



# COMAL COUNTY

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## ENGINEER'S OFFICE

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

Permit Number: 118890  
Issued This Date: 10/24/2025  
This permit is hereby given to: James and Amy Schovajsa

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

375 IRON HILL  
NEW BRAUNFELS, TX 78132

Subdivision: Vintage Oaks at the Vineyard  
Unit: 25  
Lot: 1952  
Block: n/a  
Acreage: 1.0100

#### 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.



**COMAL COUNTY**  
ENGINEER'S OFFICE

**OSSF DEVELOPMENT APPLICATION  
CHECKLIST**

*Staff will complete shaded items*

|  |  |
|--|--|
|  |  |
|--|--|

*Date Received*

*Initials*

|        |
|--------|
| 118890 |
|--------|

*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 Refeused)



COMAL COUNTY  
ENGINEERS OFFICE

## ON-SITE SEWAGE FACILITY APPLICATION

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

Date 05/29/2025

Permit Number 118890

### 1. APPLICANT / AGENT INFORMATION

Owner Name James and Amy Schovajsa  
Mailing Address 462 Curvatura  
City, State, Zip New Braunfels, Tx. 78132  
Phone # 830-837-1620  
Email james.schovajsa@gmail.com

Agent Name John J. Haag, P.E.  
Agent Address 15831 Secret Trails  
City, State, Zip San Antonio, Tx. 78247  
Phone # 210-705-4268  
Email jhaag@satx.rr.com

### 2. LOCATION

Subdivision Name Vintage Oaks at the Vineyard Unit 25 Lot 1952 Block \_\_\_\_\_  
Survey Name / Abstract Number \_\_\_\_\_ Acreage 1.01  
Address 375 Iron Hill City New Braunfels State Tx. Zip 78132

### 3. TYPE OF DEVELOPMENT

☒ Single Family Residential

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

Number of Bedrooms 5

Indicate Sq Ft of Living Area 3,593

☐ 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: \$ 350000 (Structure Only)

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

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

Source of Water ☒ Public ☐ Private Well

### 4. SIGNATURE OF OWNER

By signing this application, I certify that:

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

Signature of Owner

Date

7/11/25



## ON-SITE SEWAGE FACILITY APPLICATION

Planning Materials & Site Evaluation as Required Completed By John J. Haag, P.E.

System Description Proprietary surface spray disposal

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

Tank Size(s) (Gallons) 600 gpd Absorption/Application Area (Sq Ft) 5,625 min

Gallons Per Day (As Per TCEQ Table III) 360

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

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

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

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

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

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

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

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

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

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

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

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

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

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

If yes, indicate the city: \_\_\_\_\_

By signing this application, I certify that:

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

John J. Haag, P.E.  
Signature of Designer

08/22/24  
Date



1/BC



202506022999 07/24/2025 01:12:34 PM 1/1

THE COUNTY OF COMAL

STATE OF TEXAS

### CERTIFICATION OF OSSF REQUIRING MAINTENANCE

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

I

The Texas Health and Safety Code, Chapter 366 authorizes the TCEQ to regulate on-site sewage facilities (OSSFs). Additionally, the Texas Water Code (TWC), § 5.012 and § 5.013, gives the TCEQ 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 TCEQ, under the authority of the TWC and the Texas Health and Safety Code, requires owners to provide notice to the public that certain types of OSSFs are located on specific pieces of property. To achieve this notice, the TCEQ 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 TCEQ of the suitability of this OSSF, nor does it constitute any guarantee by the TCEQ 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):

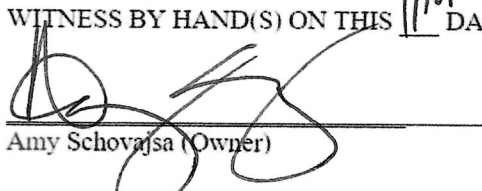
Legal Description: Lot 1952, Vintage Oaks at the Vineyard, Unit 25

This property is owned by: James Schovajsa and Amy Schovajsa

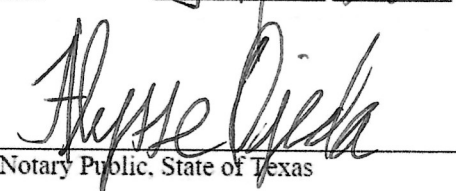
This OSSF must be covered by a continuous maintenance contract for the first two years. After the initial two year service policy, the owner of an aerobic system for a single family residence shall either obtain a maintenance contract within 30 days or maintain the system personally.

The owner will, upon any sale or transfer of the above-described property, request a transfer of the permit for the OSSF to the buyer or new owner. A copy of the planning materials for the OSSF can be obtained from Comal County.

WITNESS BY HAND(S) ON THIS 14<sup>th</sup> DAY OF July, 2025

  
Amy Schovajsa (Owner)

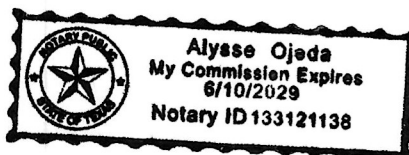
SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 14<sup>th</sup> DAY OF July, 2025

  
Notary Public, State of Texas

Filed and Recorded  
Official Public Records  
Bobbie Koepp, County Clerk  
Comal County, Texas  
07/24/2025 01:12:34 PM  
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*Bobbie Koepp*





# WASTEWATER TREATMENT SYSTEM MAINTENANCE CONTRACT

Customer

James &amp; Amy Schovajsa

Residential



Initial Contract



Site Address

375 Iron Hill, New Braunfels, TX 78132

Agency

Comal County

Email

james.schovajsa@gmail.com

Phone

(830) 837-1620

Permit Number

System Details

Treatment: Aerobic /

## MAINTENANCE AGREEMENT

### I. General:

This work for hire agreement (hereinafter referred to as "Agreement") is entered into by and between the Client and Luna Environmental, LLC (hereinafter referred to as "Contractor"), located at 9595 Ranch Rd 12 Suite #1, Wimberley, TX 78676. By this agreement, Contractor agrees to render services, as described herein, and Client agrees to fulfill his/her/their responsibilities under the agreement as described herein.

### II. Dates & Fees:

This agreement commences upon receipt by the Contractor of notice that the Local Regulatory Agency has given final approval of the installation (for a new or modified system), or on **6/10/2026** for an existing system, provided the Contractor has received payment in full of Fee(s) as agreed herein. The fees for this agreement are **\$550.00** and shall be prepaid per the payment terms outlined herein.

### III. Renewal Terms:

The term of this Agreement is **2 year(s)** but in no case shall the Fee to the Contractor be for less than **one (1) year**. This Agreement is non-expiring and automatically renews without need for signing of any additional document(s) – provided Client continues to timely pay the Fee(s) when due. Agreements paid monthly are paid using Contractor's system for automatic debit or automatic draft. Agreements that are prepaid will be invoiced by Contractor before the due date and must be timely paid by Client. If not timely paid before the due date, the Contractor has the right to terminate this Agreement.

### IV. Services by Contractor:

1. Inspect and perform routine maintenance on the part with "On-Site Sewage Facility ("OSSF or "the system") in compliance with code, regulations, and/or rules of the Texas Commission on Environmental Quality ("TCEQ") and county in which the OSSF is located and the manufacturer's requirements, at a frequency of approximately once every four (4) months.
2. Inspection, adjustment, and servicing of the mechanical, electrical, and other components to ensure proper functioning. This includes inspecting control panels, air pumps, air filters, diffusers, floats, and spray heads.
3. Effluent Inspection will include the following: effluent quality (color, turbidity, overflow, and odor), testing effluent chlorine and pH levels, when necessary, alarm function, filters, operation of effluent pump and chlorinator. Unless otherwise agreed to, Contractor does not provide chlorine. BOD and TSS annually on commercial accounts, additional charges apply.
4. Notify Client of any repairs needed to keep OSSF in proper working condition and up to regulatory standards. Items under warranty may be repaired while the technician is on-site. Replacement, Replenishment, and

Repairs are additional services not covered by the Fee. Regarding all such work, Contractor shall abide by Client's election in Section V of this agreement.

5. Report to the appropriate regulatory agency and to Client, as required by the State of Texas' on-site rules and, if required, TCEQ or County rules. All findings must be reported to the appropriate regulatory agency within 14 days.
6. Visit site within 48 hours of a service request.
7. Provide Customer Support line at (855) 560-9909

## V. Client Responsibilities:

1. Maintain a current License to Operate and abide by the conditions and limitations of that license and all requirements for OSSF from the State and Local Regulatory Agency as well as manufacturer's recommendations.
2. Maintain disinfection unit and at all times provide proper and adequate chlorine supply or operating disinfection component, if OSSF is equipped with same.
3. Provide all necessary site, yard, or lawn maintenance and removal of obstacles, including dogs and other animals, as needed to allow the system and its components to function properly and to allow Contractor safe and easy access to all parts of the system and its components.
4. Maintain site drainage to prevent adverse effects on OSSF.
5. Provide for pumping of tanks, when and as suggested by Contractor, at Client's own expense. Typically, every 3 years.
6. Do not exceed the system's physical, hydraulic, or biological limitations
7. Notify Contractor within 24 hours of the occurrence of any and all alarms or problems with any component or with the system.
8. Be available by text, phone, or in person when the Contractor is on-site in case of required repair approvals or questions.
9. Promptly pay Contractor's bills, fees, and invoices in full.
10. Elect one of the following: Authorized

**Yes, I authorize.** If during the Contractor's time of the maintenance check any component of the system is found to need replacement, replenishment, or repair, then Client authorizes Contractor to perform the service per the above and bill or charge the Client for such additional services without further approval by Client so long as the service is \$150 or less and the Contractor has the necessary materials to perform the replacement, replenishment, or repair.

**No, I do not authorize.** If, during the Contractor's maintenance check, any component of the system is found to be in need of replacement, replenishment, or repair, Contractor will notify Client of repairs needed and, where feasible, provide an estimate of costs. No replacement, replenishment, or repairs will be performed without express approval of Client. Additional Service fees will apply for return visits to perform repairs.

## VI. Authority

In signing this Agreement, the Client: (1) hereby affirms ownership to the Property as well as the OSSF that is the subject of this Agreement. (2) represents that he/she has authority to permit Contractor's entry upon property to monitor, service, or repair and agrees to hold Contractor and its agents harmless for entry upon such real property for these purposes, and (3) represents to have the authority to bind all owners of the property to the terms of this agreement, or to accept personal responsibility for these terms.

## VII. Access By Contractor

Contractor is hereby granted access to the system and all related components for the purposes of performing the Services or Additional Services. Unless other arrangements have been made in advance in writing, Contractor's personnel may enter the property at reasonable times without any form of notice for the purpose of performing the Services or Additional Services. Contractor will require free, unrestricted access to the system and related components for the purpose of performing all work. If upon arrival at the site, Contractor determines that access is prevented, blocked, or restricted, Contractor is not required to perform any of the steps, and will be credited with completion of that maintenance check. Additional maintenance checks to complete the Services shall be billed to Client as an Additional Service.

**VIII. Payment Terms:**

The fee for this agreement only covers the services described herein. This fee does not cover equipment or labor for non-warranty repairs, labor for warranty repairs, or service charges resulting from unscheduled, Client requested trips to the Client's OSSF. Payments not received within 30 days from the date of invoicing will be subject to a \$30.00 late penalty and or a 1.5% monthly carrying charge, whichever is greater. By signing this contract, the Client authorizes the Contractor to remove any parts which were installed but not paid for at the end of 30 days. The Client is still responsible for any labor costs associated with the installation and removal of said parts. All invoices are due upon receipt by Client. Under no condition shall prepayment of Fee, or the sum of monthly payments of Fee, be for less than **a one-year** term. After **2 year(s)**, prepaid agreements (other than monthly) may be prorated using monthly increments, less other charges as discussed elsewhere in this Agreement.

**IX. Application or Transfer of Payment:**

The Fee paid for this Agreement may transfer to the subsequent owner(s), however, this Agreement will not transfer. Client will advise subsequent owner(s) of the regulatory requirement for a replacement Agreement. Regulations require that replacement Agreements be signed and received within 30 days of transfer of ownership. Contractor will apply all funds received from Client first to any past-due obligations arising from this Agreement including late charges, returned check charges, and charges for repairs or services not paid within 10 days of invoicing. Unpaid balances on Client's account may lead to the extension of the monthly drafting or debiting program, if applicable, to complete payment of Client's account balance(s).

**X. Termination of Agreement:**

After a minimum of **2 year(s)**, in order to provide sufficient time to comply with the regulatory requirement for notices from the Contractor to the Local Regulatory Agency, this Agreement may be terminated for any reason by either party with a minimum 30 day written notice, without fault of the terminating party. Contractor shall be due a Fee equal to at least the first year and may also deduct for any other work performed by Contractor but not yet paid by Client, whether invoiced prior to termination or not. Contractor will notify the appropriate Local Regulatory Agency of this termination.

**XI. Limitation of Liability:**

In no event shall the Contractor be liable for indirect, consequential, incidental, or punitive damages, whether in contract, tort, or any other theory of liability. In no event shall the Contractor's liability for the direct damages exceed payments by the Client under this agreement.

**XII. Severability:**

If any provision of this agreement shall be held to be invalid or unenforceable for any reason the remaining provisions shall continue to be held valid and enforceable. If a court finds that any provision of this agreement is invalid or unenforceable, 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.

James &amp; Amy Schovajsa

Signed by:

Customer Name



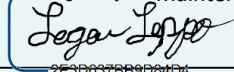
0054E02F01404EC...

Customer Signature

Luna Environmental / Logan Leppo

Signed by:

Maintenance Provider Name



License # MP0002494

2E3D637BB9D04D4...

Maintenance Provider Signature

Additional Comments / Special Terms



# HAAG ENGINEERING CONSULTANTS

15831 Secret Trails • San Antonio, Texas 78247 • Tel: (210) 705-4268 • Email: [jhaagpe@gmail.com](mailto:jhaagpe@gmail.com)

May 29, 2025

Ms. Brenda Ritzen  
Comal County Office of Environmental Health  
195 David Jonas Drive  
New Braunfels, Texas 78132-3760

RE: Water Pollution Abatement Plan  
Lot 1952, Vintage Oaks at the Vineyard, Unit 25

Dear Brenda:

The referenced property is located within the Edwards Aquifer Recharge Zone. This On-Site Sewage Facility (OSSF) design will comply with the requirements in the Water Pollution Abatement Plan (WPAP).

Temporary erosion and sedimentation controls shall be utilized as necessary prior to construction. If any recharge feature (caves, solution cavities, sink holes, etc.) is discovered during OSSF construction, all regulated activities near the feature shall be suspended immediately and the owner shall immediately notify the appropriate Texas Commission on Environmental Quality (TCEQ) regional office of the discovery of the feature. After that, regulated activities shall not proceed near the feature until the permitting authority, in conjunction with the regional TCEQ office, has reviewed and approved an approved plan proposed to protect the feature, the structural integrity of the OSSF and the water quality of the Edwards aquifer.

Designed in accordance with TCEQ Chapter 285, Subchapter D, §285.40, 285.41 and 285.42 (effective March 2013).

Sincerely,



05/29/2025

Haag Engineering Consultants, LLC  
Firm No.: F-5789



# ON-SITE SEWAGE FACILITY (OSSF) SITE EVALUATION FORM

## 1. OWNER INFORMATION

Property Owner's Full Legal Name: James and Amy Schovajsa

## 2. PROPERTY INFORMATION

City: New Braunfels | Zip Code: 78132

Legal Description:

Lot: 1952 | Block: | Subdivision: Vintage Oaks at the Vineyard | Unit: 25 | Phase:

If not located in subdivision: Survey:

Abstract: | Recorded (Vol/Pg):

## 3. SITE EVALUATION INFORMATION:

Name of Site Evaluator: John J. Haag | PE #: 90158

Date Performed: 05/12/2025 | Proposed Excavation Depth: Surface

## 4. 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 feet below the proposed excavation depth. For surface disposal, the surface horizon must be evaluated.

Soil Profile Hole Number: 1

| Depth (ft.) | Textural Class | Gravel Analysis | Drainage (Mottles/Water Table) | Restrictive Horizon | Observations        |
|-------------|----------------|-----------------|--------------------------------|---------------------|---------------------|
| 0           | IV             | <30%            | No                             | Yes                 | Limestone @ surface |
| 1           |                |                 |                                |                     |                     |
| 2           |                |                 |                                |                     |                     |
| 3           |                |                 |                                |                     |                     |
| 4           |                |                 |                                |                     |                     |
| 5           |                |                 |                                |                     |                     |

# ON-SITE SEWAGE FACILITY (OSSF) SITE EVALUATION FORM

| Soil Profile Hole Number: 2 |                   |                    |                                      |                        |                     |
|-----------------------------|-------------------|--------------------|--------------------------------------|------------------------|---------------------|
| Depth<br>(ft.)              | Textural<br>Class | Gravel<br>Analysis | Drainage<br>(Mottles/Water<br>Table) | Restrictive<br>Horizon | Observations        |
| 0                           | III               | <30%               | No                                   | Yes                    | Limestone @ surface |
| 1                           |                   |                    |                                      |                        |                     |
| 2                           |                   |                    |                                      |                        |                     |
| 3                           |                   |                    |                                      |                        |                     |
| 4                           |                   |                    |                                      |                        |                     |
| 5                           |                   |                    |                                      |                        |                     |

## 5. FEATURES OF SITE AREA:

- |                                                           |                                                                                  |
|-----------------------------------------------------------|----------------------------------------------------------------------------------|
| Presence of 100 year flood zone:                          | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No              |
| Presence of adjacent ponds, streams or water impoundments | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No              |
| Existing or proposed water well in nearby area            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No              |
| Organized sewage available to lot or tract                | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No              |
| Recharge features within 150 feet                         | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (none found) |
6. I certify that the above statements are true and correct and are based on my own field observations.



05/12/2025

Haag Engineering Consultants, LLC  
Firm: F-5789

**Aerobic With Surface Disposal**

by Felix I. Bernal, P.E. (c) 2002 - 2013

SITE EVALUATION PERFORMED ON:

12-May-25

by

John J. Haag, P.E.



Date: 05/29/25

APPLICANT: Amy Schovajsa

MAILING ADDRESS:

CITY, ST, ZIP

CONTRACTOR

SITE ADDRESS: 375 Iron Hill

CITY, ST, ZIP New Braunfels, Tx. 78132

LEGAL DESCRIPTION: Lot 1952 Vintage Oaks at the Vineyard, Unit 25

WATER SOURCE: Public

SOIL TYPE

4

AT SLOPE OF &lt;15%

BEDROOMS

5

Sq. Ft. 3593

Normally Required

450

GPD

450 GPD

WATER SAVING DEVICES?

Y

APPLICATION RATE =

0.064

GALLONS PER SQ. FT. PER DAY

USAGE FLOW =

360

GALLONS PER DAY WHICH IS

80%

OF

450 GPD

SEPTIC TANK VOLUME =

1,250

GALLONS TWO COMPARTMENT TANK REQUIRED

RESERVE CAPACITY =

120

(8 HOURS USAGE AFTER HIGH LEVEL ALARM)

AREA REQUIRED =

5,625

SQ. FT. OF ABSORPTION AREA

OR

0.13 ACRES

**WITHOUT WATER SAVING DEVICES**

7,031

SQ. FT. OF ABSORPTION AREA

OR

0.16 ACRES

Use a

600

GPD Treatment Plant Model

SA600LP

by

Solar Aerobic

Nozzle #

PSI

(K-Rain ProPlus Low Angle Sprinkler Nozzle)

4

30

PSI WITH A

31

FOOT RADIUS AND 3.4

GPM/ SPRINKLER WITH A TOTAL OF 6.8 GPM FOR THE SYSTEM

**AREA COVERED BY PROPOSED SPRINKLER HEADS**

LINEAR FEET OF DISTRIBUTION =

142.0 FT. OF

1

INCH SCH-40 PURPLE PIPE

150

C (HAZEN-WILLIAMS)

SPACE BETWEEN SPRINKLER HEADS =

62

FT

2

SPRINKLERS

FOR A DOSE TIME OF 53 MINUTES

WITH ANGLE OF DISTRIBUTION =

360

AREA PER SPRINKLER =

3,019

sf

OF ABSORPTION AREA

SPRINKLERS

LENGTH OF PIPE

Dist. Angle

Flow GPM

Q GPM

Hf ft of head

Area

2

80 FT

360

3.4

6.800

2.69

3019.0

1

62 FT

360

3.4

3.400

0.58

3019.0

0

0

0.000

0.00

0.0

0

0

0.000

0.00

0.0

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0.000

0.00

0.0

0

0

0.000

0.00

0.0

0

0

0.000

0.00

0.0

SUM= 142 feet of pipe

6.800

3.27

ft of head

6038.0 sf

Provided

fittings factor 1.20

3.92

ft of head

Hf for Dist Line 4.7783147 ft of head

(Note: 0.4335= 62.424/144 for water at 39.2°F)

30.00 psi divided by 0.4335 =

69.20

ft of head

elevation difference

-13.00

ft of head

head required for sprinkling

64.91

ft of head

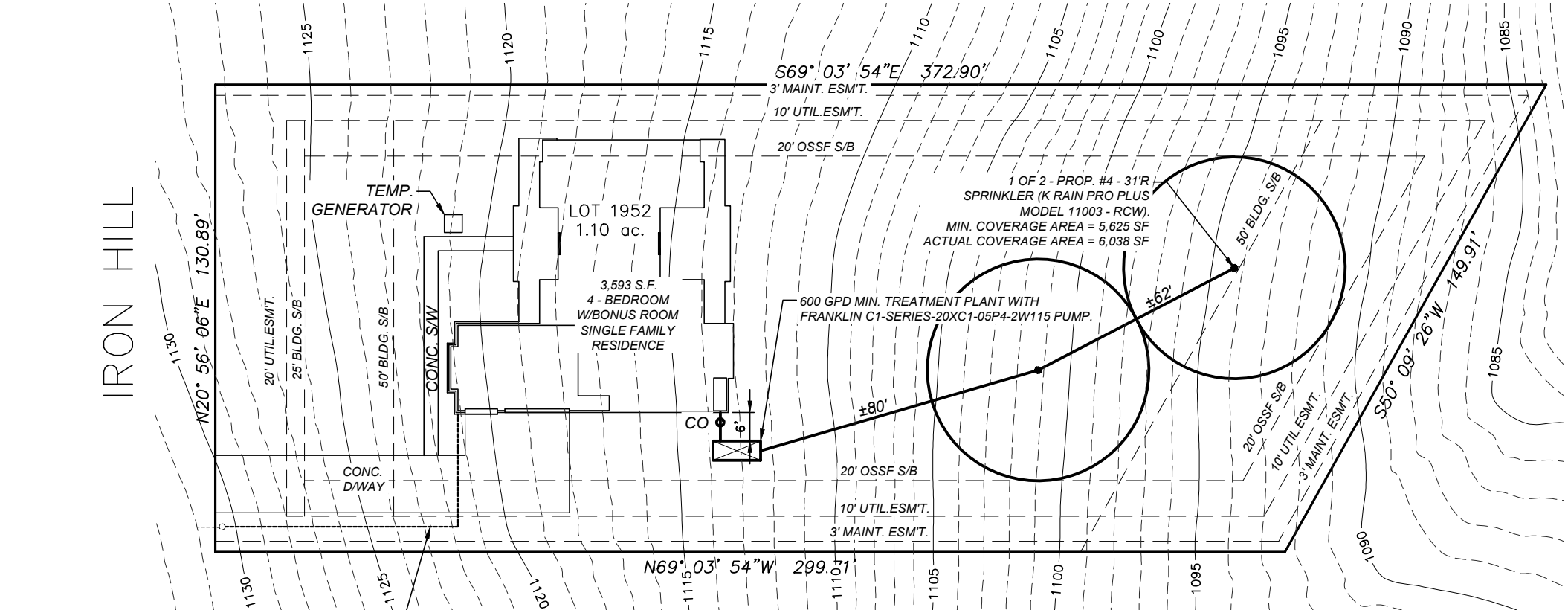
pressure required for sprinkling

28.14

psi

GENERAL NOTES:

- NO VEHICULAR TRAFFIC IS ALLOWED ON ANY PORTION OF THE DISPOSAL SYSTEM, UNLESS THE DESIGN SPECIFIES OTHERWISE.
- PIPE ALIGNMENT TO THE DISPOSAL BEDS MAY BE ALTERED AS REQUIRED. ANY CHANGE FROM THE PLANS MUST BE APPROVED BY THE ENGINEER AND THE APPROPRIATE GOVERNMENTAL AGENCY(IES).
- CONTRACTOR SHALL PROTECT TREES WHICH ARE NOT IN THE EXCAVATED CONSTRUCTION AREAS. CONTRACTOR SHALL MINIMIZE ROOT DAMAGE AND REASONABLY ADHERE TO THE DESIGN.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING A MINIMUM OF 1/4" PER FOOT OF FALL FROM THE BUILDING TO THE SEPTIC TANK.
- NO AUTOMATIC SPRINKLER SYSTEM SHALL BE INSTALLED OVER THE DISPOSAL AREAS. ANY WATERING IN THESE AREAS SHALL BE DONE BY HAND AND ONLY WHEN REQUIRED TO MAINTAIN GRASS COVER.
- ALL CONSTRUCTION SHALL CONFORM TO THE RULES AND REGULATIONS OF THE APPROPRIATE AUTHORITY - TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) AND ANY APPLICABLE LOCAL BUILDING AND SAFETY CODES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THE CONSTRUCTION OF THIS SYSTEM.
- SPRAY APPLICATION AREAS SHALL BE COVERED WITH PERENNIAL GRASSES TO TAKE ADVANTAGE OF TRANSPIRATION. IF GRASSES ARE USED WHICH HAVE DORMANT PERIODS, STEPS SHOULD BE TAKEN TO PROVIDE SOME TYPE OF VEGETATION ON THE BEDS DURING THESE PERIODS.
- RECOMMENDED COVERAGE:
  - BERMUDA: 1 LB/1000 S.F.
  - RYE: 10 LB/1000 S.F.
  - OR ST. AUGUSTINE SOD.
- SPRAY APPLICATION AREAS MUST BE MOWED AT REGULAR INTERVALS. FAILURE TO PROPERLY MAINTAIN VEGETATIVE COVER MAY RESULT IN SYSTEM FAILURE AND SHALL BE THE RESPONSIBILITY OF THE OWNER.
- ALL PIPES SHALL BE SCHEDULE 40 PVC OR APPROVED EQUAL, UNLESS NOTED OTHERWISE. ALL JOINTS SHALL BE CLEANED WITH THE APPROPRIATE SOLVENT AND GLUED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.
- ALL POTABLE WATER LINES SHALL BE A MINIMUM OF 10 FEET FROM ANY DISPOSAL SYSTEM OR SEWERAGE PIPE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF WATER LINES LESS THAN 10 FEET FROM THE DISPOSAL AREA.
- HIGH WATER ALARM SHALL BE LOCATED IN A NOTICEABLE LOCATION. THE ALARM SHALL BE A VISUAL AND AUDIBLE ALARM AND WIRED ON A SEPARATE CIRCUIT FROM THE PUMPS. ALL EXTERIOR CONTROLS AND CONNECTIONS SHALL BE ENCLOSED IN A WEATHER-PROOF HOUSING. ELECTRICAL CONSTRUCTION SHALL COMPLY WITH ALL LOCAL ELECTRICAL AND BUILDING CODES.
- NO EXCAVATION IS PERMITTED NEAR THE DISPOSAL AREAS THAT WILL RESULT IN THE NONCOMPLIANCE OF APPLICABLE SETBACKS STATED IN THE RULES AND REGULATIONS OF THE APPROPRIATE AUTHORITY.
- ONLY GOOD QUALITY SANDY LOAM SHALL BE APPLIED OVER THE DISPOSAL AREAS. CLAY LOAM IS UNACCEPTABLE AND WILL CAUSE SYSTEM FAILURE. SANDY LOAM SHALL BE DEFINED AS SHOWN IN TABLE VI (USDA SOIL TEXTURAL CLASSIFICATIONS) OF THE RULES AND REGULATIONS OF THE TCEQ. THE INSTALLER IS RESPONSIBLE FOR VERIFYING THE QUALITY OF EACH LOAD OF LOAM PLACED ON THE SYSTEM.
- STORM WATER (RAINFALL RUNOFF) SHOULD NOT BE ALLOWED TO FLOW OVER THE DISPOSAL FIELDS OR THE TANKS. DIVERSION BERMS, SWALES AND/OR RAIN GUTTERS SHOULD BE INSTALLED AS NECESSARY TO PREVENT SUCH RUNOFF.
- THE CONTRACTOR IS RESPONSIBLE FOR STAKING AND VERIFYING THE GRADES PRIOR TO EXCAVATION. ANY DISCREPANCIES OF MORE THAN 6 INCHES SHALL BE REPORTED TO THE ENGINEER PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOT DEVIATE FROM THESE PLANS WITHOUT THE WRITTEN CONSENT OF THE APPROPRIATE AUTHORITY AND THE ENGINEER.
- THIS DISPOSAL SYSTEM HAS BEEN DESIGNED TO OPERATE PROPERLY AT SPECIFICATIONS NOTED IN THESE PLANS. ALTERATIONS TO THE SYSTEM BY THE OWNER, INCLUDING BUT NOT LIMITED TO LANDSCAPING, DRAINAGE, BUILDING AND/OR WATER USAGE, MAY CAUSE PREMATURE FAILURE AND SHALL BE THE SOLE RESPONSIBILITY OF THE OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL PLUMBING FIXTURES ARE CONNECTED TO THE DESIGNATED SEPTIC TANK(S). LOW FLOW TOILETS (1.6 GAL), SHOWERHEADS AND FAUCETS SHALL BE USED IN THE STRUCTURES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR JOBSITE SAFETY AND PROTECTION OF THE PUBLIC FROM INJURY DURING CONSTRUCTION. THE OWNER SHALL BE RESPONSIBLE FOR THE PREVENTION OF PERSONAL INJURY TO ANYONE ON OR NEAR THE DISPOSAL SYSTEM.
- CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL TANKS HAVE ADEQUATE STRENGTH AND INTEGRITY TO PERFORM SATISFACTORILY AS SHOWN ON THESE PLANS.
- THE WASTEWATER FLOW TO THE SEPTIC SYSTEM SHALL NOT EXCEED THE DESIGN FLOW SHOWN ON THIS PLAN.



ASSUMED LOCATION OF WATER METER AND WATER SERVICE LINE ALIGNMENT FROM METER TO HOUSE. NOTE: WATER SERVICE LINE SHALL BE SLEEVED WITH SCH. 40 PVC WHEREVER IT IS 10' OR CLOSER TO PROPOSED OSSF DISPOSAL AREA LIMITS AND/OR ANY SYSTEM COMPONENT(S). EXCEEDS TAC 30 CHAPTER 290.44(e).

SOLAR AEROBIC SA600-768LP PUMP FLOAT SETTINGS FOR MIN. 360 GPD AND MIN. 120 GAL RESERVE :

PUMP OFF POSITION: 9.70" ABOVE TANK BOTTOM (±178.6 GAL)  
PUMP ON POSITION: 28.9" ABOVE TANK BOTTOM (±538.6 GAL)  
ALARM ON POSITION: 35.24" ABOVE TANK BOTTOM (±658.6 GAL)

120 GAL RESERVE CAPACITY AT APPROX. 41.5' ABOVE TANK BOTTOM.

SLOPE NOTE:

INSTALLER SHALL CUT OR FILL EXIST. GROUND WITHIN SPRAY DISPOSAL LIMITS SO THAT TOP OF FINISHED GROUND SLOPES WITHIN SAID LIMITS DO NOT EXCEED 15%.

WATER POLLUTION ABATEMENT PLAN (WPAP) NOTES:

- THIS SITE IS WITHIN THE EDWARDS AQUIFER RECHARGE ZONE;
- ALL OSSF CONSTRUCTION SHALL FOLLOW ANY ADDITIONAL REQUIREMENTS SPECIFIED IN THE TCEQ APPROVED WPAP(S) FOR THIS SUBDIVISION AND THE WPAP LETTER THAT WAS INCLUDED AS PART OF THE APPROVED OSSF PERMIT FOR THIS PROJECT.

ADD'L. NOTES:

- DESIGN DAILY WASTEWATER FLOW = 360 GPD (WATER SAVING DEVICES WERE ASSUMED FOR SEPTIC SYSTEM DESIGN).
- TOPOGRAPHIC DATA SOURCE: FEMA 2011 DATA.
- HOUSE LOCATION SAME/SIMILAR TO SITE PLAN LOCATION PER CLIENT.
- THE OSSF INSTALLER SHALL FIELD VERIFY ALL PROPERTY LINE LOCATIONS THAT THIS DESIGN REFERENCES PRIOR TO ANY OSSF INSTALLATIONS.

NOTE: OSSF IS WITHIN THE EDWARDS AQUIFER RECHARGE ZONE AND IS NOT IN THE FEMA 100 YEAR FLOODPLAIN.

