# COUNTY OF SUMMIT PHYSICAL PLANTS DEPARTMENT

# **BID PACKAGE FOR:**

Five (5) Year Full HVAC Maintenance Service Contract at the Summit County Jail Facility 205 East Croiser St., Akron, Ohio 44311

Bid Opening – 2:00 p.m.

OHIO BUILDING 175 SOUTH MAIN STREET 8TH FLOOR CONFERENCE ROOM AKRON, OHIO 44308

# TABLE OF CONTENTS

Description	<u>Page</u>
Invitation to Bid	
Instructions to Bidders	B-1 to B-6
Form of Proposal	P-1 to P-2
EEO Compliance Certificate	P-3 to P-4
Non Collusion Affidavit	P-5
Declaration of Personal Property Tax Delinquency	P-6 to P-7
Resources and Experience of Bidder	P-8 to P-9
Bid Guaranty	P-10 to P-11
Affirmative Action Certification	P-12
Contract	C-1 to C-3
Specifications	S-1 to S-40
Equipment List	E-1 to E-2

# **LEGAL ADVERTISEMENT**

# NOTICE TO BIDDERS

Sealed bids will be opened and publicly read on at 2:00 pm. local time, at the County of Summit Ohio Building 8 <sup>th</sup> floor meeting room located at 175 South Main Street, Akron, Ohio 44308, authorized pursuant to Council Resolution No. 2012 for:
Five (5) Year Full Maintenance Service Contract for HVAC at the Summit County Jail located at 205 East Crosier St., Akron, Ohio 44311.
The estimated cost of the project is \$ _650,000.00 .
There will be a mandatory bidders meeting at the site on The meeting will begin promptly at 9:00 a.m. at the Crosier St. site at the main entrance area. Bids will not be accepted from companies not represented at this meeting.
The County of Summit reserves the right to reject any and all bids and any part or parts of any bid. The County, also, reserves the right to waive any informalities in the bid.
Bid documents may be obtained free of charge from the County of Summit Physical Plants Department, 2525 State Rd., Cuyahoga Falls, OH 44223 between the hours of 7:30 a.m. and 4:00 p.m., Monday through Friday.
County of Summit, Ohio Russell M. Pry, County Executive
To be advertised
Faxed to Akron Beacon Journal on
To be posted on the County of Summit Website
Please invoice the following department:
County of Summit, Ohio Physical Plants Department 2525 State Rd. Cuyahoga Falls, OH 44223

#### INSTRUCTIONS TO BIDDERS

Sealed bids will be received by the County of Summit Executive Office, 175 South Main Street, Akron, Ohio 44308 until 2:30 pm. local time \_\_\_\_\_\_\_ for a Five - Year Full Service HVAC Maintenance Contract for the Summit County Jail Facility located at 205 East Crosier St. Akron, Ohio 44311.

The envelope containing the bid shall be marked with the project title and shall be opened immediately thereafter and read publicly.

#### I. BID BOND

Each bid in the amount of twenty-five thousand dollars (\$25,000.00) or more shall be accompanied by a bid bond signed by a surety company authorized to do business in Ohio, or a certified check or eashier check on a solvent bank, which bond or check shall be in the amount not less than 3% of the amount bid. This bond or check shall be given as security that if the bid is accepted; a contract will be executed in conformity with the bid. Bids less than twenty-five thousand dollars (\$25,000.00) shall require no bid bond.

- A. The bid bond or check of the successful bidder will be returned upon execution of the contract.
- B. Bid bonds or checks of unsuccessful bidders will be returned upon a written request submitted to the Executive's Office.

#### II. <u>LICENSES/PERMITS</u>

Bidders shall include in their proposal the cost for all licenses/permits required by the State of Ohio and/or any municipality, township or village that are necessary to perform this contract and shall obtain all such permits.

#### III. FORM OF PROPOSAL

The proposal shall be made on the attached blank forms, designated for such purpose, and shall be completely filled out to contain all the required information, and must be properly signed.

#### IV. <u>UNACCEPTABLE BIDS</u>

No bid will be accepted from, or contract awarded to any person, firm, or corporation that is in arrears or is in default to the County of Summit upon any debt or contract, or that is in default as surety or otherwise, upon any obligation to the County, or has failed to perform faithfully any previous contract with the County or has been debarred by the County from consideration for contract awards.

#### V. <u>WI</u>THDRAWAL OF BIDS

No bid will be allowed to be withdrawn after it has been deposited with the County of Summit, except as provided by law.

## VI. REJECTION OR ACCEPTANCE OF BIDS

The County of Summit reserves the right to reject any and all bids, and any part or parts of any bid, and also the right to waive any informality in the bid. The County has a right to hold bids for up to sixty (60) days. In awarding a contract, the County has the right to consider all elements in determining the responsibility of the bidder. Any bid which is incomplete, conditional, obscure, or which contains additions not called for or irregularities of any kind, may be rejected.

#### VII. BIDDER QUALIFICATIONS

With his proposal, the bidder shall furnish evidence that is satisfactory to the County of:

- A. Adequate experience in work of this type.
- B. Financial ability to perform the work to its completion in accordance with the specifications, and/or supply the required commodity.
- C. Effort and intent to provide equal employment opportunity and minority business enterprise requirements.

#### D. Local Preference Ordinance 94-178

Summit County has established a "Local Preference" for construction contracts by Ordinance 94-178, dated February 22, 1994. Local preference is given to contractors that have an established principal place of business in either Summit County or the State of Ohio. This principal place of business must have been established at least two (2) years prior to the bid opening date.

Bidders having established their principal place of business in Summit County may be preferred as lowest if their bid does not exceed by more than 3%, with an upper limit of Ten Thousand Dollars (\$10,000), of the apparent lowest bidder.

Bidders having established their principal place of business in the State of Ohio may be preferred as lowest if their bid does not exceed by more than 2% of the apparent lowest bid.

To qualify for local preference, bidders must state on the bid form their principal place of business and the date of establishment. Each bidder shall have only one principal place of business. Local preference may only be applied in considering the lowest bid and shall not waive or nullify evaluation of which bidders are responsive and responsible. In no event shall any preference granted herein exceed a maximum of 3% or \$10,000.00, whichever is less.

### E. Disadvantaged Business Preference--Ordinance 93-67

Summit County has established a "Disadvantaged Business Preference" for construction contracts by Ordinance 93-67, dated February 2, 1993. Disadvantaged Business Preference is given to contractors who have submitted proof of certification as a "disadvantaged business" as provided in Section 177.04 of the Codified Ordinances of County of Summit prior to the advertisement for bids or other announcement for quotes by the County and must actually perform the work or supply the goods or services themselves without the use of subcontractors other than certified disadvantaged businesses. No person, with purpose to obtain a bid preference as a disadvantaged business, shall knowingly misrepresent that he owns, controls, operates or participates in the operation of a disadvantaged business, subject to the penalties specified in Section 177.04(h) of the Codified Ordinances.

Bids from disadvantaged businesses may be preferred as lowest if their bid does not exceed by more than three percent (3%) the apparent lowest bid or ten thousand dollars (\$10,000.00), whichever is less. The disadvantaged business preference shall not apply where prohibited by State or Federal law or regulation.

#### F. Cumulative Preferences

No bidder shall receive preferences cumulatively exceeding five percent (5%) or fifteen thousand dollars (\$15,000.00), whichever is less.

#### VIII. TAXES

The County of Summit is exempt from all sales, excise, and transportation taxes, except State of Ohio gasoline tax. The unit prices for bid shall exclude all such taxes, and will be so construed.

#### IX. EXAMINATION OF SPECIFICATIONS, SITE, ETC.

The bidder must examine the specifications, location of the proposed work, if applicable, exercise individual judgment as to the extent of the work to be done, and agree to fully complete the work or deliver equipment or materials in accordance with the specifications for the price bid.

All bidders will be held to have thoroughly acquainted themselves with all conditions pertaining to the work and to have visited the site and to have familiarized themselves with the exact conditions existing.

The contractor is required to carefully read the specifications for all parts of the work so as to become familiar with the work covered under this contract.

There will be a pre-bid meeting at the job site on \_\_\_\_\_ at 9:00am. All bidders are required to attend.

## X. <u>EEO COMPLIAN</u>CE

The successful bidder must furnish documentation complying with State of Ohio and federal laws relating to discrimination and equal employment opportunity as outlined in the specifications on included forms. Questions relating to EEO requirements should be directed to Summit County EEO Office, telephone (330) 643-2404.

#### XI. OTHER REQUIREMENTS FOR SUCCESSFUL BIDDERS

- A. All permits, certificates of inspection, etc., relating to performance of contracts, if any, must be obtained prior to the contract being executed.
- B. Successful bidders must furnish a copy of an unexpired State of Ohio Certificate of Worker's Compensation.
- C. A 100% performance bond based on the bid and/or contract amount must be submitted within ten (10) days after receipt of notification of award.
- D. A "Declaration of Personal Property Tax Delinquency" form must be fully executed and notarized pursuant to Ohio Revised Code Section 5719.042, before an award can be made.
- E. The contractor shall indemnify and save the County harmless from all claims or liabilities of any type or nature to any person, firm, or corporation arising from, resulting from, or attributable to the work done under this agreement by the contractor itself or acting with others.

F. Successful bidder must furnish the County with a taxpayer identification number. The Internal Revenue Code requires the County to file an information return by January 31<sup>st</sup> of the following year on all payments made to another person of \$600.00 or more. Section 3406 of the Internal Revenue Code (26 U.S.C. 3406) requires the County to withhold at a rate of thirty-one percent (31%) if a payee fails to furnish a correct taxpayer identification number, and the back-up withholding requirements continues until the requested information is received.

#### XII. <u>SAFETY REQUIREMENT</u>

The contractor, its employees, agents, representatives, and any other party working on its behalf, shall comply with all applicable terms of the Occupational Safety and Health Act, 29 U.S.C. 651 et seq. and any applicable related regulations, including, but not limited to, those stated in 29 CFR 1910.01-1910.1450, as amended, and 29 CFR 1926.1-1926.1152, as amended, and shall comply with all applicable terms of Ohio Revised Code Chapter 4167, as amended, and any applicable related regulations under the Ohio Administrative Code, as amended. This compliance shall include, but shall not be limited to, at a minimum, providing all employees working on the project with the necessary training before the work is performed, and providing all safeguards, safety devices, and protective equipment. The contractor further shall take any and all other actions reasonably necessary to protect the life and health of employees of the contractor and of the County and to protect property in connection with the performance of the work under this agreement.

#### XIII. <u>INSURANCE</u>

The Contractor must provide insurance covering the working period in the amounts according to the contract documents.

The Contractor shall furnish Summit County with proof of insurance.

#### XIV. STATE OF OHIO PREVAILING WAGE RATES

All wages paid to employees on the work site shall be paid at the prevailing wage rate of wages for the class of work called for under this agreement. The prevailing wage rate for such wages shall be determined in accordance with Ohio Revised Code Chapter 4115, except for any employees who are covered by a collective bargaining agreement in existence prior to the date of this contract, who shall be paid the rate of pay provided for under such an agreement. The contractor agrees to provide the County with full and complete documentation of payment records.

The contractor agrees to provide the County with a contact person, a telephone number, a mailing address and if available, an electronic mail address for purposes of giving notice to the contractor of any changes in prevailing wage rates. Where an electronic mail address is given, the contractor agrees that the use of that method by the County satisfies

any notice requirements of any change in prevailing wage rates that it may have under Ohio Revised Code Chapter 4115.

The contractor further agrees that upon receipt of notice from the County of any changes in prevailing wage rates to immediately inform all subcontractors with whom it has contracted of such changes. The contractor agrees to defend and indemnify the County, its elected officials, agents and employees, against all claims, actions, demands, judgments, settlements, damages, liabilities, losses, and costs of any kind, including, but not limited to, reasonable fees of attorneys and experts, arising from or related to the contractor's failure to inform its subcontractors of changes in prevailing wage rates upon notice from the County of such changes.

# FORM OF PROPOSAL

(Submit in triplicate)

The wording of the proposal shall be retained throughout, without change, alterations, or additions. Any changes in the wording may cause the proposal to be rejected.

To:

County of Summit

2525 State Rd.	anley, Director of Admin. /Op	erations	
Cuyahoga Falls, O	H 44223		
Having read the specificat	ions and examined the work re	quired for the	e project entitled:
Five-year full service HVA located at 205 East Crosie	AC Maintenance Contract for t r St. Akron, Ohio 44311.	he Summit C	ount Jail Facility
And also having received a	and taken into account addenda	a numbers:	
work of said project, the un	cted the site and the conditions ndersigned hereby proposes to led and described in said speci	furnish all m	aterial and to
	Dollars	(\$	)
Yearly Cost Breakdown		(	,
Year I	Dollars	(\$	)
Year 2	Dollars	(\$	)
Year 3	Dollars	(\$	)
Year 4	Dollars	(\$	)
Year 5	Dollars	(\$	)
Liquidated damages in the	awarded this work, to complet amount of S per da leted beyond the contract com	ay will be cre	dited for each day

Accompanying this proposal is	(certified check, bank
Accompanying this proposal isdraft, security bond) in the amount of	, which is to be forfeited
to Summit County, Akron, Ohio, if the undersign	ed fails to execute the contract in
conformity with "the terms of contract" and furnis	
after notification of award of contract to the under	
work in connection with this bid in accordance wi	in the number of days noted above.
In submitting this bid, it is understood that the right any and all bids. It is also agreed that this bid may (60) days from the opening thereof.	
Insert below, bidders name. If a corporation, give phrase, "A corporation organized under the laws of partner using the phrase, "Copartners trading and style of;". If an individual using a trade name, give	of:". If a partnership, give name of doing business under the firm name and re individual name using the phrase,
"An individual doing business under the name and	l style of".
NAME OF FIRM	
NAME OF CORPORATION	
NAME OF PRESIDENT	<del></del>
CORPORATION IS ORGANIZED UNDER THE	LAWS OF
SIGNATURE	
BY	
PRINCIPAL PLACE OF BUSINESS ADDRESS_	
DATE OF ESTABLISHMENT OF PLACE OF BE	USINESS
FEDERAL TAX I.D. NUMBER	
TELEPHONE NUMBER	

#### EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCE CERTIFICATE

As used in this certificate, the term "contract" includes the term "Purchase Order" and all other agreements effecting purchase of supplies or services. If this certificate is submitted as part of a bid or proposal, the term "seller" shall to refer to the Bidder, Offeror, Subcontractor or Supplier. This certificate shall be renewed annually. Notwithstanding the foregoing, the certifications made herein shall remain applicable until completion of all nonexempt contracts/subcontracts awarded while this certificate is in effect. The undersigned Seller certifies the following to County of Summit hereinafter referred to as Buyer:

- A. <u>REPORTS</u> Within thirty (30) days after any contract subcontract awards and prior to each March 31 thereafter during the performance of work under that contract, the Seller shall file Standard Form 100, entitled "Equal Employment Opportunity Employer Information Report EEO-1" unless Seller has either filed a report within 12 months preceding the date of the award or is not otherwise required by law or regulation to file.
- B. <u>PRIOR REPORTS</u>: If seller has participated in a previous contract or subcontract subject to the Equal Opportunity Clause 41 C.F.R. Sec. 60-1.4 (a) (1) through (7), the clause originally contained in section 301 or Executive Order No. 10925, or the clause contained in section 201 of the Executive Order No. 11114, seller has filed all required compliance reports. Seller shall obtain similar signed representations indicating filing of all required compliance reports, signed from all proposed subcontractors prior to awarding subcontracts not exempt from the Equal Opportunity clause.
- C. <u>CERTIFICATION OF NONSEGREGATED FACILITIES:</u> Seller certifies that it does not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. Contractor certifies further that it will not maintain or provide for its employees any segregated facilities at any of its establishments and that it will not permit its employees to perform services at any location under its control where segregated facilities are maintained. Seller agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this certificate. As used in this certification, the term "segregated facilities" means any waiting rooms, rest rooms, and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion or natural origin, because of habit, local customs or otherwise. Contractor further agrees that except where it has obtained identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity Clause; that it will retain such certifications in its files; and that it will forward the following notice to such proposed subcontractors (except where the proposed subcontractors have submitted identical certifications for specific time periods):

NOTICE TO PROSPECTIVE SUBCONTRACTORS OR REQUIREMENT FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES. A Certification of Nonsegregated Facilities, as required by Section 60-1.8 of Title 41 of the Code of Federal Regulations, must be submitted prior to the award of a subcontract exceeding \$10,000.00 which is not exempt from the provisions of the Equal Opportunity Clause. Note: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

- D. <u>AFFIRMATIVE ACTION COMPLIANCE PROGRAM</u>: Prior to 120 days after receipt of any subcontract in the amount of \$50,000.00 or more, a Seller, with fifty (50) or more employees which is not otherwise exempt under 41 C.f.R., Part 60-1, shall develop for each of its establishments a written affirmative action compliance program as called for in 41 C.f.R., Sect. 60-1.40. Seller will also require its lower-tier subcontractors who have fifty (50) or more employees and receive a subcontract of \$50,000.00 or more and who are not otherwise exempt under C.f.R., Part 60-1 to establish written affirmative action compliance programs in accordance with 41 C.f.R., Section 60-1.40.
- E. Bidders are responsible for EEO compliances as provided in Executive Order 11246 and implementing regulations TITLE 41, Chapter 60-4.3 (Equal Opportunity Clause and Notice of Standard Specifications), 60-250, and 60-741 when applicable.
- F. Seller certifies that it is not currently in receipt of any outstanding letters of deficiencies, show cause, probable cause or other such notifications or noncompliance with EEO regulations.

Executed this	day of	,	20	by:
Firm:				
Ву:		_Title:		
Item:				
Project:				

## NON-COLLUSION AFFIDAVIT

THIS AFFIDAVIT IS TO BE FILLED OUT AND EXECUTED BY THE BIDDER: IF THE BID IS MADE BY A CORPORATION, THEN BY ITS PROPERLY AUTHORIZED AGENT.

State of Ohio	)		
County of Summit	) ss )		
	(Name of Bidder o	r Bidders)	
BEING DULY SWORN,	DEPOSE AND SAY T	НАТ	
reside at			
	(Give residence of ea	ach bidder)	
and that(Give name	es of persons, firms, or c	corp. interested in	the bid)
are the only person(s) into Contract; that the said Con collusion or fraud, and als therein, or any officer of t	erested with (him) (them ntract is on (his) (their) p to that no head of any de	n) in the profits of part, in all respects epartment or Burea	the herein contained s fair, said without au, or employee
	Signatu	ıre	Date
State of Ohio	) ) ss		
County of Summit	)		
Before me, a Notary Publi above named, who acknov be his own free act and de	vledged the making and ed. In testimony thereof	signing of the fore f, I have herunto so	egoing instrument to et my hand and
official seal this	day of	, 20	·
		N	
		Notary Public	
My Commission Expires			. 20

## **NOTICE**

Attached is a declaration of Personal Property Tax Delinquency form, which is required by ORC 5719.042 for every competitive bid contract awarded by the County.

When an award is made after a competitive bid, the successful bidder must attach the fully executed statement to his contract documents, i.e., contract or purchase order, as applicable. If the declaration shows monies owed, the County Auditor shall forward a copy to the County Treasurer within 30 days of receipt.

Inquiries concerning this matter may be directed to Mr. Brian Harnak, County Executive's Associate General Counsel, County of Summit Executive's Office, Ohio Building, 8th floor, 175 South Main Street, Akron, Ohio 44308, 330-643-2517.

# DECLARATION OF PERSONAL PROPERTY TAX DELINQUENCY OHIO REVISED CODE 5719.042

1,	<del></del>	nereby affirm that
	,	Bidder herein IS/ISNOT
(as applicable) charged at the time of sub	mitting this bid with any	y delinquent personal
property taxes on the general tax list of p	ersonal property of the (	County of Summit.
The amount of such due and unpaid delin	quent tax and any due a	nd unpaid penalties and
interest is \$		·
Signature		
Signature		
Title	<del></del>	
STATE OF OHIO		
COUNTY OF SUMMIT, ss.		
Before me, a Notary Public, in and for sai	d County, personally ap	peared
	, authorized si	gnatory for
	, and acknowle	edges that he has signed
the foregoing instrument and that the same	e is his free act and deec	· .
IN TESITIMONY WHEREOF, I have aff	ixed by hand and seal o	f my office at
, Ohio, this	day of	, 20
Notary Public		
Notary Public		

#### RESOURCES AND EXPERIENCE OF BIDDER

The Bidder is required to state, in detail, in the space provided below, what work of a character similar to that included in the proposed Contract it has done, or give reference and such other detailed information as will enable Summit County to judge the Bidder's responsibility, experience, skill and financial standing. Among other things, this statement shall include the following: Evidence to the effect that the Bidder maintains a permanent place of business; list of plant equipment available for the work under the proposed Contract, together with the statements as to when purchased or otherwise obtained and statements as to its present physical condition; evidence to the effect that the Bidder has suitable financial status to meet obligations incident to work, and evidence to the effect that the Bidder has appropriate technical experience.

(Attach additional sheets as may be necessary)

Bidder's Name:				_
		•		
Bidder's Addres	s:			
			<del></del>	
History of Firm:				
<del> </del>				_
		<del></del>		

	Jobs Complete					
					<u>-</u>	
				<del></del> -		
		-				
			<u>-</u>			
Manpowe	r and Equipme	ent Availal	ble to Per	form Wor	k:	
					<del>-</del>	
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Evidence		atus:				
Evidence	of Financial St	atus:				
Evidence	of Financial St	atus:				
Evidence	of Financial St	atus:				
Evidence	of Financial St	atus:				
Evidence	of Financial St	atus:				

#### BID GUARANTY & CONTRACT BOND

(SECTION 153.571 Ohio Revised Code)

Principal's bid including Alternates. Alternately, if the blank is filled in, the amount stated must not be less than the full amount of the bid including Alternates in dollars and cents. A percentage is not acceptable.)

For the payment of the penal sum well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that, whereas the above named Bidder has submitted a Bid on the above referenced project;

NOW, THEREFORE, if the Obligee accepts the bid of the Principal and the Principal fails to enter into a proper contract in accordance with the Bid, plans, details specifications, and bills of material; and in the event the Principal pays to the Obligee the difference not to exceed three percent of the penalty hereof between the amount specified in the Bid and such larger amount for which the Obligee may in good faith contract with the next lowest bidder to perform the work covered by the Bid; or in the event the Obligee does not award the Contract to the next lowest bidder and resubmits the Project for bidding, the Principal pays to the Obligee the difference not to exceed three percent of the penalty hereof between the amount specified in the Bid, or the costs in connection

with the resubmission of printing new Contract Documents, required advertising and printing and mailing notices to prospective bidders, whichever is less, then this obligation shall be null and void, otherwise to remain in full force and effect; if the Obligee accepts the bid of the Principal and the Principal within ten days after the awarding of the Contract enters into a proper Contract in accordance with the Bid, plans, details, specifications, and bills of materials which said Contract is made a part of this bond the same as though set forth herein; and

IF THE SAID Principal shall well and faithfully perform each and every condition of such contract; and indemnify the Obligee against all damage suffered by failure to perform such contract according to the provision thereof and in accordance with the plans, details, specifications, and bills of materials therefore; and shall pay all lawful claims of subcontractors, materialmen, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said Contract; we agreeing and assenting that his undertaking shall be for the benefit of any materialmen or laborer having a just claim, as well as for the Obligee herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety of any and all claims hereunder shall in no event exceed the penal amount of this obligation as stated.

THE SAID Surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to terms of said Contract or to the plans or specifications therefore shall in any way affect the obligations of said Surety on this bond.

SIGNED AND SEALED this	day of	20
BIDDER		
Ву:		
Title:		
SURETY:		
Street		
City	State	Zip

#### ANTI-DISCRIMINATION CERTIFICATE

A. The undersigned Firm agrees that in the hiring of employees for the performance of work under any contract awarded by the County of Summit, or any subcontract awarded by the County of Summit, the undersigned Firm, its subcontractor or any person acting on its behalf, shall not, by reason of race, creed, sex, disability, military status as defined in Section 4112.01 of the Ohio Revised Code, color, gender identity as defined in Section 101.02(f) in the Codified Ordinances of the County of Summit and sexual orientation as defined in Section 101.02(r) in the Codified Ordinances of the County of Summit, discriminate against any citizen of the State in the employment of labor or workers who are qualified and available to perform the work to which the employment relates.

B. The undersigned Firm agrees that it, its subcontractor or any person on its behalf shall not, in any manner, discriminate against or intimidate any employee hired for the performance of work under this Agreement on account of race, creed, sex, disability, military status as defined in Section 4112.01 of the Ohio Revised Code, color, gender identity as defined in Section 101.02(f) in the Codified Ordinances of the County of Summit and sexual orientation as defined in Section 101.02(r) in the Codified Ordinances of the County of Summit. The undersigned certifies he does not maintain and he will not permit his employees from performing services at any segregated facilities.

Firm Name		
Ву:		
Title:		
Date:		 

#### MAINTENANCE AGREEMENT

THE COUNTY OF SUMMIT ("County") AND	Vendor Nan	ne:	("Vendor")
175 South Main Street, Eighth Floor Akron, OH 44308	Principal Pla	ace of Business:	
	Phone:	Fax:	
	Federal Tax	I.D. No.:	
	Board of Co	ntrol Directive No.:	
This Maintenance Agreement ("Agreement") is entered terms set forth below. The County and Vendor agree as		ween the County and Vendor	in accordance with the
1. <u>Services</u> . Vendor agrees to provide maintenance	ce services ("Se	ervices") to County	
[as set forth in Exhibit A, which is attached hereto a	and incorporate	ed herein by reference.]	
[The Services shall be provided at the premises loca	ated at 205 Eas	t Crosier St. Akron, Ohio 4	4311.]
[The Services shall be for the entire building and inc	clude offices, l	nallways and restrooms.]	
2. <u>Term.</u> This Agreement is dated and effective as of	the date signed	by the County Executive.	
Vendor will start work for the Services on approxin Vendor will complete all work for the Services no le		June 1, 2012 May 31,2017	
3. <u>Price</u> . The price for the Services will not exceed:		<u>\$</u>	
		\$ \$ \$ \$ \$	Year 2012 Year 2013 Year 2014 Year 2015 Year 2016

- The Price will include all costs for materials, supplies and labor. There are no extra charges or fees.
- Vendor warrants that the Price for the Services is not less favorable than those currently extended to any other customer for the same or similar Services.
- County shall have the right to set off amounts owed to Vendor for Vendor's failure to perform its obligations or for any damages caused by Vendor.
- 4. Quality of Services. Vendor agrees that the Services must meet the County's quality expectations and if the County is dissatisfied with the Services provided by the Vendor, the Vendor agrees to remedy the area of dissatisfaction within thirty (30) days of notice. If Vendor is unwilling or unable to remedy the problem within the thirty (30) days, then the County will have the right to have another vendor fix the problem and the Vendor will be required to reimburse the County for those costs upon demand.
- 5. <u>Independent Contractor</u>. It is mutually understood and agreed that the Vendor, Vendor's employees, agents and anyone working on behalf of the Vendor are independent contractors and are under the sole direction and control of the Vendor.

- 6. <u>Tools, Equipment and Supplies</u>. Vendor shall use its own tools, equipment and supplies and Vendor is responsible for ensuring such tools, equipment and supplies are properly maintained and safe to use.
- 7. <u>Insurance</u>. Vendor agrees to provide and maintain throughout the term of this Agreement the following with regard to insurance:
  - (a) General Liability insurance with minimum limits of One Million Dollars (\$1,000,000) per occurrence;
  - (b) Auto Liability insurance with a combined single limit of One Million Dollars (\$1,000,000);
  - (c) Worker's Compensation insurance in such limits as prescribed by law;
  - (d) County must be named as an Additional Insured with regard to General Liability including a policy endorsement; and
  - (e) 30 days advance written notice of policy cancellation, non-renewal, reduction of limits, or other material modification.

Vendor shall provide County with a Certificate of Insurance and Policy Endorsement naming County as an additional insured upon execution of this Agreement.

- 8. No Exclusive Rights. County has not granted Vendor any exclusive rights for County projects.
- 9. <u>Indemnification.</u> Vendor agrees to indemnify, defend and hold harmless the County and all of its employees and agents from any and all losses, liabilities, negligence, expenses, claims or damages arising from or relating to the Vendor including Vendor's employees, agents, representatives or any other parties working on its behalf. This indemnification shall survive the termination of this Agreement. Vendor waives the protection of any Workers' Compensation laws with respect to claims for contributions or indemnification by the County.
- 10. Reports and Records. Vendor shall maintain and provide to the County upon demand the following records and reports: accounting and fiscal records adequate to enable the County and/or the State of Ohio to audit and otherwise verify claims for reimbursement; and any other records and reports relating to compliance with local, state and federal statutes and regulations. Vendor shall keep records for three (3) years after final payment and all pending matters are closed or for three (3) years after the completion of any action involving the records, which ever is later.
- 11. <u>Termination without Cause.</u> County reserves the right to terminate this Agreement or any part of this Agreement for its sole convenience and without cause. In the event of termination under this paragraph, Vendor will immediately stop all work and will immediately cause any of its suppliers or subcontractors to cease all work related to this Agreement. County will pay Vendor for all services satisfactorily performed prior to notice of termination. There is no termination fee.
- 12. Prevailing Wage. If the Services are construction and exceed \$38,000.00 for alterations or \$125,000.00 for new construction (for 2011), Vendor agrees it shall comply with the Prevailing Wage Rate requirement as set forth in Ohio Revised Code Chapter 4115 and all other applicable laws and regulations. It applies to installation of computers, security systems, electrical work (even if adjunct to existing system), painting, reconstruction, enlargement, alteration, repair, remodel and renovations.
- 13. Compliance. Vendor represents and warrants it has all necessary licenses required to perform the Services. In addition, Vendor agrees that in the hiring of employees for performance of work under this Agreement, the Vendor, its subcontractors, or any person acting on a Vendor's or its subcontractor's behalf, by reason of race, creed, sex, disability, military status as defined in Section 4112.01 of the Ohio Revised Code, color, gender identity as defined in Section 101.02(f) in the Codified Ordinances of the County of Summit and sexual orientation as defined in Section 101.02(r) in the Codified Ordinances of the County of Summit, shall not discriminate against any citizen of the state in the employment of labor or workers who are qualified and available to perform the work to which the employment relates. Vendor further agrees that Vendor, its subcontractors, or any person on a Vendor's or its subcontractor's behalf, in any manner, shall not discriminate against or intimidate any employee hired for the performance of work under this Agreement on account of race, creed, sex, disability, military status as defined in Section 4112.01 of the Ohio Revised Code, color, gender identity as defined in Section 101.02(f) in the Codified Ordinances of the County of Summit and sexual orientation as defined in Section 101.02(r) in the Codified Ordinances of the County of Summit. Vendor certifies it does not maintain and it will not permit its employees from performing services at any segregated facilities. Vendor agrees to comply with all applicable federal, state and local laws, orders, rules and regulations.

- 14. <u>Drug Free Workplace.</u> Vendor will comply with all applicable Ohio laws regarding maintaining a drug free workplace. Vendor will make a good faith effort to ensure that all its employees, while working on County property, do not possess and will not be under the influence of illegal drugs, alcohol or abuse prescription drugs.
- 15. <u>Waiver</u>. The remedies contained in this Agreement will be cumulative in addition to any other remedies provided in law or equity. No waiver of a breach of any provision of this Agreement or any delay in enforcing its rights will constitute a waiver of the County's rights and remedies.
- 16. <u>Modification</u>. Any modification of this Agreement must be signed by the authorized representatives of all parties.
- 17. <u>Non-Assignment.</u> Vendor agrees to perform personally all duties and obligations imposed under the terms of this Agreement. Vendor agrees not to assign (including by operation of law or otherwise) or delegate the performance of its duties under this Agreement without written consent from the County. Any assignments, delegations or substitution attempted without the previous written consent of the County will cause this agreement to be terminated at the County's sole option and upon such termination the Vendor shall forfeit its right to payment for any Services provided.
- 18. <u>Jurisdiction.</u> This Agreement will be governed by the laws of the State of Ohio without regard to conflict of laws principles. Any litigation arising under this Agreement must be litigated in the Akron Municipal Court, the Summit County Court of Common Pleas or the U.S. District Court for the Northern District of Ohio and Vendor permits itself to the jurisdiction and venue of those courts.
- 19. <u>Entire Agreement.</u> This Agreement constitutes the entire agreement between the parties and supercedes any prior agreements.
- 20. <u>Set Off.</u> All claims for money due or to become due from County and any damages caused by Vendor will be subject to deduction or right of set off by County.
- 21. <u>Conflict.</u> If this Agreement is entered into pursuant to Ohio R.C. 125.04, also known as House Bill 100, the State of Ohio Terms and Conditions shall apply in the event of a conflict.
- 22. <u>Unresolved Findings of Recovery</u>. Pursuant to Ohio Revised Code §9.24, Vendor represents and warrants that no unresolved findings of recovery have been issued against Vendor by the Auditor of the State of Ohio.

	COUNTY OF SUMMIT, OHIO	
By:Printed Name:Title:	By: Russell M. Pry, Executive	Date
	Approved as to form:	
	Deborah S. Matz. Director, Law Dena	

Intending to be legally bound, the parties hereby execute this Agreement:

# **EXHIBIT "A"**

#### **SPECIFICATIONS**

#### FOR TOTAL SYSTEM MAINTENANCE

#### SUMMIT COUNTY JAIL FACILITY

The Contractor is required to read carefully the specifications for all parts of the work as to become familiar with the work covered by this contract. The Contractor shall visit the site and familiarize himself with the existing conditions before submitting his bid. No additional compensation will be awarded due to unfamiliarity. It shall be assumed that he has full knowledge of existing conditions and accepts them as is.

#### **GENERAL SPECIFICATIONS**

#### 1. GENERAL

It is understood and agreed that the following conditions shall be part of the specifications of this contract. These General Specifications shall be binding upon this Contractor.

#### 2. DEFINITIONS

Where the word "Bidder" is used in the specifications, it shall be understood to mean any contractor submitting a bid to perform the work and supply the materials as defined in these specifications. Where the word "Contractor" is used in these specifications, it is understood to mean the successful bidder to whom the service contract is awarded. Where the work "Owner" is used in these specifications, it shall be understood to mean the County of Summit and the duly authorized representative thereof.

#### SCOPE OF WORK

This specification covers five (5) years service to the HVAC and associated systems and components thereof at the SUMMIT COUNTY JAIL, 205 East Crosier Street, Akron, Ohio 44311.

#### 4. PROPOSAL REQUIREMENTS

Before submitting a proposal, each bidder must make a careful study of the site and specifications and fully assure himself as to the extent of the

work, the type and quality of the materials, and the type and quality of the workmanship required. The bidder must carefully consider and visit the places where the work is to be performed, the materials delivered and, should his proposal be accepted, he will be held responsible for any misunderstanding or error, whether or not it is the result of his unfamiliarity with the work. The bidder accepts all equipment as is. The proposal for this work must cover all contingencies, including all labor and material, scaffolding, equipment, rigging, tools, transportation, etc., necessary for the complete service on everything described, shown or reasonably These specifications include all labor materials, implied herein. equipment, replacement parts, etc., necessary to keep all systems in good operating condition satisfactory to the Owner. All items of labor, material or equipment not specifically required by the specifications but incidental to or necessary for the proper operation of the various systems, or reasonably implied in connection therewith, shall be furnished as if specifically required by the specifications. The right is reserved to furnish any detail drawings which, in the judgment of the Owner, may be necessary.

#### 5. DISCREPANCIES

In the case of any discrepancies, the subject shall be referred to the Owner for decisions and the Owner's decision shall be binding and without such decision, adjustment shall not be made by the Contractor save at his own risk.

#### 6. SUMMIT COUNTY REPRESENTATIVES

The Summit County representative shall be the following and shall be called in the order of precedence as noted below sequentially.

Tom Hathaway (330) 643-2773
 Jon Holland (330) 926-2492

#### 7. BIDDER QUALIFICATIONS

The following requirements shall be considered as the minimum standards for a Service Company to be considered as qualified to provide services under this contract, and shall be a prerequisite to any award.

- A. The Service Company shall maintain a field office and/or warehouse that is within fifty (50) miles of the facility to be serviced under this specification. Bidder must submit address of said facility with his bid.
- B. A minimum of two (2) local HVAC mechanics and two (2) local Electronic Technicians employed by the Service Company shall be a

resident in an area within a maximum of a fifty (50) mile radius of the facility to be serviced. Bidder must submit the names and cities of residence of these individuals with his bid.

- C. Services that are to be provided shall be performed by qualified and trained service personnel that are directly employed by the Service Company. Subcontracting portions of the system or services requested in this specification shall not be allowed without prior written consent.
- D. <u>EMPLOYEES</u> The Service Company shall provide with their proposal, resumes of all personnel to be associated with this contract. Minimum resumes required are:
  - 1. HVAC mechanic (2)
  - 2. Service Manager (1)
  - 3. Electronic Technician (2)
- E. The Service Company shall submit with his bid evidence of at least five (5) documented full service maintenance contracts in excess of \$50,000 per years similar to that of this specification with documented full service for at least five (5) years. This evidence shall include name, address, phone number, length of contract and type of equipment covered.
- F. The Service Company shall submit with this bid, evidence that indicates the use of a uniform and detailed method by which preventative maintenance tasks are defined, scheduled, recorded, updated, and processed. The Service Company's preventative maintenance program shall be computer generated, based on manufacturer's recommended maintenance procedures, and include provisions to build a historical data bank of all equipment being maintained. Single computer based, run time only, or hand scheduled programs are not acceptable.
- G. A copy of the preventative maintenance work order form which the Service Company plans to use shall be submitted with his bid package and must be approved by the Owner.
- H. The Service Company shall submit with their bid, evidence, satisfactory to the Owner, of their ability to troubleshoot, maintain, modify as required, and secure replacement parts for the Johnson Controls Metasyst/8540 with S2 Migration Energy Management System.

I. There will be a mandatory bidder's meeting on \_\_\_\_\_\_at the Summit County Jail, 205 East Crosier Street, Akron, Ohio. This pre-bid meeting will involve an Owner given tour of the job site and is a time the bidders may submit questions. All bidders are required to attend. The tour will begin promptly at \_\_\_\_\_ p.m. from the second floor lobby area.

#### 8. STANDARD OF QUALITY

- A. The specific mention of manufacturer's name brand of material, equipment, etc., shall be considered as indicating a standard of quality, grade, or type desired. Material of manufacturers other than those mentioned throughout these specifications may be accepted if they are equal in quality, dimension, and performance to those specified and approval is given by Owner as outlined herein, except if the statement "no substitute" is shown.
- B. The intent of these qualifications is to encourage and permit competition, qualified products by all reputable and qualified contractors, suppliers, and manufacturers whose products, reputations, and performances warrant performance consideration.
- C. Whenever a product is specified or shown by describing proprietary items, model number, catalog number, manufacturer, trade names or similar references, the supplier obligates himself to submit proposals and accept awards of contracts based upon the use of such products, or their equal. Use of such references is intended to establish the measure of quality and dimensions which the Owner has determined as requisites and necessary for this project. The right is reserved to approve or disapprove proposed deviations to design, function, construction or similar differences that will affect the design intent.

## 9. PARTS REPLACEMENT

- A. All parts, components, or devises for the mechanical systems that are worn or are not in proper operational conditions shall be repaired and/or replaced with new parts, components, or devises of the same manufacturer. Exceptions shall not be permitted without prior written consent of the Owner.
- B. When equipment or parts are replaced in their entirety, and a newer design of this device is available and is functionally equivalent and compatible, the device of the new design shall be used as the replacement.

- C. All repair and replacement parts, components, and devices for the mechanical systems and equipment as listed shall be supplied by the Service Company and shall be included in the cost of the service program.
- D. All miscellaneous parts and supplies necessary to maintain the mechanical systems and equipment shall be supplied by the Service Company and shall be included in the cost of the service program (belts, valve packings, lubricants, tools, paints, refrigerant, test instruments, meters, etc.)
- E. The Service Company shall not be made responsible for repair or replacement necessitated by reason of negligence or misuse of the equipment by other than the Service Company, or by any other cause beyond the control of the Service Company, except ordinary wear and tear.

