#2980

GWS – RES. APP 12/04

SEPTIC FEE 290.00 cc# 133575
DATE: 12/1/05
CRT [ ] SC

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

FILE # 6247D

WELL FEE: _____
DATE: _____
CRT [ ]

SEPTIC / TYPE APPLICATION: ☐ NONE ☒ NEW SYSTEM EXISTING SYSTEM: ☐ EXPANSION/ALTERATION ☐ REPAIR

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

JOB LOCATION INFORMATION: 30
TAX/PARCEL #: 197241
STREET ADDRESS: 12045 Jumper Dr.
CITY: Mint Hill
STATE: NC ZIP:
SUBDIVISION OR MOBILE HOME PARK NAME: The Meadows of Mint Hill
LOT #: 40
TOWNSHIP:
☐ 0-MECKLENBURG ☐ 4-PINEVILLE
☐ 1-CHARLOTTE ☐ 5-MATTHEWS
☐ 2-DAVIDSON ☐ 6-HUNTERSVILLE
☐ 3-CORNELIUS ☒ 7-MINT HILL

BUILDING INFORMATION:
TYPE OF BUILDING:
☐ SINGLE MOBILE HOME (S) ☐ MODULAR HOME (M)
☐ DOUBLE WIDE (D) ☐ MULTIPLE FAMILY (U)
☒ HOUSE (H) ☐ OTHER
HEATED SQUARE FOOTAGE: 3,500
NUMBER OF BEDROOMS: 4
NUMBER OF OCCUPANTS: 4

FOUNDATION FOR RESIDENCE:
☐ CONCRETE SLAB ☒ BASEMENT WITH PLUMBING
☐ CRAWLSPACE ☐ BASEMENT WITH NO PLUMBING

IF PLANNING TO EXPAND/ALTER THE EXISTING SYSTEM INDICATE THE FOLLOWING CHANGES:
NUMBER OF BEDROOMS TO BE ADDED: NUMBER OF ADDITIONAL OCCUPANTS IN THE RESIDENCE:
WILL THERE BE A HOME BUSINESS IN THE RESIDENCE? ☐ YES ☐ NO TYPE:

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

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

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

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

PROPERTY OWNER:
NAME: NVR, INC.
ADDRESS: 10815 David Taylor Dr., Ste 100
CITY: Charlotte
STATE: NC ZIP: 28262
HOME PHONE: WORK PHONE: 704-548-3534
MOBILE PHONE: FAX:

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:
NAME: Kim Stanley
ADDRESS: PO Box 176
CITY: Stanfield
STATE: NC ZIP: 28163
HOME PHONE: 704-792-9639 WORK PHONE:
MOBILE PHONE: 704-791-6852 FAX: 704-785-8721

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 10/5/05
WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY? Feb. 2006

*An Improvement Permit is subject to suspension or revocation if site plans or the intended use change or if information submitted in this application is falsified or changed. The undersigned, owner, or legal agent for the owner, of the property described above as the "Job Location" has read the foregoing application, acknowledges that the contents of same are true, and authorizes the Mecklenburg County Health Department to enter onto the property for the purpose of processing this request.

Kim Stanley 11/28/05
Owner's/Agent's Signature Date

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

*A Well Permit is subject to suspension or revocation if site plans or the intended use change or if information submitted in this application is falsified or changed. The undersigned, owner, or legal agent for the owner, of the property described above as the "Job Location" has read the foregoing application, acknowledges that the contents of same are true, and authorizes the Mecklenburg County Health Department to enter onto the property for the purpose of processing this request.

Owner's/Agent's Signature Date

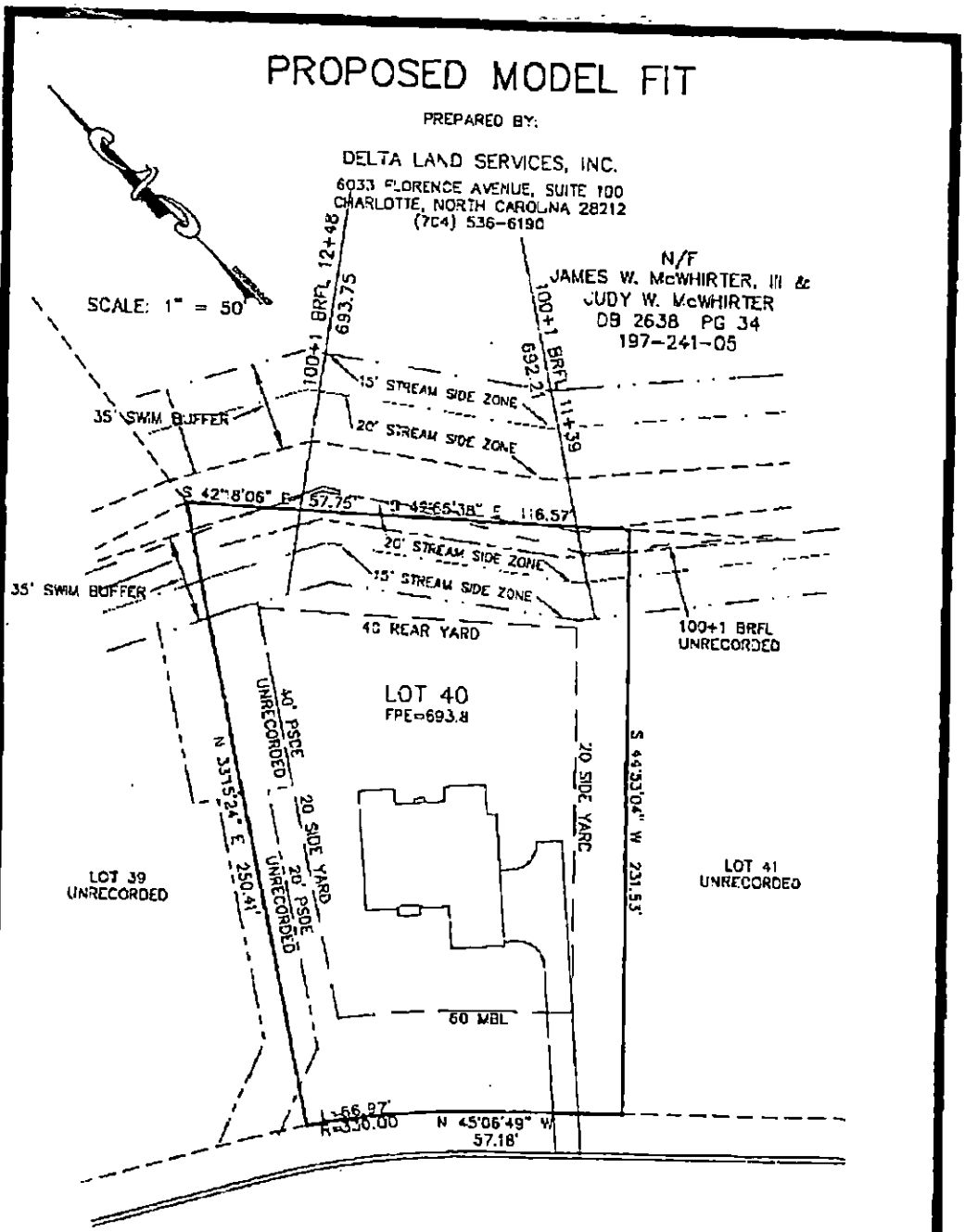
MECKLENBURG COUNTY HEALTH DEPARTMENT
GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST., SUITE 211
CHARLOTTE, NC 28202
704-336-5103 / FAX: 704-336-6894

6247B

PROPOSED MODEL FIT

PREPARED BY:

DELTA LAND SERVICES, INC.
6033 FLORENCE AVENUE, SUITE 100
CHARLOTTE, NORTH CAROLINA 28212
(704) 536-6190



NOTE: DELTA LAND SERVICES IS NOT RESPONSIBLE FOR ANY CHANGES DUE TO UNRECORDED COVENANTS AND RESTRICTIONS AND UNRECORDED PLAT

ESTIMATED DRIVEWAY AREA = 1713.4 SQ.FT.±

STAKEOUT ____

NOT FOR RECORDATION, CONVEYANCES OR SALES

Subdivision MEADOWS AT MINT HILL(UNRECORDED) County MECKLENBURG
Address ____
Lot 40 Block ____ Plan AVALON Elevation C Drive (Left) ____ (Right) X (Courtyard) ____ Deck
Patio ____ Fireplace REAR Garage (1 Car) ____ (2 Car) ____ (3 Car) X Brick FRONT Basement X Curtain Wall ____
Crawl ____ Slab ____ Other SUN & MORNING ROOM Owner RYAN HOMES

REVISED:

DWN: EHD CKD: MB DATE: 10 / 22 / 05

G:\MEADOWS\SITE.DWG - EHD

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

#C3

Sheet: 1 OF 2
Property ID: 197-241-30
Lot #: 40
File #: 6247B
Code: 3

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: NVR, INC.
Applicant: KIM STANLEY
Address: 10815 DAVID TAYLOR DRIVE, SUITE 100, CHARLOTTE, NC 28262
Date Evaluated: 12/22/05
Proposed Facility: 5 BR
Design Flow (.1949): 600 GPD
Property Size: 1
Location of Site: 12045 JUMPER DRIVE, MINT HILL, NC 28262
Property Recorded: YES
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		OTHER PROFILE FACTORS				Profile Class & LTAR
			.1941 Structure/ Texture	.1941 Consistence Mineralogy	.1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	
1	LS, 12	0-11	SBK/CL	FR/SS/SP/SEXP	>48"	40"	NA	NA	PS, IV
		11-40	SBK/ABK/C	FI/S/P/SEXP					.25 GPD/FT^2
		40-48	PL/C	FI/S/P/SEXP					

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

Other Factors (.1946): SEDIMENTATION BASIN IN FRONT THIRD OF LOT
Site Classification (.1948): UNSUITABLE
Evaluated By: CHRIS SHERRILL, RS, LSS
Others Present: NONE

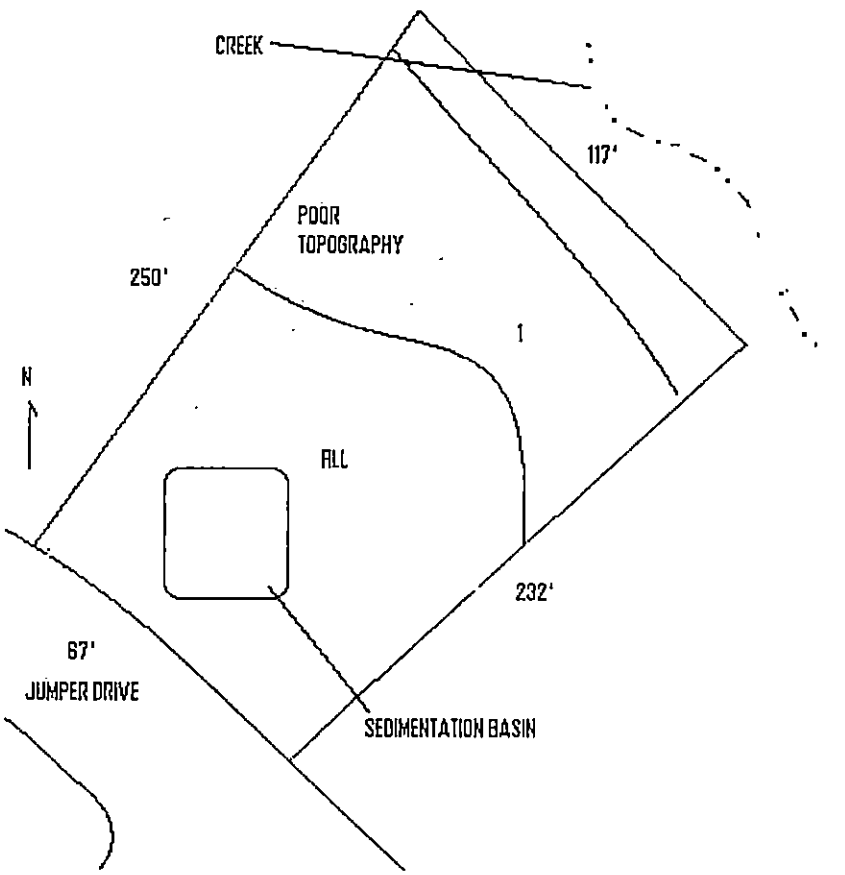
12-29-05

COMMENTS: 100% REPAIR AREA

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

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

Sketch of Soil Evaluation Locations



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

Sheet: 1 of 3
Property ID: 197-241-30
Lot #: 40
File #: 6247B
AppID: 2980

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: NVR,Inc.
Applicant: Kim Stanley
Address: 10815 David Taylor Drive., Suite 100, Charlotte, NC 28262
Date Evaluated: 11/13/2007
Proposed Facility: Residence
Design Flow (.1949): 480 gpd
Property Size:
Location of Site: 12045 Jumper Drive
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,12	0-3	DISTURBED	MASSIVE	>48" TO SOIL WETNESS	48	N/A	NONE	PS,IV
		3-48	SBK/ABK/C	FI/S/P/SEXP					.275 GPD/FT^2
2	"	0-44	SBK/ABK/C	FI/S/P/SEXP	"	"	"	"	"
		44-48	SBK/CL	FR/S/P/SEXP					
3	"	0-2	DISTURBED	MASSIVE	"	"	"	"	"
		2-48	SBK/ABK/C	FI/S/P/SEXP					
4		0-6	DISTURBED	MASSIVE	"	"	"	"	"
		6-48	SBK/ABK/C	FI/S/P/SEXP					
5	"	0-8	GR/L	FR/SS/SP/SEXP	"	"	"	"	"
		8-48	SBK/ABK/C	FI/S/P/SEXP					
6	"	0-4	GR/L	FR/SS/SP/SEXP	"	"	"	"	"
		4-48	SBK/ABK/C	FI/S/P/SEXP					
					SITE LTAR				.25 GPD/FT^2

Description	Initial System	Repair System
Available Space (.1945)	PS	PS
System Type(s)	Iva	Iva
Site LTAR	0.25	0.25

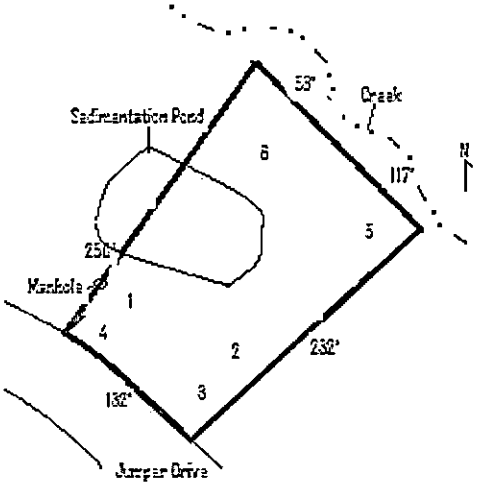
Other Factors (.1946): Maintain setback from sedimentation pond.
Soil Evaluation By: C.Sherrill,RS,LSS
Others Present: None
Site Classification (.1948): PS
Site Evaluation By: Jeremy Michael
Others Present: Jeremy Michael

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
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CV-Convex Slope		SICL-Silty Clay Loam		PR-Prismatic
T-Terrace				
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	IV	SC-Sandy Clay	0.4 - 0.1	
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VFR-Very Friable	NS-Non-Sticky	SEXP-Slightly Expansive
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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
Health Department

December 29, 2005

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

Re: Application for improvement permit for
Property Site: Lot 40, Meadows of Mint Hill
Health Department file number: **6247B**

Dear Property Owner or Owner's Agent:

The Mecklenburg County Health Department, Environmental Health Division on **December 22, 2005** evaluated the above-referenced property at the site designated on the site plan that accompanied your improvement permit application. According to your application the site is to serve a 5-bedroom residence, with a design wastewater flow of 600 gallons per day. The evaluation was done in accordance with the laws and rules governing wastewater systems in North Carolina General Statute 130A-333 and related statutes and Title 15A, Subchapter 18A, of the North Carolina Administrative Code, Rule .1900 and related rules.

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

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

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

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

sewage to another area of suitable soil or off-site to additional property.

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

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

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

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

Please note: If you wish to pursue a formal appeal, you must file the petition form with the Office of Administrative Hearings **WITHIN 30 DAYS OF THE DATE OF THIS LETTER.** The date of this letter is **December 29, 2005.** Meeting the 30-day deadline is critical to your right to a formal appeal. Beginning a formal appeal within 30 days will not interfere with any informal review that you might request. Do not wait for the outcome of any informal review if you wish to file a formal appeal.

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

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

Sincerely,

Chris Sherrill, R.S, L.S.S.
Authorized Agent - DENR

Encl: (2)

Residential Subsurface Wastewater Treatment and Disposal System Design

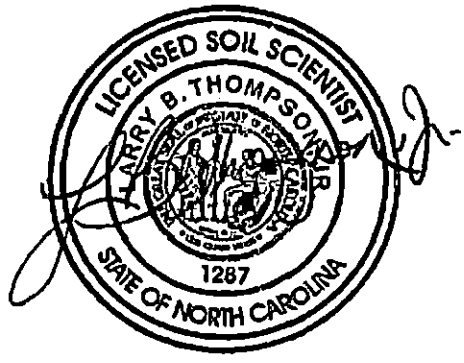
for

Lot 40 – The Meadows of Mint Hill
12045 Jumper Drive
Mint Hill, North Carolina

Tax Parcel # 197-241-30
Mecklenburg County File #~~5247B~~ 6247B
November 10, 2007

Prepared for:

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



Prepared by:

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



CC: Mr. Jeremy Michael, RS
Mecklenburg County Environmental Health

GWS Septic System Design Review

GWS File #: 6247B **Approved** **Disapproved**

Design Review: TCT 11-15-07 ☒ ☐

Field Review: JAM 11-16-07 ☒ ☐

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

Kelly,

I dont know where the new application is. It was not in the file. I permited off ~~off~~ of the info in WASP. Let me know if I need to do something else.

