Outlook

Permit # 118877

From Gallegos,Efrain <gallee@co.comal.tx.us>
Date Tue 8/19/2025 9:08 AM
To jeff.b.sellars@gmail.com <jeff.b.sellars@gmail.com>; Nicole Barnes <wintersseptics@gvtc.com>

RE: Jeff Sellars
1871 Triple Peak Dr
Application for permit for Authorization to Construct an On-Site Sewage Facility (OSSF)

Applicant / Agent,

The following information is needed before I can continue processing the referenced permit submittal:

1. Address parts of system going underneath driveway.
2. Provide copy of certification of CZP for property.
3. A preliminary inspection will be conducted of site on 8//20/25. Additional comment may follow.
4. Revise as needed and resubmit.

COMAL COUNTY
ENGINEER'S OFFICE

Efrain Z Gallegos
Environmental Health Inspector
DR: OS0039964
O: 830-608-2090 Ext 3167
C: 830-708-4304
E: gallee@co.comal.tx.us

COMAL COUNTY
ENGINEER'S OFFICE

ON-SITE SEWAGE FACILITY APPLICATION

(830) 608-2090
WWW.CCEO.ORG

RECEIVED
By Kathy Griffin at 9:48 am, Jul 28, 2025

Permit Number 118877

1. APPLICANT / AGENT INFORMATION

Owner Name	Jeff Sellars	Agent Name	David Winters Septics LLC
Mailing Address	278 Pine Meadow	Agent Address	P.O Box 195
City, State, Zip	Spring Branch, TX 78070	City, State, Zip	Spring Branch, TX 78070
Phone #	2106381453	Phone #	830-935-2477
Email	jeff.b.sellars@gmail.com	Email	Wintersseptics@gvtc.com

2. LOCATION

Subdivision Name Triple Peak Ranch Estates Unit 2 Lot 10 Block 2

Survey Name / Abstract Number _____ Acreage _____

Address 1871 Triple Peak Dr. 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 <2500

☐ 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: $ _____ (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 July 23 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 Eric Schneider RS4431, Corrie Smith OS0029488

System Description Mounded Aerobic Drip Irrigation

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

Tank Size(s) (Gallons) 600 ATU Absorption/Application Area (Sq Ft) 960 Sq. Ft.

Gallons Per Day (As Per TCEQ Table III) 240 GPD

(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 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: Canyon Lake

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.

Eric Schneider
Signature of Designer

12/5/2024
Date

Revised July 2018

202506021162 07/09/2025 11:17:05 AM 1/1

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 10, Block 2, TRIPLE PEAK RANCH ESTATES UNIT 2, Comal

County, Texas

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

Jeffrey Brian Sellars

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 8th DAY OF July .2025

Owner(s) signature(s)

Jeff Sellars
(PRINTED NAME) TITLE

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 8 DAY OF July .2025

Notary Public, State of Texas
Notary's Printed Name: Niomi Bruns
My Commission Expires: 8/29/25

NIOMI BRUNS
Notary Public, State of Texas
My Comm. Exp. 08-29-2025
ID No. 12954343-0

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
07/09/2025 11:17:05 AM
TERRI 1 Page(s)
202506021162

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 Jeff Sellars (referred to as "Client") and David Winters Septic's, LLC, Inc. (hereafter referred to as "Contractor") located at 1871 Triple Peak Dr. 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.

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

Jeff Sellars
Name

1871 Triple Peak Dr.
Address

Spring Branch TX 78070
City/State/Zip Code

2106381453
Phone

jeff.b.sellars@gmail.com
Email address

Jeff Sellars
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

PLANET FRIENDLY DESIGNS
PLANETFRIENDLYDESIGNS@GMAIL.COM
512-757-5827

December 5, 2024

To Whom It Concerns:

The attached septic design was created to serve a 3 bedroom equivalent, single family residence that will be less than 2,500 sq. ft. The project will be located at 1871 Triple Peak Drive in Canyon Lake, TX.

If there are any questions or concerns, please do not hesitate to contact me.

Sincerely,

Eric Schneider, R.S.
R.S. #4431

ERIC SCHNEIDER
RS # 4431
12/5/24

PLANET FRIENDLY DESIGNS
PLANETFRIENDLYDESIGNS@GMAIL.COM
512-757-5827

OSSF SOIL EVALUATION FORM

Physical Address: 1871 Triple Peak Dr Canyon Lake, TX 78133
Date Performed: November 8, 2024 Proposed Excavation Depth: 1 Foot

Profile Hole 1

Depth (ft)	Textural Class	Description of Soil	Drainage Mottles/Water Table	Restrictive Horizon	Comments
0	Class III	Caliche & Lg Rock	None	None	> 30% Gravel
1					
2					
3					
4					
5					

Profile Hole 2

Depth (ft)	Textural Class	Description of Soil	Drainage Mottles/Water Table	Restrictive Horizon	Comments
0	Class III	Caliche & Lg Rock	None	None	> 30% Gravel
1					
2					
3					
4					
5					

I certify that the above statements are true and based on my own field observations.

Presence of 100 year flood zone: **N** Recharge features within 150 feet: **N**
Existing or proposed water well: **N**
Presence of adjacent ponds, streams, water impoundments: **N**
Organized Sewage available on lot or tract: **N** Suitable for standard system: N/A

Corvil Smith 05002948

Site Evaluator SE #

Eric Schneider
R.S. #4431

This system is designed for an new 2 bedroom, single family residence that is less than 2,500 sq. ft. Using table III of the Chapter 285 Rules for On-Site Sewage Facilities by the TCEQ, the single family residence will use an estimated 240 gallons per day.

Site Description and Site Evaluation

The subject property is located within a subdivision. The legal description Lot 10 in Block 2 of the Triple Peak Ranch Estates Unit 2 Subdivision in Canyon Lake, TX. The property will utilize a public water source. There are no recharge features within 150 feet of the proposed system. Minimum separation distances as stated in Chapter 285.30 TCEQ, On-Site Sewage Facilities must be maintained.

Proposed System

A 3 or 4 inch SCH 40 PVC pipe, or equivalent, will discharge from the single family residence into an AquaKlear aerobic wastewater system Model AKA600CA.

Trash Tank: 500 Gal
Aerobic Treatment Chamber: 633 Gal
Pump Chamber: 800 Gal

Distribution is through a self-flushing 100 micron disk filter, and then through a 1" SCH 40 supply line to 480 linear feet of drip tubing field using Netafim Bioline. The drip lines are approximately 2 feet apart with 0.61 gph emitters set every two feet. A 1" SCH 40 return line will be 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 pump tank. Vacuum breakers installed at the highest point on each drain field will prevent siphoning of effluent from higher to lower parts of the field. The drain field will be mounded on 12" of Class II soil and capped with at least 6" of Class II soil. The field is required to be seeded after completion.

Pump Calculations

Pump Chamber has 50.5 inches of usable space. 800 gal/50 inches = 15.84 gal/inch
Pump Off Float: 16" = 253.44 gal
Pump On Float: 18" = 285.12 gal
Alarm On Float: 34"= 538.56 gal (538.56 – 285.12 = Dosing volume of 253.44 gal)
Reserve Capacity: 800 gal – 538.56 gal = 261.44 gal

Drain Field Calculations

System designed for a maximum daily effluent of 240 GPD.
Drain field Requirements: 240 GPD/.25 GPD/ft^2 = 960 ft^2
Linear feet of tubing required: 960 ft^2/2 ft (space between tubing lines) = 480 ft

Zone 1: 4 lines at 30' = 120'
Zone 2: 10 lines at 20' = 200'
Zones 3: 5 lines at 20', 2 lines @ 15', 3 lines @ 10' = 160'

Actual size of drain field: 480 ft:

Eric Schneider
R.S. #4431

Pump and Drip Line Requirements

Pump – Dominator 20 GPM "Sta-Rite" 20DOM05121, ½ HP, submersible pump. Drip emitters to operate at 40 pounds per square inch
Drip Line – Netafim ½" Drip Tubing/Emitter will drip 0.61 gph @ 40 psi
480 linear feet of drip tubing = 240 emitters
240 emitters x 0.61 gph = 146.4 gph = 2.44 gpm
There will be a total of 3 connectors to both the supply and return line.

Dosing Specifications

Design goals: Provide 2.44 gpm to 3 emitter lines at 40 psi
2.44 gpm + 1.6(3 connectors) = 7.24 gpm
Elevation Head = 20 feet (calculated from pump location to highest point on supply line)
Pressure Head: 40 psi x 2.31 ft/psi = 92.40 ft
Disc filter friction loss: 5 ft
Additional friction loss (elbows, tees, connectors, flex tubing, valves, etc...): 5 ft
Loss in Supply Line:1" Sch 40 PVC @ 7.24 gpm = 3.63/100 ft = (110 ft x 3.63/100ft)= 3.99 ft
Loss in Return Line:1" Sch 40 PVC @ 4.8 gpm = 2.13/100 ft (115 ft x 2.13/100ft) = 2.45 ft

TDH = 20 ft + 92.40 ft + 3.99 ft + 2.45 ft + 5 ft + 5 ft = 128.84 (within pump curve)

240 GPD/7.24 GPM ≈ 34 minutes per day of dosing required
7.24 GPM x 12 min dose = 86.88 gal per dose
Total Daily Dose = 86.88 gal per dose x 3 doses ≈ 260.64 gal

A commercial irrigation timer will be used to cycle power to the pump. The timer will control the pump. The timer will be set to operate the pump for a duration of 12 minutes per dose. The system will dose 3 times per day with a resting phase of approximately 7 hours and 48 minutes between operations. The timer is equipped with a manual override for use when flushing and inspecting only. An audible/visual alarm will be installed in the control panel for both the pump and the air compressor.

