## 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: 10001 Twin Lake Loop Dripping Springs, TX 78620

## LOT 4 BLK QQ TWIN LAKE HILLS

DATE: 03-26-2021



OVER 4000 APPROVED SEPTIC DESIGNS IN BURNET, TRAVIS, & WILLIAMSON COUNTIES

## 03-26-2021 10001 Twin Lake Loop, Dripping Springs, TX

## **SITE EVALUATION**

## profile #1

0 - 5"	Class III brown silty clay loam. No evidence of ground water. No restrictions. Less
	than 30% gravel.
5 - 25"	Class III tan silty clay loam. No evidence of ground water. No restrictions. Less than
	30% gravel.
25 - ?"	Fractured limestone. Restrictive rock horizon.

### profile #2

0 - 5"	Class III brown silty clay loam.	No evidence of ground water.	No restrictions.	Less
	than 30% gravel.			

- 5 25" Class III tan silty clay loam. No evidence of ground water. No restrictions. Less than 30% gravel.
- 25 ?" Fractured limestone. Restrictive rock horizon.
  - This property is well vegetated with natural grasses.
  - This property is not located within the 100-year floodplain.
  - This property is not located over the E.A.R.Z.
  - Positive drainage exists at this property.

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

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

## **DESIGN CONCLUSION**

1 to 4-bedroom /  $\leq$ 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. 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.
- Sewer line from structure to tank and from tank to drain field shall be bedded with a minimum of 4 inches of class Ib, II, or III soil with less than 30% gravel. The bedding soil shall be free of organic material and any rock or grains larger than 1/2-inch.
- Approximately 105' of 2-inch supply line (SCH 40 PVC).
- The drain field will consist of 375 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 ( <i>Q</i> )
•	Soil application rate:	0.2 for class III soil (Ra)
•	Total absorptive area:	А
•	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(.5)] 1500 / 4L = 375 feet of lateral line

### **DRAINFIELD CRITERIA**

- Lateral line: 1" schedule 40 PVC
- Head pressure: 2 feet of head at 0.87 psi
- Hole diameter: 5/32"

#### Trench #1 is highest in elevation; Trench #10 is lowest in elevation

	Start	Elev.	Fric.	Total		Hole	#	GPM	GPM	Flow	Bypass
length	Head	Diff,	Loss	Head	Inset	Space	Holes	Hole	Line	Rate	Flow
1. 25'	2.000'	0.00'	0.000'	2.000'	24"	3.00'	8	0.410	03.280	0.131	45.560
2. 37.5'	2.000'	0.222'	0.242'	1.980'	27"	3.00'	12	0.410	04.920	0.131	40.640
3. <b>45'</b>	1.980'	0.222'	0.196'	2.006'	16.5"	3.25'	14	0.410	05.740	0.128	34.900
4. <b>45'</b>	2.006'	0.222'	0.148'	2.080	16.5"	3.25'	14	0.415	05.810	0.129	29.090
5. <b>45'</b>	2.080'	0.222'	0.106'	2.196'	16.5"	3.25'	14	0.430	06.020	0.134	23.070
6. <b>45'</b>	2.196'	0.222'	0.070'	2.348'	18"	3.50'	13	0.445	05.785	0.129	17.285
7. <b>45'</b>	2.348'	0.222'	0.041'	2.529'	18"	3.50'	13	0.460	05.980	0.133	11.305
8. 37.5'	2.529'	0.222'	0.019'	2.732'	22.5"	3.75'	10	0.475	04.750	0.127	06.555
9. <b>25'</b>	2.732'	0.222'	0.007'	2.947'	6"	4.00'	7	0.495	03.465	0.139	03.090
10. 25'	2.947'	0.222'	0.002'	3.167'	15"	4.50'	6	0.515	03.090	0.124	00.000
375 f	t.						111		48.84		

### **STORAGE VOLUMES**

SUPPLY LINE

16.2 GALLONS WITH 100 LINEAR FEET OF 2 INCH SCHEDULE 40 PVC *105 feet = 17.01 gallons* 

LATERAL LINE 4.1 GALLONS WITH 100 LINEAR FEET OF 1 INCH SCHEDULE 40 PVC 375 feet = 15.375 gallons

### **DOSING VOLUMES**

<u>Minimum</u>

V (dose) = 17.01 + 5 (15.375 Gal) = 93.885 gallons

<u>As designed</u> 300 gpd Dosing volume as designed is 97.23 gallons Therefore, 300 gallons / 97.23 gallons = 3 doses per day

<u>Duration of each dose</u> 97.23 gallons / 48.84 gpm = 2 minutes per dose

## **HEAD PRESSURE CALCULATIONS**

Total Head:	pump depth - elevation to field ends		
	4' + 3.5'	=	07.5 elevation head
	105' of 2" supply line @ 48.84 gpm	=	06.0 friction head
	Head Pressure Setting	=	02.0 pressure head
	C C	=	15.5 total head

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

## PUMP TO BE USED

• A 1/2 hp Liberty LE-50 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 @ 36above the floor (500 gallons / 36" = 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
- 375 feet of lateral line
- Trench depth: 6 13"
- 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). Turn-ups will be installed on the ends of the lateral lines for future servicing.
- Each trench shall consist of a minimum of 9" 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.





NO BERM REQUIRED

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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.

BUCHANAN SEPTIC TANKS INC. P.O. Box 297 BUCHANAN DAM, TX 78609 P. (512)793-3100 F. (512)793-4047





# **Pump Specifications**

# LE50 Series <sup>1</sup>/<sub>2</sub> HP Submersible Sewage Pump







Application Number.

To be completed by TNR staff.

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### ONE OR TWO FAMILY DWELLINGS CODE AND REGULATIONS CHECKLIST FOR DEVELOPMENT PERMITS

In addition to the Travis County Code, development permit applicants are expected to comply with other applicable health, safety, and environmental quality laws and regulations prior to approval of a Travis County development permit. Please complete and sign the checklist below to determine which additional requirements may be applicable to your one or two family dwelling project, using guidance information on Pages 4–7 as necessary. Some items will require you to provide specific written documentation of compliance prior to issuance of a County permit, as described on Pages 4-7. This list is just a minimum and Travis County reserves the right to request additional information if necessary. **Please answer each of the following questions by writing yes or no in the space provided:** 

### Storm Water Pollution Prevention Plan (SWP3), Erosion/Sediment Control (ESC), Floodplain, Municipal Extra-Territorial Jurisdiction (ETJ)

1a. Will home construction disturb <u>one acre or more</u> (including building footprint, driveways, utilities, lawns, septic field, staging areas, etc.), or is it one lot within a <u>common</u> <u>or phased plan</u> of home lots which collectively will disturb more than one acre?

1b. Will the project disturb an area greater than 10,000 square feet?

1c. **Erosion and Sediment Controls (ESC):** For approval of the Travis County Development Permit, the owner/owner's agent must <u>either</u> identify on the site plan to use erosion and sediment controls to prevent water pollution and off-site storm water impacts <u>OR</u> must submit: 1) a justification for not placing erosion and sediment controls based on the development's site topography, 2) a detailed contour map showing all proposed areas of disturbance, and 3) must have a site slope of 2% or less.

Does your submittal include an erosion and sedimentation control plan?

OR

Does your submittal include a detailed contour map showing all proposed areas of disturbance and a site slope of 2% or less?

2. Is the project within the Extra-territorial Jurisdiction (ETJ) of a City (Austin, Bee Cave, Manor, etc.)?

3. Will the project permanently alter a Federal Emergency Management Agency (FEMA)	LID
100-year floodplain?	

4. Will the project disturb or cross a waterway or a critical environmental featur	e (CEF)?	<u> </u>
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5. If home construction is on an area lake or river, is a boat dock or pier planned?

6. Will home construction create over 10,000 square feet of impervious cover?  $\mathcal{I} \mathcal{I} \mathcal{I}$ 

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7. Does the proposed construction comply with all plat lot setbacks and plat note restrictions?

8. Are any cut & fill (excavations, embankments, land balancing) activities planned for this project?

### Public Right-of-way, Driveways

9. Will the project require a new or improved driveway access onto a Travis County roadway?

10. Will the project require cutting into the pavement or the roadside of a Travis County roadway, such as for the installation of utility lines (gas, telephone, cable, electric, etc)?

11. Will the project require a new or improved driveway access onto a state roadway?  $\_$ 

### Balcones Canyonlands Conservation Plan (West Travis County only)

12. For projects located west of Mo-Pac Expressway have you addressed potential endangered species impacts in compliance with the federal Endangered Species Act (see instructions for compliance methods for the Balcones Canyonlands Conservation Plan (BCCP))?

### Septic Systems, a.k.a. On-Site Sewage Facilities (OSSF)

13. Is there an existing OSSF septic system, or will a new septic system be required?

### Water Wells

14. Will the project require drilling a well for drinking water supply?

### **Residential Fire Sprinklers**

15. Will the project be in Travis County Emergency Services District 9? (associated with zip code 78746)

Certification: I understand any items above I have indicated as applicable to my proposed Travis County Development Permit Application must be addressed as described herein in order for Travis County to issue a Development Permit. I understand misrepresentation can constitute grounds for Travis County to withhold or revoke Development Permit approval. I also understand that proper Best Management Practices & ESC measures will be installed.

Location Address: 1000 \	TWIN LAKE LOOP	
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Signature of Permit Applicant:		Date:Date:

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NO

### 2/21/2021

## **Travis CAD**

Property Search > 108699 ACOSTA HOLDING COMPANY INC Tax Year: 2021 - Values not available for Year 2021

### Property

Account				
Property ID:	108699		Legal Descr	ription: LOT 4 BLK QQ TWIN LAKE HILLS
Geographic ID:	0109970101		Zoning:	
Туре:	Real		Agent Code	le:
Property Use Code:				
Property Use Description:				
Protest				
Protest Status:				
Informal Date:				
Formal Date:				
Location				
Address:	10001 TWIN LAH TX 78620	KE LOOP	Mapsco:	
Neighborhood:	P5030		Map ID:	011096
Neighborhood CD:	P5030			
Owner				
Name:	ACOSTA HOLDIN	IG COMPANY INC	Owner ID:	1820612
Mailing Address:	9860 FM 967		% Ownersh	hip: 100.00000000%
	BUDA, TX 78610		<b>-</b>	
			Exemption	15:
Values				
(+) Improvement Home	site Value:	+	N/A	
(+) Improvement Non-H	Iomesite Value:	+	N/A	
(+) Land Homesite Value	e:	+	N/A	
(+) Land Non-Homesite	Value:	+	N/A A	Ag / Timber Use Value
(+) Agricultural Market	(+) Agricultural Market Valuation:		N/A	N/A
(+) Timber Market Valua	ation:	+	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: ACOSTA HOLDING COMPANY INC % Ownership: 100.00000000%

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

#	Туре	Description	Acres	Sqft	Eff Front	Eff Depth	Market Value	Prod. Value
1	LAND	Land	0.2550	11109.40	0.00	0.00	N/A	N/A

**Roll Value History** 

Year	Improvements	Land Market	Ag Valuation	Appraised	HS Cap	Assessed
2021	N/A	N/A	N/A	N/A	N/A	N/A
2020	\$0	\$20,000	0	20,000	\$0	\$20,000
2019	\$0	\$20,000	0	20,000	\$0	\$20,000
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

**Deed History - (Last 3 Deed Transactions)** 

#	Deed Date	Туре	Description	Grantor	Grantee	Volume	Page	Deed Number
1	9/20/2019	WD	WARRANTY DEED	HOFFMAN LISA RICHARDS	ACOSTA HOLDING COMPANY INC			2019150006
2	4/20/2001	MS	MISCELLANEOUS	HOFFMAN LISA RICHARDS	HOFFMAN LISA RICHARDS			
3	9/19/2019	WD	WARRANTY DEED	EDWARDS NORMA J	HOFFMAN LISA RICHARDS			2019150002

Questions Please Call (512) 834-9317

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# ARTICLES OF INCORPORATION OF ACOSTA HOLDING COMPANY, INC.

### ARTICLE I.

The name of the corporation is Acosta Holding Company, Inc.

### ARTICLE II.

The period of its duration is perpetual.

### ARTICLE III.

The purpose for which the corporation is organized is the transaction of any and/or all lawful business for which corporations may be incorporated under the Texas Business Corporation Act.

#### ARTICLE IV.

The aggregate number of shares which the corporation shall have authority to issue is ten million (10,000,000) of the par value of One Dollar (\$1.00) each.

#### ARTICLE V.

The corporation will not commence business until it has received for the issuance of shares consideration of the value of One Thousand Dollars (\$1,000) consisting of money, labor done or property actually received.

### ARTICLE VI.

The street address of its initial registered office is 9860 FM 967, Buda, Texas, and the name of its initial registered agent at such address is Claudio Marin Acosta.

### ARTICLE VII.

The number of directors constituting the initial board of directors is one, and the name and address of the person who is to serve as director until the first annual meeting of the shareholders or until his successors are elected and qualified is:

> Claudio Marin Acosta 9860 FM 967 Buda, Texas 78610

Darwin McKee, Incorporator





