SEWAGE TREATMENT SYSTEM (STS) DESIGN FOR:

HELEN GODSEY 9960 LEACREST RD CINCINNATI, OH 45215 **Hamilton County** PARCEL: 0598-0070-0001 0.86 AC

Designed By: Evans Engineering 4240 Airport Rd., Suite 211 513-321-2168

Design Date: July 22, 2022 Site Visit Date: January 2022

Design Details:

Proposed JET J-500-PLT ATU to IM-1060, 1000 gallon dose tank with UV disinfection to low pressure leach lines with non-gravel, fines-free leaching trenches.

Design Rationale:

This design is for an existing 2 bedroom home with 0 additional rooms that could be classified as a future bedroom, per following:

- At least 70 square feet.
- Contains a closet or area that could easily be finished as a closet,
- Has multiple means of ingress/egress, sole ingress cannot be through another bedroom, and;
- Has a door or opening that can easily be finished with a door
- For every two bedroom-like-rooms that have 3 of the 4 items listed above, one will be considered a bedroom.

The Daily Design Peak Flow is therefore 240 GPD. The peak flow should not be reached on a routine basis. Average flows of 144 GPD can be accommodated routinely with typical residential wastewater strength as specified in Ohio Administrative Code (OAC) 3701-29 for households.

The Perched Seasonal Water Table is at 22"-30" from the ground surface and Highly Weathered Soils with slow permeability are at 32". Conditions require a 24" Vertical Separation Distance from the Perched Seasonal Water Table and 8" of in situ soil. Since the site has a minimum of 22"-30" of in situ soil and the trenches will be set at 13" depth (utilizing a 24" soil depth credit by pretreating to < 1000 CFU), both conditions are satisfied. Soil absorption field design length and width are calculated based on the worst soil conditions under the soil absorption system. The loading rates are selected from tables in the Ohio Administrative Code.

The Soil Loading rate for silty clay loam with moderate sub-angular blocky structure is 0.6 GPD/sq.ft for pretreated effluent.

The Linear Loading Rate for silty clay loam with moderate sub-angular blocky structure with an infiltrative distance of 8"-12" and 10-15% slope (field verified) is 3.0 GPD/Ln. Ft.,

Design Considerations:

Non-gravel, fines free trench area calculations

Required area for soil absorption: (240 gpd / 0.6 gpd/sf) = 400 sf req'd

Minimum length: 240 gpd / 3.0 gpd/ft = 80' ft,

Leaching Trench Design:

1 ZONE WITH 4 TRENCHES 40' LONG (PLUS ENDCAPS)

40' X 3' WIDE = 120 SF

TOTAL AREA = 4 TRENCHES X 120 = 480 SF

System Installation, Operation And Maintenance (O&M)

All system devices and components must be operated and maintained in accordance with the Ohio Department of Health (ODH) product approval and Conditions. System devices and components must be installed per ODH product approval, Hamilton County Installation Manual and this design. Where conflicts exist, consult Evans Engineering for guidance before proceeding.

Jet Install Manual: see C-8

Dose Tank: www.infiltratorwater.com

Chambers Installation Manual: www.infiltratorwater.com

Panel: www.infiltratorwater.com

Means for O&M is provided by the driveway which is within standard distances and elevations for a service truck.

Changes and Use of This Design

This plan is the sole ownership of the designer and may not be altered. changed, used or manipulated without approval of designer and HCPH. Evans Engineering is available to make adjustments and address questions about the system design.

It is the responsibility of the contractor to verify that the system can be installed as designed, based on their preliminary lay-out of the job. It is the responsibility the installer and property owner to inform the designer of any field or other conditions that may affect the installation. operation or maintenance of the STS, including site disturbances that may affect the performance of a soil absorption component. If design changes are needed, redesign fees may apply.

System Protection

specified in OAC 3701-29-06(G)(3).

Property owner and installer are responsible to protect the soil absorption areas from disturbance. Only excavate soil absorption area when soil is dry and friable to a depth of 13" and in compliance with Hamilton County Installation Manual requirements. Keep wheeled traffic off septic field area. Replacement area is set aside for the a future relocation, expansion and/or replacement of the system. Replacement area is to remain undisturbed and no permanent structures or hardscapes are to be erected in this area. It is the owner and installation contractor's responsibility to locate underground utilities. If utilities interfere with the designed system, construction shall not proceed without approval from designer and HCPH. No clearwater connections (downspouts, pool/spa water, footer tiles, cisterns, etc) shall be connected to this STS. All system components must meet the horizontal isolation distances

System Cost Information

The property owner has been informed of system options and briefed on cost factors. According to OAC 3701-29-10(B)(5), designers of STS systems must include approximate installation costs and operational costs of STS options to assist the homeowner in the selection of the STS options. Evans Engineering estimates costs as follows: \$32,000-\$45,000 Installation cost* \$1,000 annual operational cost* *This is a general estimate of costs for this system. It is not a bid to install or service the STS. Contact a licensed installer and service provider or distributor for actual bids.

Disclaimer

This plan set is not a site plan to be used for constructing anything other than the Sewage Treatment System. If an accurate legal site plan is required, contact a professional surveyor. This plan offers no guarantee as to the accuracy of information provided. This plan offers no guarantees for site stability. If site stability may be an issue, a geotechnical engineer should be consulted. Plan is only as accurate as the information provided by the property owner to the designer. Easements, right-of-ways, hidden objects or information not communicated to the designer invalidates the design. It is the property owner's responsibility to review this plan and information provided to verify all site conditions and design assumptions are correct. If conflicts are found or additional information must be supplied, the owner shall contact the designer and installation shall not proceed until the approval is granted. This design shall in no way be taken as guarantee that the system will function in a satisfactory manner for any given period of time, or that the Evans Engineering or any of its agents or employees assume any liability for damages, consequential or direct, which are caused, or which may be caused by a malfunction of the STS.





EVANS ENGINEERING 4240 ARPORT ROAD, SUITE 211 GRCINNATI, OHIO 45226 (513) 321-2168



SHEET SHOOMAIL OF 45 COVER RD SEPTIC-

SCALE: HORIZ. VERT. JOB. NO. 21-169 ATE July 22, 2022

SHEET NO.

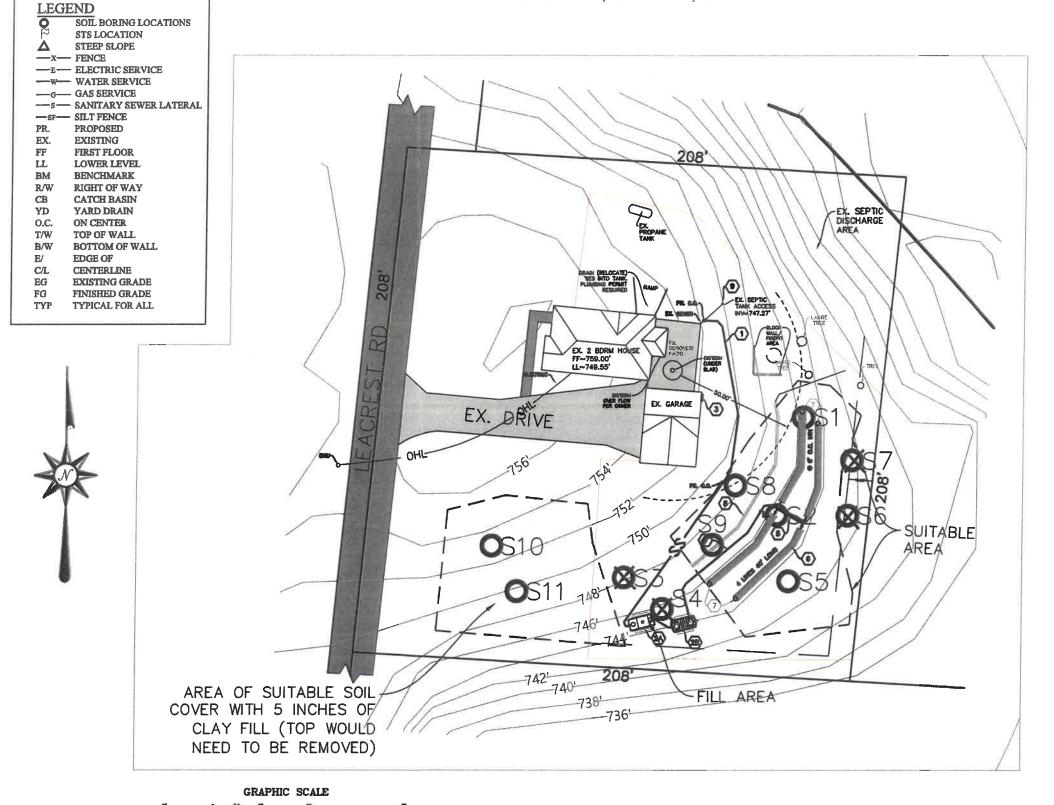
COVER

NOTES:

- 1) UNLESS OTHERWISE NOTED, ALL TREATMENT SYSTEM COMPONENTS AND ONSITE DISCHARGE COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL STATE AND FEDERAL REGULATIONS/GUIDELINES AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 2) CAUTION TAPE OR ORANGE FENCING SHOULD BE INSTALLED AROUND THE DISPERSAL FIELD AND RESERVE AREA PRIOR TO EARTHWORK ACTIVITIES.
- 3) UNLESS OTHERWISE NOTED, ALL PIPING IS SCHEDULE 40 PVC PIPING (ASTM D2665/D1785).
- 4) ALL PIPING THAT DOES NOT GRAVITY DRAIN IS TO BE BURIED 24" DEEP MIN.
- 5) SYSTEM IS DESIGNED TO TREAT 144 GALLONS PER DAY AVERAGE FLOW (240 GALLONS PER DAY OCCASIONAL PEAK FLOW) FROM A SINGLE FAMILY RESIDENCE
- 6) ANY MODIFICATIONS MADE BY THE INSTALLER MUST BE APPROVED BY THE DESIGNER PRIOR TO IMPLEMENTATION.
- 7) ANY MODIFICATIONS MADE BY THE INSTALLER MUST BE NOTED ON THE FINAL AS-BUILT DRAWING
- 8) VEHICULAR TRAFFIC AND HEAVY EQUIPMENT IS PROHIBITED IN DISPERSAL AREA, REPLACEMENT AREA AND DOWNSLOPE OF DISPERSAL.
- 9) ALL COMPONENTS TO MAINTAIN A MINIMUM 10'
 HORIZONTAL SEPARATION FROM PROPERTY LINES, R.O.W.,
 EASEMENTS, BUILDINGS, DRIVEWAY/HARDSCAPE,
 UTILITIES, INTERMITTENT STREAMS/SWALES,
 HORIZONTAL CLOSED LOOP GEOTHERMAL SYSTEMS,
 IRRIGATION LINES, AND GWRS.
- 10) ALL COMPONENTS TO MAINTAIN A MINIMUM 50' HORIZONTAL ISOLATION DISTANCE TO ALL PERENNIAL STREAMS, RIVERS, WETLANDS, WELLS, VERTICAL GEOTHERMAL SYSTEMS, AND ALL PRIVATE WATER SYSTEMS (I.E. CISTERN ON PROPERTY)
- 11) WATER FROM THE ROOF, FOUNDATION DRAINS, FLOOR DRAINS, CISTERN OVERFLOWS, SUBSURFACE DRAIN TILES, STORM WATER DRAINS, SUMP PUMPS AND CLEAR WATER DRAINS SHALL NOT BE DISCHARGED INTO OR ONTO ANY PART OF THE STS.
- 12) IF SANITARY SEWER CROSSES ANY WATER SUPPLY LINES, USE FULL LENGTH OF PIPE AT CROSSING SO NO JOINTS ARE NEAR THE CROSSING LOCATION, EXTEND 10' MINIMUM ON EACH SIDE OF CROSSING, AND SLEEVE THE WATER AND/OR SEWER WITH LARGER DIAMETER PIPE AND SEALED ENDS.
- 13) SOIL SAMPLES PERFORMED BY MR. DAN MICHAEL, CLEARCREEK ENVIRONMENTAL, LEBANON, OHIO.
- 14) BASEMAP WAS OBTAINED FROM CAGIS WITH GIS CONTOUR INFORMATION.

LEACREST RD SEPTIC - GODSEY - REPLACEMENT STS ON-SITE SANITARY SYSTEM

9960 LEACREST RD, CINCINNATI, OH 45215



(DI FEET)



DATE BY NO. & DESCRIPTION

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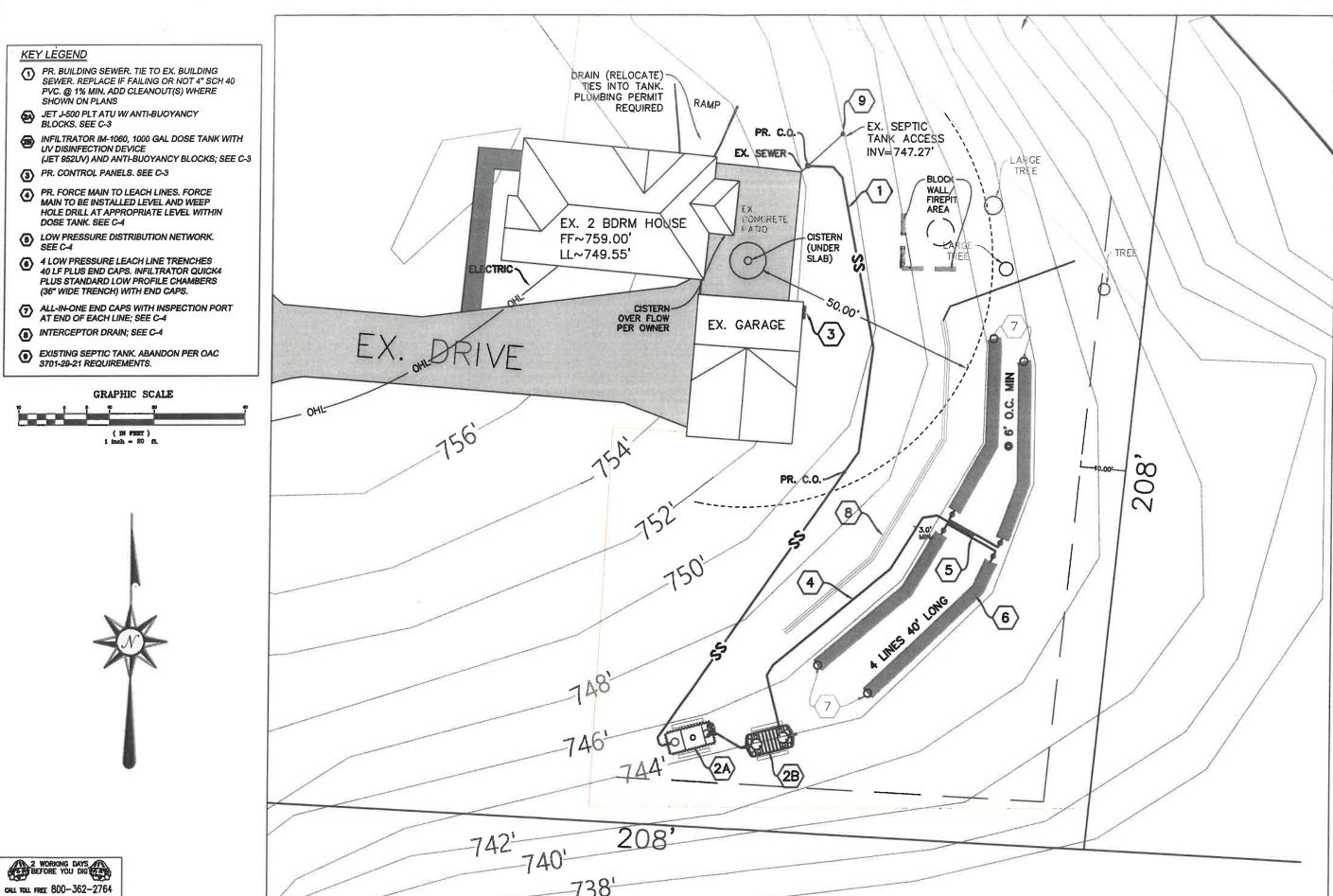


OVERALL SITTE PLAN

18960 LIBACREST RD, CINCINNATI, OH 45215
HAMILTON COUNTY

JOB. NO. 21-169 DATE July 22, 2022

SHEET NO.





REVISIONS
NO. & DESCRIPTION

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CRET ND SEPTIC - GODSEY - REPLACEMENT STS

ZONE AND TANK

LAYOUT

9960 LEACREST ND, CINCINNATI, OH 45215

HAMILTON COUNTY

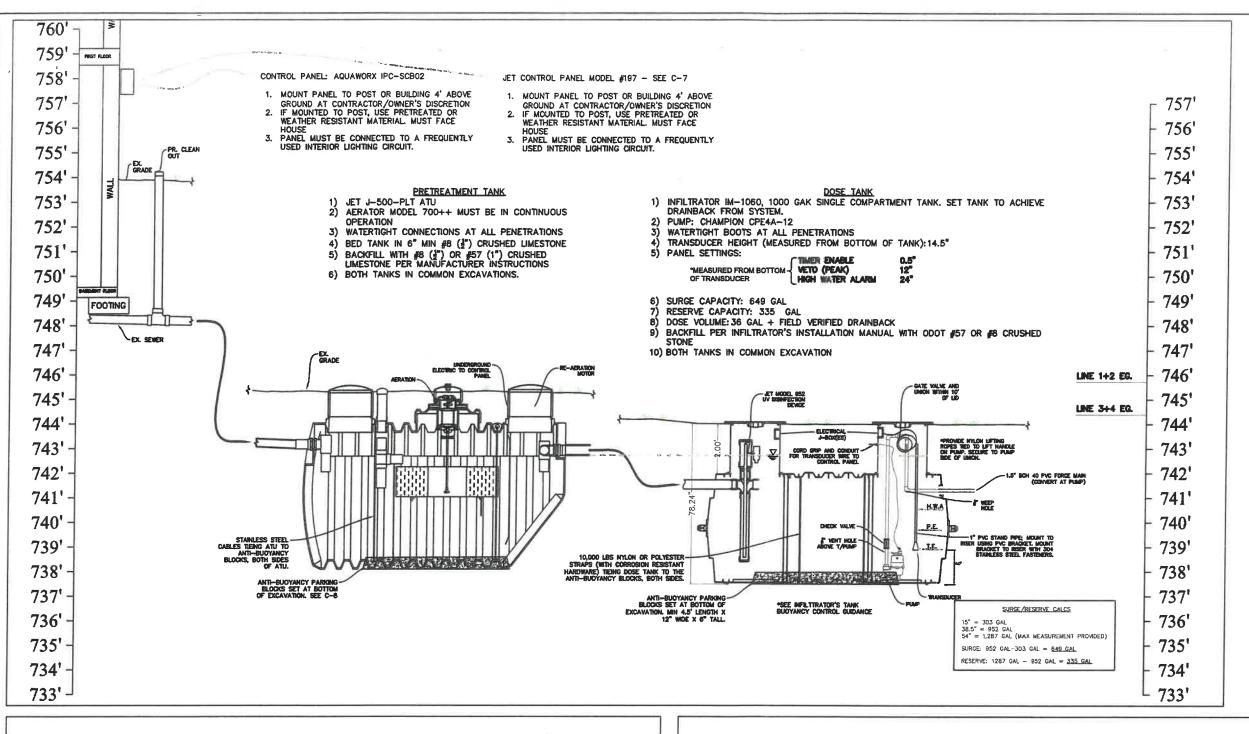
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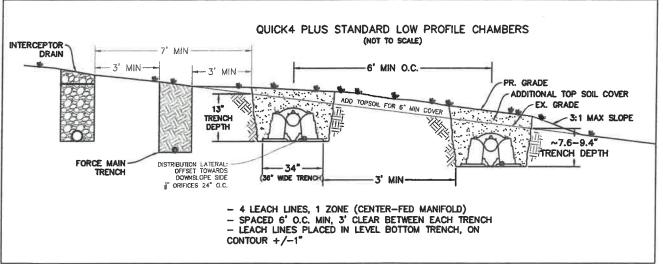
JOB. NO. 21-168

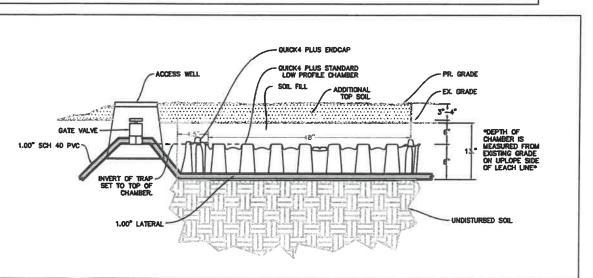
DATE July 22, 2022

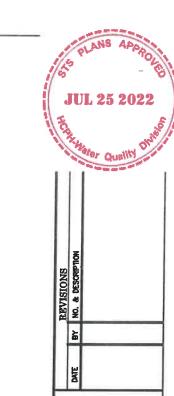
July 22, 2022

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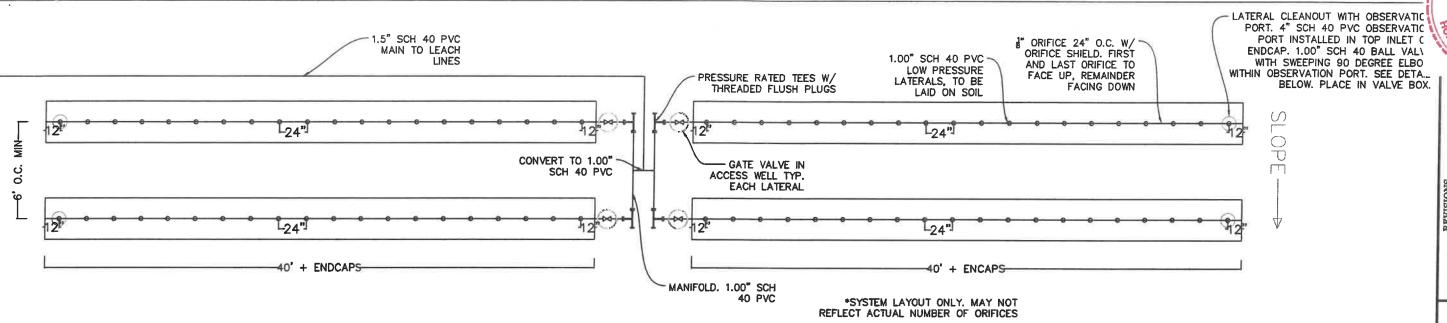
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TREATMENT SYSTEM
PROFILE

JOB. NO. 21-169
DATE July 22, 2022
SHEET NO.

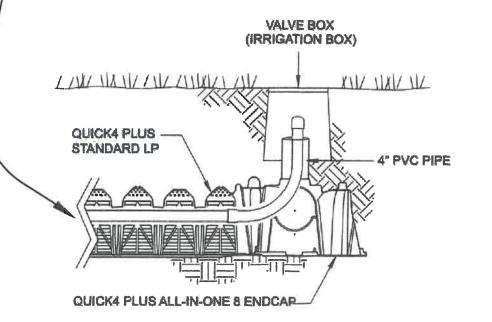
LEACH LINE LAYOUT DETAIL



*INSTALL LATERAL ON GROUND PER INSTALLATION METHOD B (SEE C-6)

ODOT #57 ROUNDED GRAVEL
OR DECORATIVE GRAVEL
ABOVE FILTER FABRIC
4" BELOW GRADE
ODOT #57 OR #8 ROUNDED GRAVEL
4" PERFORATED, CORRUGATED PE
OR SDR35 PLACED AT BOTTOM OF
TRENCH (MIN 0.5% SLOPE TO
DISCHARGE)

ACCESS FOR PRESSURE DRAINFIELD MAINTENANCE AND FLUSHING

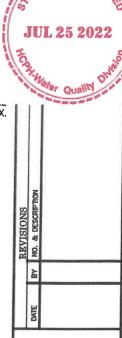


NOTE: VALVE BOX REQUIRED FOR PROTECTION. 4" SCH 40 PVC SHALL BE USED FOR INSPECTION PORT.

All-in-One inspection port.

Quick4 Plus All-in-One Inspection Port

- 1. With a hole saw drill the premarked area in the top of the Quick4 Plus All-in-One Endcap to create a 4-inch opening.
- 2. Set a cut piece of pipe of the appropriate length into the corresponding endcap's inspection port sleeve.
- NOTE: Sleeve will accommodate up to a 4-inch Schedule 40 pipe.
- 3. Use two screws to fasten pipe to the sleeve around the inspection port.
- 4. Attach a threaded cap or cleanout assembly onto the protruding pipe at appropriate height.
- A small valve cover box may be used if inspection port is below desired grade.



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SYSTEM DETAILS
9960 LEACHEST ND, CRICINIAIT, OH 4525.

SCALE: HORIZ. VERT.

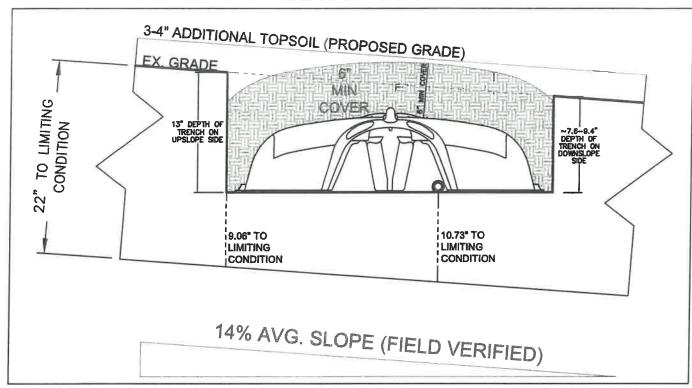
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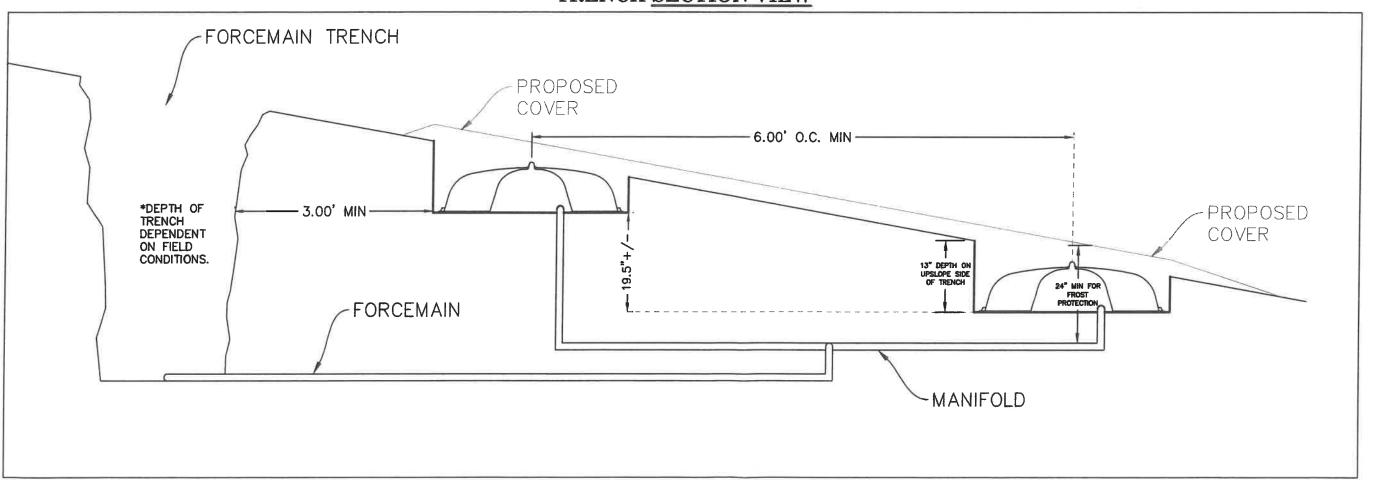
DATE July 22, 2022

SHEET NO.

SLOPE DETAIL



TRENCH SECTION VIEW





DATE BY NO. & DESCRIPTION

NO. & DESCRIPTION

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EACREST RD SEFTIC - GODGEY - REPLACEMENT ST

TRENCH DETAIL

9960 LEACREST RD, CHOCHNATT, OH 4526,
HAMILTON COUNTY

SCALE: HORIZ. VERT.

VARIES N/A

JOB. NO. 21-169 DATE July 22, 2022

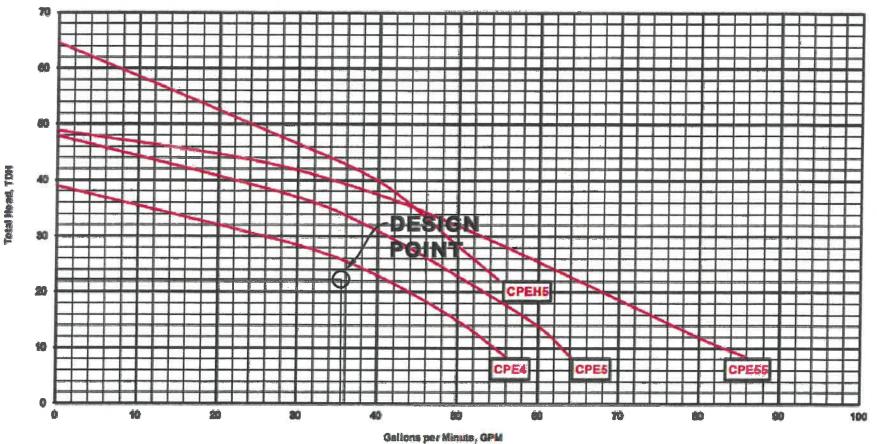
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C-4.1

PUMP CALCULATIONS

Parameters		
Discharge Assembly Size	2.00	inches
Transport Length	79	feet
Transport Pipe Class	40	
Transport Line Size	1.50	inches
Distributing Valve Model	None	
Max Elevation Lift	7	feet
Manifold Length	9	feet
Manifold Pipe Class	40	
Manifold Pipe Size	1.00	inches
Number of Laterals per Cell	4	
Lateral Length	39.9	feet
Lateral Pipe Class	40	
Lateral Pipe Size	1.00	inches
Orifice Size	1/8	inches
Orifice Spacing	2	feet
Residual Head	5	feet
Flow Meter	None	inches
'Add-on' Friction Losses	0	feet
	•	
Calculations		
Minimum Flow Rate per Orifice	0.43	gpm
Number of Orifices per Zone	80	
Total Flow Rate per Zone	35.1	gpm
Number of Laterals per Zone	4	
% Flow Differential 1st/Last Orifice	5.4	%
Transport Velocity	5.6	fps
Frictional Head Losses		
Loss through Discharge	2.5	feet
Loss in Transport	5.5	feet
Loss through Valve	0.0	feet
Loss in Manifold	1.4	feet
Loss in Laterals	0.6	feet
Loss through Flowmeter	0.0	feet
'Add-on' Friction Losses	0.0	feet
Pipe Volumes		
Vol of Transport Line	8.4	gals
Vol of Manifold	0.4	gals
Vol of Laterals per Zone	7.2	gals
Total Volume	15.9	gals
Minimum Pump Requirem	ents	
		anm
Design Flow Rate	35.1	gpm







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PUMP DETAILS
9960 LEACREST RD.
CINCINNATI, OH 45215,
HAMILTON COUNTY

SCALE HORIZ VERT.

JOB. NO. 21-169 DATE July 22, 2022

SHEET NO.

Quick4® Plus Standard Low Profile Chambers **Pressure Distribution Systems Installation Instructions**



Before You Begin

Quick4 Plus Standard Low Profile (LP) Chambers can only be installed according to state and/or local regulations. Soil and site conditions must be approved prior to installation. Conduct a thorough site evaluation to determine proper sizing and siting of the system before installation.

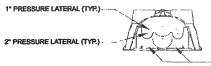
	Materials and Equipment				
	☐ Quick4 Plus Standard LP Chambers	☐ Shovel and Rake ☐ Utility Knife			
	☐ Quick4 Plus 8 and/or All-in- One 8 Endcaps	☐ 1 1/4-inch Drywall Screws* ☐ Screw Gun*			
	☐ PVC Pipe and Couplings	☐ Small Valve-cover Box*			
	☐ Backhoe	☐ 4-inch Cap Inspection Port			
ı	☐ Laser, Transit or Level	* Optional			
ı	☐ Tape measure	•			
These guidelines for construction machinery must be followed during installation: Avoid direct contact with chambers when using construction equipment. Chambers require a 12-inch minimum of compacted to support a wheel load rating of 16,000 lbs/axle or equivalent to H-10 AASHTO load rating. Only drive across the trenches when necessary. Never drive					

Installing the Chambers and End Caps

stones this size or larger that are in contact with chambers.

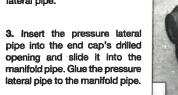
1. To allow pressure laterals to drain after each dose, drill a hole in the bottom of the pipe at the end of the pressure line. Place the snap-off splash plate or a paving block at the bottom of the trench to protect the infiltrative surface from erosion.

☐ Avoid stones larger than 3 inches in diameter in backfill. Remove



1" OR 2" TRENCH BOTTOM PIPE PLACEMENT

2. With a hole saw, drill out the appropriate diameter hole to accommodate the pressure lateral pipe.





Drill pressure pipe hole.

4. With the pressure lateral pipe through the end cap, place the back edge of the end cap over the inlet end of the first chamber. Be sure to line up the locking pins on the top of both the chamber and end cap.

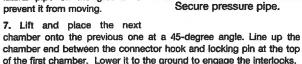
Note: Health departments may require a wet-run pressure check to be done prior to chamber installation when the pipe is laying on the ground. Check with your local health department for the proper procedure.



Place end cap over inlet end

5. (Method A) Secure the pressure lateral pipe to the top of the first chamber with a plastic pipe strap at the outlet end of the unit. Slide the strap up through a slot in the chamber top, down through the other slot, and cinch the two ends around

6. (Method B) With the holes pointing up, stabilize the pressure lateral pipe on the ground to prevent it from moving.



8. (Method A) Secure the lateral pipe to the top of the next chamber once in place. Follow the same method in Step 5.

9. Continue interlocking chambers and securing the pipe until the trench is completed.

10. Before attaching the final end cap, it may be necessary to remove the tongue of the connector book on the last chamber with a pair of pliers depending on your pipe

11. Insert the pressure lateral pipe through the hole in the final end cap and slide the end cap toward the last chamber. Lift the end cap over the modified

connector hook and push

straight down to secure it to the chamber

Note: If cleanout extensions are required, use a hole saw to cut a hole in the top of the Quick4 Plus All-in-One 8 Endcap so the pressure lateral pipe with an elbow can extend to the ground surface. For cleanout access. use the "Installing Optional Inspection Ports" section in the general installation instructions.

12. If installing multiple rows of chambers, follow Steps 1-9 to lay the next row of chambers parallel to the first. Keep a minimum separation distance



Lateral pipe through end cap.



between each row of chambers as required by local code.

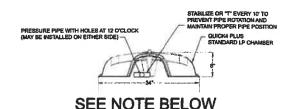
Advantages of Method A

- Pipe and orifice placed closer to the chamber dome offer improved distribution.
- · Pipe positioned at the top of the chamber places it well above
- Plastic pipe hanger easily secures pipe in place.

ALL WEATHER PLASTIC PIPE STRAP WITH 120 POUNDS TENSILE STRENGTH AT EVE QUICK4 PLUS STANDARD LP CHAMBEI

Advantage of Method B

- · Pipe resting on the trench bottom allows easy installation and
- · Stabilizing "T's" keep pipe level.
- · System promotes efficient pressure checks.
- · Pipe resting on the trench bottom allows easier inspections if monitoring ports are installed.



Infiltrator Water Technologies Limited Warranty

(a) The structural integrity of each chamber, end cap and other accessory manufactured by Infiltrator ("Units"), when installed and operated in a leachfield of an onsite septic system in accordance with Infiltrator's Instructions, is warranted to the original purchaser ("Holder") against defective materials and workmanship for one year from the date that the septic permit is issued for the septic system containing the Units; provided, however, that if a septic permit is not required by applicable law, the warranty perod will begin upon the date that installation of the septic system commences. To exercise its warranty rights, Holder must notify Infiltrator in writing at its Corporate Headquarters in Old Saybrook, Connecticut within fifteen (15) days of the alleged defect. Infiltrator will supply replacement Units for Units determined by Infiltrator to be covered by this Limited Warranty. Infiltrator's liability specifically excludes the cost of removal and/or installation of the Units.

(b) THE LIMITED WARRANTY AND REMEDIES IN SUBPARAGRAPH (a) ARE EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE UNITS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

(c) This Limited Warranty shall be void if any part of the chamber system is manufactured by anyone other than Infiltrator. The Limited Warranty does not extend to incidental, consequential, special or indirect damages. Infiltrator shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs, or other losses or expenses incurred by the Holder or any third party. Specifically excluded from Limited Warranty coverage are damage to the Units due to ordinary wear and tear, alteration, accident, misuse, abuse or neglect of the Units; the Units being subjected to vehicle traffic or other conditions which are not permitted by the installation instructions; fallure to maintain the minimum ground covers set forth in the installation instructions; the placement of improper materials into the system containing the Units; failure of the Units or the septic system due to improper siting or improper sizing, excessive water usage, improper grease disposal, or improper operation; or any other event not caused by infiltrator. This Limited Warranty shall be void if the Holder falls to comply with all of the terms set forth in this Limited Warranty.

Further, in no event shall Infiltrator be responsible for any loss or damage to the Holder, the Units, or any third party resulting from installation or shipment, or from any product liability claims of Holder or any third party. For this Limited Warranty to apply, the Units must be installed in accordance with all site conditions required by State and local codes; all other applicable laws; and Infiltrator's installation instructions.

(d) No representative of Infiltrator has the authority to change or extend this Limited Warranty. No warranty applies to any party other than the original Holder,

The above represents the standard Limited Warranty offered by Infiltrator. A limited number of States and counties have different warranty requirements. Any purchaser of Units should contact infilitrator's Corporate Headquarters in Old Saybrook, Connecticut, prior to such purchase, to obtain a copy of the applicable warranty, and should carefully read that warranty prior to the purchase of Units.



4 Business Park Road . P.O. Box 768 860-577-7000 · FAX 860-577-7001

1-800-221-4436 www.infiltratorwater.com

Old Savbrook, CT 06475

Distributed By:

NOTE: STABILIZING TEE'S NOT REQUIRED IF USING METHOD B WITH ORIFICE SHIELDS. FIRST AND LAST ORIFICE TO FACE UP. ALL OTHERS TO FACE DOWN. SEE C-4.J

U.S. Patents: 4,759,661; 5,017,041; 5,156,488; 5,336,017; 5,401,116; 5,401,459; 5,511,903; 5,716,163; 5,588,776; 5,839,844 Canadian Patents: 1,329,959; 2,004,564 Other patents pending. Infiltrator and Quick⁴ are registered tradements of Infiltrator Water Technologies, Infiltrator Water Technologies is a registered trademark in Mexico.

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JUL 25 2022

S ENGINEERING PORT ROAD, SUITE 211 IATI, OHIO 45226 1-2168



HAMBER INSTALLATION DETAILS 9960 LEACRIST RD. RD SEPTIC SCALE: HORIZ. VERT. VARIES N/A JOB. NO. 21-169 DATE July 22, 2022

SHEET NO.



has a jumper selection for normally closed or normally open operation. The sensing signal at the auxiliary input terminal block is a current limited 12VAC. Note: Auxiliary contact three is interiocked with the pump relay and will deactivate the pump circuit. Do not use this contact for high water floats in pump tanks.

Indicator LEDs

There is a blue power indicator LED that is lit when power is applied and the microcontroller is running. There is a one red LED for indication of aerator over or under current conditions. There are three red LEDs for indication of input error conditions on the auxiliary inputs. In normal operation, with no error conditions present, only the blue power indicator LED will be on. Auxiliary alarm circuits should be properly labeled on the wiring diagram or control panel cover.

Altern buzzer

The alarm buzzer sounds when an error condition exists. There is circuit board
provision for an externally mounted or alternate model buzzer. When power is initially
turned on, the buzzer will sound for ½ second to confirm that the buzzer is operational.

For purpose of testing or servicing, the buzzer can be silenced for elarm conditions by

DIP switch setting.

Reset switch and master reset switch The user accessible reset switch has dual functionality. If no alarm condition exists, and the reset switch is held down for at least two seconds, the microcontroller will perform a self-reset. If an alarm condition has been triggered, the reset switch will clear the alarm state. However, if the error condition is still present, the elarm may immediately re-trigger. After the third reset press with a continuing alarm condition, the buzzer will be silenced, but the LED error conditions will not be cleared and no further operation is possible until the panel is reset by the master reset switch or by removal and reapplication of main power. The circuit board mounted master reset switch causes a microcontribler reset.



The circuit board has a connector configured to provide power and a triggering signal to select models of commercial, automatic telephone voice dielers. If an Auto-Dialer is installed on the model 197 Control Panel use wire lies to secure RJ-10 cable to LED array mounting posts to ensure there is no contact between the RJ-10 cable and 197 control panel printed circuit board or



Wi-Fi Interface

with inserting.

The circuit board has an input/output dry contact location for low-voltage atarm leads to communicate any atarm condition to the Jet Wi-Fi module. Complete Wi-Fi module witing instructions are included with each 197W unit.



Optional Pump Cycle Counter
The circuit board is designed with blade style contacts to allow connection of a pump excle counter. The cycle counter will record each time power is supplied to the pump







Start Up Check List

These procedures should be performed by the Jet installer after all of the system components and serators have been connected to the system. This test should only be conducted after the electrician has completed the panel installiation and before occupation of the dwelling. Refer to the control panel settings and functions section to review that the proper DIP switch configuration is appropriate for the system installed.

- ✓ Make sure that the settings and pump controls are appropriate for the system.
- configuration and comply with local regulations.

 Check the system wiring to ensure the installation instructions have been

- Followed correctly.

 Check to make sure all eerator, pump, and auxiliary connections are watertight.

 Ensure there is no exposed wiring prior to turning on the system.

 Set the control panel power switch to the "Off Position", and then turn power on at the main breaker panel for all of the system circuits.

 Turn on the control panel power, the set-fleet should elarm for two seconds then all alarms should return to normal state. The blue indicator light should now indicate that there is power to the appeal and circuits. indicate that there is power to the panel and circuits.
- inducate that there is power to the panel and circuits.

 Check to make sure ell system components are operational. If a pump is connected to the system, it may not immediately function depending on additional float and timer control settings.

 Test all inhound and cutbound power with a multi-meter. All circuits should have between 105 and 132 volts AC power supplied to the aerator, compressor, and
- If aerator circuits are set for timer intervals, the cycle will begin with the on If erestor circuits are set for timer intervals, the cycle will begin with the on sensior condition. To observe servator timer intervals additional time will seed to be spent on sits, or use the "Test Mode" to accelerate the timer cycles. If tests are not satisfactory, recheck and correct the system whing as needed.
 Once all checks are completed, return the "Test Mode" to its normal position and reset the control panel with the "Massier Reset" switch.
 Make sure to correct distribution information is on the front of the panel and complete the control panel warranty card with the appropriate information.

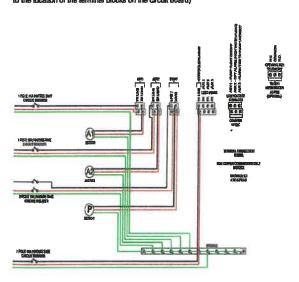


Problem	Probable Cause	Solution
No Power to Panel	No power from main breaker panel Internal panel power switch in off position	Check wiring and main breaker pan Check on/off swits
Aerator Alarm After Start Up	Aerstors not connected and running DIP serator selection incorrect Aerator/Compressor OIP setting incorrect	Check aerator(s) and connections Confirm DIP settings are corrector system design.
Auxiliary Alarm After Start Up	Alarm settings incorrect (NO/NC) Alarm or float condition is active	Check alarm settls jumpers for proper NO/NC Check external devices and floats.
No Power to Aerators	Inbound power inactive Timer setting in "Off" cycle	Check connections and main breaker penel Reset panel to override "Off" cycle
No Power to Pump	Inbound power inactive Alarm condition active	Check connections end main breaker panel Resolve atarm conditions
Auxiliary Outputs Inactive	DIP settings incorrect Excessive load on external device	Check DIP setting: Contirm power requirements for external device
Aerator Timer Not Functioning	Incorrect DIP settings	Check DIP setting:
Aerator Reset Not Functioning	Enternal reset locked out External toggle not contecting button	Reset panel with Master Reset butto Adjust depth of externel toggle
Aerator Alenn with Compressor	DIP not set to compressor function	Check DIP setting
Alarms not Functioning	Automated reset program active (Normal Function)	 Toggle test mode "ON" if instant alarms desired



Electrical Wiring Diagram

Refer to the wiring diagram below when connecting aerators, compressors, pumps, and auxiliary equipment to the Jet model 197 control panels. (Note: The location of the terminal blocks has been re-formatted for this manual and does not exactly correspond to the location of the terminal blocks on the circuit board)



WIRING DIAGRAM-MODEL 197 CONTROL PANEL

REV 1/23/2019



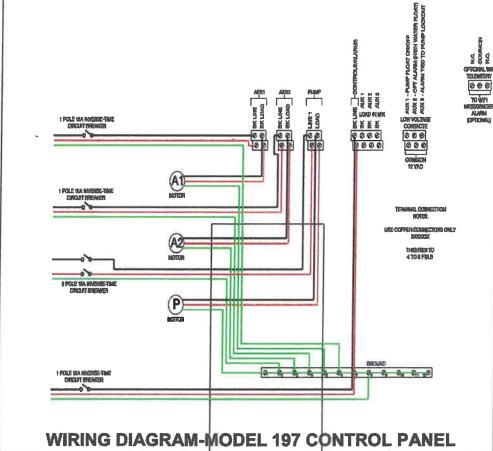
-- 14 --

1-YEAR LIMITED WARRANTY

Jet Inc. warrants all new system components supplied by Jet against defective materiats and workmanship, under normal service for one year commencing upon date of shipment from the factory. To make a claim under this warranty, you should notify your Jet Distributor or notify, Jet Inc., Customer Service Department by phone at 1-800-321-4880 or by mail at 750 Alpha Drive, Claveland, Ohio 44143. If a component or part is proven defective during this warranty period there shall be no charges for labor or materiats required for the repair or replacement of the defective component. Jet shall have the option to require the defective part be returned, freight prepaid, for evaluation at the factory before allowing a claim. All components must be returned by an authorized Jet distributor who is in good standing with Jet Inc. Jet Inc. may, at its option, elect to repair or replace the defective components or refund the ourchase price of the distributor who is in good standing with Jet Inc. Jet Inc. may, at its option, elect to repair or replace the defective components, or refund the purchase price of the defective component(e). The system owner shall assume all responsibility for freight charges to and from Jet Inc. This warranty does not cover system components or parts that have been (i) damaged due to disassemently by unauthorized persons, improper installation, misuse, or fightning, (II) subjected to external damage, (III) damaged due to improper or attered wiring, or overhad protection, or (IV) damaged by failure to follow the suggestions outlined in any associated product documentation or Owners Manuals. Items normally consumed in service such as Suses, fifter cartridges, spir plates, grease, oil, etc. are not warranted. This warranty applies only to the Jet system components supplied by Jet Inc. and does not include any of the wiring, plumbing, drainage, or any other part of the disposal system.

JET INC. SHALL NOT BE HELD RESPONSIBLE FOR ANY DAMAGES JET INC. SHALL NOT BE HELD RESPONSIBLE FOR ANY DAMAGES CAUSED BY DEFECTIVE COMPONENTS OR MATERIALS, OR FOR LOSS INCURRED BECAUSE OF THE INTERRUPTION OF SERVICE, OR ANY OTHER SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES OR EXPENSES ARISING FROM THE MANUFACTURE, SALE, USE OR MISUSE OF THE COMMERCIAL TREATMENT PLANT. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES. ANY WARRANTY IMPLIED BY CAM, INCLUDING FITNESS IS IN EFFECT ONLY FOR THE ONE YEAR WARRANTY PERIOD SPECIFIED ABOVE. (SOME STATES DO NOT ALLOW EXCLUSIONS OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR ALLOW LIMITATIONS OF HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO

Jet Inc. reserves the right to revise, change, or modify the construction and design of the Jet system components or any component part or parts thereof supplied by Jet, without incurring any obligation to make such changes or modifications in present equipment. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.



EVANS ENGINEERING 4240 ARPORT ROAD, SUITE 211 CINCINNATI, OHIO 45226 (513) 321-2168 PANEL DETAILS
9960 LACRET RD.
CINCINNATI. OF 4525.
HAMILTON COUNTY SCALE: HORIZ. VERT. VARIES N/A JOB. NO. 21-169 DATE July 22, 2022 SHEET NO. C-7

JUL 25 2022

er Quality

QA-SAL-132 REV 7/31/2013

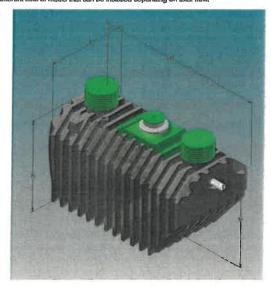
Installation - Tank & Aerator J-500PLT - 800 PLT Series

NSF LISTED PLANTS

These instructions apply to J-500PLT - 800PLT plants. This series includes a 500, 750 and 800 GPD

J-500 PLT - 800 PLT plants have been tested and meet NSF Standard 40 criteria for a Class I NSF

J-500 PLT - 800 PLT media installation is done by the distributor before the tank is delivered. There are 2 different sets of media that can be installed depending on total flow.



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4. Inspect Outlet - Inspect finel discharge point of system to insure it is not and cannot become blocked. If there is a chance that it may become blocked in the future, inform owner and contracto that this situation must be corrected before you can install service. Tell them blockage will lead to improper drahage and repeated stoppages - this can be avoided by preventive action now. (DO NOT INSTALL AERATOR IF SUCH A SITUATION EXISTS.)

a. Remove all manuals and paperwork. These should be left with the system or given directly to the

homeowner.

b. Carefully remove aspirator sheft. Silde foam restrictor onto shaft so that side of foam restrictor labeled "This side toward motor" faces away from expirator. Set this down gently in a safe place.

c. Remove parts bag, owner's manual, and erentor. Because the serator fits tightly into carton, it helps to grip the bottom of carbon with your feet when printing it out.

d. tespect all parts for shipping damage. Notify the carrier immediately if there is any damage.

e. When handling the shaft be careful not to burn the ends of the coupling and expirator shaft be-

e. When handling the shaft be careful not to burn the ends of the coupling and aspirator shaft because the fit is quite close.

 Exposing serator to severe cold, such as the back of a truck or an unheated storage area, could cause circuit breaker to trip when power is first applied due to the drag from cold bearing grease. To prevent this problem, place earstor in a warm erea (cab of truck) for a short time before installation. After the aerator is initially started, cold weather will not affect to operation.
 Electrical Connection - Before proceeding, make sure power is "OFF" at both the aerator Control Panel and at the main electrical panel in the house. Ever all three leads of cable with a multi-meter to be sure power is "OFF". Check the dimension of the underground cable to make sure it is not smaller than 2016." 4 1867. If it is exposer to in a common time the warderful. than 23/64" x 11/64", If it is smaller, the grommet will not be waterlight.

Ent 2x704 X 1104. If it is smaller, the grantere will not be welen upit.

Reclary-Installed card & connector.

Install female leaf of electrical connector on end of cable, in mounting casting, coming from facility. Connect two helves of connector.

ii. Strip the jacket of cable coming from facility approximately 1 1/4*. Strip 1/4* of insutation from

black and white lead wires.

ill. Connect wire to internal connectors on Fernale half of electrical connector, note color coded terminate designate power, neutral, and ground (brass, sliver, green)

ly. Connect two halves of connector. 7. Install Foam Restrictor and Aspirator Shaft

NOTE: An earlier high on the side would rest on the foam restrictor and bend the aspirator shall or motor shall. For this reason, it is necessary to either block up lower and of the agrator, or allow it to overhang an object during installation of espirator shall.

a. Side foam restrictor down shall until it along at ground-step on espirator shall. Tighten set screw

family. The Allen key should spring, but do not tighten it so much that it skps and rounds out the

hex sociated.

b. Slide aspirator shaft into coupling already attached to aerator motor shaft until foam restrictor stops against coupling. Firmly tighten the two set screws closest to foam restrictor. The Allen key should spring, but do not fighten it so much that it stips and rounds out hex societ.

I have sometime recent distributions anoly a light coaling of lubricant, petroleum grease,

should spring, but do not greaten it so much that it supe and nounces out next socker.

To ease future disassembly, many distributions apply a light coating of labricant, petroleum grease, to end of motor and asphator sheft. If lutricant is applied do not use too much or allow it to get into the hollow end of the connector or sheft.

8. Fit Brackets if the bumpers on the bottom brackets do not press against all sides of earstor itser, remove aerator and spring brackets out until all of them touch the sides. The fit should be snug, but

remove severace area syring characters out unit was or users routed into scores. The interaction of single, mu-not light enough to push humpers off when earsier is installed.

I install cerator in riser. If exclanation risers are used, it is easier to install or remove an earsior using a still fork that is supplied in distributor's tool kt. The lift fork can be screwed onto a piece of 1" threaded pipe (supplied by distributor). A 5' length should be adequate for most installations. The lift fork should be positioned under the serator lift handle.

be postunoed under the earant rist handle.

It is tall Dip Loops. Once genator is installed, push cable down below connector an inch or two. This forms a "trip loop" which channels any water running down the cable away from the aerator.

It Rotate Aerator Clockwiss. Looking down at installed eerator, rotate it clockwise until one of the mounting brackets engages the entit hostion both. This prevents cutting off the air supply by twisting of the air hose and also eliminates electrical problems caused by twisted cebles.

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TANK INSTALL ATION

IMPORTANT NOTES

DO NOT:

Install tank in water saturated clay or in a high water table.
 Install tank under areas where there is motorized traffic.

3. Backfill with clay soil

ALWAYS:

1. Completely fill the tank with water after installation

Ordy residential wastewater should be permitted to enter the system. The plant is not designed to receive flow from footier drains or roof downspouts or other storm water sources. The system should be located in an area which provides protection of the air intake from snow, ice or debris which pray accumulate.

It is important that all local and state laws and plumbing codes regarding the plant installation process be followed. Appropriate installation permits are required for all installations. Items such as the connection of plumbing indures to the tank inlet line, position of inlet and discharge lines, grade and any other aspects of plant or plant related plumbing should be checked with the appropriate contractors to make sure all work conforms to local and state regulations. A pre-construction conference with all interested parties is strongly

This system is not designed to be installed above ground. Special procedures are required for above ground or

Location of the tank must be in accordance with Health Department regulations in accordance with site design plans, Ideal location will be on ground which will not flood, which provides adequate fall and ellows installation of lines which are as short and straight as possible.

There are many considerations in proper installation of a tank and the most important of which is that the tank

Jet systems may only be instalted by authorized instalters, who must be present during all phases of

ANTI-FLOTATION DEVICE:

Note: It may be necessary to secure the tank with anti-flotation devices. Refer to the J-500-800PLT Bouyancy

EXCAVATION:

1. Verily the excavation is free of sharp stones and debris. The excavation should be level.

2. Allow for 9" to 24" of earth cover over the top of the tank. (approx. 7"-B'depth)

3. There should be sufficient over dig to allow for at least 12" of clearance on all four sides of the tank.

(approx.7:13')

4. Verify there is a solid earthen pad to sit the tenk on. Consider using a compacted mixture of send end gravel (6" minimum in soil and 12" minimum in rooky terretin). Clay soils are not suitable for

TANK SETTING:

1. Verify the tank is free of damage that may have occurred during transport

control name! Read these before nonce

to the factory. Install serator riser cover.

16. Final Steps.

TANK PLEMPING

12. Piace 4 ½" Outside-Air-Hose on hose adapter attached to aerator. IMPORTANT: Hose must be in place to insure fresh air for optimum treatment and plant performance, if one or more sissers are used, e longer hose is negatived. Remove the air hose from the top of the senator and cut a place from a butk coff (sold separately) and install it. It must be long enough to fit.

erator and cut a place from a bulk coll gold separately) and install it. It must be long enough to its completely on the plassic hase edeport (sop, center of serator - over shall) and go straight up into the center of the vent. Be sure hose is properly installed in vent cap. It must not be bent or kinked when the riser cover is replaced. After the riser cover is in place, remove the vent cap and check position of hose. It should be in the vent body but not close enough to the vent lid to restrict air flow. 13. Perform Electrical Test. The control panel installation and user's manual is provided with every Jet

onitol panel. Read these before proceeding.

Check to be sure the Control Panel Installed is the correct one for the system and ensure that it includes an autodialer and pump lockout feeture to disable discharge in the event of an elarm condition if required by local and state codes.

b. Check the within to be sure all the above instructions have been followed. If necessary, have the

electrical contractor connect the work.

Set the Control Panel exists to the "OFF" position. Turn the power to the Control Panel circuit.

O'N' at the main panel. With the everator installed and operational, there should be no audible or

d. Test for power to the panel. Use a multi-meter to confirm proper voltage to the panel and compo-

nents. Operating voltages for the control circuit and sendor are 120 volts +1 0%.

e. Check each circuit for proper polarity by placing one prod of the multi-meter on terminal and the other prod to the common wire in the Control Panel.

ctions provided. Trigger an starm to confirm that the autodialer is functional and the fand line

and confirm that the pump circuit power has been disabled. Return the atarm condition to normal

f. If the Control Panel is engioned with an auto dialer, program the autodialer according to the in-

g. Test the power to the pump circuit. If equipped with lock-out feature, initiale en alarm condition

setting.

If these tests or checks are not settinfactory, correct the wiring or contact an electrician.

When all checks are completed, make sure the Control Panel switch is in the "ON" position.

Close and secure the Control Panel cover.

14. Observe Aerator Operation. It should be quiet and free from excessive vibration, Heavy vibration indi-

cates shaft damage. If heavy vibration occurs, install a new shaft and return the shaft that is damaged

nal Stape.

Completely fall in label on front of Control Panel cover.

Remove the red "Notice to Occupant" tag from Control Panel.

Fill in "Installation and Service Record" cand.

Explain "Owner's Manual" to owner and wire manual to the Control Panel. Instruct owner to fill in "Owner Warranty Registration" card and mail it.

Record all installation information including address, date of start up, permit number, and status

Always pump down the pre-freshment tank firet. The transfer tee in the beffle wall between the pre-treshment and treshment tank will allow water to move freely into the pre-freshment tank.
 After the pumping of the pre-treatment tank is complete, pump remaining liquid from the treatment.

3. Fill the tank with water immediately after pumping, starting with the pre-treatment

plete start up inspection and checklist and submit copies to Jet Inc. and the local administra-

Verify rot teams not on calculate that may have become uniting it an experience.
 Verify rubber gasket and plastic tee has been installed in the intet and outlet ports on the tank.
 Place the tank in the excavation site and level to within 1° end to end and side to side.
 Install extension risers if necessary, be sure to seal with mastic sealing and appropriate hardwa

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EFFLUENT TESTING: 1. Efficient Sample Means - Collection and assessment of efficient samples is required for all NSF Listed plants. There are four sample taking means from which samples is required to all new Listed plants. There are four sample taking means from which samples may be taken. One of these methods must be chosen prior to plant installation and necessary arrangements made duri mistallation to incorporate this method into the overall system. For information on "Collecting & Assessing Samples" see "Plant Inspection & Service" instructions. The means are as follows:

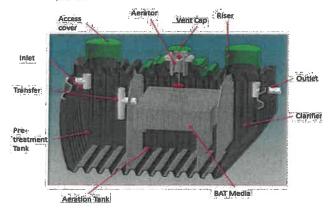
 Their Outlet Samples - Can be taken at the final outlet point if it is accessible. The final outlet must be elevated sufficiently to allow a free-flowing earniet to be taken.
 Sample Cross Samples - The cross must be as dose as possible to the discharge end of the tank. One horizontal arm of the cross should act as the first section of the discharge line from the tank. The other horizontal arm acts as a continuation of the discharge line. One vertical arm of the cross extends downward and the other extends up to grade. The arm to grade should be

of the cross extends downward and the construction by the brown that the high enough covered with a removable cover.

c. Distribution Box Samples - To use this method the box must have an inlet line high enough above the box floor so that a free-flowing sample can be taken. Also the top of the box must be slightly above grade and covered with a removable cover. If the box doesn't meet these qualifications it must be modified so that it does or this method of sample collection cannot be

used.

Baffled Outlet Samples — A sample from inside the plant outlet befile may be taken. The outlet must have an open top and the plant discharge line must lead directly to it. It must also be accessible from grade and covered with a removable cover. Baffles are usually constructed with



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5. If required attach additional secator risers to the center cover. Seal with mastic sestion

and appropriate hardware.

6. Install inlet and outlet sewer lines and seal in place. Sewer lines should be 4" diameter.

BACKFILLING TANK:

1. Fill 1/3 of the tank with water before beckfilling begins to ensure tank will not shift during

Begin to backfill under the sloped clarifier.

2. Begin to detail under the sloped clariner, 3. This sloped digrifier walf must be supported to reinforce the tank wells. A mixture of sand and/or gravel must be used to backfill the inject and outlet side walls of the tank. Jet recommends the backfill mixture consists of material no larger than 14/a" in diameter. The backfill should be added white compacting every 12" to ensure all void space under the sloped walls and ground the injet side walls has been

completely filled.

4. Once the tank has been backfilled to the center line (above the sloped wall) the upper half of the tank can be backfilled with suitable native, preferably loose, soil; Never backfill with clay soils. Be sure the backfill is free of rocks and sharp objects.

mp and compact backfill mixture under the latet and outlet pipes.

6. Fill the tank with water to the outlet.

7. Test for Proper Drainage - Be sure tank is full to the flow line. Fill bathtub, laundry sinks, and any other fictures that drain into system. Then, simultaneously drain all these fictures and flush tollets. Observing rise in water level of tank. If the water rises over 3° and does not go down immediately, inform contractor that senator cannot be installed until this situation is corrected

Backfill the rest of the excavation to a maximum of 24" above the top of the tank with earth fill material. The final grade should stope away from the tank to help with surface runoff.

When instelling the serator be extremely careful of appirator shaft. It has a very critical straightness tolerance. Don't ever left it touch anything except liquid. Also remember that the fit between counting end aspirator shaft is quite close. Be careful not to burn or dirty the ends of either part.

creams to quate service. To describe law to dust or early set series or extract part.

Let exertain have been certifully desligned and built to give years of trouble-free genetion. To assure this long, trouble-free life, it is absolutely necessary to carefully follow the earstor installation and handling Life of the aerator depends on a straight shaft. Never lift serator by the shaft or subject the shaft to any

bending, bumping, or strain. Never let the shaft contact englishing but liquid.
You can eliminate well over 50% of your service calls if you slways inspect the system and test for proper drainage at it restallation time.
Jet Floodproof model serviors are sealed to protect from from water demage by flooding, it is, however, not

designed to persite under water. Do not disease while it or remove plugs or bolts.

The "Control Penel Installation and Users Meruel" control Penel Installation and Users Meruel" control Penel Installation and Users Meruel" control is wiring diagram and detailed wiring instructions.

An electrical specification and requirements othert, is located on the Inside of each Control Penel.

1. Turn Off Power - Turn the aerator Control Panel switch to "OFP". Next turn power that controls this

circuit at main panel **OFF**.

Check Aerator/Flow Line Measurements - Location of serator to flow line is very important. Measure distance from ledge in the serator riser to liquid level in tenk. Tank must be full to flow line. If it is

between 25° to 27°, aerator location is correct. If it is not, aerator riser may not be installed correctly.

3. Check Vent Position - Check position of vent cap in cover. It must be installed on center of cover as shown in illustration. If vent cap is not centered, the outside-air-hose will be and air to the aerator will be cut off.

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COLUMN TAXABLE BOX 1477 BOX STORY - 447 FRANCE COLUMN Tar save weedfile 147 5000 The State of the S



BEV ON THE POST

Jet J-500-800PLT

BUOYANCY





750 Alpha Drive Cleveland, Ohio 44143 • www.jetincorp.gom • 600,321,696

JUL 25 2022

When the J-500-B00 PLT is to be installed insreas where high water tables are common, additional and-budyancy measures should be installed. Jet recommend using concrete archers glaced beside the tank in their expension and secured to the arch with prober yieldo devolph his sitting logs on the tank to chause they will not shift during installation and besideling. Use the chart below to determine the amount of existional hold down weight needed for the burial depth of the institution and act density from a registered soil existinctive report. When invested, the total veight of the anchor and the soil above the anchor must be greater than the weight shown in the table. For maximum effectiveness, the enchors should be invested as your possible in the exceptation.

-/Jet

Note: the table whome the required weight to hold a tank in place if it is filled with water. Do NOY have a placed tank





SYSTEM

TREATMENT SYS
PROFILE
9960 LEACHEST RD, CENCENNATI, C

SCALE: HORIZ. VERT.

JOB. NO. 21-169 DATE July 22, 2022

8

SHEET NO.

C-8

EVANS ENGINEERING 4240 AIRPORT ROAD, SUITE 211 CINCINNATI, OHIO 45226 (513) 321-2168



1 =3 N/A