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 4-bedroom residence served by a municipal water supply on Lot 40 of the Meadows of Mint Hill subdivision.

Based upon an investigation by Thompson Environmental Consulting, Inc. (TEC), it was determined that Lot 40 would be considered "Unsuitable" 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). There is, however, a sufficient amount of "Suitable" Group IV soils located on the property which would allow for the installation of a shallow placed Type IV pressure dosed prefabricated porous block panel system (PPBPS) for a 4-bedroom residence (initial and repair).

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 The Meadows of Mint Hill (Lot 40 – 12045 Jumper Drive) in the town of Mint Hill, North Carolina. From NC 51, travel south on SR 1004 (Bain School Road) approximately 0.8 mile, turn left onto Gait Drive and right onto Canter Lane, left onto Filly Road, and right onto Jumper Drive. Lot 40 is located on the right

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, June 2006.

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

Design, Installation and Maintenance of the T & J Panel Wastewater Treatment System; Sixth Edition, published by T & J Panel.

Design and Installation of Low Pressure Pipe Wastewater Treatment Systems; by Craig Cogger, Bobby Carlisle; Dennis Osborne and Ed Holland. Published by UNC Sea Grant College Pub. UNC-SC-82-03, May 1982.

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.

Pump Tank

- The pump tank shall be State approved, of one-piece construction, watertight, structurally sound and 1000 gallons in capacity. Again, it is the responsibility of the septic tank contractor to thoroughly inspect each pump tank prior to accepting delivery.
- The pump tank shall have access risers that extend, at a minimum, 6 inches above finished grade and must have less than 36 inches of fill over its top once finished grade has been established (a reinforced concrete tank will be required if finished soil cover is 36 inches or greater in depth).
- The pump and alarm controls shall be provided with manual circuit disconnects within a watertight, corrosion resistant, Nema 4X rated control panel. The control panel must be securely mounted outside, adjacent to the pump tank riser and at a minimum of 12 inches above finished grade. Pump and float control wiring should be long enough to reach from the tank to the control panel without splicing, routed through wire conduit, and sealed at the openings within the pump tank as well as the control panel enclosure. It is paramount that the conduit is properly sealed to prevent the escape of flammable gases from the pump tank. Furthermore, there must be two electrical circuits for the pump tank controls: one for the pump and one for the alarm controls.
- The pump tank shall have a properly functioning high water alarm incorporated into the control panel. The alarm circuit shall be supplied separate from any pump overload and short circuit devices. The alarm shall be both audible and visible by the system users.
- The float switch for the high water alarm should be mounted at a location slightly above the "pump on" elevation for the pump float control switch. The high water alarm float switch shall not be set more than 3 inches above this elevation.
- Pump float(s) shall be mounted so that the effluent at the end of a pump cycle is above the top of the effluent pump. The septic contractor must determine pump draw down and set the float switch accordingly.
- Float switch tie downs must be made of a corrosion resistant material (do not use electrical tape or metal hose clamps to secure these switches). Floats should be mounted on a separate "float tree" rather than the pump supply line (see pump tank detail).

- The pump must be placed on two 4-inch concrete blocks to allow for some settling of solid particulates within the pump tank.

Pump Tank Effluent

- The pump discharge piping shall be fitted with a pressure effluent filter. The filter must be equivalent to the GAG Sim Tech Filter, Boyne City, Michigan, 49712, telephone: 1-888-999-3290. This device provides a very high degree of filtration and is highly recommended.

Pipe and Fittings

- All discharge piping, supply lines, valves and disconnects should be made of PVC and pressure rated.
- All joints must be properly "welded" utilizing the appropriate PVC cement for each application.
- The supply line from the pump tank to the pressure manifold shall be 2 inch Schedule 40 PVC (approximate length of supply line is 65 feet).
- The lateral distribution lines shall be 1¼ inch Schedule 40 PVC. Holes in the laterals should be drilled on site and at the 12 o'clock position (one hole per panel). Lateral hole size is 5/32 of an inch.
- There shall be a threaded PVC union above each pump to facilitate easy removal of the pumps for maintenance or replacement.
- The end of each lateral is to be provided with a "turn up", contained within a turf/gate valve box, that provides above ground access for periodic clean out and pressure head adjustment.

Valve Box

- The control valves (gate valves) for each lateral distribution line shall be contained within one manifold box/vault of adequate size. The box should be placed upon a gravel base.
- The supply manifold conveys effluent from the pump to the lateral distribution lines.
- The supply manifold should be constructed by connecting a series of (8) 2" x 2" x 1 ¼" tees to the 2 inch supply line.

Backfill

- Backfill sand shall be a clean, washed, medium sand that is naturally occurring and falls within the gradation of ASTM C-33 specification (used in the ready mix industry and is readily available).

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 drain field area will be re-verified.

- Under no circumstances shall any construction take place within the drain field area while the soil is in a wet condition. If the installer has doubts as to whether or not the drain field area is dry enough to begin construction, the MCHD should be contacted for permission to proceed with the installation.
- The specified system is a Type IVa, pressure dosed, pre-fabricated permeable block panel system – specifically the 16 inch high panel system manufactured by T&J Panel Wastewater Treatment System, Patent No. 4013559; telephone: 1-800-222-2577. The installer must follow the manufacturer's guidelines for installing the T&J Panel System and should request an installation manual from the manufacturer prior to beginning construction.
- The initial drain field consists of eight (8) lateral trenches 3 feet wide by 40 feet in length.
- It is essential that the lateral trenches be constructed on contour with the land, with each trench being excavated level from beginning to end. The use of a tripod mounted engineer's level is essential to assure that each trench is constructed as level as possible.
- The maximum trench depth for this system shall be 28 inches. Each trench shall be placed on a minimum of 9 foot on centers. Additional soil cover may be required.
- Once trenches are dug, the side walls shall be raked and a light dusting of lime applied.
- Backfill the trench with 6 inches of sand and level to grade. Once leveled, place 1 x 4 or 6 inch boards on top of the sand the entire length of each trench. Once the grade boards have been set, the panels may be set into the trench. The panels should be placed 6 inches apart.
- Once the panels have been set, line the top chamber of each panel with 10 – 12 pounds of clean particle sand (medium sand blasting sand). Coverage depth should be approximately 1 inch thick. *Please note that this sand is not the same material specified for backfill.*
- Tar seal rope, or approved foam, should be placed in the "U" outs of each end of the panel to form seals. Once the tar rope is in place, the 1¼ inch Schedule 40 PVC laterals can be added and the seal completed by the addition of more tar rope on the top and sides of the pipe. Now that the connection and seals are complete, a block cap is placed on each end of the panel so that all openings are covered.
- The end of each lateral should be fitted with a short turn up topped by a threaded female coupling with cap. Each turn up must be fitted with a turf/gate valve box with lid fitted flush to finished grade.
- Once the lateral has been installed and the panels closed, the trench is ready to be backfilled to the top with the sand used in the trench bottom. At this point, the trenches should be left open for the final inspection by the MCHD.