SITE EVALUATION BY JOHN J. HAAG, P.E. ON 05/12/2025

DRAWN BY: JJH

CHECKED BY: JJH

DATE: 07/10/25

JOB NO. JSCHOV25002

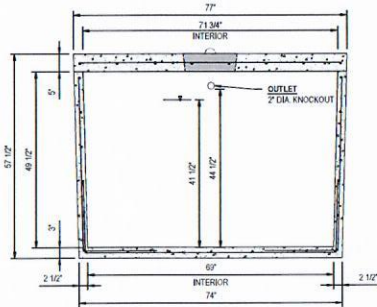
SHEET 1 OF 1

**HAAG ENGINEERING CONSULTANTS**

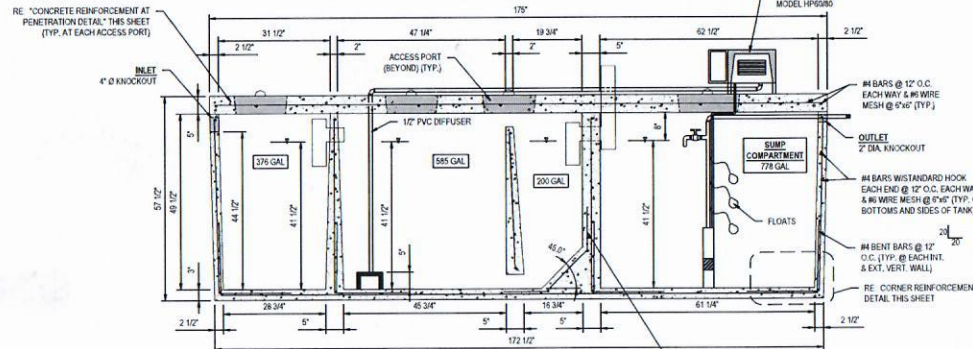
15831 SECRET TRAILS  
SAN ANTONIO, TEXAS 78247  
FIRM: F-5789

TEL: (210) 705-4268

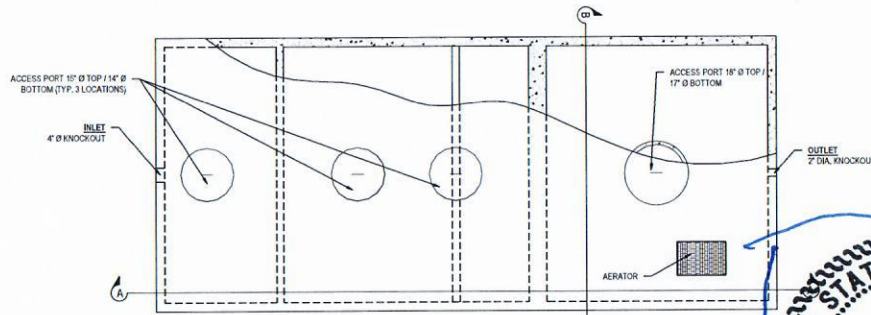
©COPYRIGHT 2025 HAAG ENGINEERING CONSULTANTS, LLC; ALL RIGHTS RESERVED



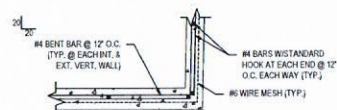
SECTION "B-B"  
SCALE 3/4" = 1'-0"



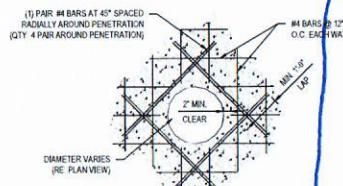
SECTION "A-A"  
SCALE 3/4" = 1'-0"



PLAN VIEW  
SCALE 3/4" = 1'-0"



CORNER REINFORCEMENT  
DETAIL  
SCALE 1 1/2" = 1'-0"



CONCRETE REINFORCEMENT  
AT ACCESS PORT DETAIL  
SCALE 1 1/2" = 1'-0"

#### GENERAL CONCRETE NOTES:

1. ALL CONCRETE SHALL CONFORM TO ASTM C94, READY MIX CONCRETE HAVING A MINIMUM DESIGN COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS WITH A MAXIMUM AGGREGATE SIZE OF 1" AND A MAXIMUM "SLUMP" OF 5". PORTLAND CEMENT SHALL BE TYPE "I". CONVEYANCE AND PLACEMENT OF ALL CONCRETE SHALL BE IN ACCORDANCE WITH ACI 315 AND 318, LATEST EDITIONS.
2. CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318, LATEST EDITION.
3. ALL CONCRETE SHALL BE PROTECTED AND MAINTAINED IN A MOISTENED CONDITION FOR A MINIMUM OF SEVEN DAYS OR TREATED WITH A CURING COMPOUND, FREE OF ALL OILS AND PARAFFIN BASE MATERIALS.
4. ALL REINFORCEMENT STEEL SHALL BE INTERMEDIATE GRADE, NEW BILLET STEEL, DEFORMED BAR AND CONFORM TO ASTM A615, GRADE 60.
5. ALL HORIZONTAL REINFORCING BARS SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH INTERSECTIONS. ALL SPLICES SHALL HAVE A MINIMUM LAP OF 40 BAR DIAMETERS. ALL TERMINATING REBAR RUNS SHALL HAVE A FULLY DEVELOPED STANDARD HOOK AT THE TERMINATING END.
6. ALL DETAILING, FABRICATION, AND PLACEMENT OF REINFORCEMENT STEEL SHALL CONFORM TO THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, ACI 315, LATEST EDITION.
7. ALL REINFORCEMENT STEEL SHALL BE TIED AT ADEQUATE INTERVALS WITH 16 GAUGE DOUBLE ANNEALED TIE WIRE.
8. ALL REINFORCEMENT BAR SPLICES SHALL BE BASIC CLASS "B" TENSION LAP SPLICES.

#### DESIGN ASSUMPTIONS PROVIDED BY SOLAR AEROBIC SYSTEMS, LLC:

1. OVERALL DIMENSIONS: 175' L x 77' W x 57.5' H
  2. CONCRETE MIX COMPRESSIVE STRENGTH: 5000 PSI
  3. STEEL REINFORCEMENT: #4 REBAR @ 12" O.C. (MAX SPACING)  
#6 WIRE MESH (MINCHOLS WIRE MESH ASSUMED)
  4. SOIL DENSITY: 100 PCF
  5. MAX BURIAL DEPTH: 6'
- OTHER ASSUMPTIONS:**
1. WATER DENSITY: 62 PCF
  2. CONCRETE DENSITY: 145 PCF
  3. REBAR STRENGTH: 60 KSI (YIELDING)
  4. ALLOWABLE SOIL BEARING PRESSURE: 1500 PSF (ASSUMED)

#### SUMP COMPARTMENT VOLUME GALLONS PER INCH DEPTH

| HEIGHT<br>(in.) | VOLUME<br>(gallons) | HEIGHT<br>(in.) | VOLUME<br>(gallons) |
|-----------------|---------------------|-----------------|---------------------|
| 1               | 18.33               | 22              | 407.9               |
| 2               | 36.64               | 23              | 426.7               |
| 3               | 54.99               | 24              | 445.5               |
| 4               | 73.36               | 25              | 464.4               |
| 5               | 91.76               | 26              | 483.3               |
| 6               | 110.17              | 27              | 502.2               |
| 7               | 128.62              | 28              | 521.1               |
| 8               | 147.08              | 29              | 540.0               |
| 9               | 165.56              | 30              | 559.0               |
| 10              | 184.07              | 31              | 577.9               |
| 11              | 202.6               | 32              | 596.9               |
| 12              | 221.2               | 33              | 616.0               |
| 13              | 239.7               | 34              | 635.0               |
| 14              | 258.3               | 35              | 654.1               |
| 15              | 276.9               | 36              | 673.2               |
| 16              | 295.6               | 37              | 692.3               |
| 17              | 314.3               | 38              | 711.4               |
| 18              | 332.9               | 39              | 730.6               |
| 19              | 351.7               | 40              | 749.8               |
| 20              | 370.4               | 41              | 769.0               |
| 21              | 389.1               | 41.5            | 778.6               |

**FOR APPROVAL**  
 (NOT FOR CONSTRUCTION OR PERMITTING)

NATHAN E. JORDAN  
 TX PE #102944

STATE OF TEXAS  
 JOHN J. HAAG  
 90158  
 LICENSED  
 PROFESSIONAL ENGINEER  
 11/20/19  
 R.E. SEAL FOR TANK  
 TYPE ~~REBAR~~  
 only



# C1 SERIES

## CISTERN PUMPS

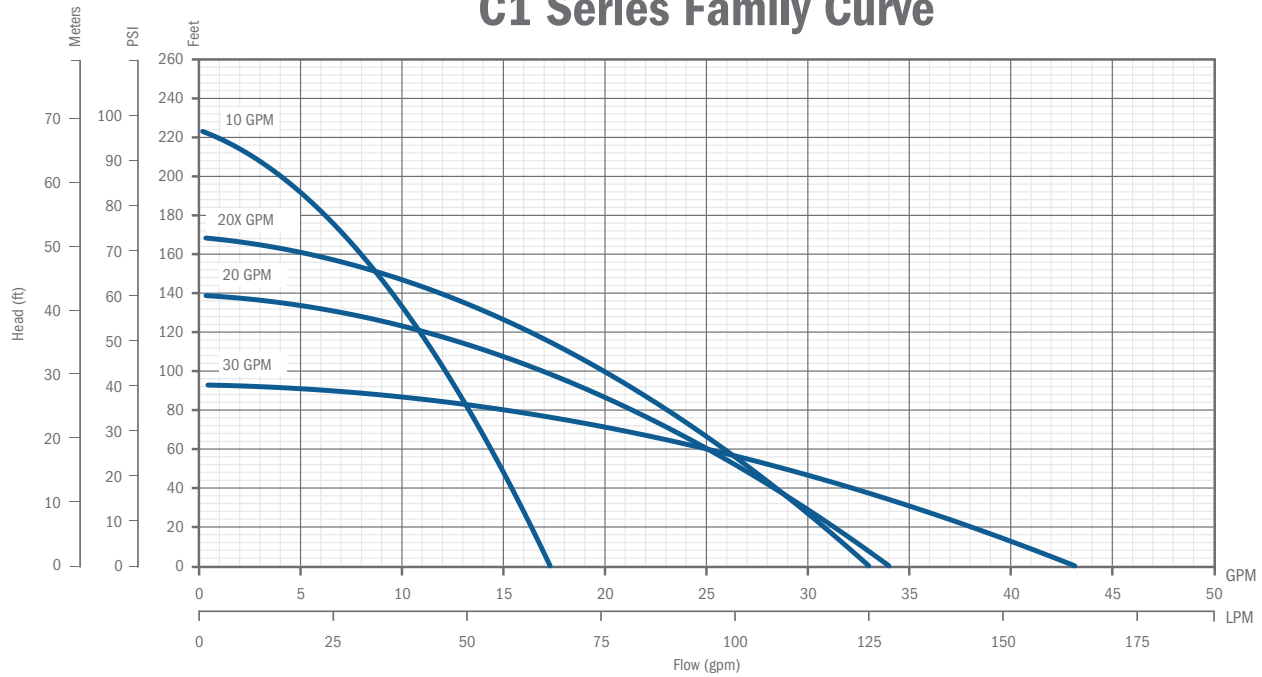
Designed for use in gray water / filtered effluent service applications, the C1 Series cistern pump provides high performance and long life in less than ideal water conditions. The C1 Series pump is able to pass solids up to 1/8" without having a negative effect on the internal hydraulic components.

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





# C1 Series Family Curve



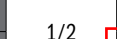
## FEATURES

- Supplied with a removable 5" base for secure and reliable mounting
- Bottom suction design
- Robust thermoplastic discharge head design resists breakage during installation and operation
- Single shell housing design provides a compact unit while ensuring cool and quiet operation
- Hydraulic components molded from high quality engineered thermoplastics
- Optimized hydraulic design allows for increased performance and decreased power usage
- All metal components are made of high grade stainless steel for corrosion resistance
- Available with a high quality 115 V or 230 V, 1/2 hp motor
- Fluid flows of 10, 20, and 30 gpm, with a max shut-off pressure of over 100 psi
- Heavy duty 600 V 10 foot SJ00W jacketed lead

## APPLICATIONS

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

## ORDERING INFORMATION

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

Note: All units have 10 foot long SJ00W leads.



## GENERAL WARRANTY DEED

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



Taxes for the current year have been prorated and are thereafter assumed by Grantee.

TO HAVE AND TO HOLD the above described premises, together with, all and singular, the rights and appurtenances thereto in anywise belonging unto the said Grantee, Grantee's heirs, executors, administrators, successors, or assigns forever.

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

DATED this the <sup>15<sup>th</sup></sup> ~~17~~ day of April, 2025.

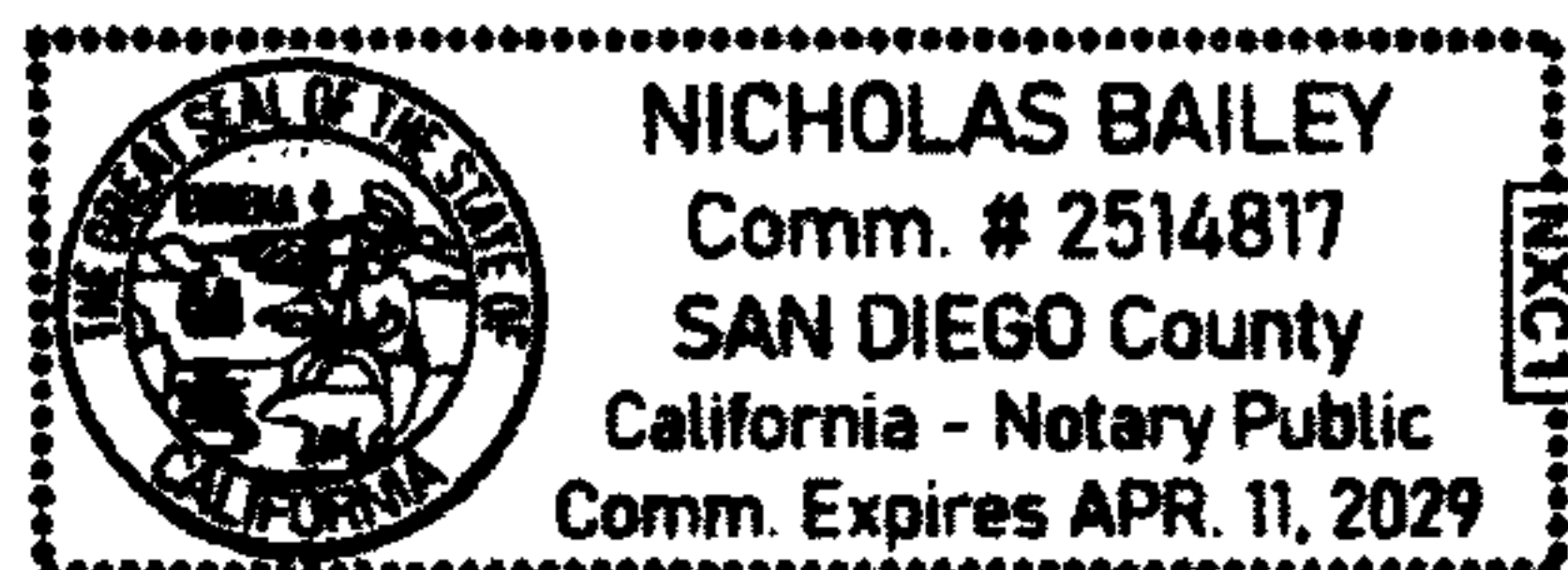
  
\_\_\_\_\_  
TALIA P. WOODS

\_\_\_\_\_  
CARLOUS O. WOODS

STATE OF CALIFORNIA                   §  
COUNTY OF SAN DIEGO               §

This instrument was acknowledged before me on this the 17TH day of April, 2025, by TALIA P. WOODS.

  
\_\_\_\_\_





Taxes for the current year have been prorated and are thereafter assumed by Grantee.

TO HAVE AND TO HOLD the above described premises, together with, all and singular, the rights and appurtenances thereto in anywise belonging unto the said Grantee, Grantee's heirs, executors, administrators, successors, or assigns forever.

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

DATED this the 15 day of April, 2025.

\_\_\_\_\_  
TALIA P. WOODS

Carlo

\_\_\_\_\_  
CARLOUS O. WOODS

04/15/2025

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

§  
§

This instrument was acknowledged before me on this the \_\_\_\_ day of April, 2025, by TALIA P. WOODS.

\_\_\_\_\_

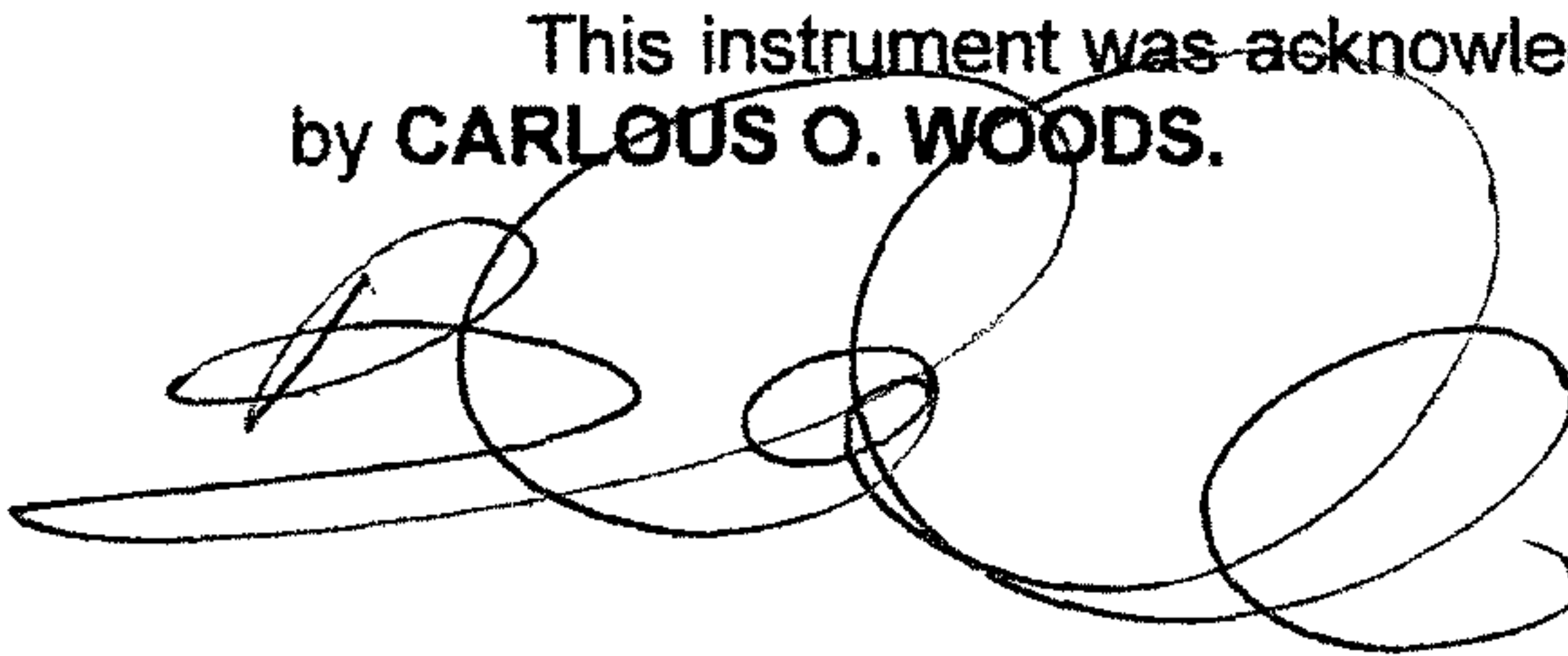


Notary Public, State of Texas

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

§  
§

This instrument was acknowledged before me on this the \_\_\_\_ day of April, 2025,  
by **CARLOUS O. WOODS.**



**SEE ATTACHED CALIFORNIA ACKNOWLEDGEMENT**

\_\_\_\_\_  
Notary Public, State of Texas

GRANTEE'S MAILING ADDRESS:

462 Curvatura  
New Braunfels, TX 78132

3151.deeds  
Old Republic Title (AH)  
GF #16955NB



A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

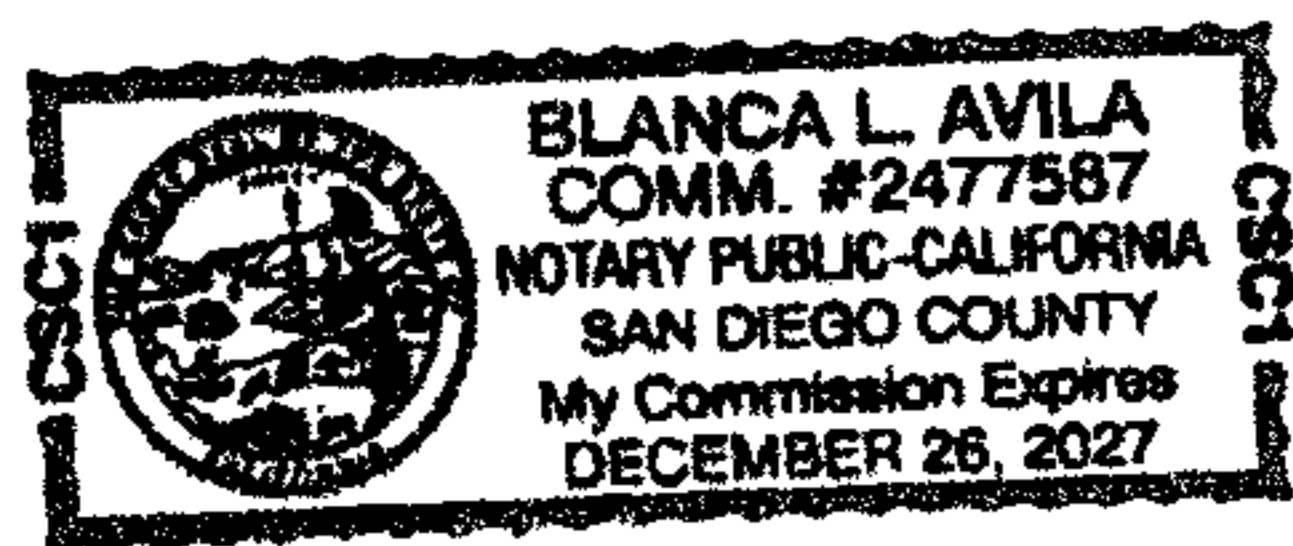
State of California  
County of

San Diego

Subscribed and sworn to (or affirmed) before me on this  
day of April, 2025, by Carlous O. Woods

15<sup>TH</sup>

proved to me on the basis of satisfactory evidence to be the  
person(s) who appeared before me.



(Seal)

Signature

A large, stylized handwritten signature in black ink, appearing to read "Carlous O. Woods".

**Filed and Recorded  
Official Public Records  
Bobbie Koepp, County Clerk  
Comal County, Texas  
04/21/2025 08:33:14 AM  
TERRI 5 Pages(s)  
202506011165**



*Bobbie Koepp*