January 26, 2015

Call S&ME before site visit

Steve Wilkinson
338 Russell Mill Road
Woolwich Township, New Jersey 08085

704-296-6350

Reference: **Technical Assistance with Fast Track Septic Permitting**
121 Holly Pond Lane
Lot 278 CL&T Section 6
Iredell County, North Carolina
S&ME, Inc. Project No. 4358-15-009

Dear Mr. Wilkinson:

S&ME, Inc (S&ME) has provided technical assistance to obtain a possible four bedroom septic Improvement Permit from the Iredell County Health Department (ICHD) for the referenced lot. The technical assistance was performed in general accordance with S&ME Proposal No. 41-1500030 dated January 12, 2015.

Attached is the Application for the Septic Improvement Permit and the ICHD Fast Track information presented to the ICHD on your behalf. The lot was originally permitted for a two bedroom mobile home and the existing bed system was installed in approximately 1979, according to the current owner. A single wide mobile home was formerly on the lot and a recreational vehicle is currently connected to the existing system. The lot was formerly in Mecklenburg County and the existing system permit could not be located by the ICHD. We understand the current owner's father was the original lot owner. An existing well is also on the property.

You requested an expansion of the existing two bedroom system to four bedrooms. The attached site plan shows the existing bed system and well, the proposed two bedroom 25% reduction system expansion, and the proposed house. The property corners, lake buffer, and lot lines were flagged by your surveyor. S&ME flagged the proposed septic drainfield and described 13 backhoe pits and hand auger borings on the building lot for the soil evaluation. The proposed septic lines and existing bed system were located by the surveyor.

The existing bed system crosses the property line approximately six feet and a ten foot proposed easement is shown around this encroachment. The easement should be recorded with meets and bounds prior to the ICHD issuing a Construction Authorization. The lot was recorded in 1976 and is considered repair exempt and the record date also allows the drainfield to be installed within five feet of the property lines. A site plan showing the bed crossing the property line and the repair status of the lot was discussed with Mr. Adrian Pruett, ICHD Supervisor on January 20, 2015. Mr. Pruett stated the existing system could be expanded as proposed and indicated that two bedrooms of repair would be required for the two bedrooms added to the system. Mr. Pruett indicated the

existing septic tank should be abandoned according to ICHD guidelines (lid crushed and tank filled) and any existing distribution pipes removed and disturbed soil areas around the tank compacted.

Once the septic area is permitted, it should be fenced off for protection during home construction. Access to the lot should only be by the proposed drive. There shall not be cuts of 2 feet or greater within 15 feet of any part of the permitted septic system or repair area. The drainfield shall be at least 15 feet from the basement wall and the associated foundation drain and the supply line and distribution device must be at least 10 feet from the basement wall. The attached information is not an Improvement Permit or Authorization to Construct, and is only to assist you and the ICHD with the Fast Track site evaluation. The attached plan is not intended to be a Professional Engineer plan. The ICHD must approve each lot and only the ICHD can issue these permits. The ICHD should verify all soils and system specifications, required setbacks, and whether a professional engineer plan is required before permitting and/or septic system installation. Soil evaluations and system layouts are done based on interpretations of the rules governing wastewater treatment and disposal systems and are not guarantees for site approval or future septic system performance. S&ME did not evaluate the existing bed system performance.

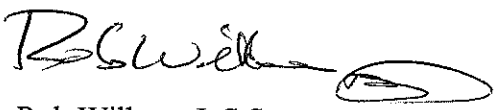
If you have any questions or require additional information please contact us at your convenience.

Sincerely,

S&ME, Inc.



Paul G. Penninger, L.S.S.
Soil Scientist



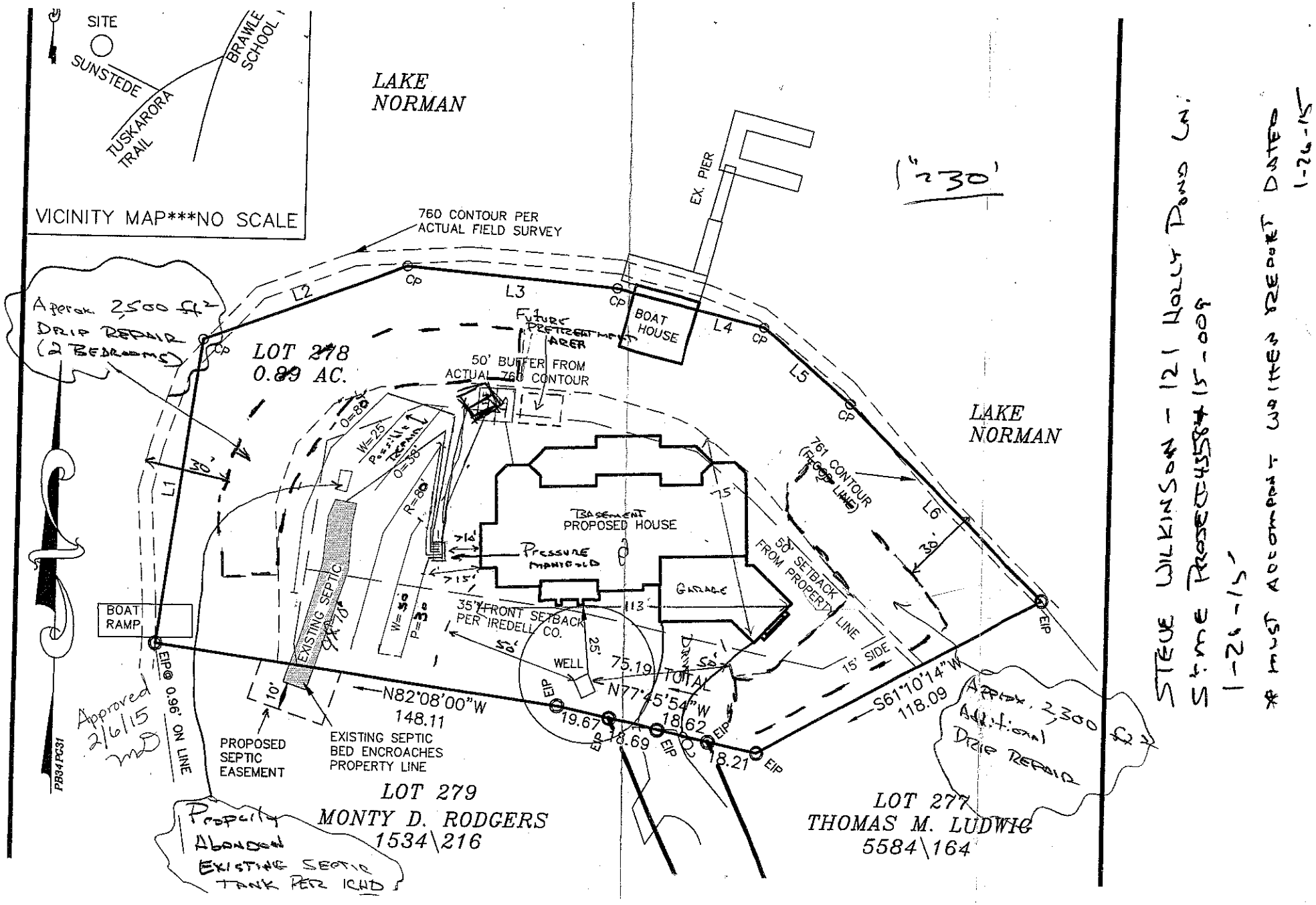
Rob Willcox, L.S.S.
Senior Project Manager / Soil Scientist

Attachments:

1. ICHD Improvement Permit Application
2. Site Plan and System Specifications
3. Soil Profile Descriptions

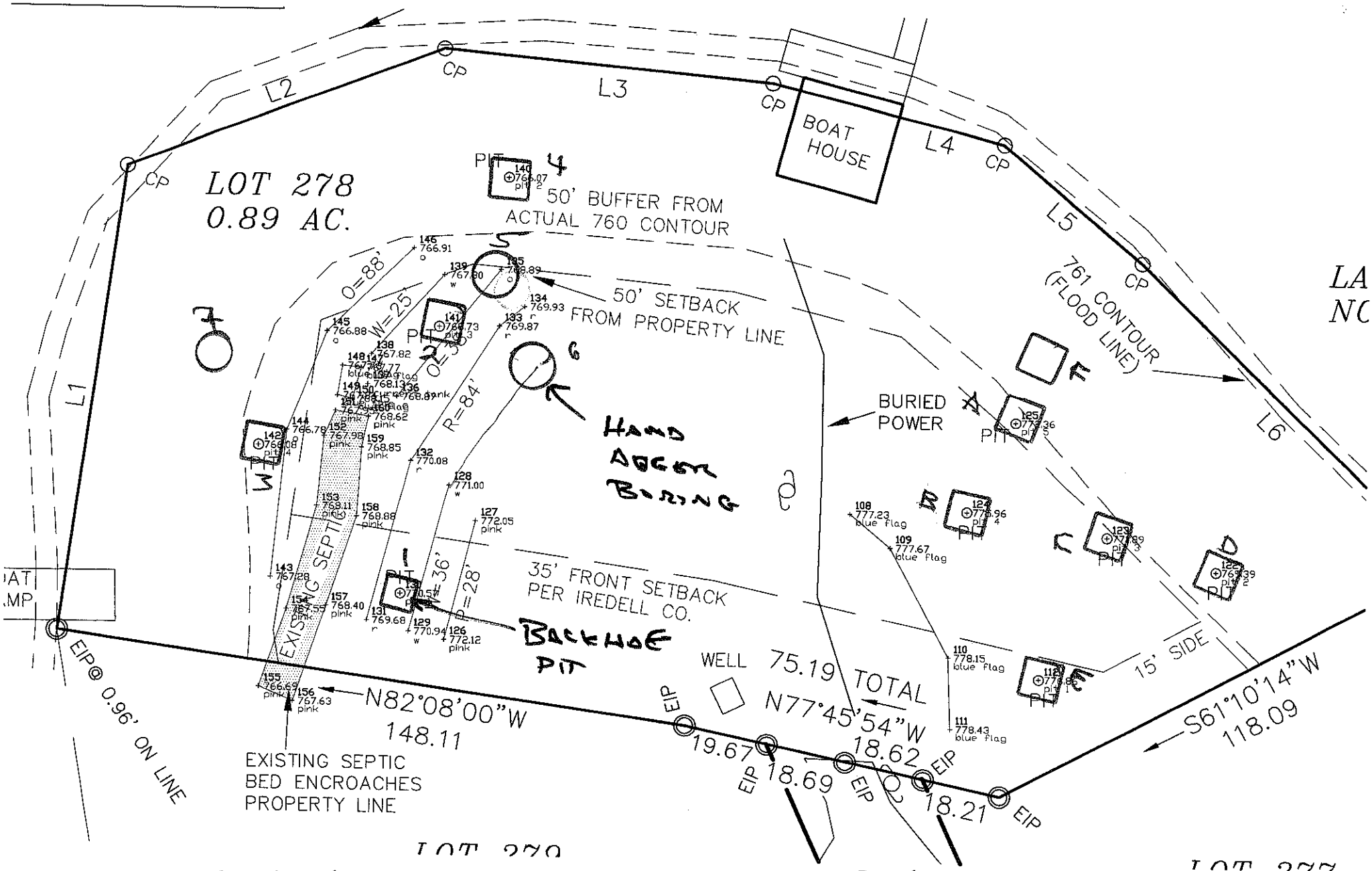
Copy: ICHD

T:\Projects\2015\ENV\4358-15-009 Steve Wilkinson - Holly Pond Ln\4358-15-009 - 121 Holly Pond Ln Summary Letter.doc



STEVE WILKINSON - 121 HOLLY POND LN.
SITE PROJECT #15-009
1-26-15

* MUST ACCOMPANY WRITTEN REPORT DATED 1-26-15



121 Holly Pd. Ln. Backhoe Pit and Hand Auger Locations 1-26-15

121 Holly Pond Lane Fast Track Summary (January 26, 2015)

Steve Wilkinson - S&ME Job No. 4358-15-009

Number of Bedrooms	**Expansion to 4**
Basement or Crawl	**Basement**
Design Flow (gpd)	**480**
Primary System LTAR (gpd/ft2)	**Expansion at 0.25**
Primary System Type	**Existing 2 bedroom bed + 2 bedrooms 25% Reduction**
No. Lines	Existing Bed + 3 @ 80 ft.
Total Linear Feet	Existing Bed + 240 ft.
Trench Width	3' min.
Trench Spacing	9' min.
Pump Required	Yes
Distribution Device	Pressure Manifold + one drop box
Maintenance Agreement Required	No
Length and Diameter of Supply Pipe	~55' of 2" SCH 40 PVC
Flow Rate through the system	33 gpm
Elevation head	*Approx. 15'
Pressure head	2.0'
Friction head	Approx. 3'
20% Contingency	4'
Total Head	24'
Pump Requirements	33 gpm @ 24' of head ***To be designed by installer.**
Maximum Dosing Volume	240 gal - 2.0 doses/day @ design flow
Volume of water pumped per dose	Calculated to specific tank by measure or dealer engineering specifications (1 cubic ft. of water equals 7.48 gal.)
Pump Run per dose	approx. 7.2 min.
Check Valve	Yes
Siphon Break hole	No
Repair System	**Repair Exempt - Partial TS-II Drip Shown**
Total Square Feet	Approx. 4,800 sq ft. shown - 4 bedrooms
Repair Loading Rate	0.1

