Comal County Environmental Health
OSSF Inspection Sheet

Installer Name: Winters **OSSF Installer #:** OS0005924

1st Inspection Date: 8/7/25 **2nd Inspection Date:** 9/12/25 **3rd Inspection Date:**

Inspector Name: Hendry **Inspector Name:** Hendry **Inspector Name:**

Permit#: 118556 **Address:** 709 BURR OAK LN

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	X	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)		X		
2	SITE AND SOIL CONDITIONS & SETBACK DISTANCES Setback Distances Meet Minimum Standards	X	285.91(10) 285.30(b)(4) 285.31(d)		X		
3	SEWER PIPE Proper Type Pipe from Structure to Disposal System (Cast Iron, Ductile Iron, Sch. 40, SDR 26)	X	285.32(a)(1)		X		
4	SEWER PIPE Slope from the Sewer to the Tank at least 1/8 Inch Per Foot	X	285.32(a)(3)		X		
5	SEWER PIPE Two Way Sanitary - Type Cleanout Properly Installed (Add. C/O Every 100' &/or 90 degree bends)	X	285.32(a)(5)		X		
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: **8/7/25 CH: No tight line, tank good, ready for cover, leave tight line and penetration into tank exposed for inspection**
9/12/25 CH: Operational, cover all

Comal County Environmental Health
OSSF Inspection Sheet

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
8	SEPTIC TANK Tank(s) Clearly Marked SEPTIC TANK If SingleTank, 2Compartments Provided withBaffle SEPTIC TANK Inlet Flowline Greater than3" and " T " Provided on Inlet and OutletSEPTIC TANK Septic Tank(s) MeetMinimum 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	X	285.32(b)(1)(F) 285.32(b)(1)(G) 285.34(b)		X		
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 providedSEPTIC 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	X			X		
15	AEROBIC TREATMENT UNIT Manufacturer AEROBIC TREATMENT UNIT Model Number	X X		AquaKlear 600; as per design	X X		
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)				

Comal County Environmental Health
OSSF Inspection Sheet

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
19	DISPOSAL SYSTEM Drip Irrigation	X	285.33(c)(3)(A)-(F)		X		
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)				

Comal County Environmental Health
OSSF Inspection Sheet

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.	X	285.32(c)(1)		X		
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	X X X X			X X X X		
35	AEROBIC TREATMENT UNIT Chlorinator Properly Installed with Chlorine Tablets in Place.	X			X		
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?	X	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)		X		
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	X X	285.33(d)(2)(G) (i)285.33(d)(2) (A)285.33(d)(2)(F)		X X		
42	APPLICATION AREA Area Installed	X			X		
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:	118556
Issued This Date:	06/30/2025
This permit is hereby given to:	Sunny Circle, LLC.

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

709 BURR OAK LN
CANYON LAKE, TX 78133

Subdivision:	Canyon Springs Resorts
Unit:	5
Lot:	49
Block:	67
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 Kathy Griffin at 2:09 pm, Apr 16, 2025

COMAL COUNTY
ENGINEER'S OFFICE

OSSF DEVELOPMENT APPLICATION CHECKLIST

Staff will complete shaded items

Date Received	Initials	Permit Number
		118556

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

04/07/2025
Date

___ COMPLETE APPLICATION
Check No. _____ Receipt No. _____

INCOMPLETE APPLICATION
—— (Missing Items Circled, Application Refused)

Revised: September 2019

RECEIVED
By Kathy Griffin at 2:09 pm, Apr 16, 2025

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 _____ Permit Number 118556

1. APPLICANT / AGENT INFORMATION

Owner Name	Sunny Circle, LLC.	Agent Name	David Winters Septics LLC.
Mailing Address	156 Canyon Bend	Agent Address	P.O Box 195
City, State, Zip	Canyon Lake, TX 78133	City, State, Zip	Spring Branch, TX 78070
Phone #	830-227-5009	Phone #	830-935-2477
Email	les@sunnycirclehomes.com	Email	Wintersseptics@gvtc.com

2. LOCATION

Subdivision Name Canyon Springs Resort Unit 5 Lot 49 Block 67

Survey Name / Abstract Number _____ Acreage _____

Address 709 Burr Oak Ln. City Canyon Lake State TX Zip 78133

3. TYPE OF DEVELOPMENT

☒ Single Family Residential

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

Number of Bedrooms 2

Indicate Sq Ft of Living Area 800

☐ 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: $ 125,000 (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

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 _____ Date 04/09/2025

Revised January 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

Planning Materials & Site Evaluation as Required Completed By Garrett R. Winters R.S #5213

System Description Aerobic System W/ Drip Irrigation

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

Tank Size(s) (Gallons) 600GPD Absorption/Application Area (Sq Ft) 952

Gallons Per Day (As Per TCEQ Table III) 180

(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.)

Is there at least one acre per single family dwelling as per 285.40(c)(1)? ◯ Yes ◉ No

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

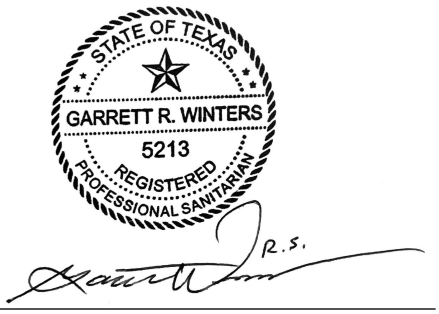
(If yes, the P.E. or R.S. shall certify that the OSSF design complies with all provisions of the existing CZP.)

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

(If yes, the R.S. or P.E. 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: _____



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

4/1/2025
Date

Revised March 2024

COUNTY OF COMAL
STATE OF TEXAS

AFFIDAVIT TO THE PUBLIC

CERTIFICATION OF OSSF REQUIRING MAINTENANCE

According to Texas Commission on Environmental Quality (TCEQ) Rules for On-Site Sewage Facilities (OSSFs), 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, give 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 owners 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):

Lot 49, in Block 67, of CANYON SPRINGS RESORT UNIT NO. 5,

An addition in Comal County, Texas

The property is owned by (Insert owner's full name):

Sunny Circle, 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 OSSF may be obtained from **Comal County Engineer's Office.**

WITNESS BY HAND(S) ON THIS 7th **DAY OF** April, 2025.

Owner(s) signature(s)

LESTER CAINSWORTH / OWNER
(PRINTED NAME) TITLE

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 7th **DAY OF** April 2025

Notary Public, State of Texas
Notary's Printed Name: Samuel Pedraza
My Commission Expires: August 10, 2026

SAMUEL PEDRAZA
Notary Public, State of Texas
Notary ID# 13167716-7
My Commission Expires
AUGUST 10, 2026

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
04/10/2025 08:59:22 AM
TAMMY 2 Pages(s)
202506010187

DAVID WINTERS SEPTICS, LLC
PO BOX 195
SPRING BRANCH, TX 78070
830-935-2477 OFFICE
830-935-2477 FAX
wintersseptics@gvtc.com

Routine Maintenance and Inspection Agreement

This Work-for-Hire Agreement (hereafter referred to as this "Agreement") is entered into, by, and between Sunny Circle LLC. (referred to as "Client") and David Winters Septic's, LLC, Inc. (hereafter referred to as "Contractor") located at 687 Burr Oak Ln. Date beginning on Issue Date of License to Operate and contract ending 2 years from Issue Date of License to Operate
By this agreement the Contractor agrees to render professional service, as described herein, and the Client agrees to fulfill the terms of this Agreement as described herein.

This agreement will provide for all required inspections, testing, and service for your Aerobic Treatment System. The policy will include the following:

1. Three (3) inspections per year/service calls (at least one every four months), for a total of six (6) over the two-year period, including inspection, adjustment, and servicing of the mechanical, electrical and other applicable component parts to ensure proper function. This includes inspecting control panel, air pumps, air filters, diffuser operation, and replacing or repairing any component not found to be functioning correctly. Any alarm situations affecting the proper function of the Aerobic process will be addressed within a 48-hour time frame. This contract does not include labor on warranty and non-warranty parts.

2. An effluent quality inspection consisting of a visual check of color, turbidity, scum overflow and examination for odors. A test for chlorine residual and pH will be taken and reported as necessary.

3 If any improper operation is observed, which cannot be corrected at the time of the service visit, you will be notified on your inspection report.

4. The Client is responsible for the chlorine tablets and/or liquid chlorine; they must be filled before or during the service visit.

5. Any additional visits, inspections or sample collection required by specific Municipalities, Water/River Authorities, and County Agencies the TCEQ or any other authorized regulatory agency in your jurisdiction will not be covered by this policy.

At the conclusion of the initial service policy, our company will make available, for purchase on an annual basis, a continuing service policy cover NORMAL inspection, maintenance and repair.

The Homeowners Manual must be strictly followed or warranties are subject invalidation. Pumping of sludge build up is not covered by this policy and will result in additional charges.

This agreement does not cover any labor or parts for items which must be replaced due to acts of God, i.e., lightning strikes, high winds, flooding, freezing.

This agreement DOES NOT COVER materials or parts which must be replaced due to misuse or abuse of the system. These include but are not limited to: Sewage flows exceeding the recommended daily hydraulic design capabilities, Disposal of Non-Biodegradable materials, such as chemicals, grease or oil, sanitary napkins, tampons, baby wipes, disposable diapers, Clogs in the line between the house and the tank.

This agreement DOES NOT COVER LABOR OR PARTS for out- of- warranty items.

Service calls made outside of the regular maintenance schedule are subject to a **$75.00 SERVICE CALL FEE** due at the time of service.

ACCESS BY CONTRACTOR
The contractor or anyone authorized by the contractor may enter the property at reasonable times without prior notice for the purpose of service described above.

PAYMENT AGREEMENT
The client will pay compensation to the contractor for the services in the amount of First 2 years included with new install. This compensation shall be payable in one lump sum payment upon acceptance of this agreement. Payments not received within 30 days of the above described due date will be subject to a $25.00 late penalty.

TERMINATION OF THIS AGREEMENT
Either party may terminate this agreement within 10 days of written notice in the event of substantial failure to perform in accordance with its terms by other party without fault of the terminating party. If this agreement is terminated, the contractor will immediately notify the appropriate health authority.

LIMIT OF LIABILTY
The Contractor will not be liable for indirect, consequential, incidental or punitive damages, whether in contract or any other theory. In no event shall the Contractor's liability for direct damages exceed the price for the services described in this agreement.

Permit # __ _____

The effective date of this initial maintenance agreement shall be the date the license to operate is issued.

Client

Sunny Circle LLC.
Name

687 Burr Oak Ln.
Address

Canyon Lake, TX 78133
City/State/Zip Code

830-227-5009
Phone

les@sunnycirclehomes.com
Email address

Signature of Client

Contractor

David Winters Septics LLC.

1550 Oak Meadows

Canyon Lake, Texas 78133

Office- 830-935-2477 Email-Wintersseptics@gvtc.com

By: David Winters

Signature of Contractor

Maintenance Provider #-MP0001686

OSSF Soil & Site Evaluation

Date Performed: 4 / 1 / 2025

Property Owner: SUNNY CIRCLE LLC

Site Location: 709 Burr Oak Ln Canyon Lake, TX 78133 Proposed Excavation Depth: 1FT

REQUIREMENTS:

At least two soil excavations must be performed on the site, at opposite ends of the proposed disposal area. Locations of soil borings 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 disposal field excavation depth. For surface disposal, the surface horizon must be evaluated. Describe each soil horizon and identify any restrictive features on this form. Indicate depths where features appear.

