



PREVENT. PROMOTE. PROTECT.

June 26, 2018

Timothy Ingram, Health Commissioner
250 William Howard Taft Road
Cincinnati, OH 45219
Phone: 513.946.7800 Fax: 513.946.7890
hcph.org

Dear Property Owner,

Hamilton County Public Health (HCPH) recently pre-approved you at 100% grant funding through the Water Pollution Control Loan Fund (WPCLF) to help in the sewage treatment system (STS) replacement project at your primary residence. The WPCLF requires at least three bids or quotes be submitted to Hamilton County Public Health for each eligible project. HCPH recently reviewed and approved the STS replacement plan for your property at 478 W. North Bend Road. Attached you will find a copy of the approved plan which you will need to use in order to solicit bids/quotes on behalf of HCPH.

Using the attached forms, sample contract, approved STS design plan for your property and the guidance provided in this letter, you will need to contact registered STS installers individually for quotes/bids. Attached is a list of registered STS installers you may contact. Any contractors interested in your project will need to submit a bid/quote for the total cost for all work needed to install the approved STS using the form provided. This will include all items specified on the approved STS design plan, any needed connection of plumbing into the building sewer, disconnection and re-routing of any clear water from the plumbing system or STS, any needed electrical service upgrade if required to accommodate the replacement STS components, any other eligible and justified items, finished grading, seed and straw, and proper abandonment of the existing STS components.

To keep the process moving forward, by August 20, 2018, at least three bids/quotes must be obtained by you on behalf of HCPH. Keep in mind that returning bids/quotes sooner will better help your chances of receiving the WPCLF funding. Bids/quotes will be reviewed by a team of individuals at HCPH. They will be awarded to the qualified applicant based on the lowest and best bid and will be dependent upon bidder's availability to complete the requested work in a timely fashion. Awarded contracts are strictly between HCPH and the selected contractor. Any attempt to enter into separate contract, addendum, modification, invoice or other contractual agreement, except for the property owner's matching percentage to be paid directly by the owner to the contractor, without prior approval by HCPH may disqualify the bidder.

If selected to complete the STS installation, the contractor will be contacted directly by HCPH. At that time, they will be required to sign a site specific version of the attached contract and submit all required contract paperwork to HCPH. Once verified, a Notice to Proceed will be issued to the contractor by HCPH allowing the selected contractor to begin the installation. All work required must be completed (including final inspection) by November 15, 2018 and following receipt of the Notice to Proceed.

It should be noted that any unexpected changes and/or alterations needed during the performance of work, requires a Contract Change Order (see Contract - Attachment B). Payment for any changed or extra services will not occur without pre-approval using this method. Also note that the contract has special insurance and bid bonding/financial guarantee requirements that must be followed.



Healthy choices. Healthy lives. Healthy communities.



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For the WPCLF portion of the payment to occur, HCPH must approve the final STS installation. After which, the contractor must submit to HCPH an invoice, by December 1, 2018, to document the incurred costs for the repair/replacement along with an approval certificate issued by HCPH. Upon verification of this information, HCPH will send a request to Ohio EPA for reimbursement of the eligible system repair/replacement costs. After confirmation by Ohio EPA, the Ohio Water Development Authority will distribute the funding to HCPH, who will then pay the contractor the approved amount. Any portion of the approved bid amount not covered by the WPCLF must be paid directly by the property owner to the contractor.

At this time, if you would like to remain eligible for the WPCLF, you must solicit quotes/bids, on behalf of HCPH, for your STS replacement project. When submitting each bid/quote, the contractor must include a completed, signed and dated copy of the following attachments:

- i Hamilton County Bid Proposal Form
- i Contractor Equal Employment Opportunity (EEO) Certification Form
- i Certification Regarding Debarment, Suspension, and Other Responsibility Matters Form
- i American Iron and Steel (AIS) Form

Please collect at least three bids/quotes and submit them with the items listed above, on or before August 20, 2018 directly to me at:

Hamilton County Public Health
Attn: Chris Griffith
250 William Howard Taft
Cincinnati, OH 45219

If you have any questions concerning this program, please feel free to contact me directly at 946-7866.

Sincerely,

A handwritten signature in black ink that reads "Chris Griffith RS". The signature is written in a cursive, somewhat stylized font.

Christopher M. Griffith, RS
Director of Water Quality

Hamilton County Bid Proposal Form

Contractor Name: _____

Contractor Address: _____

Contractor Phone(s): _____

Project Address: _____

Bid Due Date: _____

Total Amount of Bid: _____

Total Amount in Written Words: _____

Signature, Printed Name, Contractor

Date

I will begin the work within upon receipt of the written Design Contract and Notice to Proceed Order, and will complete the work within 45 days, unless otherwise agreed to by Hamilton County Public Health.

The above total price includes all materials, labor and other costs such as overhead, permits, sales tax and profit. This bid is valid for a period of 30 days after the date this proposal is received by Hamilton County Public Health.

Mail Bid Packet to: Hamilton County Public Health

Attn: Chris Griffith
250 William Howard Taft
Cincinnati, OH 45219

Contractor Equal Employment Opportunity Certification

During the performance of this contract, the undersigned agrees as follows:

1. The undersigned will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The undersigned will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The undersigned agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this equal opportunity (federally assisted construction) clause.
2. The undersigned will, in all solicitations or advertisements for employees placed by or on behalf of the undersigned, state the all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.
3. The undersigned will send to each labor union or representative of workers, with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the undersigned's commitment under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The undersigned will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
5. The undersigned will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and relevant orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the administering agency of the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
6. In the event of the undersigned's non compliance with the equal opportunity (federally assisted construction) clause of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part, and the undersigned may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No 11246 of September 24, 1965, or by rules, regulations, or order of the Secretary of Labor, or as provided by law.
7. The undersigned will include this equal opportunity (federally assisted construction) clause in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order No 11246 of September 24, 1965, so that such provision will be binding upon each subcontract or vender. The undersigned will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor, as a result of such direction by the administering agency the undersigned may request the United States to enter into such litigation to protect the interest of the United States.

(Signature)

(Date)

(Name and Title of Signer, Please type)

(Firm Name)

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification;
- (d) Have not within a three year period preceding this application / proposal had one or more public transactions (Federal, State, or local) terminated for cause or default; and
- (e) Will not utilize a subcontractor or supplier who is unable to certify (a) through (d) above.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Type Name & Title of Authorized Representative

Signature of Authorized Representative

Date

I am unable to certify to the above statements. My explanation is attached.

Certification Regarding Debarment, Suspension, and Other Responsibility Matters
INSTRUCTIONS

Under Executive Order 12549 an individual or organization debarred or excluded from participation in Federal assistance or benefit programs may not receive any assistance award under a Federal program or a subagreement thereunder for \$25,000 or more.

Accordingly, each prospective recipient of an EPA grant, loan, or cooperative agreement and any contract or subagreement participant thereunder must complete the attached certification provide an explanation why they cannot. For further details, see 40 CFR 32.510, Participants' responsibilities, in the attached regulation.

Go to <https://www.sam.gov/portal/SAM/##11> to access the Excluded Parties List System (EPLS). The EPLS includes information regarding entities debarred, suspended, proposed for debarment, excluded or disqualified under the nonprocurement common rule, or otherwise declared ineligible from receiving Federal contracts, certain subcontracts, and certain Federal assistance and benefits. This information may include names, addresses, DUNS numbers, Social Security Numbers, Employer Identification Numbers or other Taxpayer Identification Numbers, if available and deemed appropriate and permissible to publish by the agency taking the action.

Where To Submit

The prospective EPA grant, loan, or cooperative agreement recipient must return the signed certification or explanation with its application to the appropriate EPA Headquarters, Regional office, or Ohio EPA, as required in the applications.

A prospective prime contractor must submit a complete certification or explanation to the individual or organization awarding the contract.

Each prospective subcontractor must submit a complete certification or explanation to the prime contractor for the project.

Applicants may reproduce these materials as needed and provide them to their prospective prime contractor, who, in turn, may reproduce and provide them to prospective subcontractors.

Additional copies / assistance may be requested from:

Ohio EPA
Division of Environmental and Financial Assistance
P.O. Box 1049
Columbus, Ohio
43216 1049 (614)
644 2798

<http://epa.ohio.gov/defa/EnvironmentalandFinancialAssistance.aspx>

American Iron and Steel Acknowledgement

The Contractor acknowledges to and for the benefit of _____
("Purchaser") and the State of Ohio (the "State") that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as "American Iron and Steel;" that requires all of the iron and steel products used in the project to be produced in the United States ("American Iron and Steel Requirement") including iron and steel products provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

Signature _____ Date _____

Name and Title of Authorized Signatory, Please Print or Type _____

Bidder's Firm _____

Check here if the WPCLF or WSRLA applicant will be requesting an individual waiver for non-American made iron and steel products. Please note that the waiver box does not need to be marked for nationwide waivers.

CONSTRUCTION CONTRACT
HAMILTON COUNTY PUBLIC HEALTH
With xxxxxxxxxxxxxxxx
xxxx xxxxxxxxxxxxxxxx Road
Dated xxxx, xx 2018

PROJECT: HOUSEHOLD SEWAGE TREATMENT SYSTEM REPAIR/REPLACEMENT PROJECT

This CONTRACT, made and entered into at HAMILTON COUNTY, Ohio, on xxxx xx, 2018 by the HAMILTON COUNTY PUBLIC HEALTH, hereinafter referred to as "HCPH"); and xxxxxxxxxxxxxxxx (hereinafter referred to as "CONTRACTOR").

WITNESSETH, the HCPH and the CONTRACTOR hereby agree as follows:

1. CONTRACT DOCUMENTS

The Contract consists of this document, the Contractor's Bond, the Contractor's Bid, the Design Drawings, the Design Specifications, all Addenda issued prior to execution of this Contract, the Notice To Proceed (Attachment A), all Change Orders (Attachment B) issued subsequent thereto and Federal, State, and/or Local Regulations; and when specified: Labor and Material Bond, Affirmative Action and Equal Opportunity Requirements, Contractor Equal Employment Opportunity Certification Form (Attachment C), Certification Regarding Debarment, Suspension and Other Responsibility Matters Form (Attachment D), and American Iron and Steel Acknowledgement Form (Attachment E).

2. CONTRACT REGULATIONS

Terms and conditions of this Contract shall be governed by the provisions of Chapters 153 and 4115 and Section 149.53 of the Ohio Revised Code, and all applicable local, State and Federal Ordinances, Statutes and Regulations.

The CONTRACTOR agrees not to discriminate against any employee or applicant for employment because of race, creed, sex, handicap, or color, including, but not limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship. All records, manuals, forms, drawings, schedules, lists, surveys, specifications, designs, and other data pertaining to the work specified in this contract are and shall remain the sole property of the HCPH. The use of any Subcontractor must be reported to the HCPH and they shall be bound by the same requirements as the CONTRACTOR.

3. BONDING

A bond or other form of financial guarantee shall be submitted by the CONTRACTOR in accordance with Sections 153.54/307.89 of the Ohio Revised Code and Section 3.4 of the Water Pollution Control Loan Agreement for the full amount of the Contractor's Bid.

4. THE WORK

The CONTRACTOR shall perform and complete all work of the Project required by the Contract Documents for xxxx xxxxxxxx Road, supplying all the labor, materials, supervision, tools and equipment required by the Installation Permit, Design, Project and Contract Documents; shall proceed in a prompt and diligent manner, and shall do the several parts thereof at such times and in such order as the HCPH may direct, and shall execute, construct, finish, and test when required, the Project in an expeditious, substantial and workmanlike manner to the satisfaction of HCPH, and to the final acceptance of the Project by HCPH

5. TIME OF COMMENCEMENT AND COMPLETION

The CONTRACTOR shall commence work upon receipt of the written Notice To Proceed (Attachment A) issued by HCPH. The CONTRACTOR shall complete the Project work by xxxxxx xxxx, 201x and following the Notice To Proceed.

6. RIGHTS OF ACCESS

The signatories agree to ensure that the Director or its duly authorized agents shall have the right at all reasonable times to enter upon the Project Site(s) and Project Facilities, and to examine and inspect the same and to exercise the Director's rights pursuant to the WPCLF Assistance Agreement.

7. CONTRACT CONFLICTS

In the event of a conflict between the contract and the WPCLF Assistance Agreement, the provisions of the WPCLF Agreement shall prevail.

8. CONTRACT SUM

Hamilton County Public Health, utilizing OHIO EPA funding, shall pay the CONTRACTOR for the performance of the Work, up to the sum of \$xx,xxx.xx (xx% of eligible costs paid by HCPH with xx% covered by the property owner) subject to additions and deductions by Change Orders (Attachment B) properly approved and executed. All properly approved and executed Change Orders for increases will be paid by HCPH, utilizing

OHIO EPA funding, and/or homeowner contribution. Neither HCPH nor OHIO EPA will responsible for additional reinspection fees.

9. PAYMENTS

Based upon Applications for Payment submitted to the HCPH by the CONTRACTOR, and after installation approval by HCPH, the contractor shall submit an invoice that documents costs all incurred to HCPH. The invoice shall detail the services rendered, including charge rates, number of hours, materials or supplies consumed, and other information needed to support the invoice to HCPH. Upon verification of this information, HCPH will send a request to Ohio EPA for reimbursement of the eligible costs. After confirmation by Ohio EPA, the Ohio Water Development Authority will distribute the funding to HCPH, who will then pay the Contract Sum to the CONTRACTOR as provided in Chapter 153 of the Ohio Revised Code and after payment is received from the Ohio EPA.

10. NEGLECT, DEFAULT, DELAY, ETC.

Hamilton County Public Health or Hamilton County Board of Health shall not be liable to the CONTRACTOR for any neglect, default, delay, or interference of or by another contractor, nor shall any such neglect, default, delay, or interference of or by another contractor, or alteration which may be required in said Work within the time aforesaid, or from the damage to be paid in default thereof. The CONTRACTOR shall pay HCPH \$200.00 for each and every calendar day of completion the Project is delayed beyond the date fixed for completion in Section 3 herein.

11. INSURANCE

The Insurance Specifications for Contractors and their subcontractors are as follows:

- A. All insurance required herein shall be issued by companies licensed to do business in Ohio, and which are rated not less than A: VII by A. M. Best.
- B. Commercial General Liability insurance with commercial general liability form GC 00 01 or its equivalent, with limits of at least \$1,000,000 per occurrence and \$1,000,000 in the aggregate covering death, bodily injury, and property damage. Coverage must include premise and operations, contractual liability, third party property damage, severability of interest, completed operations coverage, maintained for at least three years beyond the date of the contractor's

completion of the work, waiver of subrogation, and waiver of "cross claim exclusion between insured's".

- C. Business auto liability insurance of at least \$1,000,000 combined single limit, on all owned and non-owned leased and hired automobiles.
- D. Umbrella and excess liability policies of at least \$1,000,000, per occurrence and in the aggregate, above the underlying General Liability and business auto policies. Coverage must include drop down features, concurrency of effective dates; aggregates in the primary apply in the Umbrella, waiver of subrogation.
- E. The Commercial General Liability and business auto policies must endorse the Board of Health of Hamilton County, Ohio, their employees, officials, agents and volunteers as additional insureds. Further these policies must waive subrogation claims against the aforesaid individuals.
- F. Owner shall require its contractors and subcontractors to provide Workers' Compensation Insurance coverage at the statutory limits required by the Ohio Revised Code. The Contractor shall provide Workers Compensation Insurance for all employees engaged in Work who may come within the protection of the workers compensation law, and, where applicable, employer's General Liability Insurances for employees not so protected and shall require all Subcontractors to provide corresponding insurance. The Contractor shall indemnify the Owner, Hamilton County Board of Health, their employees, officials, agents and volunteers and the Consulting Engineer against any and all liabilities, cost and expenses due to accidents or other occurrences covered by the workers compensation law.
- G. Each policy required herein may not be canceled or materially changed except upon thirty days prior written notice given to: Hamilton County Public Health, 250 William Howard Taft, Cincinnati, Ohio 45219.
- H. Maintenance of the insurance required hereunder is a material element of this Agreement. Material changes of the required coverage or cancellation of the coverage in violation of subsection G, above, is a material breach of this Agreement.
- I. Builders Risk: In addition to such fire and other physical damage insurances as the Contractors

elects to carry for his own protection, he shall also secure and maintain in the name of the Owner, the government agency sponsoring the Project, Subcontractors, the Consulting Engineer and any other parties having an interest in the Project, as named insured as their interest may appear; a builders' risk policy for fire, extended coverage, vandalism and malicious mischief in the amount of one hundred (100) percent of the value of the complete parts of the Project and Materials in storage, except that such coverage shall not be required in connection with sewer, water main or paving construction. Pump or lift station construction shall not be considered sewer or water main construction for purposes of this paragraph.

J. Contractor's Public Liability and Property Damage Liability Insurance:

Contractor's Public Liability Insurance providing a limit of not less than \$500,000 for all damages arising out of bodily injuries, including accidental death to one person, and a total limit of 1,000,000 for all damages arising out of bodily injuries, including accidental death, to two or more persons in any one occurrence. Contractor's Property Damage Liability Insurance providing for a limit on not less than \$500,000 for all damages to or destruction of property.

Coverage under this policy shall include, to the limits indicated above, the collapse or damage to any structure, building or its contents, public or private utility, or pavement during construction and for two (2) years thereafter.

Whenever Work under the Contract is to be done in the vicinity of existing underground utilities or structures, coverage under the policy shall also include, to the limits indicated, all damages to said underground utilities or structures during construction and for a period of two (2) years thereafter. Whenever Work under the Contract is to be done by blasting, coverage under the policy shall also include, to the limits indicated above, all damages of any kind whatsoever caused by blasting.

K. Contractor's Protective Public Liability and Property Damage Liability

Insurance: Contractor's Protective Public Liability and Property Damage Liability Insurance for operations performed by Subcontractors providing for coverage and limits corresponding to those described in subparagraph J.

- L. Owner's (HCPH) Protective Public Liability and Property Damage Liability
Insurance: Regular Owner's Protective Public Liability and Property Damage Liability Insurance for operations performed by the Contractor or any Sub-contractor providing for coverage and limits corresponding to those specified elsewhere herein.
- M. Railroad Protective Liability Insurance: In any of the Work under this Contract is on railroad R/W, the Contractor shall at its sole cost and expense, procure and provide, for and in behalf of each railroad company. Protective Liability Insurance (AARAASHO form) with minimum limits per occurrence of not less than \$2,000,000 for bodily injury, death and/or property damage, subject to an aggregate limit of \$6,000,000 per annum. The policy shall name each railroad company as the insured and be issued to the Contractor. Each railroad company shall be provided with a copy of each policy of insurance prior to commencement of any work.

Certificates of Insurance

The Contractor shall file a Certificate of Insurance for all coverage required in these Insurance Specifications on the ACORD 25 Form (preferred), and a copy of his current Worker's Compensation Certificate, with the Hamilton County Public Health before starting work on the project, and shall keep such Certificates current and on file with the County for the life of this Contract.

Indemnification Clause

The Contractor agrees to indemnify and save The Board of County Commissioners, Hamilton County Ohio, Hamilton County Board of Health, HCPH, their officials, officers, agents, and employees harmless from any and all losses, claims, actions, costs, expenses, judgments, subrogation's, or other damages resulting from injury to any person (including injury resulting in death), or damage (including loss or destruction) to property of whatsoever nature of any person, firm, or corporation arising out of the errors, omissions or negligent acts of the Contractor in the performance of the terms of this Contract by the Contractor, including but not limited to the Contractor's employees, agents, subcontractors, sub-subcontractors, and others designated by the Contractor to perform work or services in, about, or attendant to, the work and services under the terms of this contract.

Notice To Proceed

The Contractor shall not commence work under this contract until he has obtained all the insurance required herein, has submitted appropriate Certificates of Insurance to and received approval of the County as evidenced by a Notice to Proceed (Attachment A).

Subcontractors

The Insurance Specifications apply equally to all subcontractors and sub-subcontractors at any tier during the period of their work on the project. The Prime Contractor shall be solely responsible for his subcontractor's liability if he permits the Sub to work on the project without the Sub having been issued a Notice to Proceed by the County.

12. FAILURE TO COMPLY

If the CONTRACTOR shall fail to comply with any of the terms, conditions, provisions or stipulations of this Contract, HCPH may avail itself of any and all remedies provided in their behalf in the Contract, and shall have the right and power to proceed in accordance with the provisions thereof.

13. RESOLUTION OF DISPUTES

In the event of a dispute covering additional costs, claims and any other matter arising out of or relating to this Contract, or the breach thereof, such disputes shall be decided by submission to a court of competent jurisdiction within one (1) year of the date upon which HCPH accepts and approves the project for use. The CONTRACTOR hereby waives any right to rely upon the statute of limitations for actions on contracts.

Failure to bring an action within one year of the above date shall constitute a bar to such action. If, however, within ten (10) days of the specific event giving rise to the disputed matter, the CONTRACTOR gives HCPH, by written notice, a request to submit the matter to arbitration, HCPH and the CONTRACTOR may agree, within sixty (60) Days of receipt of the above notice, to submit the matter to arbitration as set forth below.

If the parties agree, by written change order signed by HCPH, the Ohio EPA, and the CONTRACTOR, to submit such dispute to arbitration, all proceedings shall be according to Ohio Revised Code Chapter 2711, and, unless waived, the Ohio Rules of Civil Procedure and the Ohio Rules of Evidence. HCPH and the CONTRACTOR shall each choose one arbitrator. The two arbitrators shall agree upon and choose a third arbitrator, who shall preside over the proceedings.

Compensation of the arbitrators shall be as agreed upon by HCPH, the CONTRACTOR and the arbitrators. Payment for the arbitrators shall be shared equally by HCPH and the CONTRACTOR. The CONTRACTOR shall deposit, as a precondition to commencement of the hearing, its equal share of the compensation of the arbitrators with HCPH to be placed in an account for that purpose, or with an escrow agent suitable to both parties. The hearing or the arbitration shall commence within sixty (60) days of the agreement to arbitrate. If the hearing is not commenced within sixty (60) days of the agreement to arbitrate, said agreement shall be void and the dispute shall be resolved by submission to a court of competent jurisdiction as herein before specified. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in any court having jurisdiction thereof. All questions with regard to the rights and authority of the arbitration panel shall be resolved pursuant to Chapter 2711, of the Ohio Revised Code.

14. IN FORCE AND EFFECT

Subject to the applicable provisions of law, this contract shall be in full force and effect from and after the date when a fully executed and approved counterpart hereof is forwarded to the CONTRACTOR, but the CONTRACTOR shall not start work on the Project until written notification to proceed is received from HCPH.

15. Executive Order 11246 Sec.202

Except in contracts exempted in accordance with Section 204 of this Order, all Government contracting agencies shall include in every Government contract hereafter entered into the following provisions:

During the performance of this contract, the contractor agrees as follows:

- A. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment, or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of the nondiscrimination clause.

- B. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- C. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of this notice in conspicuous places available to employees and applicants for employment.
- D. The contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- E. The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- F. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, or by rule regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- G. The contractor will include the provisions of Paragraphs (A) through (G) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as

a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

16. Violating Facilities Clause

The Contractor agrees to comply with all applicable standards, orders or requirements under Section 306 of the Clean Air Act, 42 USC 1857 (h), Section 508 of the Clean Water Act, 33 USC 1368, Executive Order 11738, and EPA regulations, 40 CFR Part 32, which prohibits the use under non-exempt Federal contracts, grants, or loans of facilities included on the EPA List of Violating Facilities.

17. Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The Contractor certifies to the best of its knowledge and belief that it and its principles:

- A. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or Agency;
- B. Have not within a year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.
- C. Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or Local) with commission of any of the offenses enumerated in paragraph (B) of this certification;
- D. Have not within a three year period preceding this application / proposal had one or more public transactions (Federal, State, or Local) terminated for cause or default' and
- E. Will not utilize a subcontractor or supplier who is unable to certify (A) through (D) above.

IN WITNESS WHEREOF, the County and the Contractor affix their signatures:

WITNESS:

HAMILTON COUNTY PUBLIC HEALTH

Health Commissioner

Date

WITNESS:

CONTRACTOR: _____

By: _____

Title

Contractor to complete applicable paragraph below:

_____ A Corporation organized under the Laws of _____ and qualified
to do business in the State of Ohio.

_____ Co-partners trading and doing business under the firm name and style of

_____ List names of all Partners _____

Or Joint Venture Participants _____

_____ An individual doing business under the firm name and style of

ATTACHMENT A
HAMILTON COUNTY PUBLIC HEALTH
NOTICE TO PROCEED

Date _____
Contractor Name
Street Address
City, State, Zip Code

Notice To Proceed With: _____

Enclosed is your copy of the completely executed contract in the amount of \$_____ to be paid from the _____ fund.

You are hereby authorized and notified to PROCEED with the repair or replacement of the household sewage treatment system located at _____ in accordance with all terms and conditions of your contract with HCPH. This includes by reference the specifications upon which you bid.

Sincerely,

Tim Ingram
Health Commissioner, Hamilton County Public Health

ATTACHMENT B
State of Ohio
 WATER POLLUTION CONTROL LOAN FUND (WPCLF/SRF) HSTS

CONTRACT CHANGE ORDER

RECIPIENT _____ CHANGE ORDER NBR _____
 LOAN NUMBER _____ CONTRACT _____
 OWDA PROJECT No. _____ DATE _____
 Description of Change
 (include address):

APPROVED BY: _____ DATE: _____
 (Health Department Representative)
 ACCEPTED BY: _____ DATE: _____
 (Contractor)

 (Company)

Original Contract Amt		
Previous Changes (+ / --)		
This Change (+ / --)		
Adjusted Contract Amt		
Ohio EPA Acceptance	Date	

ATTACHMENT B

CHANGE ORDER INSTRUCTIONS:

All Change Orders for this work, regardless of costs, must be submitted to Ohio EPA for review.

Changes Requiring Prior Approval

Any change which substantially modifies the Project Facilities as specified in the Ohio EPA approved Facilities Plan and Final Permit to Install or Final Plan Approval (when applicable) or alters the direct or indirect impact of the Project Facilities upon the environment must be incorporated into a Change Order. One copy of the Change Order prior to execution is to be submitted to Ohio EPA for review and prior approval of the acceptability of the change. "Prior to execution" means before the Change Order is signed by the Owner.

Ohio EPA will review the Change Order and inform the Owner of the technical, environmental and operational acceptability of the change, and give the Owner permission to proceed with the proposed work.

All Other Changes

Change Orders not requiring prior approval as described above must be submitted to Ohio EPA within one (1) month of the time at which they are approved by the Owner. Change Orders for WPCLF projects should be submitted to the Division of Environmental and Financial Assistance (DEFA).

Change Order Approval Process

After the Change Order is executed, one (1) copy of the Change Order, including the supporting documentation, is to be sent to Ohio EPA for final review. The HSTS Change Order form must have original signatures.

Health Departments should submit change orders electronically to the DEFA Engineer who reviewed and approved their project.

After the Change Order is accepted and eligible costs determined, Ohio EPA will return a signed copy of the HSTS Change Order form.

Payments for Change Order Work

The Owner is precluded from submitting to the OWDA payment requests for Eligible Project Costs associated with the Change Orders until the Ohio EPA's approval of the Change Orders has been obtained.

ATTACHMENT C
Contractor Equal Employment Opportunity Certification

During the performance of this contract, the undersigned agrees as follows:

8. The undersigned will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The undersigned will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The undersigned agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this equal opportunity (federally assisted construction) clause.
9. The undersigned will, in all solicitations or advertisements for employees placed by or on behalf of the undersigned, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.
10. The undersigned will send to each labor union or representative of workers, with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the undersigned's commitment under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
11. The undersigned will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
12. The undersigned will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and relevant orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the administering agency of the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
13. In the event of the undersigned's non compliance with the equal opportunity (federally assisted construction) clause of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part, and the undersigned may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rules, regulations, or order of the Secretary of Labor, or as provided by law.
14. The undersigned will include this equal opportunity (federally assisted construction) clause in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order No. 11246 of September 24, 1965, so that such provision will be binding upon each subcontract or vendor. The undersigned will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non compliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor, as a result of such direction by the administering agency the undersigned may request the United States to enter into such litigation to protect the interest of the United States.

(Signature)

(Date)

(Name and Title of Signer, Please type)

(Firm Name)

ATTACHMENT D

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (f) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (g) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (h) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (b) of this certification;
- (i) Have not within a three year period preceding this application / proposal had one or more public transactions (Federal, State, or local) terminated for cause or default; and
- (j) Will not utilize a subcontractor or supplier who is unable to certify (a) through (d) above.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Type Name & Title of Authorized Representative

Signature of Authorized Representative

Date

I am unable to certify to the above statements. My explanation is attached.

ATTACHMENT D

Certification Regarding Debarment, Suspension, and Other Responsibility Matters INSTRUCTIONS

Under Executive Order 12549 an individual or organization debarred or excluded from participation in Federal assistance or benefit programs may not receive any assistance award under a Federal program or a subagreement thereunder for \$25,000 or more.

Accordingly, each prospective recipient of an EPA grant, loan, or cooperative agreement and any contract or subagreement participant thereunder must complete the attached certification provide an explanation why they cannot. For further details, see 40 CFR 32.510, Participants' responsibilities, in the attached regulation.

Go to <https://www.sam.gov/portal/SAM/##11> to access the Excluded Parties List System (EPLS). The EPLS includes information regarding entities debarred, suspended, proposed for debarment, excluded or disqualified under the nonprocurement common rule, or otherwise declared ineligible from receiving Federal contracts, certain subcontracts, and certain Federal assistance and benefits. This information may include names, addresses, DUNS numbers, Social Security Numbers, Employer Identification Numbers or other Taxpayer Identification Numbers, if available and deemed appropriate and permissible to publish by the agency taking the action.

Where To Submit

The prospective EPA grant, loan, or cooperative agreement recipient must return the signed certification or explanation with its application to the appropriate EPA Headquarters, Regional office, or Ohio EPA, as required in the applications.

A prospective prime contractor must submit a complete certification or explanation to the individual or organization awarding the contract.

Each prospective subcontractor must submit a complete certification or explanation to the prime contractor for the project.

Applicants may reproduce these materials as needed and provide them to their prospective prime contractor, who, in turn, may reproduce and provide them to prospective subcontractors.

Additional copies / assistance may be requested from: Ohio EPA
Division of Environmental and Financial Assistance
P.P. Box 1049
Columbus, Ohio
43216 1049 (614)
644 2798

<http://epa.ohio.gov/defa/EnvironmentalandFinancialAssistance.aspx>

ATTACHMENT E

American Iron and Steel Acknowledgement

The Contractor acknowledges to and for the benefit of _____ ("Purchaser") and the State of Ohio (the "State") that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as "American Iron and Steel;" that requires all of the iron and steel products used in the project to be produced in the United States ("American Iron and Steel Requirement") including iron and steel products provided by the Contactor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

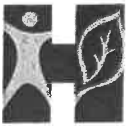
Signature

Date

Name and Title of Authorized Signatory, Please Print or Type

Bidder's Firm

Check here if the WPCLF or WSRLA applicant will be requesting an individual waiver for non- American made iron and steel products. Please note that the waiver box does not need to be marked for nationwide waivers.



250 William Howard Taft, 2nd Floor
 Cincinnati, Ohio 45219
 Phone: (513) 946-7800
 Fax: (513) 946-7890
 Web: www.hamiltoncountyhealth.org

Sub./Lot Review: _____ Fee Paid: \$1390.00
 Complaint: _____ Receipt #: 2140
 Other: _____ Received By: OB

HAMILTON COUNTY GENERAL HEALTH DISTRICT

APPLICATION TO CONSTRUCT OR REPLACE A SEWAGE TREATMENT SYSTEM

NEW REPLACEMENT (Plumbing Permit Required If All Wastewater Is Not Directed To Septic System)

Address of Construction Site: 478 W. North Bend Road **Political Subdivision:** Springfield Twp
Owner(s) Name: Susan Jeffre **Tax Parcel #:** 590-0203-0010-00 **Lot Size:** 0.217 acre(s)
Phone Number: _____ **System To Serve**
Mailing Address: 478 W. North Bend Road Single Family Public (Water Supplier CWW)
Cincinnati, Ohio 45224 Duplex Private
 Triplex Well Cistern Hauled Water
 Other: _____ **Water Supply**
 Plumbing Under Basement Ejector Pit Hung Sewer
Number of Bedrooms: 2 **Number of People in Structure:** _____ **Monthly Water Usage:** 1.30 gpd
 Watersoftner Garbage Disposal Whirlpool Style Tub High Capacity Shower per CWW
 Other Large Water Usage Fixtures: _____

Soil Type / Characteristics: see soil report
STS Daily Design Flow: 240 **STS Average Design Flow:** 144 **Soil Absorption Rate:** _____ **Linear Loading Rate:** _____

Sewage Treatment System Type: Let ATU w/ UV & post aeration - NPDES Discharge
Primary Treatment Tank: Building Sewer 4" SCH 40 PVC
 Controls Let UV w/ telemetry
 Trash Trap _____ Gallons _____ Compartment(s) _____
 Septic Tank _____ Gallons _____ Compartment(s) _____
 Dosing Tank _____ Gallons _____ Compartment(s) _____
 Dosing Septic Tank _____ Gallons _____ Compartment(s) _____
 Dosing Basin _____ Depth _____ Diameter or _____ x _____
 Effluent Filter _____ Pump _____
 Screen Vault Filter _____ Siphon _____
 Other _____ Gravity _____
Comments:
 - All tanks must pass watertight test
 - 1st electrical inspection required
 - Old septic tanks to be properly abandoned w/ all paperwork submitted

Secondary Treatment Unit:
 Intermittent Sand Filter _____ ft x _____ ft = _____ ft²
 Recirculating Gravel Filter _____ ft x _____ ft = _____ ft²
 Recirculating Sand Filter _____ ft x _____ ft = _____ ft²
 Recirculating Textile Filter _____ Manufacturer _____ Unit(s) _____
 Peat Biofilter _____ Manufacturer _____ Unit(s) _____
 Aerobic Treatment Unit Let J500-AT-RAO Manufacturer SDO GPD
 Other _____ Pump _____
 Filter Following Treatment Unit _____ Siphon _____
 Dosing Basin _____ Depth _____ Diameter or _____ x _____ Gravity _____
 Soil Absorption (See Below) _____
Comments:
 - Installer must follow inspection protocol found in HCGHD installer manual.
 - All permits during construction requirements must be implemented

Soil Absorption Component:
 Gravel Pad _____ ft x _____ ft = _____ ft² _____ Depth _____
 Leaching Trenches _____ ft x _____ ft = _____ ft² _____ Depth _____ Total Ln. Ft. _____
 Leach Bed _____ ft x _____ ft = _____ ft² _____ Depth _____
 At-Grade _____ ft x _____ ft = _____ ft² _____
 Modified Mound _____ ft x _____ ft = _____ ft² _____ Sand Thickness _____
 Wisconsin Mound _____ ft x _____ ft = _____ ft² _____ Sand Thickness _____
 Other _____
 Gravity Distribution _____
 Drip Distribution _____
 LPP Distribution _____

Drainage Enhancement: Gradient Drain _____ Depth _____
 Interceptor Drain _____ Depth _____
 Diversion Swale _____
 Other _____
 Pump _____
Disinfection Device: Chlorinator _____
 Chlorine Contact Chamber _____
 De-Chlorinator _____
 UV Let 952UV
 Other simple well
Comments: _____

Remarks: A preconstruction conference is requested at the site. The system must be laid out prior to this meeting.
ODH System Type: Pretreat SDC
 Below Grade Pretreat SDC & Drip
 At or Above Grade Drip Only
 NPDES Discharge Spray/Surface App.
 None of the Above

Refer to Site Plan 478-1A For Additional Details And Install System Per HCGHD Manual.
 By my signature below I certify that I have read, I understand, and I agree to comply with the conditions set forth on the reverse hereof.
 Owner's/Owner's Agent Signature: F. Daniel Brennan Date: 4/24/18

Field Inspection By: W. Elliott Date: 5/2/18 Approved By: Shay Cassone RS Date: 6/4/18
 This Application Expires One Year From The Approved By Date. Replacement Systems Must Be Installed Within 120 Days of Approval Date.

