

MICHAEL ATHANAS & ASSOCIATES
LICENSED SOIL SCIENTIST
1999 CANDLEWICK DRIVE
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MICHAEL ATHANAS
THE GREAT SEAL OF THE STATE OF NORTH CAROLINA
1252
STATE OF NORTH CAROLINA

Reference: Davidson Downs, Lot 4
House Footprint: See attached plan
Building Setbacks: 35' front/rear, 15' side
Water Source: Community water
Number of Bedrooms: 4/480 GPD
Proposed LTAR: 0.275 GPD/FT2 (initial), 0.3 GPD/FT2 (repair)
Proposed System Type: 25% Reduction
Proposed Repair System Type: Shallow PPBPS
Distribution: Pressure manifold
Flow per Tap: 1 @ 7.11GPM, 2 @ 10.1 GPM, 1 @ 5.48 GPM
Tap Size and Material: 1 @ ½" SCH 40, 2 @ ¾" SCH 80, 1 @ ½" SCH 80
System Flow: 33 GPM
Dosing Volume: 192 gallons
Pump Run Time: 5.8 minutes
Elevation Head: 12.7'
Friction Head: 2.3'
Pressure Head: 2'
Total Dynamic Head: 17.0'
Supply Line Length: 95'
Septic/Pump Tank Size: 1000/1000 gallons
Proposed Trench Bottom: 24"

APPROVED APR 18 2016

Line	Design Length		Actual Length	Elevation
Red 1			61'	1.7'
Pink 2			60'	3.3'
Blue 3			59'	4.3'
Orange 4			66'	5.3'
White 5			67'	6.7'
Blue (New Line)		**24'**	**24+**	**7.2**
Red 6	**73'**	**69'**	**81'**	**7.8'**
Pink 7	**73'**	**69'**	**90'**	**8.5'**
Blue 8	**73'**	**69'**	**90'**	**9.3'**
Orange 9	**73'**	**69'**	**93'**	**10.2'**

Line	Design Length		Actual Length	Elevation
White 10	**73'**	**69'**	**95'**	**11.1'**
Red 11	**73'**	**69'**	**92'**	**12.1'**

Initial System: 438' **Repair System:** 313'
Pump Tank: 15.5' **House Corner:** 15.4' **Benchmark:** 6.2' (top of conc. mon.)

Comments:

APPROVED APR 18 2016

4-11-2016
Addendum:

This site is currently permitted, although during the inspection of the installation of the septic system Iredell County found some inconsistencies with the proposed plan. These issues are the following:
-Septic laterals encroach on 15 foot side setback
-Pressure manifold encroaches on the 15 side setback
-County has asked for the water diversion to be enhanced/channelized

MA&A was asked to come back to the site and correct issues concerning the installation of the septic system.

In order to assess the installation of the system, MA&A probed/located the top line and the bottom line of the installed initial septic area to ensure a proper evaluation. It does appear that all of the initial septic laterals do encroach on the 15 foot setback by approximately 2-3 feet. In order to correct this, all 6 initial septic laterals will need to have one 4 foot section of chamber at the beginning of each initial septic lateral excavated in order to maintain the 15 foot setback. This loss in line will be made up by installing an additional 24 feet section of chambers above the first septic line. Therefore all installed septic lateral will change from 73 feet to 69 feet and an additional 24 foot line will be installed to make up the loss. Please note the pressure manifold location will need to be changed due to its proximity to the 15 setback as well (refer to drawing).

MA&A has submitted a site plan that illustrates the current location the first and last installed septic laterals. We have also demonstrated on the site plan as well as in the field where the new 24 feet of chamber line is to be installed as well as the pressure manifold.

Manifold Design:
In order to keep the system flow within reasonable levels, certain lines must be linked together in serial distribution from the same tap.

New line + R6 – ½" SCH 40
P7 + B8 – ¾" SCH 80
O9 + W10 – ¾" SCH 80
R11 – ½" SCH 80

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH, ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

Sheet ___ of ___
PROPERTY ID #: _____
COUNTY: _____

SOIL/SITE EVALUATION
***for* ON-SITE WASTEWATER SYSTEM**
(Complete all fields in full)

OWNER: Chris Mozely — APPLICATION DATE _____
ADDRESS: 114 Corporate Dale Dr. Mooresville, NC 28117 — DATE EVALUATED: 3-29-16
PROPOSED FACILITY: _____ PROPOSED DESIGN FLOW (.1949): _____ PROPERTY SIZE: _____
LOCATION OF SITE: Davidson Downs Lot 4 - 129 Buckingham Place — PROPERTY RECORDED: _____
WATER SUPPLY: ☐ Private ☐ Public ☐ Well ☐ Spring ☐ Other _____
EVALUATION METHOD: ☐ Auger Boring ☒ Pit ☐ Cut TYPE OF WASTEWATER: ☐ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	9% Above DF Lateral #1	0-17	Loam weak SBK	Friable SS, SP, Scap	—	34	—	—	0.3 PS
		17-34"	clay Loam medium SBK	slightly Friable, SS, SP, Scap					
		34-61"	Loamy massive Saprolite	Moderately Friable Dry/wet					
2	9% Adjacent House [Below DF #1]	0-16"	Clay weak SBK	slightly Firm SS, SP, Scap	well drained 51"		—	—	0.3 PS
		16-51"	clay Loam moderate SBK	Friable Earthy, SS, SP, Scap					
		51"-56"	Clay weak SBK/ABK	Firm, SS, SP, Scap					
3									
4									

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	Yes	Yes
System Type(s)	25% reduction	50% LPP~~35~~
Site LTAR	0.3	0.3

OTHER FACTORS (.1946): —
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: Tom Shuck
OTHER(S) PRESENT: Mike Athanas

COMMENTS: _____