

Preliminary Field Check For Drip Systems



Legal Description: _____

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:

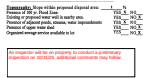
119093.pdf Markup Summary

require a TCEQ approved WPAP? ☐ Yes ☒ No
(If Yes, provide a copy of the TCEQ approved WPAP. A Permit to Construct will be issued by the appropriate regional office.)

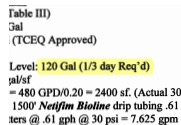
☒ No confirm that property is not in TCEQ contributing zone.

☐ No
(If Yes, provide a copy of the TCEQ approved WPAP. A Permit to Construct will be issued by the appropriate regional office.)

confirm that property is not
in TCEQ contributing zone.



An inspector will be on property to conduct a preliminary inspection on 10/31/25, additional comments may follow.



reserve capacity does not meet minimum requirements for 480 GPD.

ON-SITE SEWAGE FACILITY APPLICATION

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

119093
Permit Number

Owner Name	BILL J. CHEN & CHARLINE CHEN
Mailing Address	824 SADDLEWOOD LANE
City, State, Zip	HOUSTON, TX 77024
Phone #	(713) 927-3055
Email	billjchen@me.com

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

Subdivision Name RIVER POINT ESTATES Unit 2 Lot 40 Block _____
Survey Name / Abstract Number _____ Acreage 0.8578
Address 894 RIVER CLIFF DR City CANYON LAKE State TX Zip 78133

☒ Single Family Residential

Type of Construction (House, Mobile, RV, Etc.) REMODELED HOUSE & DETACHED LIVING

Number of Bedrooms 3+4

Indicate Sq Ft of Living Area 2500 + 2000

☐ 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:	\$ 250,000	(Structure Only)
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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 ☐ Public Well ☐ Rainwater Collection

4. SIGNATURE OF OWNER

By signing this application, I certify that:

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

X Maureen Chen Signature of Owner

Date 9/24/2025



COMAL COUNTY
ENGINEER'S OFFICE

ON-SITE SEWAGE FACILITY APPLICATION

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

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

System Description PROPRIETARY; AEROBIC TREATMENT AND DRIP TUBING

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

Tank Size(s) (Gallons) AERIES D840 Absorption/Application Area (Sq Ft) 3000

Gallons Per Day (As Per TCEQ Table III) 480

(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

confirm that property
is not in TCEQ
contributing zone.

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

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

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

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

Is this property within an incorporated city? ☐ Yes ☒ No

If yes, indicate the city: _____



FIRM #2585

By signing this application, I certify that:

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

Signature of Designer

Date 9/18/2025

AFFIDAVIT**THE COUNTY OF COMAL
STATE OF TEXAS****CERTIFICATION OF OSSF REQUIRING MAINTENANCE**

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

II

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

2 UNIT/PHASE/SECTION BLOCK 48 LOT RIVER POINT ESTATES SUBDIVISION

IF NOT IN SUBDIVISION: ACREAGE SURVEY

The property is owned by (insert owner's full name): BILL J. CHEN & CHARLINE CHEN

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

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

WITNESS BY HAND(S) ON THIS 15 DAY OF SEPTEMBER, 2025

X [Signature]

BILL J. CHEN

X [Signature]

CHARLINE CHEN

Owner(s) signature(s)

Owner (s) Printed name (s)

BILL J. CHEN & CHARLINE CHEN SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 15 DAY OF

SEPTEMBER, 2025

[Signature]
Notary Public Signature



**THE COUNTY OF COMAL
STATE OF TEXAS**

CERTIFICATION OF SINGLE FAMILY DWELLING

According to Texas Commission of Environmental Quality Rules for On-Site Sewage Facilities, this document is filed in the Deed Records of COMAL COUNTY, TEXAS.

I

Before me this day appeared BILL J. CHEN, being the owners of the referenced property at 894 RIVER CLIFF. They further state that the Residence and any additional living space on this property will be occupied only by a single family.

An OSSF requiring a Certification of Single Family Dwelling, will be installed on the property described as:

2 UNIT BLOCK 40 LOT RIVER POINT ESTATES SUBDIVISION

IF NOT IN SUBDIVISION: ACREAGE SURVEY

The property is owned by BILL J. CHEN & CHARLINE CHEN

WITNESS MY HAND ON THIS 1st OF DAY OF October, 2025.
x [Signature] x [Signature]
OWNER (SIGNATURE) OWNER (SIGNATURE)

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 1st DAY OF October, 2025 BY

BILL J. CHEN
OWNER NAME (PRINTED)

CHARLINE CHEN
OWNER NAME (PRINTED)

[Signature]
Notary Public Signature



Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
10/06/2025 08:53:18 AM
PRISCILLA 2 Pages(s)
202506032012



Bobbie Koepp

Maintenance Service Provider
15188 FM 306
Canyon Lake, TX 78133
Office (830)964-2365



SERVICE ADDRESS

894 RIVER CLIFF, CANYON LAKE, TX 78133

INSTALLER

RANDY BATEY OS#

TERM

2 year

Routine Maintenance and Inspection Agreement

This Work for Hire Agreement (hereinafter referred to as this "Agreement") is entered into by and between **Bill+Charline Chey**; (referred to as "Client") and Aerobic Services of South Texas (Thomas W. Hampton MP349) (hereinafter referred to as "Contractor") located at 15188 FM 306 Canyon Lake, Texas 78133 (830) 964-2365. 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 contract will provide for all required inspections, testing and service for your Aerobic Treatment System. The policy will include the following:

1. 3 inspections a year/services calls (at least one every 4 months), for a total of 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 the control panel, air pumps, air filters, diffuser operation. Any alarm situation affecting the proper function of the Aerobic process will be addressed within a 48-hour time frame. Repair work on non-warranty parts will include price for parts & labor. The prices will be quoted before work is performed.
2. An effluent quality inspection consisting of a visual check for 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 immediately in writing of the conditions and estimated date of correction.
4. The Property Owner is responsible for the chlorine; it 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 be covered by this policy. BOD and TSS testing is covered by this contract.

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

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 the above described Services. The contractor may access the System components including the tanks by means of excavation for the purpose of evaluations if necessary. Soil Is to be replaced with the excavated material as best as possible.

Termination of Agreement

Either party may terminate this agreement within ten days with a written notice in the event of substantial failure to perform in accordance with its terms by the other party without fault of the terminating party. If this Agreement is so terminated, the Contractor will immediately notify the appropriate health authority of the termination.

Limit of Liability

In no event shall the Contractor be liable for indirect, consequential, incidental or punitive damages, whether in contract tort 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.

Dispute Resolution

If a dispute between the Client and the Contractor arises that cannot be settled in good faith negotiations then the parties shall choose a mutually acceptable arbitrator and shall share the cost of the arbitration services equally.

Entire Agreement

This Agreement contains the entire agreement of the parties, and there are no other promises or conditions in any other agreement either oral or written.

Severability

If any provision of this Agreement shall be held to be invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable. If a court finds that any provision of this agreement is invalid or unenforceable, but that by limiting such provision it would become valid and enforceable, then such provision shall be deemed to be written, construed, and enforced as so limited.

