

Document A310™ – 2010

Conforms with The American Institute of Architects AIA Document 310

Bid Bond

CONTRACTOR:

(Name, legal status and address)

Thermal Service LLC
2891 Lexington Road
Richmond, KY 40475

SURETY:

(Name, legal status and principal place of business)

Fidelity and Deposit Company of Maryland
1299 Zurich Way, 5th Floor
Schaumburg, IL 60196-1056
Mailing Address for Notices

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

OWNER:

(Name, legal status and address)

Lexington-Fayette Urban County Government
200 E Main St.
Lexington, KY 40507

BOND AMOUNT: 5% Five Percent of Amount Bid

PROJECT:

(Name, location or address, and Project number, if any)

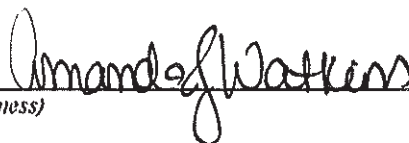
ITB #144-2023 West Hickman Solids Processing Building Hydronic System

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 18th day of December, 2023.



(Witness)

Thermal Service LLC

(Principal) (Seal)

By: 


(Title)



(Witness) WITNESS AS TO SURETY

Fidelity and Deposit Company of Maryland

(Surety) (Seal)

By: 

(Title) Adrienne Scalera, Attorney-in-Fact



LIMITED LIABILITY COMPANY ACKNOWLEDGEMENT

State of Kentucky
County of Madison

On this 19 day of December 2023 before me Personally came

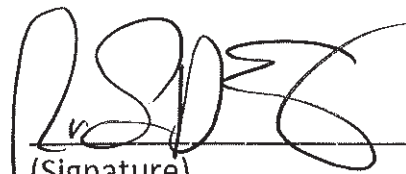
Amanda Watkins to me known to be the individual who executed the

foregoing instrument, and who, being duly sworn by me, did depose and say that

he/she is (are) Human Resource Manager of
(Member/Manager)

Thermal Service LLC a
(Limited Liability Company)

Limited Liability Company, and that he/she has authority to sign the same and
acknowledge that he/she executed the same as the act and deed of said Limited
Liability Company.


(Signature)

RaSonda D. Smith
(Notary)



RaSonda D. Smith
NOTARY PUBLIC
State at Large, Kentucky
ID # KYNP2045
My Commission Expires
February 5, 2024

CORPORATE ACKNOWLEDGMENT

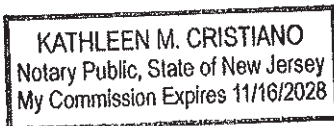
Form 152

State of **NEW JERSEY**
County of **UNION**

On this 18th day of December, 2023 before me personally came ADRIANNE SCALERA, to me known, who, being by me duly sworn, did depose and say that he/she resides in SHREWSBURY, NEW JERSEY that he/she is the ATTORNEY-IN-FACT of the Fidelity and Deposit Company of Maryland the corporation described in and which executed the above instrument; that he/she knows that seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he/she signed his/her name thereto by like order.

(SEAL)

Kathleen M. Cristiano



THE FIDELITY AND DEPOSIT COMPANY

OF MARYLAND
1299 Zurich Way Schaumburg, IL 60196

Statement of Financial Condition As Of December 31, 2022

ASSETS

Bonds.....		\$ 219,365,765
Stocks		17,619,752
Cash and Short-Term Investments		2,767,685
Reinsurance Recoverable		12,309,422
Federal Income Tax Recoverable.....		0
Other Accounts Receivable		32,200,768
TOTAL ADMITTED ASSETS.....		\$ 284,263,392

LIABILITIES, SURPLUS AND OTHER FUNDS

Reserve for Taxes and Expenses		\$ 545,031
Ceded Reinsurance Premiums Payable		42,850,834
Remittances and Items Unallocated		0
Payable to parents, subs and affiliates		0
Securities Lending Collateral Liability.....		0
TOTAL LIABILITIES.....		\$ 43,395,865
Capital Stock, Paid Up	\$ 5,000,000	
Surplus.....	240,867,527	
Surplus as regards Policyholders.....		240,867,527
TOTAL		\$ 284,263,392

Securities carried at \$78,455,274 in the above statement are deposited with various states as required by law.

Securities carried on the basis prescribed by the National Association of Insurance Commissioners. On the basis of market quotations for all bonds and stocks owned, the Company's total admitted assets at December 31, 2022 would be \$266,908,407 and surplus as regards policyholders \$223,512,542.

I, LAURA J. LAZARCZYK, Corporate Secretary of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing statement is a correct exhibit of the assets and liabilities of the said Company on the 31st day of December, 2022.

Digitally signed by
Laura J. Lazarczyk
DN: cn=Laura J. Lazarczyk

Corporate Secretary

State of Illinois }
City of Schaumburg } SS:

Subscribed and sworn to, before me, a Notary Public of the State of Illinois, in the City of Schaumburg, this 15th day of March, 2023.



[Signature]

Notary Public

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Illinois, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Illinois (herein collectively called the "Companies"), by Robert D. Murray, Vice President, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Kathleen M. CRISTIANO, Adrienne SCALERA and John Dougherty HUNTER**, all of Westfield, New Jersey, its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND, this 26th day of September, A.D. 2023.



**ATTEST:
ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**

By: *Robert D. Murray*
Vice President

By: *Dawn E. Brown*
Secretary

**State of Maryland
County of Baltimore**

On this 26th day of September, A.D. 2023, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **Robert D. Murray, Vice President and Dawn E. Brown, Secretary** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

Genevieve M. Maison

**GENEVIEVE M. MAISON
NOTARY PUBLIC
BALTIMORE COUNTY, MD
My Commission Expires JANUARY 27, 2026**



Authenticity of this bond can be confirmed at bondvalidator.zurichna.com or 410-559-8790

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 18th day of December, 2023,



MJ Pethick

By: Mary Jean Pethick
Vice President

TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT A COMPLETE DESCRIPTION OF THE CLAIM INCLUDING THE PRINCIPAL ON THE BOND, THE BOND NUMBER, AND YOUR CONTACT INFORMATION TO:

Zurich Surety Claims
1299 Zurich Way
Schaumburg, IL 60196-1056
reportsfclaims@zurichna.com
800-626-4577

Authenticity of this bond can be confirmed at bondvalidator.zurichna.com or 410-559-8790



CERTIFICATE OF LIABILITY INSURANCE

11/1/2024

DATE (MM/DD/YYYY)

12/15/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

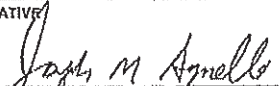
PRODUCER Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000 kcasu@lockton.com	CONTACT NAME: PHONE (A/C, No, Ext):	FAX (A/C, No):	
	E-MAIL ADDRESS:		
INSURED 1492591 THERMAL SERVICES, LLC. 2891 LEXINGTON ROAD RICHMOND KY 40475	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A: Old Republic Insurance Company		24147
	INSURER B: Travelers Property Casualty Company of America		25674
	INSURER C: Zurich American Insurance Company		16535
	INSURER D: Indian Harbor Insurance Company		36940
	INSURER E: INSURER F:		

COVERAGES CERTIFICATE NUMBER: 20131129 REVISION NUMBER: XXXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY	Y	N	MWZY31586123	11/1/2023	11/1/2024	EACH OCCURRENCE \$ 10,000,000
A	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR			MWZX31795523	11/1/2023	11/1/2024	DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 10,000,000
A	<input checked="" type="checkbox"/> CONTRACTUAL LIAB			MWZX31795823	11/1/2023	11/1/2024	MED EXP (Any one person) \$ 10,000
	<input checked="" type="checkbox"/> XCU INCLUDED						PERSONAL & ADV INJURY \$ 10,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE \$ 20,000,000
	<input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						PRODUCTS - COMP/OP AGG \$ 20,000,000
	OTHER:						\$
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY	Y	N	MWFB31586223	11/1/2023	11/1/2024	COMBINED SINGLE LIMIT (Ea accident) \$ 10,000,000
A	<input checked="" type="checkbox"/> ANY AUTO			MWZX31795623	11/1/2023	11/1/2024	BODILY INJURY (Per person) \$ XXXXXXXX
A	<input type="checkbox"/> OWNED AUTOS ONLY			MWZX31795923	11/1/2023	11/1/2024	BODILY INJURY (Per accident) \$ XXXXXXXX
A	<input type="checkbox"/> HIRED AUTOS ONLY						PROPERTY DAMAGE (Per accident) \$ XXXXXXXX
A	<input type="checkbox"/> SCHEDULED AUTOS						\$ XXXXXXXX
A	<input type="checkbox"/> NON-OWNED AUTOS ONLY						
B	<input checked="" type="checkbox"/> UMBRELLA LIAB	Y	N	CUP-7T469438-23-NF	11/1/2023	11/1/2024	EACH OCCURRENCE \$ 10,000,000
	<input type="checkbox"/> EXCESS LIAB						AGGREGATE \$ 10,000,000
	<input type="checkbox"/> CLAIMS-MADE						\$ XXXXXXXX
	<input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 10,000						
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	Y/N	N	MWC31586023	11/1/2023	11/1/2024	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	<input checked="" type="checkbox"/> N	N/A				E.L. EACH ACCIDENT \$ 10,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE \$ 10,000,000
							E.L. DISEASE - POLICY LIMIT \$ 10,000,000
C	INSTALL FLTR/BUILDERS RISK	N	N	MBR435533602	11/1/2023	11/1/2024	\$15,000,000 PER OCCURRENCE
D	PROFESSIONAL/POLLUTION			CEO744642006	11/1/2023	11/1/2024	\$10,000,000 PER CLAIM; \$20,000,000 AGGREGATE

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required) LFUCG (Lexington Fayette Urban County Government) is included as additional insured. (except as respects all coverage afforded by the WC policy) and is granted a waiver of subrogation as required by written contract, but only for liability arising out of the operations of the named insured.

CERTIFICATE HOLDER 20131129 LFUCG (Lexington Fayette Urban County Government) 200 East Main Street Lexington KY 40507	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 
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LEXINGTON

Lexington-Fayette Urban County Government

Lexington, Kentucky
Horse Capital of the World

Division of Central Purchasing

Date of Issue: December 5, 2023

INVITATION TO BID #144-2023 West Hickman Solids Processing Building Hydronic System Replacement

Bid Opening Date: December 21, 2023

Bid Opening Time: 2:00 PM

Address: Bid must be submitted electronically in Ionwave

Type of Bid: Firm Bid

Pre Bid Meeting: NA

Pre Bid Time:

Address:

Sealed bids will ONLY be received online at <https://lexingtonky.ionwave.net/> until **2:00 PM**, prevailing local time on **12/21/2023**. Bids must be submitted/uploaded by the above-mentioned date and time.

Bids are to include all shipping, handling and associated fees to the point of delivery located at: West Hickman WWTP
645 West Hickman Plant Rd.
Nicholasville, KY 40356

Bid Specifications Met <input checked="" type="checkbox"/> Exceptions to Bid Specifications. <i>Exceptions shall be itemized and attached to bid proposal submitted.</i>	Check One: <input checked="" type="checkbox"/> Exceptions to Bid Specifications. <i>Exceptions shall be itemized and attached to bid proposal submitted.</i>	Proposed Delivery: 180 days after acceptance of bid.
Procurement Card Usage —The Lexington-Fayette Urban County Government may be using Procurement Cards to purchase goods and services and also to make payments. Will you accept Procurement Cards? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Submitted by: Thermal Service LLC

Firm Name

2891 Lexington Road

Address

Richmond Ky. 40475

City, State & Zip

Bid must be signed: *Mike Rhineheimer* Account Manager
(original signature) **Signature of Authorized Company Representative – Title**

Mike Rhineheimer

Representative's Name (Typed or printed)

859-983-0218

Area Code - Phone – Extension *Fax #*

miker@thermalserviceusa.com

E-Mail Address

The Affidavit in this bid must be completed before your firm can be considered for award of this contract.

AFFIDAVIT

Comes the Affiant, Mike Rhineheimer, and after being first duly sworn under penalty of perjury as follows:

1. His/her name is Mike Rhineheimer and he/she is the individual submitting the bid or is the authorized representative of Thermal Service LLC the entity submitting the bid (hereinafter referred to as "Bidder")
2. Bidder will pay all taxes and fees, which are owed to the Lexington-Fayette Urban County Government at the time the bid is submitted, prior to award of the contract and will maintain a "current" status in regard to those taxes and fees during the life of the contract.
3. Bidder will obtain a Lexington-Fayette Urban County Government business license, if applicable, prior to award of the contract.
4. Bidder has authorized the Division of Central Purchasing to verify the above-mentioned information with the Division of Revenue and to disclose to the Urban County Council that taxes and/or fees are delinquent or that a business license has not been obtained.
5. Bidder has not knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky within the past five (5) years and the award of a contract to the Bidder will not violate any provision of the campaign finance laws of the Commonwealth.
6. Bidder has not knowingly violated any provision of Chapter 25 of the Lexington-Fayette Urban County Government Code of Ordinances, known as "Ethics Act."
7. Bidder acknowledges that "knowingly" for purposes of this Affidavit means, with respect to conduct or to circumstances described by a statute or ordinance defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that the circumstance exists.

Further, Affiant sayeth naught. _____

STATE OF Kentucky
COUNTY OF Madison

The foregoing instrument was subscribed, sworn to and acknowledged before me by Mike Rhineheimer on this the 19 day of December, 2023

My Commission expires: February 5 2023



RaSonda D. Smith
NOTARY PUBLIC
State at Large, Kentucky
ID # KYNP2045
February 5, 2024

[Signature]
NOTARY PUBLIC, STATE AT LARGE

Please refer to Section II, Bid Conditions, Item "U" prior to completing this form.

I. GREEN PROCUREMENT

A. ENERGY

The Lexington-Fayette Urban County Government is committed to protecting our environment and being fiscally responsible to our citizens.

The Lexington-Fayette Urban County Government mandates the use of Energy Star compliant products if they are available in the marketplace (go to www.Energystar.gov). If these products are available, but not submitted in your pricing, your bid will be rejected as non-compliant.

ENERGY STAR is a government program that offers businesses and consumers energy-efficient solutions, making it easy to save money while protecting the environment for future generations.

Key Benefits

- These products use 25 to 50% less energy
- Reduced energy costs without compromising quality or performance
- Reduced air pollution because fewer fossil fuels are burned
- Significant return on investment
- Extended product life and decreased maintenance

B. GREEN SEAL CERTIFIED PRODUCTS

The Lexington-Fayette Urban County Government is also committed to using other environmentally friendly products that do not negatively impact our environment. Green Seal is a non-profit organization devoted to environmental standard setting, product certification, and public education.

Go to www.Greenseal.org to find available certified products. These products will have a reduced impact on the environment and on human health. The products to be used must be pre-approved by the LFUCG prior to commencement of any work in any LFUCG facility. If a Green Seal product is not available, the LFUCG must provide a signed waiver to use an alternate product. Please provide information on the Green Seal products being used with your bid response.

C. GREEN COMMUNITY

The Lexington-Fayette Urban County Government (LFUCG) serves as a principal, along with the University of Kentucky and Fayette County Public Schools, in the Bluegrass Partnership for a Green Community. The Purchasing Team component of the Partnership collaborates on economy of scale purchasing that promotes and enhances environmental initiatives. Specifically, when applicable, each principal is interested in obtaining best value products and/or services which promote environment initiatives via solicitations and awards from the other principals.

If your company is the successful bidder on this Invitation For Bid, do you agree to extend the same product/service pricing to the other principals of the Bluegrass Partnership for a Green Community (i.e. University of Kentucky and Fayette County Schools) if requested?

Yes X No _____

II. Bid Conditions

- A. No bid may be withdrawn for a period of sixty (60) days after the date and time set for opening.
- B. No bid may be altered after the date and time set for opening. In the case of obvious errors, the Division of Central Purchasing may permit the withdrawal of a bid. The decision as to whether a bid may be withdrawn shall be that of the Division of Central Purchasing.
- C. Acceptance of this proposal shall be enactment of an Ordinance by the Urban County Council.

- D. The bidder agrees that the Urban County Government reserves the right to reject any and all bids for either fiscal or technical reasons, and to award each part of the bid separately, all parts to one vendor or all parts to multiple vendors.
- E. Minor exceptions may not eliminate the bidder. The decision as to whether any exception is minor shall be entirely that of the head of the requisitioning Department or Division and the Director of the Division of Central Purchasing. The Urban County Government may waive technicalities and informalities where such waiver would best serve the interests of the Urban County Government.
- F. Manufacturer's catalogue numbers, trade names, etc., where shown herein are for descriptive purposes and are to guide the bidder in interpreting the standard of quality, design, and performance desired, and shall not be construed to exclude proposals based on furnishing other types of materials and/or services. However, any substitution or departure proposed by the bidder must be clearly noted and described; otherwise, it will be assumed that the bidder intends to supply items specifically mentioned in this Invitation for Bids.
- G. The Urban County Government may require demonstrations of the materials proposed herein prior to acceptance of this proposal.
- H. Bids must be submitted on this form and must be signed by the bidder or his authorized representative. Unsigned bids will not be considered.
- I. Bids must be submitted prior to the date and time indicated for opening. Bids submitted after this time will not be considered.
- J. All bids mailed must be submitted in the Ion Wave online portal at <https://lexingtonky.ionwave.net/>
- K. Bidder is requested to show both unit prices and lot prices. In the event of error, the unit price shall prevail.
- L. A certified check or Bid Bond in the amount of 5 percent of the bid price must be attached hereto for bids greater than \$50,000. This check must be made payable to the Lexington-Fayette Urban County Government, and will be returned when the material and/or services specified herein have been delivered in accordance with specifications. In the event of failure to perform within the time period set forth in this bid, it is agreed the certified check may be cashed and the funds retained by the Lexington-Fayette Urban County Government as liquidated damages. Checks of unsuccessful bidders will be returned when the bid has been awarded.
- M. The delivery dates specified by bidder may be a factor in the determination of the successful bidder.
- N. Tabulations of bids received may be mailed to bidders. Bidders requesting tabulations must enclose a stamped, self-addressed envelope with the bid.
- O. The Lexington-Fayette Urban County Government is exempt from Kentucky Sales Tax and Federal Excise Tax on materials purchased from this bid invitation. Materials purchased by the bidder for construction projects are not tax exempt and are the sole responsibility of the bidder.
- P. All material furnished hereunder must be in full compliance with OSHA regulations.
- Q. If more than one bid is offered by one party, or by any person or persons representing a party, all such bids shall be rejected.
- R. Signature on the face of this bid by the Bidder or his authorized representative shall be construed as acceptance of and compliance with all terms and conditions contained herein.
- S. The Entity (regardless of whether construction contractor, non-construction contractor or supplier) agrees to provide equal opportunity in employment for all qualified persons, to prohibit discrimination in employment because of race, color, religion, sex (including pregnancy, sexual orientation or gender identity), national origin, disability, age, genetic information, political affiliation, or veteran status, and to promote equal employment through a positive, continuing program from itself and each of its sub-contracting agents. This program of equal employment opportunity shall apply to every aspect of its employment policies and practices.
- T. The Kentucky Equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) requires that any county, city, town, school district, water district, hospital district, or other political subdivision of the state shall include in directly

or indirectly publicly funded contracts for supplies, materials, services, or equipment hereinafter entered into the following provisions:

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

- (1) *The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, age or national origin;*
- (2) *The contractor will state in all solicitations or advertisements for employees placed by or on behalf of the contractors that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, age or national origin;*
- (3) *The contractor will post notices in conspicuous places, available to employees and applicants for employment, setting forth the provisions of the non-discrimination clauses required by this section; and*
- (4) *The contractor will send a notice to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding advising the labor union or workers' representative of the contractor's commitments under the nondiscrimination clauses.*

The Act further provides:

KRS 45.610. Hiring minorities - Information required

- (1) *For the length of the contract, each contractor shall hire minorities from other sources within the drawing area, should the union with which he has collective bargaining agreements be unwilling to supply sufficient minorities to satisfy the agreed upon goals and timetable.*
- (2) *Each contractor shall, for the length of the contract, furnish such information as required by KRS 45.560 to KRS 45.640 and by such rules, regulations and orders issued pursuant thereto and will permit access to all books and records pertaining to his employment practices and work sites by the contracting agency and the department for purposes of investigation to ascertain compliance with KRS 45.560 to 45.640 and such rules, regulations and orders issued pursuant thereto.*

KRS 45.620. Action against contractor - Hiring of minority contractor or subcontractor

- (1) *If any contractor is found by the department to have engaged in an unlawful practice under this chapter during the course of performing under a contract or subcontract covered under KRS 45.560 to 45.640, the department shall so certify to the contracting agency and such certification shall be binding upon the contracting agency unless it is reversed in the course of judicial review.*
- (2) *If the contractor is found to have committed an unlawful practice under KRS 45.560 to 45.640, the contracting agency may cancel or terminate the contract, conditioned upon a program for future compliance approved by the contracting agency and the department. The contracting agency may declare such a contractor ineligible to bid on further contracts with that agency until such time as the contractor complies in full with the requirements of KRS 45.560 to 45.640.*
- (3) *The equal employment provisions of KRS 45.560 to 45.640 may be met in part by a contractor by subcontracting to a minority contractor or subcontractor. For the provisions of KRS 45.560 to 45.640, a minority contractor or subcontractor shall mean a business that is owned and controlled by one or more persons disadvantaged by racial or ethnic circumstances.*

KRS 45.630 Termination of existing employee not required, when

Any provision of KRS 45.560 to 45.640 notwithstanding, no contractor shall be required to terminate an existing employee upon proof that that employee was employed prior to the date of the contract.

