

DEPARTMENT OF DEVELOPMENTAL SERVICES

West Region

INVITATION TO BID

Boiler Replacement
Cheshire Center
25 Creamery Road
Cheshire, CT 06410

- *PROJECT # and PROJECT TITLE:*
BI-DDS-547W, **Boiler Replacement Cheshire Center**
- *MANDATORY PRE-BID MEETING TO BE HELD ON:*
Thursday May 14, 2009 @ 9AM & 10:30AM
- *PRE-BID MEETING TO BE HELD AT:*
**Cheshire Center
25 Creamery Road
Cheshire, CT 06410**
Pre-registration required. Please contact Trudy Holyst at 203-805-7415 to register.
- *REQUESTS FOR CLARIFICATION, QUESTIONS CONCERNING SCOPE OF WORK, AND PROPOSED SUBSTITUTION(S) OF PRODUCTS ARE DUE TO THE FACILITIES REPRESENTATIVE BY:* **Thursday May 21, 2009 @ 2 PM**
- *(OPTIONAL) SITE VIST for CLARIFICATIONS, QUESTIONS AND FINAL MEASUREMENTS TBD @ Mandatory Pre-Bid*
- *CLARIFICATION AND ANSWERS TO QUESTIONS WILL BE POSTED ON THE DAS WEB PORTAL BY:* **Wednesday May 27, 2009 @ 2 PM**
- *BID OPENING DATE AND TIME:*
Friday May 29, 2009 @ 2 PM
- *DDS FACILITY REPRESENTATIVE:*
ROBERT KLINGNER, PLANT FACILITIES ENGINEER
Phone# 203-806-8762 Fax# 203-271-1352 Email: Robert.Klingner@ct.gov
- *DDS BUSINESS OFFICE REPRESENTATIVE:*
LAUREN MARZIARZ, FAO
25 CREMAERY ROAD
CHESHIRE, CT 06410
PHONE# 203-806-8819 FAX# 203-806-8768 EMAIL Lauren.Marziarz@ct.gov

All bids will be received at the date, time, and place (Business Office) specified and thereafter publicly opened and read aloud. The Department of Developmental Services is an Equal Employment/Affirmative Action Organization and will not knowingly do business with an organization/contractor that is or has been found to discriminate.

TABLE OF CONTENTS

	Page #
Bidding Requirements – Instructions to Bidders	3
Bid Form	4-5
Pre-Bid Representative Form	6
Experience, References, & Sub-Contractors Form	7
CHRO Contract Compliance Regulations	8-9
Bidder Contract Compliance Monitoring Report	10-11
Vendor Affidavit – Greater than or equal to \$50,000	12
Consulting Agreement Affidavit	13
Contractors Wage Certification Form – Contracts greater than/equal to 100,000	14
Contractor’s Campaign Contribution and Solicitation Ban	15
Instructions to Bidders	18-25
General Conditions	26-30
Compliance with Executive Orders	31-32
Technical Specifications / Scope of Work	(attached)

BIDDING REQUIREMENTS - INSTRUCTIONS TO BIDDERS

Failure to complete and submit any of the required forms, documents, or information may result in rejection of your bid. Should this occur, your bid will be deemed non-responsive and it will be disqualified. DDS reserves the right to not award this contract in whole or in part. Conditional bids will be disqualified. A conditional bid is defined as one limiting or modifying any of the terms and conditions and/or specifications.

Forms REQUIRED to be submitted WITH all bids

- BID FORM ((2 pages, attached))
- PRE-BID REPRESENTATIVE FORM ((1 page, attached))
- EXPERIENCE, REFERENCES, & SUB-CONTRACTORS FORM ((1 page, attached))

Required bond or check to be submitted WITH bids equal to or greater than \$10,000

- BID BOND OR CHECK per section IB. 1.11

Additional form required to be submitted WITH all bids equal to or greater than \$100,000

- CONTRACTORS WAGE CERTIFICATION FORM (Dept. of Labor prevailing wage requirements) per section IB 1.10 ((1 page, attached))

The following forms / documents are required to be submitted after bid opening, by lowest bidder only, before Purchase Order can be issued. These forms must be submitted along with your bid, or, within 5 business days of being informed you are the lowest bidder. If not received within 5 business days, your bid may be deemed non-responsive and may be disqualified. It is strongly encouraged to submit these forms / documents, along with your bid, to administratively accelerate the issuance of a Purchase Order.

- BIDDER CONTRACT COMPLIANCE MONITORING REPORT ((2 pages, attached))
 - PROOF OF INSURANCE per section IB. 1.12
 - PROOF OF REQUIRED CERTIFICATIONS AND TRADE LICENCES
 - GIFT AND CAMPAIGN CONTRIBUTION CERTIFICATION ((1 page, attached)) (Required if this bid exceeds \$50,000, or, if this bid causes the sum total of your previous contracts with DDS, in a calendar or fiscal year, to exceed \$50,000).
 - PERFORMANCE, LABOR, & MATERIAL BONDS (Required for projects equal to or greater than \$50,000) (Note: this form not required or suggested to be submitted with bid, but is required before issuance of PO).
-

BID FORM (page 1 of 2)

TO: Lauren Marziarz, FAO
Department of Developmental Services – West Region
25 Creamery Road
Cheshire, CT 06410

FOR: Project #: BI-DDS-547W
Project Title: Cheshire Center Boiler Replacement
Location: 25 Creamery Road
Cheshire, CT 06410

FROM: (Company Name) _____

In compliance with the Instruction to Bidders & Conditions of Bid (section I.B. 1.09), and subject to all conditions thereof, the undersigned offers and agrees to furnish all labor and materials and to complete work called for by the project's technical specifications within the allotted time of **(45) calendar days** for the Lump Sum of:

BASE BID: Boiler, circulator pumps and mechanical room valves
WORDS _____ DOLLARS Figures:
(\$_____).

Supplemental Bid: Asbestos abatement*
WORDS _____ DOLLAR Figures:

Both items must be bid to qualify for award

Note: All prices shall remain valid for ninety (90) calendar days.

* Please note: The potential exists for Asbestos remediation by (DPW) Department of Public Works funding and appointed contractors. If this scenario occurs, the contractor of award will be expected to remove the existing (Asbestos free) boiler material remains from site.

BID FORM (page 2 of 2)

The General Contractor on this project will be required to perform not less than (**50%**) of the completed dollar value of the work with its own forces.

I (we), the undersigned, hereby declare that I am (we are) the only person(s) interested in this bid: That it is made without any connection with any other person making any bid for the same work: that no person acting for, or employed by, the State of Connecticut is directly or indirectly interested in this bid, or in any contract which may be made under it, or in expected profits to arise there from; that this bid is made without directly or indirectly influencing or attempting to influence any other person or corporation to bid or to refrain from bidding or to influence the amount of the bid of any other person or corporation: that this bid is made in good faith without collusion or connection with any other person bidding for the same work; and that this bid is made with distinct reference and relation to the plans and specifications prepared for this contract.

I (we) further declare that in regard to the conditions affecting the work to be done and the labor and materials needed, this bid is based solely on my (our) own investigation and research and not in reliance upon any representations of any employee, officer or agent of the State.

I have carefully read, understand and will comply with all of the above Project Terms and Conditions, Security Regulations and Scope of Work. I have received and incorporated all Addendums (if any) posted on the DAS Web Portal and have incorporated these within the bid.

Contractor Owner/Officer _____ Date: _____

Title _____

Company Name _____

Address _____

City, State Zip _____

Phone # _____ Fax # _____ FEIN# _____

Email Address: _____

Signature: _____

Contractor Owner/Officer

Subscribed and sworn to before me this _____ day of _____, 20_____

Notary Public

** END OF SECTION - BID FORM **

PRE-BID REPRESENTATIVE FORM

_____ was represented at the pre-bid meeting
(Company Name)

held on _____ by _____
(date of meeting) (name of representative)

and, therefore, we are fully responsible for all information, site conditions, and other items discussed at the meeting.

Signature

Title

Date

EXPERIENCE, REFERENCES, & SUB-CONTRACTORS FORM

EXPERIENCE / REFERENCES

** Reference IB 1.06 (Contractor Qualification Requirement)
List similar type installations/projects completed in the last 18 months (at least 2).

Customer Name (Company)	Contact Person	Phone #	Address of Job	Type of Work Performed
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____

Sub-Contractors

List Sub-Contractors to be used on this project.

Sub-Contractor's Company Name	Contact Person	Phone #	% of Work by Sub-Contractor (Maximum 50%)	Type of Work to be Performed
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____

COMMISSION ON HUMAN RIGHTS AND OPPORTUNITIES
CONTRACT COMPLIANCE REGULATIONS
NOTIFICATION TO BIDDERS

(Revised 09/17/07)

The contract to be awarded is subject to contract compliance requirements mandated by Sections 4a-60 and 4a-60a of the Connecticut General Statutes; and, when the awarding agency is the State, Sections 46a-71(d) and 46a-81i(d) of the Connecticut General Statutes. There are Contract Compliance Regulations codified at Section 46a-68j-21 through 43 of the Regulations of Connecticut State Agencies, which establish a procedure for awarding all contracts covered by Sections 4a-60 and 46a-71(d) of the Connecticut General Statutes.

According to Section 46a-68j-30(9) of the Contract Compliance Regulations, every agency awarding a contract subject to the contract compliance requirements has an obligation to “aggressively solicit the participation of legitimate minority business enterprises as bidders, contractors, subcontractors and suppliers of materials.” “Minority business enterprise” is defined in Section 4a-60 of the Connecticut General Statutes as a business wherein fifty-one percent or more of the capital stock, or assets belong to a person or persons: “(1) Who are active in daily affairs of the enterprise; (2) who have the power to direct the management and policies of the enterprise; and (3) who are members of a minority, as such term is defined in subsection (a) of Section 32-9n.” “Minority” groups are defined in Section 32-9n of the Connecticut General Statutes as “(1) Black Americans . . . (2) Hispanic Americans . . . (3) persons who have origins in the Iberian Peninsula . . . (4) Women . . . (5) Asian Pacific Americans and Pacific Islanders; (6) American Indians . . .” An individual with a disability is also a minority business enterprise as provided by Section 4a-60g of the Connecticut General Statutes. The above definitions apply to the contract compliance requirements by virtue of Section 46a-68j-21(11) of the Contract Compliance Regulations.

The awarding agency will consider the following factors when reviewing the bidder’s qualifications under the contract compliance requirements:

- (a) the bidder’s success in implementing an affirmative action plan;
- (b) the bidder’s success in developing an apprenticeship program complying with Sections 46a-68-1 to 46a-68-17 of the Administrative Regulations of Connecticut State Agencies, inclusive;
- (c) the bidder’s promise to develop and implement a successful affirmative action plan;
- (d) the bidder’s submission of employment statistics contained in the “Employment Information Form”, indicating that the composition of its workforce is at or near parity when compared to the racial and sexual composition of the workforce in the relevant labor market area; and
- (e) the bidder’s promise to set aside a portion of the contract for legitimate minority business enterprises. See Section 46a-68j-30(10)(E) of the Contract Compliance Regulations.

INSTRUCTIONS AND OTHER INFORMATION

The following BIDDER CONTRACT COMPLIANCE MONITORING REPORT must be completed in full, signed, and submitted with the bid for this contract. The contract awarding agency and the Commission on Human Rights and Opportunities will use the information contained thereon to determine the bidders compliance to Sections 4a-60 and 4a-60a CONN. GEN. STAT., and Sections 46a-68j-23 of the Regulations of Connecticut State Agencies regarding equal employment opportunity, and the bidders good faith efforts to include minority business enterprises as subcontractors and suppliers for the work of the contract.

1) **Definition of Small Contractor**

Section 4a-60g CONN. GEN. STAT. defines a small contractor as a company that has been doing business under the same management and control and has maintained its principal place of business in Connecticut for a one year period immediately prior to its application for certification under this section, had gross revenues not exceeding ten million dollars in the most recently completed fiscal year, and at least fifty-one percent of the ownership of which is held by a person or persons who are active in the daily affairs of the company, and have the power to direct the management and policies of the company, except that a nonprofit corporation shall be construed to be a small contractor if such nonprofit corporation meets the requirements of subparagraphs (A) and (B) of subdivision 4a-60g CONN. GEN. STAT.

2) Description of Job Categories (as used in Part IV Bidder Employment Information)

<p>MANAGEMENT: Managers plan, organize, direct, and control the major functions of an organization through subordinates who are at the managerial or supervisory level. They make policy decisions and set objectives for the company or departments. They are not usually directly involved in production or providing services. Examples include top executives, public relations managers, managers of operations specialties (such as financial, human resources, or purchasing managers), and construction and engineering managers.</p> <p>BUSINESS AND FINANCIAL OPERATIONS: These occupations include managers and professionals who work with the financial aspects of the business. These occupations include accountants and auditors, purchasing agents, management analysts, labor relations specialists, and budget, credit, and financial analysts.</p> <p>COMPUTER SPECIALISTS: Professionals responsible for the computer operations within a company are grouped in this category. Examples of job titles in this category include computer programmers, software engineers, database administrators, computer scientists, systems analysts, and computer support specialists</p> <p>ARCHITECTURE AND ENGINEERING: Occupations related to architecture, surveying, engineering, and drafting are included in this category. Some of the job titles in this category include electrical and electronic engineers, surveyors, architects, drafters, mechanical engineers, materials engineers, mapping technicians, and civil engineers.</p> <p>OFFICE AND ADMINISTRATIVE SUPPORT: All clerical-type work is included in this category. These jobs involve the preparing, transcribing, and preserving of written communications and records; collecting accounts; gathering and distributing information; operating office machines and electronic data processing equipment; and distributing mail. Job titles listed in this category include telephone operators, payroll clerks, bill and account collectors, customer service representatives, files clerks, dispatchers, shipping clerks, secretaries and administrative assistants, computer operators, mail clerks, and stock clerks.</p>	<p>BUILDING AND GROUNDS CLEANING AND MAINTENANCE: This category includes occupations involving landscaping, housekeeping, and janitorial services. Job titles found in this category include supervisors of landscaping or housekeeping, janitors, maids, grounds maintenance workers, and pest control workers.</p> <p>CONSTRUCTION AND EXTRACTION: This category includes construction trades and related occupations. Job titles found in this category include boilermakers, masons (all types), carpenters, construction laborers, electricians, plumbers (and related trades), roofers, sheet metal workers, elevator installers, hazardous materials removal workers, paperhangers, and painters. Paving, surfacing, and tamping equipment operators; drywall and ceiling tile installers; and carpet, floor and tile installers and finishers are also included in this category. First line supervisors, foremen, and helpers in these trades are also grouped in this category..</p> <p>INSTALLATION, MAINTENANCE AND REPAIR: Occupations involving the installation, maintenance, and repair of equipment are included in this group. Examples of job titles found here are heating, ac, and refrigeration mechanics and installers; telecommunication line installers and repairers; heavy vehicle and mobile equipment service technicians and mechanics; small engine mechanics; security and fire alarm systems installers; electric/electronic repair, industrial, utility and transportation equipment; millwrights; riggers; and manufactured building and mobile home installers. First line supervisors, foremen, and helpers for these jobs are also included in the category.</p> <p>MATERIAL MOVING WORKERS: The job titles included in this group are Crane and tower operators; dredge, excavating, and lading machine operators; hoist and winch operators; industrial truck and tractor operators; cleaners of vehicles and equipment; laborers and freight, stock, and material movers, hand; machine feeders and offbearers; packers and packagers, hand; pumping station operators; refuse and recyclable material collectors; and miscellaneous material moving workers.</p>
---	---

3) Definition of Racial and Ethnic Terms (as used in Part IV Bidder Employment Information)

<p><u>White</u> (not of Hispanic Origin)- All persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.</p> <p><u>Black</u>(not of Hispanic Origin)- All persons having origins in any of the Black racial groups of Africa.</p> <p><u>Hispanic</u>- All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.</p>	<p><u>Asian or Pacific Islander</u>- All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes China, India, Japan, Korea, the Philippine Islands, and Samoa.</p> <p><u>American Indian or Alaskan Native</u>- All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition.</p>
---	---

Bidder Contract Compliance Monitoring Report

PART I - Bidder Information

Company Name Street Address City & State Chief Executive	Bidder Federal Employer Identification Number _____ Or Social Security Number _____
Major Business Activity (brief description)	Bidder Identification (response optional/definitions on page 1) -Bidder is a small contractor. Yes__ No__ -Bidder is a minority business enterprise Yes__ No__ (If yes, check ownership category) Black__ Hispanic__ Asian American__ American Indian/Alaskan Native__ Iberian Peninsula__ Individual(s) with a Physical Disability__ Female__
Bidder Parent Company (If any)	- Bidder is certified as above by State of CT Yes__ No__
Other Locations in Ct. (If any)	- DAS Certification Number _____

PART II - Bidder Nondiscrimination Policies and Procedures

1. Does your company have a written Affirmative Action/Equal Employment Opportunity statement posted on company bulletin boards? Yes__ No__	7. Do all of your company contracts and purchase orders contain non-discrimination statements as required by Sections 4a-60 & 4a-60a Conn. Gen. Stat.? Yes__ No__
2. Does your company have the state-mandated sexual harassment prevention in the workplace policy posted on company bulletin boards? Yes__ No__	8. Do you, upon request, provide reasonable accommodation to employees, or applicants for employment, who have physical or mental disability? Yes__ No__
3. Do you notify all recruitment sources in writing of your company's Affirmative Action/Equal Employment Opportunity employment policy? Yes__ No__	9. Does your company have a mandatory retirement age for all employees? Yes__ No__
4. Do your company advertisements contain a written statement that you are an Affirmative Action/Equal Opportunity Employer? Yes__ No__	10. If your company has 50 or more employees, have you provided at least two (2) hours of sexual harassment training to all of your supervisors? Yes__ No__ NA__
5. Do you notify the Ct. State Employment Service of all employment openings with your company? Yes__ No__	11. If your company has apprenticeship programs, do they meet the Affirmative Action/Equal Employment Opportunity requirements of the apprenticeship standards of the Ct. Dept. of Labor? Yes__ No__ NA__
6. Does your company have a collective bargaining agreement with workers? Yes__ No__ 6a. If yes, do the collective bargaining agreements contain non-discrimination clauses covering all workers? Yes__ No__ 6b. Have you notified each union in writing of your commitments under the nondiscrimination requirements of contracts with the state of Ct? Yes__ No__	12. Does your company have a written affirmative action Plan? Yes__ No__ If no, please explain.
	13. Is there a person in your company who is responsible for equal employment opportunity? Yes__ No__ If yes, give name and phone number. _____ _____

Part III - Bidder Subcontracting Practices

1. Will the work of this contract include subcontractors or suppliers? Yes__ No__ 1a. If yes, please list all subcontractors and suppliers and report if they are a small contractor and/or a minority business enterprise. (defined on page 1 / use additional sheet if necessary) 1b. Will the work of this contract require additional subcontractors or suppliers other than those identified in 1a. above? Yes__ No__
--

PART IV - Bidder Employment Information

Date:

JOB CATEGORY	OVERALL TOTALS	WHITE (not of Hispanic origin)		BLACK (not of Hispanic origin)		HISPANIC		ASIAN or PACIFIC ISLANDER		AMERICAN INDIAN or ALASKAN NATIVE	
		Male	Female	Male	Female	Male	Female	Male	Female	male	female
Management											
Business & Financial Ops											
Computer Specialists											
Architecture/Engineering											
Office & Admin Support											
Bldg/ Grounds Cleaning/Maintenance											
Construction & Extraction											
Installation, Maintenance & Repair											
Material Moving Workers											
TOTALS ABOVE											
Total One Year Ago											
FORMAL ON THE JOB TRAINEES (ENTER FIGURES FOR THE SAME CATEGORIES AS ARE SHOWN ABOVE)											
Apprentices											
Trainees											

PART V - Bidder Hiring and Recruitment Practices

1. Which of the following recruitment sources are used by you? (Check yes or no, and report percent used)				2. Check (X) any of the below listed requirements that you use as a hiring qualification (X)		3. Describe below any other practices or actions that you take which show that you hire, train, and promote employees without discrimination	
SOURCE	YES	NO	% of applicants provided by source				
State Employment Service				Work Experience			
Private Employment Agencies				Ability to Speak or Write English			
Schools and Colleges				Written Tests			
Newspaper Advertisement				High School Diploma			
Walk Ins				College Degree			
Present Employees				Union Membership			
Labor Organizations				Personal Recommendation			
Minority/Community Organizations				Height or Weight			
Others (please identify)				Car Ownership			
				Arrest Record			
				Wage Garnishments			

Certification (Read this form and check your statements on it CAREFULLY before signing). I certify that the statements made by me on this BIDDER CONTRACT COMPLIANCE MONITORING REPORT are complete and true to the best of my knowledge and belief, and are made in good faith. I understand that if I knowingly make any misstatements of facts, I am subject to be declared in non-compliance with Section 4a-60, 4a-60a, and related sections of the CONN. GEN. STAT.

(Signature)	(Title)	(Date Signed)	(Telephone)
-------------	---------	---------------	-------------



STATE OF CONNECTICUT GIFT AND CAMPAIGN CONTRIBUTION CERTIFICATION

Certification to accompany a State contract with a value of \$50,000 or more in a calendar or fiscal year, pursuant to C.G.S. §§ 4-250 and 4-252(c); Governor M. Jodi Rell's Executive Orders No. 1, Para. 8, and No. 7C, Para. 10; and C.G.S. §9-612(g)(2), as amended by Public Act 07-1

INSTRUCTIONS:

Complete all sections of the form. Attach additional pages, if necessary, to provide full disclosure about any lawful campaign contributions made to campaigns of candidates for statewide public office or the General Assembly, as described herein. Sign and date the form, under oath, in the presence of a Commissioner of the Superior Court or Notary Public. Submit the completed form to the awarding State agency at the time of initial contract execution (and on each anniversary date of a multi-year contract, if applicable).

CHECK ONE: Initial Certification Annual Update (Multi-year contracts only.)

GIFT CERTIFICATION:

As used in this certification, the following terms have the meaning set forth below:

1. "Contract" means that contract between the State of Connecticut (and/or one or more of its agencies or instrumentalities) and the Contractor, attached hereto, or as otherwise described by the awarding State agency below;
2. If this is an Initial Certification, "Execution Date" means the date the Contract is fully executed by, and becomes effective between, the parties; if this is an Annual Update, "Execution Date" means the date this certification is signed by the Contractor;
3. "Contractor" means the person, firm or corporation named as the contractor below;
4. "Applicable Public Official or State Employee" means any public official or state employee described in C.G.S. §4-252(c)(1)(i) or (ii);
5. "Gift" has the same meaning given that term in C.G.S. § 4-250(1);
6. "Planning Start Date" is the date the State agency began planning the project, services, procurement, lease or licensing arrangement covered by this Contract, as indicated by the awarding State agency below; and
7. "Principals or Key Personnel" means and refers to those principals and key personnel of the Contractor, and its or their agents, as described in C.G.S. §§ 4-250(5) and 4-252(c)(1)(B) and (C).

I, the undersigned, am the official authorized to execute the Contract on behalf of the Contractor. I hereby certify that, between the Planning Start Date and Execution Date, neither the Contractor nor any Principals or Key Personnel has made, will make (or has promised, or offered, to, or otherwise indicated that he, she or it will, make) any **Gifts** to any Applicable Public Official or State Employee.

I further certify that no Principals or Key Personnel know of any action by the Contractor to circumvent (or which would result in the circumvention of) the above certification regarding **Gifts** by providing for any other principals, key personnel, officials, or employees of the Contractor, or its or their agents, to make a **Gift** to any Applicable Public Official or State Employee. I further certify that the Contractor made the bid or proposal for the Contract without fraud or collusion with any person.

CAMPAIGN CONTRIBUTION CERTIFICATION:

I further certify that, on or after December 31, 2006, neither the Contractor nor any of its principals, as defined in C.G.S. § 9-612(g)(1), has made any **campaign contributions** to, or solicited any contributions on behalf of, any exploratory committee, candidate committee, political committee, or party committee established by, or supporting or authorized to support, any candidate for statewide public office, in violation of C.G.S. § 9-612(g)(2)(A). I further certify that **all lawful campaign contributions** that have been made on or after December 31, 2006 by the Contractor or any of its principals, as defined in C.G.S. § 9-612(g)(1), to, or solicited on behalf of, any exploratory committee, candidate committee, political committee, or party committee established by, or supporting or authorized to support any candidates for statewide public office or the General Assembly, are listed below:



STATE OF CONNECTICUT GIFT AND CAMPAIGN CONTRIBUTION CERTIFICATION

Lawful Campaign Contributions to Candidates for Statewide Public Office:

<u>Contribution Date</u> <u>Description</u>	<u>Name of Contributor</u>	<u>Recipient</u>	<u>Value</u>

Lawful Campaign Contributions to Candidates for the General Assembly:

<u>Contribution Date</u> <u>Description</u>	<u>Name of Contributor</u>	<u>Recipient</u>	<u>Value</u>

Sworn as true to the best of my knowledge and belief, subject to the penalties of false statement.

Printed Contractor Name
Official

Signature of Authorized

Subscribed and acknowledged before me this _____ day of _____, 200__.

Commissioner of the Superior Court (or Notary Public)

For State Agency Use Only

_____	_____
Awarding State Agency	Planning Start Date

Contract Number or Description	

STATE OF CONNECTICUT
LABOR DEPARTMENT

WAGE & WORKPLACE STANDARDS DIVISION

**CONTRACTORS WAGE CERTIFICATION
FORM**

Contracts Greater than or Equal to \$100,000

I, _____ of _____
Officer, Owner, Authorized Representative *Company Name*

do hereby certify that the _____
Company Name

Street

City

and all of its subcontractors will pay all workers on the

Project Name and Number

Street and City

the wages as listed in the current Dept. of Labor prevailing wage rates, as required for such project, per section IB 1.10.

Signed

Subscribed and sworn to before me this _____ day
of _____, 20_____

Notary Public

Send 1 copy to: Labor Department
Wage & Workplace Standards Division
200 Folly Brook Blvd.
Wethersfield, CT 06109

“With regard to a State contract as defined in P.A. 07-1 having a value in a calendar year of \$50,000 or more or a combination or series of such agreements or contracts having a value of \$100,000 or more, the authorized signatory to this submission in response to the State's solicitation expressly acknowledges receipt of the State Elections Enforcement Commission's notice advising prospective state contractors of state campaign contribution and solicitation prohibitions, and will inform its principals of the contents of the notice.

SEEC FORM 11

NOTICE TO EXECUTIVE BRANCH STATE CONTRACTORS AND PROSPECTIVE STATE CONTRACTORS OF CAMPAIGN CONTRIBUTION AND SOLICITATION BAN

This notice is provided under the authority of Connecticut General Statutes 9-612(g)(2), as amended by P.A. 07-1, and is for the purpose of informing state contractors and prospective state contractors of the following law (italicized words are defined below):

Campaign Contribution and Solicitation Ban

No state contractor, prospective state contractor, principal of a state contractor or principal of a prospective state contractor, with regard to a state contract or state contract solicitation with or from a state agency in the executive branch or a quasi-public agency or a holder, or principal of a holder of a valid prequalification certificate, shall make a contribution to, or solicit contributions on behalf of (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of Governor, Lieutenant Governor, Attorney General, State Comptroller, Secretary of the State or State Treasurer, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee;

In addition, no holder or principal of a holder of a valid prequalification certificate, shall make a contribution to, or solicit contributions on behalf of (i) an exploratory committee or candidate committee established by a candidate for nomination or election to the office of State senator or State representative, (ii) a political committee authorized to make contributions or expenditures to or for the benefit of such candidates, or (iii) a party committee.

Duty to Inform

State contractors and prospective state contractors are required to inform their principals of the above prohibitions, as applicable, and the possible penalties and other consequences of any violation thereof.

Penalties for Violations

Contributions or solicitations of contributions made in violation of the above prohibitions may result in the following civil and criminal penalties:

Civil penalties--\$2000 or twice the amount of the prohibited contribution, whichever is greater, against a principal or a contractor. Any state contractor or prospective state contractor which fails to make reasonable efforts to comply with the provisions requiring notice to its principals of these prohibitions and the possible consequences of their

violations may also be subject to civil penalties of \$2000 or twice the amount of the prohibited contributions made by their principals.

Criminal penalties—Any knowing and willful violation of the prohibition is a Class D felony, which may subject the violator to imprisonment of not more than 5 years, or \$5000 in fines, or both.

Contract Consequences

Contributions made or solicited in violation of the above prohibitions may result, in the case of a state contractor, in the contract being voided.

Contributions made or solicited in violation of the above prohibitions, in the case of a prospective state contractor, shall result in the contract described in the state contract solicitation not being awarded to the prospective state contractor, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

The State will not award any other state contract to anyone found in violation of the above prohibitions for a period of one year after the election for which such contribution is made or solicited, unless the State Elections Enforcement Commission determines that mitigating circumstances exist concerning such violation.

Additional information and the entire text of P.A 07-1 may be found on the website of the State Elections Enforcement Commission, www.ct.gov/seec. Click on the link to "State Contractor Contribution Ban."

Definitions:

"State contractor" means a person, business entity or nonprofit organization that enters into a state contract. Such person, business entity or nonprofit organization shall be deemed to be a state contractor until December thirty-first of the year in which such contract terminates. "State contractor" does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

"Prospective state contractor" means a person, business entity or nonprofit organization that (i) submits a response to a state contract solicitation by the state, a state agency or a quasi-public agency, or a proposal in response to a request for proposals by the state, a state agency or a quasi-public agency, until the contract has been entered into, or (ii) holds a valid prequalification certificate issued by the Commissioner of Administrative Services under section 4a-100. "Prospective state contractor" does not include a municipality or any other political subdivision of the state, including any entities or associations duly created by the municipality or political subdivision exclusively amongst themselves to further any purpose authorized by statute or charter, or an employee in the executive or legislative branch of state government or a quasi-public agency, whether in the classified or unclassified service and full or part-time, and only in such person's capacity as a state or quasi-public agency employee.

"Principal of a state contractor or prospective state contractor" means (i) any individual who is a member of the board of directors of, or has an ownership interest

of five per cent or more in, a state contractor or prospective state contractor, which is a business entity, except for an individual who is a member of the board of directors of a nonprofit organization, (ii) an individual who is employed by a state contractor or prospective state contractor, which is a business entity, as president, treasurer or executive vice president, (iii) an individual who is the chief executive officer of a state contractor or prospective state contractor, which is not a business entity, or if a state contractor or prospective state contractor has no such officer, then the officer who duly possesses comparable powers and duties, (iv) an officer or an employee of any state contractor or prospective state contractor who has *managerial or discretionary responsibilities with respect to a state contract*, (v) the spouse or a *dependent child* who is eighteen years of age or older of an individual described in this subparagraph, or (vi) a political committee established or controlled by an individual described in this subparagraph or the business entity or nonprofit organization that is the state contractor or prospective state contractor.

"State contract" means an agreement or contract with the state or any state agency or any quasi-public agency, let through a procurement process or otherwise, having a value of fifty thousand dollars or more, or a combination or series of such agreements or contracts having a value of one hundred thousand dollars or more in a calendar year, for (i) the rendition of services, (ii) the furnishing of any goods, material, supplies, equipment or any items of any kind, (iii) the construction, alteration or repair of any public building or public work, (iv) the acquisition, sale or lease of any land or building, (v) a licensing arrangement, or (vi) a grant, loan or loan guarantee. "State contract" does not include any agreement or contract with the state, any state agency or any quasi-public agency that is exclusively federally funded, an education loan or a loan to an individual for other than commercial purposes.

"State contract solicitation" means a request by a state agency or quasi-public agency, in whatever form issued, including, but not limited to, an invitation to bid, request for proposals, request for information or request for quotes, inviting bids, quotes or other types of submittals, through a competitive procurement process or another process authorized by law waiving competitive procurement.

"Managerial or discretionary responsibilities with respect to a state contract" means having direct, extensive and substantive responsibilities with respect to the negotiation of the state contract and not peripheral, clerical or ministerial responsibilities.

"Dependent child" means a child residing in an individual's household who may legally be claimed as a dependent on the federal income tax of such individual.

"Solicit" means (A) requesting that a contribution be made, (B) participating in any fund-raising activities for a candidate committee, exploratory committee, political committee or party committee, including, but not limited to, forwarding tickets to potential contributors, receiving contributions for transmission to any such committee or bundling contributions, (C) serving as chairperson, treasurer or deputy treasurer of any such committee, or (D) establishing a political committee for the sole purpose of soliciting or receiving contributions for any committee. Solicit does not include: (i) making a contribution that is otherwise permitted by Chapter 155 of the Connecticut General Statutes; (ii) informing any person of a position taken by a candidate for public office or a public official, (iii) notifying the person of any activities of, or contact information for, any candidate for public office; or (iv) serving as a member in any party committee or as an officer of such committee that is not otherwise prohibited in this section.

INSTRUCTIONS TO BIDDERS

IB 1.01 General

These instructions to bidders are for the complete project known as: **Cheshire Center Boiler Replacement , BI-DDS-547W**. The project will be bid in strict accordance with the specifications as prepared by the Connecticut Department of Developmental Services and procedures set fourth by the Department of Public Works. The amount of each bid shall be deemed to include the entire cost and expense of every item of labor and material necessary to complete the work bid upon, in full detail, ready for use. The risk of all such costs and expenses shall be assumed by the successful bidder.

It is the intent of the specifications to call for finished work, tested, and ready for operation and use. Any incidental accessory necessary to make the work complete in all respects and ready for operation, even if not particularly specified, shall be provided without extra compensation. Minor products or items of work, which by custom are not usually shown or specified, but are necessary for proper installation and operation of the completed work, shall be provided in the same manner as if actually shown or specified.

During construction in a Developmental Services facility, there may be delays due to various safety or security issues. This needs to be taken into consideration in your submitted bid. The Department of Developmental Services will not authorize extra compensation for these delays. The department will assign a facility representative to work with the selected contractor as liaison.

Facility Representative:

Robert Klingner

Tel. #203-806-8762

Fax #203-271-1352

Email Address: Robert.Klingner@ct.gov

Agency Representative:

Jeffrey Cyr

Director of Engineering

Tel. #860-418-6031

Fax #860-418-6001

Email Address: jeff.cyr@po.state.ct.us

IB 1.02 Bid Form and Acceptance

1. All bids must be **received** by the date and time specified at the office of **Lauren Marziarz, FAO** at the following address:

Telephone # 203-806-8819

DDS West Region Cheshire Center

Business Office

25 Creamery Road

Cheshire, CT 06410

It is recommended that you call prior to the bid opening to verify that your bid has been received.

2. Bid envelopes must clearly indicate the project number as well as the date and time of bid opening. Any correspondence shall include the project number and project title.
3. Enclosed with this specification is a BID FORM on which bids must be submitted.
4. The project shall be bid on the enclosed BID FORM as follows:
 - a. Base Bid - complete as described herein.
 - b. Supplemental Bid (if any) - complete as described herein. (Supplemental Bids may be accepted or not accepted by the agency, however if accepted the low bid will be determined by the total of the base bid and the supplemental bid(s).)
 - c. All BID FORMS shall be signed by a person duly authorized to sign bids on behalf of the bidder. Unsigned bids will be rejected.
 - d. Contractors failing to provide supplemental bids shall be deemed non-responsive and will be disqualified.
5. If you do not wish to submit a bid, return the BID FORM with the indication "No Bid Submitted," as well as a brief indication why.
6. The contract will be awarded to the lowest qualified bidder within the Agencies budget figure.
7. The Department of Developmental Services shall have the right to accept or reject the bids within ninety (90) calendar days of the bid opening date. All bid prices must be firm for this ninety (90) day period.

IB 1.03 Phasing Plan

Please refer to phasing plan within technical specifications.

IB 1.04 Scope of Work

Furnish all required labor, equipment, services, and materials necessary to complete all work as specified in the technical specifications section. Remove all debris created by this contract.

IB 1.05 Location and Examination of Site

1. The work will be performed at: **Cheshire Center, 25 Creamery Road, Cheshire, CT 06410**
2. All contractors bidding for this project are required to visit and examine the site before bidding, and to verify job conditions and dimensions. Time, date, and location of pre-bid meeting are as noted on bid package cover

sheet. **Bids received from non-attending contractors will not be honored.**

This meeting is intended to review the project requirements and answer any questions that interested contractors may have about this project. Failure to attend this meeting will result in the rejection of your bid.

IB 1.06 Contractor Qualification Requirement

The contractor shall demonstrate capability to execute this contract by submitting evidence of the following:

1. Valid Connecticut license(s), if required, to perform the required work.
2. Listing of two projects of similar scope and size that were performed within the last 18 months. Include the name, address and telephone number of a contact at each job that can be contacted and who is familiar with the project.

IB 1.07 Protection of Work and Property

1. All building equipment, furnishings, grounds landscaping, etc., shall be protected from damage of every description and any such damage thereto shall be repaired or otherwise made good at no expense to the State and to the satisfaction of the Facility Representative.
2. Supply and install any and all protective coverings and barricades necessary to protect at all times the public and building personnel from injury.
3. The contractor shall be held responsible for, and must make good at his own expense, any water damage or any other cause of damage due to improper protection.
4. Due to the nature of this institution, it is mandatory that all rules and regulations be strictly adhered to and the necessary precautions taken.
5. The contractor shall, during the progress of the construction, assume all responsibilities for loss or damage by fire to the work included in his contract until completion of the contract. No flammable material shall be stored in the structure in excess of the amounts allowed by the authorities.
6. The contractor is responsible to assure that all work is performed in accordance with all current State regulations including, but not limited to, OSHA, State Fire Codes, and the Basic Building Code of the State of Connecticut.
7. The contractor will at all times keep the premises free from the accumulation of waste materials or rubbish caused by his employees or work. All accumulated material shall be removed from the site daily at the contractors expense.

IB 1.08 Form of Guarantee--Warranty

The General Contractor will furnish the foregoing documents in the following manner:

1. Address to:

**DDS West Region Cheshire Center
25 Creamery Road
Cheshire, CT 06410
Attn: Robert Klingner, Plant Facilities Engineer**

2. Provide project name and number of project.

3. I (we) hereby guarantee, (or warranty), the work on the referenced project for a period of one (1) year from the Facility's approved completion date, against failures of workmanship and materials, unless otherwise noted on specifications. The completion date shall be the date of final payment is received by the contractor.

4. All guarantees supplied by subcontractors, suppliers or manufacturers will be countersigned by the General Contractor.

IB 1.09 Time of Completion

The contractor shall complete the project within the number of calendar days identified on page 1 of the BID FORM. Calendar days begin on the day of issuance of purchase order. Once on site, the contractor's work force shall remain mobilized until work is completed unless otherwise is specifically approved by the facility representative, in writing. Crews and material deliveries are to be scheduled to meet the completion date. If due to unforeseeable circumstances the work is not complete at the specified completion date, the contractor must obtain written permission from the facility representative and a new mutually agreed upon completion date must be established, or, liquidated damages, as described in section IB 1.17 will become effective. Working days for this project shall be Monday through Friday, exclusive of State or National Holidays. No Saturday or Sunday work shall be allowed without special written permission by the facility representative. Upon completion of the contract, the contractor shall make a request to the Facility Representative to schedule a final inspection of the work.

IB 1.10 Wage Rates

Prevailing wage rates are applicable if the submitted bid exceeds the sum of \$400,000.00 (for new construction) or \$100,000.00 (if renovation/alteration/ repair or improvement). New construction is defined as building an entire "brand new" building. The contractor is responsible for assuring that the payment of wages are as published by the Connecticut State Labor Department for the area where the job is being performed.

In accordance with the provisions of Section 31-53 of the General Statutes of Connecticut, the following applies "The wages paid on an hourly basis to any mechanic, laborer or workman employed upon the work herein contracted to be done and the amount of payment or contribution paid or payable on behalf of each such employee to any employee welfare fund, as defined in subsection (h) of this section (31-53 of the General Statutes), shall be at a rate equal to the rate customary or prevailing for the same work in the same trade or occupation in the town in which such public works project is being constructed. Any contractor who is not obligated by agreement to make payment or contribution on behalf of such employees to any such employee

welfare fund shall pay to each employee as part of his wages the amount of payment or contribution for his classification on each pay day."

IB 1.11 Bonds

1. A bid surety of not less than 10% of bid amount is required to accompany bid in the form of a bond or certified check made out to the Comptroller of the State of Connecticut if bid exceeds \$10,000.
2. A performance, and labor and material payment, surety of not less than 100% of bid amount is required of low bidder in the form of a bond made out to the Comptroller of the State of Connecticut if bid exceeds \$50,000. It is to be submitted to the Department of Developmental Services business office representative prior to award of contract and issuance of purchase order.
3. Such checks or bid bonds will be returned to all except the three lowest bidders within three days after the opening of bids, and the remaining checks or bid bonds will be returned promptly after the awarding authority and the accepted bidder have executed contract, or, if no award has been made within 60 days after the date of the opening of bids, upon demand of the bidder so long as he/she has not been notified of the acceptance of his/her bid.
4. NONRESIDENT (out of State) CONTRACTOR BOND - In order for final payment to be processed to a nonresident contractor, a certificate from the Commissioner of Revenue Services must be provided which evidences that Connecticut General Statutes Section 12-430 for non-resident contractors has been met. For details concerning the filing of this 5% Guarantee Bond with the Department of Revenue Services (DRS), call the DRS at (860) 541 7538.

IB 1.12 Insurance

1. The Contractor shall not start work under this contract until he has obtained the following insurance and until the insurance has been approved by the owner nor shall the contractor allow any subcontractor to start work until insurance required by the subcontractor has been obtained and approved. The contractor shall send certificate for the insurance to the business office representative.
2. The Contractor shall take out and maintain during the life of the contract, workers' compensation insurance for all employees working at the site and, in case any work is sublet, the Contractor shall require the subcontractor to provide workers' compensation insurance for all of the latter's employees. In case any class of employees engaged in hazardous work under this Contract is not protected under the workers' compensation statute, the Contractor shall provide, and shall cause each subcontractor to provide, insurance for those employees.
3. The Contractor shall take out and maintain during the life of a contract, public liability and property damage insurance to protect him/her and the owner's interest as their interests may appear. Each subcontractor shall take out and maintain insurance to protect him/her from claims for damage for injury, including accidental death and from claims for property damage which may arise from operations under this contract, whether such operations be by himself/herself or by any subcontractor or by any employee unless such employees are covered by the protection afforded by the Contractor. Types and amounts of insurance required shall be as follows:

DESCRIPTION	COVERAGE	SINGLE LIMIT	EACH ACCIDENT	AGGREGATE
Protective Liability	BI	\$1,000,000		
Protective Liability	PD (for and in the name of the State of Connecticut)	\$100,000		\$500,000

DESCRIPTION	COVERAGE	SINGLE LIMIT	EACH ACCIDENT	AGGREGATE
Contractor's Liability	BI	\$1,000,000		
Contractor's Liability	PD	\$100,000		\$500,000
Contractor's Protective Liability	BI	\$1,000,000		
Contractor's Protective Liability	PD	\$100,000		\$500,000

4. Coverage for damage or loss resulting from Type C - Collapse or Structural Injury, Type U - Underground Damage, Type X - explosion or blasting, ordinarily excluded from coverage, shall be provided in the amounts and manner specified in this article if required in the bid for the specified project. Builders Risk insurance, not ordinarily required, shall be provided in accordance with the amount and manner specified in the bid for the specified project if such insurance is required in the bid.

IB 1.13 Licenses

It is the responsibility of the contractor to secure all licenses, permits, approvals, or other documents necessary to complete this project.

IB 1.14 Security

The contractor must abide by all security regulations as described in or attached to this documentation.

IB 1.15 Start of Work

The contractor will not start work or order materials before receipt of a fully executed and approved purchase order. Within two (2) working days after receipt of the purchase order and prior to the start of construction, the contractor shall schedule a pre-construction meeting with the facility representative and at that time a start date will be established. The contractor shall begin construction within ten (10) working days. Working days shall be considered as Monday through Friday.

IB 1.16 Payment

- a. Projects under \$25,000.00 - A single invoice shall be submitted by the prime contractor following the acceptance of the completed project.
- b. Projects \$25,000.00 or greater - Three invoices shall be submitted by the prime contractor; one when all material or equipment is on site or the project is 50% completed (which ever occurs first), two when the project is substantially complete, and three when the project is totally complete and accepted.
- c. The invoice shall contain the State Purchase Order number and project number. Invoices received without reference to a valid State Purchase Order number and project number will result in delay of payment
- d. **NONRESIDENT (out of State) CONTRACTOR BOND** - In order for final payment to be processed to a nonresident contractor, a certificate from the Commissioner of Revenue Services must be provided which evidences that Connecticut General Statutes Section 12-430 for non-resident contractors has been met. For details concerning the filing of this 5% Guarantee Bond with the Department of Revenue Services (DRS), call the DRS at (860) 541 7538.

IB 1.17 Liquidated Damages

It is hereby declared and agreed by and between the contractor and the owner that the date of commencement, rate of progress, and time of completion of the work are essential provisions, conditions and that it would be impracticable and impossible to determine and ascertain the actual damages the owners would incur by reason of a delay in the completion of the work. It is, therefore, covenanted and agreed by and between the contractor and owner that the contractor shall and does hereby agree to pay the owner as liquidated damages (and not as a penalty) the sum of two hundred dollars (\$200.00) for each and every working day that the contractor shall be in default, hereunder for failing to complete the project within the time of completion specified above except as such date shall be extended, in writing upon request of the contractor, for the period of an excusable delay. Any such payments due to the owner by the contractor may be deducted by the owner from any sums due to the contractor.

IB 1.18 RECEIPT OF BIDS

BIDS SHALL BE PLACED IN SEALED ENVELOPES MARKED "SEALED BID OPENING, PROJECT BI-DDS-547W – Cheshire Center Boiler Replacement " AND DELIVERED/RECEIVED PRIOR TO THE BID OPENING DATE AND TIME LISTED ON THE COVER SHEET.

DELIVER TO:

DDS West Region Cheshire Center

Business Office

25 Creamery Road

Cheshire, CT 06410

Attn: Lauren Marziaz, FAO

End of Section Revised Date: 10/2008

GENERAL CONDITIONS

GC 1.01 General

In addition to the conditions in the Instructions to Bidders, the following General Conditions shall apply and form an equal part of the contract documents.

GC 1.02 Use of the Premises

1. Nothing contained in the Specifications shall be interpreted as giving the Contractor exclusive use of the premises where the work is performed.
2. The Contractor shall be held solely responsible for any damage to the existing structures, systems, equipment and site caused by them or by their employees and shall repair or replace same to their original condition as directed by the facility representative at no additional cost to the owner.
3. The work of the contract shall not interfere with the normal conditions and safe operation of the building and site. If such interference appears possible because of construction to existing work or other reasons, the work involved must be done at a time and in a manner directed by the facility representative as a part of the contract.
4. The contractor shall supply and install any and all protective coverings and barricades necessary to protect at all times the clients, public and building personnel from injury and the building from damage. The contractor shall provide and install all plastic sheeting, and other materials, which he/she may require to protect all open, unfinished work at the end of each and every day.
5. The contractor shall secure unfinished work areas at the close of business each day to preclude passage by any and all unauthorized persons.
6. No flammable material shall be stored in the structure in excess of the amounts allowed by the fire codes and authorities. No gasoline shall be stored within the building.
7. Protection of building, building occupants and visitors.
 - a. Construct barriers to prevent dust from construction areas from entering client areas. Barriers must be impermeable to fungal spores and in compliance with local fire codes.
 - b. Seal off and block return air vents if rigid barriers are used for containment.
 - c. Implement dust control measures on surfaces and divert pedestrian traffic away from work zones.
 - d. If necessary, create negative air pressure in work zones adjacent to client care areas and insure that required engineering controls are maintained. Monitor negative airflow.
 - e. Direct pedestrian traffic away from construction zones.
 - f. Provide construction crews with: Designated entrances, corridors and elevators if possible,

- g. Contractor shall clean work zones and their entrances daily.
- h. Contractor shall cover and secure debris prior to removal from the construction area.
- i. In client care areas, for major repairs that include removal of walls and disruption of the space within, the contractor shall use plastic sheets or prefabricated plastic units to contain dust and a HEPA (High Efficiency Particulate Air) filter machine to clean the air.

GC 1.03 Storage or Equipment and Materials

1. All deliveries of material, equipment, etc., shall be made to the contractor and accepted only by him/her and only during working hours. Department of Developmental Services personnel will not receive or accept any materials or equipment, etc. at any time.
2. The contractor shall secure instructions from the facility representative's as to available space for storing materials, tools, etc. If adequate space is not available, he/she shall provide his/her own storage facilities and in all cases be responsible for its protection.
3. All materials used throughout work shall be neatly stacked so as not to obstruct traffic, or the progress of the work.
4. All materials delivered to the job site will be protected by the contractor from weather damage, loss, or vandalism.

GC 1.04 Codes, Rules, Ordinances and Approvals

1. All materials furnished and all work installed shall comply with the rules and recommendations of the State of Connecticut; and must comply with all applicable State and local code, laws, ordinances, rules and regulations, with all requirements of local utility companies, and with the recommendations of the Insurance Rating Organization having jurisdiction.
2. It is intended that the technical specifications not violate any of the above. Where violations occur, such codes, laws, rules, ordinances, regulations and recommendations shall be complied with. The contractor must call any such violations to the attention of the Department of Developmental Services facility representative before making any changes to the specifications or proceeding with the work.
3. The Contractor shall, at his expense, give all notices, obtain all permits, licenses, approvals, fees and other costs in connection with the work and obtain all required certificates of inspection for the work and deliver same to the Department of Developmental Services facility representative before requesting acceptance and final payment.
4. All apparatus, equipment, such as ladders, scaffolding, chutes, etc., shall comply with the recommendations of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, OSHA, and approved revisions.
5. The contractor must at all times maintain a fire safe environment. Fire extinguishers are to be provided by

the contractor, at all work sites, of the size and type required for the work being performed. Sprinkler and alarm systems are not to be shut down or impaired without the approval of the facility representative. Welding will only be performed by certified welders. When welding is being performed there is to be a fire watch provided with extinguishing equipment at his or her immediate access.

GC 1.05 Salvage and Disposal

1. All removed materials that are deemed salvageable by the facility representative are the property of the facility (State of Connecticut). The facility's representative will direct which materials the facility will retain and which material the contractor shall retain and/or dispose of. Facility retained material is to be relocated by the contractor to an area designated by the facility's representative at the contractor's expense.
2. All debris resulting from the performance of this contract will be the property of the contractor and will be completely removed from the facility daily. All permits, manifests, fees or other requirements for the proper disposal of such debris is the sole responsibility of the contractor. If a hazardous material is involved, copies of manifest slips must be provided to the facility representative.
3. Chutes and dumpster type containers designed to keep dust and spillage to a minimum will be supplied and used by the contractor at his/her own expense.

GC 1.06 Maintenance of Utilities

1. The Department of Developmental Services has the responsibility for the operation of the entire utility distribution system. Any operation or function in relation to the work which could render said system(s) inoperable shall be coordinated, upon notification by the contractor, by the facility representative. All operational changes shall be made in this manner.
2. When installation of new work requires the temporary shutdown of an existing operating system, the connection of the new work shall be performed at such time as designated by the facility representative. The facility representative reserves the right to limit the shutdown time to a specified number of net hours and set the date and time of each occasion of complete shutdown. Notify facility representative of the estimated duration of the shutdown period at least seven (7) days in advance of the date the work is to be performed.
3. Any shutdown to the service which will interrupt critical operations shall be protected by the provision of a safe and adequate temporary means of service replacement, supplied at the contractor's expense, which shall be removed when no longer required. The contractor shall insure all tools, supplies, equipment and labor is on hand and in position to start the moment the shutdown period is made available to him.

GC 1.07 Change Orders

1. No additional compensation or time shall be granted beyond that noted on the original purchase order, unless approved in writing by the **Agency Representative**.
2. The Department of Developmental Service's **Agency Representative** is identified on the invitation to

bid section. Changes, proceeds, or approvals from others will not be honored.

GC 1.08 Shop Drawings

1. Shop drawings shall be submitted as required to the facility representative and/or as noted on the plans and technical specifications.
2. The contractor shall make any corrections required by the facility representative at no additional cost to the state and submit 2 corrected copies to the facility representative.
3. It is the contractor's responsibility to flag deviations from the contract documents. An approval will not be considered an acceptance of the deviation unless it has been explicitly and clearly identified in writing.

GC 1.09 Substitutions

If substitutions are permitted, it is the responsibility of the contractor to provide the necessary documents to prove that the product is equal to that specified. These documents must be received by the facility representative for his approval/disapproval prior to the date stated on the front cover sheet.

GC 1.10 Quality Control

1. Comply with manufacturer's recommendations and association or trade instructions and specifications for storage, use, and installation of their products. All materials and equipment shall be installed in strict accordance with the manufacturer's recommendations. This shall include any and all steps, treatments, or maintenance required before placing into use or placing into service.
2. Comply with instructions in full detail, including each step in sequence. Should instructions conflict with contract documents, request clarification from facility representative before proceeding.
3. When instructed by facility representative, submit manufacturer's data sheets, including instructions and recommendations.
4. If substitutions are permitted, it is the responsibility of the contractor to provide the necessary documents to prove that the product is equal to what is specified. These documents must be received by the facility representative for his approval/disapproval prior to use.

GC 1.11 Owners Right to Stop Work or terminate Contract

1. The owner has the right to stop work and/or terminate this contract under any or all of the following conditions:
 - a. If the contractor shall be adjudged bankrupt or make an assignment for the benefit of creditors.

- b. If a receiver or liquidator shall be appointed for the contractor or for any of his property and shall not be discharged within 20 days after such appointment or the proceedings in connection therewith shall not be stayed on appeal within the said 20 days.
 - c. The contractor shall refuse or fail, after written notice of warning from the Agency Representative, to supply sufficient properly skilled workmen or proper materials.
 - d. The contractor shall refuse or fail to prosecute the work under this contract or any part thereof with such diligence as will insure it's completion within the period herein specified (or any duly authorized extension thereof) or shall fail to complete the work within said period.
 - e. The contractor shall fail to make due and proper payment to persons supplying labor and/or materials for the work under this contract.
 - f. The contractor shall fail or refuse to regard laws, ordinances or the instructions of the Agency Representative or otherwise be in substantial violation of any provisions of this contract, then the owner, without prejudice to any other rights or remedies it may have, may, with 7 days written notice to the contractor, terminate the employment of the contractor and his right to proceed and may take possession of the work under this contract and complete the work by contract or otherwise, as the owner may deem appropriate and expedient.
2. If the right of the contractor to proceed with the work is so terminated the owner may take possession of and utilize in completing the work under this contract such materials, appliances, supplies, plant and equipment as may be on the site of the work and necessary therefore.

6/2007

END OF SECTION

COMPLIANCE WITH EXECUTIVE ORDERS

This contract is subject to the provisions of Executive Order No. Three of Governor Thomas J. Meskill promulgated June 16, 1971, and, as such, this contract may be cancelled, terminated or suspended by the State Labor Commissioner for violation of or non compliance with said Executive Order No. Three, or any state or federal law concerning nondiscrimination, notwithstanding, that the Labor Commissioner is not a party to this contract.

The parties to this contract, as part of the consideration hereof, agree that said Executive Order No. Three is incorporated herein by reference and made a part hereof. The parties agree to abide by said Executive order and agree that the State Labor Commission shall have continuing jurisdiction in respect to contract performance in regard to nondiscrimination, until the contract is completed or terminated prior to completion.

The contractor, agrees as part consideration hereof, that this contract is subject to the Guidelines and Rules issued by the State Labor Commissioner to implement Executive Order No. Three, and that he will not discriminate in his employment practices or policies, will file all reports as required, and will fully cooperate with the State of Connecticut and the State Labor Commissioner.

This contract is also subject to provisions of Executive Order No. Seventeen of Governor Thomas J. Meskill promulgated February 15, 1973, and, as such, this contract may be cancelled, terminated or suspended by the contracting agency or the State Labor Commissioner for violation of or noncompliance with said Executive Order No. Seventeen, notwithstanding that the Labor Commissioner may not be a party to this contract.

The parties to this contract, as part of the consideration hereof, agree that Executive Order No. Seventeen is incorporated herein by reference and made a part hereof. The parties agree to abide by said Executive Order and agree that the contracting agency and the State Labor Commissioner shall have joint and several continuing jurisdiction in respect to contract performance in regard to listing all employment openings with the Connecticut State Employment Service.

Executive Order No. 7C

This Contract is subject to **Executive Order No. 7C of Governor M. Jodi Rell, promulgated on July 13, 2006**. The Parties to this Contract, as part of the consideration hereof, agree that:

a. The State Contracting Standards Board (“Board”) may review this contract and recommend to the state contracting agency termination of this contract for cause. The State contracting agency shall consider the recommendations and act as required or permitted in accordance with the contract and applicable law. The Board shall provide the results of its review, together with its recommendations, to the state contracting agency and any other affected party in accordance with the notice provisions in the contract not later than fifteen (15) days after the Board finalizes its recommendation. For the purposes of this Section, “for cause” means:

(1) a violation of the State Ethics Code (Chapter 10 of the general statutes) or section 4a-100 of the general statutes or

(2) wanton or reckless disregard of any state contracting and procurement process by any person substantially involved in such contract or state contracting agency.

b. For purposes of this Section, “contract” shall not include real property transactions involving less than a fee simple interest or financial assistance comprised of state or federal funds, the form of which may include but is not limited to grants, loans, loan guarantees, and participation interests in loans, equity investments and tax credit programs. Notwithstanding the foregoing, the Board shall not have any authority to recommend the termination of a contract for the sale or purchase of a fee simple interest in real property following transfer of title.

c. Notwithstanding the contract value listed in sections 4-250 and 4-252 of the Connecticut General Statutes and section 8 of Executive Order Number 1, all State Contracts between state agencies and private entities with a value of \$50,000 (fifty thousand dollars) or more in a calendar or fiscal year shall comply with the gift and campaign contribution certification requirements of section 4-252 of the Connecticut General Statutes and section 8 of Executive Order Number 1. For purposes of this section, the term “certification” shall include the campaign contribution and annual gift affidavits required by section 8 of Executive Order Number 1.

1.01. SECTION INCLUDES

- A. Boiler, Safety & Operating Controls, Electrical Supply, Fuel Burning Equipment, Boiler Building Controls, Thermal Shock Protection, Draft Fans for Mills Boilers Only

1.02. REFERENCES

- A. American Society of Mechanical Engineers (ASME) Section IV - Boiler and Pressure Vessel Code.
- B. Hydronics Institute (HI) - Testing and Rating Standard for Cast Iron and Steel Heating Boilers.
- C. UL Approved Burner

1.03. SUBMITTALS

- A. Submit product data, wiring diagrams and near boiler piping schematics for manufactured heating units.

1.04. OPERATION AND MAINTENANCE DATA

- A. Submit operations and maintenance data, including manufacturer's descriptive literature, installation instructions, operating instructions and maintenance and repair data.

1.05 WARRANTY

- A. Units must carry a standard published limited warranty against manufacturer's defects of cast iron sections of ten or more years; units that carry less than a 10-year warranty are not acceptable to this project. Job specific warranties are not acceptable unless executed by an authorized officer of the manufacturer under seal and submitted five (5) working days prior to the bid date of this project.
- B. The contractor will be responsible to contact supplying wholesaler of equipment for contact info for the area manufacturer's factory representative for final inspection of boiler section assembly, piping and controls set-up before light-up by the factory start-up agency can be performed. All pre-start-up checks must be completed before start-up. Contact wholesaler for start-up checklist form from the manufacturer of equipment supplied.

2.01 General Description

- A. Furnish and install as herein specified, new boiler only unit(s) for Water heating service and arranged for completely automatic operation firing gas. Boiler shipped Knocked-Down for field assembly by installing contractor.
- B. Each boiler shall be furnished complete with an insulated metal jacket; Forced draft burner; Cast iron smoke hood with integral 14 gauge aluminized steel damper; Pressure-tight front and rear flame observation ports with covers; Steel angle floor rails; Cast iron burner mounting plate with insulation and additional controls and devices as hereafter specified.
- C. Safety controls and limit devices shall be installed in accordance with the requirements of (NFPA 31), (BOCA), (NFPA 54). In every instance, the boiler installation shall be accomplished in accordance with the recommended good practice and installation requirements of the A.S.M.E. Boiler and Pressure Vessel Code.
- D. The boiler only units shall have been rated in accordance with the Hydronics Institute Testing and Rating Standard for Heating Boilers, and shall be performance tested and listed by I=B=R at +0.10 ins. water draft as follows:
 - 1. Develop an I=B=R Gross Output of not less than
2513 MBTU/Hr. when fired at a rate of 3033 MBH natural gas
Combustion efficiency of 83.5 % / GAS
Thermal efficiency of 82.8 % / GAS
- E. Boilers shall have a minimum combustion efficiency of 83.5% / GAS and a thermal efficiency of 82.8 GAS.

2.02 BOILER CONSTRUCTION / INSTALLATION:

- A. Boiler sections shall be manufactured from a flake graphite eutectic cell cast iron. The sections shall be of the wet base type designed for

pressure firing and it shall be constructed and tested for 15 P.S.I. steam working pressure OR 80 P.S.I water working pressure in accordance with the A.S.M.E. Section IV Rules for the Construction of Heating Boilers. Individual sections will have been subjected to a hydrostatic pressure test of 200 PSIG at the factory before shipment and they shall be marked, stamped or cast with the A.S.M.E. Code symbol. Boilers with less than 200-psi pressure test will not be acceptable for this project. Boiler sections shall be cast in the U.S.A. to meet U.S. Steel content requirements.

Boiler sections shall be of one piece design incorporating the furnace space and flue gas collector space with perimeter joints between the sections arranged for permanent pressure sealing with high temperature ceramic fiber rope. Upper and lower ports for connecting the water space of adjacent sections shall be sealed by means of a graphite composition port connector. The port connectors will be inert and have a temperature rating of 1800 F in steam. The port connector will meet ASTM F-37 and ASTM F-36 standards for seal ability and recovery, Sections shall be assembled with short draw rods, tightened to final torque after the section assembly is complete

- B. All boiler discharges shall be piped to floor drains as shown on the contract drawings and as indicated by the consulting engineer. Blowdown valves shall be brass, ball type and not less than one-inch IPS and they shall discharge to a floor drain or away from the boiler as directed by the Consulting Engineer. Pipe ends shall be cut at a 45-degree angle to prevent a cap or plug from being installed. Hangars or standoffs to prevent the valve body from undue stress or strain shall support all such discharge piping.
- C. Boiler drain valves shall be connected to the lowest water space available and shall be installed with pipe and fittings to connect the bottom blow off full size to drain.
- D. All individual sections shall have legs to provide support on both sides. Two 3" X 3" base angles shall be furnished to be set under field assembled boilers to provide level support for the sections when shimmed and grouted to a concrete floor. The base angles shall be tapped to receive the supporting frame for the insulated metal jacket.
- F. Insulating metal jacket shall consist of 20-gauge steel panels fitted with 3" 1 1/2 Lb./Cu. Ft. density fiberglass insulation glued to the inside of the panels. Jacket panels shall be finished with blue hammertone paint baked on and shall be arranged with slots and knockouts to accommodate the boiler piping and to allow jacket installation after the piping is in place. Left & Right hand side panels shall be furnished with qty 2 black handle grips on each panel for easy removal and to provide easier access to the boiler clean out covers and draw rods.
- G. Cleanout covers shall be sized and located to allow full access to the extended pin type heating surface areas for cleaning with a wire brush. Cleanout covers shall have grooves to contain high temperature ceramic fiber rope seals for gas-tight fit to the sections and incorporate cast on horizontal baffles to reduce short-circuiting of flue gasses and also enhance performance by maximizing heat transfer
- H. Stop valves of the outside stem and yoke type shall be provided in the supply and return pipe connections to the boiler. Provisions shall be made for the expansion and contraction of the heating mains connected to the boiler by providing substantial anchorage at suitable points and assisted by the use of swing joints to allow the piping to expand and contract without imposing excessive forces on the boiler castings.
- I. Boiler shipped Knocked-Down for field assembly by installing contractor.
- J. Boiler installation shall be accomplished within acceptable A.S.M.E. piping practices and requirements and in strict accordance with the boiler manufacturer's recommendations and instructions.
- K. A hydrostatic pressure test of one-and-one-half times the working pressure of the boiler shall be conducted on this boiler for a period of not less than five hours. Such tests shall be of such duration as necessary and as directed by the Agencies representative to ensure the boiler has been assembled and installed correctly with no leaks or improper operating conditions.
- L. The installing contractor shall contact and notify the Boiler Inspections Divisions of the State when the installation of the boiler, burner and controls is substantially complete. Installing contractor shall request an Inspection of the boiler to be conducted by the State Boiler Inspector and to have a Certificate of Inspection issued upon satisfactory inspection.

2.03

BOILER CLEANOUT

- A. Boiler Cleanout
 1. After final assembly and connection, the boiler shall be thoroughly cleaned internally following the manner as described in detail within Section VI, Article 7 of the A.S.M.E. Boiler and Pressure Vessel Code or other method which might be deemed an acceptable alternate cleaning method by the Awarding Authority.
 2. The process of cleaning the boilers shall include the use of a boilout compound of Caustic Soda and Trisodium Phosphate at the rate of one pound of each chemical for every 50 gallons of total water in the system being cleaned. This process of boiler cleaning shall include a boiler cleanout, and blowdown and a wash with a high pressure hose as directed and detailed within the previously specified A.S.M.E. Section VI.
 3. Boiler cleaning shall be repeated as often as necessary and as directed by the Agencies representative to ensure that all scale, rust, debris, dirt, cutting oils and thread sealants have been sufficiently eliminated from the boilers and to produce a condition of the boiler water that is clean and considered acceptable to the Agencies representative
 4. Installing Contractor shall furnish to the Owner, two (2) copies of the previously specified A.S.M.E. Section VI Boiler and Pressure Vessel Code, which shall be utilized as Standard Operating and Maintenance Procedures for this boiler installation. This material

shall be furnished in addition to the usual manufacturer's directives normally furnished with the Boilers, Burners and Controls.

2.04 PRESSURE TESTING

- A. Pressure Testing
1. All field tests after the boilers have been erected and connected to the system shall be limited to not more than the maximum working pressure for which the boilers are intended. Installing Contractor shall be required to furnish all labor, equipment, piping, staging, fittings, hoses and valves, and (s)he shall pay all necessary permit fees as may be required in order to perform such tests as may be directed by the Consulting Engineer, Boiler Inspector and these Contract Documents.
 2. A hydrostatic pressure test of 60 PSIG shall be conducted on all steam boiler(s) for a period of not less than 5 hours for all water boilers a pressure test of 1 ½ times the working pressure will be required. These tests shall be of such duration as necessary and as directed by the Consulting Engineer to ensure that the boilers have been field assembled and installed correctly with no leaks or other unacceptable operating conditions.
 3. Installing Contractor shall be required to notify the Boiler Inspections Division of the State Dept. of Public Safety when the installation of the Boilers, Burners, Controls and System Piping is substantially complete. Installing Contractor shall officially request an inspection of the boilers to be conducted by the State Boiler Inspector and to have him issue a Certificate of Inspection upon satisfactory completion of the inspection process.
 4. Issuance of a Certificate of Inspection for the new heating boilers shall be considered mandatory to the fulfillment of this Contract. After receipt of Certificate of Inspection, Installing Contractor shall furnish a suitable glass front frame within which to place said Certificate. Frame, with Certificate contained therein, shall then be placed in or posted on a suitable location within the boiler room.

2.05 Boiler TRIM for Water

- A. Each boiler shall be supplied with a minimum of the following trim:
1. A.S.M.E. Schedule Side Outlet Safety Valve set for 40 PSI WATER
 2. Theraltimeter for All Water Boilers only
 3. L4006E Honeywell Manual Reset High Temperature limit control for ALL Water Boilers only
 4. L4006B Honeywell Operating Temperature Control for ALL Water Boilers only
 5. T991A Modulating Controller
- B1. **Thermal Shock Prevention:** Boiler shall include a integral return tube stabilizer for thermal shock protection supplied by manufacturer, primary/secondary piping arrangement preferred by manufacturer with a RTS for thermal shock prevention, only single pipe return is needed with the RTS. Substitute boilers will require a 3 Way diverting valve and return water temperature control supplied by installer for thermal shock protection sized for a 20 degree or 40 degree delta T pump, and must have a primary secondary piping arrangement.
- B. Each boiler shall be supplied with the following optional equipment:
1. M/M 63M Low Water Cut-Out with Manual Reset with M/M TC-4 test-n-check valves for all Series 19A, 28HE, and Mills Water Boilers up to 50 PSI working pressure.
- Note:**
1. For working pressure greater than 50 PSI use a McDonnell & Miller 150SM.

2.06 COMBUSTION SYSTEM

- A. Burners shall be FULL Modulation only
- B. Each unit shall include a forced draft flame retention type burner having a ring of recessed gas ports with an orifice for each port, primary air adjustment and externally mounted gas pilot and a high pressure atomizing oil burner tested by Underwriters Laboratories and complying with the rules and regulations U.L., . as well as the local authorities having jurisdiction. All burners to conform to GE Gap requirements and shall include a 16 minute low fire hold timer in panel. The burner shall be capable of firing a boiler with and 3033 MBH of natural gas against a furnace pressure of 0.1 inches of water column, with supply gas pressure of inches w.c. at the inlet to the main manual shutoff cock. Note: Gas pressure is required at the inlet to the gas train for proper gas train sizing.
- C. The gas train shall be U.L. listed and shall consist of the following items:

Main Motorized Gas Valves

High and Low Gas Pressure Switches

Auxiliary Solenoid Gas Valve

Lubricated Shutoff Cock

Maxitrol Gas Pressure Regulator

- D. The burner shall be driven by a HP 3450 RPM, 240 60 hertz, single phase alternating current motor.
- E. Straight gas burners to be supplied with a spark ignited gas pilot.
- F. Burner shall be equipped with an electronic flame safeguard system and scanner. The control shall be a Honeywell 7800 series UV Flame System microprocessor-based, burner management control system with self-diagnostics and non-volatile memory.
- G. Control Panel:

The top horizontal burner mounted control panel shall include the following:

Note: Reduces overall dimension of burner length by 10" from standard front panel mount.

Indicator lights: Power-On, Main Fuel, Demand, Flame safeguard Alarm, Low water. Alarm Bell to sound on Main Flame Failure. Alarm Reset System shall be provided to silence the Bell but the light will remain lit until the fault has been corrected.

2.07 WARRANTY BURNER SERVICE

- A. The contractor shall provide and purchase the initial Burner light off and one (1) year of Warranty service for the Burner and Controls, which (s)he has furnished by the Burner or Boiler manufacturer of the equipment. The requirement for this single source responsibility shall not be waived by the Heating and Ventilating Subcontractor, nor shall the responsibility for the Warranty service be assumed by any other party unless such a deviation from the specified Contract Start-Up and Service Specifications has received prior written approval from the Awarding Authority through the Submittal Phase of the project specifically allowing other group(s) to provide the Burner Start-Up and Warranty service. The boiler or burner manufacturer shall not be expected to start up or otherwise adjust equipment not furnished by him.
- B. The contractor shall furnish Warranty service on the Burner and Controls commencing from the date of original light off and shall continue Warranty coverage up to and including the first anniversary of burner lightoff.
- C. Warranty service shall include labor and materials to replace any parts or controls, which might fail in service as the result of a defect in material or manufacture. Boiler manufacturer shall provide warranty service through a local burner service organization which shall respond to any and all legitimate burner service calls on a 24 hour basis and shall include the cost of all labor and materials necessary to replace any parts or controls which fail in service as the result of a defect in material or manufacture.
- D. This Heating and Ventilating Subcontractor shall guarantee the entire installation for a period of one year from the date of Owner acceptance and date of Final Certificate of Payment.
- E. Heating and Ventilating Subcontractor shall maintain all apparatus in satisfactory operating condition including performing periodic burner tune-up, cleaning of the boiler fire side surfaces when dirty, provide any and all preventive maintenance necessary to keep the Burners, nozzles, orifices and other parts clean and functioning properly, (s)he shall clean and lubricate, check belts and replace as required, check Pilot systems and conduct performance tests for Flame Safeguard, Combustion Efficiency, Draft Measurements, Limit Control tests and Safety valve tests until such time as the Owner accepts the equipment and issues the Final Certificate of Payment.
- F. Heating and Ventilating Subcontractor shall maintain a permanent logbook in the boiler room accompanied with an established maintenance schedule, taken from previously specified A.S.M.E. Section VI, which shall be adhered to by his qualified personnel. Combustion efficiency tests shall be conducted monthly and burner tune-up shall be performed whenever performance tests fall below satisfactory levels.
- G. As conditions may warrant, Heating and Ventilating Subcontractor shall absorb all costs which might be necessary to extend such Warranty service by the contractor for the period of guarantee without additional costs to the Owner. This Heating and Ventilating Subcontractor shall note that any such service shall in no way absolve the Heating and Ventilating Subcontractor from any and all legitimate responsibility for the routine service, preventive maintenance and for materials furnished to this Contract, either before or after final acceptance by the Owner.
- H. Burner Light Off/Adjustment
 - 1. The contractor shall provide the services of a factory-trained burner service technician who shall actually perform the initial burner lightoff, final adjusting and testing of the burners and controls in the presence of the Installing Contractor, Gas Inspector, Gas Company representative, Agency representative and the Agencies Operating Personnel.
 - 2. This Heating and Ventilating Subcontractor shall be required to make all necessary arrangements in advance of the proposed burner lightoff to ensure that all parties have been notified in advance of the scheduled lightoff date.
 - 3. Burner lightoff shall include flue gas sampling utilizing Bacharach test equipment for flue gas analysis. Initial start-up shall be conducted in the presence of the Agency representative or his authorized representative unless otherwise directed in writing in

DIVISION 15- MECHANICAL

Section 15540 - HVAC Pumps and Specialties

1.00 PART 1 -GENERAL

1.01 DESCRIPTION OF WORK:

A. Provide pumps and required system trim for heating, chilled water, and dual temperature water systems including all related appurtenances for a complete and operating systems. Bell and Gossett pump packages are specified. Please note the Agency will entertain equals based on submission and approval by the Facilities engineer.

1.02 SECTION INCLUDES:

- A. Wet Rotor, Inline Pump
- B. 3-Piece Inline Pump – Permanently Lubricated
- C. Pump Specialties
- D. System Specialties

1.03 RELATED DOCUMENTS:

- A. Drawings and general provisions of the Contract, including General and supplementary Conditions and Division 1 Specification Sections, apply to this Sections.
 - o Section *** - Alignment of Rotating Equipment
 - o Section *** - Cast-in-Place Concrete
 - o Section *** - Mechanical General Requirements
 - o Section *** - Supports, Anchors, and Sleeves
 - o Section *** - Motors and Starters
 - o Section *** - Drives
 - o Section *** - Mechanical Identification
 - o Section *** - Vibration Isolation
 - o Section *** - Piping Insulation
 - o Section *** - Equipment Installation
 - o Section *** - Hydronic Piping and Specialties
 - o Section *** - Testing, Adjusting, and Balancing
 - o Section *** - Meters and Gauges

- Section *** - Electrical

1.04 QUALITY ASSURANCE:

- A. All equipment or components of this specification section shall meet or exceed the requirements and quality of the items herein specified, or as denoted on the drawings.
- B. Ensure pump operation at specified system fluid temperatures without vapor binding and cavitation, are non-overloading in parallel or individual operation, and operate to ANSI/HI 9.6.3.1 standard for Preferred Operating Region (POR) unless otherwise approved by the engineer. The pump NPSH shall conform to the ANSI/HI 9.6.1-1997 standards for *Centrifugal and Vertical Pumps for NPSH Margin*.
- C. Ensure pump pressure ratings are at least equal to system's maximum operating pressure at point where installed, but not less than specified.
- D. Equipment manufacturer shall be a company specializing in manufacture, assembly, and field performance of provided equipment with a minimum of 20 years experience.
- E. Equipment provider shall be responsible for providing certified equipment start-up and, when noted, an in the field certified training session. New pump start-up shall be for the purpose of determining pump alignment, lubrication, voltage, and amperage readings. All proper electrical connections, pump's balance, discharge and suction gauge readings, and adjustment of head, if required. A copy of the start-up report shall be made and sent to both the contractor and to the Engineer.

1.05 PRODUCT HANDLING:

- A. Protection: Use all means necessary to protect equipment before, during, and after installation.
- B. Replacement and Repair: All scratched, dented, and otherwise damaged units shall be repaired or replaced as directed by the Architect Engineer.

1.06 REGULATORY REQUIREMENTS:

- A. Conform to Health/Life Safety Code for Public Schools
- B. Conform to International Mechanical Code
- C. Conform to BOCA National Building Code
- D. Conform to BOCA National Fire Protection Code
- E. Conform to State of Illinois Plumbing Code
- F. Conform to National Electric Code NFPA 70
- G. Conform to Illinois Accessibility Code
- H. Conform to applicable ANSI/HI standards
- I. Products: Listed and classified by Underwriters Laboratories, Inc. as suitable for the purpose specified and indicated.

1.07 SUBMITTAL:

- A. Submit manufacturer's installation instructions under provisions of General Conditions and Division 1.
- B. Product Data including certified performance curves and rated capacities of selected models, weights (shipping, installed, and operating), furnished specialties, and accessories. Indicate pump's operating point on curves.
- C. Complete Package information Product Data including:
 - o System summary sheet (where applicable)
 - o Sequence of Operation
 - o Shop drawing indicating dimensions, required clearances and location and size of each field connection
 - o Power and control wiring diagram
 - o System profile analysis including pump curves, system curve, and variable speed pump curves (where applicable)
 - o Pump data sheets - Rated capacities of selected models and indication of pump's operating point on curves.
 - o Submittals on furnished specialties and accessories
 - o Submittals must be specific to this project. Generic submittals will not be accepted
- D. Hanging and support requirements should follow the recommendations in the manufacturer's installation instructions.

1.08 OPERATION AND MAINTENANCE DATA:

- A. Submit Operation and Maintenance information under provisions of Division 15 "Mechanical General Requirements" and the provisions of the General Conditions and Division 1.
- B. Operation and Maintenance Data: Include installation instructions, assembly views, lubrication instructions, and replacement parts lists.
- C. Under provisions of commissioning documentation; testing of pumps, as well as training of owner's operation and maintenance personnel may be required in cooperation with the commissioning consultant.

1.09 DELIVERY, STORAGE, AND HANDLING:

- A. Deliver materials to the site in such a manner as to protect the materials from shipping and handling damage. Provide materials on factory provided shipping skids and lifting lugs if required for handling. Materials damaged by the elements should be packaged in such a manner that they could withstand short-term exposure to the elements during transportation.

B. Store materials in clean, dry place and protect from weather and construction traffic. Handle carefully to avoid damage.

1.10 WARRANTY:

A. Provide a minimum One (1) year warranty on materials and installation under provision of Section 15010.

1.11 EXTRA MATERIALS:

A. Provide one (1) set of mechanical seals for each model type of primary pump scheduled.

2.00 PART 2- PRODUCTS

A. The specifying engineer reserves the right to specify a primary supplier / lead spec manufacturer on all supplied schedule and specification documents. These primary suppliers have lead their respective industry in research and development and their products have had proven track records in the field. These primary suppliers, in the opinion of this engineering firm, produce a superior product to the alternately listed manufacturers. The contractor may choose to supply equivalent equipment as manufactured by the alternately specified manufacturer. This alternately specified equipment shall be supplied on a deduct alternate basis and based on the approval of the supplied alternate manufacturer's submittals.

2.01 WET ROTOR INLINE PUMPS:

A. Manufacturer:

1. Contractor shall furnish and install new wet rotor circulating pumps for chilled water and hot water heating systems as indicated on the drawings. Pumps shall be model NRF as manufactured by **Bell & Gossett** under base bid. Equivalent units as manufactured **others** may be submitted as deduct alternates. Pumps shall meet types, sizes, capacities, and characteristics as scheduled on the Equipment Schedule drawings.

B. Wet Rotor Inline Pump:

1. The pumps shall have a ceramic shaft supported by carbon bearings. Bearings are to be lubricated by the circulating fluid. Pump shaft shall connect to a non-metallic Polypropylene impeller.
2. Pump volute shall be of cast iron design for heating systems or cast "lead free" bronze for domestic water systems. The connection style on cast iron pumps shall be flanged and on bronze body pumps should be of either sweat, flanged, or union design, as noted on schedule.
3. The motor stators shall be isolated from circulating fluid through use of stainless steel stator can. Rotor to be sheathed in stainless steel.
4. Motors shall be non-overloading at any point on the pump curve. Motors to have built in impedance protection and shall be UL and CSA listed.
5. Pump shall be of a maintenance free design and be capable of operating in variable speed (varying voltage) applications.

6. Pump manufacturer shall be ISO-9001 certified.

C. Accessories:

1. Where noted on schedule a Bell & Gossett TC-1 Automatic Timer Kit shall be furnish and installed to increase the overall efficiency of a hot water recirculation system. The TC-1 timer control is programmable to turn a recirculator ON and OFF automatically. This limits the run time of the recirculator to those times when high usage is expected during a day.
2. Where noted on schedule a Bell & Gossett AQ-1/2 or AQ-3/4 Aquastat shall be furnish and installed to increase the overall efficiency of a hot water recirculation system. The AQ aquastat shall thermostatically turn ON and OFF a recirculator automatically. The aquastat shall switch the recirculator OFF at 120° F and ON at 100° F. This limits the run time of the recirculator to those times when it is required during a day. The AQ-1/2 senses temperature on ½" copper pipe and the AQ-3/4 senses temperature on ¾" copper pipe

2.02 3-PIECE INLINE PUMPS – PERMANENTLY LUBRICATED:

A. Manufacturer:

1. Contractor shall furnish and install new 3-piece inline permanently lubricated pumps for chilled water and hot water heating systems as indicated on the drawings. Pumps shall be Series 60 as manufactured by **Bell & Gossett** under base bid. Equivalent units as manufactured **others** may be submitted as deduct alternates. Pumps shall meet types, sizes, capacities, and characteristics as scheduled on the Equipment Schedule drawings.

B. 3-piece Inline Pumps – Permanently Lubricated:

1. The pumps shall be of a horizontal, permanently lubricated type, specifically designed for quiet operation. Suitable for 225° F operation at 175 PSIG working pressure. The pump shall be single stage, vertical split case design, in cast iron bronze fitted (or all bronze) construction. The pump internals shall be capable of being services without disturbing piping connections.
2. The pumps shall be composed of three separable components a motor, bearing assembly, and pump end (wet end). The motor shaft shall be connected to the pump shaft via a replaceable flexible coupler.
3. The pumps shall have a solid SAE1144 steel shaft supported by two sealed ball bearings. A non-ferrous shaft sleeve shall be employed to completely cover the wetted area under the seal.
4. Pump shall be equipped with an internally flushed mechanical seal assembly. Seal assembly shall have a brass housing, Buna bellows and seat gasket, stainless steel spring, and be of a carbon ceramic design with the carbon face rotating against a stationary ceramic face.
5. Bearing assembly shaft shall connect to either a cast bronze impeller. Impeller shall be hydraulically and dynamically balanced, keyed to the shaft and secured by a locking capscrew or nut.
6. A flexible type coupling shall be employed between the pump and motor.
7. Pump should be designed to allow for true back pull-out access to the pump's working

components for ease of maintenance.

8. Pump volute shall be of cast iron design for heating systems or cast bronze for domestic water systems. The connection style on cast iron and bronze pumps shall be flanged. Volute shall include gauge ports at nozzles, and vent and drain ports.
9. To ensure alignment the motor shall be mounted to the bearing assembly via a bolted motor bracket assembly, and a rubber motor mount shall be used to assist in aligning the motor shaft with the pump shaft.
10. Motors shall meet scheduled horsepower, speed, voltage, and enclosure design. Motors through 1 HP shall be resilient mounted, motors over 1.5 HP shall be rigid mounted. Motors shall have permanently lubricated ball bearings and must be completely maintenance free. Motors shall be non-overloading at any point on the pump curve and shall meet NEMA specifications.
11. Pump shall be of a maintainable design and for ease of maintenance should use machine fit parts and not press fit components.
12. Pump manufacturer shall be ISO-9001 certified and be of U.S. manufacturer.
13. Each pump shall be factory tested and name-plated before shipment and shall be provided with a (3) year warranty from date of installation.

END OF SECTION 15540

Expansion Tank

Furnish and install as shown on plans a 80 gallon (302.8 liter) 24" (610 mm) diameter x50.875" (1292 mm) high pre-charged steel expansion tank with replaceable heavy duty Butyl rubber bladder. The tank shall have a 1", 1-1/2" or 2" NPT system connection, 3/4" NPT drain, and a .302"-32 charging valve connection (standard tire valve) to facilitate the on-site charging of the tank to meet system requirements. The tank shall be fitted with lifting rings and a floor mounting skirt for vertical installation. The tank must be constructed in accordance with Section VIII of the ASME Boiler and Pressure Vessel Code and stamped 125 PSI (862 kPa) working pressure.

Each tank shall be ITT Industries - Bell & Gossett Model No. B-600.

In-Line Air Separator

Furnish and install as shown on plans a horizontal in-line air separator designed to effectively separate free air in hydronic heating/cooling systems. The air separator shall be heavy duty cast iron designed to function satisfactorily at working pressures up to 175 psi (12.1 bar) and liquid temperatures up to 300 °F (149 °C). The air separator shall have an integral weir designed to decelerate system flow to maximize air separation. For Use with Precharged Bladder Expansion Tanks the in-line air separator shall also assist in eliminating free air from the system by directing the air to an air vent attached to the separator while reduced oxygenated water is circulated to the system. The in-line Air Separator shall be ITT Bell & Gossett Model No. IAS-3 In-Line Air Separator.

Reducing Valves

Furnish and install as shown on plans, a diaphragm operated Pressure Reducing Valve with brass body, low inlet pressure check valve and inlet strainer. The strainer must be easily removed without system shutdown.

The valve seat, strainer and stem must be removable and of noncorrosive material as manufactured by ITT Bell & Gossett.

Check-Trol Pump Isolation Valve

Furnish and install on plans NPT/Sweat x Flange Check-Trol Flange on the pump discharge. The Check-Trol Flange will prevent gravity circulation and flow in the wrong direction. When closed, it will provide positive shut-off. The mating flange shall be free floating allowing it to rotate eliminating the need to align the bolt holes of the flanges when installing to the piping system. The Check-Trol Flange shall be constructed with a brass body, chrome plated brass ball and flange, zinc plated handle, and teflon packing and seat ring and a non-ferrous check. The Che