Proper Operation Check

- After all components of the waste water disposal system have been installed and connected, the system shall be checked for proper operation.
- With the electrical power turned off, fill the pump tank with water until the liquid rises to a level high enough to activate the high water alarm float. Turn on the electrical power. The alarm, alarm light and pump should activate at this time. Turn off the electrical power once these checks have been performed and prepare to set the head pressure at the valve box.

Pressure Head Adjustment

- The pressure head must be adjusted to match the design specifications. The pressure head is measured by the height of the liquid coming from the turn ups at the end of each lateral when the pump is running (utilizing stand pipes).
- Prepare a length of pipe (stand pipe), cut to the desired head pressure height and fitted with a threaded adapter that will screw into the turn up couplings at the end of each lateral. Thread the stand pipes into each lateral and then turn the power on to the pump, allowing the water to rise within the stand pipes. Adjust the gate valves within the supply manifold box to achieve the specified head pressure (liquid height in the stand pipes should equal the design head pressure).
- Once the pressure head has been adjusted, allow the pump to run through the remainder of the cycle. The pump float switch will automatically turn the pump off if it is operating properly. Make sure that the effluent pump is completely submerged in the remaining water, making adjustments to the float switch(es) as needed. This completes the checks for proper operation of the pump, alarm and float switches.
- At this point, the standpipes may be removed and replaced with the threaded turn up caps.

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. Irrigation systems should not be placed in the drain field area.

Maintenance

Operation and Maintenance

The designed system is classified as a Type IVa wastewater treatment and disposal system and will require ongoing maintenance. State regulations require that a system of this type be managed by a person certified (Certified Subsurface System Operator) by the North Carolina Department of Environment and Natural Resources to operate subsurface wastewater systems (Section .1961 Maintenance of Sewage Systems). A 'Maintenance Contract' between the system owner and a Certified Operator will be required by the MCHD prior to the issuance of a final system approval or Operation Permit.

- The minimum inspection/maintenance and reporting frequency for a Type IVa system is twice a year by the Certified Operator. The local health department is required to inspect the system once every three years.
- 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; for example, if you are using a garbage disposal, it is recommended that the septic and pump tanks be cleaned out annually. Regardless, the Certified Operator will be able to advise when it is necessary to pump out tank solids.
- Pressure head for laterals should be checked and adjusted semi-annually, flushing with clean water as necessary to remove any accumulated solids.
- The effluent filters should be inspected semi-annually. When it becomes necessary to clean the effluent filters, the filters should be removed and the accumulated debris washed back into the septic or pump tank – not onto the lawn.
- All piping and valves should be inspected semi-annually for damage and corrections/repairs made immediately.
- The pump and float controls/switches should be inspected semi-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.

- 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.
- Finally, taking good care of your septic system will help to assure that you experience years of trouble free service at a relatively low cost. On-site wastewater treatment and disposal is still the most environmentally friendly method of treating residential/commercial waste and you should keep your system in use for as long as it is properly functioning! If you have additional questions, please feel free to contact your system designer or the MCHD.

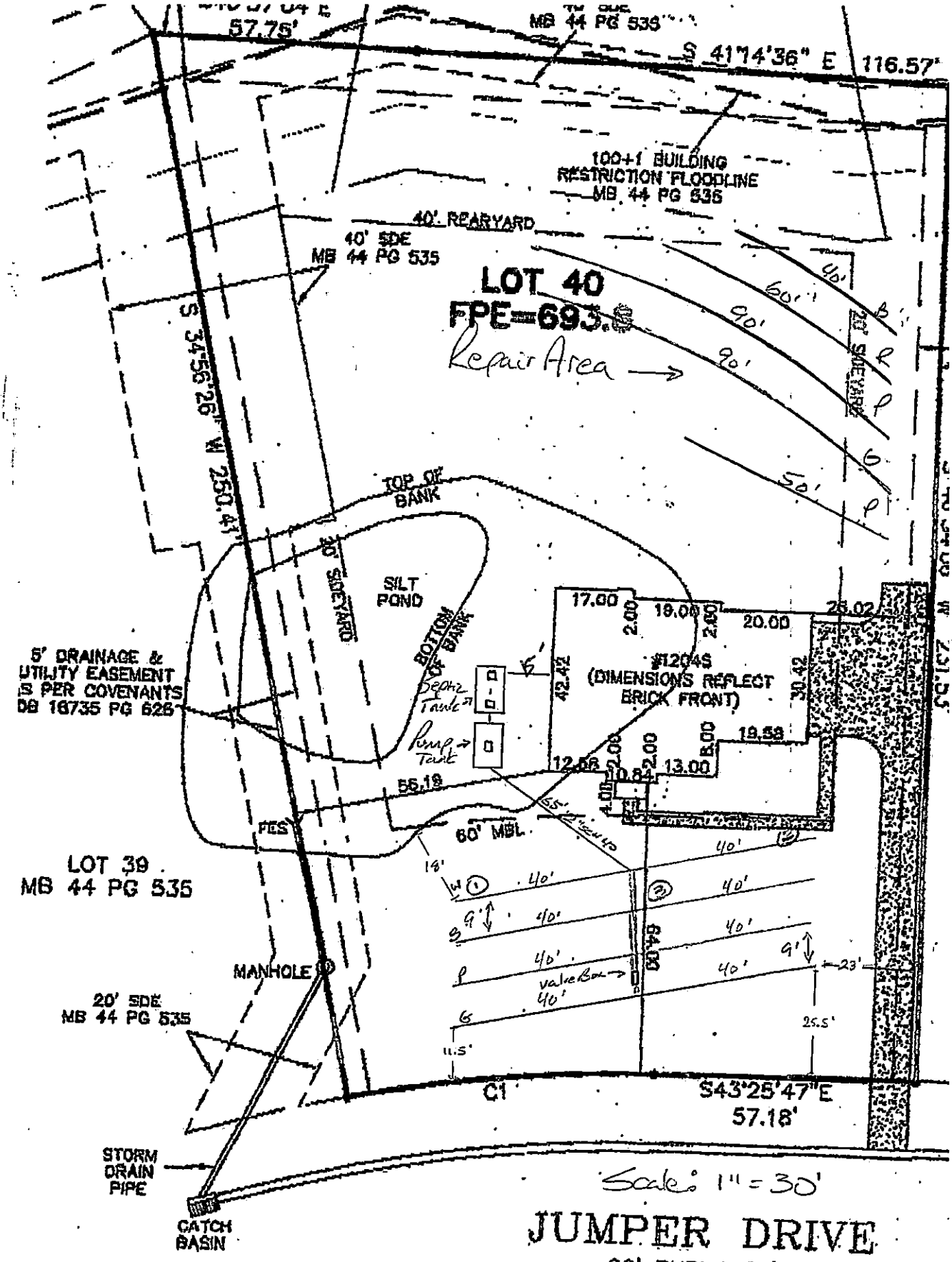
Design Specifics

Daily Design Flow:	480 GPD – 4 bedroom house
Septic Tank Size:	1500 gallons (2 compartments)
Pump Tank Size:	1000 gallons
Effluent Loading Rate:	Design = 0.25 GPD per sq. ft. (50 % reduction for the PPBPS)
Supply Length and Diameter:	Approx. 65 ft. of 2 in. SCH 40
Number and Size of Laterals:	(8) 1 ¼ inch x 40 feet long
Hole Size:	5/32 inch
Hole Spacing:	1 per panel = 72 total
Number of Panels:	72
Dosing Volume:	259.20 gallons per dose
Flow Rate Through System:	29.52 gallons per minute
Elevation Head:	12 feet (may vary, please see note at the bottom of this page)
Pressure Head:	2 feet
Pump Requirements:	31.52 GPM at 12 Feet TDH (2 GPM added for vapor lock)
Depth of Water Pumped:	12.34" check with individual tank manufacturer (1 cu. Ft. of water equals 7.5 gal.)
Pump Run:	8.78 minutes
Check Valve:	Yes
Vapor Lock Hole:	Yes

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

PPBPS Design Worksheet								File #:	5247B		
								Tax #:	197-241-30		
System Requirements								Address:	12045 Jumper Drive		
Design Flow	* 480	gpd							Charlotte, NC 28227		
LTAR	* 0.250	gpd/ft.^2						Consultant:	Larry Thompson		
Linear footage	640	ft. (conventional)						Phone:	704-301-4881		
Linear footage	320	ft. (50% Reduction)									
								Reviewed By:	TCT ✓		
Design Layout								Date:	11-15-07		
Laterals	Length (ft)	# Panels									
Line # 1	40	9									
Line # 2	40	9									
Line # 3	40	9									
Line # 4	40	9									
Line # 5	40	9									
Line # 6	40	9									
Line # 7	40	9									
Line # 8	40	9									
Totals	320	72									
Absorption Area											
Length (ft)	Width (ft)	Area (ft^2)									
320	3	960									
System Pressure Head	2	ft.	Value selected by system designer (must be between 2-5 ft.)								
Orifice Diameter	5/32	in.	Size selected by system designer (1/8 in. minimum)								
Flow Rate per Orifice	0.41	gpm	Determined from orifice flow design table (value dependent on pressure head & orifice diameter)								
Total System Flow Rate	29.52	gpm	Total number of panels required multiplied by the orifice flow rate								
System Dose Volume	259.20	gal.	Total number of panels required multiplied by 3.6 gal./panel								
Pump Run Time	8.78	min.	System dose volume divided by the total system flow rate								
Pump Tank Drawdown	12.34	in.	1,000 gal. Pump tank, volume is approximately 21 gallons per inch								
Comments:											
1. Install system using 3 ft. wide trenches.											
2. Install drainlines on 9 ft. centers, level, and on contour.											
3. System design requires effluent pump for distribution.											
4. 100% repair area (PPBPS) required for property.											

T & J Panels	
Linear Feet	# Panels
50	11
60	14
70	16
80	18
90	21
100	23



CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
C1	66.97	330.00	66.86	N49°14'44"W	11°37'40"

NOT FOR RECORDATION, CONVEYANCES OR SA

Subdivision THE MEADOWS OF MINT HILL, MAP 3

Thompson Environmental Consulting, Inc.
114 Orchard Ridge Road
Locust, NC 28097-8748
704-301-4881

SHEET 1 OF 1

COUNTY: Mecklenburg
TAX ID: 197-241-30

OWNER: NVR, Inc.
LOCATION: The Meadows - Lot 40

DATE: October 31, 2007

PROFILES		SB 1	SB 2	SB 3							
LANDSCAPE POSITION	.1940	ss	ss	ss							
SLOPE (%)	.1940	3%	3%	3%							
HORIZON 1 DEPTH	.1943	0-40	0-40+	0-41							
TEXTURE	.1941 (a)(1)	c	c	c							
CONSISTENCE	.1941	fi	fi	fi							
STRUCTURE	.1941 (a)(2)	sbk	sbk	sbk							
CLAY MINERALOGY	.1941 (a)(3)	se	se	se							
HORIZON 2 DEPTH	.1943										
TEXTURE	.1941 (a)(1)										
CONSISTENCE	.1941										
STRUCTURE	.1941 (a)(2)										
CLAY MINERALOGY	.1941 (a)(3)										
HORIZON 3 DEPTH	.1943										
TEXTURE	.1941 (a)(1)										
CONSISTENCE	.1941										
STRUCTURE	.1941 (a)(2)										
CLAY MINERALOGY	.1941 (a)(3)										
HORIZON 4 DEPTH	.1943										
TEXTURE	.1941 (a)(1)										
CONSISTENCE	.1941										
STRUCTURE	.1941 (a)(2)										
CLAY MINERALOGY	.1941 (a)(3)										
SOIL WETNESS	.1942										
RESTRICTIVE HORIZON	.1944										
SAPROLITE	.1943/.1956	40		41							
CLASSIFICATION	.1948										
L.T.A.R. (gpd/ft^2)	.1955	0.275	0.275	0.275							