Property Owner

Name

BILL J. & CHARLINE CHEN

Email

billjchen@me.com

Service Address

894 RIVER CLIFF DR
CANYON LAKE, TX 78133

Phone

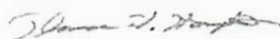
(713) 927-3055

SERVICE PROVIDER

Aerobic Services of South Texas LLC

15188 FM 306 Canyon Lake, TX 786133

(830) 964-2365



Signature of Service Provider and License #
[Thomas Hampton, OS0024597 / MP0000349]



X 
SIGNATURE

EFFECTIVE DATE _____

EXPIRED DATE _____

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

ON-SITE SEWERAGE FACILITY SOIL EVALUATION REPORT INFORMATION

Date Soil Survey Performed: August 14, 2025

Site Location: RIVER POINT ESTATES, UNIT 2, LOT 40

Proposed Excavation Depth: N/A

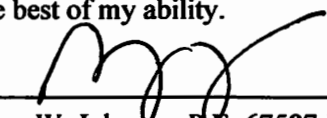
Requirements:

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

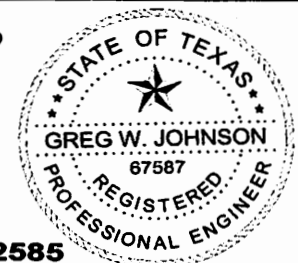
SOIL BORING NUMBER <u>1</u>						
Depth (Feet)	Texture Class	Soil Texture	Gravel Analysis	Drainage (Mottles/ Water Table)	Restrictive Horizon	Observations
0	III	SILTY LOAM	N/A	NONE OBSERVED	LIMESTONE @ 20"	BROWN
1						
2						
3						
4						
5						

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

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


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

08/14/25
Date



FIRM #2585

Date: September 05, 2025

Site Evaluator Information:

Name: **BILL & CHARLINE CHEN**
 Address: **824 SADDLEWOOD LANE**
 City: **HOUSTON** State: **TEXAS**
 Zip Code: **77024** Phone: **(713) 927-3055**

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

Installer Information:

Lot 40 **Unit** 2 **Blk ____ **Subd.** RIVER POINT ESTATES
Street Address: 894 RIVER CLIFF DR
City: CANYON LAKE **Zip Code:** 78133
Additional Info.:**

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

Topography: Slope within proposed disposal area: 1 %

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

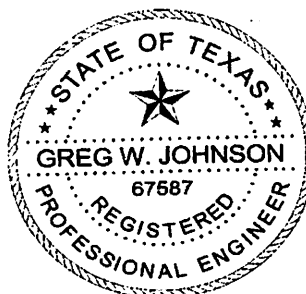
>75' to RIVER

An inspector will be on property to conduct a preliminary inspection on 10/31/25, additional comments may follow.

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

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

09/05/28
DATE

**FIRM #2585**

**AEROBIC TREATMENT
DRIP TUBING SYSTEM
DESIGNED FOR:
BILL & CHARLINE CHEN
824 SADDLEWOOD LANE
HOUSTON, TEXAS 77024**

SITE DESCRIPTION:

Located in River Point Estates, Unit 2, Lot 40, at 894 River Cliff Drive, the septic system will serve an remodeled three bedroom residence (2500sf.) & four bedroom (2000sf) detached living, situated in an area with moderate depth Type III soil as described in the Soil Evaluation Report. Native grasses and Live Oak trees were found throughout this property. An aerobic treatment plant utilizing drip irrigation was chosen as the most appropriate system to serve the conditions on this lot.

PROPOSED SYSTEM:

A 3 or 4-inch SCH-40 pipe discharges from the residence and detached living into a plumber installed lift tank with dual pumps and alarm. Wastewater is pumped to an Aeries Model D-840 gpd aerobic plant containing a 552-gallon pretreatment tank, an aerobic treatment plant, and a 916-gallon pump chamber containing a (0.5 HP FPS E-Series-20FE05P4-2W115) well pump. The well pump is activated by a time controller allowing the distribution ten times per day with an 6.3 minute run time with float setting at 480 gallons. A high level audible and visual alarm will activate should the pump fail. Distribution is through a self flushing 100 micron disc filter then through a 1" SCH-40 manifold to a 3000 sf. drip tubing field, with *Netifim Bioline* drip lines set approximately two feet apart with *0.61 gph* emitters set every two feet, as per the attached schematic. A pressure regulator Model PMR30MF installed in the pump tank on the manifold to the field will maintain pressure at 30 psi. One inch vacuum breakers will be installed at the highest point in the pressure and return manifold. A 1" SCH-40 return line is installed to continuously flush the system to the pump tank by throttling a 1" ball valve. Solids caught in the disc filter are flushed each cycle back to the trash tank. Vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher to lower parts of the field. Prior to installing drip tubing the entire field area will be scarified and built up with 2" of a Type II or III soil. Drip tubing laid and be capped with 6" of Type II or Type III soil (*NOT SAND*). The field area will be sodded with a hearty grass prior to system startup.

Risers are required on tank inspection ports as per 30 TAC 285.38 (9/1/2023). This includes access limitation (<65lbs lid or hardware secured lid), 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.

DESIGN SPECIFICATIONS:

Daily waste flow: 480 gpd (Table III)

Pretreatment tank size: 552 Gal

Plant Size: Aeries D840 gpd (TCEQ Approved)

Pump tank size: 916 Gal

Reserve capacity after High Level: 120 Gal (1/3 day Req'd)

Application Rate: $R_a = 0.2$ gal/sf

Total absorption area: $Q/R_a = 480 \text{ GPD}/0.20 = 2400 \text{ sf}$. (Actual 3000 sf.)

Total linear feet drip tubing: 1500' *Netifim Bioline* drip tubing .61 GPH

Pump requirement: 750 emitters @ .61 gph @ 30 psi = 7.625 gpm

Pump Requirement (cont.): (0.5 HP FPS E-Series-20FE05P4-2W115)

MINIMUM SCOUR VELOCITY (MSV) > 2 FPS

IN DRIP TUBING W/ NOM. DIA. 0.55" ID

$$\text{MSV} = 2 \text{ FPS } (\pi d^2/4 * 7.48 \text{ gal/cf} * 60 \text{ sec/min})$$

$$\text{MSV} = 2(3.14159((.55/12)^2/4)*7.48*60)$$

$$\text{MSV} = 1.5 \text{ gpm PER LINE} * 5 \text{ LINES} = 7.5 \text{ GPM MIN FLOW RATE}$$

IN RETURN MANIFOLD W/ NOM. DIA 1.049" ID

$$\text{MSV} = 2 \text{ FPS } (\pi d^2/4 * 7.48 \text{ gal/cf} * 60 \text{ sec/min})$$

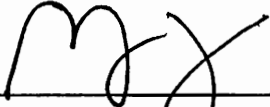
$$\text{MSV} = 2(3.14159((1.049/12)^2/4)*7.48*60)$$

$$\text{MSV} = 5.4 \text{ GPM}$$

PIPE AND FITTINGS:

