

Comal County Environmental Health OSSF Inspection Sheet

Installer Name: _____

OSSF Installer #: _____

1st Inspection Date: _____

2nd Inspection Date: _____

3rd Inspection Date: _____

Inspector Name: _____

Inspector Name: _____

Inspector Name: _____

Permit#:		Address:					
No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
1	SITE AND SOIL CONDITIONS & SETBACK DISTANCES Site and Soil Conditions Consistent with Submitted Planning Materials		285.31(a) 285.30(b)(1)(A)(iv) 285.30(b)(1)(A)(v) 285.30(b)(1)(A)(iii) 285.30(b)(1)(A)(ii) 285.30(b)(1)(A)(i)				
2	SITE AND SOIL CONDITIONS & SETBACK DISTANCES Setback Distances Meet Minimum Standards		285.91(10) 285.30(b)(4) 285.31(d)				
3	SEWER PIPE Proper Type Pipe from Structure to Disposal System (Cast Iron, Ductile Iron, Sch. 40, SDR 26)		285.32(a)(1)				
4	SEWER PIPE Slope from the Sewer to the Tank at least 1/8 Inch Per Foot		285.32(a)(3)				
5	SEWER PIPE Two Way Sanitary - Type Cleanout Properly Installed (Add. C/O Every 100' &/or 90 degree bends)		285.32(a)(5)				
6	PRETREATMENT Installed (if required) TCEQ Approved List PRETREATMENT Septic Tank(s) Meet Minimum Requirements		285.32(b)(1)(G) 285.32(b)(1)(E)(iii) 285.32(b)(1)(E)(iv) 285.32(b)(1)(F) 285.32(b)(1)(B) 285.32(b)(1)(C)(i) 285.32(b)(1)(C)(ii) 285.32(b)(1)(D) 285.32(b)(1)(E) 285.32(b)(1)(A) 285.32(b)(1)(E)(ii)(II) 285.32(b)(1)(E)(i) 285.32(b)(1)(E)(ii)(I)				
7	PRETREATMENT Grease Interceptors if required for commercial		285.34(d)				

Inspector Notes:

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No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
8	SEPTIC TANK Tank(s) Clearly Marked SEPTIC TANK If Single Tank, 2 Compartments Provided with Baffle SEPTIC TANK Inlet Flowline Greater than 3" and " T " Provided on Inlet and Outlet SEPTIC TANK Septic Tank(s) Meet Minimum Requirements		285.32(b)(1) (E)285.91(2)285.32(b)(1) (F)285.32(b)(1)(E) (iii)285.32(b)(1)(E)(ii) (II)285.32(b)(1)(E)(ii) (I)285.32(b)(1)(E) (i)285.32(b)(1) (D)285.32(b)(1)(C) (ii)285.32(b)(1)(C) (i)285.32(b)(1) (B)285.32(b)(1) (A)285.32(b)(1)(E)(iv)				
9	ALL TANKS Installed on 4" Sand Cushion/ Proper Backfill Used		285.32(b)(1)(F) 285.32(b)(1)(G) 285.34(b)				
10	SEPTIC TANK Inspection / Clean Out Port & Risers Provided on Tanks Buried Greater than 12" Sealed and Capped		285.38(d)				
11	SEPTIC TANK Secondary restraint system provided SEPTIC TANK Riser permanently fastened to lid or cast into tank SEPTIC TANK Riser cap protected against unauthorized intrusions		285.38(d) 285.38(e)				
12	SEPTIC TANK Tank Volume Installed						
13	PUMP TANK Volume Installed						
14	AEROBIC TREATMENT UNIT Size Installed						
15	AEROBIC TREATMENT UNIT Manufacturer AEROBIC TREATMENT UNIT Model Number						
16	DISPOSAL SYSTEM Absorptive		285.33(a)(4) 285.33(a)(1) 285.33(a)(2) 285.33(a)(3)				
17	DISPOSAL SYSTEM Leaching Chamber		285.33(a)(1) 285.33(a)(3) 285.33(a)(4) 285.33(a)(2)				
18	DISPOSAL SYSTEM Evapo-transpirative		285.33(a)(3) 285.33(a)(4) 285.33(a)(1) 285.33(a)(2)				

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No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
19	DISPOSAL SYSTEM Drip Irrigation		285.33(c)(3)(A)-(F)				
20	DISPOSAL SYSTEM Soil Substitution		285.33(d)(4)				
21	DISPOSAL SYSTEM Pumped Effluent		285.33(a)(4) 285.33(a)(3) 285.33(a)(1) 285.33(a)(2)				
22	DISPOSAL SYSTEM Gravelless Pipe		285.33(a)(3) 285.33(a)(2) 285.33(a)(4) 285.33(a)(1)				
23	DISPOSAL SYSTEM Mound		285.33(a)(3) 285.33(a)(1) 285.33(a)(2) 285.33(a)(4)				
24	DISPOSAL SYSTEM Other (describe) (Approved Design)		285.33(d)(6) 285.33(c)(4)				
25	DRAINFIELD Absorptive Drainline 3" PVC or 4" PVC						
26	DRAINFIELD Area Installed						
27	DRAINFIELD Level to within 1 inch per 25 feet and within 3 inches over entire excavation		285.33(b)(1)(A)(v)				
28	DRAINFIELD Excavation Width DRAINFIELD Excavation Depth DRAINFIELD Excavation Separation DRAINFIELD Depth of Porous Media DRAINFIELD Type of Porous Media						
29	DRAINFIELD Pipe and Gravel - Geotextile Fabric in Place		285.33(b)(1)(E)				
30	DRAINFIELD Leaching Chambers DRAINFIELD Chambers - Open End Plates w/Splash Plate, Inspection Port & Closed End Plates in Place (per manufacturers spec.)		285.33(c)(2)				
31	LOW PRESSURE DISPOSAL SYSTEM Adequate Trench Length & Width, and Adequate Separation Distance between Trenches		285.33(d)(1)(C)(i)				

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No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
32	EFFLUENT DISPOSAL SYSTEM Utilized Only by Single Family Dwelling EFFLUENT DISPOSAL SYSTEM Topographic Slopes < 2.0% EFFLUENT DISPOSAL SYSTEM Adequate Length of Drain Field (1000 Linear ft. for 2 bedrooms or Less & an additional 400 ft. for each additional bedroom) EFFLUENT DISPOSAL SYSTEM Lateral Depth of 18 inches to 3 ft. & Vertical Separation of 1ft on bottom and 2 ft. to restrictive horizon and ground water respectfully EFFLUENT DISPOSAL SYSTEM Lateral Drain Pipe (1.25 - 1.5" dia.) & Pipe Holes (3/16 - 1/4" dia. Hole Size) 5 ft. Apart		285.33(b)(3)(A) 285.33(b)(3)(A) 285.33(b)(3) (B)285.91(13) 285.33(b)(3)(D) 285.33(b)(3)(F)				
33	AEROBIC TREATMENT UNIT Is Aerobic Unit Installed According to Approved Guidelines.		285.32(c)(1)				
34	AEROBIC TREATMENT UNIT Inspection/Clean Out Port & Risers Provided AEROBIC TREATMENT UNIT Secondary restraint system provided AEROBIC TREATMENT UNIT Riser permanently fastened to lid or cast into tank AEROBIC TREATMENT UNIT Riser cap protected against unauthorized intrusions						
35	AEROBIC TREATMENT UNIT Chlorinator Properly Installed with Chlorine Tablets in Place.						
36	PUMP TANK Is the Pump Tank an approved concrete tank or other acceptable materials & construction PUMP TANK Sampling Port Provided in the Treated Effluent Line PUMP TANK Check Valve and/or Anti- Siphon Device Present When Required PUMP TANK Audible and Visual High Water Alarm Installed on Separate Circuit From Pump						
37	PUMP TANK Inspection/Clean Out Port & Risers Provided PUMP TANK Secondary restraint system provided PUMP TANK Riser permanently fastened to lid or cast into tank PUMP TANK Riser cap protected against unauthorized intrusions						
38	PUMP TANK Secondary restraint system provided						
39	PUMP TANK Electrical Connections in Approved Junction Boxes / Wiring Buried						

**Comal County Environmental Health
OSSF Inspection Sheet**

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
40	APPLICATION AREA Distribution Pipe, Fitting, Sprinkler Heads & Valve Covers Color Coded Purple?		285.33(d)(2)(G)(iii)(II) 285.33(d)(2)(G)(iii)(III) 285.33(d)(2)(G)(v) 285.33(d)(2)(G)(iii) 285.33(d)(2)(G)(iv) 285.33(d)(2)(G)(i) 285.33(d)(2)(G)(ii) 285.33(d)(2)(G)(iii)(I)				
41	APPLICATION AREA Low Angle Nozzles Used / Pressure is as required APPLICATION AREA Acceptable Area, nothing within 10 ft of sprinkler heads? APPLICATION AREA The Landscape Plan is as Designed		285.33(d)(2)(G) (i)285.33(d)(2) (A)285.33(d)(2)(F)				
42	APPLICATION AREA Area Installed						
43	PUMP TANK Meets Minimum Reserve Capacity Requirements						
44	PUMP TANK Material Type & Manufacturer						
45	PUMP TANK Type/Size of Pump Installed						



COMAL COUNTY

ENGINEER'S OFFICE

Permit of Authorization to Construct an On-Site Sewage Facility Permit Valid For One Year From Date Issued

Permit Number: 113048
Issued This Date: 08/06/2021
This permit is hereby given to: AROBLE MARKETING, LLC

To start construction of a private, on-site sewage facility located at:

563 OAK TRAIL DR
CANYON LAKE, TX 78133

Subdivision: TANGLEWOOD SHORES
Unit: 0
Lot: 336
Block: 0
Acreage: 0.0000

APPROVED MINIMUM SIZES AS PER ATTACHED DESIGN

Type of System: Aerobic
Drip Irrigation

This permit gives permission for the construction of the above referenced on-site facility to commence. Installation must be completed by an installer holding a valid registration card from the Texas Commission on Environmental Quality (TCEQ). Installation and inspection must comply with current TCEQ and Comal County requirements.

Call (830) 608-2090 to schedule inspections.

RECEIVED

By KG at 7:19 am, Aug 03, 2021



COMAL COUNTY
ENGINEER'S OFFICE

**OSSF DEVELOPMENT APPLICATION
CHECKLIST**

Staff will complete shaded items

		113048
<i>Date Received</i>	<i>Initials</i>	<i>Permit Number</i>

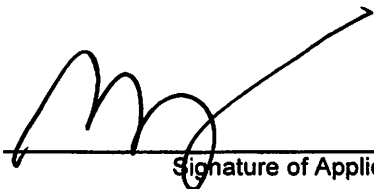
Instructions:

Place a check mark next to all items that apply. For items that do not apply, place "N/A". This OSSF Development Application Checklist must accompany the completed application.

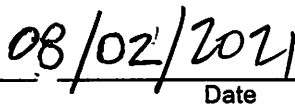
OSSF Permit

- Completed Application for Permit for Authorization to Construct an On-Site Sewage Facility and License to Operate
- Site/Soil Evaluation Completed by a Certified Site Evaluator or a Professional Engineer
- Planning Materials of the OSSF as Required by the TCEQ Rules for OSSF Chapter 285. Planning Materials shall consist of a scaled design and all system specifications.
- Required Permit Fee - See Attached Fee Schedule
- Copy of Recorded Deed
- Surface Application/Aerobic Treatment System
 - Recorded Certification of OSSF Requiring Maintenance/Affidavit to the Public
 - Signed Maintenance Contract with Effective Date as Issuance of License to Operate

I affirm that I have provided all information required for my OSSF Development Application and that this application constitutes a completed OSSF Development Application.



 Signature of Applicant



 Date

_____ COMPLETE APPLICATION Check No. _____ Receipt No. _____

INCOMPLETE APPLICATION _____ (Missing Items Circled, Application Refeused)



COMAL COUNTY
ENGINEER'S OFFICE

ON-SITE SEWAGE FACILITY APPLICATION

195 DAVID JONAS DR
NEW BRAUNFELS, TX 78132
(830) 608-2090
WWW.CCEO.ORG

Date July 13, 2021

Permit Number 113048

1. APPLICANT / AGENT INFORMATION

Owner Name AROBLE MARKETING, LLC
Mailing Address 7319 WASHITA WAY
City, State, Zip SAN ANTONIO TEXAS 78256
Phone # 210-725-8653
Email oiram1@outlook.com

Agent Name GREG JOHNSON, P.E.
Agent Address 170 HOLLOW OAK
City, State, Zip NEW BRAUNFELS TEXAS 78132
Phone # 830-905-2778
Email gregjohnsonpe@yahoo.com

2. LOCATION

Subdivision Name TANGLEWOOD SHORES Unit _____ Lot 336 Block _____

Survey Name / Abstract Number _____ Acreage _____

Address 563 OAK TRAIL DRIVE City CANYON LAKE State TX Zip 78133

3. TYPE OF DEVELOPMENT

Single Family Residential
Type of Construction (House, Mobile, RV, Etc.) APARTMENT
Number of Bedrooms 1
Indicate Sq Ft of Living Area 840

Non-Single Family Residential
(Planning materials must show adequate land area for doubling the required land needed for treatment units and disposal area)
Type of Facility _____
Offices, Factories, Churches, Schools, Parks, Etc. - Indicate Number Of Occupants _____
Restaurants, Lounges, Theaters - Indicate Number of Seats _____
Hotel, Motel, Hospital, Nursing Home - Indicate Number of Beds _____
Travel Trailer/RV Parks - Indicate Number of Spaces _____
Miscellaneous _____

Estimated Cost of Construction: \$ 60,000 (Structure Only)

Is any portion of the proposed OSSF located in the United States Army Corps of Engineers (USACE) flowage easement?

Yes No (If yes, owner must provide approval from USACE for proposed OSSF improvements within the USACE flowage easement)

Source of Water Public Private Well Rainwater Collection

4. SIGNATURE OF OWNER

By signing this application, I certify that:

- The completed application and all additional information submitted does not contain any false information and does not conceal any material facts. I certify that I am the property owner or I possess the appropriate land rights necessary to make the permitted improvements on said property.
- Authorization is hereby given to the permitting authority and designated agents to enter upon the above described property for the purpose of site/soil evaluation and inspection of private sewage facilities..
- I understand that a permit of authorization to construct will not be issued until the Floodplain Administrator has performed the reviews required by the Comal County Flood Damage Prevention Order.
- I affirmatively consent to the online posting/public release of my e-mail address associated with this permit application, as applicable.

Signature of Owner *[Signature]*
AROBLE MARKETING
Managing member

Date July 27 2021

*** COMAL COUNTY OFFICE OF ENVIRONMENTAL HEALTH * * ***

APPLICATION FOR PERMIT FOR AUTHORIZATION TO CONSTRUCT AN
ON-SITE SEWAGE FACILITY AND LICENSE TO OPERATE

Planning Materials & Site Evaluation as Required Completed By GREG W. JOHNSON, P.E.

System Description PROPRIETARY; AEROBIC TREATMENT AND DRIP TUBING

Size of Septic System Required Based on Planning Materials & Soil Evaluation

Tank Size(s) (Gallons) CLEARSTREAM 600NC3T Absorption/Application Area (Sq Ft) 1000

Gallons Per Day (As Per TCEQ Table III) 100

(Sites generating more than 5000 gallons per day are required to obtain a permit through TCEQ)

Is the property located over the Edwards Recharge Zone? Yes No

(If yes, the planning materials must be completed by a Registered Sanitarian (R.S.) or Professional Engineer (P.E.))

Is there an existing TCEQ approved WPAP for the property? Yes No

(if yes, the R. S. or P. E. shall certify that the OSSF design complies with all provisions of the existing WPAP.)

If there is no existing WPAP, does the proposed development activity require a TCEQ approved WPAP? Yes No

(If yes, the R.S. or P. E. shall certify that the OSSF design will comply with all provisions of the proposed WPAP. A Permit to Construct will not be issued for the proposed OSSF until the proposed WPAP has been approved by the appropriate regional office.)

Is the property located over the Edwards Contributing Zone? Yes No

Is there an existing TCEQ approval CZP for the property? Yes No

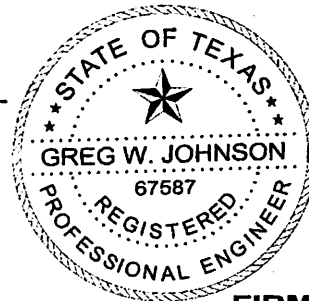
(if yes, the P.E. or R.S. shall certify that the OSSF design complies with all provisions of the existing CZP)

If there is no existing CZP, does the proposed development activity require a TCEQ approved CZP? Yes No

(if yes, the P.E. or R.S. shall certify that the OSSF design will comply with all provisions of the proposed CZP. A Permit to construct will not be issued for the proposed OSSF until the CZP has been approved by the appropriate regional office.)

Is this property within an incorporated city? Yes No

If yes, indicate the city: _____



FIRM #2585

By signing this application, I certify that:

- The information provided above is true and correct to the best of my knowledge.
- I affirmatively consent to the online posting/public release of my e-mail address associated with this permit application, as applicable

[Signature]
Signature of Designer

07/16/2021
Date

AFFIDAVIT

**THE COUNTY OF COMAL
STATE OF TEXAS**

CERTIFICATION OF OSSF REQUIRING MAINTENANCE

According to Texas Commission on Environmental Quality Rules for On-Site Sewage Facilities (OSSF's), this document is filed in the Deed Records of Comal County, Texas.

I

The Texas Health and Safety Code, Chapter 366 authorizes the Texas Commission on Environmental Quality (TCEQ) to regulate on-site sewage facilities (OSSFs). Additionally, the Texas Water Code (TWC), § 5.012 and § 5.013, gives the commission primary responsibility for implementing the laws of the State of Texas relating to water and adopting rules necessary to carry out its powers and duties under the TWC. The commission, under the authority of the TWC and the Texas Health and Safety code, requires owner's to provide notice to the public that certain types of OSSFs are located on specific pieces of property. To achieve this notice, the commission requires a recorded affidavit. Additionally, the owner must provide proof of the recording to the OSSF permitting authority. This recorded affidavit is not a representation or warranty by the commission of the suitability of this OSSF, nor does it constitute any guarantee by the commission that the appropriate OSSF was installed.

II

An OSSF requiring a maintenance contract, according to 30 Texas Administrative Code §285.91(12) will be installed on the property described as (insert legal description):

UNIT/PHASE/SECTION _____ BLOCK 336 LOT _____ TANGLEWOOD SHORES _____ SUBDIVISION

IF NOT IN SUBDIVISION: _____ ACREAGE _____ SURVEY

The property is owned by (insert owner's full name): AROBLE MARKETING, LLC

This OSSF must be covered by a continuous maintenance contract for the first two years. After the initial two-year service policy, the owner of an aerobic treatment system for a single family residence shall either obtain a maintenance contract within 30 days or maintain the system personally.

Upon sale or transfer of the above-described property, the permit for the OSSF shall be transferred to the buyer or new owner. A copy of the planning materials for the OSSF can be obtained from the Comal County Engineer's Office.

WITNESS BY HAND(S) ON THIS 27th DAY OF July, 2021

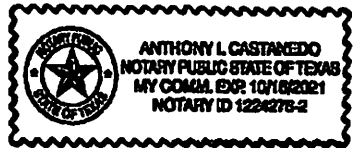
JLL
Owner(s) signature(s)

Judass Garcia - MANAGER
Owner (s) Printed name (s)

Judass Garcia SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 27th DAY OF

Justin 2021
Christy L. Koepp
Notary Public Signature

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
07/30/2021 10:42:49 AM
CHRISTY 1 Pages(s)
202106040569



 Bobbie Koepp

Countryside Construction, Inc.
300 Chapman Parkway, Canyon Lake, TX. 78133
Phone: 830-899-2615 or 1-888-379-3721 Fax: 830-899-6662
Septic System Service Agreement

In consideration of payment for this service contract, we will abide by and agree to its terms and conditions:

Name: AROBLE MARKETING, LLC Address: 563 OAK TRAIL DRIVE
Sub-Div./County: TANGLEWOOD SHORES / COMAL City, State, Zip Code CANYON LAKE, TX 78133
Permit #: _____ TYPE, Model# & SIZE: CLEARSTREAM 600NC3T Serial #: _____
Phone: 210-725-8653

(X) Initial Two Year Service & Two Year Limited Warranty

Legal Description: LOT 336, TANGLEWOOD SHORES, COMAL COUNTY

The effective date of the initial maintenance contract shall be the date the License to Operate is issued.

This contract will be in effect FROM: LTO TO: _____

Countryside Construction, Inc. will provide the following:

- An inspection every (4) four months which will include: Servicing of the mechanical & electrical components as necessary to insure system is functioning as engineer designed, pulling and cleaning the Norweco Brand aerator shaft, cleaning compressor air filters of other brands, check chlorine, conduct solids test to determine if system should be pumped, back flushing tubing for drip irrigation fields and checking sprinklers on above ground systems.

- 1) The property owner is responsible for "purchasing and keeping chlorine" in the chlorinator, (if applicable). If the chlorine test reveals "No Chlorine" in the system, the property owner may incur an additional cost.
- 2) If any improper operation is observed (which cannot be corrected at that time) the property owner will be notified immediately of the conditions and the estimated cost.
- 3) ANY PARTS, WARRANTY OR NON-WARRANTY, FREIGHT CHARGES, LABOR OR SERVICE CALLS NOT PAID IN FULL AT THE END OF (30) DAYS SHALL REMAIN THE PROPERTY OF COUNTRYSIDE CONSTRUCTION AND AUTHORIZES CONTRACTOR TO REMOVE AND REPOSSESS ANY PARTS INSTALLED. CLIENT FURTHER AGREES TO PAY ANY LABOR COST OF THE INSTALLATION AND REASONABLE COST OF REMOVAL OF SAID PARTS.
- 4) THE SIGNING OF THIS SERVICE AGREEMENT AUTHORIZES COUNTRYSIDE CONSTRUCTION TO ENTER THE PROPERTY TO EXECUTE ALL TERMS OF THIS CONTRACT.

Countryside Construction, Inc., will warranty installation of the septic system to be according to state and county regulations and the designs approved by the county. HOMEOWNER WILL BE RESPONSIBLE FOR SERVICE CALLS, LABOR AND SHIPPING COSTS ON ANY "WARRANTIED PARTS" EXCHANGED DURING WARRANTY. All other components will be according to manufacturer's warranties.

Important: As Countryside Construction, Inc. cannot control what or how much effluent goes into this septic system, we cannot warranty how the system will function. Refer to manufacturers or installer's instructions, for suggestions on septic operation. If necessary, between inspections, it is the property owner's responsibility to clean the micron filters on drip irrigation systems. This service agreement does not cover the cost of "service calls, labor or materials that are required or parts out of warranty, the failure to maintain electrical power to the system, sprinklers that are broken, leaking, stopped-up or otherwise mal-functioning; or sewage flows exceeding the hydraulic/organic design capabilities and the input of non-biodegradable materials (solvents, grease, oil, paints, etc.), or any usage contrary to the requirements as advised by authorized service representative. Laboratory test work is available at an additional cost. Chlorine, filters, or parts that are out of warranty are available at a reasonable cost.

This contract does not include the pumping of a tank or of any compartment of a tank, or settlement of soil on or around any part of the system regardless of reason:

Violations of the warranty also include: disconnecting the alarm, restricting ventilation to the aerator, overloading the system above its rated capacity; or flooding by external means. Rodent, insect or fire ant damage or any other form of unusual abuse is a violation. A renewal service contract should be "activated" (30) thirty days before expiration of existing contract. We will contact property owner prior to expiration of existing contract.

Served by: Countryside Construction Inc.

Walker Chapman – Installer's Licensee #OS0002929-OSSF

Maintenance Provider Licensee #MP0000035

(X) [Signature] Print Name (X) Judas S Garcia Date: July 27 2021
Property Owner Signature

(X) [Signature] Date: 7/27/2021 Authorized Service Representative (revised 08/13/2020)

DRIP TUBING SYSTEM
DESIGNED FOR:
AROBLE MARKETING, LLC
7319 WASHITA WAY
SAN ANTONIO, TX 78256

SITE DESCRIPTION:

Located in Tanglewood Shores, Lot 336 at 563 Oak Trail Drive, the proposed system will serve a one bedroom apartment (840sf.) situated in an area with shallow Type-III soil as described in the Soil Evaluation Report. An aerobic treatment plant utilizing drip irrigation was chosen as the most appropriate system to serve the conditions on this lot.

PROPOSED SYSTEM:

A 3-inch SCH-40 pipe discharges from the residence into Clearstream NC3T 600 gpd aerobic plant containing a 400-gallon pretreatment tank, an aerobic treatment plant, and a 700-gallon pump chamber containing a submersible (0.5 HP Clearstream P-20 or equivalent) well pump. The well pump is activated by a time controller allowing the distribution ten times per day with an 8 minute run time with float setting at 180 gallons. A high level audible and visual alarm will activate should the pump fail. Distribution is through a self flushing 100 micron disc filter (Arkal) then through a 1" SCH-40 manifold to a 1000 sf. drip tubing field, with *Netifim Bioline* drip lines set approximately two feet apart with **0.61 gph** emitters set every two feet, as per the attached schematic. A pressure regulator PMR-MF 30psi installed in the pump tank on the manifold to the field will maintain pressure at 30 psi.

A 1" SCH-40 return line is installed to periodically flush the system by cycling a 1" ball valve. Solids caught in the spin filter are flushed each cycle back to the trash tank. Vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher to lower parts of the field. Field area will be scarified and built up with 6" of Type II or Type III soil, then the drip tubing will be laid and capped with 6" of Type II or Type III soil (**NOT SAND**). The field area will be sodded with grass prior to system startup. **Tank must have at grade risers on each opening with watertight caps that must be at least 65# or have a padlock or can only be removed with tools. A secondary plug, cap, or suitable restraint must be provided below riser cap to prevent tank entry should the cap be damaged or removed, in compliance with Chapter §285.38.**

DESIGN SPECIFICATIONS:

Daily waste flow: 100 GPD Table III

Pretreatment tank size: 428Gal

Plant Size: Clearstream NC3T 600gpd (TCEQ Approved)

Pump tank size: 700 Gal

Reserve capacity after High Level: 60 Gal (1/3 day Req'd)
 Application Rate: Ra = 0.2 gal/sf
 Total absorption area: Q/Ra = 100 GPD/0.20 = 500 sf. (Actual 1000 sf.)
 Total linear feet drip tubing: 500' *Netifim Bioline* drip tubing .61 GPH
 Pump requirement: 250 emitters @ .61 gph @ 30 psi = 2.541 gpm
 Pump Requirement (cont.): (0.5 HP Clearstream P-20 pump or equiv.)
 Dosing volume: 50-70 gal.

Pump Tank Calculations: 700 Gal (14.5 gal/in.)
 Volume below working level = 12" = 148 gal
 Working level = 180 gal = 15"
 Reserve Requirement = 1/3 day = 60 gal. = 5"

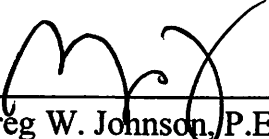
MINIMUM SCOUR VELOCITY (MSV) > 2 FPS
 IN DRIP TUBING W/ NOM. DIA. 0.55" ID
 $MSV = 2 \text{ FPS } (\pi d^2 / 4) * 7.48 \text{ gal/cf} * 60 \text{ sec/min}$
 $MSV = 2(3.14159((.55/12)^2) / 4) * 7.48 * 60$
 MSV = 1.5 gpm MIN FLOW RATE

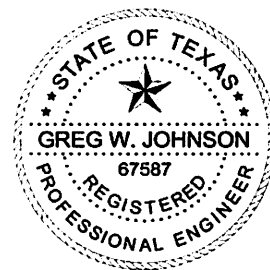
IN RETURN MANIFOLD W/ NOM. DIA 1.049" ID
 $MSV = 2 \text{ FPS } (\pi d^2 / 4) * 7.48 \text{ gal/cf} * 60 \text{ sec/min}$
 $MSV = 2(3.14159((1.049/12)^2) / 4) * 7.48 * 60$
 MSV = 5.4 GPM

PIPE AND FITTINGS:

All pipes and fittings in this drip tubing system shall be 1" schedule 40 PVC. All joints shall be sealed with approved solvent-type PVC cement. Clipper type cutters are recommended to prevent PVC burrs during cutting of pipes causing possible plugging. Drip tubing 0.61 gph drip tubing to be used in field.

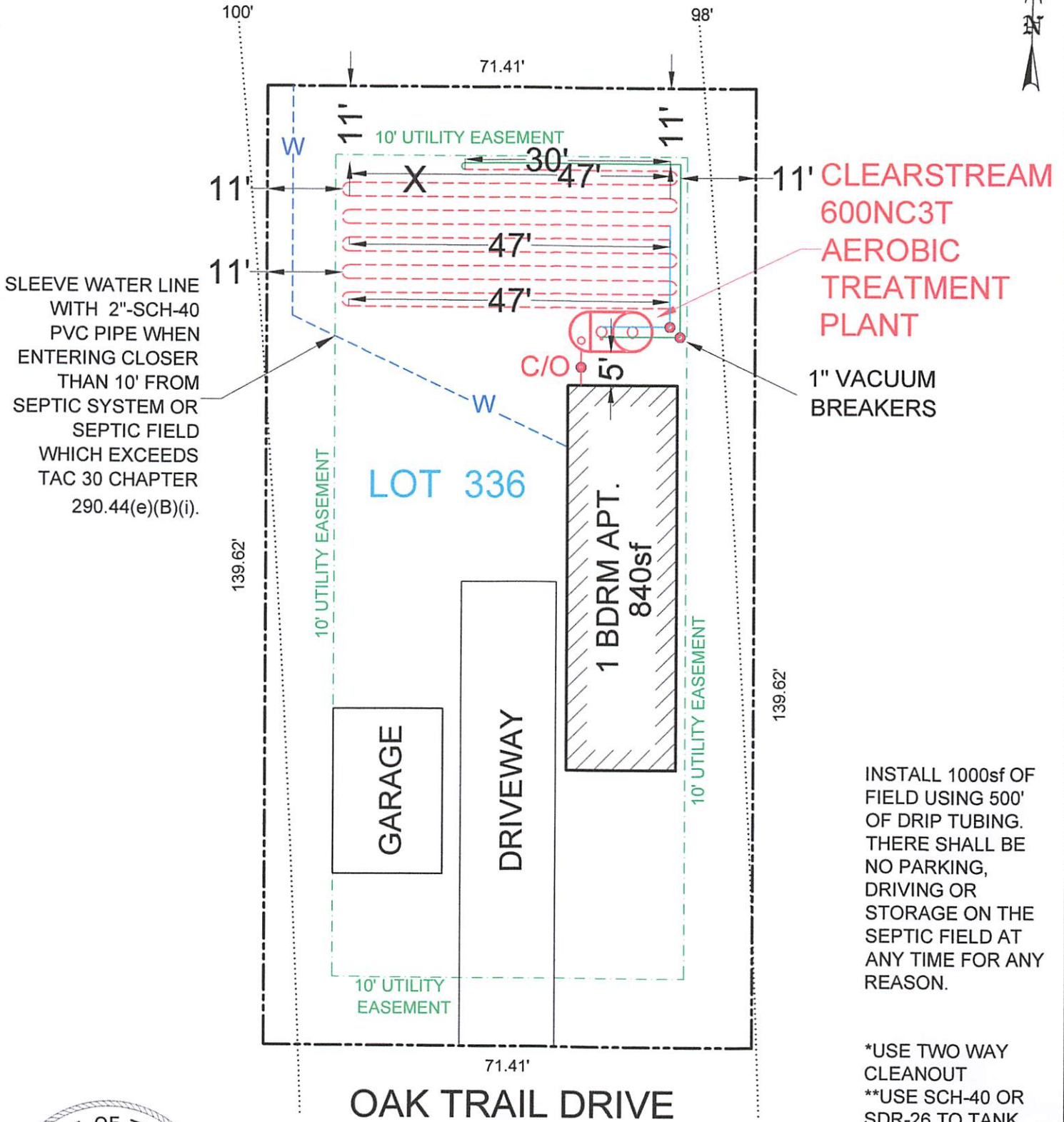
Designed in accordance with Chapter 285, Subchapter D, §285.30 and §285.40 Texas Commission on Environmental Quality (Effective December 29, 2016)

 09/22/2021
 Greg W. Johnson, P.E. No. 67587 - F-2585
 170 Hollow Oak
 New Braunfels, Texas 78132
 830/905-2778



REVISED

12:25 pm, Sep 22, 2021



OWNER: AROBLE MARKETING, LLC.		DRAWN BY: EJS III	
STREET ADDRESS: 563 OAK TRAIL DRIVE			
LEGAL DESC: TANGLEWOOD SHORES	UNIT/SECTION/PHASE:	BLOCK:	LOT: 336
PREPARED BY: GREG W. JOHNSON, P.E. F#002585	SCALE: 1"=20'	DATE: 7/16/2021	2nd REVISION: 9/22/2021

REVISED

12:25 pm, Sep 22, 2021

TANK NOTES:

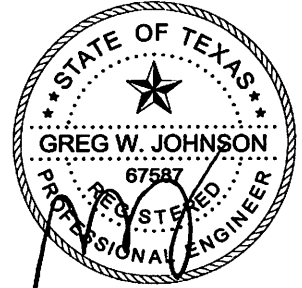
Tanks must be set to allow a minimum of 1/8" per foot fall from the residence.

Tightlines to the tank shall be SCH-40 PVC.

A two way sanitary tee is required between residence and tank.

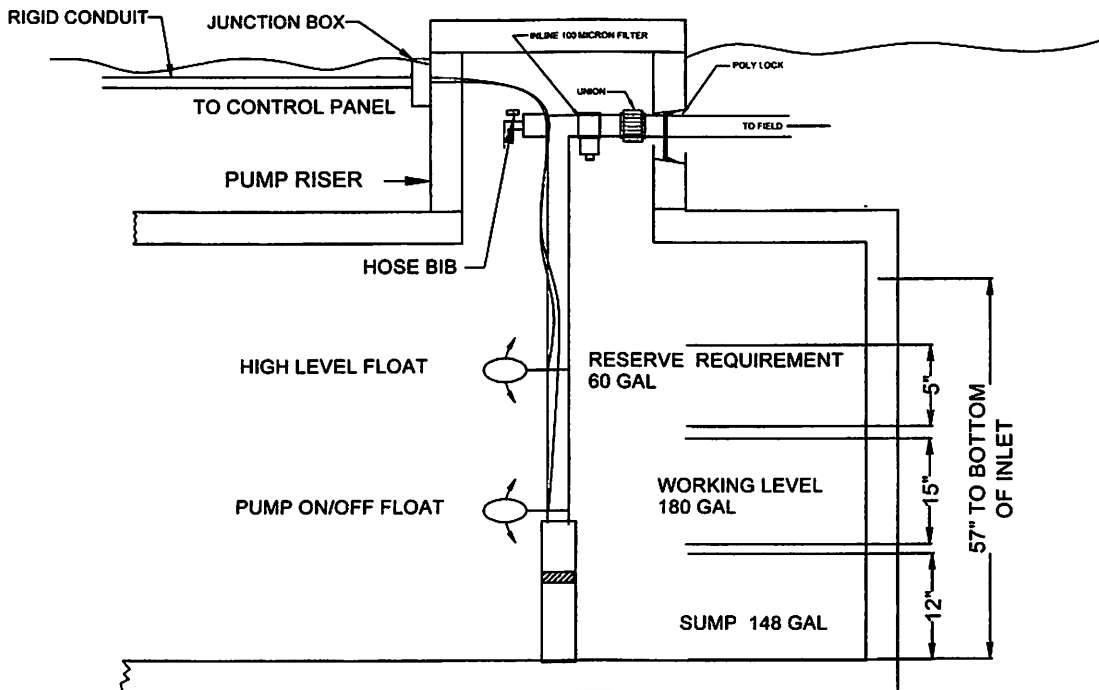
A minimum of 4" of sand, sandy loam, clay loam free of rock shall be placed under and around tanks

Tanks must be left uncovered and full of water for inspection by the permitting authority.



F-2585
09/22/2021

ALL WIRING MUST BE IN COMPLIANCE WITH THE MOST RECENT NATIONAL ELECTRIC CODE



**TYPICAL PUMP TANK CONFIGURATION
CLEARSTREAM 600NC3T W/ 700 GAL PUMP TANK**

**ON-SITE SEWERAGE FACILITY
SOIL EVALUATION REPORT INFORMATION**

Date Soil Survey Performed: July 15, 2021

Site Location: TANGLEWOOD SHORES, LOT 336

Proposed Excavation Depth: N/A

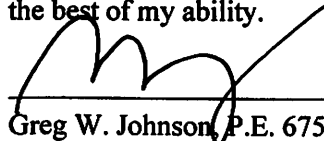
Requirements:

At least two soil excavations must be performed on the site, at opposite ends of the proposed disposal area. Locations of soil boring or dug pits must be shown on the site drawing. For subsurface disposal, soil evaluations must be performed to a depth of at least two feet below the proposed excavation depth. For surface disposal, the surface horizon must be evaluated. Describe each soil horizon and identify any restrictive features on the form. Indicate depths where features appear.

