Comal County Environmental Health
OSSF Inspection Sheet

Installer Name: Dowlearn **OSSF Installer #:** OS0004089

1st Inspection Date: 8/27/25 **2nd Inspection Date:** 8/29/25 **3rd Inspection Date:**

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

Permit#: 116336 **Address:** 145 FM 2673

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
1	SITE AND SOIL CONDITIONS & SETBACK DISTANCES Site and Soil Conditions Consistent with Submitted Planning Materials	X	285.31(a) 285.30(b)(1)(A)(iv) 285.30(b)(1)(A)(v) 285.30(b)(1)(A)(iii) 285.30(b)(1)(A)(ii) 285.30(b)(1)(A)(i)		X		
2	SITE AND SOIL CONDITIONS & SETBACK DISTANCES Setback Distances Meet Minimum Standards	X	285.91(10) 285.30(b)(4) 285.31(d)		X		
3	SEWER PIPE Proper Type Pipe from Structure to Disposal System (Cast Iron, Ductile Iron, Sch. 40, SDR 26)	X	285.32(a)(1)		X		
4	SEWER PIPE Slope from the Sewer to the Tank at least 1/8 Inch Per Foot	X	285.32(a)(3)		X		
5	SEWER PIPE Two Way Sanitary - Type Cleanout Properly Installed (Add. C/O Every 100' &/or 90 degree bends)	X	285.32(a)(5)		X		
6	PRETREATMENT Installed (if required) TCEQ Approved List PRETREATMENT Septic Tank(s) Meet Minimum Requirements		285.32(b)(1)(G) 285.32(b)(1)(E)(iii) 285.32(b)(1)(E)(iv) 285.32(b)(1)(F) 285.32(b)(1)(B) 285.32(b)(1)(C)(i) 285.32(b)(1)(C)(ii) 285.32(b)(1)(D) 285.32(b)(1)(E) 285.32(b)(1)(A) 285.32(b)(1)(E)(ii)(II) 285.32(b)(1)(E)(i) 285.32(b)(1)(E)(ii)(I)				
7	PRETREATMENT Grease Interceptors if required for commercial	X	285.34(d)	Existing 2000 gallon (permit #89548)	x		

Inspector Notes: **8/27/25 CH: Pre-treatment, EQ's and first five ATU's are good and ready for cover 8/29/25 CH:**

Comal County Environmental Health
OSSF Inspection Sheet

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
8	SEPTIC TANK Tank(s) Clearly Marked SEPTIC TANK If SingleTank, 2Compartments Provided withBaffle SEPTIC TANK Inlet Flowline Greater than3" and " T " Provided on Inlet and OutletSEPTIC TANK Septic Tank(s) MeetMinimum Requirements		285.32(b)(1) (E)285.91(2)285.32(b)(1) (F)285.32(b)(1)(E) (iii)285.32(b)(1)(E)(ii) (II)285.32(b)(1)(E)(ii) (I)285.32(b)(1)(E) (i)285.32(b)(1) (D)285.32(b)(1)(C) (ii)285.32(b)(1)(C) (i)285.32(b)(1) (B)285.32(b)(1) (A)285.32(b)(1)(E)(iv)				
9	ALL TANKS Installed on 4" Sand Cushion/ Proper Backfill Used	x	285.32(b)(1)(F) 285.32(b)(1)(G) 285.34(b)		x		
10	SEPTIC TANK Inspection / Clean Out Port & Risers Provided on Tanks Buried Greater than 12" Sealed and Capped		285.38(d)				
11	SEPTIC TANK Secondary restraint system providedSEPTIC TANK Riser permanently fastened to lid or cast into tank SEPTIC TANK Riser cap protected against unauthorized intrusions		285.38(d) 285.38(e)				
12	SEPTIC TANK Tank Volume Installed	x		2 x Existing 1500 gallon dual 3000 gallon	x		
13	PUMP TANK Volume Installed			2 x 3000 gallon equalization 3 x 3000 gallon pump			
14	AEROBIC TREATMENT UNIT Size Installed	x			x		
15	AEROBIC TREATMENT UNIT Manufacturer AEROBIC TREATMENT UNIT Model Number	x x		6 x NuWater B-1500; as per design	x x		
16	DISPOSAL SYSTEM Absorptive		285.33(a)(4) 285.33(a)(1) 285.33(a)(2) 285.33(a)(3)				
17	DISPOSAL SYSTEM Leaching Chamber		285.33(a)(1) 285.33(a)(3) 285.33(a)(4) 285.33(a)(2)				
18	DISPOSAL SYSTEM Evapo-transpirative		285.33(a)(3) 285.33(a)(4) 285.33(a)(1) 285.33(a)(2)				

Comal County Environmental Health
OSSF Inspection Sheet

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

Comal County Environmental Health
OSSF Inspection Sheet

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

Comal County Environmental Health
OSSF Inspection Sheet

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

COMAL COUNTY

ENGINEER'S OFFICE

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

Permit Number:	116336
Issued This Date:	12/20/2024
This permit is hereby given to:	John M Golden

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

145 FM 2673
CANYON LAKE, TX 78133

Subdivision:	A-417 SUR- 323 GEORGE MCWHORTER
Unit:	-
Lot:	-
Block:	-
Acreage:	2.9400

APPROVED MINIMUM SIZES AS PER ATTACHED DESIGN

Type of System:	Aerobic
	Drip Irrigation

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

Call (830) 608-2090 to schedule inspections.

RECEIVED
By Kathy Griffin at 3:48 pm, Jun 14, 2023

COMAL COUNTY
ENGINEER'S OFFICE

OSSF DEVELOPMENT APPLICATION CHECKLIST

Staff will complete shaded items

Date Received	Initials	Permit Number
		116336

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

6/13/2023
Date

___ COMPLETE APPLICATION

Check No._____ Receipt No._____

INCOMPLETE APPLICATION
___ (Missing Items Circled, Application Refeused)

Revised: September 2019

COMAL COUNTY
ENGINEER'S OFFICE

ON-SITE SEWAGE FACILITY APPLICATION

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

Date 11/27/2024 Permit Number _____

1. APPLICANT / AGENT INFORMATION

Owner Name	John M Golden	Agent Name	Doug Dowlearn R.S.
Mailing Address	PO Box 114	Agent Address	703 Oak Drive
City, State, Zip	Yorktown, TX 78164	City, State, Zip	Blanco, TX 78606
Phone #	361-550-4208	Phone #	210-240-2101
Email	jgoldenland@sbcglobal.net	Email	txseptic@gmail.com

2. LOCATION

Subdivision Name _____ Unit _____ Lot _____ Block _____

Survey Name / Abstract Number A-417 SUR-323 George McWhorter Acreage 2.942

Address 145 FM 2673 City Canyon Lake State TX Zip 78133

3. TYPE OF DEVELOPMENT

☐ Single Family Residential

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

Number of Bedrooms _____

Indicate Sq Ft of Living Area _____

☒ Non-Single Family Residential

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

Type of Facility (2) new 3 bedroom, <2500 SF residences (2 x 240 gpd = 480 gpd) and (2) new 2 bedroom, < 1500 SF residences (2 x 180 gpd = 360 gpd)

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

Restaurants, Lounges, Theaters - Indicate Number of Seats Bar & Grill - 100 seats (12 gpd/seat)

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

Travel Trailer/RV Parks - Indicate Number of Spaces _____

Miscellaneous _____

Estimated Cost of Construction: $ 2,000,000 (Structure Only)

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

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

Source of Water ☒ Public ☐ Private Well

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.

_____ 11/27/2024

Signature of Owner Date

Revised January 2021

Planning Materials & Site Evaluation as Required Completed By Doug Dowlearn

System Description Aerobic With Drip Irrigation

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

Tank Size(s) (Gallons) See Attached Documents Absorption/Application Area (Sq Ft) 8160

Gallons Per Day (As Per TCEQ Table III) 2040

(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: _____

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

11/27/2024
Date

195 David Jonas Dr., New Braunfels, Texas 78132-3760 (830) 608-2090 Fax (830) 608-2078

202106059998 11/19/2021 01:58:29 PM 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):

2.942 acres out of the G.W. McWhorter Survey No. 323, Abstract No. 417

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

John M. Golden

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 17TH **DAY OF** November , 2021

Owner(s) signature(s)

John M. Golden
(PRINTED NAME)

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 17th **DAY OF** November, 2021

Notary Public, State of Texas
Notary's Printed Name: Sarah Ureste
My Commission Expires: 07-17-2025

SARAH K. URESTE
Notary Public, State of Texas
Comm. Expires 07-17-2025
Notary ID 125032203

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
11/19/2021 01:58:29 PM
CASHFOUR 1 Page(s)
202106059998

Bobbie Koepp

Comal County TX
Honorable Bobbie Koepp , Comal County Clerk
150 N. Seguin, Suite 101
New Braunfels, TX 78130
(830) 221-1230

Receipt for Services

Cashier CASHFOUR **Batch #** 807163

Customer Name J. GOLDEN PROPERTIES
P.O. BOX 114
YORKTOWN, TX 78164

Date: 11/19/2021 **Time:** 01:58:29PM

Date		Instrument No	Document Type	Transaction Type	GF Number	Pg/Amt
11/19/2021	1:58:29PM	202106059998	AFFIDAVIT			1
					Total:	**$26.00**
			Fee Total:			**$26.00**
CHECK	GOLDEN 1794		TK			26.00
					Payment Total:	**$26.00**

DAD

15188 FM 306
Canyon Lake, TX 78133
Phone (830)964-2365 Fax (830) 964-2659

Aerobic Services of South Texas

12/28/21

Routine Maintenance and Inspection Agreement

General

This Work for Hire Agreement (hereinafter referred to as this "Agreement") is entered into by and between John M Golden (referred to as "Client") and Aerobic Services of South Texas (Thomas W. Hampton MP 349) (hereinafter referred to as "Contractor") located at 15188 FM 306, 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 control panel, air pumps, air filters, diffuser operation. Any alarm situation affecting the proper function of the Aerobic process will be address 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 customer is responsible for the chlorine tablets; 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 be covered by this policy.

The Homeowners 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 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 Designer 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.

HOME OWNER	SERVICE PROVIDER
John M Golden	Aerobic Services of South Texas Inc.
Name	Name
145 FM 2673	15188 FM 306
Address	Address
Canyon Lake, TX 78133	Canyon Lake, Texas 78133
City, State	City, State
361-550-4208	(830) 964 - 2365
Phone	Phone
Signature of Home Owner	OS24597/MP349 Thomas Hampton Signature of Service Provider and License #

1885

TOM HAMPTON

EFFECTIVE DATE Issue date of License to Operate EXPIRED DATE 2 years later INSTALLED _____

Model # _____ Blower/Panel Serial # _____

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

OSSF SOIL EVALUATION REPORT INFORMATION

Date: 11/27/2024
Applicant Information:
Name: John M Golden
Address: PO Box 114
City, State & Zip Code: Yorktown, TX 78164
Phone: 361-550-4208
Email: jgoldenland@sbcglobal.net

Site Evaluator Information:
Name: Douglas R. Dowlearn
Company: D.A.D. Services, Inc.
Address: 703 Oak Drive
City, State & Zip: Blanco, TX 78606
Phone: (210)240-2101 **Fax:** (866)260-7687
Email: txseptic@gmail.com

Legal: A-417, George McWhorter Sur-323; 2.942 acres
Street/Road Address: 145 FM 2673
City : Canyon Lake Zip: 78133
Additional Info: Comal County

Installer Information:
Name:
Company:
Address:
City, State & Zip:
Phone:

Depth	Texture Class	Soil Texture	Structure *(For Class III – blocky, platy or massive)*	Drainage *(Mottles/Water Table*	Restrictive Horizon	Observation
Soil Boring #1 60"	II	0-12" Loam 12"+ Limestone		<30% gravel	12"+ limestone	None
Soil Boring #2 60"		**Same as above**				

DESIGN SPECIFICATIONS

Application Rate (RA): 0.25
OSSF is designed for: Existing bar and grill with 100 seats (100 x 12 gpd = 1200gpd), along with (2) new 3 bedroom, <2500 SF residences (2 x 240 gpd = 480 gpd) and (2) new 2 bedroom, < 1500 SF residences (2 x 180 gpd = 360 gpd)
2040 gallons per day
Application Area required: 8160 Sq. Ft
An aerobic treatment/drip disposal system is to be utilized based on the site evaluation.
See attached planning materials for tank configuration
Calculations: Absorption Area: Q/RA= 2040/0.25= 8160 Sq. Ft.

FEATURES OF SITE AREA

Presence of 100-year flood zone: YES
Existing or proposed water well in nearby area: NO
Presence of adjacent ponds, streams, water impoundments: YES
Presence of upper water shed: NO
Organized sewage service available to lot: NO

I certify that the findings of this report are based on my field observations and are accurate to the best of my ability. The site evaluation and OSSF design are subject to approval by the TCEQ or the local authorized agent. The planning materials and the OSSF design should not be considered final until a permit to construct has been issued.

Site Evaluator:
NAME: Douglas R. Dowlearn, R.S.
Signature:

License No. OS9902 – Exp. 6/30/2026
TDH: #2432 – Exp. 2/28/2025

RECEIVED
By Brandon Olvera at 3:30 pm, Dec 20, 2024

Project Address: 145 FM 2673
Permit Number: 116336
Designer: Douglas R. Dowlearn, R.S. 2432
Date: 11.26.24

UPDATED OSSF DESIGN PACKET

1.) Number of 1500 gpd ATUs increased from 5 to 6. See site plan for details.

2.) New residence count went from (2) 4 bedroom, < 3500 SF and (2) 2 bedroom, < 2500 SF residences to (2) 3 bedroom, < 2500 SF and (2) 2 bedroom, < 1500 SF. Overall GPD is now 2040 GPD between existing bar and grill(1200 GPD) and new residences(840 GPD). Planning materials reflect this change.

3.) Drainfield layout has been modified from 8 zones to 4 zones. See site plan for details.

4.) Tank G went from 1000 gallons to 3000 gallons, and is now utilizing dual alternating Liberty LE70 Series pumps instead of grinder pumps.

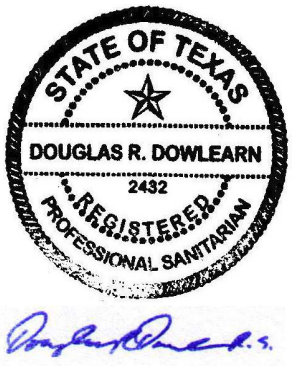
5.) Sewer line stubout location from the residences has changed. See site plan for details.

RECEIVED
By Brandon Olvera at 3:30 pm, Dec 20, 2024

Project Address: 145 FM 2673
Permit Number: 116336
Designer: Douglas R. Dowlearn, R.S. 2432
Date: 7.14.23

SPECIAL PERMIT CONDITIONS

1.) As a condition of this permit submittal, a meter must be installed on the outflow line of the pump tank. The readings from this meter must be recorded daily and submitted to the Comal County Environmental Health Department once a month for 12 months from the date the License to Operate is issued ***and for every new tenant.*** If at any time the daily meter reading exceeds the permitted flow rate this permit will be void and a new permit must be obtained.



D.A.D SERVICES, INC.
DOUG DOWLEARN
PO BOX 212, BULVERDE, TX 78163
Designed for: Golden John M

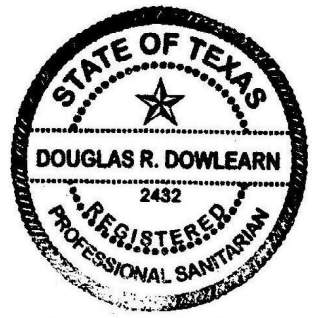
The installation site is at 145 FM 2673 of the A-417 SUR-323 G C MCWHORTER in Comal County, TX. The proposed OSSF will treat the wastewater from an existing bar and grill with 100 seats (100 x 12 gpd = 1200 gpd), along with (2) new 3 bedroom, < 2500 SF residences (2 x 240 gpd = 480 gpd) and (2) new 2 bedroom, < 1500 SF residences (2 x 180 gpd = 360 gpd) . The proposed method of wastewater treatment is aerobic treatment(utilizing liquid chlorination) with drip irrigation. This method was chosen because of unsuitable soil conditions.

PROPOSED SYSTEM:

A 4" PVC pipe will discharge from the existing bar and grill to an existing 2000 gallon grease trap(E - permit #89548), which will then discharge into two 1500 gallon dual compartment septic tanks(F - permit #89548). Effluent will flow from the 1500 gallon dual compartment tanks to a 3000 gallon pre treatment tank(A). A 4" PVC pipe will discharge from the new residences to a 3000 gallon pump tank with dual alternating pumps(G), which will flow into the 3000 gallon pre-treatment tank previously mentioned(A). From the pre-treatment tank, effluent flows into (2) 3000 gallon flow equalization tanks connected together with dual alternating pumps(B1 and B1*). Effluent will be pumped from the flow equalization tanks to (6) 1500 gpd aerobic treatment units(C). A 2" ball valve shall be placed on the line going into each 1500 gpd aerobic treatment unit, and the ball valves shall be adjusted to allow for equal flow to the aerobic treatment units. Effluent from the aerobic treatment units will flow to (2) 3000 gallon pump tanks connected together with dual alternating pumps(D1 and D1*). The (2) 3000 gallon pump tanks(D1 and D1*) are activated by a time controller allowing the distribution 40 times per day with a 10 minute run time per dose with float switches set to pump 2040 gallons per day. A high level audible and visual alarm will activate should the pumps fail. Distribution from pump tank D1 and D1* is through a self flushing 100 mesh spin filter to an ALTD-8Z valve box then through a 1.5" SCH-40 manifold to 4180 L.F. drip tubing field(Zones 1-4), with drip lines set approximately two feet apart with 0.61 gph emitters set every two feet, as per the attached schematic. A hose bib will be installed in the pump tank on the supply manifold to the drip field. A 1.5" SCH-40 return line with a pressure gauge is installed to periodically flush the system and will maintain pressure at 30 psi. Solids caught in the spin filter are flushed each cycle back to the pre-treatment tank. Vacuum breakers in each zone will be installed at the highest points on each manifold to prevent siphoning of effluent from higher to lower parts of the field. The placement of the drip tubing will be on soil that has been scarified. The tubing will be covered with 6" of Class II soil.

DESIGN SPECIFICATIONS:

Daily Waste Flow: 2040 gpd
Application rate: 0.25
Application area required: 2040/.25 = 8160 SF
Application area utilized: 8360 SF - 5 SF(for impermeable tank lids) = 8355 SF
Pump tank reserve capacity: 680 gal minimum total



SYSTEM COMPONENTS:
SCH 40 PVC sewer line
1.5" purple PVC supply and flush line
1 - Existing 2000 gallon grease trap(E - existing permit #89548)
2 - Existing 1500 gallon dual compartment septic tanks(F- existing permit #89548)
1 - 3000 gallon pretreatment tank(A)
2 - 3000 gallon flow equalization tanks connected together with dual alternating pumps(B1 and B1*)
6 - 1500 gpd aerobic treatment unit(C)
2 - 3000 gallon pump tanks connected together with dual alternating pumps and timed controls(D1 and D1*)
1 - Liquid chlorinator (NG300 V - Series 100 7", or equivalent)
1 - ALTD-8Z Dosing Duplex 8 Zone Effluent Management System
6 - 2" ball valves
7 - check valve
1 - Arkal 1" filter(>100 microns) - Netafim Model #DF100-120
1 - 3000 gallon pump tank with dual alternating pumps(G)

LANDSCAPING:

The native vegetation in the distribution area should consist of low level shrubs, plains grass, bluestem or bermuda. The entire area of the drip disposal must be covered with a ground cover such as grass seed or sod prior to the final inspection. The placement of the drip tubing will be on soil that has been scarified. The tubing will be covered with 6" of Class II soil. In the event the natural cover is disturbed, a suitable ground cover must be installed on all excavated areas.

OSSF SOIL EVALUATION REPORT INFORMATION

Date: 5/19/23

Applicant Information:
Name: John M Golden
Address: PO Box 114
City, State & Zip Code: Yorktown, TX 78164
Phone: 361-550-4208
Email: jgoldenland@sbcglobal.net

Site Evaluator Information:
Name: Douglas R. Dowlearn
Company: D.A.D. Services, Inc.
Address: 703 Oak Drive
City, State & Zip: Blanco, TX 78606
Phone: (210)240-2101 **Fax:** (866)260-7687
Email: txseptic@gmail.com

Legal: A-417, George McWhorter Sur-323; 2.942 acres

Street/Road Address: 145 FM 2673
City : Canyon Lake Zip: 78133
Additional Info: Comal County

Installer Information:

Name:
Company:
Address:
City, State & Zip:
Phone:

Depth	Texture Class	Soil Texture	Structure *(For Class III – blocky, platy or massive)*	Drainage *(Mottles/Water Table*	Restrictive Horizon	Observation
Soil Boring #1 60”	II	0-12” Loam 12”+ Limestone		<30% gravel	12”+ limestone	None
Soil Boring #2 60”		**Same as above**				

DESIGN SPECIFICATIONS

Application Rate (RA): 0.25
OSSF is designed for: Bar & Grill w/ 100 seats (12 gpd/seat), (2) 3 BR (<2500 sq. ft.), (2) 2 BR (<1500 sq. ft.)
1200 gpd + (2) 240 gpd + (2) 180 gpd = 2040 gallons per day
An aerobic treatment/drip disposal system is to be utilized based on the site evaluation.
8160 sq. ft. disposal area required
1 - 2000 gallon grease trap(existing permit #89548)
2 - 1500 gallon dual compartment septic tanks(existing permit #89548)
1 - 3000 gallon pretreatment tank required
2 - 3000 gallon flow equalization tank with dual alternating pumps required
6 - 1500 gpd aerobic treatment units required
2 - 3000 gallon pump tank with dual alternating pumps with timed controls required
1 - 3000 gallon pump tank with dual alternating pumps required
Calculations: Absorption Area: Q/RA= 2040/0.25= 8160 Sq. Ft.

FEATURES OF SITE AREA

Presence of 100-year flood zone: YES
Existing or proposed water well in nearby area: NO
Presence of adjacent ponds, streams, water impoundments: YES
Presence of upper water shed: NO
Organized sewage service available to lot: NO

I certify that the findings of this report are based on my field observations and are accurate to the best of my ability. The site evaluation and OSSF design are subject to approval by the TCEQ or the local authorized agent. The planning materials and the OSSF design should not be considered final until a permit to construct has been issued.

Site Evaluator:
NAME: Douglas R. Dowlearn, R.S.
Signature:

License No. OS9902 – Exp. 6/30/2026
TDH: #2432 – Exp. 2/28/2025

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Kimley»Horn

Project Name: 145 FM 2673 System
Date: 8/11/2023

Reference Permit # 89548

BOD Calculations

Structure Generating Waste	# of Units	GPD/Unit	Lbs of BOD_5/Unit/Day_2	GPD	BOD_5 (Lbs)	BOD_5 (mg/L)
Existing Bar and Grill	1	1200	12.01	1200	12.01	1200
New Residences	1	960	2.40	960	2.40	300

Total lbs of BOD_5/day	14.4
Total BOD_5 (mg/L)	800
Total GPD	2160

	Gallons
Total Aeration Treatment Volume Required =	7186
Total Aeration Volume Provided w/ (5) NuWater E-1500 Dual Aeration Aerobic Treatment Plant =	7500

	Lbs/Day
NuWater E-1500 BOD_5 Loading Rate per treatment plant per day =	4.50
Total Treatment Plant BOD_5 Loading Capacity provided =	22.50

Footnote #1 - Existing Bar and Grill uses disposable sliverwater and plates, falls into fast food category. Flow used in calculations is 12 GPD as per TAC 285.91(3).

STATE OF TEXAS
ELI D. PUENTE
136819
LICENSED
PROFESSIONAL ENGINEER

08/11/2023
TBPE FIRM
#F-928

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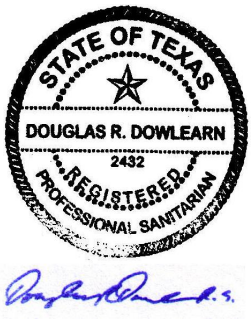
Project Address: 145 FM 2673
Permit Number: 116336
Designer: Douglas R. Dowlearn, R.S. 2432
Date: 7.8.2025

UPDATED OSSF DESIGN PACKET

1.) Zone 1 and Zone 3 layout has been updated to accommodate the change in driveway/parking area layout, along with the addition of an elevated tank - see site plan for details. Overall linear feet of each zone has not changed from the previous design.



7.8.2025

ACRES 2.942
COMAL COUNTY/2.942 ACRES

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SCALE 1" = 16'

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN
7.8.2025

A PORTION OF THE DRIVE SHALL BE REMOVED IN THE EVENT THAT DOUBLING AREA IS TO BE USED.

(N10°36'14"E) N09°51'16"E 275.38' (275.38')

(N60°00'27"E) N59°15'28"E 59.19' (59.19')

ICE HOUSE

1895 SF

433 SF

5562 SF

SHED (NO PLUMBING)

2025 SF

CONCRETE

(S53°51'46"E) S54°36'44"E 162.67' (162.67')

ZONE 2
45' 45' 45' 45'

ZONE 3
54' 56' 11'
73' 76' 78'
81' 82'
79' 80'

EXISTING
BAR & GRILL
100 SEATS X 12 GPD/SEAT = (1200 GPD)

2621 SF

PATIO

PATIO

WALK IN COOLER MOTOR

WOOD RAMP

12'

20'

790'

THE PATIO SHALL BE REMOVED IN THE EVENT THAT DOUBLING AREA IS TO BE USED.