Soil Boring Number:					
Depth (Feet)	**Texture Class**	**Gravel Analysis (If Applicable)**	**Drainage (Mottles/ Water Table)**	**Restrictive Horizon**	**Observations**
1 FT.	III	<30%	None Observed	BEDROCK @ 3"	CLAY LOAM SOIL
2 FT.					
3 FT.					
4 FT.					
5 FT.					

Soil Boring Number:					
Depth (Feet)	**Texture Class**	**Gravel Analysis (If Applicable)**	**Drainage (Mottles/ Water Table)**	**Restrictive Horizon**	**Observations**
1 FT.					
2 FT.		SAME AS	TH1		
3 FT.					
4 FT.					
5 FT.					

FEATURES OF SITE AREA

Presence of 100 year flood zone ☐ Yes ☑ No

Presence of upper water shed ☐ Yes ☑ No

Presence of adjacent ponds, streams, water impoundments ☐ Yes ☑ No

Existing or proposed water well in nearby area (within 150 feet) ☐ Yes ☑ No

Ground Slope 8 %

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

R.S.

(Signature of person performing evaluation) 04/01/25 (Date) OS#0037882 Registration Number and Type

RECEIVED
By Brandon Olvera at 8:09 am, May 28, 2025

GW Septic Designs

On-Site Sewage Facility Application and Design

Prepared By:
Garrett R. Winters
Registered Professional Sanitarian
R.S# 5213

Contact Information
Phone: (210) 854-2673
Email: Gwinterssseptics@gmail.com

RECEIVED
By Brandon Olvera at 8:09 am, May 28, 2025

Owner/Site Location

Owner/Builder: SUNNY CIRCLE LLC
Address: 709 Burr Oak Ln. Canyon Lake, TX 78133
Subdivision: CANYON SPRINGS RESORT 5
Lot: 49 BLOCK: 67

LOT DESCRIPTION

The proposed method of wastewater treatment is aerobic treatment with Drip irrigation. The sizing of the OSSF was determined as specified in the Texas Commission on Environmental Quality (TCEQ) CHAPTER 285.33 (C)(2). Water saving devices are assumed for the septic system design. This site is not within the 100-Year flood plain (see site plan). Water to the property will be serviced by a public water supply. All parts of the system will maintain at least a 10-foot setback from all water lines and 5-foot from property lines.

This design was performed in conformance with Chapter 285 of the Texas Commission on Environmental Quality. I have performed a thorough site visit of the proposed lot as a Professional Registered Sanitarian and Site Evaluator in accordance with Chapter 285, Subchapter D, regarding Recharge Features, of the Texas Commission on Environmental Quality

System Summary

This design was performed in conformance with Chapter 285 of Texas Commission on Environmental Quality.

- 600gpd Aerobic DRIP treatment unit
- Control Dosing Timer
- 20gpm submersible effluent pump
- Aerator
- SCH40 PVC Sewer line
- 1” purple PVC SCH40 supply/return manifold
- NETAFIM Arkal 100-micron disk filter
- Pressure Gauge
- 40PSI pressure regulator - Model PMR40MF
- Vacuum Breakers installed at the highest points of the drip field.
- Spin lock connections
- Drip Tubing (Netafim Bioline)
- Visual and audio alarms monitoring high water and aerator failure placed in a noticeable location.

Wastewater Design Flow

Structure: 800SF SINGLE FAMILY RESIDENCE
# of Bedrooms: 2
Wastewater Usage Rate: 180GPD
Application Rate: 0.2
Application Area Required: 900SF
Actual Application Area: 952SF

System Components

Pretreatment Tank: 500gal
Pump Tank: 800gal
Aeration Tank: 600gpd
Pump: C1 20gpm submersible pump (Model no. 20C1-05P4-2W115 or equivalent)
Pump tank reserve minimum: 60gal

Potable Water Lines

Potable water lines must be at a minimum distance of 10 feet from OSSF components. If a water line is within 10 feet, it must be sleeved with 2" SCH40 PVC Pipe in order to provide equivalent protection of a 10' separation in compliance with TAC chapter 290, Subchapter D, Rules for Public Drinking Water Systems.

Electrical Components

All electrical wiring shall conform to the requirements of the National Electric Code (1999) or under any other standards approved by the executive director. Additionally, all external wiring shall be installed in approved, rigid, non-metallic gray code electrical conduit. The conduit shall be buried according to the requirements in the National Electric Code and terminated at a main circuit breaker panel or sub-panel. Connections shall be in approved junction boxes. All electrical components shall have an electrical disconnect within direct vision from the place where the electrical device is being serviced. Electrical disconnects must be weatherproof (approved for outdoor use) and have maintenance lockout provisions.

Installation

A 3” or 4” solid-wall SCH40 or SDR 26 PVC pipe with a minimum downward slope of 1/8 inch per foot will be installed between the tank and house. A 2-way cleanout must be included in the line between the house and tank. All piping from house-to-tank and tank-to-drain field must be bedded with class Ib, II, or III soils containing less than 30% gravel. The bottom of the excavation for the tank shall be level and free of large rocks/debris, the tanks shall then be bedded with a 4”-6” layer of sand, sandy loam, 3/4 dust or pea gravel. All openings in the tank are to be sealed to prevent the escape of wastewater. For all OSSF’s permitted on or after September 1, 2023, inspection and cleanout ports shall have risers over the port openings which extend to a minimum of ***two inches above grade***. A secondary plug, cap, or other suitable restraint system shall be provided below the riser cap to prevent tank entry if the cap is unknowingly damaged or removed. A secondary plug, cap, or other suitable restraint system shall be provided below the riser cap to prevent tank entry if the cap is unknowingly damaged or removed. Risers must be fitted with removable watertight caps and protected against unauthorized intrusions. Acceptable protective measures include: a padlock and a cover that can be removed with tools.

LANDSCAPING

The native vegetation in the distribution area should consist of low-level shrubs, plains grass, bluestem, or Bermuda. The entire area of the drip disposal must be covered with a ground cover such as grass seed or sod prior to the final inspection. The native soil in the proposed drip field is to be scarified, the location of an individual sewage system shall not be in a poorly drained or filled area, or in any area where seasonal flooding/seeping occurs, without prior written approval. Stormwater runoff should not be allowed to flow over the drip field or tanks. Berms, swales and/or rain gutters should be installed by the owner/contractor to minimize erosion and field saturation. If the slope in the drain field area is greater than 30% or is complex, the area is unsuitable for the disposal method, suitable fill shall be brought into the field area to meet this requirement. *The drip field shall then either be seeded and covered with Curlex or sodded.*

As the septic designer for this project, responsibility is limited to the design and layout of the septic system based on the conditions at the time of design. There can be no liability for any drainage issues or system performance problems arising from construction activities or modifications made by contractors or other parties after the design has been finalized. It is essential for all parties to consult with qualified professionals before making changes that could impact on the system.

RECEIVED
By Brandon Olvera at 8:09 am, May 28, 2025

Maintenance Contract

For any OSSF with a pump, the installer shall provide the Designated Representative with proof of an executed two-year full-service maintenance contract as required by the TCEQ. The maintenance company will verify that the system is operating properly and that they will provide on-going maintenance of the installation. The initial contract will be for a minimum of 2 years. A maintenance contract will authorize the Maintenance Company to maintain and repair the system as needed. The owner must continuously maintain a signed written contract with a valid maintenance company and shall submit a copy of the contract to the permitting authority at least 30 days prior to the date service will cease.

Maintenance & Operations

***Water Conservation**:* Proper water management is essential to prevent septic system failure. To promote water efficiency, the use of low-flow toilets (1.6 gallons per flush or less) and water-saving showerheads and faucets is mandatory. Additionally, any leaking fixtures should be promptly repaired or replaced to ensure optimal system performance.

***Garbage Disposal**:* The use of a garbage disposal is discouraged, as it increases the presence of fats, grease, and floating solids within the septic tank, which can clog the system's lines and disrupt normal operation.

***Septic Tank Maintenance**:* Septic tanks require regular pumping to function effectively. It is recommended that tanks be pumped annually by a licensed pumping service. In the event of an alarm condition, discontinue use of the system until the pumping chamber is serviced, and a qualified maintenance provider or licensed installer addresses the necessary repairs.

***Appropriate Waste Disposal**:* The system is designed exclusively for treating and disposing of domestic wastewater. The disposal of products such as commercial enzymes, yeast, or water softener backflush through the system is prohibited, as they may interfere with the treatment and disposal processes.

***Vegetation and Drain Field Maintenance**:* The presence of vegetation on the drain field is crucial for system functionality. Erosion control measures should be applied immediately to disturbed or imported soils upon system completion to minimize erosion. Ground cover must be maintained, as it supports plant transpiration and stabilizes the soil. If vegetation dies, it should be promptly replaced to maintain
system efficiency. Any settling of the soil that causes ponding or surface water channeling should be addressed by replacing the material with quality sandy loam, which should be compacted and revegetated. Proper drainage and maintenance of vegetation prevent the formation of furrows and ensure the long-term viability of the drain field. Berms, swales, and retaining walls originally designed for the system must be preserved. The final landscaping must not interfere with the protection of the disposal fields or septic tanks. It is important to note that clay-backed sod is not recommended for this type of drain field. Furthermore, no structures (such as sidewalks, patios, or decks) should be placed over the disposal fields, and no traffic should be allowed over any components of the septic system.

***Surface Water Management**:* To prevent infiltration of surface water into the treatment tanks, proper drainage must be maintained. If tanks are located downhill, berms or tank lid risers should be used to direct surface water away. Standing water over the tanks should be avoided, as it can cause tanks to fill excessively, leading to potential flooding of the drain field and additional strain on the system's pump, which may accelerate system failure. Gutters may be required to divert water from the disposal area.

***Surface Water Management**:* To prevent infiltration of surface water into the treatment tanks, proper drainage must be maintained. If tanks are located downhill, berms or tank lid risers should be used to direct surface water away. Standing water over the tanks should be avoided, as it can cause tanks to fill excessively, leading to potential flooding of the drain field and additional strain on the system's pump, which may accelerate system failure. Gutters may be required to divert water from the disposal area.

RECEIVED
By Brandon Olvera at 8:09 am, May 28, 2025

***System Flushing and Maintenance**:* Regular flushing under full system pressure is vital for the proper operation and longevity of the system. Over time, biomat can accumulate in dripper lines and emitters, leading to clogs. Frequent flushing helps to dislodge the biomat and reduce debris buildup. Dripper lines and filters should be cleaned on a routine basis. If the lines become sluggish or filters frequently clog, it may be necessary to install a larger filter or an automatic backwashing system. It is important to monitor the pressure within the dripper lines and ensure the pressure regulator valve is properly adjusted. If a flow meter is installed, check the flow rates regularly. Any adjustments or maintenance should be performed in consultation with your maintenance provider. Routine inspections are required and will be conducted by your installer or maintenance provider for the first two years. After the two-year maintenance period, it will be the homeowner's responsibility to engage a maintenance provider for continued scheduled upkeep of the system.

Affidavit

Prior to issuance of a permit, a certified copy of an affidavit must be submitted to the County Clerk's office. The affidavit is a recorded file in reference to the real property deed on which the surface application is installed on the property. The permit issued to the previous owner of the property being transferred to the new owner in accordance with §285.20(5) of the TCEQ OSSF Rules. The permit will be issued in the name of the owner of the OSSF. Permits shall be transferred to the new owner automatically upon legal sale of the OSSF. The transfer of an OSSF permit under this section shall occur upon actual transfer of the property on which the OSSF is located unless the ownership of the OSSF has been severed from the property.

Proposed System

A 3- or 4-inch SCH-40 pipe discharges from the residence into an Aquaklear AKA600CA aerobic treatment plant (600 gpd), which includes a 500-gallon pretreatment tank and an 800-gallon pump chamber. A threaded union will be installed in the pump tank on the supply manifold, and a pressure regulator will be set to maintain a pressure of 40psi. The pump chamber houses a 0.5 HP Franklin C1-Series-20XC1-05P4-2W115 submersible well pump (or equivalent). Distribution is facilitated through a self-flushing 100-micron Arkal Disk filter and then through a 1-inch SCH-40 manifold to a minimum of 952 square feet of drip tubing field. This field will use Netifim Bioline drip lines, spaced approximately two feet apart, with 0.61 gph emitters set every two feet, as per the attached schematic. A 1-inch SCH-40 return line is installed to periodically flush the system. Solids collected in the disk filter will be flushed back to the pretreatment tank during each cycle. Vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher to lower areas of the field. The field area will be scarified and built up with 9 inches of imported Type II or Type III soil (not sand) and capped with ***6 inches***. ***The drip field will then be seeded and covered with Curlex or sodded.***

The following design is intended to follow and meet the TCEQ 30 TAC 285 OSSF Regulations. The performance of this system cannot be guaranteed even though all provisions of 30 TAC 285 have been met or exceeded.

June 3, 2025

Sunny Circle LLC.
156 Canyon Bend
Canyon Lake, Tx. 78133

Dear Member:

In reviewing the Site Utility Plan for the location at 709 Burr Oak Lane, Canyon Lake, Texas 78133, we acknowledge that we don't have an objection with the installation of the Schedule 40 pvc sleeve in the public utility easement between Lot 49 and Lot 50. As long as you are aware, the Cooperative's has the ability to maintain, patrol or construct any electric facilities. In addition, the Cooperative will assume no liability for any damages to the which may possibly occur during the course of our work.

If you have any questions, please visit us online or give us a call at 877-372-0391 option #5. We are available Monday through Friday from 8 a.m. to 5 p.m.

Sincerely,

Eric Villanueva
Electrical Distribution Design & Planning Manager
Canyon Lake District

EV:bb

Pedernales Electric Cooperative
201 S. Avenue F
P.O. Box 1
Johnson City, Texas 78636

Toll-free: 888-554-4732
Payment line: 844-886-9798
Power interruptions: 888-883-3379

pec.coop

GW Designs
Garrett R. Winters

June 24, 2025

Comal County Engineers Office
195 David Jones Drive
New Braunfels, TX 78132

RE- **Septic Design**
709 Burr Oak
Canyon Lake, TX 78133

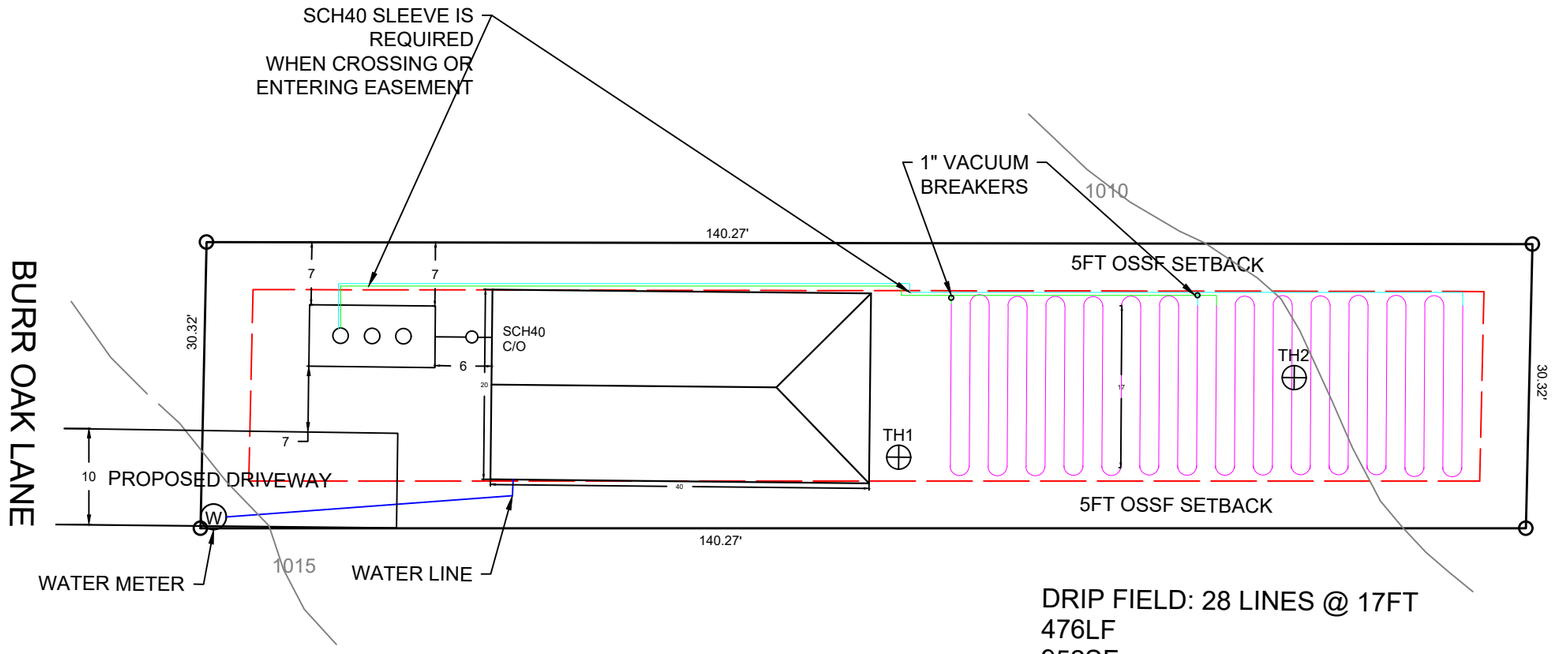
Brandon/Brenda

I am requesting a variance to allow for the installation of a 1" supply and return manifold that encroaches into the property easement as well as the OSSF Setback from the property line due to space constraints and the overall design of the site. To ensure compliance with TCEQ Chapter 285, the manifold will be sleeved where it crosses into the OSSF Setback & Easement, providing equal protection and preventing harm to the environment or the OSSF system components. I believe this modification will not negatively impact the system's functionality or public health standards.

Thank you for your consideration.

Sincerely,
Garrett R. Winters R.S
(210) 854-2673

FLOOD PLAIN: AFTER CAREFUL EXAMINATION AND STUDY OF AVAILABLE DATA (INCLUDING FEMA PANEL ZONE X (AREA OF MINIMAL FLOOD HAZARD) I HAVE DETERMINED, TO THE BEST OF MY ABILITY, THAT NEITHER THE HOUSE NOR THE SEPTIC IS LOCATED WITHIN THE 100 YEAR FLOOD PLAIN.



DRIP FIELD: 28 LINES @ 17FT
476LF
952SF

OSSF INFORMATION

- STRUCTURE: 800SF SINGLE FAMILY RESIDENCE
- BEDROOMS: 2
- DAILY WASTEFLOW: 180GPD
- TANK MANUFACTURER: AQUAKLEAR AKA600CA
- MINIMUM DRIP FIELD COVERAGE: 900SF
- ACTUAL COVERAGE AREA: 952SF

NOTES

- ALL POTABLE WATER LINES SHALL BE A MINIMUM OF 10 FEET FROM ANY PART OF THE OSSF
- TANK SEWER PIPE MUST HAVE AT MINIMUM .25" FALL PER 1'
- USE 3" OR 4" SCH40 PIPE TO CONNECT STRUCTURE TO TANK
- VACUUM BREAKERS ARE TO BE PLACED AT THE HIGHEST POINT ON THE SUPPLY AND RETURN LINES
- NO VEHICLE TRAFFIC IS TO BE ON ANY PART OF THE DISPOSAL AREA
- SYSTEM SHALL INCLUDE AUDIO AND VISUAL ALARMS TO INDICATE HIGH WATER AND AIR
- ALL PIPES SHALL BE SCHEDULE 40 PVC OR APPROVED EQUAL, UNLESS NOTED OTHERWISE. ALL JOINTS SHALL BE CLEANED WITH THE APPROPRIATE SOLVENT AND GLUED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION
- ONLY GOOD QUALITY SANDY LOAM SHALL BE APPLIED OVER THE DISPOSAL FIELDS. CLASS IV CLAY IS UNACCEPTABLE AND WILL CAUSE SYSTEM FAILURE. SANDY LOAM SHALL BE DEFINED AS SHOWN IN TABLE VI (USDA SOIL TEXTURAL CLASSIFICATIONS) OF THE RULES AND REGULATIONS OF THE TCEQ. THE INSTALLER IS RESPONSIBLE FOR VERIFYING THE QUALITY OF EACH LOAD OF LOAM PLACED ON THE SYSTEM.
- STORM WATER (RAINFALL RUNOFF) SHOULD NOT BE ALLOWED TO FLOW OVER THE DISPOSAL FIELDS OR THE TANKS. DIVERSION BERMS, SWALES AND/OR RAIN GUTTERS SHOULD BE INSTALLED AS NECESSARY TO PREVENT SUCH RUNOFF.
- THIS DISPOSAL SYSTEM HAS BEEN DESIGNED TO OPERATE PROPERLY AT SPECIFICATIONS NOTED IN THESE PLANS. ALTERATIONS TO THE SYSTEM BY THE OWNER, INCLUDING BUT NOT LIMITED TO LANDSCAPING, DRAINAGE, BUILDING AND/OR WATER USAGE, MAY CAUSE PREMATURE FAILURE AND SHALL BE THE SOLE RESPONSIBILITY OF THE OWNER
- THIS SITE PLAN IS EXPRESSLY INTENDED FOR ON-SITE SEWAGE FACILITY (OSSF) USE ONLY AND SHOULD NOT BE UTILIZED OR CONSTRUCTED FOR SURVEYING PURPOSES. ITS PURPOSE IS TO ACCURATELY REPRESENT THE LAYOUT AND DESIGN OF THE SEWAGE SYSTEM WITHIN THE SPECIFIED PROPERTY BOUNDARIES FOR REGULATORY AND OPERATIONAL COMPLIANCE.

PREPARED BY: GARRETT R. WINTERS
R.S #5213

OWNER: SUNNY CIRCLE LLC

ADDRESS: 709 Burr Oak Ln
Canyon Lake, TX 78133
SUBDIVISION: CANYON SPRINGS RESORT 5
LOT: 49 BLOCK: 67

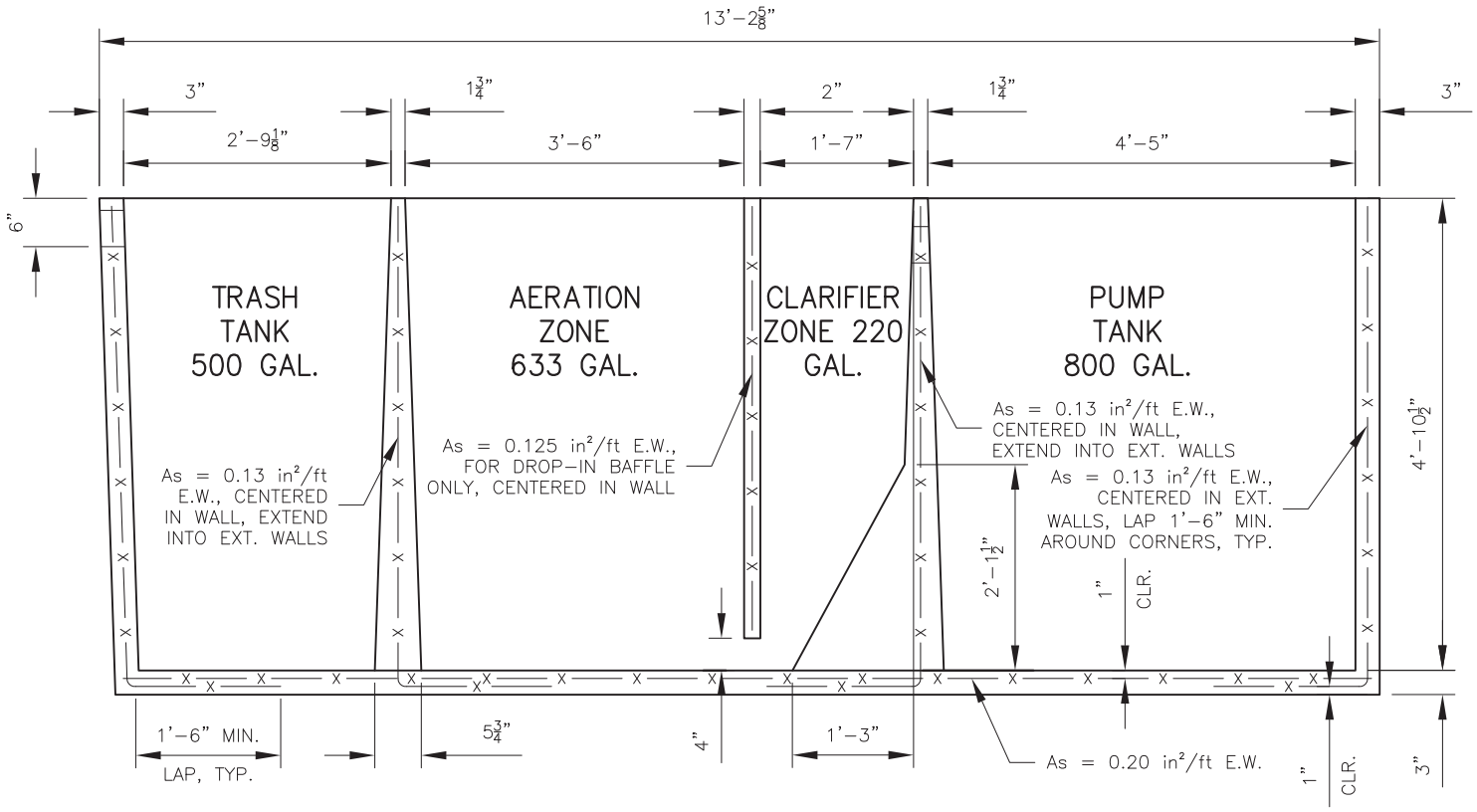
DATE	DESCRIPTION	REV#

GW Designs

SCALE:1"- 16'

DATE: 4/1/2025

STATE OF TEXAS
GARRETT R. WINTERS
5213
REGISTERED
PROFESSIONAL SANITARIAN
R.S.



REINFORCING SECTION

PUMP FLOAT SETTINGS FOR: 180GPD

Volume	800.0	gallons
Water Depth	52.5	inches
Volume / Vertical Inch	**15.24**	**gal/in**

Min. Reserve Volume	**1/3**	**of Q**	**60**	**gal/day**
Pump OFF	12	inches =	182.9	gallons
Pump ON	15	inches =	45.7	gallons
High Water ALARM	32	inches =	259.0	gallons
RESERVE	**52.5**	**inches =**	**312.4**	**gallons**

STATE OF TEXAS
GARRETT R. WINTERS
5213
REGISTERED
PROFESSIONAL SANITARIAN
R.S.

REV.NO.	DATE	REVISION

PREPARED FOR:

DAVID WINTERS SEPTIC
P.O. BOX 195
SPRINF BRANCH, TX 78070

PREPARED BY:

DELTA
SPECIALTY PRECAST CONCRETE ENGINEERS
860 HOOPER ROAD, ENDWELL, NY 13760-1564
PHONE(607)231-6600 FAX(607)231-6650

DATE: 09/20/2021 | SHEET TITLE: REINFORCING SECTION | DRWN BY: CCFH | CKD BY:
SCALE: N.T.S.
PROJECT: AQUAKLEAR WASTEWATER TREATMENT SYSTEM MODEL AKA600CA
CONTRACTOR:
DWG. I.D. RS-02
DELTA PROJ. NO.: 2021.750.001
SHT. NO. 2 OF 2

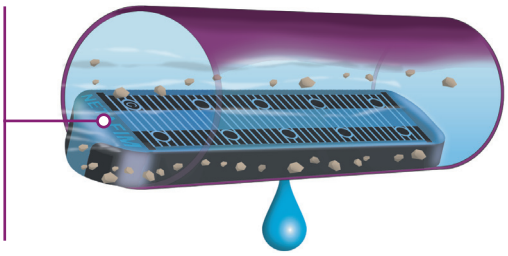
WASTEWATER DIVISION

BIOLINE® DRIPLINE

THE WORLD'S MOST ADVANCED CONTINUOUS SELF-CLEANING, PRESSURE COMPENSATING DRIPLINE SPECIFICALLY DESIGNED FOR WASTEWATER

CROSS SECTION OF BIOLINE DRIPLINE

Bioline dripper inlets are positioned in the center of flow where water is the cleanest



PRODUCT ADVANTAGES

- Pressure compensation - all drippers deliver equal flow, even on sloped or rolling terrain.
- Unique flow path - Turbonet technology provides more control of water and a high resistance to clogging.
- Continuous self-flushing dripper design - flushes debris, as it is detected - throughout operation, not just at the beginning or end of a cycle. Ensures uninterrupted dripper operation.
- Single hole dripper outlet from tubing:
  - Better protection against root intrusion
  - Allows the dripline to be used in subsurface applications without need for chemical protection
- Drippers capture water flow from the center of the tubing - ensures that only the cleanest flow enters the dripper.
- Built-in physical root barrier - drippers are protected from root intrusion without the need for chemical protection. Water exits dripper in one location while exiting the tubing in another.
- Three dripper flow rates - provides the broadest range of flow rates available. Allows the designer to match the dripline to any soil or slope condition.
- Bioline tubing is completely wrapped in purple - easily identifying it for non-potable use, regardless of how the tubing is installed.
- Anti-bacterial-impregnated drippers - prevents buildup of microbial slime.
- Can be used subsurface - Bioline can be installed on-surface, under cover or subsurface.
- No special storage requirements - does not degrade if stored outdoors.
- Techfilter compatible - an optional level of protection, provides a limited lifetime warranty against root intrusion.

APPLICATIONS

- Typically installed following a treatment process
- Can be used with domestic septic tank effluent with proper design, filtration and operation
- Reuse applications including municipally treated effluent designated for irrigation and other disinfected and non-disinfected water sources.

SPECIFICATIONS

- Dripper flow rates: 0.4, 0.6 or 0.9 GPH
- Dripper spacings: 12", 18" or 24" dripper spacings and blank tubing
- Pressure compensation range: 7 to 58 psi (stainless steel clamps recommended above 50 psi)
- Maximum recommended system pressure: 50 psi
- Tubing diameter: 0.66" OD, 0.57" ID
- Tubing color: Purple color indicates non-potable
- Coil lengths: 500' or 1,000' (Blank tubing in 250')
- Recommended filtration: 120 mesh
- Bending radius: 7"
- UV resistant
- Tubing material: Linear low-density polyethylene

Additional spacing and pipe sizes available by special order. Please contact Netafim USA Customer Service for details.

BIOLINE DRIPLINE

MAXIMUM LENGTH OF A SINGLE LATERAL WITH 3.0 fps FLUSH VELOCITY

ADDITIONAL FLOW OF 2.3 GPM REQUIRED PER LATERAL TO ACHIEVE 3 fps

DRIPPER SPACING		12"			18"			24"		
DRIPPER FLOW RATE (GPH)		0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH
INLET PRESSURE	15	102	94	84	136	127	113	161	151	137
	25	151	136	118	203	184	161	245	223	197
	35	193	171	146	260	232	200	315	283	245
	40	211	186	158	286	254	218	347	311	267
	45	228	200	169	310	274	233	377	335	287
Flow per 100' (GPM / GPH)		0.67/40	1.02/61	1.53/92	0.44/26.67	0.68/41	1.02/61	0.34/20	0.51/31	0.77/46

Lateral lengths are based on flows allowing for a 3 fps flushing/scouring velocity

MAXIMUM LENGTH OF A SINGLE LATERAL WITH 2.5 fps FLUSH VELOCITY

ADDITIONAL FLOW OF 2.0 GPM REQUIRED PER LATERAL TO ACHIEVE 2.5 fps

DRIPPER SPACING		12"			18"			24"		
DRIPPER FLOW RATE (GPH)		0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH
INLET PRESSURE	15	128	115	100	172	155	136	205	187	165
	25	183	161	137	248	220	188	301	268	231
	35	228	198	166	310	272	229	379	333	283
	40	248	214	178	338	295	247	413	362	305
	45	266	229	190	364	316	263	447	389	327
Flow per 100' (GPM / GPH)		0.67/40	1.02/61	1.53/92	0.44/26.67	0.68/41	1.02/61	0.34/20	0.51/31	0.77/46

Lateral lengths are based on flows allowing for a 2.5 fps flushing/scouring velocity

MAXIMUM LENGTH OF A SINGLE LATERAL WITH 2.0 fps FLUSH VELOCITY

ADDITIONAL FLOW OF 1.6 GPM REQUIRED PER LATERAL TO ACHIEVE 2.0 fps

DRIPPER SPACING		12"			18"			24"		
DRIPPER FLOW RATE (GPH)		0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH
INLET PRESSURE	15	161	141	119	217	191	164	263	233	201
	25	221	190	157	302	261	218	369	321	270
	35	269	229	187	370	316	260	455	391	324
	40	290	246	200	399	340	278	493	421	347
	45	310	261	212	427	362	296	527	449	369
Flow per 100' (GPM / GPH)		0.67/40	1.02/61	1.53/92	0.44/26.67	0.68/41	1.02/61	0.34/20	0.51/31	0.77/46

Lateral lengths are based on flows allowing for a 2 fps flushing/scouring velocity