OTHER FACTORS (.1946):		**SITE LTAR (gpd/ft^2):**	**0.275**
AVAILABLE SPACE (.1945):	provisionally suitable		
SITE CLASSIFICATION (.1948):	provisionally suitable	SYSTEM TYPE:	PPBPS
EVALUATED BY:	Larry Thompson	OTHERS PRESENT:	

COMMENTS: "A" horizon has been graded off. No fill observed in the areas tested. Survey indicates that we have sufficient separation between proposed system area and the former Type A erosion control basin.

LOT # 40

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 #: **30002980** GWS File #: **6247B** Tax Parcel #: **197-241-30**

- 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):** 11/19/2012

Type of Installation: Residential - New System Lot Number: 40

Structure Type: HOUSE Size (ft^2): 3500 # Bedrooms: 4 # Occupants: 4

Building Foundation: Basement With Plumbing Water Supply: Municipal

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

Initial System Specifications:

Design Flow (gpd):	480	LTAR (gpd/ft^2):	0.25	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	960	Total Trench Length (ft):	320
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	Distribution Device:	Manifold (LPP Distri		

III. Repair System Type: PPBPS (pressurized) **System Classification:** IVa

Repair System Specifications:

Design Flow (gpd):	480	LTAR (gpd/ft^2):	0.25	Septic Tank Size (gal):	1500	Pump Tank Size (gal):	1000
Trench Width (ft):	3	Trench Spacing (ft):	9	Absorption Area (ft^2):	960	Total Trench Length (ft):	320
Maximum Trench Depth (in):	36	Depth of Media (in):	N/A	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: Jeremy Michael

Signature: Jeremy Michael

Date Issued: 11/19/2007

Owner/Legal Agent: Patrice Garner
Print Name

Signature: Patrice Garner

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 #: **30002980** GWS File #: **6247B**

IV. Permit Conditions/Comments:

- This type of septic system requires an inspection once every 3 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.
- This type of septic system requires a Certified Operator to maintain the system. A system maintenance contract with a Certified Operator must be on file prior to issuance of an Operation Permit.
- The septic system shall be installed in accordance with the plans submitted by the wastewater system design consultant.
- All water lines must be at least 10ft off any part of septic system.

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: Jeremy Michael

Signature: Jeremy Michael

Date Issued: 11/19/2007

Owner/Legal Agent: Patrice Garner
Print Name

Signature: Patrice Garner

FEE: 300.00
DATE: 1/23/2008

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

MECKLENBURG COUNTY
GROUNDWATER & WASTEWATER SERVICES

FILE NUMBER: 6247B

PERMIT NUMBER: 30002980

PARCEL NUMBER: 19724130

JOB LOCATION INFORMATION

ADDRESS: 12045 JUMPER DR

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

ISSUED TO: NVR, Inc.

CONSTRUCTION AUTHORIZATION ISSUANCE DATE: 1/23/2008

CONSTRUCTION AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 30002980, 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: 11/19/2012

STATE OF NORTH CAROLINA
COUNTY OF Mecklenburg

lpp / panel block

THIS AGREEMENT is made and entered into this 17 day of Dec., 2008 by and between Ryan Owens (hereinafter the "Owner") and R.C.S., Inc., Joe R. Hudson (hereinafter the "Contractor").

WITNESSETH

WHEREAS, the Owner owns or controls the property upon which a ground absorption sewage treatment (hereinafter the "system") is installed, such system being designated a Type lpp system under the Rules for Sanitary Sewage Collection, Treatment and Disposal found at 15A N.C. Admin. Code 18A.1900 et seq.; and

WHEREAS, 15A N.C. Admin.Code 18A.1961 requires a contract to be executed between the system owner and a management entity prior to the issuance of an Operation Permit for said system: and

WHEREAS, 15A N.C. Admin. Code 18A.1961 requires that a condition of the Operation Permit for said system be that a properly executed contract between the system owner and a management entity shall be in effect for as long as the system is in use; and

WHEREAS, the Contractor is a management entity of a type authorized by 15A N.C. Admin. Code 18A.1961 to manage a Type lpp system.

NOW THEREFORE, in consideration of the premises and of the mutual covenants and promises contained in this Agreement, it is hereby agreed by and between the Owner and the Contractor as stipulated below.

1. The Contractor's Obligations. The Contractor shall perform the following services on the Owner's system located at 12045 Juniper Drive Meadows of Mint Hill

a. The Contractor shall inspect the system at least at the frequency required

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in Table V(b) of 15A N.C. Admin. Code 18A.1961(b) for a Type Ipp system.

b. The Contractor shall perform th following routine maintenance procedures in accordance with the conditions of the Operation Permit:

(1) (from the operation permit)
(2)
(3)

c. The Contractor shall report the results of its inspections to the local health department at the frequency specified in Table V(b) of 15A N.C. Admin. Code 18A.1961(b) for a Type Ipp system.

d. If an inspection indicates the need for system repairs, the Contractor shall notify the local health department within 48 hours of the inspection.

e. The Contractor shall notify the Owner of needed repairs which are outside of the scope of routine maintenance described in subparagraph (b) above. The Contractor shall perform necessary repairs to the system at the request of the Owner and shall be entitled to payment therefor at the Contractor's normal charge for services and materials.

f. The Contractor shall employ of shall contract with a certified operator(s) if required by Table V(b) of 15A N.C. Admin. Code 18A.1961(b) for a Type Ipp System.

g. The Contractor shall respond to a request for a nonscheduled service or maintenance call within 24-48 hours after receipt of such request depending on the urgency of the request.