ZONE 1
49' 55' 67' 67' 18' 18' 18' 18' 28' 28' 67'

C C C C C C A F E F

D1* D1 B1* B1

ZONE 3
20' 20' 21' 32' 32' 32'
45' 45' 46'

ELEVATED TANK

ABANDON EXISTING DRAINFIELD (PERMIT #89548)

ZONE 4
50' 70' 100' 100'
25' 37'

(S49°55'00"E) S50°39'59"E 200.59' (200.59')

N64°53'13"W (N64°08'14"W) 438.86' (438.86')

ABANDON EXISTING DRAINFIELD (PERMIT #89548)

ELEVATOR SHAFT

13' 6' 21' 35'

ZONE 4
49' 32' 15'
68' 68' 68' 68' 68'

STAIRS

STAIRS

NEW 3 STORY STRUCTURE

(2) - 3 BR RESIDENCES < 2500 SF
(2 X 240 GPD = 480 GPD)

(2) - 2 BR RESIDENCES < 1500 SF
(2 X 180 GPD = 360 GPD)
TOTAL GPD = 840 GPD

G

STAIRS

STAIRS

STAIRS

RETAINING WALL(LINED WITH 20 MIL LINER - SEE RETAINING WALL SCHEMATIC)

785'

780'

775'

770'

POOL (25' DIAMETER)

STAIRS

3996 SF

(S54°11'59"E) S54°56'58"E 143.70' (143.70')

50' OFFSET FROM RIVER

RETAINING WALL(LINED WITH 20 MIL LINER - SEE RETAINING WALL SCHEMATIC)

S32°30'55"W (S33°15'54"W) 29.47' (29.47')

S25°02'25"W (S25°47'24"W) 75.92' (75.92')

S31°41'13"W (S32°26'12"W) 54.80' (54.80')

S33°49'24"W (S34°34'22"W) 52.59' (52.59')

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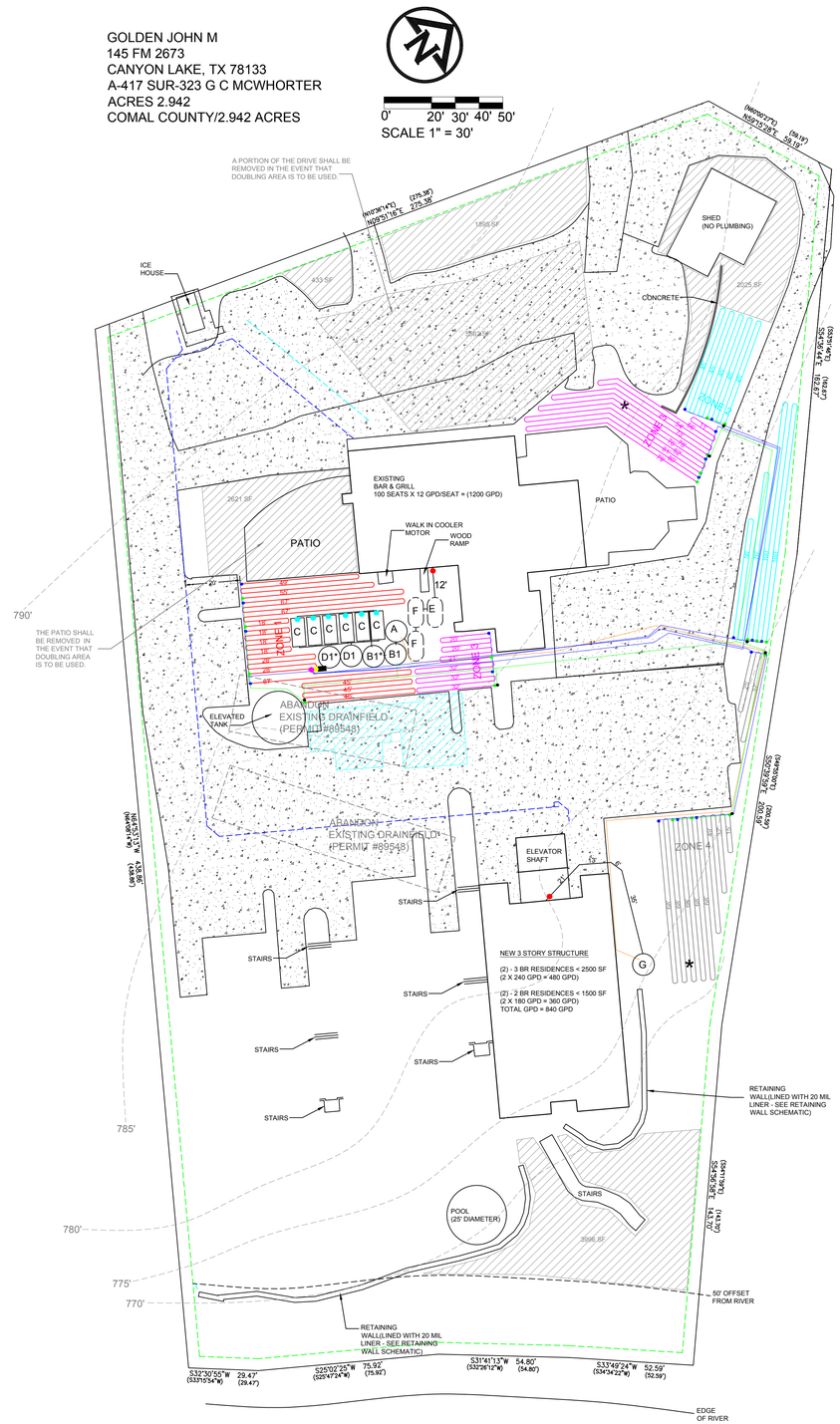
STATE OF TEXAS
DOUGLAS R. DOWLEARN
2482
REGISTERED
PROFESSIONAL SANITARIAN

7.8.2025

GOLDEN JOHN M
145 FM 2673
CANYON LAKE, TX 78133
A-417 SUR-323 G C MCWHORTER
ACRES 2.942
COMAL COUNTY/2.942 ACRES



NOTES:
- PLACE CLEANOUTS WITHIN 3' OF STRUCTURES.
- INSTALL VACUUM BREAKERS AT HIGHEST POINTS ON BOTH THE SUPPLY AND FLUSH MANIFOLDS IN EACH ZONE.
- INSTALL CHECK VALVES ON THE FLUSH LINE TO ISOLATE EACH ZONE..
- SEWER LINE WILL BE SCH 80 PVC OR SLEEVED WITH SCH 40 PIPE WHERE IT IS WITHIN 5' OF OR CROSSES UNDER FOUNDATIONS, BUILDINGS, SURFACE IMPROVEMENTS, SWIMMING POOLS AND OTHER STRUCTURES TO PROVIDE EQUIVALENT PROTECTION UNDER SETBACK REQUIREMENTS OF TAC 285.
- 1.5" SCH 40 SUPPLY AND FLUSH LINES WILL BE SLEEVED IN SCH 40 PVC PIPE OR WILL BE SCH 80 PVC PIPE WHERE THEY ARE WITHIN 5' OF THE DRIVE. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR THE OSSF SETBACK REQUIREMENTS OF TAC 285.
- 1.5" SCH 40 SUPPLY AND FLUSH LINES WILL BE SLEEVED IN SCH 40 PVC PIPE OR WILL BE SCH 80 PVC PIPE WHERE THEY CROSS SURFACE IMPROVEMENTS AND 5' BEYOND. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR THE OSSF SETBACK REQUIREMENTS OF TAC 285.
- 2" SCH 40 PVC PIPE FROM PUMP TANK(G) WILL BE SCH 80 PVC OR SLEEVED WITH SCH 40 PVC PIPE WHERE IT IS WITHIN 5' OF FOUNDATIONS, BUILDINGS, SURFACE IMPROVEMENTS, SWIMMING POOLS AND OTHER STRUCTURES TO PROVIDE EQUIVALENT PROTECTION UNDER SETBACK REQUIREMENTS OF TAC 285.
- TANKS TO BE > 5' FROM DRIVE AND STRUCTURES. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR THE SETBACK REQUIREMENTS OF TAC 285.
- TANKS WILL BE WATER TIGHT AND MANUFACTURED ACCORDING TO ASTM DESIGNATION: C 1227.
- TANK G TO BE BURIED AT DEPTH TO ALLOW FOR 12" SOIL OVER THE PUMP TANK.
- 5 SF OF DRAINFIELD AREA DEDUCTED FOR IMPERMEABLE TANK G LIDS.
- THERE SHALL BE NO DRIVING OVER THE DRAINFIELD.
- IN THE EVENT THAT TANK DOUBLING AREA AND DRAINFIELD DOUBLING AREA SHALL BE UTILIZED, A PORTION OF THE DRIVE WILL BE REMOVED.
- LIQUID CHLORINATION SHALL BE UTILIZED.
- ALL ELECTRICAL WIRING SHALL CONFORM TO THE REQUIREMENTS 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 ELECTRICAL 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.
- TANKS MUST HAVE WATER TIGHT CAPS THAT ARE AT LEAST 65# OR CAN ONLY BE REMOVED WITH TOOLS. A SECONDARY PLUG, NET OR MESH IN RISER MUST BE PROVIDED TO PREVENT ENTRY IN THE EVENT THAT CAP IS DAMAGED OR REMOVED SO TO CONFORM WITH 30 TAC CHAPTER 285.38.
- DRAINFIELD SHALL BE SLIGHTLY CROWNED TO SHED RAINWATER.
- TANKS MUST HAVE WATER TIGHT CAPS THAT ARE AT LEAST 65# OR CAN ONLY BE REMOVED WITH TOOLS. A SECONDARY PLUG, NET OR MESH IN RISER MUST BE PROVIDED TO PREVENT ENTRY IN THE EVENT THAT CAP IS DAMAGED OR REMOVED SO TO CONFORM WITH 30 TAC CHAPTER 285.38.
- INSPECTION AND CLEANOUT PORTS SHALL HAVE RISERS OVER THE PORT OPENINGS WHICH EXTEND TO 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 SO TO CONFORM WITH 30 TAC §285.38 (C)
- A FENCE AROUND TANKS TO PREVENT ACCESS FROM THE PUBLIC TO TANKS IS RECOMMENDED.

SPECIAL PERMIT CONDITIONS:
- AS A CONDITION OF THIS PERMIT SUBMITTAL, A METER MUST BE INSTALLED ON THE OUTFLOW LINE OF THE PUMP TANK. THE READINGS FROM THIS METER MUST BE RECORDED DAILY AND SUBMITTED TO THE COMAL COUNTY ENVIRONMENTAL HEALTH DEPARTMENT ONCE A MONTH FOR 12 MONTHS FROM THE DATE THE LICENSE TO OPERATE IS ISSUED AND FOR EVERY NEW TENANT. IF AT ANY TIME THE DAILY METER READING EXCEEDS THE PERMITTED FLOW RATE THIS PERMIT WILL BE VOID AND A NEW PERMIT MUST BE OBTAINED.

KEY

- TANK DOUBLING AREA = 1588 SF
- DRAINFIELD DOUBLING AREA = 16532 SF
- 1.5" SUPPLY LINE
- 1.5" FLUSH LINE
- CLEANOUT
- 2" SCH 40 PVC PIPE
- PROPOSED WATER LINE
- 5' OSSF OFFSET
- CHECK VALVE
- ALTD-8Z VALVE BOX
- SUPPLY LINE CONNECTION
- FLUSH LINE CONNECTION
- 1" ARKAL FILTER
- TEST HOLE
- 2" BALL VALVE(BALL VALVES SHALL BE ADJUSTED TO ALLOW FOR EQUAL FLOW TO AEROBIC TREATMENT UNITS)
- FLOW METER(SEE SPECIAL PERMIT CONDITION NOTE)
- DRIVE/WALKWAY

A - 3000 GALLON PRE TREATMENT TANK
B1 - 3000 GALLON FLOW EQUALIZATION TANK
B1* - 3000 GALLON FLOW EQUALIZATION TANK WITH DUAL ALTERNATING PUMPS.
C - 1500 GALLON AEROBIC TREATMENT UNIT.
D1 - 3000 GALLON PUMP TANK.
D1* -3000 GALLON PUMP TANK WITH DUAL ALTERNATING PUMPS.
E - EXISTING 2000 GALLON GREASE TRAP (PERMIT #89548)
F - EXISTING 1500 GALLON DUAL COMPARTMENT SEPTIC TANK(PERMIT #89548)
G - 3000 GALLON PUMP TANK WITH DUAL ALTERNATING PUMPS

NOTES:
- D1 AND D1* SHALL BE CONNECTED TO MAKE ONE LARGE TANK.
- B1 AND B1* SHALL BE CONNECTED TO MAKE ONE LARGE TANK.

ZONE 1:
1026 L.F. OF DRIP TUBING SPACED 2' APART.
2 ROWS @ 49 L.F. EACH.
2 ROWS @ 55 L.F. EACH.
4 ROWS @ 67 L.F. EACH.
8 ROWS @ 18 L.F. EACH.
4 ROWS @ 28 L.F. EACH.
1 ROW @ 67 L.F.
3 ROWS @ 45 L.F. EACH.
2 ROWS @ 46 L.F. EACH.

ZONE 2:
1090 L.F. OF DRIP TUBING SPACED 2' APART.
10 ROWS @ 45 L.F. EACH.
2 ROWS @ 50 L.F. EACH.
2 ROWS @ 70 L.F. EACH.
4 ROWS @ 100 L.F. EACH.

ZONE 3:
1068 L.F. OF DRIP TUBING SPACED 2' APART.
4 ROWS @ 20 L.F. EACH.
2 ROWS @ 21 L.F. EACH.
6 ROWS @ 32 L.F. EACH.
1 ROW @ 79 L.F.
1 ROW @ 80 L.F.
1 ROW @ 81 L.F.
1 ROW @ 82 L.F.
1 ROW @ 76 L.F.
1 ROW @ 78 L.F.
2 ROWS @ 73 L.F. EACH.
1 ROW @ 54 L.F.
1 ROW @ 56 L.F.
2 ROWS @ 11 L.F. EACH.

ZONE 4:
996 L.F. OF DRIP TUBING SPACED 2' APART.
2 ROWS @ 25 L.F. EACH.
2 ROWS @ 37 L.F. EACH.
2 ROWS @ 15 L.F. EACH.
2 ROWS @ 32 L.F. EACH.
2 ROWS @ 49 L.F. EACH.
10 ROWS @ 68 L.F. EACH.

GPD AND DRAINFIELD AREA CALCULATIONS:
TOTAL GPD = 1200 GPD + 840 GPD = 2040 GPD
TOTAL REQUIRED DRAINFIELD AREA = 2040 GPD/0.25 = 8160 SF
TOTAL LINEAR FEET OF DRIP LINE = 4180 L.F.
TOTAL ACTUAL DRAINFIELD AREA = 8360 SF - 5 SF(FOR IMPERMEABLE TANK G LIDS) = 8355 SF

BOD CALCULATIONS:
EXISTING BAR AND GRILL
(1200 GPD X 1200 MG/L X 8.34)/ (10^6) = 12 LBS OF BOD

NEW RESIDENCES
(840 GPD X 300 MG/L X 8.34)/(10^6) = 2.1 LBS OF BOD

TOTAL LBS OF BOD = 12 + 2.1 = 14.1 LBS OF BOD

RECEIVED
By Brandon Olvera at 3:32 pm, Dec 20, 2024

RETAINING WALL SCHEMATIC

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
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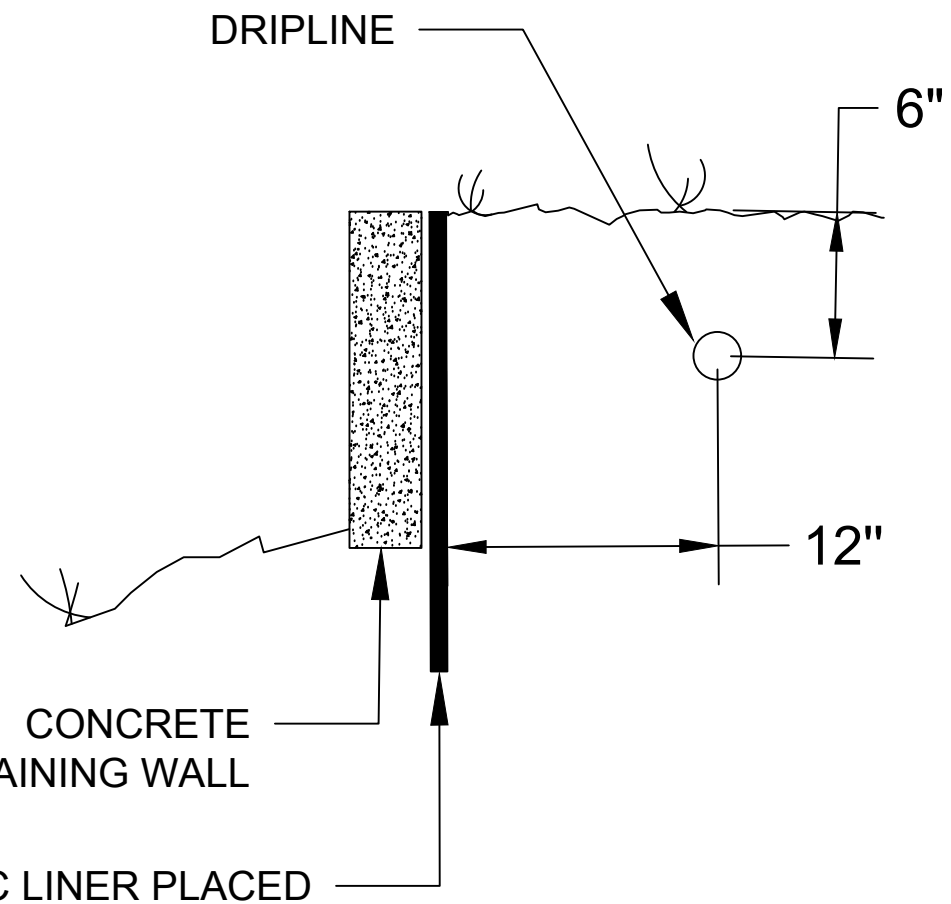
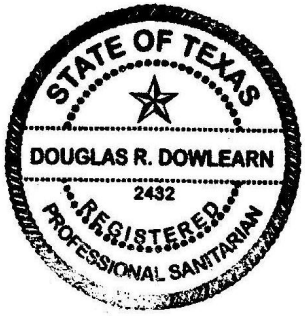
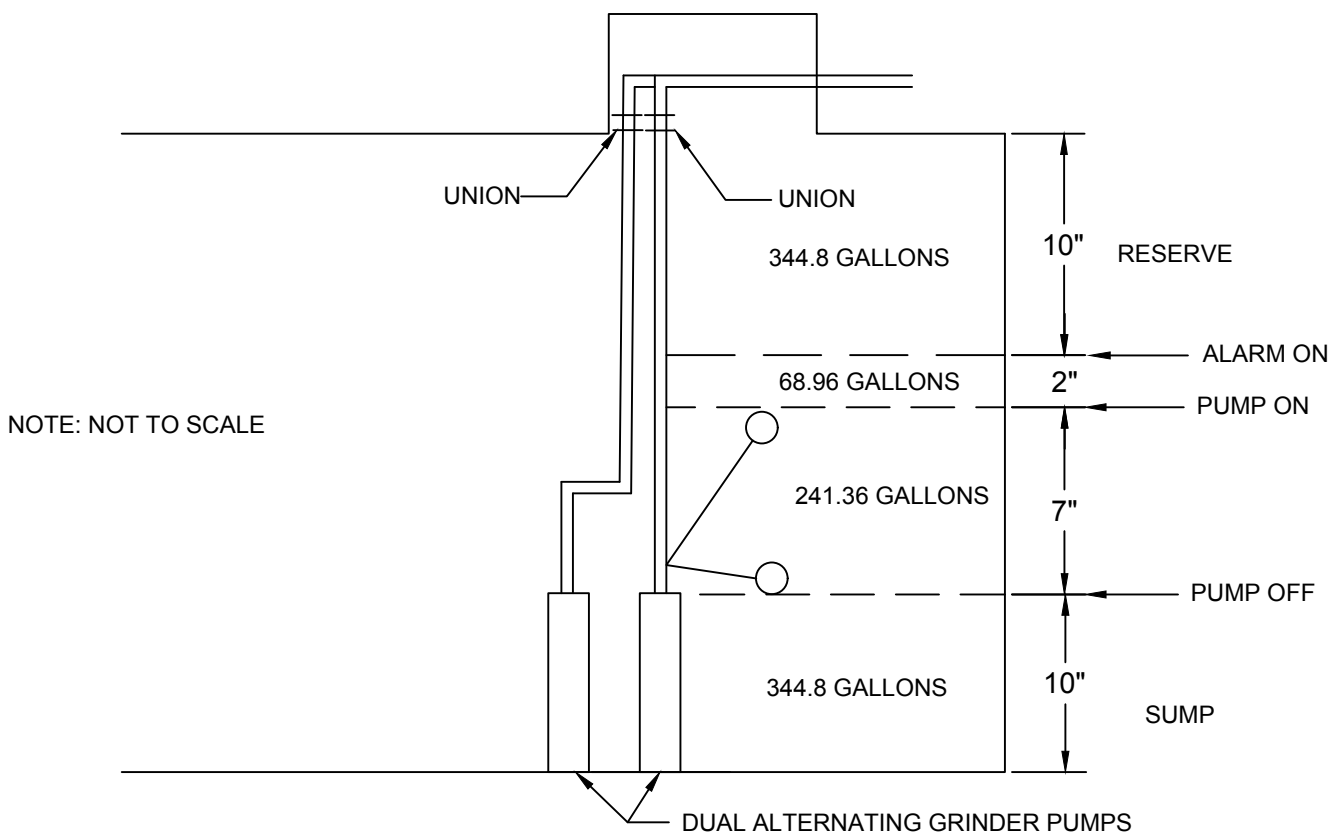


NOTE: NOT TO SCALE

1000 GALLON PUMP TANK W/GRINDER PUMPS
TANK G





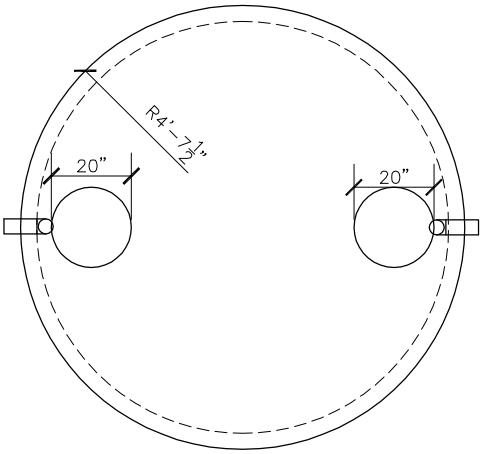
NOTE: NOT TO SCALE

NOTE: SET TO ACTIVATE ON DEMAND.

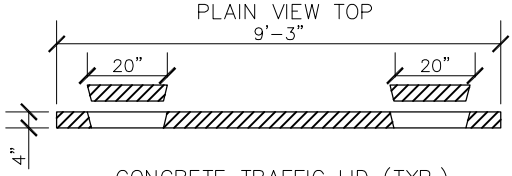
PRE TREATMENT TANK A, FLOW EQ TANKS B1 & B1* & PUMP TANKS D1 & D1*

CERTIFICATIONS:

* ANALYSIS AND DESIGN IN ACCORDANCE WITH ASTM STANDARD C 1227

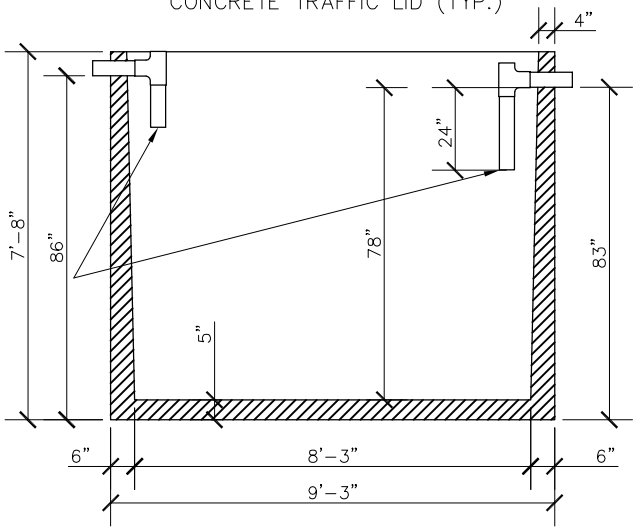


PLAIN VIEW TOP



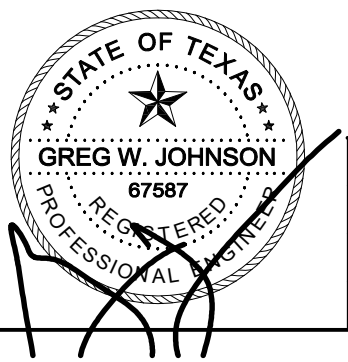
CONCRETE TRAFFIC LID (TYP.)

4" SDR 35/SCH-40 TEE FITTING



SINGLE COMPARTMENT TANK

NOTES:
1. CONCRETE: 4500 PSI
2. REINFORCEMENT: #3 REBAR 1' ON CENTER IN LID AND FLOOR W/ 1' TURN UP IN WALL
   3"X5"X1/4" MESH WIRE IN WALLS
3. 5" TRAFFIC LID (STD)
4. TANK WEIGHT: 20,126.7#
5. CAPACITY: 2706 GAL
6. GAL/IN = 34.7
7. INLET & OUTLET MEASURED FROM BOTTOM OF TANK TO FLOWLINE.

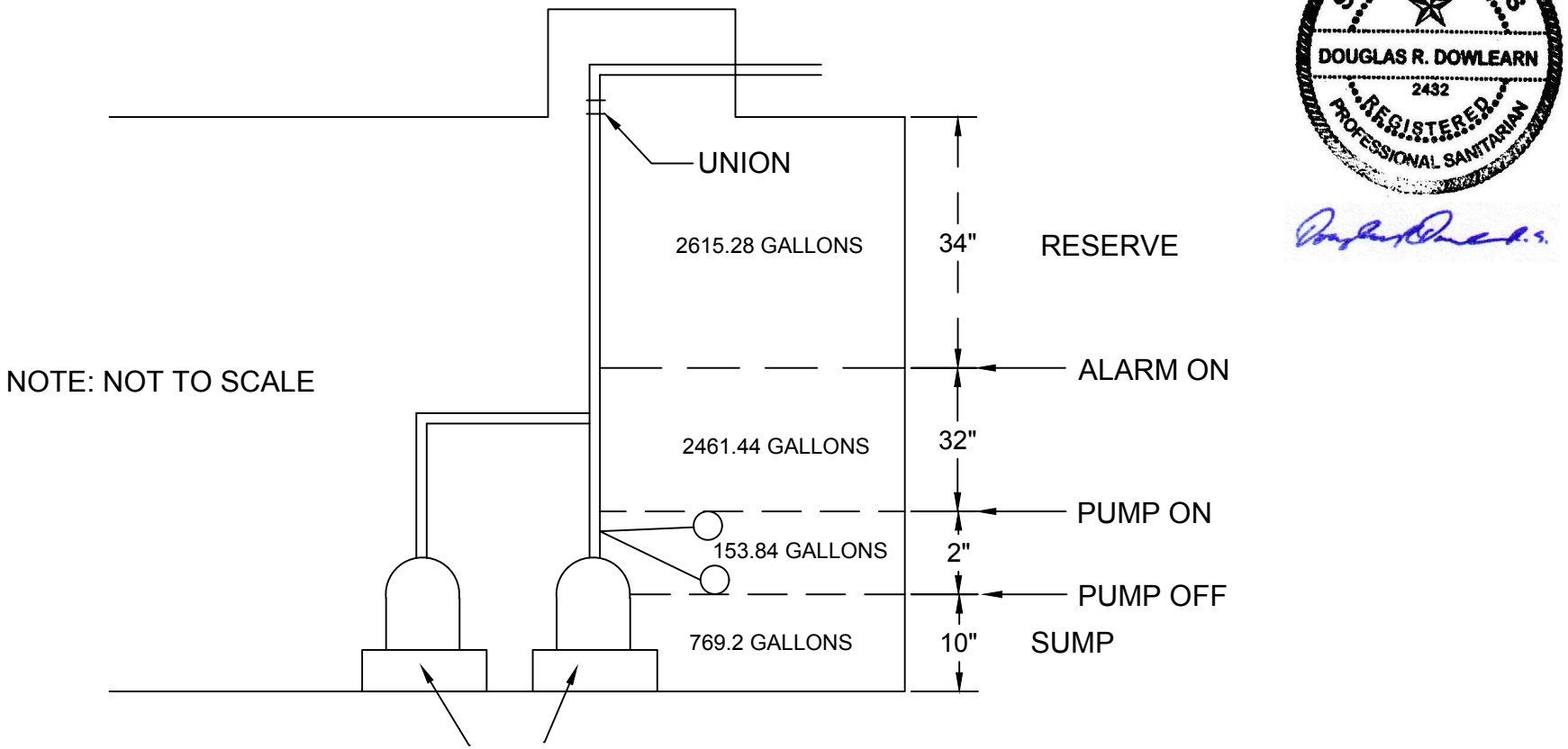


CLIENT: BLOCK CREEK CONCRETE				DRAWN BY:
STREET ADDRESS: 444 OLD #9 HWY A				
DESC: 3000 GAL. SINGLE COMP. SEPTIC TANK				
PREPARED BY: GREG W. JOHNSON, P.E., F#2585	SCALE: 1/4" = 1'-0"	DATE: 12/1/2017	REVISED:	

6000 GALLON FLOW EQUALIZATION TANK (2 - 3000 GALLON TANKS CONNECTED)

TANKS B1 & B1*

WORKING LEVEL = 78"
76.92 GAL/INCH



NOTE: NOT TO SCALE

DUAL ALTERNATING PUMPS(GOULDS EP 04, 0.4HP, 115V PUMPS OR EQUIVALENT)

NOTE: 2160 GALLON DAILY DISCHARGE SET BY TIMER TO CYCLE 24 TIMES/DAY (90 GAL/CYCLE)

NOTE: SYSTEM HAS (2) 3000 GALLON EQUALIZATION TANKS CONNECTED TOGETHER(B1 & B1*).

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

Advantage Wastewater Solutions llc

C TANKS

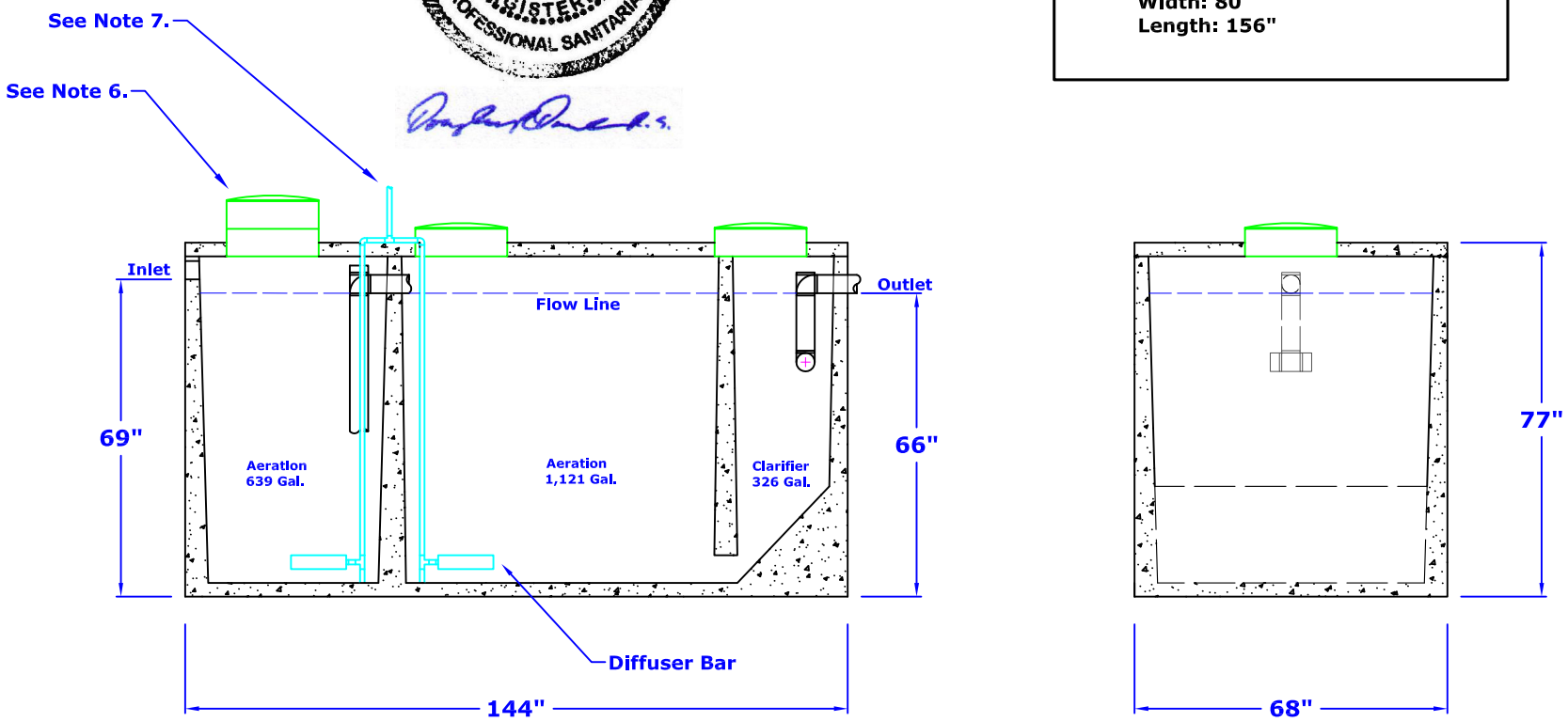
RECEIVED
By Brandon Olvera at 2:34 pm, Oct 17, 2023

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

GENERAL NOTES:

1. Plant structure material to be precast concrete and steel.
2. Maximum burial depth is 30" from slab top to grade.
3. Weight = 16,600 lbs.
4. Treatment capacity is 1,500 GPD.
5. BOD Loading = 4.50 lbs. per day.
6. 20" Ø acess riser w/ lid (Typical 3). Optional extension risers available.
7. 1" Sch. 40 PVC Air Line to NuWater B-1500 Air Compressor (Max. 50 Lft from Plant).
8. Requires minimum 1,000 gallon trash tank unless otherwise specified by engineering.

MINIMUM EXCAVATION DIMENSIONS:
Width: 80"
Length: 156"



NuWater B-1500 Duel Aeration Aerobic Treatment Plant

Model: B-1500

July, 2010
By: A.S.

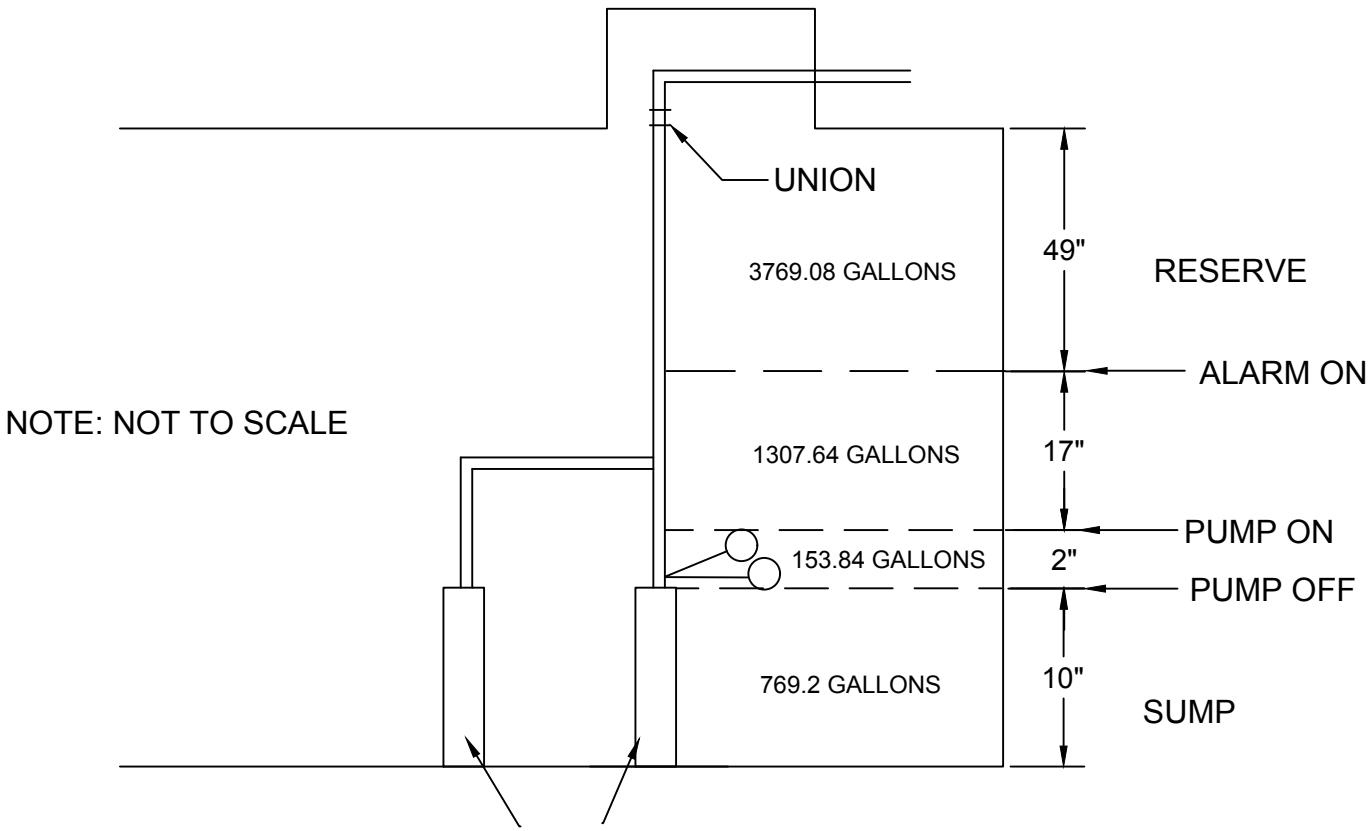
Scale:
* All Dimensions subject to allowable specification tolerances.

Dwg. #: ADV-B1500-2

Advantage Wastewater Solutions llc
444 A Old Hwy No 9
Comfort, TX 78013
830-995-3189
fax 830-995-4051

6000 GALLON PUMP TANK (2 - 3000 GALLON TANKS CONNECTED) - TANKS D1 & D1*

WORKING LEVEL = 78"
76.92 GAL/INCH



NOTE: NOT TO SCALE

DUAL ALTERNATING PUMPS
(C1 SERIES - 0.5HP, 115V, MODEL 20XC1-05P4-2W115 OR EQUIVALENT)

NOTE: SET ON A TIMER TO DOSE 42 TIMES PER DAY AT 10 MINUTES PER DOSE.

NOTE: THIS IS 2 - 3000 GALLON TANKS CONNECTED TOGETHER, WITH DUAL ALTERNATING PUMPS IN ONE OF THE TANKS.

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

Greg W. Johnson, P.E.
170 Hollow Oak
New Braunfels, Texas 78132
830/905-2778

March 28, 2013

Block Creek Concrete Products
Attn: Burt Seidensticker
444 A Old #9
Comfort, TX 78013

RE: BLOCK CREEK CONCRETE PRODUCTS

Attached is a schematic for septic tanks manufactured by BLOCK CREEK CONCRETE PRODUCTS. The tanks meet the specifications required by Texas State Code and ASTM Designation C 1227-93a Standard Specification for Precast Concrete septic tanks. Additionally, these tanks meet the specifications required in Chapter 285.32.

Please contact me should you have any questions.

Respectfully yours,

Greg W. Johnson, P.E., F#2585

3/28/2013

STATE OF TEXAS
GREG W. JOHNSON
67587
REGISTERED
PROFESSIONAL ENGINEER

RECEIVED
By Brandon Olvera at 1:14 pm, Oct 17, 2023

Texas Commission on Environmental Quality
On-Site Sewage Facility Program

Approved Product - Treatment Unit

Product Name: NuWater
Model Name: B-1500
Manufacturer: Enviro-Flo
Product Type: Treatment Unit
Capacity: 1500

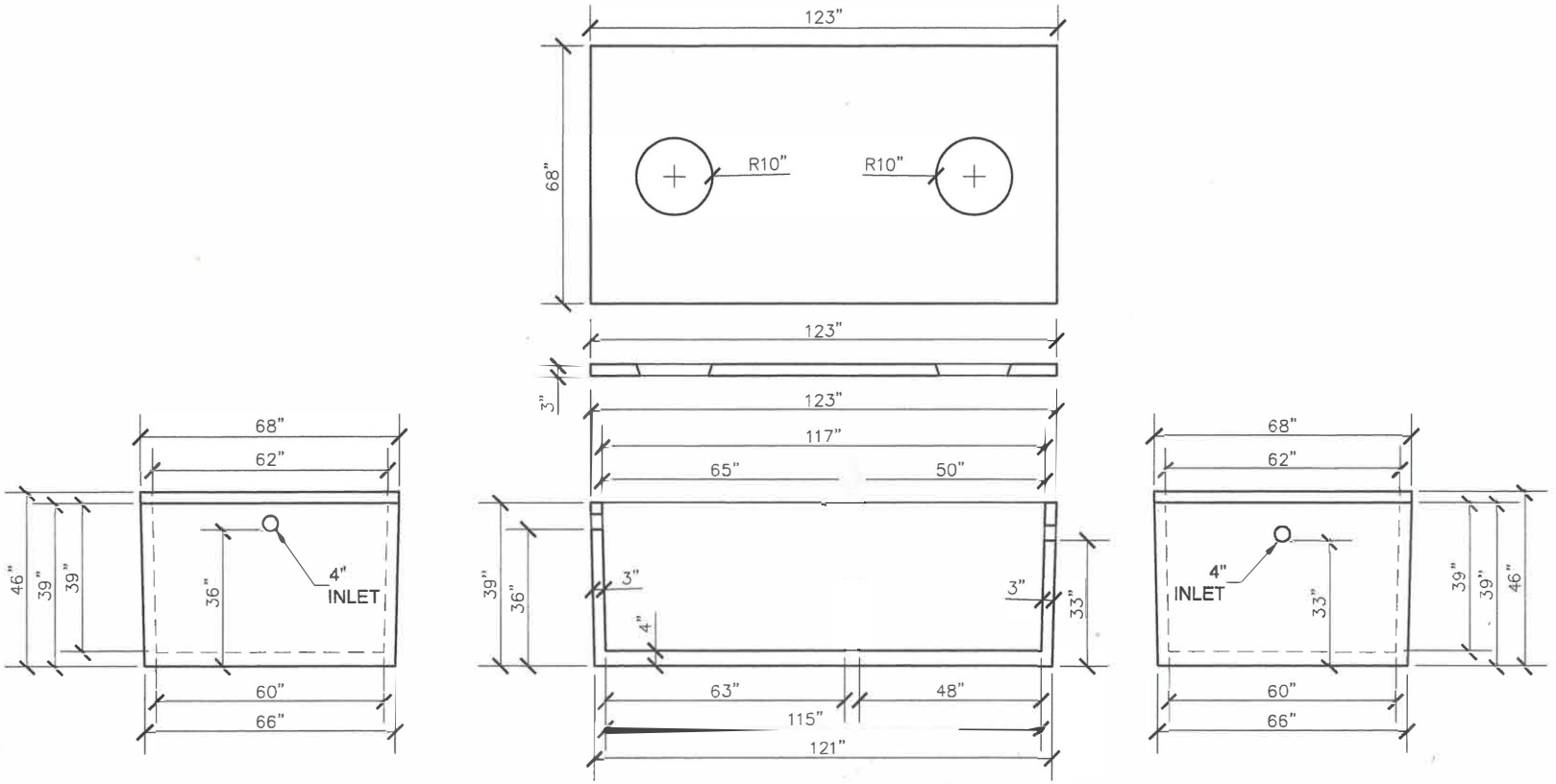
Contact: Enviro-Flo
Address: 151 Custom Drive
Flowood, MS 39232
Phone: (601) 939-3526
Website: http://www.enviro-flo.net/

Technical Notes: The B-1500 is supplied with a 770 gallon (full fluid capacity) pretreatment chamber. You, as the manufacturer, require a separate pretreatment tank, with a minimum of a 1000 gallon capacity, to be installed with the B-1500. Unit may be supplied with, or without, a pump chamber. Units supplied with a pump chamber will have the suffix "Combo Tank" included in the model identifier.

Restrictions: Pretreatment Unit required

Certifying Agency: Gulf Coast Testing, LLC
Certification Standard: NSF Standard 40

PUMP TANK G

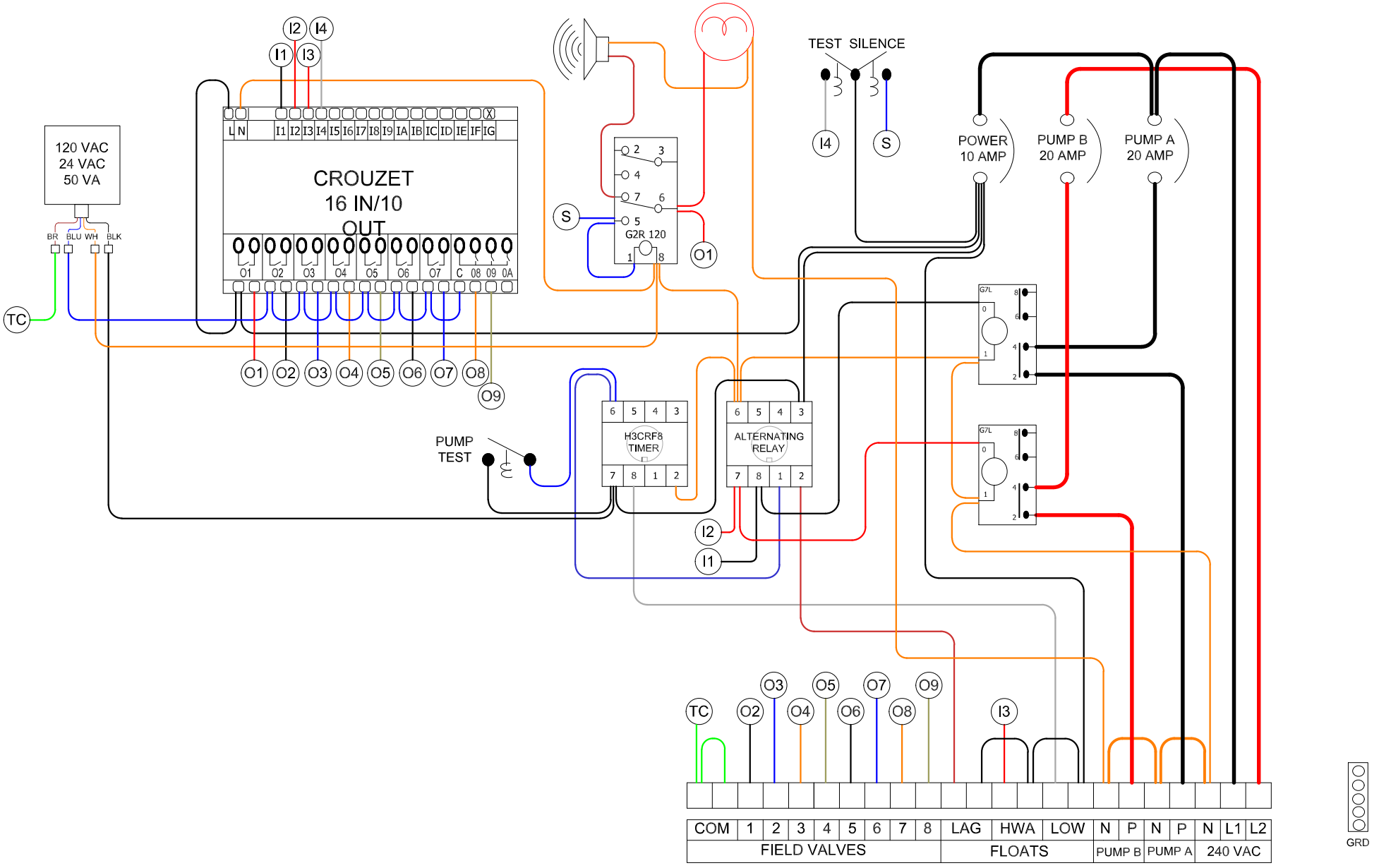


NOTE:
* HEAVY DUTY LIDS AVALIABLE
* MEETS ASTM 1227-93a
* COMPLIES WITH 30 TEXAS ADMINSTRATIVE CODE 285.32
* 4" PVC FITTINGS TYPICAL
* EXTERNAL PLUMBING INSTALLED BY CONTRACTORS ON SITE

STATE OF TEXAS
GREG W. JOHNSON
67587
REGISTERED
PROFESSIONAL ENGINEER
12/4/17

BLOCK CREEK CONCRETE PRODUCTS		
1000 GAL. SINGLE COMP. L.P. TANK		
PART #:	DRAFTER: EJS III	DATE: 12/4/2017

ALTD-8Z SCHEMATIC



RJR CONTROLS LLC	MODEL	ALTD-8Z	
	TITLE	Dosing Duplex 8 Zone Effluent Managment	
	SIZE A2	CAGE CODE	DWG NO 021120RW / REV

D.I.R.® Manufacturing & Supply Inc.

"Do-It-Right" Liquid Chlorine Dispensers

(800) 559 - 8664

NG300 V - Series 100 5" & 7"

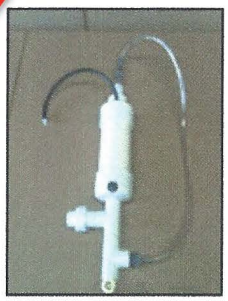
Standard 4 Gallon Reservoir

Standard 4 Gallon Reservoir

Available with:

5" Bulb Assembly

or



7" Bulb Assembly

Note:
5" Bulb Assembly processes 2 ounces to 6 ounces of common household bleach (6% Sodium Hypochlorite) - **not included** - per dosing cycle.

7" Bulb Assembly processes 2 ounces to 10 ounces of common household bleach (6% Sodium Hypochlorite) - **not included** - per dosing cycle.

Caution: Always observe the manufacturers instructions and safety precautions on the chlorine bottle when handling liquid chlorine bleach. Wear protective clothing and safety eyewear.

Dosing rates were established to provide a constant residual at all times. 6% chlorine provides 2ppm per 100 gallons of potable water. Check with your local regulatory agency for minimum chlorine residual requirements.

An Installation Instruction/Owner's Manual is shipped with each chlorinator.

back

Liberty Pumps®

LE70-Series

Sewage Pumps

3/4 hp
2" Solids-Handling

Features:

- Rugged 2 vane, semi-open cast iron impellers
- Cast iron housings and volute with all stainless and brass fasteners
- 416 stainless steel rotor shaft
- Oil-filled, hermetically sealed motors
- Built-in thermal protection on single phase models
- 2" or 3" flanged discharge
- Permanently lubricated upper and lower ball bearings
- Unitized shaft seals
- Single float mechanical level control with series plug for manual bypass operation–standard on single-phase automatic models
- Adjustable pumping range
- Quick-disconnect 10' standard power cord allows replacement of cord in seconds without breaking seals to motor (25' and 35' length optional)

Models:

SINGLE PHASE

LE71M 115V, 12a, manual
LE71A 115V, 12a, automatic
LE72M 208-230V, 6a, manual
LE72A 208-230V, 6a, automatic

3-PHASE

LE73M 208-230V, 4.1a, manual*
LE74M 440-480V, 2.1a, manual*

***NOTE:** 3-phase models require control panel for automatic operation. See sewage accessories literature for complete information on all Simplex and Duplex controls.

innovate. evolve.

LE70-SERIES TECHNICAL SPECIFICATIONS

ALL MODELS: 3/4 HP, 1725 RPM

PUMP

The pump(s) shall be model _____ as manufactured by Liberty Pumps, Bergen, N.Y. or equal. The pump(s) shall have a capacity of _____ GPM at a total dynamic head of _____ feet. Motor size shall be 3/4 horsepower, _____ phase, 60 hz. and _____ volt operation.

MOTOR

The pump motor shall be of the submersible type, oil filled, and hermetically sealed. Single phase motors shall have thermal overload protection embedded in the windings, and shall automatically reset when motor cools. Three-phase motors shall have overloads incorporated into the control panel, properly sized for the horsepower and amperage of the pump(s).

The rotor shaft shall be made of 17-4 PH stainless steel and shall be supported by upper and lower ball bearings.

The power cord shall be of the quick-disconnect design.

The pump impeller shall be cast iron, 2 vane, semi-open, and shall be capable of passing a 2" spherical solid.

SEAL

The shaft seal shall be of the carbon/ceramic unitized design, with BUNA N elastomers and stainless housings.

EXTERNAL CONSTRUCTION

The pump volute, legs and motor housing shall be heavy gray iron castings, class 25 or better. All castings shall be powder coated before assembly.

All fasteners shall be of 300-series stainless steel.

LEVEL CONTROL

The pump shall be controlled by an adjustable mechanical switch sealed in a PVC float, and shall have a series plug for manual bypass operation.

IMPELLER

	MODELS	VOLTS	PHASE	AMPS	DISCHARGE	AUTOMATIC
SINGLE PHASE	LE71M2	115	1	12	2" FLANGED	NO
	LE71A2	115	1	12	2" FLANGED	YES
	LE72M2	208-230	1	6	2" FLANGED	NO
	LE72A2	208-230	1	6	2" FLANGED	YES
	LE71M3	115	1	12	3" FLANGED	NO
	LE71A3	115	1	12	3" FLANGED	YES
	LE72M3	208-230	1	6	3" FLANGED	NO
	LE72A3	208-230	1	6	3" FLANGED	YES
3-PHASE	LE73M2-2	208-230	3	4.1	2" FLANGED	NO
	LE74M2-2	440-480	3	2.1	2" FLANGED	NO
	LE73M3-2	208-230	3	4.1	3" FLANGED	NO
	LE74M3-2	440-480	3	2.1	3" FLANGED	NO

10' cord standard on single phase models. For 25' cord option, add a "-2" suffix to model number. Example: LE71A2-2
For 35' cord option, add a "-3" suffix to model number. Example: LE71A2-3.

NOTE: 3-Phase models require panel for automatic operation. See sewage accessories literature for complete information on all simplex and duplex controls.

DIMENSIONAL DATA:

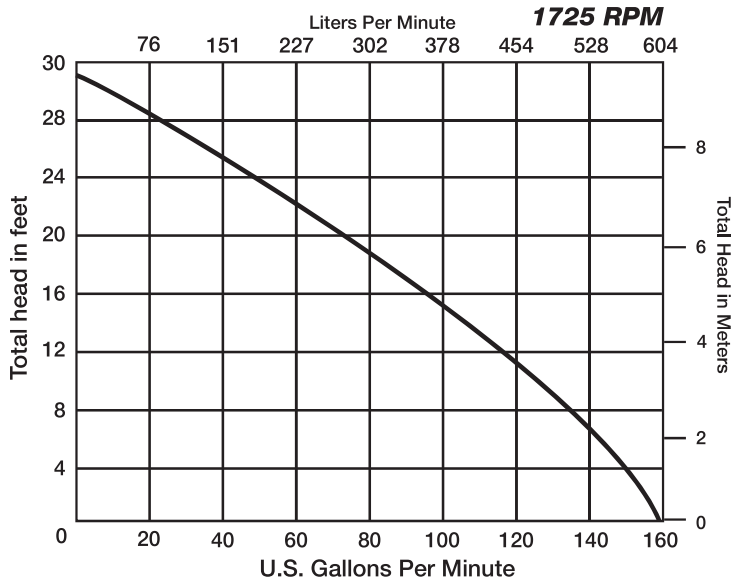
Weight: LE71M: 62 LBS.

Height: 18.9"

Major Width: 12.5"

Maximum fluid temperature 140˚ F.

PERFORMANCE CURVE 60HZ



Dual Safety certification for the United States and Canada.

SSPMA Certified PUMP MEMBER ® C SA US

Specifications are subject to change without notice.

Liberty Pumps • 7000 Apple Tree Avenue • Bergen, New York 14416 • Phone 800-543-2550 Fax (585) 494-1839
www.libertypumps.com

TECHNICAL BROCHURE
B3871 R1

EP04 & EP05 Series

Model 3871

SUBMERSIBLE EFFLUENT PUMPS

GOULDS WATER TECHNOLOGY
a xylem brand

FEATURES

EP04 Impeller: Thermoplastic semi-open design with pump out vanes for mechanical seal protection.

EP05 Impeller: Thermoplastic enclosed design for improved performance.

Casing and Base: Rugged thermoplastic design provides superior strength and corrosion resistance.

Motor Housing: Cast iron for efficient heat transfer, strength, and durability.

Motor Cover: Thermoplastic cover with integral handle and float switch attachment points.

Power Cable: Severe duty rated oil and water resistant.

Bearings: Upper and lower heavy duty ball bearing construction.

AGENCY LISTINGS

Tested to UL 778 and CSA 22.2 108 Standards
By Canadian Standards Association
File #LR38549

APPLICATIONS

Specifically designed for the following uses:

- Effluent systems
- Homes
- Farms
- Heavy duty sump
- Water transfer
- Dewatering

SPECIFICATIONS

- Solids handling capability: ¾" maximum.
- Capacities: up to 60 GPM.
- Total heads: up to 31 feet.
- Discharge size: 1½" NPT.
- Mechanical seal: carbon-rotary/ceramic-stationary, BUNA-N elastomers.
- Temperature:
  104° F (40° C) continuous
  140° F (60° C) intermittent.
- Class B Insulation
- Fasteners: 300 series stainless steel.
- Capable of running dry without damage to components.

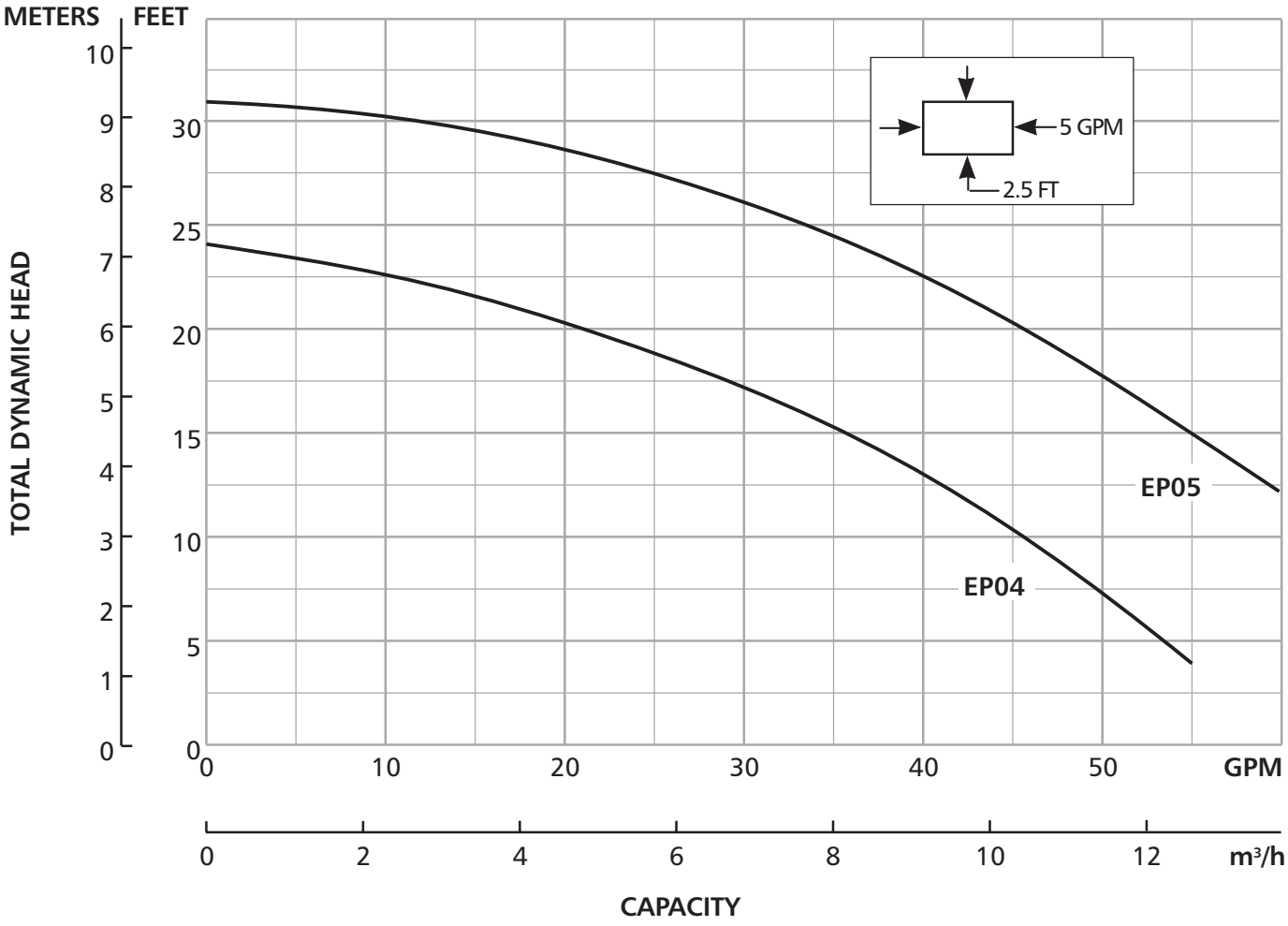
Motor:

- EP04 Single phase: 0.4 HP, 115 or 230 V, 60 Hz, 1550 RPM, built in overload with automatic reset.
- EP05 Single phase: 0.5 HP, 115 V or 230V, 60 Hz, 1550 RPM, built in overload with automatic reset.
- Power cord: 10 foot standard length, 16/3 SJTW with three prong grounding plug. Optional 20 foot length, 16/3 SJTW with three prong grounding plug (standard on EP05).
- Fully submerged in high grade turbine oil for lubrication and efficient heat transfer.

Available for automatic and manual operation. Automatic models include Mechanical Float Switch assembled and preset at the factory.