MAXIMUM LENGTH OF A SINGLE LATERAL WITH 1.5 fps FLUSH VELOCITY

ADDITIONAL FLOW OF 1.2 GPM REQUIRED PER LATERAL TO ACHIEVE 1.5 fps

DRIPPER SPACING		12"			18"			24"		
DRIPPER FLOW RATE (GPH)		0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH
INLET PRESSURE	15	201	171	140	275	235	194	337	289	241
	25	266	222	179	366	308	251	453	383	313
	35	316	262	210	437	365	295	543	455	369
	40	337	280	223	469	391	313	583	487	393
	45	358	296	235	497	413	331	619	517	415
Flow per 100' (GPM / GPH)		0.67/40	1.02/61	1.53/92	0.44/26.67	0.68/41	1.02/61	0.34/20	0.51/31	0.77/46

Lateral lengths are based on flows allowing for a 1.5 fps flushing/scouring velocity

MAXIMUM LENGTH OF A SINGLE LATERAL WITH 1.0 fps FLUSH VELOCITY

ADDITIONAL FLOW OF 0.8 GPM REQUIRED PER LATERAL TO ACHIEVE 1.0 fps

DRIPPER SPACING		12"			18"			24"		
DRIPPER FLOW RATE (GPH)		0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH
INLET PRESSURE	15	248	205	163	344	285	228	427	355	285
	25	315	258	203	440	361	286	549	453	359
	35	367	299	234	513	419	331	643	527	417
	40	389	316	248	545	445	350	683	559	441
	45	409	332	260	574	468	367	721	589	463
Flow per 100' (GPM / GPH)		0.67/40	1.02/61	1.53/92	0.44/26.67	0.68/41	1.02/61	0.34/20	0.51/31	0.77/46

Lateral lengths are based on flows allowing for a 1 fps flushing/scouring velocity

MAXIMUM LENGTH OF A SINGLE LATERAL WITH 0.5 fps FLUSH VELOCITY

ADDITIONAL FLOW OF 0.4 GPM REQUIRED PER LATERAL TO ACHIEVE 0.5 fps

DRIPPER SPACING		12"			18"			24"		
DRIPPER FLOW RATE (GPH)		0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH
INLET PRESSURE	15	301	242	188	422	341	265	531	429	335
	25	369	296	228	520	418	323	655	527	409
	35	421	337	260	595	476	368	749	603	467
	40	443	354	273	626	501	387	790	635	491
	45	464	371	285	656	524	404	829	665	513
Flow per 100' (GPM / GPH)		0.67/40	1.02/61	1.53/92	0.44/26.67	0.68/41	1.02/61	0.34/20	0.51/31	0.77/46

Lateral lengths are based on flows allowing for a 0.5 fps flushing/scouring velocity

Netafim recommends flushing velocities capable of breaking free any accumulated bioslimes and debris in the piping network.

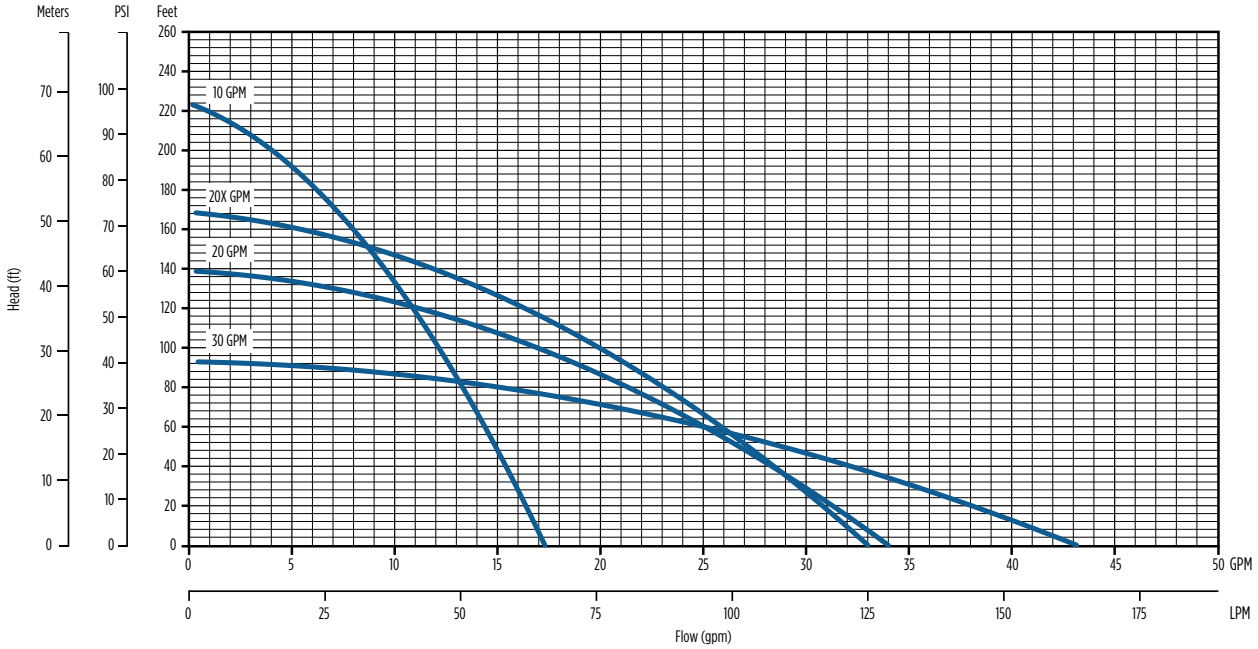
Notes:
1. Refer to local regulations for information on flushing velocities that may be written into codes.
2. Netafim does not endorse a specific flushing velocity.
3. Flushing velocities should be determined based on regulations, quality of effluent, and type of flushing control.
4. Using a flushing velocity less than 1 fps does not provide turbulent flow as defined by Reynolds Number.
5. Higher flushing velocities provide more aggressive flushing.

C1 SERIES
CISTERN PUMPS

Designed for use in gray water and filtered effluent service applications, the C1 Series cistern pump provides high performance and long life in less than ideal water conditions. Able to pass solids up to 1/8" without having a negative effect on the internal hydraulic components, the pump features a unique bottom suction design allowing for maximum fluid drawdown without compromising durability or overall life, and it does not require the use of a flow induction sleeve. Intended specifically for use in a cistern or tank, C1 Series pumps are suitable for use in agricultural, residential, and commercial installations.

Franklin Electric

C1 SERIES FAMILY CURVE



FEATURES

- Supplied with a removable 5" base for secure and reliable mounting
- Bottom suction design
- Robust thermoplastic discharge head design resists breakage during installation and operation
- Standard backflow prevention through a built-in, but removable, check valve.
- Single shell housing design provides a compact unit while ensuring cool and quiet operation
- Hydraulic components molded from high quality engineered thermoplastics
- Optimized hydraulic design allows for increased performance and decreased power usage
- All metal components are made of high grade stainless steel for corrosion resistance
- Available with a high quality 115 V or 230 V, 1/2 hp motor
- Fluid flows of 10, 20, and 30 gpm, with a max shut-off pressure of over 100 psi
- Heavy-duty 300 V 10 foot SJOOW jacketed lead

APPLICATIONS

- Gray water pumping
- Filtered effluent service water pumping
- Water reclamation projects such as pumping from rain catchment basins
- Aeration and other foundation or pond applications
- Agriculture and livestock water pumping

ORDERING INFORMATION

GPM	HP	Volts	Stage	Model No.	Order No.	Length (in)	Weight (lbs)
10	1/2	115	6	10C1-05P4-2W115	90301005	26	17
		230	6	10C1-05P4-2W230	90301010	26	17
20		115	4	20C1-05P4-2W115	90302005	25	16
		230	4	20C1-05P4-2W230	90302010	25	16
20X		115	5	20XC1-05P4-2W115	90302015	26	17
		230	5	20XC1-05P4-2W230	90302020	26	17
30		115	3	30C1-05P4-2W115	90303005	25	16
		230	3	30C1-05P4-2W230	90303010	25	16

NOTE: All units have 10 foot long SJOOW leads

PMR-MF

PRESSURE-MASTER REGULATOR - MEDIUM FLOW

Specifications

The pressure regulator shall be capable of operating at a constant, factory preset, non-adjustable outlet pressure of 6, 10, 12, 15, 20, 25, 30, 35, 40, 50, or 60 PSI (0.41, 0.69, 0.83, 1.03, 1.38, 1.72, 2.07, 2.41, 2.76, 3.45, or 4.14 bar) with a flow range between:

4 - 16 GPM (909 - 3634 L/hr) for 6 - 10 PSI models or
2 - 20 GPM (454 - 4542 L/hr) for 12 - 60 PSI models.

The pressure regulator shall maintain the nominal pressure at a minimum of 5 PSI (0.34 bar) above model inlet pressure and a maximum of 80 PSI (5.52 bar) above nominal model pressure*. Refer to the Model Numbers Chart on page 2 for outlet flow based on the model. Always install downstream from all shut-off valves. Recommended for outdoor use only. Not NSF certified.

All pressure regulator models shall be equipped with one of these inlet-x-outlet configurations:

Inlet	Outlet
¾-inch Female National Pipe Thread (FNPT)	¾-inch Female National Pipe Thread (FNPT)
1-inch Female National Pipe Thread (FNPT)	1-inch Female National Pipe Thread (FNPT)
1-inch Female British Standard Pipe Thread (FBSPT)	1-inch Female British Standard Pipe Thread (FBSPT)

The upper housing, lower housing, and internal molded parts shall be of engineering-grade thermoplastics with internal elastomeric seals and a reinforced elastomeric diaphragm. Regulation shall be accomplished by a fixed stainless steel compression spring, which shall be enclosed in a chamber isolated from the normal water passage.

Outlet pressure and flow shall be clearly marked on each regulator.

The pressure regulator shall carry a two-year manufacturer's warranty on materials, workmanship, and performance.

The pressure regulator shall be manufactured by Senninger Irrigation in Clermont, Florida. Senninger is a Hunter Industries Company.

* Please consult the factory for applications outside of recommended guidelines.

Physical

3/4″ FNPT x 3/4″ FNPT model *(shown on right)*

Overall Length 5.2 inches (13.1 cm)

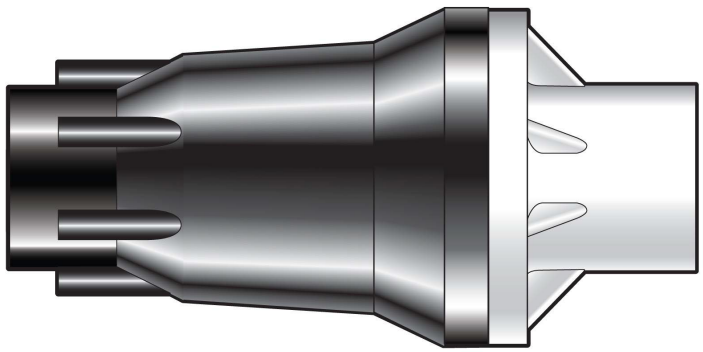
Overall Width 2.5 inches (6.4 cm)

1″ FNPT x 1″ FNPT model

1″ FBSPT x 1″ FBSPT model

Overall Length 5.8 inches (14.6 cm)

Overall Width 2.5 inches (6.4 cm)



PMR-MF

PRESSURE-MASTER REGULATOR - MEDIUM FLOW

Model Numbers

Model #	Flow Range	Preset Operating Pressure	Maximum Inlet Pressure
PMR06MF3F3FV (3/4″ F x 3/4″ F NPT) or PMR06MF4F4FV (1″ F x 1″ F NPT) or PMR06MF4F3FV (1″ F x 3/4″ F NPT)	4 - 16 GPM (909 - 3634 L/hr)	6 PSI (0.41 bar)	80 psi (5.51 bar)
PMR10MF3F3FV (3/4″ F x 3/4″ F NPT) or PMR10MF4F4FV (1″ F x 1″ F NPT) or PMR10MF4F3FV (1″ F x 3/4″ F NPT)	4 - 16 GPM (909 - 3634 L/hr)	10 PSI (0.69 bar)	90 psi (6.20 bar)
PMR12MF3F3FV (3/4″ F x 3/4″ F NPT) or PMR12MF4F4FV (1″ F x 1″ F NPT) or PMR12MF4F3FV (1″ F x 3/4″ F NPT)	2 - 20 GPM (454 - 4542 L/hr)	12 PSI (0.83 bar)	90 psi (6.20 bar)
PMR15MF3F3FV (3/4″ F x 3/4″ F NPT) or PMR15MF4F4FV (1″ F x 1″ F NPT) or PMR15MF4F3FV (1″ F x 3/4″ F NPT)	2 - 20 GPM (454 - 4542 L/hr)	15 PSI (1.03 bar)	95 psi (6.55 bar)
PMR20MF3F3FV (3/4″ F x 3/4″ F NPT) or PMR20MF4F4FV (1″ F x 1″ F NPT) or PMR20MF4F3FV (1″ F x 3/4″ F NPT)	2 - 20 GPM (454 - 4542 L/hr)	20 PSI (1.38 bar)	100 psi (6.89 bar)
PMR25MF3F3FV (3/4″ F x 3/4″ F NPT) or PMR25MF4F4FV (1″ F x 1″ F NPT) or PMR25MF4F3FV (1″ F x 3/4″ F NPT)	2 - 20 GPM (454 - 4542 L/hr)	25 PSI (1.72 bar)	105 psi (7.24 bar)
PMR30MF3F3FV (3/4″ F x 3/4″ F NPT) or PMR30MF4F4FV (1″ F x 1″ F NPT) or PMR30MF4F3FV (1″ F x 3/4″ F NPT)	2 - 20 GPM (454 - 4542 L/hr)	30 PSI (2.07 bar)	110 psi (7.58 bar)
PMR35MF3F3FV (3/4″ F x 3/4″ F NPT) or PMR35MF4F4FV (1″ F x 1″ F NPT) or PMR35MF4F3FV (1″ F x 3/4″ F NPT)	2 - 20 GPM (454 - 4542 L/hr)	35 PSI (2.41 bar)	115 psi (7.93 bar)
PMR40MF3F3FV (3/4″ F x 3/4″ F NPT) or PMR40MF4F4FV (1″ F x 1″ F NPT) or PMR40MF4F3FV (1″ F x 3/4″ F NPT)	2 - 20 GPM (454 - 4542 L/hr)	40 PSI (2.76 bar)	120 psi (8.27 bar)
PMR50MF3F3FV (3/4″ F x 3/4″ F NPT) or PMR50MF4F4FV (1″ F x 1″ F NPT) or PMR50MF4F3FV (1″ F x 3/4″ F NPT)	2 - 20 GPM (454 - 4542 L/hr)	50 PSI (3.45 bar)	130 psi (8.96 bar)
PMR60MF3F3FV (3/4″ F x 3/4″ F NPT) or PMR60MF4F4FV (1″ F x 1″ F NPT) or PMR60MF4F3FV (1″ F x 3/4″ F NPT)	2 - 20 GPM (454 - 4542 L/hr)	60 PSI (4.14 bar)	140 psi (9.65 bar)

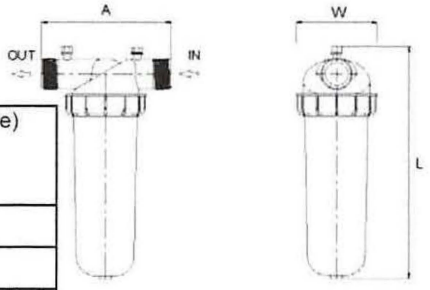
ARKAL
FILTRATION SYSTEMS

Arkal 1½" Super Filter

Catalog No. 1152 0_ _ _

Features

- A "T" shaped filter with two 1½" male threads.
- A "T" volume filter for in-line installation on 1½" 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.
- A sealing spring keeps the discs compressed.
- Screw-on filter cover.
- Filter discs are available in various filtration grades.



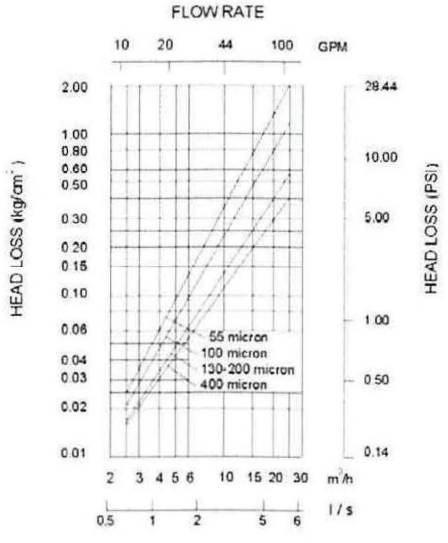
Technical Data

Inlet/outlet diameter	1½" BSPT (male) 40 mm – nominal diameter 48.2 mm – pipe diameter (O. D.)	1½" NPT (male)
Maximum pressure	10 atm	145 psi
Maximum flow rate	12 m^3/h (2.22 l/sec)	52.8 gpm
General filtration area	500 cm^2	77.5 in^2
Filtration volume	600 cm^3	37 in^3
Filter length L	350 mm	13 25/32"
Filter width W	130 mm	5 3/32"
Distance between end connections A	200 mm	7 7/8"
Weight	1.51 kg	3.32 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)

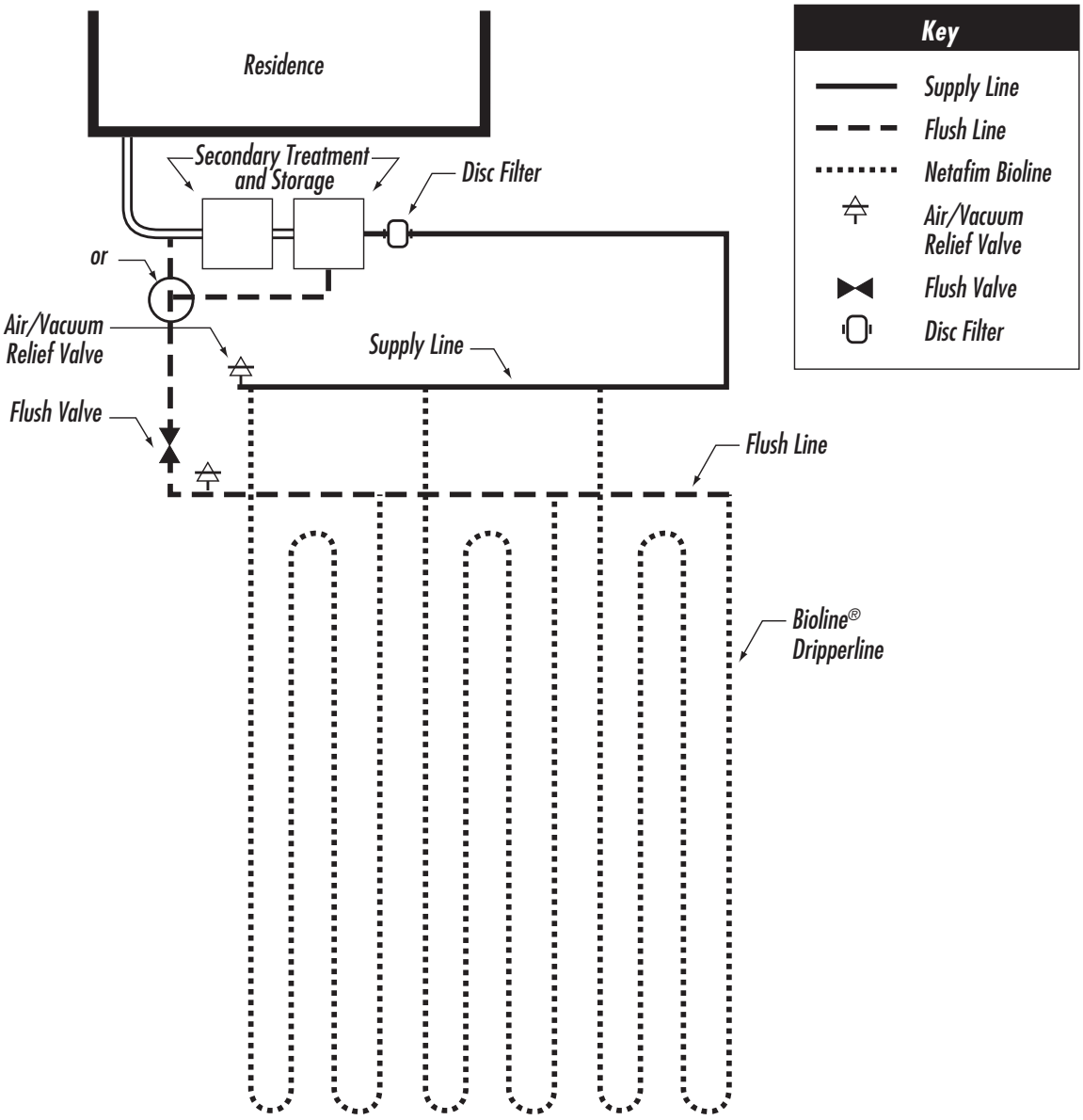
Head Loss Chart



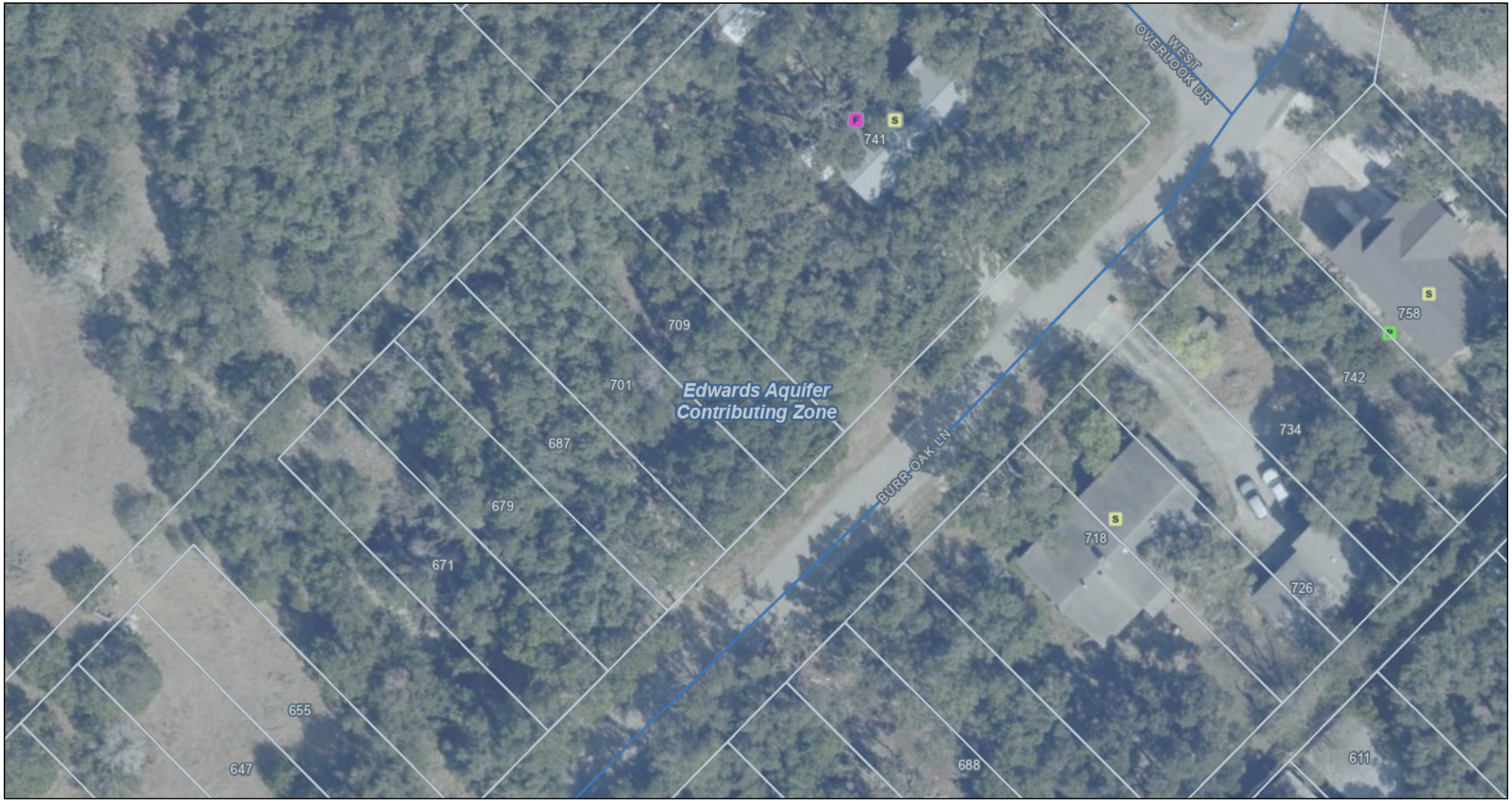
SINGLE TRENCH LAYOUT

Rectangular field with supply and flush manifolds on the same side and in the same trench:

- Locate the supply and flush manifolds in the same trench
- Dripperlines are looped at the halfway point of their run and returned to flush manifold
- Bioline® laterals should never exceed recommended lengths



Comal County Web Map



4/1/2025, 4:56:58 PM

1:473

TCEQ Contributing Zone

Addresses

Streets

Parcels

Scaled County Boundary

Permits

Septic

Piprow/Driveway

Floodplain

County Maintained Roads

0 0.01 0.01 0.02 mi

0 0.01 0.01 0.03 km

OSSF Soil & Site Evaluation

Page 1 (Soil & Site Evaluation) **Date Performed:** 4 / 1 / 2025

Property Owner: SUNNY CIRCLE LLC

Site Location: 709 Burr Oak Ln Canyon Lake, TX 78133 Proposed Excavation Depth: 1FT

REQUIREMENTS:

At least two soil excavations must be performed on the site, at opposite ends of the proposed disposal area. Locations of soil borings 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 disposal field excavation depth. For surface disposal, the surface horizon must be evaluated. Describe each soil horizon and identify any restrictive features on this form. Indicate depths where features appear.

Soil Boring Number:

Depth (Feet)	Texture Class	Gravel Analysis (If Applicable)	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
1 FT.	III	<30%	None Observed	BEDROCK @ 3"	CLAY LOAM SOIL
2 FT.					
3 FT.					
4 FT.					
5 FT.					

Soil Boring Number:

Depth (Feet)	Texture Class	Gravel Analysis (If Applicable)	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
1 FT.					
2 FT.		SAME AS	TH1		
3 FT.					
4 FT.					
5 FT.					

VOID

FEATURES OF SITE AREA

Presence of 100 year flood zone	☐ Yes	☑ No
Presence of upper water shed	☐ Yes	☑ No
Presence of adjacent ponds, streams, water impoundments	☐ Yes	☑ No
Existing or proposed water well in nearby area (within 150 feet)	☐ Yes	☑ No

Ground Slope 8 %

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

R.S.

(Signature of person performing evaluation) 04/01/25 (Date) OS#0037882 Registration Number and Type

GW Septic Designs

Designs

On-Site Sewage Facility Application and Design

VOID

Prepared By:
Garrett R. Winters
Registered Professional Sanitarian
R.S# 5213

Contact Information
Phone: (210) 854-2673
Email: Gwinterssseptics@gmail.com

Owner/Site Location

Owner/Builder: SUNNY CIRCLE LLC
Address: 709 Burr Oak Ln. Canyon Lake, TX 78133
Subdivision: CANYON SPRINGS RESORT 5
Lot: 49 BLOCK: 67

LOT DESCRIPTION

The proposed method of wastewater treatment is aerobic treatment with Drip irrigation. The sizing of the OSSF was determined as specified in the Texas Commission on Environmental Quality (TCEQ) CHAPTER 285.33 (C)(2). Water saving devices are assumed for the septic system design. This site is not within the 100-Year flood plain (see site plan). Water to the property will be serviced by a public water supply. All parts of the system will maintain at least a 10-foot setback from all water lines and 5-foot from property lines.

This design was performed in conformance with Chapter 285 of the Texas Commission on Environmental Quality. I have performed a thorough site visit of the proposed lot as a Professional Registered Sanitarian and Site Eval[illegible] in accordance with Chapter 285, Subchapter D, regarding Recharge Features, of the Texas Commission on Environmental Quality

VOID

System Summary

This design was performed in conformance with Chapter 285 of Texas Commission on Environmental Quality.

- 600gp[illegible]bic DRIP tr[illegible]t unit
- Contro[illegible]g Timer
- 20gpm [illegible]ersible [illegible]t pu
- Aerator
- SCH40 P[illegible]wer
- 1" purpl[illegible] SC[illegible]upply/[illegible]manifold
- NETAFIM[illegible]l [illegible]icron di[illegible]
- Pressure
- 40PSI pre[illegible]ulator - Mode[illegible]
- Vacuum B[illegible] installed at the h[illegible]of the dri
- Spin lock connections
- Drip Tubing (Netafim Bioline)
- Visual and audio alarms monitoring high water and aerator failure placed in a noticeable location.

Wastewater Design Flow

Structure: 800SF SINGLE FAMILY RESIDENCE
# of Bedrooms: 2
Wastewater Usage Rate: 180GPD
Application Rate: 0.2
Application Area Required: 900SF
Actual Application Area: 952SF

System Components

Pretreatment Tank: 500gal
Pump Tank: 800gal
Aeration Tank: 600gpd
Pump: C1 20gpm submersible pump (Model no. 20C1-05P4-2W115 or equivalent)
Pump tank reserve minimum: 60gal

STATE OF TEXAS
GARRETT R. WINTERS
5213
REGISTERED
PROFESSIONAL SANITARIAN

R.S.

Potable Water Lines

Potable water lines must be at a minimum distance of 10 feet from OSSF components. If a water line is within 10 feet, it must be sleeved with 2" SCH40 PVC Pipe in order to provide equivalent protection of a 10' separation in compliance with TAC chapter 290, Subchapter D, Rules for Public Drinking Water Systems.

Electrical Components

All electrical wiring shall conform to the requirements of the National Electric Code (1999) or under any other standards approved by the executive director. Additionally, all external wiring shall be installed in approved, rigid, non-metallic gray code electrical conduit. The conduit shall be buried according to the requirements in the National Electric Code and terminated at a main circuit breaker panel or sub-panel. Connections shall be in approved junction boxes. All electrical components shall have an electrical disconnect within direct vision from the place where the electrical device is being serviced. Electrical disconnects must be weatherproof (approved for outdoor use) and have maintenance lockout provisions.

VOID

Installation

A 3” or 4” solid wall SCH40 or SDR 26 PVC pipe with a minimum downward slope of 1/4 inch per foot will be installed between the tank and the drain field. A 2-way cleanout will be included on the line between house and tank. All piping from house-to-tank and tank-to-drainfield must be bedded with Class I bedding in all soils containing less than 30% gravel. The bottom of the excavation for the tank shall be level and free of large rocks/debris, and tanks shall then be bedded with 4”-6” of sand or sandy loam, 3/4” minus or pea gravel. All openings in the tanks are to be sealed to prevent the escape of wastewater. For all OSSF’s permitted after September 1, 2025, the inspection and cleanout ports shall be ***two inches above grade***. A secondary plug, gasket or other suitable joint system shall be provided below the riser cap to prevent tank entry if the cap is unknowingly damaged or removed. A secondary plug, gasket or other acceptable restraint system shall be provided below the riser cap to prevent tank entry if the cap is unknowingly damaged or removed. Risers must be fitted with removable watertight caps and protected against unauthorized intrusions. Acceptable protective measures include: a padlock and a cover that can be removed with tools.

LANDSCAPING

The native vegetation in the distribution area should consist of low-level shrubs, plains grass, bluestem, or Bermuda. The entire area of the drip disposal must be covered with a ground cover such as grass seed or sod prior to the final inspection. The native soil in the proposed drip field is to be scarified, the location of an individual sewage system shall not be in a poorly drained or filled area, or in any area where seasonal flooding/seeping occurs, without prior written approval. Stormwater runoff should not be allowed to flow over the drip field or tanks. Berms, swales and/or rain gutters should be installed by the owner/contractor to minimize erosion and field saturation. If the slope in the drain field area is greater than 30% or is complex, the area is unsuitable for the disposal method, suitable fill shall be brought into the field area to meet this requirement. *The drip field shall then either be seeded and covered with Curlex or sodded.*

As the septic designer for this project, responsibility is limited to the design and layout of the septic system based on the conditions at the time of design. There can be no liability for any drainage issues or system performance problems arising from construction activities or modifications made by contractors or other parties after the design has been finalized. It is essential for all parties to consult with qualified professionals before making changes that could impact on the system.

Maintenance Contract

For any OSSF with a pump, the installer shall provide the Designated Representative with proof of an executed two-year full-service maintenance contract as required by the TCEQ. The maintenance company will verify that the system is operating properly and that they will provide on-going maintenance of the installation. The initial contract will be for a minimum of 2 years. A maintenance contract will authorize the Maintenance Company to maintain and repair the system as needed. The owner must continuously maintain a signed written contract with a valid maintenance company and shall submit a copy of the contract to the permitting authority at least 30 days prior to the date service will cease.

Maintenance & Operations

***Water Conservation**:* Proper water management is essential to prevent septic system failure. To promote water effici[illegible] mandatory. Additionally, any leaking fixtures should be promptly repaired or replaced to ensure optimal system performance.

***Garbage Disposal**:* The use of a garbage disposal is discouraged, as it increases the presence of fats, grease, and floating solids within the septic tank, which can clog the system's lines and disrupt normal operation.