121 Holly Pond Lane Fast Track Summary (January 26, 2015)

Steve Wilkinson - S&ME Job No. 4358-15-009

Table: Summary of Primary Nitrification Line Specifications

Line No.	Use	Line Color	System Type	Line Length (Ft.)	*Elevation (Ft.)
1	System	Pink	Ex. Bed	Existing	768.0
2	System	Pink	25% Reduction	30	772.1
3	System	White	25% Reduction	50	771.0
4	System	Red	25% Reduction	80	769.8
5	System	Orange	25& Reduction	80	766.8

Total System: Ex Bed + 240'

Use three taps from pressure manifold to existing bed for 2 bedrooms of system (1/2 system). Use one tap to each 80 ft line for 2 bedroom addition. Line 2 and 3 connected with a drop box for one 80 ft line (total of 3 taps for 1/2 system).

Tank		1000 gal (2 compartment)	*Elevation (ft)
Pump Tank		1000 gal.	766.0
House		Front, Left Corner	approx. 774

Manifold Information	
Tap Size (In.)	1/2
Tap Material	SCH 80 PVC
No. Taps	6
Barrel Size (In.)	4
Barrel Material	SCH 80 PVC
Flow (gpm)/Tap	5.5

See attached Email from Paul Penninger regarding revised design of Pressure manifold

NOTES:

***elevations must be verified by installer at installation and final tank placement.**

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

Sheet 1 of 4
PROPERTY ID #: 4614754291
COUNTY: Iredell

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

OWNER: Steve Wilkinson
ADDRESS: 121 Holly Pl
PROPOSED FACILITY: 4 Bd
PROPOSED DESIGN FLOW (.1949): 480
LOCATION OF SITE:
APPLICATION DATE
DATE EVALUATED: 2015
PROPERTY SIZE:
PROPERTY RECORDED: 1996

WATER SUPPLY: ☐ Private ☐ Public ☒ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☒ Auger Boring ☒ Pit ☐ Cut
TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

Approved MP 2/6/15

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	L ~10%	0-9	wsbk scl	fr ss/se	br				PS .3
		9-30	ABK C	fr-fi ss/p	red, f	well lithe.		~ 44"	
		30-55+	sbk/abk c	fr ss/se	red f	well lithe.	Chrome		
					—	55+	—	—	
2	L ~10%	0-7	wsbk cl	fr ss/se	br - red L, f/p				PS .3
		7-37	sbk/abk c	fi ss/p	red f SAP in J				
		37-57	wsbk cl-scl	fr ss/se	yellowish red c SAP in J				
					Zone SAP w/ soil below				
					~ 42-53" NE wall				
3	L ~10%	0-10	wsbk scl	fr ss/sp	br				PS .25
		10-23	mabk c	fr ss/p	rd c roots				
		23-53	sbk/abk c	fi ss/p	rd f 10YR 6/6 in channels fr ~	53+	—	36"	
					—				
4	L ~10% In setback fill	0-5	wsbk scl	fr ss/sp	br				PS .3 restr. 0.1 Drip
		5-42 (44)	mabk c	fr ss/p	red f SAP(w2, BLK mix				
		44-48	mass sl	fr ss/sp	rc rd cl/wR				
			zone	SAP fill	~ 37" E wall				
			REPAIR		—	44	44" PS	—	

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	REPAIR
System Type(s)	Ek. Bed +	Except
		D210
Site LTAR	.25	REPAIR IN LATE SEASON — TSD

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948):
EVALUATED BY: PEP
OTHER(S) PRESENT: ~~X~~ MUST BE APPROVED by ICHD,

COMMENTS:

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

PROPERTY ID #:
COUNTY:

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

OWNER: Steve Wilkinson
ADDRESS: 121 Rolly Road
PROPOSED FACILITY:
LOCATION OF SITE:
APPLICATION DATE
DATE EVALUATED:
PROPOSED DESIGN FLOW (.1949):
PROPERTY SIZE:
PROPERTY RECORDED:

WATER SUPPLY: ☐ Private ☐ Public ☐ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☒ Auger Boring ☒ Pit ☐ Cut
TYPE OF WASTEWATER: ☐ Sewage ☐ Industrial Process ☐ Mixed

Approved MP 2/6/15

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
#5	L ~ 10%	0-6	WSTSK SCL	fr SS/SP	br				PS .3
		6-36	ASK C	f: S/P	red				
		36-48	WSBK C	fr S/P	red C	(mod) SAP	(FS)	WR	
					(-)	48	(-)	(-)	
#6 MP	L ~ 10%	0-2	WSBK SCL	fr SS/SP	br				PS .3
		2-44	ASK/SBK C	f: S/P	red f	Zone	SAP w/ Soil below		
		44-48	MASS SI	fr SS/SP	mod fi red C				
					(-)	44	PS	(-)	
#7 MP	L ~ 10%	0-4	WSBK SCL	fr SS/SP	br				PS .3 Drip .1
		4-26	ASK/SBK C	f: S/P	red				
		26-48	WSBK C	fr S/P	red fi	SAP mod			
					(-)	48	(-)	(-)	
#4	L ~ 10%	0-6	SBK SCL	fr SS/SP					Drip .1
		6-18, 27, 26	ASK/SBK C	fr-c mod	SAP / WR				
		18+	R-c/s						

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)		
System Type(s)		
Site LTAR		

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948):
EVALUATED BY: PSP
OTHER(S) PRESENT:
* must be approved by LCHD.

COMMENTS:

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

Sheet 3 of 4
PROPERTY ID #:
COUNTY:

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

OWNER: Steve Watkins
ADDRESS: 121 Rocky Point Ln
PROPOSED FACILITY:
PROPOSED DESIGN FLOW (.1949):
LOCATION OF SITE:
APPLICATION DATE
DATE EVALUATED:
PROPERTY SIZE:
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	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
B	C ~10%	WD	12-18" VS		0	12, 18"	2	0	Us 1
C	C ~10%	Zone Fill ~24-48"			own soil sand				Us Dup -1
		Poor x66 Privy Pit			0	PS	2 -1	0 Dup	
		Zone mix of Sand							
D		0-9	WSBK cl	fr cl/sl	red fill				Dup -1 Pit. Downslope
		9-14	WSBK scl	fr ss/sp	br				
		14-30	SBK C	fr s/p	w in d	WD/SAP			
		30+	WD		0	20"	2	0	
			Fill on upper edge of pit						
E		0-6	WSBK scl	fr ss/sp	br				Ps .2x-3 Dup -1
		6-24	MSBK C	fr s/p	M				
		24-51	ABK C	fr s/s	red fr-C SAP, fr WD				
					0	SL"	2	0	

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)		
System Type(s)		
Site LTAR		

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948):
EVALUATED BY: PGS
OTHER(S) PRESENT:
must be Approved by LHD

COMMENTS:

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

PROPERTY ID #:
COUNTY:

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

OWNER: Stacy & Wilkinson — APPLICATION DATE
ADDRESS: 127 Holly Rd CN — DATE EVALUATED:
PROPOSED FACILITY: — PROPOSED DESIGN FLOW (.1949): — PROPERTY SIZE:
LOCATION OF SITE: — 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	OTHER PROFILE FACTORS .1943 SOIL DEPTH	OTHER PROFILE FACTORS .1956 SAPRO CLASS	OTHER PROFILE FACTORS .1944 RESTR HORIZ	OK MD 2/6/15 PROFILE CLASS & LTAR
1	L ~ 1-2%	0-9	wsbk sl	fr ss/sp	10YR				Dp -1
		9-24	sbk C	fr sl	2.5Y	1-2	wk	sbk	
		24-32	mix	hard sbk	+wd				
		32+	wd		(0)	(24)	(0)	(0)	
2									
3									
4									

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)		
System Type(s)		
Site LTAR		

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948):
EVALUATED BY: PEP
OTHER(S) PRESENT:
* must be approved by LHD

COMMENTS: