



# COMAL COUNTY

ENGINEER'S OFFICE

## License to Operate On-Site Sewage Treatment and Disposal Facility

Issued This Date: 09/28/2022 Permit Number: 113268

Location Description: 172 GRANITE RD  
SPRING BRANCH, TX 78070

Subdivision: CYPRESS COVE  
Unit: 9  
Lot: 610  
Block: 0  
Acreage: 0.0000

Type of System: Aerobic  
Drip Irrigation

Issued to: AAID CONSTRUCTION, LLC

This license is authorization for the owner to operate and maintain a private facility at the location described in accordance to the rules and regulations for on-site sewerage facilities of Comal County, Texas, and the Texas Commission on Environmental Quality.

The license grants permission to operate the facility. It does not guarantee successful operation. It is the responsibility of the owner to maintain and operate the facility in a satisfactory manner.

Alterations to this permit including, but not limited to:

- Increase in the square feet of living area
- Increase in the number of bedrooms
- A change of use (i.e. residential to commercial)
- Relocation of system components (including the relocation of spray heads)
- Installation of landscaping
- Adding new structures to the system

may require a new permit. **It is the responsibility of the owner to apply for a new permit, if applicable.**

Inspection and licensing of a facility indicates only that the facility meets certain minimum requirements. It does not impede any governmental entity in taking the proper steps to prevent or control pollution, to abate nuisance, or to protect the public health.

This license to operate is valid for an indefinite period. The holder may transfer it to a succeeding owner, provided the facility has not been remodeled and is functioning properly.

Licensing Authority  
Comal County Environmental Health

OS0037176

ENVIRONMENTAL HEALTH INSPECTOR

ENVIRONMENTAL HEALTH COORDINATOR

OS0007722

# 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  
OSSF Inspection Sheet**

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)				

**Comal County Environmental Health  
OSSF Inspection Sheet**

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  
OSSF Inspection Sheet**

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
32	EFFLUENT DISPOSAL SYSTEM Utilized Only by Single Family Dwelling EFFLUENT DISPOSAL SYSTEM Topographic Slopes < 2.0% EFFLUENT DISPOSAL SYSTEM Adequate Length of Drain Field ( 1000 Linear ft. for 2 bedrooms or Less & an additional 400 ft. for each additional bedroom ) EFFLUENT DISPOSAL SYSTEM Lateral Depth of 18 inches to 3 ft. & Vertical Separation of 1ft on bottom and 2 ft. to restrictive horizon and ground water respectfully EFFLUENT DISPOSAL SYSTEM Lateral Drain Pipe ( 1.25 - 1.5" dia. ) & Pipe Holes ( 3/16 - 1/4" dia. Hole Size ) 5 ft. Apart		285.33(b)(3)(A) 285.33(b)(3)(A) 285.33(b)(3) (B)285.91(13) 285.33(b)(3)(D) 285.33(b)(3)(F)				
33	AEROBIC TREATMENT UNIT Is Aerobic Unit Installed According to Approved Guidelines.		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						

**Comal County Environmental Health  
OSSF Inspection Sheet**

No.	Description	Answer	Citations	Notes	1st Insp.	2nd Insp.	3rd Insp.
40	APPLICATION AREA Distribution Pipe, Fitting, Sprinkler Heads & Valve Covers Color Coded Purple?		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: 113268  
Issued This Date: 09/28/2021  
This permit is hereby given to: AAID CONSTRUCTION, LLC

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

172 GRANITE RD  
SPRING BRANCH, TX 78070

Subdivision: CYPRESS COVE  
Unit: 9  
Lot: 610  
Block: 0  
Acreage: 0.0000

APPROVED MINIMUM SIZES AS PER ATTACHED DESIGN

Type of System: Aerobic  
Drip Irrigation

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

Call (830) 608-2090 to schedule inspections.

**RECEIVED**

By KG at 12:17 pm, Sep 16, 2021



**COMAL COUNTY**  
ENGINEER'S OFFICE

**OSSF DEVELOPMENT APPLICATION  
CHECKLIST**

Staff will complete shaded items

--	--

Date Received

Initials

113268
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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)
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ON-SITE SEWAGE FACILITY APPLICATION

Date August 3, 2021

Permit Number 113268

1. APPLICANT / AGENT INFORMATION

Owner Name AAID CONSTRUCTION LLC
Mailing Address 9330 CORPORATE DRIVE # 103
City, State, Zip SELMA TEXAS 78154
Phone # 210-391-7158
Email cindy@wagner-holak.com

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

2. LOCATION

Subdivision Name CYPRESS COVE Unit SEC 9 Lot 610 Block
Survey Name / Abstract Number Acreage
Address 172 GRANITE ROAD City SPRING BRANCH State TX Zip 78070

3. TYPE OF DEVELOPMENT

[X] Single Family Residential
Type of Construction (House, Mobile, RV, Etc.) HOUSE
Number of Bedrooms 3
Indicate Sq Ft of Living Area 1767

[ ] 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: \$ 200,000 (Structure Only)

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

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

Source of Water [X] Public [ ] Private Well [ ] Rainwater Collection

4. SIGNATURE OF OWNER

By signing this application, I certify that:

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

Signature of Owner

Date 9-16-21

# 113268.

**REVISED**  
8:29 am, Aug 11, 2022

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

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

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

System Description PROPRIETARY; AEROBIC TREATMENT AND DRIP TUBING

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

Tank Size(s) (Gallons) NUWATER B550 PC Absorption/Application Area (Sq Ft) 1924

Gallons Per Day (As Per TCEQ Table III) 240

(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

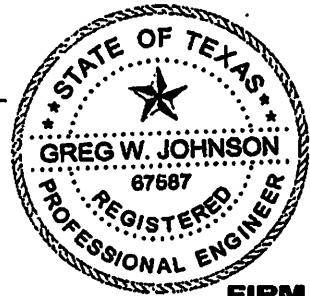
(If yes, the P.E. or R.S. shall certify that the OSSF design complies with all provisions of the existing CZP)

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

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

Is this property within an incorporated city?  Yes  No

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



**FIRM #2585**

By signing this application, I certify that:

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

[Signature]  
Signature of Designer

August 5, 2021  
Date

**AFFIDAVIT**

**THE COUNTY OF COMAL  
STATE OF TEXAS**

**CERTIFICATION OF OSSF REQUIRING MAINTENANCE**

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

**I**

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

**II**

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

9 UNIT/PHASE/SECTION                      BLOCK 610 LOT                      CYPRESS COVE                      SUBDIVISION

IF NOT IN SUBDIVISION:                      ACREAGE                      SURVEY

The property is owned by (insert owner's full name): AAID CONSTRUCTION, LLC,  
a Texas limited liability company

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.

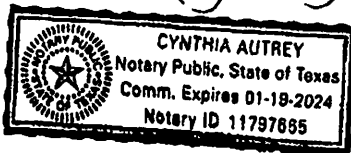
WITNESS BY HAND(S) ON THIS 16 DAY OF September, 20 21

[Signature]  
Owner(s) signature(s)

John Torres AAID Const.  
Owner (s) Printed name (s)

John Torres SWORN TO AND SUBSCRIBED BEFORE ME ON THIS 16 DAY OF  
September, 20 21

[Signature]  
Notary Public Signature



Filed and Recorded  
Official Public Records  
Bobbie Koepf, County Clerk  
Comal County, Texas  
09/16/2021 09:45:20 AM  
CHRISTY 1 Page(s)  
202106048827

 Bobbie Koepf



**Countryside Construction, Inc.**  
**300 Chapman Parkway, Canyon Lake, TX. 78133**  
**Phone: 830-899-2615 or 1-888-379-3721 Fax: 830-899-6662**  
**Septic System Service Agreement**

In consideration of payment for this service contract, we will abide by and agree to its terms and conditions:

Name: AAID CONSTRUCTION, LLC Address: 172 GRANITE ROAD  
Sub-Div./County: CYPRESS COVE / COMAL City, State, Zip Code SPRING BRANCH, TX 78070  
Permit #: \_\_\_\_\_ TYPE, Model# & SIZE: CLEARSTREAM 600NC3T Serial #: \_\_\_\_\_  
Phone: 210-391-7158

( X ) Initial Two Year Service & Two Year Limited Warranty

Legal Description: LOT 610, CYPRESS COVE, SECTION 9 / COMAL COUNTY, TEXAS

The effective date of the initial maintenance contract shall be the date the License to Operate is issued.  
This contract will be in effect FROM: LTO TO: \_\_\_\_\_  
Countryside Construction, Inc. will provide the following:

- An inspection every (4) four months which will include: Servicing of the mechanical & electrical components as necessary to insure system is functioning as engineer designed, pulling and cleaning the Norweco Brand aerator shaft, cleaning compressor air filters of other brands, check chlorine, conduct solids test to determine if system should be pumped, back flushing tubing for drip irrigation fields and checking sprinklers on above ground systems.
- 1) The property owner is responsible for "purchasing and keeping chlorine" in the chlorinator, (if applicable). If the chlorine test reveals "No Chlorine" in the system, the property owner may incur an additional cost.
  - 2) If any improper operation is observed (which cannot be corrected at that time) the property owner will be notified immediately of the conditions and the estimated cost.
  - 3) ANY PARTS, WARRANTY OR NON-WARRANTY, FREIGHT CHARGES, LABOR OR SERVICE CALLS NOT PAID IN FULL AT THE END OF (30) DAYS SHALL REMAIN THE PROPERTY OF COUNTRYSIDE CONSTRUCTION AND AUTHORIZES CONTRACTOR TO REMOVE AND REPOSSESS ANY PARTS INSTALLED. CLIENT FURTHER AGREES TO PAY ANY LABOR COST OF THE INSTALLATION AND REASONABLE COST OF REMOVAL OF SAID PARTS.
  - 4) THE SIGNING OF THIS SERVICE AGREEMENT AUTHORIZES COUNTRYSIDE CONSTRUCTION TO ENTER THE PROPERTY TO EXECUTE ALL TERMS OF THIS CONTRACT.

Countryside Construction, Inc., will warranty installation of the septic system to be according to state and county regulations and the designs approved by the county. HOMEOWNER WILL BE RESPONSIBLE FOR SERVICE CALLS, LABOR AND SHIPPING COSTS ON ANY "WARRANTIED PARTS" EXCHANGED DURING WARRANTY. All other components will be according to manufacturer's warranties.

**Important:** As Countryside Construction, Inc. cannot control what or how much effluent goes into this septic system, we cannot warranty how the system will function. Refer to manufacturers or installer's instructions, for suggestions on septic operation. If necessary, between inspections, it is the property owner's responsibility to clean the micron filters on drip irrigation systems. This service agreement does not cover the cost of "service calls, labor or materials that are required or parts out of warranty, the failure to maintain electrical power to the system, sprinklers that are broken, leaking, stopped-up or otherwise mal-functioning; or sewage flows exceeding the hydraulic/organic design capabilities and the input of non-biodegradable materials (solvents, grease, oil, paints, etc.), or any usage contrary to the requirements as advised by authorized service representative. Laboratory test work is available at an additional cost. Chlorine, filters, or parts that are out of warranty are available at a reasonable cost.

This contract does not include the pumping of a tank or of any compartment of a tank, or settlement of soil on or around any part of the system regardless of reason:

Violations of the warranty also include: disconnecting the alarm, restricting ventilation to the aerator, overloading the system above its rated capacity; or flooding by external means. Rodent, insect or fire ant damage or any other form of unusual abuse is a violation. A renewal service contract should be "activated" (30) thirty days before expiration of existing contract. We will contact property owner prior to expiration of existing contract.

Served by: *Countryside Construction Inc.*  
Walker Chapman – Installer's Licensee #OS0002929-OSSF Maintenance Provider Licensee #MP0000035

(X) [Signature] Print Name (X) John Torres Date: 9-16-21  
Property Owner Signature

(X) Walker Chapman Date: 9/16/2021 Authorized Service Representative (revised 08/13/2020)  
AAID Const.

**ON-SITE SEWERAGE FACILITY  
SOIL EVALUATION REPORT INFORMATION**

Date Soil Survey Performed: August 04, 2021

Site Location: CYPRESS COVE, SECTION 9, LOT 610

Proposed Excavation Depth: N/A

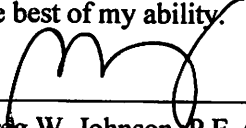
**Requirements:**

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

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

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

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

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

08/04/2021  
Date



**DRIP TUBING SYSTEM**  
DESIGNED FOR:  
AAID CONSTRUCTION, LLC  
9330 CORPORATE DRIVE, #103  
SELMA, TX 78154

**SITE DESCRIPTION:**

Located in a Replat & Extension of Cypress Cove, Section 9, Lot 610 at 172 Granite Road, the proposed system will serve a three bedroom residence (1767sf.) situated in an area with shallow Type-III soil as described in the Soil Evaluation Report. An aerobic treatment plant utilizing drip irrigation was chosen as the most appropriate system to serve the conditions on this lot.

**PROPOSED SYSTEM:**

A 3-inch SCH-40 pipe discharges from the residence into a NuWater B550-400PT 600 gpd aerobic plant containing a 353-gallon pretreatment tank, an aerobic treatment plant, and a 768-gallon pump chamber containing a submersible (Franklin C1 20XC1-05P4-W115 ) well pump. The well pump is activated by a time controller allowing the distribution ten times per day with an 8 minute run time with float setting at 240 gallons. A high level audible and visual alarm will activate should the pump fail. Distribution is through a self flushing 100 micron disc filter (Arkal) then through a 1" SCH-40 manifold to a 1924 sf. drip tubing field, with *Netifim Bioline* drip lines set approximately two feet apart with **0.61 gph** emitters set every two feet, as per the attached schematic. A pressure regulator PMR-MF 30psi installed in the pump tank on the manifold to the field will maintain pressure at 30 psi. A 1" SCH-40 return line is installed to periodically flush the system by cycling a 1" ball valve. Solids caught in the disk filter are flushed each cycle back to the trash tank. Vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher to lower parts of the field. Field area will be scarified and built up with 8" of Type II or Type III soil, then the drip tubing will be laid and capped with 6" of Type II or Type III soil (**NOT SAND**). **A minimum of 12" of soil is required between drip tubing and tank or rock.** The field area will be sodded with grass prior to system startup. **Tank must have at grade risers on each opening with watertight caps that must be at least 65# or have a padlock or can only be removed with tools. A secondary plug, cap, or suitable restraint must be provided below riser cap to prevent tank entry should the cap be damaged or removed, in compliance with Chapter §285.38.**

**DESIGN SPECIFICATIONS:**

Daily waste flow: 240 GPD Table III

Pretreatment tank size: 353 Gal

Plant Size: NuWater B550-400PT 600gpd (TCEQ Approved)



**REVISED**

8:30 am, Aug 11, 2022

Pump tank size: 768 Gal Reserve capacity after High Level: 80 Gal (1/3 day Req'd)  
Application Rate: Ra = 0.2 gal/sf  
Total absorption area: Q/Ra = 240 GPD/0.20 = 1200 sf. (Actual 1924sf.)  
Total linear feet drip tubing: 962' *Netifim Bioline* drip tubing .61 GPH  
Pump requirement: 481 emitters @ .61 gph @ 30 psi = 4.89 gpm  
Pump Requirement (cont.): (Franklin C1 20XC1-05P4-W115 )  
Dosing volume: 50-70 gal.

Pump Tank Calculations: 768 Gal (14.5 gal/in.)  
Volume below working level = 15" = 218 gal  
Working level = 240 gal = 17"  
Reserve Requirement = 1/3 day = 80 gal. = 6"

MINIMUM SCOUR VELOCITY (MSV) > 2 FPS  
IN DRIP TUBING W/ NOM. DIA. 0.55" ID

MSV = 2 FPS  $(\pi d^2/4) * 7.48 \text{ gal/cf} * 60 \text{ sec/min}$   
MSV =  $2(3.14159((.55/12)^2)/4) * 7.48 * 60$   
MSV = 1.5 gpm MIN FLOW RATE x 3 = 4.5 gpm

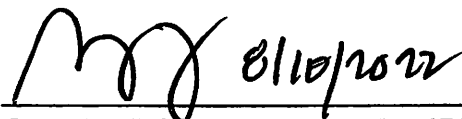
IN RETURN MANIFOLD W/ NOM. DIA 1.049" ID

MSV = 2 FPS  $(\pi d^2/4) * 7.48 \text{ gal/cf} * 60 \text{ sec/min}$   
MSV =  $2(3.14159((1.049/12)^2)/4) * 7.48 * 60$   
MSV = 5.4 GPM

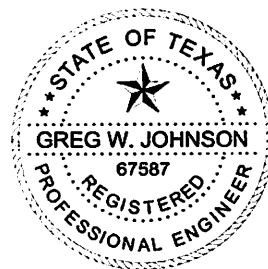
**PIPE AND FITTINGS:**

All pipes and fittings in this drip tubing system shall be 1" schedule 40 PVC. All joints shall be sealed with approved solvent-type PVC cement. Clipper type cutters are recommended to prevent PVC burrs during cutting of pipes causing possible plugging. Drip tubing 0.61 gph drip tubing to be used in field.

Designed in accordance with Chapter 285, Subchapter D, §285.30 and §285.40 Texas Commission on Environmental Quality (Effective December 29, 2016)



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



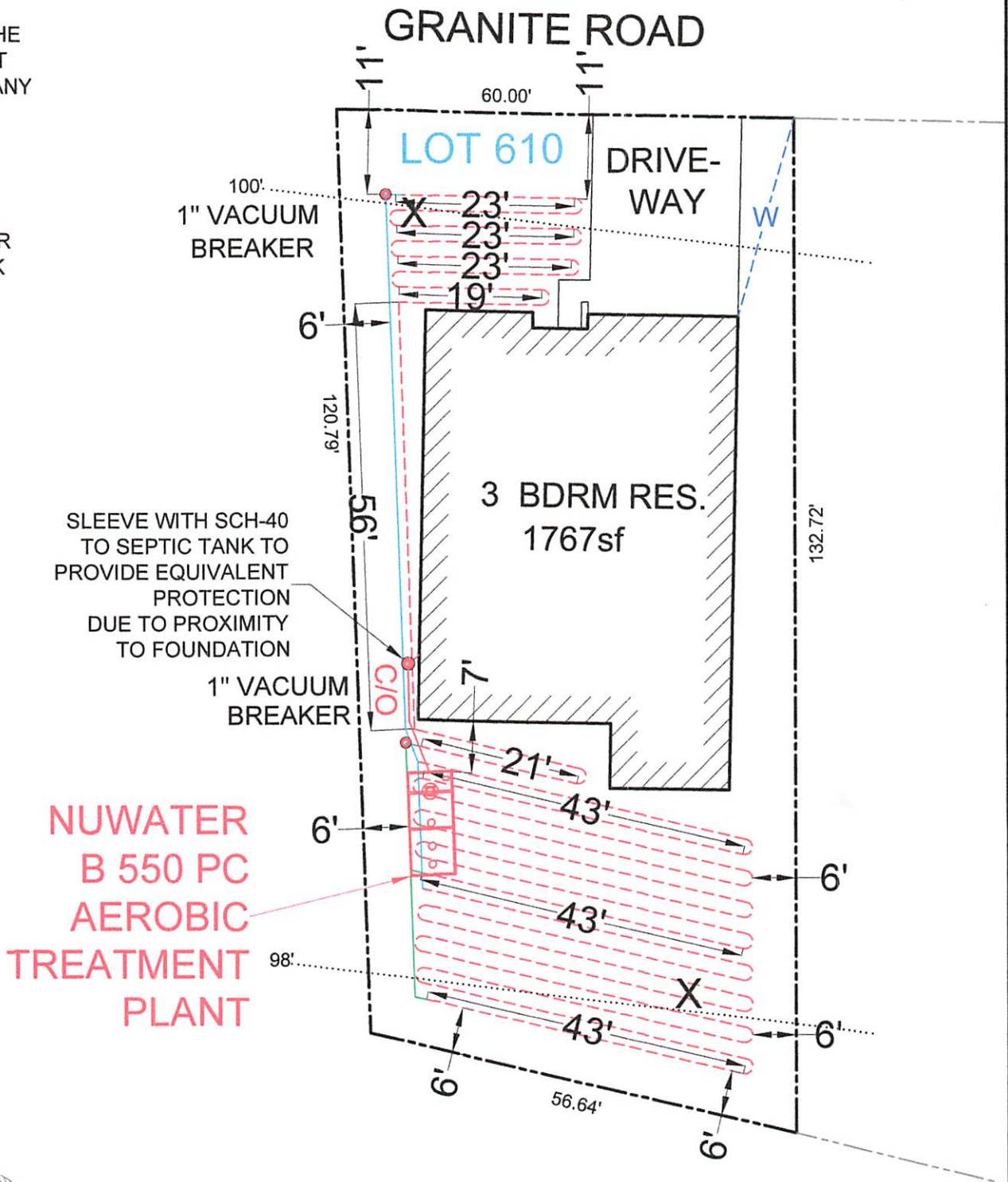


INSTALL 1924sf OF FIELD USING 962' OF DRIP TUBING. THERE SHALL BE NO PARKING, DRIVING OR STORAGE ON THE SEPTIC FIELD AT ANY TIME FOR ANY REASON.

\*USE TWO WAY CLEANOUT  
 \*\*USE SCH-40 OR SDR-26 TO TANK

X= TEST HOLE

**REVISED**  
 8:30 am, Aug 11, 2022



SLEEVE WITH SCH-40 TO SEPTIC TANK TO PROVIDE EQUIVALENT PROTECTION DUE TO PROXIMITY TO FOUNDATION

NUWATER  
 B 550 PC  
 AEROBIC  
 TREATMENT  
 PLANT



OWNER: AAID CONSTRUCTION, LLC.		DRAWN BY: EJS III		
STREET ADDRESS: 172 GRANITE ROAD				
LEGAL DESC: CYPRESS COVE	UNIT/SECTION/PHASE: 9	BLOCK:	LOT: 610	
PREPARED BY: GREG W. JOHNSON, P.E. F#002585	SCALE: 1"=20'	DATE: 8/5/2021	REVISED: 8/8/2022	

# Assembly Details

OSSF

**REVISED**

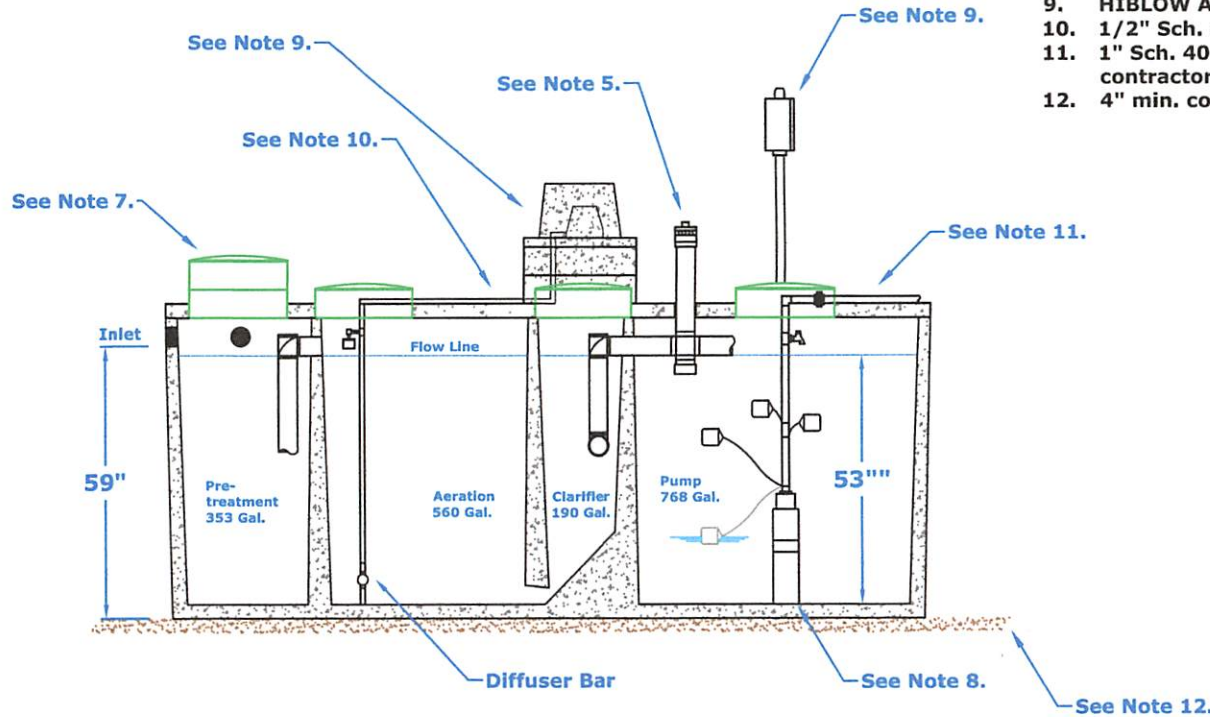
8:13 am, Aug 10, 2022



*Handwritten:* 67587  
08/19/2022

**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

**REVISED**

8:13 am, Aug 10, 2022

**TANK NOTES:**

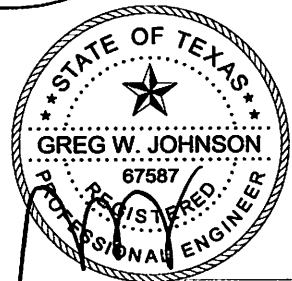
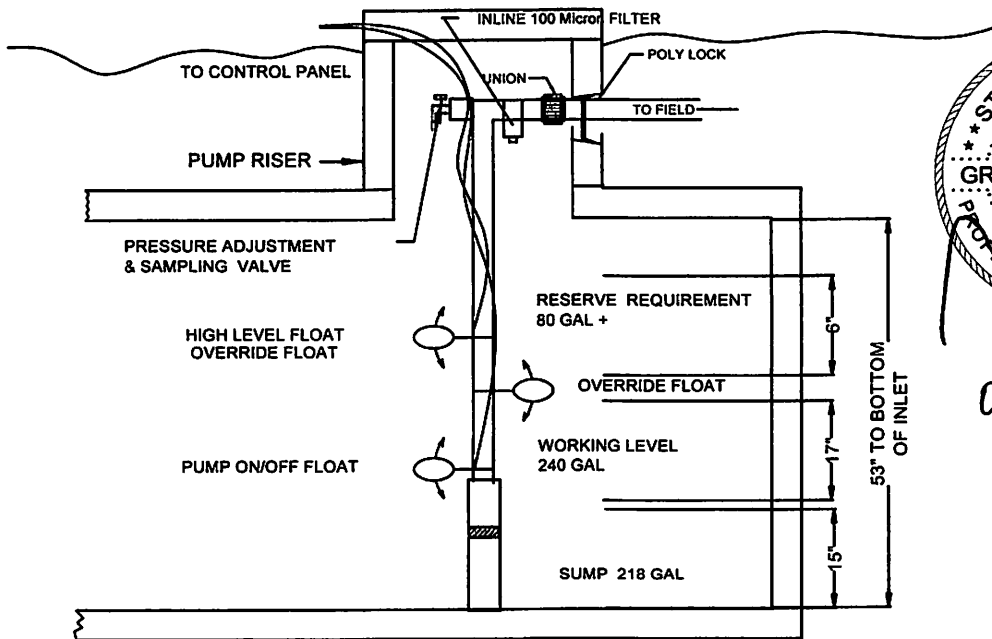
Tanks must be set to allow a minimum of 1/8" per foot fall from the residence.

Tightlines to the tank shall be SCH-40 PVC.

A two way sanitary tee is required between residence and tank.

A minimum of 4" of sand, sandy loam, clay loam free of rock shall be placed under and around tanks

ALL WIRING MUST BE IN COMPLIANCE WITH THE MOST RECENT NATIONAL ELECTRIC CODE



F-2585  
08/09/2022

**TYPICAL PUMP TANK CONFIGURATION  
NU-WATER 550PC -400PT 768 GAL PUMP TANK**



# Arkal 1" Super Filter

Catalog No. 1102 0 \_ \_ \_

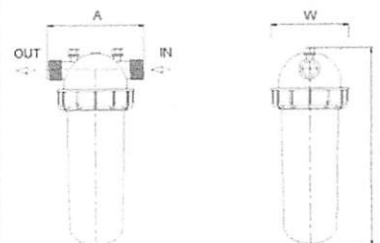
## Features

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



## Technical Data

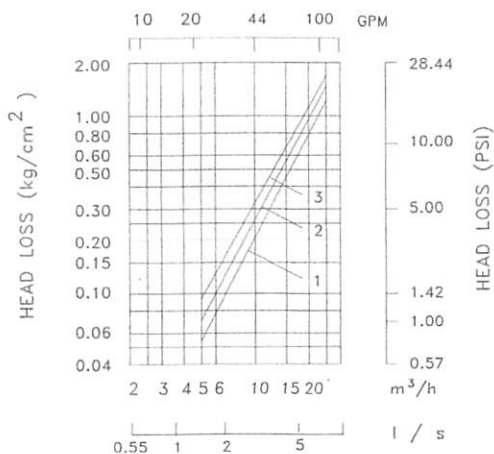
Inlet/outlet diameter	1" BSPT (male)	1" NPT (male)
	25.0 mm – nominal diameter	
	33.6 mm – pipe diameter (O. D.)	
Maximum pressure	10 atm	145 psi
Maximum flow rate	8 m <sup>3</sup> /h (1.7 l/sec)	35 gpm
General filtration area	500 cm <sup>2</sup>	77.5 in <sup>2</sup>
Filtration volume	600 cm <sup>3</sup>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



## Filtration Grades

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

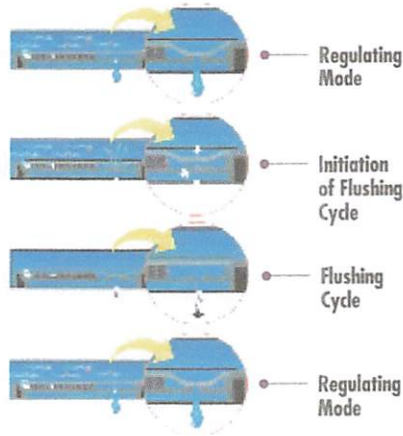
## Head Loss Chart





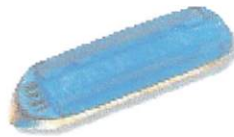
# BioLine® Dripperline

## Pressure Compensating Dripperline for Wastewater



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

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



### Product Advantages

#### The Proven Performer

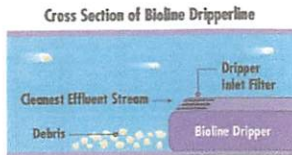
- Tens of millions of feet used in wastewater today.
- BioLine is permitted in every state allowing drip disposal.
- Backed by the largest, most quality-driven manufacturer of drip products in the U.S.
- Preferred choice of major wastewater designers and regulators.
- Proven track record of success for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

#### Quality Manufacturing with Specifications Designed to Meet Your Needs

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

#### Long-Term Reliability

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



#### Root Safe

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



### Applications

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

### Specifications

Wall thickness (mil): 45\*

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

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

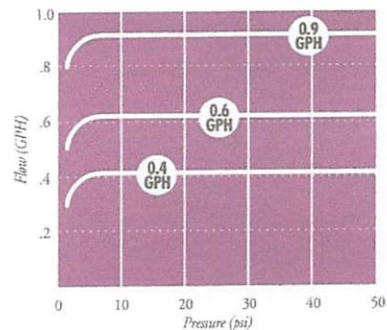
Recommended filtration: 120 mesh

Inside diameter: .570\*

Color: Purple tubing indicates non-potable source

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

### BIOLINE Flow Rate vs. Pressure



**NETAFIM USA**  
 5470 E. Home Ave. • Fresno, CA 93727  
 888.638.2346 • 559.453.6800  
 FAX 800.695.4753  
[www.netafimusa.com](http://www.netafimusa.com)

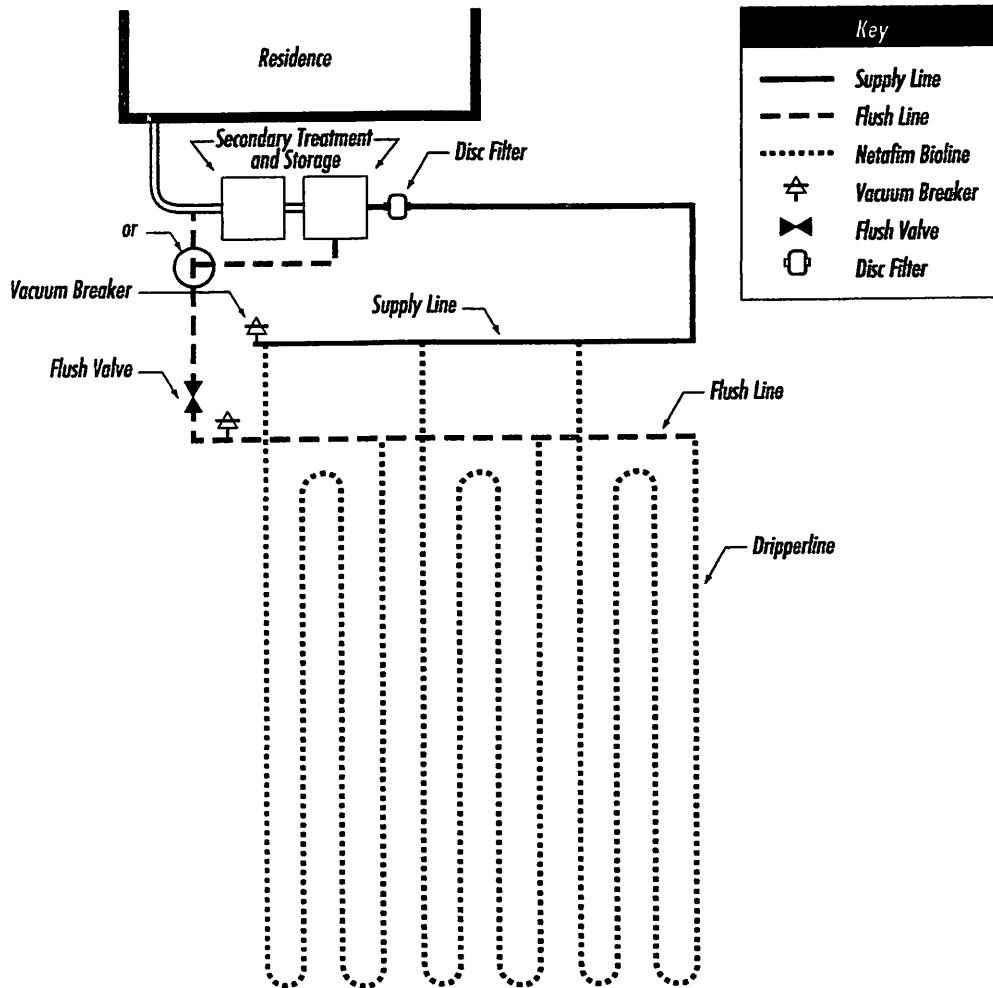
# NETAFIM WASTEWATER DISPERSAL SYSTEM DESIGN GUIDE

## SAMPLE DESIGNS

### SINGLE TRENCH LAYOUT

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

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



ORIG/GR 11602 / Close AHA / NB

**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.**

**GENERAL WARRANTY DEED**

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

THAT BES STRATEGIC INVESTMENTS, LLC, a Texas limited liability company hereinafter called Grantor, for and in consideration of the sum of TEN AND NO/100 DOLLARS (\$10.00) cash and other good and valuable consideration in hand paid by AAID CONSTRUCTION, LLC, a Texas limited liability company, hereinafter called Grantee, the receipt and sufficiency of which is hereby acknowledged;

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

Lot 610 of CYPRESS COVE SECTION NINE, a subdivision in Comal County, Texas according to the plat recorded in Volume 2, Page 66 of the Map and Plat Records of Comal County, Texas;

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 25<sup>th</sup> day of June, 2021.

BES STRATEGIC INVESTMENTS, LLC, a Texas limited liability company

BY: [Signature]  
ERIK SAENGERHAUSEN, Member

STATE OF TEXAS  
COUNTY OF Comal

§  
§

This instrument was acknowledged before me on the 25 day of June, 2021, by ERIK SAENGERHAUSEN, Member of BES STRATEGIC INVESTMENTS, LLC, a Texas limited liability company.



[Signature]  
Notary Public in and for the State of Texas

Grantee's Mailing Address:

1975 Inocriato  
New Braunfels, TX 78132

1215.deeds:  
Old Republic Title Co. (AH)  
GF #11602nb

Filed and Recorded  
Official Public Records  
Bobbie Koepf, County Clerk  
Comal County, Texas  
06/30/2021 03:20:43 PM  
NANCY 2 Pages(s)  
202106035215

 Bobbie Koepf



**From:** Magley, Wesley  
**To:** ["cindy@wagner-holak.com"](mailto:cindy@wagner-holak.com)  
**Cc:** ["Greg Johnson"](#)  
**Subject:** 113268 Deficiency  
**Date:** Monday, September 27, 2021 9:52:00 AM  
**Attachments:** [image001.png](#)

---

RE: 172 Granite Rd, Cypress Cove, Section 9, Lot 610

Property Owner & Agent,

We received planning materials for the referenced permit application on 9/16/21 and found those planning materials to be deficient. In order to continue processing this permit, we need the following:

- ✓ 1. Show the location of the septic line from the structure to the tank including the location of the cleanout.
2. Revise accordingly and resubmit.

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

Thank you,



**Wesley A. Magley**

Health Inspector

DR # OS0035625

195 David Jonas Dr.

New Braunfels, TX 78132

830-608-2090

830-643-3770

[maglew@co.comal.tx.us](mailto:maglew@co.comal.tx.us)

INSTALL 1774sf OF FIELD USING 887' OF DRIP TUBING. THERE SHALL BE NO PARKING, DRIVING OR STORAGE ON THE SEPTIC FIELD AT ANY TIME FOR ANY REASON.

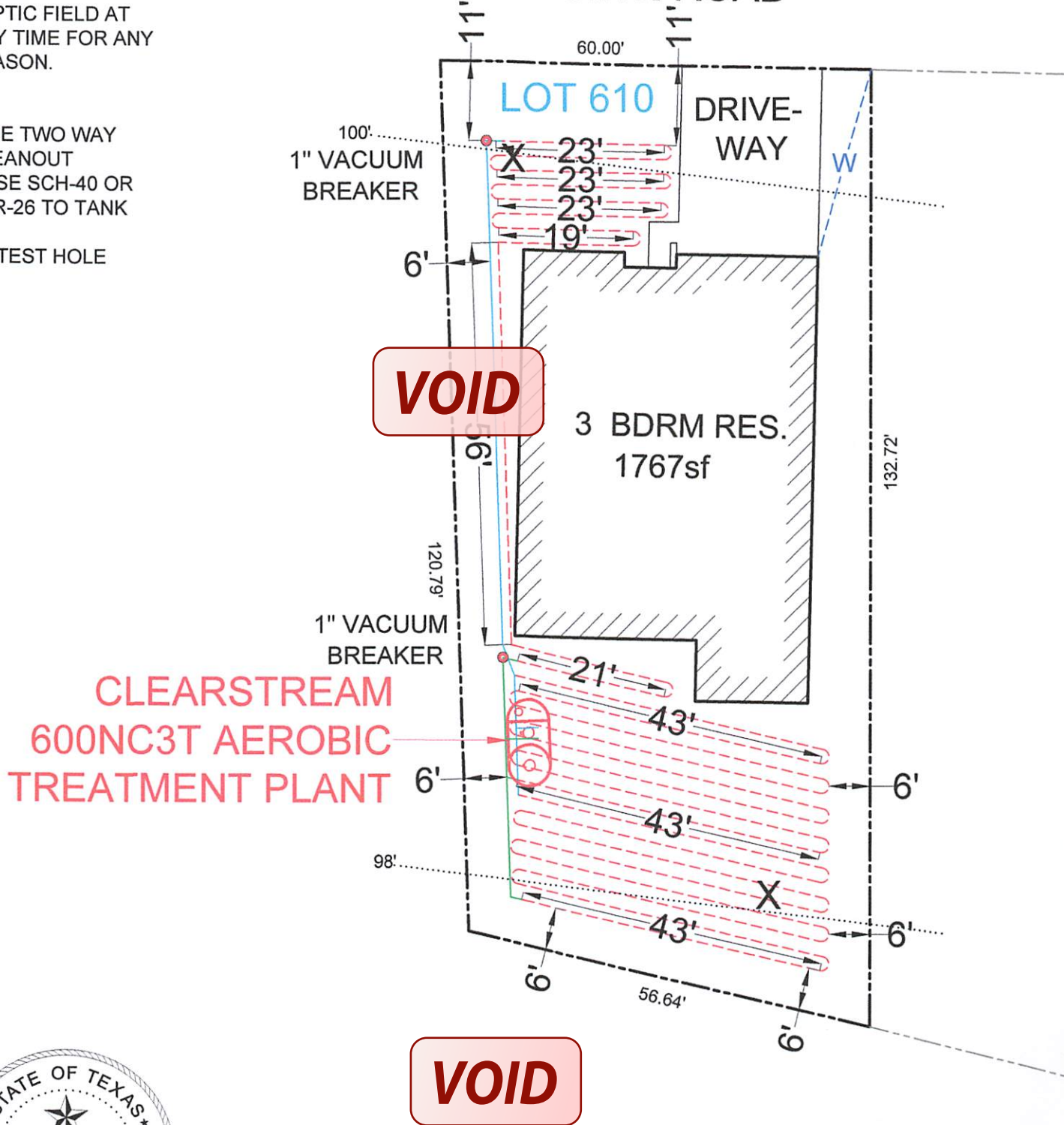
\*USE TWO WAY CLEANOUT  
 \*\*USE SCH-40 OR SDR-26 TO TANK

X= TEST HOLE

**VOID**



GRANITE ROAD



**VOID**

**VOID**



OWNER: AAID CONSTRUCTION, LLC.		DRAWN BY: EJS III	
STREET ADDRESS: 172 GRANITE ROAD			
LEGAL DESC: CYPRESS COVE	UNIT/SECTION/PHASE: 9	BLOCK: 9	LOT: 610
PREPARED BY: GREG W. JOHNSON, P.E. F#002585	SCALE: 1"=20'	DATE: 8/5/2021	REVISED:

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

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

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

System Description PROPRIETARY; AEROBIC TREATMENT AND DRIP TUBING

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

Tank Size(s) (Gallons) CLEARSTREAM 600NC3T Absorption/Application Area (Sq Ft) 1774

Gallons Per Day (GPD) (Maximum)

(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 CZP for the property?

(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 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 the property located over the Edwards Contributing Zone? Yes No

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

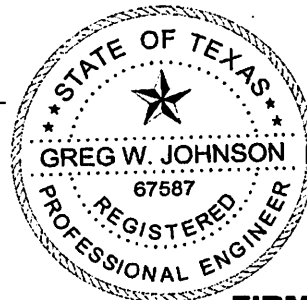
(if yes, the R.S. or P.E. shall certify that the OSSF design complies with all provisions of the existing CZP)

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

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

Is this property within an incorporated city? Yes No

If yes, indicate the city:



FIRM #2585

By signing this application, I certify that:

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

Signature of Designer

Date August 5, 2021

**DRIP TUBING SYSTEM**  
**DESIGNED FOR:**  
**AAID CONSTRUCTION, LLC**  
**9330 CORPORATE DRIVE, #103**  
**SELMA, TX 78154**

**SITE DESCRIPTION:**

Located in a Replat & Extension of Cypress Cove, Section 9, Lot 610 at 172 Granite Road, the proposed system will serve a three bedroom residence (1767sf.) situated in an area with shallow Type-III soil as described in the Soil Evaluation Report. An aerobic treatment plant utilizing drip irrigation was chosen as the most appropriate system to serve the conditions on this lot.

**PROPOSED SYSTEM:**

A 3-inch SCH-40 pipe discharges from the residence into Clearstream NC3T 600 gpd aerobic plant containing a 400-gallon pretreatment tank, an aerobic treatment plant, and a 700-gallon pump chamber containing a submersible (0.5 HP Clearstream P-20 or equivalent) well pump. The well pump activates a time controller which cycles the distribution ten times per day with an 8 minute on time. A float switch is installed in the tank to provide an audible and visual alarm. All air lines should be purged prior to distribution through a self-flushing 100 micron coarse filter (1/2" NPT) then through a 1/2" SCH-40 manifold to the 1767 sf. drip tubing field, with *North Bid* drip lines spaced approximately 10 feet apart with *0.61 gph* emitters set every 12 feet, as shown on the attached sheets. A pressure regulator or PMR-MF 30psi installed on the pump tank will be maintained to the field at a constant pressure of 30 psi. A 1" SCH-40 line is installed to periodically flush the system by cycling a 1" ball valve. Solids caught in the spin filter are flushed each cycle back to the trash tank. Vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher to lower parts of the field. Field area will be scarified and built up with 8" of Type II or Type III soil, then the drip tubing will be laid and capped with 6" of Type II or Type III soil (**NOT SAND**). **A minimum of 12" of soil is required between drip tubing and tank or rock.** The field area will be sodded with grass prior to system startup. **Tank must have at grade risers on each opening with watertight caps that must be at least 65# or have a padlock or can only be removed with tools. A secondary plug, cap, or suitable restraint must be provided below riser cap to prevent tank entry should the cap be damaged or removed, in compliance with Chapter §285.38.**

**DESIGN SPECIFICATIONS:**

Daily waste flow: 240 GPD Table III  
Pretreatment tank size: 428Gal  
Plant Size: Clearstream NC3T 600gpd (TCEQ Approved)

Pump tank size: 700 Gal  
Reserve capacity after High Level: 80 Gal (1/3 day Req'd)  
Application Rate: Ra = 0.2 gal/sf  
Total absorption area:  $Q/Ra = 240 \text{ GPD}/0.20 = 1200 \text{ sf}$ . (Actual 1774sf.)  
Total linear feet drip tubing: 887' *Netifim Bioline* drip tubing .61 GPH  
Pump requirement: 444 emitters @ .61 gph @ 30 psi = 4.509 gpm  
Pump Requirement (cont.): (0.5 HP Clearstream P-20 pump or equiv.)  
Dosing volume: 50-70 gal.

Pump Tank Calculations: 700 Gal (14.5 gal/in.)  
Volume below working level = 15" = 148 gal  
Working level = 240 gal = 20"  
Reserve Requirement = 1/3 day = 80 gal. = 6.5"

MINIMUM SCOUR VELOCITY (MSV) > 2 FPS

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

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

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

$MSV = 5.1 \text{ FPS}$  (gpm MIN FLOW PUMP = 4.5 gpm)

IN RETURN MANIFOLD W/ NOM. DIA 1.0" ID

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

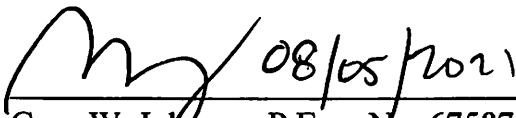
$MSV = 2(3.14159(1.049/12)^2)/4 * 7.48 * 60$

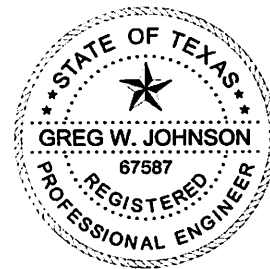
$MSV = 5.1 \text{ FPS}$

### PIPE AND FITTINGS:

All pipes and fittings in this drip tubing system shall be 1" schedule 40 PVC. All joints shall be sealed with approved solvent-type PVC cement. Clipper type cutters are recommended to prevent PVC burrs during cutting of pipes causing possible plugging. Drip tubing 0.61 gph drip tubing to be used in field.

Designed in accordance with Chapter 285, Subchapter D, §285.30 and §285.40 Texas Commission on Environmental Quality (Effective December 29, 2016)

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





**REVISED**

12:30 pm, Sep 28, 2021

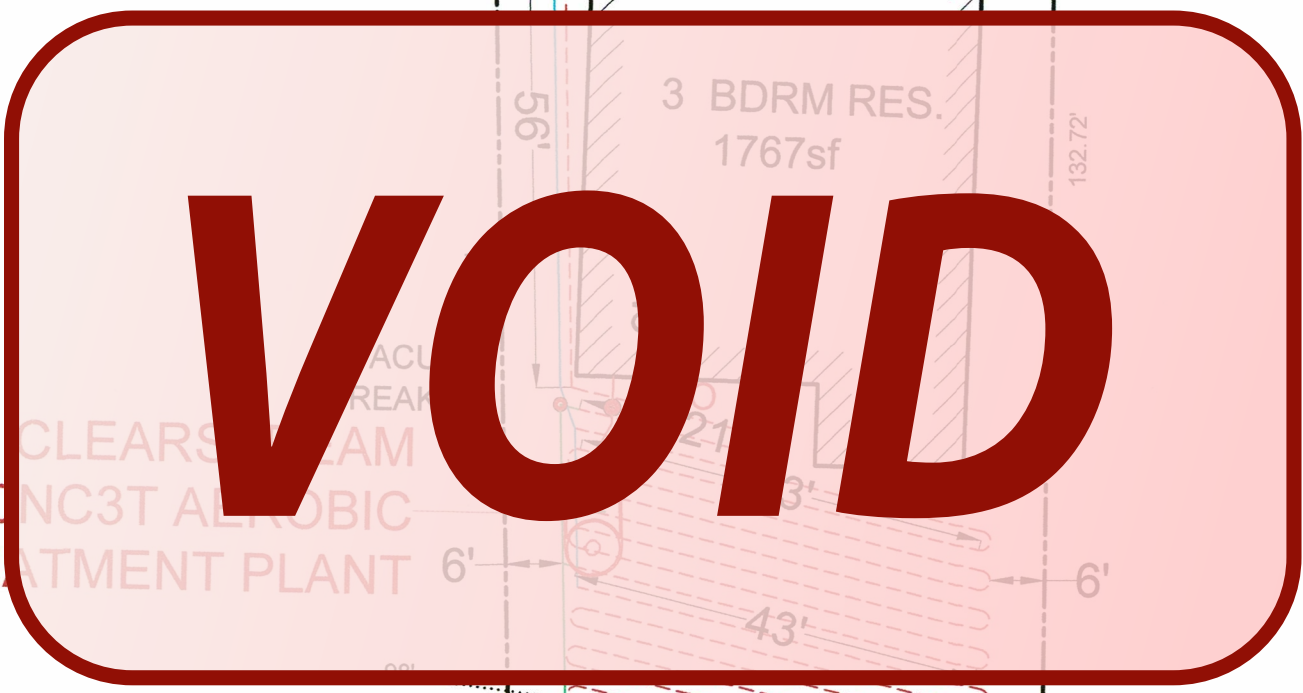
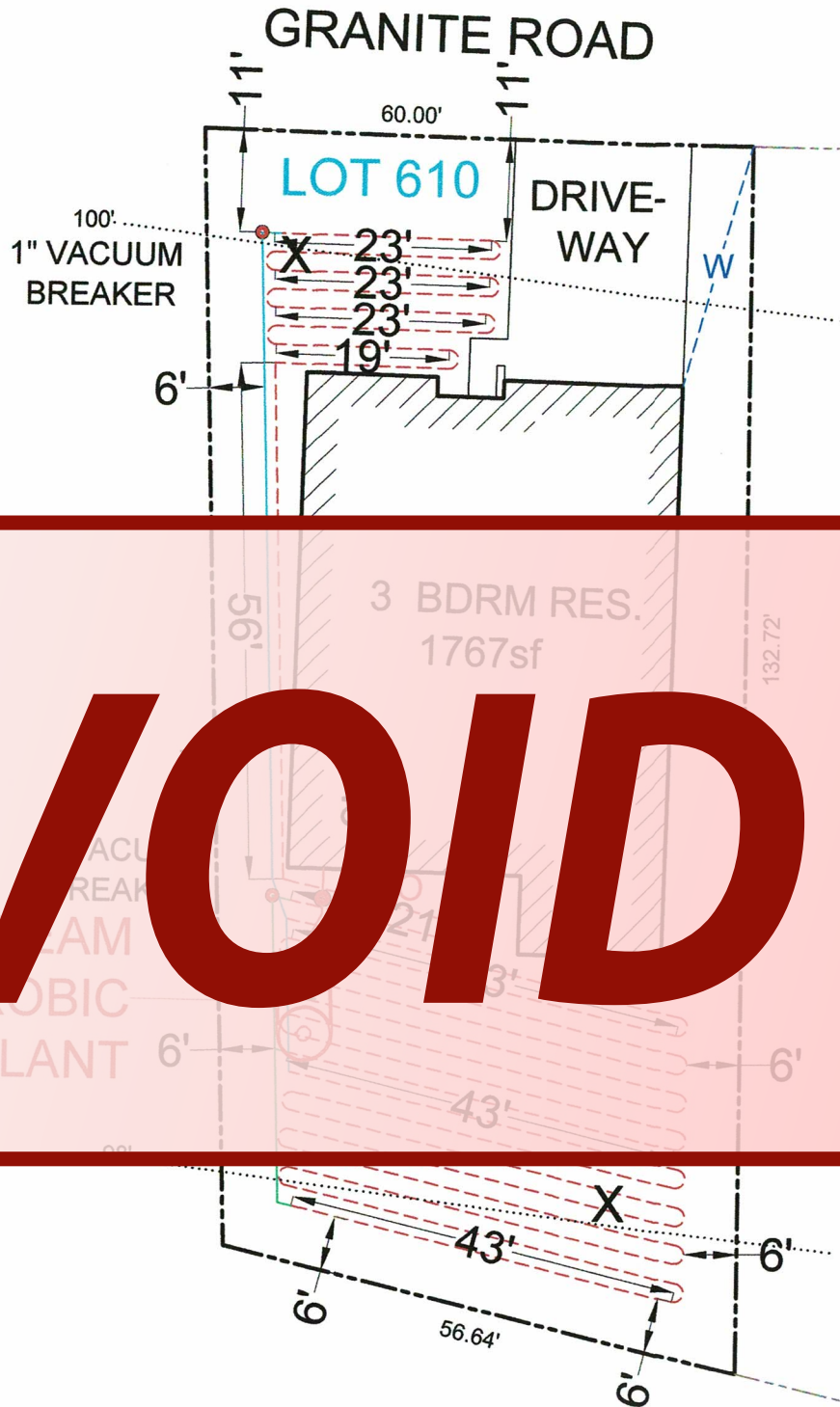
#113268



THERE SHALL BE NO PARKING, DRIVING OR STORAGE ON THE SEPTIC FIELD AT ANY TIME FOR ANY REASON.

\*USE TWO WAY CLEANOUT  
\*\*USE SCH-40 OR SDR-26 TO TANK

X= TEST HOLE



OWNER: AAID CONSTRUCTION, LLC.		DRAWN BY: EJS III	
STREET ADDRESS: 172 GRANITE ROAD			
LEGAL DESC: CYPRESS COVE	UNIT/SECTION/PHASE: 9	BLOCK:	LOT: 610
PREPARED BY: GREG W. JOHNSON, P.E. F#002585	SCALE: 1"=20'	DATE: 8/5/2021	REVISED:

**TANK NOTES:**

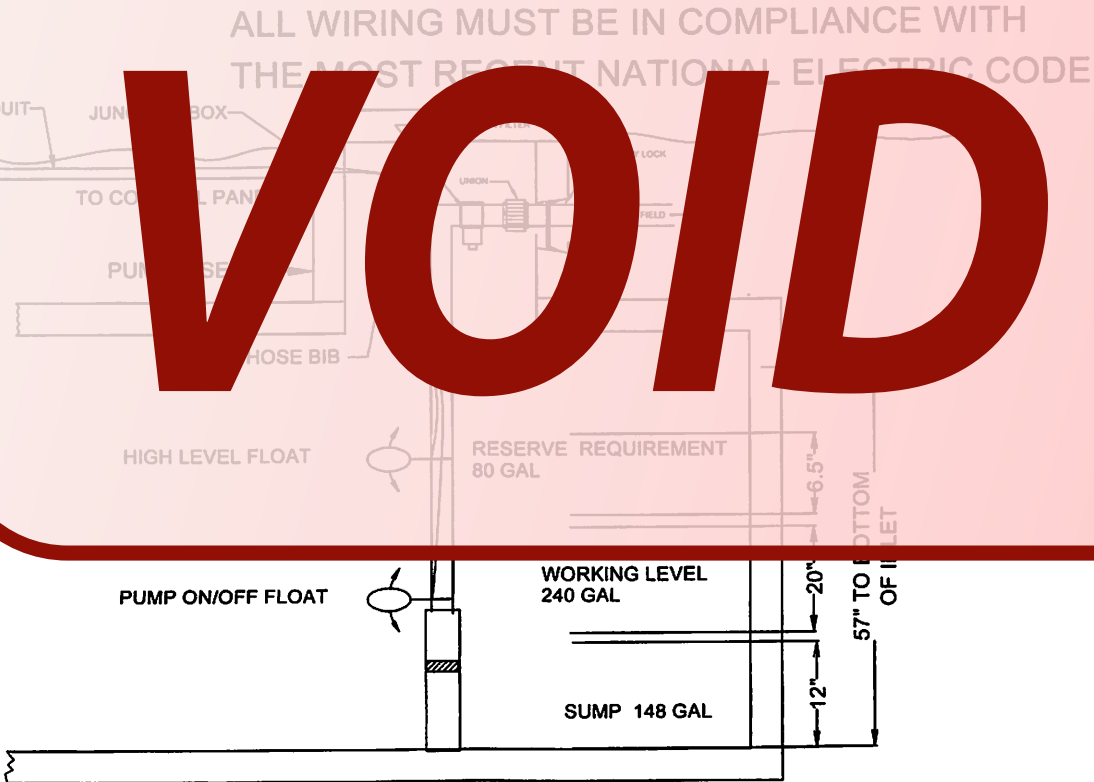
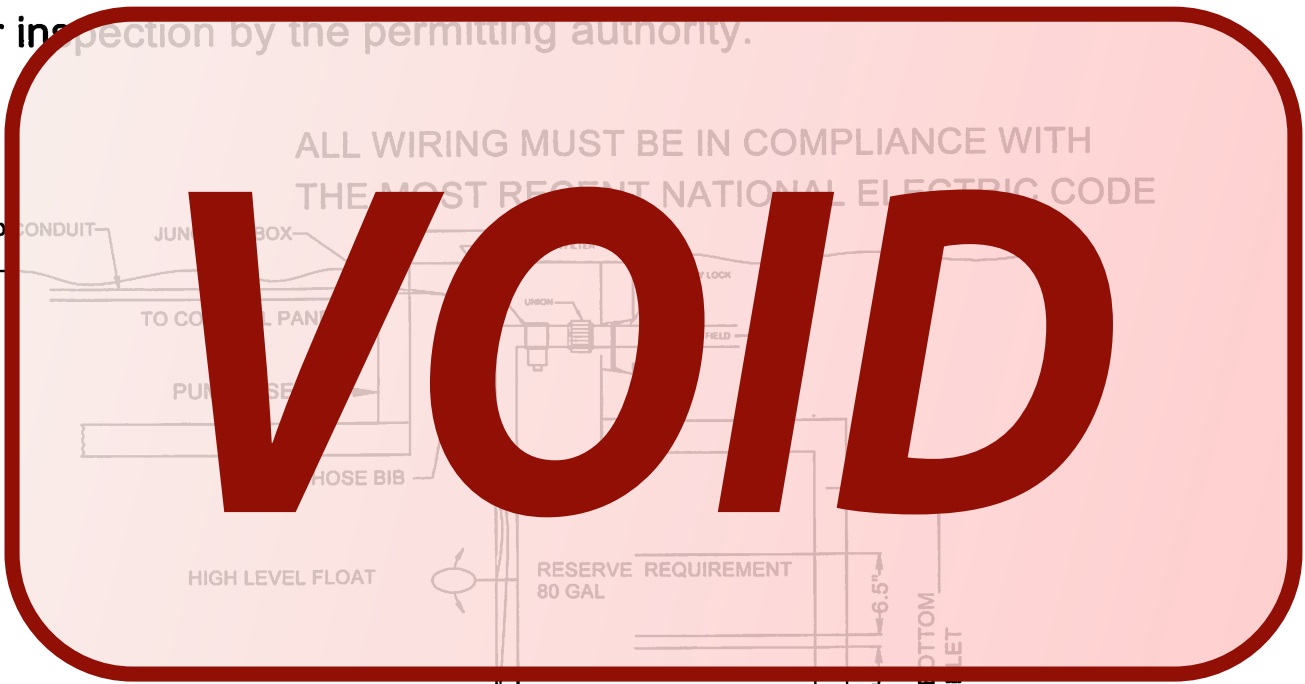
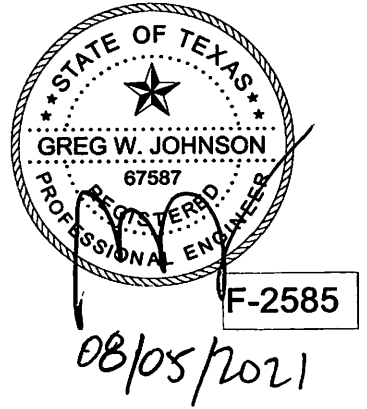
Tanks must be set to allow a minimum of 1/8" per foot fall from the residence.

Tightlines to the tank shall be SCH-40 PVC.

A two way sanitary tee is required between residence and tank.

A minimum of 4" of sand, sandy loam, clay loam free of rock shall be placed under and around tanks

Tanks must be left uncovered and full of water for inspection by the permitting authority.



**TYPICAL PUMP TANK CONFIGURATION  
CLEARSTREAM 600NC3T W/ 700 GAL PUMP TANK**

# 113268

**REVISED**  
8:12 am, Aug 10, 2022

**COMAL COUNTY OFFICE OF ENVIRONMENTAL HEALTH**

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

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

System Description PROPRIETARY; AEROBIC TREATMENT AND DRIP TUBING

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

Tank Size(s) (Gallons) NUWATER B550 PC Absorption/Application Area (Sq Ft) 1774

Gallons Per Day (As Per TCEQ Table III) 240

(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 actually 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.)

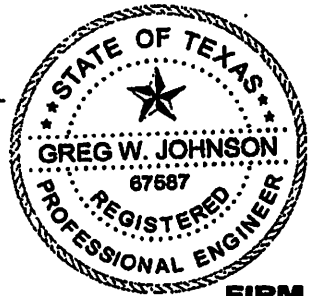
Is the property located over the Edwards Containment Zone?  Yes  No

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 actually require a TCEQ approved CZP?  Yes  No  
(If yes, the P.E. or R.S. shall certify that the OSSF design will comply with all provisions of the proposed CZP. A Permit to construct will not be issued for the proposed OSSF until the CZP has been approved by the appropriate regional office.)

Is this property within an incorporated city?  Yes  No

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



**FIRM #2585**

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

[Signature]  
Signature of Designer

August 5, 2021  
Date



**DRIP TUBING SYSTEM  
DESIGNED FOR:  
AAID CONSTRUCTION, LLC  
9330 CORPORATE DRIVE, #103  
SELMA, TX 78154**

**SITE DESCRIPTION:**

Located in a Replat & Extension of Cypress Cove, Section 9, Lot 610 at 172 Granite Road, the proposed system will serve a three bedroom residence (1767sf.) situated in an area with shallow Type-III soil as described in the Soil Evaluation Report. An aerobic treatment plant utilizing drip irrigation was chosen as the most appropriate system to serve the conditions on this lot.

**PROPOSED SYSTEM:**

**VOID**

A 3-inch SCH-40 pipe discharges from the residence into a NuWater B550-400PT 600 gpd aerobic plant containing a 353-gallon pretreatment tank, an aerobic treatment plant, and a 768-gallon pump chamber containing a submersible (Franklin C1 20XC1-05P4-W115) well pump. The well pump is activated by a time controller allowing the distribution ten times per day with an audible alarm when the system is running at a level audible and visual alarm will activate should pump malfunction. Distribution through self flushing 100 micron disc filter marked with a 1" SCH-40 manifold to a 1767 sq ft drip tubing field, with *Netifim Bi* emitters approximately 1 foot apart with 0.5 gph emitters set every two feet, as shown in attached schematic. A pressure regulator PMR-100 F 30psi installed in the pump tank manifold will maintain a pressure of 30psi. A 1" SCH-40 return line is installed to periodically flush the system by a 1" ball valve. Solids caught in the disk filter are flushed each cycle back to the trash tank. Vacuum breakers installed at the highest point on each manifold will prevent siphoning of effluent from higher to lower parts of the field. Field area will be scarified and built up with 8" of Type II or Type III soil, then the drip tubing will be laid and capped with 6" of Type II or Type III soil (**NOT SAND**). **A minimum of 12" of soil is required between drip tubing and tank or rock.** The field area will be sodded with grass prior to system startup. **Tank must have at grade risers on each opening with watertight caps that must be at least 65# or have a padlock or can only be removed with tools. A secondary plug, cap, or suitable restraint must be provided below riser cap to prevent tank entry should the cap be damaged or removed, in compliance with Chapter §285.38.**

**DESIGN SPECIFICATIONS:**

Daily waste flow: 240 GPD Table III  
Pretreatment tank size: 353 Gal  
Plant Size: NuWater B550-400PT 600gpd (TCEQ Approved)

Pump tank size: 768 Gal Reserve capacity after High Level: 80 Gal (1/3 day Req'd)  
 Application Rate: Ra = 0.2 gal/sf  
 Total absorption area: Q/Ra = 240 GPD/0.20 = 1200 sf. (Actual 1774sf.)  
 Total linear feet drip tubing: 887' *Netifim Bioline* drip tubing .61 GPH  
 Pump requirement: 444 emitters @ .61 gph @ 30 psi = 4.509 gpm  
 Pump Requirement (cont.): (Franklin C1 20XC1-05P4-W115 )  
 Dosing volume: 50-70 gal.

Pump Tank Calculations: 768 Gal (14.5 gal/in.)  
 Volume below working level = 15"= 218 gal  
 Working level = 240 gal = 17"  
 Reserve Requirement = 1/3 day = 80 gal. = 6"

MINIMUM SCOUR VELOCITY (MSV) > 2 FPS  
 IN Drip Tubing w/ NOM. DIA. 0.55" ID

$MSV = 2 \text{ FPS } (\pi d^2 / 4) * 7.48 \text{ gal/cf} * 60 \text{ sec/min}$   
 $MSV = 2(3.14159((.55/12)^2)/4) * 7.48 * 60$   
 $MSV = 1.5 \text{ gpm MIN FLOW RATE} * 3 = 4.5 \text{ gpm}$

IN RETURN MANIFOLD w/ NOM. DIA. 1.0" ID

$MSV = 2 \text{ FPS } (\pi d^2 / 4) * 7.48 \text{ gal/cf} * 60 \text{ sec/min}$   
 $MSV = 2(3.14159((1.0/12)^2)/4) * 7.48 * 60$   
 $MSV = 5 \text{ gpm MIN FLOW RATE} * 3 = 15 \text{ gpm}$

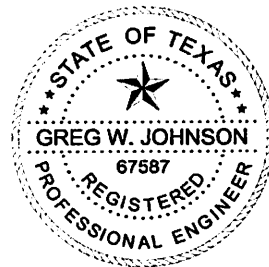
**PIPE AND FITTINGS:**

All pipes and fittings in this drip tubing system shall be 1" schedule 40 PVC. All joints shall be sealed with approved solvent-type PVC cement. Clipper type cutters are recommended to prevent PVC burrs during cutting of pipes causing possible plugging. Drip tubing 0.61 gph drip tubing to be used in field.

Designed in accordance with Chapter 285, Subchapter D, §285.30 and §285.40 Texas Commission on Environmental Quality (Effective December 29, 2016)

*Greg W. Johnson* 08/09/2022

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



INSTALL 1774sf OF FIELD USING 887' OF DRIP TUBING. THERE SHALL BE NO PARKING, DRIVING OR STORAGE ON THE SEPTIC FIELD AT ANY TIME FOR ANY REASON.

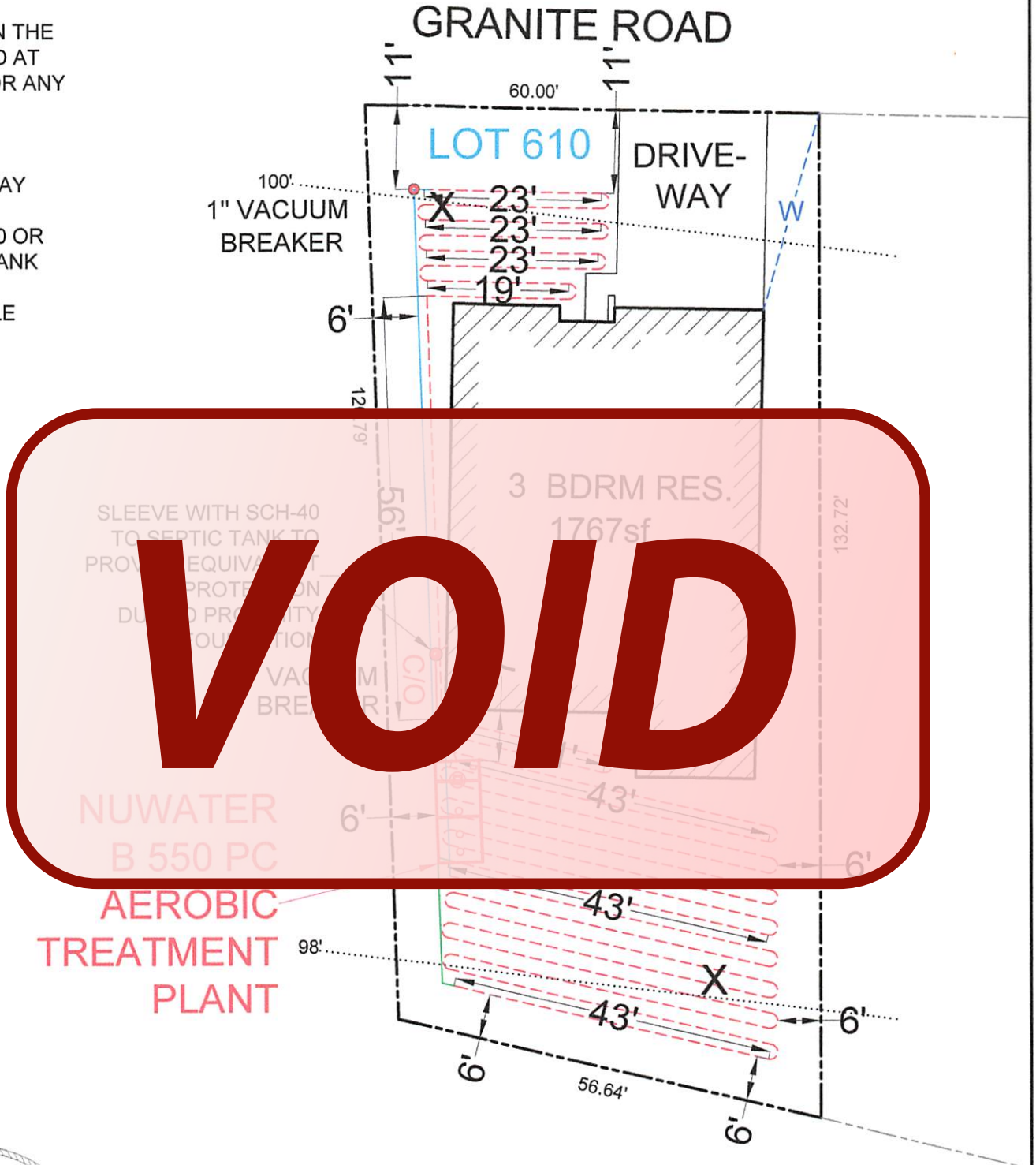
**REVISED**

8:13 am, Aug 10, 2022



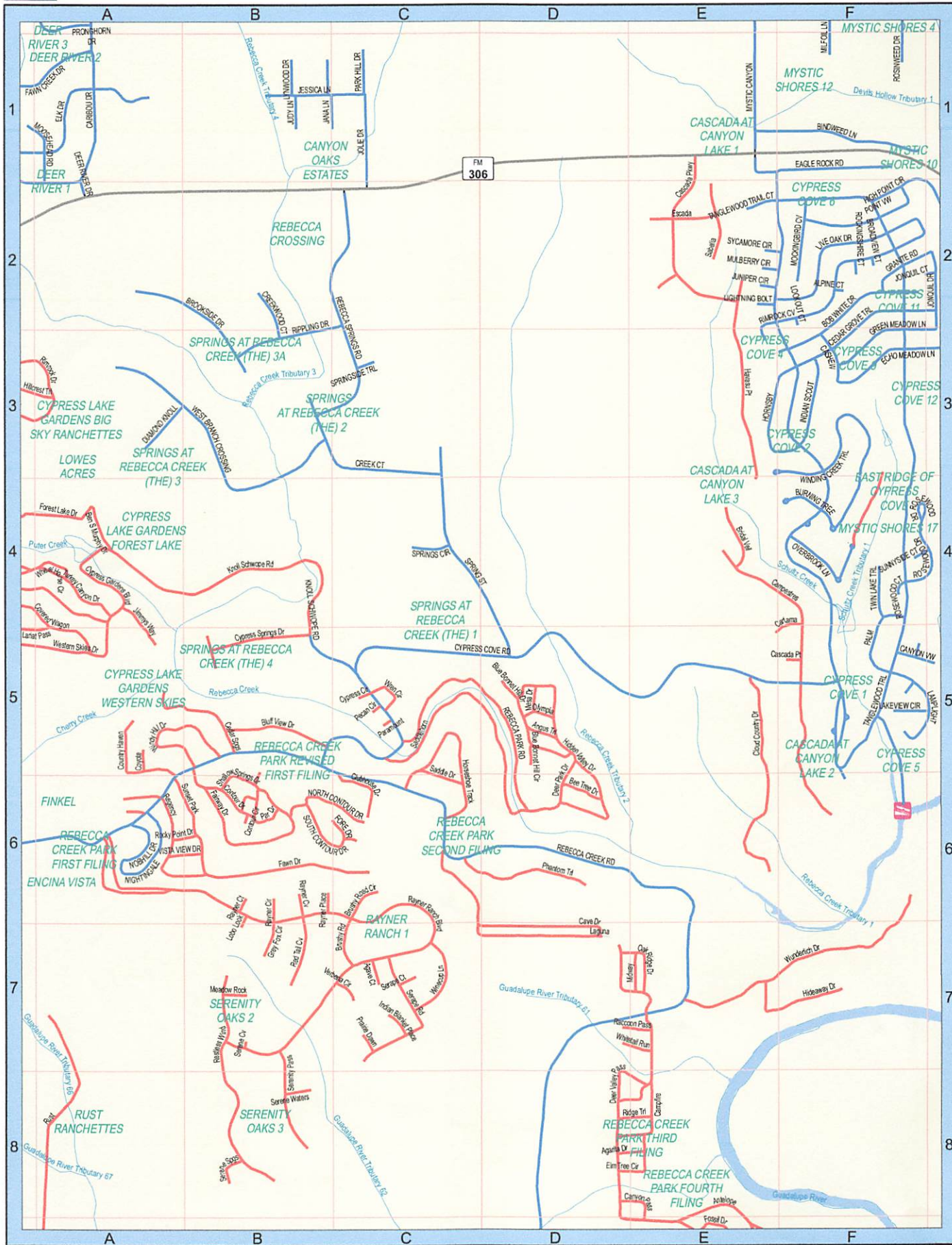
\*USE TWO WAY CLEANOUT  
\*\*USE SCH-40 OR SDR-26 TO TANK

X= TEST HOLE



OWNER: A AID CONSTRUCTION, LLC.		DRAWN BY: EJS III	
STREET ADDRESS: 172 GRANITE ROAD			
LEGAL DESC: CYPRESS COVE	UNIT/SECTION/PHASE: 9	BLOCK:	LOT: 610
PREPARED BY: GREG W. JOHNSON, P.E. F#002585	SCALE: 1"=20'	DATE: 8/5/2021	REVISED: 8/8/2022





SEE PAGE 17



0 1,250 2,500  
Feet

0 0.25 0.5  
Miles

**Aerobic Services of South Texas**  
**15188 FM 306**  
**Canyon Lake, TX 78133**



**(830) 964-2365**  
**Fax: (830) 964-2659**  
**www.aerobicservices.com**

To: Melvin Hight  
172 Granite Road  
Spring Branch, TX 78070  
Agency: CCEH  
County: Comal  
Permit No: 113268

Tech: Chris Bausch  
Phone: (210) 391-5373 Date: 2023-01-09  
Alt Ph: \_\_\_\_\_ Service Due: \_\_\_\_\_

Inspection Type: Scheduled

Item	Operational	Inoperative	N/A	
<b>Aerator:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Air Pressure: 58</b>
<b>Irrigation pump:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Air compressor:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Disinfection device:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Chlorine supply:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Spray field vegetation:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Sprinkler / Drip backwash:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Controls / Electric Circuits:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Test Results and observations: (As Required)**

Chlorine Residual: \_\_\_\_\_  
Test Method: Drip  
BOD: \_\_\_\_\_  
TSS: \_\_\_\_\_  
Access Ports Secured: Yes  / NO   
Repairs Made: Yes  / NO

Mixed Liquor Aeration: 57  
**Sludge Levels**  
Clarifier: 0  
Pump: 0

Repairs and Comments:  
Power shut off to system on arrival, restored it, and system pumping down now.

*CB*

Inspector: \_\_\_\_\_ Date: 2023-01-09

Tom Hampton VP  
MP349/OS24597

**Aerobic Services of South Texas**  
**15188 FM 306**  
**Canyon Lake, TX 78133**



**Canyon Lake:** (830) 964-2365  
**Bastrop:** (512) 303-6922  
 info@aerobicservices.com  
 bastrop@aerobicservices.com  
**MP349 / OS24597**  
**www.aerobicservices.com**

To: Melvin Hight  
172 Granite Road  
Spring Branch, TX 78070  
 Agency: Comal County Environmental Health  
 County: Comal  
 Permit No: 113268

Tech: Nick  
 Phone: (210) 391-5373 Date: 2023-09-28  
 Alt Ph: \_\_\_\_\_ Service  
 Due: \_\_\_\_\_

Inspection Type: \_\_\_\_\_

Item	Operational	Inoperative	N/A	
<b>Aerator:</b>	[X]	[ ]	[ ]	<b>Air Pressure: 100</b>
<b>Irrigation pump:</b>	[X]	[ ]	[ ]	
<b>Air compressor:</b>	[X]	[ ]	[ ]	
<b>Disinfection device:</b>	[ ]	[ ]	[ ]	
<b>Chlorine supply:</b>	[ ]	[ ]	[ ]	
<b>Spray field vegetation:</b>	[X]	[ ]	[ ]	
<b>Sprinkler / Drip backwash:</b>	[X]	[ ]	[ ]	
<b>Controls / Electric Circuits:</b>	[X]	[ ]	[ ]	

**Test Results and Observations: (As Required)**

Chlorine Residual: Drip  
 Test Method: -  
 BOD: \_\_\_\_\_  
 TSS: \_\_\_\_\_  
 Access Ports Secured: Yes [X] / NO [ ]  
 Repairs Made: Yes [ ] / NO [X]

Mixed Liquor  
 Aeration: 48  
**Sludge Levels**  
 Clarifier: 0  
 Pump: 0

**Repairs and Comments:**

Did backwash of system, system running at full capacity.

*NA*

Inspector: \_\_\_\_\_ Date: 2023-09-28

Tom Hampton, VP  
 MP349/OS24597

**Aerobic Services of South Texas**  
**15188 FM 306**  
**Canyon Lake, TX 78133**



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**www.aerobicservices.com**

To: Melvin Hight  
172 Granite Road  
Spring Branch, TX 78070  
 Agency: Comal  
 County: Comal  
 Permit No: 113268

Tech: Mark  
 Phone: (210) 391-5373 Date: 2024-02-01  
 Alt Ph: \_\_\_\_\_ Service  
 Due: \_\_\_\_\_

Inspection Type: Scheduled

Item	Operational	Inoperative	N/A
Aerator:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Irrigation pump:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air compressor:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Disinfection device:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Chlorine supply:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Spray field vegetation:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sprinkler / Drip backwash:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Controls / Electric Circuits:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Air Pressure: 81**

**Test Results and Observations: (As Required)**

Chlorine Residual: Na

Test Method: Na

BOD: \_\_\_\_\_

TSS: \_\_\_\_\_

Access Ports Secured: Yes  / NO

Repairs Made: Yes  / NO

Mixed Liquor

Aeration: 0

**Sludge Levels**

Clarifier: 0

Pump: 0

**Repairs and Comments:**

In working order.

*Tom Hampton*

Inspector: \_\_\_\_\_

Date: 2024-02-01

Tom Hampton, VP  
 MP349/OS24597

**Aerobic Services**  
15188 FM 306  
Canyon Lake, TX 78133



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info@aerobicservices.com  
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To: Melvin Hight  
172 Granite Road  
Spring Branch, TX 78070  
Agency: Comal County Environmental Health  
County: Comal  
Permit No: 113268

Tech: Chris Bausch  
Phone: (210) 391-5373 Date: 2024-09-26  
Alt Ph: \_\_\_\_\_ Service \_\_\_\_\_  
Due: \_\_\_\_\_

Inspection Type: Scheduled

<b>Item</b>	<b>Operational</b>	<b>Inoperative</b>	<b>Not Present</b>	
<b>Aerator:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Air Pressure: 104</b>
<b>Irrigation Pump:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Air Compressor:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Pump Screen:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Chlorinator:</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Spray Field Vegetation:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Filters:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Sprinkler / Drip Backwash:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Controls / Electric Circuits:</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Test Results and Observations: (As Required)**

Chlorine Residual (ppm): \_\_\_\_\_

Test Method: \_\_\_\_\_

BOD: \_\_\_\_\_

TSS: \_\_\_\_\_

Tank Lids Secured: Yes  / NO

Pump Out Needed: Yes  / NO

Repairs Made Yes  / NO

Mixed Liquor: all measurements in inches

Aeration: 50

**Sludge Levels**

Clarifier: 0

Pump: 1

**Repairs and Comments:**

Cleaned filter and backwashed field.

Inspector: CB

Date: 2024-09-26

Tom Hampton, VP  
MP349/OS24597