RECEIVED APR 25 2018

Address of Construction Site: 478 W. North Bend Rd Political Subdivision: Springfield File #: PT 2018-037

Jet J-500-800PLT BUOYANCY

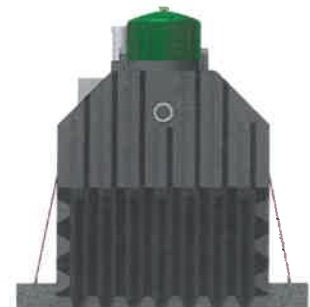
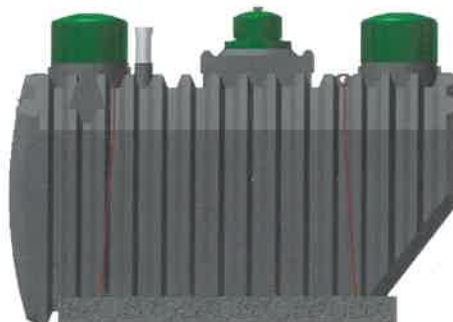
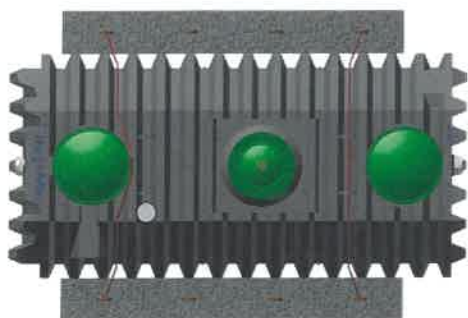


When the J-500-800 PLT is to be installed in areas where high water tables are common, additional anti-buoyancy measures should be installed. Jet recommends using concrete anchors placed beside the tank in the excavation and secured to the tank with properly rated corrosion resistant straps. Straps may be routed through the lifting lugs on the tank to ensure they will not shift during installation and backfilling.

Use the chart below to determine the amount of additional hold down weight needed for the burial depth of the installation and soil density from a registered soil scientist's report. When installed, the total weight of the anchor and the soil above the anchor must be greater than the weight shown in the table. For maximum effectiveness, the anchors should be installed as low as possible in the excavation.

*an asterix in the table indicate that no additional weight is required.
Note: the table shows the required weight to hold a tank in place if it is filled with water. Do NOT leave a plastic tank empty if high water level is a concern.

Soil Density (lb per cubic ft)	80	90	100	110	120	130
Depth of Soil Over Tank (in)	Extra Weight Needed (lbs)					
6	1327.7	1106.424	885.1472	663.8709	442.5945	221.3182
8	737.6296	442.5945	147.5595	*	*	*
10	147.5595	*	*	*	*	*
12	*	*	*	*	*	*
14	*	*	*	*	*	*



Installation - Tank & Aerator

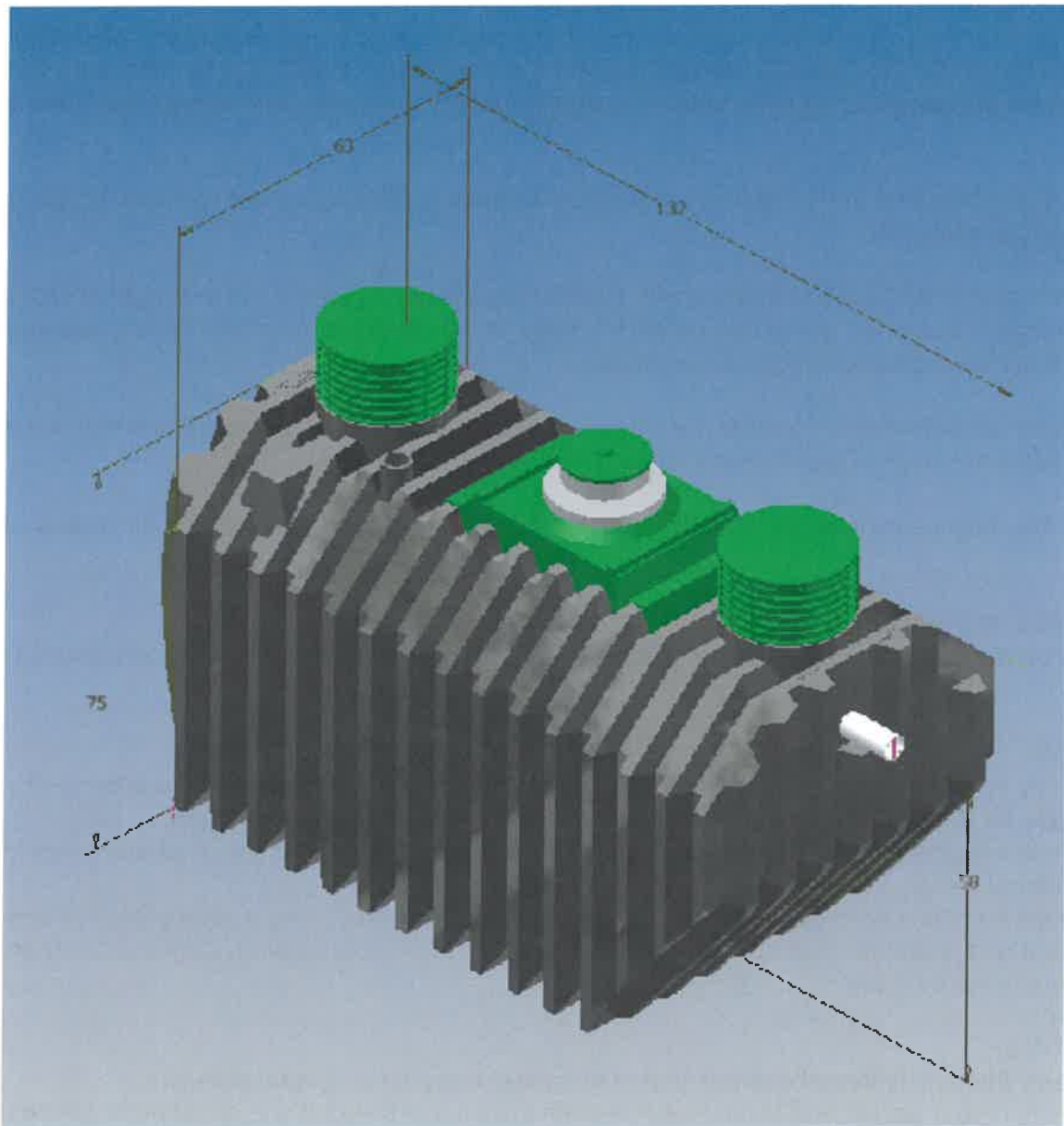
J-500PLT – 800 PLT Series

NSF LISTED PLANTS

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

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

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.



5. If required, attach additional aerator risers to the center cover. Seal with mastic sealing and appropriate hardware.
6. Install inlet and outlet sewer lines and seal in place. Sewer lines should be 4" diameter PVC.
7. Cover all openings.

BACKFILLING TANK:

1. Fill 1/3 of the tank with water before backfilling begins to ensure tank will not shift during process.
2. Begin to backfill under the sloped clarifier.
3. The sloped clarifier wall must be supported to reinforce the tank walls. A mixture of sand and/or gravel must be used to backfill the inlet and outlet side walls of the tank. Jet recommends the backfill mixture consist of material no larger than 1 1/2" in diameter. The backfill should be added while compacting every 12" to ensure all void space under the sloped walls and around the inlet 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.
5. Tamp and compact backfill mixture under the inlet 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 fixtures that drain into system. Then, simultaneously drain all these fixtures and flush toilets. Observe any rise in water level of tank. If the water rises over 3" and does not go down immediately, inform contractor that aerator cannot be installed until this situation is corrected.
8. 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 slope away from the tank to help with surface runoff.

AERATOR INSTALLATION

IMPORTANT

- When installing the aerator be extremely careful of aspirator shaft. It has a very critical straightness tolerance. Don't ever let it touch anything except liquid. Also remember that the fit between coupling and aspirator shaft is quite close. Be careful not to burr or dirty the ends of either part.
- Jet aerators have been carefully designed and built to give years of trouble-free operation. To assure this long, trouble-free life, it is absolutely necessary to carefully follow the aerator installation and handling instructions.
- Life of the aerator depends on a straight shaft. Never lift aerator by the shaft or subject the shaft to any bending, bumping, or strain. Never let the shaft contact anything but liquid.
- You can eliminate well over 50% of your service calls if you always inspect the system and test for proper drainage at installation time.
- Jet Floodproof model aerators are sealed to protect them from water damage by flooding. It is, however, not designed to operate under water. Do not disassemble it or remove plugs or bolts.
- The "Control Panel Installation and Users Manual" contain a wiring diagram and detailed wiring instructions. An electrical specification and requirements chart, is located on the inside of each Control Panel.

INSTALLATION STEPS

1. Turn Off Power - Turn the aerator Control Panel switch to "OFF". Next turn power that controls this circuit at main panel "OFF".
2. Check Aerator/Flow Line Measurements - Location of aerator to flow line is very important. Measure distance from ledge in the aerator riser to liquid level in tank. 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 in center of cover as shown in illustration. If vent cap is not centered, the outside-air-hose will bend and air to the aerator will be cut off.

12. Place 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 risers are used, a longer hose is required. Remove the air hose from the top of the aerator and cut a piece from a bulk coil (sold separately) and install it. It must be long enough to fit completely on the plastic hose adapter (top, center of aerator - over shaft) 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 control panel. Read these before proceeding.

- a. 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 feature to disable discharge in the event of an alarm condition if required by local and state codes.
- b. Check the wiring to be sure all the above instructions have been followed. If necessary, have the electrical contractor correct the work.
- c. Set the Control Panel switch to the "OFF" position. Turn the power to the Control Panel circuit "ON" at the main panel. With the aerator installed and operational, there should be no audible or visual alarms.
- d. Test for power to the panel. Use a multi-meter to confirm proper voltage to the panel and components. Operating voltages for the control circuit and aerator are 120 volts +/- 10%.
- 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.
- f. If the Control Panel is equipped with an auto dialer, program the autodialer according to the instructions provided. Trigger an alarm to confirm that the autodialer is functional and the land line has been activated.
- g. Test the power to the pump circuit. If equipped with lock-out feature, initiate an alarm condition and confirm that the pump circuit power has been disabled. Return the alarm condition to normal setting.
- h. If these tests or checks are not satisfactory, correct the wiring or contact an electrician.
- i. 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 indicates shaft damage. If heavy vibration occurs, install a new shaft and return the shaft that is damaged to the factory.

15. Install aerator riser cover.

16. Final Steps.

- a. Completely fill in label on front of Control Panel cover.
- b. Remove the red "Notice to Occupant" tag from Control Panel.
- c. Fill in "Installation and Service Record" card.
- d. 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.
- e. Record all installation information including address, date of start up, permit number, and status of contracts on the "Install Checklist".
- f. Complete start up inspection and checklist and submit copies to Jet Inc. and the local administrative authority.

TANK PUMPING:

1. Always pump down the pre-treatment tank first. The transfer tee in the baffle wall between the pre-treatment and treatment tank will allow water to move freely into the pre-treatment tank.
2. After the pumping of the pre-treatment tank is complete, pump remaining liquid from the treatment tank and the clarifier.
3. Fill the tank with water immediately after pumping, starting with the pre-treatment.

Jet Inc. Model 197 Control Panel Installation and Users Manual

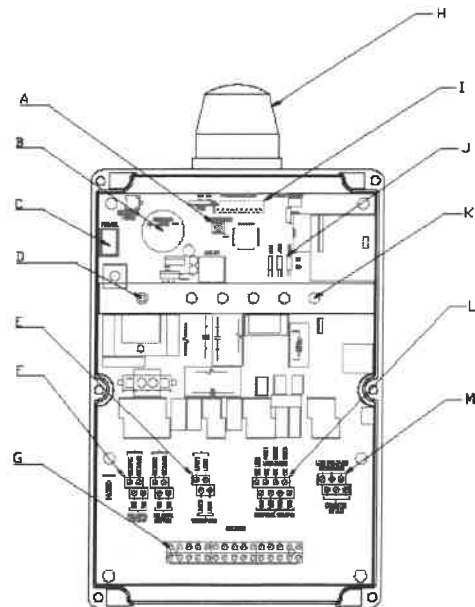
The Jet Incorporated Aerator control panel monitors and controls the operation of Jet system aerators and additional components. The panel can be configured to control single or dual aeration systems. A single aerator system controls the operation of one aerator. A dual aerator system can control two aerators, or one aerator and one re-aeration compressor.

In addition to the aerator control circuits, the control panel also contains the following circuits or features:

- Two aerator/compressor control circuits
- Three auxiliary output circuits
- Three auxiliary input circuits with normally open or normally closed selection
- One power indicator LED, and four additional error indicator LED's
- An alarm buzzer with circuit board provision for an alternate or externally mounted buzzer
- A 9-position DIP switch for selection of configuration options
- User accessible reset switch and circuit board master reset switch
- Alarm mode Auto-Dialer power and control interface
- RS232 interface circuit
- Circuit board mounted power switch and fuse

Control Panel Features

- A. Master Reset Button
- B. Internal Horn
- C. On/Off Switch
- D. External Reset Button
- E. Pump Power Supply Contacts
- F. Alarm and Aerator Power Supply Contacts
- G. Ground Buss
- H. Central Alarm Beacon
- I. DIP Switch Array
- J. Auxiliary Alarm Settings (NC/NO)
- K. Indicator Light Array
- L. Auxiliary Alarm Contacts
- M. Auxiliary Alarm Contacts



Wiring at the Jobsite

1. All cable and conduit should be installed from the tank to control panel location by the system installer.



USE ONLY NON-METALLIC CONDUIT WITH THE MODEL 197 CONTROL PANEL. METALLIC CONDUIT IS NOT APPROVED FOR INSTALLATION WITH THE MODEL 197 CONTROL PANEL.

2. Use only UL listed Direct Burial and non-metallic conduit and wiring for control and aerator installation.
3. Cable should be carefully measured; cables and wiring must not be spliced. Spliced connections could result in aerator or alarm sensing malfunctions.
4. When ordering and measuring cable be sure to:
 - a. Leave ample cable in aerator mounting casting to install aerator at desired depth
 - b. If direct burial cable is used it must be encased in conduit from the aerator mounting casting to the edge of the concrete tank. It should not cross over any access covers or panels
 - c. If direct burial cable is used leave slack in the line to allow for possible settling in the trench or tank
 - d. Above grade entrance to the house is recommended if the control panel is mounted inside the dwelling. If direct burial cable is used conduit should be in place from the beginning of the foundation to the entrance of the dwelling.
5. Jet recommends burying cable and conduit at least two feet deep to prevent accidental damage to the external wiring
6. Proper procedures and solvents must be used to protect the integrity of the external wiring.

Control Panel Installation

The control panel should be given to the electrician on site for installation. The installer or distributor must make sure that the control panel settings are correct for the type of system and components being installed. Refer to control panel settings section for more information on desired system configurations.

1. Mount the control panel in a location that will be easily accessible, clearly visible from at least 50 feet and out of reach from children. The panel is weather proof and can be mounted outdoors. If outdoor installation is required consideration should be taken to minimize the impact of climate on the panel. If possible do not mount the panel in direct sunlight.
 - a. To mount panel remove the panel cover by removing the four Philips head screws, the panel can then be mounted with the four

11. Individual power sources should be connected to the control panel according to the wiring diagram provided on page 9 of this manual.
12. Additional alarm return and external relay contacts are provided to monitor and control additional components of the system:
 - a. Auxiliary Alarm Inputs – there are three additional alarm inputs that can be operated in either a normally closed (N/C) or normally open (N/O) alarm state. The alarm state can be reversed by moving the jumper directly above each alarm input to the desired setting. The N/O alarm operates on 12 volts AC low amperage circuit.
 - b. Auxiliary Relay Outputs – there are two additional 120 volt relay outputs designed to control external relays for operation of external components. These outputs are 120 volt low amperage and are not designed to carry any significant electrical load, or to directly control external pumps or other devices
 - c. Smaller gauge wire (#16 or #18 AWG) may be used for additional alarm and relay inputs depending on the proximity of the system components and the panel.
13. If an integrated pump control is desired the model 197 control panel is equipped with an internal pump control relay. The pump should always be operated on an independent circuit. The pump control relay is designed to supply continuous power to the pump circuit provided there is not an active alarm condition. In the event of an alarm state the pump control relay will deactivate power to the pump circuit.
14. Make sure all power supply connections have been fastened securely; recommended torque for terminal connections is 4 to 5 ft/lbs.
15. Perform an initial power supply test on all available circuits. Ensure that power from the dwelling is sufficient to properly operate all system components. All circuits should have 120 volts or equivalent available.



All wiring must be in accordance with local and national electric codes. Contact your local electrical inspector for more information regarding proper wiring procedures.

16. Typically the aerator and system components will not be installed at the time of initial wiring for the system control. The current sensing ability of the panel will create an alarm condition if there are no components active during standard operation. The control panel should be left in the off position until the entire system has been installed.

Control Panel Settings and Functions

The Jet model 197 control panels are designed to be used with several system configurations. The primary selection of control panel operation is selected by the array of DIP switches located at the top of the circuit board. Refer to the following chart which outlines the function of the separate DIP switches and their corresponding system controls:

Aerator Timer Control			
Switch One *	Switch Two *	Switch Three *	Aerator Run Time *
Off	Off	Off	Continuous Run
On	Off	Off	On 50 min. / Off 10 min.
Off	On	Off	On 45 min. / Off 15 min.
On	On	Off	On 40 min. / Off 20 min.
Off	Off	On	On 35 min. / Off 25 min.
On	Off	On	On 30 min. / Off 30 min.
On	On	On	Continuous Run
Switch Four	Inactive		
Auxiliary Output Control			
Switch Five	Switch Six	Auxiliary Alarm Function	
Off	Off	All Outputs Inactive	
On	Off	Output One Active	
Off	On	Outputs One and Two Active	
On	On	All Outputs Active	
Multiple Aerator Controls			
Switch Seven	Toggle multiple aeration alarm sensing		
Off	Single Aerator System		
On	Dual Aerator System		
Switch Eight	Toggle high/low current sensing		
Off	Aerator 2 circuit high current sensing for Aerator		
On	Aerator 2 circuit low current sensing for Compressor		
Test Mode Control			
Switch Nine	On/Off	Toggle Test Mode	

* - DIP switches one, two, and three will be fused in the ON position for 197 controls used with NSF Listed J-1500 series treatment systems which must have continuous aeration

Auxiliary inputs

The auxiliary inputs are intended for sensing the open or closed condition of additional system components and sensing switches. Typically the auxiliary inputs are expected to be connected to float switches for sensing water levels. The active auxiliary input circuits are selectable with the DIP switches. Each auxiliary input circuit 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 will be interlocked 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.

Alarm 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 purposes of testing or servicing, the buzzer can be silenced for alarm 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 alarm 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 microcontroller reset.

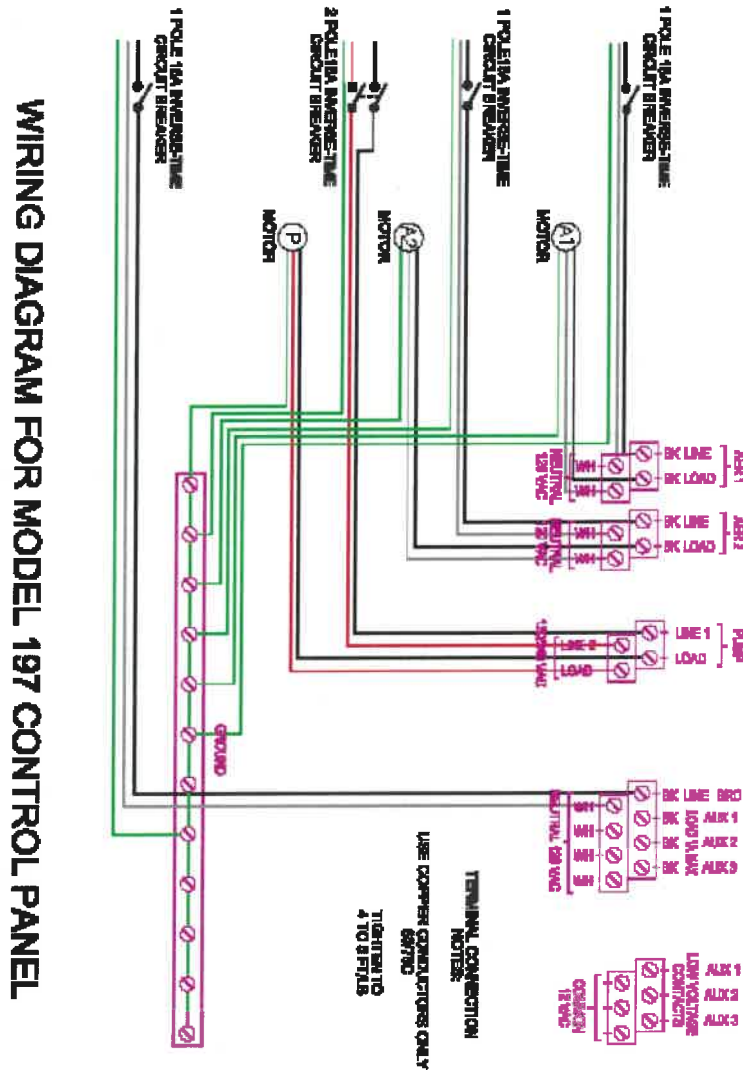
Start Up Check List

These procedures should be performed by the Jet installer after all of the system components and aerators have been connected to the system. This test should only be conducted after the electrician has completed the panel installation 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 aerator, 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 self test should alarm for two seconds then all alarms should return to normal state. The blue indicator light should now indicate that there is power to the panel and circuits.
- ✓ Check to make sure all 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 inbound and outbound power with a multi-meter. All circuits should have between 105 and 132 volts AC power supplied to the aerator, compressor, and pump circuits.
- ✓ If aerator circuits are set for timer intervals the cycle will begin with the on aerator condition. To observe aerator timer intervals additional time will need to be spent on site, or use the "Test Mode" to accelerate the timer cycles.
- ✓ If tests are not satisfactory recheck and correct the system wiring as needed.
- ✓ Once all checks are completed return the "Test Mode" to its normal position and reset the control panel with the "Master Reset" switch.
- ✓ Make sure to correct distributor information is on the front of the panel and complete the control panel warranty card with the appropriate information.

