FAST TRACK LOW PRESSURE MANIFOLD DOSING
FOR A
25% REDUCTION SEPTIC SYSTEM
FOR
SUBSURFACE WASTEWATER DISPOSAL
TWIN COVES AT MORRISON – LOT 17
TROUTMAN NC

Prepared for
Matthew Durchman
823 Oak Street
Mooresville, North Carolina 28115
704 369-9236
mdurchman@yahoo.com

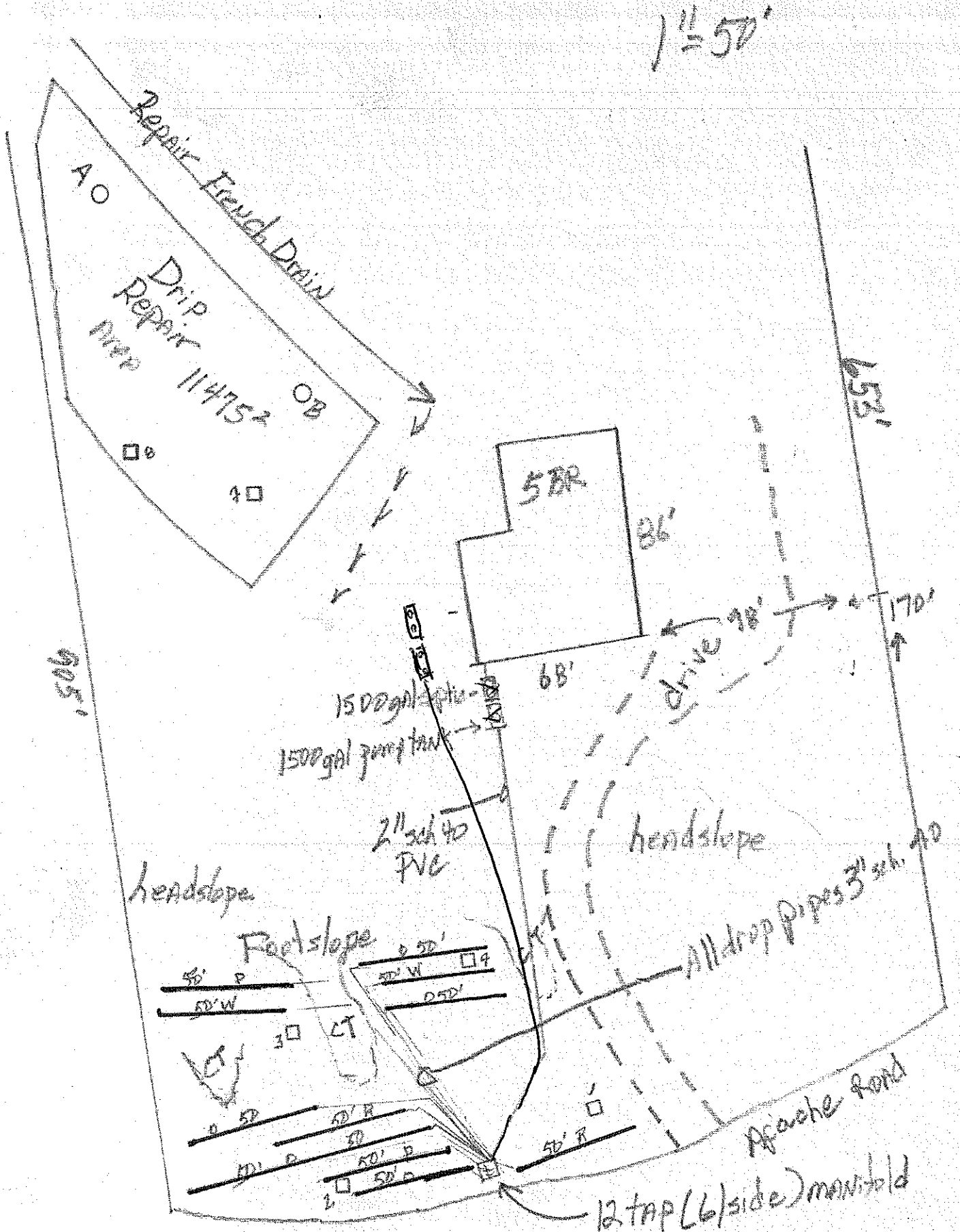
Prepared by:
Toney C. Jacobs, LSS
Jacobs On-Site Development, Inc.
168 Broadbill Drive
Mooresville, North Carolina 28117
704 662-9845
toneycjacobs@gmail.com

November 5, 2014
Reworked November10, 2014



Toney C. Jacobs, LSS

Copy: Heath Snow, RS
Iredell County Health Dept.
Statesville, NC


1" = 50'
Repair Trench Drain
AO
Drip Repair 1147 sq ft
OB
5BR
86'
6B'
drive 98'
170'
150'
150 gal septic
1500 gal pump tank
2" sch 40 PVC
headslope
Footslope
all drop pipes 3" sch 40
Apache road
12 tmp (6) side) manifold

DESIGN SPECIFICATIONS

Twin Coves – Lot 17

Daily design flow	600 gpd.
Septic tank size	1500 gal.
Pumping tank size	1500 gal.
Initial system	600' of 25% reduction, 12 @ 50'
Effluent loading rate, Initial system	0.25 gpd/ft^2
Total length and diameter of supply pipe	approx. 200 ft. 2" sch 40 PVC
Number and length of laterals	12 @ 50' end-fed
Trench depth	30" maximum on low side
Flow rate through the system	66.0 gpm from 12 each ½" sch 80 taps from a 4" manifold 6 taps on each side
Tank depth	7.0'
Elevation head	approx. 22.0' (to be verified by installer after tanks are set)
Pressure head	2.0'
Friction head	20.3'
20% contingency	8.9'
Total head	53.2'
Pump requirements	66.0 gpm at 53.2' of head; use Goulds WE15H pump, pump and compatible panel or equivalent
Dosing volume	300 gal. – 2.0 doses/day at design flow
Depth 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. 4.5 min.
Check valve	yes
Siphon break hole	no
Effluent loading rate, Repair system	0.125 gpd/ft^2 aerial
Repair system	Drip – area of sufficient soil could use anaerobic. There is greater than 10,000 sq.ft. evaluated and delineated

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Lot #:
File #:
Appl ID:

Owner: Dunham Initial lot 2 Applicant:
Address: Date Evaluated:
Proposed Facility: Design Flow (.1949) Property Size:
Location of Site: Property Recorded:

Water Supply: [ ] Public [ ] Individual [ ] 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 Structure/ Texture	.1941 Consistence Mineralogy	PROFILE FACTORS b .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
1	LS 14-16	0-4	gr sol	fri sandy lm	mottling weak brn - mott @				0.3
		4-30	blocky sbk	fri sandy clay "					
2	LS 5-12 Alum F3	0-4	gr sol	fri sandy lm 1:1	mottling significant				0.25
		4-25	blocky sbk	fri sandy " "					
		25-30	medium sbl	fri clay "					
3	LS 5-12 Alum F3	0-6	gr sol	fri sandy 1:1	Mottling weak brn				0.3
		6-16	blocky sbk	fri " "					
		16-27	weak sbk cl	fri blocky "	Grayish				
		27-51	m cl. l	firm " "	sandy				
					very light brn				
4	mod I LS 3-5	0-9	gr sol	fri sandy 1:1	mottling				0.3
		9-28	blocky sbk	fri sandy clay "					
		28-50	weak cl	" " "	plentiful free water @ 32"				

Description	Initial System	Repair System
Available Space (.1945)	40	25
System Type(s)	25% red	Subsurface drip
Site LTAR	0.25	0.125

Other Factors (.1946):
Soil Evaluation By: TLJ
Others Present:
Site Classification (.1948):
Site Evaluation By:
Others Present:

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Lot #:
File #:
AppID:

Owner: Matt Dunham — Repair — 2017
Address: Lot 14 Jamestown
Proposed Facility: — Design Flow (.1949): 4 BR
Location of Site:

Applicant:
Date Evaluated:
Property Size:
Property Recorded:

Water Supply: [V] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [V] Auger Boring [V] Pit [ ] Cut
Type of Wastewater: [V] Sewage [ ] Industrial Process [ ] Mixed

PROFILE #	1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 Structure/ Texture	.1941 Consistence Mineralogy	PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr. Horiz	Profile Class & LTAR
7	LS Mod Well 6%	0-5	gr sl	fri dmoist NP				NA	
		5-17	mod SBK cl	fri " "					
		17-40	mod SBK cl	fri " "	m		mod/rapid		PS
		40-48	m "	loose wet NP	"		PS		LA3
A	LS 13%	0-23	g sl	fri MS NP	N/A		mod/PS	NA	
		23-50	mod SBK cl	fri SS/PL					PS 0.25
B	LS 11%	0-15	g sl	fri MS NP	mod/gray				
		15-24	mod SBK sil	" " "			rapid		PS 0.25
		24-48	" cl	fri SS/PL					
8	LS 3-5	0-12	g sl	fri MS NP	m mod/gray		NA		
		12-28	mod SBK cl	fri SS/PL	m " gr.				PS
		28-50	SBK + MAS cl		mypl bri & chrom 3 colors			CBED	0.25

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

Other Factors (.1946):
Soil Evaluation By: TAH
Others Present:
Site Classification (.1948):
Site Evaluation By:
Others Present: