

Date: 01-04-2022
To: Travis County
From: Kevin Moore

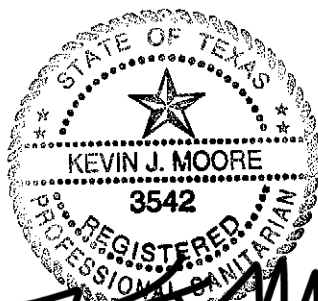
RE: 19-22747, 10218 Longhorn Skyway

1. See revised manifold on 6-foot centers.
2. See tank.

Sincerely,



Kevin Moore



01-04-2022

Kevin J. Moore, R. S.

Registered Professional Sanitarian # 3542

Site Evaluator # OS-0011071

Installer II # OS-0019037

P.O. BOX 1088

Liberty Hill, TX 78642

(512) 689-9293

(512) 758-8037 fax

email: septicplan@gmail.com

300 GALLON PER DAY CLASS III LOW PRESSURE DOSE ON-SITE SEWAGE FACILITY

**LOCATION OF PROPERTY:
10218 LONGHORN SKYWAY
DRIPPING SPRINGS, TX 78620**

LOT 10 BLK KK VALLEY LAKE HILLS SEC 1



12-01-2021

12-01-2021 10218 Longhorn Skyway, Dripping Springs, TX

SITE EVALUATION

profile #1

0 - 4" Class III dark brown silty clay loam. No evidence of ground water. No restrictions.
Less than 30% gravel.
4 - 30" Class III tan silty clay loam. No evidence of ground water. No restrictions.
Less than 30% gravel.
30 - ?" Fractured limestone.

profile #2

0 - 4" Class III dark brown silty clay loam. No evidence of ground water. No restrictions.
Less than 30% gravel.
4 - 28" Class III tan silty clay loam. No evidence of ground water. No restrictions.
Less than 30% gravel.
28 - ?" Fractured limestone.

<u>Property vegetated with natural grasses:</u>	<u>Yes</u>
<u>Property located within the 100-year floodplain:</u>	<u>No</u>
<u>Property located over the E.A.R.Z.:</u>	<u>No</u>
<u>Positive drainage exists at this property:</u>	<u>Yes</u>
<u>Other easements located on property:</u>	<u>No</u>
<u>Existing OSSF's located on this property:</u>	<u>No</u>
<u>Presence of upper watershed:</u>	<u>No</u>
<u>Presence of adjacent ponds, streams, or water impoundments:</u>	<u>No</u>
<u>Existing or proposed water well within 150':</u>	<u>No</u>
<u>Organized sewerage available to lot or tract:</u>	<u>No</u>
<u>Existing or proposed rainwater collection system:</u>	<u>No</u>

Based on the above-mentioned site evaluation, the following OSSF's may be utilized:

- Low Pressure Dose
- A.T.U. drip irrigation

Impervious Coverage Calculations

Proposed Foundation = 2,546

Proposed Sidewalk = 57 sf

Driveway = 383 sf

OSSF Total Area = 1,590 sf

Total Impervious Cover Area = 4,576 sf

Lot Size = 11,482 sf

Total Proposed Impervious Cover Percentage = 40 %

DESIGN CONCLUSION

1 to 4-bedroom / <3500 square feet

Based on the results of the site evaluation, a **low-pressure dose OSSF** was selected for this site.

PROPOSED OSSF DESIGN

- A two-way cleanout placed within three feet of the house and every 50 feet between the house and tank.
- A Buchanan 1500-gallon three-compartment septic. Tank must have a minimum 5' setback from the foundation and be level within 1". Tank should be bedded with a minimum of 4" of washed sand. The tank will be connected to the house with 3 or 4-inch SCH 40 PVC. The inlet and outlet devices for the septic tank(s) shall consist of "T" branch fittings. The outlet "T" of the 2-compartment tank will protrude the effluent to a depth of 9 – 18 inches (tank bottom 36 inches from bottom of outlet). There will not be a "T" branch fitting installed on the outlet of the pump tank or pump chamber as the outlet will remain sealed and the supply line will exit the top of the tank.
- Manhole inspection ports for the septic tank will be backfilled below finished grade and must extend to within 12 inches of the finished surface grade not requiring additional safety measures.
- The tank excavation will be backfilled with soil or pea gravel that is free of rock larger than 1/2 inch in diameter. Class IV soils and gravel larger than 1/2 inch in diameter are not acceptable for use as backfill material.
- There will be a minimum of 1/8 inch of fall per linear foot between the structure and septic tank.
- Approximately 95' of 2-inch supply line (SCH 40 PVC).
- The drain field will consist of 330 linear feet. These trenches shall be separated by 3 feet of undisturbed soil (pipes placed on 6-foot centers).

CALCULATIONS

- Maximum daily discharge rate: 300 GPD (Q)
- Soil application rate: 0.2 for class III soil (Ra)
- Total absorptive area: A
- Total feet of lateral line: L

Total absorptive area (A) = Q / Ra Therefore, $300 / .2 = 1500$ square feet.