Electrical Wiring Diagram

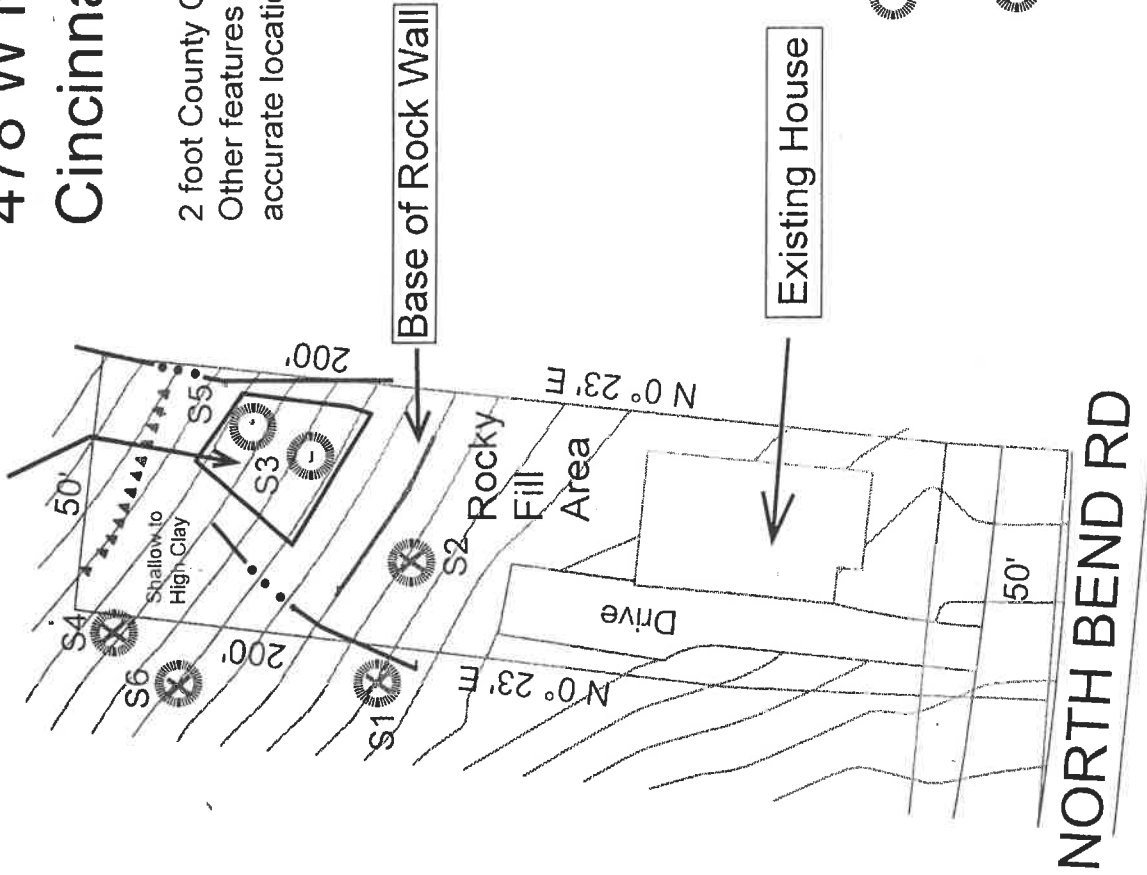
Refer to the wiring diagram below when connecting aerators, compressors, pumps, and auxiliary equipment to the Jet model 197 control panels. (Note: The location of the terminal blocks has been re-formatted for this manual and does not exactly correspond to the location of the terminal blocks on the circuit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



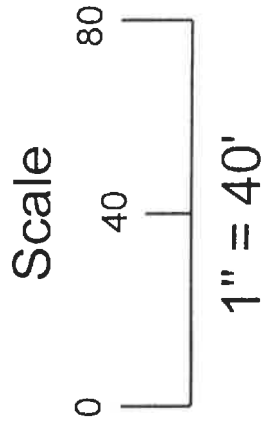
JEFFRE Property
478 W N. Bend Rd
Cincinnati, OH 45224

2 foot County GIS Contours shown.
 Other features are from GIS. For more accurate locations, contact a Professional Surveyor.

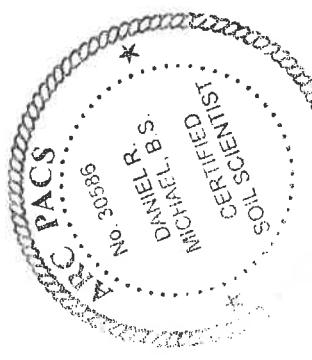
Acceptable Soil
 Only About 25' on Contour



- ⊙ Steep Slope
- ⊙ Soil Locations
- ⊗ Very Poor Soil



Soil and Site Evaluation for Sewage Treatment and Dispersal



County: Hamilton
 Township/Sec.: Springfield
 Property Address/Location: 478 West North Bend Road
Cincinnati, OH 45224
 Parcel # / Subdiv. Lot #: #590-020301110-00
 Applicant Name: Jeffre
 Address: c/o SCS 2060 Reading Road Suite 200
Cincinnati, OH 45202
 Phone #: 513-375-0586
 Lot #: _____
 Test Hole #: 3;5
 Latitude/Longitude: _____
 Method: _____ Pit _____ Auger _____ X _____ Probe _____
 Land Use/Vegetation: meadow
 Landform: upland
 Position on Landform: side slope
 Percent Slope: 25%
 Shape of Slope: linear
 Coord. Method/Accuracy: GPS - 3 ft.

Date: 10/10/2017
 Evaluator: Dan Michael
903 North Broadway
Lebanon, OH 45036
 Certification Stamp or Certification#: #30586
 Signature: Dan Michael
 Phone #: 513-934-1040

Estimating Soil Permeability

Soil Profile	Estimating Soil Saturation		Estimating Soil Permeability				Other Soil Features	
	Horizon	Depth (inches)	Munsell Color (hue, value, chroma)	Redoximorphic Features	Texture	Structure		Consistence
			Concentrations	Depletions	Approx. % clay	Grade	Type (shape)	Consistence
Ap	0 - 10	10YR 3/3 dark brown			15%	3 - strong	f	friable
Bw1	10 - 36	10YR 4/3 brown			27%	2 - moderate	co	friable
Bw2	36 - 40	10YR 4/3 brown	10YR 3/1 1%	10YR 5/2 10%	30%	2 - moderate	co	friable
2C	40 - +	10YR 5/4 yellowish brown			50%	1 - weak	co	very firm

Limiting Conditions	Depth to (in.)	Descriptive notes	Remarks/Risk Factors:
Perched Seasonal Water Table	36 in.		This represents a very small area on the map only capable of handling about 1 bedroom.
Ground Water/Aquifer	> 50 in.		
Highly Permeable Material (range)	> 50 in.		The lot is too small even with better soil.
Bedrock	> 40 in.	Fractured - Karst (circle one)	
Flow Restrictive Layer	40 in.	>45% Clay	S2 contains Rocky fill
Highly Weathered Soil	> 40 in.		
Fractured Glacial Till	> 40 in.		
Other High Risk Limiting Conditions	> 40 in.		

Table 3. Soil Infiltration Loading Rates.

Soil Characteristics		Soil Infiltration Loading RRate (gpd/ft2)			Row
Texture	Structure		CBOD5		
	Shape	Grade	>25mg/L (septic tank effluent)	<=25mg/L (pretreated effluent)	
COS, S, LCOS,LS FS, VFS, LFS, LVFS	--	0SG	0.8	1.6	1
	--	0SG	0.4	1	2
CSL, SL	--	0M	0.2	0.6	3
	PL	1	0.2	0.5	4
		2,3	0	0	5
	PR/BK/GR	1	0.4	0.7	6
		2,3	0.6	1	7
FSL, VFSL	--	0M	0.2	0.5	8
	PL	1,2,3	0	0	9
		1	0.2	0.6	10
	PR/BK/GR	2,3	0.4	0.8	11
		--	0M	0.2	0.5
L	PL	1,2,3	0	0	13
		1	0.4	0.6	14
	PR/BK/GR	2,3	0.6	0.8	15
SIL	--	0M	0	0	16
	PL	1,2,3	0	0	17
		1	0.4	0.6	18
SCL, CL, SICL	PR/BK/GR	2,3	0.6	0.8	19
		--	0M	0	20
	PL	1,2,3	0	0	21
1		0.2	0.3	22	
SC, C, SIC	PR/BK/GR	2,3	0.4	0.6	23
		--	0M	0	24
	PL	1,2,3	0	0	25
1		0	0	26	
	PR/BK/G	2,3	0.2	0.3	27

Soil Characteristics			Hydraulic Linear Loading Rate (gpd/ft)													
			Slope 0-4%						Slope 5-9%						Slope >10%	
			Structure		Infiltrative Distance, (Inches)		Infiltrative Distance, (Inches)		Infiltrative Distance, (Inches)		Infiltrative Distance, (Inches)		Infiltrative Distance, (Inches)		Infiltrative Distance, (Inches)	
Texture	Shape	Grade	8-12	12-24	24-48	8-12	12-24	24-48	8-12	12-24	24-48	8-12	12-24	24-48	Row	
COS, S, LCOS, LS FS, VFS, LFS, LVFS	--	OSG	4.0	5.0	6.0	5.0	4.0	6.0	7.0	6.0	7.0	6.0	7.0	8.0	1	
	--	OSG	3.5	4.5	5.5	4.0	5.0	6.0	5.0	6.0	7.0	5.0	6.0	7.0	2	
	--	OM	3.0	3.5	4.0	3.6	4.1	4.6	5.0	6.0	7.0	5.0	6.0	7.0	3	
CSL, SL	PL	1	3.0	3.5	4.0	3.6	4.1	4.6	4.0	5.0	6.0	4.0	5.0	6.0	4	
		2,3													5	
FSL, VFSL	PR/BK/	1	3.5	4.5	5.5	4.0	5.0	6.0	5.0	6.0	7.0	5.0	6.0	7.0	6	
	GR	2,3	3.5	4.5	5.5	4.0	5.0	6.0	5.0	6.0	7.0	5.0	6.0	7.0	7	
	--	OM	2.0	2.3	2.6	2.4	2.7	3.0	2.7	3.0	3.7	2.7	3.2	3.7	8	
L	PL	1,2,3													9	
	PR/BK	1	3.0	3.5	4.0	3.3	3.8	4.3	3.6	4.1	4.6	3.6	4.1	4.6	10	
	GR	2,3	3.3	3.8	4.3	3.6	4.1	4.6	3.9	4.4	4.9	3.9	4.4	4.9	11	
SIL	--	OM	2.0	2.3	2.6	2.4	2.7	3.0	2.4	2.7	3.0	2.4	2.7	3.0	12	
	PL	1,2,3	-	-	-	-	-	-	-	-	-	-	-	-	13	
	PR/BK	1	3.0	3.5	4.0	3.3	3.8	4.3	3.6	4.1	4.6	3.6	4.1	4.6	14	
SCL, CL, SICL	GR	2,3	3.3	3.8	4.3	3.6	4.1	4.6	3.9	4.4	4.9	3.9	4.4	4.9	15	
	--	OM	2.0	2.5	3.0	2.2	2.7	3.2	2.4	2.9	3.4	2.4	2.9	3.4	16	
	PL	1,2,3													17	
SC, C, SIC	PR/BK	1	2.4	2.7	3.0	2.7	3.0	3.3	3.0	3.3	3.6	3.0	3.5	4.0	18	
	GR	2,3	2.7	3.0	3.3	3.0	3.5	4.0	3.3	3.8	4.3	3.3	3.8	4.3	19	
	--	OM													20	
SCL, CL, SICL	PL	1,2,3													21	
	PR/BK	1	2.0	2.5	3.0	2.2	2.7	3.2	2.4	2.9	3.4	2.4	2.9	3.4	22	
	GR	2,3	2.4	2.9	3.2	2.7	3.0	3.3	3.0	3.5	4.0	3.0	3.5	4.0	23	
SC, C, SIC	--	OM													24	
	PL	1,2,3													25	
	PR/BK	1													26	
SC, C, SIC	GR	2,3	2.0	2.5	3.0	2.2	2.7	3.2	2.4	2.9	3.4	2.4	2.9	3.4	27	

**SEWAGE TREATMENT SYSTEM (STS) DESIGN FOR:
SUSAN JEFFRE
478 NORTH BEND ROAD
Cincinnati, Ohio 45224
Par# 590-0203-0010-00
0.217 Acres**

Designed By:
SCS ENGINEERS
2060 Reading Road, #200
Cincinnati OH 45202
513-421-5353
Design Date: NOV 13, 2017
Site Visited on OCT 10, 2017

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, Hamilton County Public Health Operation Permit Terms and Conditions. System devices and components must be installed per ODH product approval, Hamilton County Installation Manual and this design. Where conflicts exist, consult HCPH and designer for guidance before proceeding.

Jet ODH Product O&M: <http://ow.ly/YUxGX>
Jet 952 UV and O&M: <http://ow.ly/4mHXcl>
Polylok 20" D-Boxes: <http://ow.ly/LhrC308Rhwh>
Hamilton County Installation Manual: <http://ow.ly/YUIW30dOkV6>
This installation will require an electrical inspection(s) and approval by IBI (513) 381-6080, <http://www.inspectionbureau.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 SCS Engineers. SCS Engineers 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

It is the owner and installation contractors responsibility to locate underground utilities. If utilities interfere with the designed system, construction shall not proceed without approval from HCPH and designer. 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 specified in OAC 3701-29-06(G)(3).

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.

SCS Engineers estimates costs as follows :
\$19,000 - \$25,000 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 SCS Engineers 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.

Design Details:

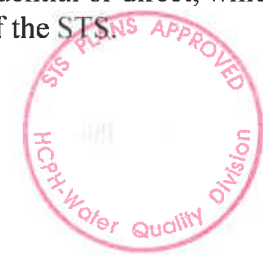
New building sewer to new Jet J-500-PLT-RAD 500 GPD aerobic treatment unit containing a pretreatment chamber, an aeration chamber, a settling chamber, re-aeration and Jet 952 UV disinfection device to discharge. Because the system is gravity fed and will not have a pump discharge, an active phone line will be required for telemetry within the control panel.

Design Rationale:

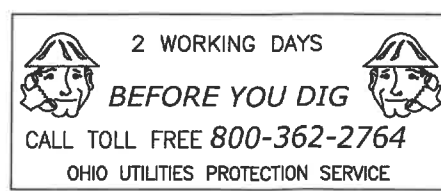
This design is for a 2 bedroom home with a Daily Design Peak Flow of 240 GPD. The peak flow should not be reached on a routine basis. Average flows of 144 GPD can be accommodated routinely with typical residential wastewater strength as specified in Ohio Administrative Code (OAC) 3701-29 for households.

The soil report indicates that soil from this yard consists mostly of shallow to high clay and rocky fill. A small, approximately 25'x25' area of usable soil exists in the back yard, but is insufficient in size for installation of a replacement system. The front yard is unuseable after considering offsets due to it's small size. The back yard is unuseable due to the narrow width of the lot, the presence of a large area of rocky fill directly behind the house and an area of shallow to high clay near the rear of the yard. Additionally, a rock wall runs horizontally through the middle of the back yard. Insufficient available space is the primary limiting factor precluding use of soil absorption at this property.

Owner will obtain a NPDES discharge permit through OEPA (owner currently does not have a permit).



REV.	DATE	DESCRIPTION	CK. BY
△			
△			
△			
△			
△			
△			



SCS ENGINEERS
CONSULTING ENGINEERS, INC.
2060 READING ROAD SUITE 200 CINCINNATI, OHIO 45202
PH. (513) 421-5353

PROJ. NO. 27217008.49	CADD FILE: JEFFRE SEPTIC V1	DATE: November 2017	SCALE: N.T.S.
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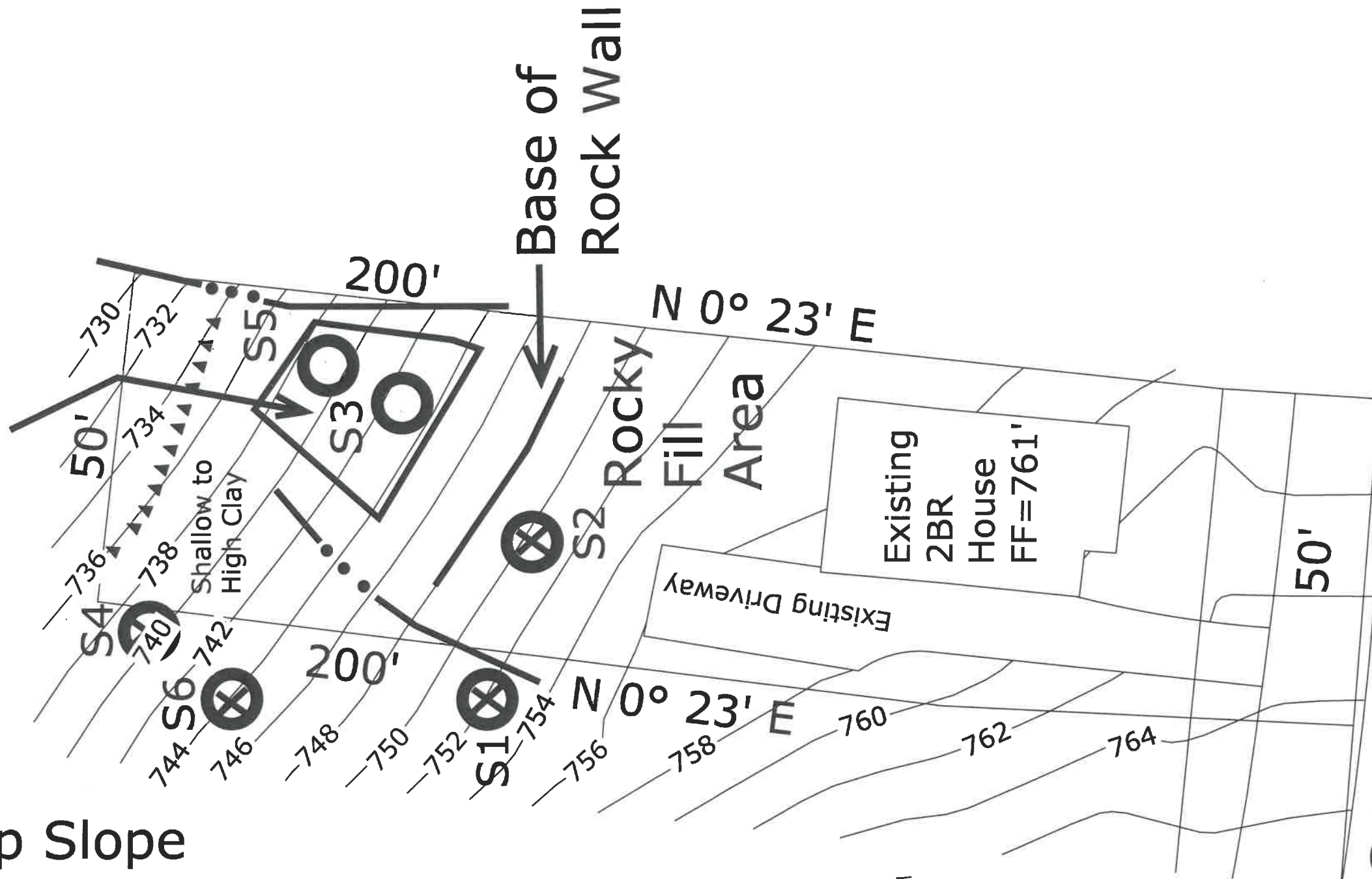
SHEET 1 *478-10E*

GENERAL NOTES AND DESIGN BASIS

478 NORTH BEND ROAD - JEFFRE RESIDENCE
PARCEL NUMBER: 590-0203-0010-00
HAMILTON COUNTY OHIO - 0.217 ACRES

C:\Users\0649fdb\appdata\local\temp\AcPublish_9996\Jeffre Septic_V2.dwg May 14, 2018 - 6:38pm Layout Name: Sheet 1

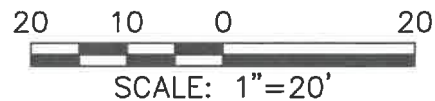
Acceptable Soil
Only About 25' on Contour



Steep Slope

Soil Locations

Very Poor Soil



CAGIS Internet Server, 2015

NORTH BEND RD



SCS ENGINEERS			
CONSULTING ENGINEERS, INC.			
2060 READING ROAD SUITE 200 CINCINNATI, OHIO 45202			
PH. (513) 421-5353			
PROJ. NO.	CADD FILE:	DATE:	SCALE:
27217008.49	JEFFRE SEPTIC V1	November 2017	AS SHOWN

SHEET 2 **478-1DE**

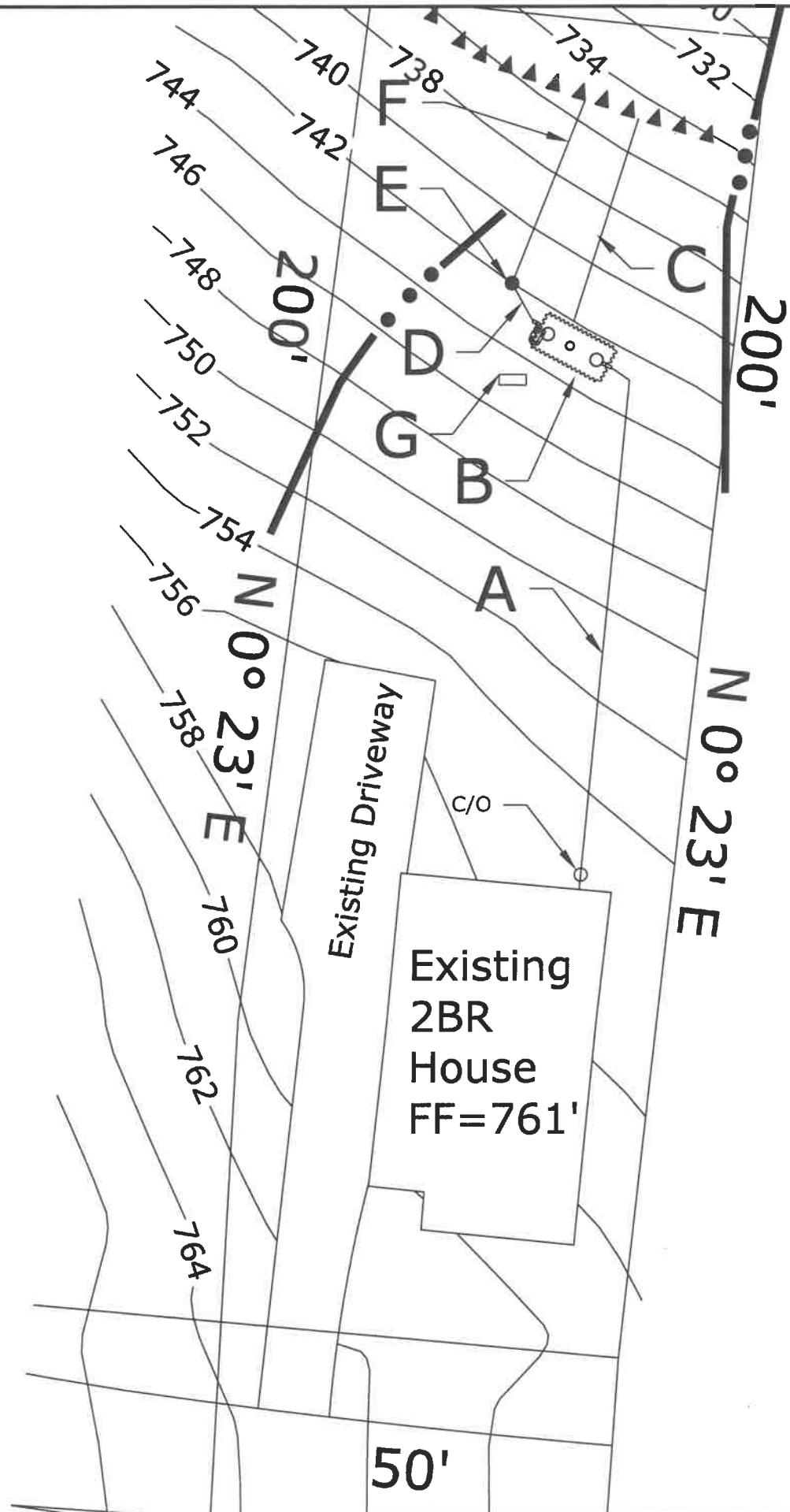
SOIL SAMPLING LOCATIONS

478 NORTH BEND ROAD - JEFFRE RESIDENCE

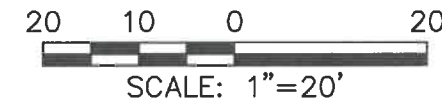
PARCEL NUMBER: 590-0203-0010-00

HAMILTON COUNTY OHIO - 0.217 ACRES

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- A - New 4 inch Schedule 40 PVC Sewer pipe with minimum 1% grade. A cleanout will be installed at the point that existing building sewer exits the foundation wall. No pipe elbows greater than 45° will be used. Pipe must be anchored at every coupling due to steep slope
- B - Jet J-500-PLT-RAD Treatment Unit with re-aeration and Jet 952 UV disinfection device (See Sheet 4 for detail). UV unit housed in 20" Polylok D-Box
- C - Tank Cavity Drain (See Sheet 4 for detail).
- D - 4 inch Schedule 40 PVC pipe, extending a short distance from ATU/UV unit (B) to Sample Well (E), with minimum 1% grade.
- E - Sample Well (See Sheet 4 for detail).
- F - 4 inch Schedule 40 PVC gravity discharge piping extending from Sample Well (E) to outlet. Sloped minimum 1/8" per foot (i.e., nominally 1%) to outlet, with animal guard at outlet, and must have 6" minimum freeboard at outlet.
- G - Jet Model 197 control panel with Jet Model 197D autodialer/telemetry control panel. Panel shall be preceded by an electrical disconnect switch. Control panel and disconnect to be installed by a licensed electrician. Permanent phone line will be required for telemetry panel. Panel may optionally be mounted on house - to be determined by homeowner and installer at time of installation and pre-approved by HCPH.
- H - Existing tank to be properly abandoned according to OAC 3701-29-21, and in conformance with HCPH permitting and reporting requirements. Location of existing tank to be field located. Location was not found/visible during field investigation.



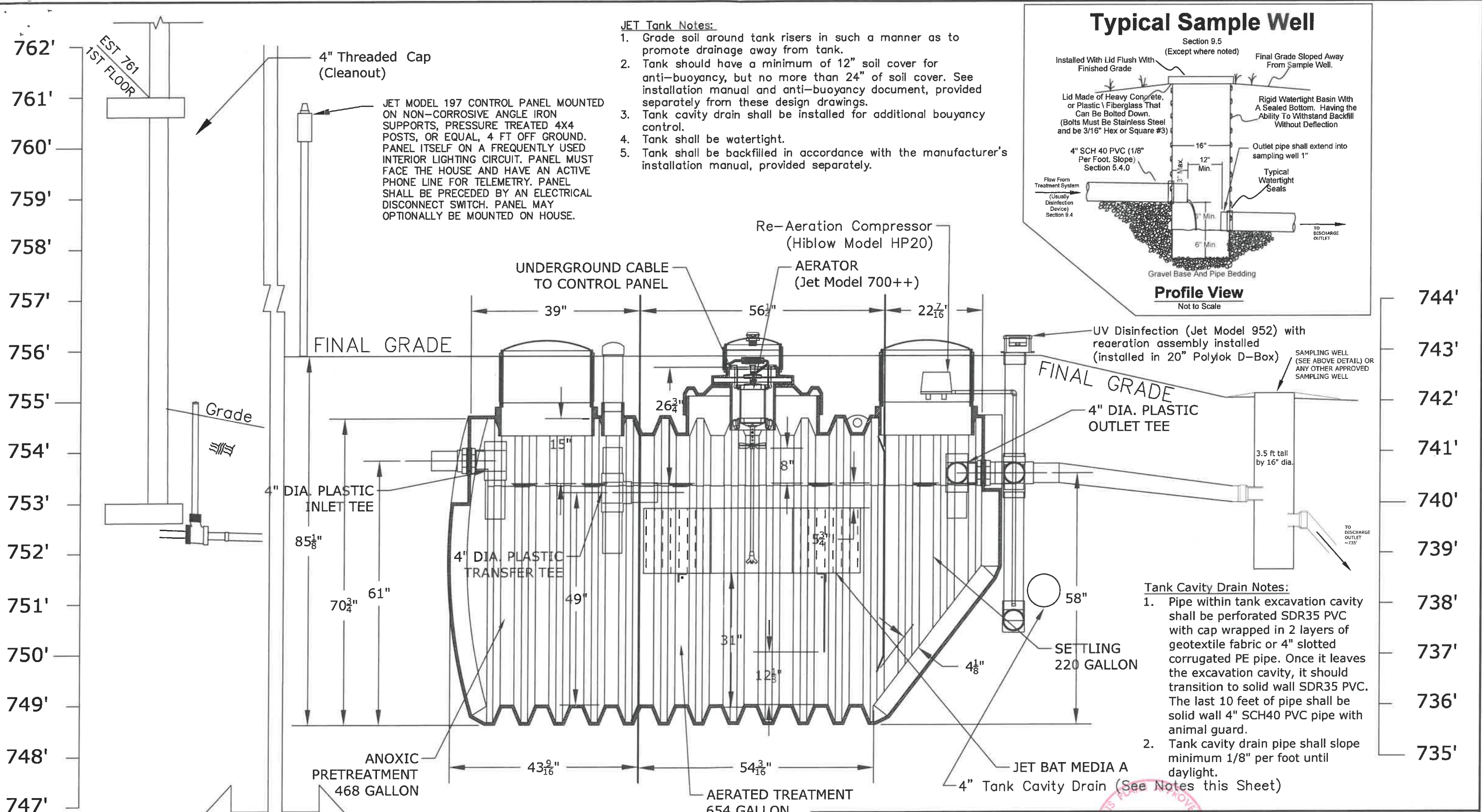
NOTE: ALL PIPE SHALL BE SCHEDULE 40 PVC MEETING ASTM 1785 UNLESS OTHERWISE SPECIFIED.

SCS ENGINEERS CONSULTING ENGINEERS, INC. 2060 READING ROAD SUITE 200 CINCINNATI, OHIO 45202 PH. (513) 421-5353			
PROJ. NO. 27217008.49	CADD FILE: JEFFRE SEPTIC V1	DATE: November 2017	SCALE: AS SHOWN

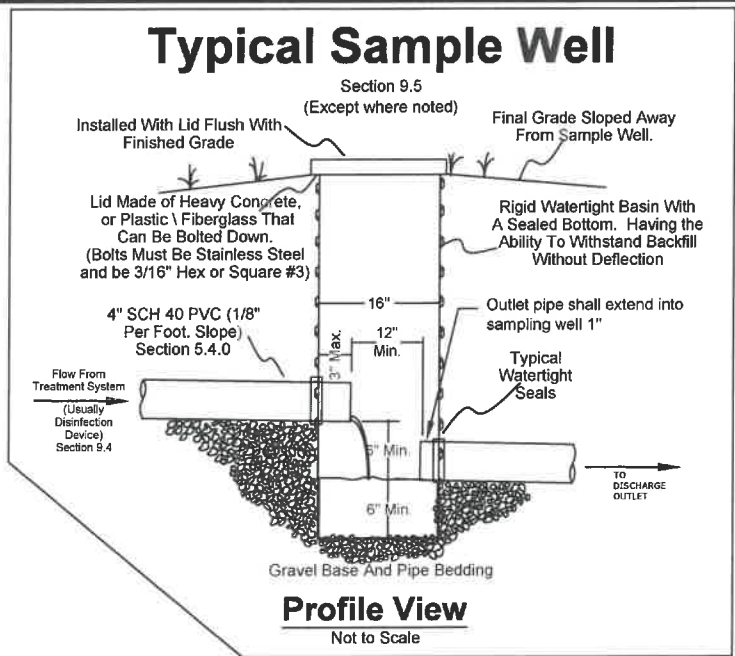
SHEET 3 *478-1 DE*

STS SYSTEM LAYOUT
 478 NORTH BEND ROAD - JEFFRE RESIDENCE
 PARCEL NUMBER: 590-0203-0010-00
 HAMILTON COUNTY OHIO - 0.217 ACRES

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- JET Tank Notes:**
1. Grade soil around tank risers in such a manner as to promote drainage away from tank.
 2. Tank should have a minimum of 12" soil cover for anti-buoyancy, but no more than 24" of soil cover. See installation manual and anti-buoyancy document, provided separately from these design drawings.
 3. Tank cavity drain shall be installed for additional buoyancy control.
 4. Tank shall be watertight.
 5. Tank shall be backfilled in accordance with the manufacturer's installation manual, provided separately.



- Tank Cavity Drain Notes:**
1. Pipe within tank excavation cavity shall be perforated SDR35 PVC with cap wrapped in 2 layers of geotextile fabric or 4" slotted corrugated PE pipe. Once it leaves the excavation cavity, it should transition to solid wall SDR35 PVC. The last 10 feet of pipe shall be solid wall 4" SCH40 PVC pipe with animal guard.
 2. Tank cavity drain pipe shall slope minimum 1/8" per foot until daylight.

762'
761'
760'
759'
758'
757'
756'
755'
754'
753'
752'
751'
750'
749'
748'
747'

EST. 761
1ST FLOOR

4" Threaded Cap (Cleanout)

JET MODEL 197 CONTROL PANEL MOUNTED ON NON-CORROSIVE ANGLE IRON SUPPORTS, PRESSURE TREATED 4X4 POSTS, OR EQUAL, 4 FT OFF GROUND. PANEL ITSELF ON A FREQUENTLY USED INTERIOR LIGHTING CIRCUIT. PANEL MUST FACE THE HOUSE AND HAVE AN ACTIVE PHONE LINE FOR TELEMTRY. PANEL SHALL BE PRECEDED BY AN ELECTRICAL DISCONNECT SWITCH. PANEL MAY OPTIONALLY BE MOUNTED ON HOUSE.

4" DIA. PLASTIC INLET TEE

4" DIA. PLASTIC TRANSFER TEE

ANOXIC PRETREATMENT 468 GALLON

USE LEFT ELEV. SCALE

USE RIGHT ELEV. SCALE

Jet J-500-PLT-RAD with UV and Re-Aeration

SCS ENGINEERS
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2060 READING ROAD SUITE 200 CINCINNATI, OHIO 45202
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SHEET 4 *478-1 DE*

SYSTEM HYDRAULIC PROFILE

478 NORTH BEND ROAD - JEFFRE RESIDENCE
PARCEL NUMBER: 590-0203-0010-00
HAMILTON COUNTY OHIO - 0.217 ACRES

ALL SECTION NOTATIONS REFERENCE THE HAMILTON COUNTY INSTALLER'S MANUAL