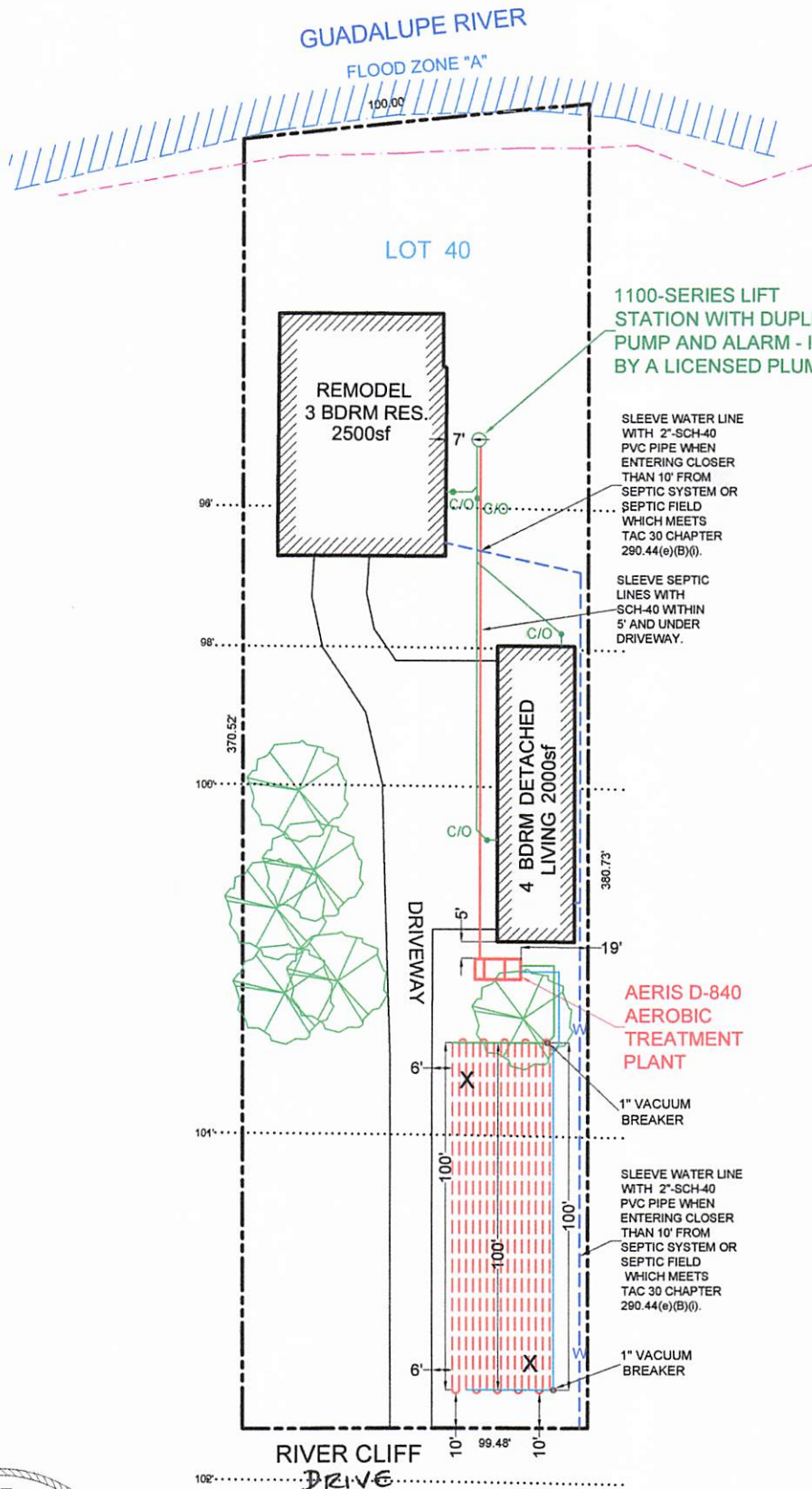
All pipes and fittings in this drip tubing system shall be 1" schedule 40 PVC. All joints shall be sealed with approved solvent-type PVC cement. Clipper type cutters are recommended to prevent PVC burrs during cutting of pipes causing possible plugging.

Designed in accordance with Chapter 285, Subchapter D, §285.30 and §285.40 Texas Commission On Environmental Quality. (Effective September 1, 2023)

 09/20/25

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





NOTE:
EXISTING SEPTIC
TANK TO BE
PUMPED, CRUSHED
AND BACK FILLED.
EXISTING SEPTIC
SYSTEM TO BE
ABANDONED

INSTALL 3000sf OF
FIELD USING 1500' OF
DRIP TUBING. THERE
SHALL BE NO PARKING,
DRIVING OR STORAGE
ON THE SEPTIC FIELD
AT ANY TIME FOR ANY
REASON.

*USE TWO WAY CLEAN
OUTS

**USE SCH-40 OR
SDR-26 TO TANK

X= TEST HOLE



OWNER: BILL & CHARLINE CHEN		DRAWN BY: EJS III	
STREET ADDRESS: 894 RIVER CLIFF DRIVE			
LEGAL DESC: RIVER POINT ESTATES	UNIT/SECTION/PHASE: 2	BLOCK:	LOT: 40
PREPARED BY: GREG W. JOHNSON, P.E. F#002585	SCALE: 1"=50'	DATE: 8/14/2025	2nd REVISION: 9/18/2025