Total feet of lateral line (L) = $A / (w + 2H)$
 $1500 / [3 + 2(.92)]$
 $1500 / 4.83$
L = 311'

DRAINFIELD CRITERIA

Manifold size: 2-inch SCH 40 PVC
Lateral line: 1" schedule 40 PVC

Trench #1 is highest in elevation; Trench #11 is lowest in elevation

<u>length</u>	<u>Start Head</u>	<u>Elev. Diff.</u>	<u>Fric. Loss</u>	<u>Total Head</u>	<u>Inset</u>	<u>Hole Space</u>	<u># Holes</u>	<u>GPM Hole</u>	<u>GPM Line</u>	<u>Flow Rate</u>	<u>Bypass Flow</u>
1. 30'	2.000'	0.00'	0.000'	2.000'	18"	3.00'	10	0.410	04.100	0.137	39.705

2.	40'	2.000'	0.20'	0.181'	2.019'	24"	3.00'	13	0.415	05.395	0.135	34.310
3.	40'	2.019'	0.20'	0.137'	2.082'	24"	3.00'	13	0.420	05.460	0.137	28.850
4.	40'	2.082'	0.20'	0.099'	2.183'	24"	3.00'	13	0.425	05.525	0.138	23.325
5.	50'	2.183'	0.20'	0.066'	2.317'	7.5"	3.25'	16	0.440	07.040	0.141	16.285
6.	50'	2.317'	0.20'	0.034'	2.483'	6"	3.50'	15	0.455	06.825	0.137	09.460
7.	40'	2.483'	0.20'	0.012'	2.671'	9"	3.50'	12	0.465	05.580	0.140	03.880
8.	27'	2.671'	0.20'	0.002'	2.869'	18"	3.00'	8	0.485	03.880	0.144	00.000
317 ft.								100	43.805			

STORAGE VOLUMES

SUPPLY LINE

16.2 GALLONS WITH 100 LINEAR FEET OF 1.5 INCH SCHEDULE 40 PVC

95 feet = 15.39 gallons

LATERAL LINE

4.1 GALLONS WITH 100 LINEAR FEET OF 1 INCH SCHEDULE 40 PVC

375 feet = 15.375 gallons

DOSING VOLUMES

Minimum

$V(\text{dose}) = 15.39 + 5(15.375 \text{ Gal}) = 92.265 \text{ gallons}$

As designed

300 gpd

Dosing volume as designed is 97.23 gallons

Therefore, 300 gallons / 97.23 gallons = 3 doses per day

Duration of each dose

$97.23 \text{ gallons} / 60.9 \text{ gpm} = 1.6 \text{ minutes per dose (1 min., 36 sec.)}$

HEAD PRESSURE CALCULATIONS

<i>Total Head:</i>	pump depth - elevation to field ends	=	03.5 elevation head
	4' + -0.5'	=	01.5 friction head
	25' of 2" supply line @ 43.805 gpm	=	<u>02.0 pressure head</u>
	Head Pressure Setting	=	07.0 total head

Head pressure will be set with a two-foot riser pipe attached to the highest trench in the drain field and will be regulated by a ball valve.

PUMP TO BE USED

- ½ hp Liberty 280 Series

PUMP TANK DATA

A Buchanan 1500-gallon three-compartment septic tank. A minimum of 300 gallons after the alarm on float will be achieved (1-day full reserve). The manhole inspection port for the pump tank shall have a riser to the ground surface. The riser shall be permanently fastened to the tank lid. The riser lid shall screw down. A secondary plug shall be provided below the riser lid. A Check valve will be needed on this design for the supply line exiting the pump tank. Here are the alarm settings:

Inlet @ 36 above the floor (541.67 gallons / 39" = 13.89 gallons per inch) **with outlet sealed**
Alarm on at 14" above the floor (305-gallon reserve)
Start pump at 13" above the floor (97.23-gallon dose)
Stop pump at 6" above the floor (83.34-gallon constant level)

ALARM SYSTEM

An audio/visual high-water alarm will be installed on this system at a highly visible location. The pump and the alarm will be wired on separate circuits.

TRENCH SPECIFICATIONS

- Schedule 40 PVC or greater
- 1531 square feet drain field
- 317 feet of lateral line
- Trench depth: 11 - 16"
- Trench width: 36"
- Trench bottoms should be level within 1 inch every 25' (maximum difference of 3 inches).
- Each drain field pipe shall be placed on a minimum of 6" of uniform grade (washed gravel 0.75 - 2.0 inches) under the pipe. Turn-ups will be installed on the ends of the lateral lines for future servicing.
- **Each trench shall consist of a minimum of 11" of uniform grade (washed gravel 0.75 - 2.0 inches).**
- The gravel will then be covered with a geotextile fabric
- The entire field area is to be covered with a minimum of 6" of class Ib, II, or III backfill ensuring positive drainage off the drain field.
- The field then must be seeded, hydro-mulched or sodded immediately after installation.
- Fields must be always maintained (mowed).
- No part of the disposal area shall be located within 10 feet of a potable water line.

