DESCRIPTION OF GOODS & SERVICES AND ADDITIONAL TERMS & CONDITIONS

1. DESCRIPTION OF GOODS AND SERVICES:

This Contract covers the requirements of the Department of Correction ("DOC") for maintenance, replacement and repair of Shell and Tube Heat Exchangers, Tube Bundles, and Fin Coils for all DOC locations.

2. **DEFINITIONS**:

a) Shell and Tube Heat Exchangers:

Shell and Tube Heat Exchangers are used to produce hot water. Steam or hot water from a boiler is circulated through the shell and around the tubes heating the cold water pumped through the tubes. The water pumped through the tubes can either be potable (used for showers or sinks) or for space heating.

b) Tube Bundles:

Tube Bundles are the component in a shell and tube heat exchanger that typically hold the water that needs to be heated. The heated water can be potable (used for showers or sinks) or for space heating.

c) Fin Coils for hot and chilled Water:

Fin Coils are used in air handling units (AHU's) to heat or cool air in order to temper an occupied space. Hot water or chilled water depending on the season, is pumped through the tubes of the coil. Air is drawn through the coil and over its fins by the AHU's fan. The air is either heated or cooled and is delivered to occupied space through ductwork.

d) Fin Coils for steam:

Fin Coils are used in air handling units (AHU) to heat air in order to temper an occupied space. Steam from a boiler flows through the tubes of the coil and air from the space is drawn through the coil and over its fins by the AHU's fan. The air is heated and this tempered air is then delivered to the occupied space through ductwork.

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3. **SPECIFICATIONS:**

Contractor shall provide the below listed Services and Goods.

a) Repairs/Fabrications:

- All repairs or rebuilding of units on shell and tube exchangers must have the American Society of Mechanical Engineers ("ASME") standard "R" stamp for pressure vessels.
- 2. Any fabricating of units must the ASME standard "U" stamp for pressure vessels.
- 3. All repairs includes, but is not limited to, resurfacing the flange, heat treating, weld testing, and magnet particle testing.

b) Shell and Tube Heat Exchangers:

All workmanship must be in accordance with ASME Section VIII, Division 1 requirements as stated below:

- 1. Six (6) inch diameter to twelve (12) inch diameter;
- 2. Length 36 to 72inches;
- 3. Two (2) and four (4) pass tube bundle that is either (a) through (c) as listed below:
 - (i) Carbon Steel, Copper, 90/10 Cupro-Nickel, 80/20 Cupro-Nickel;
 - (ii) 1/2 inch and inch diameter tubes; and
 - (iii) 16 gauge tube wall thickness.

c) Tube Bundles:

Tube Bundles must be constructed to the following specifications:

- 1. Six (6) inch diameter to twelve(12) inch diameter;
- 2. Length 36 to 72 inches;
- 3. A half (1/2) inch and 3/4 inch diameter tubes;
- 4. Sixteen (16) gauge tube wall thickness; and
- 5. Two (2) and four (4) pass bundle that is either: Carbon Steel, Copper, 90/10 Cupro-Nickel, 80/20 Cupro-Nickel.

d) Fin Coils for Hot and Chilled Water:

Fin Coils must be constructed to the following specifications:

- 1. Three (3) to twelve (12) rows of tubes with the following: (i) 1/2 inch copper .020 and .025 tube wall thickness or (ii) 5/8 inch copper .025, .035, .049 tube wall thickness.
- 2. Fins must have the following specifications:
 - i. 8, 10 fins/inch

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- ii. Aluminum .006, .008, .010 thick
- iii. Height from 24 inch to 48 inch
- iv. Length from 24 inch to 72 inch
- v. Header sizes from 1/2 inch to 4 inch
- vi. Connections Copper, Steel, (MPT, FPT. Flanged)
- vii. Casing material 16 gauge galvanized steel

e) Fin Coils for Steam:

Fin Coils for steam must be constructed to the following specifications:

- 1. Fin Coils must have 2 Rows of Tubes with each tube as follows:
 - i. 5/8 inch copper .025, .035, .049 tube wall thickness; and
 - ii. 1 inch copper .025, .035, .049 tube wall thickness.
- 2. Fins must meet the following specifications:
 - i. 8 10 fins/inch;
 - ii. Aluminum .006, .008, .010 thick;
 - iii. Height from 24 inch to 48 inch;
 - iv. Length from 24 inch to 72 inch;
 - v. Header sizes from 1/2 inch to 4 inch;
 - vi. Connections Copper, Steel, MPT (male pipe threads, FPT (female pipe threads, Flanged); and
 - vii. Casing material 16 gauge galvanized steel.

4. Qualifications, Licenses, Certifications and Permits, Photo IDs:

Contractor shall provide sufficient qualified supervision and labor and sufficient and proper materials, supplies, and equipment to perform the Service(s). Contractor shall employee and ensure employees are qualified, trained and certified to Perform the Services.

Contractor shall insure all necessary licenses, certifications and permits are current for all Services performed under this Contract. Contractor shall immediately notify the Client Agency by written notice in the event any of such licenses, certifications or permits expire or are revoked. The Client Agency, at any time during the term of this Contract, may request the Contractor and subcontractor, if any, to provide proof of any of required licenses, certifications and permits.

The Contractor's employees and subcontractors must carry photo identification at all times while Preforming Services which clearly identifies them as properly licensed or otherwise qualified employees or subcontractors of the Contractor.

5. Warranty:

All items supplied or repaired by the Contractor must be warrantied against defects in materials and workmanship. The warranty must provide the Client Agency with full replacement cost of the deficient item(s) and the cost of any labor, packaging, shipping or other costs incurred to replace the

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defective item(s). Any defective or damaged items must be immediately replaced at no charge to the Client Agency.

6. ADDITIONAL TERMS AND CONDITIONS:

(a) Contract Separately/Additional Savings Opportunities

DAS reserves the right to either seek additional discounts from the Contractor or to contract separately for a single purchase, if in the judgment of DAS, the quantity required is sufficiently large, to enable the State to realize a cost savings, over and above the prices set forth in Exhibit B, whether or not such a savings actually occurs.

(b) Energy Star Provision (per CGS 4a-67c)

Equipment and appliances offered pursuant to this contract shall meet or exceed the federal energy conservation standards set forth in the Energy Policy and Conversation Act, 42 USC 6295, any federal regulations adopted thereunder, and shall meet or exceed the federal Energy Star standards established by the U.S. Environmental Protection Agency and the U.S. Department of Energy.

(c) P-Card (Purchasing MasterCard Credit Card)

Notwithstanding the provisions of Section 4(b)(2) of the Contract, purchases may be made using the State of Connecticut Purchasing Card (MasterCard) in accordance with Memorandum No. 2011-11 issued by the Office of the State Comptroller.

Contractor shall be equipped to receive orders issued by the Client Agency using the MasterCard. The Contractor shall be responsible for the credit card user-handling fee associated with MasterCard purchases. The Contractor shall charge to the MasterCard only upon acceptance of Goods delivered to the Client Agency or the rendering of Services.

The Contractor shall capture and provide to its merchant bank, Level 3 reporting at the line item level for all orders placed by MasterCard.

Questions regarding the state of Connecticut MasterCard Program may be directed to Ms. Kerry DiMatteo, Procurement Card Program Administrator at 860-713-5072.

(d) Subcontractors

DAS must approve any and all subcontractors utilized by the Contractor in writing prior to any such subcontractor commencing any work. Contractor acknowledges that any work provided under the Contract to any state entity is work conducted on behalf of the State and that the Commissioner of DAS or his/her designee may communicate directly with any subcontractor as the State deems to be necessary or appropriate. Contractor shall be responsible for all payment or fees charged by the

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subcontractor(s). A performance evaluation of any subcontractor shall be provided promptly by the Contractor to DAS upon request.

(e) Security and/or Property Entrance Policies and Procedures

Contractor shall adhere to established security or property entrance policies and procedures or both for each requesting Client Agency. It is the responsibility of each Contractor to understand and adhere to those policies and procedures prior to any attempt to enter any Client Agency premises for the purpose of carrying out the scope of work described in this Contract.