SOIL BORING NUMBER <u> </u> SURFACE EVALUATION <u> </u>						
Depth (Feet)	Texture Class	Soil Texture	Gravel Analysis	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0	III	CLAY LOAM	N/A	NONE OBSERVED	LIMESTONE @ 6"	BROWN
1						
2						
3						
4						
5						

SOIL BORING NUMBER <u> </u> SURFACE EVALUATION <u> </u>						
Depth (Feet)	Texture Class	Soil Texture	Gravel Analysis	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0	SAME		AS		ABOVE	
1						
2						
3						
4						
5						

I certify that the findings of this report are based on my field observations and are accurate to the best of my ability.



Greg W. Johnson, P.E. 67587-F2585, S.E. 11561

07/15/2021
Date

OSSF SOIL EVALUATION REPORT INFORMATION

Date: July 16, 2021

Applicant Information:

Name: AROBLE MARKETING, LLC.
 Address: 7319 WASHITA WAY
 City: SAN ANTONIO State: TEXAS
 Zip Code: 78256 Phone: (210) 725-8653

Site Evaluator Information:

Name: Greg W. Johnson, P.E., R.S. S.E. 11561
 Address: 170 Hollow Oak
 City: New Braunfels State: Texas
 Zip Code: 78132 Phone & Fax (830)905-2778

Property Location:


Lot 336 Unit ___ Blk ___ Subd. TANGLEWOOD SHORES
 Street Address: 563 OAK TRAIL DRIVE
 City: CANYON LAKE Zip Code: 78133
 Additional Info.: _____

Installer Information:

Name: _____
 Company: _____
 Address: _____
 City: _____ State: _____
 Zip Code: _____ Phone _____

Topography: Slope within proposed disposal area:	<u>3</u> %
Presence of 100 yr. Flood Zone:	YES ___ NO <u>X</u>
Existing or proposed water well in nearby area.	YES ___ NO <u>X</u>
Presence of adjacent ponds, streams, water impoundments	YES ___ NO <u>X</u>
Presence of upper water shed	YES ___ NO <u>X</u>
Organized sewage service available to lot	YES ___ NO <u>X</u>

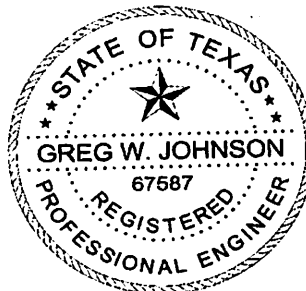
I HAVE PERFORMED A THOROUGH INVESTIGATION BEING A REGISTERED PROFESSIONAL ENGINEER AND SITE EVALUATOR IN ACCORDANCE WITH CHAPTER 285, SUBCHAPTER D, §285.30, & §285.40 (REGARDING RECHARGE FEATURES), TEXAS COMMISSION OF ENVIRONMENTAL QUALITY (EFFECTIVE DECEMBER 29, 2016).



 GREG W. JOHNSON, P.E. 67587 - S.E. 11561

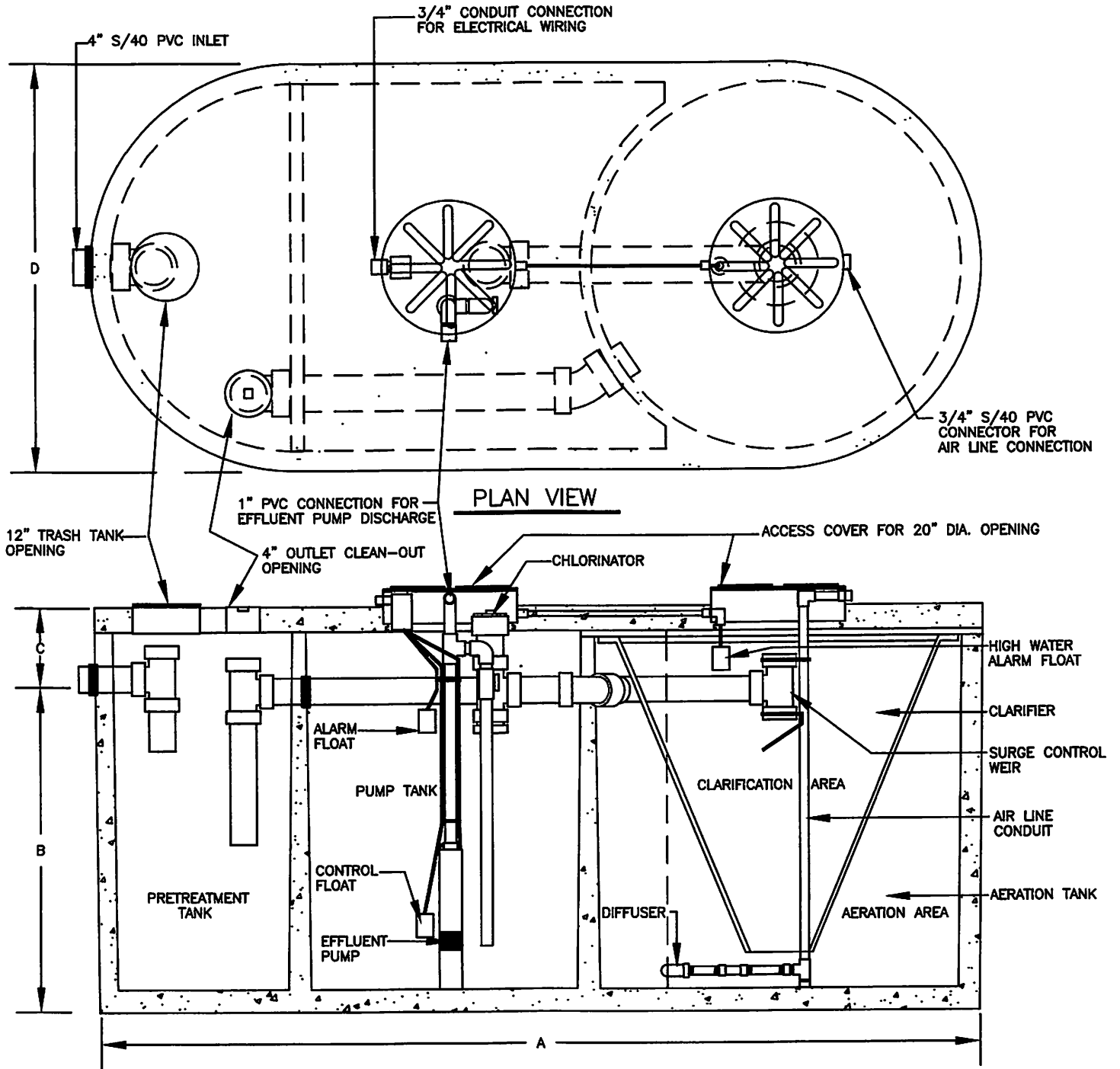
07/16/2021

 DATE



FIRM #2585

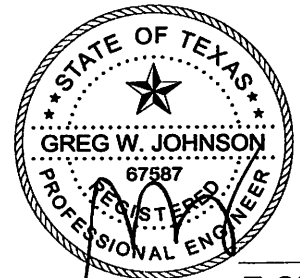
DESIGN DRAWINGS



**MODEL NC3
SECTION**

DIMENSIONAL DATA

MODEL	A	B	C	D
500NC3-500	12'-2"	60"	10"	75"
500NC3-750	13'-5"	60"	10"	75"
600NC3	12'-7"	60"	10"	82"



F-2585

01/15/2021

Arkal 1" Super Filter

Catalog No. 1102 0 _ _ _

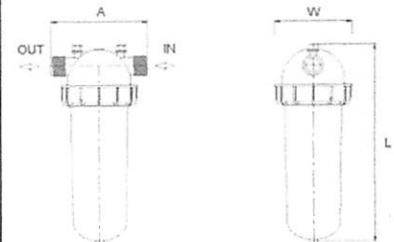
Features

- ◆ A "T" shaped filter with two 1" male threads.
- ◆ A "T" volume filter for in-line installation on 1" pipelines.
- ◆ The filter prevents clogging due to its enlarged filtering area that collects sediments and particles.
- ◆ Manufactured entirely from fiber reinforced plastic.
- ◆ A cylindrical column of grooved discs constitutes the filter element.
- ◆ Spring keeps the discs compressed.
- ◆ Screw-on filter cover.
- ◆ Filter discs are available in various filtration grades.



Technical Data

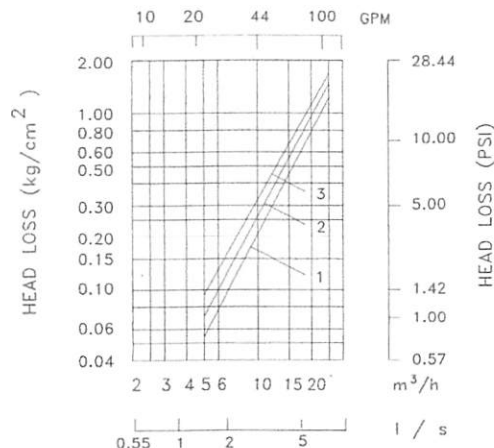
Inlet/outlet diameter	1" BSPT (male)	1" NPT (male)
	25.0 mm – nominal diameter 33.6 mm – pipe diameter (O. D.)	
Maximum pressure	10 atm	145 psi
Maximum flow rate	8 m ³ /h (1.7 l/sec)	35 gpm
General filtration area	500 cm ²	77.5 in ²
Filtration volume	600 cm ³	37 in ³
Filter length L	340 mm	13 13/32"
Filter width W	130 mm	5 3/32"
Distance between end connections A	158 mm	6 7/32"
Weight	1.420 kg	3.13 lbs.
Maximum temperature	70° C	158 °F
pH	5-11	5-11



Filtration Grades

- Blue (400 micron / 40 mesh)
- Yellow (200 micron / 80 mesh)
- Red (130 micron / 120 mesh)
- Black (100 micron / 140 mesh)
- Green (55 micron)

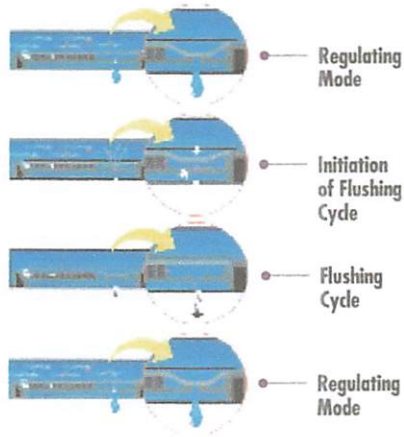
Head Loss Chart





Bioline® Dripperline

Pressure Compensating Dripperline for Wastewater



BioLine's Self-Cleaning, Pressure Compensating Dripper is a fully self-contained unit molded to the interior wall of the dripper tubing.

As shown at left, BioLine is continuously self-cleaning during operation, not just at the beginning and end of a cycle. The result is dependable, clog free operation, year after year.



Product Advantages

The Proven Performer

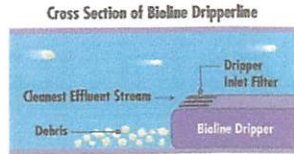
- Tens of millions of feet used in wastewater today.
- BioLine is permitted in every state allowing drip disposal.
- Backed by the largest, most quality-driven manufacturer of drip products in the U.S.
- Preferred choice of major wastewater designers and regulators.
- Proven track record of success for many years of hard use in wastewater applications.

Quality Manufacturing with Specifications Designed to Meet Your Needs

- Pressure compensating drippers assure the highest application uniformity - even on sloped or rolling terrain.
- Excellent uniformity with runs of 400 feet or more - reducing installation costs.
- Highest quality-control standards in the industry: Cv of 0.25 (coefficient of manufacturer's variation).
- A selection of flows and spacings to satisfy the designer's demand for almost any application rate.

Long-Term Reliability

- Protection against plugging:
 - Dripper inlet raised 0.27" above wall of tubing to prevent sediment from entering dripper.
 - Drippers impregnated with Vinyzene to prevent buildup of microbial slime.
 - Unique self-flushing mechanism passes small particles before they can build up.



Root Safe

- A physical barrier on each BioLine dripper helps prevent root intrusion.
- Protection never wears out - never depletes - releases nothing to the environment.
- Working reliably for up to 15 years in subsurface wastewater installations.
- Additional security of chemical root inhibition with Techfilter - supplies Trifluralin to the entire system, effectively inhibiting root growth to the dripper outlets.



Applications

- For domestic strength wastewater disposal.
- Installed following a treatment process.
- Can be successfully used on straight septic effluent with proper design, filtration and operation.
- Suitable for reuse applications using municipally treated effluent designated for irrigation water.

Specifications

Wall thickness (mil): 45*

Nominal flow rates (GPH): .4, .6, .9*

Common spacings: 12", 18", 24"*

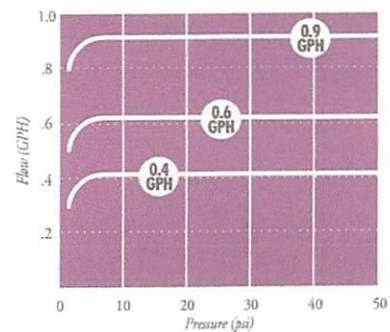
Recommended filtration: 120 mesh

Inside diameter: .570*

Color: Purple tubing indicates non-potable source

*Additional flows, spacings, and pipe sizes available by request. Please contact Netafim USA Customer Service for details.

BIOLINE Flow Rate vs. Pressure



NETAFIM USA

5470 E. Home Ave. • Fresno, CA 93727
 888.638.2346 • 559.453.6800
 FAX 800.695.4753
www.netafimusa.com

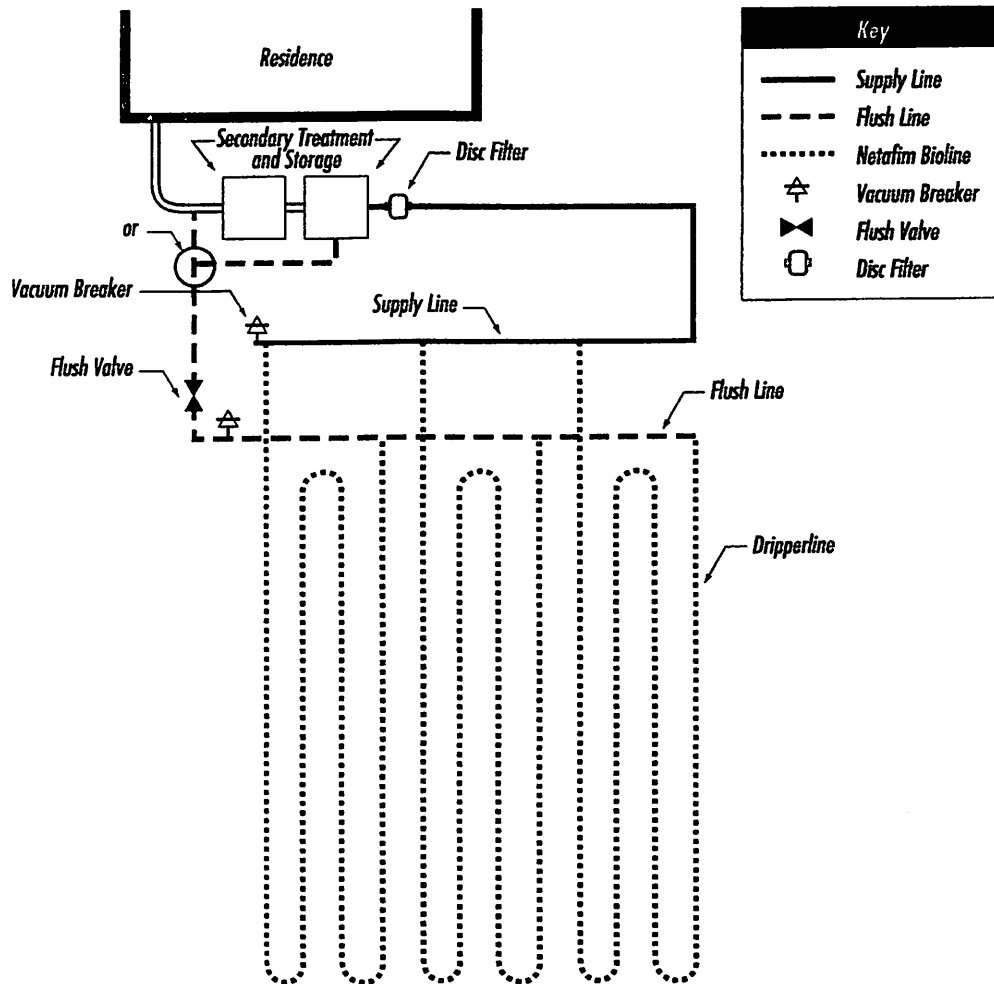
NETAFIM WASTEWATER DISPERSAL SYSTEM DESIGN GUIDE

SAMPLE DESIGNS

SINGLE TRENCH LAYOUT

Rectangular field with supply and flush manifold on same side and in same trench;

- Locate supply and flush manifold in same trench
- Dripperlines are looped at the end opposite the supply and flush manifolds
- The longest Bioline length should not exceed 400 ft. Drip fields 200 ft. in length might loop the Bioline once; drip dispersal fields under 100 ft. might be looped twice, as illustrated



VOID



COMAL COUNTY ENGINEER'S OFFICE

ON-SITE SEWAGE FACILITY APPLICATION

195 DAVID JONAS DR NEW BRAUNFELS, TX 78132 (830) 608-2090 WWW.CCEO.ORG

Date July 13, 2021

Permit Number 113048

1. APPLICANT / AGENT INFORMATION

Owner Name AROBLE MARKETING, LLC Agent Name GREG JOHNSON, P.E. Mailing Address 7319 WASHITA WAY Agent Address 170 HOLLOW OAK City, State, Zip SAN ANTONIO TEXAS 78256 City, State, Zip NEW BRAUNFELS TEXAS 78132 Phone # 210-725-8653 Phone # 830-905-2778 Email oiram1@outlook.com Email gregjohnsonpe@yahoo.com

2. LOCATION

Subdivision Name TANGLEWOOD SHORES Unit Lot 336 Block Survey Name / Abstract Number Address 563 OAK TRAIL DRIVE City CANYON LAKE State TX Zip 78133

VOID

3. TYPE OF DEVELOPMENT

[X] Single Family Residential Type of Construction (House, Mobile, RV, Etc.) PERSONAL RV SITE

Number of Bedrooms Indicate Sq Ft of Living Area

[] Non-Single Family Residential

(Planning materials must show adequate land area for doubling the required land needed for treatment units and disposal area)

Type of Facility Offices, Factories, Churches, Schools, Parks, Etc. - Indicate Number Of Occupants Restaurants, Lounges, Theaters - Indicate Number of Seats Hotel, Motel, Hospital, Nursing Home - Indicate Number of Beds Travel Trailer/RV Parks - Indicate Number of Spaces Miscellaneous

Estimated Cost of Construction: \$ 120,000 (Structure Only)

Is any portion of the proposed OSSF located in the United States Army Corps of Engineers (USACE) flowage easement?

[] Yes [X] No (If yes, owner must provide approval from USACE for OSSF improvements within the USACE flowage easement)

Source of Water [X] Public [] Private Well [] Rainwater Collection

VOID

4. SIGNATURE OF OWNER

By signing this application, I certify that:

- The completed application and all additional information submitted does not contain any false information and does not conceal any material facts. I certify that I am the property owner or I possess the appropriate land rights necessary to make the permitted improvements on said property.
- Authorization is hereby given to the permitting authority and designated agents to enter upon the above described property for the purpose of site/soil evaluation and inspection of private sewage facilities.
- I understand that a permit of authorization to construct will not be issued until the Floodplain Administrator has performed the reviews required by the Comal County Flood Damage Prevention Order.
- I affirmatively consent to the online posting/public release of my e-mail address associated with this permit application, as applicable.

Signature of Owner AROBLE MARKETING Managing member

Date July 27 2021

REVISED
8:16 am, Sep 20, 2021

* COMAL COUNTY OFFICE OF ENVIRONMENTAL HEALTH * * *

APPLICATION FOR PERMIT FOR AUTHORIZATION TO CONSTRUCT AN ON-SITE SEWAGE FACILITY AND FOR CONSENT TO OPERATE

VOID

Planning Materials & Site Evaluation as Required Completed By GREG W. JOHNSON, P.E.

System Description PROPRIETARY; AEROBIC TREATMENT AND DRIP TUBING

Size of Septic System Required Based on Planning Materials & Soil Evaluation

Tank Size(s) (Gallons) CLEARSTREAM 600NC3T Absorption/Application Area (Sq Ft) 2000

Gallons Per Day (As Per TCEQ Table III) USING 240 (PERSONAL RV)

(Sites generating more than 5000 gallons per day are required to obtain a permit through TCEQ)

Is the property located over the Edwards Recharge Zone? Yes No

(If yes, the planning materials must be completed by a Registered Sanitarian (R.S.) or Professional Engineer (P.E.))

Is there an existing TCEQ approved WPAP for the property? Yes No

(if yes, the R. S. or P. E. shall certify that the OSSF design complies with all provisions of the existing WPAP.)

If there is no existing WPAP, does the proposed development require a TCEQ approved WPAP? Yes No

(If yes, the R.S. or P. E. shall certify that the OSSF design will comply with all provisions of the proposed WPAP. A Permit to Construct will not be issued for the proposed OSSF until the proposed WPAP has been approved by the appropriate regional office.)

VOID

Is the property located over the Edwards Contributing Zone? Yes No

Is there an existing TCEQ approval CZP for the property? Yes No

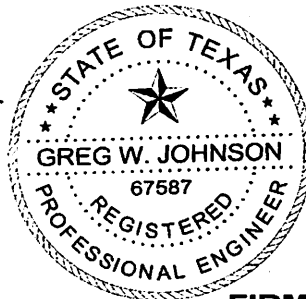
(if yes, the P.E. or R.S. shall certify that the OSSF design complies with all provisions of the existing CZP)

If there is no existing CZP, does the proposed development activity require a TCEQ approved CZP? Yes No

(if yes, the P.E. or R.S. shall certify that the OSSF design will comply with all provisions of the proposed CZP. A Permit to construct will not be issued for the proposed OSSF until the CZP has been approved by the appropriate regional office.)

Is this property within an incorporated city? Yes No

If yes, indicate the city: _____



FIRM #2585

VOID

By signing this application, I certify that:

- The information provided above is true and correct to the best of my knowledge.
- I affirmatively consent to the online posting/public release of my e-mail address associated with this permit application, as applicable

[Signature]
Signature of Designer

07/16/2021
Date

VOID

**DRIP TUBING SYSTEM
DESIGNED FOR:
AROBLE MARKETING, LLC
7319 WASHITA WAY
SAN ANTONIO, TX 78256**

SITE DESCRIPTION:

Located in Tanglewood Shores, Lot 336 at 563 Oak Trail Drive, the proposed system will serve a three bedroom mobile residence (1093sf.) situated in an area with shallow Type-III soil as described in the Soil Evaluation Report. An aerobic treatment plant utilizing drip irrigation was chosen as the most appropriate system to serve the conditions on this lot.

PROPOSED SYSTEM:

A 3-inch SCH-40 pipe discharges from the *RV* into Clearstream NC3T 600 gpd aerobic plant containing a 400-gallon pretreatment tank, an aerobic treatment plant, and a 700-gallon pump chamber containing a submersible (0.5 HP Clearstream P-20 or equivalent) well pump. The well pump is activated by a time controller allowing the distribution ten times per day with an 8 minute run time with float setting at 240 gallons. A high level audible and visual alarm will activate should the pump fail. Distribution is through a self flushing 100 micron disc filter (Arkal) then through a 1" SCH-40 manifold to a 2000 sf. drip tubing field, with *Netifim Bioline* drip lines set approximately two feet apart with *0.61 gph* emitters set every two feet, as per *the schematic*. A pressure regulator PMR-MF 30psi installed in the pump tank on *the manifold to the field* will maintain pressure at 30 psi.

A 1" SCH-40 return line is installed to periodically flush the system by cycling a 1" ball valve. Solids caught in the spin filter are flushed each cycle back to the trash tank. Vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher to lower parts of the field. Field area will be scarified and built up with 6" of Type II or Type III soil, then the drip tubing will be laid and capped with 6" of Type II or Type III soil (**NOT SAND**). The field area will be sodded with grass prior to system startup. **Tank must have at grade risers on each opening with watertight caps that must be at least 65# or have a padlock or can only be removed with tools. A secondary plug, cap, or suitable restraint must be provided below riser cap to prevent tank entry should the cap be damaged or removed, in compliance with Chapter §285.38.**

DESIGN SPECIFICATIONS:

- Daily waste flow: 240 GPD Table III (*Design Rate*)
- Pretreatment tank size: 428Gal
- Plant Size: Clearstream NC3T 600gpd (TCEQ Approved)
- Pump tank size: 700 Gal

VOID

REVISED

8:17 am, Sep 20, 2021

VOID

Reserve capacity after High Level: 80 Gal (1/3 day Req'd)
Application Rate: Ra = 0.2 gal/sf
Total absorption area: Q/Ra = 240 GPD/0.20 = 1200 sf. (Actual 2000 sf.)
Total linear feet drip tubing: 1000' *Netifim Bioline* drip tubing .61 GPH
Pump requirement: 500 emitters @ .61 gph @ 30 psi = 5.0833 gpm
Pump Requirement (cont.): (0.5 HP Clearstream P-20 pump or equiv.)
Dosing volume: 50-70 gal.

Pump Tank Calculations: 700 Gal (14.5 gal/in.)
Volume below working level = 15" = 148 gal
Working level = 240 gal = 20"
Reserve Requirement = 1/3 day = 80 gal. = 6.5"

MINIMUM SCOUR VELOCITY (MSV) > 2 FPS
IN DRIP TUBING W/ NOM. DIA. 0.55" ID
MSV = 2 FPS $(\Pi d^2)/4 * 7.48 \text{ gal/cf} * 60 \text{ sec/min}$
MSV = $2(3.14159((.55/12)^2)/4) * 7.48 * 60$
MSV = 1.5 gpm MIN FLOW RATE x 3 = 4.5 gpm

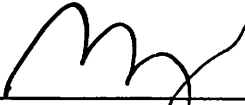
IN RETURN MANIFOLD W/ NOM. DIA 1.049" ID
MSV = 2 FPS $(\Pi d^2)/4 * 7.48 \text{ gal/cf} * 60 \text{ sec/min}$
MSV = $2(3.14159((1.049/12)^2)/4) * 7.48 * 60$
MSV = 5.4 GPM

VOID

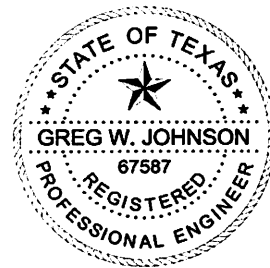
PIPE AND FITTINGS:

All pipes and fittings in this drip tubing system shall be 1" schedule 40 PVC. All joints shall be sealed with approved solvent-type PVC cement. Clipper type cutters are recommended to prevent PVC burrs during cutting of pipes causing possible plugging. Drip tubing 0.61 gph drip tubing to be used in field.

Designed in accordance with Chapter 285, Subchapter D, §285.30 and §285.40 Texas Commission on Environmental Quality (Effective December 29, 2016)

 07/16/2021

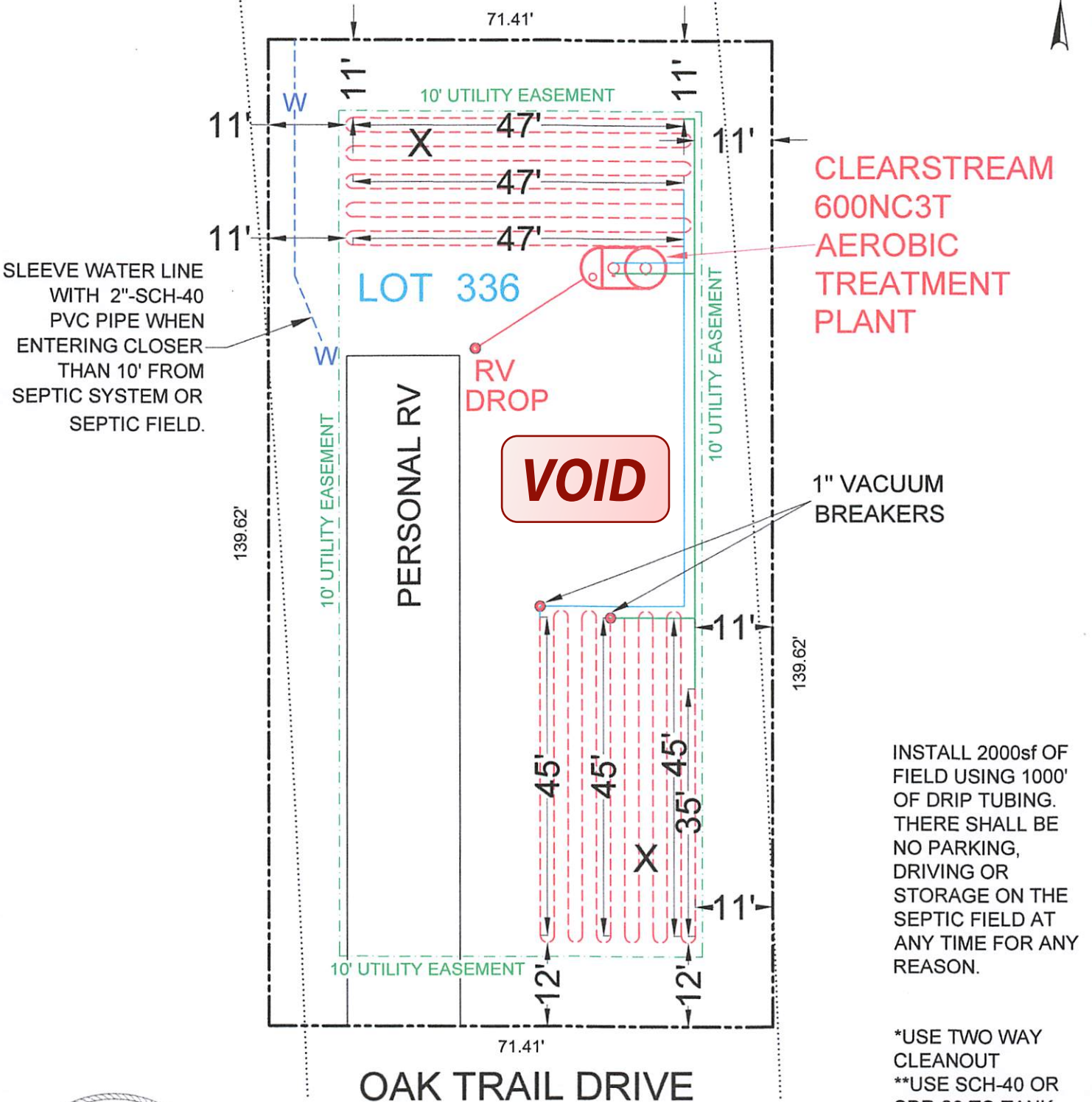
Greg W. Johnson, P.E. No. 67587 - F-2585
170 Hollow Oak
New Braunfels, Texas 78132
830/905-2778



VOID

REVISED
8:17 am, Sep 20, 2021

VOID



VOID

INSTALL 2000sf OF FIELD USING 1000' OF DRIP TUBING. THERE SHALL BE NO PARKING, DRIVING OR STORAGE ON THE SEPTIC FIELD AT ANY TIME FOR ANY REASON.

*USE TWO WAY CLEANOUT
**USE SCH-40 OR SDR-26 TO TANK

X= TEST HOLE

OWNER: AROBLE MARKETING, LLC		DRAWN BY: EJS III	
STREET ADDRESS: 563 OAK TRAIL DRIVE			
LEGAL DESC: TANGLEWOOD SHORES	UNIT/SECTION/PHASE:	BLOCK:	LOT: 336
PREPARED BY: GREG W. JOHNSON, P.E. F#002585	SCALE: 1"=20'	DATE: 7/16/2021	REVISED: 9/17/2021

VOID

TANK NOTES:

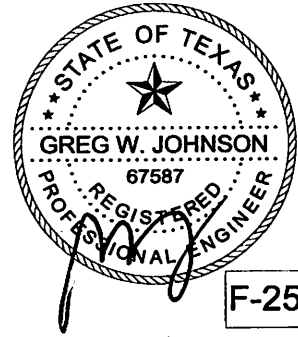
Tanks must be set to allow a minimum of 1/8" per foot fall from the residence.

Tightlines to the tank shall be SCH-40 PVC.

A two way sanitary tee is required between residence and tank.

A minimum of 4" of sand, sandy loam, clay loam free of rock shall be placed under and around tanks

Tanks must be left uncovered and full of water for inspection by the permitting authority.

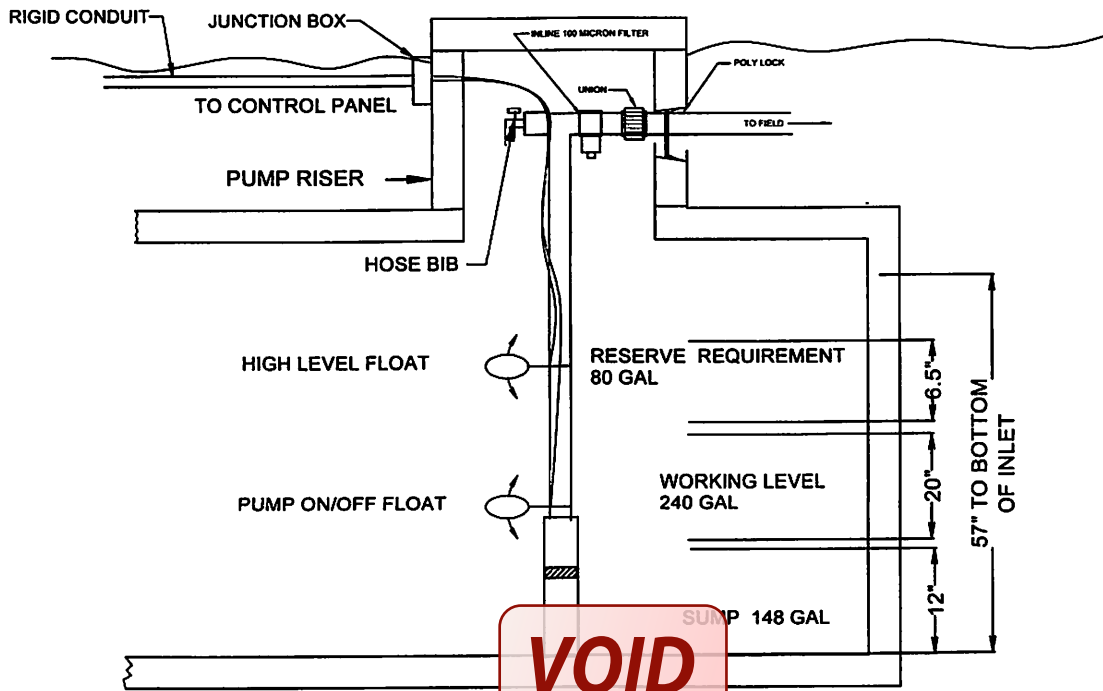


F-2585

07/15/2021

VOID

ALL WIRING MUST BE IN COMPLIANCE WITH THE MOST RECENT NATIONAL ELECTRIC CODE



VOID

**TYPICAL PUMP TANK CONFIGURATION
CLEARSTREAM 600NC3T W/ 700 GAL PUMP TANK**

RECEIVED

By KG at 7:19 am, Aug 03, 2021



COMAL COUNTY
ENGINEER'S OFFICE

ON-SITE SEWAGE FACILITY APPLICATION

195 DAVID JONAS DR
NEW BRAUNFELS, TX 78132
(830) 608-2090
WWW.CCEO.ORG

Date July 13, 2021

Permit Number 113048

1. APPLICANT / AGENT INFORMATION

VOID

Owner Name	<u>AROBLE MARKETING, LLC</u>	Agent Name	<u>GREG JOHNSON, P.E.</u>
Mailing Address	<u>7319 WASHITA WAY</u>	Agent Address	<u>170 HOLLOW OAK</u>
City, State, Zip	<u>SAN ANTONIO TEXAS 78256</u>	City, State, Zip	<u>NEW BRAUNFELS TEXAS 78132</u>
Phone #	<u>210-725-8653</u>	Phone #	<u>830-905-2778</u>
Email	<u>oiraml@outlook.com</u>	Email	<u>gregjohnsonpe@yahoo.com</u>

2. LOCATION

Subdivision Name TANGLEWOOD SHORES Unit _____ Lot 336 Block _____
 Survey Name / Abstract Number _____ Acreage _____
 Address 563 OAK TRAIL DRIVE City CANYON LAKE State TX Zip 78133

3. TYPE OF DEVELOPMENT

Single Family Residential

Type of Construction (House, Mobile, RV, Etc.) MOBILE HOME

Number of Bedrooms 3

Indicate Sq Ft of Living Area 1093

Non-Single Family Residential

(Planning materials must show adequate land area for required land needed for treatment units and disposal area)

Type of Facility _____

Offices, Factories, Churches, Schools, Parks, Etc. - Indicate Number Of Occupants _____

Restaurants, Lounges, Theaters - Indicate Number of Seats _____

Hotel, Motel, Hospital, Nursing Home - Indicate Number of Beds _____

Travel Trailer/RV Parks - Indicate Number of Spaces _____

Miscellaneous _____

VOID

Estimated Cost of Construction: \$ 120,000 (Structure Only)

Is any portion of the proposed OSSF located in the United States Army Corps of Engineers (USACE) flowage easement?