OSSF MAINTENANCE & LIMITATIONS

This OSSF design is intended to meet the minimum state requirements provided by TCEQ's Title 30 Texas Administrative Code, Chapter 285- On-Site Sewage Facility Regulations effective December 29, 2016. The homeowner should be aware that a septic system of limited capacity would not tolerate prolonged abuse. The operational requirements listed below should be always followed:

- Water saving devices shall be utilized throughout the life of this system. Never place a greater wastewater load on your system than prescribed by the rules and regulations as described within this report. (300 gpd)
- Garbage disposals should be avoided. The use of garbage disposals could cause complete system failure.
- The water softener shall regenerate using a demand-initiated regeneration (DIR) control device. The water softener shall be clearly labeled as being equipped with a DIR control device as follows: the label shall be affixed to the outside of the water softener so the label can be easily inspected and read; and the label shall provide the name of the company that installed the water softener.
- Do not dispose grease into the OSSF.
- Do not dispose of any objects into the system other than toilet paper.
- Do not add any treatment items to the system, such as, toilet tank chlorine tablets, yeast, enzymes

etc.

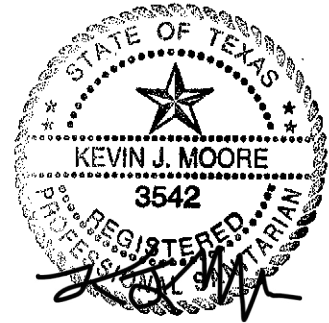
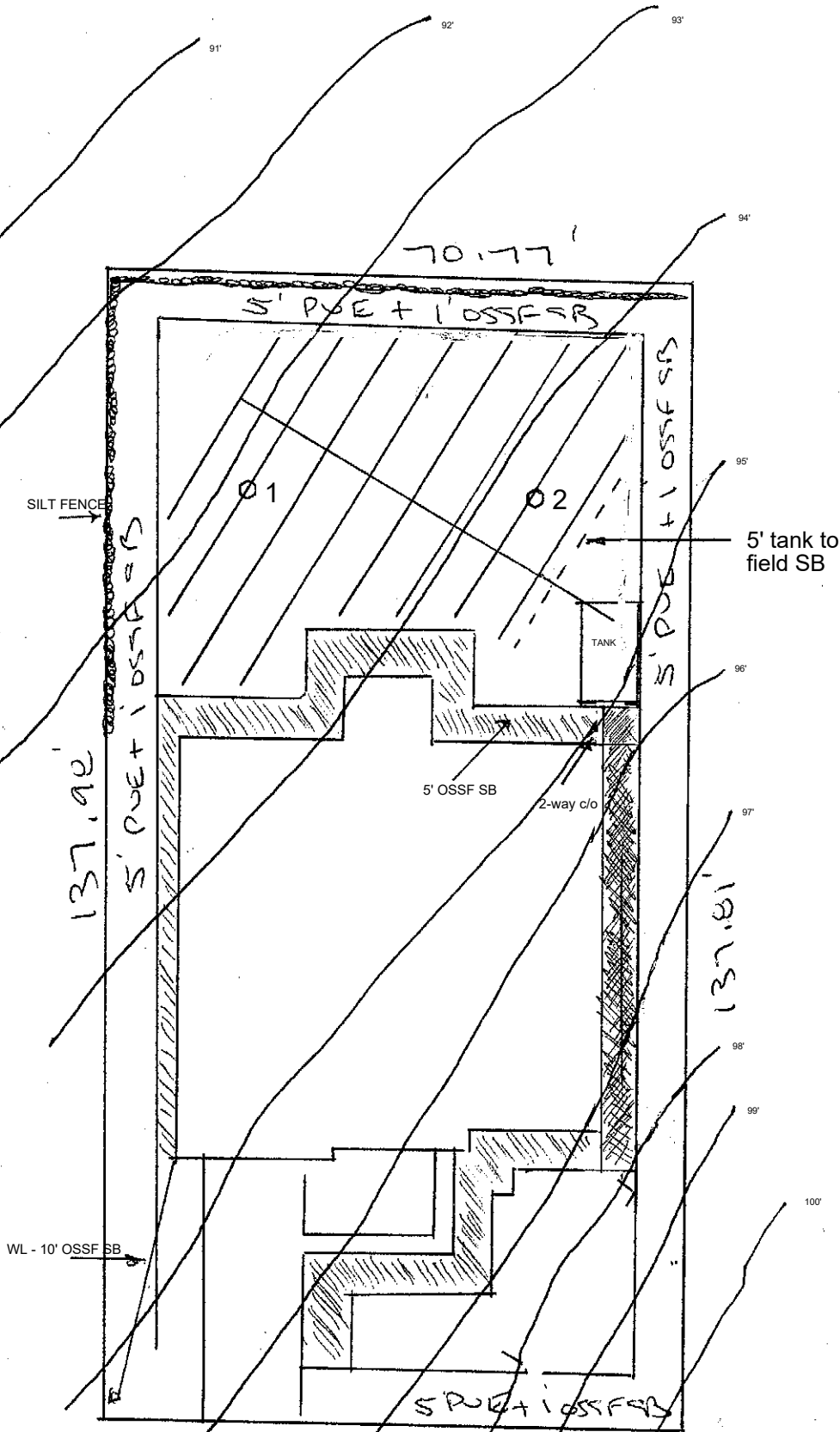
- Repair all leaky faucets and toilets immediately.
- Rainfall runoff, surface water runoff, and sub-surface water seepage must be diverted from the OSSF by the homeowner.
- Do not operate heavy machinery over tanks, supply lines, and drain field.
- Maintain vegetation over the drain field. Keep the vegetation over the drain field mowed. It is imperative that the homeowner establish and maintain vegetation.
- Have your system evacuated every 1 to 3 years to prevent sludge buildup and to enhance your system's overall performance.

