPP Distri		

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: 5/8/2008

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 #: 30003458 GWS File #: 7731B

IV. Permit Conditions/Comments:

- 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.
- All waterlines must be located a minimum of 10 ft. from any part of the septic system.
- Install according to plans on file submitted by Larry Thompson, 4/29/08.

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DENR Authorized Agent: David Cornelius

Signature: _____

Date Issued: 5/8/2008

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) 336-5904

NC DENR
Division of Environmental Health
On-Site Wastewater Section

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

Permit #: 30003458 GWS File #: 77318 Tax Parcel #: 139-032-25

- 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.

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Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft²):	1500	Total Trench Length (ft):	500
Maximum Trench Depth (in):	28	Depth of Media (in):	N/A	Distribution Device:	Distribution Box		

III. Repair System Type: Low Pressure Pipe (LPP) **System Classification:** IVa

Repair System Specifications:

Design Flow (gpd):	600	LTAR (gpd/ft²):	0.3	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1500
Trench Width (ft):	8	Trench Spacing (ft):	5	Absorption Area (ft²):	2000	Total Trench Length (ft):	250
Maximum Trench Depth (in):	28	Depth of Media (in):	8	Distribution Device:	Manifold (LPP Dist)		

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- This IMPROVEMENT PERMIT is transferable.

DENR Authorized Agent: David Cornelius

Signature: [signature]

Date Issued: 5/8/2008

Owner/Legal Agent: Kim Widenhouse

Print Name

Signature: Kim Widenhouse

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St. Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-8894

NC DENR
Division of Environmental Health
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Permit #: 30003458 GWS File #: 7731B

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- 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.
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- 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: 5/6/2008

Owner/Legal Agent: Kim Widenhouse
Print Name

Signature: Kim Widenhouse

Residential Subsurface Wastewater Treatment and Disposal System Design

for

Lot 67 – Stonebridge at Mint Hill
9939 Stonebridge Way
Mint Hill, North Carolina

Tax Parcel # 139-033-69
Mecklenburg County File # 7731B
April 29, 2008

GWS Septic System Design Review

GWS File #: 7731B **Approved** ☐ **Disapproved**

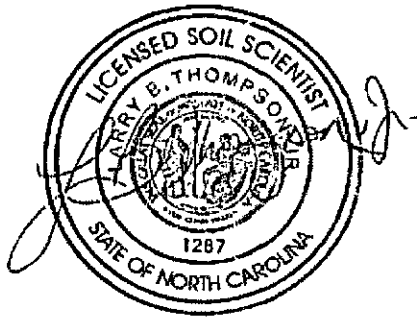
Design Review: JCT 5-6-08 ☒ ☐

Field Review: 5.8.08 ☒ ☐

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

Prepared for:

NVR, Inc.
10815 David Taylor Drive, Ste. 100
Charlotte, NC 28262



Prepared by:

Larry Thompson, RS, LSS
Thompson Environmental Consulting. Inc.
114 Orchard Ridge Road
Locust, NC 28097-8748
Phone: 704-301-4881
Fax: 704-888-1496



cc: Mr. David Cornelius, RS
Mecklenburg County Environmental Health

Details

The following proposal is submitted to the Mecklenburg County Health Department (MCHD), Ground Water Section, to help assist the county in the issuance of an Improvement Permit for a 5-bedroom residence served by a municipal water supply on Lot 67 of the Stonebridge at Mint Hill Subdivision.

Based upon an investigation by The Catena Group, Inc. (TCG), it was determined that Lot 67 would be considered "Provisionally Suitable" under the *Laws and Rules for Sewage Treatment, and Disposal Systems* 15A NCAC 18A .1900 (North Carolina Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section for the installation of a Type III innovative system (Infiltrator Chamber System or equivalent) for a 5-bedroom residence (low-pressure pipe or drip irrigation repair may be required due to shallow soil depths in the front left corner of the lot). It is the desire of the owner that the MCHD consider issuing an Improvement Permit and Construction Authorization, based upon the following proposal.

Location

The subject property is located in Stonebridge Subdivision (Lot 67 – 9939 Stonebridge Way) in the town of Mint Hill, North Carolina. From NC 51, travel south on NC 218 approximately 0.9 mile, turn left onto SR 3109 (Bartlett Road). Stonebridge is the first subdivision on the right after crossing the I-485 overpass. Turn right onto Stonebridge Way. 9939 Stonebridge Way will be located on your left in the cul-de-sac.