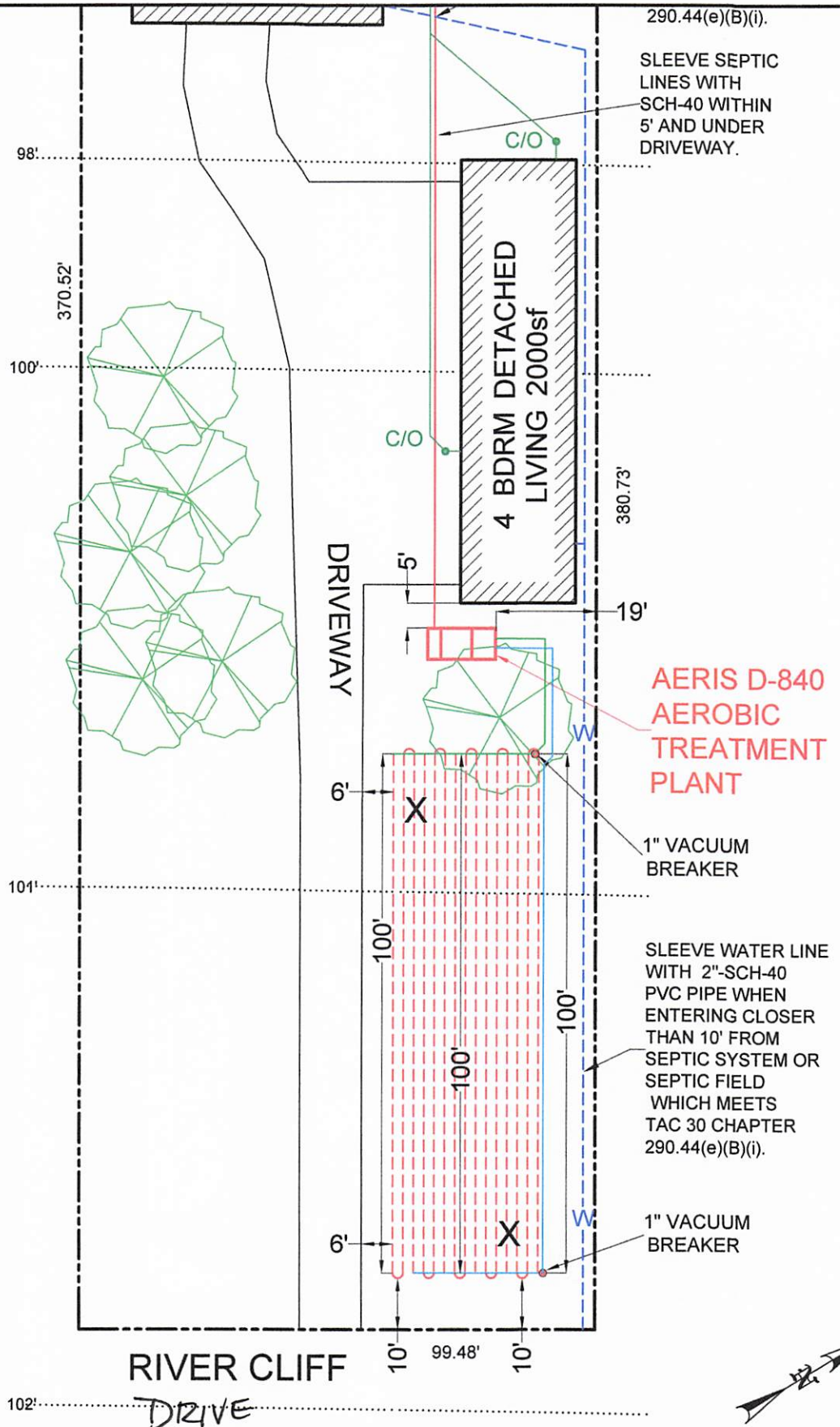
NOTE:
EXISTING SEPTIC
TANK TO BE
PUMPED, CRUSHED
AND BACK FILLED.
EXISTING SEPTIC
SYSTEM TO BE
ABANDONED

INSTALL 3000sf OF
FIELD USING 1500' OF
DRIP TUBING. THERE
SHALL BE NO PARKING,
DRIVING OR STORAGE
ON THE SEPTIC FIELD
AT ANY TIME FOR ANY
REASON.

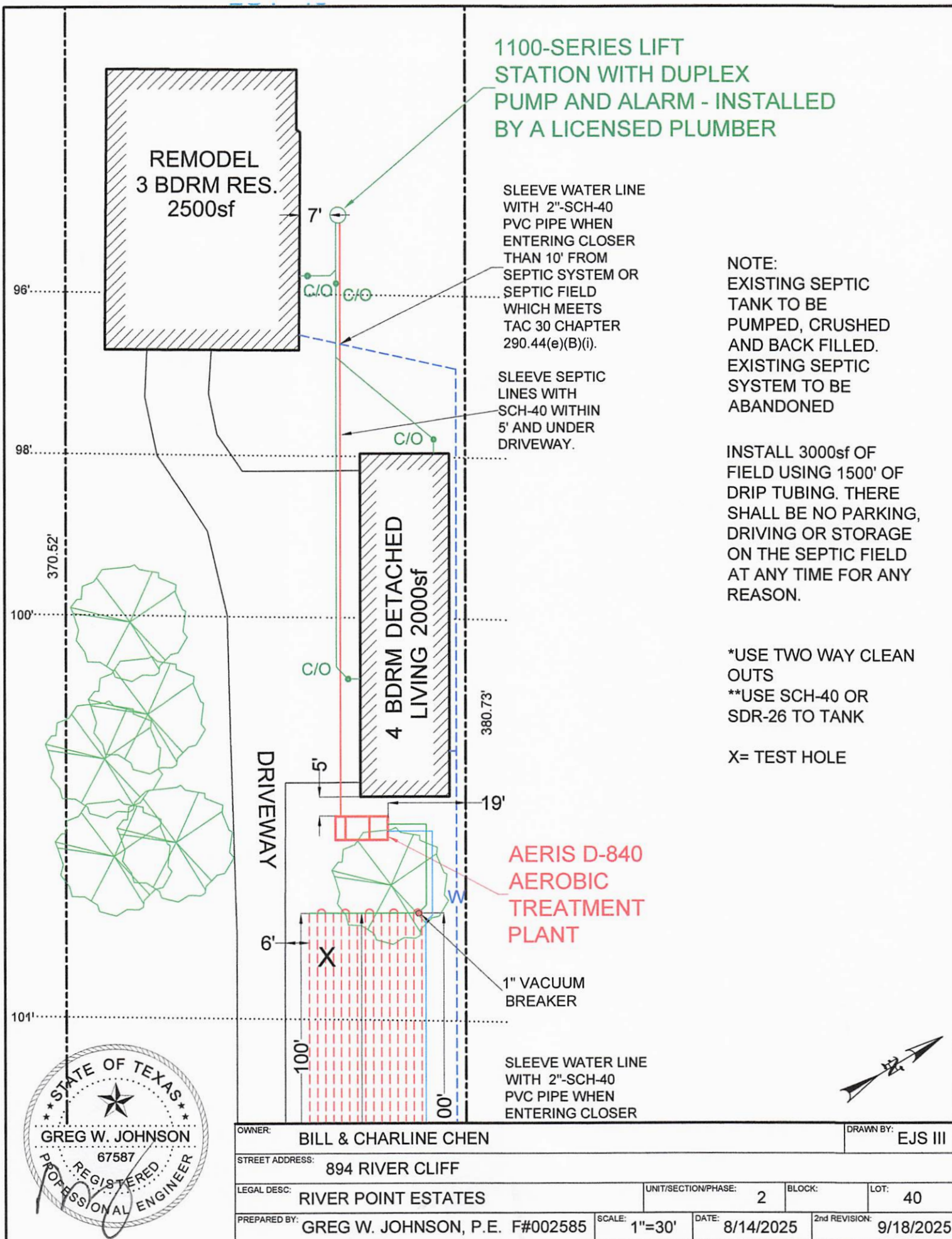
*USE TWO WAY CLEAN
OUTS

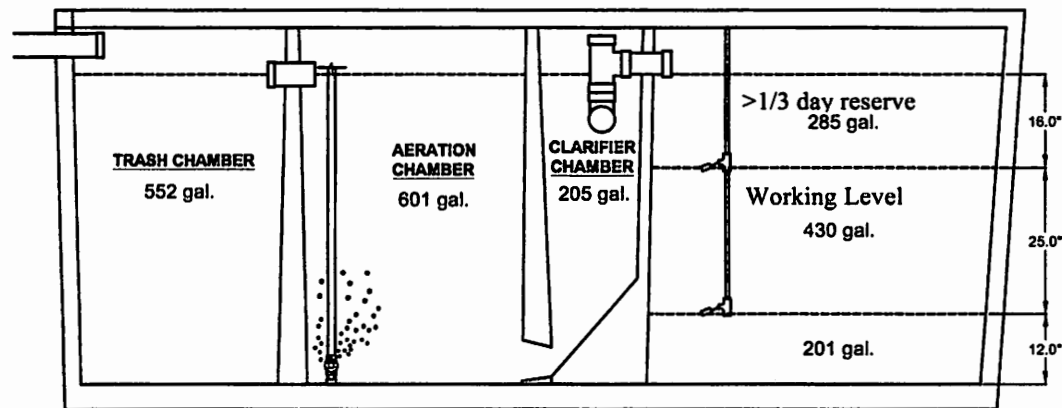
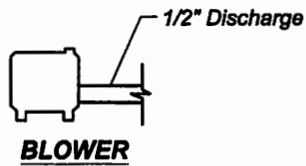
**USE SCH-40 OR
SDR-26 TO TANK

X= TEST HOLE

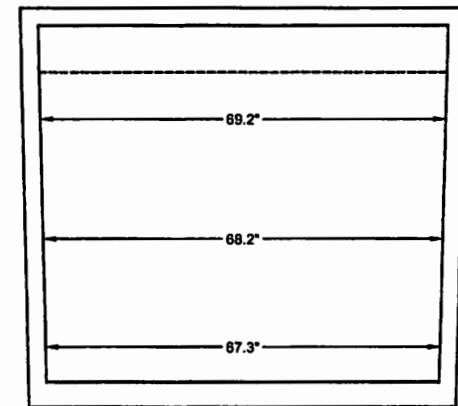


OWNER: BILL & CHARLINE CHEN		DRAWN BY: EJS III	
STREET ADDRESS: 894 RIVER CLIFF DR			
LEGAL DESC: RIVER POINT ESTATES	UNIT/SECTION/PHASE: 2	BLOCK: 40	LOT: 40
PREPARED BY: GREG W. JOHNSON, P.E. F#002585	SCALE: 1"=30'	DATE: 8/14/2025	2nd REVISION: 9/18/2025

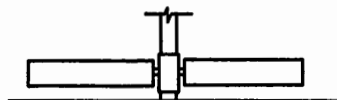




SIDE SECTION VIEW
SCALE: 1" = 3/8"



END SECTION VIEW
SCALE: 1" = 3/8"



Diffuser Detail
2 - 250 mm
Max flow per diffuser
= 55 liters/minute



F2585
09/20/25

Title:

Model D-840
Night Time Pumping

Company Name:

Aeris Aerobics

Date:

5-8-2014

Arkal 1" Super Filter

Catalog No. 1102 0 _ _ _

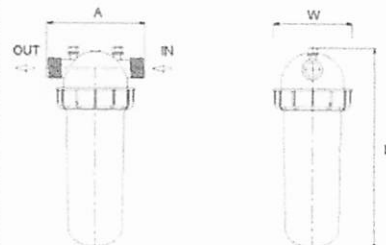
Features

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



Technical Data

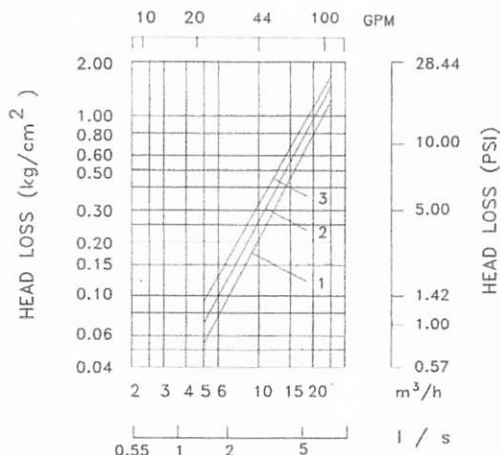
Inlet/outlet diameter	1" BSPT (male)	1" NPT (male)
	25.0 mm – nominal diameter	
	33.6 mm – pipe diameter (O. D.)	
Maximum pressure	10 atm	145 psi
Maximum flow rate	8 m ³ /h (1.7 l/sec)	35 gpm
General filtration area	500 cm ²	77.5 in ²
Filtration volume	600 cm ³	37 in ³
Filter length L	340 mm	13 13/32"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



Filtration Grades

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

Head Loss Chart



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 PRU performance curve to establish specific outlet pressures based on relative inlet pressure and flow rate. 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

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

Outlet

- ¾-inch Female National Pipe Thread (FNPT)
- 1-inch Female National Pipe Thread (FNPT)
- 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. Each pressure regulator shall be water tested for accuracy before departing the manufacturing facility.

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

Physical

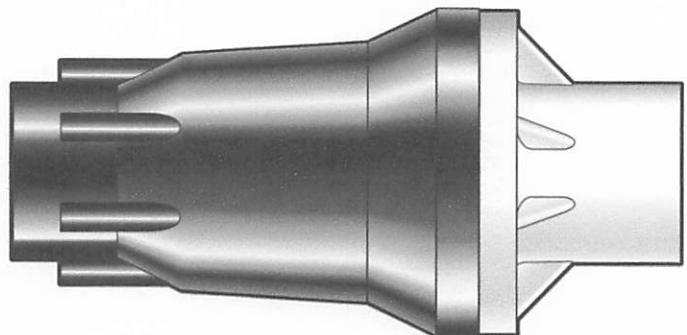
¾" FNPT x ¾" FNPT model (shown on right)

- 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)



* Please consult factory for applications outside of recommended guidelines.



PMR-MF

PRESSURE-MASTER REGULATOR - MEDIUM FLOW

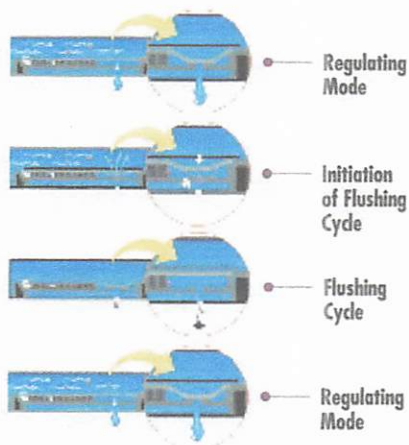
Model Numbers

Model #	Flow Range	Preset Operating Pressure	Maximum Inlet Pressure
PMR-6 MF	4 - 16 GPM (909 - 3634 L/hr)	6 PSI (0.41 bar)	80 psi (5.51 bar)
PMR-10 MF	4 - 16 GPM (909 - 3634 L/hr)	10 PSI (0.69 bar)	90 psi (6.20 bar)
PMR-12 MF	2 - 20 GPM (454 - 4542 L/hr)	12 PSI (0.83 bar)	90 psi (6.20 bar)
PMR-15 MF	2 - 20 GPM (454 - 4542 L/hr)	15 PSI (1.03 bar)	95 psi (6.55 bar)
PMR-20 MF	2 - 20 GPM (454 - 4542 L/hr)	20 PSI (1.38 bar)	100 psi (6.89 bar)
PMR-25 MF	2 - 20 GPM (454 - 4542 L/hr)	25 PSI (1.72 bar)	105 psi (7.24 bar)
PMR-30 MF	2 - 20 GPM (454 - 4542 L/hr)	30 PSI (2.07 bar)	110 psi (7.58 bar)
PMR-35 MF	2 - 20 GPM (454 - 4542 L/hr)	35 PSI (2.41 bar)	115 psi (7.93 bar)
PMR-40 MF	2 - 20 GPM (454 - 4542 L/hr)	40 PSI (2.76 bar)	120 psi (8.27 bar)
PMR-50 MF	2 - 20 GPM (454 - 4542 L/hr)	50 PSI (3.45 bar)	130 psi (8.96 bar)
PMR-60 MF	2 - 20 GPM (454 - 4542 L/hr)	60 PSI (4.14 bar)	140 psi (9.65 bar)



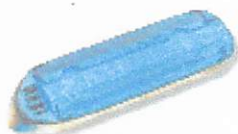
Bioline® Dripperline

Pressure Compensating Dripperline for Wastewater



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

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



Product Advantages

The Proven Performer

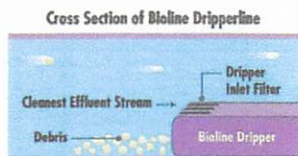
- Tens of millions of feet used in wastewater today.
- Bioline is permitted in every state allowing drip disposal.
- Backed by the largest, most quality-driven manufacturer of drip products in the U.S.
- Preferred choice of major wastewater designers and regulators.
- Proven track record of success for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

Quality Manufacturing with Specifications Designed to Meet Your Needs

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

Long-Term Reliability

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



Root Safe

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



Applications

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

Specifications

Wall thickness (mil): .45*

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

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

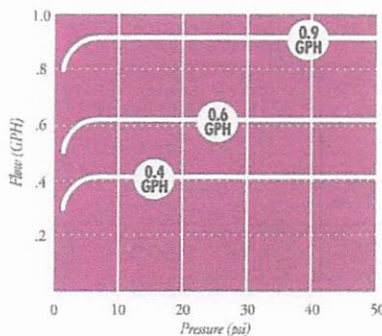
Recommended filtration: 120 mesh

Inside diameter: .570*

Color: Purple tubing indicates non-potable source

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

BIOLINE Flow Rate vs. Pressure



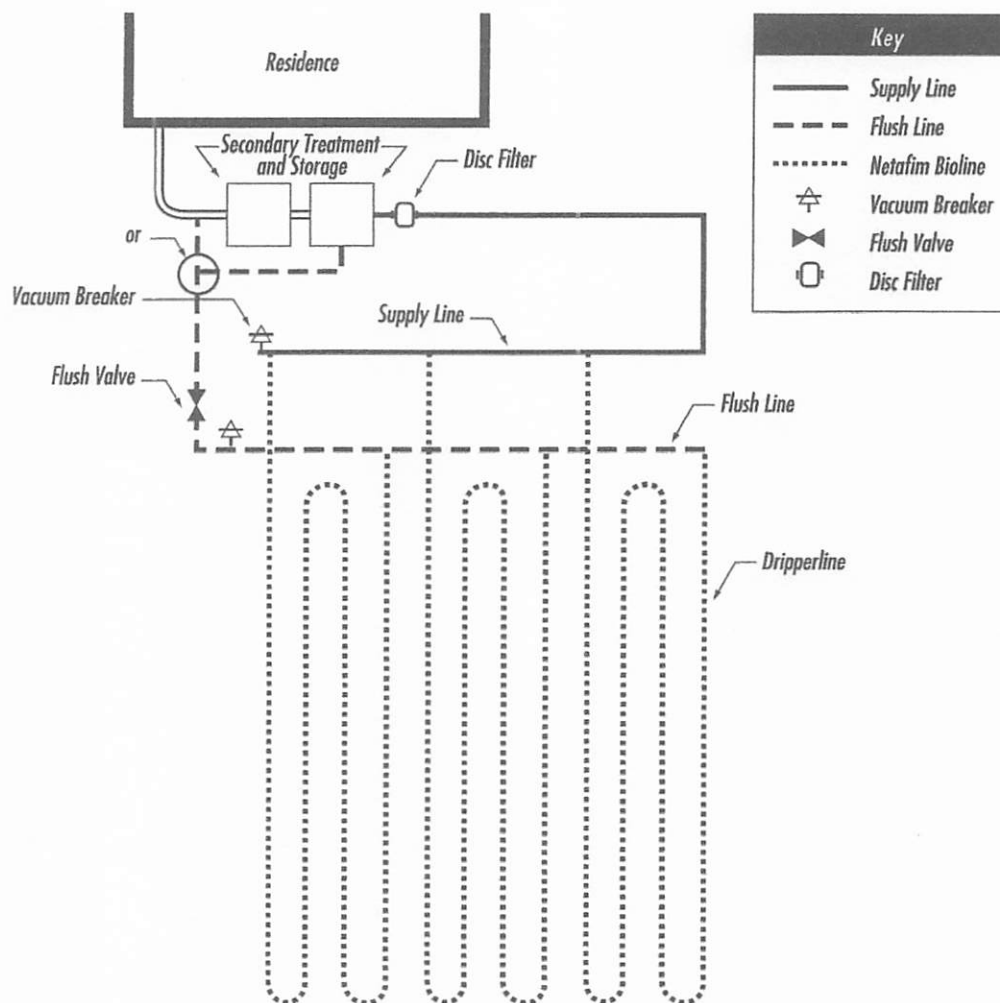
NETAFIM USA
 5470 E. Home Ave. • Fresno, CA 93727
 888.638.2346 • 559.453.6800
 FAX 800.695.4753
www.netafimusa.com

SAMPLE DESIGNS

SINGLE TRENCH LAYOUT

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

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





GENERAL WARRANTY DEED

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REVOKE 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.

THE STATE OF TEXAS

§
§
§

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF COMAL

THAT THE UNDERSIGNED, MARK L. OLIVEAUX AND CONNIE G. OLIVEAUX, HUSBAND AND WIFE, hereinafter referred to as "Grantor", whether one or more, for and in consideration of the sum of TEN DOLLARS (\$10.00) cash, and other good and valuable consideration in hand paid by the Grantee, herein named, whose address is 824 SADDLEWOOD LANE, HOUSTON, TEXAS 77024, the receipt and sufficiency of which is hereby fully acknowledged and confessed, has GRANTED, SOLD and CONVEYED, and by these presents does hereby GRANT, SELL and CONVEY unto BILL J. CHEN AND CHARLINE CHEN, herein referred to as "Grantee", whether one or more, all Grantor's right, title and interest in and to the real property described as follows, to-wit:

**LOT 40, RIVER POINT ESTATES UNIT-2, COMAL COUNTY, TEXAS,
ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 4, PAGE(S)
40-41, MAP AND PLAT RECORDS, COMAL COUNTY, TEXAS.**

Commonly known as: 894 RIVER CLIFF DRIVE, CANYON LAKE, TEXAS 78133

This conveyance, however, is made and accepted subject to any and all validly existing encumbrances, conditions and restrictions, relating to the hereinabove described property as now reflected by the records of the County Clerk of COMAL County, Texas.

TO HAVE AND TO HOLD the above described premises, together with all and singular the rights and appurtenances thereto in anywise belonging unto the said Grantee, Grantee's heirs, executors, administrators, successors and/or assigns forever; and Grantor does hereby bind Grantor's heirs, executors, administrators, successors and/or assigns, to WARRANT AND FOREVER DEFEND all and singular the said premises unto the said Grantee, Grantee's heirs, executors, administrators, successors and/or assigns, against every person whomsoever claiming or to claim the same or any part thereof.

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

TO BE EFFECTIVE this 29TH day of AUGUST, 2025.

GRANTOR:

Mark L Oliveaux
MARK L. OLIVEAUX

Connie G Oliveaux
CONNIE G. OLIVEAUX

ACKNOWLEDGMENT

THE STATE OF Texas §
COUNTY OF COMAL §

The foregoing instrument was acknowledged before me on the 29TH day of AUGUST, 2025, by
MARK L. OLIVEAUX AND CONNIE G. OLIVEAUX.



Mark S
NOTARY PUBLIC, STATE OF TEXAS
MY COMMISSION EXPIRES: 09.23.2029

AFTER RECORDING, RETURN TO:

BILL J. CHEN AND CHARLINE CHEN
824 SADDLEWOOD LANE
HOUSTON, TEXAS 77024

GENERAL WARRANTY DEED

Page 2 of 2

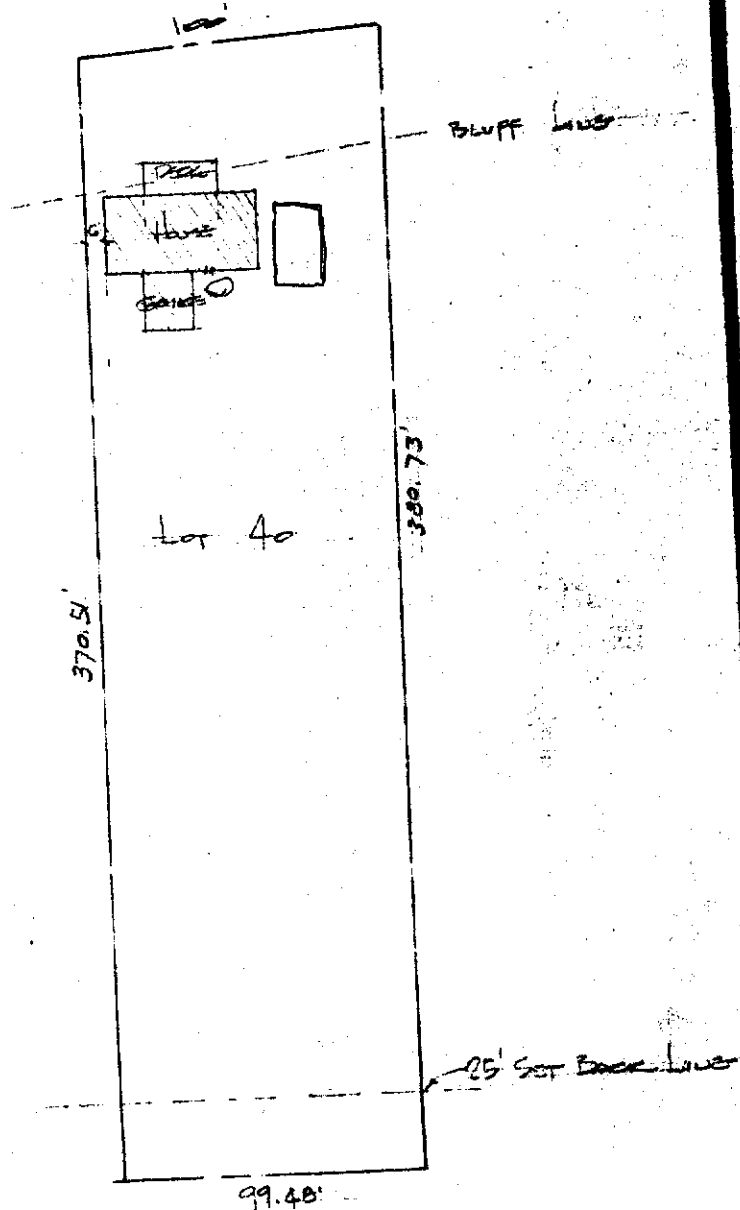
Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
09/02/2025 08:39:40 AM
MARY 2 Pages(s)
202506027981



Bobbie Koepp

CCEO
COPY

GUADALUPE RIVER



RIVER CLIFF DRIVE

LOT 40 RIVER CLIFF ESTATES

PLOT PLAN 1" = 50'-0"

CCEO
COPY

PROCEDURE AS OUTLINED IN " CONSTRUCTION STANDARDS FOR PRIVATE SEWAGE
FACILITIES ", PUBLISHED BY THE TEXAS DEPARTMENT OF HEALTH

Jerome Schutz

River Point

1. NAME OF SUBDIVISION OR LOCATION OF PROPERTY

Estates

2. UNIT NO.

BLOCK

LOT

40

3. TOTAL AREA OF LOT

4. RECHARGE ZONE ? () YES () NO

5. SURFACE SLOPE CHARACTERISTICS OF LOT (in feet)

relatively

flat at test site

6. TYPE OF SOIL

Rock / Sand

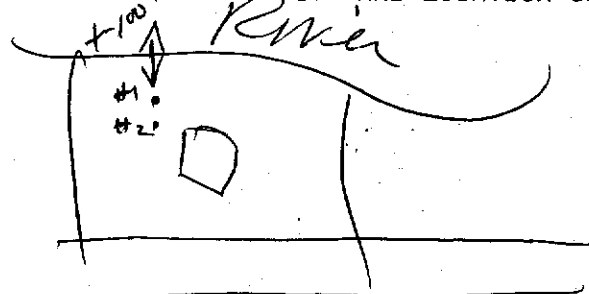
TEST HOLES	DEPTH OF HOLE	RATE OF PERCOLATION
1.	<i>2' 8"</i>	<i>75"</i>
2.	<i>2' 8"</i>	<i>75"</i>
3.		
4.		
5.		
6.		

DATE OF TEST *8/26/80*
PERSON PERFORMING TEST *Alan*

REG.#

194374

SKETCH OF LOT AND LOCATION OF TEST



LICENSE TO OPERATE A PRIVATE SEWAGE FACILITY

DATE 10-04-84

PERMIT # 66944

CCEO

The private sewage system located at River Point

Lot 40

COPY

has been inspected and found to consist of a 847 gal on tank and a

528 square foot drainfield, or

and conforms to the minimum standards in effect as of the above date.

Additional requirements: None

Inspectors Sketch

1. 10-02-84 (Drawing is not to scale)

2. 10-04-84

3. 10-04-84 (sand out of drainfield)

Tank Diameter - $7\frac{1}{3}$ "

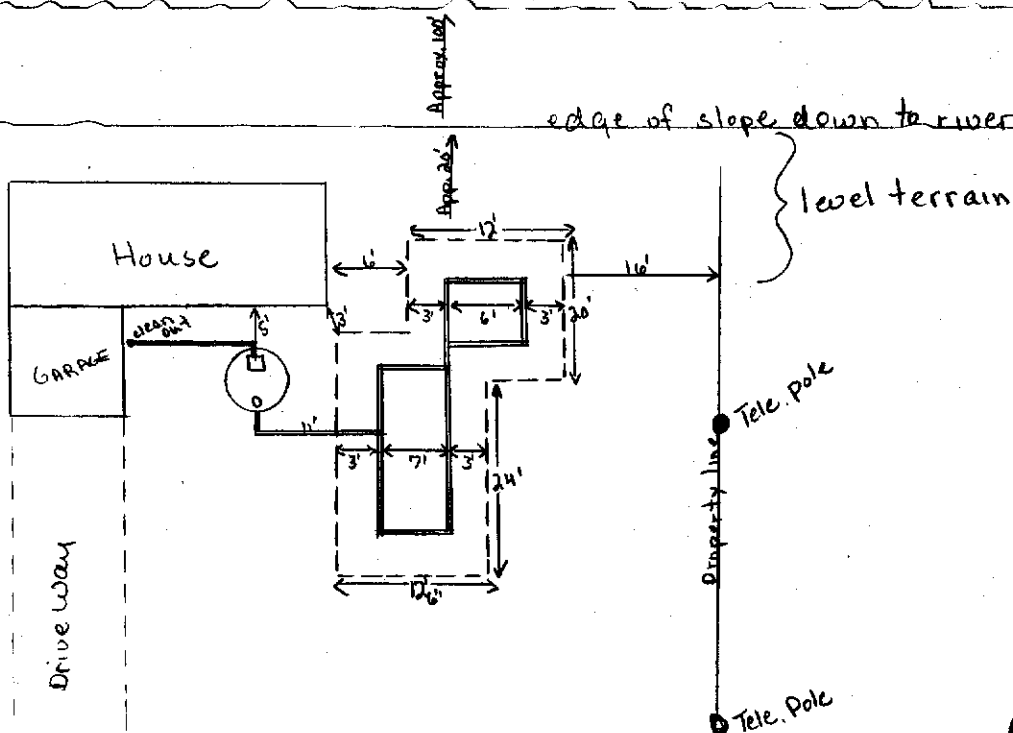
Structure was (☒) was not () on site

Depth - $4\frac{1}{2}$ " (T's)

Outlet - 11"

Actual volume - 847

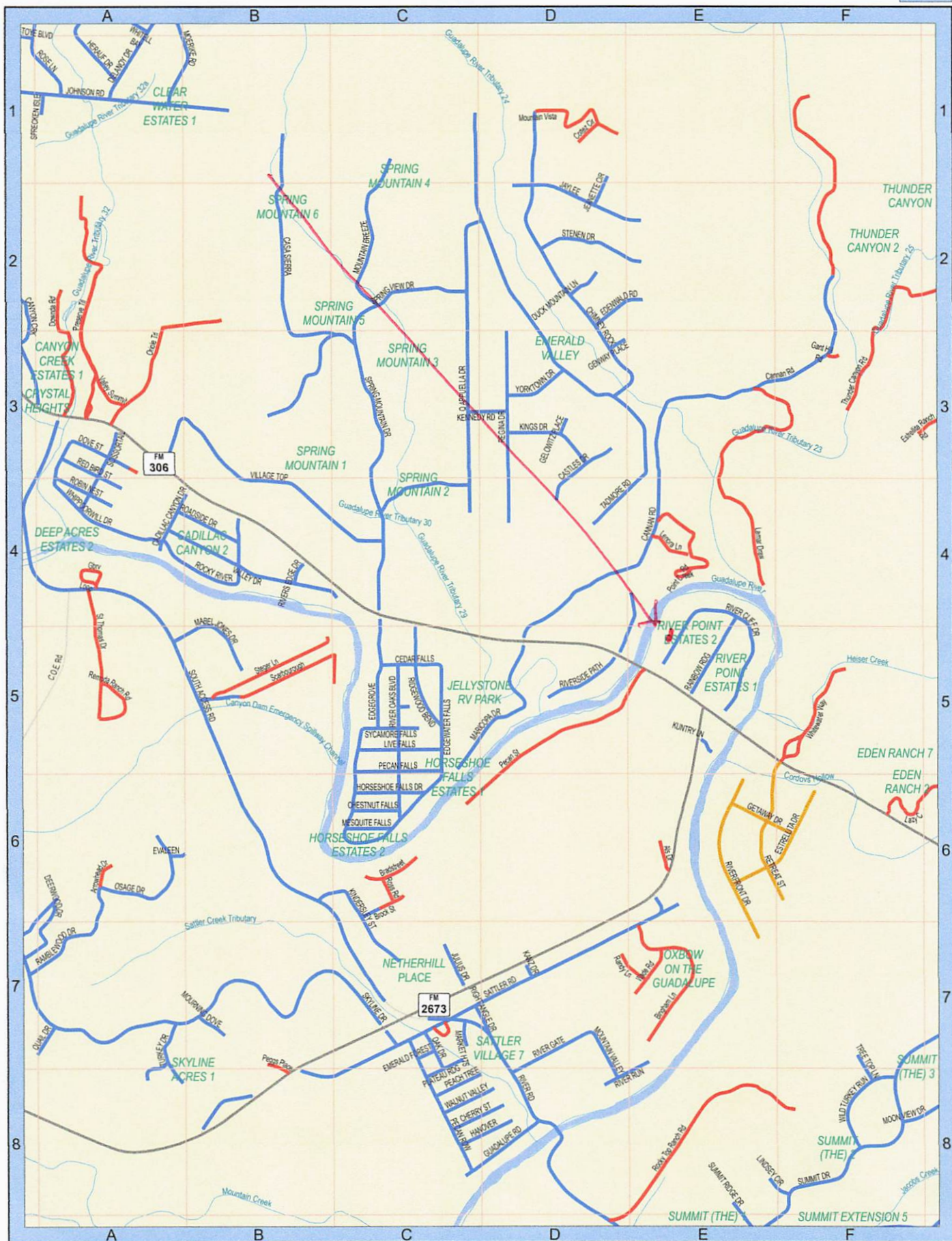
Guadalupe River



River Cliff Dr.

- INSPECTOR mm Wallace SANITARIAN APPROVAL

Oct 15 1984



SEE PAGE 32



COMAL COUNTY
ENGINEER'S OFFICE

**OSSF DEVELOPMENT APPLICATION
CHECKLIST**

Staff will complete shaded items

		119093
<i>Date Received</i>	<i>Initials</i>	<i>Permit Number</i>

Instructions:

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

OSSF Permit

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

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

Signature of Applicant

10/09/2025

Date

___ COMPLETE APPLICATION

Check No. _____ Receipt No. _____

INCOMPLETE APPLICATION

___ (Missing Items Circled, Application Refeused)