Yes No (If yes, owner must provide approval from USACE for proposed OSSF improvements within the USACE flowage easement)

Source of Water Public Private Well Rainwater Collection

4. SIGNATURE OF OWNER

By signing this application, I certify that:

- The completed application and all additional information submitted does not contain any false information and does not conceal any material facts. I certify that I am the property owner or I possess the appropriate land rights necessary to make the permitted improvements on said property.
- Authorization is hereby given to the permitting authority and designated agents to enter upon the above described property for the purpose of site/soil evaluation and inspection of private sewage facilities..
- I understand that a permit of authorization to construct will not be issued until the Floodplain Administrator has performed the reviews required by the Comal County Flood Damage Prevention Order.
- I affirmatively consent to the online posting/public release of my e-mail address as associated with this permit application, as applicable.

Signature of Owner AROBLE MARKETING
Managing member

Date July 27 2021

VOID

*** COMAL COUNTY OFFICE OF ENVIRONMENTAL HEALTH ***

APPLICATION FOR PERMIT FOR AUTHORIZATION TO CONSTRUCT AN ON-SITE SEWAGE FACILITY AND LICENSE TO OPERATE

Planning Materials & Site Evaluation as Required by Chapter 261.001, Texas Health Code, Completed by GREG W. JOHNSON, P.E.



System Description PROPRIETARY; AEROBIC TREATMENT AND DRIP TUBING

Size of Septic System Required Based on Planning Materials & Soil Evaluation

Tank Size(s) (Gallons) CLEARSTREAM 600NC3T Absorption/Application Area (Sq Ft) 2000

Gallons Per Day (As Per TCEQ Table III) 240

(Sites generating more than 5000 gallons per day are required to obtain a permit through TCEQ)

Is the property located over the Edwards Recharge Zone? [] Yes [X] No

(If yes, the planning materials must be completed by a Registered Sanitarian (R.S.) or Professional Engineer (P.E.))

Is there an existing TCEQ approved WPAP for the property? [] Yes [X] No

(if yes, the R. S. or P. E. shall certify that the OSSF design complies with all provisions of the existing WPAP.)

If there is no existing WPAP, does the proposed development activity require a TCEQ approved WPAP? [] Yes [] No

(If yes, the R.S. or P. E. shall certify that the OSSF design will comply with all provisions of the proposed WPAP. A Permit to Construct will not be issued for the proposed OSSF until the proposed WPAP has been approved by the appropriate regional office.)

Is the property located over the Edwards Contributing Zone? [X] Yes [] No



Is there an existing TCEQ approval CZP for the property? [] Yes [X] No

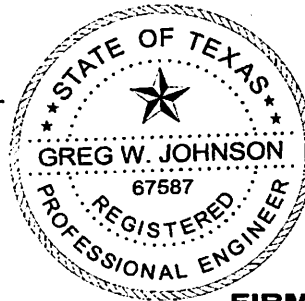
(if yes, the P.E. or R.S. shall certify that the OSSF design complies with all provisions of the existing CZP)

If there is no existing CZP, does the proposed development activity require a TCEQ approved CZP? [] Yes [X] No

(if yes, the P.E. or R.S. shall certify that the OSSF design will comply with all provisions of the proposed CZP. A Permit to construct will not be issued for the proposed OSSF until the CZP has been approved by the appropriate regional office.)

Is this property within an incorporated city? [] Yes [X] No

If yes, indicate the city: _____



FIRM #2585

By signing this application, I certify that:

- The information provided above is true and correct to the best of my knowledge.
- I affirmatively consent to the online posting/public release of my e-mail address associated with this permit application, as applicable



Signature of Designer

Date 07/16/2021

DRIP TUBING SYSTEM
DESIGNED FOR:
AROBLE MARKETING, LLC
319 WASHITA WAY
SAN ANTONIO, TX 78256

SITE DESCRIPTION:

Located in Tanglewood Shores, Lot 336 at 563 Oak Trail Drive, the proposed system will serve a three bedroom mobile residence (1093sf.) situated in an area with shallow Type-III soil as described in the Soil Evaluation Report. An aerobic treatment plant utilizing drip irrigation was chosen as the most appropriate system to serve the conditions on this lot.

PROPOSED SYSTEM:

A 3-inch SCH-40 pipe discharges from the residence into Clearstream NC3T 600 gpd aerobic plant containing a 400-gallon pretreatment tank, an aerobic treatment plant, and a 700-gallon pump chamber containing a submersible (0.5 HP Clearstream P-20 or equivalent) well pump. The well pump is activated by a time controller allowing the distribution ten times per day with an 8 minute run time with float setting at 240 gallons. A high level audible and visual alarm will activate should the pump fail. Distribution is through a self flushing 100 micron disc filter (Arkal) then through a 1" SCH-40 manifold to a 2000 sf. drip tubing field, with *Netifim Bioline* drip lines set approximately two feet apart with **0.61 gph** emitters set every two feet, as per the attached schematic. A pressure regulator PMR-MF 30psi installed in the pump tank on the field will maintain pressure at 30 psi.

A 1" SCH-40 return line is installed to periodically flush the system by cycling a 1" ball valve. Solids caught in the spin filter are flushed each cycle back to the trash tank. Vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher to lower parts of the field. Field area will be scarified and built up with 6" of Type II or Type III soil, then the drip tubing will be laid and capped with 6" of Type II or Type III soil (**NOT SAND**). The field area will be sodded with grass prior to system startup. **Tank must have at grade risers on each opening with watertight caps that must be at least 65# or have a padlock or can only be removed with tools. A secondary plug, cap, or suitable restraint must be provided below riser cap to prevent tank entry should the cap be damaged or removed, in compliance with Chapter §285.38.**

DESIGN SPECIFICATIONS:

Daily waste flow: 240 GPD Table III
Pretreatment tank size: 428Gal
Plant Size: Clearstream NC3T 600gpd (TCEQ Approved)
Pump tank size: 700 Gal

Reserve capacity after High Level: 80 Gal (1/3 day Req'd)
Application Rate: Ra = 0.2 gal/sf
Total absorption area: Q/Ra = 240 GPD/0.20 = 1200 sf. (Actual 2000 sf.)
Total linear feet drip tubing: 1000' Netifin Bioline drip tubing .61 GPH
Pump requirement: 500 emitters @ .61 GPH = 5.0833 gpm
Pump Requirement (cont.): (0.5 HP Clearstream P-20 pump or equiv.)
Dosing volume: 50-70 gal.

Pump Tank Calculations: 700 Gal (14.5 gal/in.)
Volume below working level = 15" = 148 gal
Working level = 240 gal = 20"
Reserve Requirement = 1/3 day = 80 gal. = 6.5"

MINIMUM SCOUR VELOCITY (MSV) > 2 FPS
IN DRIP TUBING W/ NOM. DIA. 0.55" ID
MSV = 2 FPS $(\pi d^2) / 4 * 7.48 \text{ gal/cf} * 60 \text{ sec/min}$
MSV = 2 $(3.14159 ((.55/12)^2) / 4) * 7.48 * 60$
MSV = 1.5 gpm MIN FLOW RATE x 3 = 4.5 gpm

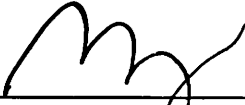
IN RETURN MANIFOLD W/ NOM. DIA 1.049" ID
MSV = 2 FPS $(\pi d^2) / 4 * 7.48 \text{ gal/cf} * 60 \text{ sec/min}$
MSV = 2 $(3.14159 ((1.049/12)^2) / 4) * 7.48 * 60$
MSV = 5.4 GPM

VOID

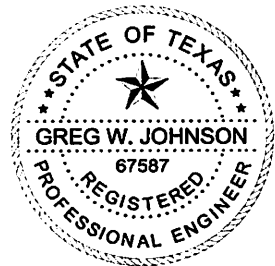
PIPE AND FITTINGS:

All pipes and fittings in this drip tubing system shall be 1" schedule 40 PVC. All joints shall be sealed with approved solvent-type PVC cement. Clipper type cutters are recommended to prevent PVC burrs during cutting of pipes causing possible plugging. Drip tubing 0.61 gph drip tubing to be used in field.

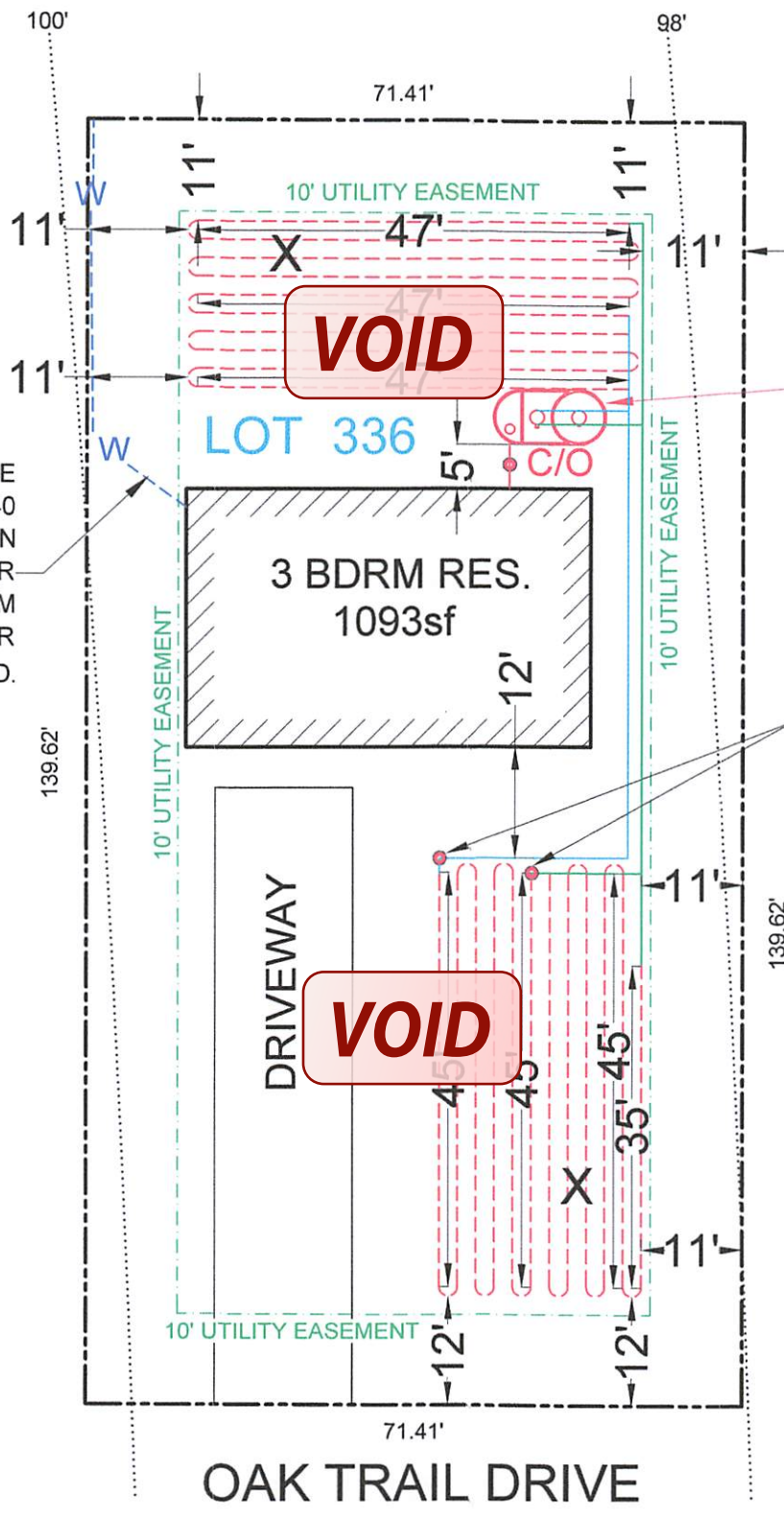
Designed in accordance with Chapter 285, Subchapter D, §285.30 and §285.40 Texas Commission on Environmental Quality (Effective December 29, 2016)

 07/16/2021

Greg W. Johnson, P.E. No. 67587 - F-2585
170 Hollow Oak
New Braunfels, Texas 78132
830/905-2778



VOID



SLEEVE WATER LINE WITH 2"-SCH-40 PVC PIPE WHEN ENTERING CLOSER THAN 10' FROM SEPTIC SYSTEM OR SEPTIC FIELD.

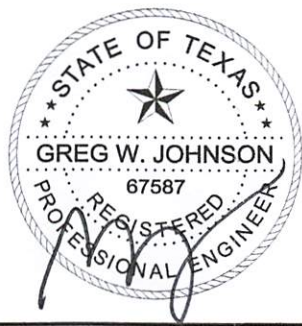
**CLEARSTREAM
600NC3T
AEROBIC
TREATMENT
PLANT**

**1" VACUUM
BREAKERS**

INSTALL 2000sf OF FIELD USING 1000' OF DRIP TUBING. THERE SHALL BE NO PARKING, DRIVING OR STORAGE ON THE SEPTIC FIELD AT ANY TIME FOR ANY REASON.

*USE TWO WAY CLEANOUT
**USE SCH-40 OR SDR-26 TO TANK

X= TEST HOLE



VOID

OWNER: AROBLE MARKETING, LLC.		DRAWN BY: EJS III	
STREET ADDRESS: 563 OAK TRAIL DRIVE			
LEGAL DESC: TANGLEWOOD SHORES	UNIT/SECTION/PHASE:	BLOCK:	LOT: 336
PREPARED BY: GREG W. JOHNSON, P.E. F#002585	SCALE: 1"=20'	DATE: 7/16/2021	REVISED:

SPECIAL WARRANTY DEED

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OF THE FOLLOWING INFORMATION FROM THIS INSTRUMENT BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

Date: 12/30/20

Grantor: AgCat Realty, LLC, a Texas Limited Liability Company.

Grantor's Mailing Address: P. O. Box 6296, San Antonio, TX 78209

Grantee: Aroble Marketing, LLC

Grantee's Mailing Address (including County): 7319 Washita Way, San Antonio, TX 78256

CONSIDERATION: Ten and No/100 Dollars (\$10.00), cash, and other good and valuable consideration.

PROPERTY (including any improvements): Lot 120 and 336, in Tanglewood Shores Subdivision, as shown by the plat thereof recorded in Volume 4, Page 63, Plat Records, Comal County, Texas.

RESERVATIONS FROM CONVEYANCE: None.

EXCEPTIONS TO CONVEYANCE AND WARRANTY: LIENS DESCRIBED AS PART OF THE CONSIDERATION AND ANY OTHER LIENS DESCRIBED IN THIS DEED AS BEING EITHER ASSUMED OR SUBJECT TO WHICH TITLE IS TAKEN; VALIDLY EXISTING EASEMENTS, RIGHTS-OF-WAY, AND PRESCRIPTIVE RIGHTS, WHETHER OF RECORD OR NOT; ALL PRESENTLY RECORDED AND VALIDLY EXISTING INSTRUMENTS, OTHER THAN CONVEYANCES OF THE SURFACE FEE ESTATE, THAT AFFECT THE PROPERTY; AND TAXES FOR THE CURRENT YEAR, WHICH GRANTEE ASSUMES AND AGREES TO PAY, AND SUBSEQUENT ASSESSMENTS FOR THAT AND PRIOR YEARS DUE TO CHANGE IN LAND USAGE, OWNERSHIP, OR BOTH, THE PAYMENT OF WHICH GRANTEE ASSUMES.

GRANTOR, FOR THE CONSIDERATION AND SUBJECT TO THE RESERVATIONS FROM CONVEYANCE AND THE EXCEPTIONS TO CONVEYANCE AND WARRANTY, GRANTS, SELLS, AND CONVEYS TO GRANTEE THE PROPERTY, TOGETHER WITH ALL AND SINGULAR THE RIGHTS AND APPURTENANCES THERETO IN ANY WAY BELONGING, TO HAVE AND TO HOLD IT TO GRANTEE AND GRANTEE'S HEIRS, SUCCESSORS, AND ASSIGNS, FOREVER. GRANTEE EXPRESSLY AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW THAT PROPERTY AND ANY IMPROVEMENTS THEREON ARE CONVEYED "AS IS" AND "WITH ALL FAULTS", AND GRANTEE HAS DISCLAIMED, ANY AND ALL REPRESENTATIONS, WARRANTIES, OF ANY KIND, ORAL OR WRITTEN, EXPRESS OR IMPLIED, (EXCEPT AS TO TITLE AS HEREAFTER PROVIDED AND LIMITED) CONCERNING THE PROPERTY AND ANY IMPROVEMENTS THEREON, INCLUDING WITHOUT LIMITATION, THE VALUE, CONDITION, MERCHANTABILITY, HABITABILITY, MARKETABILITY, PROFITABILITY, SUITABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE OF THE PROPERTY.

BY ACCEPTING THIS DEED, GRANTEE ACKNOWLEDGES THAT GRANTEE HAS NOT MADE AND DOES NOT MAKE ANY REPRESENTATIONS AS TO THE PHYSICAL CONDITION, OR ANY OTHER MATTER AFFECTING OR RELATED TO THE PROPERTY OR ANY IMPROVEMENTS THEREON (OTHER THAN WARRANTIES OF TITLE AS PROVIDED AND LIMITED HEREIN), GRANTEE EXPRESSLY AGREES THAT TO THE MAXIMUM EXTENT PERMITTED BY LAW THAT PROPERTY AND ANY IMPROVEMENTS THEREON ARE CONVEYED "AS IS" AND "WITH ALL FAULTS", AND GRANTEE HAS DISCLAIMED, ANY AND ALL REPRESENTATIONS, WARRANTIES, OF ANY KIND, ORAL OR WRITTEN, EXPRESS OR IMPLIED, (EXCEPT AS TO TITLE AS HEREAFTER PROVIDED AND LIMITED) CONCERNING THE PROPERTY AND ANY IMPROVEMENTS THEREON, INCLUDING WITHOUT LIMITATION, THE VALUE, CONDITION, MERCHANTABILITY, HABITABILITY, MARKETABILITY, PROFITABILITY, SUITABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE OF THE PROPERTY.

WHEN THE CONTEXT REQUIRES, SINGULAR NOUNS AND PRONOUNS INCLUDE THE PLURAL.

Grantor(s):

Logan Fullmer

LOGAN FULLMER

Ryan MacDonald, Manager of AgCat Realty, LLC on behalf of the company

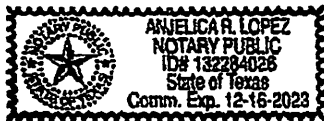
ACKNOWLEDGMENT

STATE OF TEXAS
COUNTY OF BEXAR

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This instrument was acknowledged before me on the 30 day of December, 2020, by Ryan MacDonald, Manager of AgCat Realty, LLC on behalf of the company.

Logan Fullmer
Notary Public, State of Texas

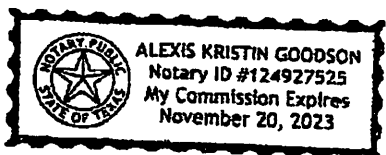


Grantee's Initials *LF*

Grantee's Acceptance of Deed

Grantee acknowledges that prior to the conveyance of the Property it has made a physical inspection and has satisfied itself as to the condition of Property. Additionally, Grantee further acknowledges that Grantor may have limited knowledge of the Property site and may not have made a personal visit to the Property prior to listing the Property for sale. Grantor is an investment entity who purchases property in volume and often has limited or no knowledge of the site other than what is available in the public records, through third parties and from the internet. Therefore, Grantee acknowledges that Grantor asserts it has disclosed the condition of the property to the best of its abilities based on its limited knowledge of the site. Grantee additionally acknowledges that it has received the Seller's Property Disclosure, has performed it's own inspection of the site prior to the date of the sale, and should Grantee determine any characteristic of the property differs from that of what the disclosure states it shall unconditionally waive the right to make any and all claims against Grantor, and Grantor's shareholders, owners, directors, agents, officers, partners (both general and limited), members, managers, other beneficial owners, parents and subsidiaries, employees, agents, representatives, legal representatives, heirs, successors, and assigns, and each of them, of any from all claims, demands, causes of action, damages, costs, expenses, actual attorney fees, losses and/or liabilities in law or in equity, of every kind and nature whatsoever arising out of, relating to or in connection with, all statements within the Seller's Property Disclosure as they relate to the physical, abstract, and intrinsic characteristics of the Property.

Grantee accepts the attached deed and consents to its form and substance. Grantee acknowledges that the terms of the deed conform with Grantee's intent and that they will control in the event of any conflict with the contract Grantee signed regarding the Property described in the deed. Grantee waives and releases all claims against Grantor, including fraud and fraudulent inducement against Grantor and all persons and entities associated with Grantor.



Grantee(s): [Signature]
By: Judas S. Garcia
As: Manager of Aroble Marketing, LLC
on behalf of the company

ACKNOWLEDGMENT

STATE OF TEXAS
COUNTY OF BEXAR

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This instrument was acknowledged before me on the 30 day of December, 2020, by Judas S. Garcia, Manager of Aroble Marketing, LLC on behalf of the company.

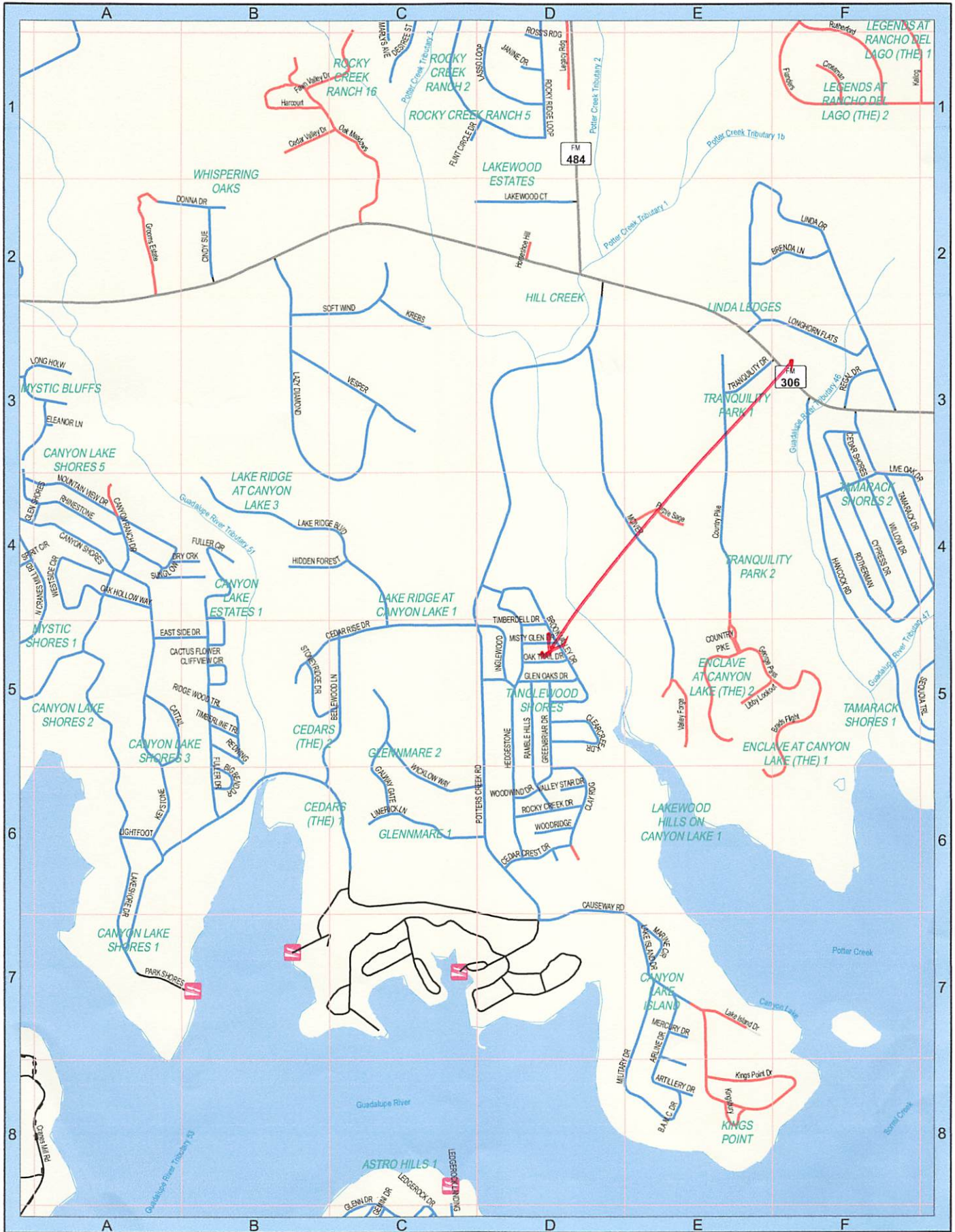
[Signature]
Notary Public, State of Texas

RETURN AFTER RECORDING TO:
Aroble Marketing
1319 Alameda Way
San Antonio, TX 78256

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
12/30/2020 02:33:17 PM
CHRISTY 2 Pages(s)
202006059515

Grantee's Initials [Signature]

 [Signature]



SEE PAGE 19