2. The Owner's Obligations.

a. The Owner shall pay to the Contractor the sum of $ 200.00 per year for periodic inspections, routine maintenance procedures and periodic reports. The annual fee may be amended upon sixty(60) days advance notice to the Owner but may not be increased more than 20 percent per year. The Owner shall pay to the Contractor his normal and customary fees for any work performed on the system as a result of nonscheduled service or maintenance calls. All fees are due and payable within thirty (30) days shall accrue interest from the due date until paid at a rate of 15 percent per month.

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b. Within 10 days of receipt of notice of needed repairs pursuant to paragraph 1.e. above, the Owner shall request the Contractor to complete needed repairs or shall provide to the Contractor evidence that the needed repairs were satisfactorily completed by another entity.

c. The Owner shall provide the Contractor with such access to the system as is reasonably necessary for the Contractor to comply with the terms of this Agreement.

3. Term. This Agreement shall remain in effect until terminated.

a. Automatic Termination.
This agreement shall automatically terminate if the Operation Permit for the system is revoked and all appeals of the revocation are exhausted or time for taking an appeal; has passed.

b. Termination by Mutual Consent.
The Parties may mutually agree to terminate this Agreement by giving written notice of termination by mutual consent to the local health department thirty (30) days in advance of the date of termination.

c. Termination by the Owner.
The Owner may terminate this Agreement by giving notice to the Contractor and to the local health department thirty (30) days in advance to the date of termination.

d. Termination by the Contractor.

(1.) The Contractor may terminate this Agreement for cause by giving written notice of intent to terminate this Agreement to the Owner and to the local health department thirty (30) days is advance of the date of termination. Cause shall be defined as:

(a) failure to remit payment for any bill for services performed under and in accordance with this Agreement if said bill is not is not paid within thirty (30) days of receipt by the Owner of the bill. If said bill is paid after notice of termination is given but prior to the date of termination of this Agreement, this Agreement shall continue in effect:

or

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(b) failure of the Owner to provide to the Contractor authorization to complete needed repairs or satisfactory evidence that needed repairs to the system were completed by another entity within 10 days of receipt of notice of needed repairs pursuant to paragraph 1.e. above. If said authorization to complete needed repairs or evidence of completion of said repairs is provided after notice of termination is given but prior to the date of termination of this Agreement, this Agreement shall continue in effect;

(c) failure of the Owner to allow the Contractor such access to the system as is reasonably necessary in order for the Contractor to comply with the terms of this Agreement.

(2) The Contractor may not terminate this Agreement without cause, but may assign its rights and duties under this Agreement as provided in paragraph 4, below.

4. Assignment.

a. Assignment by the Owner. The Owner shall notify the Contractor of the name and address of any purchaser of the property on which the system is located. The Owner shall also notify any purchaser of the property on which the system is located of the existence of this Agreement and shall assign all tights and duties under this Agreement to said purchaser.

b. Assignment by the Contractor. The Contractor may assign its rights and duties under this Agreement to another management entity which is qualified pursuant to 15A NC Admin. Code 18A.1961 to manage a Type lpp system upon thirty (30) days written notice to the Owner and to the local health department.

5. Use of Subcontractors. The Contractor may subcontract with such manufacturers, suppliers and contractors as it deems desirable to perform any of the Contractor's duties under this Agreement. The Contractor shall at all times remain responsible for the performance of and payment for all work performed by all subcontractors.

6. Representations. The Parties represent to each other that each has the power, authority and legal right to enter into and perform its obligations as set forth in this Agreement.

7. Regulatory Amendments. References in this Agreement to sections of the Administrative Code shall include such rules as they may be amended in the future.

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8. No Implied Waiver. The waiver by either Party of a default or a breach by the other Party of any provision of this Agreement shall not operate or be construed to operate as a waiver of any subsequent default or breach. The failure at any time of either Party to enforce any provision of this Agreement (a) shall not be construed to be a waiver of such provisions, or of any other provision; and (b) shall not in any way affect the validity of this Agreement, or any part of this Agreement, or the right of either Party thereafter to enforce each and every provision of this Agreement.

9. Notice. Every notice required under this Agreement shall be in writing and shall be deemed sufficiently given if delivered in person or sent by certified or registered mail, return receipt requested, postage prepaid to the Party to be notified and addressed as follows:

To the Owner: Ryan Homes
10815 David Taylor Dr.
Charlotte, NC 28262

To the Contractor:
R.C.S. ,Inc.
Joe R. Hudson
PO Box 708
Monroe, NC 28111

To the Local Health Department:
Mecklenburg County Environmental Health Department
700 North Tryon Street, Suite 211
Charlotte, NC 28202

The date of any Notice shall be the date of personal delivery or the date shown on the return receipt as the date of delivery of attempted delivery, as the case may be. Changes in the respective addresses to which notice may be directed may be made form time to time by either Party by notice to the other party/

10. Place of Agreement. This Agreement and any questions concerning its validity, construction or performance shall be governed by the laws of the State of North Carolina, notwithstanding the place of execution, or the order in which the signatures of the Parties are affixed.

11. Entire Agreement and Amendment. This Agreement supersedes all prior negotiations, agreements and understandings between the Parties with respect to

STATE OF NORTH CAROLINA
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the subject matter hereof. To be effective, any amendment or modification to this Agreement must be in writing and must be signed by the Parties.

12. Solvability. In the event that any provision of this Agreement shall, for any reason, be determined to be invalid, illegal or unenforceable in any respect, the Parties shall negotiate in good faith and agree to such amendments, modifications or supplements of or to this Agreement of such other appropriate actions as shall to the maximum extent practicable in light of such determination, implement and give effect to the intentions of the Parties as reflected in this Agreement, and the other provisions of this Agreement shall, as so amended, modified, supplemented or otherwise affected by such action, remain in full force and effect.

IN TESTIMONY WHEREOF, the Parties hereto have executed this Agreement in duplicate originals, one of which is retained by each of the Parties, the day and year first above written.

Ryan Homes
(Owner)

Attest:

12/16/08

(Contractor)

Attest: