

BOILER REPLACEMENT AND RELATED WORK

**EAST HADDAM ELEMENTARY SCHOOL
45 JOE WILLIAMS ROAD
MOODUS, CT**

STATE PROJECT NO.: TMP-041-QKDL

CHANGES TO SPECIFICATIONS:

INSTRUCTIONS TO BIDDERS

Change Paragraph 15. to read:

15. TIME FOR COMPLETION

- A. Bidder must agree to commence work forthwith and to fully complete the project in the Proposal. Please note that construction activities which in any way may be disruptive to the educational process cannot be performed while school is in session. The domestic hot water service and all work outside the main boiler area shall be substantially complete by August 26, 2016. The balance of the project shall be substantially complete by September 30, 2016. All construction activities performed after August 26, 2016 must be coordinated with and approved by the Superintendent of Schools or his/her designee.

SECTION 01500 – TEMPORARY FACILITIES

See attached revised Section 01500 – Temporary Facilities.

SECTION 01505 – CONSTRUCTION WASTE MANAGEMENT

Delete Section 01505 – Construction Waste Management, in its entirety.

CHANGES TO DRAWINGS:

DRAWING HA-001

If Alternate No. 1 is accepted, and the General Contractor's choice is to remove the contents of the main boiler room through the existing window opening, the new replacement window unit shall be Series 2700 Thermal AW-PG110-C Fixed & Awning, as manufactured by EFCO® Corporation, or approved equal.

END OF ADDENDUM NO. 2

SECTION 01500 - TEMPORARY FACILITIES

ADDENDUM NO. 2

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Instructions to Bidders, AIA Document A201 - 2007, "General Conditions of the Contract for Construction", the Supplementary General Conditions and Division 1, General Requirements, are a part of this Section and shall be binding on the Contractor and or Subcontractor who performs this Work. Note also all Addenda.

1.2 SUMMARY

- A. This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection.
- B. Temporary utilities required include but are not limited to:
 - 1. Water service and distribution.
 - 2. Temporary electric power and light.
 - 3. Telephone service.
- C. Temporary construction and support facilities required include but are not limited to:
 - 1. Temporary heat (as required for construction).
 - 2. Field offices and storage sheds.
 - 3. Temporary roads and paving.
 - 4. Sanitary facilities, including drinking water.
 - 5. Dewatering facilities and drains.
 - 6. Temporary enclosures.
 - 7. Temporary Project identification signs and bulletin boards.
 - 8. Waste disposal services.
 - 9. Construction aids and miscellaneous services and facilities.
- D. Security and protection facilities required include but are not limited to:
 - 1. Temporary fire protection.
 - 2. Barricades, warning signs, lights.
 - 3. Environmental protection.

1.3 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to:
 - 1. Building Code requirements.
 - 2. Health and safety regulations.
 - 3. Utility company regulations.
 - 4. Environmental protection regulations.

- B. Standards: Comply with NFPA Code 241, "Building Construction and Demolition Operations", ANSI-ALO Series standards for "Safety Requirements for Construction and Demolition", and NECA Electrical Design Library "Temporary Electrical Facilities."
 - 1. Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services", prepared jointly by AGC and ASC, for industry recommendations.
 - 2. Electrical Service: Comply with NEMA, NECA and UL standards and regulations for temporary electric service. Install service in compliance with National Electric Code (NFPA 70).

- C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. obtain required certifications and permits.

1.4 PROJECT CONDITIONS

- A. Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility within 15 days of the date established for commencement of the Work. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of the permanent service.

- B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide new materials; if acceptable to the Architect, undamaged previously used materials in serviceable condition may be used. Provide materials suitable for the use intended.

- B. Gypsum Wallboard: Provide gypsum wallboard complying with requirements of ASTM C 36 on interior walls of temporary partitions.
- C. Tarpaulins: Provide waterproof, fire-resistant, UL labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures provide translucent nylon reinforced laminated polyethylene or polyvinyl chloride fire retardant tarpaulins.
- D. Water: Owner to provide temporary water for the purposes of construction activity. Water service will be available for Contractor's use upon approval of the Owner.

2.2 EQUIPMENT

- A. General: Provide new equipment; if acceptable to the Architect, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.
- B. Water Hoses: Provide $\frac{3}{4}$ inch heavy-duty, abrasion-resistant, flexible rubber hose 100 ft. long, with pressure rating greater than the maximum pressure of the water distribution system; provide adjustable shut-off nozzles at hose discharge.
- C. Electrical Outlets: Provide properly configured NEMA polarized outlets to prevent insertion of 110-120 volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for connection of power tools and equipment.
- D. Electrical Power Cords: Provide grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords, if single lengths will not reach areas where construction activities are in progress.
- E. Lamps and Light Fixtures: Provide general service lamps of wattage required for adequate illumination. Provide guard cages or tempered glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- F. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM or another recognized trade association related to the type of fuel being consumed.
- G. Temporary Toilet Units: Provide self-contained single-occupant toilet units of the chemical, aerated recirculation, or combustion type, properly vented and fully enclosed with a glass fiber reinforced polyester shell or similar nonabsorbent material.
- H. First Aid Supplies: Comply with governing regulations.

- I. Fire Extinguishers: Provide hand-carried, portable UL-rated, class “All fire extinguishers for temporary offices and similar spaces. In other locations provide hand-carried, portable, UL-rated, class “ABC” dry chemical extinguishers, or a combination of extinguishers of NFPA recommended classes for the exposures.
 1. Comply with NFPA 10 and 241 for classification, extinguishing agent and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required, at no additional cost to the Owner.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed, or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Where required, engage the appropriate local utility company to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment; comply with the company’s recommendations.
 1. Arrange with the company and existing users for a time when service can be interrupted, where necessary, to make connections for temporary services.
 2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.
- B. Water Service: Owner to provide water service for the purposes of construction activity. **The Owner shall be responsible for all costs associated with water service and distribution.**
- C. Temporary Electric Power Service: Provide weatherproof, grounded electric power connections and distribution system of sufficient size, capacity, and power characteristics during construction period. Include transformers, overload protected disconnects, automatic ground-fault interrupters and main distribution switch gear. **The Electrical Contractor shall be responsible for all costs associated with electric service installation and removal until Substantial Completion is granted by the Awarding Authority. The Owner shall be responsible for all costs associated with electric service consumption for**

construction-related activities. The Contractor shall be responsible for all electric service consumption related to job trailers and associated equipment.

1. Power Distribution System: Install wiring overhead, and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 Volts, AC 20 ampere rating, and lighting circuits may be nonmetallic sheathed cable where overhead and exposed for surveillance.
 2. Furnish light bulbs and extensions cords as may be essential to the execution of the respective trades, and for extensions of lines to sheds or to power tools and remote areas which cannot be reached with extension cords.
- D. Temporary Lighting: Whenever overhead floor or roof deck has been installed, provide temporary lighting with local switching.
1. Install and operate temporary lighting that will fulfill security and protection requirements, without operating the entire system, and will provide adequate illumination for construction operations and traffic conditions.
- E. Temporary Telephones: Contractor to provide all telephones required for Contractor's use during the extent of construction and pay all costs for installation, use, and removal. Telephones required by separate contractor's shall be installed, removed, and paid for by that contractor.
1. At Contractor's telephone, post a list of important telephone numbers.

3.3 TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION

- A. Locate field offices, storage sheds, sanitary facilities and other temporary construction and support facilities for easy access.
1. Confine apparatus, storage materials, equipment, supplies and operations to the areas bounded by the Contract and on-site limits as shown on the drawings.
 2. Maintain temporary construction and support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.
- B. Provide incombustible construction for offices, shops and sheds located within the construction area, or within 30 feet of building lines. Comply with requirements of NFPA 241.
- C. **The Contractor shall furnish and pay for all necessary temporary heat to prevent injury to work or to material through dampness or cold.** At all times when there is concrete or other masonry not thoroughly set, he shall maintain a temperature of at least 40 degrees F in areas where such work is located. For two

(2) days previous to placement or application of any interior work, resilient tile, paint or similar finish, a temperature of at least 60 degrees F shall be maintained in those portions of building in which this work occurs.

- D. If temporary heat is required for protection of work or to hasten drying out process of construction before permanent heating apparatus is available for use, the Contractor shall provide suitable approved heating, apparatus, adequate proper fuel and maintain fires as required at his expense.
- E. All temporary heating apparatus shall be installed and operated in such a manner that finished work will not be damaged thereby. Until the permanent heating system is available, the Contractor is responsible for maintenance and costs of continuous heat in all areas being constructed as part of the building after finish has been delivered or erected.
- F. **The Electrical Contractor shall provide temporary connections to all equipment requiring electrical power in order to provide temporary heat.** The Electrical Contractor shall remove such temporary connections and equipment when the need for same is concluded.
- G. With the cooperation of all trades and separate Contractors involved, the Contractor may utilize the permanent heating and ventilating system when completely installed and operational, providing the following conditions are met by the Contractor at no additional cost to the Owner:
 - 1. The Contractor shall minimize interruption of heat and hot water to areas of the building being utilized by the Owner and shall take adequate precaution to prevent any damage from occurring due to lack of heat.
 - 2. The Contractor shall take all necessary precautions to prevent waste of heat due to excessive ventilation of careless operation of openings in the building.
 - 3. The system shall be protected from freezing. Any frost damage shall be repaired at the Contractor's cost.
 - 4. Arrangements shall be made to monitor the system operation at night and over weekends and holidays by the Contractor.
 - 5. All safety controls shall be installed and operating.
 - 6. All equipment shall be serviced and brought back to "as new" condition to the Architect's satisfaction before acceptance by the Owner.
 - 7. All equipment warranties and guarantees shall be extended so that their full term is available to the Owner from the date of acceptance.
 - 8. All permanent HVAC systems utilized for heat shall be cleaned throughout the system, including but not limited to the ductwork, cores, and coils of equipment, etc. Replacement of filters alone does not constitute a thorough cleaning.
 - 9. All costs for fuel shall be the responsibility of the Contractor until Substantial Completion if permanent systems are functioning and energy efficient measures are installed.

- H. Storage and Fabrication Sheds: Install storage and fabrication sheds, sized, furnished and equipped to accommodate materials and equipment involved, including temporary utility service. Sheds may be open shelters or fully enclosed spaces on the site.
- I. Toilets: **Contractor to install, maintain, and remove self-contained toilet units.** Shield toilets to ensure privacy. Use of pit-type privies will not be permitted. Maintain clean, sanitary conditions.
- J. Drinking Water Facilities: Provide containerized tap-dispenser bottled-water type drinking water units, including paper supply.
1. Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45 to 55 deg F (7 to 13 deg C).
- K. The Contractor shall provide and maintain suitable pumps and drains to keep the excavated areas of the building (including concrete slab and footing bottoms, drainage, fill for concrete slabs, and excavations for all other building work including pits and trenches) free from water and sufficiently dry at all times until site and building structures are in place. **All costs associated with the requirements of this dewatering are to be included by the Contractor in his Bid.**
- L. Temporary Enclosures: Provide temporary enclosure for protection of construction in progress and completed, from exposure, foul weather, other construction operations and similar activities.
1. Where heat is needed and the permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
 2. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25 square feet or less with plywood or similar materials.
 3. Close openings through floor or roof decks and horizontal surfaces with load-bearing wood-framed construction.
 4. Where temporary wood or plywood enclosure exceeds 100 square feet in area, use UL-labeled fire-retardant treated material for framing and main sheathing.
- M. Protection:
1. Protect the building at all times from damages from rain water, spring water, ground water, backing up of drains and sewers and all other water. Provide all pumps, equipment and enclosures to insure this protection.
 2. Remove all snow and ice as may be required for proper protection and prosecution of the work.

3. Provide all shoring, bracing and sheeting as required for safety and for proper execution of work.
 4. Protect all work from damage during cold weather. If low temperatures make it impossible to continue operations safely in spite of cold weather precautions, cease work and so notify Architect. Repair and/or replacement of all work damaged from frost, freezing or any elements of the weather are the responsibility of the Contractor.
 5. Protect the building and the site from damage, loss or liability due to theft or vandalism when the work is not in progress at night, weekends, or holidays.
 6. Exercise precaution for the protection of persons and property at all times. Observe the provisions of applicable laws and construction codes. Take additional safety and health measures, or cause such measures to be taken as reasonably necessary. Maintain guards on machinery, equipment and other hazards as set forth in the safety provisions of the Manual of Accident Prevention in Construction, published by the Associated Contractors of America, to the extent that such provisions are not in contravention of applicable laws.
 7. Protect and preserve in operating conditions all utilities traversing the work area. Repair all damages to any utility due to work performed under this Contract, to the satisfaction of the Architect at no additional cost to the Owner.
- N. Temporary Lifts and Hoists: Provide facilities for hoisting materials, rubbish, and employees. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- O. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F (27 deg C). Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material in a lawful manner. **The Contractor shall furnish and maintain dumpster service on-site for the removal of all waste material and debris. It is the responsibility of each contractor utilized for the completion of this project to remove all associated waste material and debris from the job site on a daily basis and place into appropriate waste receptacle as directed by the Contractor.**

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer as requested by the Architect.
- B. Temporary Fire Protection: Until fire protection needs are supplied by permanent facilities, install and maintain temporary fire protection facilities of the types

needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 “Standard for Portable Fire Extinguishers,” and NFPA 241 “Standard for Safeguarding Construction, Alterations and Demolition Operations.

1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor.
 2. Store combustible materials in containers in fire-safe locations.
 3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes for fighting fires. Prohibit smoking in hazardous fire exposure areas.
 4. Provide supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.
 5. No gasoline may be stored in or close to the building at any time.
- C. Permanent Fire Protection: At the earliest feasible date in each area of the Project, complete installation of the permanent fire protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.
- D. Barricades, Warning Signs and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed provide lighting, including flashing red or amber lights.
- E. Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security.
1. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- F. Environmental Protection: Provide protection, operate temporary facilities and, conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result. Avoid use of tools and equipment which produce harmful noise. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near the site.

3.5 OPERATION, TERMINATION AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.

- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation and similar facilities on a 24-hour day basis where required to achieve indicated results and to avoid possibility of damage.
 2. Protection: Prevent water filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- C. Termination and Removal: Unless the Architect requests that it be maintained longer, the contractor responsible for its installation shall remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are property of the Contractor.
 2. At Substantial Completion, clean and renovate existing permanent facilities that have been used during the construction period, including but not limited to:
 - a. Replace air filters and clean inside of ductwork and housings (new construction areas only).
 - b. Replace significantly worn parts and parts that have been subject to unusual operating conditions.

END OF SECTION 01500