NO DEVIATION IN THESE RULES AND REGULATIONS IS PERMITTED WITHOUT PRIOR VARIANCE APPROVAL BY THE REGULATING AUTHORITY. THE DESIGNER MUST BE NOTIFIED PRIOR TO ANY CONSTRUCTION OF THE OSSF TO OVERVIEW PLANNING CRITERIA. FAILURE TO CONSULT WITH DESIGNER NEGATES ALL LIABILITY FROM DESIGNER. THE LICENSED INSTALLER MAY DEVIATE OSSF COMPONENT LOCATION NO GREATER THAN TEN FEET, HOWEVER, THE DESIGNER MUST BE NOTIFIED PRIOR TO ANY CHANGE IN THE INSTALLATION OF THIS OSSF AS SHOWN IN THIS DESIGN.



SCALE: 1" = 20'

○ PROFILE HOLE

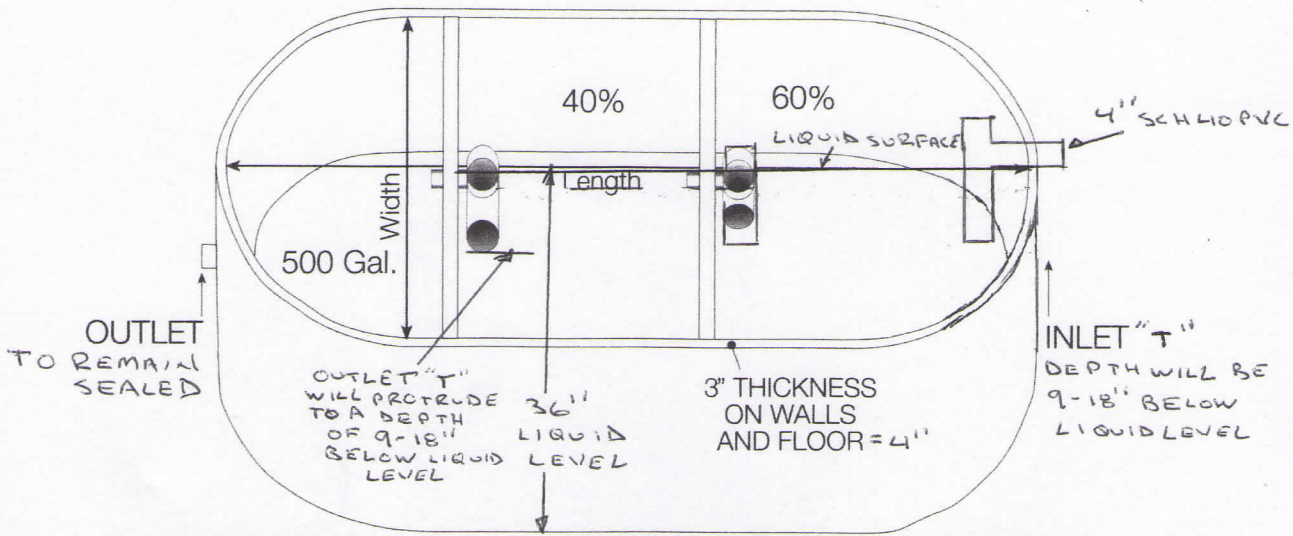


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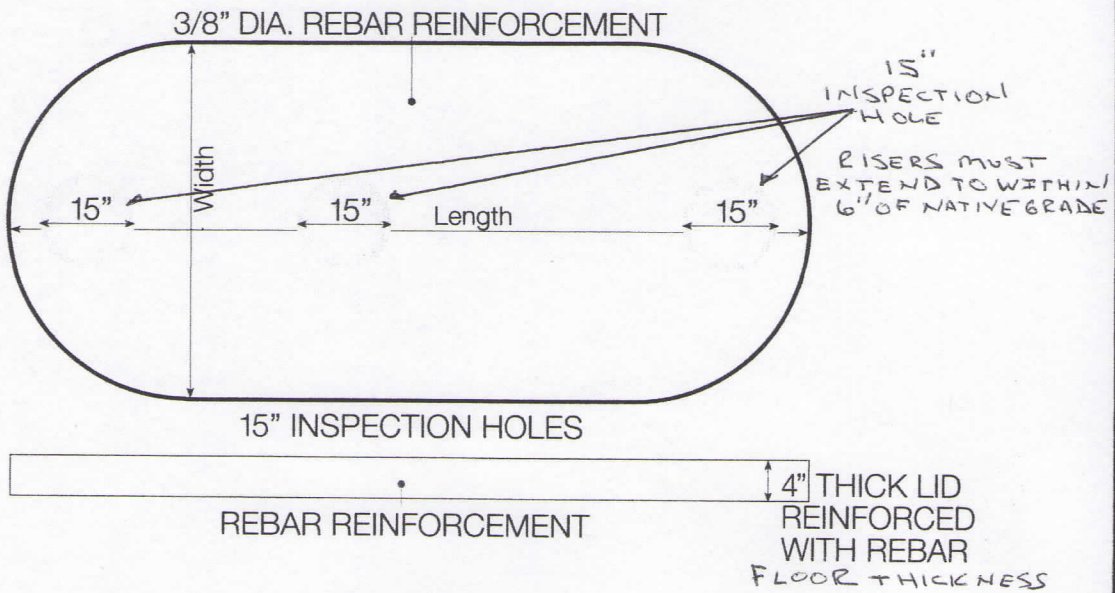
69.82'
 LONGHORN SICKWAY

PreCast Concrete Tanks

3-COMPARTMENT SEPTIC TANK



Tank will be bedded with a minimum of 4" of washed sand. The tank excavation will be backfilled with soil or pea gravel that is free of rock larger than 1/2 inch in diameter. Class IV soils and gravel larger than 1/2 inch in diameter are not acceptable for use as backfill material.



PRECAST CONCRETE TANK SIZES:

	500	750	1000	1250	1500	1750	AS4+75
Length	82"	90"	110"	132"	154"	134"	147"
Width	82"	82"	82"	82"	82"	82"	74"
Height	46"	52"	52"	52"	52"	66"	84"
Inlet	36"	43"	43"	43"	43"	57"	73"
Outlet	33"	40"	40"	40"	40"	54"	0

*Inlet and outlet measurement is the bottom of the tank to the bottom of the hole.

280-SERIES

1/2 hp Submersible Sump/Effluent Pumps

The Liberty 280 series provides a cost effective "mid-range" pump for on-site waste water systems, liquid waste transfer and commercial heavy-duty sump pump applications that require higher head or more flow. Designed around Liberty's unique "Uni-Body" casting, the 280-Series will provide years of reliable performance.

All Models Feature:

- Vortex style impeller, permitting passage of solids up to 3/4"
- 416 stainless steel rotor shaft
- Permanently lubricated upper sleeve bearing and lower ball bearing
- Carbon and ceramic mechanical face seal
- Epoxy powder coat finish

- All fasteners – corrosion-resistant stainless steel
- 1 1/2" Discharge
- Stainless steel bottom screen – easily removable
- 10' quick-disconnect power cord standard (20' and 30' lengths optional)

For 20' and 30' cord options, add "-2" or "-3" suffix to model number. Example: 283-2 for 283 with 20' cord

Motor Specifications

1/2 hp 60 Hz 3450 RPM
Oil filled, thermally protected

115 V. Models 10 amps
208/230 V. Models 5 amps (Available on 280 and 283 only. Add "HV" to model. Example: 283 HV.)

Maximum fluid temperature: 140° F.

Dimensional Data:

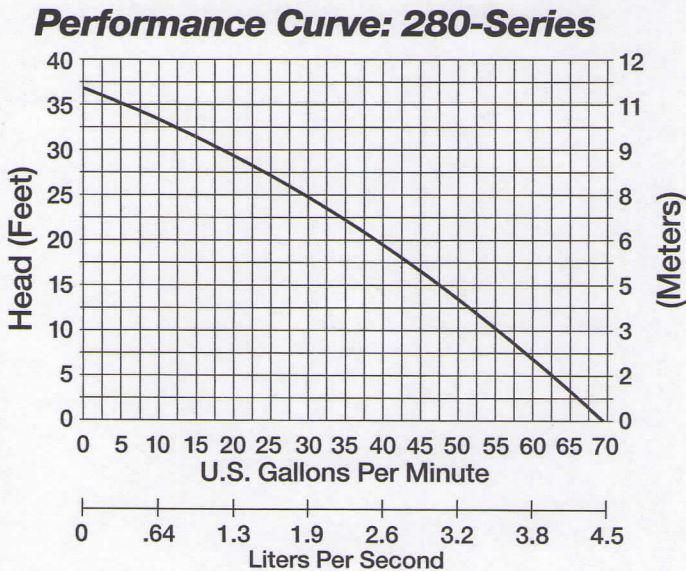
Weight: 29 lbs.
Height: 13"
Major Width: 9.6" (model 280)

Minimum Sump Diameters:

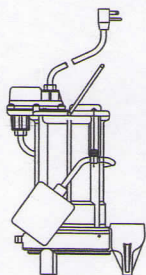
Model 281, 283...14"
Model 287 VMF...10"

Factory switch settings	Model 281, 283	Model 287 VMF
Turn on level	12.5"	9.5"
Turn off level	6"	4.0"

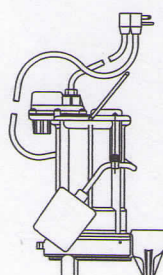
The Model 283 features a fully adjustable wide-angle float. Differential adjustments can be made easily by tethering the float to the discharge pipe or other mounting point. Vertical float model 287 is not adjustable.



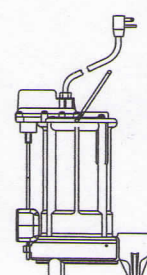
Model 280
Manual,
no switch



Model 281
Wide angle
float switch
with quick-
disconnect



Model 283
Wide angle
float switch
with series
(piggy-back)
plug



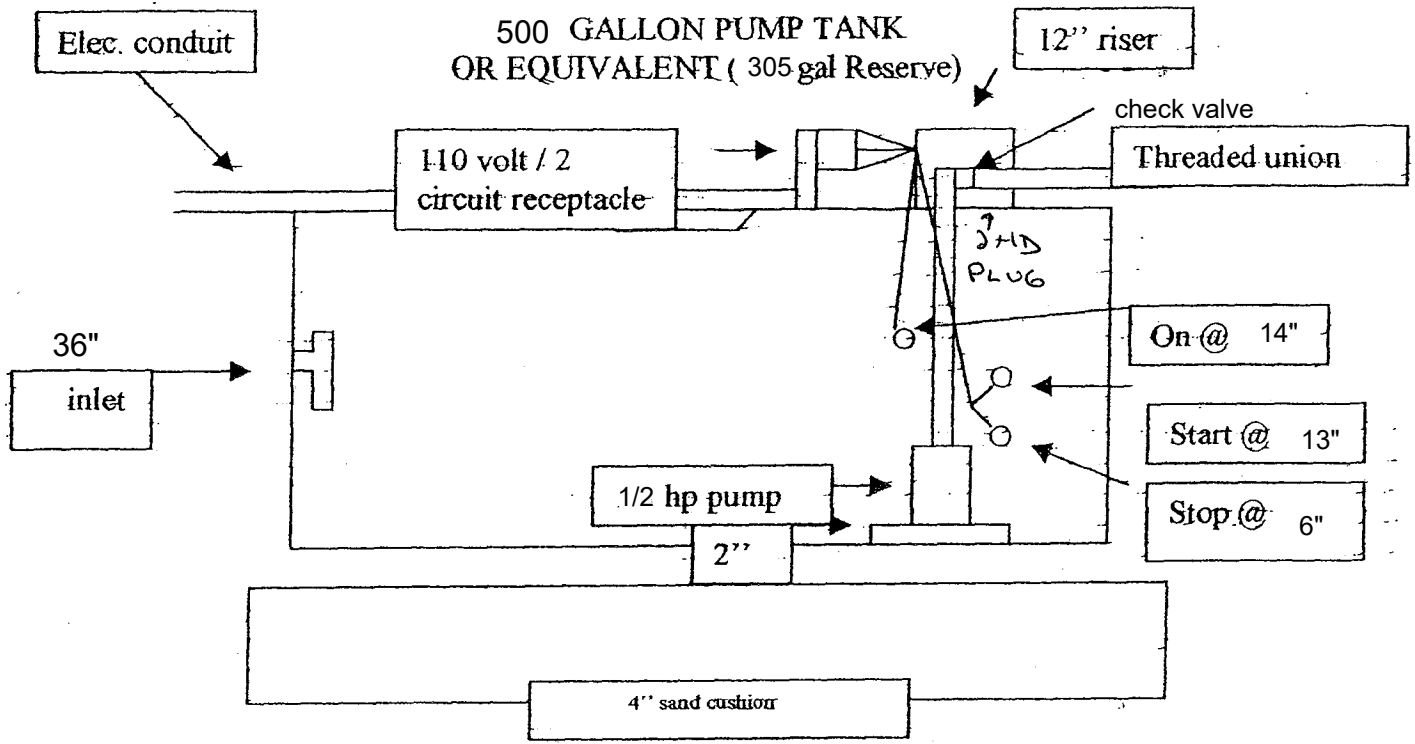
Model 287
VMF-Series
Vertical mag-
netic float for
smaller pits –
will operate in
a 10" diameter
sump

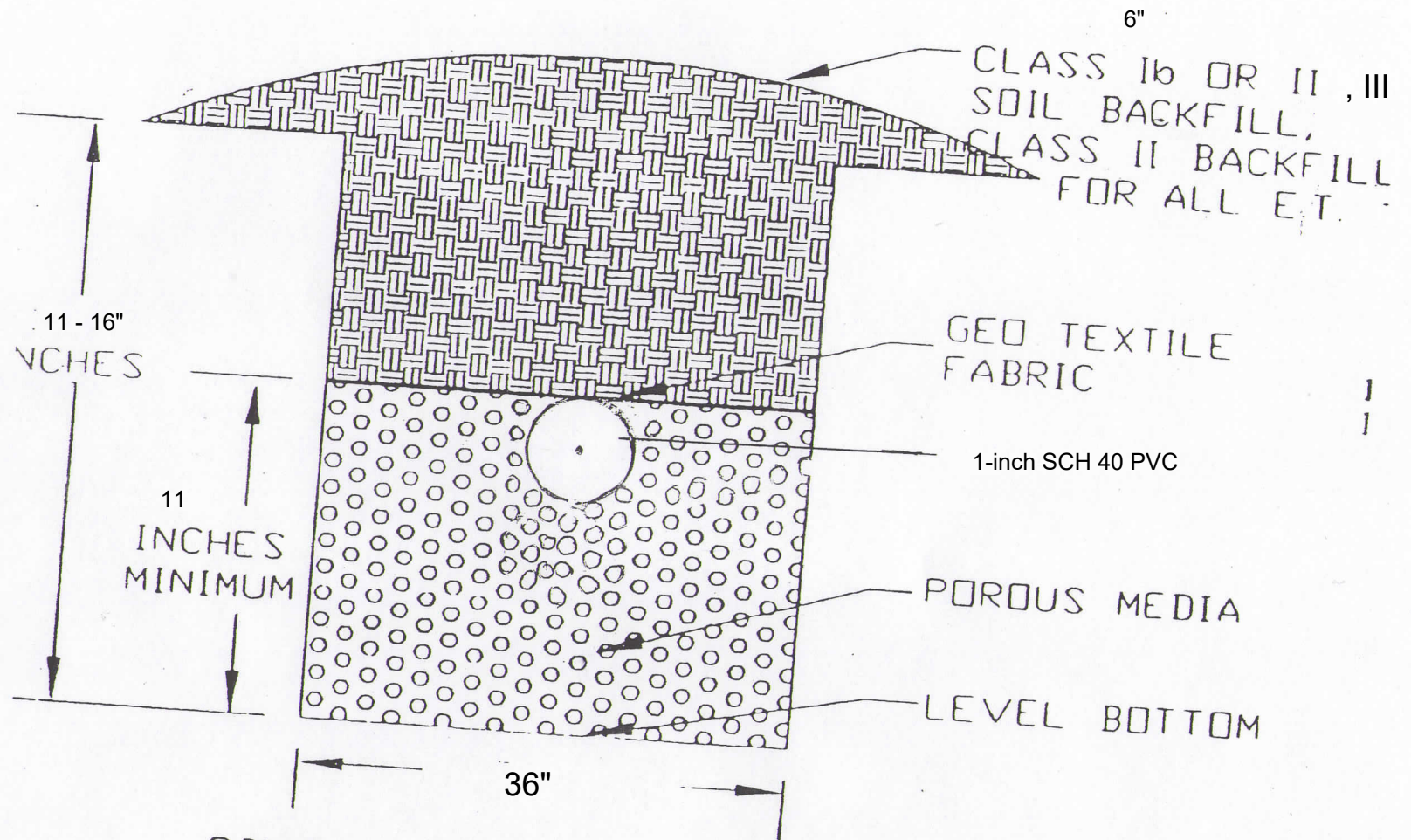


Specifications are subject to change without notice.

Liberty Pumps • 7000 Apple Tree Avenue • Bergen, New York 14416 • Phone 800-543-2550 Fax (585) 494-1839
www.libertypumps.com

7135-R5/02





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ABSORPTIVE OR E.T.



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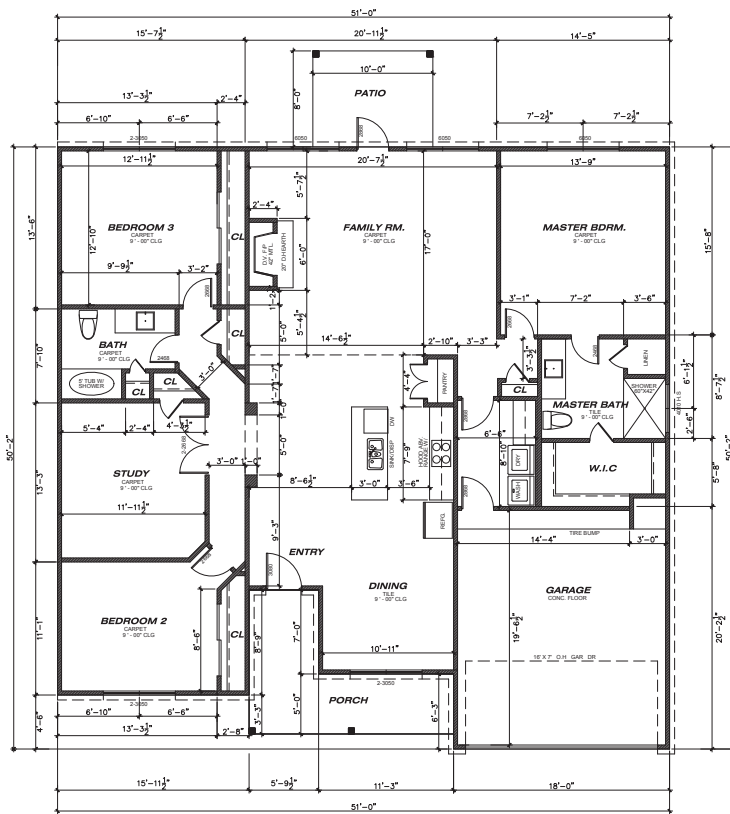
10218 LONGHORN SKYWAY
DRIPPING SPRINGS TEXAS 78620
NEW SINGLE FAMILY RESIDENCE
ACOSTA HOLDING COMPANY, INC

DATE:
MARCH-08-19

FLOOR PLAN

SCALE:
1/8" = 1'0"

A SHEET
2



COVERAGE CALCULATIONS	
FIRST FLOOR LIVING AREA	1,987 S.F.
CAR GARAGE	353 S.F.
PORCH	126 S.F.
PATIO	80 S.F.
TOTAL	2,546 S.F.

Travis CAD

Property Search Results > 106361 HARMSSEN JAN DAWN for Year 2019

Tax Year: 2019 - Values not available

Property

Account

Property ID:	106361	Legal Description:	LOT 10 BLK KK VALLEY LAKE HILLS SEC 1
Geographic ID:	0107970303	Zoning:	
Type:	Real	Agent Code:	
Property Use Code:			
Property Use Description:			

Protest

Protest Status:
 Informal Date:
 Formal Date:

Location

Address:	10218 LONGHORN SKYWAY TX 78620	Mapsco:	
Neighborhood:	P5030	Map ID:	010296
Neighborhood CD:	P5030		

Owner

Name:	HARMSSEN JAN DAWN	Owner ID:	1757855
Mailing Address:	251 OLD RED RANCH RD DRIPPING SPRINGS, TX 78620-4616	% Ownership:	100.0000000000%
		Exemptions:	

Values

(+) Improvement Homesite Value:	+	N/A	
(+) Improvement Non-Homesite Value:	+	N/A	
(+) Land Homesite Value:	+	N/A	
(+) Land Non-Homesite Value:	+	N/A	Ag / Timber Use Value
(+) Agricultural Market Valuation:	+	N/A	N/A
(+) Timber Market Valuation:	+	N/A	N/A

(=) Market Value:	=	N/A	
(-) Ag or Timber Use Value Reduction:	-	N/A	

(=) Appraised Value:	=	N/A	
(-) HS Cap:	-	N/A	

(=) Assessed Value:	=	N/A	

Taxing Jurisdiction

Owner: HARMSSEN JAN DAWN
 % Ownership: 100.0000000000%
 Total Value: N/A

Entity	Description	Tax Rate	Appraised Value	Taxable Value	Estimated Tax
03	TRAVIS COUNTY	N/A	N/A	N/A	N/A
07	LAKE TRAVIS ISD	N/A	N/A	N/A	N/A
0A	TRAVIS CENTRAL APP DIST	N/A	N/A	N/A	N/A
2J	TRAVIS COUNTY HEALTHCARE DISTRICT	N/A	N/A	N/A	N/A
52	TRAVIS CO ESD NO 6	N/A	N/A	N/A	N/A
Total Tax Rate:		N/A			
Taxes w/Current Exemptions:					N/A
Taxes w/o Exemptions:					N/A

Improvement / Building

No improvements exist for this property.

Land

#	Type	Description	Acres	Sqft	Eff Front	Eff Depth	Market Value	Prod. Value
1	LAND	Land	0.2636	11483.58	0.00	0.00	N/A	N/A

Roll Value History

Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap	Assessed
2019	N/A	N/A	N/A	N/A	N/A	N/A
2018	\$0	\$20,000	0	20,000	\$0	\$20,000
2017	\$0	\$20,000	0	20,000	\$0	\$20,000
2016	\$0	\$20,000	0	20,000	\$0	\$20,000
2015	\$0	\$38,500	0	38,500	\$0	\$38,500
2014	\$0	\$15,750	0	15,750	\$0	\$15,750

Deed History - (Last 3 Deed Transactions)

#	Deed Date	Type	Description	Grantor	Grantee	Volume	Page	Deed Number
1	3/15/2018	ED	EXECUTOR DEED	MCFARLAND MYRTLE ALLEENE	HARMSSEN JAN DAWN			2018039085
2	12/2/1993	WD	WARRANTY DEED	BEDDINGFIELD ELIZABETH	MCFARLAND MYRTLE ALLEENE	12078	00300	
3	4/23/1970	WD	WARRANTY DEED		BEDDINGFIELD ELIZABETH	03835	02399	

Questions Please Call (512) 834-9317

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This year is not certified and ALL values will be represented with "N/A".