

2950 MCMANUS RD

13943102

1/9/2008

duponbj

Groundwater and Wastewater Services File Imaging Project
May 2007
Barcode Font = IDAutomationHC39M

CONDITIONS OF IMPROVEMENT PERMIT / CONSTRUCTION AUTHORIZATON

Permit Number: **6057B** Tax Number: **13943102**

- The 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.

Basement: ☐ Yes ☒ No ☐ Partial Basement

Primary Wastewater System

Type: ☐ I ☐ II ☒ III ☐ IV ☐ V ☐ VI

☐ Conventional
☐ Prefabricated, permeable block panel system
☐ Shallow Placed Conventional
☐ Low Pressure Pipe
☐ Large Diameter Pipe
☐ Fill
☐ Other
☒ Innovative or Experimental:

.225 *Long-term acceptance rate* (GPD/ft^2)	360 Max gallons/day wastewater flow	1600 Absorption Area (ft^2)	9 Trench spacing (min. on centers) (ft)
Serviced by private well: ☒ Yes ☐ No	1500 Gallon septic tank	400 Total trench length (ft)	18 Maximum trench depth (in) (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions.)
3 Bedrooms in residence	1000 Gallon pump tank	na Depth of stone (in)	

Any surface water present: Type: Minimum separation distance (ft):

Additional conditions: **Agreement forms are required be issuing a construction authorization**

Repair Area System

Type: ☐ I ☐ II ☐ III ☐ IV ☒ V ☐ VI

☐ Conventional
☐ Prefabricated, permeable block panel system
☐ Shallow Placed Conventional
☐ Low Pressure Pipe
☐ Large Diameter Pipe
☐ Fill
☒ Other
☐ Innovative or Experimental:

13400 Absorption Area (ft^2) ___ Total trench length (ft)	na Depth of stone (in)	__ Trench spacing (min. on centers) (ft)	6 Maximum trench depth (in)

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department has approved the Request for the Job Location contained in this document. The approval is granted in accordance with the provisions of Laws and Rules For Sewage Treatment, and Disposal Systems in effect at the time of issuance of the permit and is subject to the following provisions:

*** No work shall be conducted on the septic tank system until an Installation, Construction, Alteration and/or Repair Approval is granted by this Department.

*** This Improvement permit is transferable.

11/2/2005

DENR Authorized Agent Date

Owner/Agent Signature Date

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
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

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ENVIRONMENTAL HEALTH DIVISION
700 N. TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE: (704) 336-5103
FAX: (704) 336-6894

Owner/Agent Signature Date

NC DENR
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

WASTEWATER TREATMENT AND DISPOSAL SYSTEM DESIGN AGREEMENT: 15A NCAC 18A .1948 AND ANY OF THE FOLLOWING RULES: .1956; .1957(a); .1957(b); or .1957(c); OR .1969

FILE #_____
PARCEL #_____

The undersigned, _____, owner of property located at _____, (the "site") and described in an instrument recorded in Book _____ at Page _____, Mecklenburg Public Registry, hereby acknowledges that the undersigned applied to the Mecklenburg County Health Department (the "Department") for a permit to install a septic tank sewage disposal system on the site; that the Department evaluated the site for suitability for such a system in accordance with the regulations promulgated by the North Carolina Commission for Health Services as 15A NCAC 18A .1900 et seq.; that the Department originally classified the site as "unsuitable" pursuant to the standards set forth in the regulations; that the undersigned requested that the Department reclassify the site as "provisionally suitable" in light of the particular septic tank system proposed by the undersigned; that the Department considered various studies, data, and other information which indicate to the Department that the septic tank system proposed by the undersigned is allowed by the rules; and that the Department therefore reclassified the site as "provisionally suitable" and issued an appropriate permit for such proposed septic tank system.

The undersigned further acknowledges that the proper design, construction, operation and maintenance of such septic tank system is the responsibility of the designer, owner, developer, installer, or user of the system, as applicable, and that neither the Department nor its officials, employees, or agents warrant or guarantee that the said system installed pursuant to the permit issued by the Department will function in a satisfactory manner for any given period of time or that the Department, its officials, employees or agents assume any liability for any damages of any kind which are caused, or which may be caused, by a malfunction of such system.

The undersigned further acknowledges that the following conditions will apply to the site:

This instrument was prepared by: _____
Mail after recording to: _____
_____

-- Any changes on the property may make the Improvement Permit null and void and may make the Improvement Permit subject to revocation.

-- Do not grade, cut, fill, pave, construct a building or deck, dig a well, install a swimming pool or otherwise cover or disturb the soil (except for planting and maintaining grass or other ground covers) in a manner which will adversely affect the repair area or area where the septic tank system is located.

-- When a private certified operator is required, no improvement permit for the designated repair shall be issued unless there is a private certified operator to carry out this management program in the service area where the proposed system is to be located. (Refer to Rule .1961, "Maintenance of Sewage Systems," for further information.)

-- Additional fees will be required according to the Mecklenburg County user fee schedule applicable at the time for the issuance of a repair permit for any subsequent repairs to the sewage treatment and disposal system or for installation of a replacement system.

-- At the time repairs to the sewage treatment and disposal system are to be made or a replacement system installed, the regulations in effect at that time will govern the repairs or installation of a replacement system.

The undersigned further agrees for himself, his heirs and assigns that he shall indemnify and hold harmless theDepartment, its employees, and officials, as well as Mecklenburg County and its employees and officials, for any damages or other claims of any person or persons whatsoever arising out of the installation, operation, or failure of said septic tank system.

Use of the singular masculine pronoun forms herein shall be deemed to also include the plural and feminine forms as the context may require.

This document shall be placed on the public records of the Register of Deeds of Mecklenburg County and indexed therein under the Grantor Index in the name or names of the undersigned, and the foregoing acknowledgements shall henceforth be binding on all persons claiming any right, title, or interest in the site.

IN WITNESS WHEREOF, the undersigned has hereunto set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, this _____ day of _____, 20___.

_____ _____(SEAL)

(Corporate Name)

_____(SEAL)

By: _____ _____(SEAL)

_____ President _____(SEAL)

ATTEST:

_____

_____ Secretary

(Corporate Seal)

STATE OF NORTH CAROLINA
COUNTY OF _____

I, _____, a Notary Public for said County and State, do hereby certify that _____ personally appeared before me this date and acknowledged the due execution of the foregoing instrument.

WITNESS my hand and notarial seal, this _____ day of _____, 20____.

_____
Notary Public

My Commission Expires:

_____

STATE OF NORTH CAROLINA
COUNTY OF _____

I, _____, a Notary Public for said County and State, do hereby certify that _____ personally came before me this day and acknowledged that he is _____ Secretary of _____, a North Carolina corporation, and that by authority duly given and as the act and deed of said corporation, the foregoing instrument was signed in its name by its _____ President, sealed with its corporate seal, and attested by _____ as its _____ Secretary.

WITNESS my hand and notarial seal, this _____ day of _____, 20____.

_____
Notary Public

My Commission Expires:

_____

REVISED 8-13-02

S&EC

Soil & Environmental Consultants, PA

236 LePhillip Court, Suite C • Concord, North Carolina 28025 • Phone: (704) 720-9405 • Fax: (704) 720-9406
www.SandEC.com

Attached is a proposed design for a Pressure Manifold Septic System for a 3 bedroom single family residence on lot 4 McManus Road Mecklenburg County, North Carolina.

Contents: **Page**

Information for the Installer---------- 1

Design Information
- Design Specifications---------- 2-3
- Layout Specifications---------- 4
- System Tapsheet---------- 5

Site Plan/System Plan---------- 6

Septic Tank Diagram---------- 7

Pump Tank Diagram---------- 8

Pressure Manifold Diagram---------- 9

Control Panel Specifications---------- 10-13

Pump Specifications---------- 14-15

Electric Box Specifications---------- 16

Calculations---------- 17

October 28, 2005
S & EC Project No. 5-1619s1
Design By: W. Overby

11-3-05
PLAN
APPROVED

Greensboro Office:
3817-E Lawndale Drive
Greensboro, NC 27455
Phone: (336) 540-8234
Fax: (336) 540-8235

Raleigh Office:
11010 Raven Ridge Road
Raleigh, NC 27614
Phone: (919) 846-5900
Fax: (919) 846-9467

INFORMATION FOR THE INSTALLER:

- The permit should be read very carefully prior to bidding. The following are details that must be considered along with all other considerations.
- Tanks shall be approved by DEHNR, and certification supplied by the manufacturer.
- Tanks shall be water tested prior to installation.
- The installer shall be responsible to the owner for placement of the tanks and to insure that final grades are returned to the original natural grade, with exception of added structural features.
- The supply trench shall be compacted to eliminate cavities left during initial fill placement.
- Installation of the system shall be during dry conditions in order to protect the soil structure.
- All fittings shall be pressure rated fittings.
- All joints shall be cleaned with PVC pipe cleaner and a heavy bodied glue applied to weld all joints.
- Where required by the county health department, post installation inspections by the designer must be scheduled 5 week days in advance.
- Trenches shall be carefully excavated so the bottom is within 2" from the highest to . the lowest points of elevation within the trench. If the bottom elevation needs adjusting after it has been trenched, it will be done by removing high points rather than filling low points. It is extremely important to insure that trenches are not over excavated during initial trenching. All fine grading within the trench will be hand done with a shovel. No loose material will be left in the trench
- All pipe openings in the tanks shall be properly grouted. This also applies to the joints around the riser.
- All tanks shall be properly back filled and compacted to prevent slump at a later date.
- Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral.
- No heavy equipment shall be used on the field during or after installation. The use of a small loader (i.e. Bobcat) or a trencher (i.e. Ditch Witch 2300/2310) may be used for installation.
- Elevations at pinflag locations should be checked by the installer prior to beginning trenches.
- Pumptank riser should be 6" above grade, control panel should be 12" above grade.
- Septic tank riser shall be a minimum of 6" above finished grade.
- Design precludes use of foundation drains on the residence.
- System is specified as an innovative installation
- Repair is specified as a subsurface drip system

PRESSURE MANIFOLD SYSTEM
FOR WASTEWATER TREATMENT

Owner: Coy McManus

Address: 1056 Ben Black Road
Midland, NC 28107
Phone: (704) 888-2198
County: Mecklenburg
Location: Lot 4 McManus Road
Source of Wastewater Flow: 3 bedroom home
Estimated Daily Wastewater Production: 360gpd
System Flow: 38.36

Design Specifications

Drainfield Size: 400
Loading Rate: 0.225
Depth of Gravel in Trench: N/A
Gravel Size: N/A
Trench Depth: 18
Trench Width: 36 in.
Septic Tank Size: ~~1000~~ 1500 gal SDW 11/8/05
Pump Tank Size: 1000
Estimated Supply Line Length: 400
Supply Line Diameter: 2 in. SCH 40 PVC
Supply Line Volume: 69.60
Dosing Volume: 182.84
Supply Manifold: 4 in. SCH 80 PVC
Supply Manifold Length: 5 ft. (minimum)
Supply Manifold Volume: N/A

Recommended Float Controls: SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalents
Recommended Control Panel: SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.
Pressure Head: 2 ft.
Friction Head: 11.28
Elevation Head: 10.00
Total Dynamic Head: 26.77
Threaded Union: In Tank
Gate Valves: 1 in Tank
1 at Pressure Manifold
Check Valves: In Tank
Anti-Siphon Hole: NA
Recommended Pump: Myers Model ME50 or County Approved Effluent Rated Pump Capable of Delivering ~27 ft.of Head at ~39 gpm Total Flow

Additional Comments: Soil suitability was performed by the Mecklenburg County Health Department.