Construction/Installation Notes & Requirements

- Refer to site plan for component placement and follow manufacturer's instructions for installation of treatment plant and aerator.
- All materials and construction methods are required to conform to the standards for Private Sewage Facilities set forth by the Texas Administrative Code, Chapter 285 On-Site Sewage Facilities.
- The installer must have a current and valid Texas installer certificate, and is required to have at the minimum an Installer II certification.
- The installer must notify the designer and regulatory authority at least 48 hours in advance to schedule required inspections to ensure that the system in installed in accordance with approved plans and specifications.
- Diversion berms will be placed when needed to protect irrigation and tank areas from excessive runoff.
- It is the responsibility of the installer to maintain the minimum setback requirements as stated in Chapter 285 On-Site Sewage Facilities.
- No part of the system shall be located within 10 feet of a potable water line. If this is unavoidable, the water line shall be sleeved with Sch. 40 PVC pipe 10 feet in both directions and sealed with silicone to prevent contamination.

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.

General Notes

- Sewer pipe from house to tank must be 3" or 4" SCH 40 PVC bedded in a minimum of 4" thick encasement of class 1b or II soil free of rock or gravel greater than ½" in diameter with a minimum of 1/8" per foot fall and a 2 way cleanout between the house and aerobic unit.
- Supply line and return line shall also be completely bedded in a minimum of 4" thick encasement of class 1b or II soil free of rock or gravel greater than ½" in diameter.
- The bottom of the excavation for the tank should be level and free of large rocks and debris.
- All tanks are to be set level on a minimum 4 inch layer of sand, sandy loam, clay loam, or pea gravel.
- Backfill tank with pea grGavel, sand, sandy loam or clay loam only.
- Backfill over the top of tank shall not exceed 18" unless approved by the manufacturer. Load bearing lids may be required if backfill exceeds 18"

- Risers are required on tank inspection ports as per 30 TAC 285.38 (9/1/2012.) This includes access limitation (<65 lbs lid or hardware secured lid) and secondary plug, net, or mesh in riser. Risers are required to be two inches above grade level.
- All openings in the tank must be properly sealed to prevent the escape of wastewater, and/or to prevent the infiltration of water.
- Tanks must be filled with water for at least 24 hours to test for leaks and structural integrity.

Additional Notes

- Install audio-visual alarm for aerator and pump on separate breakers.
- The high water and air compressor alarms should be audio/visual and mounted in a place that can be easily seen and heard when alarms are activated.

Maintenance Requirements

- The applicant must furnish to the regulatory authority a valid maintenance contract with a certified maintenance company before a permit will be issued.
- The maintenance company will verify that the system is operating properly and provide on-going maintenance of the installation.
- The initial contract will be a minimum of 2 years.
- A maintenance contract will authorize the maintenance company to maintain and repair the system as needed.
- The property owner must continuously maintain a signed written contract with a valid maintenance company and will submit a copy of the contract to the permitting authority at least 30 days prior to the date service will cease.

Affidavit

- The applicant must file a certified copy of an affidavit at the County Clerk's Office and file in reference to the real property deed on which the drip irrigation system is to be installed.
- The affidavit will state that the property shall not be transferred to a new owner without:
    - The new owner being advised that the property contains a drip application system for wastewater disposal.
    - The permit issued to the previous owner of the property being transferred to the new owner in accordance with Chapter 285.3(b)(3) of the TCEQ OSSF Rules, i.e.; 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 ownership of the OSSF has been severed from the property.
    - The new owners submitting a valid maintenance contract to the permitting authority.

Operation and Management Notes

- The OSSF should not be treated as a normal city sewer.
- Feminine hygiene products should never be disposed of in the toilet. Products such as these can be detrimental to a septic system, causing backups inside the home and/or overflowing of the tank due to pump malfunction.
- The excessive use of in-sink garbage grinders and grease discarding should be avoided. In-sink garbage grinders can cause a rapid buildup of sludge or scum resulting in a more frequent cleaning and possible system failure.
- Do not use the toilet to dispose of cleaning tissue, cigarette butts, or other trash. This disposal practice will waste water and also impose an undesirable solid load on the treatment system.
- Septic tanks should be cleaned before sludge accumulates to a point where it approaches the bottom of the outlet device. If sludge or scum accumulates to this point, solids will leave the tank with the liquid and possibly cause the system to clog resulting in sewage surfacing or backing up into the house through plumbing fixtures.
- A regular schedule of cleaning the tank at two to three year intervals should be established. Commercial cleaners are equipped to readily perform the cleaning operation. Owner of OSSF's will contract only persons registered with TCEQ to transport the septic system waste.
- Do not build driveways, storage buildings, or other structures of system components on the disposal field.
- Chemical additives, or so-called enzymes, are not necessary for the operation of a septic tank. Some of these additives may even be harmful to the system's operation.
- Soaps, detergents, bleaches, drain cleaners, and other household cleaning materials will very seldom affect the operation of the system. However, moderation should be exercised in the use of such materials.
- The homeowner shall observe Chapter 285.37 regarding water softeners and reverse osmosis entering into the OSSF.
- The liquid from the OSSF is still heavily laden with bacteria. The surfacing of this liquid constitutes a health hazard to those that might come into contact with it.
- Once the system is in use, the drainfield must be maintained at all times (mowed).

Water Conservation Practices

- Showers usually use less water than baths. Installing water saving shower heads that use less than 2.5 gallons per minute saves both water and energy.
- If you take a tub bath, reduce the level of water in the tub from the level to which you customarily fill it.
- Leaky faucets and faulty toilet fill-up mechanisms should be repaired as quickly as possible.
- Leaking toilets may not be evident. Add a few drops of food coloring into the tank. Do not flush. If the color appears in the bowl within a few minutes, adjustments and/or repairs to the toilet need to be made.
- Install low-flow fixtures throughout the house and use faucet aerators that restrict water flow to help reduce consumption.
- Try to run dishwasher with a full load.

- Avoid running the water continuously for brushing teeth, washing hands, shaving, or rinsing kitchen utensils.
- Water can be saved in the laundry room by adjusting water levels to match the size of the load. If the washing machine does not have a variable load control, water can be saved by running it only when the washer if full.
- Keep a container of drinking water in the refrigerator instead of running a faucet until it turns cold.
- Insulate hot water pipes to avoid long delays of wasted water while waiting for the water to heat.

This proposed system has been designed generally following the minimum requirements under TCEQ Chapter 285 On-Site Sewage Facilities. The site evaluation and subsequent design are based on technical information currently available. There was no indication of shallow groundwater or slopes where seeps could occur at the time of the site evaluation. The performance of the OSSF is not, and cannot be guaranteed, even though all provisions of the Standards have been complied with. If failure should occur, additions or modifications to the OSSF may need to be made. By accepting this design, the homeowner/builder understands that the designer/site evaluator will not be liable for more than the agreed upon design fee.

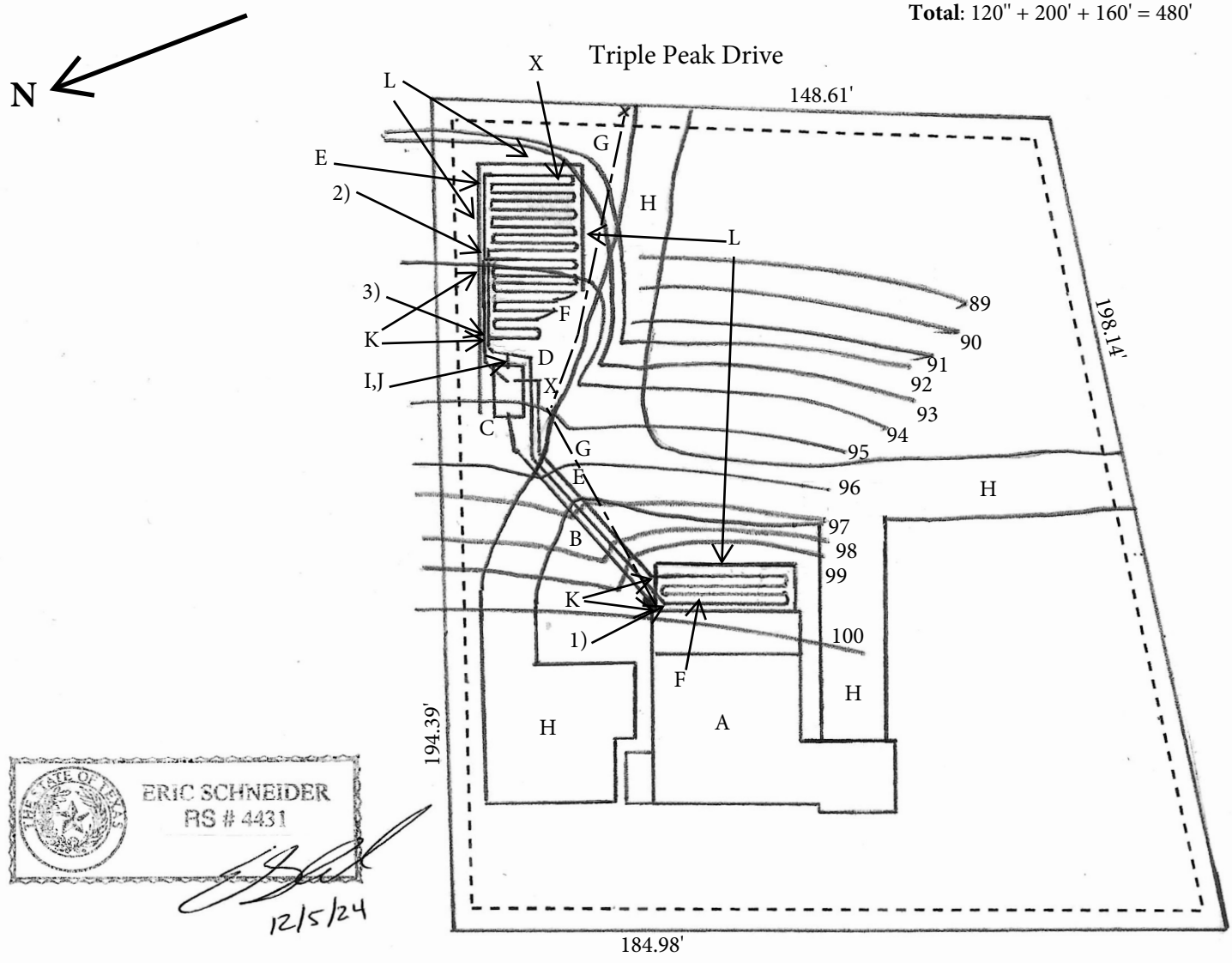
1871 Triple Peak Drive
Canyon Lake, TX 78133

PROPERTY NOTES
5' OSSF Setback on All Property Lines
1' OSSF Setback from Retaining Walls

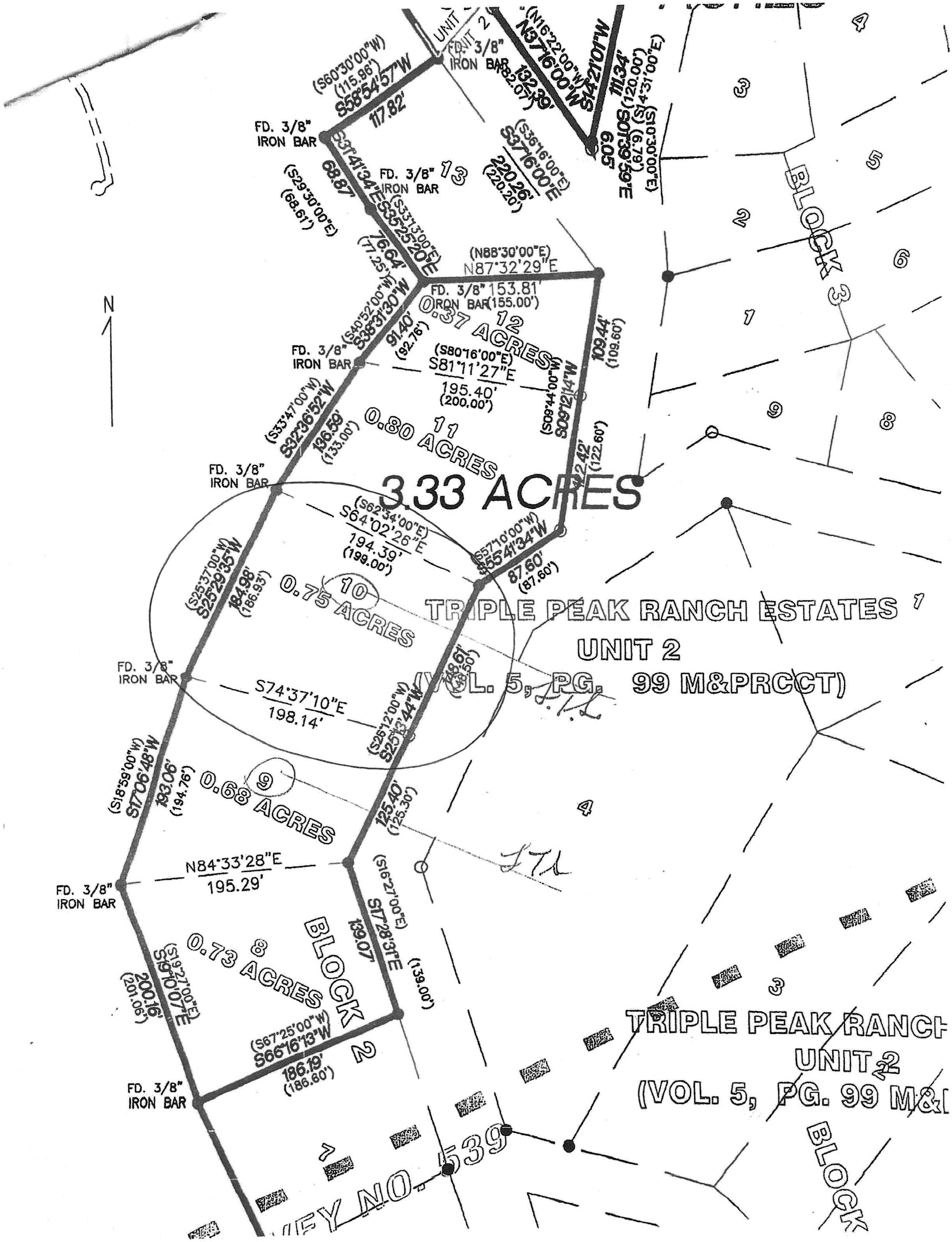
LEGEND
A: 3 Bedroom Equivalent, Single Family Residence, < 2,500 Sq. Ft.
B: 3" or 4" SCH 40 PVC Pipe with Two Way Clean Out
C: AquaKlear Aerobic Treatment Unit, Model AKA600CA
D: 1" SCH 40 Supply Line
E: 1" SCH 40 Return Line
F: 480 Linear Feet of Netafim Purple Drip Tubing (See Drain Field Details)
G: Waterline (Sleeved the entire way)
H: Driveway
I: 100 Micron Disc Filter
J: 1" Ball Valve (to remain partially open during dosing to allow continuous flushing)
K: Air/Vacuum Relief Valve (located at highest connections on both fields)
L: Rock Retaining Wall
X: Profile Hole

SCALE
1 INCH = 40 FEET

Drain Field Details
Number Points to Supply Connection
1) 4 Lines @ 30' each = 120'
2) 10 Lines @ 20' each - 200'
3) 5 Lines @ 20', 2 Lines @ 15', 3 Lines @ 10' = 160'
Total: 120'' + 200' + 160' = 480'



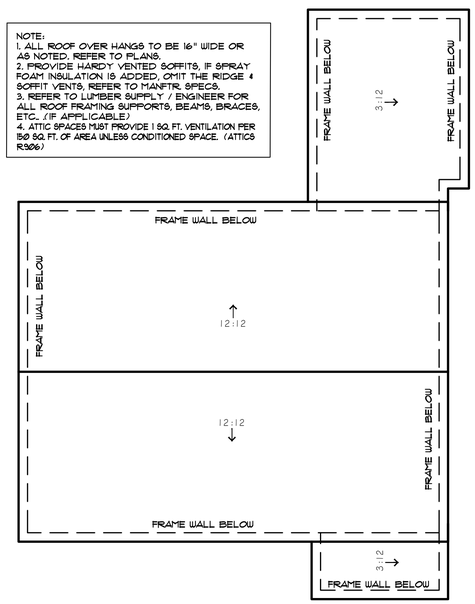
ERIC SCHNEIDER
RS # 4431
12/5/24



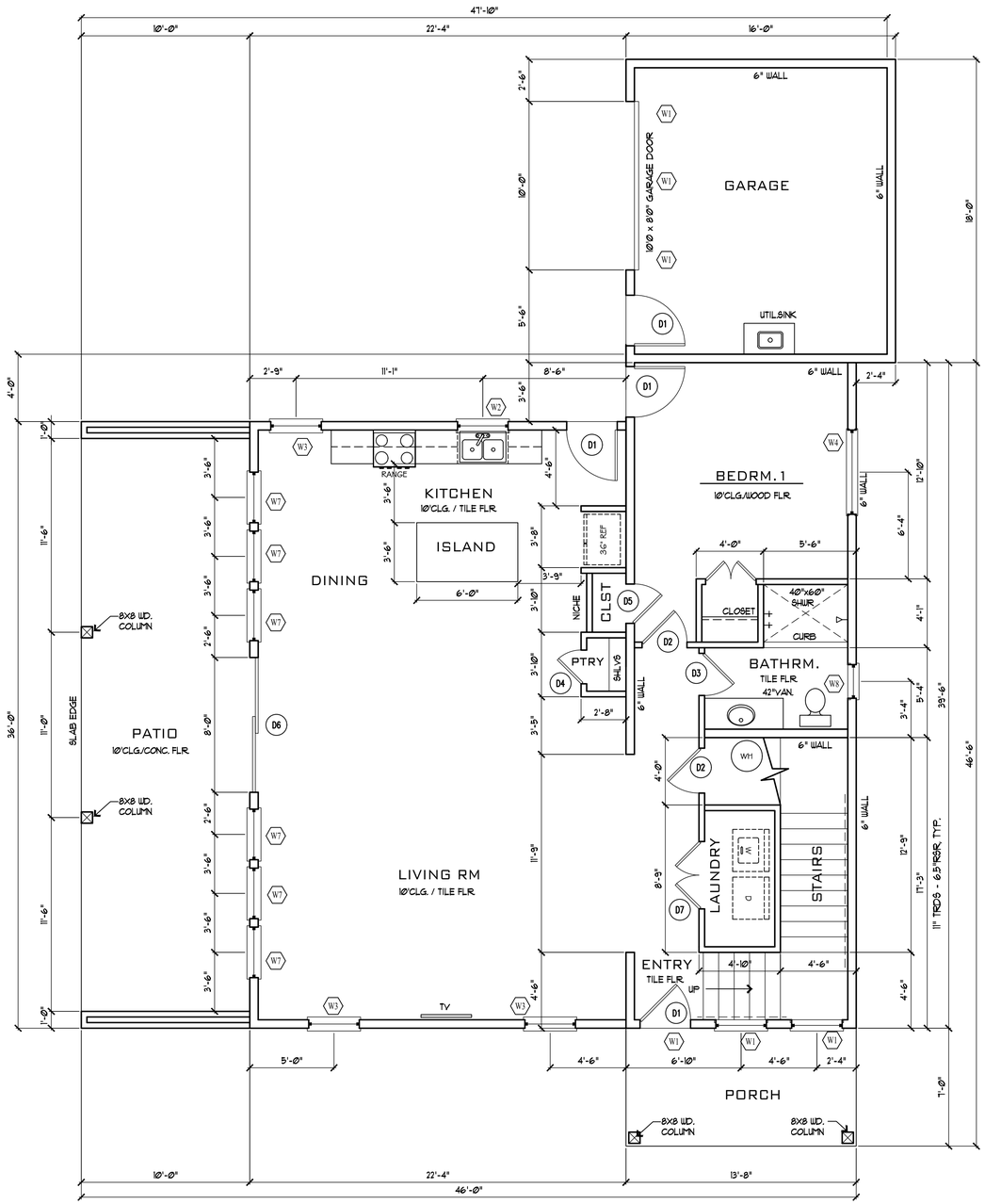
N
3.33 ACRES
12
0.37 ACRES
11
0.80 ACRES
10
0.75 ACRES
9
0.68 ACRES
8
0.73 ACRES
13
7
BLOCK 3
BLOCK 2
TRIPLE PEAK RANCH ESTATES
UNIT 2
(VOL. 5, PG. 99 M&PRCCT)
TRIPLE PEAK RANCH
UNIT 2
(VOL. 5, PG. 99 M&
FD. 3/8" IRON BAR
(S60°30'00"W)
(115.96')
S58°54'57"W
117.82'
N37°16'00"W
132.39'
(N16°22'00"W)
(182.07')
S14°21'01"W
111.34'
(120.00')
(S14°31'00"E)
S01°39'59"E
6.05'
(6.79')
(S36°16'00"E)
S37°16'00"E
220.26'
(220.20')
(S29°30'00"E)
(68.61')
S31°41'34"E
68.87'
(S33°13'00"E)
S35°25'20"E
76.64'
(77.25')
(N88°30'00"E)
N87°32'29"E
153.81'
(155.00')
(S40°52'00"W)
S38°31'30"W
91.40'
(92.76')
(S80°16'00"E)
S81°11'27"E
195.40'
(200.00')
109.44'
(109.60')
(S09°44'00"W)
S09°12'14"W
122.42'
(122.60')
(S33°47'00"W)
S32°36'52"W
136.59'
(133.00')
(S62°34'00"E)
S64°02'26"E
194.39'
(199.00')
(S57°10'00"W)
S55°41'34"W
87.60'
(87.60')
(S25°37'00"W)
S25°29'35"W
184.98'
(186.93')
S74°37'10"E
198.14'
(S26°12'00"W)
S25°13'44"W
148.61'
(S18°59'00"W)
S17°06'48"W
193.06'
(194.76')
125.40'
(125.30')
N84°33'28"E
195.29'
(S16°27'00"E)
S17°28'31"E
139.07'
(139.00')
(S19°27'00"E)
S19°10'07"E
200.16'
(201.06')
(S67°25'00"W)
S66°16'13"W
186.19'
(186.60')

APPOXIMATE SQUARE FEET	
FIRST FLOOR	= 1,343 SQ.FT.
SECOND FLOOR	= 815 SQ.FT.
TOTAL LIVING SQ.FT.	= 2,158 SQ.FT.
PORCH	= 96 SQ.FT.
GARAGE	= 281 SQ.FT.
PATIO	= 360 SQ.FT.
2ND FLR DECK	= 360 SQ.FT.
TOTAL SLAB + LUG	= 2,088 SQ.FT.

NOTE:
1. ALL ROOF OVER HANGS TO BE 16" WIDE OR AS NOTED, REFER TO PLANS.
2. PROVIDE HARDY VENTED SOFFITS, IF SPRAY FOAM INSULATION IS ADDED, OMIT THE RIDGE & SOFFIT VENTS, REFER TO MANFTR. SPECS.
3. REFER TO LUMBER SUPPLY / ENGINEER FOR ALL ROOF FRAMING SUPPORTS, BEAMS, BRACES, ETC., (IF APPLICABLE)
4. ATTIC SPACES MUST PROVIDE 1 SQ. FT. VENTILATION PER 150 SQ. FT. OF AREA UNLESS CONDITIONED SPACE. (ATTICS R806)



2 ROOF PLAN — SCALE: 1/8" = 1'-0"



1 FIRST FLOOR PLAN — SCALE: 1/4" = 1'-0"

LEGEND SYMBOL / ABBREV.

- NEW 2X4 STUD WALLS @16"O.C.
- THERMAL BUILDING ENVELOPE SEE SHEET A4.0
- W1 — NEW WINDOW TYPE
- D1 — NEW DOOR TYPE
- FLOOR/CEILING CHANGE
- CLG. — CEILING TYPE
- CONC. — CONCRETE
- EXTG. — EXISTING
- F.V. — FIELD VERIFY
- FIX — FIXED WINDOW
- FRST. — FROSTED GLASS
- HDR. — OPENING HEADER HEIGHT
- H.B. — HOSE BIB
- S.H. — SINGLE HUNG WINDOW
- SLD. — SLIDE WINDOW
- S & R — SHELF & ROD
- TEMP. — TEMPERED GLASS
- WD. — WOOD
- VAN. — VANITY

DOOR SCHEDULE

- D1 — DOOR 3'0"x6'8"
- D2 — DOOR 2'8"x6'8"
- D3 — DOOR 2'6"x6'8"
- D4 — DOOR 2'0"x6'8"
- D5 — DOOR 2'4"x6'8"
- D6 — GLASS SLIDING DOORS 8'0"x6'8" MODEL AS SELECTED
- D7 — PAIR DOORS 2'0"x6'8"
- D8 — PAIR DOORS 2'6"x6'8"
- D9 — PAIR DOORS 2'6"x4'0"
- D10 — PAIR DOORS 1'6"x6'8"

WINDOW SCHEDULE

- W1 — 3'0"x1'3" FIX
- W2 — 3'0"x3'0" SH.
- W3 — 3'0"x5'0" SH.
- W4 — 5'0"x2'0" SLDR.
- W5 — 8'0"x3'0" FIX.
- W6 — 3'6"x1'0" FIX.
- W7 — 3'0"x5'0" FIX.
- W8 — 2'0"x3'0" SH.
- W9 — 3'0"x1'6" SLDR

NOTE:
- ALL EXTERIOR WALL SHALL BE 2X4 STUDS @ 16"O.C.
- WINDOW HDR @ 7'-0""AFF UNLESS OTHERWISE NOTED.
- LOCATE A/C UNIT IN ATTIC VERIFY LOCATION BY OWNER

* A - FRAME STRUCTURE *

MiCaza Design 'Architecture' and Development, LLC
(210) 473-1000 San Antonio, Texas
www.mcdesignarch.com

FINAL COMPLETION
PERMIT - BID SET

New Home Remodel for 1871 Triple Peak Residence
San Antonio, TEXAS

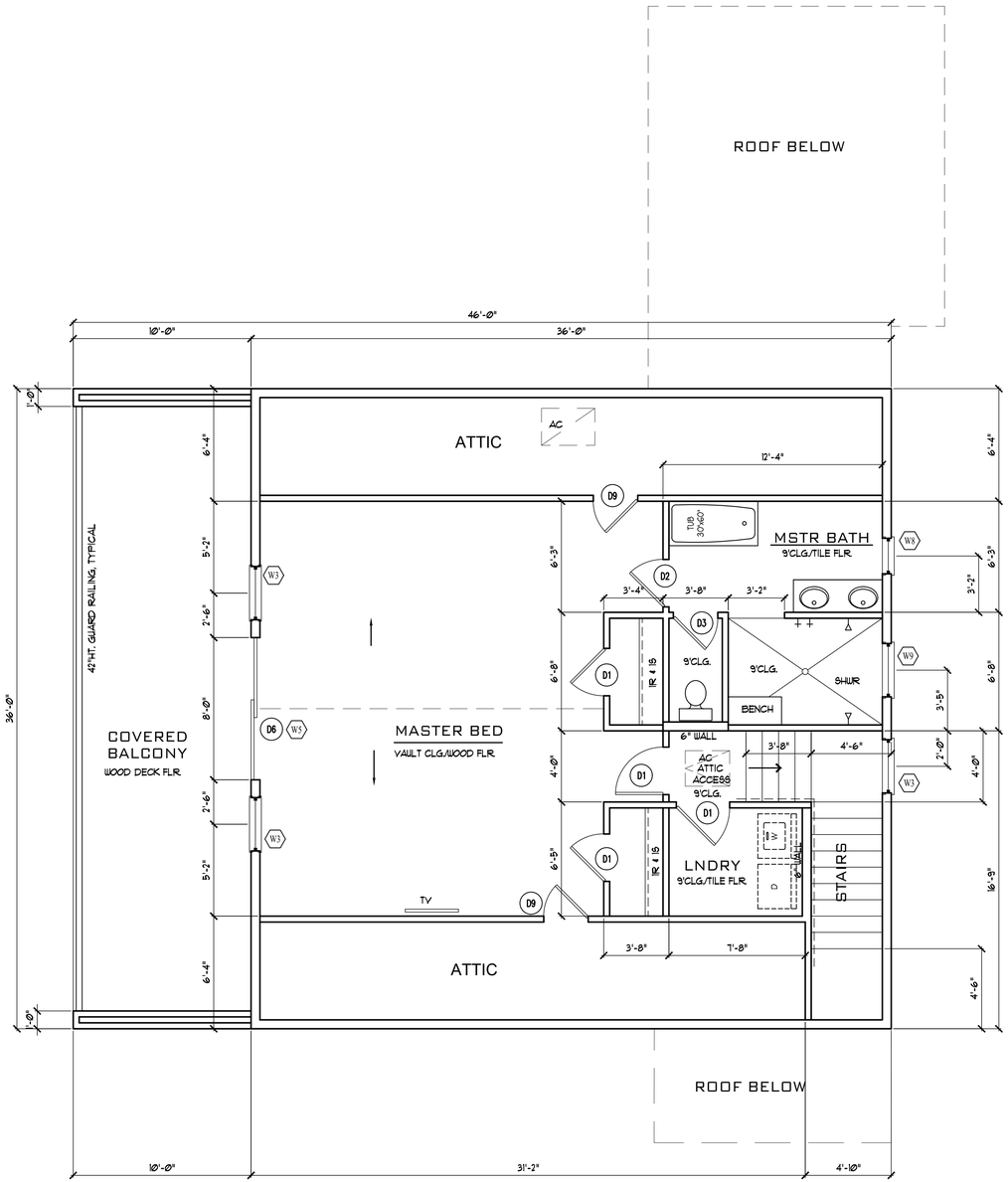
DATE: 03-06-24
PROJECT NO. 2406
REVISIONS

TITLE: FIRST FLOOR PLAN - ROOF PLAN

SHEET 2.1

GENERAL NOTES & SPECIFICATION (if applicable)

1. PROVIDE 1/2" GYP. BD. ON ALL WALLS & 1/2" GYP.BD. ON CEILINGS AND 5/8" GARAGE COMMON WALLS
2. PROVIDE MIN. R-30 BATT INSULATION IN CEILING & MIN. R-13 IN EXTERIOR WALLS.
3. ELECTRICAL CONTRACTOR TO PROVIDE POWER FOR A/C SYSTEM, COORDINATE W/ HOME OWNER.
4. ALL SUBS REQUIRE TO INSTALL ALL APPLIANCES PRETAINING TO THEIR WORK.
5. ELECTRICAL TO PROVIDE BLOCKING FOR ALL EXTERIOR AND INTERIOR HUNG FIXTURES AND CEILING FANS, AS REQUIRED.
6. ELECTRICIAN TO INSTALL ALL LIGHTING FIXTURES.
7. CONTRACTOR(S) SHALL COORDINATE ALL WORK NEEDED TO RESOLVE ANY DISCREPANCIES OR VARIANCES WITH IN THE DRAWINGS, GENERAL NOTES, SPECIFICATION OR EQUIPMENT WITH OWNER & GENERAL CONTRACTOR. IN WHICH CASE, THE MICAZA DESIGN & DEVT., LLC & ITS AFFILIATED CONSULTANTS SHALL HAVE NO LIABLE INTEREST NOR BE HELD RESPONSIBLE FOR ANY PART OF THE CONSTRUCTION INCLUDING FINANCING. ALL DISCREPANCIES SHALL BE PROCESSED IN WRITTEN FORM FOR ASSISTANCE FROM MICAZA DESIGN & DEVT., LLC.
8. PROVIDE INSULATED DOUBLE PANE WINDOWS W/ LOW E.
9. CEILING HEIGHTS TO BE @ 9'-0" HIGH UNLESS NOTED OTHERWISE.
10. ALL WORK AND MATERIAL IS TO COMPLY IN EVERY RESPECT WITH THE LATEST REQUIREMENTS OF ALL APPLICABLE CITY, COUNTY AND STATE CODES, LOCAL REGULATIONS AND THE DIRECTION OF THE BUILDING INSPECTOR FOR SUCH BUILDING LAWS. REGULATIONS AND DIRECTIONS ARE TO BE CONSIDERED AS PART OF THESE SPECIFICATIONS AND PLANS, EXCEPT WHERE EXCEEDED HEREIN.
11. CONTRACTOR SHALL GUARANTEE ALL CONSTRUCTION MATERIAL AND EQUIPMENT FROM ANY DEFECTS FOR A PERIOD DISCLAIMED ON CONTRACT FROM THE DATE OF FINAL COMPLETION & ACCEPTANCE OF CONSTRUCTION BY THE HOME OWNER.
12. COORDINATE THE EXACT LOCATION FOR ALL BRUSH, TRASH AND DUMPSTERS, CONSTRUCTION MATERIAL AND ANY OTHER ITEMS ON THE JOB SITE WITH THE HOME OWNER PRIOR TO CONSTRUCTION.
13. PROVIDE A PROPER WATERPROOFING FLASHING IN ALL EXTERIOR PENETRATIONS, INCLUDING DOORS, WINDOWS, SKYLIGHTS, ROOF VENTS AND SIDING CONSTRUCTION.
14. CONTRACTOR TO COORDINATE ALL MATERIAL SELECTIONS & PURCHASE WITH HOMEOWNER PRIOR TO ORDERING AND INSTALLING ALL MATERIALS ON A TIMELY & REASEONABLE ORDERING SCHEDULE. (EX: WALL & CEILING COLOR PAINT, WINDOW TYPES, DOOR TYPES, CARPET, TILE, PLUMBING FIXTURES, ELECTRICAL FIXTURES, TRIM FINISH, BASE BOARD, ETC...
15. SUBCONTRACTOR(S) TO FOLLOW & PROVIDE ALL NECESSARY WORK AND MATERIALS ACCORDING TO THE CONSTRUCTION CONTRACT & SPECIFICATIONS.
16. PLUMBING SUBCONTRACTOR SHALL CALL FOR CITY PLUMBING ROUGH-IN INSPECTION IN NEW CONCRETE FOUNDATION PRIOR TO POURING CONCRETE.
17. PROPERTY OWNER-GENERAL CONTRACTOR (G.C.)-FOUNDATION SUBCONTRACTOR SHALL HIRE A SURVEY COMPANY TO STAKE OUT THE BUILDING ENVELOPE ON THE PROPERTY PRIOR TO EXCAVATING FOR FOUNDATION FORMS. VERIFY ALL PROPERTY BOUNDARIES -EASEMENTS-SETBACKS. FOUNDATION SUBCONTRACTOR SHALL CALL STRUCTURAL ENGINEER 3-5 DAYS PRIOR TO POURING CONCRETE FOR FOUNDATION INSPECTION. FOUNDATION SUBCONTRACTS TO COORDINATE TIME SCHEDULE WITH PLUMBING SUBCONTRACTS FOR ANY CORRECTIONS OR REPAIRS TO PLUMBING LINES DUE TO FOUNDATION FORMING. OWNER -G.C.-FOUNDATION SUBCONTRACTOR SHALL VERIFY WITH THE CITY ALL UTILITIES ON/IN THE PROPERTY PRIOR TO ANY EXCAVATING. OWNER-G.C.-PLUMBING SUBCONTRACTOR SHALL APPLY & ACQUIRE ANY & ALL PERMITS NEEDED FOR A SEPTIC TANK CONSTRUCTION AND OR CITY IMPACT FEES RELATED TO NEW CONSTRUCTION WORK. OWNER/CONTRACTORS MUST PAY FOUNDATION ENGINEER PRIOR TO RELEASING FOUNDATION INSPECTION REPORT (AS REGRD. BY THE CITY PERMITTING)
18. ALL SUBCONTRACTORS ARE REQUIRED TO SUBMIT A WRITTEN TIME SCHEDULE FOR THEY'RE WORK COMPLETION. ANY WORK THAT NEEDS TO BE STOPPED FOR OTHER TRADE COMPLETION AND THEN RESTARTED SHOULD BE INCLUDED IN THE WRITTEN TIME SCHEDULE. IT'S THE RESPONSIBILITY OF EACH CONTRACTOR TO COORDINATE W/ G.C. FOR ALL WORK SCHEDULES.
19. ALL UTILITY CONNECTIONS SHALL BE COORDINATED BY CONTRACTOR W/ CITY OF SAN ANTONIO AND HOME OWNER. SUBCONTRACTORS SHALL BE RESPONSIBLE FOR ALL PERMITTING AND SCHEDULED INSPECTIONS ACCORDING TO THEIR SCHEDULED COMPLETION TIME.
20. INSTALL ELECTRICAL WATER HEATER, VERIFY LOCATION W/ OWNER.
21. INSTALL ELECTRIC FURNACE, VERIFY LOCATION W/ OWNER. ELECTRICAL SUBCONTR. TO PROVIDE 220V CIRCUIT FOR UNIT (AS PER CODE).
22. PROVIDE ATTIC ACCESS IN HOUSE/GARAGE CEILING. MINIMUM OPENING 24"x54". VERIFY LOCATION & ACCESS UNIT W/ OWNER.
23. A/C HEATING SUBCONTR. TO VERIFY ALL SUPPLY & RETURN REGISTERS W/ OWNER PRIOR TO INSTALLATION. INSTALL MINIMUM 14 SEERS A/C UNITS. A/C SUB-CONTRACTOR TO FILL OUT & PROVIDE COMPLIANCE REPORT; MECHANICAL SYSTEM DESIGN CRITERIA:
    - TYPE OF WHOLE HOUSE VENTILATION: SUPPLY, EXHAUST, BALANCED+ CONTINUOUS OR INTERMITTENT - INDICATE USE OF ENERGY RECOVERY SYSTEM IF ANY,
    - DESIGN AIRFLOW FOR MECHANICAL VENTILATION (INDICATE IF LOCAL EXHAUST AIR FLOW WILL BE PART OF THE DESIGN AIRFLOW),
    - LIST OF FAN EFFICIENCIES FOR VENTILATION SYSTEM - ALL FANS USED AS COMPONENTS,
    - CALCULATIONS FOR MECHANICAL HVAC EQUIPMENT SIZING.
    - LIST OF PROPOSED MECHANICAL SYSTEM EQUIPMENT
    - AIR DUCTS TO HAVE A MIN. OF R4 INSULATION WRAP
    - HVAC DUCT LEAKAGE TEST (APPROVED 3RD PARTY RESIDENTIAL ENERGY COMPLIANCE LETTER
24. VERIFY W/ HOME OWNER FOR TYPE & LOCATION OF WATER SOFTENER.
25. FRAMING CONTRACTOR TO PROVIDE WALL BRACING PER REQUIRED PER CODE.
26. PLUMBING SUB-CONTRACTOR TO PROVIDE A CIRCULATING WATER HEATER PUMP SYSTEM, (IF REQUESTED BY OWNER) MUST MEET CITY CODE REQUIREMENT. PROVIDE NARRATIVE OF HOW PUMPS FOR HOT WATER LOOP ARE CONTROLLED. ALL WATER PIPES SHALL HAVE A MIN. OF R3 INSULATION WRAP.



1 SECOND FLOOR PLAN — SCALE: 1/4" = 1'-0"

* A - FRAME STRUCTURE *

MiCaza Design 'Architecture' and Development, LLC
(210) 473-1000 San Antonio, Texas
www.mcdesignarch.com

FINAL COMPLETION
PERMIT - BID SET

New Home Remodel for 1871 Triple Peak Residence

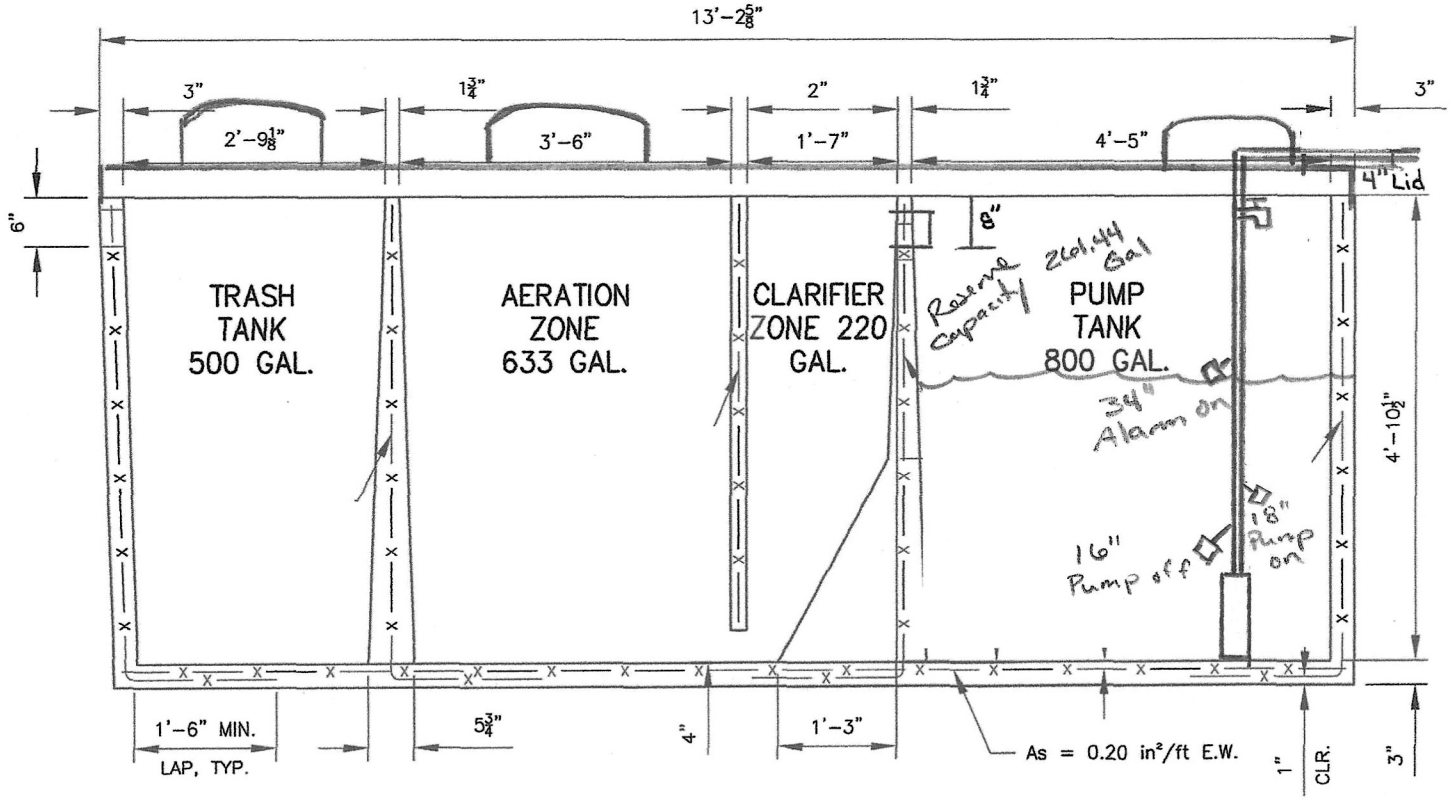
San Antonio, TEXAS

DATE: 03-06-24
PROJECT NO. 2406
REVISIONS

TITLE: 2ND FLOOR PLAN

SHEET: 2.2

Checked by: JRW



REINFORCING SECTION

Risers required to be 2" above grade level
A secondary plug, net or mesh is required inside of every riser

ERIC SCHNEIDER
RS # 3431
12/5/24

REV.NO.	DATE	REVISION

PREPARED BY:

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

PREPARED FOR:

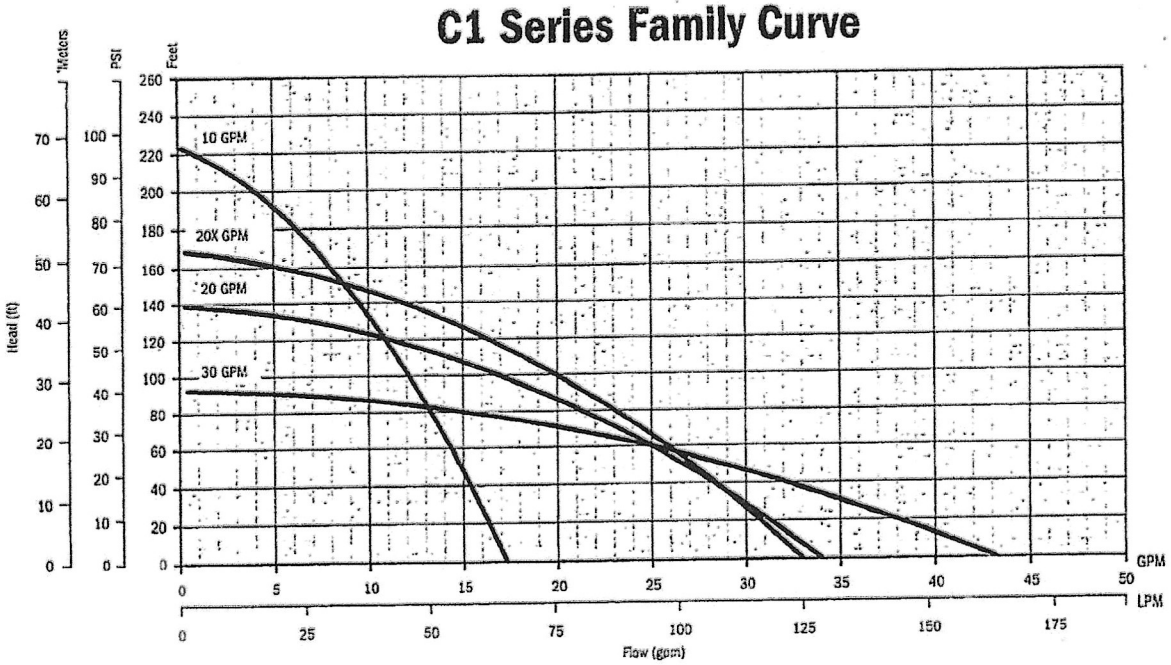
DAVID WINTERS SEPTIC
P.O. BOX 195
SPRINF BRANCH, TX 78070

DATE: 09/20/2021	SHEET TITLE: REINFORCING SECTION	DRWN BY: CCFH	
SCALE: N.T.S.		CKD BY:	

PROJECT:
AQUAKLEAR
WASTEWATER TREATMENT SYSTEM
MODEL AKA600CA

CONTRACTOR:	DWG. I.D. RS-02
DELTA PROJ. NO.: 2021.750.001	SHT. NO. 2 OF 2

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
- 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, ½ hp motor
- Fluid flows of 10, 20, and 30 gpm, with a max shut-off pressure of over 100 psi
- Heavy duty 600 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

C1 Series Pumps

GPM	HP	Volts	Stage	Model No.	Order No.	Length (in)	Weight (lbs)
10	1/2	115	7	10C1-05P4-2W115	90301005	26	17
		230	7	10C1-05P4-2W230	90301010	26	17
20		115	5	20C1-05P4-2W115	90302005	25	16
		230	5	20C1-05P4-2W230	90302010	25	16
20X		115	6	20XC1-05P4-2W115	90302015	26	17
		230	6	20XC1-05P4-2W230	90302020	26	17
30		115	4	30C1-05P4-2W115	90303005	25	16
		230	4	30C1-05P4-2W230	90303010	25	16

Note: All units have 10 foot long SJOOW leads.

Franklin Electric

NETAFIM™

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.

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
- Maximum recommended system pressure: 58 psi
- Tubing diameter: 0.66" OD, 0.56" 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

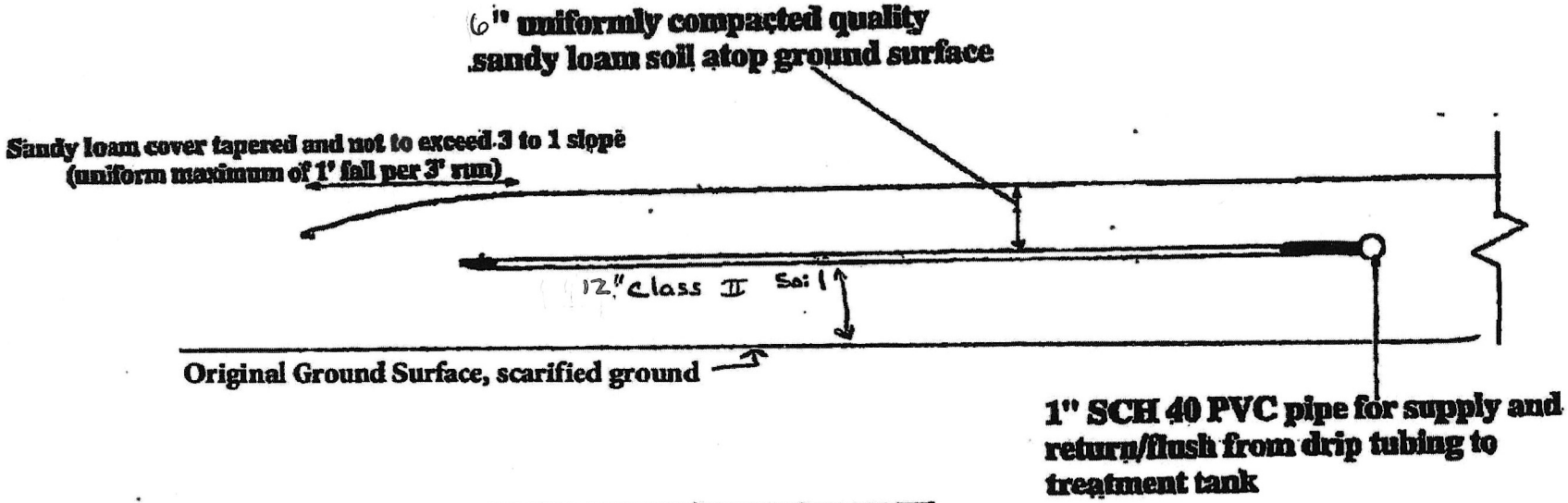
DRIPPER SPACING		12"			18"			24"		
DRIPPER FLOW RATE (GPH)		0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH	0.4 GPH	0.6 GPH	0.9 GPH
INLET PRESSURE	15	301	242	188	422	341	265	531	429	335
	25	369	296	228	520	418	323	655	527	409
	35	421	337	260	595	476	368	749	603	467
	40	443	354	273	626	501	387	790	635	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

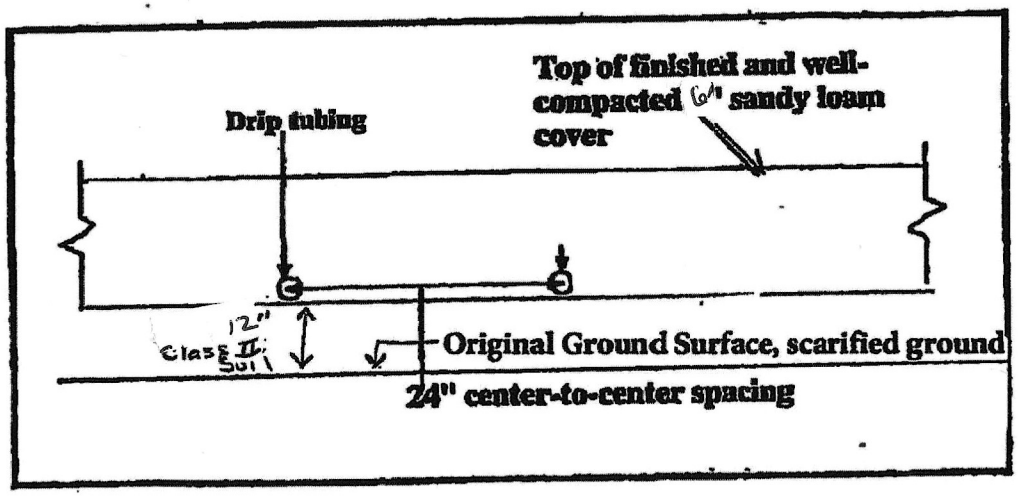
Lateral lengths are based on flows allowing for a 0.5 fps flushing/scouring velocity

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.

Drip Tubing Cross-Section Diagram





THE STATE OF TEXAS
ERIC SCHNEIDER
RS. # 4431

12/5/24

SECTION: 5.10.270
FM0503
0396
Supersedes
1195

"Quality Pumps Since 1939"

Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

ZOELLER PUMP CO.

MAIL TO: P.O. BOX 16347 • Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road • Louisville, KY 40211-1961
(502) 778-2731 • 1 (800) 928-PUMP • FAX (502) 774-3624

FRICTION HEAD

FOR SCHEDULE 40 PLASTIC PIPE

Velocity in FT. / SEC. Friction head loss in feet of water per 100 ft. of pipe.

GALS. PER MIN.	1/2" PIPE		3/4" PIPE		1" PIPE		1 1/4" PIPE		1 1/2" PIPE		2" PIPE		2 1/2" PIPE		3" PIPE		3 1/2" PIPE		4" PIPE	
	VEL	LOSS	VEL	LOSS	VEL	LOSS	VEL	LOSS	VEL	LOSS	VEL	LOSS	VEL	LOSS	VEL	LOSS	VEL	LOSS	VEL	LOSS
2	2.11	3.54	1.20	0.90	0.74	0.28	0.43	0.07	0.31	0.03										
4	4.22	12.79	2.40	3.26	1.48	1.01	0.86	0.26	0.63	0.13	0.38	0.04								
6	6.33	27.10	3.61	6.90	2.22	2.13	1.29	0.56	0.94	0.27	0.57	0.08	0.40	0.03						
8	8.44	46.17	4.81	11.75	2.97	3.63	1.71	0.96	1.26	0.45	0.76	0.13	0.54	0.06						
10	10.55	69.80	6.01	17.77	3.71	5.49	2.14	1.45	1.57	0.68	0.95	0.20	0.67	0.09	0.43	0.03				
12	5.05	97.84	7.21	24.90	4.45	7.69	2.57	2.03	1.89	0.96	1.15	0.28	0.80	0.12	0.52	0.04	0.39	0.02		
15			9.01	37.65	5.56	11.63	3.21	3.06	2.36	1.45	1.43	0.43	1.00	0.18	0.65	0.06	0.49	0.03	0.38	0.02
18			10.82	52.77	6.67	16.30	3.86	4.29	2.83	2.03	1.72	0.60	1.20	0.25	0.78	0.09	0.58	0.04	0.45	0.02
20			12.02	64.14	7.42	19.81	4.28	5.22	3.15	2.46	1.91	0.73	1.34	0.31	0.87	0.11	0.65	0.05	0.50	0.03
25	5" PIPE				9.27	29.95	5.36	7.89	3.94	3.73	2.39	1.10	1.67	0.47	1.08	0.16	0.81	0.08	0.63	0.04
30	0.48	0.02			11.12	41.99	6.43	11.06	4.72	5.22	2.86	1.55	2.01	0.65	1.30	0.23	0.97	0.11	0.76	0.06
35	0.56	0.03			12.98	55.86	7.50	14.71	5.51	6.95	3.34	2.06	2.34	0.87	1.52	0.30	1.13	0.15	0.88	0.08
40	0.64	0.03			14.83	71.53	8.57	18.84	6.30	8.90	3.82	2.64	2.68	1.11	1.73	0.39	1.30	0.19	1.01	0.10
45	0.72	0.04	6" PIPE		16.68	88.97	9.64	23.43	7.08	11.07	4.30	3.28	3.01	1.38	1.95	0.48	1.46	0.24	1.13	0.13
50	0.80	0.05	0.55	0.02			10.71	28.48	7.87	13.45	4.77	3.99	3.35	1.68	2.17	0.58	1.62	0.29	1.26	0.16
55	0.88	0.06	0.61	0.03			11.78	33.97	8.66	16.05	5.25	4.76	3.68	2.00	2.38	0.70	1.78	0.34	1.38	0.19
60	0.96	0.07	0.67	0.03			12.85	39.91	9.44	18.85	5.73	5.59	4.02	2.35	2.60	0.82	1.94	0.40	1.51	0.22
65	1.04	0.08	0.72	0.03			13.93	46.29	10.23	21.87	6.21	6.48	4.35	2.73	2.82	0.95	2.11	0.47	1.64	0.25
70	1.12	0.10	0.78	0.04			15.00	53.10	11.02	25.08	6.68	7.44	4.69	3.13	3.03	1.09	2.27	0.54	1.76	0.29
75	1.20	0.11	0.83	0.04			16.07	60.34	11.81	28.50	7.16	8.45	5.02	3.56	3.25	1.24	2.43	0.61	1.89	0.33
80	1.28	0.12	0.89	0.05			17.14	68.00	12.59	32.12	7.64	9.52	5.35	4.01	3.47	1.39	2.59	0.69	2.01	0.37
85	1.36	0.14	0.94	0.06			18.21	76.08	13.38	35.94	8.12	10.65	5.69	4.49	3.68	1.56	2.75	0.77	2.14	0.42
90	1.44	0.15	1.00	0.06			19.28	84.57	14.17	39.95	8.59	11.84	6.02	4.99	3.90	1.73	2.92	0.85	2.27	0.46
95	1.52	0.17	1.05	0.07					14.95	44.16	9.07	13.09	6.36	5.51	4.12	1.92	3.08	0.94	2.39	0.51
100	1.60	0.19	1.11	0.08					15.74	48.56	9.55	14.40	6.69	6.06	4.33	2.11	3.24	1.04	2.52	0.56
110	1.76	0.22	1.22	0.09					17.31	57.93	10.50	17.18	7.36	7.23	4.77	2.51	3.57	1.24	2.77	0.67
120	1.92	0.26	1.33	0.11					18.89	68.06	11.46	20.18	8.03	8.50	5.20	2.95	3.89	1.46	3.02	0.79
130	2.08	0.30	1.44	0.12	8" PIPE				20.46	78.93	12.41	23.40	8.70	9.86	5.63	3.43	4.21	1.69	3.27	0.91
140	2.24	0.35	1.55	0.14	0.90	0.04			22.04	90.55	13.37	26.85	9.37	11.31	6.07	3.93	4.54	1.94	3.52	1.05
150	2.40	0.40	1.66	0.16	0.96	0.04			23.61	102.89	14.32	30.51	10.04	12.85	6.50	4.47	4.86	2.20	3.78	1.19
160	2.56	0.45	1.77	0.18	1.02	0.05					15.28	34.38	10.71	14.48	6.94	5.03	5.19	2.48	4.03	1.34
170	2.72	0.50	1.89	0.20	1.09	0.05					16.23	38.46	11.38	16.20	7.37	5.63	5.51	2.78	4.28	1.50
180	2.88	0.56	2.00	0.23	1.15	0.06					17.19	42.76	12.05	18.01	7.80	6.26	5.83	3.09	4.53	1.67
190	3.04	0.61	2.11	0.25	1.22	0.07					18.14	47.26	12.72	19.91	8.24	6.92	6.16	3.41	4.78	1.84
200	3.20	0.68	2.22	0.28	1.28	0.07	10" PIPE				19.10	51.97	13.39	21.89	8.67	7.61	6.48	3.75	5.03	2.03
220	3.52	0.81	2.44	0.33	1.41	0.09	0.89	0.03			21.01	62.01	14.72	26.12	9.54	9.08	7.13	4.47	5.54	2.42
240	3.84	0.95	2.66	0.39	1.54	0.10	0.98	0.03			22.92	72.85	16.06	30.68	10.40	10.66	7.78	5.26	6.04	2.84
260	4.16	1.10	2.88	0.45	1.67	0.12	1.06	0.04					17.40	35.59	11.27	12.37	8.43	6.10	6.54	3.30
280	4.48	1.26	3.11	0.52	1.79	0.14	1.14	0.04					18.74	40.82	12.14	14.19	9.08	6.99	7.05	3.78
300	4.81	1.43	3.33	0.59	1.92	0.15	1.22	0.05					20.08	46.38	13.00	16.12	9.72	7.95	7.55	4.30
320	5.13	1.61	3.55	0.66	2.05	0.17	1.30	0.06					21.42	52.27	13.87	18.17	10.37	8.96	8.05	4.84
340	5.45	1.80	3.77	0.74	2.18	0.19	1.38	0.06					22.76	58.48	14.74	20.33	11.02	10.02	8.56	5.42
360	5.77	2.01	3.99	0.82	2.31	0.22	1.46	0.07	12" PIPE				24.09	65.02	15.60	22.60	11.67	11.14	9.06	6.02
380	6.09	2.22	4.21	0.91	2.43	0.24	1.54	0.08	1.08	0.03			25.43	71.86	16.47	24.98	12.32	12.31	9.57	6.66
400	6.41	2.44	4.44	1.00	2.56	0.26	1.63	0.09	1.13	0.04					17.34	27.46	12.96	13.54	10.07	7.32
450	7.21	3.03	4.99	1.24	2.88	0.33	1.83	0.11	1.28	0.04					19.51	34.16	14.58	16.84	11.33	9.11
500	8.01	3.69	5.55	1.51	3.20	0.40	2.03	0.13	1.42	0.05					21.67	41.52	16.21	20.47	12.59	11.07
550	8.81	4.40	6.10	1.80	3.52	0.47	2.24	0.16	1.56	0.07					23.84	49.53	17.83	24.42	13.84	13.20
600	9.61	5.17	6.66	2.11	3.84	0.56	2.44	0.18	1.70	0.08					26.01	58.20	19.45	28.69	15.10	15.51
650	10.41	5.99	7.21	2.45	4.16	0.64	2.64	0.21	1.84	0.09					28.17	67.50	21.07	33.28	16.36	17.99
700	11.21	6.87	7.76	2.81	4.48	0.74	2.84	0.24	1.98	0.10							22.69	38.17	17.62	20.64
750	12.01	7.81	8.32	3.19	4.80	0.84	3.05	0.28	2.13	0.12							24.31	43.37	18.88	23.45
800	12.81	8.80	8.87	3.60	5.12	0.95	3.25	0.31	2.27	0.13							25.93	48.88	20.14	26.43
850	13.61	9.85	9.43	4.03	5.44	1.06	3.45	0.35	2.41	0.15							27.55	54.69	21.40	29.57

The velocity of two (2) feet per second is generally accepted as the velocity to carry solids.
The shaded area above indicates those accepted velocities over two (2) ft. / sec.

Data shown is calculated from Williams and Hazen formula :

$$H = 1043.94 \times ((Q^{1.852}) / ((C^{1.852} \times D^{4.8655})))$$

USING: C = 150 for water at 60 degrees F. C = coefficient for roughness of the interior pipe surface for plastic pipe
H = head loss in FT.
V = fluid velocity in FT / SEC.
D = inside diameter of the pipe in INCHES.
Q = flow rate GPM

2/C

202106041018 08/03/2021 10:18:58 AM 1/2

QUITCLAIM DEED

STATE OF TEXAS

COMAL COUNTY

Frankie Raye Emery Sellars, recently divorced from Jeffrey Brian Sellars, exercising sole management and control of her property and any she has in the former marital estate, as Transferor, for a good and valuable consideration received, QUITCLAIMS, TRANSFERS, AND ASSIGNS to Jeffrey Brian Sellars, whose mailing address is 1851 Triple Peak Road, Canyon Lake, TX 78133, as Transferee, all Transferor's right, title, and interest in and to that certain tract or parcel of real property located in Comal County, Texas, known as 1851 Triple Peak Road, Canyon Lake TX 78133 and with legal description:

> Lots 9 and 10, Block 2, TRIPLE PEAK RANCH ESTATES UNIT 2, according to the map or plat thereof, recorded volume 2, page 87, and amended in volume 5, page 99, Map and Plat Records, Comal County, Texas.

TO HAVE AND TO HOLD all of Transferor's right, title, and interest in and to the Property, together with all and singular the rights and appurtenances belonging in any way to Transferor, by Transferee and Transferee's eventual heirs, personal representatives, successors and assigns forever. Neither Transferor nor Transferor's eventual heirs, personal representatives, successors or assigns shall have, claim, or demand any right, title, or interest in all or any part of the Property.

Quitclaim Deed

EXECUTED on 7-30-2021 [*date*]

[*Signature*] Frankie Emery Sellars

State of Texas
County of Comal

Before me, the undersigned authority, on this day personally appeared Frankie Emery Sellars, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that she executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office :

7.30.2021 [*date*].

[*notarial seal*]

ANNETTE DARLING
Notary Public, State of Texas
My Comm. Exp. 01-24-2025
ID No. 13097532-8

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
08/03/2021 10:18:58 AM
CSCHUL 2 Page(s)
202106041018
Bobbie Koepp

Annette Darling [*signature*]

Annette Darling [*printed name*]

Notary Public in and for
Comal County, Texas

COMAL COUNTY
ENGINEER'S OFFICE

OSSF DEVELOPMENT APPLICATION CHECKLIST

Staff will complete shaded items

Date Received	Initials	Permit Number
		118877

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

- [X] Completed Application for Permit for Authorization to Construct an On-Site Sewage Facility and License to Operate
- [X] Site/Soil Evaluation Completed by a Certified Site Evaluator or a Professional Engineer
- [X] 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.
- [X] Required Permit Fee - See Attached Fee Schedule
- [X] Copy of Recorded Deed
- [X] Surface Application/Aerobic Treatment System
  - [X] Recorded Certification of OSSF Requiring Maintenance/Affidavit to the Public
  - [X] 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

July 23 2025
Date

___ COMPLETE APPLICATION

Check No. _____ Receipt No._____

___ INCOMPLETE APPLICATION
(Missing Items Circled, Application Refused)

Revised: September 2019