***Septic Tank M[illegible]nance**:* Sep[illegible]ks re[illegible]g to fu[illegible] effec[illegible]nded that tanks be pump[illegible]nually b[illegible]nsed[illegible]g servic[illegible]e even[illegible] alar[illegible]dition, d[illegible]ue use of the system until th[illegible]ping ch[illegible]r is s[illegible], and a qua[illegible]maint[illegible]e pro[illegible]or licensed[illegible]er addresses the necessary r[illegible].

***Appropriate Wa[illegible]ist**:* The sys[illegible] designed exc[illegible]y fo[illegible]ing an[illegible]osing of do[illegible] wastewater. The disposal of p[illegible]n as com[illegible] enzymes,[illegible]or w[illegible]ftene[illegible]flush thro[illegible]e system is prohibited, as th[illegible]erfere with[illegible]tmen[illegible]posal[illegible]sses.

***Vegetation and Drain Field Maintenance**:* The presence of vegetation on the drain field is crucial for system functionality. Erosion control measures should be applied immediately to disturbed or imported soils upon system completion to minimize erosion. Ground cover must be maintained, as it supports plant transpiration and stabilizes the soil. If vegetation dies, it should be promptly replaced to maintain
system efficiency. Any settling of the soil that causes ponding or surface water channeling should be addressed by repla[illegible]d maintenance of vegetation prevent the formation of furrows and ensure the long-term viability of the drain field. Berms, swales, and retaining walls originally designed for the system must be preserved. The final landscaping must not interfere with the protection of the disposal fields or septic tanks. It is important to note that clay-backed sod is not recommended for this type of drain field. Furthermore, no structures (such as sidewalks, patios, or decks) should be placed over the disposal fields, and no traffic should be allowed over any components of the septic system.

***Surface Water Management**:* To prevent infiltration of surface water into the treatment tanks, proper drainage must be maintained. If tanks are located downhill, berms or tank lid risers should be used to direct surface water away. Standing water over the tanks should be avoided, as it can cause tanks to fill excessively, leading to potential flooding of the drain field and additional strain on the system's pump, which may accelerate system failure. Gutters may be required to divert water from the disposal area.

***Surface Water Management**:* To prevent infiltration of surface water into the treatment tanks, proper drainage must be maintained. If tanks are located downhill, berms or tank lid risers should be used to direct surface water away. Standing water over the tanks should be avoided, as it can cause tanks to fill excessively, leading to potential flooding of the drain field and additional strain on the system's pump, which may accelerate system failure. Gutters may be required to divert water from the disposal area.

STATE OF TEXAS
GARRETT R. WINTERS
5213
REGISTERED
PROFESSIONAL SANITARIAN
R.S.

***System Flushing and Maintenance**:* Regular flushing under full system pressure is vital for the proper operation and longevity of the system. Over time, biomat can accumulate in dripper lines and emitters, leading to clogs. Frequent flushing helps to dislodge the biomat and reduce debris buildup. Dripper lines and filters should be cleaned on a routine basis. If the lines become sluggish or filters frequently clog, it may be necessary to install a larger filter or an automatic backwashing system. It is important to monitor the pressure within the dripper lines and ensure the pressure regulator valve is properly adjusted. If a flow meter is installed, check the flow rates regularly. Any adjustments or maintenance should be performed in consultation with your maintenance provider. Routine inspections are required and will be conducted by your installer or maintenance provider for the first two years. After the two-year maintenance period, it will be the homeowner's responsibility to engage a maintenance provider for continued scheduled upkeep of the system.

Affidavit

Prior to issuance of a permit, a certified copy of an affidavit must be submitted to the County Clerk's office. The affidavit is a recorded file in reference to the real property deed on which the surface application is installed on the property. The permit issued to the previous owner of the property being transferred to the new owner in accordance wi 5.20(5) of t Q OSSF rmit will be d in t owner of the OSSF. Permits s e transfer the n ally upd al sale nsfer of an OSSF permit un is sectio occ actual t of the erty o h the OS cated unless the ownership OSSF h en se rom the pro

Proposed Sys

A 3- or 4-inch SC i charges he residence n Ar ar AK A aerobic ent plant (600 gpd), which 00-gallon atment t an 8 lon p hamber ded union will be installed in the nk on the su pressu gulato ain a pressure of 40psi. The pump houses a 0.5 HP eries-20X P4-2V e well pump (or equivalent). Distribution is facilitated through a self-flushing 100-micron Arkal Disk filter and then through a 1-inch SCH-40 manifold to a minimum of 952 square feet of drip tubing field. This field will use Netifim Bioline drip lines, spaced approximately two feet apart, with 0.61 gph emitters set every two feet, as per the attached schematic. A 1-inch SCH-40 return line is installed to periodically flush the system. Solids collected in the disk filter will be flushed back to the pretreatment tank during each cycle. Vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher to lower areas of the field. The field area will be scarified and built up with ***0 inches*** of imported Type II or Type III soil (not sand) and capped with ***6 inches***. ***The drip field will then be seeded and covered with Curlex or sodded.***

The following design is intended to follow and meet the TCEQ 30 TAC 285 OSSF Regulations. The performance of this system cannot be guaranteed even though all provisions of 30 TAC 285 have been met or exceeded.

GW Designs
Garrett R. Winters

March 1st, 2025

Comal County Engineer's Office
195 David Jonas Drive
New Braunfels, TX 78132

RE- Septic Design
709 Burr Oak Ln.
Canyon Lake, TX 78133

Brandon/Brenda

VOID

I am request[illegible] a var[illegible]e to allow for the [illegible]llati[illegible] of a [illegible]pply an[illegible]urn manifold that encroac[illegible] into [illegible] pro[illegible] easemen[illegible]e to [illegible]ce c[illegible]traints a[illegible]e overall design of the [illegible]. To ensure [illegible]mpliance w[illegible] CE[illegible] chap[illegible]285, the [illegible]fold will be sleeved when [illegible]ses into [illegible]easeme[illegible]rovi[illegible] equ[illegible]rotecti[illegible]d preventing harm to the e[illegible]ment or th[illegible]m co[illegible]men[illegible]s modification will not negatively impact the system's functionality or public health standards.

Thank you for your consideration.

Sincerely,

Garrett R. Winters R.S
(210) 854-2673

STATE OF TEXAS
GARRETT R. WINTERS
5213
REGISTERED
PROFESSIONAL SANITARIAN

R.S.

Olvera,Brandon

From: Olvera,Brandon
Sent: Tuesday, June 24, 2025 8:30 AM
To: Nicole Barnes; Lester Collinsworth
Cc: Garrett Winters
Subject: RE: 709 Burr Oak ln. /118556 Pec Approval (STATUS PLEASE)

Property O Agent,
Fi as been updated. I see the mention of sleeving of the supply and return lines on the site plan. Write this u variance request for 285.91(10) property lines and easement separation distances.

Thank You,

| **Brandon Olvera** | **Designated Representative OS0034792** | Comal County | www.cceo.org |
| 195 David Jonas Dr, New Braunfels, TX-78132 | t: 830-608-2090 | f: 830-608-2078 | e: olverb@co.comal.tx.us |

May 21, 2025

118556

COMAL COUNTY
ENGINEER'S OFFICE

RE: ***709 Burr Oak Lane***
Canyon Springs Resort 5
Lot 49 – Block 67

Dear Property Owner & Agent,

Thank you for your submission. We have reviewed the planning materials for the referenced permit application, and unfortunately, they are insufficient. To proceed with processing this permit, we require the following:

1. Based on our preliminary inspection, there is only 3-4 inches of soil before the restrictive horizon. See below notes/photos.
2. On the recorded plat, it states that there is a 5 ft utility easement on all sides of the property. You will need to provide our office with a release of easement from the utility companies.
3. Revise accordingly and resubmit.

If you have any questions, you can email me or call the office.

Thank You,

| **Brandon Olvera** | **Designated Representative OS0034792** |

| Comal County | www.cceo.org | f: 830-608-2078 | e: olverb@co.comal.tx.us |

195 David Jonas Dr, New Braunfels, Texas 78132 - Phone (830) 608-2090

COMAL COUNTY

ENGINEER'S OFFICE

Preliminary Field Check For Drip Systems

DATE: 5/16/25

INSPECTOR: Hendry

COMMENTS: Probing in the area of the proposed drip field showed an average of 3-4" of soil above a restrictive horizon

195 David Jonas Dr, New Braunfels, Texas 78132 - Phone (830) 608-2090

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

GENERAL WARRANTY DEED

Date: March 10, 2025

Grantor: Brothers Three, LLP, a Texas limited liability partnership

Grantor's Mailing Address:

156 Canyon Bend
Canyon Lake, Texas 78133

Grantee: Sunny Circle, LLC, a Texas limited liability company

Grantee's Mailing Address:

156 Canyon Bend
Canyon Lake, Texas 78133

Consideration: TEN AND NO/100 DOLLARS and other good and valuable consideration the receipt of which is hereby acknowledged.

Property (including any improvements):

Lots 49, 50, and 51, in Block 67, of CANYON SPRINGS RESORT UNIT NO. 5, an addition in Comal County, Texas, according to the map or plat thereof recorded in/under Volume 8, Page 13 of the Map/Plat Records of Comal County, Texas.

Reservations from and Exceptions to Conveyance and Warranty:

This conveyance is made and accepted subject to any and all restrictions, covenants, reservations, and easements, if any, relating to the hereinabove described property, but only to the extent they are still in effect, shown of record in the hereinabove mentioned County and State.

Grantor, for the consideration, receipt of which is acknowledged, and subject to the reservations from and 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 wise belonging, to have and hold it to Grantee, Grantee's heirs, executor, administrators, successors or assigns forever. Grantor binds Grantor and Grantor's heirs, executors, administrators and

successors are hereby bound to warrant and forever defend all and singular the property to Grantee and Grantee's heirs, executors, administrators, successors and assigns against every person whomsoever lawfully claiming or to claim the same or any part thereof, except as to the reservations from and exceptions to conveyance and warranty.

Current ad valorem taxes on said property having been prorated, the payment thereof is assumed by Grantee

When the context requires, singular nouns and pronouns include the plural.

The undersigned Grantor and Grantee hereby acknowledge Stevens & Malone, PLLC has not conducted an independent title examination of the Property and makes no representation as to and assumes no responsibility for the status of title to the referenced Property, nor the status of ad valorem taxes or property owner association dues.

Brothers Three, LLP, a Texas limited liability partnership

By: _____
Anthony Collinsworth, Partner

By: _____
Lester Collinsworth, Partner

ACKNOWLEDGMENT

THE STATE OF TEXAS

COUNTY OF COMAL

This instrument was acknowledged before me on this 6th day of March 2025, by Anthony Collinsworth and Lester Collinsworth, Partners in Brothers Three, LLP, a Texas limited liability partnership, on its behalf.

NOTARY PUBLIC STATE OF TEXAS
BRITTANY PHILLIPS
My Notary ID # 126000272
Expires May 6, 2027

_____
Notary Public, State of Texas

PREPARED IN THE OFFICES OF:

Stevens & Malone, PLLC
P.O. Box 1744
Canyon Lake, Texas 78133
830.964.4442 – tel.
830.964.4426 – fax

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
03/06/2025 03:29:42 PM
JESS 3 Pages(s)
202506006410

Bobbie Koepp