McManus Road Lot 4
PRESSURE MANIFOLD DESIGN

DESIGN FLOW:	360
SOIL APPLICATION RATE:	0.225 gpd/ft.^{2}
TOTAL AREA TRENCH BOTTOM:	1200
TOTAL LATERAL LENGTH:	400
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	400
SUPPLY LINE LENGTH:	400
TOTAL DYNAMIC HEAD:	26.77
MANIFOLD SIZE:	*4* in.SCH 80 PVC
DOSING VOLUME:	182.84
PUMP TANK DRAW DOWN*:	8.7
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	1000
RECOMMENDED PUMP:	Myers Model ME50 or County Approved Effluent Rated Pump Capable of Delivering ~27 ft.of Head at ~39 gpm Total Flow

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

COY McMANUS - LOT 4

Project No. 5-1619s1

LAYOUT FOR 3 BEDROOM HOME

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH
TBM		1.0			100.00	
INSTR. 1			101.00			
			SYSTEM			
1	PINK			3.20	97.80	57
2	RED			4.40	96.60	57
3	YELO			5.70	95.30	57
4	PINK			6.40	94.60	57
5	RED			7.20	93.80	57
6	BLUE			7.60	93.40	57
7	YELO			8.80	92.20	58
					Total	**400**

REPAIR

Subsurface Drip Area of 9500 sf

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	TRENCH DEPTH	INNOVATIVE SYSTEM	DISTRIBUTION
System	400	0.225	INNOV	18.000	EZFLO	MANIFOLD
Repair		0.10		6.000		DRIP

Notes: **TBM is assumed to be 100'; all measures in feet

**Nitrification lines are demonstrated on contour via colored pin flags

**BS, HI, and FS indicate rod readings

Mcmanus Road Lot 4

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/Tap	gpd	Trench Area	Line LTAR
1	Pink	97.8	57	SCH 80 1/2	5.48	51.43	171	0.30
2	Red	96.6	57	SCH 80 1/2	5.48	51.43	171	0.30
3	Yellow	96	57	SCH 80 1/2	5.48	51.43	171	0.30
4	Pink	95.3	57	SCH 80 1/2	5.48	51.43	171	0.30
5	Red	94.6	57	SCH 80 1/2	5.48	51.43	171	0.30
6	Blue	93.8	57	SCH 80 1/2	5.48	51.43	171	0.30
7	Yellow	93.8	58	SCH 80 1/2	5.48	51.43	174	0.30
	total	feet =	400	gal/min =	38.36			
			Des. Flow	360				
			Pump Run=	9.38				
			soil LTAR	0.225				
			EZFLO LTAR	0.30				

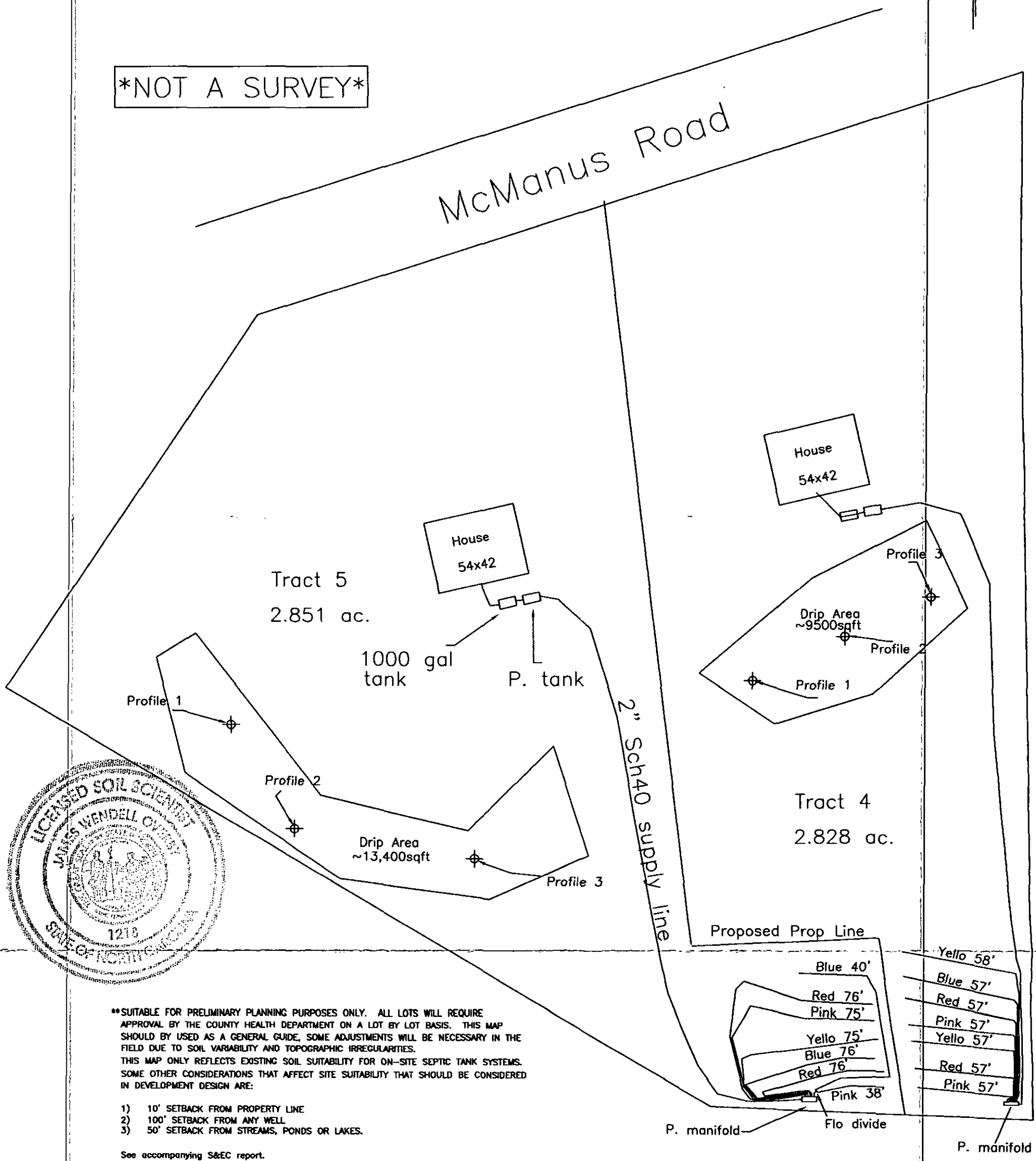
SEPTIC SYSTEM
LAYOUT SKETCH MAP

GRAPHIC SCALE
1" = 60'

60 0 60 120

DRAFT
FOR REVIEW ONLY

NOT A SURVEY



LICENSED SOIL SCIENTIST
JAMES WENDELL OWEN
1213
STATE OF NORTH CAROLINA

**SUITABLE FOR PRELIMINARY PLANNING PURPOSES ONLY. ALL LOTS WILL REQUIRE APPROVAL BY THE COUNTY HEALTH DEPARTMENT ON A LOT BY LOT BASIS. THIS MAP SHOULD BY USED AS A GENERAL GUIDE, SOME ADJUSTMENTS WILL BE NECESSARY IN THE FIELD DUE TO SOIL VARIABILITY AND TOPOGRAPHIC IRREGULARITIES.
THIS MAP ONLY REFLECTS EXISTING SOIL SUITABILITY FOR ON-SITE SEPTIC TANK SYSTEMS. SOME OTHER CONSIDERATIONS THAT AFFECT SITE SUITABILITY THAT SHOULD BE CONSIDERED IN DEVELOPMENT DESIGN ARE:

1) 10' SETBACK FROM PROPERTY LINE
2) 100' SETBACK FROM ANY WELL
3) 50' SETBACK FROM STREAMS, PONDS OR LAKES.

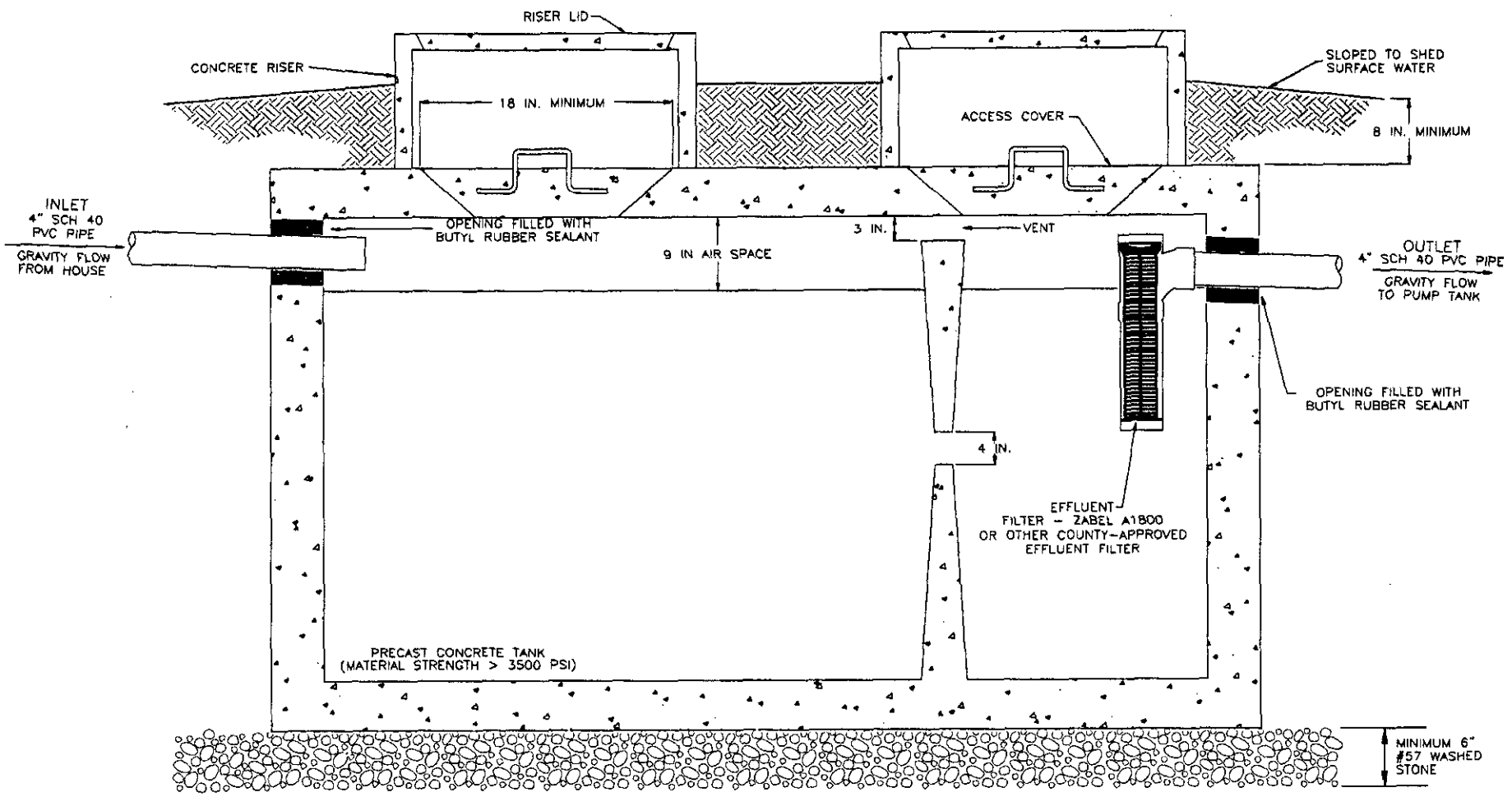
See accompanying S&EC report.