References

Laws and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A, Section .1900, Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section, August, 2007.

Onsite Wastewater Treatment and Disposal Systems; EPA 625/R-00/008 Design Manual, February 2002.

Innovative Wastewater System Approval: IWWS-95-3-R3; North Carolina Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section, April 18, 2002.

Innovative Wastewater System Approval: IWWS-93-1-R4; North Carolina Department of Environment and Natural Resources, Division of Environmental Health, On-Site Wastewater Section, November 1, 2005.

Plans and Specifications

Septic Tank

- The septic tank shall be State approved (Section .1953 of 15A NCAC 18A), watertight, structurally sound, and 1500 gallons in capacity.
- The septic tank will be fitted with an approved effluent filter and riser for easy access and periodic maintenance.
- It is the responsibility of the septic contractor to thoroughly inspect the septic tank prior to accepting delivery to assure that the tank has had time to properly cure and is free of cracks or other structural deficiencies.

Pipe and Fittings

- All discharge piping and supply lines should be SCH 40 PVC.
- All joints must be properly "welded" utilizing the appropriate PVC cement for each application.

Distribution Method

- Wastewater from the septic tank will be directed to distribution box that, in turn, equally feed six (6) 85 foot long drain lines.
- The distribution box shall be level, watertight, and the flow adjusted (equalized) at the time of the final inspection.
- Supply lines shall be Schedule 40 PVC.

Drain Field Installation

- The drain field has been previously laid out on-site utilizing metal stemmed flags. Once this area has been approved by the MCHD, the property owner/builder should mark this area and isolate it as much as possible from construction traffic. Prior to the system installation, the septic contractor shall contact the MCHD and the system designer for a preconstruction conference at which time the drainfield area will be re-verified.
- Under no circumstances shall any construction take place within the drainfield area while the soil is in a wet condition. If the installer has doubts as to whether or not the drainfield area is dry enough to begin construction, the Mecklenburg County Health Department should be contacted for permission to proceed with the installation.
- The specified system is a Type III Innovative, specifically the **Infiltrator chamber nitrification trench system**.
- The drain field consists of (6) lateral trenches to be constructed 3 foot wide by 85 feet in length.
- The maximum trench depth for this system shall be 29 inches.
- The laterals are to be installed on contour with the land, keeping the individual trench bottoms level from beginning to end.
- The trenches should be left open for the final inspection by the MCHD.

Final Landscaping

- The drainfield shall be shaped to shed rainwater and be free from low spots.
- The entire area of the drainfield should be planted with grass as soon as possible to prevent erosion. The soil should be properly tilled, limed (if necessary) and fertilized prior to planting. After applying grass seed, the area should be heavily mulched with straw or other suitable material.

Utility Conflicts

- The builder and property owner must take special care in planning for water, power, gas, telephone and cable lines. These utilities shall be kept clear of all parts of the septic system and its proposed repair area. Improper planning for underground utilities can negatively impact the installation and, in some cases, cause irreparable damage. If there are any questions regarding preferred routes, contact the MCHD as soon as possible.

Maintenance

In General

- The septic and pump tanks shall be pumped every 4 years or when the solids within the septic tank reach an elevation that is equivalent to 1/3 of the volume of the tank. In some situations, the tanks may need to be pumped more frequently. If using a garbage disposal, it is recommended that the homeowner has the septic and pump tanks cleaned out annually.
- When it becomes necessary to clean the effluent filter, the filter should be removed and the accumulated debris washed back into the septic tank – not onto the lawn.
- All piping and valves should be inspected annually for damage and corrections/repairs made immediately.
- The pump and float controls/switches should be inspected annually to assure proper operation
- The drain field area should be maintained to prevent over growth of vegetation. Any damp areas, leakages or malfunctions should be addressed immediately.
- Divert gutter downspouts and surface water runoff away from the septic and pump tanks.

Suggestions to the Homeowner

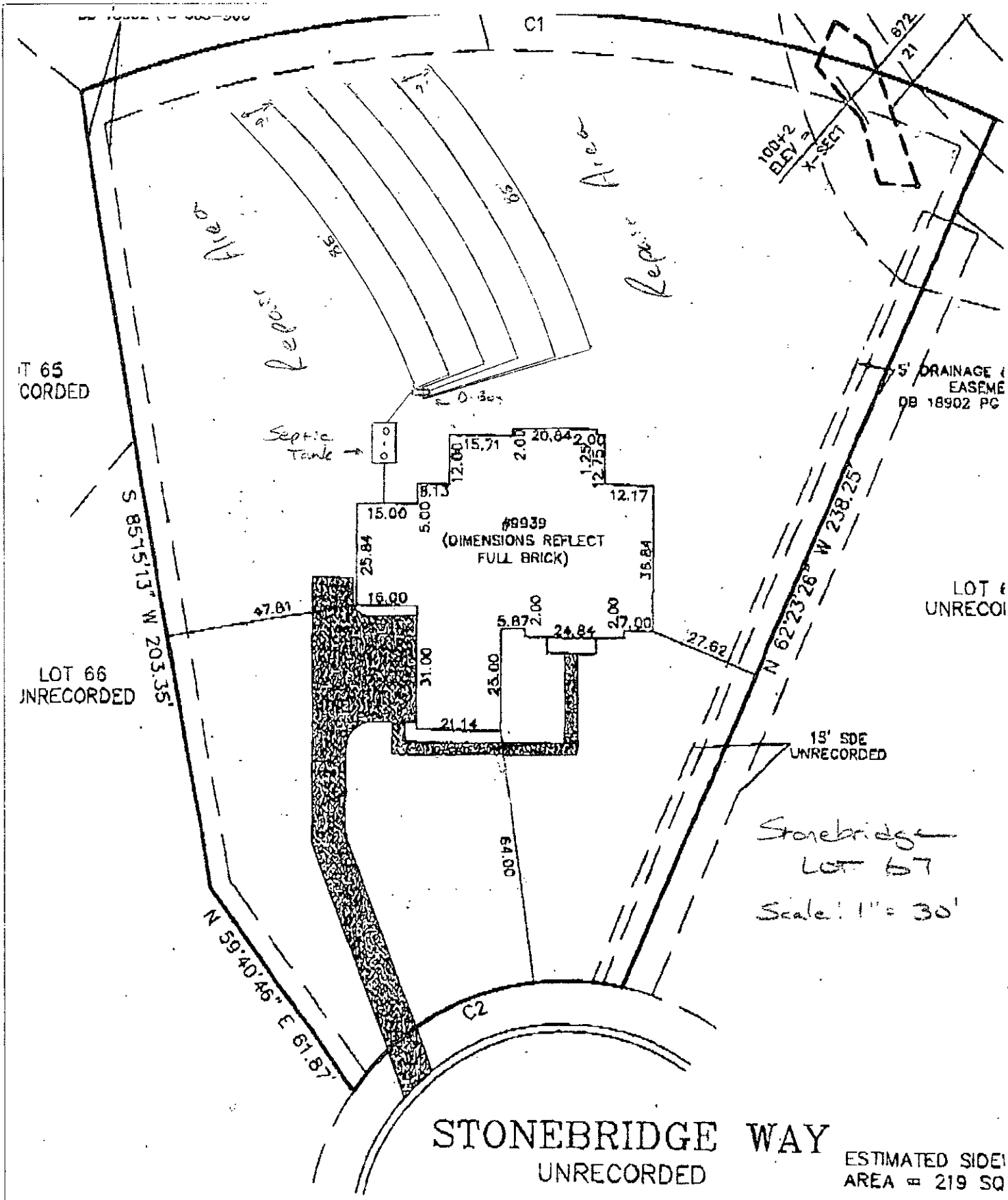
- As previously mentioned, if you plan to use a garbage disposal in your home you should plan to have your septic and pump tanks cleaned out annually. The ground up garbage adds large amounts of solids into a septic tank that tend to degrade at a very slow rate.
- Grease, cooking oils, coffee grounds and non-degradable solids (disposable diapers, cigarettes and solid paper wastes) should never be put into a septic tank.
- Used motor oil or any oily liquids should not be disposed of in a septic tank.

garbage adds large amounts of solids into a septic tank that tend to degrade at a very slow rate.

- Grease, cooking oils, coffee grounds and non-degradable solids (disposable diapers, cigarettes and solid paper wastes) should never be put into a septic tank.
- Used motor oil or any oily liquids should not be disposed of in a septic tank.
- Be aware of the amount of water that you are using in your home. Water saving fixtures and devices can be installed on sinks, toilets and showers to reduce the volume of wastewater that you are sending to your drain field.
- Run dishwashers and washing machines only when you have a full load.
- Use liquid detergents. Powdered detergents have binding agents in them that tend to solidify in the wastewater disposal system.
- Repair leaky faucets and toilets. Small drips equal large volumes of water over time and can over burden your drain field.
- Do not use chemical additives in your system. Studies have indicated that they do not increase the biological activity that naturally occurs in the septic system and in some cases certain additives have been found to be detrimental to the life of a system.

Design Specifics

Daily Design Flow:	600 GPD – 5 bedroom house
Septic Tank Size:	1500 gallons (2 compartments)
Effluent Loading Rate:	Design = 0.3 GPD per sq. ft.
Distribution Method:	Distribution Box
Drain Lines:	(6) 3' W x 85' L x 29" D



CURVE TABLE

RADIUS	LENGTH	CHORD	BEARING	DELTA
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

FEE: 300.00
DATE: 7/16/2008

CONSTRUCTION AUTHORIZATION FOR AN ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

MECKLENBURG COUNTY
GROUNDWATER & WASTEWATER SERVICES

FILE NUMBER: 7731B

PERMIT NUMBER: 30003458

PARCEL NUMBER: 13903369

JOB LOCATION INFORMATION

ADDRESS: 9939 STONEBRIDGE WAY

CITY: CHARLOTTE **STATE: NC** **ZIP:** 28227

ISSUED TO: RYAN HOMES

CONSTRUCTION AUTHORIZATION ISSUANCE DATE: 7/16/2008

CONSTRUCTION AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 30003458, AND THE ATTACHED SITE PLAN WITH SYSTEM DETAILS. CONSTRUCTION AND INSTALLATION MUST ALSO MEET ALL REQUIREMENTS SET FORTH IN THE RULES GOVERNING SANITARY SEWAGE COLLECTION, TREATMENT, AND DISPOSAL AND ANY OTHER APPLICABLE RULES AND LAWS.

2. AN INSTALLATION APPROVAL MUST BE SECURED PRIOR TO INSTALLATION OF THE SEPTIC TANK SYSTEM. THE INSTALLER OF THE SYSTEM SHALL BE A REGISTERED SEPTIC TANK CONTRACTOR WITH THE MECKLENBURG COUNTY HEALTH DEPARTMENT.

3. ANY ALTERATION IN SITE OR SOIL CONDITIONS (INCLUDING LOCATION OF STRUCTURES AND APPURTENANCES) OR MODIFICATION IN USE, DESIGN WASTEWATER FLOW, OR WASTEWATER CHARACTERISTICS AS SPECIFIED IN THE ASSOCIATED IMPROVEMENT PERMIT AND APPLICATION, MAY SUBJECT THIS CONSTRUCTION AUTHORIZATION AND ASSOCIATED PERMIT(S) TO REVOCATION.

4. THIS CONSTRUCTION AUTHORIZATION AS PROVIDED IN G.S. 130A-335(f) AND G.S. 130A-336(b) SHALL BE VALID FOR A PERIOD EQUAL TO THE VALIDITY OF THE IMPROVEMENT PERMIT, NOT TO EXCEED 60 MONTHS.
   *CONSTRUCTION AUTHORIZATION EXPIRATION DATE: 5/8/2013

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 #: 77318 Permit #: _____ Tax Parcel #: 139-033-69

Property Owner: RYAN HOMES

Job Location Address: 9939 STONEBRIDGE WAY

City: MINT HILL State: NC Zip Code: 28227

Installation Approval Issuance Date: 10/22/08

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 11/22/08, 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: N/A gallons

Drainfield Design ☐ N/A INNOVATIVE 25% REDUCTION

Trench Depth: 24 inches

Trench Width: 3 feet

Line Spacing: 9 feet (O.C.)

Total line length: 510 feet

# of Lines: 6 @ 85 feet

Depth of Media: N/A inches (Type) IIIg

Distribution Device: D-Box

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

Bed Depth: _____ inches

Bed Width: _____ feet

Total line length: _____ feet

# of Lines: _____ @ _____ feet

Depth of Media: _____ inches (Type) _____

Distribution Device: _____

Water Supply Source

☑ Municipal ☐ Private Well ☐ Community Well

☐ Other _____

Minimum System Setbacks

Distance from Building Foundation: 5 feet

Distance from Property Line: 10 feet

Distance from Water Supply Source: >100 feet

SKETCH OF SYSTEM LAYOUT
(Proposed Layout)

INSTALL ACCORDING TO PLANS ON FILE SUBMITTED BY LARRY THOMPSON, 4/29/08.

Comments: System Classification & Type: IIIg, INNOVATIVE, 25% REDUCTION. INSTALL 6 LINES @ 85'. INSTALL ACCORDING TO PLAN.

DENR Authorized Agent: DAVID CORNELIUS Signature: _____, RS

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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 #: 7731B Permit #: _____ Tax Parcel #: 139-033-69

Property Owner: RYAN HOMES

Job Location Address: 9939 STONEBRIDGE WAY LOT 67

City: MINT HILL State: NC Zip Code: 28227

Operation Permit Issuance Date: 10/23/08 Contractor Name: WATER MANAGEMENT

Permitted Design Flow: 600 GPD

Liquid Capacity of Septic Tank: 1500 gallons

Liquid Capacity of Dosing Tank: N/A gallons

Effluent Pump Model: N/A

Drainfield Installation ☐ N/A INNOVATIVE 25% REDUCTION

Trench Depth: 29 inches

Trench Width: 3 feet

Line Spacing: 9 feet (O.C.)

Total line length: 510 feet

# of Lines: 6 @ 85 feet

Depth of Media: N/A inches (Type) 111g

Depth of Cover: 12 inches

Distribution Device: D-BOX

Inspection Dates

Tank(s) Inspected: 10/23/08

Excavation Inspected: 10/23/08

Pump & Controls Inspected: N/A

SKETCH OF SYSTEM INSTALLATION
(As-Built Drawing)

INSTALLED ACCORDING TO PLANS ON FILE SUBMITTED BY LARRY THOMPSON 4/29/08

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

Bed Depth: _____ inches

Bed Width: _____ feet

Total line length: _____ feet

# of Lines: _____ @ _____ feet

Depth of Media: _____ inches (Type) _____

Depth of Cover: _____ inches

Distribution Device: _____

Water Supply Source

☑ Municipal ☐ Private Well ☐ Community Well

☐ Other _____

System Installation Setbacks

Distance from Building Foundation: 5 feet

Distance from Property Line: 10 feet

Distance from Water Supply Source: >100 feet

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: 111g, INNOVATIVE, 25% REDUCTION. INSTALLED ACCORDING TO PLAN. (1Q4W, G, NA/NA)

DENR Authorized Agent: DAVID CORNELIUS Signature: _____

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NC DENR
Division of Environmental Health
On-Site Wastewater Section

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

File #: 7731B Permit #: _____ Tax Parcel #: 139-033-69

Property Owner: RYAN HOMES

Job Location Address: 9939 STONEBRIDGE WAY LOT 67

City: MINT HILL State: NC Zip Code: 28227

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: I

*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:

DENR Authorized Agent: DAVID CORNELIUS Date: 10/23/08

Signature: _____

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	05/15/08	**Amount:**	300.00
Receipt #:	57340	**Tendered:**	0.00
Check / Auth #:	CHARGE	**Returned:**	0.00
Received By:	CRAIGGY		

Account Information

Account #: X33577
Contractor: NVR INC (SOUTH)
Attn:
Address: 10710 SIKES PLACE
Address: STE 200
City/State/Zip: CHARLOTTE, NC 28277

Item	Description	Permit#	Quantity	Unit Price	Total Price
0734	Auth for Waste Wtr Sys Constr lot 67 file 7731B, lot 68 file 7732B		1	300.00	300.00

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

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance
8,494.01	29,108.49	46,334.91			

MECKLENBURG COUNTY
LAND USE AND ENVIRONMENTAL SERVICES
Payment Receipt

Receipt Information

Date:	05/15/08	**Amount:**	300.00
Receipt #:	57341	**Tendered:**	0.00
Check / Auth #:	CHARGE	**Returned:**	0.00
Received By:	CRAIGGY		

Account Information

Account #: X33577
Contractor: NVR INC (SOUTH)
Attn:
Address: 10710 SIKES PLACE
Address: STE 200
City/State/Zip: CHARLOTTE, NC 28277

Item	Description	Permit#	Quantity	Unit Price	Total Price
0703	Installation/Final Approval lot 67 file 7731B, lot 68 file 7732B		1	300.00	300.00

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

Month-To-Date	Prior Month	30 Days	60 Days	90 Days	Balance
8,794.01	29,108.49	46,334.91			