

# Job Title Westdale Hi-Rise Boiler Replacment Project Location





If you would like to submit a bid, you must complete the GDPM Quote Form. It must be signed. If the proposal section does not have enough room for your proposal, please write 'see attached' and attach your quote.

If you are interested in working with GDPM, please contact <a href="mailto:housingdevelopment@dmha.org">housingdevelopment@dmha.org</a> and request a vendor registration packet. Once submitted you will be notified of all contracting opportunities related to the areas you select when registering.

PROJECT NAME: Westdale Hi-Rise Boiler Replacment Project

How to Quote: Email quotes to housingdevelopment@dmha.org

Email quotes to housingdevelopment@dmha.org

Questions and Site Visits Kevin Arnold at 937-910-7637

Quote Deadline: September 28, 2023 no later than 10:00: AM



## PLANNING & DEVELOPMENT REQUEST FOR QUOTE Construction Services

Contractor Signature	Date		DPM Signature	 Date
Contractor is qualified to per applicable. Further, Contrac necessary. Unless otherwise Documents is in conflict wit that conflict with and/or are are executed after the GDPM	form all work necessary to compl tor has reviewed, acknowledges a specified in writing by GDPM o h, or inconsistent with any provis inconsistent with the GDPM General	ete the services as specified in the Cont nd accepts all GDPM Small Constructi n GDPM letterhead and signed by both ion with the GDPM General Terms and eral Terms and Conditions are hereby re this includes, but is not limited to inden	ract Documents at Contractor's quote on Project General Terms and Condin parties, during the term of the Cont d Conditions, the GDPM General Te woked, rejected and void, even if the	that if selected for the Contract Award, d price within the time period provided, if tions; no other contract documents will be tract, if any provision within the Contract rms and Conditions shall prevail. Terms contract documents containing such terms of precedence, and integration provisions.
Proposed Quote for Services. (Contractor may attach Contractor's form of Proposal)				
Contact Number:		E-mail:		
City:		State:	Zip Code:	
Street Address:		Street Address Li	ne 2:	
Name of Business:				
Section 3	MBE/WBE Vetera	n None Apply		
Check at least one of the fo	ollowing:			
		oreference apply: (for more inform g/business-opportunities/diversity-o		is eligible for any of the following
Scope of Work				
Contract No.		Contract Term	Davis Bacon A <sub>l</sub>	oply?
Contract Name				

#### **SECTION 01 10 00**

#### **SUMMARY**

#### PART 1 GENERAL

#### 1.1 DESCRIPTION / SUMMARY OF WORK

A. Project Identification As follows:

Project: GDPM/DMHA OH5-7A - Wesdale Hi-Rise Amp 3 108 Melba Avenue Dayton, Ohio 45402 Heating Boiler Replacement Project

B. Contract Documents dated Monday, September 18, 2023 as prepared by Greater Dayton Premier Management 400 Wayne Avenue Dayton Ohio P.O. Box 8750 Dayton, Ohio 45401-8750.

#### C. Building Summary:

Westdale Terrace Apartments is a combination of townhouse and high-rise development consisting of 126 units. The buildings were originally constructed in 1965 for the Housing Authority. The high rise building is constructed of concrete post and beam with concrete slab construction at floors and roof. The building foundations are concrete. Perimeter wall construction is masonry unit with brick veneer. Roof construction is rigid foam insulation with a granular faced built-up-roofing system. Heating for the high rise building is provided by two Bryan central boilers and fin tube radiators in each unit. The boilers are rated at 1,200 MBH, 80 % efficiency.

## 1.2 Scope Summary:

- 1. Remove the failed boiler, and replace with a new Lochinvar Crest Model 12 Condensing Boiler 98% thermal efficiency; 1,200,000 BTU/Hr or equal.
- The contractor shall be responsible for supplying all components related to the
  installation of the new appliance at no cost to the owner and shall install new
  components if necessary to accomplish the installation. Any damage done to the boiler
  and associated appurtenances as a result of the work shall be the responsibility of the
  contractor.
- 3. The new boiler be online and fully functional within 24 hours after work commences. There shall be no exceptions.
- 4. The contractor shall be responsible for providing all but not limited to piping, fittings (sweat/compression or otherwise), couplings, valves, adapters, elbows, new pressure relief valves and fittings, unions, nipples, pipe wrap/insulation, indoor/outdoor sensors, line sensors, aquastat relays/sensors, regulators, gas line(s). This shall include but is not limited to black iron pipe and related components/fitting, copper pipe and related components/fittings gas cock(s) gas regulators, flue dampers, pressure/temperature gauges and associated components as needed to accomplish a complete installation.
- 5. The contractor will be responsible to make all piping modifications to the current configuration and layout and supply all materials needed to accomplish the installation.

- 6. The contractor shall be responsible for installing vent piping for the new appliance per manufacture's recommendations and or connecting vent piping to the existing configuration and making any terminations as needed to accomplish the installation.
- 7. The contractor shall be responsible to make any and all penetrations to accomplish the installation and shall be responsible for the restoration of affected areas/services interior or exterior and shall fire- stop penetrations in accordance with local/federal codes.
- 8. The contractor will be responsible to make all electrical connections from panel(s) to the appliance and make modifications as needed to accomplish the installation to the current configuration and layout. This includes but is not limited to all components and wiring related to the functionality of the boiler and associated devices.
- 9. The contractor shall install new direct digital controls on the new boiler and interface and program the unit for operational sequence with the existing secondary boiler control and environmental systems.
- 10. The contractor shall be responsible for all permit/inspection fees and comply with all local, state, and federal codes/ regulations.
- 11. The building will be occupied during the work. The contractor shall have sufficient manpower to complete the work within 24 hours. There shall be no exceptions.
- 12. Bidders must visit the site for field verification/measurements. Contact Kevin Arnold at 937-910-7637 for access to the property.
- 13. All work shall be performed in a professional manner, per acceptable industry standards and practices. Products shall be cared for and applied in accordance with the respective manufacturers' recommendations and documentation
- 14. The contractor shall be responsible for any damage caused to the building/property interior and exterior as a result of this work and shall be responsible for making any and all repairs.
- 15. The contractor shall be responsible for removing and disposing the failed boiler and related components off site. The contractor shall not use the owners dumpster or trash containers to dispose of materials related to this project.
- 16. When the installation is complete, the contractor shall test the system and provide training to GDPM staff on the operation of the new boiler.
- 17. The contractor shall supply the owner with four (2) O&M manuals in written format and two (2) on compact disk.
- 18. The contractor shall respond to warranty related issues within two hours and be onsite to correct any issue within four (4) hours. This shall include weekends and holidays.
- 19. Manufactures warranties shall apply and all work done by the contractor shall carry a 1 year warranty from date of acceptance. The contractor and maintenance supervisor of the property shall conduct a twelve (12) month anniversary inspection of the installation prior to the expiration of the warranty. The contractor shall correct any deficiency.
- 20. Questions and site visits shall be arranged by contacting Kevin Arnold, who will superintend this project. He may be contacted at 937-910-7637 or <a href="mailto:karnold@dmha.org">karnold@dmha.org</a>

SECTION 235216 - FIRE-TUBE CONDENSING BOILERS

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

A. This Section includes packaged, factory-fabricated and -assembled, gas-fired, fire-tube condensing boilers, trim, and accessories for heating hot water.

#### 1.3 SUBMITTALS

- A. Product Data: Include performance data, operating characteristics, furnished specialties, and accessories.
- B. Shop Drawings: For boilers, boiler trim, and accessories.
  - 1. Include plans, elevations, sections, details, and attachments to other work.
  - 2. Wiring Diagrams: Power, signal, and control wiring.
- C. Source quality-control test reports: Indicate and interpret test results for compliance with performance requirements before shipping.
- D. Field quality-control test reports: Indicate and interpret test results for compliance with performance requirements.
- E. Efficiency Data Points: Data shall be submitted per ASHRAE 155 Method of Testing for Rating Commercial Space Heating Boiler Systems. This data shall cover steady state thermal efficiency, part load efficiency, and idling energy input rate. Efficiency data not supported by a third party published test standard shall not be permitted.
- F. Warranty: Standard warranty specified in this Section.

#### 1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For boilers to include in emergency, operation, and maintenance manuals.

#### 1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: The manufacturer must have been involved in the manufacture of fire tube condensing hydronic boilers for no less than 5 years. The manufacturer must be headquartered in North America and manufacture in an ASME-certified facility wholly owned by the manufacturer. The specifying engineer, contractor and end customer must have the option to visit the factory to witness test fire and other relevant procedures.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

- ASME Compliance: Fabricate and label boilers to comply with ASME Boiler and Pressure Vessel Code.
- D. ASHRAE/IESNA 90.1 Compliance: Boilers shall have minimum efficiency according to "Gas and Oil Fired Boilers Minimum Efficiency Requirements."
- E. AHRI Compliance: Boilers shall be AHRI listed and must meet the minimum efficiency specified under AHRI BTS-2000 as defined by Department of Energy in 10 CFR Part 431.
- F. ANSI Compliance: Boilers shall be compliant with ANSI Z21.13 test standards for US and Canada. Boilers shall be tested in an ISO 17025 recognized laboratory. Boilers tested to UL 795 shall not be permitted.
  - 1. ANSI Z21.13 pertains to gas-fired low-pressure steam and hot water boilers. UL 795 pertains to commercial-industrial gas heating equipment.
- G. CSA Compliant: Boilers shall be compliant with CSA certification.

#### 1.6 COORDINATION

A. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified in Division 03.

#### 1.7 WARRANTY

- A. Standard Warranty: Boilers shall include manufacturer's standard form in which manufacturer agrees to repair or replace components of boilers that fail in materials or workmanship within specified warranty period.
  - 1. Warranty Period for Fire-Tube Condensing Boilers:
    - a. Heat Exchanger, Pressure Vessel and Condensation Collection Basin shall carry a 10 year limited warranty against defects in materials or workmanship.
    - Heat exchangers/pressure vessel are warranted against thermal shock for the lifetime of the boiler.
    - c. The burner shall carry a five (5) year limited warranty against defective material or workmanship from the date of shipment.
    - d. All other components shall carry a one year limited warranty from date of boiler start up or 18 months from shipment if start up cannot be proven.

#### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Basis-of-Design Product: Lochinvar Crest Boiler as specified on Drawings. All others must be submitted by Voluntary alternate.
- B. Manufacturer shall have the capability to design, engineer, and build package systems for the above-mentioned boilers. These can include hydronic heating, domestic hot water, and pool heating applications. Design of such systems shall be collaborative between the customer and the manufacturer.

#### 2.2 CONSTRUCTION

- A. Description: Boiler shall be natural gas fired, fully condensing, and fire tube design. The boiler shall be factory-fabricated, factory-assembled, and factory-tested, fire-tube condensing boiler with heat exchanger sealed pressure tight, built on a steel base; including insulated jacket; flue-gas vent; combustion-air intake connections; water supply, return, and condensate drain connections; and controls.
- B. Heat Exchanger: The heater exchanger shall bear the ASME "H" stamp for 160 psi working pressure and shall be National Board listed. The heat exchanger shall be constructed of a fully welded 316L stainless steel interior with a carbon steel shell and of fire tube design. Fire tube shall be of the Wave Fire Tube design and capable of transferring 16,000 to 20,000 Btu's per tube. The Wave Fire Tube shall be manufactured via a liquid impact process. The Wave Fire Tube shall have an OD = 1.654" and a wall thickness = 0.039". The top and bottom tubesheets shall have a minimum thickness = 1/4" (0751-2001) or 3/8" (2501,6001). There shall be no overlapping welds with the Wave Fire Tube to tubesheet welds. The heat exchanger shall be designed for a single-pass water flow to limit the water side pressure drop. There shall be no banding material, bolts, gaskets or "O" rings in the heat exchanger design. Cast iron, aluminum, or copper tube or water tube boilers will not be accepted.
- C. Condensate Collection Basin: Fully welded 316L stainless steel.
- D. Intake Filter and Dirty Filter Switch: Boiler shall include an intake air filter with a factory installed air pressure switch. The pressure switch will alert the end user on the screen of the boiler that the intake filter is dirty and needs to be changed.
- E. Pressure Vessel: The pressure vessel shall be in accordance with ASME Section IV pressure vessel code. The pressure vessel shall be designed for a single-pass water flow to limit the water side pressure drop. Pressure drop shall be no greater than 6.5 psi at 180 gpm. The pressure vessel shall contain a volume of water no less than:

Input MBH	Water Content		
999	77 gallons		
1,250	87 gallons		

F. Burner: Natural gas, forced draft single burner premix design. Operation of the burner shall not exceed that of 5.7% oxygen level or 40% excess air. The burner shall be high temperature stainless steel with a woven Fecralloy outer covering to provide modulating firing rates. The burner shall be capable of the stated gas train turndown without loss of combustion efficiency. The burner shall be removable from the boiler without removing the gas/air manifold. The burner shall have an independent laboratory rating for Oxides of Nitrogen (NOx) to meet requirements of South Coast Air Quality Management District (SCAQMD) as compliant with Rule 1146.2 (FB 0751 – FB 2001), Bay Area Quality Management District as compliant with Regulation 9 Rule 7 (FB 2501 – FB 6001) and Texas Commission on Environmental Quality (FB 0751 – FB 2001) as being compliant with Section 117.465.

- G. Blower: Boiler shall be equipped with a pulse width modulating blower system to precisely control the fuel/air mixture to provide modulating boiler firing rates for maximum efficiency. The burner firing sequence of operation shall include pre-purge, firing, modulation, and post-purge operation.
  - 1. Motors: Comply with requirements specified in Division 23 Section "Common Motor Requirements for HVAC Equipment."
- H. Gas Train: The boiler shall be supplied with two gas valves designed with negative pressure regulation and shall be capable of the following minimum turndowns:

Input MBH	Turndown	Minimum Input	Maximum Input
999	20:1	50,000	999,000
1,250	20:1	62,500	1,250,000

- I. Ignition: Spark ignition with 100 percent main-valve shutoff with electronic flame supervision. Boilers using a pilot for ignition and/or UV scanners for flame supervision shall be deemed unacceptable.
- J. High Altitude: Boiler shall operate at altitudes up to 4,500 feet above sea level without additional parts or adjustments. High altitude operation shall be certified at a minimum of 4,500 feet above sea level by a third party organization. High altitude boilers shall be certified to 3,000 to 12,000 feet above sea level. The boilers shall carry a CSA certification for high altitude operation up to 12,000 feet. High altitude operation shall be 3<sup>rd</sup> party certified and be conducted in an ISO 17025 recognized laboratory; boilers without this high-altitude certification shall be deemed unacceptable.

#### K. Casing:

- 1. Jacket: Heavy gauge primed and painted steel jacket with snap-in closures. Jacket panels shall be fully removal; the front door and side panels shall not require tools for removal. The jacket shall be mounted on a steel base with a minimum thickness = 1/4".
- 2. Control Compartment Enclosures: NEMA 250, Type 1A.
- 3. Insulation: Minimum ½ inch thick, mineral fiber insulation surrounding the heat exchanger.
- 4. Combustion-Air Connections: Inlet and vent duct collars.
- Clearances: Boilers shall feature zero (0) clearance to combustibles. Boilers shall have the ability to be placed side by side in multiples with no clearance in between if necessary. Local codes should be considered.
- L. Outdoor Capability: Manufacturer shall offer an outdoor certified boiler to allow outdoor installation in suitable climates.
- M. Rigging and Placement: Boiler shall include lifting lugs and fork truck accessibility for rigging.
- N. Characteristics and Capacities:
  - 1. Heating Medium: Hot water.
  - 2. Design Water Pressure Rating: 160 psi working pressure.
  - 3. Safety Relief Valve Setting: 50 psig
  - 4. Minimum Water Flow Rate:

Input MBH	Minimum Flow
999	18 gpm
1,250	18 gpm

O. Oxygen Sensor

1. An O<sub>2</sub> sensor shall be offered as an optional package with this boiler. The O<sub>2</sub> sensor shall be made by a top automotive supplier and is only available through Lochinvar. The O<sub>2</sub> sensor shall be located in the combustion chamber. Boilers with O<sub>2</sub> sensors placed elsewhere on the unit shall not be permitted.

#### 2.3 TRIM

- A. Safety Relief Valve:
  - 1. Size and Capacity: 50 lb.
    - a. System pressures should be confirmed.
    - b. Custom relief valve sizes can be ordered.
  - 2. Description: Fully enclosed steel spring with adjustable pressure range and positive shutoff; factory set and sealed.
- B. Pressure Gage: Minimum 3-1/2 inch diameter. Gage shall have normal operating pressure about 50 percent of full range.
- C. Drain Valves: Minimum NPS 3/4 or nozzle size with hose-end connection.
- D. Condensate Trap: Factory supplied condensate trap with condensate trip sensor.

#### 2.4 CONTROLS

- A. Refer to Division 23 Section "Instrumentation and Control for HVAC."
- B. Boiler controls shall feature the following standard features:
  - 1. 8" LCD screen display displaying status, modulation percentage, setpoints, and sensor data at a minimum on the home screen. Additional information such as history and parameters can be accessed via the touchscreen display without the need for navigation buttons. A screen saver mode shall be available with the display.
  - 2. Variable Speed Boiler Pump Control: Boiler may be programmed to send a 0-10V DC output signal to an ECM or VFD boiler pump to maintain a designed temperature rise across the heat exchanger. The boiler shall be able to operate in this mode with a minimum temperature rise of 20 degrees F and a maximum temperature rise of 60 degrees F.
  - 3. Password Security: Boiler shall have a different password security code for the User and the Installer to access adjustable parameters.
  - 4. Outdoor air reset: Boiler shall calculate the set point using a field installed, factory supplied outdoor sensor and an adjustable reset curve.
  - 5. Pump exercise: Boiler shall energize any pump it controls for an adjustable time if the associated pump has been off for a time period of 24 hours.
  - Ramp delay: Boiler may be programmed to limit the firing rate based on six limits steps and six time intervals.
  - 7. Boost function: Boiler may be programmed to automatically increase the set point a fixed number of degrees (adjustable by installer) if the setpoint has been continuously active for a set period of time (time adjustable by installer). This process will continue until the space heating demand ends.
  - 8. Domestic hot water priority: Boiler shall make the domestic hot water call for heat a priority over any space heating call and adjust the boiler setpoint to the domestic hot water boiler setpoint.

- 9. Domestic hot water modulation limiting: Boiler may be programmed to limit the maximum domestic hot water firing rate to match the input rating of the indirect tank coil.
- 10. Domestic hot water night setback: Boiler may be programmed to reduce the domestic hot water tank set point during a certain time of the day.
- 11. PC port connection: Boiler shall have a PC port allowing the connection of PC boiler software.
- 12. Time clock: Boiler shall have an internal time clock with the ability to time and date stamp lock-out codes and maintain records of runtime.
- 13. Service reminder: Boiler shall have the ability to display a yellow colored service notification screen based upon months of installation, hours of operation, and number of boiler cycles. All notifications are adjustable by the installer.
- 14. Three pump control: Boiler shall have the ability to control the boiler pump, system pump and the domestic hot water pump.
- 15. Anti-cycling control: Boiler shall have the ability to set a time delay after a heating demand is satisfied allowing the boiler to block a new call for heat. The boiler will display an anti-cycling blocking on the screen until the time has elapsed or the water temperature drops below the anti-cycling differential parameter. The anti-cycling control parameter is adjustable by the installer.
- 16. Night setback: Boiler may be programmed to reduce the space heating temperature set point during a certain time of the day.
- 17. Freeze protection: Boiler shall turn on the boiler and system pumps when the boiler water temperature falls below 45 degrees. When the boiler water temperature falls below 37 degrees the boiler will automatically turn on. Boiler and pumps will turn off when the boiler water temperature rises above 43 degrees.
- 18. Isolation valve control: Boiler shall have the ability to control a 2-way motorized control valve. Boiler shall also be able to force a fixed number of valves to always be energized regardless of the number of boilers that are firing.
- 19. BMS integration with 0-10V DC input: The Control shall allow an option to Enable and control set point temperature or control firing rate by sending the boiler a 0-10V input signal.
- 20. Data logging: Boiler shall have non-volatile data logging memory including last 10 lockouts, hours running and ignition attempts and should be able to view on boiler screen.
- C. The boiler shall have a built in Cascade controller to sequence and rotate lead boiler to ensure equal runtime while maintaining modulation of up to 8 boilers of different btu inputs without utilization of an external controller. The factory installed, internal cascade controller shall include:
  - Lead lag: The Control module shall minimize the number of boilers firing to achieve the heating load.
  - 2. Efficiency optimization: The Control module shall allow multiple boilers to fire at minimum firing rate in lieu of Lead/Lag.
  - 3. Front end loading: The Control modulate shall have the ability to communicate with other Lochinvar boilers featuring the Smart Touch™ and Smart System™ control platforms. This allows for a combination of units that feature condensing and non-condensing operation if so desired.
  - 4. Rotation of lead boiler: The Control module shall change the lead boiler every hour for the first 24 hours after initializing the Cascade. Following that, the leader will be changed once every 24 hours.
  - 5. Redundancy: The Control module shall have a built in feature to continue operating with follow boilers if the Lead boiler is not operational.

- D. Boiler operating controls shall include the following devices and features:
  - 1. Set-Point Adjust: Set points shall be adjustable.
  - 2. Operating Pressure Control: Factory wired and mounted to cycle burner.
  - 3. Sequence of Operation: Factory installed controller to modulate burner firing rate to maintain system water temperature in response to call for heat.
  - 4. Sequence of Operation: Electric, factory-fabricated and factory-installed panel to control burner firing rate to reset supply-water temperature inversely with outside-air temperature. At 10 deg F outside-air temperature, set supply-water temperature at 180 deg F; at 60 deg F outside-air temperature, set supply-water temperature at 140 deg F.
- E. Burner Operating Controls: To maintain safe operating conditions, burner safety controls limit burner operation.
  - High Temperature Limit: Automatic and manual reset stops burner if operating conditions rise above maximum boiler design temperature. Limit switch to be manually reset on the control interface.
  - 2. Low-Water Cutoff Switch: Electronic probe shall prevent burner operation on low water. Cutoff switch shall be manually reset on the control interface.
  - 3. Blocked Inlet Safety Switch: Manual-reset pressure switch field mounted on boiler combustion-air inlet.
  - 4. High and Low Gas Pressure Switches: Pressure switches shall prevent burner operation on low or high gas pressure. Pressure switches to be manually reset on the control interface.
  - 5. Proof of Closure Valve (FB 6001 only): Proof of closure valve (POC) shall prevent the boiler from firing if the POC valve seat is detected open. Upon a call for heat, once the POC valve seat is proven to be closed, the pre-purge cycle will begin and the POC valve will begin to open.
  - 6. Blocked Drain Switch: Blocked drain switch shall prevent burner operation when tripped. Switch to be manually reset on the control interface.
  - 7. Low air pressure switch: Pressure switches shall prevent burner operation on low air pressure. Switch to be manually reset on the control interface.
  - 8. Audible Alarm: Factory mounted on control panel with silence switch; shall sound alarm for any lockout conditions.
- F. Building Automation System Interface: Factory installed Modbus and BACnet MSTP gateway interface to enable building automation system to monitor, control, and display boiler status and alarms.
  - 1. BACnet IP and Lon Works gateways are available as optional equipment.
- G. Software Update: The control shall have the ability to receive updates in the field without hardware component replacement. This update can be performed via USB flash drive, internet connection, or via wireless connection. This service shall be provided at no additional and/or annual cost to the owner.
- H. CON•X•US Remote Connect: Integral remote connectivity technology that allows a mobile device to monitor and control boiler functionality. Internet connection is available on the Crest via Wi-Fi or hardwired Ethernet connection. This service shall be provided at no additional and/or annual cost to the owner.
- I. Real Time O₂ Feedback™: Boiler, if equipped with the optional Real Time O₂ Feedback™ package, shall provide real time sensing of O₂. Free air calibration of the sensor shall occur after every combustion cycle. The O₂ value shall also auto correct for conditions such as altitude. O₂ information shall be displayed in real time via a gauge on both the boiler touchscreen as well as the CON•X•US Remote Connect screen.

#### 2.5 ELECTRICAL POWER

- A. Controllers, Electrical Devices, and Wiring: Electrical devices and connections are specified in Division 26 Sections.
- B. Single-Point Field Power Connection: Factory-installed and factory-wired switches, motor controllers, transformers, and other electrical devices necessary shall provide a single-point field power connection to boiler.
- C. Electrical Characteristics:
  - 1. See Drawings
  - Voltage
    - a. 120V/1PH FB 0751 through FB 2001
    - b. 208V/3PH FB 2501 through FB 3501
    - c. 480V/3PH FB 4001 through 6001
  - 3. Frequency: 60 Hz
  - 4. Factory supplied 208V, 480V or 600V transformers are available for optional voltage.

#### 2.6 VENTING

- A. Exhaust flue for the FB 0751 FB 4001 must be Category IV approved PVC, CPVC, PP or stainless steel sealed vent material from one of the approved manufacturers listed in the Installation and Operation manual. Boilers exhaust vent length must be able to extend to 100 equivalent feet.
- B. Exhaust flue for the FB 5001 FB 6001 must be UL listed, Category IV approved stainless steel sealed vent material from one of the approved manufacturers listed in the Installation and Operation manual. Boilers exhaust vent length must be able to extend to 100 equivalent feet.
- C. Intake piping for all models must be of approved material as listed in the Installation and Operations manual. Boilers intake pipe length must be able to extend to 100 equivalent feet.
- D. Boiler venting and intake piping configuration shall be installed per one of the approved venting methods shown in the Installation and Operation manual.
- E. Boiler shall come standard with a flue sensor to monitor and display flue gas temperature on factory provided LCD display.
- F. Boilers using common venting must contact the factory for sizing.
- G. Refer to manufacturer's Installation and Operations manual for detailed venting instructions and approved manufacturers.

#### 2.7 SOURCE QUALITY CONTROL

- A. Burner and Hydrostatic Test: Factory adjust burner to eliminate excess oxygen, carbon dioxide, oxides of nitrogen emissions, and carbon monoxide in flue gas and to achieve combustion efficiency; perform hydrostatic test.
- B. Test and inspect factory-assembled boilers, before shipping, according to ASME Boiler and Pressure Vessel Code.
- Allow Owner access to source quality-control testing of boilers. Notify Architect 14 days in advance of testing.

#### 3.1 EXAMINATION

- A. Before boiler installation, examine roughing-in for concrete equipment bases, anchor-bolt sizes and locations, and piping and electrical connections to verify actual locations, sizes, and other conditions affecting boiler performance, maintenance, and operations.
  - 1. Final boiler locations indicated on Drawings are approximate. Determine exact locations before roughing-in of piping and electrical connections.
- B. Examine mechanical spaces for suitable conditions where boilers will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 BOILER INSTALLATION

- A. Install equipment on 4" concrete housekeeping pad.
- B. Install gas-fired boilers according to NFPA 54.
- C. Assemble and install boiler trim.
- D. Install electrical devices furnished with boiler but not specified to be factory mounted.
- E. Install control wiring to field-mounted electrical devices.

#### 3.3 CONNECTIONS

- A. Install boilers level on concrete bases. Concrete base is specified in Division 23 Section "Common Work Results for HVAC," and concrete materials and installation requirements are specified in Division 03.
- B. Install piping adjacent to boiler to allow service and maintenance.
- C. Install piping from equipment drain connection to nearest floor drain. Piping shall be at least full size of connection. Provide an isolation valve if required.
- D. Connect gas piping to boiler gas-train inlet with union. Piping shall be at least full size of equipment connection. Provide a reducer if required. Gas regulator shall also be installed per IOM. Manufacturer shall offer a 2 and 5 psi gas regulator offering for each boiler model.
- E. Connect hot-water piping to supply and return boiler tappings with shutoff valve and union or flange at each connection.
- F. Install piping from safety relief valves to nearest floor drain.
- G. Boiler Venting:
  - 1. Install flue venting kit and combustion-air intake.
  - 2. Connect full size to boiler connections. Comply with requirements in Division 23 Section "Breechings, Chimneys, and Stacks.
- H. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."

I. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

#### 3.4 FIELD QUALITY CONTROL

- A. Perform tests and inspections and prepare test reports.
  - Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.

#### B. Tests and Inspections:

- Perform installation and startup checks according to manufacturer's written instructions.
   Complete startup form included with Boiler and return to Manufacturer as described in the instructions.
- Leak Test: Hydrostatic test. Repair leaks and retest until no leaks exist.
- Operational Test: Start units to confirm proper motor rotation and unit operation. Adjust airfuel ratio and combustion.
- Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
  - a. Check and adjust initial operating set points and high- and low-limit safety set points of fuel supply, water level and water temperature.
  - b. Set field-adjustable switches and circuit-breaker trip ranges as indicated.
- C. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to two visits to Project during other than normal occupancy hours for this purpose.

#### D. Performance Tests:

- 1. Engage a factory-authorized service representative to inspect component assemblies and equipment installations, including connections, and to conduct performance testing.
- 2. Boilers shall comply with performance requirements indicated, as determined by field performance tests. Adjust, modify, or replace equipment to comply.
- 3. Perform field performance tests to determine capacity and efficiency of boilers.
- 4. Repeat tests until results comply with requirements indicated.
- 5. Provide analysis equipment required to determine performance.
- 6. Provide temporary equipment and system modifications necessary to dissipate the heat produced during tests if building systems are not adequate.
- 7. Notify project project manager in advance of test dates.
- 8. Perform a combustion analysis after installation and adjust gas valve per the Installation and Operations manual and note in startup report.
- 9. Document test results in a report and submit to project manager.

#### 3.5 DEMONSTRATION

A. Engage a factory representative or a factory-authorized service representative for boiler startup and to train Owner's maintenance personnel to adjust, operate, and maintain boilers. Refer to Division 01 Section "Demonstration and Training."

Westdale Hi-Rise Boiler Replacement END OF SECTION 235216



# PLANNING & DEVELOPMENT VENDOR REGISTRATION FORM

GENERAL INFORMATION		
Vendor Name		
Contact Name	Contact Person's Title	
Street Address	Street Address Line 2	
City	State	Zip Code
Phone Number	Other Phone	
Fax Number	E-mail Address	

## **DISCLAIMER**

The completion and submission of the Vendor Registration Form does not guarantee any minimum or maximum amount of work for a Vendor. It simply means that a Vendor is registered to conduct business with GDPM as opportunities are made available. At that time, the Vendor may have the opportunity to submit a bid, quote or proposal. Likewise, the submission of a bid, quote or proposal does not guarantee any Vendor the right to an award as all procurement activity conducted by GDPM must be in full compliance with the following regulations:

- 2 CFR Part 200
- HUD Procurement Handbook 7460.8 REV 2
- GDPM's Procurement Policy and Procedures

For registrations you must submit a W-9 Form.

### **BUSINESS CLASSIFICATION**

**Taxpayer Identification Number or Social Security Number** 

(must select at least 1)

Individual /Sole Proprietorship Partnership

Joint Venture Not-for-Profit

**Corporation** State of Incorporation

**Resident Owned Business** 

Other

Number of Years Company has been in

Business: Number of Employees:

### **ECONOMIC INCLUSION**

Certifying documentation or notarized declaration must be provided to GDPM to prove status:

(must select at least 1)

Not Applicable Small Business
Disabled Owned Veteran Owned

**Woman Owned (at least 51%)** 

**Minority Owned (at least 51%):** 

**Section 3 Business Concern:** 

Would you like to receive e-mails on development opportunities that involve your services?

#### **VENDORS SERVICES AND/OR PRODUCTS**

Please specify the type of service(s) or product(s) that your business provides:

(must select at least 1)

**Appraisal (Real Property)** 

**Asphalt Repair** 

**Architecture/Engineering** 

**Cabinet Installation** 

**Carpet Cleaning** 

**Concrete Repair** 

**Construction: Exterior** 

Renovation

**Construction: Interior** 

Renovation

**Construction: New** 

**Construction: Repair** 

**Construction Management** 

**Demolition** 

**Design Services** 

**Electrical Supplies** 

**Elevators** 

**Energy Services - Building** 

**Facilities** 

**Environmental Services** 

**Planning Design** 

**Fire Suppression and Inspection** 

**Flooring** 

**Hazardous Materials Removal** 

**HVAC** 

**Janitorial Services** 

**Land Acquisition** 

**Land Surveying** 

**Landscaping Services** 

**Masonry** 

**Mowing Services** 

**Painting** 

**Planning Design** 

**Playgrounds** 

**Plumbing** 

**Real Estate Appraisals** 

Roofing

**Siding & Installation** 

**Waste Removal** 

**Waster Repair Restoration** 

Other



# SECTION 3 BUSINESS CONCERN APPLICATION

Are you a Section 3 business?	res no	
*If you select 'No' to the above question	on you do not have to complete thi	s form*
Section 3 is a provision of the Housing local economic development, neighbor The Section 3 program requires that extent feasible, provide job training, low income residents in connection w	rhood economic improvement, and recipients of certain HUD financial employment, and contracting op	d individual self sufficiency. al assistance, to the greatest portunities for low-or very-
Name of Business:		
Contact Name:	Contact Person's T	Fitle:
Street Address:	Street Address Lir	ne 2:
City:	State:	Zip Code:
Phone Number:	Other Phone:	
E-mail Address:		
Type of Business:	(please atta	ach supporting documentations)
Services Your Business Provides:		

## **GDPM SECTION 3 BUSINESS CONCERN**

I certify that	21	1.1	· 1	name) is applying to
become a bona fide Se Section 3 business con		incern, and that it	will meet the follow	wing definition of a
Check at least one of the following:	Category 1	Category 2	Category 3	Category 4
		Category 1		
	vered assistance is			sing or developments for nt workforce includes 30
		Category 2		
	naged by the GDI	r more owned by PM that is expend	ding the Section 3	housing developments covered assistance, or semployees.
HUD YouthBuild prog	_		politan area (or no	n-metropolitan county)
Business concerns that full-time workforce in guidelines and live in commitment to subcontawarded to Section 3 kg.	cludes no less that the GDPM covered ntract in excess of	n 30 percent of em d assistance area;	ployees who meet or businesses that p	the low-income
the contract based on GDPM may request questions about this f mail to procurement@ "I hereby certify the inf	the preference give additional docur form, please our Pagdpm.org.	ven to section 3 but mentation and in rocurement Depar by me to be true an	isinesses and descr formation as need rtment at (937) 910 d correct, and under	ou qualify for award of ibed in the solicitation, ded. If you have any -7500, or by send an e-
any of the information of Signature of Chief Exe		unishment under th	e law."  Date	

"General Decision Number: OH20230018 08/04/2023

Superseded General Decision Number: OH20220018

State: Ohio

Construction Type: Residential

Counties: Greene, Miami, Montgomery and Preble Counties in Ohio.

RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

```
option is exercised) on or | all covered workers at |
after January 30, 2022:
                          | least $16.20 per hour (or |
                the applicable wage rate
                | listed on this wage
                determination, if it is
                | higher) for all hours
                | spent performing on the |
                contract in 2023.
If the contract was awarded on Lexecutive Order 13658
or between January 1, 2015 and generally applies to the
|January 29, 2022, and the | contract.
|contract is not renewed or |. The contractor must pay all|
|extended on or after January | covered workers at least |
|30, 2022:
                     | $12.15 per hour (or the |
                | applicable wage rate listed|
                on this wage determination,
                | if it is higher) for all |
                | hours spent performing on |
                that contract in 2023.
```

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number Publication Date	
0 01/06/2023	
1 08/04/2023	
ENGI0018-027 05/01/2019	
Rates Fringes	
POWER EQUIPMENT OPERATOR	
(Bulldozer)\$ 37.02 15.20	
ENGI0066-026 06/01/2017	
Rates Fringes	
POWER EQUIPMENT OPERATOR	
Crane\$ 22.08 19.66	
LABO0265-004 06/01/2018	
Rates Fringes	
LABORER (Mason Tender-Brick)\$ 20.25	16.20

### PAIN0707-001 05/01/2019

	Rates	Fringes		
PAINTER (Brush a				
PLAS0109-006 05				
	Rates	Fringes		
CEMENT MASON,	CONCRETE	FINISHER	\$ 28.86	17.11
* SHEE0033-016 (	06/01/2023			
	Rates	Fringes		
SHEET METAL WO	RKER (HVA	C Duct		
Installation Only).	\$2	21.62		
SUOH2012-020 (				
	Rates	Fringes		
BRICKLAYER	\$ 2	28.40	11.78	
CARPENTER	\$	20.19	6.51	
ELECTRICIAN	\$ 1	19.68	9.46	

LABORER: Common or General.....\$ 21.50 5.23

OPERATOR: Backhoe/Excavator.....\$ 25.25 9.38

OPERATOR: Bobcat/Skid

Steer/Skid Loader.....\$ 29.49 11.16

PLUMBER.....\$ 20.00 5.52

ROOFER.....\$ 16.85 3.83

\_\_\_\_\_

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

\_\_\_\_\_

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons

resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at

https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or

""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example:

PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007

in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

**Union Average Rate Identifiers** 

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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- 1.) Has there been an initial decision in the matter? This can be:
- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request

review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board

U.S. Department of Labor

200 Constitution Avenue, N.W.

Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"