PROJECT NAME: MCMANUS ROAD
COY MCMANUS
– MCMANUS ROAD –
MECKLENBURG COUNTY, NORTH CAROLINA
OCTOBER 2005

S&EC

Soil & Environmental Consultants, PA
236 LePhillip Ct. STE C • Concord, North Carolina 28025 • Phone (704)720-9405 • Fax (704) 720-9406

FILE C:\JOBS\5-1619
SCALE 1" = 60'
WO
FIELD WORK BF
DRAWN WO
PROJECT MGR.
JOB NO. 5-1619

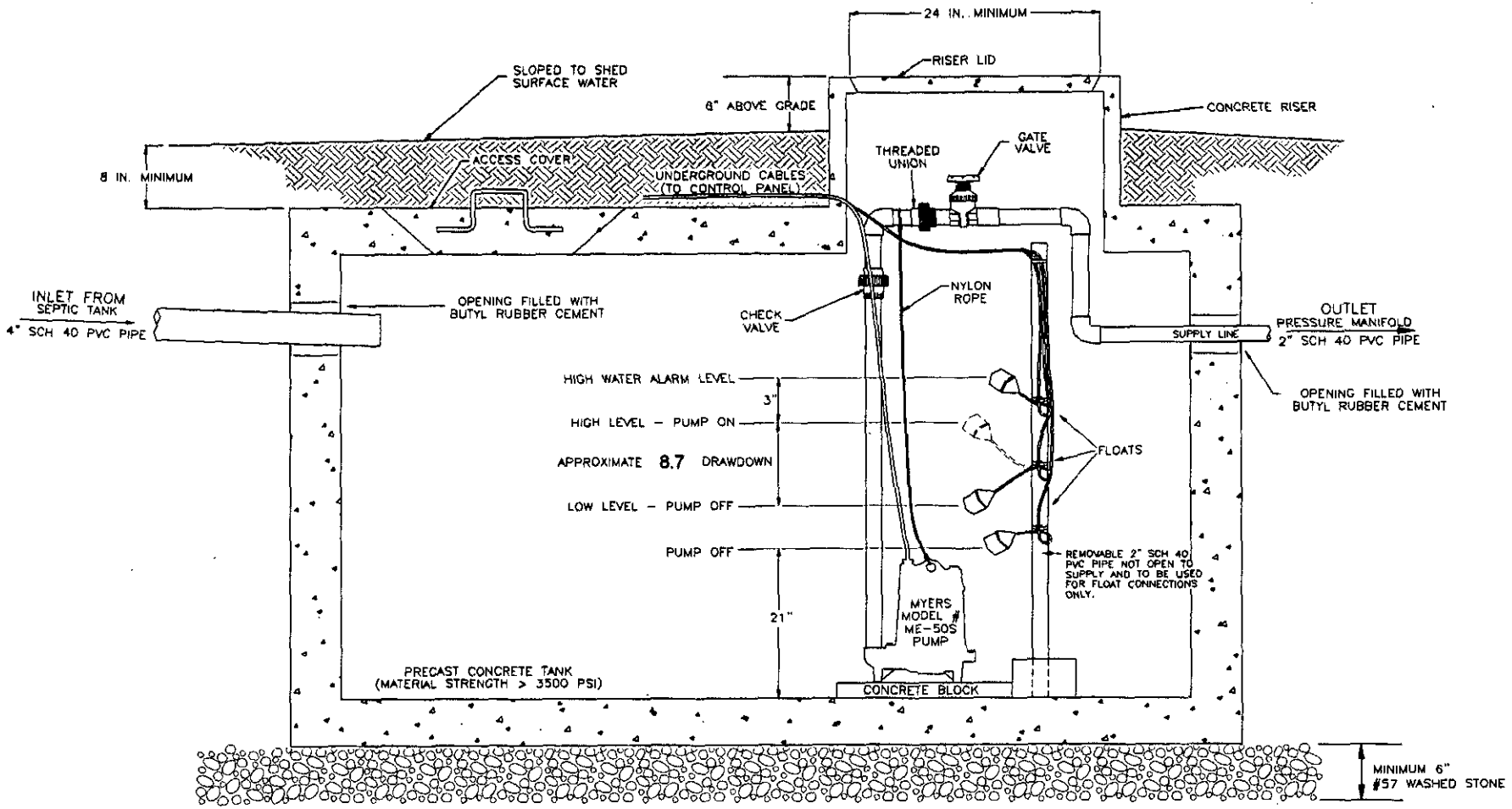


NOTES

1. TANK DIMENSIONS VARY BY MANUFACTURER.

1000 GALLON SEPTIC TANK

PROJECT NO: 4591	PROJECT NAME: **COY McMANUS - LOT 4**	S&EC Soil & Environmental Consultants, Inc.
PROJECT MGR:	SHEET TITLE: SEPTIC TANK DIAGRAM	11010 Raven Ridge Road Raleigh, North Carolina 27614 Phone: (919) 846-5900 Fax: (919) 846-9467 Web Page: www.SandEC.com
SCALE: NTS		



NOTES

1. TANK DIMENSIONS VARY BY MANUFACTURER.
2. DRAWDOWN WILL VARY WITH TANK DIMENSIONS. DRAWDOWN SHOWN BASED ON 21 GALLONS PER INCH.

1000 GALLON PUMP TANK

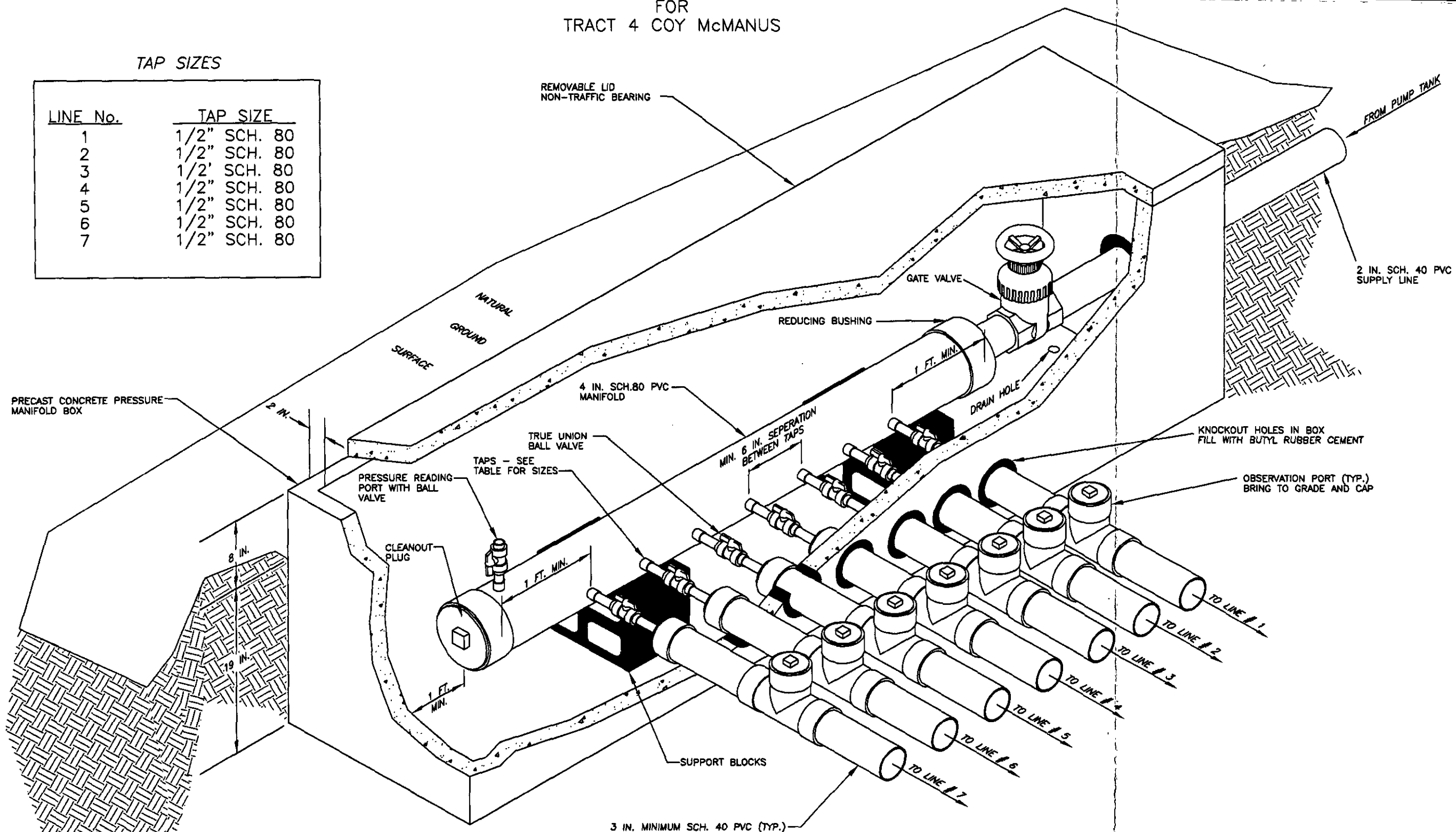
PROJECT NO. 5	PROJECT NAME:	**COY McMANUS - LOT 4**
PROJECT MGR.	SHEET TITLE:	PUMP TANK DIAGRAM
SCALE NTS		

S&EC
Soil & Environmental Consultants, Inc.
11010 Raven Ridge Road Raleigh, North Carolina 27614 Phone: (919) 846-5900 Fax: (919) 846-9467
Web Page: www.SoilEC.com

PRESSURE MANIFOLD DETAILS
FOR
TRACT 4 COY McMANUS

TAP SIZES

LINE No.	TAP SIZE
1	1/2" SCH. 80
2	1/2" SCH. 80
3	1/2' SCH. 80
4	1/2" SCH. 80
5	1/2" SCH. 80
6	1/2" SCH. 80
7	1/2" SCH. 80

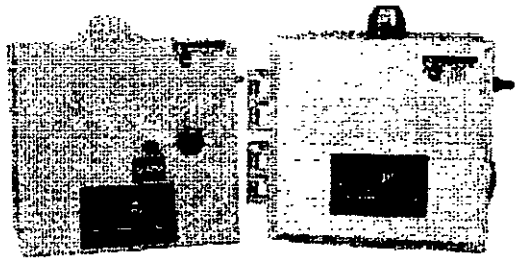


MANIFOLD WILL BE INSTALLED REVERSE OF THIS DRAWING IN THE FIELD

MODEL 112 Control Panel

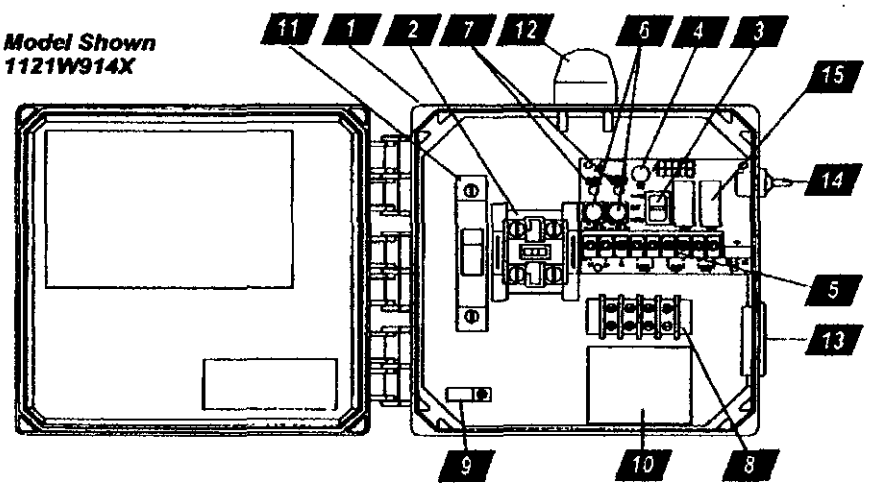
Single phase, simplex motor contactor control.

The Model 112 control panel provides a reliable means of controlling one 120, 208, or 240 VAC single-phase pump in pump chambers, sump pump basins, irrigation systems and lift stations. Two control switches activate a magnetic motor contactor to turn the pump on and off. If an alarm condition occurs, an additional alarm switch activates the audio/visual alarm system.



Indoor *Indoor/outdoor*

Model Shown
1121W914X



1. **Enclosure** measures 8 x 8 x 4 inches (20.32 X 20.32 X 10.16 cm). Choice of NEMA 1 (steel for indoor use), or NEMA 4X (ultraviolet stabilized thermoplastic with removable flanges for outdoor or indoor use).

   * Options selected may increase enclosure size and change component layout.
2. **Magnetic Motor Contactor** controls pump by switching hot electrical lines.
3. **HOA Switch** for manual pump control (mounted on circuit board).
4. **Green Pump Run Indicator Light** (mounted on circuit board).
5. **Float Switch Terminal Block** (mounted on circuit board).
6. **Alarm and Control Fuses** (mounted on circuit board).
7. **Alarm and Control Power Indicators** (mounted on circuit board).
8. **Pump Input Power and Pump Connection Terminal Block**
9. **Ground Lug**
10. **Terminal Block Installation Label**
11. **Circuit Breaker** (optional) provides pump disconnect and branch circuit protection.

STANDARD ALARM PACKAGE (other options available)

12. **Red Alarm Beacon** provides 360° visual check of alarm condition. **Note:** NEMA 1 style utilizes a door mounted indicator in lieu of a beacon.
13. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating). **Note:** NEMA 1 style utilizes an internally mounted buzzer (83 to 85 decibel) in lieu of horn.
14. **Exterior Horn Test/Normal/Silence Switch** allows alarm horn to be silenced and testing of horn and light to ensure proper operation of alarm system.
15. **Horn Silence Relay** automatically resets alarm after alarm condition has been resolved (mounted on circuit board).

FEATURES

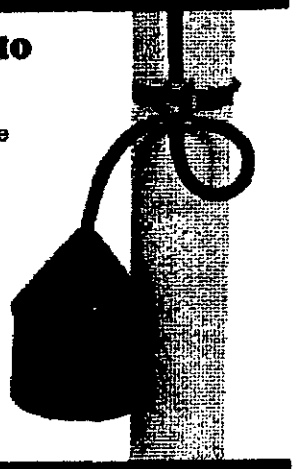
- Entire control system (panel and switches) is UL Listed to meet and/or exceed industry safety standards
- Dual safety certification for the United States and Canada
- Standard package includes three 20' Sensor Float® control switches
- Complete with step-by-step installation instructions
- Three-year limited warranty

c UL us
LISTED

SJE Rhombus CONTROLS
SJ Electro Systems, Inc.
PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE 1-218-847-1317
1-218-847-4617 Fax
email: sje@sjerhombus.com
www.sjerhombus.com

SENSOR FLOAT® control switch

Mercury-activated, narrow-angle float switch designed to activate pump control panels and alarms.



This narrow-angle sensing device is used to accurately monitor liquid levels in sewage and non-potable water applications. The Sensor Float® control switch is not sensitive to rotation and is suitable for use with intrinsically safe circuits. Contact SJE-Rhombus regarding specific intrinsically safe applications.

Normally Open Model (high level)
The control switch turns on (closes) when the float tips slightly **above** horizontal signaling a high level, and turns off (opens) when the float drops slightly below horizontal.

Normally Closed Model (low level)
The control switch turns on (closes) when the float drops slightly **below** horizontal signaling a low level, and turns off (opens) when the float tips slightly above horizontal.

FEATURES

- Suitable for use with intrinsically safe circuits.
- Not sensitive to rotation.
- Control differential of .5 inches (1 cm) above or below horizontal.
- UL Listed for use in non-potable water and sewage.
- CSA Certified.
- Three-year limited warranty.

LR54245 LISTED E3N2

Hydraulic

OPTIONS

This switch is available:

- for normally open (high level) applications or normally closed (low level) applications.
- in standard cable lengths of *10, 15, 20, or 30 feet and 3, 5, 6, or 10* meters.
- with three mounting options that allow for flexibility in installation:

  Mounting Clamp: for applications where the switch can be attached to a discharge pipe or similar mounting device.

  Internally Weighted: for applications where the switch can be suspended from above.

  Externally Weighted: for applications where the switch can be suspended from above.

SPECIFICATIONS

CABLE: flexible 18 gauge, 2 conductor (UL,CSA) SJOW, water-resistant (CPE) jacket

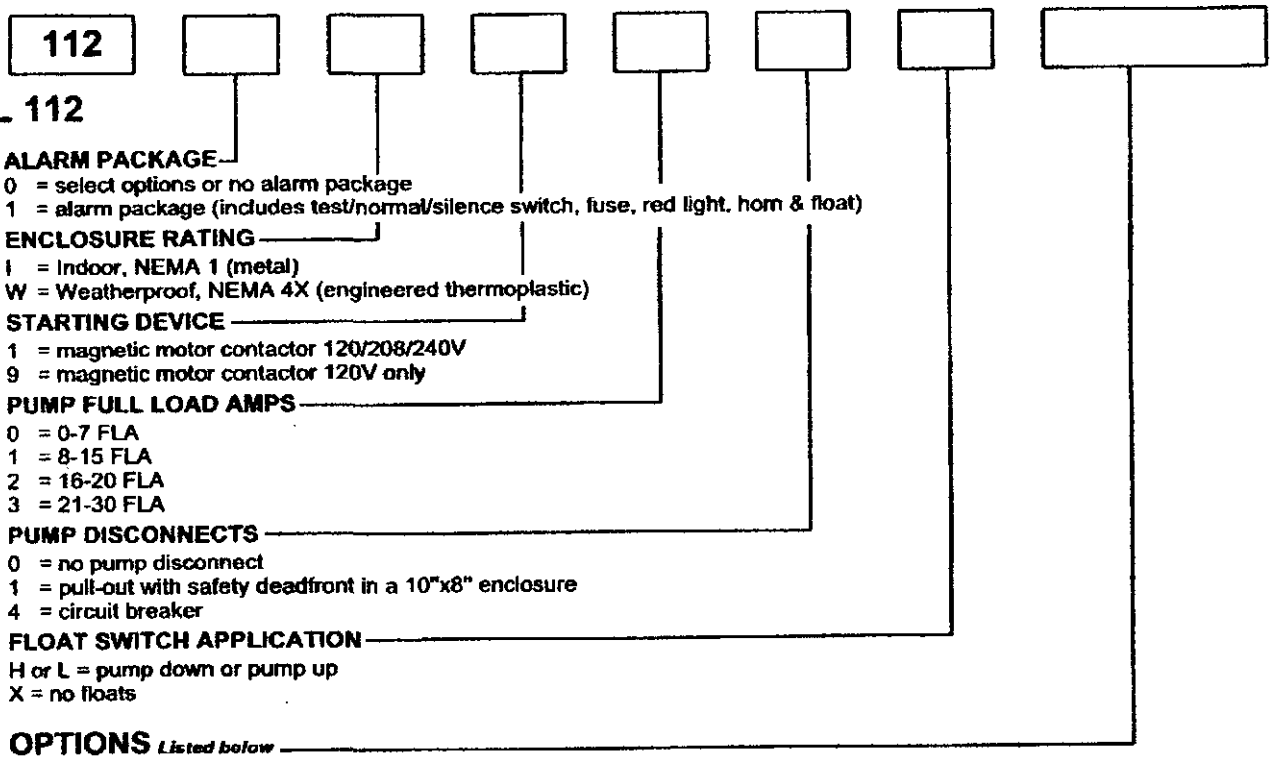
FLOAT: 3.38 inch diameter x 4.55 inch long (8.58 cm x 11.56 cm), high-impact, corrosion resistant, PVC housing for use in sewage and non-potable water up to 140°F (60°C)

MAXIMUM WATER DEPTH: 30 feet (9 meters), 13 psi

MERCURY TILT SWITCH: single pole, single throw, mercury-to-mercury contacts, hermetically sealed in a steel capsule and epoxy sealed in the float housing

ELECTRICAL: 5 amp, 120/230 VAC, 50/60 Hz

CONTROLS SJE Rhombus
SJ ELECTRO SYSTEMS, INC.
PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE 1-218-847-1317
1-218-847-4617 Fax
email: sje@sjerhombus.com
www.sjerhombus.com



MODEL 112

ALARM PACKAGE
0 = select options or no alarm package
1 = alarm package (includes test/normal/silence switch, fuse, red light, horn & float)

ENCLOSURE RATING
I = Indoor, NEMA 1 (metal)
W = Weatherproof, NEMA 4X (engineered thermoplastic)

STARTING DEVICE
1 = magnetic motor contactor 120/208/240V
9 = magnetic motor contactor 120V only

PUMP FULL LOAD AMPS
0 = 0-7 FLA
1 = 8-15 FLA
2 = 16-20 FLA
3 = 21-30 FLA

PUMP DISCONNECTS
0 = no pump disconnect
1 = pull-out with safety deadfront in a 10"x8" enclosure
4 = circuit breaker

FLOAT SWITCH APPLICATION
H or L = pump down or pump up
X = no floats

OPTIONS *Listed below*

★ Options selected may increase enclosure size and change component layout.

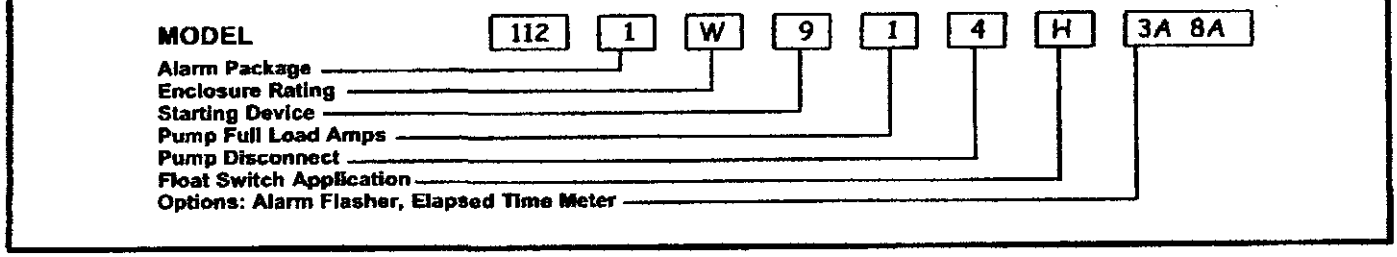
If additional features are required, call the factory for a quote on either a Pro-Line or Engineered Custom control panel system.

	CODE	DESCRIPTION
☐	1A	Red beacon only / no audio *must select 1E if floats included*
☐	1C	Horn only / no visual *must select 1E if floats included*
☐	1E	Alarm float
☐	3A	Alarm flasher
☐ ★	4A	Low level cutout *select option 4D if floats included*
☐ ★	4B	Red low-level indicator & alarm *must select 4A also*
☐	4D	Low-level float
☐	6A	Auxiliary alarm contact, form C type
☐ ★	8A	Elapsed time meter
☐ ★	8C	Event (cycle) counter
☐	10E	Lockable latch - NEMA 4X
☐	10E	Lockable latch - NEMA 1
☐ ★	10F	Lightning arrester
☐ ★	10K	Anti-condensation heater

	CODE	DESCRIPTION
☐	11C	NEMA 1 alarm panel *must select option 6A*
☐	11D	NEMA 4X alarm panel *must select option 6A*
☐	15A	Control / alarm circuit breaker *Does not include the circuit board as in standard.*
☐	16A	10' cord in lieu of 20'
☐	16B	15' cord in lieu of 20'
☐	16C	30' cord in lieu of 20'
☐	16D	40' cord in lieu of 20'
☐	17A	SJE SignalMaster® / mounting strap ●
☐	17B	SJE SignalMaster® / externally weighted ●
☐	17C	Sensor Float® / internally weighted ▲
☐	17D	Sensor Float® / externally weighted ▲
☐	17E	Sensor Float® Mini / pipe clamp ▲
☐	17F	Sensor Float® Mini / externally weighted ▲
☐	19X	Door mounted pump run indicator
☐	21A	Pumpmaster® in lieu of on/off switches ●
☐	21B	PumpMaster® Plus in lieu of on/off switches ●
☐	21C	Super Single® in lieu of on/off switches ▲
☐	21D	Double Float™ in lieu of on/off switches ▲

● Mechanically-activated ▲ Mercury-activated

SAMPLE



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Sensor Float® control switch installation instructions

⚠WARNING **ELECTRICAL SHOCK HAZARD**
Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes.

⚠WARNING **EXPLOSION OR FIRE HAZARD**
Do not use this product with flammable liquids. Do not install in hazardous locations as defined by National Electrical Code, ANSI/NFPA 70.

Failure to follow these precautions could result in serious injury or death. Replace product immediately if switch cable becomes damaged or severed. Keep these instructions with warranty after installation. *This product must be installed in accordance with National Electric Code, ANSI/NFPA 70* so as to prevent moisture from entering or accumulating within boxes, conduit bodies, fittings, float housing, or cable.

MOUNTING THE SWITCH

1. Place the cord into the clamp as shown in Figure B.
2. Locate clamp at desired activation level and secure the clamp to the discharge pipe as shown in Figures A and B. **Note:** Do not install cord under hose clamp.
3. Tighten the hose clamp using a screwdriver. Over tightening may result in damage to the plastic clamp. Make sure the float cable is not allowed to touch the excess hose clamp band during operation.
4. Bring cable leads back to control device and wire according to Figure C.
5. Check installation. Allow system to cycle to insure proper operation.

Note: All hose clamp components are made of 18-8 stainless steel material. See your SJE-Rhombus supplier for replacements.

Figure A

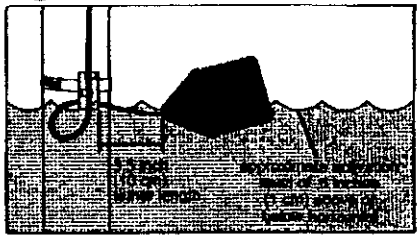
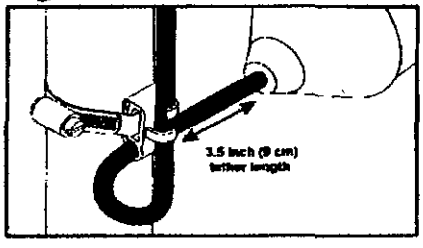


Figure B



INTERNAL WEIGHT

1. Determine desired activation level.
2. Suspend switch 7 inches (18 cm) below desired activation level as shown in Figure D. Switch remains partially submerged during the "on" tipping action. Switch can be totally submerged and still continue to operate properly.
3. Wire cable leads directly into control device as shown in Figure C.
4. Check installation. Allow system to cycle to insure proper operation.

Figure C - Wiring Diagram

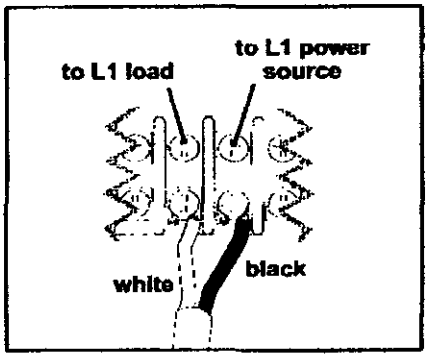
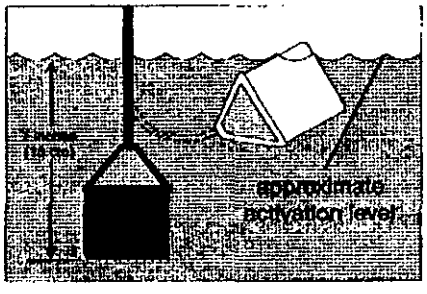


Figure D



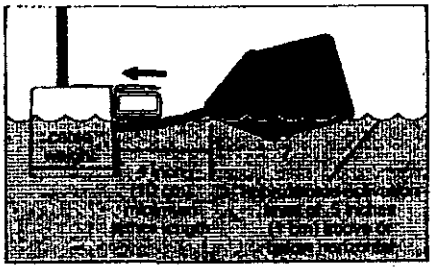
CABLE WEIGHT

1. Determine desired activation level.
2. Suspend switch and cable weight at desired activation level as shown in Figure E.
3. Wire cable leads directly into control device as shown in Figure C.
4. Check installation. Allow system to cycle to insure proper operation.

Cable weight is attached to switch cable at the factory. To adjust:

1. Release clip.
2. Adjust cable weight to desired position.
3. Lay switch cable in weight channel.
4. Align clip with weight channel and slide towards switch cable as shown in Figure E.
5. Snap clip snugly up to cable, moving clip to tightest possible position.

Figure E



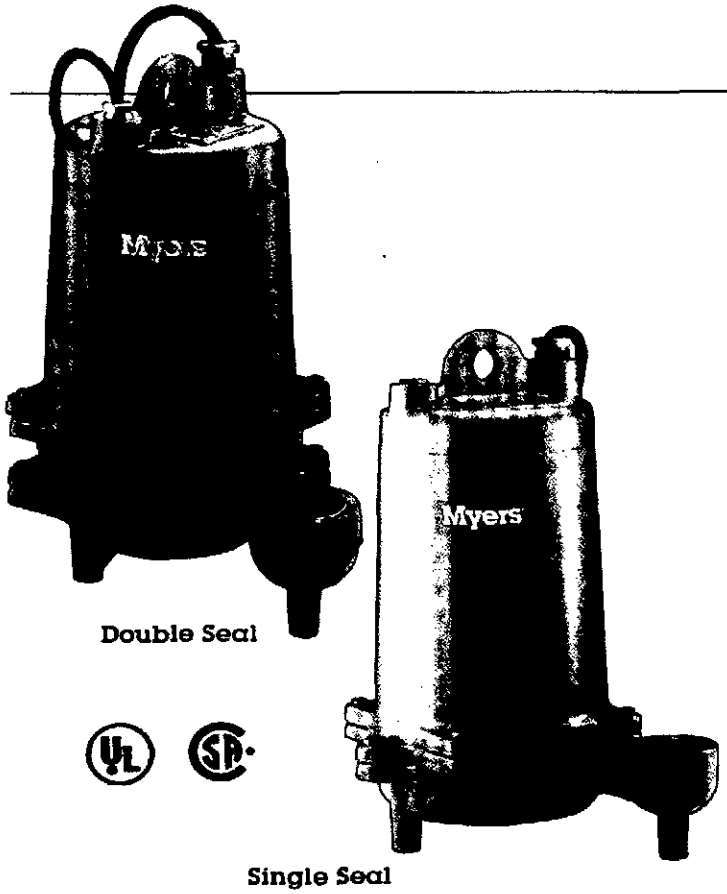
SJE Rhombus CONTROLS
SJ ELECTRO SYSTEMS, INC.
22650 County Highway 6 ■ P.O. Box 1708 ■ Detroit Lakes, Minnesota 56502 USA
1-888-DIAL-SJE (1-888-342-5753) ■ Phone: 218-847-1317 ■ Fax: 218-847-4617
e-mail: sje@sjerhombus.com

Instl. Instr. PN 1009648A
Cat. Page PN 1009509A

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Printed in USA 03/00

ME SERIES

1/2 through 1-1/2 HP
Effluent Pumps



Double Seal

Single Seal

THE MYERS ME SERIES EFFLUENT PUMPS ARE DESIGNED SPECIFICALLY FOR TODAY'S EFFLUENT PRESSURE DISTRIBUTION MOUNDS, TRENCHES AND HIGH FLOW DRAINAGE APPLICATIONS. The ME Series effluent pumps with their efficient two vane, enclosed impellers, provide the ideal performance for optimum dosing. ME Series pumps are constructed of only corrosion resistant materials like cast iron, stainless steel and thermoplastics to assure that they will perform for years to come in the harsh effluent environment and drainage applications. For more information, call your Myers distributor today or the Myers Ashland, Ohio sales office at 419/289-1144.

ADVANTAGES BY DESIGN

IDEAL FOR USE IN MOUND AND TRENCH PRESSURE DISTRIBUTION SYSTEMS

- High efficiency, two vane, enclosed impeller provides ideal performance for most efficient dosing.
- Impeller passes full ¾ inch solids.
- Enclosed impeller design eliminates possibility of jamming or corrosion between impeller and volute.

DURABLE MOTOR WILL DELIVER MANY YEARS OF RELIABLE SERVICE

- Oil-filled motor for maximum heat dissipation and constant bearing lubrication.
- High torque, permanent split capacitor (PSC), single phase motors. No starting switches or relays to wear out.
- Optional seal leak probe warns of seal leak condition. (Dual seal motors only.) Helps prevent costly motor damage.
- Motors have on winding current and temperature sensitive overload. (Single phase only.)

THE ME SERIES EFFLUENT PUMPS ARE DESIGNED FOR YEARS OF MAINTENANCE FREE OPERATION

- Volute seal ring is replaceable. Restores pump to original performance if wear should occur.
- Motor is held in place by 4 screws. Easily removed if service is ever needed.

PRODUCT CAPAILITIES

Capacities To	120 GPM	454 LPM
Heads To	95 ft.	28.9 m
Max. Spherical Solids	¾ in.	19 mm
Liquids Handling	domestic effluent & drain water	
Intermittent Liquid Temp.	up to 140° F	up to 60° C
Motor Electrical Data	1/2 HP 115 volts, 1 ph 1/2 to 1-1/2 HP 230 volts, 1 ph 208, 230, 460, 575 volts, 3 ph oil-filled, permanent split capacitor type, 1 ph, 3450 rpm, 60 Hz	
Motor Insulation	Class B (130° C)	
Third Party Approvals	UL, CSA	
Acceptable pH Range	6-9	
Specific Gravity	.9-1.1	
Viscosity	28-35 SSU	
Discharge, NPT	2 in.	50.8 mm
Min. Sump Dia. Simplex	24 in.	61 cm
Duplex	36 in.	91.4 cm

Construction Materials	
Motor Housing, Volute	cast iron, Class 30, ASTM A48-76
Enclosed Two Vane Impeller Standard	engineered thermoplastic
Optional	bronze
Impeller Wear Ring	304 SST
Volute Sealing Ring	Buna-N
Shaft	416 SST
Power Cord	
1/2 HP 1 Ph	20 ft. 16/3 SJOW/SJOW-A
3/4 - 1-1/2 HP 1 Ph	20 ft. 14/3 SJOW/SJOW-A
All 3 Ph	20 ft. 14/4 SOW/SOW-A
Shaft Seals Standard	single carbon & ceramic
Optional	tandem carbon & ceramic
Opt. Lower	tungsten carbide
Fasteners	300 Series SST

WHERE INNOVATION MEETS TRADITION

ISO 9001 Certified Company

Myers
PENTAIR PUMP GROUP

ME SERIES

1/2 through 1-1/2 HP
Effluent Pumps

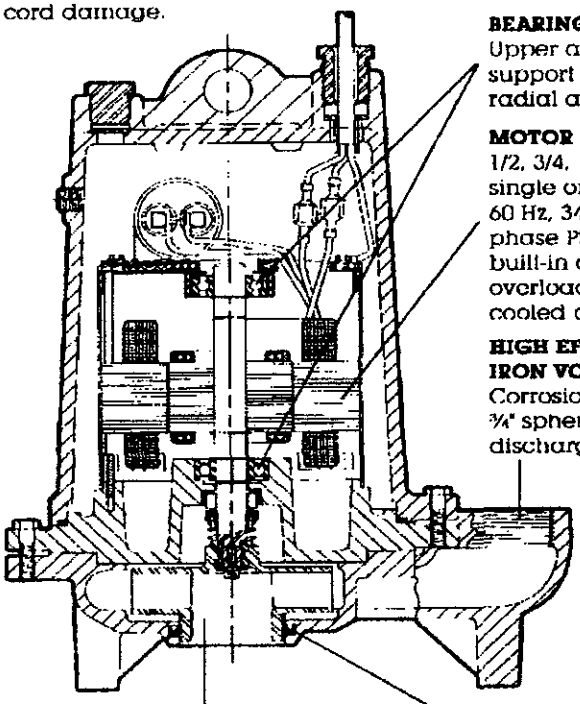
POWER CORD
Jacket sealed with compression fittings. Individual wires potted with epoxy to prevent wicking in case of cord damage.

MOTOR HOUSING
Cast iron for efficient heat transfer and corrosion resistance.

BEARINGS
Upper and lower ball support rotor. Take radial and thrust loads.

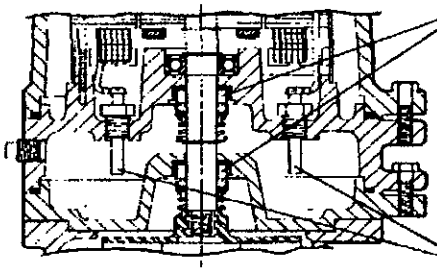
MOTOR
1/2, 3/4, 1 and 1-1/2 HP single or three phase. 60 Hz, 3450 RPM. Single phase PSC motors have built-in on winding overload protection, oil-cooled and lubricated.

HIGH EFFICIENCY CAST IRON VOLUTE
Corrosion resistant. Passes ¾" spherical solids. 2" NPT discharge.



ENCLOSED TWO VANE IMPELLER
high efficiency. Passes ¾" spherical solids with stainless steel wear ring. Optional bronze construction available.

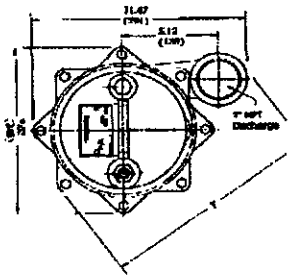
VOLUTE/IMPELLER SEAL RING
Maintains high efficiency and reduces recirculation. Replaceable.

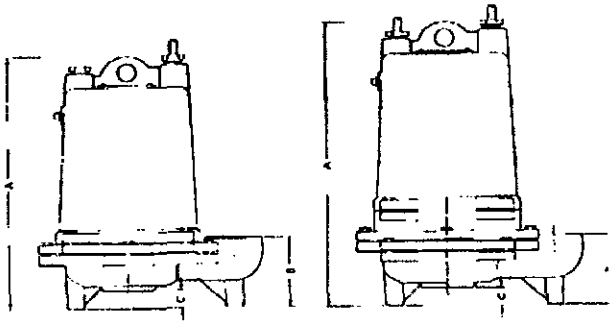


SHAFT SEAL(S)
Carbon and ceramic faces. Optional dual tandem seals. Extends motor life.

SEAL LEAK PROBES
Optional probes (dual seal only) detect water leakage in seal housing. Activates warning light.

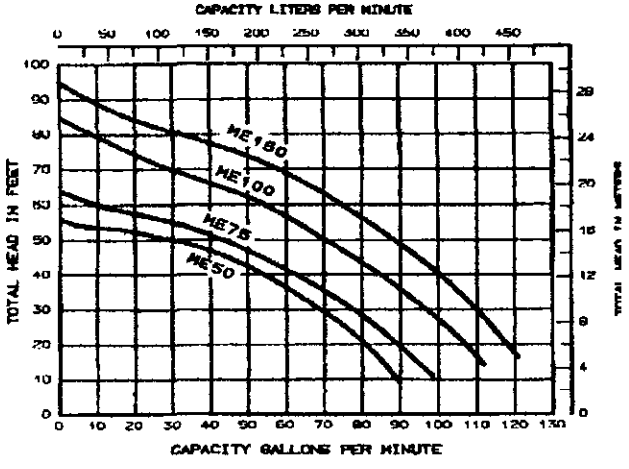
DIMENSIONS





Model Series	Inches (millimeters) A	B	C	F
ME50S	16.8 (427)	4.09 (104)	1.03 (26)	12.13 (308)
ME50D	18.6 (472)	4.09 (104)	1.03 (26)	12.13 (308)
ME75S, ME100S, ME150S	16.8 (427)	4.0 (102)	1.06 (27)	12.5 (318)
ME75D, ME100D, ME150D	18.6 (472)	4.0 (102)	1.06 (27)	12.5 (318)

PERFORMANCE CURVE

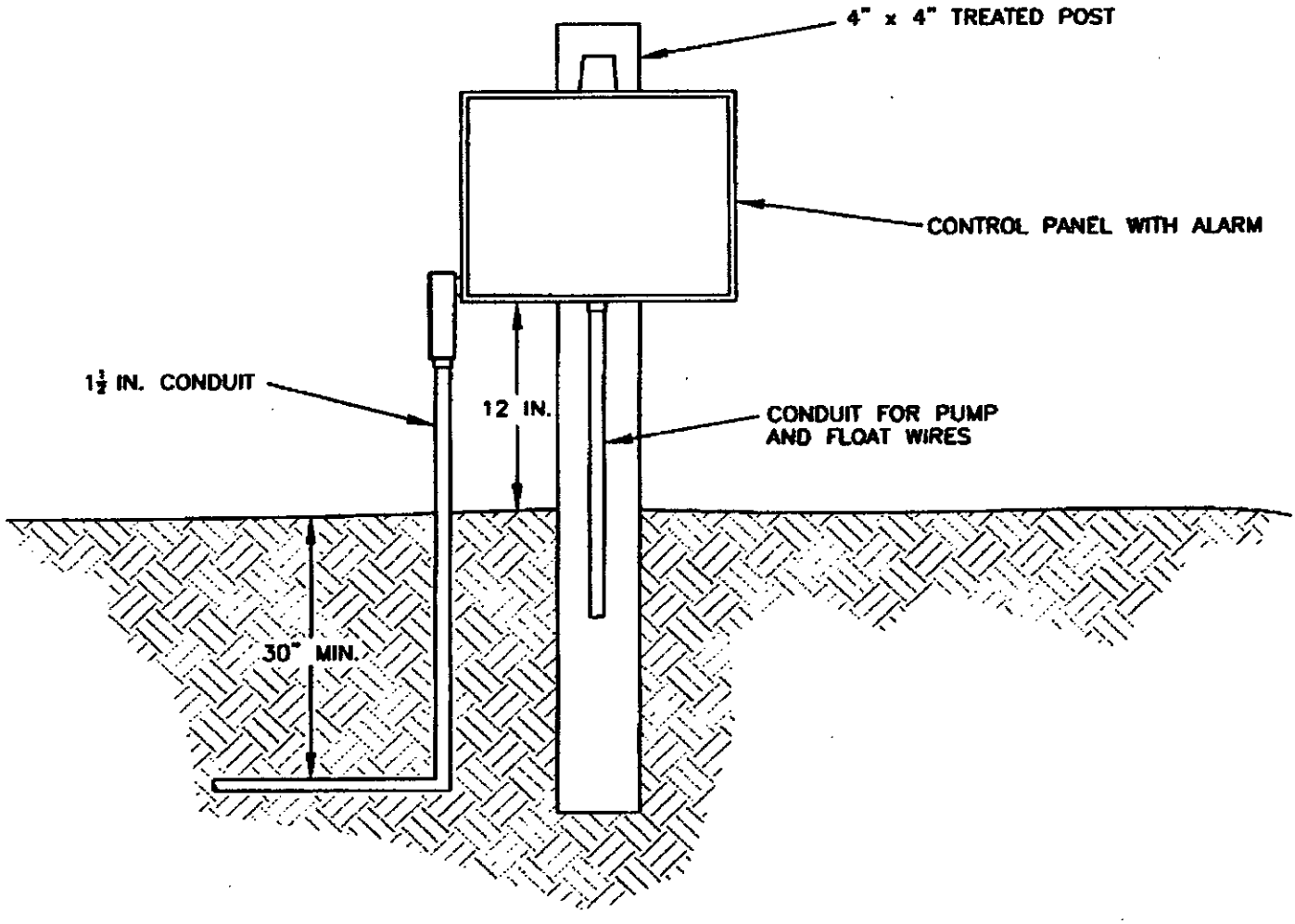


K3320 9/98
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Myers
PENTAIR PUMP GROUP

F. E. Myers, 1101 Myers Parkway, Ashland, Ohio 44805-1969
419/289-1144, FAX: 419/289-6658, www.femyers.com
Myers (Canada), 269 Trillium Drive, Kitchener, Ontario N2G 4W5
519/748-5470, FAX: 519/748-2553

ELECTRIC BOX



NOTES: ELECTRICAL SYSTEM COMPONENTS SHALL BE INSTALLED TO MEET OR EXCEED MINIMUM REQUIREMENTS SPECIFIED IN THE ELECTRICAL COME. ALL WIRING SHALL BE #12 MINIMUM, AND RATED FOR DIRECT BURY. PROVIDE GROUNDING AS REQUIRED, AND PROVIDE 30" MINIMUM BURY ON CABLES. PROVIDE ONE 20 AMP, DOUBLE POLE, 230 VOLT CIRCUIT BREAKER (FOR PUMP), AND ONE 20 AMP; SINGLE POLE, 115 VOLT CIRCUIT BREAKER (FOR ALARM) IN MAIN PANEL.

CALCULATIONS

Location McManus Road

Project Number 5-1619s1

Lot No: 4

No. of Bedrooms	3	
Design Flow	360	$^{gal}/_{day}$
LTAR	0.225	$^{gal}/_{ft^2\,day}$
EZ-Lay? (YES OR NO)	yes	
Supply Line Length	400	ft.
Supply Line Volume	69.6	gal.
Required Feet of Line	400	ft.
Amount of Line from Layout	400	ft.
Gallons per Minute	38.36	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Lateral Line Volume	261.2	gal.
Dosing Volume	182.84	gal.

Note: Dosing Volume based on 70% of the lateral line volume.

Tank Draw Down	8.7	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	4.77	minutes
Estimated Elevation Head	10	ft.
Pressure Head	2	ft.
Friction Factor	2.82	ft./100 ft. *(From the interpolater.)*
Friction Head	11.28	ft.
Total Dynamic Head (+15%)	26.77	ft.

FRICTION FACTOR INTERPOLATER
2" SCH 40 PVC

GPM	*f*
20	0.84
	-0.88
25	1.27
	-1.28
30	1.78
	-1.76
35	2.37
38.4	2.82
40	3.03
40.67	3.13
45	3.77
48.14	4.28
50	4.58
57.11	5.89
58.47	6.14
60	6.42

LOT #4

GWS – RES. APP 12/04

SEPTIC FEE: 700.00
DATE: 4/5/05
CRT [N] Check #2678
N/A

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 # 60578

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:

TAX/PARCEL #: 139-431-02 PO
STREET ADDRESS: 2950 McMANUS RD
CITY: MIDLAND
STATE: NC ZIP: 28107
SUBDIVISION OR MOBILE HOME PARK NAME:
LOT #: 4
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: 3000
NUMBER OF BEDROOMS: 3 5, 3 75
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: Coy McManus
ADDRESS: 1055 Ben Black Rd
CITY: Midland
STATE: NC ZIP: 28107
HOME PHONE: 704-888 2198 WORK PHONE:
MOBILE PHONE: 704-904-6051 FAX:

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME:
ADDRESS:
CITY:
STATE: ZIP:
HOME PHONE: WORK PHONE:
MOBILE PHONE: FAX:

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED?

WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY?

*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.

Coy McManus 6-30-05
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.

Margaret C. McManus 6-30-05
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

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

Sheet: 1 of 2
Property ID # PO 139-431-02
Lot #: 4
File #: 6057B
Code: 2

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: Coy McManus
Applicant:
Address: 1055 Ben Black Road, Midland, N. C. 28107
Date Evaluated: 8/15/05
Proposed Facility: Residence
Design Flow (.1949): 360gpd
Property Size: 5.38a
Location of Site: 2950 McManus Road
Property Recorded:
Water Supply: [ ] Public [x] Individual [x] Well [ ] Spring [ ] Other
Evaluation Method: [ ] Auger Boring [x] 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 (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
1	LS, 10	0-4	GR/SICL	FR/SEXP/SS/SP	>37" TO SOIL WETNESS	37	N/A	NONE	PS, IV .2GPD/FT^2
		4-14	SBK/SICL	"					
		14-32	SBK/SIC	FI/SEXP/S/P					
		32-37	SBK/SICL	FR/SEXP/SS/SP					
2	"	0-3	GR/SICL	"	>27" TO SOIL WETNESS	27	"	"	US, IV .15GPD/FT^2
		3-14	SBK/SICL	"					
		14-27	SBK/SIC	FI/SEXP/S/P					
3	LS, 8	0-3	GR/SICL	FR/SEXP/SS/SP	>36" TO SOIL WETNESS	36	"	"	PS, IV .2GPD/FT^2
		3-11	SBK/SICL	"					
		11-36	ABK/SBK/SIC	FI/SEXP/S/P					
		36+	M/SIC	"					
4	LS, 8	0-5	GR/SICL	FR/SEXP/SS/SP	>33" TO SOIL WETNESS	33	"	"	PS, IV .25GPD/FT^2
		5-33	ABK/SBK/SIC	FI/SEXP/S/P					
5	LS, 6	0-8	GR/SICL	FR/SEXP/SS/SP	2.5Y7/1at 23"	34	"	"	US, IV
		8-34	ABK/SIC	FI/SEXP/S/P					
6	"	0-4	GR/SICL	FR/SEXP/SS/SP	>24" TO SOIL WETNESS	24	"	"	US
		4-13	SBK/SICL	"					
		13-24	ABK/SIC	VFI/EXP/VS/VP					
		24+	SAPROLITE						

Description	Initial System	Repair System
Available Space (.1945)	PS	US
System Type(s)		
Site LTAR	.1GPD/FT^2	.1GPD/FT

Other Factors (.1946):
Site Classification (.1948): UNSUITABLE
Evaluated By: W. R. Marlin, LSS, 8/19/2005, W. R. Marlin
Others Present:

COMMENTS:
100% repair

Landscape Position	Group	Texture	.1955 LTAR
R-Ridge	I	S-Sand	1.2 - 0.8
SS-Shoulder Slope		LS-Loamy Sand	
LS-Linear Slope			
FS-Food Slope	II	SL-Sandy Loam	0.8 - 0.6
NS-Nose Slope		L-Loam	
HS-Head Slope			
CC-Concave Slope	III	SI-Silt	0.6 - 0.3
CV-Convex Slope		SICL-Silty Clay Loam	
T-Terrace		CL-Clay Loam	
FP-Flood Plain		SCL-Sandy Clay Loam	
	IV	SC-Sandy Clay	0.4 - 0.1
		SIC-Silty Clay	
		C-Clay	

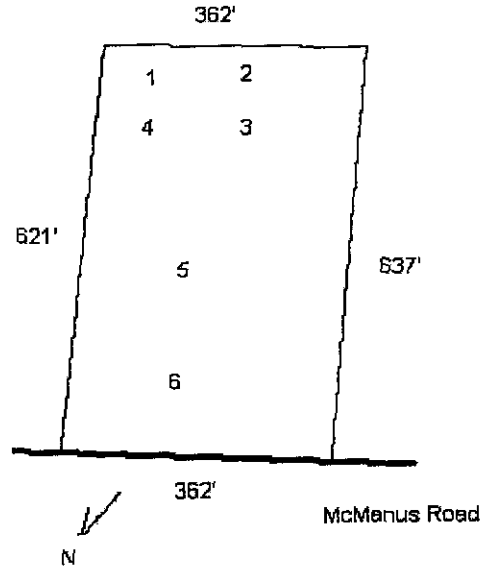
Structure
SG-Single Grain
M-Massive
CR-Crumb
GR-Granular
SBK-Subangular Blocky
ABK-Angular Blocky
PL-Platy
PR-Prismatic

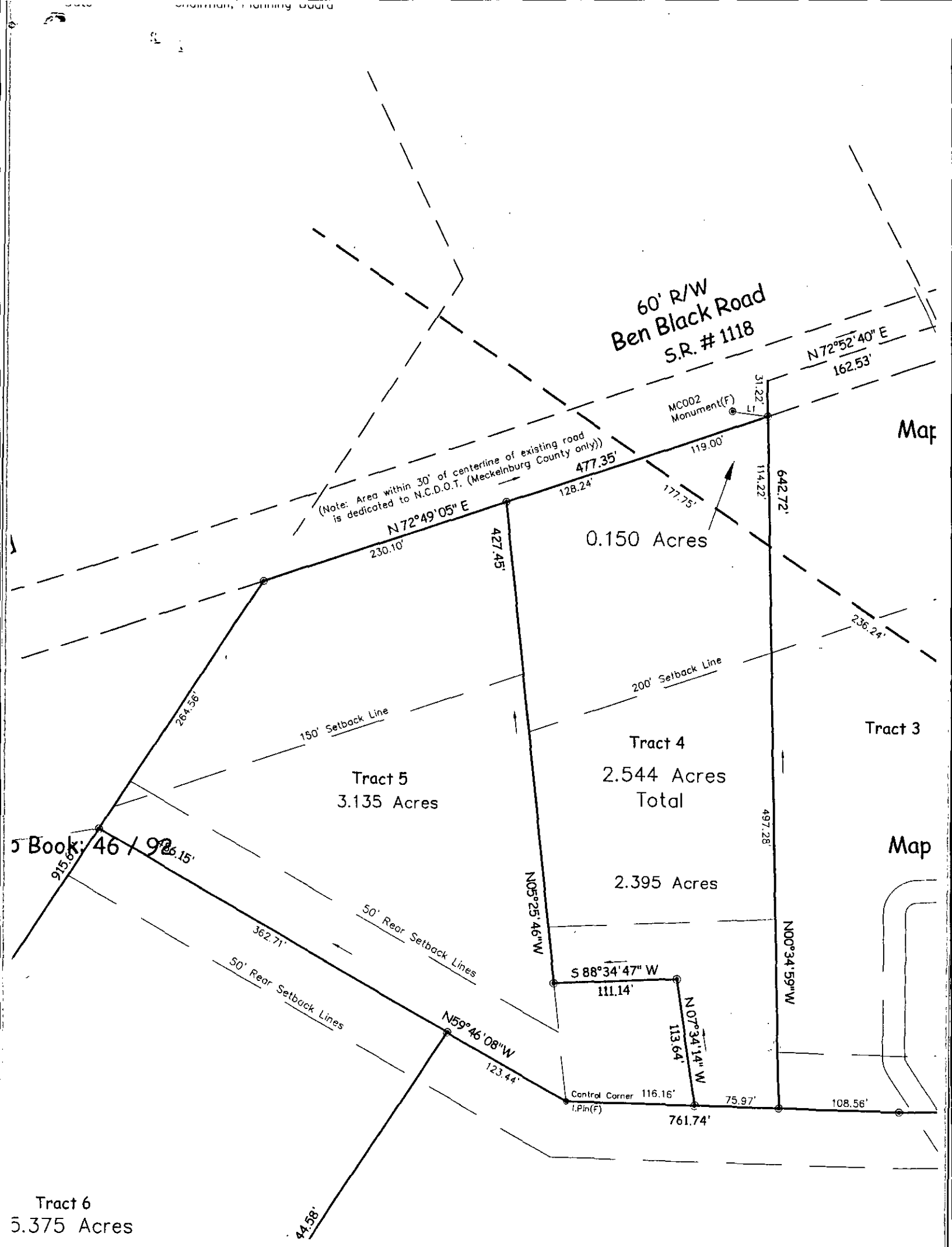
Consistence
Moist
VFR-Very Friable
FR-Friable
FI-Firm
VFI-Very Firm
EFI-Extremely Firm

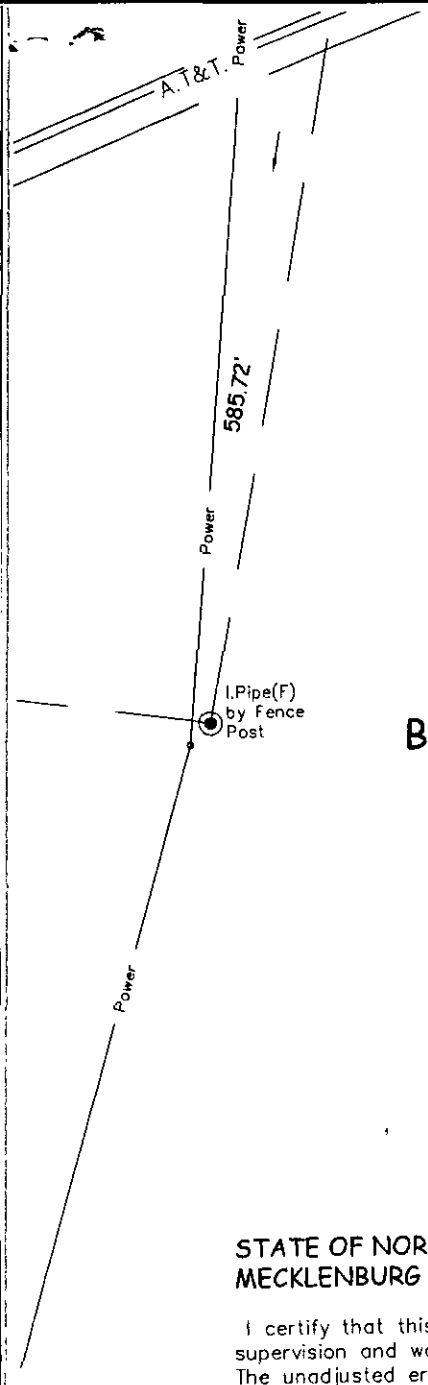
Consistence
Wet
NS-Non-Sticky
SS-Slightly Sticky
S-Sticky
VS-Very Sticky
NP-Non-Plastic
SP-Slightly Plastic
P-Plastic
VP-Very Plastic

Mineralogy
SEXP-Slightly Expansive
EXP-Expansive

Sketch of Soil Evaluation Locations




60' R/W
Ben Black Road
S.R. # 1118
N 72°52'40" E
162.53'
31.22'
MC002
Monument(F)
119.00'
114.22'
642.72'
(Note: Area within 30' of centerline of existing road is dedicated to N.C.D.O.T. (Meckelnburg County only))
N 72°49'05" E
230.10'
128.24'
477.35'
177.75'
427.45'
0.150 Acres
236.24'
200' Setback Line
150' Setback Line
264.56'
Tract 5
3.135 Acres
Tract 4
2.544 Acres
Total
2.395 Acres
Tract 3
497.28'
Book: 46 / 92
915.6'
26.15'
362.71'
50' Rear Setback Lines
50' Rear Setback Lines
N05°25'46"W
S 88°34'47" W
111.14'
N 07°34'14" W
113.64'
N00°34'59"W
N59°46'08"W
123.44'
Control Corner
I.Pin(F)
116.16'
75.97'
108.56'
761.74'
44.58'
Tract 6
5.375 Acres



Boy Scouts of America, Inc.
11049 / 945
Tax # 139-431-10

NORTH CAROLINA PROFESSIONAL SEAL L-3600 LAND SURVEYOR GREGORY S. FLOWE

STATE OF NORTH CAROLINA
MECKLENBURG COUNTY

I certify that this map was drawn from an actual survey made under my supervision and was prepared in accordance with G.S. 47-30 as amended. The unadjusted error of closure as calculated is 1': 10,000 + _____. Boundaries not surveyed, if any, are noted. Deed descriptions are recorded in Book AS _____, Page SHOWN _____.

Witness my hand and seal this 1st day of ~~May~~ October 20 05.

Professional Land Surveyor

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

Sheet: 1 of 2
Property ID # PO 139-431-02
Lot #: 4
File #: 6057B
Code: 2

AC

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: Coy McManus
Applicant:
Address: 1055 Ben Black Road, Midland, N. C. 28107
Date Evaluated: 8/15/05
Proposed Facility: Residence
Design Flow (.1949): 360gpd
Property Size: 5.38a
Location of Site: 2950 McManus Road
Property Recorded:
Water Supply: [ ] Public [x] Individual [x] Well [ ] Spring [ ] Other
Evaluation Method: [ ] Auger Boring [x] 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 (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
1	LS, 10	0-4	GR/SICL	FR/SEXP/SS/SP	>37" TO SOIL WETNESS	37	N/A	NONE	PS, IV .2GPD/FT^2
		4-14	SBK/SICL	"					
		14-32	SBK/SIC	FI/SEXP/S/P					
		32-37	SBK/SICL	FR/SEXP/SS/SP					
2	"	0-3	GR/SICL	"	>27" TO SOIL WETNESS	27	"	"	US, IV .15GPD/FT^2
		3-14	SBK/SICL	"					
		14-27	SBK/SIC	FI/SEXP/S/P					
3	LS, 8	0-3	GR/SICL	FR/SEXP/SS/SP	>36" TO SOIL WETNESS	36	"	"	PS, IV .2GPD/FT^2
		3-11	SBK/SICL	"					
		11-36	ABK/SBK/SIC	FI/SEXP/S/P					
		36+	M/SIC	"					
4	LS, 8	0-5	GR/SICL	FR/SEXP/SS/SP	>33" TO SOIL WETNESS	33	"	"	PS, IV .25GPD/FT^2
		5-33	ABK/SBK/SIC	FI/SEXP/S/P					
5	LS, 6	0-8	GR/SICL	FR/SEXP/SS/SP	2.5Y7/1at 23"	34	"	"	US, IV
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Available Space (.1945)	PS	US
System Type(s)		
Site LTAR	.1GPD/FT^2	.1GPD/FT

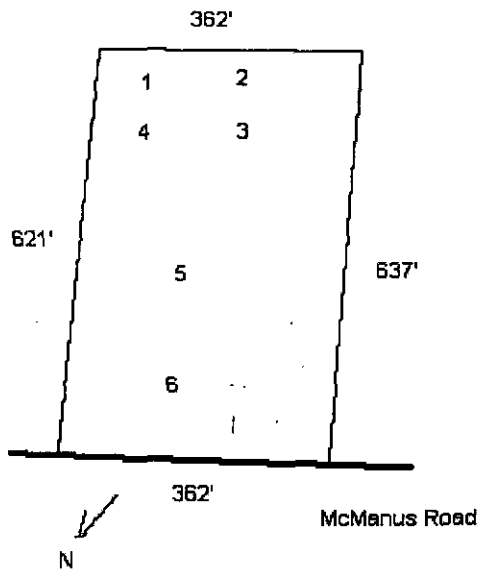
Other Factors (.1946):
Site Classification (.1948): UNSUITABLE
Evaluated By: W. R. Marlin, LSS, 8/19/2005, W. R. Marlin
Others Present:

COMMENTS:
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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		CL-Clay Loam		
FP-Flood Plain		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
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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



Lot #14

GWS – RES. APP 12/04

SEPTIC FEE: 200.00
DATE: 4/5/05
CRT [ ] Check 2678
VRA

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 # 60057B

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:

TAX/PARCEL #: 139-431-02
STREET ADDRESS: * 2950 McMANUS Rd
CITY: * MIDLAND
STATE: NC ZIP: * 28107
SUBDIVISION OR MOBILE HOME PARK NAME:
LOT #: 4
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: * 3000
NUMBER OF BEDROOMS: * 3
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: Coy McManus
ADDRESS: 1055 Ben Black Rd
CITY: Midland
STATE: NC ZIP: 28107
HOME PHONE: 704-888-2198 WORK PHONE:
MOBILE PHONE: 704-904-6051 FAX:

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME:
ADDRESS:
CITY:
STATE: ZIP:
HOME PHONE: WORK PHONE:
MOBILE PHONE: FAX:

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED?

WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY?

*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.

Coy McManus 6-30-05
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.

Margaret C. McManus 6-30-05
Owner's/Agent's Signature Date

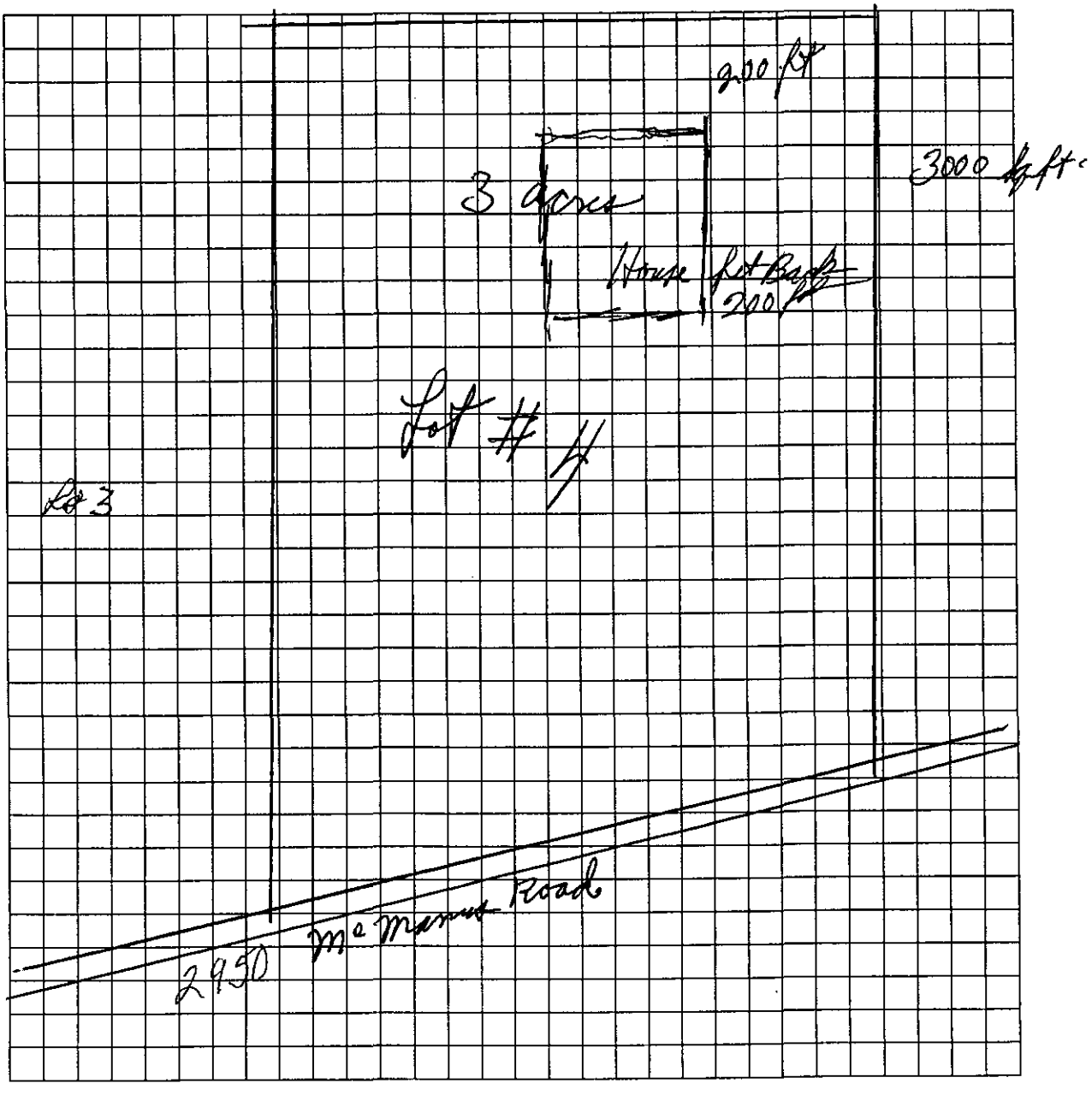
MECKLENBURG COUNTY HEALTH DEPARTMENT
GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST., SUITE 211
CHARLOTTE, NC 28202
704-336-5103 / FAX: 704-336-6894

Mecklenburg County
Land Use & Environmental Service Agency
Groundwater & Wastewater Services
700 N. Tryon St., Suite 211
Charlotte, NC 28202
Phone: (704) 336-5103
Fax: (704) 336-6894

File # 60578
Approval Date_____

APPROVED PLOT PLAN

A map showing existing and proposed property lines and easements with dimensions, the location of the single family residence, non-single family residence, or other facility, and appurtenances, the site for the proposed well, and the location of existing or proposed sewer lines and/or sewage disposal systems, surface water bodies, aboveground or underground storage tanks. Name all roads adjoining the property.



Owner/Agent Signature Roy McManus	Staff Signature
Date 6-30-05	Date

LBC 12/15/04

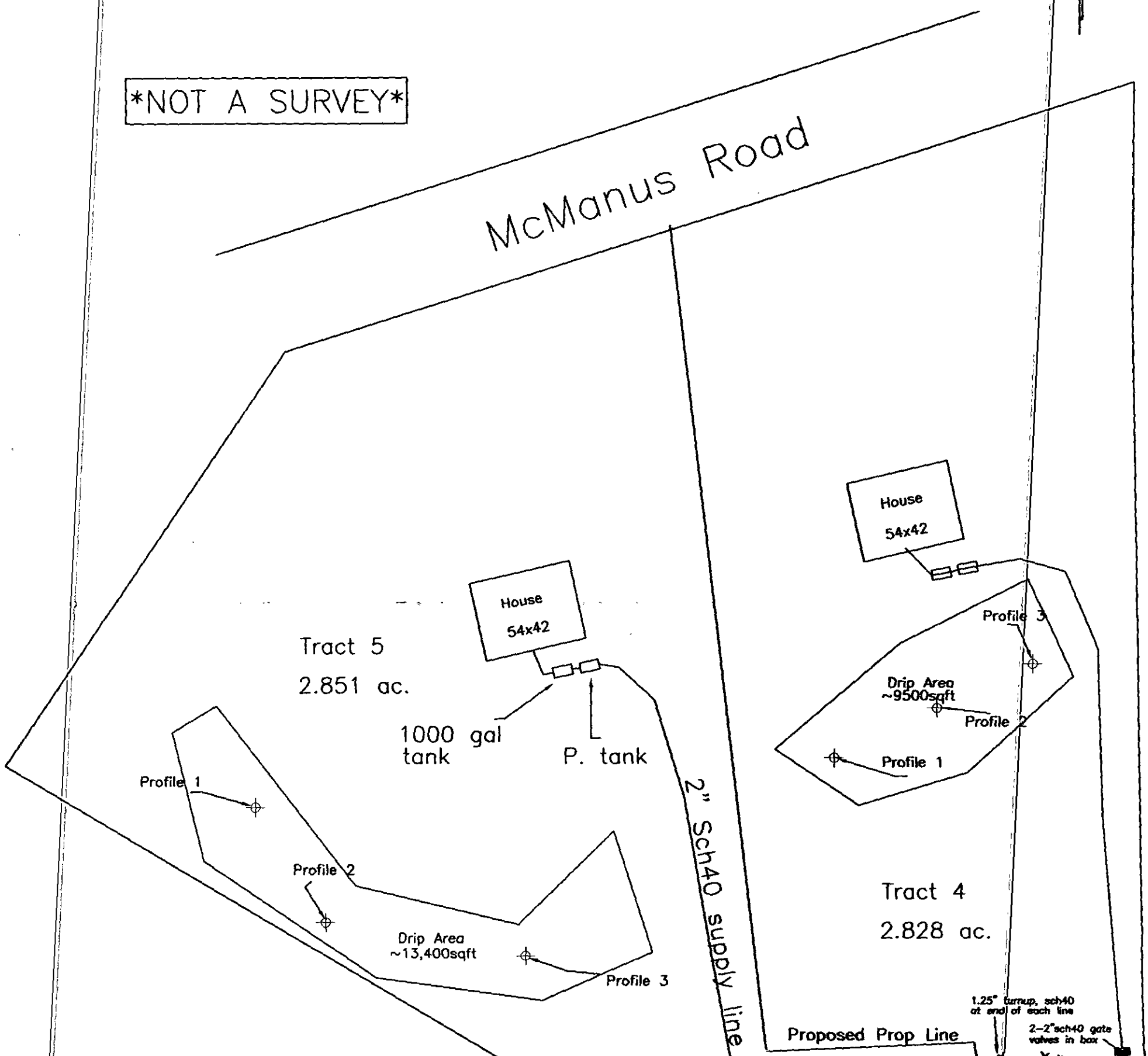
SEPTIC SYSTEM
LAYOUT SKETCH MAP

GRAPHIC SCALE
1" = 60'

60 0 60 120

DRAFT
FOR REVIEW ONLY

NOT A SURVEY



**SUITABLE FOR PRELIMINARY PLANNING PURPOSES ONLY. ALL LOTS WILL REQUIRE APPROVAL BY THE COUNTY HEALTH DEPARTMENT ON A LOT BY LOT BASIS. THIS MAP SHOULD BY USED AS A GENERAL GUIDE. SOME ADJUSTMENTS WILL BE NECESSARY IN THE FIELD DUE TO SOIL VARIABILITY AND TOPOGRAPHIC IRREGULARITIES.
THIS MAP ONLY REFLECTS EXISTING SOIL SUITABILITY FOR ON-SITE SEPTIC TANK SYSTEMS. SOME OTHER CONSIDERATIONS THAT AFFECT SITE SUITABILITY THAT SHOULD BE CONSIDERED IN DEVELOPMENT DESIGN ARE:

1) 10' SETBACK FROM PROPERTY LINE
2) 100' SETBACK FROM ANY WELL
3) 50' SETBACK FROM STREAMS, PONDS OR LAKES.

See accompanying S&EC report.

PROJECT NAME: MCMANUS ROAD
COY MCMANUS
- MCMANUS ROAD -
MECKLENBURG COUNTY, NORTH CAROLINA
SEPTEMBER 2005

S&EC

Soil & Environmental Consultants, PA
236 LaPhillip Ct. STE C • Concord, North Carolina 28025 • Phone (704)720-9405 • Fax (704) 720-9406

FILE C:\JOBS\5-1619
1" = 60'
SCALE
WO
FIELD WORK
BF
DRAWN
WO
PROJECT MGR.
5-1619
JUG NO.