

Comal County Environmental Health

OSSF Inspection Sheet

Installer Name: _____

OSSF Installer #: _____

1st Inspection Date: _____

2nd Inspection Date: _____

3rd Inspection Date: _____

Inspector Name: _____

Inspector Name: _____

Inspector Name: _____

Permit#:

Address:

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

Inspector Notes:

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

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

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

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



COMAL COUNTY

ENGINEER'S OFFICE

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

Permit Number: 115449
Issued This Date: 02/14/2023
This permit is hereby given to: Royce & Donna Courts

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

5800 FM 32
FISCHER, TX 78623

Subdivision: CD Robertson 999, TCRR Co. 945 & 946 Sur
Unit: -
Lot: 9
Block: -
Acreage: 20.5900

APPROVED MINIMUM SIZES AS PER ATTACHED DESIGN

Type of System: Aerobic
Surface 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.

ON-SITE SEWAGE FACILITY APPLICATION

REVISED

11:00 am, Feb 14, 2023

Date _____

Permit Number _____

1. APPLICANT / AGENT INFORMATION

Owner Name Royce Courts & Donna Courts
Mailing Address PO BOX 3108
City, State, Zip WIMBERLEY TX 78676
Phone # 512-560-6188
Email PACHL @SBCGLOBAL.NET

Agent Name Stephen Jetton
Agent Address 2573 Deer Stand Loop
City, State, Zip San Marcos TX 78666
Phone # 512-757-1259
Email stephen.jetton@gmail.com

2. LOCATION

Subdivision Name RANCHES AT SENTINEL PEAK Unit _____ Lot 4 Block _____
Survey Name / Abstract Number 5800 C.D. Robertson survey No. 999 ABS 982; T.C.R.R. Co. Survey Section no. 946; ABS 936; The T.C.R.R. Co. Survey Section No. 945 ABS No. 832 Acreage 2.1 20.59
Address 5700 FM 32 Lot 9 City Fischer State TX Zip 78623

3. TYPE OF DEVELOPMENT

☒ Single Family Residential
Type of Construction (House, Mobile, RV, Etc.) HOUSE
Number of Bedrooms 3
Indicate Sq Ft of Living Area 3651

☐ Non-Single Family Residential

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

Type of Facility _____

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

Restaurants, Lounges, Theaters - Indicate Number of Seats _____

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

Travel Trailer/RV Parks - Indicate Number of Spaces _____

Miscellaneous _____

Estimated Cost of Construction: \$ 1,500,000 (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

10-4-2022
Date



REVISED

2:34 pm, Dec 16, 2022

Planning Materials & Site Evaluation as Required Completed By Stephen F Jetton

System Description Aerobic Surface Spray Nuwater B-550

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

Tank Size(s) (Gallons) 600 GPD - 353 Trash - 768 Pump Absorption/Application Area (Sq Ft) 5652.00 sq. ft.

Gallons Per Day (As Per TCEQ Table III) 360 GPD

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

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

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

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

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

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

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

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

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

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

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

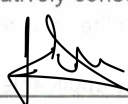
(If yes, the R.S. or P.E. shall certify that the OSSF design will comply with all provisions of the proposed CZP. A Permit to Construct will not be issued for the proposed OSSF until the CZP has been approved by the appropriate regional office.)

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

If yes, indicate the city: _____

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

~~12-1-2022~~
Date

12/16/2022

1/c
3

REVISED

10:59 am, Feb 14, 2023



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AFFIDAVIT TO THE PUBLIC

THE COUNTY OF COMAL
STATE OF TEXAS

CERTIFICATION OF OSSF REQUIRING MAINTENANCE

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

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

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

C.D. Robertson Survey No. 999 ABSTRACT 782
T.C.R.R. Survey Section No. 945
ABSTRACT No. 936 + The T.C.R.R. Co. Survey
Section No. 945 ABSTRACT No. 832 - 20.59 ACRES

The property is owned by (Insert owner's full name): DONNA COURTS
+ Royce Courts

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

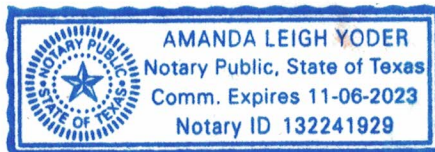
Upon sale or transfer of the above-described property, the permit for the OSSF shall be transferred to the buyer or new owner. A copy of the planning materials for the OSSF can be obtained from the Comal County Engineer's Office.

WITNESS BY HAND(S) ON THIS 9 DAY OF February, 2023

Donna Courts
[Signature]
Owner(s) signature(s)

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 9 DAY OF February, 2023

[Signature]
Notary Public, State of Texas



Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
02/13/2023 01:55:41 PM
CHRISTY 1 Page(s)
202306004515



Bobbie Koepp

Regulatory Authority _____
Block Creek Aerobic Services, LLC
444 A Old Hwy #9
Comfort, TX 78013
Off. (830) 995-3189
Fax. (830) 995-4051

Permit/License Number _____
Customer Royce Courts
Site Address 5962 Grotto Creek Ct.
City Fischer Zip 78623
Mailing Address PO Box 8108 Wimberley 78676
County Hays Map # _____
Phone 512-560-6188
Email pacLLC@sbcglobal.net

I. General: This Work for Hire Agreement (hereinafter referred to as "Agreement") is entered into by and between _____ (hereinafter referred to as "Customer") and Block Creek Aerobic Services, LLC. By this agreement, Block Creek Aerobic Services, LLC and its employees (hereinafter inclusively referred to as "Contractor") agree to render services at the site address stated above, as described herein, and the Customer agrees to fulfill his/her/their responsibilities, as described herein.

II. Effective Date:

This Agreement commences on _____ and ends on _____ for a total of two (2) years (initial agreement) or one (1) year (thereafter). If this is an initial agreement (new installation), the Customer shall notify the Contractor within two (2) business days of the system's first use to establish the date of commencement. If no notification is received by Contractor within ninety (90) days after completion of installation or where county authority mandates, the date of commencement will be the date the "License to operate" (Notice of Approval) was issued by the permitting authority. This agreement may or may not commence at the same time as any warranty period of installed equipment, but in no case shall it extend the specified warranty.

III. Termination of Agreement:

This Agreement may be terminated by either party for any reason, including for example, substantial failure of either party to perform in accordance with the terms of this Agreement, without fault or liability of the terminating party. The terminating party must provide written notice to the non-terminating party thirty (30) days prior to the termination of this Agreement. If this Agreement is terminated, Contractor will be paid at the rate of \$75.00 per hour for any work performed and for which compensation has not been received. After the deduction of all outstanding charges, any remaining monies from prepayment for services will be refunded to customer within thirty (30) days of termination of this Agreement. Either party terminating this Agreement for any reason, including non-renewal, shall notify in writing the equipment manufacturer and the appropriate regulatory agency a minimum of thirty (30) days prior to the date of such termination. Nonpayment of any kind shall be considered breach of contract and a termination of contract.

IV. Services:

Contractor will:

- Inspect and perform routine upkeep on the On-Site Sewage Facility (hereinafter referred to as OSSF) as recommended by the treatment system manufacturer, and required by state and/or local regulation, for a total of three visits to site per year. The list of items checked at each visit shall be the: control panel, Electrical circuits, timer, Aeration including compressor and diffusers, CFM/PSI measured, lids safety pans, pump, compressor, sludge levels, and anything else required as per the manufacturer.
- Provide a written record of visits to the site by means of an inspection tag attached to or contained in the control panel.
- Repair or replace, if Contractor has the necessary materials at site, any component of the OSSF found to be failing or inoperative during the course of a routine monitoring visit. If such services are not covered by warranty, and the service(s) cost less than \$100.00, Customer hereby authorizes Contractor to perform the service(s) and bill Customer for said service(s). When service costs are greater than \$100.00, or if contractor does not have the necessary supplies at the site, Contractor will notify Customer of the required service(s) and the associated cost(s). Customer must notify Contractor of arrangements to affect repair of system within two (2) business days after said notification.
- Provide sample collection and laboratory testing of TSS and BOD on a yearly basis (commercial systems only).
- Forward copies of this Agreement and all reports to the regulatory agency and the Customer.
- Visit site in response to Customer's request for unscheduled services within forty-eight (48) hours of the date of notification (weekends and holidays excluded) of said request. Unless otherwise covered by warranty, costs for such unscheduled responses will be billed to Customer.

V. Disinfection:



Customer's Initials



RC

Contractor's Initials

Not required; ☒ required. The responsibility to maintain the disinfection device(s) and provide any necessary chemicals is that of the Customer.

VI. Electronic Monitoring:

Electronic Monitoring is not included in this Agreement.

VII. Performance of Agreement:

Commencement of performance by Contractor under this Agreement is contingent on the following conditions:

a. If this is an initial Agreement (new installation):

i. Contractor's receipt of a fully executed original copy or facsimile of this agreement and all documentation requested by Contractor.

If the above conditions are not met, Contractor is not obligated to perform any portion of this Agreement.

VIII. Customer's Responsibilities:

The customer is responsible for each and all of the following:

a. Provide all necessary yard or lawn maintenance and removal of all obstacles, including but not limited to dogs and other animals, vehicles, trees, brush, trash, or debris, as needed to allow the OSSF to function properly, and to allow Contractor safe and easy access to all parts of the OSSF.

b. Protect equipment from physical damage including but not limited to that damage caused by insects.

c. Maintain a current license to operate, and abide by the conditions and limitations of that license, and all requirements for and OSSF from the State and/or local regulatory agency, whichever requirements are more stringent, as well as the proprietary system's manufacturer recommendations.

d. Notify Contractor immediately of any and all alarms, and/or any and all problems with, including failure of, the OSSF.

e. Provide, upon request by Contractor, water usage records for the OSSF so that the Contractor can perform a proper evaluation of the performance of the OSSF.

f. Allow for samples at both the inlet and outlet of the OSSF to be obtained by Contractor for the purpose of evaluating the OSSF's performance. If these samples are taken to a laboratory for testing, with the exception of the service provided under Section IV (d) above, Customer agrees to pay Contractor for the sample collection and transportation, portal to portal, at a rate of \$35.00 per hour, plus the associated fees for laboratory testing.

g. Prevent the backwash or flushing of water treatment or conditioning equipment from entering the OSSF.

h. Prevent the condensation from air conditioning or refrigeration units, or the drains of icemakers, from hydraulically overloading the aerobic treatment units. Drain lines may discharge into the surface application pump tank if approved by system designer.

i. Provide for pumping and cleaning of tanks and treatment units, when and as recommended by Contractor, at Customer's expense.

j. Maintain site drainage to prevent adverse effects on the OSSF.

k. Pay promptly and fully, all Contractor's fees, bills, or invoices as described herein.

IX. Access by Contractor:

Contractor is hereby granted an easement to the OSSF for the purpose of performing services described herein. Contractor may enter the property during Contractor's normal business hours and/or other reasonable hours without prior notice to Customer to perform the Services and/or repairs described herein. Contractor shall have access to the OSSF electrical and physical components. Tanks and treatment units shall be accessible by means of man ways, or risers and removable covers, for the purpose of evaluation as required by State and/or local rules and the proprietary system manufacturer. It is Customer's responsibility to keep lids exposed and accessible at all times.

X. Limit of Liability:

Contractor shall not be held liable for any incidental, consequential, or special damages, or for economic loss due to expense, or for loss of profits or income, or loss of use to Customer, whether in contract tort or any other theory. In no event shall Contractor be liable in an amount exceeding the total Fee for Services amount paid by Customer under this Agreement.

XI. Indemnification:

Customer (whether one or more) shall and does hereby agree to indemnify, hold harmless and defend Contractor and each of its successors, assigns, heirs, legal representatives, devisees, employees, agents and/or counsel (collectively "Indemnitees") from and against any and all liabilities, claims, damages, losses, liens, causes of action, suits, fines, judgments and other expenses (including, but not limited to, attorneys' fees and expenses and costs of investigation), of any kind, nature or description, (hereinafter collectively referred to as "Liabilities") arising out of, caused by, or resulting, in whole or in part, from this Agreement.



Customer's Initials



RC

Contractor's Initials

THIS INDEMNIFICATION APPLIES EVEN IF SUCH LIABILITIES ARE CAUSED BY THE CONCURRENT OR CONTRIBUTORY NEGLIGENCE OR BY THE STRICT LIABILITY OF ANY INDEMNITEE.

Customer hereby waives its right of recourse as to any Indemnitee when Indemnification applies, and Customer shall require its insurer(s) to waive its/their right of subrogation to the extent such action is required to render such waiver of subrogation effective. Customer shall be subrogated to Indemnitees with respect to all rights Indemnitees may have against third parties with respect to matters as to which Customer provides indemnity and/or defense to Indemnitees. No Indemnification is provided to Indemnitees when the liability or loss results from (1) the sole responsibility of such Indemnitee; or, (2) the willful misconduct of such Indemnitee. Upon irrevocable acceptance of this Indemnification obligation, Customer, in its sole discretion, shall select and pay counsel to defend Indemnitees of and from any action that is subject to this Indemnification provision. Indemnitees hereby covenant not to compromise or settle any claim or cause of action for which Customer has provided Indemnification without the consent of Customer.

XII. Severability:

If any provision of the "Proposal and Contract" 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 the "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.

XIII. Fee for Services:

The Fee for Services does not include any fees for equipment, material, labor necessary for non-warranty repairs, unscheduled inspections, or Customer requested visits to the site.

XIV. Payment:

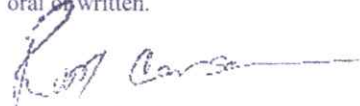
Full payment is due upon execution of this Agreement (Required of new Customer). For any other service(s) or repair(s) provided by Contractor the Customer shall pay the invoice(s) for said service(s) or repair(s) within thirty (30) days of the invoice date. The Contractor shall mail all invoices on the date of invoice. All payments not received within thirty (30) days from the invoice date will be subject to a \$29.00 late penalty and a 1.5% per month carrying charge, as well as any reasonable attorney's fees, and all collection and court costs incurred by Contractor in collection of unpaid debt(s). Contractor may terminate contract at any time for nonpayment for services. Any check returned to Contractor for any reason will be assessed a \$30.00 return check fee.

XV. Application or Transfer of payment:

The fees paid for this agreement may be transferred to subsequent property owner(s); however, this Agreement is not transferable. Customer shall advise the subsequent property owner(s) of the State requirement that they sign a replacement agreement authorizing Contractor to perform the herein described Services, and accepting Customer's Responsibilities. This replacement Agreement must be signed and received in Contractor's offices within ten (10) business days of date of transfer of property ownership. Contractor will apply all funds received from Customer first to any past due obligation arising from this Agreement including late fees or penalties, return check fees, and/or charges for services or repairs not paid within thirty (30) days of invoice date. Any remaining monies shall be applied to the funding of the replacement Agreement. The consumption of funds in this manner may cause a reduction in the termination date of effective coverage per this Agreement. See Section IV.

XVI. Entire Agreement:

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



Rudy Carson

Block Creek Aerobic Services, LLC,
Contractor
MP# 0002036



Customer Signature

9/30/25
Date



Customer's Initials

Contractor's Initials

OSSF SOIL EVALUATION FORM

Owner's Name: Courts Residence

Physical Address: 5800 FM 32

Legal Description: T.C. R.R. Co. Survey Section 945 ABS No. 832 – 20.59-acres

C.D. Robertson Survey No. 999 ABS 982; T.C.R.R. Co. Survey Sec. No 946 ABS 936

Date Performed: 9-29-2022

Proposed Excavation Depth: 6"

Requirements:

- At least two soil evaluations must be performed on the site, at opposite ends of the proposed disposal area. Locations of soil evaluations must be shown on the application site drawing or designer's site drawing.
- For subsurface disposal, soil evaluations must be performed to a depth of at least 2-ft. below the proposed excavation depth. For surface disposal, the surface horizon must be evaluated.
- Please describe each soil horizon and identify any restrictive features in the space provided below. Draw lines at the appropriate depths.

Soil Boring Number: 1

Depth (ft.)	Textural Class	Structure (For class III – blocky, platy or massive)	Drainage (Mottles, Water Table)	Restrictive Horizon	Observations
0 0-6" 1 2 3 4 5	III		None	6"	Class III type soil. No shallow mottling.

Soil Boring Number: 2

Depth (ft.)	Textural Class	Structure (For class III – blocky, platy or massive)	Drainage (Mottles, Water Table)	Restrictive Horizon	Observations
0 0-6" 1 2 3 4 5	III		None	6"	Class III type soil. No shallow mottling.

Features of Site Area

Presence of 100 year flood zone

No

Presence of adjacent ponds, streams, water impoundment's

No

Existing or proposed water well in nearby area

Yes

Organized sewage available to lot or tract

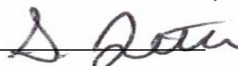
No

Recharge features within 150 feet

No

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

Signature of Site evaluator



Date 9-29-22



REVISED

11:01 am, Feb 14, 2023

Southwest Septic Design

On-Site Sewage Facility Application and Design

Prepared For:

Royce Courts
5800 FM 32
Fischer, Texas 78620

Design 101190222

Prepared By:

Stephen F. Jetton 
Registered Professional Sanitarian



~~Revision 12/16/2022~~

~~10/4/2022~~

Revision 2/13/2023

Stephen F. Jetton • Southwest Septic Design
2573 Deer Stand Loop • San Marcos, Texas 78666 • Mobile (512) 757-1259
E – Mail stephen.jetton@gmail.com

Southwest Septic Design

2573 Deer Stand Loop
San Marcos, Texas 78666
Hays County

Stephen.jetton@gmail.com
Mobile (512) 757-1259

Revised
Efrain Gallegos
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Design Report On-Site Sewage facility Aerobic Wastewater Treatment System Utilizing Surface Spray Application

OWNER/SITE LOCATION:

Courts Residence
5800 FM 32
T.C. R.R. Co. Survey Section 945 ABS No. 832 – 20.59-acres
Fischer, Texas

SITE DESCRIPTION & EVALUATION:

A site evaluation indicated that the site is suitable for an aerobic surface irrigation system. The spray area has a slope of less than 15 percent, and there was no evidence of shallow groundwater. This residence will utilize an above ground rain-water collection tank for their source of water. All portions of the proposed OSSF must maintain at least a 10' setback from all water lines. This property is not within the 100-Year Floodplain (see site plan). There are no recharge features within 150' of the proposed OSSF. Minimum separation distances as stated in §285 TCEQ On-Site Sewage Facilities, must be maintained.

WASTEWATER DESIGN FLOW:

This design is for a 3-bedroom, 3651 sq. ft., single-family residence utilizing low-flow fixtures. This design will be slightly oversized to accommodate a future addition. Therefore, the total daily wastewater flow will be **360 gallons per day**, as per Texas Commission of Environmental Quality (TCEQ) On Site Sewage Facilities, effective 12-29-2016.

AEROBIC TREATMENT SYSTEM DESCRIPTION:

This proposed development will utilize a Nuwater Aerobic Treatment Plant, Model B-550. A 353-gallon pretreatment/trash tank will precede the 600-gallon per day aerobic treatment tank. Effluent from the aeration tank will flow through a liquid chlorinator (**EZ Tank Chlorinator**) to a 768-gallon pump tank. The pump tank serves as a chlorine contact chamber and a storage tank prior to the treated/chlorinated effluent being discharged to sprinkler heads. The disposal area will consist of **4– 30 ft. 180°** radius patterns. The system is considered a “package system”, and will be installed according to manufacturer’s instructions.



Revision 10/22/2025

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Size of Residence		3651 sq. ft.
Number of Bedrooms		3
Average Expected Flow		360 GPD
Application Rate	<i>0.064 Gal./ft²/Day</i>	0.064
Minimum Application Area	<i>(GPD)/(0.064 Gal./ft²/Day)</i>	5625.00 ft ²
Actual Application Area	<i>3.14(r²) x number of heads</i>	5652.00 ft ²

System Components:

Trash Tank	353 gallon one-compartment
Aeration Tank	600 gallon per day
Pump Tank	768 gallon

Pump Tank:

Pump Tank gallons per inch: 14.49"

Operating Capacity: 14.49" x 13" = **188.37 operating gallons**

Reserve Capacity: 53" usable depth (53 x 14.49 = 768.00) 768.00 – 347.76 = **420.24 reserve gallons.**

<i>Pump off</i>	8" Above tank floor	115.92 Gallons
<i>Pump on</i>	21" Above tank floor	304.29 Gallons
<i>Alarm on</i>	24" Above tank floor	347.76 Gallons

Combined capacity of pretreatment and aeration tank is 953-gallons. A 768-gallon, single-compartment pump tank allows for a one day's flow above the alarm-on level. This system will be designed to pump on demand.

Pump and Sprinkler Head Requirements:

Pump: Ashland Pump CPM Series – 20+CPM5-115 20GPM ½ H.P.

Sprinkler Head: K Rain Pro Plus with Purple Tops.

Nozzle #: **3 LA** (Low angle trajectory, 11 degrees), operating at 35 psi, 30 ft. radius and 3.05 GPM flow per sprinkler

Dosing:

Application Flow Rate 3.05 gpm/head x 4 heads = **12.20 gpm**

Application Time: 2 doses @ 180 gal/dose / 12.20 gpm = ~ **15.0 min/dose**

Head Requirements:

Elevation head: 6 (*assumed elevation at top of pump 1120 and highest spray head at 1126*)



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Pressure head: $35 \text{ psi} \times 2.31 \text{ ft/psi} = 80.85 \text{ ft.}$

Friction head: 1" Sch. 40 PVC @ 12.20 gpm = 11.63 ft. $(367 \times 11.63/100 \times 1.2) = 51.21$

TDH = 6 ft. + 80.85 ft. + 51.21 = 138.06 (within pump curve).

An unthreaded sampling valve must also be provided. Under the Texas Administrative Code, §285 On-Site Sewage Facilities. This system is designed to dose on demand.

Alarm System:

An audio/visual high-water alarm will be installed on this system. NuWater control panel (SPI-BIO Model 50B138-AAV-PT). The alarm/light will be installed in a high visible location close to the pump tank.

Installation Notes:

- Refer to site plan for component placement and follow manufacturer's instructions for installation of treatment plant and aerator.
- All materials and construction methods are required to conform to the standards for Private Sewage Facility's set forth in the Texas Administrative Code, §285 On-Site Sewage Facilities.
- The installer must have a current and valid Texas installer certificate, and is required to have at the minimum an Installer II certification.
- The installer must notify designer and regulatory authority at least 48 hours in advance to schedule required inspections to ensure that the system is installed in accordance with the approved plans and specifications.
- The installer may not alter these plans without the approval of the designer.
- Diversion berms will be place when needed to protect irrigation area from excessive runoff.
- All electrical installation must follow applicable electric codes.
- All outside electrical components must be placed in electrical conduit.
- It is the responsibility of the installer to maintain the minimum setback requirements as stated in §285 for On-Site Sewage Facilities.

Tank Notes:

- The bottom of the excavation for the tanks shall be level and free of large rocks and debris.
- All tanks are to be set level on a layer, with a minimum thickness of 4 inches, of sand, sandy loam, clay loam, or pea gravel.
- Tank excavations must be backfilled with soil or pea gravel that is free of rock larger than ½ inch in diameter. Class IV soils and gravel larger than ½ inch in diameter are not acceptable for use as backfill material. If the top of a septic tank extends above the ground surface, soil may be mounded over the tank to maintain slope to the drain field.
- Risers are required over all tank openings and must extend to the ground surface.
- Risers shall be permanently fastened to the tank lid.
- The riser lid shall screw down and have a lock or weigh 65lbs.
- A secondary plug, cap, netting, etc. shall be provided below the riser lid.



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All openings in the tank must be properly sealed to prevent the escape of wastewater, or to prevent the infiltration of water.

- Tanks must be filled with water for 24 hours to test for leaks and structural integrity.
- The tanks must be set low enough to have fall of at least 1/8" per foot from RV pad to tank.
- PVC pipe from house to tank must be at least Sch.40 or SDR 26.

Irrigation & Landscaping Notes:

- Irrigation lines shall be 1" Sch.40 PVC. Sleeve any pipe that crosses under any roads or driveways with Sch.40 PVC.
- Purple Pipe must be used for all irrigation lines.
- Supply lines must be buried at least 6" below finished grade.
- If irrigation area does not have established vegetation, a mixture of winter rye and Bermuda grasses will be seeded to establish seasonal vegetation.
- The installer shall notify property owner prior to removal of any trees that may obstruct the operation of the irrigation system.
- *All exposed surface rock must be covered with at least 4" of suitable soil*
- *Vegetation must be established before system is in use.*

Additional Notes:

- Install audio-visual alarm for aerator and pump on separate breakers.
- The high water and air compressor alarms shall be audio/visual and mounted in a place that can be easily seen and heard when the alarms are activated.
- A hose bib must be installed in pump tank at tank inspection port.
- The chlorinator must be constructed to allow a chlorine residual of 1.0 mg/l in the pump tank for the period of time between scheduled inspections.
- The disinfected effluent must obey the standards as stated in §285, TCEQ, On-Site Sewage Facilities. Approved disinfections methods using chlorinated tablets, must use calcium hypochlorite that is properly labeled for wastewater disinfections.

Maintenance Requirements:

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

Affidavit:

- The applicant must file a certified copy of an affidavit at the County clerk's office and filed in reference to the real property deed on which the surface application system is to be installed.
- The affidavit will state that the property shall not be transferred to a new owner without:



Revision 10/22/2025

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- (1) The new owner being advised that the property contains a surface application system for wastewater disposal;
- (2) The permit issued to the previous owner of the property being transferred to the new owner in accordance with §285.20(5) of the TCEQ OSSF Rules, i.e.; the permit will be issued in the name of the owner of the OSSF. Permits shall be transferred to the new owner automatically upon legal sale of the OSSF. The transfer of an OSSF permit under this section shall occur upon actual transfer of the property on which the OSSF is located unless the ownership of the OSSF had been severed from the property.
- (3) The new owners submitting a valid maintenance contract to the permitting authority.

Operation and Management Notes:

- The OSSF should not be treated as a normal city sewer.
- Water conservation practices should be always used. Consult your local authorities for more information.
- Run the dishwasher with a full load whenever possible
- Avoid running water continuously when brushing teeth, washing hands, or cleaning food and utensils.
- Repair any water leaks immediately, such as running toilets or leaky faucets.
- The owner is responsible for cleaning and pumping the septic tank, typically every 2 to 3 years depending on system usage.
- Do not use the toilet to dispose of tissue, feminine hygiene products, trash, cigarettes, etc.
- It is recommended that you do not use the garbage disposal and/ or garbage grinders in the facility serviced by this system.
- Household chemicals should be used in moderation.
- According to §285, no water softener will be allowed to enter the OSSF.
- Chemical additives or the so-called enzymes should not be used during the operation of this system. Some of these additives may even be harmful to the facilities operation.
- Do not build driveways, storage buildings, decks, or other structures over the tank or disposal area.
- The OSSF must be protected from meeting vehicular traffic.
- A strong vegetative cover is essential for the proper operation of this system. The property owner is solely responsible for maintaining this vegetation. The irrigation area should be groomed by mowing on a regular basis.
- If you notice a problem with the spray patterns, or any of the alarms are activated, contact your maintenance provider immediately.
- Never place a greater wastewater load on your system than that prescribed by the design of the system (**360 gallons per day**).

****The proposed system has been designed generally following the minimum requirements under TCEQ §285 On Site Sewage Facilities. The site evaluation and subsequent design are based on technical information currently available. The performance of the OSSF is not, and cannot be guaranteed even though all provisions of the Standards have been complied with. If failure should occur, additions to the OSSF may have to be made. In extreme cases a substitute system may be required. By accepting this design, the homeowner/contractor understands the conditions, and agrees that the designer will not be liable for any more than the agreed upon design***



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5800 FM 32
Fischer, Texas 78623

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T.C. R.R. CO. Survey
Section 945 ABS No. 832
20.59 - Acres
Comal County, Texas

- A1 - 3-Bedroom Single-Family Residence (3651 sq. ft.).
- A2 - Outdoor Kitchen 2" Sch. 40 PVC Sink Drain.
- B - Proposed NuWater Model B-550- 600 GPD ATU.
- C - K Rain Pro Plus, 30' Radius Sprinkler Head
#3 Nozzle - 35 PSI - 3.05 GPM per Sprinkler Head.

C/O - Two-Way Cleanout

Provide Two-Way Cleanout from House to Tank.
3" or 4" Sch. 40 between House and Tank. Must maintain
a minimum of 1/8" per foot of fall between house and tank.

Supply Line: 1" Sch. 40 PVC Purple Pipe

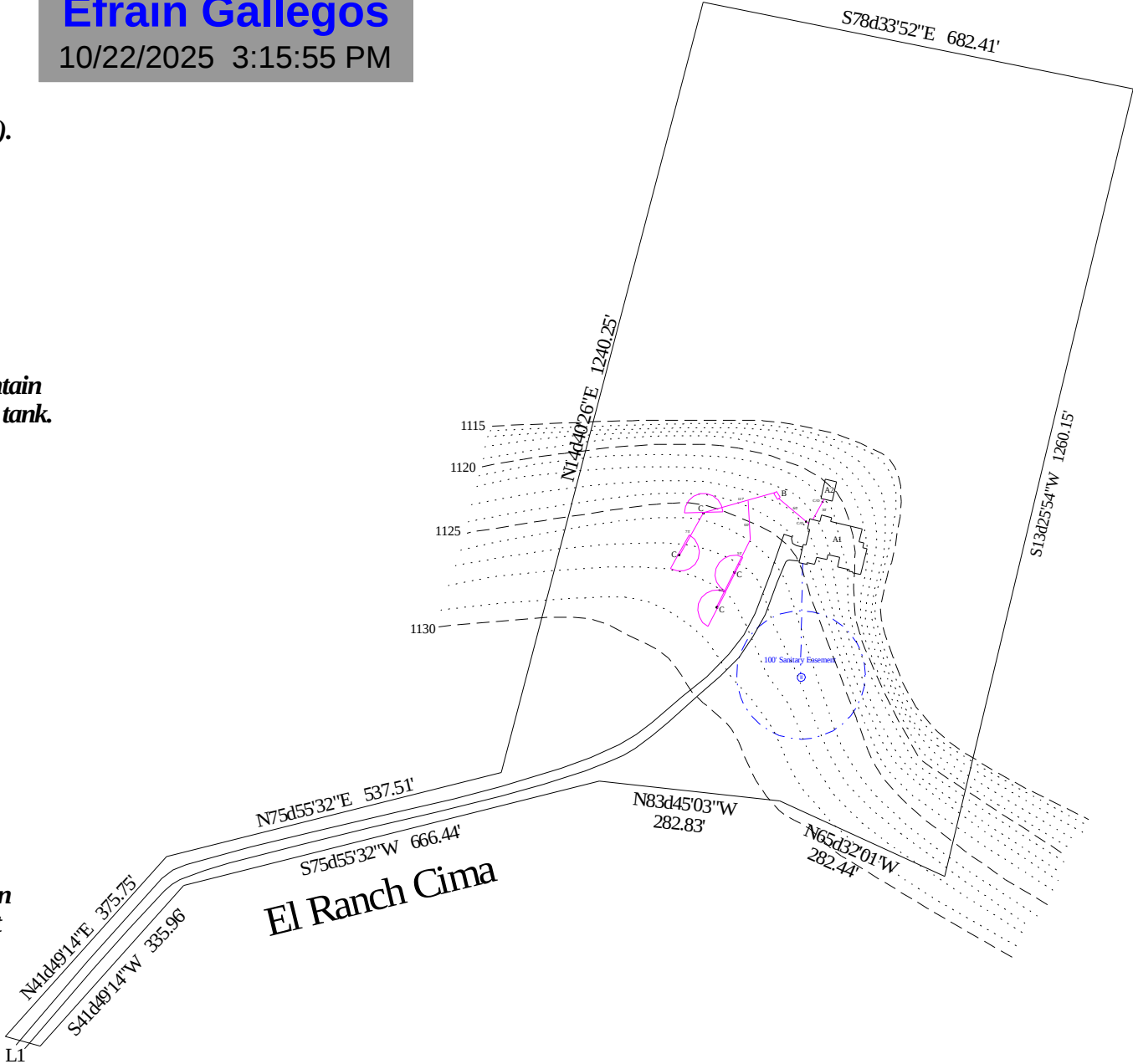
Maintain 10' from all Potable Water Lines.
Maintain 20' from all Property Lines.

*Refer to Tank Detail and Design Notes for more
Information.

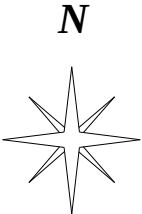
*Plans may vary Slightly based on Conditions
Encountered in the Field.

*Trim Trees as Neccessary in Application Area.
Trees must maintain at least 10' from Sprinkler
Head.

*All Separation and Setback Requirements as Stated in
Chapter 285, TCEQ, On-Site Sewage Facilities, must
be maintained.



Revision 10/22/2025



Scale: 1" = 300'



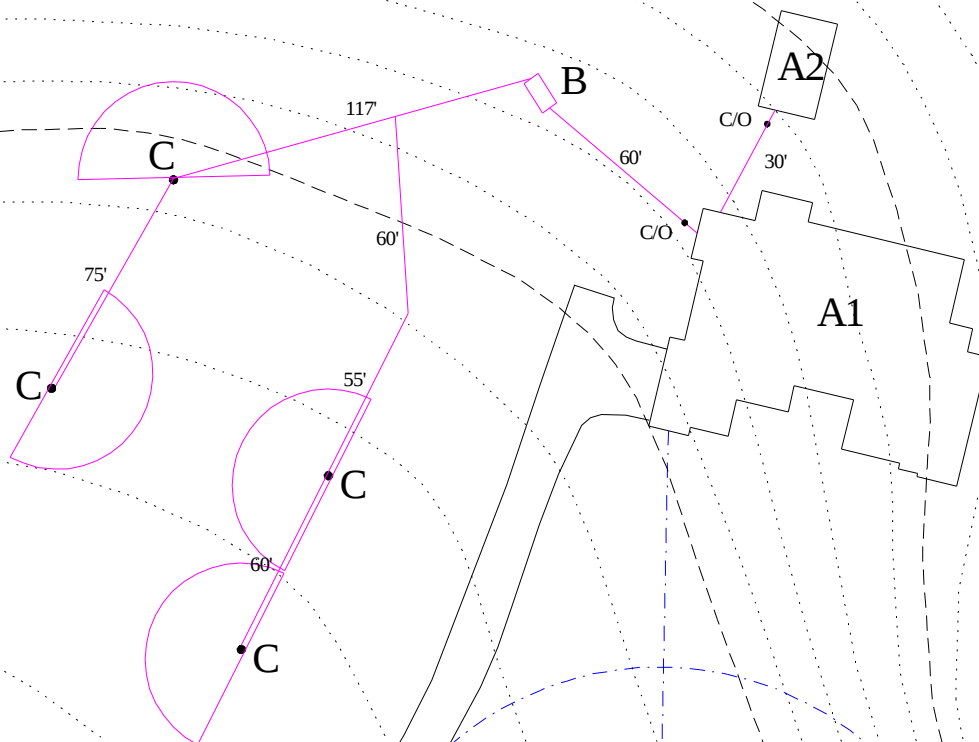
*This is not intended to be used as an official
survey. All structures and Contour locations
are approximate.

Flood Plain Note: This property is not within
the 100-Year Flood Plain according to Map
Panel No. 48091C0110F Dated 9/2/2009.

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N14d40'26"

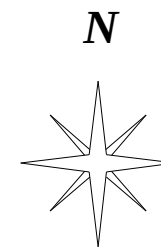
S13d25'54"W 1260.15'



100' Sanitary Easement



Revision 10/22/2025



Scale: 1" = 60'

Assembly Details

OSSF

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11:02 am, Feb 14, 2023

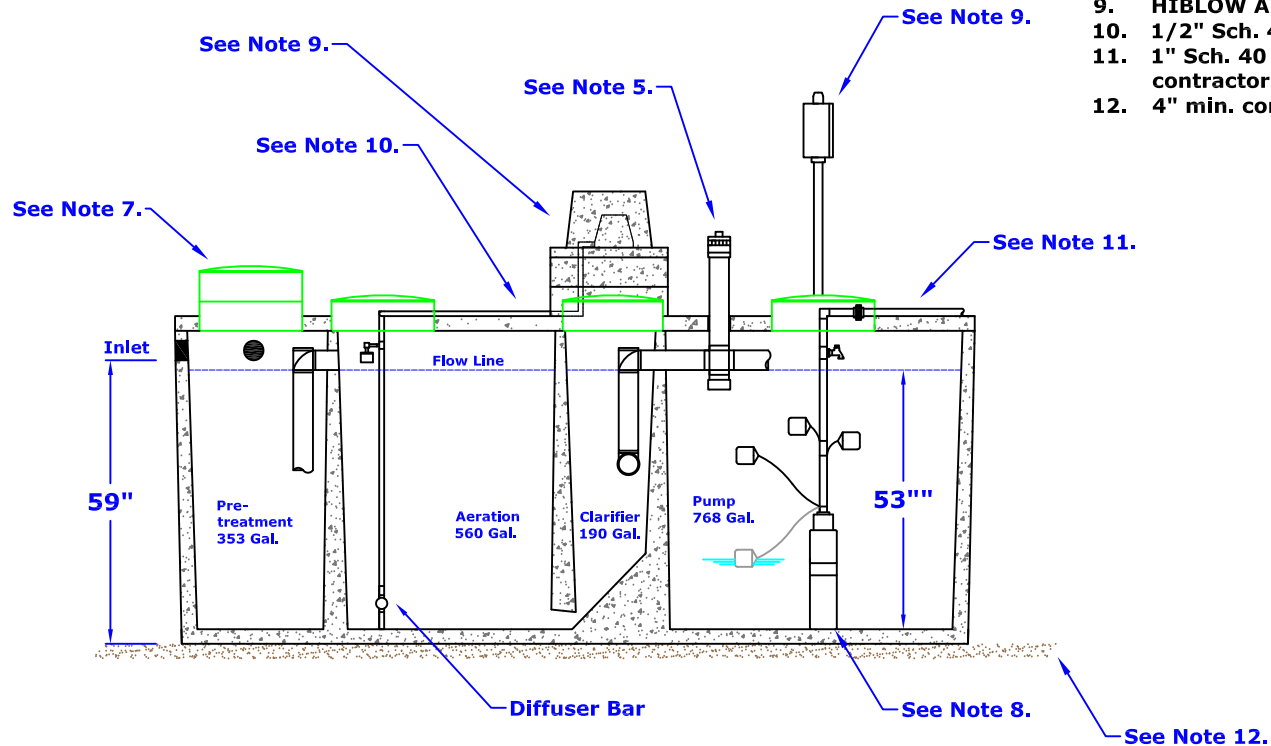
4 - 6: See design notes



12/16/2022

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 = 14,900 lbs.
4. Treatment capacity is 600 GPD. Pump compartment set-up for a 360 GPD Flow Rate (4 bedroom, < 4,000 sq/ft living area). Please specify for additional set-up requirements. BOD Loading = 1.62 lbs. per day.
5. Standard tablet chlorinator or Optional Liquid chlorinator. NSF approved chlorinators (tablet & liquid) available.
6. Bio-Robix B-550 Control Center w/ Timer for night spray application. Optional Micro Dose (min/sec) timer available for drip applications. Electrical Requirement to be 115 Volts, 60 Hz, Single Phase, 30 AMP, Grounded Receptacle.
7. 20" Ø access riser w/ lid (Typical 4). Optional extension risers available.
8. 20 GPM 1/2 HP, high head effluent pump.
9. HIBLOW Air Compressor w/ concrete housing.
10. 1/2" Sch. 40 PVC Air Line (Max. 50 Lft from Plant).
11. 1" Sch. 40 PVC pipe to distribution system provided by contractor.
12. 4" min. compacted sand or gravel pad by Contractor



DIMENSIONS:

Outside Height: 67"
Outside Width: 63"
Outside Length: 164"

MINIMUM EXCAVATION DIMENSIONS:

Width: 76"
Length: 176"

NuWater B-550 (600 GPD) Aerobic Treatment Plant (Assembled)

Model: B-550-PC-400PT

March, 2012 - Rev 1
By: A.S.

Scale:

* All Dimensions subject to allowable specification tolerances.

Dwg. #: ADV-B550-3



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

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11:02 am, Feb 14, 2023

Typical Pump Tank Cross Section

A - Ashland Pump CPM Series - 20CPM5-115 20GPM 1/2HP.

B - Wide Angle Mercury Float Switch

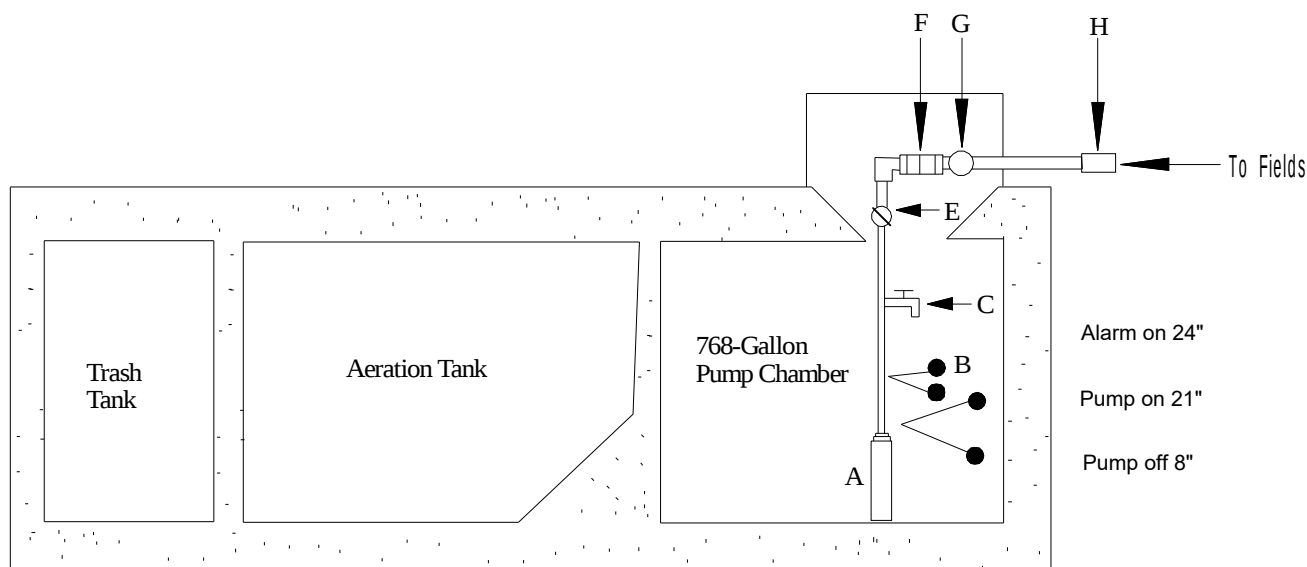
C - Sampling Port

~~E - Pressure Regulator~~

F - Quick Disconnect Union

G - 40 PSI Pressure Gauge

H - Check Valve



12/16/2022



NuWater B-550 (600 GPD) Aerobic Treatment Plant

Not to Scale

PROPLUS GEAR DRIVEN SPRINKLER SETTING INSTRUCTIONS

SPRINKLER INSTALLATION

1► INSTALL AND BURY

Do not use pipe dope. Thread the sprinkler on the pipe. Bury the sprinkler flush to grade. **NOTE:** Gear driven sprinklers and pop-up sprays should not be installed on the same watering zone.

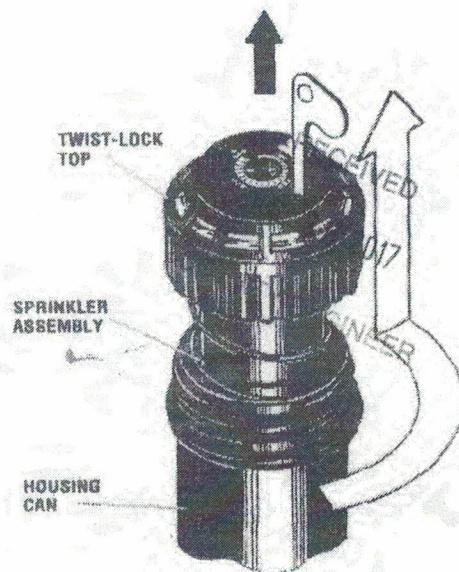
2► INSPECTING THE FILTER

Unscrew the top and lift the complete sprinkler assembly out of the housing can. The filter is located on the bottom of the sprinkler assembly and can easily be pulled out, cleaned and re-installed.

3► WINTERIZATION TIPS

When using an air compressor to remove water from the system please note the following:

- 1) Do not exceed 30 PSI.
- 2) Always introduce air into the system gradually to avoid air pressure surges. Sudden release of compressed air into the sprinkler can cause damage.
- 3) Each zone should run no longer than 1 minute on air. Sprinklers turn 10 to 12 times faster on air than on water. Over spinning rotors on air can cause damage to the internal components.



STANDARD NOZZLE PERFORMANCE

Nozzle	U.S.			METRIC			Flow	
	Pressure PSI	Radius Ft.	Flow GPM	Pressure KPa	Radius Meters	Flow L/M		
#2.5 Factory Installed Nozzle	30	38'	2.5	206	2.04	11.6	9.46	.57
	40	39'	2.8	275	2.72	11.9	10.60	.64
	50	40'	3.2	345	3.40	12.2	12.11	.73
	60	41'	3.6	413	4.08	12.5	13.25	.79
#0.5	30	28'	0.5	206	2.0	8.5	1.89	.11
	40	28'	0.6	275	3.0	8.8	2.27	.14
	50	29'	0.7	345	3.5	8.8	2.65	.16
	60	30'	0.8	413	4.0	9.1	3.03	.18
#0.75	30	29'	0.7	206	2.0	8.8	2.65	.16
	40	30'	0.8	275	3.0	9.1	3.03	.18
	50	31'	0.9	345	3.5	9.4	3.41	.20
	60	32'	1.0	413	4.0	9.8	3.79	.23
#1	30	32'	1.3	206	2.0	9.8	4.92	.14
	40	33'	1.6	275	3.0	10.1	5.68	.18
	50	34'	1.8	345	3.5	10.4	6.05	.20
	60	35'	1.8	413	4.0	10.7	6.81	.23
#2	30	37'	2.4	206	2.0	11.3	9.08	.54
	40	40'	2.5	275	3.0	12.2	9.46	.56
	50	42'	3.0	345	3.5	12.8	11.35	.68
	60	43'	3.3	413	4.0	13.1	12.49	.75
#3	30	38'	3.6	206	2.0	11.6	13.63	.75
	40	39'	4.2	275	3.0	11.9	15.89	.95
	50	41'	4.6	345	3.5	12.5	17.41	1.04
	60	42'	5.0	413	4.0	12.8	18.92	1.13
#4	30	43'	4.4	206	2.0	13.1	16.65	.98
	40	44'	5.1	275	3.0	13.4	19.30	1.15
	50	46'	5.6	345	3.5	14.0	21.19	1.27
	60	49'	5.9	413	4.0	14.9	22.33	1.33
#6	40	45'	5.9	206	3.0	13.7	22.33	1.33
	50	46'	6.0	275	3.5	14.0	22.71	1.36
	60	48'	6.3	345	4.0	14.6	23.85	1.43
	70	49'	6.7	413	5.0	14.9	25.35	1.52
#8	40	42'	8.0	206	3.0	12.8	30.28	1.81
	50	45'	8.5	275	3.5	13.7	32.12	1.92
	60	49'	9.5	345	4.0	14.8	35.05	2.15
	70	50'	10.0	413	5.0	15.3	37.85	2.27

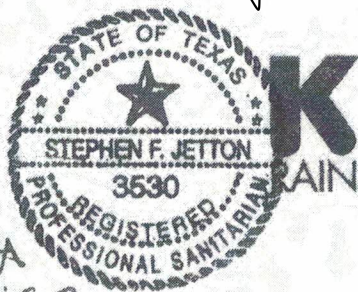
LOW ANGLE NOZZLE PERFORMANCE

Nozzle	U.S.			METRIC			Flow	
	Pressure PSI	Radius Ft.	Flow GPM	Pressure KPa	Radius Meters	Flow L/M		
#1	30	22'	1.2	207	2.04	6.71	4.54	.34
	40	24'	1.7	275	2.72	7.32	5.43	.39
	50	26'	1.8	344	3.40	7.92	6.80	.41
	60	28'	2.0	413	4.08	8.53	7.56	.46
#3	30	29'	3.0	207	2.04	8.84	11.34	.68
	40	32'	3.1	275	2.72	9.75	11.72	.71
	50	35'	3.5	344	3.40	10.67	13.23	.80
	60	37'	3.8	413	4.08	11.58	14.36	.87
#4	30	31'	3.4	207	2.04	9.45	12.85	.78
	40	34'	3.9	275	2.72	10.36	14.74	.89
	50	37'	4.4	344	3.40	11.28	16.63	1.00
	60	38'	4.7	413	4.08	11.58	17.77	1.07
#6	40	38'	8.5	275	2.72	11.58	24.57	1.68
	50	40'	7.3	344	3.40	12.19	27.89	1.76
	60	42'	8.0	413	4.08	12.80	30.24	1.82
	70	44'	8.6	482	4.76	13.41	32.51	1.95

Data represents test results in zero wind for ProPlus. Adjust for local conditions. Radius may be reduced with nozzle retention screw.

12/16/2022

[Signature]



K-RAIN MANUFACTURING CORP.
1640 Australian Avenue
Riviera Beach, FL 33404 USA
PH: 1-561-844-1002 / 1-800-735-7246
FAX: 1-561-842-9493
WEB: <http://www.krain.com>

© K-RAIN Manufacturing Corp. L-58921

[Handwritten signature]
2257

CISTERN PUMPS CPM Series

REVISED

11:02 am, Feb 14, 2023

Ashland Pump – CPM Series

The Ashland Pump CPM Series is designed to operate in filtered effluent/gray water applications. The bottom suction design allows for maximum drawdown of fluid and the hydraulic stages are able to pass 1/8" solids without damage to the pump.

Installations in cistern tanks, rain basin catchments or anywhere drawdown levels need to be maximized are ideal applications for the Ashland Pump CPM Series.

APPLICATIONS

- Filtered Effluent Water Pumping
- Gray Water Pumping
- Water Feature / Aeration Applications
- Rain Water Basin Applications

FEATURES

- Bottom suction design for maximum drawdown
- Able to pass 1/8" solids
- Available in 10, 20 and 30 GPM flow rates
- ½ HP, 115V and 230V single phase motors
- Heavy duty discharge with stainless steel internal threads
- 600 Volt, 10' SJ00W jacketed lead
- High shut-off pressure
- Quiet operation
- Standard removable base for stable mounting

12/16/2022



ORDERING INFORMATION

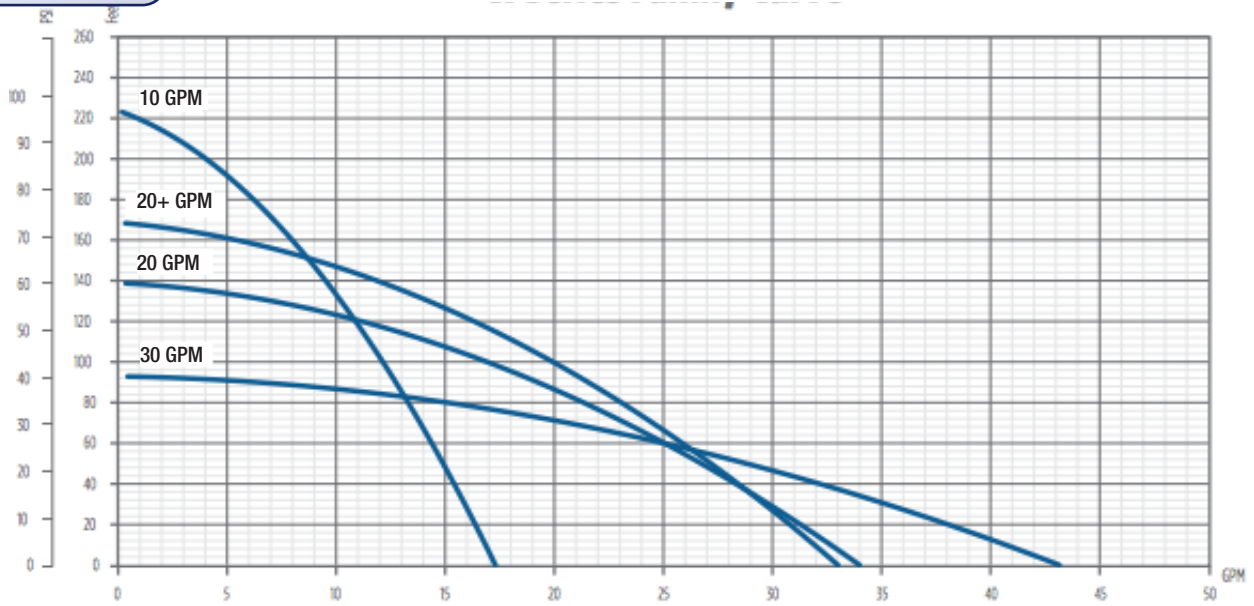
CPM SERIES CISTERN PUMP						
Model/Order No.	GPM	HP	Voltage/Ph.	Stage Count	Length (in.)	Shipping Wt. (lbs.)
10CPM5-115	10	1/2	115/1	7	26	17
10CPM5-230	10		230/1	7	26	17
20CPM5-115	20		115/1	5	25	16
20CPM5-230	20		230/1	5	25	16
20+CPM5-115	20+		115/1	6	26	17
20+CPM5-230	20+		230/1	6	26	17
30CPM5-115	30		115/1	4	25	16
30CPM5-230	30		230/1	4	25	16



REVISED

11:02 am, Feb 14, 2023

ASHLAND PUMP CPM SERIES CISTERN PUMP PERFORMANCE



12/16/2022



P U M P

Honest, Professional, Dependable

1899 Cottage Street, Ashland, Ohio 44805

Telephone: 855 281-6830 • Fax: 877 326-1994 • ashlandpump.com

REVISED

11:02 am, Feb 14, 2023

LBC Manufacturing

"EZ-Tank"

GRAVITY FLOW

Liquid Bleach Chlorinator

US Patent Pending

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LBC Manufacturing

P.O. Box 454 • Fayetteville, TEXAS 78940
(979) 826-0139 off.

For a downloadable copy:
www.ez-tank.com



THIS PRODUCT WAS EVALUATED AS A CHLORINE DISINFECTION DEVICE AND
MEETS OR EXCEEDS THE APPLICABLE REQUIREMENTS OF STANDARD 46

12/16/2022



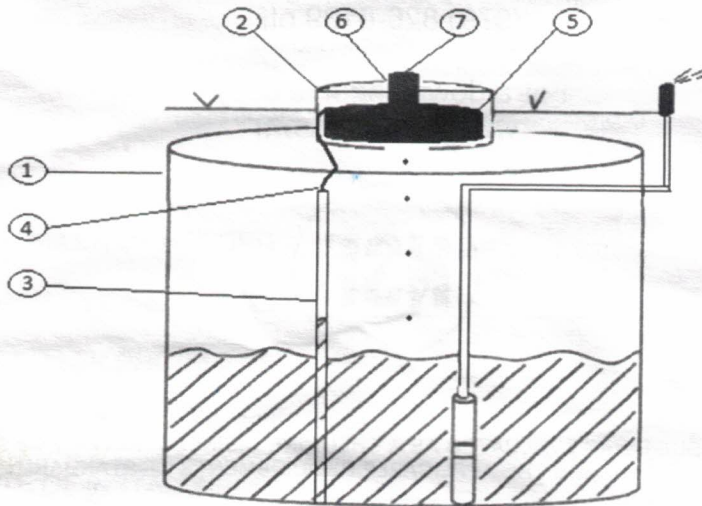
REVISED

11:02 am, Feb 14, 2023

RECOMMENDED INSTALLATION INSTRUCTIONS

**** LBC Manufacturing recommends installation by
TCEQ licensed and trained installers. ****

1. Locate the Aerobic System Holding/Pump tank
2. Remove the green access lid mounting screws and remove green access lid.
3. Install vertical sensing pipe into Holding/Pump tank. Ensure sensing pipe is resting on the bottom of the Holding/Pump tank. Cut the sensing pipe off below the top of the Holding/Pump tank lid, and secure the sensing pipe to remain vertical in the Holding/Pump tank
4. Using PVC Cleaner and PVC glue, attach the barb fitting adapter (supplied on the end of EZ-Tanks vinyl tubing) to the sensing pipe.
5. Place the EZ-Tank reservoir inside the holding tank access riser. (EZ-Tank reservoir rests on the secondary safety lid inside the holding tank access riser. If the holding tank access riser does not have a secondary safety lid, replace with new access riser that accommodates the secondary safety lid to code.)
6. Next, drill 4.25 inch hole in center of holding tank access lid. (this allows the fill lid to be accessed without having to reopen the holding tank lid) Next, Re-Install holding tank access lid and replace mounting and safety screws.
7. Open EZ-Tank gasketed fill lid. Fill with 6% -10% sodium hypochlorite. Once filled, Replace the gasketed fill lid ensuring a firm secure seal. (If the fill lid is not tightened securely, a vacuum will not form and reservoir will empty sodium hypochlorite contents into Holding/Pump tank prematurely.)



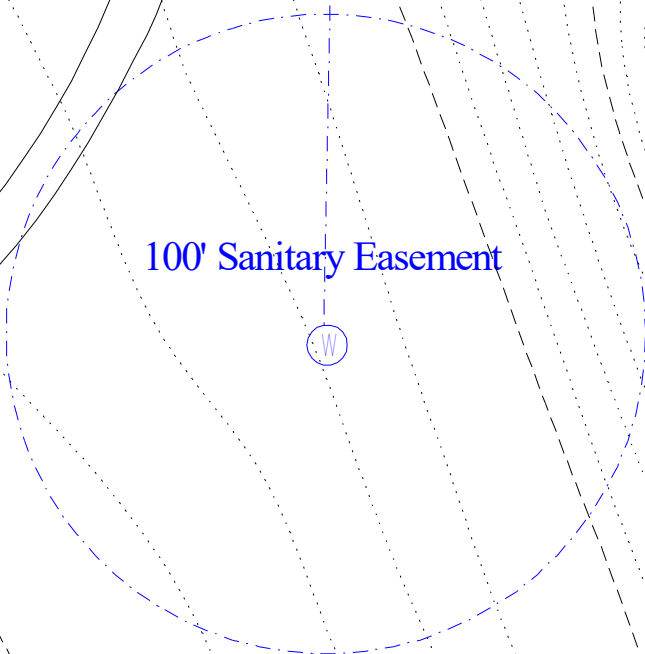
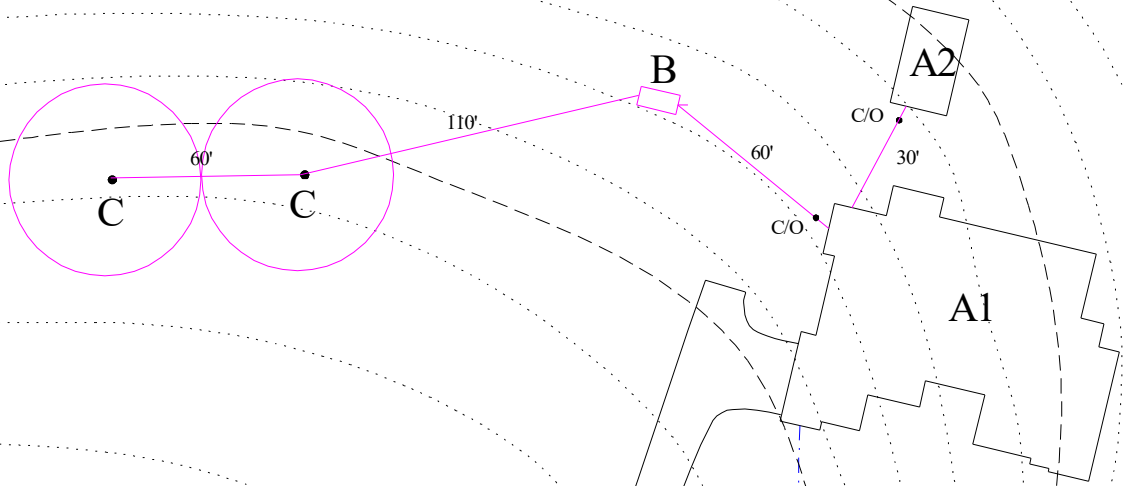
12/16/2022



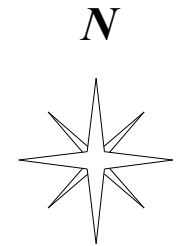
N14d44

S13d25'54"W 1260

REVISED
4:07 pm, Nov 02, 2023



Revision 11/2/2023



Scale: 1" = 60'

5800 FM 32
Fischer, Texas 78623

T.C. R.R. CO. Survey
Section 945 ABS No. 832
20.59 - Acres
Comal County, Texas

REVISED
4:07 pm, Nov 02, 2023

- A1 - 3-Bedroom Single-Family Residence (3651 sq. ft.).
- A2 - Outdoor Kitchen 2" Sch. 40 PVC Sink Drain.
- B - Proposed NuWater Model B-550- 600 GPD ATU.
- C - K Rain Pro Plus, 30' Radius Sprinkler Head
- #3 Nozzle - 35 PSI - 3.05 GPM per Sprinkler Head.

C/O - Two-Way Cleanout

Provide Two-Way Cleanout from House to Tank.
3" or 4" Sch. 40 between House and Tank. Must maintain
a minimum of 1/8" per foot of fall between house and tank.

Supply Line: 1" Sch. 40 PVC Purple Pipe

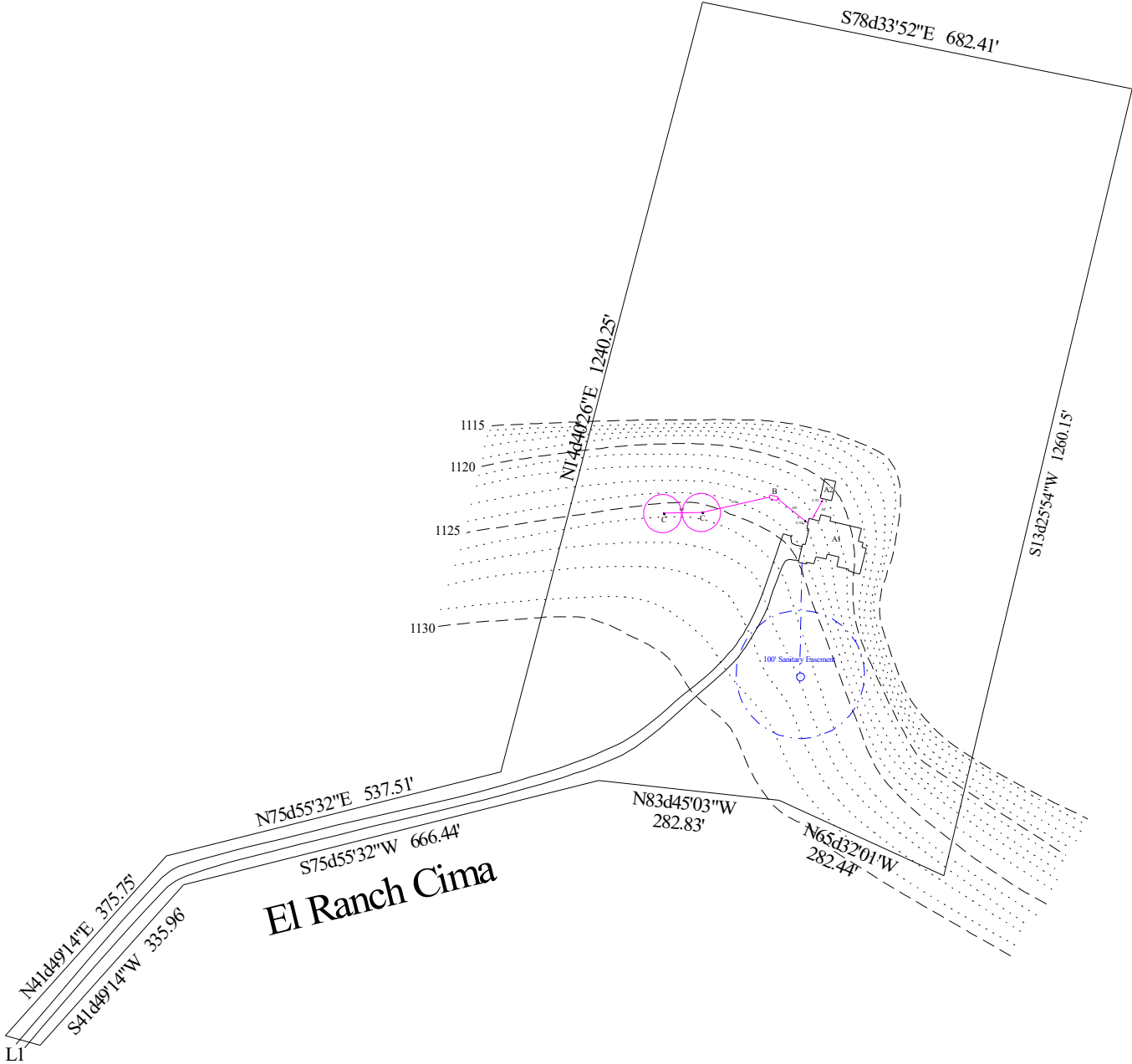
Maintain 10' from all Potable Water Lines.
Maintain 20' from all Property Lines.

*Refer to Tank Detail and Design Notes for more
Information.

*Plans may vary Slightly based on Conditions
Encountered in the Field.

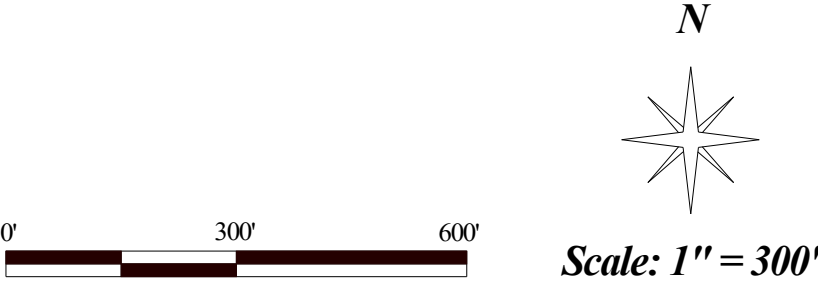
*Trim Trees as Neccessary in Application Area.
Trees must maintain at least 10' from Sprinkler
Head.

*All Separation and Setback Requirements as Stated in
Chapter 285, TCEQ, On-Site Sewage Facilities, must
be maintained.



Revision 11/2/2023

Flood Plain Note: This property is not within
the 100-Year Flood Plain according to Map
Panel No. 48091C0110F Dated 9/2/2009.



*This is not intended to be used as an official
survey. All structures and Contour locations
are approximate.

5800 FM 32
Fischer, Texas 78623

REVISED
11:02 am, Feb 14, 2023

T.C. R.R. CO. Survey
Section 945 ABS No. 832
20.59 - Acres
Comal County, Texas

C.D. Robertson Survey No. 999
ABS 982; T.C.R.R. Co. Survey
Section No. 946 ABS 936

- A1 - 3-Bedroom Single-Family Residence (3651 sq. ft.).
- A2 - Outdoor Kitchen 2" Sch. 40 PVC Sink Drain.
- B - Proposed NuWater Model B-550- 600 GPD ATU.
- C - K Rain Pro Plus, 30' Radius Sprinkler Head
- #3 Nozzle - 35 PSI - 3.05 GPM per Sprinkler Head.

C/O - Two-Way Cleanout X - Profile Hole

Provide Two-Way Cleanout from House to Tank.
3" or 4" Sch. 40 between House and Tank. Must maintain
a minimum of 1/8" per foot of fall between house and tank.

Supply Line: 1" Sch. 40 PVC Purple Pipe

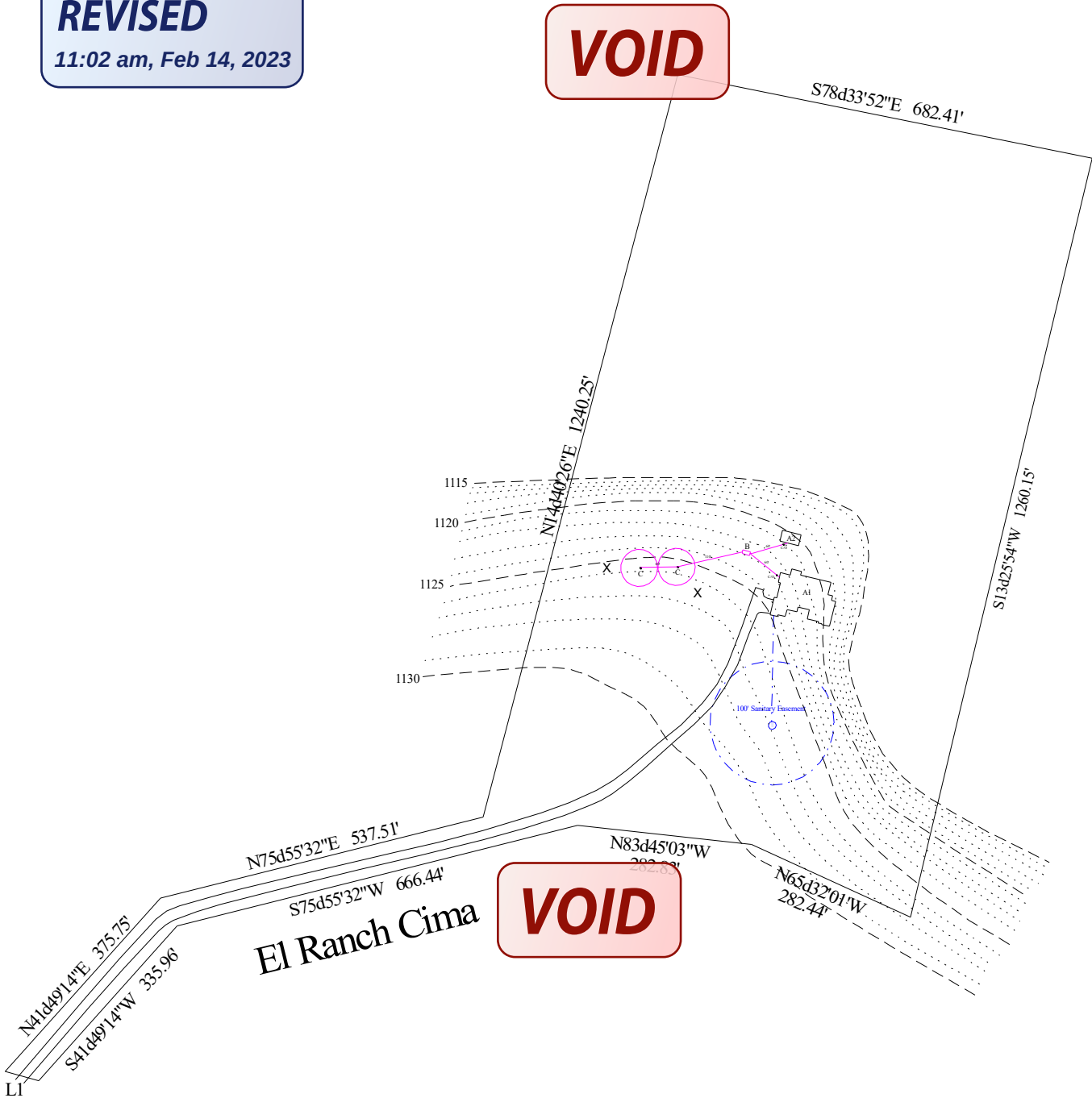
Maintain 10' from all Potable Water Lines.
Maintain 20' from all Property Lines.

*Refer to Tank Detail and Design Notes for more
Information.

*Plans may vary Slightly based on Conditions
Encountered in the Field.

*Trim Trees as Neccessary in Application Area.
Trees must maintain at least 10' from Sprinkler
Head.

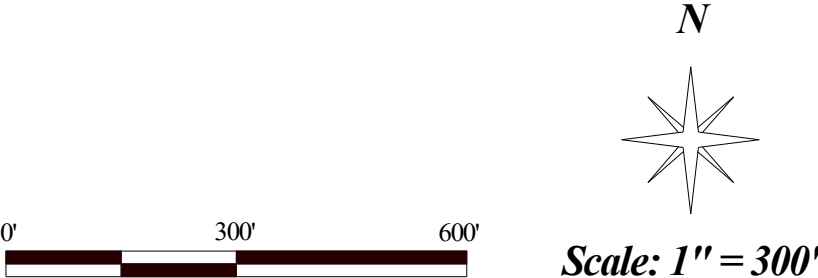
*All Separation and Setback Requirements as Stated in
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be maintained.



12/16/2022



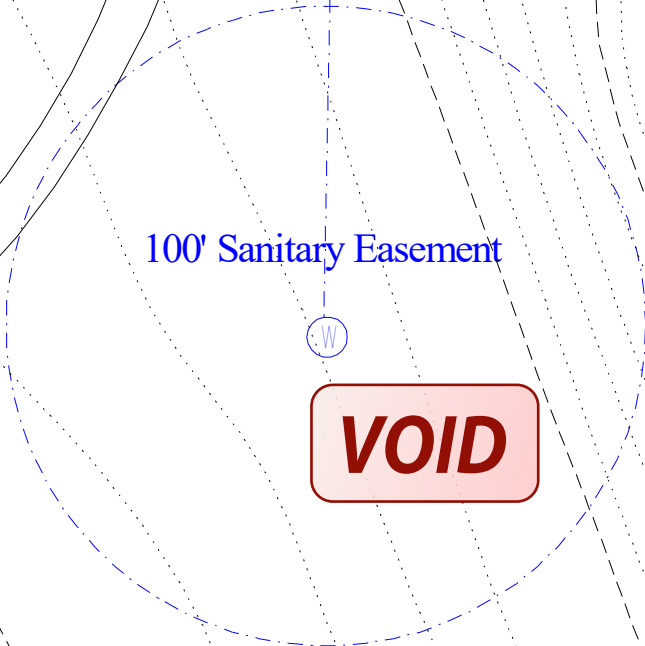
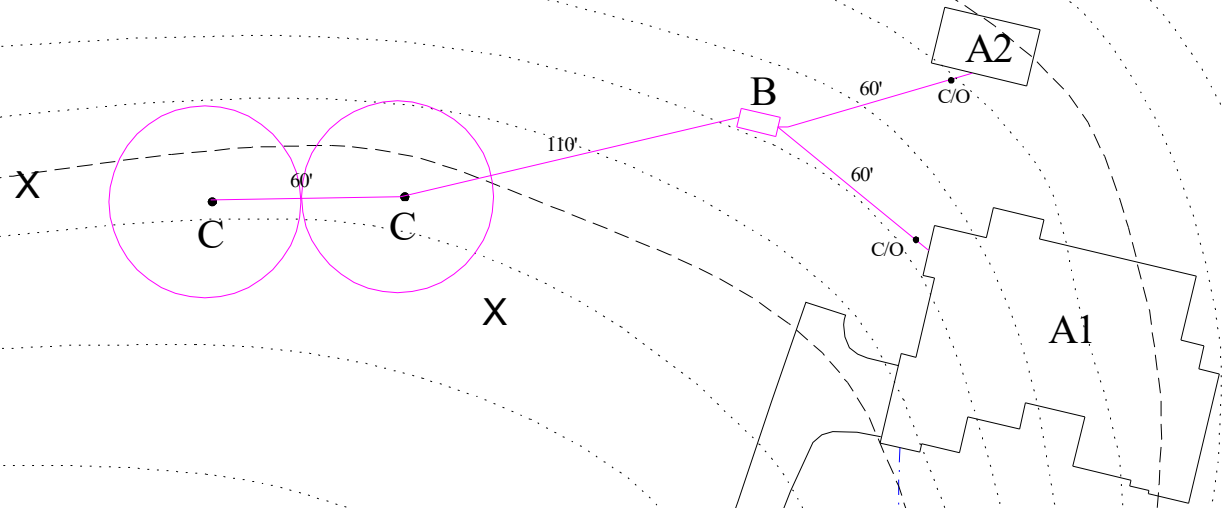
Flood Plain Note: This property is not within
the 100-Year Flood Plain according to Map
Panel No. 48091C0110F Dated 9/2/2009.



N14d44

REVISED
11:02 am, Feb 14, 2023

VOID

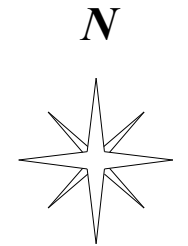


VOID

S13d25'54"W 1260



12/16/2022



Scale: 1" = 60'

Date _____

VOID

Permit Number _____

1. APPLICANT / AGENT INFORMATION

Owner Name Royce Courts & Donna Courts
Mailing Address PO BOX 3108
City, State, Zip WIMBERLEY TX 78676
Phone # 512-560-6188
Email PACHL@SBCGLOBAL.NET

Agent Name Stephen Jetton
Agent Address 2573 Deer Stand Loop
City, State, Zip San Marcos TX 78666
Phone # 512-757-1259
Email stephen.jetton@gmail.com

2. LOCATION

Subdivision Name RANCHES AT SENTINEL PEAK Unit _____ Lot 9 Block _____
Survey Name / Abstract Number _____ Acreage 21
Address 5800 FM 32 LOT 9 City Fischer State TX Zip 78623

3. TYPE OF DEVELOPMENT

☒ Single Family Residential
Type of Construction (House, Mobile, RV, Etc.) HOUSE
Number of Bedrooms 3
Indicate Sq Ft of Living Area 3651

☐ Non-Single Family Residential

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

Type of Facility _____

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

Restaurants, Lounges, Theaters - Indicate Number of Seats _____

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

Travel Trailer/RV Parks - Indicate Number of Spaces _____

Miscellaneous _____

Estimated Cost of Construction: \$ 1,500,000 (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

10-4-2022
Date



202206044927 10/14/2022 01:04:22 PM 1/1

THE COUNTY OF COMAL
STATE OF TEXAS

VOID

CERTIFICATION OF OSSF REQUIRING MAINTENANCE

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

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

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

LOT 9 RANCHES AT SENTINEL PEAK

The property is owned by (insert owner's full name): ROYCE AND DONNA COURTS

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

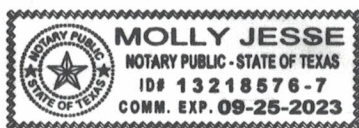
Upon sale or transfer of the above-described property, the permit for the OSSF shall be transferred to the buyer or new owner. A copy of the planning materials for the OSSF can be obtained from the Comal County Engineer's Office.

WITNESS BY HAND(S) ON THIS 20th DAY OF SEPTEMBER, 2022

[Signature]
Owner(s) signature(s)

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 20th DAY OF SEPTEMBER, 2022

Molly Jesse
Notary Public, State of Texas



Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
10/14/2022 01:04:22 PM
TAMMY 1 Page(s)
202206044927



Bobbie Koepp

From: [Ritzen, Brenda](#)
To: ["Stephen Jetton"](#)
Subject: RE: Permit 115449
Date: Wednesday, January 18, 2023 8:38:00 AM
Attachments: [image001.png](#)

Stephen,

Yes the plat has been completed, but they only platted the roads. Therefore, the permit application and all planning materials need to be revised to reflect the amount of acreage, survey and abstract information as the legal description.

Thank you,



Brenda Ritzen
Environmental Health Coordinator
195 David Jonas Dr.
New Braunfels, TX 78132
DR:OS00007722
830-608-2090
www.cceo.org

From: Stephen Jetton <stephen.jetton@gmail.com>
Sent: Tuesday, January 17, 2023 3:37 PM
To: Ritzen, Brenda <rabbjr@co.comal.tx.us>
Subject: Re: Permit 115449

This email originated from outside of the organization.

Do not click links or open attachments unless you recognize the sender and know the content is safe.

- Comal IT

Hi Brenda,

Can I get a permit update on this one please?

Thanks,

Stephen

On Fri, Dec 16, 2022 at 2:54 PM Ritzen, Brenda <rabbjr@co.comal.tx.us> wrote:

From: [Hernandez, Sandra](#)
To: ["Pacllc@sbcglobal.net"; "stephen.jetton@gmail.com"](#)
Cc: [Ritzen, Brenda](#); [Olvera, Brandon](#)
Subject: FW: Permit 115449
Date: Tuesday, November 15, 2022 12:15:00 PM
Attachments: [image001.png](#)

RE: 580 FM 32 (Ranches at Sentinel Peak, Lot 9)

Dear property owner,

The referenced property is currently not compliant with the subdivision rules and regulations. We do have a plat in our office that is currently in review, however, our office will not be able to issue permits to this tract until the final plat is approved.

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

Thank you,



Sandra Ann Hernandez

Subdivision Coordinator

Comal County Engineer's Office

195 David Jonas Drive | 830-608-2090 | www.cceo.org

From: [Ritzen, Brenda](#)
To: ["pacllc@sbcglobal.net"](mailto:pacllc@sbcglobal.net); ["Stephen Jetton"](#)
Subject: Permit 115449
Date: Tuesday, November 15, 2022 4:16:00 PM
Attachments: [image001.png](#)

**Re: Donna Courts & Royce Courts
Ranches at Sentinel Peak Lot 9
Application for Permit for Authorization to Construct an On-Site
Sewage Facility (OSSF)**

Owner / Agent :

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

1. ✓ The owner name on the permit application must match the owner name on the deed. Please add Donna Courts to the permit application.
2. ✓ Show test hole locations on design.
3. ✓ Identify the height of the pump tank settings on the tank detail.
4. ✓ Designer signature needed on all planning materials.
5. Be advised that the subdivision plat must be approved in Commissioners Court before the Permit to Construct can be issued.
6. Revise as needed and resubmit.

Thank you,



Brenda Ritzen
Environmental Health Coordinator
195 David Jonas Dr.
New Braunfels, TX 78132
DR:OS00007722
830-608-2090
www.cceo.org

OSSF SOIL EVALUATION FORM

Owner's Name: Courts Residence

Physical Address: 5800 FM 32

Legal Description: T.C. R.R. Co. Survey Section 945 ABS No. 832 – 20.59-acres

Date Performed: 9-29-2022

VOID
Proposed Excavation Depth: 6"

Requirements:

- At least two soil evaluations must be performed on the site, at opposite ends of the proposed disposal area. Locations of soil evaluations must be shown on the application site drawing or designer's site drawing.
- For subsurface disposal, soil evaluations must be performed to a depth of at least 2-ft. below the proposed excavation depth. For surface disposal, the surface horizon must be evaluated.
- Please describe each soil horizon and identify any restrictive features in the space provided below. Draw lines at the appropriate depths.

Soil Boring Number: 1

Depth (ft.)	Textural Class	Structure (For class III – blocky, platy or massive)	Drainage (Mottles, Water Table)	Restrictive Horizon	Observations
0 0-6" 1 2 3 4 5	III		None	6"	Class III type soil. No shallow mottling.

Soil Boring Number: 2

Depth (ft.)	Textural Class	Structure (For class III – blocky, platy or massive)	Drainage (Mottles, Water Table)	Restrictive Horizon	Observations
0 0-6" 1 2 3 4 5	III		None	6"	Class III type soil. No shallow mottling.

Features of Site Area

Presence of 100 year flood zone

No

Presence of adjacent ponds, streams, water impoundment's

No

Existing or proposed water well in nearby area

Yes

Organized sewage available to lot or tract

No

Recharge features within 150 feet

No

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

Signature of Site evaluator

S. Jettin

Date 9-29-22



REVISED

2:31 pm, Dec 16, 2022

VOID

Southwest Septic Design

On-Site Sewage Facility Application and Design

Prepared For:

Royce Courts
5800 FM 32
Fischer, Texas 78620

Design 101190222

Prepared By:

Stephen F. Jetton 
Registered Professional Sanitarian



Revision 12/16/2022

~~10/4/2022~~

Stephen F. Jetton • Southwest Septic Design
2573 Deer Stand Loop • San Marcos, Texas 78666 • Mobile (512) 757-1259
E – Mail stephen.jetton@gmail.com

Southwest Septic Design

VOID

2573 Deer Stand Loop
San Marcos, Texas 78666
Hays County

Stephen.jetton@gmail.com
Mobile (512) 757-1259

Design Report On-Site Sewage facility Aerobic Wastewater Treatment System Utilizing Surface Spray Application

OWNER/SITE LOCATION:

Courts Residence
5800 FM 32
T.C. R.R. Co. Survey Section 945 ABS No. 832 – 20.59-acres
Fischer, Texas

SITE DESCRIPTION & EVALUATION:

A site evaluation indicated that the site is suitable for an aerobic surface irrigation system. The spray area has a slope of less than 15 percent, and there was no evidence of shallow groundwater. This residence will utilize an above ground rain-water collection tank for their source of water. All portions of the proposed OSSF must maintain at least a 10' setback from all water lines. This property is not within the 100-Year Floodplain (see site plan). There are no recharge features within 150' of the proposed OSSF. Minimum separation distances as stated in §285 TCEQ On-Site Sewage Facilities, must be maintained.

WASTEWATER DESIGN FLOW:

This design is for a 3-bedroom, 3651 sq. ft., single-family residence utilizing low-flow fixtures. This design will be slightly oversized to accommodate a future addition. Therefore, the total daily wastewater flow will be **360 gallons per day**, as per Texas Commission of Environmental Quality (TCEQ) On Site Sewage Facilities, effective 12-29-2016.

AEROBIC TREATMENT SYSTEM DESCRIPTION:

This proposed development will utilize a Nuwater Aerobic Treatment Plant, Model B-550. A 353-gallon pretreatment/trash tank will precede the 600-gallon per day aerobic treatment tank. Effluent from the aeration tank will flow through a liquid chlorinator (**EZ Tank Chlorinator**) to a 768-gallon pump tank. The pump tank serves as a chlorine contact chamber and a storage tank prior to the treated/chlorinated effluent being discharged to sprinkler heads. The disposal area will consist of 2– 30 ft. 360° radius patterns. The system is considered a “package system”, and will be installed according to manufacturer’s instructions.

12/16/2022



Design Specification:

Size of Residence	VOID	3651 sq. ft.
Number of Bedrooms		3
Average Expected Flow		360 GPD
Application Rate		0.064 Gal./ft ² /Day
Minimum Application Area		(GPD)/(0.064 Gal./ft ² /Day)
Actual Application Area	3.14(r ²) x number of heads	5652.00 ft ²

System Components:

Trash Tank	353 gallon one-compartment
Aeration Tank	600 gallon per day
Pump Tank	768 gallon

Pump Tank:

Pump Tank gallons per inch: 14.49"

Operating Capacity: 14.49" x 13" = **188.37 operating gallons**

Reserve Capacity: 53" usable depth (53 x 14.49 = 768.00) 768.00 – 347.76 = **420.24 reserve gallons.**

Pump off	8" Above tank floor	115.92 Gallons
Pump on	21" Above tank floor	304.29 Gallons
Alarm on	24" Above tank floor	347.76 Gallons

Combined capacity of pretreatment and aeration tank is 953-gallons. A 768-gallon, single-compartment pump tank allows for a one day's flow above the alarm-on level. This system will be designed to pump on demand.

Pump and Sprinkler Head Requirements:

Pump: Ashland Pump CPM Series – 20CPM5-115 20GPM ½ H.P.

Sprinkler Head: K Rain Pro Plus with Purple Tops.

Nozzle #: **3 LA** (Low angle trajectory, 11 degrees), operating at 35 psi, 30 ft. radius and 3.05 GPM flow per sprinkler

Dosing:

Application Flow Rate 3.05 gpm/head x 2 heads = **6.1 gpm**

Application Time: 2 doses @ 180 gal/dose / 6.1 gpm = ~ **29.51 min/dose**

Head Requirements:

Elevation head: 6 (assumed elevation at top of pump 1120 and highest spray head at 1126)

12/16/2022




Pressure head: $35 \text{ psi} \times 2.31 \text{ ft/psi} = 80.85 \text{ ft.}$

Friction head: $1'' \text{ Sch. 40 PVC @ } 6.10 \text{ gpm} = 8.61 \text{ ft} \times \frac{63}{100} \times 1.2 = 8.712$

VOID

TDH = $6 \text{ ft.} + 80.85 \text{ ft.} + 7.41 = 94.26$ (within pump curve).

An unthreaded sampling valve must also be provided. Under the Texas Administrative Code, §285 On-Site Sewage Facilities. This system is designed to dose on demand.

Alarm System:

An audio/visual high-water alarm will be installed on this system. NuWater control panel (SPI-BIO Model 50B138-AAV-PT). The alarm/light will be installed in a high visible location close to the pump tank.

Installation Notes:

- Refer to site plan for component placement and follow manufacturer's instructions for installation of treatment plant and aerator.
- All materials and construction methods are required to conform to the standards for Private Sewage Facility's set forth in the Texas Administrative Code, §285 On-Site Sewage Facilities.
- The installer must have a current and valid Texas installer certificate, and is required to have at the minimum an Installer II certification.
- The installer must notify designer and regulatory authority at least 48 hours in advance to schedule required inspections to ensure that the system is installed in accordance with the approved plans and specifications.
- The installer may not alter these plans without the approval of the designer.
- Diversion berms will be place when needed to protect irrigation area from excessive runoff.
- All electrical installation must be in compliance with applicable electric codes.
- All outside electrical components must be placed in electrical conduit.
- It is the responsibility of the installer to maintain the minimum setback requirements as stated in §285 for On-Site Sewage Facilities.

Tank Notes:

- The bottom of the excavation for the tanks shall be level and free of large rocks and debris.
- All tanks are to be set level on a layer, with a minimum thickness of 4 inches, of sand, sandy loam, clay loam, or pea gravel.
- Tank excavations must be backfilled with soil or pea gravel that is free of rock larger than $\frac{1}{2}$ inch in diameter. Class IV soils and gravel larger than $\frac{1}{2}$ inch in diameter are not acceptable for use as backfill material. If the top of a septic tank extends above the ground surface, soil may be mounded over the tank to maintain slope to the drain field.
- Risers are required over all tank openings and must extend to the ground surface.
- Risers shall be permanently fastened to the tank lid.
- The riser lid shall screw down and have a lock or weigh 65lbs.
- A secondary plug, cap, netting, etc. shall be provided below the riser lid.

12/16/2022



- All openings in the tank must be properly sealed to prevent the escape of wastewater, or to prevent the infiltration of water.
- Tanks must be filled with water for 24 hours to test for leaks and structural integrity.
- The tanks must be set low enough to have a minimum of 1/8" per foot from RV pad to tank.
- PVC pipe from RV pad to tank must be at least Sch.40 or SDR 26.

Irrigation & Landscaping Notes:

- Irrigation lines shall be 1" Sch.40 PVC. Sleeve any pipe that crosses under any roads or driveways with Sch.40 PVC.
- Purple Pipe must be used for all irrigation lines.
- Supply lines must be buried at least 6" below finished grade.
- If irrigation area does not have established vegetation, a mixture of winter rye and Bermuda grasses will be seeded to establish seasonal vegetation.
- The installer shall notify property owner prior to removal of any trees that may obstruct the operation of the irrigation system.
- *All exposed surface rock must be covered with at least 4" of suitable soil*
- *Vegetation must be established before system is in use.*

Additional Notes:

- Install audio-visual alarm for aerator and pump on separate breakers.
- The high water and air compressor alarms shall be audio/visual and mounted in a place that can be easily seen and heard when the alarms are activated.
- A hose bib must be installed in pump tank at tank inspection port.
- The chlorinator must be constructed to allow a chlorine residual of 1.0 mg/l in the pump tank for the period of time between scheduled inspections.
- The disinfected effluent must obey the standards as stated in §285, TCEQ, On-Site Sewage Facilities. Approved disinfections methods using chlorinated tablets, must use calcium hypochlorite that is properly labeled for wastewater disinfections.

Maintenance Requirements:

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

Affidavit:

- The applicant must file a certified copy of an affidavit at the County clerk's office and filed in reference to the real property deed on which the surface application system is to be installed.
- The affidavit will state that the property shall not be transferred to a new owner without:

12/16/2022



- (1) The new owner being advised that the property contains a surface application system for wastewater disposal;
- (2) The permit issued to the previous owner of the property being transferred to the new owner in accordance with §285.205 of the TCEQ OSSF Rules, i.e.; the permit will be issued in the name of the owner of the OSSF. The transfer of an OSSF permit under this section shall occur upon actual transfer of the property on which the OSSF is located unless the ownership of the OSSF had been severed from the property.
- (3) The new owners submitting a valid maintenance contract to the permitting authority.

Operation and Management Notes:

- The OSSF should not be treated as a normal city sewer.
- Water conservation practices should be used at all times. Consult your local authorities for more information.
- Run the dishwasher with a full load whenever possible
- Avoid running water continuously when brushing teeth, washing hands, or cleaning food and utensils.
- Repair any water leaks immediately, such as running toilets or leaky faucets.
- The owner is responsible for cleaning and pumping the septic tank, typically every 2 to 3 years depending on system usage.
- Do not use the toilet to dispose of tissue, feminine hygiene products, trash, cigarettes, etc.
- It is recommended that you do not use the garbage disposal and/or garbage grinders in the facility serviced by this system.
- Household chemicals should be used in moderation.
- According to §285, no water softener will be allowed to enter the OSSF.
- Chemical additives or the so-called enzymes should not be used during the operation of this system. Some of these additives may even be harmful to the facilities operation.
- Do not build driveways, storage buildings, decks, or other structures over the tank or disposal area.
- The OSSF must be protected from coming in contact with vehicular traffic.
- A strong vegetative cover is essential for the proper operation of this system. The property owner is solely responsible for maintaining this vegetation. The irrigation area should be groomed by mowing on a regular basis.
- If you notice a problem with the spray patterns, or any of the alarms are activated, contact your maintenance provider immediately.
- Never place a greater wastewater load on your system than that prescribed by the design of the system (*360 gallons per day*).

****The proposed system has been designed generally following the minimum requirements under TCEQ §285 On Site Sewage Facilities. The site evaluation and subsequent design are based on technical information currently available. The performance of the OSSF is not, and cannot be guaranteed even though all provisions of the Standards have been complied with. If failure should occur, additions to the OSSF may have to be made. In extreme cases a substitute system may be required. By accepting this design, the homeowner/contractor understands the aforementioned conditions, and agrees that the designer will not be liable for any more than the agreed upon design***

12/16/2022

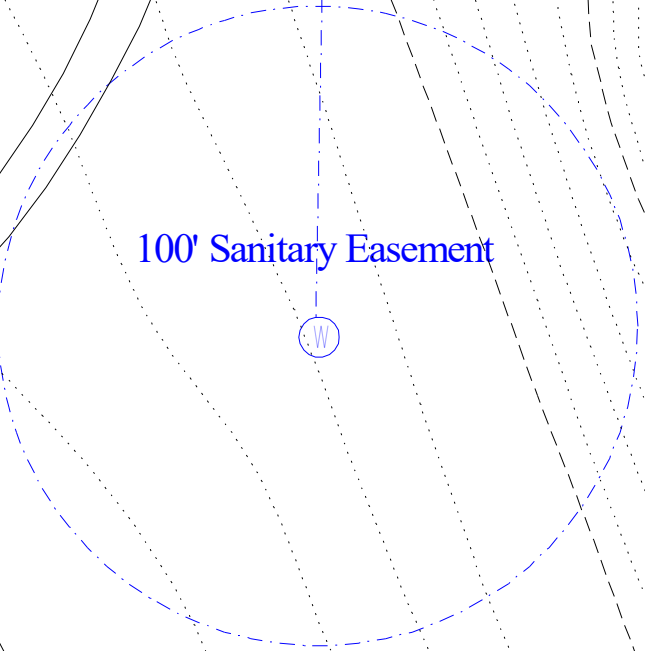
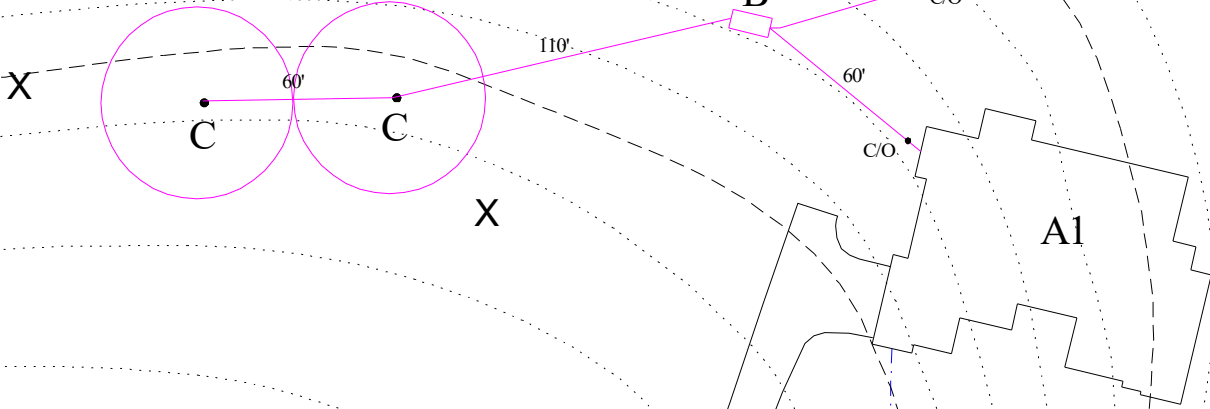


N14d44

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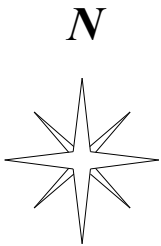
S13d25'54"W 1260



100' Sanitary Easement



12/16/2022
[Signature]



Scale: 1" = 60'

5800 FM 32
Fischer, Texas 78623

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2:33 pm, Dec 16, 2022

T.C. R.R. CO. Survey
Section 945 ABS No. 832
20.59 - Acres
Comal County, Texas

VOID

- A1 - 3-Bedroom Single-Family Residence (3651 sq. ft.).
- A2 - Outdoor Kitchen 2" Sch. 40 PVC Sink Drain.
- B - Proposed NuWater Model B-550- 600 GPD ATU.
- C - K Rain Pro Plus, 30' Radius Sprinkler Head
- #3 Nozzle - 35 PSI - 3.05 GPM per Sprinkler Head.

C/O - Two-Way Cleanout X - Profile Hole

Provide Two-Way Cleanout from House to Tank.
3" or 4" Sch. 40 between House and Tank. Must maintain
a minimum of 1/8" per foot of fall between house and tank.

Supply Line: 1" Sch. 40 PVC Purple Pipe

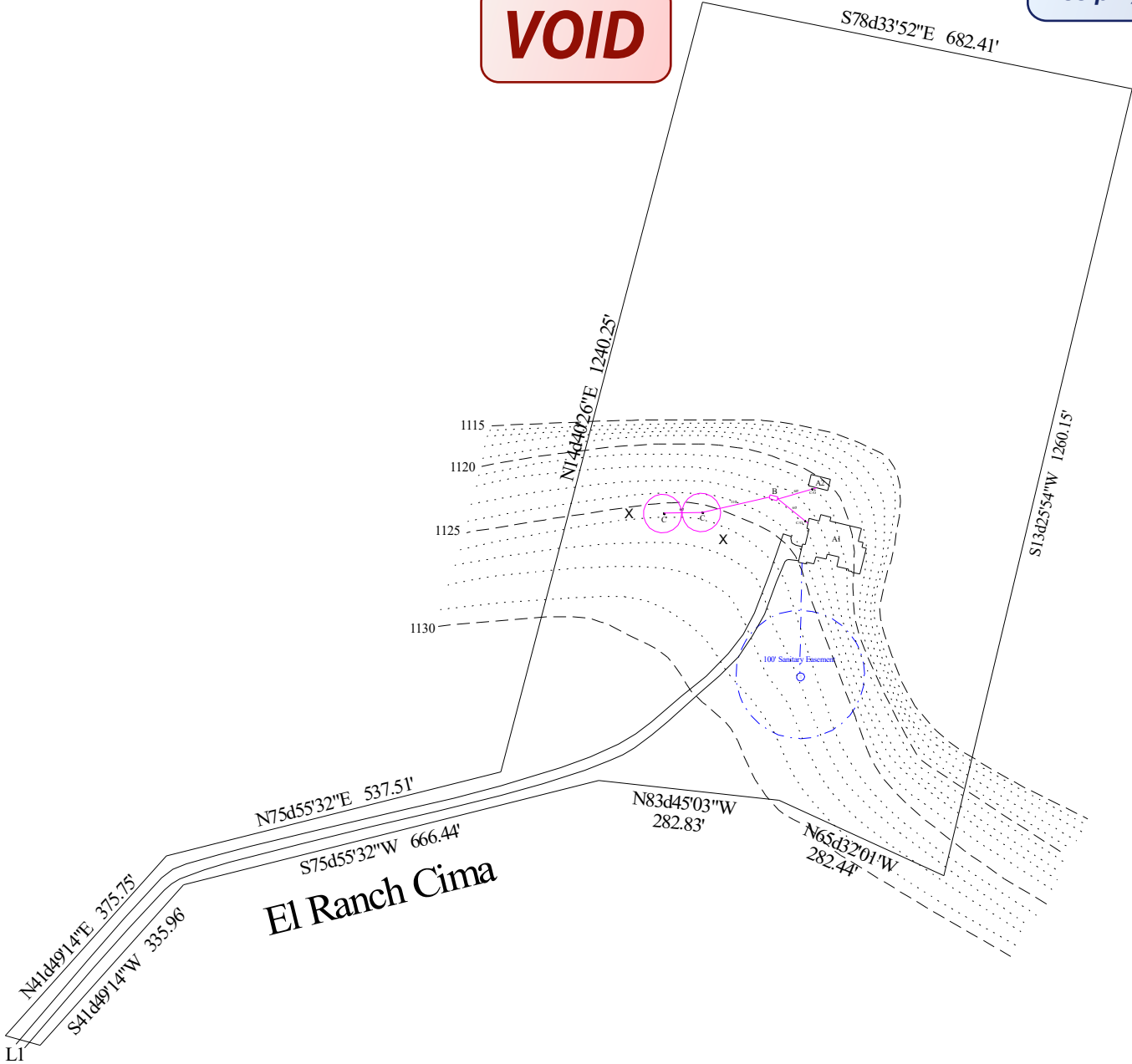
Maintain 10' from all Potable Water Lines.
Maintain 20' from all Property Lines.

*Refer to Tank Detail and Design Notes for more
Information.

*Plans may vary Slightly based on Conditions
Encountered in the Field.

*Trim Trees as Neccessary in Application Area.
Trees must maintain at least 10' from Sprinkler
Head.

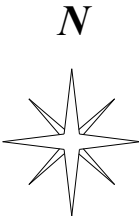
*All Separation and Setback Requirements as Stated in
Chapter 285, TCEQ, On-Site Sewage Facilities, must
be maintained.



12/16/2022



Flood Plain Note: This property is not within
the 100-Year Flood Plain according to Map
Panel No. 48091C0110F Dated 9/2/2009.



Scale: 1" = 300'

Typical Pump Tank Cross Section

VOID

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2:32 pm, Dec 16, 2022

A - Ashland Pump CPM Series - 20CPM5-115 20GPM 1/2HP.

B - Wide Angle Mercury Float Switch

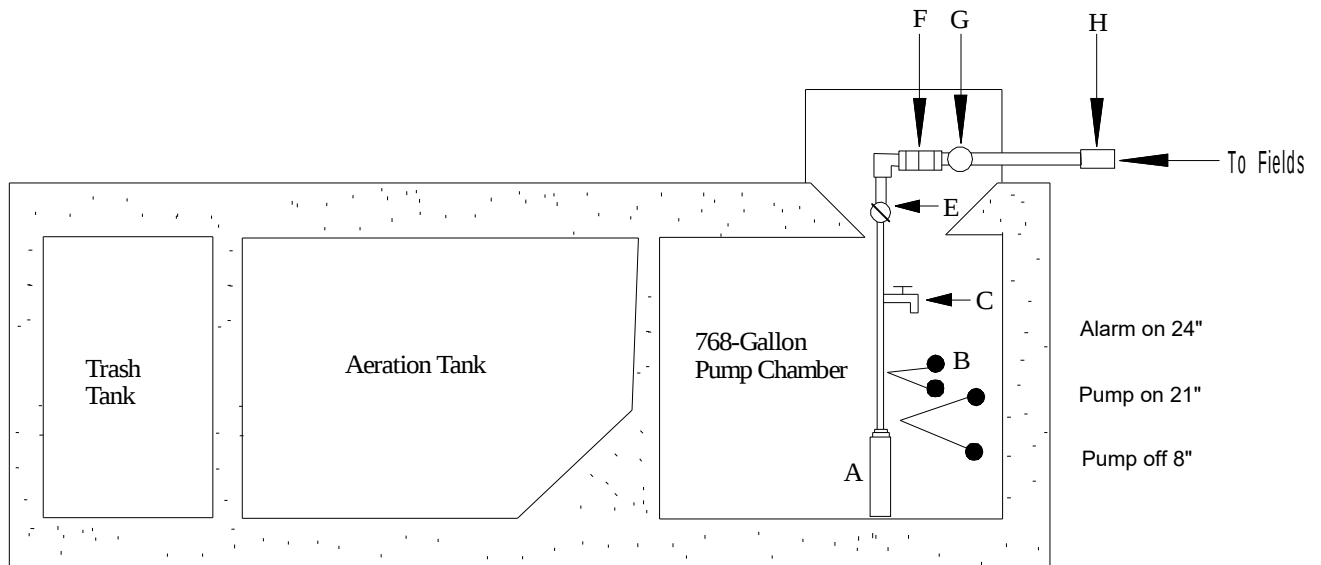
C - Sampling Port

~~E - Pressure Regulator~~

F - Quick Disconnect Union

G - 40 PSI Pressure Gauge

H - Check Valve



12/16/2022



NuWater B-550 (600 GPD) Aerobic Treatment Plant

Not to Scale

Assembly Details

OSSF

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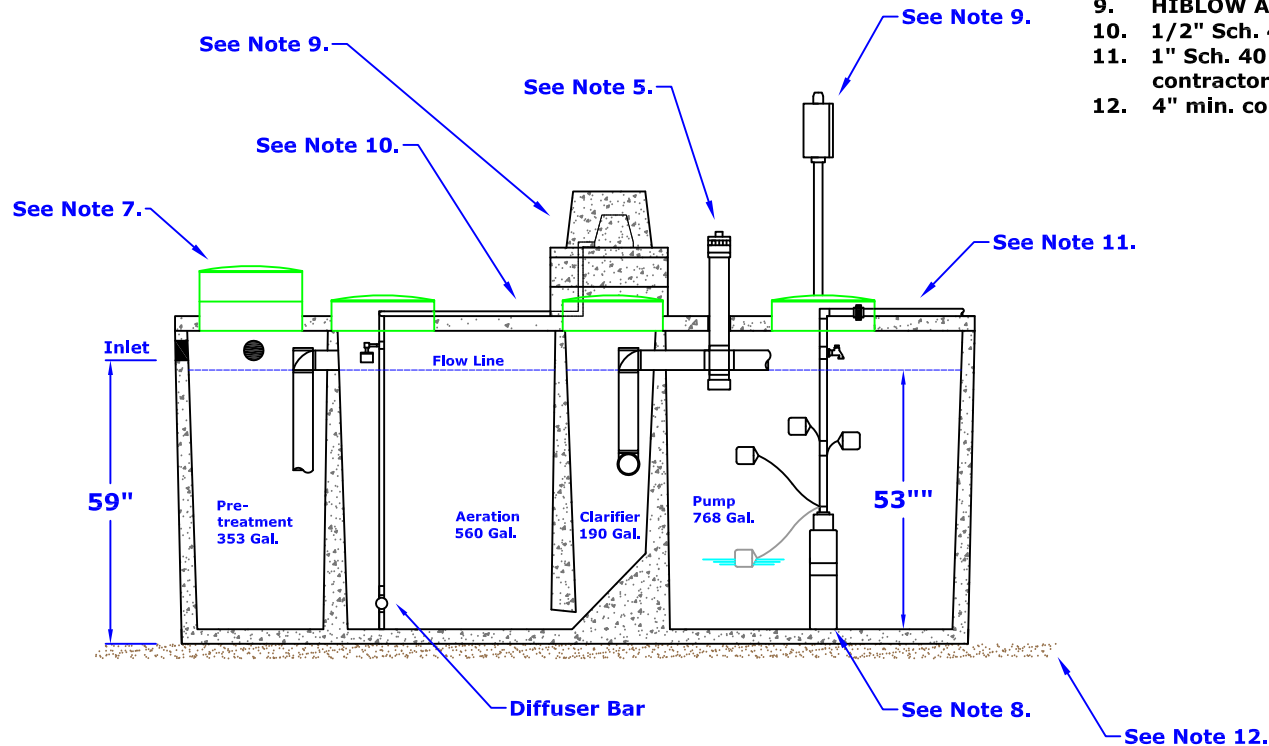
4 - 6 - See design notes



VOID

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 = 14,900 lbs.
4. Treatment capacity is 600 GPD. Pump compartment set-up for a 360 GPD Flow Rate (4 bedroom, < 4,000 sq/ft living area). Please specify for additional set-up requirements. BOD Loading = 1.62 lbs. per day.
5. Standard tablet chlorinator or Optional Liquid chlorinator. NSF approved chlorinators (tablet & liquid) available.
6. Bio-Robix B-550 Control Center w/ Timer for night spray application. Optional Micro Dose (min/sec) timer available for drip applications. Electrical Requirement to be 115 Volts, 60 Hz, Single Phase, 30 AMP, Grounded Receptacle.
7. 20" Ø access riser w/ lid (Typical 4). Optional extension risers available.
8. 20 GPM 1/2 HP, high head effluent pump.
9. HIBLOW Air Compressor w/ concrete housing.
10. 1/2" Sch. 40 PVC Air Line (Max. 50 Lft from Plant).
11. 1" Sch. 40 PVC pipe to distribution system provided by contractor.
12. 4" min. compacted sand or gravel pad by Contractor



DIMENSIONS:

Outside Height: 67"
Outside Width: 63"
Outside Length: 164"

MINIMUM EXCAVATION DIMENSIONS:

Width: 76"
Length: 176"

**NuWater B-550 (600 GPD)
Aerobic Treatment Plant (Assembled)**

Model: B-550-PC-400PT

March, 2012 - Rev 1
By: A.S.

Scale:

* All Dimensions subject to allowable specification tolerances.

Dwg. #: ADV-B550-3



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

PROPLUS GEAR DRIVEN SPRINKLER SETTING INSTRUCTIONS

VOID

SPRINKLER INSTALLATION

1► INSTALL AND BURY

Do not use pipe dope. Thread the sprinkler on the pipe. Bury the sprinkler flush to grade. **NOTE:** Gear driven sprinklers and pop-up sprays should not be installed on the same watering zone.

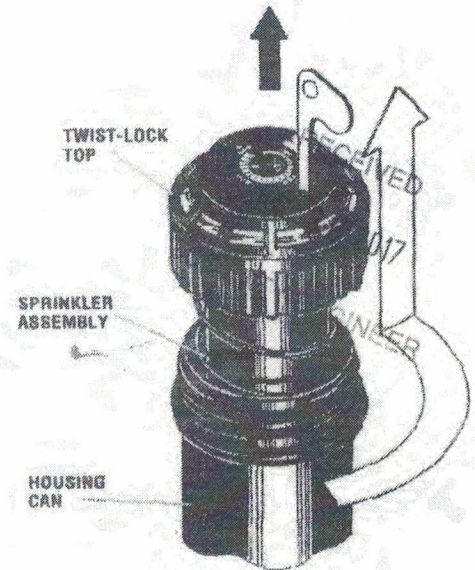
2► INSPECTING THE FILTER

Unscrew the top and lift the complete sprinkler assembly out of the housing can. The filter is located on the bottom of the sprinkler assembly and can easily be pulled out, cleaned and re-installed.

3► WINTERIZATION TIPS

When using an air compressor to remove water from the system please note the following:

- 1) Do not exceed 30 PSI.
- 2) Always introduce air into the system gradually to avoid air pressure surges. Sudden release of compressed air into the sprinkler can cause damage.
- 3) Each zone should run no longer than 1 minute on air. Sprinklers turn 10 to 12 times faster on air than on water. Over spinning rotors on air can cause damage to the internal components.



STANDARD NOZZLE PERFORMANCE

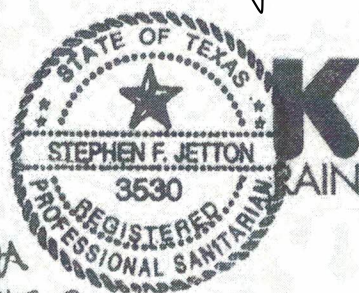
Nozzle	U.S.			METRIC			Flow	
	Pressure PSI	Radius Ft.	Flow GPM	Pressure KPa	Radius Meters	Flow L/M		
#2.5 Factory Installed Nozzle	30	38'	2.5	206	2.04	11.6	9.46	.57
	40	39'	2.8	275	2.72	11.9	10.60	.64
	50	40'	3.2	345	3.40	12.2	12.11	.73
	60	41'	3.6	413	4.08	12.5	13.25	.79
#0.5	30	28'	0.5	206	2.0	8.5	1.89	.11
	40	28'	0.6	275	3.0	8.8	2.27	.14
	50	29'	0.7	345	3.5	8.8	2.65	.16
	60	30'	0.8	413	4.0	9.1	3.03	.18
#0.75	30	29'	0.7	206	2.0	8.8	2.65	.16
	40	30'	0.8	275	3.0	9.1	3.03	.18
	50	31'	0.9	345	3.5	9.4	3.41	.20
	60	32'	1.0	413	4.0	9.8	3.79	.23
#1	30	32'	1.3	206	2.0	9.8	4.92	.14
	40	33'	1.6	275	3.0	10.1	5.68	.18
	50	34'	1.8	345	3.5	10.4	6.05	.20
	60	35'	1.8	413	4.0	10.7	6.81	.23
#2	30	37'	2.4	206	2.0	11.3	9.08	.54
	40	40'	2.5	275	3.0	12.2	9.46	.56
	50	42'	3.0	345	3.5	12.8	11.35	.68
	60	43'	3.3	413	4.0	13.1	12.49	.75
#3	30	38'	3.6	206	2.0	11.6	13.63	.75
	40	39'	4.2	275	3.0	11.9	15.89	.95
	50	41'	4.6	345	3.5	12.5	17.41	1.04
	60	42'	5.0	413	4.0	12.8	18.92	1.13
#4	30	43'	4.4	206	2.0	13.1	16.65	.88
	40	44'	5.1	275	3.0	13.4	19.30	1.15
	50	46'	5.6	345	3.5	14.0	21.19	1.27
	60	49'	5.9	413	4.0	14.9	22.33	1.33
#6	40	45'	5.9	206	3.0	13.7	22.33	1.33
	50	46'	6.0	275	3.5	14.0	22.71	1.36
	60	48'	6.3	345	4.0	14.6	23.85	1.43
	70	49'	6.7	413	5.0	14.9	25.35	1.52
#8	40	42'	8.0	206	3.0	12.8	30.28	1.81
	50	45'	8.5	275	3.5	13.7	32.12	1.92
	60	49'	9.5	345	4.0	14.8	35.05	2.15
	70	50'	10.0	413	5.0	15.3	37.85	2.27

LOW ANGLE NOZZLE PERFORMANCE

Nozzle	U.S.			METRIC			Flow	
	Pressure PSI	Radius Ft.	Flow GPM	Pressure KPa	Radius Meters	Flow L/M		
#1	30	22'	1.2	207	2.04	6.71	4.54	.34
	40	24'	1.7	275	2.72	7.32	5.43	.39
	50	26'	1.8	344	3.40	7.92	6.80	.41
	60	28'	2.0	413	4.08	8.53	7.56	.46
#3	30	29'	3.0	207	2.04	8.84	11.34	.68
	40	32'	3.1	275	2.72	9.75	11.72	.71
	50	35'	3.5	344	3.40	10.67	13.23	.80
	60	37'	3.8	413	4.08	11.58	14.36	.87
#4	30	31'	3.4	207	2.04	9.45	12.85	.78
	40	34'	3.9	275	2.72	10.36	14.74	.89
	50	37'	4.4	344	3.40	11.28	16.63	1.00
	60	38'	4.7	413	4.08	11.58	17.77	1.07
#6	40	38'	8.5	275	2.72	11.58	24.57	1.68
	50	40'	7.3	344	3.40	12.19	27.89	1.76
	60	42'	8.0	413	4.08	12.80	30.24	1.82
	70	44'	8.6	482	4.76	13.41	32.51	1.96

Data represents test results in zero wind for ProPlus. Adjust for local conditions.
Radius may be reduced with nozzle retention screw.

12/16/2022



K-RAIN MANUFACTURING CORP.
1640 Australian Avenue
Riviera Beach, FL 33404 USA
PH: 1-561-844-1002 / 1-800-735-7246
FAX: 1-561-842-9493
WEB: <http://www.krain.com>

© K-RAIN Manufacturing Corp. L-58921

CISTERN PUMPS

CPM Series

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Ashland Pump – CPM Series

VOID

The Ashland Pump CPM Series is designed to operate in filtered effluent/gray water applications. The bottom suction design allows for maximum drawdown of fluid and the hydraulic stages are able to pass 1/8" solids without damage to the pump.

Installations in cistern tanks, rain basin catchments or anywhere drawdown levels need to be maximized are ideal applications for the Ashland Pump CPM Series.

APPLICATIONS

- Filtered Effluent Water Pumping
- Gray Water Pumping
- Water Feature / Aeration Applications
- Rain Water Basin Applications

FEATURES

- Bottom suction design for maximum drawdown
- Able to pass 1/8" solids
- Available in 10, 20 and 30 GPM flow rates
- ½ HP, 115V and 230V single phase motors
- Heavy duty discharge with stainless steel internal threads
- 600 Volt, 10' SJ00W jacketed lead
- High shut-off pressure
- Quiet operation
- Standard removable base for stable mounting

12/16/2022



ORDERING INFORMATION

CPM SERIES CISTERN PUMP

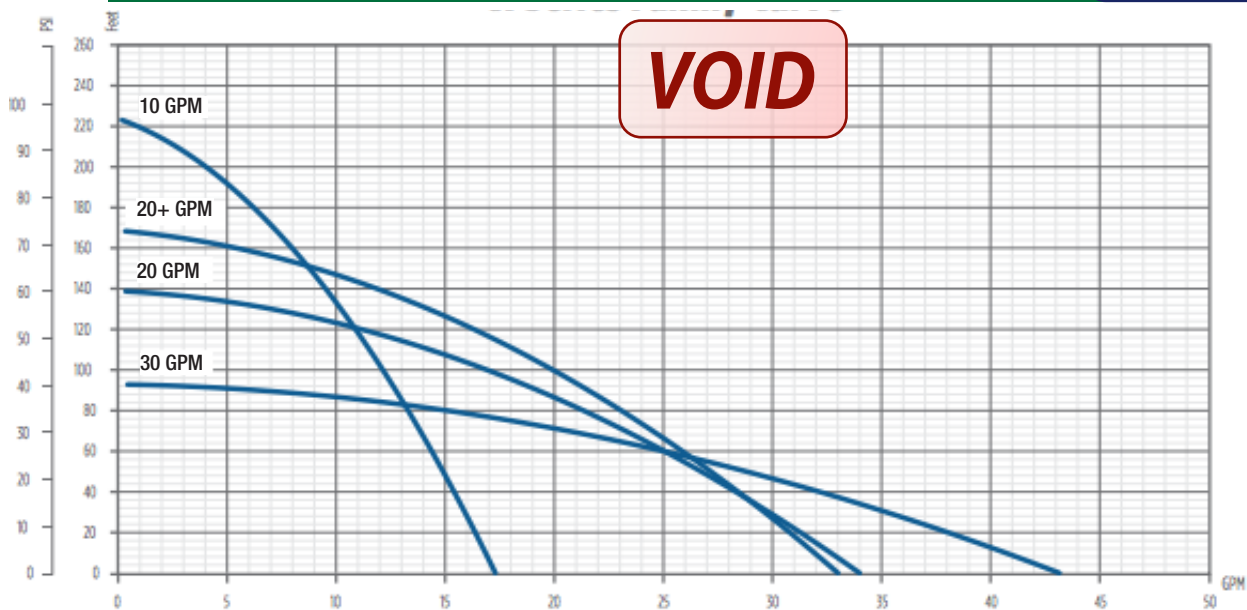
Model/Order No.	GPM	HP	Voltage/Ph.	Stage Count	Length (in.)	Shipping Wt. (lbs.)
10CPM5-115	10	1/2	115/1	7	26	17
10CPM5-230	10		230/1	7	26	17
20CPM5-115	20		115/1	5	25	16
20CPM5-230	20		230/1	5	25	16
20+CPM5-115	20+		115/1	6	26	17
20+CPM5-230	20+		230/1	6	26	17
30CPM5-115	30		115/1	4	25	16
30CPM5-230	30		230/1	4	25	16



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ASHLAND PUMP CPM SERIES CISTERN PUMP PERFORMANCE



12/16/2022



P U M P

Honest, Professional, Dependable

1899 Cottage Street, Ashland, Ohio 44805

Telephone: 855 281-6830 • Fax: 877 326-1994 • ashlandpump.com

LBC Manufacturing

"EZ-TANK" **VOID**

GRAVITY FLOW Liquid Bleach Chlorinator

US Patent Pending

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LBC Manufacturing

P.O. Box 454 • Fayetteville, TEXAS 78940
(979) 826-0139 off.

For a downloadable copy:
www.ez-tank.com



THIS PRODUCT WAS EVALUATED AS A CHLORINE DISINFECTION DEVICE AND
MEETS OR EXCEEDS THE APPLICABLE REQUIREMENTS OF STANDARD 46

12/16/2022



RECOMMENDED INSTALLATION INSTRUCTIONS

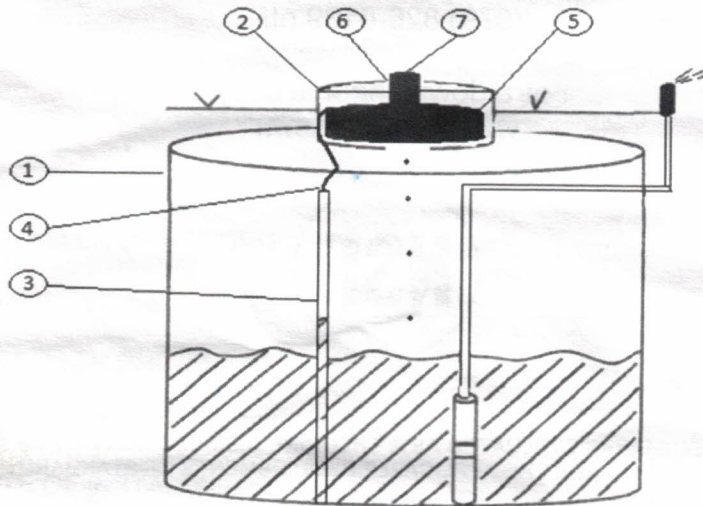
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2:33 pm, Dec 16, 2022

**** LBC Manufacturing recommends installation by
TCEQ licensed and trained installers. ****

VOID

1. Locate the Aerobic System Holding/Pump tank
2. Remove the green access lid mounting screw and remove green access lid.
3. Install vertical sensing pipe into Holding/Pump tank. Ensure sensing pipe is resting on the bottom of the Holding/Pump tank. Cut the sensing pipe off below the top of the Holding/Pump tank lid, and secure the sensing pipe to remain vertical in the Holding/Pump tank
4. Using PVC Cleaner and PVC glue, attach the barb fitting adapter (supplied on the end of EZ-Tanks vinyl tubing) to the sensing pipe.
5. Place the EZ-Tank reservoir inside the holding tank access riser. (EZ-Tank reservoir rests on the secondary safety lid inside the holding tank access riser. If the holding tank access riser does not have a secondary safety lid, replace with new access riser that accommodates the secondary safety lid to code.)
6. Next, drill 4.25 inch hole in center of holding tank access lid. (this allows the fill lid to be accessed without having to reopen the holding tank lid) Next, Re-Install holding tank access lid and replace mounting and safety screws.
7. Open EZ-Tank gasketed fill lid. Fill with 6% -10% sodium hypochlorite. Once filled, Replace the gasketed fill lid ensuring a firm secure seal. (If the fill lid is not tightened securely, a vacuum will not form and reservoir will empty sodium hypochlorite contents into Holding/Pump tank prematurely.)



12/16/2022

[Signature]



Southwest Septic Design

2573 Deer Stand Loop
San Marcos, Texas 78666
Hays County

Stephen.jetton@gmail.com
Mobile (512) 757-1259

VOID

Design Report
On-Site Sewage facility

**Aerobic Wastewater Treatment System
Utilizing Surface Spray Application**

OWNER/SITE LOCATION:

Courts Residence

5800 FM 32

T.C. R.R. Co. Survey Section 945 ABS No. 832 – 20.59-acres

Fischer, Texas

C.D. Robertson Survey No. 999 ABS 982;
T.C.R.R. Co. Survey Sec. No 946 ABS 936

SITE DESCRIPTION & EVALUATION:

A site evaluation indicated that the site is suitable for an aerobic surface irrigation system. The spray area has a slope of less than 15 percent, and there was no evidence of shallow groundwater. This residence will utilize an above ground rain-water collection tank for their source of water. All portions of the proposed OSSF must maintain at least a 10' setback from all water lines. This property is not within the 100-Year Floodplain (see site plan). There are no recharge features within 150' of the proposed OSSF. Minimum separation distances as stated in §285 TCEQ On-Site Sewage Facilities, must be maintained.

WASTEWATER DESIGN FLOW:

This design is for a 3-bedroom, 3651 sq. ft., single-family residence utilizing low-flow fixtures. This design will be slightly oversized to accommodate a future addition. Therefore, the total daily wastewater flow will be **360 gallons per day**, as per Texas Commission of Environmental Quality (TCEQ) On Site Sewage Facilities, effective 12-29-2016.

AEROBIC TREATMENT SYSTEM DESCRIPTION:

This proposed development will utilize a Nuwater Aerobic Treatment Plant, Model B-550. A 353-gallon pretreatment/trash tank will precede the 600-gallon per day aerobic treatment tank. Effluent from the aeration tank will flow through a liquid chlorinator (**EZ Tank Chlorinator**) to a 768-gallon pump tank. The pump tank serves as a chlorine contact chamber and a storage tank prior to the treated/chlorinated effluent being discharged to sprinkler heads. The disposal area will consist of 2– 30 ft. 360° radius patterns. The system is considered a “package system”, and will be installed according to manufacturer’s instructions.

12/16/2022



Design Specification:

Size of Residence	3651 sq. ft.
Number of Bedrooms	3
Average Expected Flow	360 GPD
Application Rate	0.064
Minimum Application Area	5625.00 ft ²
Actual Application Area	5652.00 ft ²

System Components:

Trash Tank	353 gallon one-compartment
Aeration Tank	600 gallon per day
Pump Tank	768 gallon

Pump Tank:

Pump Tank gallons per inch: 14.49"

Operating Capacity: 14.49" x 13" = **188.37 operating gallons**

Reserve Capacity: 53" usable depth (53 x 14.49 = 768.00) 768.00 – 347.76 = **420.24 reserve gallons.**

Pump off	8" Above tank floor	115.92 Gallons
Pump on	21" Above tank floor	304.29 Gallons
Alarm on	24" Above tank floor	347.76 Gallons

Combined capacity of pretreatment and aeration tank is 953-gallons. A 768-gallon, single-compartment pump tank allows for a one day's flow above the alarm-on level. This system will be designed to pump on demand.

Pump and Sprinkler Head Requirements:

Pump: Ashland Pump CPM Series – 20CPM5-115 20GPM ½ H.P.

Sprinkler Head: K Rain Pro Plus with Purple Tops.

Nozzle #: **3 LA** (Low angle trajectory, 11 degrees), operating at 35 psi, 30 ft. radius and 3.05 GPM flow per sprinkler

Dosing:

Application Flow Rate 3.05 gpm/head x 2 heads = **6.1 gpm**

Application Time: 2 doses @ 180 gal/dose / 6.1 gpm = ~ **29.51 min/dose**

Head Requirements:

Elevation head: 6 (assumed elevation at top of pump 1120 and highest spray head at 1126)

12/16/2022




Design Specification:

Size of Residence		3651 sq. ft.
Number of Bedrooms		3
Average Expected Flow		360 GPD
Application Rate	0.064 Gal./ft ² /Day	0.064
Minimum Application Area	(0.064 Gal./ft ² /Day)	5625.00 ft ²
Actual Application Area	5.14 (x 1000 sq. ft. of lands)	5652.00 ft ²

System Components

Trash Tank	353 gallon one-compartment
Aeration Tank	600 gallon per day
Pump Tank	768 gallon

Pump Tank:

Pump Tank gallons per inch: 14.49"

Operating Capacity: 14.49" x 13" = **188.37 operating gallons**

Reserve Capacity: 53" usable depth (53 x 14.49 = 768.00) 768.00 – 347.76 = **420.24 reserve gallons.**

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Dosing:

Application Flow Rate 3.05 gpm/head x 2 heads = **6.1 gpm**

Application Time: 2 doses @ 180 gal/dose / 6.1 gpm = ~ **29.51 min/dose**

Head Requirements:

Elevation head: 6 (assumed elevation at top of pump 1120 and highest spray head at 1126)

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Pressure head: $35 \text{ psi} \times 2.31 \text{ ft/psi} = 80.85 \text{ ft.}$

Friction head: $1'' \text{ Sch. 40 PVC @ } 6.10 \text{ gpm} = 3.63 \text{ ft. } (170 \times 3.63/100 \times 1.2) = 8.712$

TDH = $6 \text{ ft.} + 80.85 \text{ ft.} + 7.41 = 94.26$ (within pump curve).

An unthreaded sampling valve must also be provided. Under the Texas Administrative Code, §285 On-Site Sewage Facilities. This system is designed to dose on demand.

Alarm System:

An audio/visual alarm system must be installed on this system. NuWater control panel (SPI-BIO Model 008-A) will be installed in a high visible location close to the pump tank.

Installation Notes:

- Refer to site plan for component placement and follow manufacturer's instructions for installation of treatment plant and aerator.
- All materials and construction methods are required to conform to the standards for Private Sewage Facility's set forth in the Texas Administrative Code, §285 On-Site Sewage Facilities.
- The installer must have a current and valid Texas installer certificate, and is required to have at the minimum an Installer II certification.
- The installer must notify designer and regulatory authority at least 48 hours in advance to schedule required inspections to ensure that the system is installed in accordance with the approved plans and specifications.
- The installer may not alter these plans without the approval of the designer.
- Diversion berms will be place when needed to protect irrigation area from excessive runoff.
- All electrical installation must be in compliance with applicable electric codes.
- All outside electrical components must be placed in electrical conduit.
- It is the responsibility of the installer to maintain the minimum setback requirements as stated in §285 for On-Site Sewage Facilities.

Tank Notes:

- The bottom of the excavation for the tanks shall be level and free of large rocks and debris.
- All tanks are to be set level on a layer, with a minimum thickness of 4 inches, of sand, sandy loam, clay loam, or pea gravel.
- Tank excavations must be backfilled with soil or pea gravel that is free of rock larger than ½ inch in diameter. Class IV soils and gravel larger than ½ inch in diameter are not acceptable for use as backfill material. If the top of a septic tank extends above the ground surface, soil may be mounded over the tank to maintain slope to the drain field.
- Risers are required over all tank openings and must extend to the ground surface.
- Risers shall be permanently fastened to the tank lid.
- The riser lid shall screw down and have a lock or weigh 65lbs.
- A secondary plug, cap, netting, etc. shall be provided below the riser lid.

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- All openings in the tank must be properly sealed to prevent the escape of wastewater, or to prevent the infiltration of water.
- Tanks must be filled with water for 24 hours to test for leaks and structural integrity.
- The tanks must be set low enough to have fall of at least 1/8" per foot from RV pad to tank.
- PVC pipe from RV pad to tank must be at least Sch.40 or SDR 26.

Irrigation & Landscaping Notes:

- Irrigation lines shall be 1" Sch.40 PVC. Sleeve any pipe that crosses under any roads or driveways with Sch.40 PVC.
- Purple Pipe must be used for all irrigation lines.
- Supply lines must be buried at least 6" below finished grade.
- If irrigation area does not have established vegetation, a mixture of winter rye and Bermuda grasses will be seeded to establish seasonal vegetation.
- The installation shall be completed prior to removal of any trees that may obstruct the operation of the irrigation system.
- All exposed surface work must be covered with at least 4" of suitable soil
- Vegetation must be maintained when the system is in use.

Additional Notes:

- Install audio-visual alarm for aerator and pump on separate breakers.
- The high water and air compressor alarms shall be audio/visual and mounted in a place that can be easily seen and heard when the alarms are activated.
- A hose bib must be installed in pump tank at tank inspection port.
- The chlorinator must be constructed to allow a chlorine residual of 1.0 mg/l in the pump tank for the period of time between scheduled inspections.
- The disinfected effluent must obey the standards as stated in §285, TCEQ, On-Site Sewage Facilities. Approved disinfections methods using chlorinated tablets, must use calcium hypochlorite that is properly labeled for wastewater disinfections.

Maintenance Requirements:

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

Affidavit:

- The applicant must file a certified copy of an affidavit at the County clerk's office and filed in reference to the real property deed on which the surface application system is to be installed.
- The affidavit will state that the property shall not be transferred to a new owner without:

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- (1) The new owner being advised that the property contains a surface application system for wastewater disposal;
- (2) The permit issued to the previous owner of the property being transferred to the new owner in accordance with §285.20(5) of the TCEQ OSSF Rules, i.e.; the permit will be issued in the name of the owner of the OSSF. Permits shall be transferred to the new owner automatically upon legal sale of the OSSF. The transfer of an OSSF permit under this section shall occur upon actual transfer of the property on which the OSSF is located unless the ownership of the OSSF has been severed from the property.
- (3) The new owners submitting a valid maintenance contract to the permitting authority.

Operation and Maintenance Notes:

- The OSSF should not be treated as a normal city sewer.
- Water conservation activities should be used at all times. Consult your local authorities for more information.
- Run the dishwasher with a full load whenever possible.
- Avoid running water continuously when brushing teeth, washing hands, or cleaning food and utensils.
- Repair any water leaks immediately, such as running toilets or leaky faucets.
- The owner is responsible for cleaning and pumping the septic tank, typically every 2 to 3 years depending on system usage.
- Do not use the toilet to dispose of tissue, feminine hygiene products, trash, cigarettes, etc.
- It is recommended that you do not use the garbage disposal and/or garbage grinders in the facility serviced by this system.
- Household chemicals should be used in moderation.
- According to §285, no water softener will be allowed to enter the OSSF.
- Chemical additives or the so-called enzymes should not be used during the operation of this system. Some of these additives may even be harmful to the facilities operation.
- Do not build driveways, storage buildings, decks, or other structures over the tank or disposal area.
- The OSSF must be protected from coming in contact with vehicular traffic.
- A strong vegetative cover is essential for the proper operation of this system. The property owner is solely responsible for maintaining this vegetation. The irrigation area should be groomed by mowing on a regular basis.
- If you notice a problem with the spray patterns, or any of the alarms are activated, contact your maintenance provider immediately.
- Never place a greater wastewater load on your system than that prescribed by the design of the system (360 gallons per day).

****The proposed system has been designed generally following the minimum requirements under TCEQ §285 On Site Sewage Facilities. The site evaluation and subsequent design are based on technical information currently available. The performance of the OSSF is not, and cannot be guaranteed even though all provisions of the Standards have been complied with. If failure should occur, additions to the OSSF may have to be made. In extreme cases a substitute system may be required. By accepting this design, the homeowner/contractor understands the aforementioned conditions, and agrees that the designer will not be liable for any more than the agreed upon design***

12/16/2022




NOTES

1. BEARINGS ARE BASED ON THE STATE PLANE COORDINATE SYSTEM ESTABLISHED FOR THE TEXAS SOUTH CENTRAL ZONE 4204, NORTH AMERICAN DATUM (NAD) OF 1983.
2. THE REFERENCED PROPERTY IS IN ZONE "X" AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FEMA FLOOD MAP 48070107, COMMUNITY PANEL NO. 170 OF 505, DATED SEPTEMBER 9, 2008.

TITLE COMMITMENT PROVIDED BY THE OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY, OF NO. 177550400P, EFFECTIVE DATE: DECEMBER 14, 2021, ISSUED DATE: DECEMBER 22, 2021.

LEGAL DESCRIPTION OF LAND:

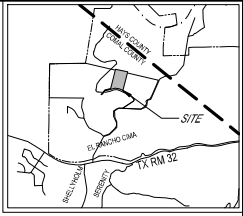
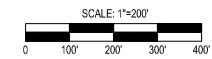
BEING A 20.59 ACRE TRACT OF LAND, OUT OF A 430.984 ACRES OF LAND, MORE OR LESS, OUT OF THE MARIA EMPORIA ABSTRACT NO. 2, SURVEY NO. 3, THE C.D. ROBERTSON SURVEY NO. 999, ABSTRACT NO. 936, T.C. R.R. CO. SURVEY SECTION NO. 946, ABSTRACT NO. 832, COMAL COUNTY, TEXAS, AND BEING A PORTION OF A CALLED 430.984 ACRES TRACT OF LAND AS DESCRIBED OF RECORD IN DOCUMENT NO. 202106029019 OF THE OFFICIAL RECORDS OF COMAL COUNTY, TEXAS.

SCHEDULE B

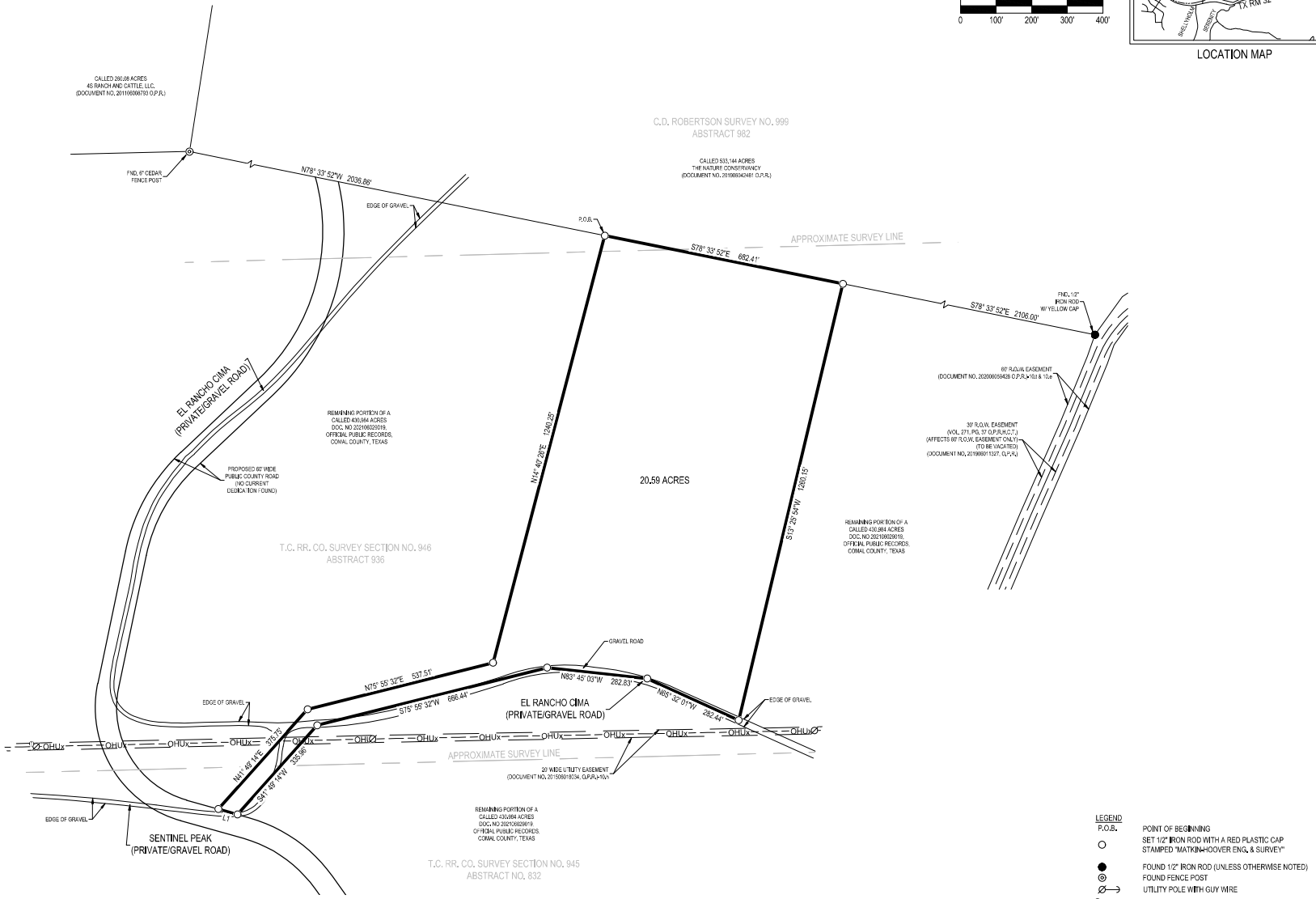
2. RESTRICTIVE COVENANTS OF RECORD:
DOCUMENT NO. 201906011206,
DOCUMENT NO. 201906011337,
DOCUMENT NO. 20190604462,
DOCUMENT NO. 20200404211,
DOCUMENT NO. 20200504645,
DOCUMENT NO. 20200404706,
DOCUMENT NO. 20200404803,
DOCUMENT NO. 20200404932,
DOCUMENT NO. 20200404951, AND
DOCUMENT NO. 20200404918, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS.
3. VOLUME 191, PAGE 384, DEED RECORDS, COMAL COUNTY, TEXAS, (DOES NOT CROSS SUBJECT TRACT)
- EASEMENT AS STATED THEREIN.
4. VOLUME 198, PAGE 223, DEED RECORDS, COMAL COUNTY, TEXAS, (MAY APPLY, UNABLE TO LOCATE)
- EASEMENT AS STATED THEREIN.
5. VOLUME 198, PAGE 3, DEED RECORDS, COMAL COUNTY, TEXAS, (DOES NOT CROSS SUBJECT TRACT)
- EASEMENT AS STATED THEREIN.
6. DOCUMENT NO. 20090020862, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS, (MAY APPLY, UNABLE TO LOCATE)
- EASEMENT AS STATED THEREIN.
7. VOLUME 221, PAGE 193 OF THE DEED RECORDS OF COMAL COUNTY, TEXAS, AS AFFECTED BY DOCUMENT NO. 20090020862, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS, (DOES NOT CROSS SUBJECT TRACT)
- 80' ROADWAY EASEMENT (SHOWN).
8. COUNTY CLERK'S FILE NO. 20090020862 OF THE OFFICIAL RECORDS OF COMAL COUNTY, TEXAS, (MAY APPLY, UNABLE TO LOCATE)
- ELECTRIC TRANSMISSION AND DISTRIBUTION LINE EASEMENT, 20 FEET WIDE, AS GRANTED TO FORDERHULDS ELECTRIC COOPERATIVE, INC.
9. COUNTY CLERK'S FILE NO. 20100010309 OF THE OFFICIAL RECORDS OF COMAL COUNTY, TEXAS, (MAY APPLY, UNABLE TO LOCATE)
- ELECTRIC TRANSMISSION AND DISTRIBUTION LINE EASEMENT, 20 FEET WIDE, AS GRANTED TO FORDERHULDS ELECTRIC COOPERATIVE, INC.
10. COUNTY CLERK'S FILE NO. 20150018004 OF THE OFFICIAL RECORDS OF COMAL COUNTY, TEXAS, (APPLIES)
- ELECTRIC TRANSMISSION AND DISTRIBUTION LINE EASEMENT, 20 FEET WIDE, AS GRANTED TO FORDERHULDS ELECTRIC COOPERATIVE, INC. (SHOWN).
11. COUNTY CLERK'S FILE NO. 20150018003 OF THE OFFICIAL RECORDS OF COMAL COUNTY, TEXAS, (DOES NOT CROSS SUBJECT TRACT)
- PROVISIONS AND RESTRICTIONS AS IMPOSED BY THAT CERTAIN SANITARY CONTROL EASEMENT.
12. COUNTY CLERK'S FILE NO. 20200020474 AND 20200020475 OF THE OFFICIAL RECORDS OF COMAL COUNTY, TEXAS AND 20200020476 AND 20200020477 OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS, (NOT A SURVEY MATTER)
- NOTICE REGARDING REGULATIONS PERTAINING TO CHUTE SERVICE FACILITIES, INCLUDING THE OBLIGATION OF A CONTRACTOR'S MAINTENANCE CONTRACT AND TRANSFER OF OBLIGATION UPON SALE.
13. DOCUMENT NO. 201906011207, 20200404942, 20200404908, 20200404918, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS, (NOT A SURVEY MATTER)
- MANTENANCE CHARGES AND/OR ASSESSMENTS AND/OR WORKING CAPITAL ASSESSMENTS.
14. COUNTY CLERK'S FILE NO. 20200404932 OF THE OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS (NOT A SURVEY MATTER)
- WAIVER OF CERTIFICATE.
15. DOCUMENT NO. 201906011227 AND 20200504928, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS, (DOES NOT CROSS SUBJECT TRACT)
- 80' ROAD EASEMENT (SHOWN).

TITLE SURVEY OF

A 20.59 ACRE TRACT OF LAND, LOCATED IN THE C.D. ROBERTSON SURVEY NO. 999, ABSTRACT 982, THE T.C. R.R. CO. SURVEY SECTION NO. 946, ABSTRACT NO. 936, AND THE T.C. R.R. CO. SURVEY SECTION NO. 945, ABSTRACT NO. 832, COMAL COUNTY, TEXAS, AND BEING A PORTION OF A CALLED 430.984 ACRES TRACT OF LAND AS DESCRIBED OF RECORD IN DOCUMENT NO. 202106029019 OF THE OFFICIAL RECORDS OF COMAL COUNTY, TEXAS.



LOCATION MAP



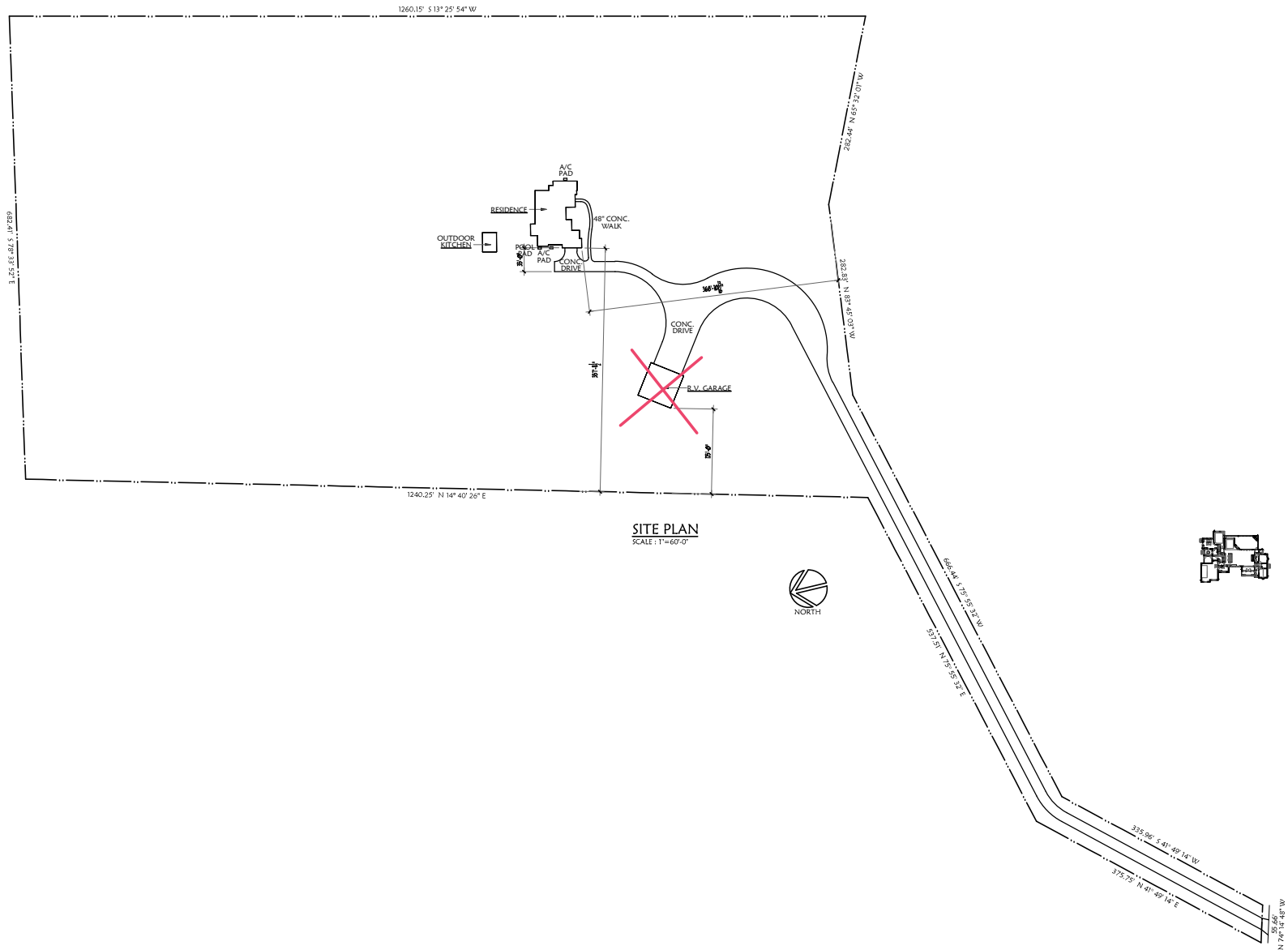
LINE TABLE		
LINE	BEARING	DISTANCE
1.1	N 74° 14' 48" W	55.06'

- LEGEND
- P.O.B. (Point of Beginning)
 - SET 1/2" IRON ROD WITH A RED PLASTIC CAP STAMPED "MATKIN-HOOVER ENG. & SURVEY"
 - FOUND 1/2" IRON ROD (UNLESS OTHERWISE NOTED)
 - FOUND FENCE POST
 - UTILITY POLE WITH GUY WIRE
 - UTILITY POLE WITH ELECTRIC TRANSFORMER
 - GENERAL OVERHEAD UTILITY

MATKIN-HOOVER
ENGINEERING & SURVEYING
10000 N. 100th St., Suite 100
Dallas, TX 75243-1000
OFFICE: 214.343.1000 FAX: 214.343.1001
10000 N. 100th St., Suite 100
Dallas, TX 75243-1000
OFFICE: 214.343.1000 FAX: 214.343.1001
10000 N. 100th St., Suite 100
Dallas, TX 75243-1000
OFFICE: 214.343.1000 FAX: 214.343.1001



I HEREBY CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND, AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS PLAT CORRECTLY REPRESENTS THE FACTS FOUND AT THE TIME OF THIS SURVEY.
DATE OF FIELD WORK: JUNE 7, 2021
Kyle L. Pressler
KYLE L. PRESSLER DATE: DECEMBER 28, 2021
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 4528
KYLE.PRESSLER@MATKIN-HOOVER.COM
JOB NO. 21-4528 - TRACT 5 - 20.59 ACRES
REvised: FEBRUARY 16, 2022 - NEW EAST BOUNDARY LINE



SITE PLAN
SCALE: 1"=60'-0"



REVISIONS

JUNE 28, 2022
JULY 1, 2022
AUGUST 3, 2022
AUGUST 15, 2022

COMPANY: [Redacted]
PROJECT: [Redacted]
DRAWING: [Redacted]
DATE: [Redacted]
BY: [Redacted]
CHECKED: [Redacted]
APPROVED: [Redacted]
REVISIONS: [Redacted]

**A RESIDENCE FOR:
MR. & MRS. COURTS**



**RANDY HERRERA
DESIGNER, LLC**
1130 West Blanco, San Antonio, Texas 78212
Voice: 210.479.6644 | Fax: 210.719.4428
Email: info@randyherreradesigner.com
Web: randyherreradesigner.com
RESIDENTIAL & COMMERCIAL DESIGN & PLANNING

DATE DRAWN
JUNE 10, 2022

SHEET
A-1
2 OF 15

BID SET

From: [Ritzen, Brenda](#)
To: ["Stephen Jetton"](#)
Subject: RE: Permit 115449
Date: Friday, December 16, 2022 2:51:00 PM
Attachments: [image001.png](#)

Stephen,

The permit file has been updated.

Thank you,



Brenda Ritzen
Environmental Health Coordinator
195 David Jonas Dr.
New Braunfels, TX 78132
DR:OS00007722
830-608-2090
www.cceo.org

From: Stephen Jetton <stephen.jetton@gmail.com>
Sent: Friday, December 16, 2022 1:44 PM
To: Ritzen, Brenda <rabbjr@co.comal.tx.us>
Subject: Re: Permit 115449

This email originated from outside of the organization.
Do not click links or open attachments unless you recognize the sender and know the content is safe.

- Comal IT

Hi Brenda,

Please see the attached revisions.

1. App updated with Donna Courts.
2. Test holes added to site plans noted as X.
3. Pump tank cross section updated with float heights.
4. Design notes signed and dated.
5. Owner item.

Thank you.

ON-SITE SEWAGE FACILITY APPLICATION

VOID

RECEIVED
By Kathy Griffin at 2:48 pm, Nov 08, 2022

Date

Permit Number 115449

1. APPLICANT / AGENT INFORMATION

Owner Name ROYLE COURTS
Mailing Address PO BOX 3108
City, State, Zip WIMBERLEY TX 78676
Phone # 512-560-6188
Email PACHL@SBCGLOBAL.NET

Agent Name Stephen Jetton
Agent Address 2573 Deer Stand Loop
City, State, Zip San Marcos TX 78666
Phone # 512-757-1259
Email stephen.jetton@gmail.com

2. LOCATION

Subdivision Name RANCHES AT SENTINEL PEAK Unit _____ Lot 9 Block _____
Survey Name / Abstract Number _____ Acreage 21
Address 5800 FM 32 LOT 9 City Fischer State TX Zip 78623

3. TYPE OF DEVELOPMENT

☒ Single Family Residential
Type of Construction (House, Mobile, RV, Etc.) HOUSE
Number of Bedrooms 3
Indicate Sq Ft of Living Area 3651

☐ Non-Single Family Residential

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

Type of Facility _____

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

Restaurants, Lounges, Theaters - Indicate Number of Seats _____

Hotel, Motel, Hospital, Nursing Home - Indicate _____

Travel Trailer/RV Parks - Indicate Number of _____

Miscellaneous _____

VOID

Estimated Cost of Construction: \$ 1,500,000 (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

10-4-2022

Date



VOID

Planning Materials & Site Evaluation as Required Completed By Stephen F Jetton

System Description Aerobic Surface Spray Nuwater B-550

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

Tank Size(s) (Gallons) 600 GPD - 353 Trash - 768 Pump Absorption/Application Area (Sq Ft) 5652.00 sq. ft.

Gallons Per Day (As Per TCEQ Table III) 360 GPD

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

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

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

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

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

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

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

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

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

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

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

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

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

If yes, indicate the city: _____

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

10-4-2022

Date

VOID

Southwest Septic Design

On-Site Sewage Facility Application and Design

Prepared For:

**Royce Courts
5800 FM 32
Fischer, Texas 78620**

Design 101190222

Prepared By:

Stephen F. Jetton 
Registered Professional Sanitarian



10/4/2022

Stephen F. Jetton • Southwest Septic Design
2573 Deer Stand Loop • San Marcos, Texas 78666 • Mobile (512) 757-1259
E – Mail stephen.jetton@gmail.com

Southwest Septic Design

2573 Deer Stand Loop
San Marcos, Texas 78666
Hays County

Stephen.jetton@gmail.com
Mobile (512) 757-1259

Design Report On-Site Sewage facility Aerobic Wastewater Treatment System Utilizing Surface Spray Application

OWNER/SITE LOCATION:

Courts Residence
5800 FM 32
T.C. R.R. Co. Survey Section 945 ABS No. 832 – 20.59-acres
Fischer, Texas

SITE DESCRIPTION & EVALUATION:

A site evaluation indicated that the site is suitable for an aerobic surface irrigation system. The spray area has a slope of less than 15 percent, and there was no evidence of shallow groundwater. This residence will utilize an above ground rain-water collection tank for their source of water. All portions of the proposed OSSF must maintain at least a 10' setback from all water lines. This property is not within the 100-Year Floodplain (see site plan). There are no recharge features within 150' of the proposed OSSF. Minimum separation distances as stated in §285 TCEQ On-Site Sewage Facilities, must be maintained.

WASTEWATER DESIGN FLOW:

This design is for a 3-bedroom, 3651 sq. ft., single-family residence utilizing low-flow fixtures. This design will be slightly oversized to accommodate a future addition. Therefore, the total daily wastewater flow will be **360 gallons per day**, as per Texas Commission of Environmental Quality (TCEQ) On Site Sewage Facilities, effective 12-29-2016.

AEROBIC TREATMENT SYSTEM DESCRIPTION:

This proposed development will utilize a Nuwater Aerobic Treatment Plant, Model B-550. A 353-gallon pretreatment/trash tank will precede the 600-gallon per day aerobic treatment tank. Effluent from the aeration tank will flow through a liquid chlorinator (**EZ Tank Chlorinator**) to a 768-gallon pump tank. The pump tank serves as a chlorine contact chamber and a storage tank prior to the treated/chlorinated effluent being discharged to sprinkler heads. The disposal area will consist of **2– 30 ft. 360°** radius patterns. The system is considered a “package system”, and will be installed according to manufacturer’s instructions.

COPYRIGHT © 2002 BY RANDY HERMAN
 HERMAN, INC., GREAT SPORT & GEAR PUBLISHERS
 10000 E. CHERRY AVE., SUITE 100, DENVER, CO 80231
 A COMPISTION OF THESE PLANS HOWEVER
 RECALCULATE OF THE IMPOSSIBILITY OF
 PROVIDING ANY PERSONAL AND DIVISION
 BEST CONSULTATION, REPRODUCING
 THESE PLANS OR ANY PART THEREOF
 WITHOUT THE WRITTEN PERMISSION OF THE
 PUBLISHER AND RECALCULATE OF THE GREAT
 VARIANCE IN LOCAL BUILDING CODES AND
 WEATHER CONDITIONS, THE DESIGNER
 ASSUMES NO RESPONSIBILITY FOR THE
 MANAGER, INCLUDING STRUCTURAL FAILURE
 DUE TO ANY DISCREPANCY, OMISSIONS, OR
 ERRORS IN THE DESIGN. IT IS RECOMMENDED
 THAT THE DESIGNER CONSULT WITH A LOCAL
 BUILDER, ARCHITECT, OR ENGINEER, OF
 YOUR CHOICE, AND CHECK WITH YOUR
 LOCAL BUILDING OFFICIALS, PRIOR TO
 START. NO PART OF THESE DRAWINGS
 MAY BE REPRODUCED OR TRANSMITTED
 IN ANY FORM OR BY ANY MEANS,
 ELECTRONIC OR MECHANICAL,
 INCLUDING PHOTOCOPYING, RECORDING,
 OR BY ANY INFORMATION STORAGE
 OR RETRIEVAL SYSTEM,
 WITHOUT PERMISSION IN WRITING.

FLOOR PLAN LEGEND

1. VERIFY AIR CHASE & AIR RETURNS W/ BUILDER @ JOBSITE
2. VERIFY A/C PAD(S) SIZE & LOCATION W/ OWNER & BUILDER.
3. ALLOW MINIMUM 6" OF RETURNS FOR ALL DOORS.
4. ALLOW FOR 6" WALLS @ ALL COMMODE LOCATIONS.
5. ALL WINDOW HEADER HEIGHTS ARE DETERMINED FROM MAIN FINISHED FLOOR AND/OR FLOOR OF UPPER LEVEL.
6. SHOWER HEADS @ BATHS - VERIFY LOCATIONS W/ OWNER & BUILDER. ALSO, SHOWER HEADS TO BE A MINIMUM 84" A.F.F. +/-
7. VERIFY BATH TUB DRAIN LOCATION(S) W/ BUILDER.
8. VERIFY ALL HOSE BIBB LOCATIONS W/ BUILDER.
9. ALLOW CONNECTIONS FOR (2) ON DEMAND (TANKLESS) WATER HEATERS. VERIFY LOCATION(S) W/ BUILDER.
10. ALLOW CONNECTIONS FOR FUTURE WATER SOFTENER

- | | |
|---|---------------------------------------|
|  | FLOOR LEVEL CHANGE |
|  | FLOOR MATERIAL TRANSITION |
|  | CEILING HEIGHT TRANSITION |
|  | GAS SYMBOL |
|  | WATER - COLD |
|  | WATER - COLD & HOT |
|  | HOSE BIBB |
|  | WATER SOFTENER |
|  | ON DEMAND (TANKLESS) GAS WATER HEATER |

A RESIDENCE FOR:
MR. & MRS. COURTS



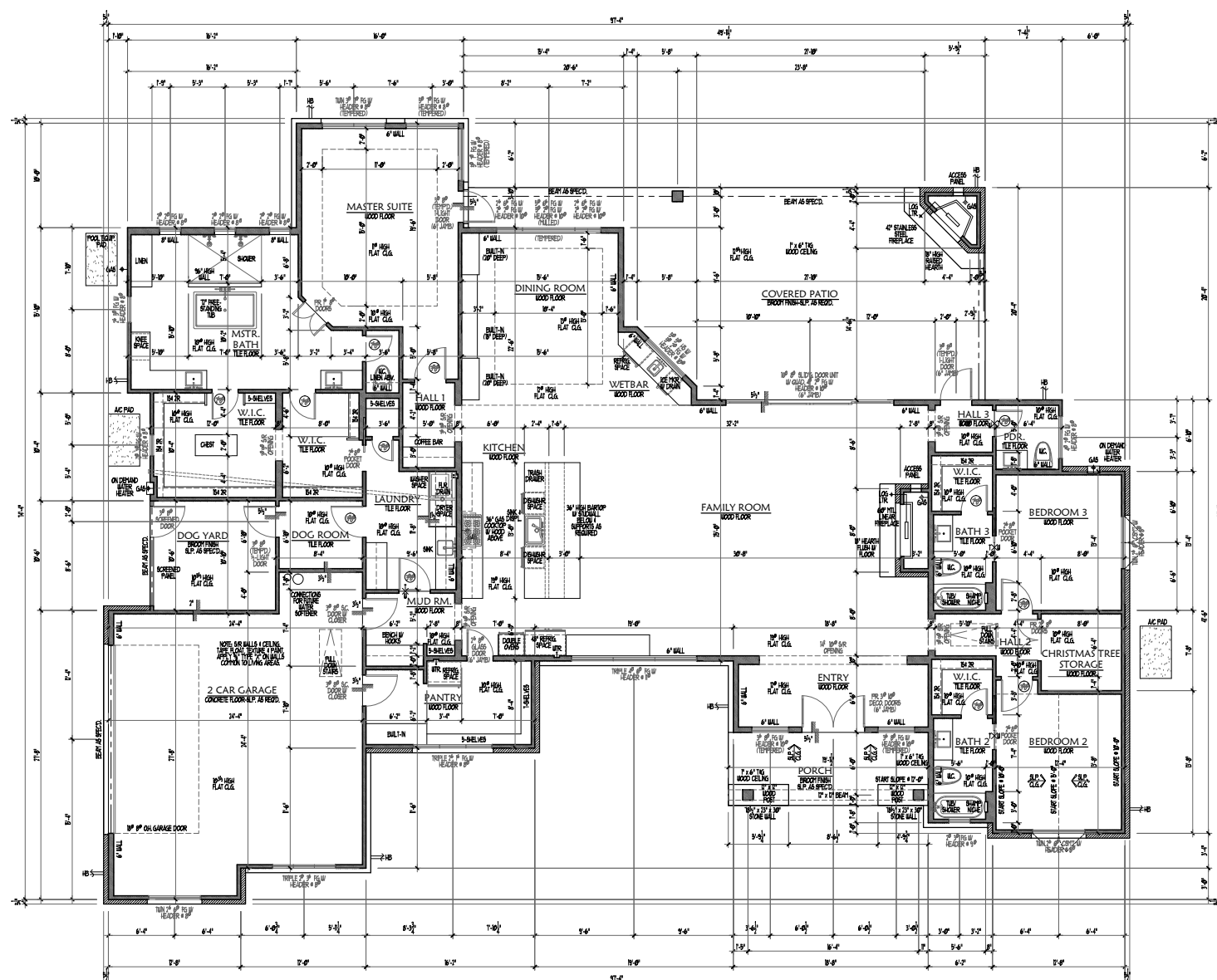
RANDY HERRERA
DESIGNER, LLC

1130 West Blanco, San Antonio, Texas, 78232
Voice: 210.479.6544 | Fax: 210.479.8428
Email: randy@randyherreradesigner.com
Web: randyherreradesigner.com

RESIDENTIAL & COMMERCIAL DESIGN & PLANNING

DATE DRAWN
JUNE 10, 2022

SHEET
A-2
3 OF 15



FLOOR PLAN



 1'-0"



 2x6 PG W/ 1x4
 HEADER #11
 (CENTERED IN GABLE
 IN ATTIC)



 2x6 PG W/ 1x4
 HEADER #13
 (CENTERED IN GABLE)

2x6 FG W/HEADER @ 13' (CENTERED IN GABLE)

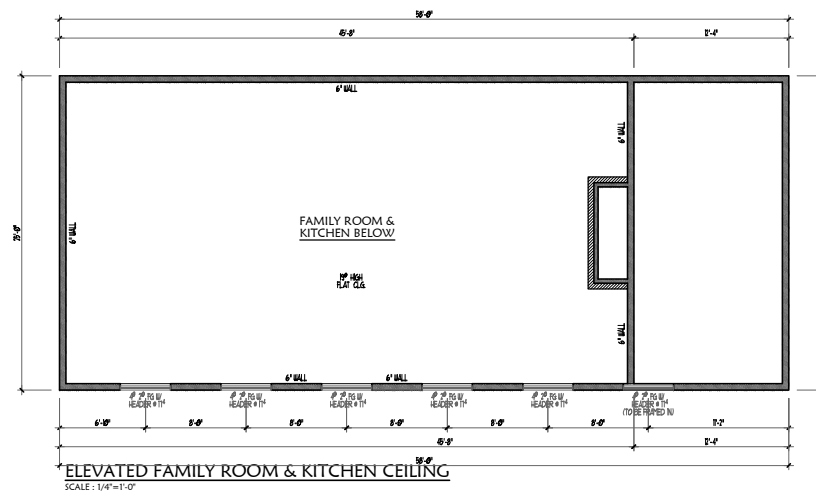
BID SET

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 COME INTO THE CREATION OF THE DESIGN
 A COMPOSITION OF THESE FRAMES, HOWEVER
 FOCALISE OF THE IMPOSSIBILITY OF
 IMPROVING ANY PERSONAL, AND NO
 ONE CAN BE RESPONSIBLE FOR THE
 AND CONTROL OVER THE ACTUAL CON-
 STRUCTED AND RECAUSE OF THE GREAT
 VARIANCE IN LOCAL BUILDING CODES AND
 STANDARDS, UNDER THE ASSUMPTION
 ASSUMING THAT RESPONSIBILITY FOR AN
 DAMAGES, INCLUDING STRUCTURAL FAILURE
 OR TO ANY DISCREPANCY, ORIGINALLY
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FLOOR PLAN LEGEND

1. VERIFY AIR CHASE & AIR RETURNS W/ BUILDER @ JOBSITE
2. VERIFY A/C PAD(S) SIZE & LOCATION W/ OWNER & BUILDER.
3. ALLOW MINIMUM OF 6" RETURNS FOR ALL DOORS.
4. ALLOW FOR 6" WALLS @ ALL COMMODO LOCATIONS.
5. ALL WINDOW HEADER HEIGHTS ARE DETERMINED FROM MAIN FINISHED FLOOR AND/OR FLOOR OF UPPER LEVEL.
6. SHOWER HEADS @ BATHS - VERIFY LOCATIONS W/ OWNER & BUILDER. ALSO, SHOWER HEADS TO BE A MINIMUM 84" A.F. +/-
7. VERIFY BATH TUB DRAIN LOCATION(S) W/ BUILDER.
8. VERIFY ALL HOSE BIBB LOCATIONS W/ BUILDER.
9. ALLOW CONNECTIONS FOR (2) ON DEMAND (TANKLESS) WATER HEATERS. VERIFY LOCATION(S) W/ BUILDER.
10. ALLOW CONNECTIONS FOR FUTURE WATER SOFTENER

	FLOOR LEVEL CHANGE
	FLOOR MATERIAL TRANSITION
	CEILING HEIGHT TRANSITION
	GAS SYMBOL
	WATER - COLD
	WATER - COLD & HOT
	HOSE BIBB
	WATER SOFTENER
	ON DEMAND (TANKLESS) GAS WATER HEATER



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MR. & MRS. COURTS



RANDY HERRERA
DESIGNER, LLC

1130 West Blanco, San Antonio, Texas, 78232
Voice: 210.479.6544 | Fax: 210.479.3428
Email: randy@randyherreradesigner.com
Web: randyherreradesigner.com

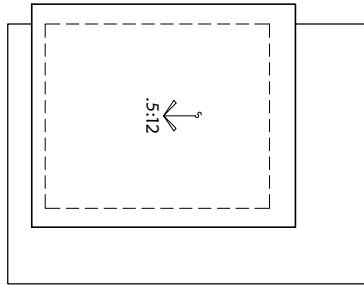
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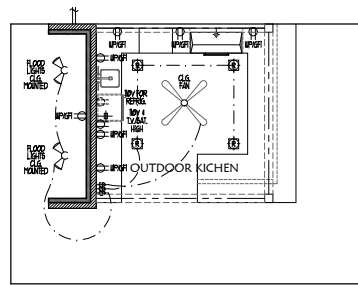
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A-3

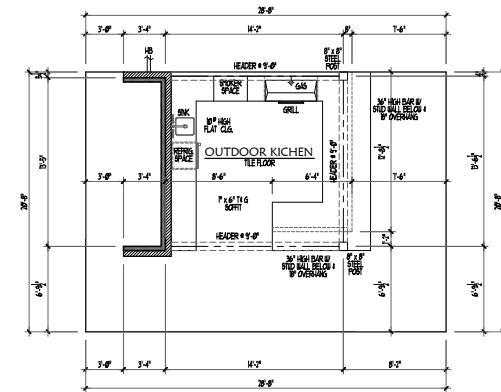
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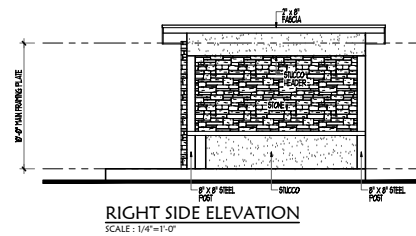
ROOF PLAN
SCALE: 1/4"=1'-0"



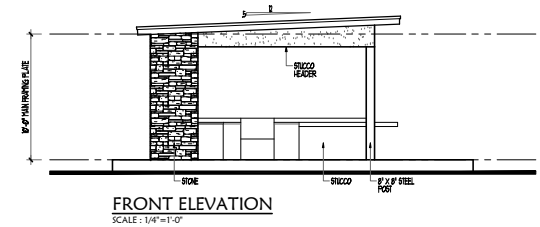
ELECTRICAL FLOOR PLAN
SCALE: 1/4"=1'-0"



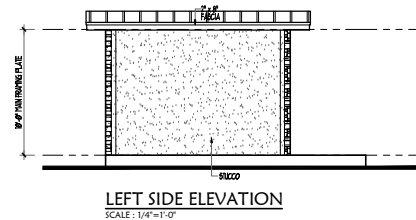
FLOOR PLAN
SCALE: 1/4"=1'-0"



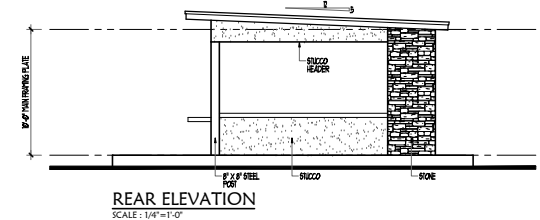
RIGHT SIDE ELEVATION
SCALE: 1/4"=1'-0"



FRONT ELEVATION
SCALE: 1/4"=1'-0"



LEFT SIDE ELEVATION
SCALE: 1/4"=1'-0"



REAR ELEVATION
SCALE: 1/4"=1'-0"

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RANDY HERRERA
DESIGNER, LLC
1130 West Blanco, San Antonio, Texas, 78212
Voice: 210.479.6544 | Fax: 210.479.4428
Web: randyherreradesigner.com
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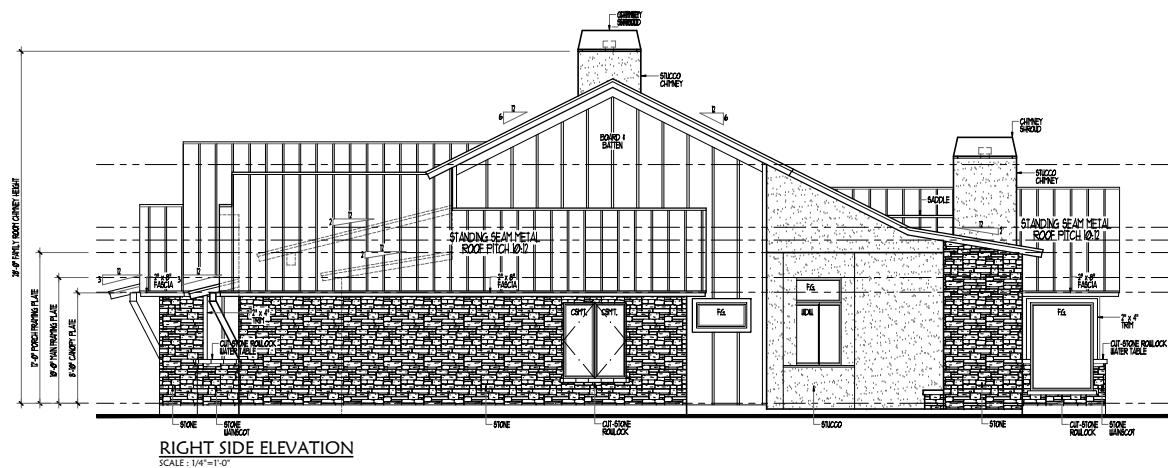
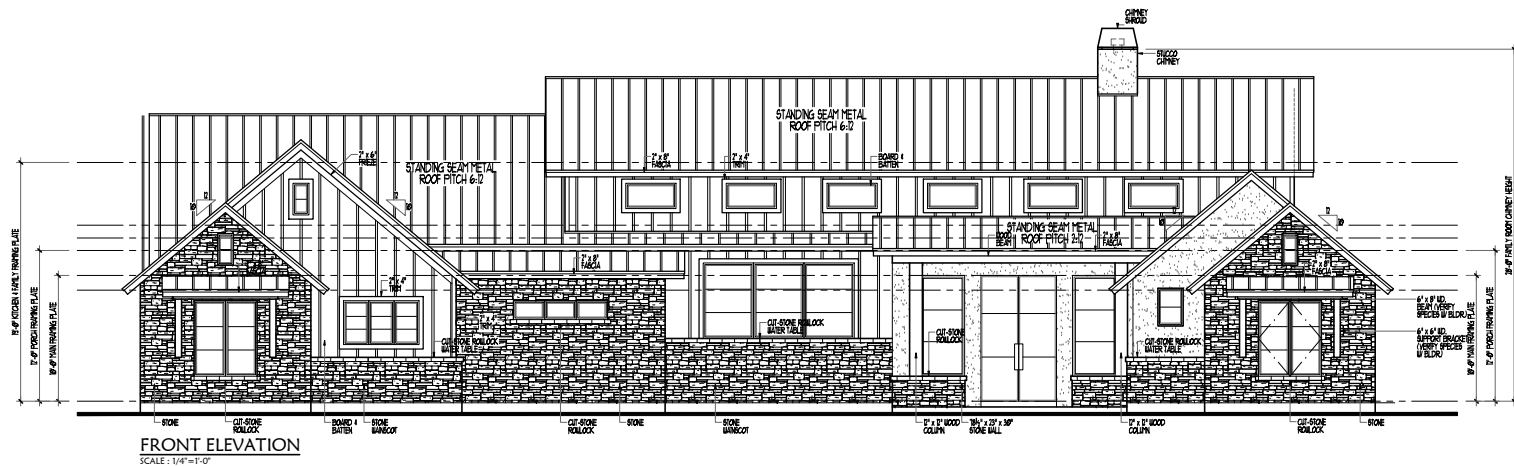
RANDY HERRERA
DESIGNER, LLC

1130 West Blanco, San Antonio, Texas, 78232
Voice: 210.479.6544 | Fax: 210.479.1428
Email: randy@randyherreradesigner.com
Web: randyherreradesigner.com

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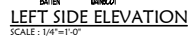
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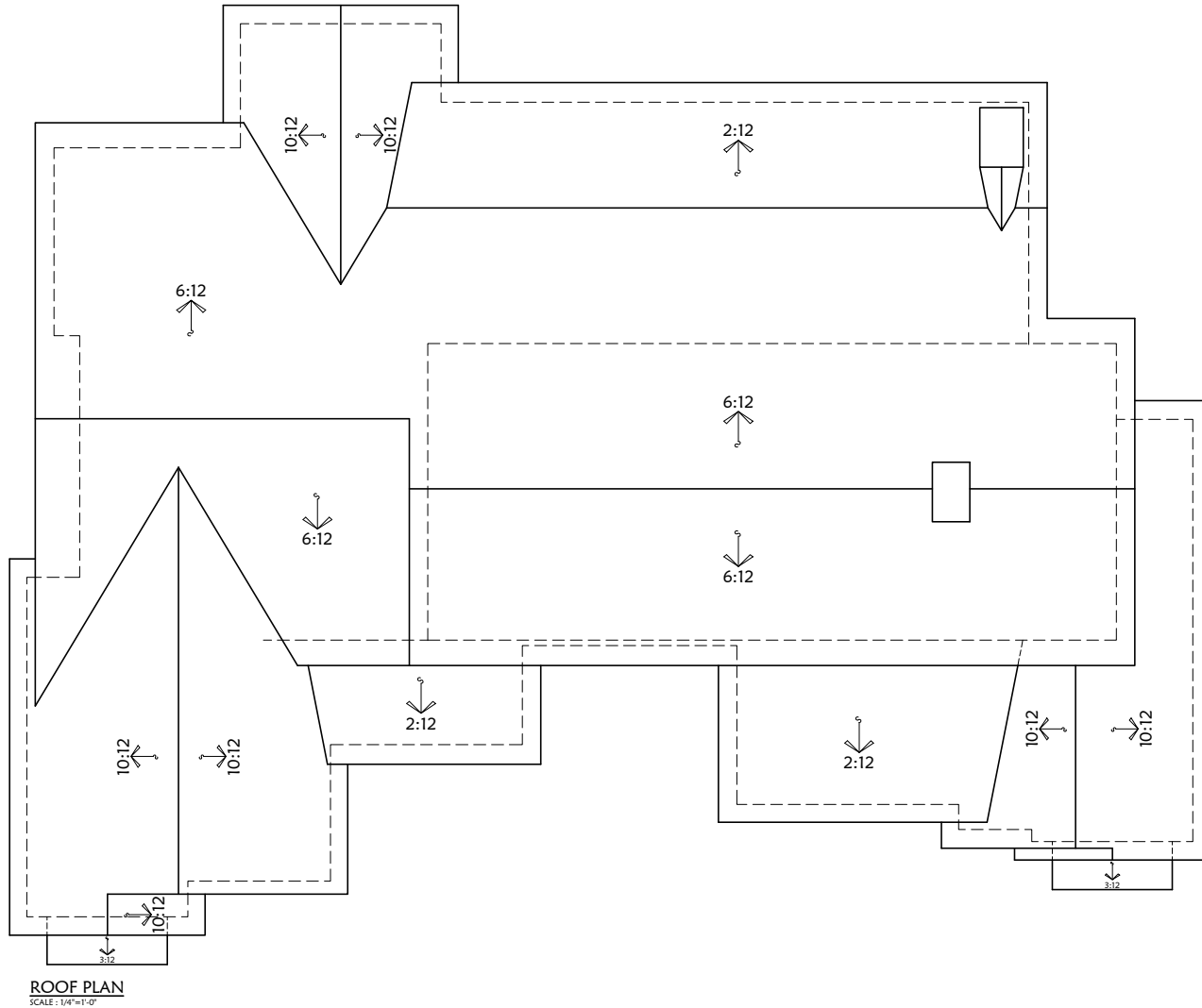
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BID SET



ROOF PLAN
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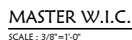
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1130 West Blanco, San Antonio, Texas 78212
Voice: 210.479.6544 | Fax: 210.759.4428
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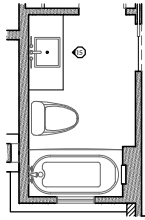
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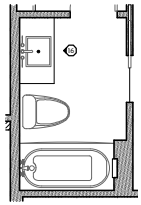
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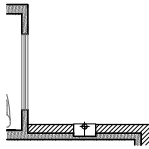
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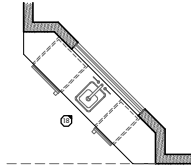
BATH 2
SCALE : 3/8"=1'-0"



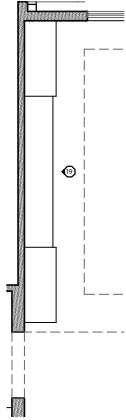
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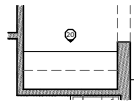
POWDER
SCALE : 3/8"=1'-0"



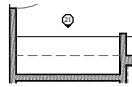
WETBAR
SCALE : 3/8"=1'-0"



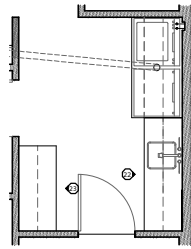
DINING ROOM
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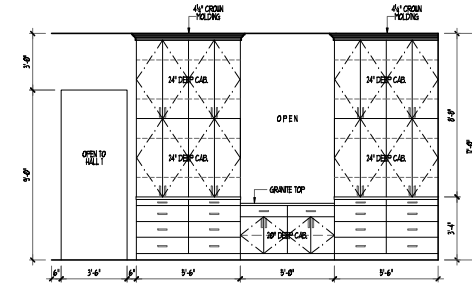
COFFEE BAR
SCALE : 3/8"=1'-0"



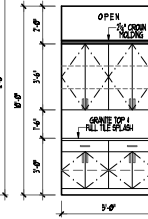
MUD ROOM
SCALE : 3/8"=1'-0"



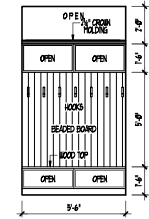
LAUNDRY
SCALE : 3/8"=1'-0"



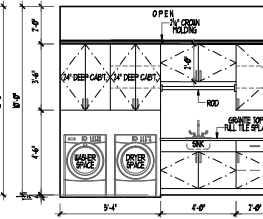
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SCALE : 3/8"=1'-0"



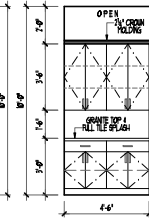
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SCALE : 3/8"=1'-0"



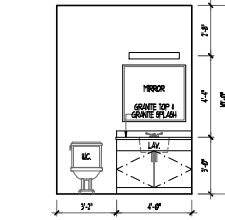
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SCALE : 3/8"=1'-0"



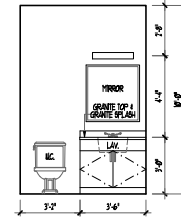
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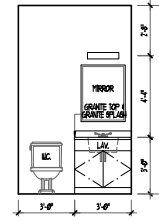
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SCALE : 3/8"=1'-0"



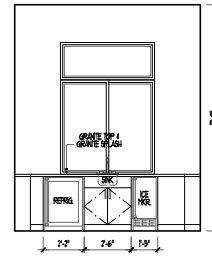
15 BATH 2
SCALE : 3/8"=1'-0"



16 BATH 3
SCALE : 3/8"=1'-0"



17 POWDER
SCALE : 3/8"=1'-0"



18 WETBAR
SCALE : 3/8"=1'-0"

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RANDY HERRERA
DESIGNER, LLC
1130 West Blanco, San Antonio, Texas 78212
Voice: 210.479.6544 | Fax: 210.259.4428
Email: r.herrera@randyherreradesigner.com
Web: randyherreradesigner.com
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SCALE : $3/8" = 1'-0"$

SCALE : 3/8"=1'-0"

HALL 3

SCALE : 3/8"=1'-0"

MSTR. W.I.C.
SCALE: 3/8"=1'-0"

F SCALE : 3/8"=1'-0"

25 SCALE : 3/8"=1'-0"

20 SCALE : 3/8"=1'-0"

21 SCALE : 3/8"=1'-0"

SCALE : 3/8"=1'-0"

SCALE : 3/8"=1'-0"

BID SET

1. ALL ELECTRICAL TO MEET OR EXCEED ALL LOCAL BUILDING CODES.
2. LIGHT SWITCHES & ENVIRONMENTAL CONTROLS MUST BE NO HIGHER THAN 48" ABOVE INTERIOR FLOOR LEVEL.
3. ALLOW FOR 110V(S), W/ GFCI & 220V(S) FOR A/C PADS (S) & LOCATIONS (S) W/ OWNER & BUILDER.
4. ALLOW & VERIFY LOCATIONS OF DOORBELLS & CHIME(S) W/ OWNER & BUILDER.
5. ALLOW FOR SWITCH, LIGHT & 110V @ ALL PULL DOWN LOCATIONS - IF APPLICABLE VERIFY LOCATIONS W/ BUILDER.
6. VERIFY FLOOR PLUG LOCATIONS W/ OWNER & BUILDER.
7. ALLOW CONNECTIONS FOR FUTURE WATER SOFTENER.
8. ALLOW CONNECTIONS FOR (2) ON DEMAND WATER HEATERS. VERIFY LOCATION W/ BUILDER.
9. ALLOW FOR UNDER-CABINET LIGHTING @ KITCHEN.

1. ALLOW & VERIFY LOCATION(S) OF PUSH BUTTON DOORBELL & CHIME(S) W/ OWNER & BUILDER.
2. CABLE/SATELLITE LOCATIONS AS PER PLAN.
3. VERIFY LOCATION(S) FOR TELEPHONE OUTLETS IF APPLICABLE.
4. ALLOW FOR USB OUTLET CONNECTIONS. VERIFY LOCATIONS W/ BUILDER.
5. ALLOW CONNECTIONS FOR FUTURE SECURITY SYSTEM @ MASTER W.I.C. VERIFY LOCATION W/ BUILDER.
6. VERIFY LOCATION(S) FOR SECURITY CAMERAS IF APPLICABLE.

	110V OUTLET
	110V OUTLET BELOW THE COUNTER
	110V GROUND FAULT INTERRUPTER
	110V WATERPROOF OUTLET
	110V OVERHEAD GARAGE DOOR OUTLET
	110V FLOOR PLUG OUTLET
	220V OUTLET
	220V OUTLET BELOW THE COUNTER
	WALL SWITCH
	WALL SWITCH 3-WAY
	WALL SWITCH 4-WAY
	PUSH BUTTON SWITCH
	TELEVISION / SATELLITE JACK

	RECESSED CAN LIGHT
	RECESSED CAN LIGHT WATERPROOF
	FLUSH MOUNT LIGHT
	PENDANT LIGHT
	HANGING FIXTURE
	WALL MOUNTED LIGHT FIXTURE
	UNDER CABINET LED STRIP
	EXHAUST VENT
	EXHAUST VENT & LIGHT COMBO
	SMOKE DETECTOR
	FLUSH MOUNTED DOOR CHIMES
	FLOOD LIGHTS
	Zigzag LED LIGHTS
	CEILING FAN
	CEILING FAN WITH LIGHT KIT



SHEET
E-1
OF 15

Design Specification:

Size of Residence		3651 sq. ft.
Number of Bedrooms		3
Average Expected Flow		360 GPD
Application Rate	<i>0.064 Gal./ft²/Day</i>	0.064
Minimum Application Area	<i>(GPD)/(0.064 Gal./ft²/Day)</i>	5625.00 ft ²
Actual Application Area	<i>3.14(r²) x number of heads</i>	5652.00 ft ²

System Components:

Trash Tank	353 gallon one-compartment
Aeration Tank	600 gallon per day
Pump Tank	768 gallon

Pump Tank:

Pump Tank gallons per inch: 14.49"

Operating Capacity: 14.49" x 13" = **188.37 operating gallons**

Reserve Capacity: 53" usable depth (53 x 14.49 = 768.00) 768.00 – 347.76 = **420.24 reserve gallons.**

<i>Pump off</i>	8" Above tank floor	115.92 Gallons
<i>Pump on</i>	21" Above tank floor	304.29 Gallons
<i>Alarm on</i>	24" Above tank floor	347.76 Gallons

Combined capacity of pretreatment and aeration tank is 953-gallons. A 768-gallon, single-compartment pump tank allows for a one day's flow above the alarm-on level. This system will be designed to pump on demand.

Pump and Sprinkler Head Requirements:

Pump: Ashland Pump CPM Series – 20CPM5-115 20GPM ½ H.P.

Sprinkler Head: K Rain Pro Plus with Purple Tops.

Nozzle #: **3 LA** (Low angle trajectory, 11 degrees), operating at 35 psi, 30 ft. radius and 3.05 GPM flow per sprinkler

Dosing:

Application Flow Rate 3.05 gpm/head x 2 heads = **6.1 gpm**

Application Time: 2 doses @ 180 gal/dose / 6.1 gpm = ~ **29.51 min/dose**

Head Requirements:

Elevation head: 6 (*assumed elevation at top of pump 1120 and highest spray head at 1126*)



Pressure head: $35 \text{ psi} \times 2.31 \text{ ft/psi} = 80.85 \text{ ft.}$

Friction head: $1'' \text{ Sch. 40 PVC @ } 6.10 \text{ gpm} = 3.63 \text{ ft. } (170 \times 3.63/100 \times 1.2) = 8.712$

TDH = $6 \text{ ft.} + 80.85 \text{ ft.} + 7.41 = 94.26$ (within pump curve).

An unthreaded sampling valve must also be provided. Under the Texas Administrative Code, §285 On-Site Sewage Facilities. This system is designed to dose on demand.

Alarm System:

An audio/visual high-water alarm will be installed on this system. NuWater control panel (SPI-BIO Model 50B138-AAV-PT). The alarm/light will be installed in a high visible location close to the pump tank.

Installation Notes:

- Refer to site plan for component placement and follow manufacturer's instructions for installation of treatment plant and aerator.
- All materials and construction methods are required to conform to the standards for Private Sewage Facility's set forth in the Texas Administrative Code, §285 On-Site Sewage Facilities.
- The installer must have a current and valid Texas installer certificate, and is required to have at the minimum an Installer II certification.
- The installer must notify designer and regulatory authority at least 48 hours in advance to schedule required inspections to ensure that the system is installed in accordance with the approved plans and specifications.
- The installer may not alter these plans without the approval of the designer.
- Diversion berms will be place when needed to protect irrigation area from excessive runoff.
- All electrical installation must be in compliance with applicable electric codes.
- All outside electrical components must be placed in electrical conduit.
- It is the responsibility of the installer to maintain the minimum setback requirements as stated in §285 for On-Site Sewage Facilities.

Tank Notes:

- The bottom of the excavation for the tanks shall be level and free of large rocks and debris.
- All tanks are to be set level on a layer, with a minimum thickness of 4 inches, of sand, sandy loam, clay loam, or pea gravel.
- Tank excavations must be backfilled with soil or pea gravel that is free of rock larger than ½ inch in diameter. Class IV soils and gravel larger than ½ inch in diameter are not acceptable for use as backfill material. If the top of a septic tank extends above the ground surface, soil may be mounded over the tank to maintain slope to the drain field.
- Risers are required over all tank openings and must extend to the ground surface.
- Risers shall be permanently fastened to the tank lid.
- The riser lid shall screw down and have a lock or weigh 65lbs.
- A secondary plug, cap, netting, etc. shall be provided below the riser lid.

- All openings in the tank must be properly sealed to prevent the escape of wastewater, or to prevent the infiltration of water.
- Tanks must be filled with water for 24 hours to test for leaks and structural integrity.
- The tanks must be set low enough to have fall of at least 1/8" per foot from RV pad to tank.
- PVC pipe from RV pad to tank must be at least Sch.40 or SDR 26.

Irrigation & Landscaping Notes:

- Irrigation lines shall be 1" Sch.40 PVC. Sleeve any pipe that crosses under any roads or driveways with Sch.40 PVC.
- Purple Pipe must be used for all irrigation lines.
- Supply lines must be buried at least 6" below finished grade.
- If irrigation area does not have established vegetation, a mixture of winter rye and Bermuda grasses will be seeded to establish seasonal vegetation.
- The installer shall notify property owner prior to removal of any trees that may obstruct the operation of the irrigation system.
- *All exposed surface rock must be covered with at least 4" of suitable soil*
- *Vegetation must be established before system is in use.*

Additional Notes:

- Install audio-visual alarm for aerator and pump on separate breakers.
- The high water and air compressor alarms shall be audio/visual and mounted in a place that can be easily seen and heard when the alarms are activated.
- A hose bib must be installed in pump tank at tank inspection port.
- The chlorinator must be constructed to allow a chlorine residual of 1.0 mg/l in the pump tank for the period of time between scheduled inspections.
- The disinfected effluent must obey the standards as stated in §285, TCEQ, On-Site Sewage Facilities. Approved disinfections methods using chlorinated tablets, must use calcium hypochlorite that is properly labeled for wastewater disinfections.

Maintenance Requirements:

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

Affidavit:

- The applicant must file a certified copy of an affidavit at the County clerk's office and filed in reference to the real property deed on which the surface application system is to be installed.
- The affidavit will state that the property shall not be transferred to a new owner without:

VOID

- (1) The new owner being advised that the property contains a surface application system for wastewater disposal;
- (2) The permit issued to the previous owner of the property being transferred to the new owner in accordance with §285.20(5) of the TCEQ OSSF Rules, i.e.; the permit will be issued in the name of the owner of the OSSF. Permits shall be transferred to the new owner automatically upon legal sale of the OSSF. The transfer of an OSSF permit under this section shall occur upon actual transfer of the property on which the OSSF is located unless the ownership of the OSSF had been severed from the property.
- (3) The new owners submitting a valid maintenance contract to the permitting authority.

Operation and Management Notes:

- The OSSF should not be treated as a normal city sewer.
- Water conservation practices should be used at all times. Consult your local authorities for more information.
- Run the dishwasher with a full load whenever possible
- Avoid running water continuously when brushing teeth, washing hands, or cleaning food and utensils.
- Repair any water leaks immediately, such as running toilets or leaky faucets.
- The owner is responsible for cleaning and pumping the septic tank, typically every 2 to 3 years depending on system usage.
- Do not use the toilet to dispose of tissue, feminine hygiene products, trash, cigarettes, etc.
- It is recommended that you do not use the garbage disposal and/ or garbage grinders in the facility serviced by this system.
- Household chemicals should be used in moderation.
- According to §285, no water softener will be allowed to enter the OSSF.
- Chemical additives or the so-called enzymes should not be used during the operation of this system. Some of these additives may even be harmful to the facilities operation.
- Do not build driveways, storage buildings, decks, or other structures over the tank or disposal area.
- The OSSF must be protected from coming in contact with vehicular traffic.
- A strong vegetative cover is essential for the proper operation of this system. The property owner is solely responsible for maintaining this vegetation. The irrigation area should be groomed by mowing on a regular basis.
- If you notice a problem with the spray patterns, or any of the alarms are activated, contact your maintenance provider immediately.
- Never place a greater wastewater load on your system than that prescribed by the design of the system (*360 gallons per day*).

****The proposed system has been designed generally following the minimum requirements under TCEQ §285 On Site Sewage Facilities. The site evaluation and subsequent design are based on technical information currently available. The performance of the OSSF is not, and cannot be guaranteed even though all provisions of the Standards have been complied with. If failure should occur, additions to the OSSF may have to be made. In extreme cases a substitute system may be required. By accepting this design, the homeowner/contractor understands the aforementioned conditions, and agrees that the designer will not be liable for any more than the agreed upon design***

5800 FM 32
Fischer, Texas 78623

T.C. R.R. CO. Survey
Section 945 ABS No. 832
20.59 - Acres
Comal County, Texas

- A1 - 3-Bedroom Single-Family Residence (3651 sq. ft.).
- A2 - Outdoor Kitchen 2" Sch. 40 PVC Sink Drain.
- B - Proposed NuWater Model B-550- 600 GPD ATU.
- C - K Rain Pro Plus, 30' Radius Sprinkler Head
- #3 Nozzle - 35 PSI - 3.05 GPM per Sprinkler Head.

C/O - Two-Way Cleanout

Provide Two-Way Cleanout from House to Tank.
3" or 4" Sch. 40 between House and Tank. Must maintain
a minimum of 1/8" per foot of fall between house and tank.

Supply Line: 1" Sch. 40 PVC Purple Pipe

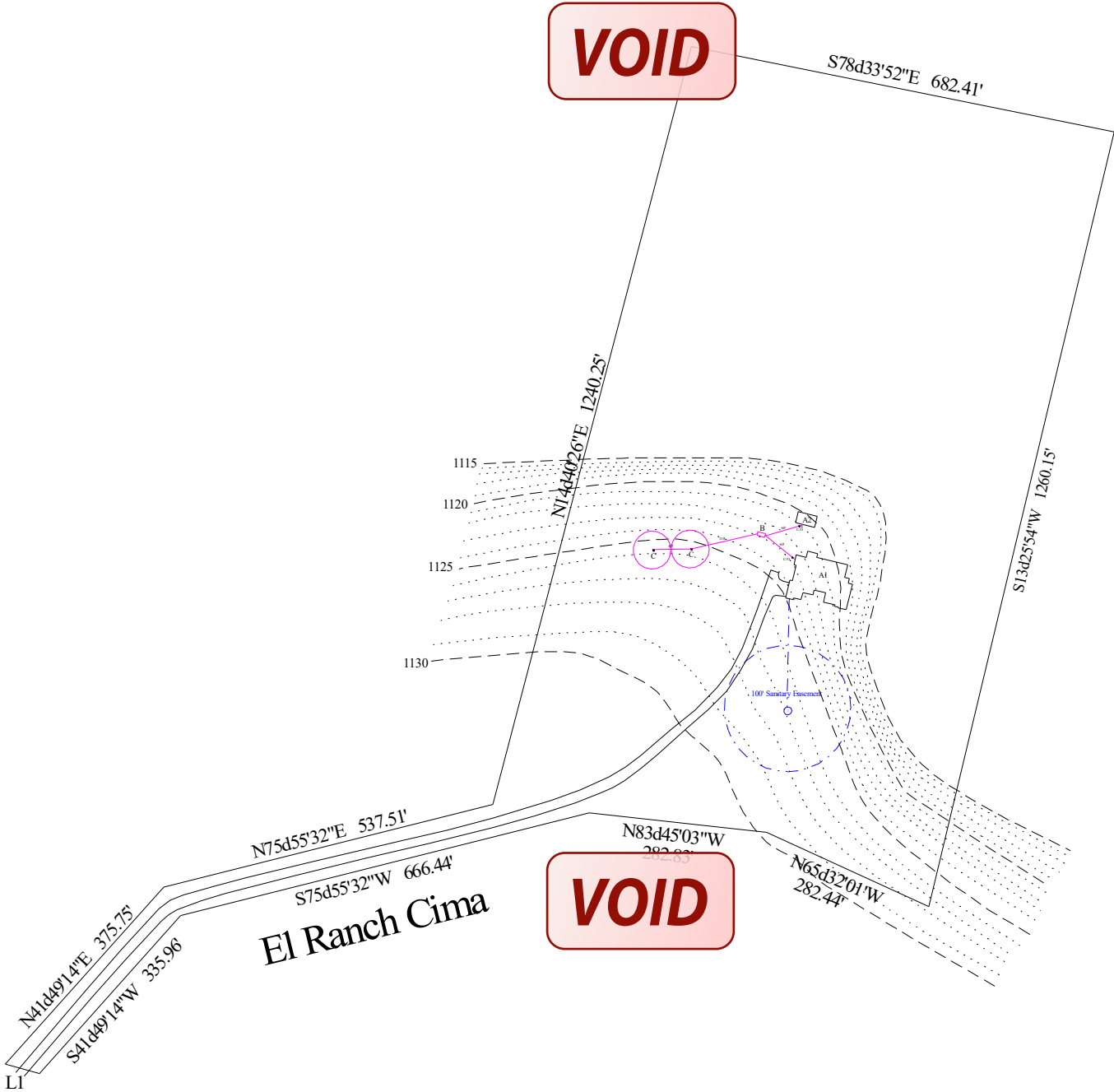
Maintain 10' from all Potable Water Lines.
Maintain 20' from all Property Lines.

*Refer to Tank Detail and Design Notes for more
Information.

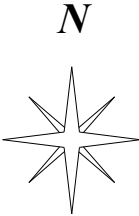
*Plans may vary Slightly based on Conditions
Encountered in the Field.

*Trim Trees as Neccessary in Application Area.
Trees must maintain at least 10' from Sprinkler
Head.

*All Separation and Setback Requirements as Stated in
Chapter 285, TCEQ, On-Site Sewage Facilities, must
be maintained.



Flood Plain Note: This property is not within
the 100-Year Flood Plain according to Map
Panel No. 48091C0110F Dated 9/2/2009.



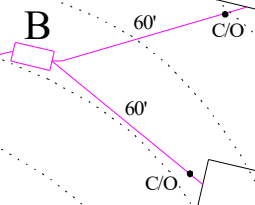
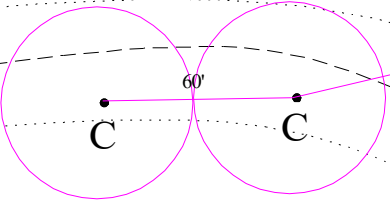
Scale: 1" = 300'

*This is not intended to be used as an official
survey. All structures and Contour locations
are approximate.

N14d44

S13d25'54"W 1260

VOID



C/O

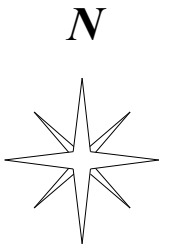
60'

60'

A1

100' Sanitary Easement

VOID



Scale: 1" = 60'

Assembly Details

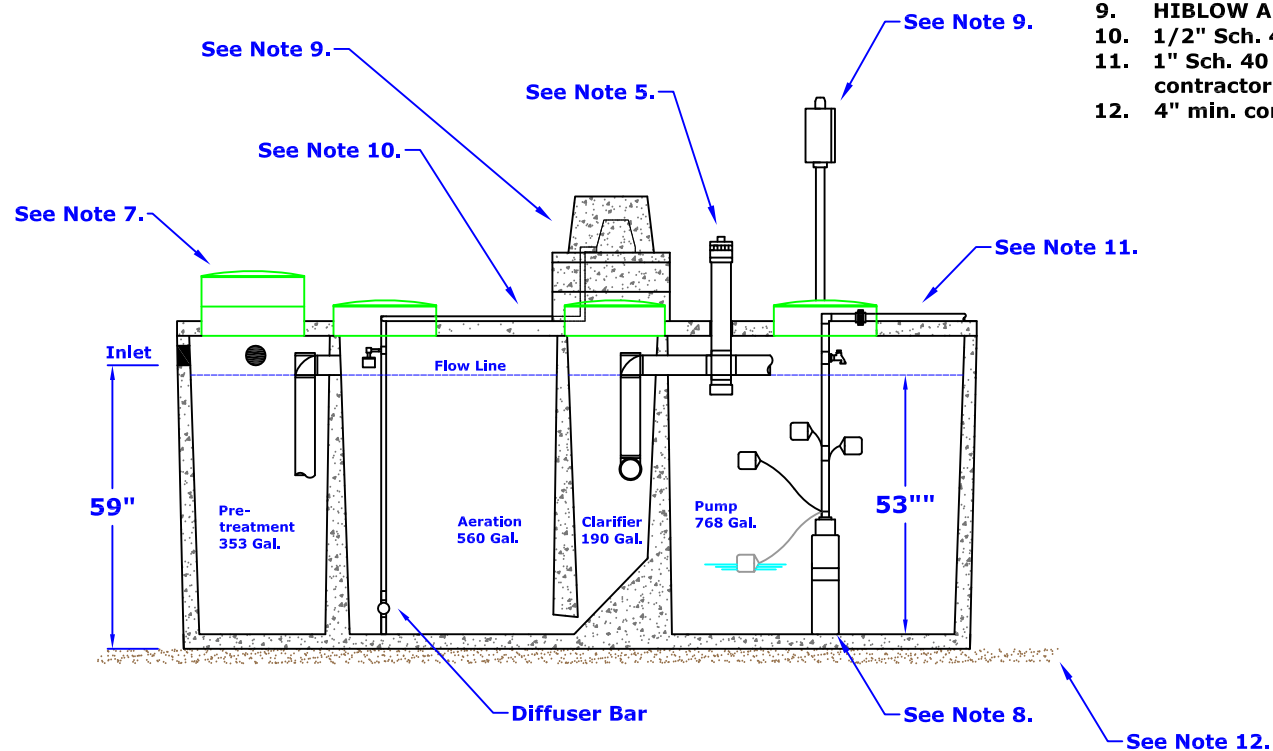
OSSF

4 - 6: See design notes

VOID

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 = 14,900 lbs.
4. Treatment capacity is 600 GPD. Pump compartment set-up for a 360 GPD Flow Rate (4 bedroom, < 4,000 sq/ft living area). Please specify for additional set-up requirements. BOD Loading = 1.62 lbs. per day.
5. Standard tablet chlorinator or Optional Liquid chlorinator. NSF approved chlorinators (tablet & liquid) available.
6. Bio-Robix B-550 Control Center w/ Timer for night spray application. Optional Micro Dose (min/sec) timer available for drip applications. Electrical Requirement to be 115 Volts, 60 Hz, Single Phase, 30 AMP, Grounded Receptacle.
7. 20" Ø access riser w/ lid (Typical 4). Optional extension risers available.
8. 20 GPM 1/2 HP, high head effluent pump.
9. HIBLOW Air Compressor w/ concrete housing.
10. 1/2" Sch. 40 PVC Air Line (Max. 50 Lft from Plant).
11. 1" Sch. 40 PVC pipe to distribution system provided by contractor.
12. 4" min. compacted sand or gravel pad by Contractor



DIMENSIONS:

Outside Height: 67"
Outside Width: 63"
Outside Length: 164"

MINIMUM EXCAVATION DIMENSIONS:

Width: 76"
Length: 176"

**NuWater B-550 (600 GPD)
Aerobic Treatment Plant (Assembled)**

Model: B-550-PC-400PT

March, 2012 - Rev 1
By: A.S.

Scale:

* All Dimensions subject to allowable specification tolerances.

Dwg. #: ADV-B550-3

Advantage
Wastewater Solutions llc

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

Typical Pump Tank Cross Section

VOID

A - Ashland Pump CPM Series - 20CPM5-115 20GPM 1/2HP.

B - Wide Angle Mercury Float Switch

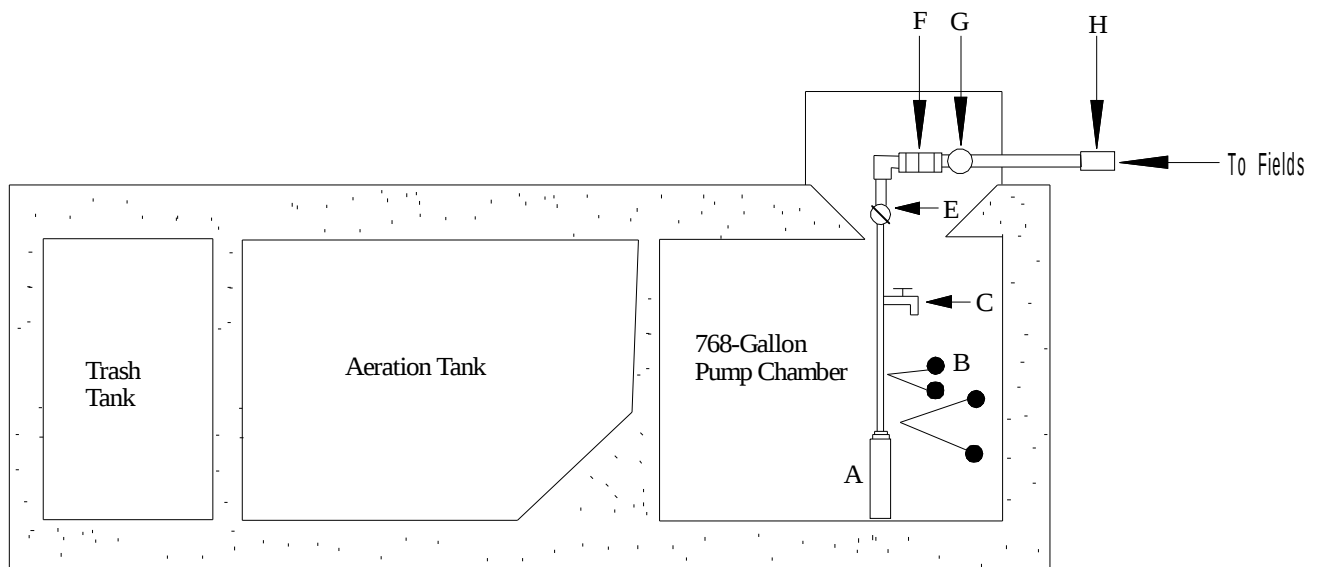
C - Sampling Port

~~E - Pressure Regulator~~

F - Quick Disconnect Union

G - 40 PSI Pressure Gauge

H - Check Valve



NuWater B-550 (600 GPD) Aerobic Treatment Plant

Not to Scale

LBC Manufacturing

"EZ-Tank"

VOID

GRAVITY FLOW Liquid Bleach Chlorinator

US Patent Pending

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LBC Manufacturing

P.O. Box 454 • Fayetteville, TEXAS 78940
(979) 826-0139 off.

For a downloadable copy:
www.ez-tank.com



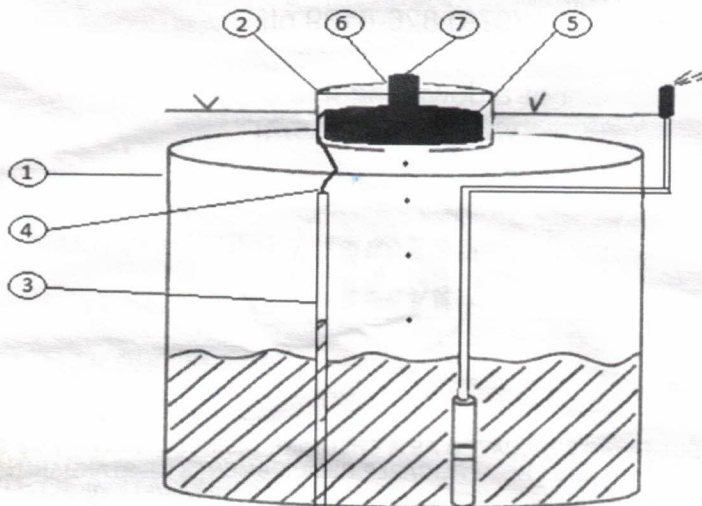
THIS PRODUCT WAS EVALUATED AS A CHLORINE DISINFECTION DEVICE AND
MEETS OR EXCEEDS THE APPLICABLE REQUIREMENTS OF STANDARD 46

RECOMMENDED INSTALLATION INSTRUCTIONS

**** LBC Manufacturing recommends installation by
TCEQ licensed installers ****

VOID

1. Locate the Aerobic System Holding/Pump tank.
2. Remove the green access lid mounting screws and remove green access lid.
3. Install vertical sensing pipe into Holding/Pump tank. Ensure sensing pipe is resting on the bottom of the Holding/Pump tank. Cut the sensing pipe off below the top of the Holding/Pump tank lid, and secure the sensing pipe to remain vertical in the Holding/Pump tank.
4. Using PVC Cleaner and PVC glue, attach the barb fitting adapter (supplied on the end of EZ-Tanks vinyl tubing) to the sensing pipe.
5. Place the EZ-Tank reservoir inside the holding tank access riser. (EZ-Tank reservoir rests on the secondary safety lid inside the holding tank access riser. If the holding tank access riser does not have a secondary safety lid, replace with new access riser that accommodates the secondary safety lid to code.)
6. Next, drill 4.25 inch hole in center of holding tank access lid. (this allows the fill lid to be accessed without having to reopen the holding tank lid) Next, Re-Install holding tank access lid and replace mounting and safety screws.
7. Open EZ-Tank gasketed fill lid. Fill with 6% -10% sodium hypochlorite. Once filled, Replace the gasketed fill lid ensuring a firm secure seal. (If the fill lid is not tightened securely, a vacuum will not form and reservoir will empty sodium hypochlorite contents into Holding/Pump tank prematurely.)



PROPLUS GEAR DRIVEN SPRINKLER SETTING INSTRUCTIONS

VOID

SPRINKLER INSTALLATION

1► INSTALL AND BURY

Do not use pipe dope. Thread the sprinkler on the pipe. Bury the sprinkler flush to grade. **NOTE:** Gear driven sprinklers and pop-up sprays should not be installed on the same watering zone.

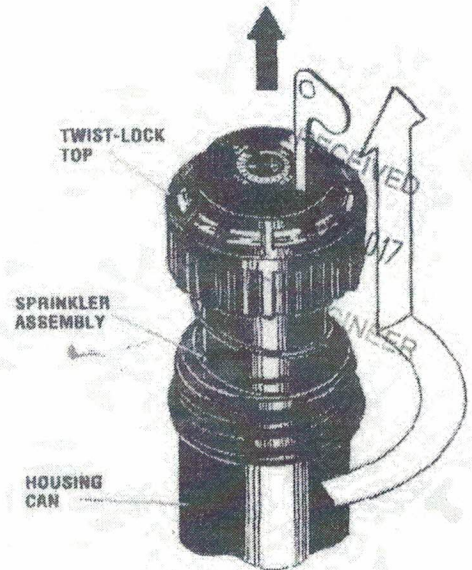
2► INSPECTING THE FILTER

Unscrew the top and lift the complete sprinkler assembly out of the housing can. The filter is located on the bottom of the sprinkler assembly and can easily be pulled out, cleaned and re-installed.

3► WINTERIZATION TIPS

When using an air compressor to remove water from the system please note the following:

- 1) Do not exceed 30 PSI.
- 2) Always introduce air into the system gradually to avoid air pressure surges. Sudden release of compressed air into the sprinkler can cause damage.
- 3) Each zone should run no longer than 1 minute on air. Sprinklers turn 10 to 12 times faster on air than on water. Over spinning rotors on air can cause damage to the internal components.



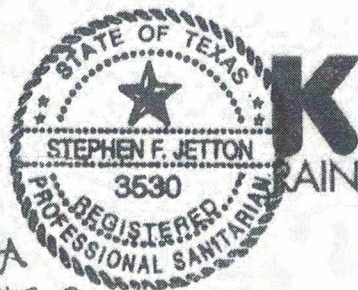
STANDARD NOZZLE PERFORMANCE

Nozzle	U.S.			METRIC				
	Pressure PSI	Radius Ft.	Flow GPM	Pressure KPa	Radius Meters	Flow L/M	Flow MPH	
#2.5 Factory Installed Nozzle	30	38'	2.5	206	2.04	11.6	9.46	.57
	40	39'	2.8	275	2.72	11.9	10.60	.64
	50	40'	3.2	345	3.40	12.2	12.11	.73
	60	41'	3.6	413	4.08	12.5	13.25	.79
#0.5	30	28'	0.5	206	2.0	8.5	1.89	.11
	40	28'	0.6	275	3.0	8.8	2.27	.14
	50	29'	0.7	345	3.5	8.8	2.65	.16
	60	30'	0.8	413	4.0	9.1	3.03	.18
#0.75	30	29'	0.7	206	2.0	8.8	2.65	.16
	40	30'	0.8	275	3.0	9.1	3.03	.18
	50	31'	0.9	345	3.5	9.4	3.41	.20
	60	32'	1.0	413	4.0	9.8	3.79	.23
#1	30	32'	1.3	206	2.0	9.8	4.92	.14
	40	33'	1.6	275	3.0	10.1	5.68	.18
	50	34'	1.8	345	3.5	10.4	6.05	.20
	60	35'	1.8	413	4.0	10.7	6.81	.23
#2	30	37'	2.4	206	2.0	11.3	9.08	.54
	40	40'	2.5	275	3.0	12.2	9.46	.56
	50	42'	3.0	345	3.5	12.8	11.35	.68
	60	43'	3.3	413	4.0	13.1	12.49	.75
#3	30	38'	3.6	206	2.0	11.6	13.63	.75
	40	39'	4.2	275	3.0	11.9	15.89	.95
	50	41'	4.6	345	3.5	12.5	17.41	1.04
	60	42'	5.0	413	4.0	12.8	18.92	1.13
#4	30	43'	4.4	206	2.0	13.1	16.65	.98
	40	44'	5.1	275	3.0	13.4	19.30	1.15
	50	46'	5.6	345	3.5	14.0	21.19	1.27
	60	49'	5.9	413	4.0	14.9	22.33	1.33
#6	40	45'	5.9	206	3.0	13.7	22.33	1.33
	50	46'	6.0	275	3.5	14.0	22.71	1.36
	60	48'	6.3	345	4.0	14.6	23.85	1.43
	70	49'	6.7	413	5.0	14.9	25.35	1.52
#8	40	42'	8.0	206	3.0	12.8	30.28	1.81
	50	45'	8.5	275	3.5	13.7	32.12	1.92
	60	49'	9.5	345	4.0	14.8	35.05	2.15
	70	50'	10.0	413	5.0	15.3	37.85	2.27

LOW ANGLE NOZZLE PERFORMANCE

Nozzle	U.S.			METRIC			Flow	
	Pressure PSI	Radius Ft.	Flow GPM	Pressure KPa	Radius Meters	L/M	MPH	
#1	30	22'	1.2	207	2.04	6.71	4.54	.34
	40	24'	1.7	275	2.72	7.32	5.43	.39
	50	26'	1.8	344	3.40	7.92	6.80	.41
	60	28'	2.0	413	4.08	8.53	7.56	.46
#3	30	29'	3.0	207	2.04	8.84	11.34	.68
	40	32'	3.1	275	2.72	9.75	11.72	.71
	50	35'	3.5	344	3.40	10.67	13.23	.80
	60	37'	3.8	413	4.08	11.58	14.36	.87
#4	30	31'	3.4	207	2.04	9.45	12.85	.78
	40	34'	3.9	275	2.72	10.36	14.74	.89
	50	37'	4.4	344	3.40	11.28	16.63	1.00
	60	38'	4.7	413	4.08	11.58	17.77	1.07
#6	40	38'	8.5	275	2.72	11.58	24.57	1.68
	50	40'	7.3	344	3.40	12.19	27.89	1.76
	60	42'	8.0	413	4.08	12.80	30.24	1.82
	70	44'	8.6	482	4.76	13.41	32.51	1.96

Data represents test results in zero wind for ProPlus. Adjust for local conditions. Radius may be reduced with nozzle retention screw.



K-RAIN MANUFACTURING CORP.
1640 Australian Avenue
Riviera Beach, FL 33404 USA
PH: 1-561-844-1002 / 1-800-735-7246
FAX: 1-561-842-9493
WEB: <http://www.krain.com>

© K-RAIN Manufacturing Corp. L-58921

Handwritten: J. F. Jetton 2-25-17

CISTERN PUMPS

CPM Series

VOID

Ashland Pump – CPM Series

The Ashland Pump CPM Series is designed to operate in filtered effluent/gray water applications. The bottom suction design allows for maximum drawdown of fluid and the hydraulic stages are able to pass 1/8" solids without damage to the pump.

Installations in cistern tanks, rain basin catchments or anywhere drawdown levels need to be maximized are ideal applications for the Ashland Pump CPM Series.

APPLICATIONS

- Filtered Effluent Water Pumping
- Gray Water Pumping
- Water Feature / Aeration Applications
- Rain Water Basin Applications

FEATURES

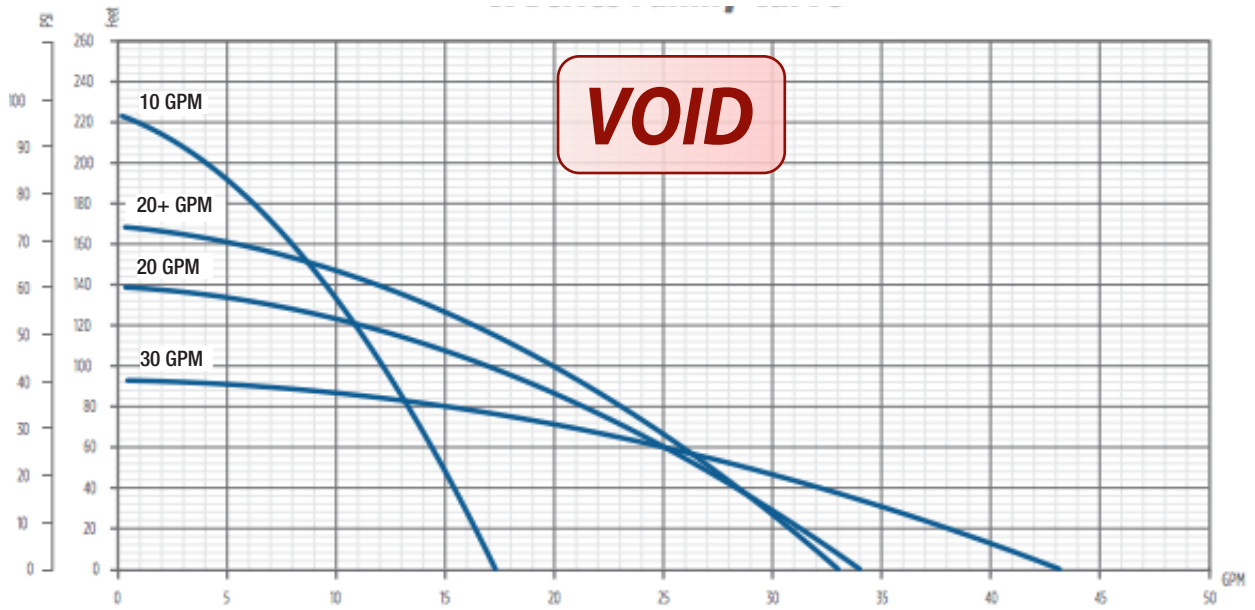
- Bottom suction design for maximum drawdown
- Able to pass 1/8" solids
- Available in 10, 20 and 30 GPM flow rates
- ½ HP, 115V and 230V single phase motors
- Heavy duty discharge with stainless steel internal threads
- 600 Volt, 10' SJ00W jacketed lead
- High shut-off pressure
- Quiet operation
- Standard removable base for stable mounting

ORDERING INFORMATION

CPM SERIES CISTERN PUMP						
Model/Order No.	GPM	HP	Voltage/Ph.	Stage Count	Length (in.)	Shipping Wt. (lbs.)
10CPM5-115	10	1/2	115/1	7	26	17
10CPM5-230	10		230/1	7	26	17
20CPM5-115	20		115/1	5	25	16
20CPM5-230	20		230/1	5	25	16
20+CPM5-115	20+		115/1	6	26	17
20+CPM5-230	20+		230/1	6	26	17
30CPM5-115	30		115/1	4	25	16
30CPM5-230	30		230/1	4	25	16



ASHLAND PUMP CPM SERIES CISTERN PUMP PERFORMANCE



P U M P

Honest, Professional, Dependable

1899 Cottage Street, Ashland, Ohio 44805

Telephone: 855 281-6830 • Fax: 877 326-1994 • ashlandpump.com

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

CORRECTION WARRANTY DEED THIRD PARTY VENDOR'S LIEN

DATE: January 14, 2022

GRANTOR: RANCHES AT SENTINEL PEAK, LLC
A TEXAS LIMITED LIABILITY COMPANY

GRANTEE: DONNA A. COURTS AKA DONNA COURTS AKA DONNA
ANN COURTS, and husband, ROYCE D. COURTS AKA
ROYCE COURTS AKA ROYCE DEAN COURTS
Address: 440 Toro Pass, Wimberly, TX 78676

CONSIDERATION: TEN AND NO/100 DOLLARS (\$10.00), and other good and valuable consideration, including a Note of the same date in the principal amount of **EIGHT HUNDRED FIFTY THOUSAND AND NO/100 Dollars (\$850,000.00)** (the "note") and is executed by Grantee, payable to the order of **CLASSIC BANK, NATIONAL ASSOCIATION** (the "Lender"). The Note is secured by a first and superior Vendor's Lien and the Superior Title herein retained in favor of Grantor and assigned and conveyed without recourse to Lender in this Deed and by a Deed of Trust of even date from Grantees to **RICHARD EARL WILLIAMS, JR.,** as Trustee.

THE FOLLOWING PROPERTY OWNED BY GRANTOR (including any improvements):

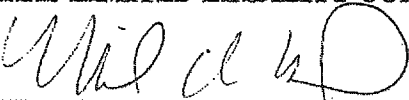
A 20.59 acre tract of land, located in the C.D. Roberston Survey No. 999, Abstract No. 982, the T.C.R.R. Co. Survey Section No. 946, Abstract No. 936, and the T.C.R.R. Co. Survey Section No. 945, Abstract No. 832, Comal County, Texas; and being a portion of a called 430.984 acres of land as described in Document No. 202106029019, Official Public Records, Comal County, Texas; said 20.59 acre tract, more or less, being more particularly described by metes and bounds on Exhibit "A" attached hereto.

Together with all improvements thereon, if any, and all rights, privileges, tenements, hereditaments, rights of way, easements, appendages and appurtenances, in anyway appertaining thereto, and all right, title and interest of Grantor in and to any streets, ways, alleys, strips or gores of land adjoining the above described property or any part thereof (hereinafter referred to as the "Property").

RESERVATIONS FROM CONVEYANCE: The first and superior vendor's lien and superior title to secure payment of the Note.

GRANTOR:

**RANCHES AT SENTINEL PEAK, LLC
A TEXAS LIMITED LIABILITY COMPANY**

By: 
Michael Clinard, Manager

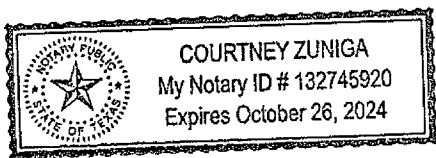
THE STATE OF TEXAS §

COUNTY OF HAYS §
 §

This instrument was acknowledged before me on April 1st, 2022, by Michael Clinard, the Manager of **RANCHES AT SENTINEL PEAK, LLC**, a Texas limited liability company, on behalf of said limited liability company.


Notary Public, State of Texas

[Seal]



EXCEPTIONS TO CONVEYANCE AND WARRANTY:

Liens described herein as part of the Consideration and any other liens described in this deed as being either assumed or to which title is taken subject to; validly existing easements, rights of way which are recorded and of record; and taxes for the current year and subsequent years, which Grantee assumes and agrees to pay and subsequent assessments for the current year and prior years due to change in land usage, ownership, or both, the payment of which Grantee assumes.

Grantor, for the consideration and subject to the Reservations from Conveyance and Exceptions to Conveyance and Warranty, grants, sells, and conveys to Grantee the property, together with all and singular the rights and appurtenances thereto in any wise belonging, to have and hold it to Grantee, Grantee's heirs, executors, administrators, successors, or assigns forever. Grantor hereby binds Grantor and Grantor's heirs, executors, administrators, and successors to warrant and forever defend all and singular the property to Grantee and Grantee's heirs, executors, administrators, successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof, except as to the Reservations from Conveyance and Exceptions to Conveyance and Warranty.

The Lender, at Grantees request, has paid in cash to Grantor the portion of the purchase price of the Property that is evidenced by the Note. The First and Superior Vendor's Lien against the superior title to the Property are retained for the benefit of the Lender and are transferred to the Lender without recourse against Grantor.

When this Deed is executed by one person, or when the Grantee is one person, the instrument shall read as though pertinent verbs and pronouns were changed to correspond, and when executed by or to a corporation the words "heirs, executors, administrators" or "heirs and assigns" shall be construed to mean "Successors and Assigns".

CORRECTION

This Correction Warranty Deed Third Party Vendor's Lien (this "*Deed*") is made as a correction deed in substitution of the deed titled Warranty Deed Third Party Vendor's Lien ("*Corrected Deed*") executed January 14, 2022 and recorded January 18, 2022 under Instrument Number 202206002747 of the Official Public Records of Comal County, Texas, to correct an incorrect description of the Property. The basis for the undersigned's personal knowledge of the facts relevant to the correction is the recollection of such facts by the undersigned, as an officer of Grantor. Other than the stated correction, this Deed is intended to restate in all respects the Corrected Deed, and the effective date of this Deed relates back to the effective date of the Corrected Deed.

Dated as first written above.

[Remainder of page left blank; Signature page follows]

GRANTEE:

Donna Courts
Donna Courts

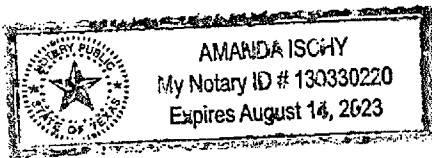
Royce Courts
Royce Courts

THE STATE OF TEXAS §

COUNTY OF HAYS §
§

This instrument was acknowledged before me on 3/31, 2022, by Donna Courts.

[Seal]



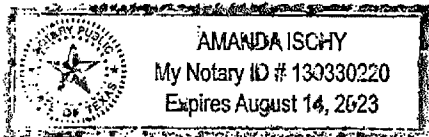
A. Ischy
Notary Public, State of Texas

THE STATE OF TEXAS §

COUNTY OF HAYS §
§

This instrument was acknowledged before me on 3/31, 2022, by Royce Courts.

[Seal]



A. Ischy
Notary Public, State of Texas

EXHIBIT "A"
Description of Property



FIELD NOTES FOR A 20.59 ACRE TRACT OF LAND

A 20.59 acre tract of land, located in the C. D. Robertson Survey No. 999, Abstract 982, the T.C. R.R. Co. Survey Section No. 946, Abstract No. 936, and the T.C. R.R. Co. Survey Section No. 945, Abstract No. 832, Comal County Texas, and being a portion of a called 430.984 acre tract of land as described of record in Document No. 202106029019 of the Official Records of Comal County, Texas. Said 20.59 acre tract being more particularly described by metes and bounds as follows:

BEGINNING at a set $\frac{1}{2}$ " iron rod with a red plastic cap stamped "Matkin-Hoover Eng. & Survey" in the south line of a called 533.144 acre tract of land as described of record in Document No. 201906042461 of the Official Public Records of Comal County, Texas, a north line of said 430.984 acre tract and for the northwest corner of the tract described herein, from which a found 6" cedar fence post at the southeast corner of a called 260.08 acre tract of land as described of record in Document No. 201106008793 of the Official Public Records of Comal County, Texas, for the southwest corner of said 533.144 acre tract and for a northerly angle point of said 430.984 acre tract bears, N 78° 33' 52" W, a distance of 2036.86 feet;

THENCE: S 78° 33' 52" E, with the south line of said 533.144 acre tract and a north line of said 430.984 acre tract, a distance of 682.41 feet to a set $\frac{1}{2}$ " iron rod with a red plastic cap stamped "Matkin-Hoover Eng. & Survey" for the northeast corner of the tract described herein, from which a found $\frac{1}{2}$ " iron rod with a yellow cap in the west right-of-way line of a 60' Wide Right-of-Way Easement as described of record in Document No. 202006059428 of the Official Public Records of Comal County, Texas, at the southeast corner of said 533.144 acre tract and for the northeast corner of said 430.984 acre tract bears, S 78° 33' 52" E, a distance of 2126.01 feet;

THENCE: Into said 430.984 acre tract the following nine (9) courses:

1. S 13° 25' 54" W, a distance of 1260.15 feet to a set $\frac{1}{2}$ " iron rod with a red plastic cap stamped "Matkin-Hoover Eng. & Survey" for the southeast corner of the tract described herein,
2. N 65° 32' 01" W, a distance of 282.44 feet to a set $\frac{1}{2}$ " iron rod with a red plastic cap stamped "Matkin-Hoover Eng. & Survey" for angle,
3. N 83° 45' 03" W, a distance of 282.83 feet to a set $\frac{1}{2}$ " iron rod with a red plastic cap stamped "Matkin-Hoover Eng. & Survey" for angle,
4. S 75° 55' 32" W, a distance of 666.44 feet to a set $\frac{1}{2}$ " iron rod with a red plastic cap stamped "Matkin-Hoover Eng. & Survey" for angle,
5. S 41° 49' 14" W, a distance of 335.96 feet to a set $\frac{1}{2}$ " iron rod with a red plastic cap stamped "Matkin-Hoover Eng. & Survey" for the most southerly southeast corner of the tract described herein,
6. N 74° 14' 48" W, a distance of 55.66 feet to a set $\frac{1}{2}$ " iron rod with a red plastic cap stamped "Matkin-Hoover Eng. & Survey" for a southwest corner of the tract described herein,
7. N 41° 49' 14" E, a distance of 375.75 feet to a set $\frac{1}{2}$ " iron rod with a red plastic cap stamped "Matkin-Hoover Eng. & Survey" for angle,
8. N 75° 55' 32" E, a distance of 537.51 feet to a set $\frac{1}{2}$ " iron rod with a red plastic cap stamped "Matkin-Hoover Eng. & Survey" for angle, and
9. N 14° 40' 26" E, a distance of 1240.25 feet to the **POINT OF BEGINNING** and containing 20.59 acres of land situated in Comal County, Texas.

Note: The basis of bearing was established using the Trimble VRS Network, NAD (83), Texas State Plane Coordinate System, South Central Zone, 4204, US Survey Foot Grid. A survey plat was prepared by a separate document. Field work performed on September 7, 2021.



Job # 21-4080 - 20.59 Acres
Date: December 28, 2021
Revised: February 15, 2022

Filed and Recorded
Official Public Records
Bobbie Koepp, County Clerk
Comal County, Texas
04/05/2022 02:15:02 PM
CHRISTY 5 Pages(s)
202206015916



Bobbie Koepp

Regulatory Authority

WASTEWATER TREATMENT FAC
Block Creek Aerobic Services, LLC
444 A Old Hwy #9
Comfort, TX 78013
Off. (830) 995-3189
Fax. (830) 995-4051

Permit/License Number

VOID

CONTRACTING AGREEMENT

Royce Courts

5800 Fm 32 Lot 9

Zip 78623

Mailing Address PO Box 3108

County Comal

Map #

Phone 512 560-6188

Email PACALLC@SBCGLOBAL.NET

I. General: This Work for Hire Agreement (hereinafter referred to as "Agreement") is entered into by and between Royce Courts (hereinafter referred to as "Customer") and Block Creek Aerobic Service, LLC. By this agreement, Block Creek Aerobic Service, LLC and its employees (hereinafter inclusively referred to as "Contractor") agree to render services at the site address stated above, as described herein, and the Customer agrees to fulfill his/her/their responsibilities, as described herein.

II. Effective Dates: This Agreement commences on _____ and end on _____ for a total of two (2) years (initial agreement) or one (1) year (there after). If this is an initial agreement (new installation), the Customer will notify the Contractor within two (2) business days of the system's first use to establish the date of commencement. If no notification is received by Contractor within ninety (90) days after completion of installation or where county authority mandates, the date of commencement will be the date the "License to operate" (Notice of Approval) was issued by the permitting authority. This agreement may or may not commence at the same time as any warranty period of installed equipment, but in no case shall it extend the specified warranty.

III. Termination of Agreement: This Agreement may be terminated by either party with thirty (30) days written notice for any reason, including for example, substantial failure to perform in accordance with its terms, without fault or liability of the terminating party. If this Agreement is so terminated, Contractor will be paid at the rate of \$75.00 per hour for any work performed and for which compensation has not been received. After the deduction of all outstanding charges, any remaining monies from prepayment for services will be refunded to customer within thirty (30) days. Either party terminating this Agreement for any reason, including non-renewal, shall notify in writing the equipment manufacturer and the appropriate regulatory agency a minimum of thirty (30) days prior to the date of such termination. Nonpayment of any kind shall be considered breach of contract and a termination of contract.

IV. Services: Contractor will:

- Inspect and perform routine upkeep on the On-Site Sewage Facility (hereinafter referred to as OSSF) as recommended by the treatment system manufacturer, and required by state and/or local regulation, for a total of three visits to site per year.
- Provide a written record of visits to the site by means of an inspection tag attached to or contained in the control panel.
- Repair or replace, if Contractor has necessary materials at site, any component of the OSSF to be failing or inoperative during the course of a routine monitoring visit. If such services are not covered by warranty, and services costs are \$100.00, or less. Customer hereby authorizes Contractor to perform the service and bill Customer for said service. When service costs are greater than \$100.00, or if contractor does not have necessary supplies at the site. Contractor will notify Customer of required service(s) and associated cost(s). Customer must notify Contractor of arrangements to affect repair of system with two (2) business days after said notification.
- Provide sample collection and laboratory testing of TSS and BOD on a yearly basis (commercial systems only).
- Forward copies of this Agreement and all reports to the regulatory agency and the Customer.
- Visit site in response to Customer's request for unscheduled services within forty-eight (48) hours of the date of notification (weekends and holidays excluded) of said request. Unless otherwise covered by warranty, costs for such unscheduled responses will be billed to Customer.

V. Disinfection: Not required XX required. The responsibility to maintain the disinfection device(s) and provide any necessary chemicals is that of the Customer. _____ (Initial)

V. Electronic Monitoring is not included in this Agreement.

VI. Performance of Agreement: Commencement of performance by Contractor under this Agreement is contingent on the following conditions:

- If this is an initial Agreement (new installation):
 - Contractor's receipt of a fully executed original copy or facsimile of this agreement and all documentation requested by Contractor.
 - Contractor's receipt of payment of the wastewater-monitoring fee in accordance with the terms as described in Section XIV of this Agreement.
 - If this is not an initial Agreement (existing system):
 - Contractors receipt of a fully executed original copy or facsimile of this agreement and all documentation requested by Contractor.
 - Contractor's receipt of payment of the wastewater-monitoring fee in accordance with the terms as described in Section XIV of this Agreement.
 - If the above conditions are not met, Contractor is not obligated to perform any portion of this Agreement.
- VII. Customer's Responsibilities: The customer is responsible for each and all of the following:

VOID

- a. Provide all necessary yard or lawn maintenance and keep the area free of obstructions, including but not limited to dogs and other animals, vehicles, trees, brush, trash, or debris, as needed to allow the OSSF to function properly, and to allow Contractor safe and easy access to all parts of the OSSF.
- b. Protect equipment from physical damage including but not limited to that damage caused by insects.
- c. Maintain a current license to operate, and abide by the conditions and limitation of that license, and all requirements for and OSSF from the State and/or local regulatory agency, whichever are more stringent, as well as proprietary system's manufacturer recommendations.
- d. Notify Contractor immediately of any and all alarms, and/or any and all problems with, including failure of, the OSSF.
- e. Provide, upon request by Contractor, water usage records for evaluation by Contractor as to the performance of the OSSF.
- f. Allow for samples at both the inlet and outlet of the OSSF to be obtained by Contractor for the purpose of evaluation the OSSF's performance. If these samples are taken to a laboratory for testing, with the exception of the service provided under Section V. sub-section d. above. Customer agrees to pay contractor for sample collection and transportation, portal to portal, at a rate of \$35.00 per hour, plus the associated fees for laboratory testing.
- g. Prevent the backwash or flushing of water treatment or conditioning equipment from entering the OSSF.
- h. Prevent the condensation from air conditioning or refrigeration units, or the drains of icemakers, from hydraulically overloading the aerobic treatment units. Drain lines may discharge into the surface application pump tank if approved by system designer.
- i. Provide for pumping and cleaning of tanks and treatment units, when and as recommended by Contractor, at Customer's expense.
- j. Maintain site drainage to prevent adverse effects on the OSSF.
- k. Pay promptly and fully, all Contractor's fees, bills, or invoices as described herein.
- X. Access by Contractor: Contractor is hereby granted an easement to the OSSF for the purpose of performing services described herein. Contractor may enter the property during Contractor's normal business hours and/or other reasonable hours without prior notice to Customer to perform the Services and/or repairs described herein. Contractor shall have access to the OSSF electrical and physical components. Tanks and treatment units shall be accessible by means of man ways, or risers and removable covers, for the purpose of evaluation as required by State and/or local rules and the proprietary system manufacturer. Initial ____ It is customers responsibility to keep lids exposed and accessible at all times
- VIII. Limit of Liability: Contractor shall not be held liable for any incidental, consequential, or special damages, or for economic loss due to expense, or for loss of profits or income, or loss of use to Customer, whether in contract tort or any other theory. In no event shall Contractor be liable in an amount exceeding the total Fee for Services amount paid by Customer under this Agreement.
- IX. Severability: If any provision of the "Proposal and Contract" 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 the "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.
- X. Fee for Services: The fee does not include any equipment, material, or labor necessary for non-warranty repairs or for unscheduled inspections. Customer requested visits to the site.
- XI. Payment: Full amount due upon signature (Required of new Customer). Payment of invoice(s) for any other service or repair provided by contractor in due upon receipt of invoice. Invoices are mailed on the date of invoice. All payments not received within thirty (30) days form the invoice date will be subject to a \$29.00 late penalty and a 1.5% per month carrying charge, as well as any reasonable attorney's fees, and all collection and court costs incurred by Contractor in collection of unpaid debt(s). Contractor may terminate contract at any time for nonpayment for services. Any check returned to Contractor for any reason will be assessed a \$30.00 return check fee.
- XII. Application or Transfer of payment: The fees paid for this agreement may transfer to the subsequent property owner(s); however this Agreements not transferable. Customer will advise subsequent property owner(s) of the state requirement that they sign a replacement agreement authorizing Contractor to perform the herein described Services, and accepting Customer's Responsibilities. This replacement Agreement must be signed and received in Contractor's offices within ten (10) business days of date of transfer of property ownership. Contractor will apply all funds received from Customer first to any past due obligation arising from this Agreement including late fees or penalties, return check fees, and/or charges for services or repairs not paid within thirty (30) days of invoice date.
- Any remaining monies shall be applied to the funding of the replacement Agreement. The consumption of funds in this manner may cause a reduction in the termination date of effective coverage per this Agreement. See Section IV.
- XIII. Entire Agreement: This agreement contains the entire Agreement of the parties, and there are no other conditions in any other agreement, oral or written.

Lock Creek Aerobic Service MC# 0000042 MC#0000002

Customer Signature

Date

Burt S. Sideris



COMAL COUNTY
ENGINEER'S OFFICE

**OSSF DEVELOPMENT APPLICATION
CHECKLIST**

Staff will complete shaded items

--	--

Date Received

Initials

115449

Permit Number

Instructions:

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

OSSF Permit

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

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

Signature of Applicant

Date

___ COMPLETE APPLICATION	
Check No. _____	Receipt No. _____

INCOMPLETE APPLICATION	
___ (Missing Items Circled, Application Refused)	