KRS 45.640 Minimum skills

Nothing in KRS 45.560 to 45.640 shall require a contractor to hire anyone who fails to demonstrate the minimum skills required to perform a particular job.

It is recommended that all of the provisions above quoted to be included as special conditions in each contract.

In the case of a contract exceeding \$250,000, the contractor is required to furnish evidence that his work-force in Kentucky is representative of the available work-force in the area from which he draws employees, or to supply an Affirmative Action plan which will achieve such representation during the life of the contract.

- U. Any party, firm or individual submitting a proposal pursuant to this invitation must be in compliance with the requirements of the Lexington-Fayette Urban County Government regarding taxes and fees before they can be considered for award of this invitation and must maintain a "current" status with regard to those taxes and fees throughout the term of the contract. The contractor must be in compliance with Chapter 13 from the Code of Ordinances of the Lexington-Fayette Urban County Government. The contractor must be in compliance with Ordinance 35-2000 pursuant to contractor registration with the Division of Building Inspection. If applicable, said business must have a Fayette County business license.

Pursuant to KRS 45A.343 and KRS 45A.345, the contractor shall

- (1) *Reveal any final determination of a violation by the contractor within the previous five year period pursuant to KRS Chapters 136 (corporation and utility taxes), 139 (sales and use taxes), 141 (income taxes), 337 (wages and hours), 338 (occupational safety and health of employees), 341 (unemployment and compensation) and 342 (labor and human rights) that apply to the contractor; and*
- (2) *Be in continuous compliance with the above-mentioned KRS provisions that apply to the contractor for the duration of the contract.*

A contractor's failure to reveal the above or to comply with such provisions for the duration of the contract shall be grounds for cancellation of the contract and disqualification of the contractor from eligibility for future contracts for a period of two (2) years.

- V. Vendors who respond to this invitation have the right to file a notice of contention associated with the bid process or to file a notice of appeal of the recommendation made by the Director of Central Purchasing resulting from this invitation.

Notice of contention with the bid process must be filed within 3 business days of the bid/proposal opening by (1) sending a written notice, including sufficient documentation to support contention, to the Director of the Division of Central Purchasing or (2) submitting a written request for a meeting with the Director of Central Purchasing to explain his/her contention with the bid process. After consulting with the Commissioner of Finance the Chief Administrative Officer and reviewing the documentation and/or hearing the vendor, the Director of Central Purchasing shall promptly respond in writing findings as to the compliance with bid processes. If, based on this review, a bid process irregularity is deemed to have occurred the Director of Central Purchasing will consult with the Commissioner of Finance, the Chief Administrative Officer and the Department of Law as to the appropriate remedy.

Notice of appeal of a bid recommendation must be filed within 3 business days of the bid recommendation by (1) sending a written notice, including sufficient documentation to support appeal, to the Director, Division of Central Purchasing or (2) submitting a written request for a meeting with the Director of Central Purchasing to explain his appeal. After reviewing the documentation and/or hearing the vendor and consulting with the Commissioner of Finance and the Chief Administrative Officer, the Director of Central Purchasing shall in writing, affirm or withdraw the recommendation.

LFUCG Non-Appropriation Clause

Contractor acknowledges that the LFUCG is a governmental entity, and the contract validity is based upon the availability of public funding under the authority of its statutory mandate.

In the event that public funds are unavailable and not appropriated for the performance of the LFUCG's obligations under this contract, then this contract shall automatically expire without penalty to the LFUCG thirty (30) days after written notice to Contractor of the unavailability and non-appropriation of public funds. It is expressly agreed that the LFUCG shall not activate this non-appropriation provision for its convenience or to circumvent the requirements of this contract, but only as an emergency fiscal measure during a substantial fiscal crisis, which affects generally its governmental operations.

In the event of a change in the LFUCG's statutory authority, mandate and mandated functions, by state and federal legislative or regulatory action, which adversely affects the LFUCG's authority to continue its obligations under this contract, then this contract shall automatically terminate without penalty to the LFUCG upon written notice to Contractor of such limitation or change in the LFUCG's legal authority.

EQUAL OPPORTUNITY AGREEMENT

Standard Title VI Assurance

The Lexington Fayette-Urban County Government, (hereinafter referred to as the "Recipient") hereby agrees that as a condition to receiving any Federal financial assistance from the U.S. Department of Transportation, it will comply with Title VI of the Civil Rights Act of 1964, 78Stat.252, 42 U.S.C. 2000d-4 (hereinafter referred to as the "Act"), and all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, (49 CFR, Part 21) Nondiscrimination in Federally Assisted Program of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964 (hereinafter referred to as the "Regulations") and other pertinent directives, no person in the United States shall, on the grounds of race, color, national origin, sex, age (over 40), religion, sexual orientation, gender identity, veteran status, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Recipient receives Federal financial assistance from the U.S. Department of Transportation, including the Federal Highway Administration, and hereby gives assurance that will promptly take any necessary measures to effectuate this agreement. This assurance is required by subsection 21.7(a) (1) of the Regulations.

The Law

- Title VII of the Civil Rights Act of 1964 (amended 1972) states that it is unlawful for an employer to discriminate in employment because of race, color, religion, sex, age (40-70 years) or national origin.
- Executive Order No. 11246 on Nondiscrimination under Federal contract prohibits employment discrimination by contractor and sub-contractor doing business with the Federal Government or recipients of Federal funds. This order was later amended by Executive Order No. 11375 to prohibit discrimination on the basis of sex.
- Section 503 of the Rehabilitation Act of 1973 states:

The Contractor will not discriminate against any employee or applicant for employment because of physical or mental disability.
- Section 2012 of the Vietnam Era Veterans Readjustment Act of 1973 requires Affirmative Action on behalf of disabled veterans and veterans of the Vietnam Era by contractors having Federal contracts.
- Section 206(A) of Executive Order 12086, Consolidation of Contract Compliance Functions for Equal Employment Opportunity, states:

The Secretary of Labor may investigate the employment practices of any Government contractor or sub-contractor to determine whether or not the contractual provisions specified in Section 202 of this order have been violated.

The Lexington-Fayette Urban County Government practices Equal Opportunity in recruiting, hiring and promoting. It is the Government's intent to affirmatively provide employment opportunities for those individuals who have previously not been allowed to enter into the mainstream of society. Because of its importance to the local Government, this policy carries the full endorsement of the Mayor, Commissioners, Directors and all supervisory personnel. In following this commitment to Equal Employment Opportunity and because the Government is the benefactor of the Federal funds, it is both against the Urban County Government policy and illegal for the Government to let contracts to companies which knowingly or unknowingly practice discrimination in their employment practices. Violation of the above mentioned ordinances may cause a contract to be canceled and the contractors may be declared ineligible for future consideration.

Please sign this statement in the appropriate space acknowledging that you have read and understand the provisions contained herein. Return this document as part of your application packet.

Bidders

I/We agree to comply with the Civil Rights Laws listed above that govern employment rights of minorities, women, veteran status, disability and age.

Mike Rhinheimer
Signature

Thermal Service LLC
Name of Business

GENERAL PROVISIONS OF BID CONTRACT

By signing the below, bidder acknowledges that it understands and agrees with the following provisions related to its bid response and the provision of any goods or services to LFUCG upon selection by LFUCG pursuant to the bid request:

1. Bidder shall comply with all Federal, State & Local regulations concerning this type of service or good. All applicable state laws, ordinances and resolutions (including but not limited to Section 2-33 (Discrimination due to sexual orientation or gender identity) and Chapter 13 (Licenses and Regulations) of the Lexington-Fayette Urban County Government Code of Ordinances, and Resolution No. 484-17 (Minority, Women, and Veteran-Owned Businesses)) and the regulations of all authorities having jurisdiction over the project shall apply to the contract, and shall be deemed to be incorporated herein by reference.
2. Failure to submit ALL forms and information required by LFUCG may be grounds for disqualification.
3. Addenda: All addenda and IonWave Q&A, if any, must be considered by the bidder in making its response, and such addenda shall be made a part of the requirements of the bid contract. Before submitting a bid response, it is incumbent upon bidder to be informed as to whether any addenda have been issued, and the failure of the bidder to cover any such addenda may result in disqualification of that response.
4. Bid Reservations: LFUCG reserves the right to reject any or all bid responses, to award in whole or part, and to waive minor immaterial defects in proposals. LFUCG may consider any alternative proposal that meets its basic needs.
5. Liability: LFUCG is not responsible for any cost incurred by bidder in the preparation of its response.
6. Changes/Alterations: Bidder may change or withdraw a proposal at any time prior to the opening; however, no oral modifications will be allowed. Only letters, or other formal written requests for modifications or corrections of a previously submitted proposal which is addressed in the same manner as the bid response, and received by LFUCG prior to the scheduled closing time for receipt of bids, will be accepted. The bid response when opened, will then be corrected in accordance with such written request(s), provided that the written request is contained in a sealed envelope which is plainly marked "modifications of bid response".
7. Clarification of Submittal: LFUCG reserves the right to obtain clarification of any point in a bid or to obtain additional information from any bidder.
8. Bribery Clause: By his/her signature on its response, bidder certifies that no employee of his/hers, any affiliate or subcontractor, has bribed or attempted to bribe an officer or employee of the LFUCG.
9. Additional Information: While not necessary, the bidder may include any product brochures, software documentation, sample reports, or other documentation that may assist LFUCG in better understanding and evaluating the bid response. Additional documentation shall not serve as a substitute for other documentation which is required by the LFUCG to be submitted with the bid response.
10. Ambiguity, Conflict or other Errors: If a bidder discovers any ambiguity, conflict, discrepancy, omission or other error in the bid request of LFUCG, it shall immediately notify LFUCG of such error in writing and request modification or clarification of the document if allowable by the LFUCG.
11. Agreement to Bid Terms: In submitting its bid response, the bidder agrees that it has carefully examined the specifications and all provisions relating to LFUCG's bid request, including but not limited to the bid contract. By submission of its bid response, bidder states that it understands the meaning, intent and requirements of LFUCG's bid request and agrees to the same. The successful bidder shall warrant that it is familiar with and understands all provisions herein and shall warrant that it can comply with them. No additional compensation to bidder shall be authorized for services, expenses, or goods reasonably covered under these provisions that the bidder omits from its bid response.

12. Cancellation: LFUCG may unilaterally terminate the bid contract with the selected bidder(s) at any time, with or without cause, by providing at least thirty (30) days advance written notice unless a different advance written notice period is negotiated prior to contract approval. Payment for services or goods received prior to termination shall be made by the LFUCG provided these goods or services were provided in a manner acceptable to the LFUCG. Payment for those goods and services shall not be unreasonably withheld.
13. Assignment of Contract: The selected bidder(s) shall not assign or subcontract any portion of the bid contract with LFUCG without the express written consent of LFUCG. Any purported assignment or subcontract in violation hereof shall be void. It is expressly acknowledged that LFUCG shall never be required or obligated to consent to any request for assignment or subcontract; and further that such refusal to consent can be for any or no reason, fully within the sole discretion of LFUCG.
14. No Waiver: No failure or delay by LFUCG in exercising any right, remedy, power or privilege hereunder, nor any single or partial exercise thereof, nor the exercise of any other right, remedy, power or privilege shall operate as a waiver hereof or thereof. No failure or delay by LFUCG in exercising any right, remedy, power or privilege under or in respect of this bid proposal or bid contract shall affect the rights, remedies, powers or privileges of LFUCG hereunder or shall operate as a waiver thereof.
15. Authority to do Business: Each bidder must be authorized to do business under the laws of the Commonwealth of Kentucky and must be in good standing and have full legal capacity to provide the goods or services specified in the bid proposal. Each bidder must have all necessary right and lawful authority to submit the bid response and enter into the bid contract for the full term hereof including any necessary corporate or other action authorizing the bidder to submit the bid response and enter into this bid contract. If requested, the bidder will provide LFUCG with a copy of a corporate resolution authorizing this action and/or a letter from an attorney confirming that the proposer is authorized to do business in the Commonwealth of Kentucky. All bid responses must be signed by a duly authorized officer, agent or employee of the bidder.
16. Governing Law: This bid request and bid contract shall be governed by and construed in accordance with the laws of the Commonwealth of Kentucky. In the event of any proceedings regarding this matter, the bidder agrees that the venue shall be the Fayette County Circuit Court or the U.S. District Court for the Eastern District of Kentucky, Lexington Division and that the bidder expressly consents to personal jurisdiction and venue in such Court for the limited and sole purpose of proceedings relating to these matters or any rights or obligations arising thereunder.
17. Ability to Meet Obligations: Bidder affirmatively states that there are no actions, suits or proceedings of any kind pending against bidder or, to the knowledge of the bidder, threatened against the bidder before or by any court, governmental body or agency or other tribunal or authority which would, if adversely determined, have a materially adverse effect on the authority or ability of bidder to perform its obligations under this bid response or bid contract, or which question the legality, validity or enforceability hereof or thereof.
18. Price Discrepancy: When applicable, in case of price discrepancy, unit bid price written in words will prevail followed by unit price written in numbers then total amount bid per line item.
19. Bidder understands and agrees that its employees, agents, or subcontractors are not employees of LFUCG for any purpose whatsoever. Bidder is an independent contractor at all times related to the bid response or bid contract.
20. Contractor [or Vendor or Vendor's Employees] will not appropriate or make use of the Lexington-Fayette Urban County Government (LFUCG) name or any of its trade or service marks or property (including but not limited to any logo or seal), in any promotion, endorsement, advertisement, testimonial or similar use without the prior written consent of the government. If such consent is granted LFUCG reserves the unilateral right, in its sole discretion, to immediately terminate and revoke such use for any reason whatsoever. Contractor agrees that it shall cease and desist from any unauthorized use immediately upon being notified by LFUCG.

21. If any term or provision of this bid contract shall be found to be illegal or unenforceable, the remainder of the contract shall remain in full force and such term or provision shall be deemed stricken.

Mike Rhinheimer
Signature

12/19/23
Date

WORKFORCE ANALYSIS FORM

Name of Organization: Thermal Service LLC

Categories	Total	White (Not Hispanic or Latino)		Hispanic or Latino		Black or African-American (Not Hispanic or Latino)		Native Hawaiian and Other Pacific Islander (Not Hispanic)		Asian (Not Hispanic or Latino)		American Indian or Alaskan Native (not Hispanic or Latino)		Two or more races (Not Hispanic or Latino)		Total	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Administrators	4	2	2														
Professionals	3	2	1														
Superintendents																	
Supervisors	3	3															
Foremen	4	4															
Technicians	62	61			1												
Protective Service																	
Para-Professionals																	
Office/Clerical	10	2	8														
Skilled Craft																	
Service/Maintenanc																	
Total:	86	74	11		1												

Prepared by: Amanda Watkins HR Manager
(Name and Title)

Date: 12, 15, 2023
Revised 2015-Dec-15

**DIRECTOR, DIVISION OF CENTRAL PURCHASING
LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 EAST MAIN STREET
LEXINGTON, KENTUCKY 40507**

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE
EQUAL EMPLOYMENT OPPORTUNITIES AND DBE CONTRACT PARTICIPATION**

The Lexington-Fayette Urban County Government has set a goal that not less than ten percent (10%) of the total value of this contract be subcontracted to MBE/WBE's, and set a goal that not less than three percent (3%) of the total value of this contract be subcontracted to Veteran-Owned Small Businesses. The goal for the utilization of Certified MBE/WBE's and Veteran-Owned Small Businesses as subcontractors are recommended goals. Contractors who fail to meet such goals will be expected to provide written explanations to the Director of the Division of Central Purchasing of efforts they have made to accomplish the recommended goals and the extent to which they are successful in accomplishing the recommended goals will be a consideration in the procurement process.

For assistance in locating MBE/WBE Subcontractors contact Sherita Miller at 859/258-3320 or by writing the address listed below:

Sherita Miller, Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street – Room 338
Lexington, Kentucky 40507
smiller@lexingtonky.gov

Lexington-Fayette Urban County Government
MWDBE PARTICIPATION GOALS

A. GENERAL

- 1) The LFUCG request all potential contractors to make a concerted effort to include Minority-Owned (MBE), Woman-Owned (WBE), Disadvantaged (DBE) Business Enterprises and Veteran-Owned Small Businesses (VOSB) as subcontractors or suppliers in their bids.
- 2) Toward that end, the LFUCG has established 10% of total procurement costs as a Goal for participation of Minority-Owned, Woman-Owned and Disadvantaged Businesses on this contract.
- 3) **It is therefore a request of each Bidder to include in its bid, the same goal (10%) for MWDBE participation and other requirements as outlined in this section.**
- 4) The LFUCG has also established a 3% of total procurement costs as a Goal for participation for of Veteran-Owned Businesses.
- 5) **It is therefore a request of each Bidder to include in its bid, the same goal (3%) for Veteran-Owned participation and other requirements as outlined in this section.**

B. PROCEDURES

- 1) The successful bidder will be required to report to the LFUCG, the dollar amounts of all payments submitted to Minority-Owned, Woman-Owned or Veteran-Owned subcontractors and suppliers for work done or materials purchased for this contract. (See Subcontractor Monthly Payment Report)
- 2) Replacement of a Minority-Owned, Woman-Owned or Veteran-Owned subcontractor or supplier listed in the original submittal must be requested in writing and must be accompanied by documentation of Good Faith Efforts to replace the subcontractor / supplier with another MWDBE Firm; this is subject to approval by the LFUCG. (See LFUCG MWDBE Substitution Form)
- 3) For assistance in identifying qualified, certified businesses to solicit for potential contracting opportunities, bidders may contact:
 - a) The Lexington-Fayette Urban County Government, Division of Central Purchasing (859-258-3320)
- 4) The LFUCG will make every effort to notify interested MWDBE and Veteran-Owned subcontractors and suppliers of each Bid Package, including information on the scope of work, the pre-bid meeting time and location, the bid date, and all other pertinent information regarding the project.

C. DEFINITIONS

- 1) A Minority-Owned Business Enterprise (MBE) is defined as a business which is certified as being at least 51% owned, managed and controlled by persons of African American, Hispanic, Asian, Pacific Islander, American Indian or Alaskan Native Heritage.
- 2) A Woman-Owned Business Enterprise (WBE) is defined as a business which is certified as being at least 51% owned, managed and controlled by one or more women.

- 3) A Disadvantaged Business (DBE) is defined as a business which is certified as being at least 51% owned, managed and controlled by a person(s) that are economically and socially disadvantaged.
- 4) A Veteran-Owned Small Business (VOSB) is defined as a business which is certified as being at least 51% owned, managed and controlled by a veteran and/or a service disabled veteran.
- 5) Good Faith Efforts are efforts that, given all relevant circumstances, a bidder or proposer actively and aggressively seeking to meet the goals, can reasonably be expected to make. In evaluating good faith efforts made toward achieving the goals, whether the bidder or proposer has performed the efforts outlined in the Obligations of Bidder for Good Faith Efforts outlined in this document will be considered, along with any other relevant factors.

D. OBLIGATION OF BIDDER FOR GOOD FAITH EFFORTS

- 1) **The bidder shall make a Good Faith Effort to achieve the Participation Goal for MWDBE and Veteran-Owned subcontractors/suppliers. The failure to meet the goal shall not necessarily be cause for disqualification of the bidder; however, bidders not meeting the goal are required to furnish with their bids written documentation of their Good Faith Efforts to do so.**
- 2) Award of Contract shall be conditioned upon satisfaction of the requirements set forth herein.
- 3) The Form of Proposal includes a section entitled "MWDBE Participation Form". The applicable information must be completed and submitted as outlined below.
- 4) **Failure to submit this information as requested may be cause for rejection of bid or delay in contract award.**

E. DOCUMENTATION REQUIRED FOR GOOD FAITH EFFORTS

- 1) Bidders reaching the Goal are required to submit only the MWDBE Participation Form." The form must be fully completed including names and telephone number of participating MWDBE firm(s); type of work to be performed; estimated value of the contract and value expressed as a percentage of the total Lump Sum Bid Price. The form must be signed and dated, and is to be submitted with the bid.
- 2) Bidders not reaching the Goal must submit the "MWDBE Participation Form", the "Quote Summary Form" and a written statement documenting their Good Faith Effort to do so. If bid includes no MWDBE and/or Veteran participation, bidder shall enter "None" on the subcontractor / supplier form). In addition, the bidder must submit written proof of their Good Faith Efforts to meet the Participation Goal:
 - a. Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow MWDBE firms and Veteran-Owned businesses to participate.
 - b. Included documentation of advertising in the above publications with the bidders good faith efforts package

- c. Attended LFUCG Central Purchasing Economic Inclusion Outreach event
- d. Attended pre-bid meetings that were scheduled by LFUCG to inform MWDBEs and/or Veteran-Owned businesses of subcontracting opportunities
- e. Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and MWDBE firms and Veteran-Owned businesses.
- f. Requested a list of MWDBE and/or Veteran subcontractors or suppliers from LFUCG and showed evidence of contacting the companies on the list(s).
- g. Contacted organizations that work with MWDBE companies for assistance in finding certified MWBDE firms and Veteran-Owned businesses to work on this project. Those contacted and their responses should be a part of the bidder's good faith efforts documentation.
- h. Sent written notices, by certified mail, email or facsimile, to qualified, certified MWDBEs and/or Veteran-Owned businesses soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.
- i. Followed up initial solicitations by contacting MWDBEs and Veteran-Owned Businesses to determine their level of interest.
- j. Provided the interested MWBDE firm and/or Veteran-Owned business with adequate and timely information about the plans, specifications, and requirements of the contract.
- k. Selected portions of the work to be performed by MWDBE firms and/or Veteran-Owned businesses in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate MWDBE and Veteran participation, even when the prime contractor may otherwise perform these work items with its own workforce
- l. Negotiated in good faith with interested MWDBE firms and Veteran-Owned businesses not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached.
- m. Included documentation of quotations received from interested MWDBE firms and Veteran-Owned businesses which were not used due to uncompetitive pricing or were rejected as unacceptable and/or copies of responses from firms indicating that they would not be submitting a bid.
- n. Bidder has to submit sound reasons why the quotations were considered unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a MWDBE and/or Veteran-Owned business's quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy MWDBE and Veteran goals.

o. Made an effort to offer assistance to or refer interested MWDBE firms and Veteran-Owned businesses to obtain the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal

p. Made efforts to expand the search for MWBE firms and Veteran-Owned businesses beyond the usual geographic boundaries.

q. Other--any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include MWDBE and Veteran participation.

Note: Failure to submit any of the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement which is subject to review by the MBE Liaison. Documentation of Good Faith Efforts must be submitted with the Bid, if the participation Goal is not met.



MINORITY BUSINESS ENTERPRISE PROGRAM

Sherita Miller, MPA
Minority Business Enterprise Liaison
Division of Central Purchasing
Lexington-Fayette Urban County Government
200 East Main Street
Lexington, KY 40507
smiller@lexingtonky.gov
859-258-3323

OUR MISSION: The mission of the Minority Business Enterprise Program is to facilitate the full participation of minority and women owned businesses in the procurement process and to promote economic inclusion as a business imperative essential to the long term economic viability of Lexington-Fayette Urban County Government.

To that end the city council adopted and implemented Resolution 484-2017 – A Certified Minority, Women and Disadvantaged Business Enterprise ten percent (10%) minimum goal and a three (3%) minimum goal for Certified Veteran-Owned Small Businesses and Certified Service Disabled Veteran – Owned Businesses for government contracts.

The resolution states the following definitions shall be used for the purposes of reaching these goals (a full copy is available in Central Purchasing):

***Certified Disadvantaged Business Enterprise (DBE)** – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a person(s) who is socially and economically disadvantaged as define by 49 CFR subpart 26.*

***Certified Minority Business Enterprise (MBE)** – a business in which at least fifty-one percent (51%) is owned, managed and controlled by an ethnic minority (i.e. African American, Asian American/Pacific Islander, Hispanic Islander, Native American/Native Alaskan Indian) as defined in federal law or regulation as it may be amended from time-to-time.*

***Certified Women Business Enterprise (WBE)** – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a woman.*

***Certified Veteran-Owned Small Business (VOSB)** – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a veteran who served on active duty with the U.S. Army, Air Force, Navy, Marines or Coast Guard.*

***Certified Service Disabled Veteran Owned Small Business (SDVOSB)** – a business in which at least fifty-one percent (51%) is owned, managed and controlled by a disabled veteran who served on active duty with the U.S. Army, Air Force, Navy, Marines or Coast Guard.*

The term “Certified” shall mean the business is appropriately certified, licensed, verified, or validated by an organization or entity recognized by the Division of Purchasing as having the appropriate credentials to make a determination as to the status of the business.

To comply with Resolution 484-2017, prime contractors and minority, women and veteran owned businesses must enroll in the new Diverse Business Management Compliance system, <https://lexingtonky.diversitycompliance.com/>

We have compiled the list below to help you locate certified MBE, WBE and DBE certified businesses. Below is a listing of contacts for LFUCG Certified MWDBEs and Veteran-Owned Small Businesses in (<https://lexingtonky.ionwave.net>)

1

Business	Contact	Email Address	Phone
LFUCG	Sherita Miller	smiller@lexingtonky.gov	859-258-3323
Commerce Lexington – Minority Business Development	Tyrone Tyra	ttyra@commercelexington.com	859-226-1625
Tri-State Minority Supplier Diversity Council	Susan Marston	smarston@tsmsdc.com	502-365-9762
Small Business Development Council	Shawn Rogers UK SBDC	shawn.rogers@uky.edu	859-257-7666
Community Ventures Corporation	Phyllis Alcorn	palcorn@cvky.org	859-231-0054
KY Transportation Cabinet (KYTC)	Melvin Bynes	Melvin.bynes2@ky.gov	502-564-3601
KYTC Pre-Qualification	Shella Eagle	Shella.Eagle@ky.gov	502-782-4815
Ohio River Valley Women’s Business Council (WBENC)	Sheila Mixon	smixon@orvwbc.org	513-487-6537
Kentucky MWBE Certification Program	Yvette Smith, Kentucky Finance Cabinet	Yvette.Smith@ky.gov	502-564-8099
National Women Business Owner’s Council (NWBOC)	Janet Harris-Lange	janet@nwbo.org	800-675-5066
Small Business Administration	Robert Coffey	robertcoffey@sba.gov	502-582-5971
LaVoz de Kentucky	Andres Cruz	lavozdeky@yahoo.com	859-621-2106
The Key News Journal	Patrice Muhammad	production@keynewsjournal.com	859-685-8488



LFUCG MWDBE PARTICIPATION FORM

Bid/RFP/Quote Reference # 144-2023 to text here

The MWDBE and/or veteran subcontractors listed have agreed to participate on this Bid/RFP/Quote. If any substitution is made or the total value of the work is changed prior to or after the job is in progress, it is understood that those substitutions must be submitted to Central Purchasing for approval immediately. **Failure to submit a completed form may cause rejection of the bid.**

MWDBE Company, Name, Address, Phone, Email	MBE WBE or DBE	Work to be Performed	Total Dollar Value of the Work	% Value of Total Contract
1.				
2.				
3.				
4.				

The undersigned company representative submits the above list of MWDBE firms to be used in accomplishing the work contained in this Bid/RFP/Quote. Any misrepresentation may result in the termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Thermal Service LLC
Company

12/19/23
Date

Mike Rhineheimer
Company Representative

Account Manager
Title



LEXINGTON

LFUCG MWDBE SUBSTITUTION FORM

Bid/RFP/Quote Reference # 144-2023

The substituted MWDBE and/or veteran subcontractors listed below have agreed to participate on this Bid/RFP/Quote. These substitutions were made prior to or after the job was in progress. These substitutions were made for reasons stated below and are now being submitted to Central Purchasing for approval. By the authorized signature of a representative of our company, we understand that this information will be entered into our file for this project.

SUBSTITUTED MWDBE Company Name, Address, Phone, Email	MWDBE Formally Contracted/ Name, Address, Phone, Email	Work to Be Performed	Reason for the Substitution	Total Dollar Value of the Work	% Value of Total Contract
1.					
2.					
3.					
4.					

The undersigned acknowledges that any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and false claims.

Thermal Service LLC
Company

12/19/23
Date

Mike Rhineheimer
Company Representative

Account Manager
Title



LEXINGTON

MWDBE QUOTE SUMMARY FORM

Bid/RFP/Quote Reference # 144-2023

The undersigned acknowledges that the minority and/or veteran subcontractors listed on this form did submit a quote to participate on this project. Failure to submit this form may cause rejection of the bid.

Company Name	Contact Person
Address/Phone/Email	Bid Package / Bid Date

MWDBE Company Address	Contact Person	Contact Information (work phone, Email, cell)	Date Contacted	Services to be performed	Method of Communication (email, phone meeting, ad, event etc)	Total dollars \$\$ Do Not Leave Blank (Attach Documentation)	MBE * AA HA AS NA Female	Veteran

(MBE designation / AA=African American / HA= Hispanic American/AS = Asian American/Pacific Islander/ NA= Native American)

The undersigned acknowledges that all information is accurate. Any misrepresentation may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Thermal Service LLC
Company

12/19/23
Date

Mike Rhineheimer
Company Representative

Account Manager
Title



LEXINGTON

LFUCG SUBCONTRACTOR MONTHLY PAYMENT REPORT

The LFUCG has a 10% goal plan adopted by city council to increase the participation of minority and women owned businesses in the procurement process. The LFUCG also has a 3% goal plan adopted by cited council to increase the participation of veteran owned businesses in the procurement process. In order to measure that goal LFUCG will track spending with MWDBE and Veteran contractors on a monthly basis. By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentation may result in termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims. Please submit this form monthly to the Division of Central Purchasing/ 200 East Main Street / Room 338 / Lexington, KY 40507.

Bid/RFP/Quote # 144-2023

Total Contract Amount Awarded to Prime Contractor for this Project \$0.00

Project Name/ Contract #	Work Period/ From: _____ To: _____
Company Name:	Address: _____
Federal Tax ID:	Contact Person: _____

Subcontractor Vendor ID (name, address, phone, email)	Description of Work	Total Subcontract Amount	% of Total Contract Awarded to Prime for this Project	Total Amount Paid for this Period	Purchase Order number for subcontractor work (please attach PO)	Scheduled Project Start Date	Scheduled Project End Date

By the signature below of an authorized company representative, you certify that the information is correct, and that each of the representations set forth below is true. Any misrepresentations may result in the termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims.

Thermal Service LLC

 Company
12/19/23

 Date

Mike Rhineheimer

 Company Representative
Account Manager

 Title

* This Bid does NOT include
Subcontractors. *

LFUCG STATEMENT OF GOOD FAITH EFFORTS
Bid/RFP/Quote # _____

By the signature below of an authorized company representative, we certify that we have utilized the following Good Faith Efforts to obtain the maximum participation by MWDBE and Veteran-Owned business enterprises on the project and can supply the appropriate documentation.

_____ Advertised opportunities to participate in the contract in at least two (2) publications of general circulation media; trade and professional association publications; small and minority business or trade publications; and publications or trades targeting minority, women and disadvantaged businesses not less than fifteen (15) days prior to the deadline for submission of bids to allow MWDBE firms and Veteran-Owned businesses to participate.

_____ Included documentation of advertising in the above publications with the bidders good faith efforts package

_____ Attended LFUCG Central Purchasing Economic Inclusion Outreach event

_____ Attended pre-bid meetings that were scheduled by LFUCG to inform MWDBEs and/or Veteran-Owned Businesses of subcontracting opportunities

_____ Sponsored Economic Inclusion event to provide networking opportunities for prime contractors and MWDBE firms and Veteran-Owned businesses

_____ Requested a list of MWDBE and/or Veteran subcontractors or suppliers from LFUCG and showed evidence of contacting the companies on the list(s).

_____ Contacted organizations that work with MWDBE companies for assistance in finding certified MWDBE firms and Veteran-Owned businesses to work on this project. Those contacted and their responses should be a part of the bidder's good faith efforts documentation.

_____ Sent written notices, by certified mail, email or facsimile, to qualified, certified MWDBEs soliciting their participation in the contract not less than seven (7) days prior to the deadline for submission of bids to allow them to participate effectively.

_____ Followed up initial solicitations by contacting MWDBEs and Veteran-Owned businesses to determine their level of interest.

_____ Provided the interested MWDBE firm and/or Veteran-Owned business with adequate and timely information about the plans, specifications, and requirements of the contract.

_____ Selected portions of the work to be performed by MWDBE firms and/or Veteran-Owned businesses in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate MWDBE and Veteran participation, even when the prime contractor may otherwise perform these work items with its own workforce

_____ Negotiated in good faith with interested MWDBE firms and Veteran-Owned businesses not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached.

_____ Included documentation of quotations received from interested MWDBE firms and Veteran-Owned businesses which were not used due to uncompetitive pricing or were rejected as unacceptable and/or copies of responses from firms indicating that they would not be submitting a bid.

_____ Bidder has to submit sound reasons why the quotations were considered unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a MWDBE and/or Veteran-Owned business's quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy MWDBE and Veteran goals.

_____ Made an effort to offer assistance to or refer interested MWDBE firms and Veteran-Owned businesses to obtain the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal

_____ Made efforts to expand the search for MWBE firms and Veteran-Owned businesses beyond the usual geographic boundaries.

_____ Other--any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include MWDBE and Veteran participation.

NOTE: Failure to submit any of the documentation requested in this section may be cause for rejection of bid. Bidders may include any other documentation deemed relevant to this requirement which is subject to approval by the MBE Liaison. Documentation of Good Faith Efforts must be submitted with the Bid, if the participation Goal is not met.

The undersigned acknowledges that all information is accurate. Any misrepresentations may result in termination of the contract and/or be subject to applicable Federal and State laws concerning false statements and claims.

Thermal Service LLC
Company
12.15.2023
Date

Amanda Watkins
Company Representative
HR Manager
Title

AMENDMENT 1 —
CERTIFICATION OF COMPLIANCE FOR EXPENDITURES USING FEDERAL FUNDS,
INCLUDING THE AMERICAN RESCUE PLAN ACT

The Lexington-Fayette Urban County Government (“LFUCG”) may use Federal funding to pay for the goods and/or services that are the subject matter of this bid. That Federal funding may include funds received by LFUCG under the American Rescue Plan Act of 2021. Expenditures using Federal funds require evidence of the contractor’s compliance with Federal law. Therefore, by the signature below of an authorized company representative, you certify that the information below is understood, agreed, and correct. Any misrepresentations may result in the termination of the contract and/or prosecution under applicable Federal and State laws concerning false statements and false claims.

The bidder (hereafter “bidder,” or “contractor”) agrees and understands that in addition to all conditions stated within the attached bid documents, the following conditions will also apply to any Agreement entered between bidder and LFUCG, if LFUCG uses Federal funds, including but not limited to funding received by LFUCG under the American Rescue Plan Act (“ARPA”), toward payment of goods and/or services referenced in this bid. The bidder also agrees and understands that if there is a conflict between the terms included elsewhere in this Request for Proposal and the terms of this Amendment 1, then the terms of Amendment 1 shall control. The bidder further certifies that it can and will comply with these conditions, if this bid is accepted and an Agreement is executed:

1. Any Agreement executed as a result of acceptance of this bid may be governed in accordance with 2 CFR Part 200 and all other applicable Federal law and regulations and guidance issued by the U.S. Department of the Treasury.
2. Pursuant to 24 CFR § 85.43, any Agreement executed as a result of acceptance of this bid can be terminated if the contractor fails to comply with any term of the award. This Agreement may be terminated for convenience in accordance with 24 CFR § 85.44 upon written notice by LFUCG. Either party may terminate this Agreement with thirty (30) days written notice to the other party, in which case the Agreement shall terminate on the thirtieth day. In the event of termination, the contractor shall be entitled to that portion of total compensation due under this Agreement as the services rendered bears to the services required. However, if LFUCG suspects a breach of the terms of the Agreement and/or that the contractor is violating the terms of any applicable law governing the use of Federal funds, LFUCG may suspend the contractor’s ability to receive payment by giving thirty (30) days’ advance written notice. Further, either party may terminate this Agreement for cause shown with thirty (30) days written notice, which shall explain the party’s cause for the termination. If the parties do not reach a settlement before the end of the 30 days, then the Agreement shall terminate on the thirtieth day. In the event of a breach, LFUCG reserves the right to pursue any and all applicable legal, equitable, and/or administrative remedies against the contractor.
3. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, 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, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:
 - (1) 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 setting forth the provisions of this nondiscrimination clause.

- (2) 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, sexual orientation, gender identity, or national origin.
- (3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
- (4) 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 advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- (5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
- (6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- (7) In the event of the contractor's noncompliance with the nondiscrimination clauses 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 contractor may be declared ineligible for further government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- (8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) 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 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 administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

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 contractor may request the United States to enter into such litigation to protect the interests of the United States.

4. If fulfillment of the contract requires the contractor to employ mechanic's or laborers, the contractor further agrees that it can and will comply with the following:

- (1) Overtime requirements: No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such a workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such a workweek.

- (2) Violation: liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.
 - (3) Withholding for unpaid wages and liquidated damages. LFUCG shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.
 - (4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower-tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower-tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.
5. The contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
 6. The contractor shall report each violation to LFUCG and understands and agrees that LFUCG will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency Regional Office.
 7. The contractor shall include these requirements in numerical paragraphs 5 and 6 in each subcontract exceeding \$100,000 financed in whole or in part with Federal funding.
 8. The contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 et seq.
 9. The contractor shall report each violation to LFUCG and understands and agrees that LFUCG will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency Regional Office.
 10. The contractor shall include these requirements in numerical paragraphs 8 and 9 in each subcontract exceeding \$100,000 financed in whole or in part with Federal funds.
 11. The contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. § 1251 et seq.
 12. The contractor shall report each violation to LFUCG and understands and agrees that LFUCG will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency regional office.
 13. The contractor shall include these requirements in numerical paragraphs 11 and 12 in each subcontract exceeding \$100,000 financed in whole or in part with American Rescue Plan Act funds.

14. The contractor shall include this language in any subcontract it executes to fulfill the terms of this bid: “the subgrantee, contractor, subcontractor, successor, transferee, and assignee shall comply with Title VI of the Civil Rights Act of 1964, which prohibits recipients of federal financial assistance from excluding from a program or activity, denying benefits of, or otherwise discriminating against a person on the basis of race, color, or national origin (42 U.S.C. § 2000d et seq.), as implemented by the Department of the Treasury’s Title VI regulations, 31 CFR Part 22, which are herein incorporated by reference and made a part of this contract (or agreement). Title VI also includes protection to persons with ‘Limited English Proficiency’ in any program or activity receiving federal financial assistance, 42 U.S.C. § 2000d et seq., as implemented by the Department of the Treasury’s Title VI regulations, 31 CFR Part 22, and herein incorporated by reference and made a part of this contract or agreement.”

15. Contractors who apply or bid for an award of \$100,000 or more shall file the required certification that it will not and has not used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency. Each tier certifies to the tier above that it will not and has not used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-federal funds that takes place in connection with obtaining any federal award. Such disclosures are forwarded from tier to tier, up to the recipient. The required certification is included here:

- a. The undersigned certifies, to the best of his or her knowledge and belief, that:
 - (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 - (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.
 - (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.
- b. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

16. The contractor acknowledges and certifies that it has not been debarred or suspended and further acknowledges and agrees that it must comply with regulations regarding debarred or suspended entities in accordance with 24 CFR § 570.489(l). Funds may not be provided to excluded or disqualified persons.

17. The contractor agrees and certifies that to the greatest extent practicable, it will prefer the purchase, acquisition, and use of all applicable goods, products or materials produced in the United States, in conformity with 2 CFR 200.322 and/or section 70914 of Public Law No. 117-58, §§ 70901-52, also known as the Infrastructure Investment and Jobs Act, whichever is applicable.

18. The contractor agrees and certifies that all activities performed pursuant to any Agreement entered as a result of the contractor's bid, and all goods and services procured under that Agreement, shall comply with 2 C.F.R. § 200.216 (Prohibition on certain telecommunications and video surveillance services and equipment) and 2 C.F.R. 200 § 200.323 (Procurement of recovered materials), to the extent either section is applicable.

19. If this bid involves construction work for a project totaling \$10 million or more, then the contractor further agrees that all laborers and mechanics, etc., employed in the construction of the public facility project assisted with funds provided under this Agreement, whether employed by contractor, or contractor's contractors, or subcontractors, shall be paid wages complying with the Davis-Bacon Act (40 U.S.C. 3141-3144). Contractor agrees that all of contractor's contractors and subcontractors will pay laborers and mechanics the prevailing wage as determined by the Secretary of Labor and that said laborers and mechanics will be paid not less than once a week. The contractor agrees to comply with the Copeland Anti- Kick Back Act (18 U.S.C. § 874) and its implementing regulations of the U.S. Department of Labor at 29 CFR part 3 and part 5. The contractor further agrees to comply with the applicable provisions of the Contract Work Hours and Safety Standards Act (40 U.S.C. Section 327-333), and the applicable provisions of the Fair Labor Standards Act of 1938, as amended (29 U.S.C. et seq.). Contractor further agrees that it will report all suspected or reported violations of any of the laws identified in this paragraph to LFUCG.