PERFORMANCE RATINGS

Total Head (ft. of water)	Gallons Per Minute	
	EP04	EP05
5	53	–
10	46	62
15	36	55
20	21	46
25	0	33
30	–	11

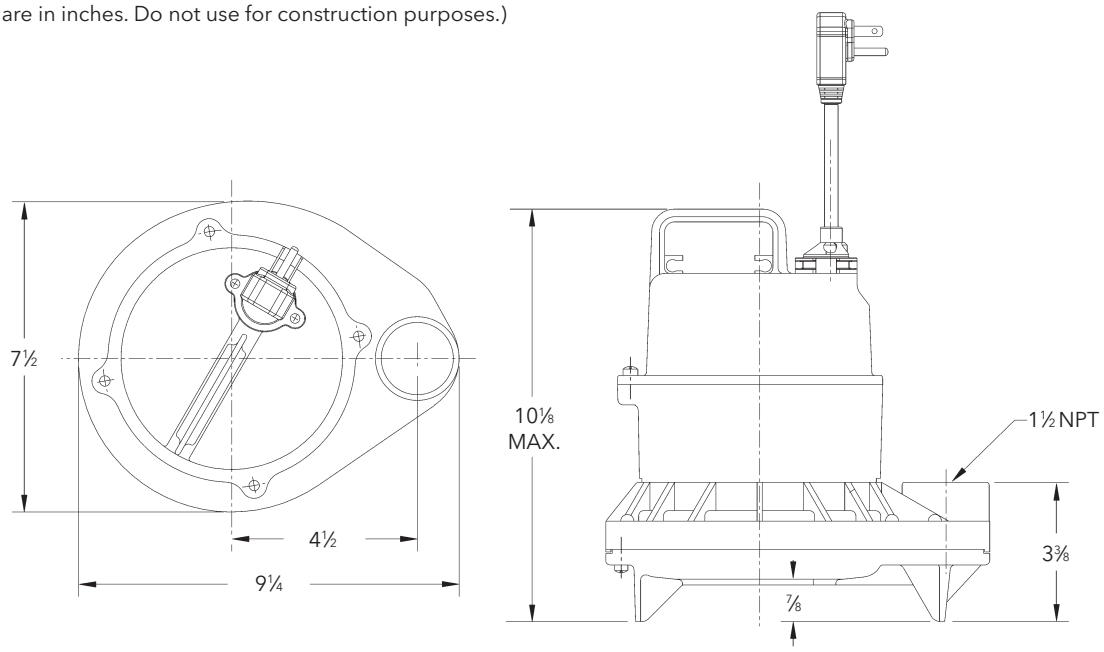


MODEL INFORMATION

Order No.	HP	Volts	Amps	Minimum Circuit Breaker	Phase	Float Switch Style	Cord Length	Discharge Connection	Minimum On Level	Minimum Off Level	Minimum Basin Diameter	Maximum Solids Size	Shipping Weight lbs/kg
EP0411	.4	115	12	20	1	Plug / No Switch	10'	1½"	Manual	Manual	15"	¾"	20 / 9.1
EP0411A						Piggyback / Wide-Angle	10'	1½"	12"	6"	15"		21 / 9.5
EP0411F						Plug / No Switch	20'	1½"	Manual	Manual	15"		20 / 9.1
EP0411AC						Piggyback / Wide-Angle	20'	1½"	12"	6"	15"		21 / 9.5
EP0412		230	6	10		Plug / No Switch	10'	1½"	Manual	Manual	15"		20 / 9.1
EP0412F						Plug / No Switch	20'	1½"	Manual	Manual	15"		20 / 9.1
EP0511F	.5	115	13	20		Plug / No Switch	20'	1½"	Manual	Manual	15"		22 / 10
EP0511AC						Piggyback / Wide-Angle	20'	1½"	12"	6"	15"		23 / 10.4
EP0512F		230	6.5	10		Plug / No Switch	20'	1½"	Manual	Manual	15"		22 / 10

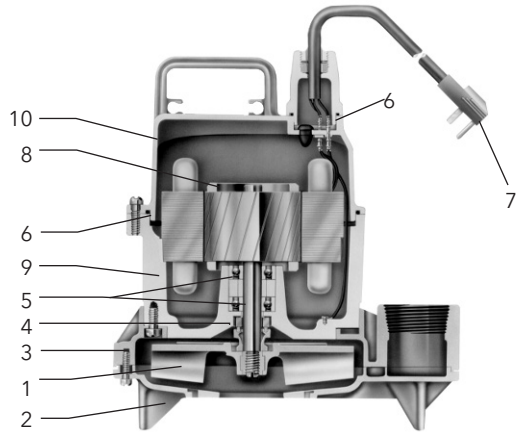
DIMENSIONS

(All dimensions are in inches. Do not use for construction purposes.)



COMPONENTS

Item No.	Description
1	Impeller
2	Base
3	Pump casing
4	Mechanical seal
5	Ball bearings
6	O-rings
7	Power cord
8	Oil filled motor
9	Motor housing/stator assembly
10	Motor cover



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Xylem, Inc.
2881 East Bayard Street Ext., Suite A
Seneca Falls, NY 13148
Phone: (866) 325-4210
Fax: (888) 322-5877
www.gouldswatertechnology.com

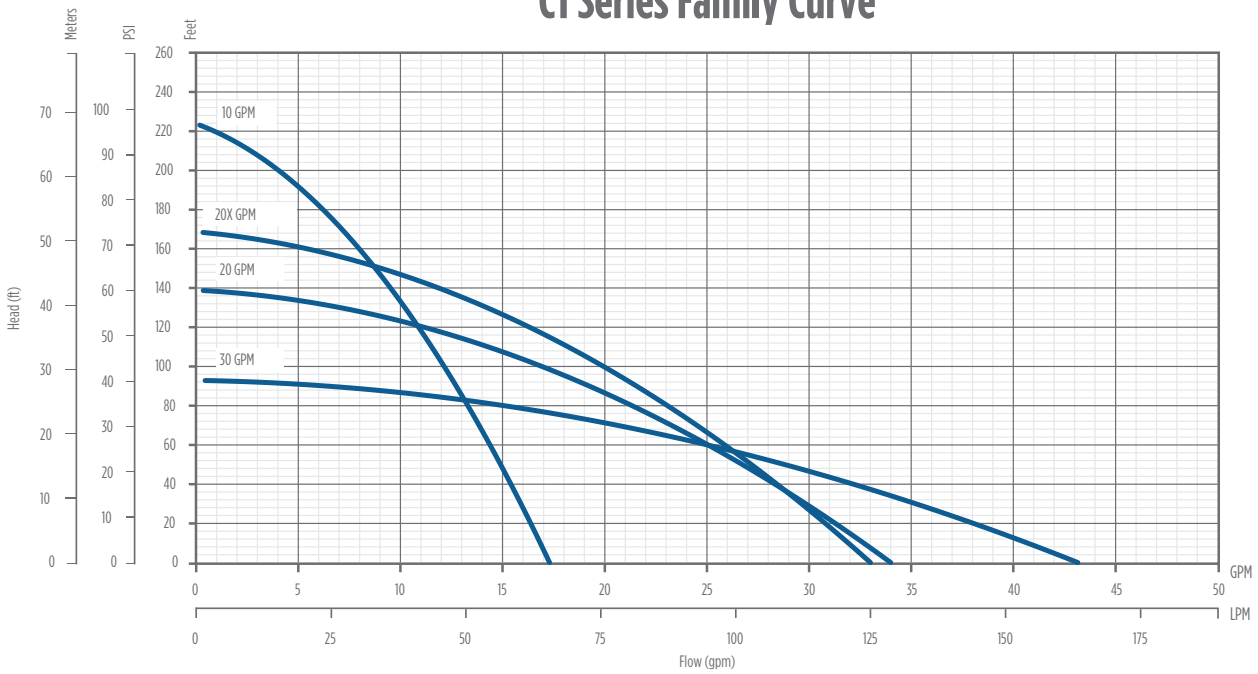
C1 SERIES
CISTERN PUMPS

Designed for use in gray water / filtered effluent service applications, the C1 Series cistern pump provides high performance and long life in less than ideal water conditions. The C1 Series pump is able to pass solids up to 1/8" without having a negative effect on the internal hydraulic components.

The pump's unique bottom suction design allows for maximum fluid drawdown without compromising durability or overall life, and it does not require the use of a flow induction sleeve. Intended specifically for use in a cistern or tank, C1 Series pumps are suitable for use in agricultural, residential, and commercial installations.

Franklin Electric

C1 Series Family Curve



FEATURES

- Supplied with a removable 5" base for secure and reliable mounting
- Bottom suction design
- Robust thermoplastic discharge head design resists breakage during installation and operation
- 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.

Olvera,Brandon

From: Olvera,Brandon
Sent: Tuesday, July 11, 2023 11:49 AM
To: Lauren Dowlearn ; jgoldenland@sbcglobaal.net
Subject: 116336

RE: 145 FM 2673

Property Owner & Agent,

We received planning materials for the referenced permit application and found those planning materials to be deficient. To continue processing this permit, we need the following:

1. Are the residences long-term or short-term?
2. Per TAC 285.91(10) Table X the GPD for a restaurant is 28 GPD.
3. There is a coffee shop on the property.
    a. What is the GPD?
    b. This would be considered high strength.
4. Do the 100 seats also include the patio seating?
5. Do the 100 seats include the Sushi Restaurant next to the river Rose Tavern?
6. The BOD calculations need to be submitted by an engineer.
7. Is the one structure outline on the design going to be for all the residences?
8. 30 TAC §285.32 (d) (5) identifies electrical wiring for non-standard systems shall be installed according to 30 TAC §285.34 (c).
    a. Specify these requirements in your planning materials.
9. 30 TAC §§285.38 identifies the Prevention of Unauthorized Access to On-site Sewage Facilities (OSSF)
    a. Specify these requirements in your planning materials.
10. Show the required testing for BOD and TSS grab samples in the planning materials.
11. As a condition of this permit submittal, a meter must be installed on the outflow line of the pump tank. The readings from this meter must be recorded daily and submitted to the Comal County Environmental Health Department once a month for 12 months from the date the License to Operate is issued and for every new tenant. If at any time the daily meter reading exceeds the permitted flow rate this permit will be void and a new permit must be obtained.
    a. Include this in your planning materials and design.
12. Revise accordingly and resubmit.

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

Thank You,

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

OSSF SOIL EVALUATION REPORT INFORMATION

Date: 5/19/23
Applicant Information:
Name: John M Golden
Address: PO Box 114
City, State & Zip Code: Yorktown, TX 78164
Phone: 361-550-4208
Email: jgoldenland@sbcglobal.net

Site Evaluator Information:
Name: Douglas R. Dowlearn
Company: D.A.D. Services, Inc.
Address: 703 Oak Drive
City, State & Zip: Blanco, TX 78606
Phone: (210)240-2101 **Fax:** (866)260-7687
Email: txseptic@gmail.com

Legal: A-417, George McWhorter Sur-323; 2.942 acres

Street/Road Address: 145 FM 2673
City : Canyon Lake Zip: 78133
Additional Info: Comal County

Installer Information:

Name:
Company:
Address:
City, State & Zip:
Phone:

VOID

Depth	Texture Class	Soil Texture	Structure (For Clay only)	Drainage (Mottling, Water Table)	Restrictive	Observation
Soil Boring #1 60"	II	0-1 ...n 12 ...estone		<3 ...avel	+ estone	...e
Soil Boring #2 60"		...e as abov				

DESIGN SPECIFICATIONS

Application Rate (RA): 0.25
OSSF is designed for: Bar & Grill w/ 100 seats (12 gpd/seat), (2) 4 BR (<3500 sq. ft.), (2) 2 BR (<1500 sq. ft.)
1200 gpd + (2) 300 gpd + (2) 180 gpd = 2160 gallons per day
An aerobic treatment/drip disposal system is to be utilized based on the site evaluation.
...40 sq. ft. disposal area required
2000 gallon grease trap(existing permit #89548)
2 - 1500 gallon dual compartment septic tanks(existing permit #89548)
3000 gallon pretreatment tank required
2 - 3000 gallon flow equalization tank with dual alternating pumps required
5 - 1500 gpd aerobic treatment units required
2 - 3000 gallon pump tank with dual alternating pumps with timed controls(D1 and D1*) required
1 - 1000 gallon pump tank with dual alternating grinder pumps required
Calculations: Absorption Area: Q/RA= 2160/0.25= 8640 Sq. Ft.

FEATURES OF SITE AREA

Presence of 100-year flood zone: YES
Existing or proposed water well in nearby area: NO
Presence of adjacent ponds, streams, water impoundments: YES
Presence of upper water shed: NO
Organized sewage service available to lot: NO

I certify that the findings of this report are based on my field observations and are accurate to the best of my ability. The site evaluation and OSSF design are subject to approval by the TCEQ or the local authorized agent. The planning materials and the OSSF design should not be considered final until a permit to construct has been issued.

Site Evaluator:
NAME: Douglas R. Dowlearn, R.S.
Signature:

License No. OS9902 – Exp. 6/30/2026
TDH: #2432 – Exp. 2/28/2025

D.A.D SERVICES, INC.
DOUG DOWLEARN
PO BOX 212, BULVERDE, TX 78163
Designed for: Golden John M

The installation site is at 145 FM 2673 of the A-417 SUR-323 G C MCWHORTER in Comal County, TX. The proposed OSSF will treat the wastewater from an existing bar and grill with 100 seats (100 x 12 gpd = 1200 gpd), along with (2) new 4 bedroom, < 3500 SF residences (2 x 300 gpd = 600 gpd) and (2) new 2 bedroom, < 1500 SF residences (2 x 180 gpd = 360 gpd) . The proposed method of wastewater treatment is aerobic treatment(utilizing liquid chlorination) with drip irrigation. This method was chosen because of unsuitable soil conditions.

PROPOSED SYSTEM:

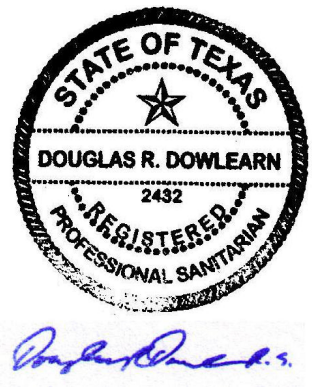
A 4" PVC pipe will discharge from the existing bar and grill to an existing 2000 gallon grease trap(E - permit #89548) which will then discharge into two 1500 gallon dual compartment septic tanks(F - permit #89548). Effluent will flow from the 1500 gallons dual compartment tanks to a 3000 gallon pre treatment tank(A). A 4" PVC pipe will discharge from the new residences to a 1000 gallon pump tank with dual alternating grinder pumps(G), which will flow into the 3000 gallon pre-treatment tank previously mentioned(A). From the pre-treatment tank, effluent flows into (2) 3000 gallon flow equalization tanks connected together with dual alternating pumps(B1 and B1*). A K-Rain alternates from the flow equalization tanks to (5) 500 gpd aerobic treatment units (D) which flow into 3000 gallon pump tanks connected together with dual alternating pumps(B1 and B1*). The 3000 gallon pump tanks (B1 and B1*) are actuated by a time controller allowing distribution 2 times per day with a minimum time dose with float switches set to pump 2160 gallons per day. High level audible and visual alarms activate should the pumps fail. Distribution from pump tanks (B1 and B1*) through a self cleaning 150 mesh filter to an electronic K-Rain valve box then through SCH-40 manifold to 8266 LF of drip tubing fields (zones 1-8). Drip lines set approximately two feet apart with 0.61 gph emitters spaced every two feet as per manufacturer's schematic. A hose bib will be installed in the pump tank on the manifold to the drip fields. A SCH-40 return line with a pressure gauge is installed to periodically flush the system and will maintain pressure at 30 psi. Solids caught in the spin filter are flushed each cycle back to the pre-treatment tank. Vacuum breakers in each zone will be installed at the highest points on each manifold to prevent siphoning of effluent from higher to lower parts of the field. The placement of the drip tubing will be on soil that has been scarified. The tubing will be covered with 6" of Class II soil.

VOID

DESIGN SPECIFICATIONS:

Daily Waste Flow: 2160 gpd
Application rate: 0.25
Application area required: 2160/.25 =8640 SF
Application area utilized: 16532 SF - 5 SF(for impermeable tank lids) = 16527 SF
Pump tank reserve capacity: 720 gal minimum total

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN



SYSTEM COMPONENTS:

SCH 40 PVC sewer line

1.5” purple PVC supply and flush line

1 - Existing 2000 gallon grease trap(E - existing permit #89548)

2 - Existing 1500 gallon dual compartment septic tanks(F- existing permit #89548)

1 - 3000 gallon pretreatment tank(A)

2 - 3000 gallon flow equalization tanks connected together with dual alternating pumps(B1 and B1*)

5 - 1500 gpd aerobic treatment unit(C)

2 - 3000 gallon pump tanks connected together with dual alternating pumps and timed controls(D1 and D1*)

1 - Liquid chlorinator

1 - 8 zone K-Rain valve

1 - 5 zone K-Rain valve

5 - check valve

- Arkal 1” filter(>100 microns) - Netafim Model #DF100-120

- 1000 gallon pump tank with dual alternating grinder pumps(G)

VOID

LANDS ING

The native vegeta m distribut ea should c of l vel s plains gr uestem or ermuda. The ent the drip al must b ered gro over such ass seed or sod rior to the final i t. The plac ubing be or scarified. The ubing will be cov th 6” of Class I event th ral c ed, a suitable ground over must be installed on all excavated areas.

ACRES 2.942
COMAL COUNTY/2.942 ACRES

SCALE 1" = 16'

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

A PORTION OF THE DRIVE SHALL BE REMOVED IN THE EVENT THAT DOUBLING AREA IS TO BE USED.

(N10°36'14"E) N09°51'16"E (275.38') 275.38'

(N60°00'27"E) N59°15'28"E (59.19') 59.19'

(S53°51'46"E) S54°36'44"E (162.67') 162.67'

ICE HOUSE

1895 SF

433 SF

5562 SF

SHED (NO PLUMBING)

2025 SF

CONCRETE

2621 SF

EXISTING
BAR & GRILL
100 SEATS X 12 GPD/SEAT = (1200 GPD)

PATIO

790'

785'

780'

775'

770'

ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5
ZONE 6
ZONE 7
ZONE 8

STAIRS

NEW
(2 X 300 GPD = 600 GPD)

(2) - 2 BR RESIDENCES < 1500 SF
(2 X 180 GPD = 360 GPD)
TOTAL GPD = 960 GPD

RETAINING WALL(LINED WITH 20 MIL LINER - SEE RETAINING WALL SCHEMATIC)

POOL
(55' X 21')

3996 SF

50' OFFSET FROM RIVER

100 YR. FLOODPLAIN

N64°53'13"W 438.86' (N64°08'14"W) (438.86')

S32°30'55"W (S33°15'54"W) 29.47' (29.47')

S25°02'25"W (S25°47'24"W) 75.92' (75.92')

S31°41'13"W (S32°26'12"W) 54.80' (54.80')

S33°49'24"W (S34°34'22"W) 52.59' (52.59')

(S54°11'59"E) S54°56'58"E (143.70') 143.70'

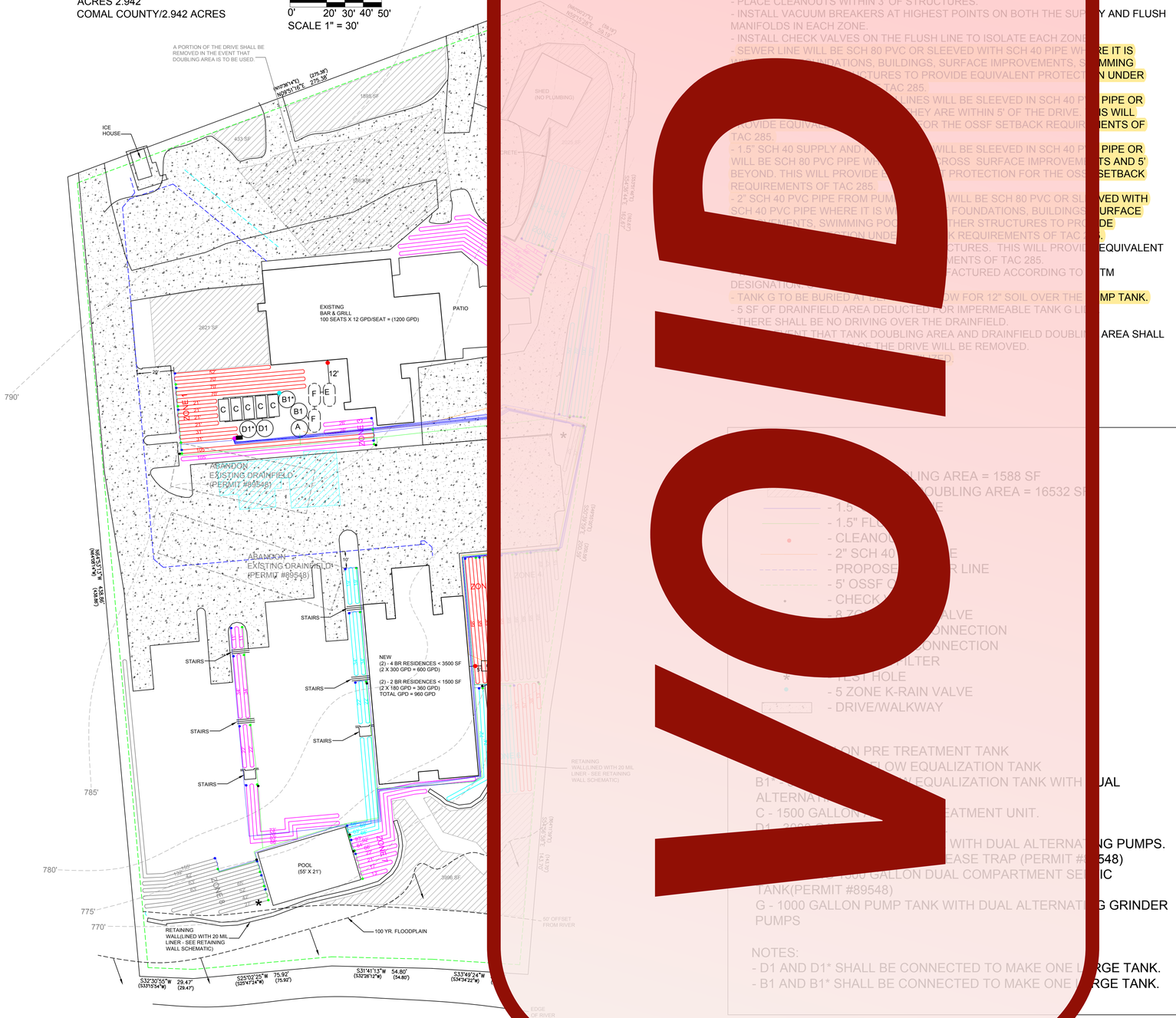
EDGE OF RIVER

VOID

GOLDEN JOHN M
145 FM 2673
CANYON LAKE, TX 78133
A-417 SUR-323 G C MCWHORTER
ACRES 2.942
COMAL COUNTY/2.942 ACRES

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

0' 20' 30' 40' 50'
SCALE 1" = 30'



NOTES:
- PLACE CLEANOUTS WITHIN 3' OF STRUCTURES.
- INSTALL VACUUM BREAKERS AT HIGHEST POINTS ON BOTH THE SUP Y AND FLUSH MANIFOLDS IN EACH ZONE.
- INSTALL CHECK VALVES ON THE FLUSH LINE TO ISOLATE EACH ZONE
- SEWER LINE WILL BE SCH 80 PVC OR SLEEVED WITH SCH 40 PIPE WH RE IT IS ... FOUNDATIONS, BUILDINGS, SURFACE IMPROVEMENTS, S MMING ...CTURES TO PROVIDE EQUIVALENT PROTECT N UNDER ... TAC 285.
- ... LINES WILL BE SLEEVED IN SCH 40 P PIPE OR ... EY ARE WITHIN 5' OF THE DRIVE S WILL ... FOR THE OSSF SETBACK REQUIR ENTS OF TAC 285.
- 1.5" SCH 40 SUPPLY AND ... WILL BE SLEEVED IN SCH 40 P PIPE OR WILL BE SCH 80 PVC PIPE WH ... CROSS SURFACE IMPROVEM TS AND 5' BEYOND. THIS WILL PROVIDE E ... PROTECTION FOR THE OSS SETBACK REQUIREMENTS OF TAC 285.
- 2" SCH 40 PVC PIPE FROM PUM ... WILL BE SCH 80 PVC OR SL VED WITH SCH 40 PVC PIPE WHERE IT IS W ... FOUNDATIONS, BUILDINGS URFACE ...MENTS, SWIMMING POO ... THER STRUCTURES TO PRO DE ... TION UNDE ... K REQUIREMENTS OF TAC 2 . ... CTURES. THIS WILL PROVI EQUIVALENT ... MENTS OF TAC 285.
... FACTURED ACCORDING TO TM DESIGNATION ...
- TANK G TO BE BURIED AT ... W FOR 12" SOIL OVER THE ... MP TANK.
- 5 SF OF DRAINFIELD AREA DEDUCTED ... IMPERMEABLE TANK G LI ...
- THERE SHALL BE NO DRIVING OVER THE DRAINFIELD.
- IT IS THE INTENT THAT TANK DOUBLING AREA AND DRAINFIELD DOUBLI ... AREA SHALL ... OF THE DRIVE WILL BE REMOVED.

... LING AREA = 1588 SF
... DOUBLING AREA = 16532 SF
- 1.5 ... E
- 1.5" FL ...
- CLEANO ...
- 2" SCH 40 ... E
- PROPOSE ... R LINE
- 5' OSSF ...
- CHECK ...
... ALVE
... ONNECTION
... ONNECTION
... ILTER
TEST HOLE
- 5 ZONE K-RAIN VALVE
- DRIVE/WALKWAY

... ON PRE TREATMENT TANK
... LOW EQUALIZATION TANK
B1* ... / EQUALIZATION TANK WITH ... UAL ALTERNA ...
C - 1500 GALLON ... EATMENT UNIT.
D1 ... WITH DUAL ALTERNA ... G PUMPS.
... EASE TRAP (PERMIT # ... 548)
... 1000 GALLON DUAL COMPARTMENT SEP IC TANK(PERMIT #89548)
G - 1000 GALLON PUMP TANK WITH DUAL ALTERNA ... G GRINDER PUMPS

NOTES:
- D1 AND D1* SHALL BE CONNECTED TO MAKE ONE L ... RGE TANK.
- B1 AND B1* SHALL BE CONNECTED TO MAKE ONE L ... RGE TANK.

ZONE 1:
1026 L.F. OF DRIP TUBING SPACED 2' APART.
2 ROWS @ 52 L.F. EACH.
6 ROWS @ 70 L.F. EACH.
8 ROWS @ 21 L.F. EACH.
4 ROWS @ 31 L.F. EACH.
2 ROWS @ 105 L.F. EACH.

ZONE 2:
1090 L.F. OF DRIP TUBING SPACED 2' APART.
10 ROWS @ 45 L.F. EACH.
2 ROWS @ 50 L.F. EACH.
2 ROWS @ 70 L.F. EACH.
4 ROWS @ 100 L.F. EACH.

ZONE 3:
1068 L.F. OF DRIP TUBING SPACED 2' APART.
2 ROWS @ 105 L.F. EACH.
4 ROWS @ 26 L.F. EACH.
1 ROW @ 79 L.F.
1 ROW @ 80 L.F.
1 ROW @ 81 L.F.
1 ROW @ 82 L.F.
1 ROW @ 76 L.F.
1 ROW @ 78 L.F.
2 ROWS @ 73 L.F. EACH.
1 ROW @ 54 L.F.
1 ROW @ 56 L.F.
2 ROWS @ 11 L.F. EACH.

ZONE 4:
996 L.F. OF DRIP TUBING SPACED 2' APART.
2 ROWS @ 25 L.F. EACH.
2 ROWS @ 37 L.F. EACH.
2 ROWS @ 15 L.F. EACH.
2 ROWS @ 32 L.F. EACH.
2 ROWS @ 49 L.F. EACH.
10 ROWS @ 68 L.F. EACH.

ZONE 5:
1010 L.F. OF DRIP TUBING SPACED 2' APART.
10 ROWS @ 68 L.F. EACH.
2 ROWS @ 38 L.F. EACH.
2 ROWS @ 13 L.F. EACH.
4 ROWS @ 57 L.F. EACH.

ZONE 6:
1032 L.F. OF DRIP TUBING SPACED 2' APART.
6 ROWS @ 57 L.F. EACH.
1 ROW @ 72 L.F.
1 ROW @ 74 L.F.
4 ROWS @ 19 L.F. EACH.
4 ROWS @ 34 L.F. EACH.
4 ROWS @ 22 L.F. EACH.
1 ROW @ 56 L.F.
1 ROW @ 59 L.F.
1 ROW @ 63 L.F.
1 ROW @ 66 L.F.

ZONE 7:
1049 L.F. OF DRIP TUBING SPACED 2' APART.
1 ROW @ 93 L.F.
1 ROW @ 92 L.F.
1 ROW @ 64 L.F.
1 ROW @ 66 L.F.
2 ROWS @ 22 L.F. EACH.
2 ROWS @ 21 L.F. EACH.
2 ROWS @ 17 L.F. EACH.
2 ROWS @ 13 L.F. EACH.
1 ROW @ 73 L.F.
1 ROW @ 76 L.F.
1 ROW @ 83 L.F.
1 ROW @ 86 L.F.
4 ROWS @ 11 L.F. EACH.
4 ROWS @ 34 L.F. EACH.
4 ROWS @ 22 L.F. EACH.

ZONE 8:
995 L.F. OF DRIP TUBING SPACED 2' APART.
1 ROW @ 155 L.F.
1 ROW @ 132 L.F.
2 ROWS @ 42 L.F. EACH.
4 ROWS @ 63 L.F. EACH.
2 ROWS @ 65 L.F. EACH.
2 ROWS @ 52 L.F. EACH.
2 ROWS @ 42 L.F. EACH.
2 ROWS @ 27 L.F. EACH.

GPD AND DRAINFIELD AREA CALCULATIONS:
TOTAL GPD = 1200 GPD + 960 GPD = 2160 GPD
TOTAL REQUIRED DRAINFIELD AREA = 2160 GPD/0.25 = 8640 SF
TOTAL LINEAR FEET OF DRIP LINE = 8266 L.F.
TOTAL ACTUAL DRAINFIELD AREA = 16532 SF - 5SF(FOR IMPERMEABLE TANK G LIDS) = 16527 SF

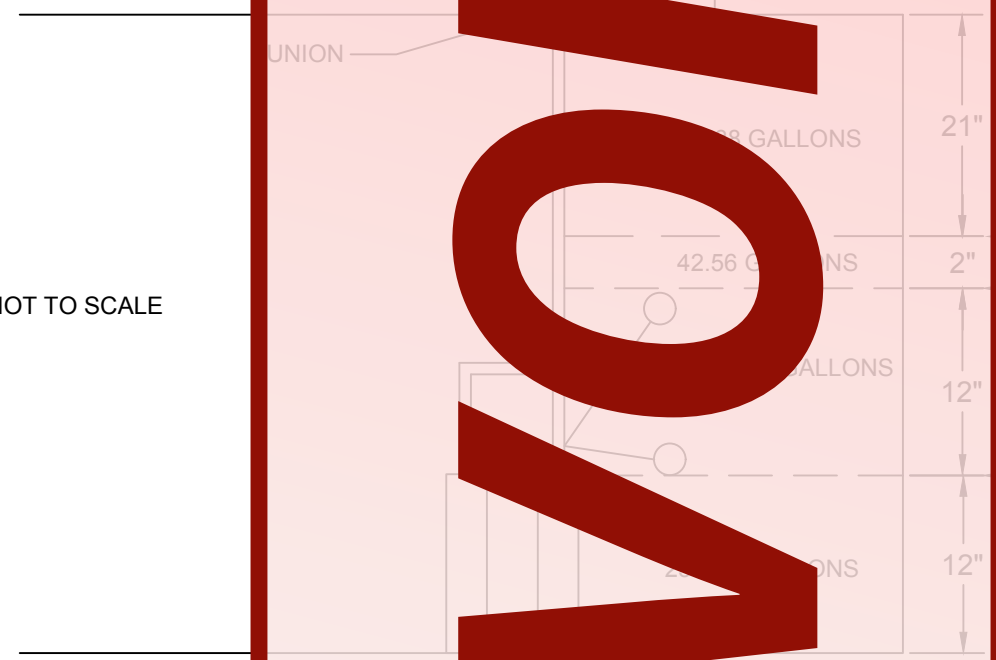
BOD CALCULATIONS:
EXISTING BAR AND GRILL
(1200 GPD X 1200 MG/L X 8.34)/ (10^6) = 12 LBS OF BOD

NEW RESIDENCES
(960 GPD X 300 MG/L X 8.34)/(10^6) = 2.4 LBS OF BOD

TOTAL LBS OF BOD = 12 + 2.4 = 14.4 LBS OF BOD

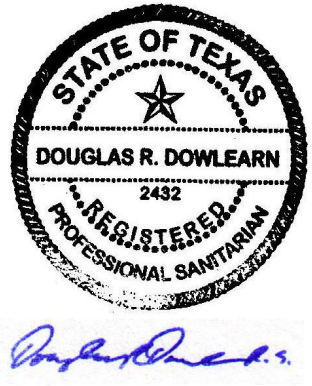
1000 GAL LON PUMP TANK W/GR INDER PUMPS

21.28 GAL/INCH
TOTAL HEIGHT = 47



NOTE: NOT TO SCALE

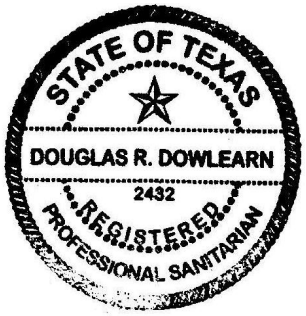
NOTE: SET TO ACTIVATE ON DEMAND.

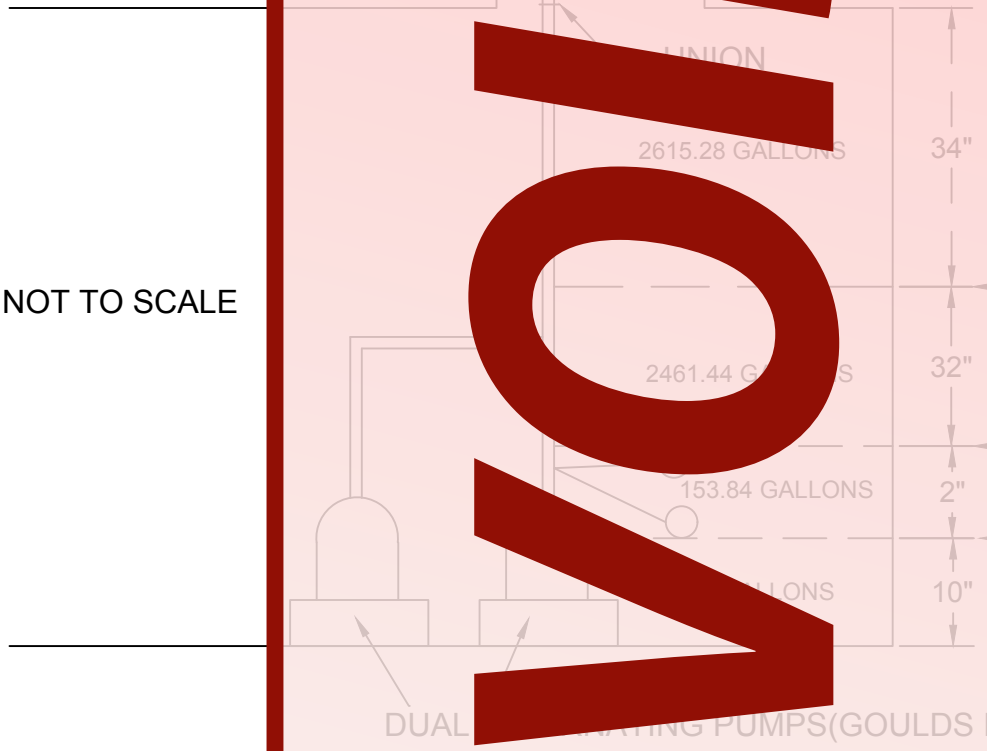


6000 GALLON FLOW EQUALIZATION TANK (2 - 3000 GALLON TANKS CONNECTED)

TANKS B1 & B1*

WORKING LEVEL = 78"
76.92 GAL/INCH





RESERVE

ALARM ON

PUMP ON

PUMP OFF

SUMP

NOTE: NOT TO SCALE

DUAL ALTERNATING PUMPS(GOULDS E 04, 0.4HP, 115V PUMPS OR EQUIVALENT)

NOTE: 2160 GALLON DAILY DISCHARGE SET BY TIMER TO CYCLE 2 TIMES/DAY (90 GAL/CYCLE)

NOTE: SYSTEM HAS (2) 3000 GALLON EQUALIZATION TANKS CONNECTED TOGETHER(B1 & B1*).

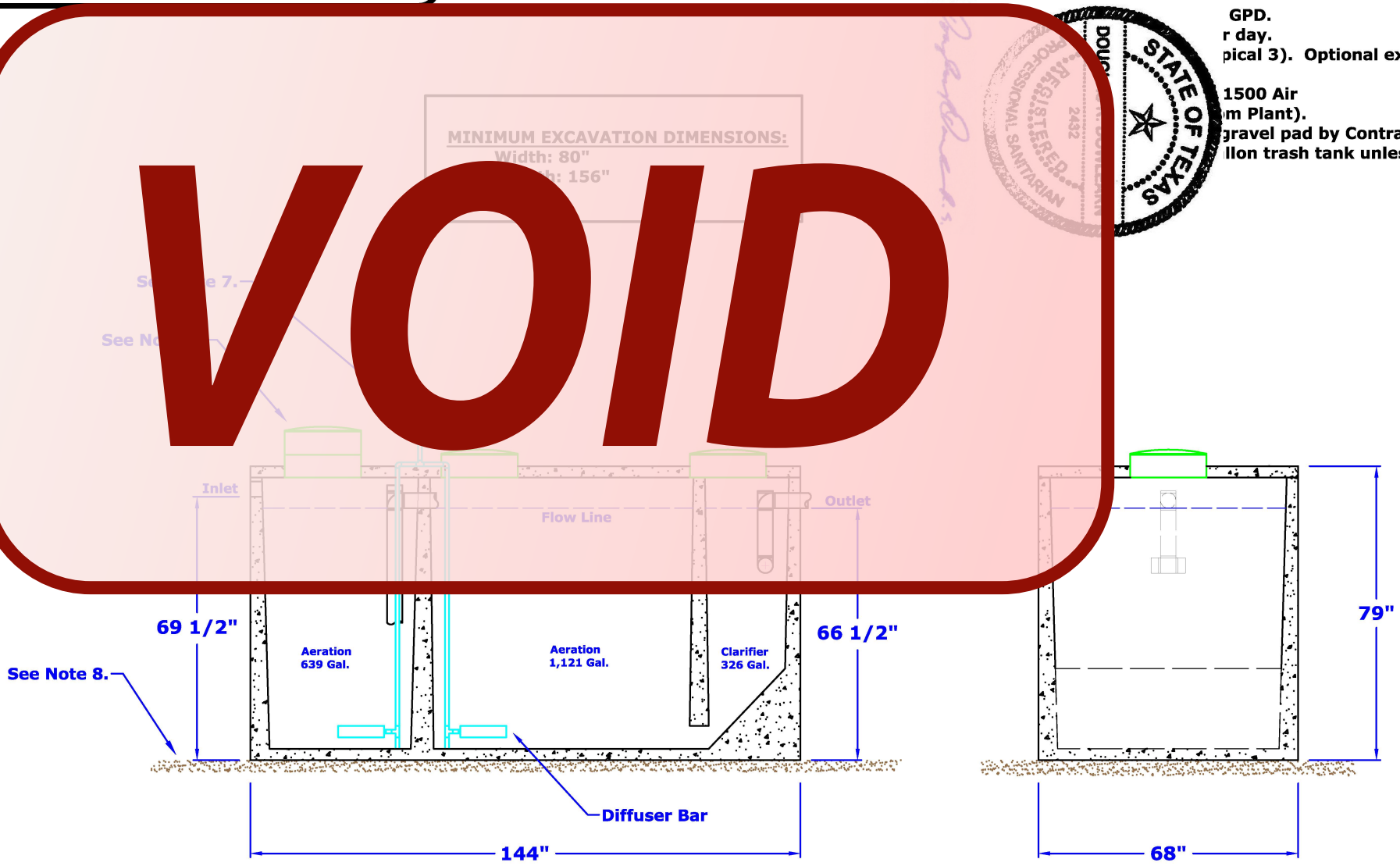
Advantage
Wastewater Solutions llc

GENERAL NOTES:

1. Plant structure material to be precast concrete and steel.
2. Maximum burial depth is 30" from slab top to grade.
3. Weight = 16,600 lbs

GPD.
r day.
pical 3). Optional extension

1500 Air
m Plant).
gravel pad by Contractor
llon trash tank unless otherwise



NuWater E-1500 Duel Aeration Aerobic Treatment Plant (Assembled)

Model: E-1500

July, 2010
By: A.S.

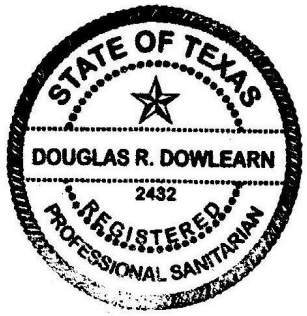
Scale:
* All Dimensions subject to allowable specification tolerances.

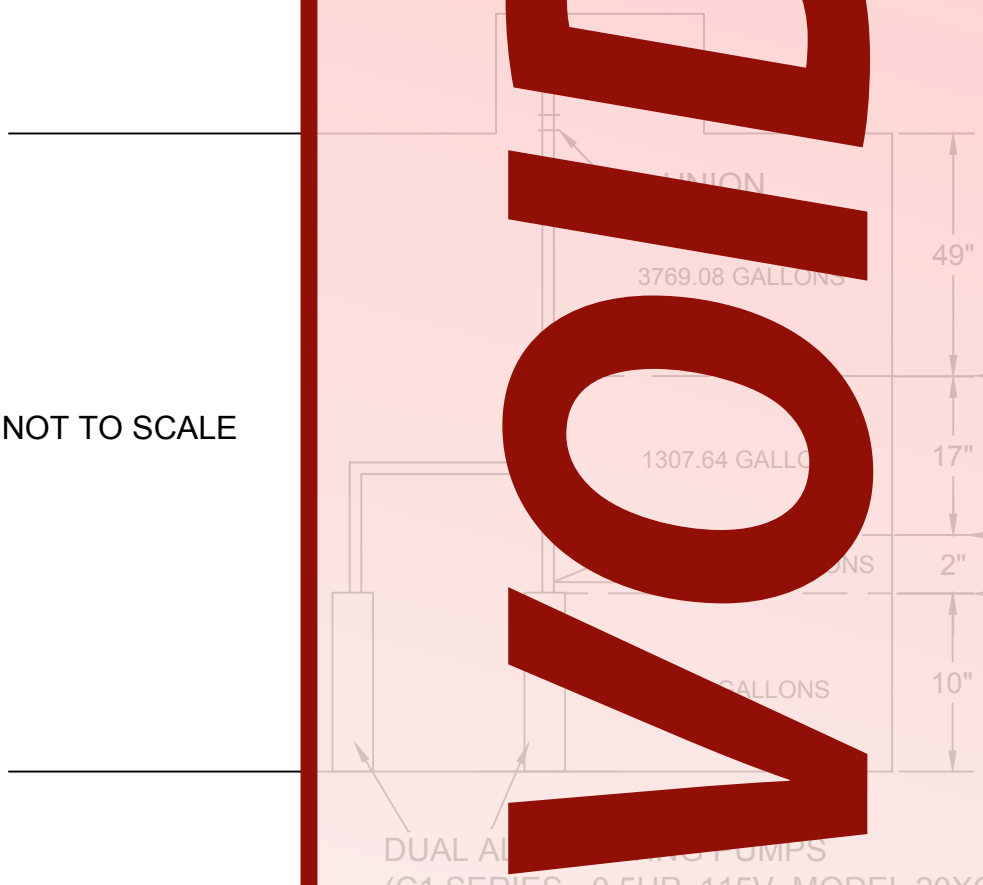
Dwg. #: ADV-B1500-2

Advantage
Wastewater Solutions llc
Advantage Wastewater Solutions llc.
444 A Old Hwy No 9
Comfort, TX 78013
830-995-3189
fax 830-995-4051

6000 GALLON PUMP TANK (2 - 3000 GALLON TANKS CONNECTED) - TANKS D1 & D1*

WORKING LEVEL = 78"
76.92 GAL/INCH





RESERVE

ALARM ON

NOTE: NOT TO SCALE

PUMP ON

PUMP OFF

UMP

DUAL AL PUMPS
(C1 SERIES - 0.5HP, 115V, MODEL 20XC1-0 P4-2W115 OR EQUIVALENT)

NOTE: SET ON A TIMER TO DO SE 42 TIMES
PER DAY AT 10 MINUTES PER OSE.

NOTE: THIS IS 2 - 3000 G LLON TANKS
CONNECTED TOGETHE , WITH DUAL
ALTERNATING PUMP IN ONE OF THE TANKS.

TECHNICAL BROCHURE
B3871 R1

EP04 & EP06 Series

Model 3871

SUBMERSIBLE EFFLUENT PUMPS

GOULDS WATER TECHNOLOGY
a xylem brand

FEATURES

EP04 Impeller: Thermoplastic semi-open design with pump out vanes for mechanical seal protection.

EP05 Impeller: Thermoplastic enclosed design for improved performance.

Casing and Base: Rugged thermoplastic design provides superior strength and corrosion resistance.

Motor Housing: Cast iron for efficient heat transfer, strength, and durability.

Motor Cover: Thermoplastic cover with integral handle and float switch attachment points.

Power Cable: Severe duty rated oil and water resistant.

Bearings: Upper and lower heavy duty ball bearing construction.

AGENCY LISTINGS

Tested to UL 778 and CSA 22.2 108 Standards
By Canadian Standards Association
File #LR38549

PPLICATIONS

pecifically designed for the following uses:

Effluent systems

Homes

Farms

Heavy duty sump

Water transfer

Dewatering

PECIFICATIONS

Solids handling capacity: ¾" maximum.

Capacities: up to 60 GPM.

Total heads: up to 31 feet.

- Discharge size: 1½" NPT.
- Mechanical seal: carbon-rotary/ceramic-stationary, BUNA
- Temperature:
  104° F (40° C) continuous
  140° F (60° C) intermittent.
- Class B Insulation
- Fasteners: 300 series stainless steel.
- Capable of running dry without damage to components.

Motor:

- EP04 Single phase: 0.4 HP, 115 or 230 V, 60 Hz, 1550 RPM, built in overload with automatic reset.
- EP05 Sing se: 0 0V, 60 Hz, 50 RPM in o d with tic reset.

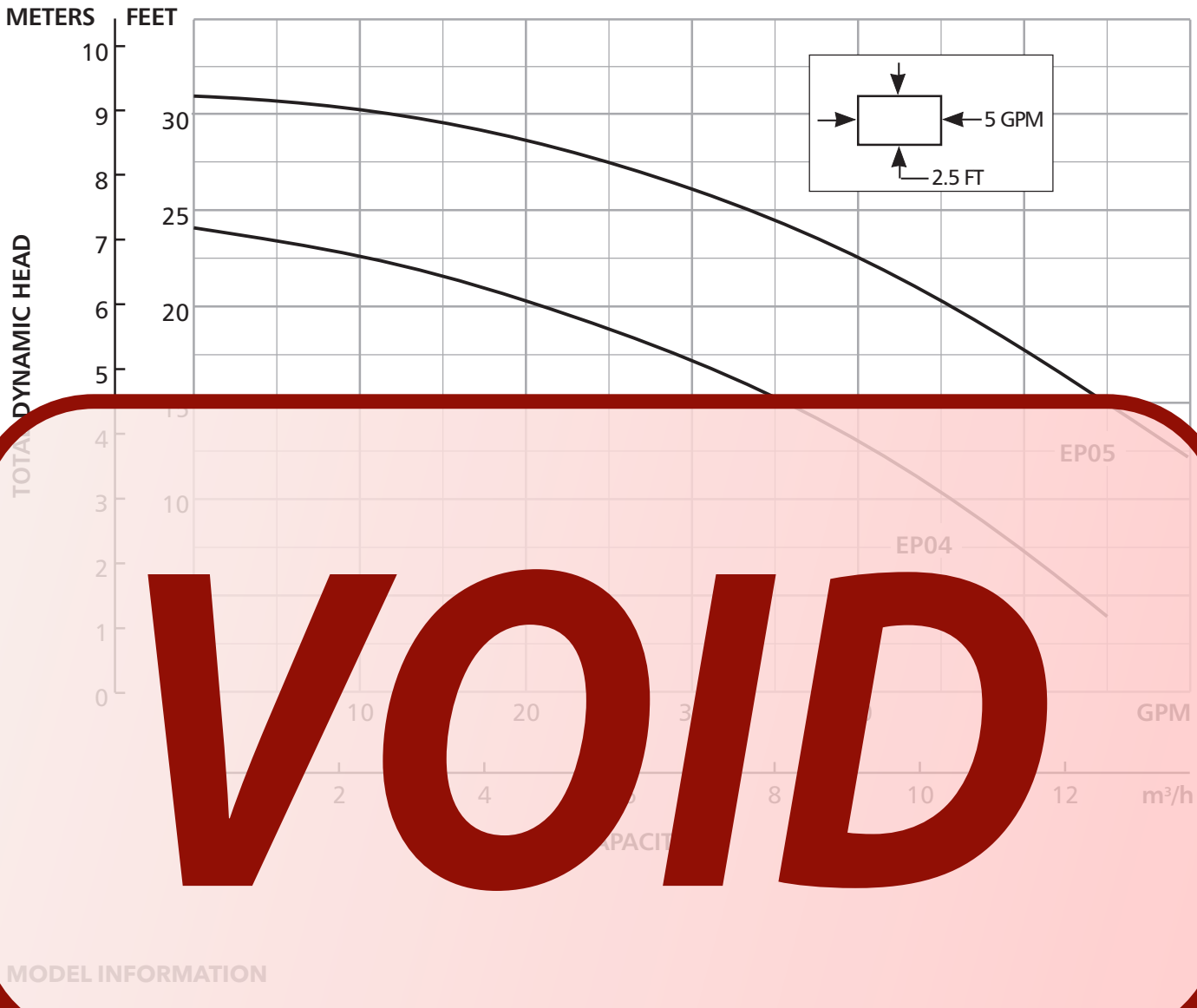
er co foot ard length SJTW thre g gr ng plug. O l 20 foot th, JTW hree prong ding plug nda EP05

y su ged i grade tu l for brica nd ef heat tra

Availab auto al operation. Automatic models include Mechanical Float Switch assembled and preset at the factory.

PERFORMANCE RATINGS

Total Head (ft. of water)	Minute	
	EP04	EP05
5	53	–
10	46	62
15	36	55
20	21	46
25	0	33
30	–	11



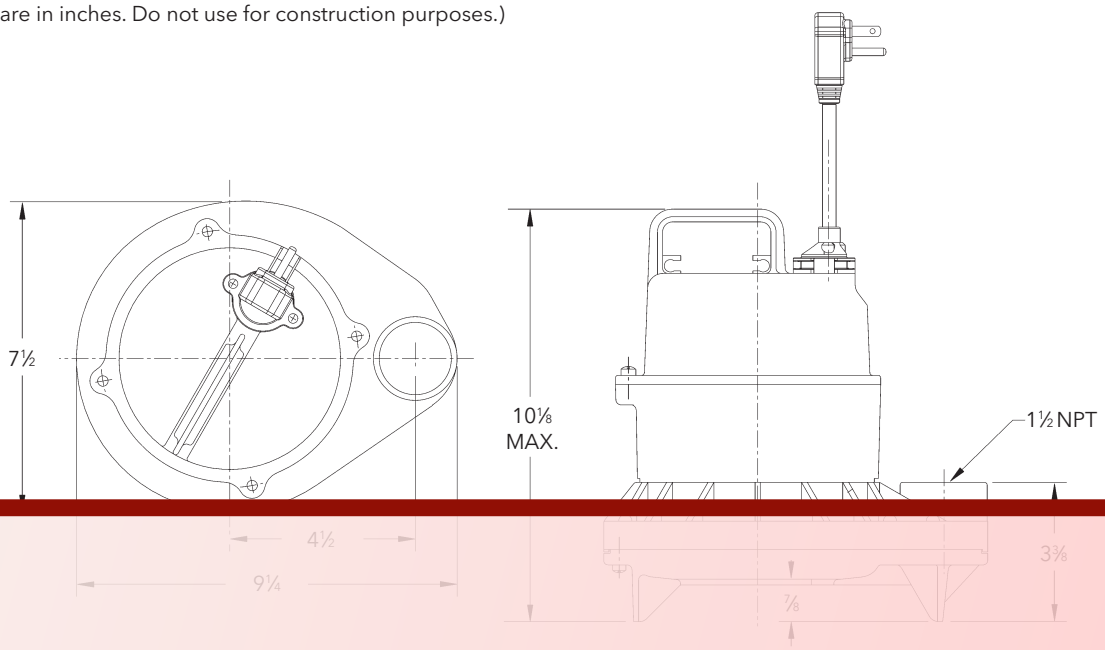
VOID

MODEL INFORMATION

Order				Minimum Breaker		Float Switch Style	Cord Length	Discharge Connection	Minimum Level	Minimum Level	Minimum Diameter	Maximum Size	Shipping Weight lbs/kg
EP0411	.4	115	12	20	1	Plug / No Switch	10'	1½"	Manual	Manual	15"	¾"	20 / 9.1
EP0411A						Piggyback / Wide-Angle	10'	1½"	12"	6"	15"		21 / 9.5
EP0411F						Plug / No Switch	20'	1½"	Manual	Manual	15"		20 / 9.1
EP0411AC						Piggyback / Wide-Angle	20'	1½"	12"	6"	15"		21 / 9.5
EP0412		230	6	10		Plug / No Switch	10'	1½"	Manual	Manual	15"		20 / 9.1
EP0412F						Plug / No Switch	20'	1½"	Manual	Manual	15"		20 / 9.1
EP0511F	.5	115	13	20		Plug / No Switch	20'	1½"	Manual	Manual	15"		22 / 10
EP0511AC						Piggyback / Wide-Angle	20'	1½"	12"	6"	15"		23 / 10.4
EP0512F		230	6.5	10		Plug / No Switch	20'	1½"	Manual	Manual	15"		22 / 10

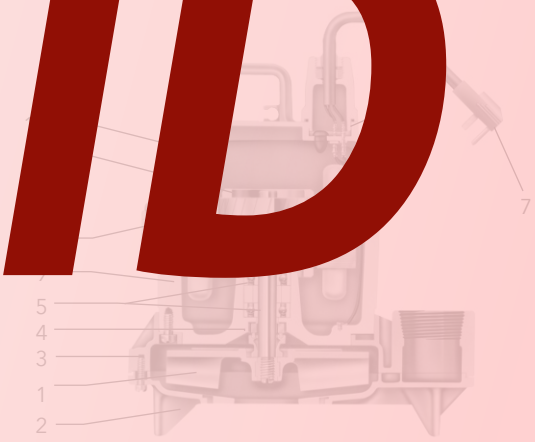
DIMENSIONS

(All dimensions are in inches. Do not use for construction purposes.)



COMPONENTS

Item No.	Description
1	Impeller
2	Base
3	Pump
4	Mech
5	Ball be
6	O-rings
7	Power cord
8	Oil filled motor
9	Motor housing/stator assembly
10	Motor cover



xylem
Let's Solve Water

Xylem, Inc.
2881 East Bayard Street Ext., Suite A
Seneca Falls, NY 13148
Phone: (866) 325-4210
Fax: (888) 322-5877
www.gouldswatertechnology.com

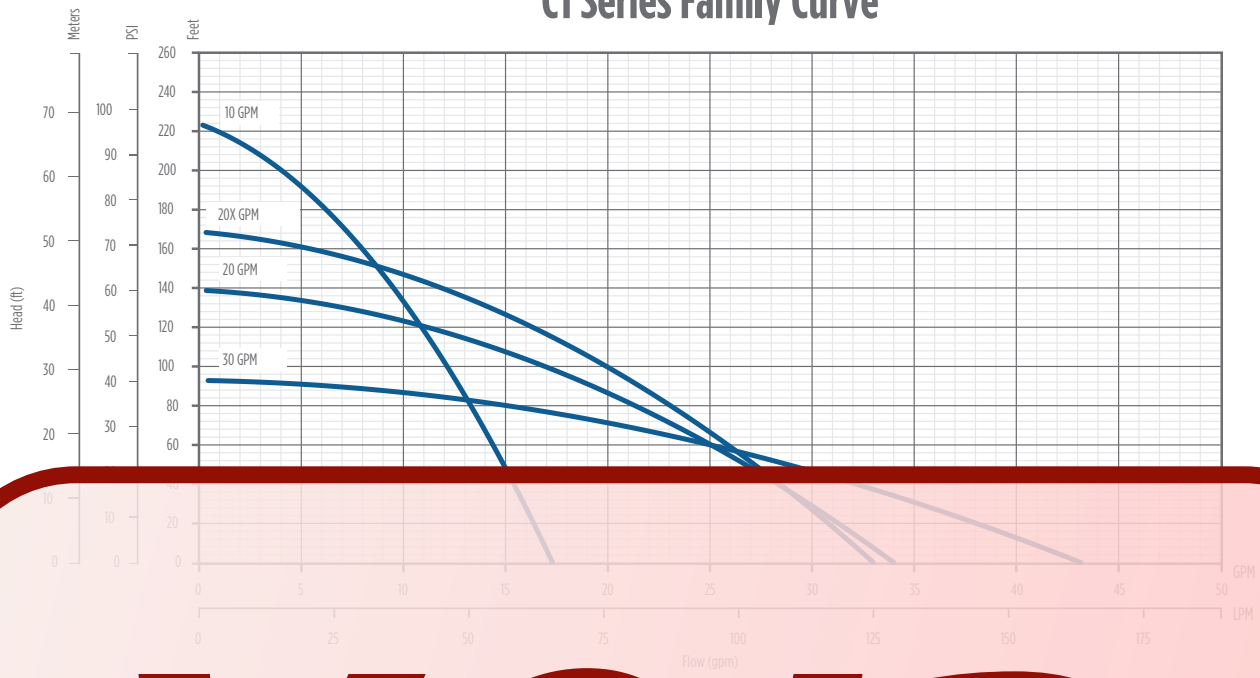
C1 SERIES
CISTERN PUMP

Designed for use in gray water / filtered effluent service applications, the C1 Series cistern pump provides high performance and long life in less than ideal water conditions. The C1 Series pump is able to pass solids up to 1/8" without having a negative effect on the internal hydraulic components.

The pump's unique bottom suction design allows for maximum fluid drawdown without compromising durability or overall life, and it does not require the use of a flow induction sleeve. Intended specifically for use in a cistern or tank, C1 Series pumps are suitable for use in agricultural, residential, and commercial installations.

Franklin Electric

C1 Series Family Curve



- Fluid flows of 10, 20, and 30 gpm, with a max shut-off pressure of over 100 psi

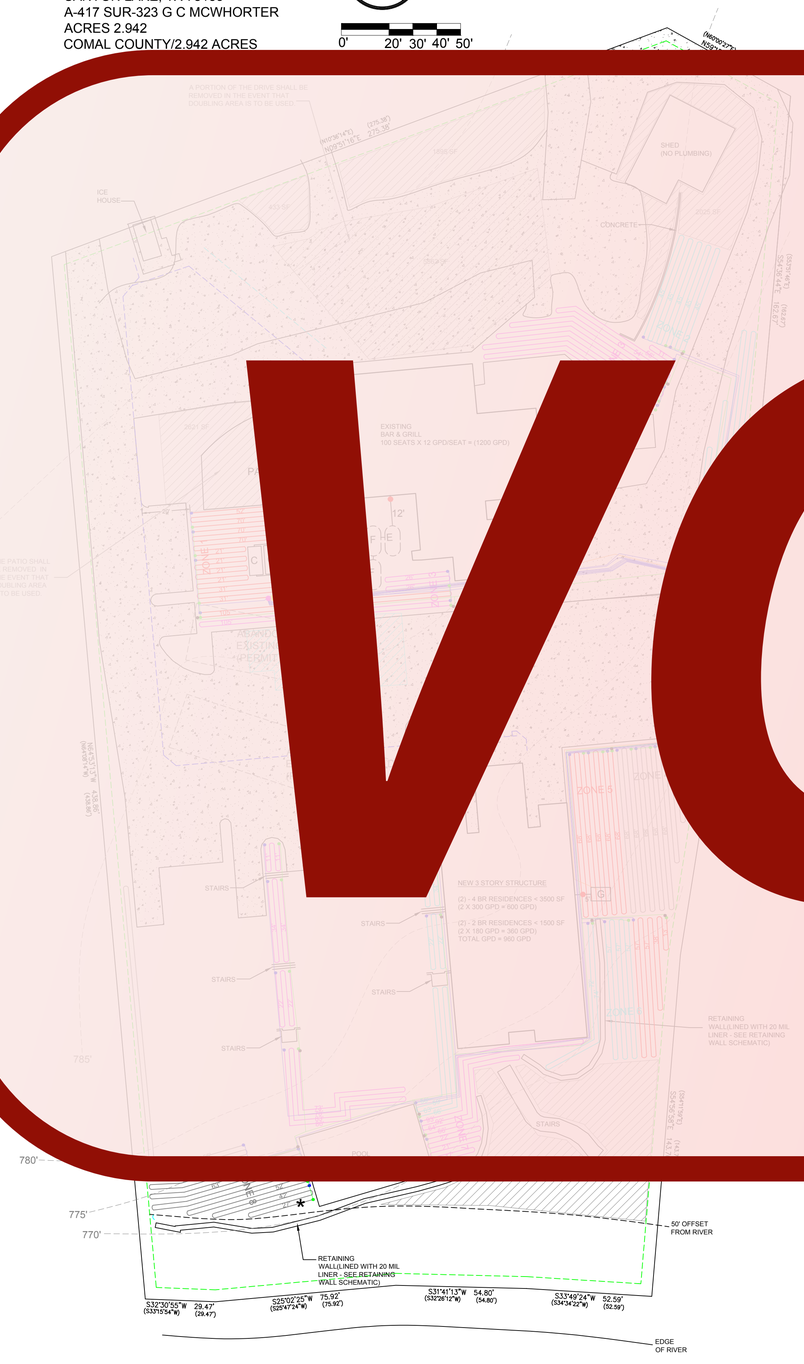
ORDERING INFORMATION

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.

GOLDEN JOHN M
145 FM 2673
CANYON LAKE, TX 78133
A-417 SUR-323 G C MCWHORTER
ACRES 2.942
COMAL COUNTY/2.942 ACRES

0' 20' 30' 40' 50'



NOTES:
- PLACE CLEANOUTS WITHIN 3' OF STRUCTURES.
- INSTALL VACUUM BREAKERS AT HIGHEST POINTS ON BOTH THE SUPPLY AND FLUSH MANIFOLDS IN EACH ZONE.
- INSTALL CHECK VALVES ON THE FLUSH LINE TO ISOLATE EACH ZONE..
- SEWER LINE WILL BE SCH 80 PVC OR SLEEVED WITH SCH 40 PIPE WHERE IT IS WITHIN 5' OF FOUNDATIONS, BUILDINGS, SURFACE IMPROVEMENTS, SWIMMING POOLS AND OTHER STRUCTURES TO PROVIDE EQUIVALENT PROTECTION UNDER SETBACK REQUIREMENTS OF TAC 285.
- 1.5" SCH 40 SUPPLY AND FLUSH LINES WILL BE SLEEVED IN SCH 40 PVC PIPE OR WILL BE SCH 80 PVC PIPE WHERE THEY ARE WITHIN 5' OF THE DRIVE. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR THE OSSF SETBACK REQUIREMENTS OF TAC 285.
- 1.5" SCH 40 SUPPLY AND FLUSH LINES WILL BE SLEEVED IN SCH 40 PVC PIPE OR WILL BE SCH 80 PVC PIPE WHERE THEY CROSS SURFACE IMPROVEMENTS AND 5' BEYOND. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR THE OSSF SETBACK REQUIREMENTS OF TAC 285.
- 2" SCH 40 PVC PIPE FROM PUMP TANK(G) WILL BE SCH 80 PVC OR SLEEVED WITH SCH 40 PVC PIPE WHERE IT IS WITHIN 5' OF FOUNDATIONS, BUILDINGS, SURFACE IMPROVEMENTS, SWIMMING POOLS AND OTHER STRUCTURES TO PROVIDE EQUIVALENT PROTECTION UNDER SETBACK REQUIREMENTS OF TAC 285.
- TANKS TO BE > 5' FROM DRIVE AND STRUCTURES. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR THE SETBACK REQUIREMENTS OF TAC 285.
- TANK G TO BE BURIED AT DEPTH TO ALLOW FOR 12" SOIL OVER THE PUMP TANK.
- 5 SF OF DRAINFIELD AREA DEDUCTED FOR IMPERMEABLE TANK G LIDS.
- THERE SHALL BE NO DRIVING OVER THE DRAINFIELD.
- IN THE EVENT THAT TANK DOUBLING AREA AND DRAINFIELD DOUBLING AREA SHALL BE UTILIZED, A PORTION OF THE DRIVE WILL BE REMOVED.
- LIQUID CHLORINATION SHALL BE UTILIZED.
- ALL ELECTRICAL WIRING SHALL CONFORM TO THE REQUIREMENTS 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 ELECTRICAL 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.
- TANKS MUST HAVE WATER TIGHT CAPS THAT ARE AT LEAST 65# OR CAN ONLY BE REMOVED WITH TOOLS. A SECONDARY PLUG, NET OR MESH IN RISER MUST BE PROVIDED TO PREVENT ENTRY IN THE EVENT THAT CAP IS DAMAGED OR REMOVED SO TO CONFORM WITH 30 TAC CHAPTER 285.38.

ONS:
MIT SUBMITTAL, A METER M ED ON THE OU
ROM THIS METER MUST DAILY AND SU
HEALTH DEPARTMENT FOR 12 MONT
AND FOR EVERY NE ANY TIME TH
OW RATE THIS PE OID AND A NEW
TAINED.

KEY

DOUBLIN 8 SF
FIELD D A = 16532 S
UPPLY L
LUSH LIN
ANOUT
CH 40 PV
OPOSED
OSSF OFF
CHECK VAL
- 8 ZONE K-R
- SUPPLY LI ON
- FLUSH LIN ON
- 1" ARKAL
- TEST HOLE
- 5 ZONE K-RAIN VALVE
- FLOW METER(SEE SPECIAL PERMIT CONDITION NOTE)
- DRIVE/WALKWAY

A - 3000 GALLON PRE TREATMENT TANK
B1 - 3000 GALLON FLOW EQUALIZATION TANK
B1* - 3000 GALLON FLOW EQUALIZATION TANK WITH DUAL ALTERNATING PUMPS.
C - 1500 GALLON AEROBIC TREATMENT UNIT.
D1 - 3000 GALLON PUMP TANK.
D1* -3000 GALLON PUMP TANK WITH DUAL ALTERNATING PUMPS.
E - EXISTING 2000 GALLON GREASE TRAP (PERMIT #89548)
TANK(PERMIT #89548)
G - 1000 GALLON PUMP TANK WITH DUAL ALTERNATING GRINDER PUMPS

NOTES:
- D1 AND D1* SHALL BE CONNECTED TO MAKE ONE LARGE TANK.
- B1 AND B1* SHALL BE CONNECTED TO MAKE ONE LARGE TANK.

ZONE 1:
1026 L.F. OF DRIP TUBING SPACED 2' APART.
8 ROWS @ 21 L.F. EACH.
4 ROWS @ 31 L.F. EACH.
2 ROWS @ 105 L.F. EACH.

ZONE 2:
1090 L.F. OF DRIP TUBING SPACED 2' APART.
10 ROWS @ 45 L.F. EACH.
2 ROWS @ 50 L.F. EACH.
2 ROWS @ 70 L.F. EACH.
4 ROWS @ 100 L.F. EACH.

ZONE 3:
1068 L.F. OF DRIP TUBING SPACED 2' APART.
2 ROWS @ 105 L.F. EACH.
4 ROWS @ 26 L.F. EACH.
1 ROW @ 79 L.F.
1 ROW @ 80 L.F.
1 ROW @ 81 L.F.
1 ROW @ 82 L.F.
1 ROW @ 76 L.F.
1 ROW @ 78 L.F.
2 ROWS @ 73 L.F. EACH.
1 ROW @ 54 L.F.
1 ROW @ 56 L.F.
[illegible] @ 11 L.F. EACH.
[illegible] SPACED 2' APART.
2
10 R

ZONE 5:
1010 L.F. [illegible] 2' APART.
10 ROWS
2 ROWS @
2 ROWS @
4 ROWS @

ZONE 6:
1032 L.F. OF [illegible] 2' APART.
6 ROWS @
1 ROW @ 7
1 ROW @ 7
4 ROWS @
4 ROWS @
4 ROWS @
1 ROW @
1 ROW
1 RO

SPACED 2' APART.
EACH.
L.F. EACH.
L.F. EACH.
@ 13 L.F. EACH.
@ 73 L.F.
ROW @ 78 L.F.
1 ROW @ 83 L.F.
1 ROW @ 86 L.F.
4 ROWS @ 11 L.F. EACH.
4 ROWS @ 34 L.F. EACH.
4 ROWS @ 22 L.F. EACH.

ZONE 8:
995 L.F. OF DRIP TUBING SPACED 2' APART.
1 ROW @ 155 L.F.
1 ROW @ 132 L.F.
2 ROWS @ 42 L.F. EACH.
4 ROWS @ 63 L.F. EACH.
2 ROWS @ 65 L.F. EACH.
2 ROWS @ 52 L.F. EACH.
2 ROWS @ 42 L.F. EACH.
2 ROWS @ 27 L.F. EACH.

GPD AND DRAINFIELD AREA CALCULATIONS:
TOTAL GPD = 1200 GPD + 960 GPD = 2160 GPD
TOTAL REQUIRED DRAINFIELD AREA = 2160 GPD/0.25 = 8640 SF
TOTAL LINEAR FEET OF DRIP LINE = 8266 L.F.
TOTAL ACTUAL DRAINFIELD AREA = 16532 SF - 5SF/EQR LID[illegible] G LIDS) = 16527 SF

BOD CALCULATIONS:
EXISTING BAR AND GRILL
(1200 GPD X 1200 MG/L X 8.34)/ (10^6) = 12 LBS OF BOD

NEW RESIDENCES
(960 GPD X 300 MG/L X 8.34)/(10^6) = 2.4 LBS OF BOD

TOTAL LBS OF BOD = 12 + 2.4 = 14.4 LBS OF BOD

ACRES 2.942
COMAL COUNTY/2.942 ACRES

RECEIVED
By Brandon Olvera at 3:01 pm, Aug 22, 2023

SCALE 1" = 16'

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

A PORTION OF THE DRIVE SHALL BE REMOVED IN THE EVENT THAT DOUBLING AREA IS TO BE USED.

THE PATIO SHALL BE REMOVED IN THE EVENT THAT DOUBLING AREA IS TO BE USED.

790'
785'
780'
775'
770'

N64°53'13"W (N64°08'14"W) 438.86' (438.86')

(N60°00'27"E) N59°15'28"E (59.19') 59.19'

(S53°51'46"E) S54°36'44"E (162.67') 162.67'

(S49°55'00"E) S50°39'59"E (200.59') 200.59'

S32°30'55"W (S33°15'54"W) 29.47' (29.47')

S25°02'25"W (S25°47'24"W) 75.92' (75.92')

S31°41'13"W (S32°26'12"W) 54.80' (54.80')

S33°49'24"W (S34°34'22"W) 52.59' (52.59')

(S54°11'59"E) S54°56'58"E (143.70') 143.70'

1895 SF
433 SF
5562 SF
2621 SF
3996 SF
CONCRETE
PATIO
BAR & 100 SEATS
ZONE 1
ZONE 2
ZONE 3
ZONE 4
ZONE 5
ZONE 6
ZONE 7
ZONE 8
STAIRS
NEW 3 STORY STRUCTURE
POOL (55' X 21')
EXISTING DRAINFIELD
(PERMITTED)
ABANDONED DRAINFIELD
RETAINING WALL(LINED WITH 20 MIL LINER - SEE RETAINING WALL SCHEMATIC)
OFFSET FROM RIVER
EDGE OF RIVER

- TAN
SETE
- TAN
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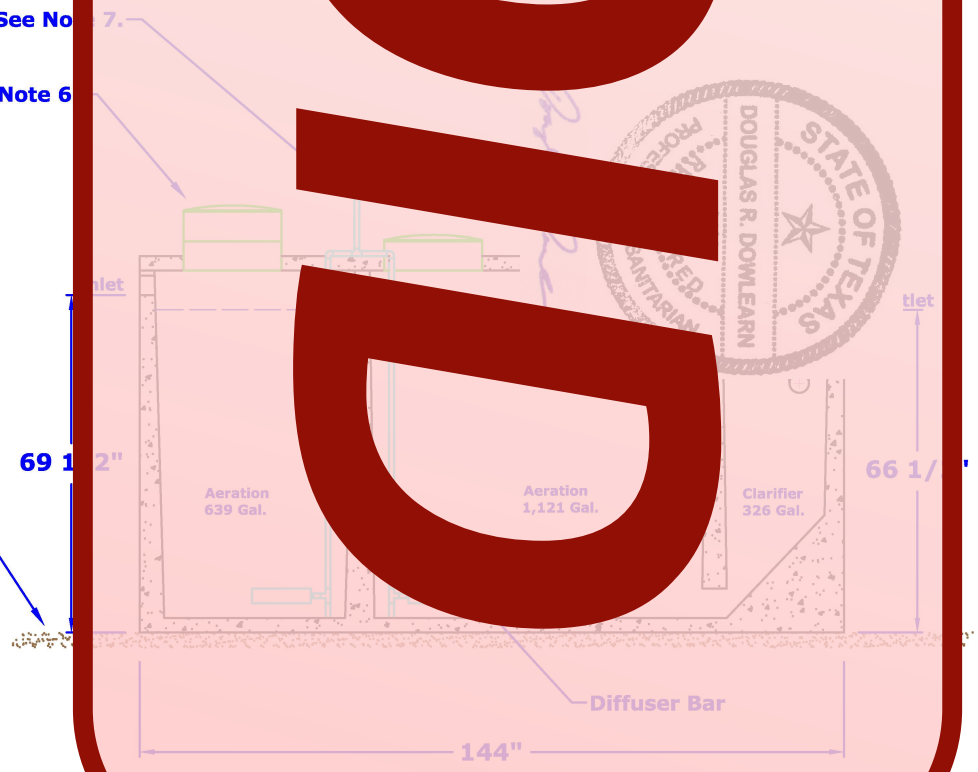
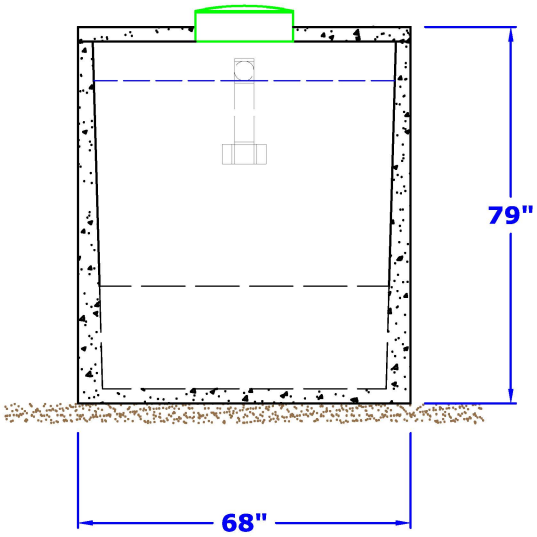
Advantage
Wastewater Solutions llc

GENERAL NOTES:

1. Plant structure material to be precast concrete and steel.
2. Maximum burial depth is 30" from slab top to grade.
3. Weight = 16,600 lbs.
4. Treatment capacity is 1,500 GPD.
5. BOD Loading = 4.50 lbs. per day.
6. 20" Ø acess riser w/ lid (Typical 3). Optional extension risers available.
7. PVC Air Line to Bio-Robic B-1500 Air Compressor (Max. 50 Lft from Plant).
8. 4" min. compacted sand or gravel pad by Contractor
9. Requires minimum 1,000 gallon trash tank unless otherwise specified by engineering.

MINIMUM EXCA MENSIONS:
Width: 80"
Length: 156"





NuWater E-15 Duel Aeration
Aerobic Treatment Plant (Assembled)

July, 2010

Model: E-1500

Scale:
* All Dimensions subject to allowable specification tolerances.

Dwg. #: ADV-B1500-2

Advantage
Wastewater Solutions llc
Advantage Wastewater Solutions llc.
444 A Old Hwy No 9
Comfort, TX 78013
830-995-3189
fax 830-995-4051

D.A.D SERVICES, IN
DOUG DOWLEARN
PO BOX 212, BULVERDE, TX 78163
Designed for: Golden John M

RECEIVED
By Brandon Olvera at 3:01 pm, Aug 22, 2023

The installation site is at 145 FM 2673 of the A-417 SUR-323 G C MCWHORTER in Comal County, TX. The proposed OSSF will treat the wastewater from an existing bar and grill with 100 seats (100 x 12 gpd = 1200 gpd), along with (2) new 4 bedroom, < 3500 SF residences (2 x 300 gpd = 600 gpd) and (2) new 2 bedroom, < 1500 SF residences (2 x 180 gpd = 360 gpd) . The proposed method of wastewater treatment is aerobic treatment(utilizing liquid chlorination) with drip irrigation. This method was chosen because of unsuitable soil conditions.

PROPOSED SYSTEM:

VOID

A 4" PVC pipe will discharge from the existing bar and grill to an existing 2000 gallon grease trap(E - permit #89548), which will then discharge into two 1500 gallon dual compartment septic tanks(F - permit #89548). Effluent will flow from the 1500 gallons dual compartment tanks to a 3000 gallon pre treatment tank(A). A 4" PVC pipe will discharge from the new residences 1000 gallon pump tank with dual alternating grinder pumps(G), which will flow into 3000 gallon pre treatment tank previously mentioned. From the pre-treatment tank, effluent flow to (2) 1500 gallon flow equalization tanks connected together with dual alternating pumps and A 5 zone K-Rain valve and alternating dosed from the flow equalization tanks to (5) 1500 gpd aerobic treatment units which will flow to (2) 3000 gallon pump tanks connected together with dual alternating pumps(D1 and D1*) and (2) 3000 gallon pump tanks(D1 and D1*) are controlled by a time controller allowing distribution 4 times per day for 10 minute run per dose. Float switches set to pump 2160 gallons per day. A high water audible and visual alarm will activate should pumps fail. Distribution from pump tank D1 and D1* by self flushing 100 to an 8 zone K-Rain valve box then through a 1.5" SCH-40 manifold to 8266 L.F. drip tubing field(Zones 1-8), with drip lines set approximately two feet apart with 0.61 gph emitters set every two feet, as per the attached schematic. A hose bib will be installed in the pump tank on the supply manifold to the drip field. A 1.5" SCH-40 return line with a pressure gauge is installed to periodically flush the system and will maintain pressure at 30 psi. Solids caught in the spin filter are flushed each cycle back to the pre-treatment tank. Vacuum breakers in each zone will be installed at the highest points on each manifold to prevent siphoning of effluent from higher to lower parts of the field. The placement of the drip tubing will be on soil that has been scarified. The tubing will be covered with 6" of Class II soil.

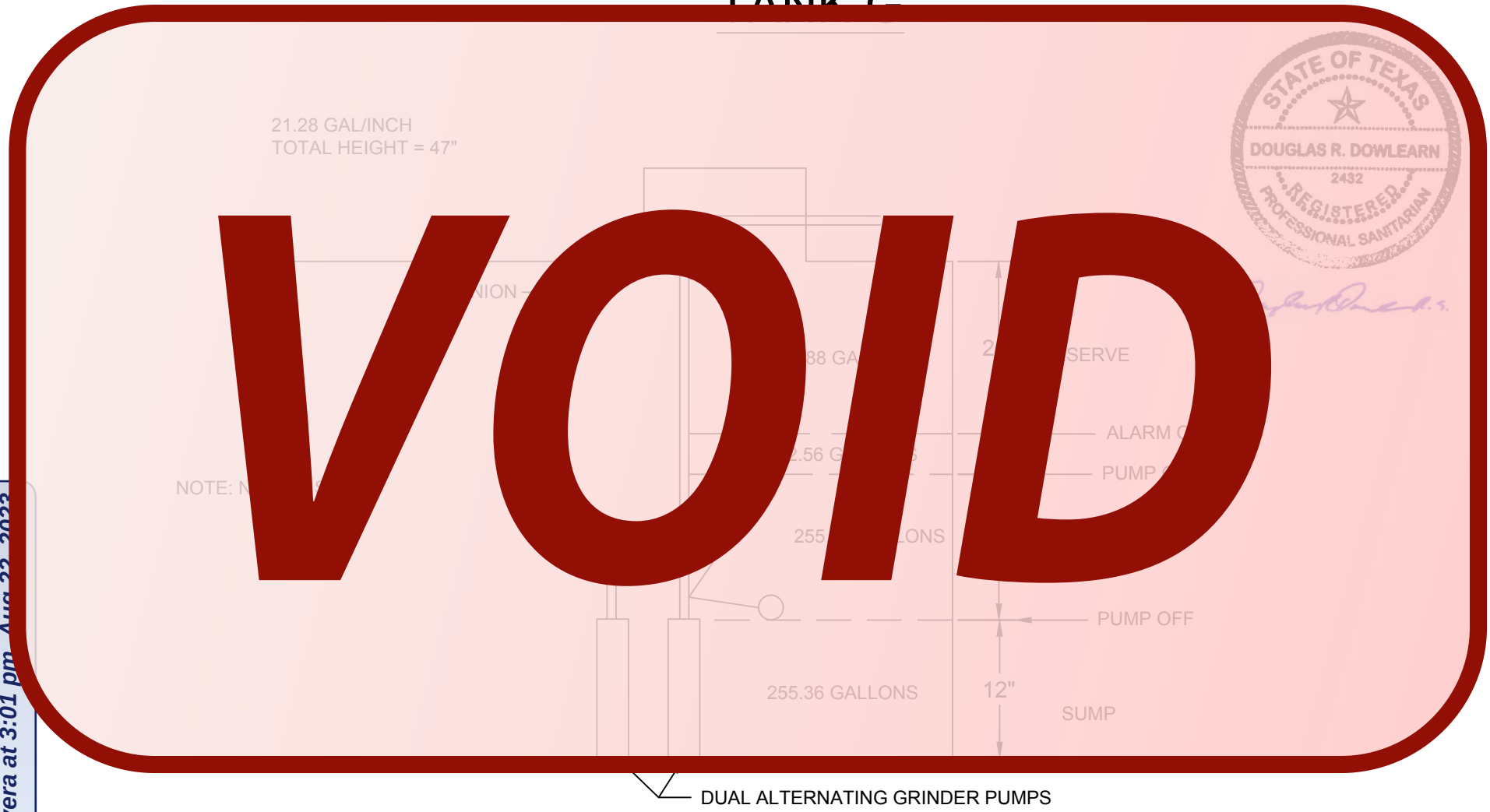
DESIGN SPECIFICATIONS:

Daily Waste Flow: 2160 gpd
Application rate: 0.25
Application area required: 2160/.25 =8640 SF
Application area utilized: 16532 SF - 5 SF(for impermeable tank lids) = 16527 SF
Pump tank reserve capacity: 720 gal minimum total

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

1000 GALLON PUMP TANK W/GRINDER PUMPS

TANK C



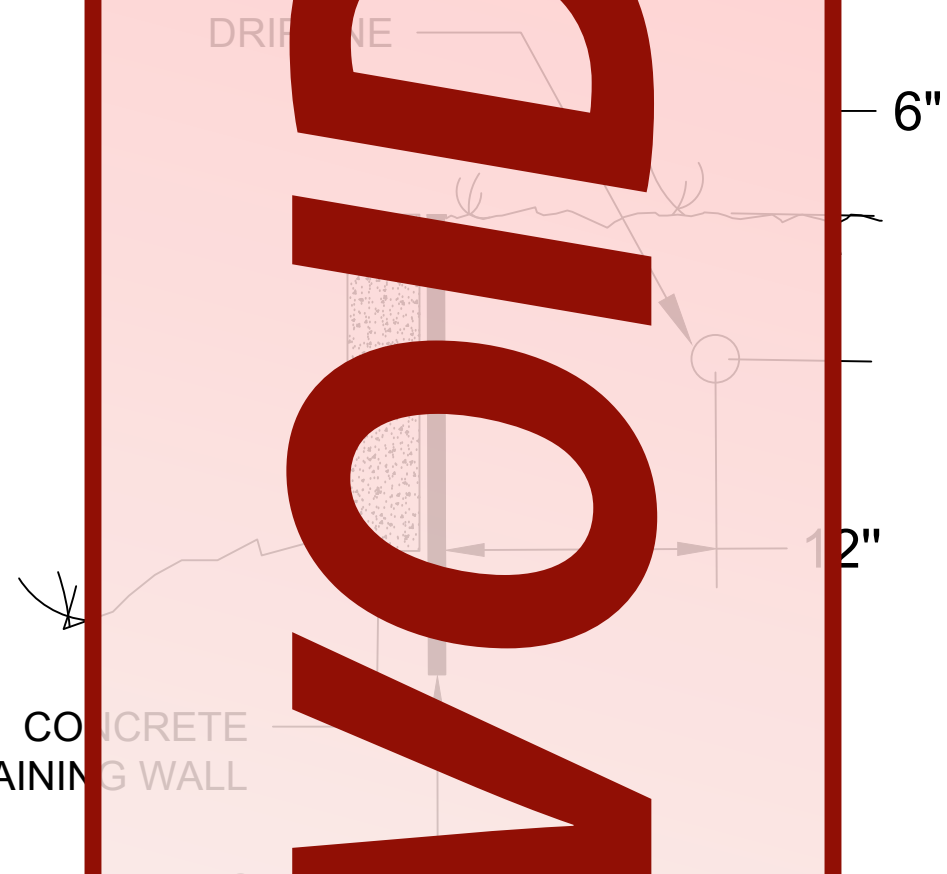
NOTE: SET TO ACTIVATE ON DEMAND.

SYSTEM COMPONENTS:
SCH 40 PVC sewer line
1.5” purple PVC supply and flush line
1 - Existing 2000 gallon grease trap(E - existing permit #89548)
2 - Existing 1500 gallon dual compartment septic tanks(F- existing permit #89548)
1 - 3000 gallon pretreatment tank(A)
2 - 3000 gallon flow equalization tanks connected together with dual alternating pumps(B1 and B1*)
5 - 1500 gpd aerobic treatment unit(C)
2 - 3000 gallon pump tanks connected together with dual alternating pumps and timed controls(D1 and D1*)
1 - Liquid chlorinator
1 - 8 zone K-Rain valve
1 - 5 zone K-Rain valve
5 - check valve
- Arkal 1” filter(>100 microns) - Netafim Model #DF100-120
- 1000 gallon pump tank with dual alternating grinder pumps(G)

LANDS ING

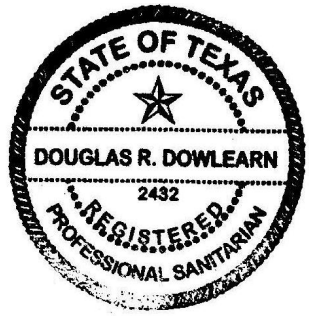
The native vegeta n distribut ea should c of l vel s plains gr uestem or ermuda. The ent the drip al must b ered gro over such ass seed or sod rior to the final in t. The plac f tubing be on scarified. The ubing will be cove th 6” of Class I event th ral c ed, a suitable ground over must be installed on all excavated areas.

RETAINING WALL SCHEMATIC



20 MIL PLASTIC LINER PLACED
IN A TRENCH THAT IS A
MINIMUM DEPTH OF 18" TO
PREVENT SEEPAGE

NOTE: NOT TO SCALE



OSSF SOIL EVALUATION REPORT INFORMATION

Date: 5/19/23

Applicant Information:
Name: John M Golden
Address: PO Box 114
City, State & Zip Code: Yorktown, TX 78164
Phone: 361-550-4208
Email: jgoldenland@sbcglobal.net

Site Evaluator Information:
Name: Douglas R. Dowlearn
Company: D.A.D. Services, Inc.
Address: 703 Oak Drive
City, State & Zip: Blanco, TX 78606
Phone: (210)240-2101 **Fax:** (866)260-7687
Email: txseptic@gmail.com

Legal: A-417, George McWhorter Sur-323; 2.942 acres

Street/Road Address: 145 FM 2673
City : Canyon Lake Zip: 78133
Additional Info: Comal County

Installer Information:

Name:
Company:
Address:
City, State & Zip:
Phone:

Depth	Texture	Soil Type	Structure	Drainage (Mottling/Water Table)	Observation
Soil Boring #1 0-60"	II	Clay loam Limestone		<2" gravel 2"+ limestone	one
Soil Boring #2 0-60"		Same as above			

DESIGN SPECIFICATIONS

Application Rate (RA): 0.25
OSSF is designed for: Bar & Grill w/ 100 seats (12 gpd/seat), (2) 4 BR (<3500 sq. ft.), (2) 2 BR (<1500 sq. ft.)
1200 gpd + (2) 300 gpd + (2) 180 gpd = 2160 gallons per day

An aerobic treatment/drip disposal system is to be utilized based on the site evaluation.
8640 sq. ft. disposal area required
2000 gallon grease trap(existing permit #89548)
2 - 1500 gallon dual compartment septic tanks(existing permit #89548)
3000 gallon pretreatment tank required
2 - 3000 gallon flow equalization tank with dual alternating pumps required
5 - 1500 gpd aerobic treatment units required
2 - 3000 gallon pump tank with dual alternating pumps with timed controls(D1 and D1*) required
1 - 1000 gallon pump tank with dual alternating grinder pumps required
Calculations: Absorption Area: Q/RA= 2160/0.25= 8640 Sq. Ft.

FEATURES OF SITE AREA

Presence of 100-year flood zone: YES
Existing or proposed water well in nearby area: NO
Presence of adjacent ponds, streams, water impoundments: YES
Presence of upper water shed: NO
Organized sewage service available to lot: NO

I certify that the findings of this report are based on my field observations and are accurate to the best of my ability. The site evaluation and OSSF design are subject to approval by the TCEQ or the local authorized agent. The planning materials and the OSSF design should not be considered final until a permit to construct has been issued.

Site Evaluator:
NAME: Douglas R. Dowlearn, R.S.
Signature:

License No. OS9902 – Exp. 6/30/2023
TDH: #2432 – Exp. 2/28/2025

Olvera,Brandon

From: Olvera,Brandon
Sent: Wednesday, August 30, 2023 4:05 PM
To: Lauren Dowlearn ; jgoldenland@sbcglobaal.net
Subject: FW: QA for Cindy--FW: 116336.pdf
Attachments: Comal County 116336-8-23-23-CRA-8-24-23 Final_TCEQ Nonstandard Review.pdf

Good Afternoon,

e response from TCEQ.
evise accordingly and resubmit.

FYI- the last line of the attached document states that we will need to send this back to TCEQ for their approvsl.

Thank You,

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

RECEIVED
By Kathy Griffin at 3:48 pm, Jun 14, 2023

RECEIVED
By Kathy Griffin at 12:48 pm, Oct 01, 2024

COMAL COUNTY
ENGINEER'S OFFICE

ON-SITE SEWAGE FACILITY APPLICATION

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

Date 6/13/2023

Permit Number 116336

1. APPLICANT / AGENT INFORMATION

Owner Name	John M Golden	Agent Name	Doug Dowlearn R.S.
Mailing Address	PO Box 114	Agent Address	703 Oak Drive
City, State, Zip	Yorktown, TX 78164	City, State, Zip	Blanco, TX 78606
Phone #	361-550-4208	Phone #	210-240-2101
Email	jgoldenland@sbcglobal.net	Email	txseptic@gmail.com

2. LOCATION

Subdivision Name _____ Unit _____ Lot _____ Block _____

Survey Name / Abstract Number A-417 SUR-323 George McWhorter Acreage 2.942

Address 145 FM 2673 City Canyon Lake State TX Zip 78133

3. TYPE OF DEVELOPMENT

☐ Single Family Residential

Type of Construction (Home, Mobile, Etc.) _____

Number of Bedrooms _____

Indicate Square Footage _____

☒ Non-Single Family Residential

(Planning materials must show adequate area for the replacement and repair of the OSSF and disposal area)

Type of Facility 1 Bedroom <3500 Sq. Ft., 2 - 2 Bedroom <1500 Sq. Ft.

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

Restaurants, Lounges, Theaters - Indicate Number of Seats Bar & Grill - 100 seats (12 gpd/seat)

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

Travel Trailer/RV Parks - Indicate Number of Spaces _____

Miscellaneous _____

VOID

Estimated Cost of Construction: $ 2,000,000 (Structure Only)

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

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

Source of Water ☒ Public ☐ Private Well

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 6/13/2023

10/1/24

Revised January 2021

RECEIVED
By Brandon Olvera at 3:01 pm, Aug 22, 2023

Project Address: 1431 FM 2673
Permit Number: 116336
Designer: Douglas R. Dowlearn, R.S. 2432
Date: 7.14.23

VOID

SPECIAL PERMIT CONDITIONS

1.) As a condition of this permit submittal, a meter must be installed on the outflow line of the pump tank. The readings from this meter must be recorded daily and submitted to the Comal County Environmental Health Department once a month for 12 months from the date the License to Operate is issued ***and for every new tenant.*** If at any time the daily meter reading exceeds the permitted flow rate this permit will be void and a new permit must be obtained.

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

RECEIVED
By Brandon Olvera at 2:38 pm, Oct 17, 2023

Project Address: 145 FM 2673
Permit Number: 116336
Designer: Douglas R. Dowlearn, R.S. 2432
Date: 10.11.2023

UPDATED OSSF DESIGN PACKET

VOID

1. 30 TAC §285.32 (b) identifies that a professional engineer shall verify in writing that the pre-cast concrete tanks are in compliance with the Materials and Manufacture Sectio[illegible]d the Str[illegible]al Des[illegible]ments S[illegible]n of [illegible]nation: C 1227, Standa[illegible]pecifica[illegible]or P[illegible]Co[illegible]Septi[illegible]ks (

- The [illegible]gner s[illegible]prov[illegible]e stampe[illegible]ifica[illegible]etter[illegible]tamped p[illegible] that verify comp[illegible]e w[illegible]is re[illegible]ment for e[illegible]onc[illegible]tank[illegible]uded in th[illegible]sign.

Stampe[illegible]ri[illegible]on lett[illegible]ow provi[illegible]lon[illegible]n sta[illegible]d plans f[illegible]ch concrete tank.

2. 30 TAC §285.32(d)(2) identifies the planning materials for nonstandard treatment systems submitted for review will be evaluated using the criteria established in this chapter, or basic engineering and scientific principles.

- The designer is proposing a drip field hydraulic loading rate at 0.25 gallons per square foot per day, equivalent to 12.2 feet of water per year. The evaporation and transpiration rate is estimated at 5 feet per year. Therefore, the designer is stating that 7.2 feet of water will enter the site through the drip field.

We are utilizing the soil application rate from §285.91 Table 1 for the class II soil that was found on this site, which is 0.25 gallons per square foot per day.

The complexity of the drip fields should be controlled with a commercial automated control system. The designer has developed a comprehensive plan for using every available landscaping place for reusing the treated effluent. The drip field zones have unique shapes to fit the available area. The designer is proposing a drip field management system with limited ability to manage the site. The maintenance provider has no controls in the system to adjust water application to the zones. The design should implement a drip field management system to facilitate controlling the fields. An automated drip field control system can adjust dosing times to given fields, control a robust filtration package, control field flushing for the zones, and record the volume of water applied to each zone.

An ALTD-8Z control shall now be utilized - see ALTD-8Z SCHEMATIC for details.

- The aerobic treatment units consist of five treatment plants. The dosing to the treatment plants is through an indexing valve, which provides no ability for the maintenance provider to control dose rates to treatment units or allow controlling flow to given plants. An alternative approach to dosing the plants (orifices or weir box) would allow controlling of the doses to the treatment plants.

A 2" ball valve will now be installed on the line going into each aerobic treatment unit, which will be adjusted to provide equal flow to each aerobic treatment unit - see site plan and spec sheet.

- A comprehensive drainage plan should be developed to move stormwater from the buildings. The drip field loading rate is 2.5 times the landscape water needs. Rainfall shou[illegible] divert[illegible] drip fiel[illegible] mai[illegible]for effluent [illegible]agemen[illegible] TA[illegible]5.4(c)[illegible]

Drainfie[illegible]nal[illegible]rown[illegible]ightly to sh[illegible]inw[illegible]- see[illegible]e in site p[illegible]

- T[illegible]p tank dra[illegible]lt[illegible]he pl[illegible]ng of[illegible]ps in the lower se[illegible] of the tank. Th[illegible]awings s[illegible]d be [illegible]reflect both pumps having a separate union for removal in the top portion of the riser. The current drawing would indicate the need to enter the tanks to remove the pumps for maintenance.

VOID

Separate Unions have been added to allow for easier removal and maintenance of pumps - see tank schematics.

3. 30 TAC §285.33(d)(2)(D) identifies effluent disinfection. All disinfection systems shall be listed as approved dispensers or disinfection devices for wastewater systems by NSF/ANSI standard 46.

- The designer should specify a liquid chlorinator disinfection unit to be installed as a part of the design. The designer can state the allowance of an equivalent product. However, a chlorinator with associated literature should be included in the design package.

A NG300V - Series 100, 7" liquid chlorinator has been specified. See spec sheet for details.

4. 30 TAC §285.38 identifies the Prevention of Unauthorized Access to On-site Sewage Facilities (OSSF).

- The designer should specify equipment accessibility criteria for performing maintenance and restrictions for unauthorized access. Please identify the equipment selected to restrict access to OSSF components.

The following has been added to the design in order to prevent unauthorized access to OSSF components:

- TANKS MUST HAVE WATER TIGHT CAPS THAT ARE AT LEAST 65# OR CAN ONLY BE REMOVED WITH TOOLS. A SECONDARY PLUG, NET OR MESH IN RISER MUST BE PROVIDED TO PREVENT ENTRY IN THE EVENT THAT CAP IS DAMAGED OR REMOVED SO TO CONFORM WITH 30 TAC CHAPTER 285.38.

- INSPECTION AND CLEANOUT PORTS SHALL HAVE RISERS OVER THE PORT OPENINGS WHICH EXTEND TO 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 SO TO CONFORM WITH 30 TAC §285.38 (C)

- A FENCE AROUND TANKS TO PREVENT ACCESS FROM THE PUBLIC TO TANKS IS RECOMMENDED.

- The treatment tanks are in an area accessible by the public. The owner and designer should consider fencing of the treatment tanks.

A note regarding recommending a fence around the tanks to prevent access to the public is now on the site plan.

- Effective September 1, 2023, inspection and cleanout ports shall have risers over the port openings which extend to 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, 30 TAC §285.38 (c).

Planning materials now include the following note:

- INSPECTION AND CLEANOUT PORTS SHALL HAVE RISERS OVER THE PORT OPENINGS WHICH EXTEND TO 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 SO TO CONFORM WITH 30 TAC §285.38 (C)

Project Address: 145 FM 2673
Permit Number: 116336
Designer: Douglas R. Dowlearn, R.S. 2432
Date: 7.14.23

UPDATED OSSF DESIGN PACKET

1. Are the residences long-term or short-term?

Long term residences.

2. Per TAC 285.91(10) Table X the GPD for a restaurant is 28 GPD.

The restaurant sizing is staying the same as it was for permit #89548. Per TAC 285.91(10) Table X, 12 gpd/se r fast food ory. Di s and silv are n the premise.

3. is a cof op o roperty.
Wh e GF
Thi d be dered high s n.

The coff op is ontai No effluent is disp into t SF system

4. D ats also de the patio g?

Yes.

5. D seats includ urant r the r

Yes.

6. The BOD calculations need to be submitted by an engineer.

Find BOD calculations by an engineer attached.

7. Is the one structure outline on the design going to be for all the residences?

Yes. The structure(2 story structure) outline on the design is for the residences shown in the permit which are (2) new 4 bedroom, < 3500 SF residences (2 x 300 gpd = 600 gpd) and (2) new 2 bedroom, < 1500 SF residences (2 x 180 gpd = 360 gpd).

8. 30 TAC §285.32 (d) (5) identifies electrical wiring for non-standard systems shall be installed according to 30 TAC §285.34 (c).
    1. Specify these requirements in your planning materials.

Requirements now specified in site plan.

9. 30 TAC §§285.38 identifies the Prevention of Unauthorized Access to On-site Sewage Facilities (OSSF)
    1. Specify these requirements in your planning materials.

Requirements now specified in site plan.

10. As a condition of this permit submittal, a meter must be installed on the outflow line of the pump tank. The readings from this meter must be recorded daily and submitted to the Comal County Environmental Health Department once a month for 12 months from the date the License to Operate is issued and for every new tenant. If at any time the daily meter reading exceeds the permitted flow rate this permit will be void and a new permit must be obtained.
    1. Include this in your planning materials and design.

Special condition note is now included in design.

12. Revise accordingly and resubmit.

OSSF SOIL EVALUATION REPORT INFORMATION

Date: 5/19/23
Applicant Information:
Name: John M Golden
Address: PO Box 114
City, State & Zip Code: Yorktown, TX 78164
Phone: 361-550-4208
Email: jgoldenland@sbcglobal.net

Site Evaluator Information:
Name: Douglas R. Dowlearn
Company: D.A.D. Services, Inc.
Address: 703 Oak Drive
City, State & Zip: Blanco, TX 78606
Phone: (210)240-2101 **Fax:** (866)260-7687
Email: txseptic@gmail.com

Legal: A-417, George McWhorter Sur-323; 2.942 acres

Installer Information:

Street/Road Address: 145 FM 2673
City : Canyon Lake Zip: 78133
Additional Info: Comal County

Name:
Company:
Address:
City, State & Zip:
Phone:

VOID

Depth	Texture	Structure	Structure	Drainage	Restrictive Horizon	Observation
			Class III – platy or m	*tles/ e*		
Soil Boring #1 6”	Il	12” Loa 12”+ Limes		0% g	12”+	None
Soil Boring #2 6”	Same as above					

DESIGN SPECIFICATIONS

Applicati Rate (RA): 0.25
OSSF is designed for: Bar & Grill w/ 100 seats (12 gpd/seat), (2) 4 BR (<3500 sq. ft.), (2) 2 BR (<1500 sq. ft.)
1200 gpd + (2) 300 gpd + (2) 180 gpd = 2160 gallons per day
An aerobic treatment/drip disposal system is to be utilized based on the site evaluation.
8640 sq. ft. disposal area required
1 - 2000 gallon grease trap(existing permit #89548)
2 - 1500 gallon dual compartment septic tanks(existing permit #89548)
1 - 3000 gallon pretreatment tank required
2 - 3000 gallon flow equalization tank with dual alternating pumps required
5 - 1500 gpd aerobic treatment units required
2 - 3000 gallon pump tank with dual alternating pumps with timed controls required
1 - 1000 gallon pump tank with dual alternating grinder pumps required
Calculations: Absorption Area: Q/RA= 2160/0.25= 8640 Sq. Ft.

FEATURES OF SITE AREA

Presence of 100-year flood zone: YES
Existing or proposed water well in nearby area: NO
Presence of adjacent ponds, streams, water impoundments: YES
Presence of upper water shed: NO
Organized sewage service available to lot: NO

I certify that the findings of this report are based on my field observations and are accurate to the best of my ability. The site evaluation and OSSF design are subject to approval by the TCEQ or the local authorized agent. The planning materials and the OSSF design should not be considered final until a permit to construct has been issued.

Site Evaluator:
NAME: Douglas R. Dowlearn, R.S.
Signature:

License No. OS9902 – Exp. 6/30/2026
TDH: #2432 – Exp. 2/28/2025

RECEIVED
By Brandon Olvera at 2:13 pm, Oct 17, 2023

RECEIVED
By Brandon Olvera at 2:18 pm, Oct 17, 2023

D.A.D SERVICES, INC.
DOUG DOWLEARN
PO BOX 212, BULVERDE, TX 78163
Designed for: Golden John M

The installation site is at 145 FM 2673 of the A-417 SUR-323 G C MCWHORTER in Comal County, TX. The proposed OSSF will treat the wastewater from an existing bar and grill with 100 seats (100 x 12 gpd = 1200 gpd), along with (2) new 4 bedroom, < 3500 SF residences (2 x 300 gpd = 600 gpd) and (2) new 2 bedroom, < 1500 SF residences (2 x 180 gpd = 360 gpd) . The proposed method of wastewater treatment is aerobic treatment(utilizing liquid chlorination) with drip irrigation. This method was chosen because of unsuitable soil conditions.

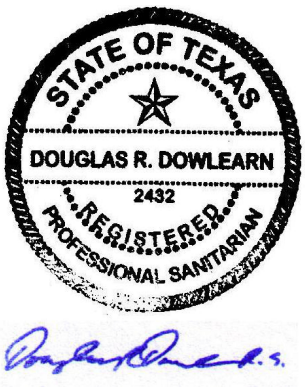
VOID

PROPOSED SYSTEM:

A 4" PVC pip discharg the grill to istin rease trap(E - perm t #89548), whic then di ge i 1500 dual artm ptic ta permit #89548). Effluent will fl om th ga dual compa tan a 30 lon pre t ent tank(A). A 4" PVC pipe will arge the sidences to 0 g pum with dua nating grinder pumps(G), whi ll f ato th 0 gallon pre ner prev y mentio . From the pre treatment tank, ws into 000 gallon equa on ta connected her with dual alternating pump B1*). Ef will be d fr e flo alizatio to (5) 1500 gpd aerobic treatmen). A 2" ba placed e lin 1500 gpd aerobic treatment unit, and the ball valves shall be adjusted to allow for equal flow to the aerobic treatment units. Effluent from the aerobic treatment units will flow to (2) 3000 gallon pump tanks connected together with dual alternating pumps(D1 and D1*). The (2) 3000 gallon pump tanks(D1 and D1*) are activated by a time controller allowing the distribution 42 times per day with a 10 minute run time per dose with float switches set to pump 2160 gallons per day. A high level audible and visual alarm will activate should the pumps fail. Distribution from pump tank D1 and D1* is through a self flushing 100 mesh spin filter to an ALTD-8Z valve box then through a 1.5" SCH-40 manifold to 8266 L.F. drip tubing field(Zones 1-8), with drip lines set approximately two feet apart with 0.61 gph emitters set every two feet, as per the attached schematic. A hose bib will be installed in the pump tank on the supply manifold to the drip field. A 1.5" SCH-40 return line with a pressure gauge is installed to periodically flush the system and will maintain pressure at 30 psi. Solids caught in the spin filter are flushed each cycle back to the pre-treatment tank. Vacuum breakers in each zone will be installed at the highest points on each manifold to prevent siphoning of effluent from higher to lower parts of the field. The placement of the drip tubing will be on soil that has been scarified. The tubing will be covered with 6" of Class II soil.

DESIGN SPECIFICATIONS:

Daily Waste Flow: 2160 gpd
Application rate: 0.25
Application area required: 2160/.25 =8640 SF
Application area utilized: 16532 SF - 5 SF(for impermeable tank lids) = 16527 SF
Pump tank reserve capacity: 720 gal minimum total



SYSTEM COMPONENTS:
SCH 40 PVC sewer line
1.5” purple PVC supply and flush line
1 - Existing 2000 gallon grease trap(E - existing permit #89548)
2 - Existing 1500 gallon dual compartment septic tanks(E- existing permit #89548)
1 - 3000 gallon pretreatment tank(A)
2 - 3000 gallon flow equalization tanks connected together with dual alternating pumps(B1 and B1*)
5 - 1500 gpd aerobic treatment unit(C)
2 - 3000 gallon pump tanks connected together with dual alternating pumps and timed controls(D1 and D1*
1 - Liquid chlorinator (NG300 V - Series 100 7” or equivalent)
1 - ALTD-8Z Duplex Effluent Sys
5 - 2” ball valv
15 - check valv
1 - Arkal 1” fil 00 m Model #
1 - 1000 gallon ternating grin

LANDSCAPING:

The native vegetation in the distribution area should consist of low level shrubs, plains grass, bluestem or Bermuda. The entire area of the drip disposal must be covered with a ground cover such as grass seed or sod prior to the final inspection. The placement of the drip tubing will be on soil that has been scarified. The tubing will be covered with 6” of Class II soil. In the event the natural cover is disturbed, a suitable ground cover must be installed on all excavated areas.

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

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

Planning Materials & Site Evaluation as Required Completed By Doug Dowlearn

System Description Aerobic With Drip Irrigation

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

Tank Size(s) (Gallons) See Attached Documents Absorption/Application Area (Sq Ft) 8640

Gallons Per Day (As Per TCEQ Table III) 2160

(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: _____

VOID

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

Signature of Designer Date 6/13/2023

195 David Jonas Dr., New Braunfels, Texas 78132-3760 (830) 608-2090 Fax (830) 608-2078

Revised July 2018

NOTES:
- PLACE CLEANOUTS WITHIN 3' OF STRUCTURES.
- INSTALL VACUUM BREAKERS AT HIGHEST POINTS ON BOTH THE SUPPLY AND FLUSH MANIFOLDS IN EACH ZONE.
- INSTALL CHECK VALVES ON THE FLUSH LINE TO ISOLATE EACH ZONE..
- SEWER LINE WILL BE SCH 80 PVC OR SLEEVED WITH SCH 40 PIPE WHERE IT IS WITHIN 5' OF FOUNDATIONS, BUILDINGS, SURFACE IMPROVEMENTS, SWIMMING POOLS AND OTHER STRUCTURES TO PROVIDE EQUIVALENT PROTECTION UNDER SETBACK REQUIREMENTS OF TAC 285.
- 1.5" SCH 40 SUPPLY AND FLUSH LINES WILL BE SLEEVED IN SCH 40 PVC PIPE OR WILL BE SCH 80 PVC PIPE WHERE THEY ARE WITHIN 5' OF THE DRIVE. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR THE OSSF SETBACK REQUIREMENTS OF TAC 285.

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

GOLDEN JOHN M
145 FM 2673
CANYON LAKE, TX 78133
A-417 SUR-323 G C MCWHORTER
ACRES 2.942
COMAL COUNTY/2.942 ACRES

0' 20' 30' 40' 50'
SCALE 1" = 30'

KEY
- 1.5" FLUSH LINE
- CLEANOUT
- 2" SCH 40 PVC PIPE
- PROPOSED WATER LINE
- 5' OSSF OFFSET
- CHECK VALVE
- ALTD-8Z VALVE BOX
- SUPPLY LINE CONNECTION
- FLUSH LINE CONNECTION
- 1" ARKAL FILTER
- TEST HOLE
- 2" BALL VALVE(BALL VALVES SHALL BE ADJUSTED TO
- FLOW METER(SEE SPECIAL PERMIT CONDITION NOTE)
- DRIVE/WALKWAY

A - 3000 GALLON PRE TREATMENT TANK
B1 - 3000 GALLON FLOW EQUALIZATION TANK
B1* - 3000 GALLON FLOW EQUALIZATION TANK WITH DUAL ALTERNATING PUMPS.
C - 1500 GALLON AEROBIC TREATMENT UNIT.
D1 - 3000 GALLON PUMP TANK.
D1* -3000 GALLON PUMP TANK WITH DUAL ALTERNATING PUMPS.
E - EXISTING 2000 GALLON GREASE TRAP (PERMIT #89548)
F - EXISTING 1500 GALLON DUAL COMPARTMENT SEPTIC TANK(PERMIT #89548)
G - 1000 GALLON PUMP TANK WITH DUAL ALTERNATING GRINDER PUMPS

NOTES:
- D1 AND D1* SHALL BE CONNECTED TO MAKE ONE LARGE TANK.
- B1 AND B1* SHALL BE CONNECTED TO MAKE ONE LARGE TANK.

ZONE 1:
1026 L.F. OF DRIP TUBING SPACED 2' APART.
2 ROWS @ 52 L.F. EACH.
6 ROWS @ 70 L.F. EACH.
8 ROWS @ 21 L.F. EACH.
4 ROWS @ 31 L.F. EACH.
2 ROWS @ 105 L.F. EACH.

ZONE 2:
1090 L.F. OF DRIP TUBING SPACED 2' APART.
10 ROWS @ 45 L.F. EACH.
2 ROWS @ 50 L.F. EACH.
2 ROWS @ 70 L.F. EACH.
4 ROWS @ 100 L.F. EACH.

ZONE 3:
1068 L.F. OF DRIP TUBING SPACED 2' APART.
2 ROWS @ 105 L.F. EACH.
4 ROWS @ 26 L.F. EACH.
1 ROW @ 79 L.F.
1 ROW @ 80 L.F.
1 ROW @ 81 L.F.
1 ROW @ 82 L.F.
1 ROW @ 76 L.F.
1 ROW @ 78 L.F.
2 ROWS @ 73 L.F. EACH.
1 ROW @ 54 L.F.
1 ROW @ 56 L.F.
2 ROWS @ 11 L.F. EACH.

ZONE 4:
996 L.F. OF DRIP TUBING SPACED 2' APART.
2 ROWS @ 25 L.F. EACH.
2 ROWS @ 37 L.F. EACH.
2 ROWS @ 15 L.F. EACH.
2 ROWS @ 32 L.F. EACH.
2 ROWS @ 49 L.F. EACH.
10 ROWS @ 68 L.F. EACH.

ZONE 5:
1010 L.F. OF DRIP TUBING SPACED 2' APART.
10 ROWS @ 68 L.F. EACH.
2 ROWS @ 38 L.F. EACH.
2 ROWS @ 13 L.F. EACH.
4 ROWS @ 57 L.F. EACH.

ZONE 6:
1032 L.F. OF DRIP TUBING SPACED 2' APART.
6 ROWS @ 57 L.F. EACH.
1 ROW @ 72 L.F.
1 ROW @ 74 L.F.
4 ROWS @ 19 L.F. EACH.
4 ROWS @ 34 L.F. EACH.
4 ROWS @ 22 L.F. EACH.
1 ROW @ 56 L.F.
1 ROW @ 59 L.F.
1 ROW @ 63 L.F.
1 ROW @ 66 L.F.

ZONE 7:
1049 L.F. OF DRIP TUBING SPACED 2' APART.
1 ROW @ 93 L.F.
1 ROW @ 92 L.F.
1 ROW @ 64 L.F.
1 ROW @ 66 L.F.
2 ROWS @ 22 L.F. EACH.
2 ROWS @ 21 L.F. EACH.
2 ROWS @ 17 L.F. EACH.
2 ROWS @ 13 L.F. EACH.
1 ROW @ 73 L.F.
1 ROW @ 78 L.F.
1 ROW @ 83 L.F.
1 ROW @ 86 L.F.
4 ROWS @ 11 L.F. EACH.
4 ROWS @ 34 L.F. EACH.
4 ROWS @ 22 L.F. EACH.

[illegible] SPACED 2' APART.
1 ROW @ 155 L.F.
1 ROW @ 132 L.F.
2 ROWS @ 42 L.F. EACH.
4 ROWS @ 63 L.F. EACH.
2 ROWS @ 65 L.F. EACH.
2 ROWS @ 52 L.F. EACH.
2 ROWS @ 42 L.F. EACH.
2 ROWS @ 27 L.F. EACH.

GPD AND DRAINFIELD AREA CALCULATIONS:
TOTAL GPD = 1200 GPD + 960 GPD = 2160 GPD
TOTAL REQUIRED DRAINFIELD AREA = 2160 GPD/0.25 = 8640 SF
TOTAL LINEAR FEET OF DRIP LINE = 8266 L.F.
TOTAL ACTUAL DRAINFIELD AREA = 16532 SF - 5SF(FOR IMPERMEABLE TANK G LIDS) = 16527 SF

BOD CALCULATIONS:
EXISTING BAR AND GRILL
(1200 GPD X 1200 MG/L X 8.34)/ (10^6) = 12 LBS OF BOD

NEW RESIDENCES
(960 GPD X 300 MG/L X 8.34)/(10^6) = 2.4 LBS OF BOD

TOTAL LBS OF BOD = 12 + 2.4 = 14.4 LBS OF BOD

ACRES 2.942
COMAL COUNTY/2.942 ACRES

SCALE 1" = 16'

A PORTION OF THE DRIVE SHALL BE REMOVED IN THE EVENT THAT DOUBLING AREA IS TO BE USED.

STATE OF TEXAS
DOUGLAS R. DOWLEARN
2432
REGISTERED
PROFESSIONAL SANITARIAN

ICE HOUSE

1895 SF

433 SF

5562 SF

SHED
(NO PLUMBING)

2025 SF

CONCRETE

(N60°00'27"E) N59°15'28"E (59.19') 59.19'

(N10°36'14"E) N09°51'16"E (275.38') 275.38'

(S53°51'46"E) S54°36'44"E (162.67') 162.67'

2621 SF

EXISTING
BAR & GRILL
100 SEATS X 12 GPD/SEAT = (1200 GPD)

PATIO

THE PATIO SHALL BE REMOVED IN THE EVENT THAT DOUBLING AREA IS TO BE USED.

ABANDON
EXISTING
(PERMIT #89548)

STAIRS

NEW 3 STORY STRUCTURE

(2) - 4 BR RESIDENCES < 3500 SF
(2 X 300 GPD = 600 GPD)

(2) - 2 BR RESIDENCES < 1500 SF
(2 X 180 GPD = 360 GPD)
TOTAL GPD = 960 GPD

ZONE 3
ZONE 4
ZONE 5
ZONE 6
ZONE 7
ZONE 8

RETAINING WALL(LINED WITH 20 MIL LINER - SEE RETAINING WALL SCHEMATIC)

POOL
(55' X 21')

3996 SF

50' OFFSET FROM RIVER

EDGE OF RIVER

785'
780'
775'
770'

S32°30'55"W (S33°15'54"W) 29.47' (29.47')
S25°02'25"W (S25°47'24"W) 75.92' (75.92')
S31°41'13"W (S32°26'12"W) 54.80' (54.80')
S33°49'24"W (S34°34'22"W) 52.59' (52.59')

N64°13'13"W (N64°28'26"W) 438.86' (438.86')

(S49°35'00"E) S50°39'59"E 200.59' (200.59')

(S54°11'59"E) S54°56'58"E 143.70' (143.70')

VOID

RECEIVED
By Brandon Olvera at 2:26 pm, Oct 17, 2023

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 25, 2023

Mr. Brandon Olvera, Designated Representative
Comal County, TCEQ ID No. 620049
195 David Jonas Dr.
New Braunfels, Texas 78132

Re: Non-Standard Review of an On-Site Sewage Facility Located at:
Restaurant (100 seats) plus 4 residences
145 FM 2673, Canyon Lake, Comal County, Texas
OSSF Permit Application Number OSSF-116336

Dear Mr. Olvera:

We received your request for a Texas Commission on Environmental Quality (TCEQ) review of the above-referenced nonstandard design on August 22, 2023. The nonstandard design review is to evaluate compliance with applicable requirements for On-Site Sewage Facilities (OSSF), as required by 30 Texas Administrative Code (TAC) §285.5(b)(2). Bruce Lesikar of the TCEQ Technical Programs Team conducted a review of the above-referenced application, planning materials, and related technical information. The nonstandard planning materials and related technical information submitted have been determined to generally not meet the requirements for further OSSF system permitting activity. **This letter serves as notification that your nonstandard design review request is determined to be unfavorable, as submitted**. Specifically, the following items are required to be addressed prior to the issuance of an Authorization to Construct by the applicable Authorized Agent:

LIST OF DEFICIENCIES AND/OR REQUIRED ITEMS.

1. 30 TAC §285.32 (b) identifies that a professional engineer shall verify in writing that the pre-cast concrete tanks are in compliance with the Materials and Manufacture Section and the Structural Design Requirements Section of ASTM Designation: C 1227, Standard Specification for Precast Concrete Septic Tanks (2000).
   - The designer shall provide the stamped verification letter or stamped plans that verify compliance with this requirement for each concrete tank included in the design.

2. 30 TAC §285.32(d)(2) identifies the planning materials for nonstandard treatment systems submitted for review will be evaluated using the criteria established in this chapter, or basic engineering and scientific principles.
   - The designer is proposing a drip field hydraulic loading rate at 0.25 gallons per square foot per day, equivalent to 12.2 feet of water per year. The evaporation and transpiration rate is estimated at 5 feet per year. Therefore, the designer is stating that 7.2 feet of water will enter the site through the drip field.
   - The complexity of the drip fields should be controlled with a commercial automated control system. The designer has developed a comprehensive plan for using every

available landscaping place for reusing the treated effluent. The drip field zones have unique shapes to fit the available area. The designer is proposing a drip field management system with limited ability to manage the site. The maintenance provider has no controls in the system to adjust water application to the zones. The design should implement a drip field management system to facilitate controlling the fields. An automated drip field control system can adjust dosing times to given fields, control a robust filtration package, control field flushing for the zones, and record the volume of water applied to each zone.

- The aerobic treatment units consist of five treatment plants. The dosing to the treatment plants is through an indexing valve, which provides no ability for the maintenance provider to control dose rates to treatment units or allow controlling flow to given plants. An alternative approach to dosing the plants (orifices or weir box) would allow controlling of the doses to the treatment plants.
- A comprehensive drainage plan should be developed to move stormwater from the buildings. The drip fields loading rate is 2.5 times the landscape water needs. Rainfall should be diverted from the drip fields to maintain capacity for effluent management. 30 TAC §285.4(c)(1)(G).
- The pump tank drawings illustrate the plumbing of the duplex pumps in the lower section of the tank. The tank drawings should be modified to reflect both pumps having a separate union for removal in the top portion of the riser. The current drawing would indicate the need to enter the tanks to remove the pumps for maintenance.

✓ 30 TAC §285.33(d)(2)(D) identifies effluent disinfection. All disinfection systems shall be listed as approved dispensers or disinfection devices for wastewater systems by NSF/ANSI standard 46.

- The designer should specify a liquid chlorinator disinfection unit to be installed as a part of the design. The designer can state the allowance of an equivalent product. However, a chlorinator with associated literature should be included in the design package.

✓ 30 TAC §285.38 identifies the Prevention of Unauthorized Access to On-site Sewage Facilities (OSSF).

- The designer should specify equipment accessibility criteria for performing maintenance and restrictions for unauthorized access. Please identify the equipment selected to restrict access to OSSF components.
- The treatment tanks are in an area accessible by the public. The owner and designer should consider fencing of the treatment tanks.
- Effective September 1, 2023, inspection and cleanout ports shall have risers over the port openings which extend to 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, 30 TAC §285.38 (c).

This letter serves as notification of an unfavorable OSSF nonstandard system design review by the TCEQ Technical Programs Team. A redesign of the system is required. The Authorized Agent should submit the new design to TCEQ for review. The Authorized Agent or their Designated Representative should review the responses to comments to confirm they are

complete. If you have any questions, or if we may be of assistance to you, please contact Bruce Lesikar in the TCEQ Technical Programs Team at (512) 239-0415 or via e-mail at Bruce.Lesikar@tceq.texas.gov.

Sincerely,

Joseph L. Hopkins

Joseph L. Hopkins, P.G.
Technical Programs Team Leader
Program Support and Environmental Assistance Division
Texas Commission on Environmental Quality

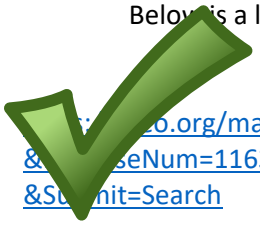
JLH/BJL

Olvera,Brandon

From: Olvera,Brandon
Sent: Tuesday, October 17, 2023 2:59 PM
To: Joseph Hopkins
Cc: Bruce Lesikar; Cindy Rojas Annicchiarico; Donna Cosper
Subject: RE: QA for Cindy--FW: 116336.pdf

Good Afternoon,

Below is a link to the response to the nonstandard review letter dated August 25, 2023.



[...o.org/mainpage/allSearches/record_search_resultsAll.php?frmDateFrom=&frmDateTo=&frmPermitType=all&...seNum=116336&frmAppName=&frmAddress=&frmSubdivision=&frmOrderBy=CASE_NUMBER&frmSortBy=desc&Su...mit=Search]

Thank You,

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

Olvera,Brandon

From: Olvera,Brandon
Sent: Tuesday, October 17, 2023 2:46 PM
To: Texas Super Septic
Cc: jgoldenland@sbcglobaal.net
Subject: RE: FW: QA for Cindy--FW: 116336.pdf

Good Afternoon,

file has been updated. I have sent the packet to TCEQ for executive director review.

Thank You,

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

GOLDEN JOHN M
145 FM 2673
CANYON LAKE, TX 78133
A-417 SUR-323 G C MCWHORTER
ACRES 2,942
COMAL COUNTY/2,942 ACRES

NOTES:
- PLACE CLEANOUTS WITHIN 3' OF STRUCTURES.
- INSTALL VACUUM BREAKERS AT HIGHEST POINTS ON BOTH THE SUPPLY AND FLUSH MANIFOLDS IN EACH ZONE.
- INSTALL CHECK VALVES ON THE FLUSH LINE TO ISOLATE EACH ZONE..
- SEWER LINE WILL BE SCH 80 PVC OR SLEEVED WITH SCH 40 PIPE WHERE IT IS WITHIN 5' OF OR CROSSES UNDER FOUNDATIONS, BUILDINGS, SURFACE IMPROVEMENTS, SWIMMING POOLS AND OTHER STRUCTURES TO PROVIDE EQUIVALENT PROTECTION UNDER SETBACK REQUIREMENTS OF TAC 285.
- 1.5" SCH 40 SUPPLY AND FLUSH LINES WILL BE SLEEVED IN SCH 40 PVC PIPE OR WILL BE SCH 80 PVC PIPE WHERE THEY ARE WITHIN 5' OF THE DRIVE. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR THE OSSF SETBACK REQUIREMENTS OF TAC 285.
- 1,5" SCH 40 SUPPLY AND FLUSH LINES WILL BE SLEEVED IN SCH 40 PVC PIPE OR WILL BE SCH 80 PVC PIPE WHERE THEY CROSS SURFACE IMPROVEMENTS AND 5' BEYOND. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR THE OSSF SETBACK REQUIREMENTS OF TAC 285.
- 2" SCH 40 PVC PIPE FROM PUMP TANK(G) WILL BE SCH 80 PVC OR SLEEVED WITH SCH 40 PVC PIPE WHERE IT IS WITHIN 5' OF FOUNDATIONS, BUILDINGS, SURFACE IMPROVEMENTS, SWIMMING POOLS AND OTHER STRUCTURES TO PROVIDE EQUIVALENT PROTECTION UNDER SETBACK REQUIREMENTS OF TAC 285.
- TANKS TO BE > 5' FROM DRIVE AND STRUCTURES. THIS WILL PROVIDE EQUIVALENT PROTECTION FOR THE SETBACK REQUIREMENTS OF TAC 285.
- TANKS WILL BE WATER TIGHT AND MANUFACTURED ACCORDING TO ASTM DESIGNATION: C 1227
- 5 SF OF DRAINFIELD AREA DEDUCTED FOR IMPERMEABLE TANK G LIDS.
- THERE SHALL BE NO DRIVING OVER THE DRAINFIELD.
- IN THE EVENT THAT TANK DOUBLING AREA AND DRAINFIELD DOUBLING AREA SHALL BE UTILIZED, A PORTION OF THE DRIVE WILL BE REMOVED.
- LIQUID CHLORINATION SHALL BE UTILIZED.
- ALL ELECTRICAL WIRING SHALL CONFORM TO THE REQUIREMENTS 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 ELECTRICAL 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.
- TANKS MUST HAVE WATER TIGHT CAPS THAT ARE AT LEAST 65# OR CAN ONLY BE REMOVED WITH TOOLS. A SECONDARY CORROSION RESISTANT SCREEN OR MESH IN RISER MUST BE PROVIDED TO PREVENT ENTRY IN THE EVENT THAT CAP IS DAMAGED OR LOST. RISERS SHALL CONFORM WITH 30 TAC 285.38 (C)
- TANKS SHALL BE INSTALLED LEVEL AND CROWNED TO SHED RAINWATER AWAY FROM THE TANK. RISER CAPS THAT ARE AT LEAST 65# OR CAN ONLY BE REMOVED WITH TOOLS. A SECONDARY CORROSION RESISTANT SCREEN OR MESH IN RISER MUST BE PROVIDED TO PREVENT ENTRY IN THE EVENT THAT CAP IS DAMAGED OR LOST. RISERS SHALL CONFORM WITH 30 TAC 285.38.
- EXCAVATION AND CLEANOUTS SHALL HAVE RISERS TO GRADE. A SECONDARY CORROSION RESISTANT SCREEN OR OTHER RESTRAINT SYSTEM PROVIDED BELOW CAP TO PREVENT TANK CAP IS LOST OR DAMAGED. TANKS TO CONFORM WITH 30 TAC 285.38 (C)
- FENCE AROUND TANKS TO BE INSTALLED TO ACCESS FROM TANKS TO BE PROVIDED.

SPECIAL PERMIT CONDITIONS:
- AS A CONDITION OF THIS PERMIT, A TOTAL OF 1 FLOW METER SHALL BE INSTALLED ON THE FLOW LINE OF THE PUMP TANK. THE READING OF THIS METER SHALL BE RECORDED IN A LOG BOOK AND SUBMITTED TO THE COMAL COUNTY ENVIRONMENTAL HEALTH DEPARTMENT ON A MONTHLY BASIS FROM THE DATE THE LICENSE TO OPERATE IS ISSUED FOR EACH APPLICANT. IF AT ANY TIME THE DAILY METER READING EXCEEDS THE DESIGN FLOW RATE, A NEW PERMIT MUST BE OBTAINED.

ZONE 1:
1026 L.F. OF DRIP TUBING SPACED 2' APART.
2 ROWS @ 53 L.F. EACH.
8 ROWS @ 31 L.F. EACH.
4 ROWS @ 31 L.F. EACH.
2 ROWS @ 105 L.F. EACH.

ZONE 2:
1090 L.F. OF DRIP TUBING SPACED 2' APART.
10 ROWS @ 45 L.F. EACH.
2 ROWS @ 50 L.F. EACH.
2 ROWS @ 70 L.F. EACH.
4 ROWS @ 100 L.F. EACH.

ZONE 3:
1069 L.F. OF DRIP TUBING SPACED 2' APART.
2 ROWS @ 105 L.F. EACH.
4 ROWS @ 20 L.F. EACH.
1 ROW @ 79 L.F.
1 ROW @ 80 L.F.
1 ROW @ 81 L.F.
1 ROW @ 82 L.F.
1 ROW @ 78 L.F.
1 ROW @ 76 L.F.
2 ROWS @ 73 L.F. EACH.
1 ROW @ 54 L.F.
1 ROW @ 56 L.F.
2 ROWS @ 11 L.F. EACH.

ZONE 4
996 L.F. OF DRIP TUBING SPACED 2' APART.
2 ROWS @ 25 L.F. EACH.
2 ROWS @ 37 L.F. EACH.
2 ROWS @ 15 L.F. EACH.
2 ROWS @ 32 L.F. EACH.
2 ROWS @ 49 L.F. EACH.
10 ROWS @ 68 L.F. EACH.

GPD AND DRAINFIELD AREA CALCULATIONS:
TOTAL GPD = 1200 GPD + 840 GPD = 2040 GPD
TOTAL REQUIRED DRAINFIELD AREA = 2040 GPD / .25 = 8160 SF
TOTAL LINEAR FEET OF DRIP LINE = 4180 L.F.
TOTAL ACTUAL DRAINFIELD AREA = 8360 SF - 5 SF (FOR IMPERMEABLE TANK G LIDS) = 8355 SF

BOD CALCULATIONS:
EXISTING BAR AND GRILL
(1200 GPD X 1200 MG/L X 8.34)/ (10^6) = 12 LBS OF BOD

NEW RESIDENCES
(840 GPD X 300 MG/L X 8.34)/(10^6) = 2.1 LBS OF BOD

TOTAL LBS OF BOD = 12 + 2.1 = 14.1 LBS OF BOD

KEY:
- NEW TANK DOUBLING AREA = 1588 SF
- DRAINFIELD AREA =
- 1.5" SUPPLY
- 1.5" FLUSH
- CLEANOUT
- 2" SCH 40
- PROPOSED WATER LINE
- 5' OSSF OFFSET
- CHECK VALVE
- ALTD-8Z VALVE BOX
- SUPPLY LINE CONNECTION
- FLUSH LINE CONNECTION
- 1" ARKAL FILTER
- TEST HOLE
- 2" BALL VALVE(BALL VALVES SHALL BE ADJUSTED TO ALLOW FOR EQUAL FLOW TO AEROBIC TREATMENT UNITS)
- FLOW METER/SEE SPECIAL PERMIT CONDITION NOTE)

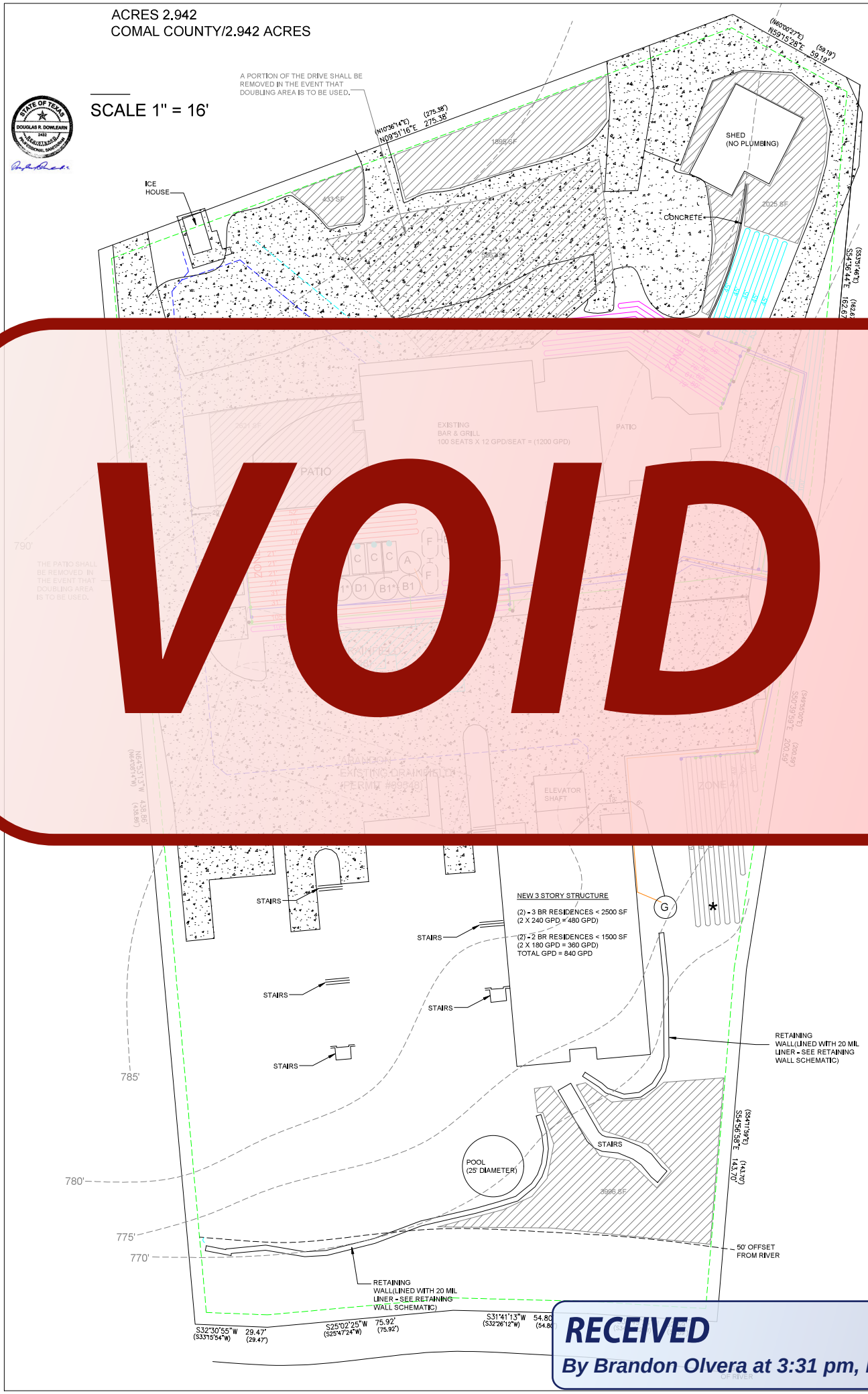
DRIVEWAY

A - 3000 GALLON PRE TREATMENT TANK
B1 - 3000 GALLON FLOW EQUALIZATION TANK
B1* - 3000 GALLON FLOW EQUALIZATION TANK WITH DUAL ALTERNATING PUMPS.
C - 1500 GALLON AEROBIC TREATMENT UNIT.
D1 - 3000 GALLON PUMP TANK,
D1* -3000 GALLON PUMP TANK WITH DUAL ALTERNATING PUMPS.
E - EXISTING 2000 GALLON GREASE TRAP (PERMIT #89548)
F - EXISTING 1500 GALLON DUAL COMPARTMENT SEPTIC TANK(PERMIT #89548)
G - 3000 GALLON PUMP TANK WITH DUAL ALTERNATING PUMPS

NOTES:
- D1 AND D1* SHALL BE CONNECTED TO MAKE ONE LARGE TANK.
- B1 AND B1* SHALL BE CONNECTED TO MAKE ONE LARGE TANK.

ACRES 2.942
COMAL COUNTY/2.942 ACRES

SCALE 1" = 16'



VOID

RECEIVED
By Brandon Olvera at 3:31 pm, Dec 20, 2024

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 23, 2023

Mr. Brandon Olvera, Designated Representative
Comal County, TCEQ ID No. 620049
195 David Jonas Dr.
New Braunfels, Texas 78132

Re: Non-Standard Review of an On-Site Sewage Facility Located at:
145 FM 2673, Canyon Lake, Comal County, Texas
OSSF Permit Application Number OSSF-116336

Dear Mr. Olvera:

We received your request for a Texas Commission on Environmental Quality (TCEQ) review of the above-referenced nonstandard design on October 17, 2023. The nonstandard design review is to evaluate compliance with applicable requirements for On-Site Sewage Facilities (OSSF), as required by 30 Texas Administrative Code (TAC) §285.5(b)(2). Bruce Lesikar of the TCEQ Technical Programs Team conducted a review of the above-referenced application, planning materials, and related technical information. The nonstandard design planning materials and related technical information submitted have been determined to generally meet the requirements for OSSF systems described in 30 TAC §285.32(d) (relating to criteria for nonstandard treatment systems) and 30 TAC §285.33(d)(6) (relating to criteria for nonstandard effluent disposal systems).

LIST OF DEFICIENCIES, RECOMMENDATIONS, AND/OR REQUIRED ITEMS.

- A recommendation provided in the first review was to increase flexibility in splitting the flow from the flow equalization tank to the Aerobic Treatment Units (ATUs). The increased flexibility was to facilitate operation and maintenance capabilities. The designer originally proposed an indexing valve. The designer changed the flow splitting method to ball valves in the second submission. The manual adjustment of 2-inch ball valves to equally split flow to ATUs can be challenging. If the options available for flow splitting and balancing flow between ATUs only includes ball and indexing valves, the preference would be an indexing valve.

Please be advised this letter is not an Authorization to Construct or a Notification of Approval to install an individual OSSF anywhere on the site at this time. This letter only indicates a favorable assessment of the non-standard system review performed by the TCEQ based on the submitted planning materials.

If you have any questions or if we may be of assistance to you, please contact Mr. Bruce Lesikar in the TCEQ Technical Programs Team at (512) 239-0451 or via e-mail at Bruce.Lesikar@tceq.texas.gov.

Sincerely,

Joseph L. Hopkins

Joseph L. Hopkins, P.G.
PSEAD Technical Programs Team Leader
Texas Commission on Environmental Quality

JLH/BJL

Doc# 200306041047

GENERAL WARRANTY DEED RESERVING VENDOR'S LIEN IN FAVOR OF THIRD PARTY

THE STATE OF TEXAS §
KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF COMAL §

THAT **JAK'S FOOD & BEVERAGE MART, A TEXAS PARTNERSHIP DATED NOVEMBER 4, 1997, COMPRISED OF JERRIS SPRINGFIELD, DAVID SPRINGFIELD AND MICHAEL J. JUNGMANN A/K/A MICHAEL R. JUNGMANN and LARRY SPRINGFIELD, not joined herein by their respective spouses, because the herein conveyed property forms no part of any property claimed by them as homestead,** hereinafter called Grantor, for and in consideration of the sum of TEN AND NO/100 DOLLARS ($10.00) cash and other good and valuable consideration in hand paid by **JOHN M. GOLDEN, whose address is 143 W. 4th, Yorktown, Texas, 78164,** hereinafter called Grantee, the receipt and sufficiency of which is hereby acknowledged and confessed, and the further consideration of the execution and delivery by the said Grantee of one certain Promissory Note of even date herewith in the principal sum of **FOUR HUNDRED EIGHT THOUSAND AND NO/100 ($408,000.00) DOLLARS**, payable to the order of **FIRSTCAPITAL BANK, SSB,** hereinafter called Mortgagee, said Note being payable as therein provided, bearing interest at the rate therein specified, providing for attorney's fees and acceleration of maturity at the rate and in the events therein set forth, and payment of said Note being secured by a vendor's lien and superior title retained herein in favor of said Mortgagee and by Deed of Trust of even date herewith from Grantee to **STAN HUBENAK, Trustee**, to which reference is hereby made for all purposes; and,

WHEREAS, Mortgagee has, at the special instance and request of said Grantee herein, paid to Grantor herein **$408,000.00** of the purchase money for the property hereinafter described as represented by the above described Note, said Note, together with the vendor's lien and Deed of Trust Lien against said property securing the payment of said Note is, without recourse upon the Grantor herein, hereby assigned, transferred and delivered to Mortgagee, the Grantor hereby conveying to the said Mortgagee the said superior title to said property, and subrogating the said Mortgagee unto all the rights and remedies of Grantor in the premises by virtue of said Note and liens; the indebtedness evidenced by said Note being due and payable as therein provided, both principal and interest being due and payable at the office of **FIRSTCAPITAL BANK, SSB**;

HAS GRANTED, SOLD and CONVEYED, and by these presents does GRANT, SELL and CONVEY unto the said Grantee, the following described property, to-wit:

> A tract of land being **Three (3)** acres out of the 348 acres out of the G.W. McWhorter Survey No. 323, Abstract No. 417, Comal County, Texas and being more particularly described in **Exhibit "A"**, attached hereto for all purposes.

This conveyance is made subject to, all and singular, the restrictions, easements and covenants, if any, applicable to and enforceable against the above described property as reflected by the records of the County Clerk of Comal County, Texas.

It is expressly agreed and stipulated that a vendor's lien is retained in favor of the payee in said Note against the above described property, premises and improvements, until said Note, and all interest thereon, is fully paid according to the face and tenor, effect and reading thereof, when this deed shall become absolute.

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 and assigns forever.

Grantor does hereby bind Grantor, Grantor's heirs, executors, administrators and successors to warrant and forever defend, all and singular, the said premises unto the said Grantee, Grantee's heirs, executors, administrators, successors and assigns, against every person whomsoever claiming or to claim the same or any part thereof.

EXECUTED on this the 31 day of **October, 2003**.

JAK'S FOOD & BEVERAGE MART, A TEXAS PARTNERSHIP DATED NOVEMBER 4, 1997

BY: _____
JERRIS SPRINGFIELD, Individually and as Partner

BY: _____
DAVID SPRINGFIELD, Individually and as Partner

BY: _____
MICHAEL J. JUNGMANN A/K/A MICHAEL R. JUNGMANN, Individually and as Partner

_____
LARRY SPRINGFIELD, Individually

STATE OF TEXAS §
COUNTY OF COMAL §

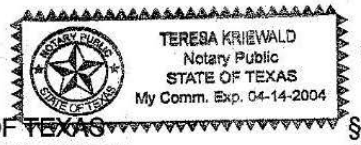
This instrument was acknowledged before me on this the 31 day of **October, 2003**, by **JERRIS SPRINGFIELD, Individually and as Partner** of **JAK'S FOOD & BEVERAGE MART, A TEXAS PARTNERSHIP DATED NOVEMBER 4, 1997.**

_____
Notary Public in and for the State of Texas

TERESA KRIEWALD
Notary Public
STATE OF TEXAS
My Comm. Exp. 04-14-2004

STATE OF TEXAS §
COUNTY OF COMAL §

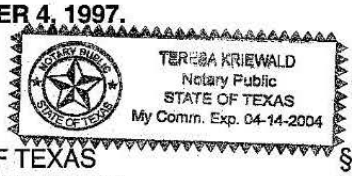
This instrument was acknowledged before me on this the 31 day of **October, 2003**, by **DAVID SPRINGFIELD, Individually and as Partner** of **JAK'S FOOD & BEVERAGE MART, A TEXAS PARTNERSHIP DATED NOVEMBER 4, 1997.**



Notary Public in and for the State of Texas

STATE OF TEXAS §
COUNTY OF COMAL §

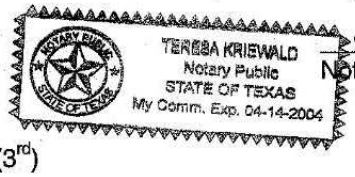
This instrument was acknowledged before me on this the 31 day of **October, 2003**, by **MICHAEL J. JUNGMANN A/K/A MICHAEL R. JUNGMANN, Individually and as Partner** of **JAK'S FOOD & BEVERAGE MART, A TEXAS PARTNERSHIP DATED NOVEMBER 4, 1997.**



Notary Public in and for the State of Texas

STATE OF TEXAS §
COUNTY OF COMAL §

This instrument was acknowledged before me on this the 31 day of **October, 2003**, by **LARRY SPRINGFIELD, Individually.**



Notary Public in and for the State of Texas

181.DEEDS (3rd)

EXHIBIT "A"

FIELD NOTES
FOR
A 2.942 ACRE TRACT

Being a 2.942 acre tract of land situated in the George McWhorter Survey No. 323, Abstract 47, Comal County, Texas, being the same tract of land called 3 acres in Deed described in Doc# 9606003753 of the Official Public Records of Comal County, Texas, and all bearings referred to in this description are rotated to and referenced to a bearing of S 49° 55' E between concrete monuments found along the Southwest line of F. M. Highway No. 306, and all bearings and distances referred to in this description as record calls are taken from Doc# 9606003753, said 2.942 acre tract of land surveyed under the supervision of Richard A. Goodwin, RPLS #4069, S. Craig Hollmig, Inc., and being more particularly described as follows:

BEGINNING: At a ½" iron pin found in the East line of F. M. Highway 2673, for the Northwest corner of Kuntry Korner Estates, recorded in Volume 3, Page 1 of the Map and Plat Records of Comal County, Texas, for the West corner of the above referenced 3 acre tract, for the West corner and Point of Beginning of this tract;

THENCE: Along the East line of said F.M. Highway 2673, the West line of the above referenced 3 acre tract, N 10° 36' 14" E 275.38 feet (record call: N 10° 20' E – 278.50 feet) to a concrete monument found at a flare corner and N 60° 00' 27" E 59.19 feet (record call: N 59° 52' E – 59.30 feet) to a concrete monument found at the flare intersection of the East line of F.M. Highway 2673, with the Southwest line of F.M. Highway No. 306, for the North corner of the above referenced 3 acre tract, for the North corner of this tract;

THENCE: Along the Southwest line of F.M. Highway No. 306, the Northeast line of the above referenced 3 acre tract, S 53° 51' 46" E 162.67 feet (record call: S 54° 12' E – 167.40 feet) to a concrete monument, S 49° 55' 00" E 200.59 feet (record call: 200.60 feet) to a concrete monument found and S 54° 11' 59" E 143.70 feet (record call: S 54° 12' E – 133.0 feet) to a ½" iron pin set in same, said point being on the Northwest bank of the Guadalupe River, for the East corner of this tract;

THENCE: With the Northwest bank of the Guadalupe River, S 34° 34' 22" W 52.59 feet, S 32° 26' 12" W 54.80 feet, S 25° 47' 24" W 75.92 feet (record call for last three calls: S 25° 00' W – 190.0 feet) and S 33° 15' 54" W 29.47 feet (record call: S 30° 00' W – 27.50 feet) to a 1" pipe found in same, said point lying in the North line of said Kuntry Korner Estates, for the occupational South corner of this tract;

Page 2: 2.942 Acre Tract

THENCE: Along the North line of said Kuntry Korner Estates, the South line of the above referenced 3 acre tract, N 64° 08' 14" W 438.86 feet (record call: N 63° 38' W – 449.30 feet) to the Point of Beginning and containing 2.942 acres of land, more or less.

The foregoing field notes represent the results of an on-the-ground survey made under my supervision, September 17, 2003. Reference plat prepared this same date of this 2.942 acre tract.

Richard A. Goodwin, RPLS #4069

Job #03-808

This page has been added to comply with the statutory requirement that the clerk shall stamp the recording information at the bottom of the last page.

This page becomes part of the document identified by the file clerk number affixed on preceding pages.

Doc# 200306041047
Pages 6
11/03/2003 03:19:49 PM
Filed & Recorded in
Official Records of
COMAL COUNTY
JOY STREATER
COUNTY CLERK
Fees $24.00

Doc# 200306041047