Mike Rhinheimer

Signature

12/19/23

Date

180

**RISK MANAGEMENT PROVISIONS
INSURANCE AND INDEMNIFICATION**

INDEMNIFICATION AND HOLD HARMLESS PROVISION

- (1) It is understood and agreed by the parties that Contractor hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of Contractor or its employees, agents, servants, owners, principals, licensees, assigns or subcontractors of any tier (hereinafter "CONTRACTOR") under or in connection with this agreement and/or the provision of goods or services and the performance or failure to perform any work required thereby.
- (2) CONTRACTOR shall indemnify, save, hold harmless and defend the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, volunteers, and successors in interest (hereinafter "LFUCG") from and against all liability, damages, and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees that are in any way incidental to or connected with, or that arise or are alleged to have arisen, directly or indirectly, from or by CONTRACTOR's performance or breach of the agreement and/or the provision of goods or services provided that: (a) it is attributable to personal injury, bodily injury, sickness, or death, or to injury to or destruction of property (including the loss of use resulting therefrom), or to or from the negligent acts, errors or omissions or willful misconduct of the CONTRACTOR; and (b) not caused solely by the active negligence or willful misconduct of LFUCG.
- (3) In the event LFUCG is alleged to be liable based upon the above, CONTRACTOR shall defend such allegations and shall bear all costs, fees and expenses of such defense, including but not limited to, all reasonable attorneys' fees and expenses, court costs, and expert witness fees and expenses, using attorneys approved in writing by LFUCG, which approval shall not be unreasonably withheld.
- (4) These provisions shall in no way be limited by any financial responsibility or insurance requirements, and shall survive the termination of this agreement.
- (5) LFUCG is a political subdivision of the Commonwealth of Kentucky. CONTRACTOR acknowledges and agrees that LFUCG is unable to provide indemnity or otherwise save, hold harmless, or defend the CONTRACTOR in any manner.

FINANCIAL RESPONSIBILITY

BIDDER/CONTRACTOR understands and agrees that it shall, prior to final acceptance of its bid and the commencement of any work, demonstrate the ability to assure compliance with the above Indemnity provisions and these other risk management provisions.

INSURANCE REQUIREMENTS

YOUR ATTENTION IS DIRECTED TO THE INSURANCE REQUIREMENTS BELOW, AND YOU MAY NEED TO CONFER WITH YOUR INSURANCE AGENTS, BROKERS, OR CARRIERS TO DETERMINE IN ADVANCE OF SUBMISSION OF A RESPONSE THE AVAILABILITY OF THE INSURANCE COVERAGES AND ENDORSEMENTS REQUIRED HEREIN. IF YOU FAIL TO

COMPLY WITH THE INSURANCE REQUIREMENTS BELOW, YOU MAY BE DISQUALIFIED FROM AWARD OF THE CONTRACT.

Required Insurance Coverage

BIDDER/CONTRACTOR shall procure and maintain for the duration of this contract the following or equivalent insurance policies at no less than the limits shown below and cause its subcontractors to maintain similar insurance with limits acceptable to LFUCG in order to protect LFUCG against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by CONTRACTOR. The cost of such insurance shall be included in any bid:

<u>Coverage</u>	<u>Limits</u>
General Liability aggregate (Insurance Services Office Form CG 00 01)	\$1 million per occurrence, \$2 million or \$2 million combined single limit
Commercial Automobile Liability (Insurance Services Office Form CA 0001)	combined single, \$1 million per occurrence
Worker's Compensation	Statutory
Employer's Liability	\$1,000,000.00

The policies above shall contain the following conditions:

- a. All Certificates of Insurance forms used by the insurance carrier shall be properly filed and approved by the Department of Insurance for the Commonwealth of Kentucky (DOI). LFUCG shall be named as an additional insured in the General Liability Policy and Commercial Automobile Liability Policy using the Kentucky DOI approved forms.
- b. The General Liability Policy shall be primary to any insurance or self-insurance retained by LFUCG.
- c. The General Liability Policy shall include a Products and Completed Operations endorsement or Premises and Operations Liability endorsement unless deemed not to apply by LFUCG.
- d. LFUCG shall be provided at least 30 days advance written notice via certified mail, return receipt requested, in the event any of the required policies are canceled or non-renewed.
- e. Said coverage shall be written by insurers acceptable to LFUCG and shall be in a form acceptable to LFUCG. Insurance placed with insurers with a rating classification of no less than Excellent (A or A-) and a financial size category of no less than VIII, as defined by the most current Best's Key Rating Guide shall be deemed automatically acceptable.

Renewals

After insurance has been approved by LFUCG, evidence of renewal of an expiring policy must be submitted to LFUCG, and may be submitted on a manually signed renewal endorsement form. If

the policy or carrier has changed, however, new evidence of coverage must be submitted in accordance with these Insurance Requirements.

Deductibles and Self-Insured Programs

IF YOU INTEND TO SUBMIT A SELF-INSURANCE PLAN IT MUST BE FORWARDED TO LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT, DIVISION OF RISK MANAGEMENT, 200 EAST MAIN STREET, LEXINGTON, KENTUCKY 40507 NO LATER THAN A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO THE RESPONSE DATE. Self-insurance programs, deductibles, and self-insured retentions in insurance policies are subject to separate approval by Lexington-Fayette Urban County Government's Division of Risk Management, upon review of evidence of BIDDER/CONTRACTOR's financial capacity to respond to claims. Any such programs or retentions must provide LFUCG with at least the same protection from liability and defense of suits as would be afforded by first-dollar insurance coverage. If BIDDER/CONTRACTOR satisfies any portion of the insurance requirements through deductibles, self-insurance programs, or self-insured retentions, BIDDER/CONTRACTOR agrees to provide Lexington-Fayette Urban County Government, Division of Risk Management, the following data prior to the final acceptance of bid and the commencement of any work:

- a. Latest audited financial statement, including auditor's notes.
- b. Any records of any self-insured trust fund plan or policy and related accounting statements.
- c. Actuarial funding reports or retained losses.
- d. Risk Management Manual or a description of the self-insurance and risk management program.
- e. A claim loss run summary for the previous five (5) years.
- f. Self-Insured Associations will be considered.

Safety and Loss Control

CONTRACTOR shall comply with all applicable federal, state, and local safety standards related to the performance of its works or services under this Agreement and take necessary action to protect the life, health and safety and property of all of its personnel on the job site, the public, and LFUCG.

Verification of Coverage

BIDDER/CONTRACTOR agrees to furnish LFUCG with all applicable Certificates of Insurance signed by a person authorized by the insurer to bind coverage on its behalf prior to final award, and if requested, shall provide LFUCG copies of all insurance policies, including all endorsements.

Right to Review, Audit and Inspect

CONTRACTOR understands and agrees that LFUCG may review, audit and inspect any and all of its records and operations to insure compliance with these Insurance Requirements.

DEFAULT

BIDDER/CONTRACTOR understands and agrees that the failure to comply with any of these insurance, safety, or loss control provisions shall constitute default and that LFUCG may elect at its option any single remedy or penalty or any combination of remedies and penalties, as available, including but not limited to purchasing insurance and charging BIDDER/CONTRACTOR for any such insurance premiums purchased, or suspending or terminating the work.

00470806

**BID SPECIFICATIONS
FOR
HYDRONIC HEATING SYSTEM REPLACEMENT
AT
WEST HICKMAN WWTP
SOLIDS PROCESSING BUILDING**

GENERAL

1. The successful bidder will provide all materials, equipment, and labor necessary for demolition/removal of existing hydronic heating system and installation of new hydronic heating system in the Solids Processing Building at the West Hickman Wastewater Treatment Plant which is owned and operated by the Lexington Fayette Urban County Government Division of Water Quality.
2. The WORK activities will be performed at the following location:
 - West Hickman WWTP
645 West Hickman Plant Rd.
Nicholasville, KY 40356
 - Solids Processing Building
3. WORK location, Solids Processing Building, use centrifuge(s) to dewater Waste Activated Sludge for final disposal in a landfill and, as such, foul odors will be present throughout the building. Work activities shall be coordinated with West Hickman WWTP Superintendent and/or Maintenance Supervisor.
4. Bidder/Contractor **must have** previous experience with same or similar type projects. It is the responsibility of the Bidder/Contractor to provide documentation of previous similar work type experience and/or familiarity of working within wastewater treatment facilities with their respective bid submittals. Failure to provide requested documentation may result in rejection of bid submittal.
5. It is recommended that each potential Bidder schedule a site visit to view and/or evaluate current building conditions and identify work locations and/or conditions that may or may not have an impact on bid submittal.

Site visits must be scheduled through one of the following:

Mike Foster: (859)280-8658

Vince Isaacs: (859)280-8663

Rick Bowman: (859)425-2475

6. CONTRACTOR shall provide all items, articles, materials, operations or methods mentioned or scheduled on the Drawings or herein specified: including all labor, supervision, equipment, incidentals, taxes, and permits necessary to complete the Work as described within the Contract Documents.

7. CONTRACTOR responsible for obtaining any and all required permits
8. The successful Bidder is responsible for disposal of all material/product that may be removed and/or used during the work activities.

9. CONTRACT DOCUMENTS–INTENT AND USE

- Use of Documents:
 - CONTRACTOR shall examine all Specifications and Drawings for the Work, including those that may pertain to Work CONTRACTOR does not normally perform with its own forces.
 - CONTRACTOR shall use all of the Project Drawings and Specifications:
 - For a complete understanding of the Project.
 - To determine the type of construction and systems required.
 - For coordination with other contractors.
 - And all other relevant matters related to the project.

10. PROTECTION OF WORK AND IMPROVEMENTS

- CONTRACTOR shall protect the property of OWNER, existing improvements, and the Work installed by CONTRACTOR and others from abuse, damage, dust, debris, and other objectionable materials resulting from construction activities.
- Property, improvements, and Work damaged by CONTRACTOR shall be repaired or replaced by CONTRACTOR to the satisfaction of OWNER.

11. REGULATORY REQUIREMENTS

- OSHA requirements
 - All work including site safety, equipment, materials, and fabricated items provided under the Contract shall comply with the provisions of the "Occupational Safety and Health Act" (OSHA), the Kentucky Occupational Safety and Health Act (KYOSH), the Commonwealth of Kentucky and all other applicable federal, state, county and local laws, ordinances, codes, the requirements set forth herein, and any regulations that may be specified in other parts of these Contract Documents. Where any of these are in conflict, the more stringent requirements shall be followed.
 - The CONTRACTOR's failure to thoroughly familiarize itself with the aforementioned safety provisions shall not relieve CONTRACTOR from compliance with the obligations and penalties set forth therein.

SCOPE OF WORK

1. Removal of existing and installation of Hydronic Heating System, at the Solids Processing Building:

- **Demotion/Removal of existing hydronic heating system:**

- CONTRACTOR to drain and complete demolition and remove existing pipe, pipe insulation, valves, hangers, unit heaters and any other associated directly connected equipment/components:
 - Remove all existing pipe from the circulating pump(s) supply and return line(s) in the boilers room
 - Remove all existing unit heaters, ten (10) total as identified in attached Drawings, and piping as well as conduit(s) and wiring up to the ceiling box at each location
 - Remove and dispose of existing water softener equipment located in the boilers room
- CONTRACTOR is responsible for abatement and appropriate disposal of any materials deemed hazardous to one's health encountered during demolition
- CONTRACTOR is responsible for disposal of all demolished materials in a safe and legal manner
- CONTRACTOR to furnish all materials, consumables and any other expense required to complete the project
- Refer to included drawing:
 - DEMO1
 - DEMO2

- **Installation of new hydronic heating system:**

- CONTRACTOR is responsible for determining new piping route(s) and field measurements to accurately determine quantities of pipe and/or pipe fittings needed for each size specified/required to complete project
- CONTRACTOR to furnish and install new 2-inch black iron Supply and Return loop with separate 1¼-inch S/R loops extended out to each new unit heater, as indicated, throughout the building
 - There are existing core drilled holes, floor penetrations, between the first and second floors in most locations, HOWEVER, CONTRACTOR is responsible to verify size and access
- CONTRACTOR to furnish and install new pipe hangers in compliance with all current codes and regulations
 - All-thread rods, nuts and/or washers shall be stainless steel
 - Pipe hangers to be galvanized

- CONTRACTOR to furnish and install, where indicated or scheduled on plans the new horizontal hot water unit heater(s) as specified and indicated herein. All units shall be installed in a neat and workmanlike manner in accordance with this specification(s) and the manufacturer's installation instructions
- CONTRACTOR to connect the proper Supply and Return at each unit heater for a complete functional hot water flow system
- CONTRACTOR, at each new unit heater location, shall extend the existing conduit and wiring down to the CONTRACTOR furnished and installed motor rated switch box mounted within 6 feet off the floor and back up to the heater fan control
 - There will be no thermostats required
 - 120-volt circuit(s)
 - ¾-inch PVC preferred
 - Minimum 12 AWG copper THHN/THWN wiring
- CONTRACTOR to furnish and install new, minimum, 1-inch fiberglass pipe insulation for all newly installed pipe
- CONTRACTOR to furnish and install new vinyl pipe wrap, color coded per OWNER, on all newly installed insulation
- CONTRACTOR to furnish and install large print labels on all HWS and HWR piping
- CONTRACTOR to furnish and install flow direction labels on all HWS and HWR piping
- CONTRACTOR shall complete all required testing and inspections to ensure a safe, completely functional, and fully code compliant installation of all new pipes, electrical components, and unit heaters
- CONTRACTOR shall submit material cut sheets on all purchased materials where applicable
- Refer to included Drawings:
 - UH1
 - UH2
 - UH3
- CONTRACTOR to furnish and install new high efficiency water softener in the boilers room
 - Water softener installation shall be per manufacturer's recommendations and compliant with applicable codes if any

- **GENERAL NOTES:**

- Contractor to coordinate his/her operations with the Owner's representative
- Contractor shall verify all dimensions in the field prior to commencement of work. The OWNER shall be notified of any discrepancies which may exist.
- Any discrepancies between the drawings and the field conditions shall be brought to the attention of the OWNER.
- Contractor to warranty workmanship for a period of 12 months after completion of project

2 **PRODUCTS** (The following list is designed to identify OWNER preferred products for unit heaters and water softener, the list is not all inclusive as it relates to pipe, pipe fittings, hangers, fiberglass insulation, vinyl pipe wrap, labels and/or other products/consumables necessary to complete installation of new hydronic heating system)

- **HYDRONIC HEATING EQUIPMENT**

- STERLING HORIZONTAL UNIT HEATERS or (OWNER approved equal)
 - Model HS-72: (2) Units
 - Model HS-84: (4) Units

- **BALL VALVES (1 ¼-inch)**

- Apollo 77C-A Series or (OWNER approved equal)
 - (6) Valves

- **BALANCING VALVES (1 ¼-inch)**

- Nutech MB2e with 2b orifice or (OWNER approved equal)
 - (6) Valves

- **SWITCH CONTROLLER**

- Leviton MS4X-302 or (OWNER approved equal)
 - (6) Switches

- **HIGH EFFICIENCY WATER SOFTENER**

- US Water Systems or (OWNER approved equal)
 - Model FNL1-150

- 3. Work must be scheduled with West Hickman WWTP Superintendent and/or Maintenance Supervisor.

END OF SECTION

BID SUBMITTAL

- 1. Bidder/Contractor is required to review included drawings and specifications to become familiar with all aspects of the project requirements and equipment.
 - Provide Shop Drawing Submittals for Contractor furnished equipment/components.
 - Bid Submittal must include "Lump Sum" cost for project completion.

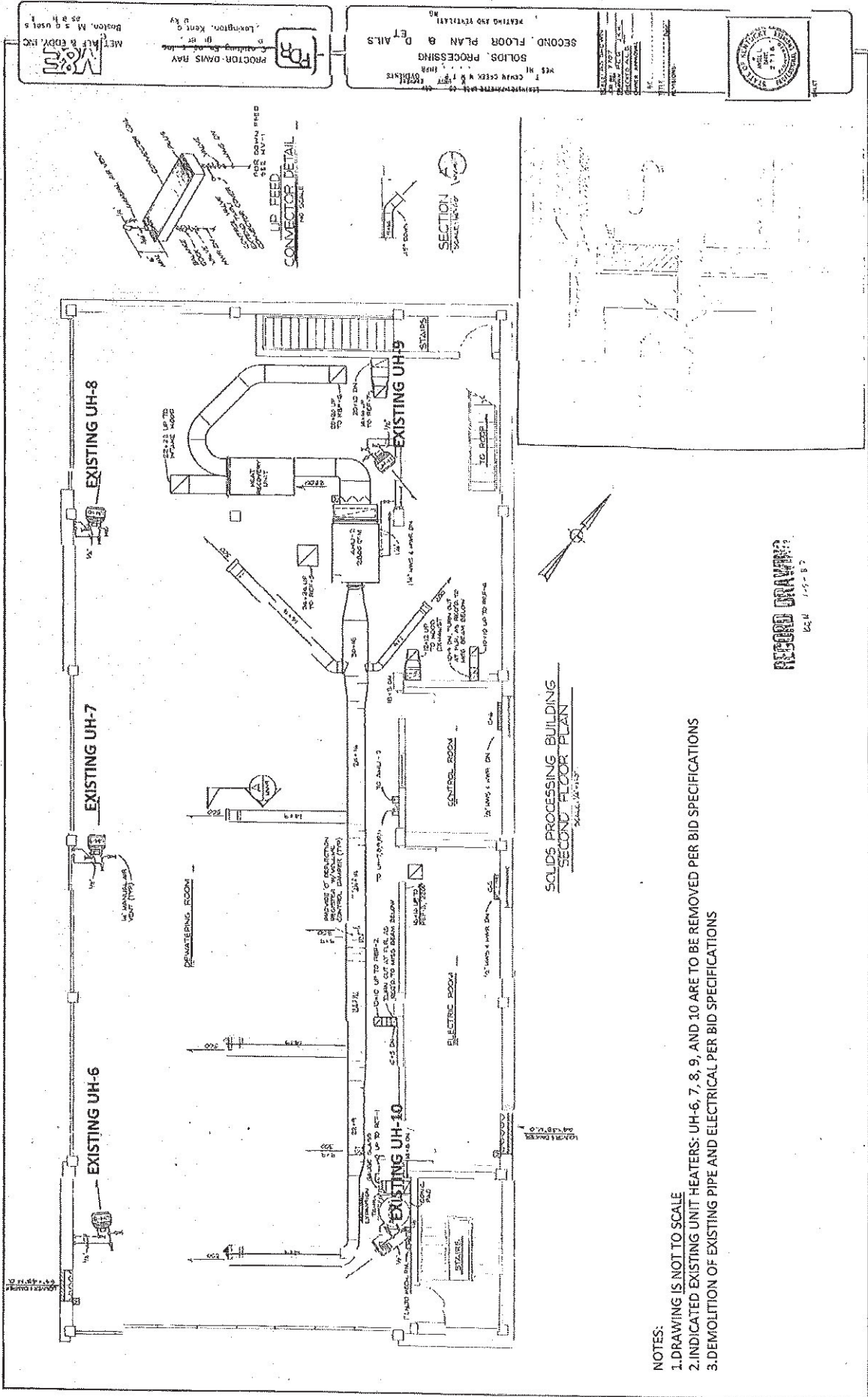
Item	Description	Lump Sum Bid Price
Demolition of existing hydronic heating system and installation of new hydronic heating system in the Solids Processing Building	Remove from service and dispose of, in accordance with any and all regulations, existing hydronic heating system and water softener as identified within. Contractor to furnish and install new hydronic heating system components and water softener as specified and/or identified herein and ensure hydronic heating system is complete, functional and Code compliant	Enter Bid In Ion-Wave

SPECIAL INSTRUCTIONS TO BIDDER:

- For bidding questions contact Brian Marcum, Division of Central Purchasing, @ 859-258-3325.

WEST HICKMAN WWT
 SOLIDS PROCESSING BUILDING
 2ND FLOOR

DRAWING - DEMO1



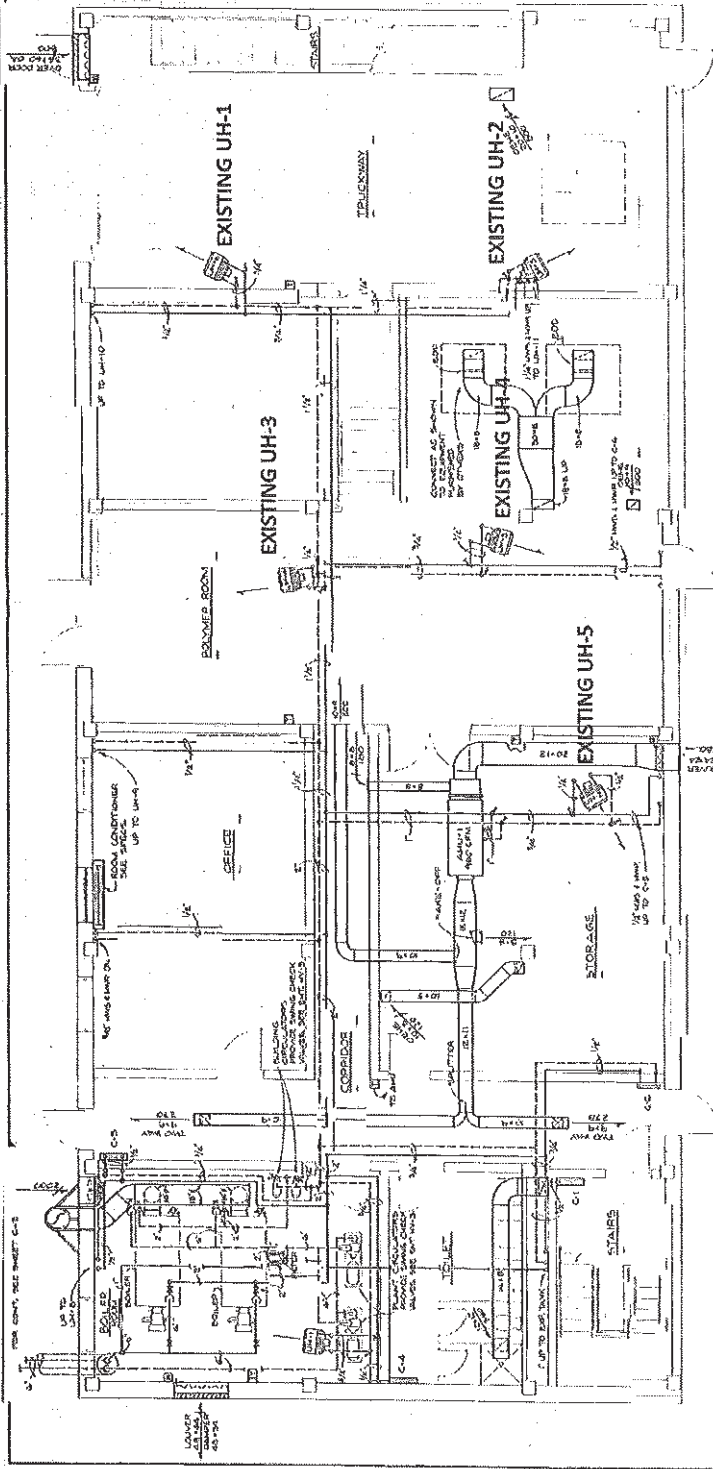
- NOTES:
1. DRAWING IS NOT TO SCALE
 2. INDICATED EXISTING UNIT HEATERS: UH-6, 7, 8, 9, AND 10 ARE TO BE REMOVED PER BID SPECIFICATIONS
 3. DEMOLITION OF EXISTING PIPE AND ELECTRICAL PER BID SPECIFICATIONS

RECORD DRAWING
 2011 1-25-10

<p>PROCTOR-DAVIS RAY 15 Lexington, Kent, OH 44202 MEET, PLAN & BUILD, INC. Boston, MA 02114</p>	<p>DESIGNED BY: PROCTOR-DAVIS RAY, INC. DRAWN BY: [Name] CHECKED BY: [Name] DATE: [Date]</p>	<p>PROJECT: WEST HICKMAN WWT SOLIDS PROCESSING BUILDING SHEET: 2ND FLOOR PLAN SCALE: 1/8" = 1'-0"</p>	

WEST HICKMAN WWTP
SOLIDS PROCESSING BUILDING
1ST FLOOR

DRAWING - DEMO2



SOLIDS PROCESSING BUILDING - FIRST FLOOR PLAN

- NOTES:
1. DRAWING IS NOT TO SCALE
 2. INDICATED EXISTING UNIT HEATERS: UH-1, 2, 3, 4, AND 5 ARE TO BE REMOVED PER BID SPECIFICATIONS
 3. DEMOLITION OF EXISTING PIPE AND ELECTRICAL PER BID SPECIFICATIONS

MOSE
METCALF & EDDY, INC.
Boston, Massachusetts

PROCTOR-DAVIS-BAY
Consulting Engineers, Inc.
Lexington, Kentucky

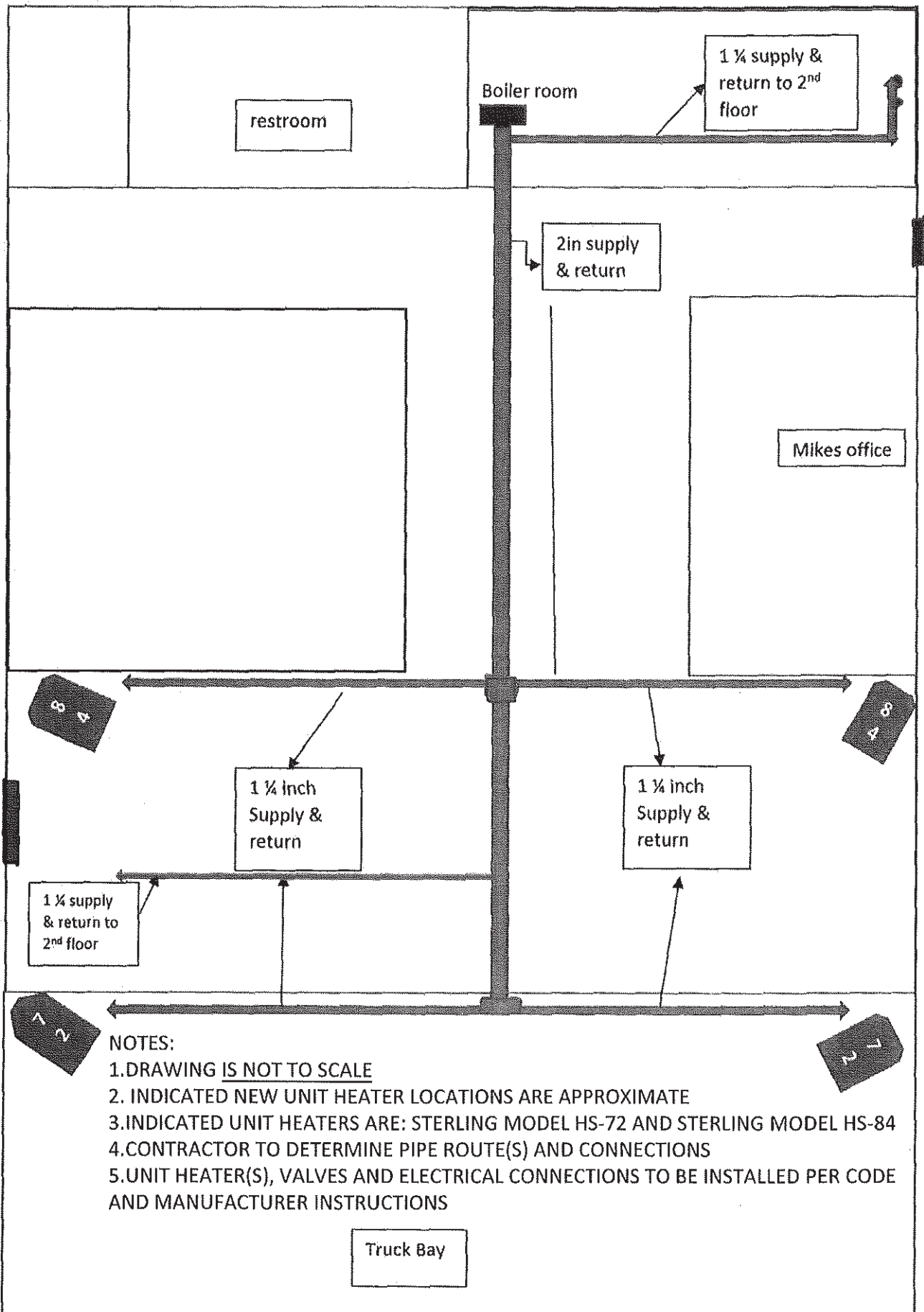
WEST HICKMAN WWTP
SOLIDS PROCESSING
FIRST FLOOR PLAN
KEY NO AND VERTICAL NO

STATE OF KENTUCKY
PLANNING BOARD
REGISTERED PROFESSIONAL ENGINEER
No. 10000
DATE: 1-5-87

RECORD DRAWING
KEY NO. 1-5-87

WEST HICKMAN WWTP
SOLIDS PROCESSING BUILDING
1ST FLOOR

DRAWING - UH1

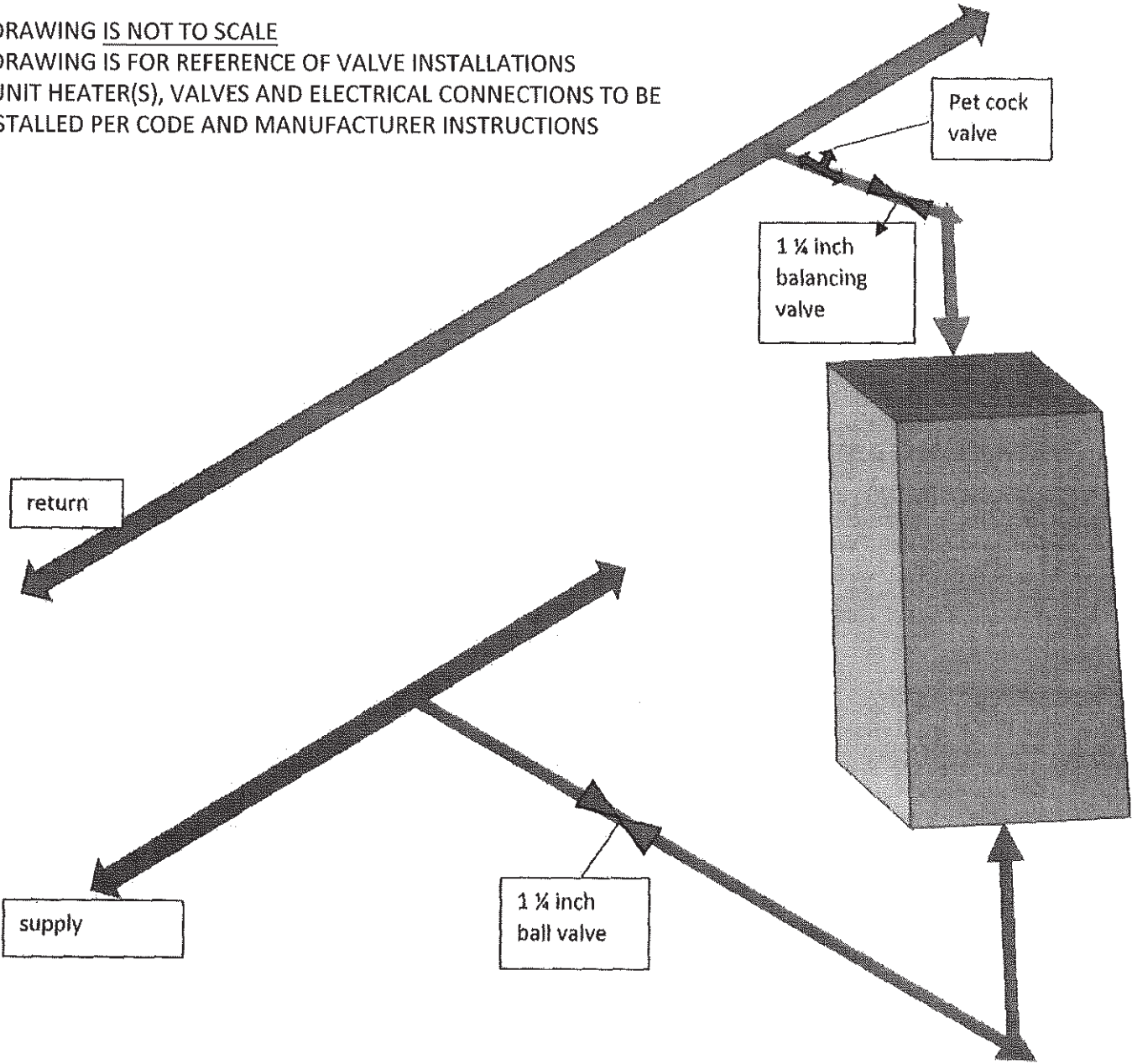


WEST HICKMAN WWTP SOLIDS
PROCESSING BUILDING

DRAWING - UH2

NOTES:

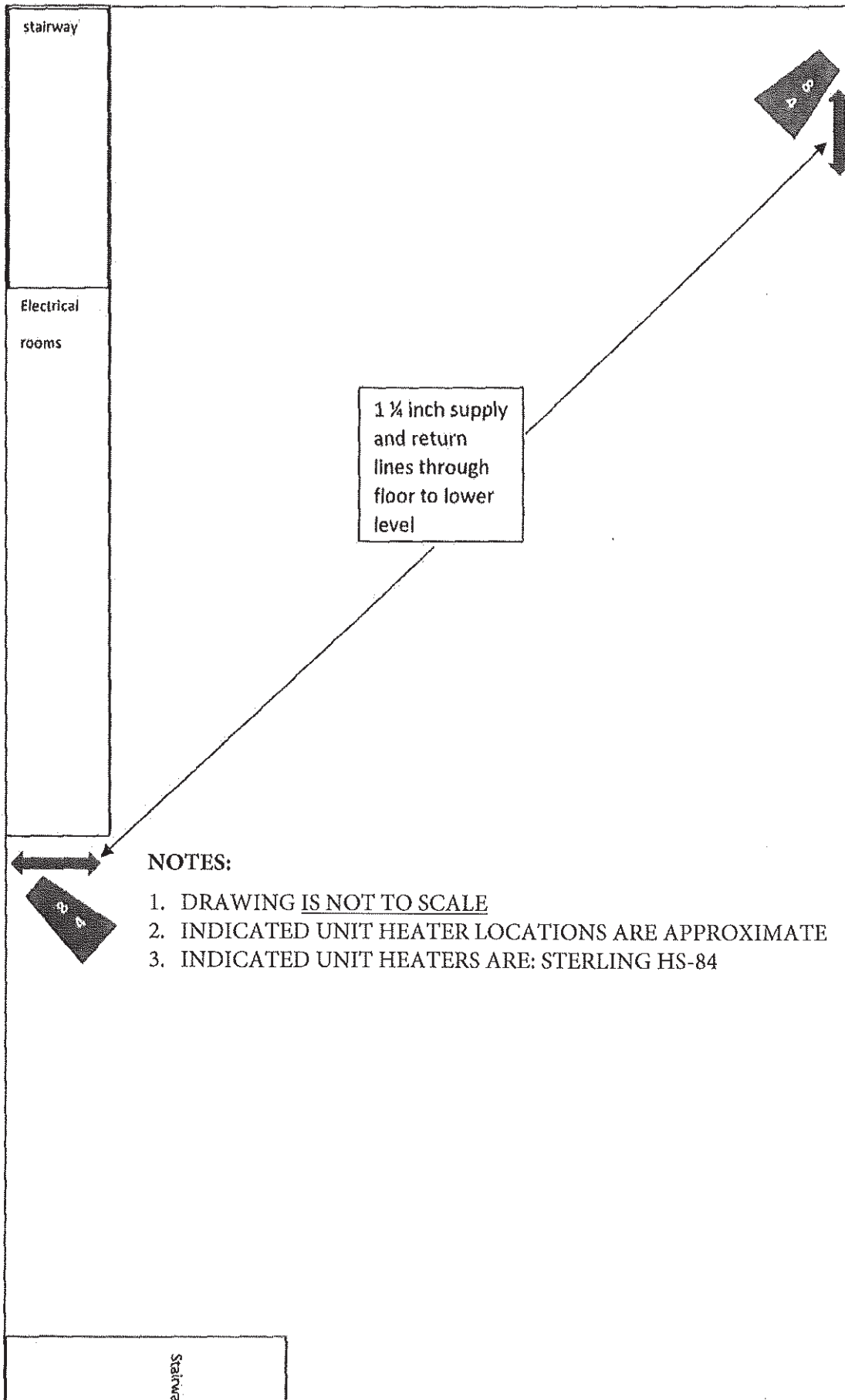
- 1. DRAWING IS NOT TO SCALE
- 2. DRAWING IS FOR REFERENCE OF VALVE INSTALLATIONS
- 3. UNIT HEATER(S), VALVES AND ELECTRICAL CONNECTIONS TO BE INSTALLED PER CODE AND MANUFACTURER INSTRUCTIONS

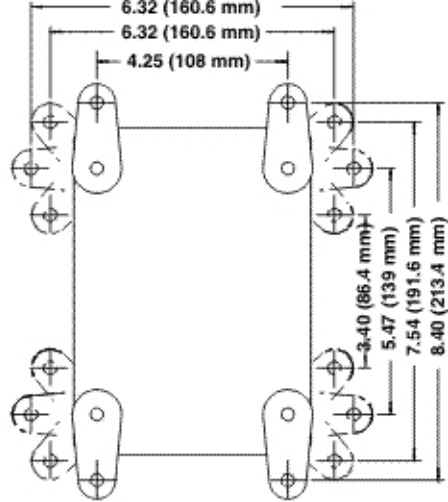
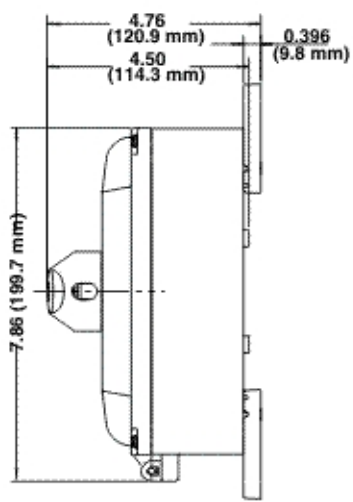
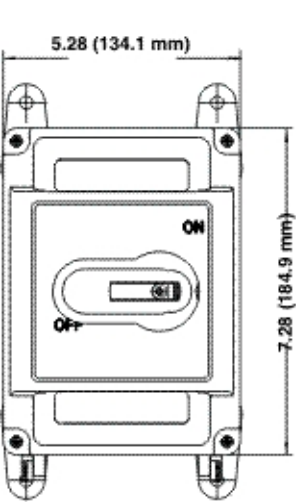


All valves must be installed in a manner that allows complete unobstructed operation.

WEST HICKMAN WWTP
SOLIDS PROCESSING BUILDING
2ND FLOOR

DRAWING - UH3





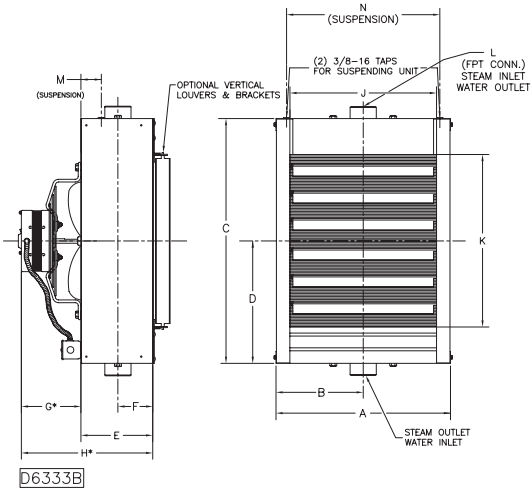
Horizontal Unit Heaters – Submittal

Dimensional Data



Steam and Hotwater Coil

MODELS HV-18 THRU 360 (HEADER TYPE)



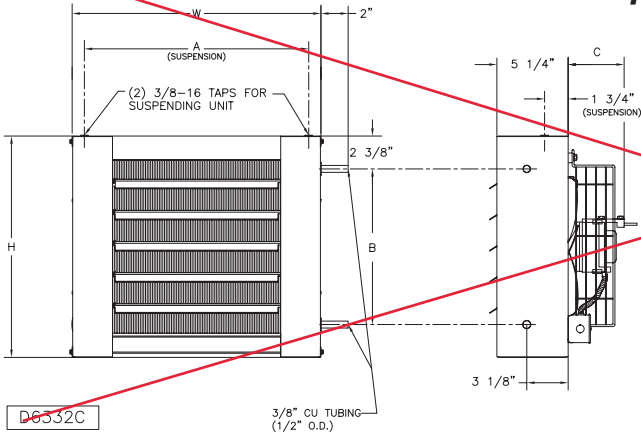
Unit Size	A inches (mm)	B inches (mm)	C inches (mm)	D inches (mm)	E inches (mm)	F inches (mm)	G* inches (mm)	H* inches (mm)	J inches (mm)	K inches (mm)	L inches (mm)	M inches (mm)	N inches (mm)	Number of Louvers	Nom. Fan Diam. inches (mm)	Approx. Ship Wt. lbs. (kg)
18	14 ⁹ / ₈ (371)	7 ⁹ / ₁₆ (186)	15 (381)	7 ¹ / ₂ (191)	6 ⁵ / ₈ (156)	2 ¹ / ₂ (63)	3 ¹ / ₄ (83)	9 ⁹ / ₈ (238)	12 ¹ / ₄ (311)	9 ¹ / ₂ (241)	1 ¹ / ₄ (32)	2 ¹ / ₄ (57)	12 ⁷ / ₈ (327)	4	9 (229)	26 (11.8)
24	14 ⁹ / ₈ (371)	7 ⁹ / ₁₆ (186)	18 (457)	9 (229)	6 ⁵ / ₈ (156)	2 ¹ / ₂ (63)	3 ¹ / ₄ (83)	9 ⁹ / ₈ (238)	12 ¹ / ₄ (311)	12 ¹ / ₂ (318)	1 ¹ / ₄ (32)	2 ¹ / ₄ (57)	12 ⁷ / ₈ (327)	5	10 (254)	30 (13.6)
36	17 ¹ / ₂ (435)	8 ⁹ / ₁₆ (217)	20 ¹ / ₂ (521)	10 ¹ / ₄ (260)	5 ⁷ / ₈ (149)	2 ¹ / ₂ (63)	5 ¹ / ₂ (144)	11 ⁷ / ₈ (291)	14 ³ / ₄ (375)	15 (381)	1 ¹ / ₄ (32)	1 ³ / ₄ (44)	15 ³ / ₈ (391)	6	12 (305)	41 (18.6)
48	17 ¹ / ₂ (435)	8 ⁹ / ₁₆ (217)	20 ¹ / ₂ (521)	10 ¹ / ₄ (260)	5 ⁷ / ₈ (149)	2 ¹ / ₂ (63)	5 ¹ / ₂ (144)	10 ¹ / ₂ (278)	14 ³ / ₄ (375)	15 (381)	1 ¹ / ₄ (32)	1 ³ / ₄ (44)	15 ³ / ₈ (391)	6	12 (305)	41 (18.6)
60	18 ³ / ₈ (467)	9 ⁹ / ₁₆ (233)	21 ³ / ₄ (552)	10 ⁷ / ₈ (276)	6 ¹ / ₂ (152)	2 ¹ / ₂ (63)	5 ¹ / ₂ (129)	11 ¹ / ₈ (281)	16 (406)	16 ¹ / ₄ (413)	1 ¹ / ₄ (32)	1 ³ / ₄ (44)	16 ⁵ / ₈ (422)	7	14 (356)	44 (19.9)
84	20 ⁷ / ₈ (530)	10 ¹ / ₂ (265)	24 ¹ / ₄ (616)	12 ¹ / ₂ (308)	6 ¹ / ₂ (156)	2 ¹ / ₂ (63)	5 ¹ / ₂ (144)	11 ³ / ₈ (300)	18 ¹ / ₂ (470)	18 ³ / ₄ (476)	1 ¹ / ₄ (32)	1 ³ / ₄ (44)	19 ¹ / ₈ (486)	8	14 (356)	47 (21.3)
96	19 ⁵ / ₈ (498)	9 ³ / ₈ (249)	24 (610)	12 (305)	6 ⁵ / ₈ (160)	3 ¹ / ₂ (81)	7 ¹ / ₂ (191)	13 ¹ / ₈ (351)	17 ¹ / ₄ (438)	17 ¹ / ₂ (445)	1 ¹ / ₂ (38)	1 ³ / ₄ (44)	17 ⁷ / ₈ (454)	8	16 (406)	49 (22.2)
108	20 ⁷ / ₈ (530)	10 ¹ / ₂ (265)	25 ¹ / ₄ (641)	12 ³ / ₄ (321)	6 ⁵ / ₈ (160)	3 ¹ / ₂ (81)	6 ¹ / ₂ (170)	13 (330)	18 ¹ / ₂ (470)	18 ³ / ₄ (476)	1 ¹ / ₂ (38)	1 ³ / ₄ (44)	19 ¹ / ₈ (486)	8	18 (457)	59 (26.7)
120	23 ³ / ₈ (594)	11 ¹ / ₂ (297)	27 ³ / ₄ (705)	13 ³ / ₄ (352)	6 ⁵ / ₈ (160)	3 ¹ / ₂ (81)	7 ¹ / ₂ (194)	14 (356)	21 (533)	21 ¹ / ₄ (540)	1 ¹ / ₂ (38)	1 ³ / ₄ (44)	21 ¹ / ₈ (549)	9	18 (457)	74 (33.5)
132	23 ³ / ₈ (594)	11 ¹ / ₂ (297)	27 ³ / ₄ (705)	13 ³ / ₄ (352)	6 ⁵ / ₈ (160)	3 ¹ / ₂ (81)	7 ¹ / ₂ (194)	13 ³ / ₄ (349)	21 (533)	21 ¹ / ₄ (540)	1 ¹ / ₂ (38)	1 ³ / ₄ (44)	21 ¹ / ₈ (549)	9	18 (457)	74 (33.5)
144	24 ¹ / ₂ (625)	12 ³ / ₈ (313)	29 (737)	14 ¹ / ₂ (368)	6 ⁵ / ₈ (162)	3 ¹ / ₂ (81)	7 ¹ / ₂ (194)	13 ³ / ₄ (349)	22 ¹ / ₄ (565)	22 ¹ / ₂ (572)	1 ¹ / ₂ (38)	1 ³ / ₄ (44)	22 ⁷ / ₈ (581)	9	18 (457)	90 (40.8)
180	27 ¹ / ₂ (708)	13 ¹ / ₂ (354)	30 ¹ / ₄ (768)	15 ¹ / ₂ (384)	8 ¹ / ₂ (206)	3 ¹ / ₂ (81)	8 ¹ / ₂ (149)	5 ⁷ / ₈ (356)	25 ¹ / ₂ (648)	25 ³ / ₄ (603)	2 (51)	1 ³ / ₄ (44)	26 ¹ / ₈ (664)	10	20 (508)	143 (65)
204	27 ¹ / ₂ (708)	13 ¹ / ₂ (354)	30 ¹ / ₄ (768)	15 ¹ / ₂ (384)	8 ¹ / ₂ (206)	3 ¹ / ₂ (81)	9 ¹ / ₂ (244)	17 ¹ / ₄ (451)	25 ¹ / ₂ (648)	23 ³ / ₄ (603)	2 (51)	1 ³ / ₄ (44)	26 ¹ / ₈ (664)	10	20 (508)	154 (70)
240	33 ¹ / ₂ (848)	16 ¹ / ₂ (424)	37 ¹ / ₄ (959)	18 ¹ / ₂ (479)	9 (229)	3 ¹ / ₂ (81)	9 ¹ / ₂ (244)	18 ³ / ₄ (473)	31 (787)	31 ¹ / ₄ (794)	2 (51)	1 ³ / ₄ (44)	31 ³ / ₈ (803)	13	24 (610)	203 (92)

* APPLIES TO STANDARD MOTOR WITH STANDARD FAN GUARD. WHEN OPTIONAL MOTORS OR OSHA FAN GUARDS ARE REQUESTED, DIMENSIONS WILL CHANGE ACCORDING TO THE SUBSTITUTIONS MADE.

- NOTES: 1. OSHA guard standard on models HV-18 thru HV-48 (dimensions shown in table).
 2. Standard motor and standard guard shown in both tables.
 3. Optional OSHA guards available for all units with standard single phase motors.
 4. All three phase and explosion proof motors are shelf mounted.

Serpentine Hotwater Coil

MODELS HV-108A THRU 136A



Unit Size	H inches (mm)	W inches (mm)	A inches (mm)	B inches (mm)	C inches (mm)	Number of Louvers	Nominal Fan Diameter inches (mm)	Approx. Ship Wt. lb. (kg)
108A	16 (406)	18 (457)	16 ¹ / ₂ (412)	11 ¹ / ₄ (286)	4 ¹ / ₄ (108)	5	9 (229)	22 (10.0)
118A	16 (406)	18 (457)	16 ¹ / ₂ (412)	11 ¹ / ₄ (286)	4 ¹ / ₄ (108)	5	10 (254)	24 (10.9)
125A	16 (406)	18 (457)	16 ¹ / ₂ (412)	11 ¹ / ₄ (286)	4 ¹ / ₄ (108)	5	10 (254)	25 (11.3)
136A*	18 ¹ / ₂ (470)	20 ¹ / ₂ (521)	18 ² / ₂ (475)	13 ³ / ₄ (349)	5 ¹ / ₁₆ (144)	6	12 (305)	31 (14.0)

* Dimension "C" is to back of motor, not motor conduit connector as shown.
 NOTE: OSHA type fan guard standard on models HV-108A thru HV-136A.



A MESTEK COMPANY

260 North Elm Street
 Westfield, Massachusetts 01085
 (413) 568-9571 • Fax (413) 564-5661
 www.vulcanrad.com

PROJECT: _____
 LOCATION: _____
 ARCHITECT: _____
 ENGINEER: _____
 CONTRACTOR: _____
 PO NUMBER: _____
 DATE: _____



Hot Water Performance Data

Model/ Unit Size	Output BTU Per Hour*	GPM	Final Air Temp	Pressure Drop Ft/H ₂ O	Motor HP†	Motor RPM	Nominal CFM	Outlet FPM	Nominal Amps At 115VAC**	Sound Rating
HV-108A	8,030	.80	91°F	.80	16 Watt	1550	245	250	.80	II
	6,800		90°F			1350	210	215	.80	I
HV-118A	18,400	1.9	94°F	2.2	16 Watt	1550	500	500	.80	II
	15,650		96°F			1350	420	420	.80	I
HV-125A	24,800	2.5	102°F	2.2	25 Watt	1550	580	590	1.2	II
	21,230		106°F			1350	460	450	1.2	I
HV-136A	35,900	3.6	99°F	3.0	1/20	1000	850	550	1.4	II
	32,300		100°F			900	750	480	1.4	I
HV-018B	13,050	1.3	95°F	.005	16 Watt	1550	395	395	.80	II
	11,725		99°F			1350	350	350	.80	I
HV-024B	17,400	1.8	96°F	.014	16 Watt	1550	450	450	.80	II
	15,600		98°F			1350	380	380	.80	I
HV-036B	26,100	2.7	103°F	.09	25 Watt	1550	550	550	1.2	II
	23,500		103°F			1350	480	480	1.2	I
HV-048B	34,800	3.5	103°F	.12	1/20	1000	750	550	1.4	II
	31,300		111°F			900	630	460	1.4	I
HV-060B	43,600	4.4	105°F	.17	1/20	1000	900	650	1.4	II
	39,200		112°F			900	700	510	1.4	I
HV-072B	52,300	5.3	104°F	.23	1/20	1000	1100	800	1.4	II
	47,000		106°F			900	950	700	1.4	I
HV-084B	61,000	6.1	100°F	.24	1/12	1000	1400	900	2.2	III
	54,900		106°F			900	1100	750	2.2	II
HV-096B	69,700	7.0	106°F	.29	1/12	1000	1400	930	2.2	III
	62,700		113°F			900	1100	800	2.2	II
HV-108B	78,400	7.9	100°F	.36	1/12	1000	1800	1000	2.2	III
	70,500		103°F			900	1500	900	2.2	II
HV-120B	87,100	8.8	102°F	.39	1/3	1140	1900	900	4.5	III
	—		—			—	—	—	—	—
HV-132B	95,800	9.6	104°F	.41	1/3	1140	2000	950	4.5	IV
	—		—			—	—	—	—	—
HV-144B	104,000	10.4	104°F	.43	1/3	1140	2200	1000	4.5	IV
	—		—			—	—	—	—	—
HV-156B	113,000	11.3	100°F	.53	1/3	1140	2600	1150	4.5	IV
	—		—			—	—	—	—	—
HV-180B	118,000	11.8	110°F	.60	1/3	1140	2200	800	4.5	III
	—		—			—	—	—	—	—
HV-204B	148,100	14.9	107°F	.79	1/3	1140	2900	1000	4.5	IV
	—		—			—	—	—	—	—
HV-240B	174,000	17.4	106°F	1.06	1/3	1140	3500	900	4.5	IV
	—		—			—	—	—	—	—
HV-280B	209,100	21.0	106°F	1.33	1/2	1100	4200	980	5.4	IV
	—		—			—	—	—	—	—
HV-300B	230,000	23.0	102°F	2.1	1/2	1100	5000	700	5.4	IV
	—		—			—	—	—	—	—
HV-360B	261,300	26.2	103°F	2.1	1/2	1100	5500	1000	5.4	IV
	—		—			—	—	—	—	—

Performance based on 200° EWT, 60° E.A.T., 20° TD.

* For the lower output, an optional Speed Controller must be ordered.

** Stated AMP is full load (FLA). AMP draw varies by motor manufacturer ± .2 AMPS.

† Motor HP listed is applicable to standard motor type only. For explosion proof motor HP, see motor data section.

Steam Performance Data

Model/ Unit Size	Output BTU Per Hour*	Condensate Lbs Per Hour	Square Foot EDR	Final Air Temp	Motor HP‡	Motor RPM	Nominal CFM	Outlet FPM	Nominal Amps At 115VAC†	Nominal Fan Diameter
HV-018B	18,000	18.0	75	102°F	16 Watt	1550	395	395	.80	9"
	16,200	16.2	68	105°F		1350	330	330	.80	9"
HV-024B	24,000	24.5	100	109°F	16 Watt	1550	450	450	.80	10"
	21,600	22.0	90	112°F		1350	380	380	.80	10"
HV-036B	36,000	37.0	150	119°F	25 Watt	1550	550	550	1.2	10"
	32,400	33.0	135	120°F		1350	480	480	1.2	10"
HV-048B	48,000	49.0	200	119°F	1/20	1000	750	550	1.4	12"
	43,200	44.0	180	123°F		900	630	460	1.4	12"
HV-060B	60,000	61.0	250	121°F	1/20	1000	900	650	1.4	12"
	54,000	55.0	225	131°F		900	700	510	1.4	12"
HV-072B	72,000	73.0	300	120°F	1/20	1000	1100	800	1.4	14"
	64,800	66.0	270	123°F		900	950	700	1.4	14"
HV-084B	84,000	85.0	350	115°F	1/12	1000	1400	900	2.2	14"
	75,600	76.0	315	123°F		900	1100	750	2.2	14"
HV-096B	96,000	97.0	400	123°F	1/12	1000	1400	930	2.2	16"
	86,400	88.0	360	132°F		900	1100	800	2.2	16"
HV-108B	108,000	110.0	450	115°F	1/12	1000	1800	1000	2.2	16"
	97,200	98.0	405	120°F		900	1500	900	2.2	16"
HV-120B	120,000	122.0	500	118°F	1/3	1140	1900	900	4.5	18"
	—	—	—	—		—	—	—	—	—
HV-132B	132,000	134.0	550	121°F	1/3	1140	2000	950	4.5	18"
	—	—	—	—		—	—	—	—	—
HV-144B	144,000	146.0	600	120°F	1/3	1140	2200	1000	4.5	18"
	—	—	—	—		—	—	—	—	—
HV-156B	156,000	160.0	650	115°F	1/3	1140	2600	1150	4.5	18"
	—	—	—	—		—	—	—	—	—
HV-180B	180,000	190.0	770	135°F	1/3	1140	2200	800	4.5	18"
	—	—	—	—		—	—	—	—	—
HV-204B	204,000	208.0	850	124°F	1/3	1140	2900	1000	4.5	18"
	—	—	—	—		—	—	—	—	—
HV-240B	240,000	244.0	1000	123°F	1/3	1140	3500	900	4.5	20"
	—	—	—	—		—	—	—	—	—
HV-280B	280,000	286.0	1100	121°F	1/2	1100	4200	980	5.4	20"
	—	—	—	—		—	—	—	—	—
HV-300B	300,000	310.0	1250	117°F	1/2	1100	5000	700	5.4	24"
	—	—	—	—		—	—	—	—	—
HV-360B	360,000	366.0	1500	120°F	1/2	1100	5500	1000	5.4	24"
	—	—	—	—		—	—	—	—	—

Performance based on 2# steam pressure at heater with air entering @ 60°F.

Maximum working pressure 150 PSI, 366°F

* For the lower output, an optional Speed Controller must be ordered.

† Stated AMP is full load (FLA). AMP draw varies by motor manufacturer ± .2 AMPS.

‡ Motor HP listed is applicable to standard motor type only. For explosion proof motor HP, see motor data section.

Steam and Hot Water Coil Specifications

GENERAL

Furnish and install where indicated or scheduled on plans horizontal steam/hot water unit heater. Unit shall be equipped as specified herein. All units shall be installed in a neat and workmanlike manner in accordance with this specification and the manufacturer's installation instructions.

CASING

Casings shall be 20-gauge die-formed steel. Paint finish shall be of lead-free, chromate free, polyester melamine resin base. Finish shall be baked at 400°F.

COIL SIZES 18 - 360

Coil elements and headers shall be of heavy wall drawn seamless copper tubing. Element tubes shall be brazed into extruded header junctions. Pipe connection saddles shall be of cast bronze. Aluminum fins shall have drawn collars to assure permanent bond with expanded element tubes and exact spacing. All Element Assemblies are submersion tested at the factory at 200 PSI. Under maximum conditions, coils are rated at 150 PSI at 366°F for steam and 150 PSI at 320°F for hot water. We recommend operating pressure of 75 PSI at 320°F for long life.

MOTORS

Motors shall be totally enclosed fan cooled, resilient mounted with class "B" windings. All motors shall be designed for horizontal mounting. Motors under 1/3 HP are totally enclosed, frame mounted, 115/1/60 with thermal overload protection and permanently lubricated sleeve bearings with optional solid state speed controller available. 1/3 HP (115/1/60) motors are open frame construction, with thermal overload protection and ball bearings. 1/3 HP at (230 Volt) and all 1/2 HP motors are open frame construction, with thermal overload protection and ball bearings. 1/3 and 1/2 HP motors are available in single and three phase in open frame construction or explosion-proof housings, all the above are available as options.

EXPLOSION PROOF MOTORS

An enclosed motor whose enclosure is designed and constructed to withstand an explosion of a specified gas or vapor which may occur within the motor and to prevent the ignition of this gas or vapor surrounding the machine.

Horizontal unit heater motors comply with the National Electrical Code classification as follows:

- Class I, Group D; all sizes
- Class II, Group F; all sizes
- Class II, Group G; all sizes
- Division I & II Installations
- T-code (T3B)

Explosion proof equipment is not generally available for Class I, Group A and B and it is necessary to isolate motors from the hazardous area. All explosion proof motors are shelf mounted.

FANS

Fans shall be of aluminum blade, hub type designed and balanced to assure maximum air delivery, low motor horsepower requirements and quiet operation. Blades are spark proof.

FAN GUARDS

Fan guards shall be welded steel, zinc plated or painted. Units mounted below 8 feet from floor must be equipped with an OSHA fan guard to meet ETL and OSHA requirements. OSHA fan guard standard on sizes 18 thru 48.

AIR DEFLECTION LOUVERS

Units shall be equipped with horizontal, individually adjustable louvers. Vertical louvers for four-way air control shall be available as an optional extra.

Serpentine Coil Specifications

GENERAL

Furnish and install, where indicated or scheduled on plans, Vulcan Model HVA horizontal hot water unit heaters. Unit shall be equipped as specified herein. All units shall be installed in a neat and workmanlike manner in accordance with this specification and the manufacturer's installation instructions.

CASING

Casings shall be 20-gauge die-formed steel. Paint finish shall be of lead-free, chromate free, polyester melamine resin base. Finish shall be baked at 400°F.

COIL MODELS 108A - 136A

Coil is a serpentine design with seamless copper tubing. Aluminum fins shall have drawn collars to assure permanent bond with expanded tubes. Tubing connection shall be 3/8 in copper tubing, type "M" (.500 OD). Coils shall be factory tested at 200 PSI. Coils have a max operating entering water temperature of 320°F.

MOTORS

Motors shall be totally enclosed fan cooled, resilient mounted with class "B" windings. All motors shall be designed for horizontal mounting.

FANS

Fans shall be of aluminum blade type, designed and balanced to assure maximum air delivery, low motor horsepower requirements and quiet operation.

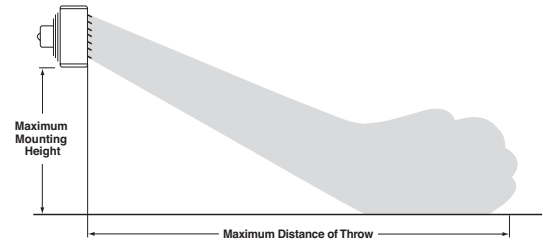
OSHA FAN GUARDS

- OSHA fan guards shall be welded steel, zinc plated or painted.
- OSHA fan guard standard on sizes 108A thru 136A.

AIR DEFLECTION LOUVERS

Units shall be equipped with horizontal, individually adjustable louvers.

Mounting Heights and Throws



Model/Unit Size	Maximum Mounting Height	Approximate Maximum Throw	Model/Unit Size	Maximum Mounting Height	Approximate Maximum Throw
HV-108A	8'	20'	HV-108	11'	40'
HV-118A	8'	25'	HV-120	12'	40'
HV-125A	9'	29'	HV-132	13'	54'
HV-136A	9'	29'	HV-144	13'	55'
HV-18	8'	20'	HV-156	13'	55'
HV-24	8'	24'	HV-180	13'	53'
HV-36	9'	28'	HV-204	13'	55'
HV-48	9'	30'	HV-240	14'	57'
HV-60	10'	30'	HV-280	14'	57'
HV-72	10'	29'	HV-300	15'	58'
HV-84	10'	30'	HV-360	15'	60'
HV-96	11'	38'			

The following table is based on 60°F entering air and either 2 lbs steam or 200°F TD. The data is based on the higher speed CFM throughout and velocity. Care should be exercised in locating adjacent unit heaters and allowance should be made for obstructions in the air pattern and conflicting air currents from other air moving devices.

Horizontal Unit Heaters

Motor Characteristics

TOTALLY ENCLOSED MOTOR TYPE

Unit Sizes	AMP	MCA	HP	RPM
115/1/60				
18, 24, 108A, 118A	0.8	1	16W*	1550
136A	1.4	1.8	1/20*	1000
36, 125A	1.2	1.5	25W*	1550
48, 60, 72	1.4	1.8	1/20*	1000
84, 96, 108	2.2	2.8	1/12*	1000
120, 132, 144, 156, 180, 204, 240	4.5	5.6	1/3	1140
280, 300, 360	5.4	6.8	1/2	1100
230/1/60				
18, 24, 108A, 118A	0.4	0.5	16W	1550
136A	1.4	1.8	1/20†	1000
36, 125A	0.6	0.8	25W	1550
48, 60, 72	1.4	1.8	1/20†	1000
84, 96, 108	2.2	2.8	1/12†	1000
120, 132, 144, 156, 180, 204, 240	4.5	5.6	1/3†	1140
280, 300, 360	5.4	6.8	1/2†	1100
208-230/460/3/60				
48, 60, 72, 84, 96, 108, 120, 132, 144, 156, 180, 204, 240, 280, 300, 360	2.6-2.6/1.3	3.3-3.3/1.6	1/2**	1140

*Optional variable speed switch is available.

**These motors are without thermal overload protection.

Motors without thermal overload protection must be installed with optional manual starter or field provided overload protection.

NOTE 1: All motors are constant speed and operate at top speed as indicated in motor data. Unit sizes 18 through 108, including 108A, 118A, 125A and 136A can be run at reduced speed with addition of optional variable speed switch. This switch is factory-calibrated for low and high speed ratings, with intermediate speeds infinitely controllable. Models 120 through 360 operate at constant speed as indicated in motor data. All 1/4 HP motors are PSC.

NOTE 2: Motors under 1/3 HP are totally enclosed, frame mounted, 115/1/60 with thermal overload protection and permanently lubricated sleeve bearings with optional speed controller available. 1/3 HP (115/1/60) motors are open frame constant speed with thermal over-load protection and ball bearings. 1/3 HP (230 Volt) and 1/2 HP (230 Volt) motors are open frame constant speed with thermal overload protection and ball bearings.

EXPLOSION PROOF WITH THERMAL OVERLOAD MOTOR TYPE

Unit Sizes	AMP	MCA	HP	RPM
115/1/60				
48, 60, 72, 84, 96, 108, 120, 132	3.7	4.6	1/6	1140
144, 156, 180, 204	5.4	6.8	1/4	1140
240	7.8	9.8	1/3***	1140
280, 300, 360	9.6	12.0	1/2***	1140
230/1/60				
48, 60, 72, 84, 96, 108, 120, 132	3.7	4.6	1/6†	1140
144, 156, 180, 204	5.4	6.8	1/4†	1140
240	3.9	4.9	1/3***	1140
280, 300, 360	4.8	6.0	1/2***	1140
230/460/3/60				
144, 156, 180, 204, 240, 280, 300, 360	2.2/1.1	2.8/1.4	1/3	1140

***These motors are 115/230 volts.

†230/1/60 unit has 115/1/60 motor supplied with field installed stepdown transformer.

NOTE 3: 1/3 and 1/2 HP motors are available as 230 Volt single and 3 phase in open frame and explosion-proof housings, all available as options. 1/3 and 1/2 HP motors operate at single speed only.

NOTE 4: Stated AMP draw is full load amp (FLA). AMP draw varies by motor manufacturer ± .2 AMPS. Verify FLA per unit motor data plate.

CAUTION: Select appropriate AMP and MCA for the multiple voltage motors. For example, the AMP and MCA for Models 360 with a 460 volt Totally Enclosed motor is 1.3 and 1.6 respectively.

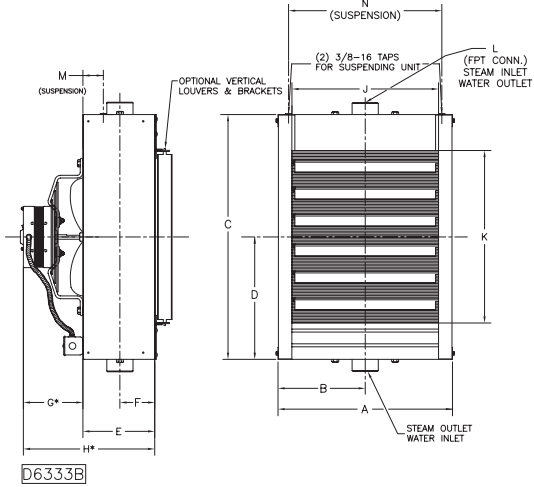
Horizontal Unit Heaters – Submittal

Dimensional Data



Steam and Hotwater Coil

MODELS HV-18 THRU 360 (HEADER TYPE)

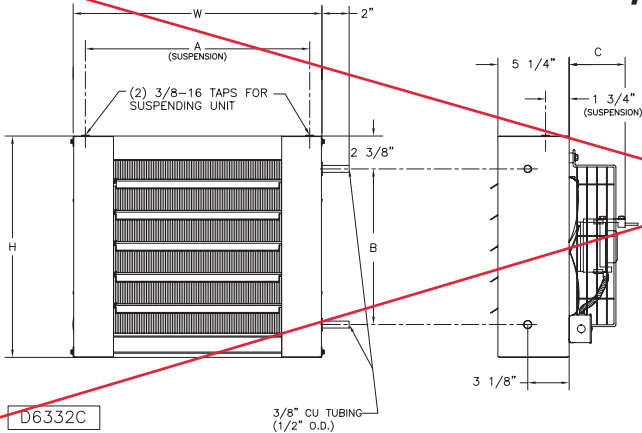


Unit Size	A inches (mm)	B inches (mm)	C inches (mm)	D inches (mm)	E inches (mm)	F inches (mm)	G* inches (mm)	H* inches (mm)	J inches (mm)	K inches (mm)	L inches (mm)	M inches (mm)	N inches (mm)	Number of Louvers	Nom. Fan Diam. inches (mm)	Approx. Ship Wt. lbs. (kg)
18	14 ⁷ / ₈ (371)	7 ⁷ / ₁₆ (186)	15 (381)	7 ¹ / ₂ (191)	6 ⁵ / ₈ (156)	2 ¹ / ₂ (63)	3 ¹ / ₄ (83)	9 ³ / ₈ (238)	12 ¹ / ₄ (311)	9 ¹ / ₂ (241)	1 ¹ / ₄ (32)	2 ¹ / ₄ (57)	12 ⁷ / ₈ (327)	4	9 (229)	26 (11.8)
24	14 ⁷ / ₈ (371)	7 ⁷ / ₁₆ (186)	18 (457)	9 (229)	6 ⁵ / ₈ (156)	2 ¹ / ₂ (63)	3 ¹ / ₄ (83)	9 ³ / ₈ (238)	12 ¹ / ₄ (311)	12 ¹ / ₂ (318)	1 ¹ / ₄ (32)	2 ¹ / ₄ (57)	12 ⁷ / ₈ (327)	5	10 (254)	30 (13.6)
36	17 ¹ / ₂ (435)	8 ⁹ / ₁₆ (217)	20 ¹ / ₂ (521)	10 ¹ / ₄ (260)	5 ⁷ / ₈ (149)	2 ¹ / ₂ (63)	5 ¹ / ₁₆ (144)	11 ⁷ / ₁₆ (291)	14 ³ / ₄ (375)	14 ³ / ₄ (381)	1 ¹ / ₄ (32)	1 ³ / ₄ (44)	15 ³ / ₈ (391)	6	12 (305)	41 (18.6)
48	17 ¹ / ₂ (435)	8 ⁹ / ₁₆ (217)	20 ¹ / ₂ (521)	10 ¹ / ₄ (260)	5 ⁷ / ₈ (149)	2 ¹ / ₂ (63)	5 ¹ / ₁₆ (144)	10 ¹ / ₁₆ (278)	14 ³ / ₄ (375)	15 (381)	1 ¹ / ₄ (32)	1 ³ / ₄ (44)	15 ³ / ₈ (391)	6	12 (305)	41 (18.6)
60	18 ³ / ₈ (467)	9 ³ / ₁₆ (233)	21 ³ / ₈ (552)	10 ⁷ / ₈ (276)	6 ¹ / ₂ (152)	2 ¹ / ₂ (63)	5 ¹ / ₁₆ (129)	11 ¹ / ₁₆ (281)	16 (406)	16 ¹ / ₄ (413)	1 ¹ / ₄ (32)	1 ³ / ₄ (44)	16 ³ / ₈ (422)	7	14 (356)	44 (19.9)
72	20 ⁷ / ₈ (530)	10 ¹ / ₁₆ (265)	24 ¹ / ₄ (616)	12 ¹ / ₈ (308)	6 ⁵ / ₈ (156)	2 ¹ / ₂ (63)	5 ¹ / ₁₆ (144)	11 ³ / ₁₆ (300)	18 ¹ / ₂ (470)	18 ³ / ₄ (476)	1 ¹ / ₄ (32)	1 ³ / ₄ (44)	19 ¹ / ₈ (486)	8	14 (356)	47 (21.3)
84	19 ⁵ / ₈ (498)	9 ³ / ₁₆ (249)	24 (610)	12 (305)	6 ⁵ / ₈ (160)	3 ³ / ₁₆ (81)	7 ¹ / ₂ (191)	13 ¹ / ₁₆ (351)	17 ¹ / ₄ (438)	17 ¹ / ₂ (445)	1 ¹ / ₂ (38)	1 ³ / ₄ (44)	17 ⁷ / ₈ (454)	8	16 (406)	49 (22.2)
108	20 ⁷ / ₈ (530)	10 ¹ / ₁₆ (265)	25 ¹ / ₄ (641)	12 ³ / ₈ (321)	6 ⁵ / ₈ (160)	3 ³ / ₁₆ (81)	6 ¹ / ₁₆ (170)	13 (330)	18 ¹ / ₂ (470)	18 ³ / ₄ (476)	1 ¹ / ₂ (38)	1 ³ / ₄ (44)	19 ¹ / ₈ (486)	8	18 (457)	59 (26.7)
120	23 ³ / ₈ (594)	11 ¹ / ₁₆ (297)	27 ³ / ₈ (705)	13 ³ / ₈ (352)	6 ⁵ / ₈ (160)	3 ³ / ₁₆ (81)	7 ¹ / ₂ (194)	14 (356)	21 (533)	21 ¹ / ₄ (540)	1 ¹ / ₂ (38)	1 ³ / ₄ (44)	21 ¹ / ₈ (549)	9	18 (457)	74 (33.5)
144	23 ³ / ₈ (594)	11 ¹ / ₁₆ (297)	27 ³ / ₈ (705)	13 ³ / ₈ (352)	6 ⁵ / ₈ (160)	3 ³ / ₁₆ (81)	7 ¹ / ₁₆ (194)	13 ³ / ₈ (349)	21 (533)	21 ¹ / ₄ (540)	1 ¹ / ₂ (38)	1 ³ / ₄ (44)	21 ¹ / ₈ (549)	9	18 (457)	74 (33.5)
156	24 ⁵ / ₈ (625)	12 ³ / ₁₆ (313)	29 (737)	14 ¹ / ₂ (368)	6 ⁵ / ₈ (162)	3 ³ / ₁₆ (81)	7 ¹ / ₁₆ (194)	13 ³ / ₈ (349)	22 ¹ / ₄ (565)	22 ¹ / ₂ (572)	1 ¹ / ₂ (38)	1 ³ / ₄ (44)	22 ⁷ / ₈ (581)	9	18 (457)	90 (40.8)
204	27 ¹ / ₂ (708)	13 ¹ / ₁₆ (354)	30 ¹ / ₄ (768)	15 ¹ / ₂ (384)	8 ¹ / ₂ (206)	3 ³ / ₁₆ (81)	8 ¹ / ₂ (214)	14 (356)	25 ¹ / ₂ (648)	25 ³ / ₄ (603)	2 (51)	1 ³ / ₄ (44)	26 ¹ / ₈ (664)	10	20 (508)	143 (65)
240	27 ¹ / ₂ (708)	13 ¹ / ₁₆ (354)	30 ¹ / ₄ (768)	15 ¹ / ₂ (384)	8 ¹ / ₂ (206)	3 ³ / ₁₆ (81)	9 ¹ / ₂ (244)	17 ¹ / ₄ (451)	25 ¹ / ₂ (648)	23 ³ / ₄ (603)	2 (51)	1 ³ / ₄ (44)	26 ¹ / ₈ (664)	10	20 (508)	154 (70)
280	30 ³ / ₈ (848)	16 ¹ / ₁₆ (424)	37 ¹ / ₄ (959)	18 ¹ / ₂ (479)	9 (229)	3 ³ / ₁₆ (81)	9 ¹ / ₂ (244)	18 ³ / ₈ (473)	31 (787)	31 ¹ / ₄ (794)	2 (51)	1 ³ / ₄ (44)	31 ³ / ₈ (803)	13	24 (610)	203 (92)
360																

* APPLIES TO STANDARD MOTOR WITH STANDARD FAN GUARD. WHEN OPTIONAL MOTORS OR OSHA FAN GUARDS ARE REQUESTED, DIMENSIONS WILL CHANGE ACCORDING TO THE SUBSTITUTIONS MADE.

- NOTES: 1. OSHA guard standard on models HV-18 thru HV-48 (dimensions shown in table).
 2. Standard motor and standard guard shown in both tables.
 3. Optional OSHA guards available for all units with standard single phase motors.
 4. All three phase and explosion proof motors are shelf mounted.

Serpentine Hotwater Coil



MODELS HV-108A THRU 136A

Unit Size	H inches (mm)	W inches (mm)	A inches (mm)	B inches (mm)	C inches (mm)	Number of Louvers	Nominal Fan Diameter inches (mm)	Approx. Ship Wt. lb. (kg)
108A	16 (406)	18 (457)	16 ⁷ / ₃₂ (412)	11 ¹ / ₄ (286)	4 ¹ / ₄ (108)	5	9 (229)	22 (10.0)
118A	16 (406)	18 (457)	16 ⁷ / ₃₂ (412)	11 ¹ / ₄ (286)	4 ¹ / ₄ (108)	5	10 (254)	24 (10.9)
125A	16 (406)	18 (457)	16 ⁷ / ₃₂ (412)	11 ¹ / ₄ (286)	4 ¹ / ₄ (108)	5	10 (254)	25 (11.3)
136A*	18 ¹ / ₂ (470)	20 ¹ / ₂ (521)	18 ²⁹ / ₃₂ (475)	13 ³ / ₄ (349)	5 ¹ / ₁₆ (144)	6	12 (305)	31 (14.0)

* Dimension "C" is to back of motor, not motor conduit connector as shown.
 NOTE: OSHA type fan guard standard on models HV-108A thru HV-136A.



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 LOCATION: _____
 ARCHITECT: _____
 ENGINEER: _____
 CONTRACTOR: _____
 PO NUMBER: _____
 DATE: _____



Hot Water Performance Data

Model/ Unit Size	Output BTU Per Hour*	GPM	Final Air Temp	Pressure Drop Ft/H ₂ O	Motor HP†	Motor RPM	Nominal CFM	Outlet FPM	Nominal Amps At 115VAC**	Sound Rating
HV-108A	8,030	.80	91°F	.80	16 Watt	1550	245	250	.80	II
	6,800		90°F							
HV-118A	18,400	1.9	94°F	2.2	16 Watt	1550	500	500	.80	II
	15,650		96°F							
HV-125A	24,800	2.5	102°F	2.2	25 Watt	1550	580	590	1.2	II
	21,230		106°F							
HV-136A	35,900	3.6	99°F	3.0	1/20	1000	850	550	1.4	II
	32,300		100°F							
HV-018B	13,050	1.3	95°F	.005	16 Watt	1550	395	395	.80	II
	11,725		99°F							
HV-024B	17,400	1.8	96°F	.014	16 Watt	1550	450	450	.80	II
	15,600		98°F							
HV-036B	26,100	2.7	103°F	.09	25 Watt	1550	550	550	1.2	II
	23,500		103°F							
HV-048B	34,800	3.5	103°F	.12	1/20	1000	750	550	1.4	II
	31,300		111°F							
HV-060B	43,600	4.4	105°F	.17	1/20	1000	900	650	1.4	II
	39,200		112°F							
HV-072B	52,300	5.3	104°F	.23	1/20	1000	1100	800	1.4	II
	47,000		106°F			900	950	700	1.4	I
HV-084B	61,000	6.1	100°F	.24	1/12	1000	1400	900	2.2	III
	54,900		106°F			900	1100	750	2.2	II
HV-096B	69,700	7.0	106°F	.29	1/12	1000	1400	930	2.2	III
	62,700		113°F			900	1100	800	2.2	II
HV-108B	78,400	7.9	100°F	.36	1/12	1000	1800	1000	2.2	III
	70,500		103°F			900	1500	900	2.2	II
HV-120B	87,100	8.8	102°F	.39	1/3	1140	1900	900	4.5	III
	—		—			—	—	—	—	—
HV-132B	95,800	9.6	104°F	.41	1/3	1140	2000	950	4.5	IV
	—		—			—	—	—	—	—
HV-144B	104,000	10.4	104°F	.43	1/3	1140	2200	1000	4.5	IV
	—		—			—	—	—	—	—
HV-156B	113,000	11.3	100°F	.53	1/3	1140	2600	1150	4.5	IV
	—		—			—	—	—	—	—
HV-180B	118,000	11.8	110°F	.60	1/3	1140	2200	800	4.5	III
	—		—			—	—	—	—	—
HV-204B	148,100	14.9	107°F	.79	1/3	1140	2900	1000	4.5	IV
	—		—			—	—	—	—	—
HV-240B	174,000	17.4	106°F	1.06	1/3	1140	3500	900	4.5	IV
	—		—			—	—	—	—	—
HV-280B	209,100	21.0	106°F	1.33	1/2	1100	4200	980	5.4	IV
	—		—			—	—	—	—	—
HV-300B	230,000	23.0	102°F	2.1	1/2	1100	5000	700	5.4	IV
	—		—			—	—	—	—	—
HV-360B	261,300	26.2	103°F	2.1	1/2	1100	5500	1000	5.4	IV
	—		—			—	—	—	—	—

Performance based on 200° EWT, 60° E.A.T., 20° TD.

* For the lower output, an optional Speed Controller must be ordered.

** Stated AMP is full load (FLA). AMP draw varies by motor manufacturer ± .2 AMPS.

† Motor HP listed is applicable to standard motor type only. For explosion proof motor HP, see motor data section.

Steam Performance Data

Model/ Unit Size	Output BTU Per Hour*	Condensate Lbs Per Hour	Square Foot EDR	Final Air Temp	Motor HP‡	Motor RPM	Nominal CFM	Outlet FPM	Nominal Amps At 115VAC†	Nominal Fan Diameter
HV-018B	18,000	18.0	75	102°F	16 Watt	1550	395	395	.80	9"
	16,200	16.2	68	105°F						
HV-024B	24,000	24.5	100	109°F	16 Watt	1550	450	450	.80	10"
	21,600	22.0	90	112°F						
HV-036B	36,000	37.0	150	119°F	25 Watt	1550	550	550	1.2	10"
	32,400	33.0	135	120°F						
HV-048B	48,000	49.0	200	119°F	1/20	1000	750	550	1.4	12"
	43,200	44.0	180	123°F						
HV-060B	60,000	61.0	250	121°F	1/20	1000	900	650	1.4	12"
	54,000	55.0	225	131°F						
HV-072B	72,000	73.0	300	120°F	1/20	1000	1100	800	1.4	14"
	64,800	66.0	270	123°F						
HV-084B	84,000	85.0	350	115°F	1/12	1000	1400	900	2.2	14"
	75,600	76.0	315	123°F						
HV-096B	96,000	97.0	400	123°F	1/12	1000	1400	930	2.2	16"
	86,400	88.0	360	132°F						
HV-108B	108,000	110.0	450	115°F	1/12	1000	1800	1000	2.2	16"
	97,200	98.0	405	120°F						
HV-120B	120,000	122.0	500	118°F	1/3	1140	1900	900	4.5	18"
	—	—	—	—						
HV-132B	132,000	134.0	550	121°F	1/3	1140	2000	950	4.5	18"
	—	—	—	—						
HV-144B	144,000	146.0	600	120°F	1/3	1140	2200	1000	4.5	18"
	—	—	—	—						
HV-156B	156,000	160.0	650	115°F	1/3	1140	2600	1150	4.5	18"
	—	—	—	—						
HV-180B	180,000	190.0	770	135°F	1/3	1140	2200	800	4.5	18"
	—	—	—	—						
HV-204B	204,000	208.0	850	124°F	1/3	1140	2900	1000	4.5	18"
	—	—	—	—						
HV-240B	240,000	244.0	1000	123°F	1/3	1140	3500	900	4.5	20"
	—	—	—	—						
HV-280B	280,000	280.0	1100	121°F	1/2	1100	4200	980	5.4	20"
	—	—	—	—						
HV-300B	300,000	310.0	1250	117°F	1/2	1100	5000	700	5.4	24"
	—	—	—	—						
HV-360B	360,000	366.0	1500	120°F	1/2	1100	5500	1000	5.4	24"
	—	—	—	—						

Performance based on 2# steam pressure at heater with air entering @ 60°F.

Maximum working pressure 150 PSI, 366°F

* For the lower output, an optional Speed Controller must be ordered.

† Stated AMP is full load (FLA). AMP draw varies by motor manufacturer ± .2 AMPS.

‡ Motor HP listed is applicable to standard motor type only. For explosion proof motor HP, see motor data section.

Steam and Hot Water Coil Specifications

GENERAL

Furnish and install where indicated or scheduled on plans horizontal steam/hot water unit heater. Unit shall be equipped as specified herein. All units shall be installed in a neat and workmanlike manner in accordance with this specification and the manufacturer's installation instructions.

CASING

Casings shall be 20-gauge die-formed steel. Paint finish shall be of lead-free, chromate free, polyester melamine resin base. Finish shall be baked at 400°F.

COIL SIZES 18 - 360

Coil elements and headers shall be of heavy wall drawn seamless copper tubing. Element tubes shall be brazed into extruded header junctions. Pipe connection saddles shall be of cast bronze. Aluminum fins shall have drawn collars to assure permanent bond with expanded element tubes and exact spacing. All Element Assemblies are submersion tested at the factory at 200 PSI. Under maximum conditions, coils are rated at 150 PSI at 366°F for steam and 150 PSI at 320°F for hot water. We recommend operating pressure of 75 PSI at 320°F for long life.

MOTORS

Motors shall be totally enclosed fan cooled, resilient mounted with class "B" windings. All motors shall be designed for horizontal mounting. Motors under 1/3 HP are totally enclosed, frame mounted, 115/1/60 with thermal overload protection and permanently lubricated sleeve bearings with optional solid state speed controller available. 1/3 HP (115/1/60) motors are open frame construction, with thermal overload protection and ball bearings. 1/3 HP at (230 Volt) and all 1/2 HP motors are open frame construction, with thermal overload protection and ball bearings. 1/3 and 1/2 HP motors are available in single and three phase in open frame construction or explosion-proof housings, all the above are available as options.

EXPLOSION PROOF MOTORS

An enclosed motor whose enclosure is designed and constructed to withstand an explosion of a specified gas or vapor which may occur within the motor and to prevent the ignition of this gas or vapor surrounding the machine.

Horizontal unit heater motors comply with the National Electrical Code classification as follows:

- Class I, Group D; all sizes
- Class II, Group F; all sizes
- Class II, Group G; all sizes
- Division I & II Installations
- T-code (T3B)

Explosion proof equipment is not generally available for Class I, Group A and B and it is necessary to isolate motors from the hazardous area. All explosion proof motors are shelf mounted.

FANS

Fans shall be of aluminum blade, hub type designed and balanced to assure maximum air delivery, low motor horsepower requirements and quiet operation. Blades are spark proof.

FAN GUARDS

Fan guards shall be welded steel, zinc plated or painted. Units mounted below 8 feet from floor must be equipped with an OSHA fan guard to meet ETL and OSHA requirements. OSHA fan guard standard on sizes 18 thru 48.

AIR DEFLECTION LOUVERS

Units shall be equipped with horizontal, individually adjustable louvers. Vertical louvers for four-way air control shall be available as an optional extra.

Serpentine Coil Specifications

GENERAL

Furnish and install, where indicated or scheduled on plans, Vulcan Model HVA horizontal hot water unit heaters. Unit shall be equipped as specified herein. All units shall be installed in a neat and workmanlike manner in accordance with this specification and the manufacturer's installation instructions.

CASING

Casings shall be 20-gauge die-formed steel. Paint finish shall be of lead-free, chromate free, polyester melamine resin base. Finish shall be baked at 400°F.

COIL MODELS 108A - 136A

Coil is a serpentine design with seamless copper tubing. Aluminum fins shall have drawn collars to assure permanent bond with expanded tubes. Tubing connection shall be 3/8 in copper tubing, type "M" (.500 OD). Coils shall be factory tested at 200 PSI. Coils have a max operating entering water temperature of 320°F.

MOTORS

Motors shall be totally enclosed fan cooled, resilient mounted with class "B" windings. All motors shall be designed for horizontal mounting.

FANS

Fans shall be of aluminum blade type, designed and balanced to assure maximum air delivery, low motor horsepower requirements and quiet operation.

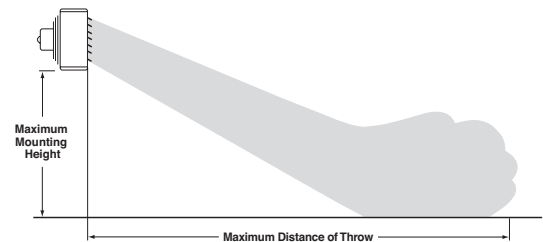
OSHA FAN GUARDS

OSHA fan guards shall be welded steel, zinc plated or painted. OSHA fan guard standard on sizes 108A thru 136A.

AIR DEFLECTION LOUVERS

Units shall be equipped with horizontal, individually adjustable louvers.

Mounting Heights and Throws



Model/Unit Size	Maximum Mounting Height	Approximate Maximum Throw	Model/Unit Size	Maximum Mounting Height	Approximate Maximum Throw
HV-108A	8'	20'	HV-108	11'	40'
HV-118A	8'	25'	HV-120	12'	40'
HV-125A	9'	29'	HV-132	13'	54'
HV-136A	9'	29'	HV-144	13'	55'
HV-18	8'	20'	HV-156	13'	55'
HV-24	8'	24'	HV-180	13'	53'
HV-36	9'	28'	HV-204	13'	55'
HV-48	9'	30'	HV-240	14'	57'
HV-60	10'	30'	HV-280	14'	57'
HV-72	10'	29'	HV-300	15'	58'
HV-84	10'	30'	HV-360	15'	60'
HV-96	11'	38'			

The following table is based on 60°F entering air and either 2 lbs steam or 200°F TD. The data is based on the higher speed CFM throughout and velocity. Care should be exercised in locating adjacent unit heaters and allowance should be made for obstructions in the air pattern and conflicting air currents from other air moving devices.

Horizontal Unit Heaters

Motor Characteristics

TOTALLY ENCLOSED MOTOR TYPE

Unit Sizes	AMP	MCA	HP	RPM
115/1/60				
18, 24, 108A, 118A	0.8	1	16W*	1550
136A	1.4	1.8	1/20*	1000
36, 125A	1.2	1.5	25W*	1550
48, 60, 72	1.4	1.8	1/20*	1000
84, 96, 108	2.2	2.8	1/12*	1000
120, 132, 144, 156, 180, 204, 240	4.5	5.6	1/3	1140
280, 300, 360	5.4	6.8	1/2	1100
230/1/60				
18, 24, 108A, 118A	0.4	0.5	16W	1550
136A	1.4	1.8	1/20†	1000
36, 125A	0.6	0.8	25W	1550
48, 60, 72	1.4	1.8	1/20†	1000
84, 96, 108	2.2	2.8	1/12†	1000
120, 132, 144, 156, 180, 204, 240	4.5	5.6	1/3†	1140
280, 300, 360	5.4	6.8	1/2†	1100
208-230/460/3/60				
48, 60, 72, 84, 96, 108, 120, 132, 144, 156, 180, 204, 240, 280, 300, 360	2.6-2.6/1.3	3.3-3.3/1.6	1/2**	1140

*Optional variable speed switch is available.

**These motors are without thermal overload protection.

Motors without thermal overload protection must be installed with optional manual starter or field provided overload protection.

NOTE 1: All motors are constant speed and operate at top speed as indicated in motor data. Unit sizes 18 through 108, including 108A, 118A, 125A and 136A can be run at reduced speed with addition of optional variable speed switch. This switch is factory-calibrated for low and high speed ratings, with intermediate speeds infinitely controllable. Models 120 through 360 operate at constant speed as indicated in motor data. All 1/4 HP motors are PSC.

NOTE 2: Motors under 1/3 HP are totally enclosed, frame mounted, 115/1/60 with thermal overload protection and permanently lubricated sleeve bearings with optional speed controller available. 1/3 HP (115/1/60) motors are open frame constant speed with thermal over-load protection and ball bearings. 1/3 HP (230 Volt) and 1/2 HP (230 Volt) motors are open frame constant speed with thermal overload protection and ball bearings.

EXPLOSION PROOF WITH THERMAL OVERLOAD MOTOR TYPE

Unit Sizes	AMP	MCA	HP	RPM
115/1/60				
48, 60, 72, 84, 96, 108, 120, 132	3.7	4.6	1/6	1140
144, 156, 180, 204	5.4	6.8	1/4	1140
240	7.8	9.8	1/3***	1140
280, 300, 360	9.6	12.0	1/2***	1140
230/1/60				
48, 60, 72, 84, 96, 108, 120, 132	3.7	4.6	1/6†	1140
144, 156, 180, 204	5.4	6.8	1/4†	1140
240	3.9	4.9	1/3***	1140
280, 300, 360	4.8	6.0	1/2***	1140
230/460/3/60				
144, 156, 180, 204, 240, 280, 300, 360	2.2/1.1	2.8/1.4	1/3	1140

***These motors are 115/230 volts.

†230/1/60 unit has 115/1/60 motor supplied with field installed stepdown transformer.

NOTE 3: 1/3 and 1/2 HP motors are available as 230 Volt single and 3 phase in open frame and explosion-proof housings, all available as options. 1/3 and 1/2 HP motors operate at single speed only.

NOTE 4: Stated AMP draw is full load amp (FLA). AMP draw varies by motor manufacturer ± .2 AMPS. Verify FLA per unit motor data plate.

CAUTION: Select appropriate AMP and MCA for the multiple voltage motors. For example, the AMP and MCA for Models 360 with a 460 volt Totally Enclosed motor is 1.3 and 1.6 respectively.

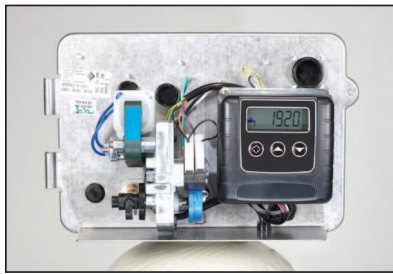
Fleck® SXT Controls

Fleck SXT Controls provide easy, step-by-step programming at the touch of a button.

The same SXT control drives 6 different Fleck valves, saving you time in installation, service and training.

Unlike other electronic valves, the SXT control performs without switching out cams or fumbling with jumpers, pins and cryptic calculations.














A large backlit LCD display alternates between time of day, soft water remaining or days to regeneration, and tank in service (twin tank systems only). Fleck valves using an SXT control is the best entry-level solution for all your residential water treatment applications.



Features and Benefits

- Easy, user-friendly programming
- Large, blue backlit LCD display
- 48 hour internal power backup capacitor
- True time of day in hours and minutes
- Volume of soft water remaining
- Regeneration steps and cycle time remaining
- Service and self diagnostic indicator
- Quick and easy setup of capacity, regeneration time, and day override
- Advanced programming options including up to 6 independently adjustable cycle times
- Programming is stored in memory and will not be lost due to power outages
- Electronic step-by-step regeneration
- Regeneration tonight and regenerate now option

Setup in Five Simple Steps

1. **To set the Time of Day** simply push the up  or down  buttons.
2. **Enter the User Programming Mode** by pressing the up and down buttons   together for 5 seconds while in service and the Time of Day is NOT set to 12:01 PM.
3. Now, **set the Capacity** by pushing the up  or down  buttons. To continue, push the Extra Cycle button .
4. Next **set the Regeneration Time** by pushing the up  or down  buttons. To continue, push the Extra Cycle button .
5. Finally, set the **Regeneration Day Override** by pushing the up  or down  buttons. To exit Programming Mode, push the Extra Cycle button .



5600SXT



ProFloSXT



2510SXT / 2750SXT



TwinFloSXT



9000SXT

System Configurations

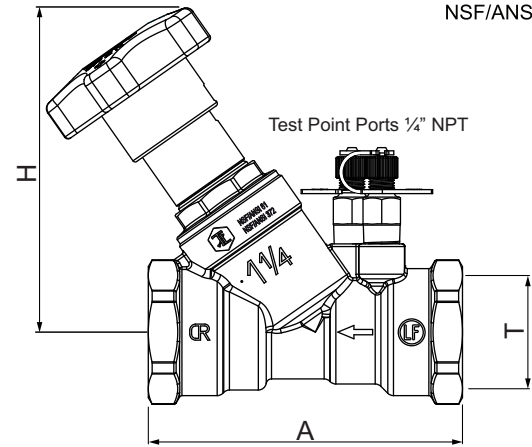
System Type 4	Single Unit Operation
Regeneration Types	Time Clock Delayed Meter Delayed Meter Immediate Day of Week
Electrical Rating	24, 120 or 240 VAC (with appropriate transformer) 50/60 Hz
Operating Temperature Range	32° F - 120° F (0° C - 49° C)

T-1810-LF Lead-Free* DZR Brass Fixed Orifice Circuit Balancing Valve - 1/2" to 2"



NSF/ANSI 61
NSF/ANSI 372

DIMENSIONS - In.						
Size	Cv - Full Open	Cvs	H	A	T - Thread	Weight Lbs.
1/2" - U	0.605	0.64	4.06	3.46	1/2" - 14 NPT	1.228
1/2" - L	0.985	1.33	4.06	3.46	1/2" - 14 NPT	1.228
1/2"	2.22	3.24	4.06	3.46	1/2" - 14 NPT	1.228
3/4"	4.24	6.16	4.06	3.78	3/4" - 14 NPT	1.426
1"	7.21	11.24	4.06	3.94	1" - 11.5 NPT	1.731
1 1/4"	14.50	23.41	4.85	4.63	1 1/4" - 11.5 NPT	2.780
1 1/2"	22.65	34.95	4.94	5.00	1 1/2" - 11.5 NPT	3.501
2"	34.36	63.67	5.34	5.72	2" - 11.5 NPT	4.802



MATERIAL LIST	
PART	SPECIFICATION
Body	Brass - UNS C27453 (DZR)
Venturi Insert	Brass - UNS C27453 (DZR)
Balancing Cone	Brass - UNS C27453 (DZR)
Gasket Disk	PTFE
Disk	Brass - UNS C27453 (DZR)
O-ring	EPDM
Disk stem	Brass - UNS C27453 (DZR)
Union	Brass - UNS C27453 (DZR)
Stem	Brass ASTM B124 C37700
Bonnet	Brass - UNS C27453 (DZR)
Indicator Housing	ABS Black Color
Scale	Acetal Resin
Handwheel	ABS Black Color
Test Point (2)	Brass UNS C35330 (DZR)

**300 PSI Non-Shock Cold Working Pressure to 160°F
Maximum Temperature 260°F @ 150 PSI**

Flow Measurement Accuracy ±3%

Accessories



PT Test Point Extension

RECOMMENDED FLOW RANGE		
Size - In.	Flow Range - gpm	
	Min	Max
1/2" - U	0.24	1.0
1/2" - L	0.52	2.0
1/2"	1.2	5.0
3/4"	2.4	10
1"	4.3	18
1 1/4"	9.0	33
1 1/2"	12	49
2"	24	78

*Weighted average lead content ≤0.25%

Project: _____

Contractor: _____

PO/Job No.: _____

Engineer: _____

Representative: _____

Date: _____

Brass Ball Valves

Two-Piece Body • Full Port • Blowout-Proof Stem • PTFE Seats
1/4"-2" 600 PSI/41.4 Bar Non-Shock Cold Working Pressure
2 1/2"-4" 400 PSI/27.6 Bar Non-Shock Cold Working Pressure

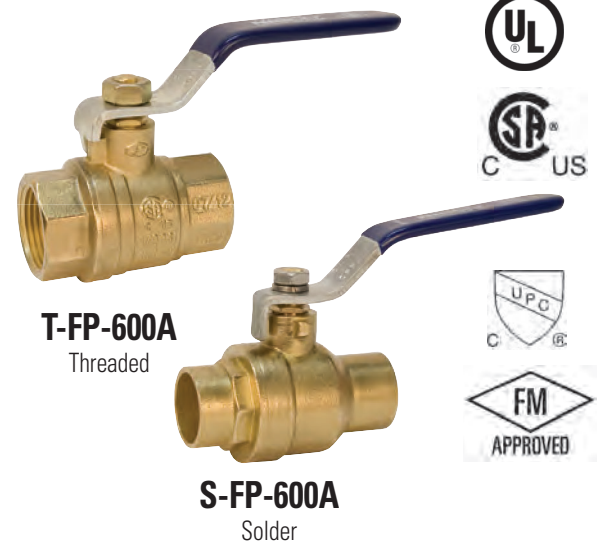
CSA CERTIFIED TO ASME B16.44 AND CR91-002 (THREADED 1/4"-4")
 • UL LISTED (THREADED 1/4"-4") • FM APPROVED (THREADED 1/4"-2")
 • CRN: 0C19353.5XX*

Threaded
 CSA (1/4" - 4"):
 • CR91-002: 1/2 psig, 2 psig, and 5 psig (these are specific approved categories)
 • ASME B16.33: 125 psig (maximum)
 • Temperature is -4° F to 194° F

Threaded
 FM (1/4" - 2"):
 • 175wvp Threaded

UL, Gas and Oil (1/4" - 4"):
 • YQNZ, Compressed Gas Shutoff Valves: 250 psi
 • YRBX, Flammable Liquid Shutoff Valves: 250 psi
 • YRPV, Gas Shutoff Valves: 250 psi
 • YSDT, LP-Gas Shutoff Valves: 250 psi
 • MHKZ, Manual Valves: 250 psi

*Please contact Technical Customer Service for the CRN Jurisdictions/Provinces list



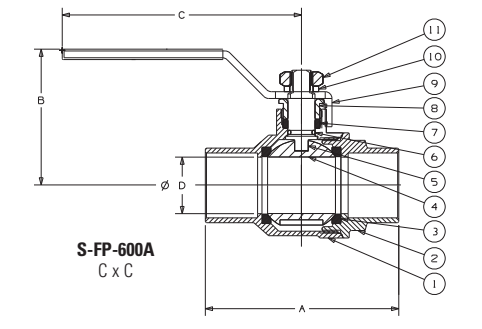
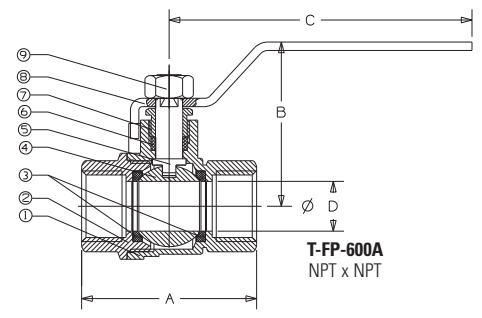
T-FP-600A
Threaded

S-FP-600A
Solder

MATERIAL LIST

PART	SPECIFICATION
1. Body	Forged Brass ² CU > 57%
2. End Cap	Forged Brass ² CU > 57%
3. Ball Seat	PTFE
4. Ball	Chrome Plated Brass - C46500 (1/4"-1"), Stainless Steel 316 (1 1/4"-4")
5. Stem	Brass
6. O-Ring (Stem Seal)*	Fluorocarbon (FKM)
7. Stem Packing	PTFE
8. Packing Nut	Brass
9. Lever Handle ¹	Steel, Plated
10. Lock Washer*	Stainless Steel
11. Handle Nut ¹	Stainless Steel

Note: * Parts 6 and 10 are applicable of S-FP-600A only.
¹ Due to Standard Approvals, Lever Handles and Nuts are not interchangeable between Solder and Threaded.
² For Material Certification, contact NIBCO Technical Services.



DIMENSIONS—WEIGHTS—QUANTITIES

Size	Dimensions														T-FP-600A		S-FP-600A		T-FP-600A		S-FP-600A	
	A		A		B		B		C		C		D		Lbs.	Kg.	Lbs.	Kg.	Ctn. Qty.	Ctn. Qty.		
In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.	In. mm.			
1/4	8	1.76	45	—	—	1.73	44	—	—	3.54	90	—	—	.39	10	.33	.15	—	—	18	—	
3/8	10	1.76	45	1.75	44	1.73	44	1.58	40	3.54	90	3.78	96	.39	10	.30	.14	.38	.17	18	18	
1/2	15	2.05	52	2.01	51	1.92	49	1.78	45	3.54	90	3.78	96	.59	15	.44	.20	.40	.18	18	18	
3/4	20	2.36	60	2.74	70	2.09	53	2.13	54	3.78	96	3.98	101	.75	19	.66	.30	.67	.30	12	12	
1	25	2.76	70	3.35	85	2.56	65	2.52	64	4.53	115	4.41	112	.98	25	1.10	.50	1.12	.51	6	6	
1 1/4	32	3.31	84	3.78	96	2.95	75	2.65	67	4.53	115	5.04	128	1.26	32	1.57	.71	1.49	.67	4	4	
1 1/2	40	3.66	93	4.42	112	3.35	85	3.12	79	5.51	140	6.22	158	1.57	40	2.40	1.09	2.38	1.08	2	2	
2	50	4.18	106	5.34	136	3.68	93	3.41	87	5.51	140	6.22	158	1.97	50	3.37	1.53	3.62	1.64	2	2	
2 1/2	65	5.38	137	6.28	160	4.76	121	4.76	121	8.66	220	8.66	220	2.56	65	7.60	3.45	6.36	2.88	3	3	
3	75	6.04	153	7.15	182	5.08	129	5.08	129	8.66	220	8.66	220	2.95	75	9.36	4.24	8.32	3.77	2	2	
4	100	7.39	188	—	—	5.87	149	—	—	9.61	244	—	—	3.89	99	16.85	7.64	—	—	1	—	

NOT FOR USE WITH POTABLE DRINKING WATER APPLICATIONS AFTER JANUARY 3, 2014.
WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.