#### 10. SCOPE

The Contractor shall be responsible for maintaining ORIGINAL DESIGN PERFORMANCE (ODP) condition for all equipment and systems covered under this specification. <u>The Contractor accepts all equipment and systems AS IS upon submitting this maintenance proposal.</u>

Design, installation labor and materials required to keep systems at ODP are the responsibility of the Contractor, <u>and shall be affected at no</u> additional costs to the owner.

Please be aware that the majority of the systems in this specification operate 24 hours per day and 12 months per year. It is, therefore, likely that a significant portion of repairs and maintenance will take place outside of normal working hours, and will have to be prescheduled. Additionally, much of the work to be performed will be located in a secured area and may have to be prescheduled. All premium time incurred shall be at not additional cost to the Owner.

Due to the frequent and critical nature of off-hour calls, the bidder must provide their procedure for handling night and weekend calls with their bid proposal.

Contract for HVAC Maintenance will be awarded to include:

Domestic Boiler Preventative Maintenance Domestic Boiler Emergency Service HVAC Preventative Maintenance HVAC Emergency Service HVAC Equipment Repair
HVAC Equipment Test and Calibration
HVAC Water Treatment Service
HVAC Filter Service
Emergency Generator Preventative Maintenance
Emergency Generator Repair
Emergency Management System Preventative Maintenance
Emergency Management System Repair
Fire Pump Inspection, Preventative Maintenance and Repair
Automatic Temperature Control Maintenance and Repair

All HVAC equipment, appurtenant devices and systems that are related to the HVAC Systems, Domestic Hot Water Tanks and Boilers are the equipment to be maintained. The equipment not maintained under this contract are such items as foundations, structural supports, domestic water lines, drains plumbing, gas lines, unit cabinets, cooling tower structure, piping, electrical services (power), etc.

#### 11. CLEANING

Upon completion of any work, the work area shall be cleaned of all refuse caused by work performed under this contract.

#### 12. RUBBISH

The Contractor shall not allow waste material, or rubbish, caused by his employees to accumulate in or about the premises, but shall have same properly removed, as requested by Owner.

#### 13. EMERGENCIES

Because of the nature of the Owner's facility, the Contractor will be required to have personnel on site and commence corrective action within two (2) hours of receipt of notification (by telephone, or otherwise) from the Owner that such an emergency exists. Failure of the Contractor to adequately respond to emergency situations within the terms of this contract will be grounds for the Owner to seek assistance from whatever means available and back charge the associated charges to the Contractor.

#### 14. EQUIPMENT ACCESS

Due to the nature of the facility and the security involved, as well as the design of the facility, access to some equipment may be very difficult. Additionally, it is the responsibility of the bidder to evaluate the accessibility of the equipment and make his own provisions for the access to the equipment. Some dampers, linkages, endswitches, valves, etc., have been covered in insulation. This insulation must be replaced after servicing of these devices.

#### 15. PERFORMANCE REVIEW

- A. The Owner's agent may review, at any time, the services provided and reports submitted, to verify that the preventative maintenance is, in fact, being properly and adequately performed. Any lack of maintenance service, complaints, or deficiencies in the performance of the services shall be submitted to the Service Company in writing for correction.
- B. For problems or deficiencies of significant importance or of a continual nature, a time period of compliance shall be established after discussion and mutual agreement. Failure of the Service Company to correct the deficiencies within the time period agreed upon shall constitute cause for termination of the services and/or withholding of payment.

#### 16. EXTENDED OUTAGES

If for some unknown reason or reasons, equipment must be shut down for an extended period of time, the County of Summit shall be notified immediately of the delay and the measures being taken to put the equipment back in service. During situations involving extended outages of critical equipment it shall be the Contractor's responsibility to implement contingency plans to temporarily provide the required services.

#### 17. EQUIPMENT MAINTENANCE SERVICE

#### A. Equipment included

- 1. The specific quantities and sizes of the major pieces of equipment shall be listed separately on the EQUIPMENT LIST attached.
- 2. The preventative maintenance and responsibility of the Service Company shall not be limited only to these major piece of equipment as shown on the EQUIPMENT LIST, but

- shall also include all appurtenant devices and systems that are related to heating, ventilating, and air conditioning system.
- 3. This mechanical maintenance includes all parts, materials, and labor necessary to perform preventative maintenance and make the repairs and, in addition, the necessary replacement of any units.
  - a. Heating System Boilers, furnaces, furnace, pumps, heating coils, steam traps, water strainers, unit heaters, duct heaters, heat exchangers, humidifiers, expansion tanks, etc.
  - b. Cooling System Air conditioning compressor(s), evaporative condensers, air cooled condensers, cooling towers, cooling tower fans, pumps, water chillers, cooling coils, ice pit, related equipment, etc.
  - c. Air Handling System Fans, motors, air grills, plenums, registers, air filters, dampers, induction units, mixing boxes, fan coil units, etc.
  - d. Temperature Control System Thermostats, pressure controls, relays, limits, valve operators, damper motors, humidity controls, step switches, time clocks, contactors, controllers, capacity controls, safety controls, recorders, control panels, gauges, air compressor.
  - e. Emergency Management System Processors, keyboards, mouse, monitors, power supplies, hard disks displays, sensors, transducers, actuators, feedback devices, interface devices, cabinets, contacts, surge protectors, software, relays printers, modems, duct smoke detectors, etc.
  - f. Miscellaneous Equipment Exhaust fans, manual valves, float valves, direct expansion valves, thermometers, gauges, magnetic starters, manual motor starters, pump and fan motor starter their respective motor, check valves, refrigerant piping and piping insulation, refrigerant.
  - g. Emergency power generator equipment including transfer switches.

h. Smoke control, pressurization and removal system.

#### B. EQUIPMENT NOT INCLUDED

- 1. Maintenance services, including repair labor and parts replacement, for portion of the systems and equipment that are non-maintainable or non-moving which have no serviceable parts are not required nor included of this specification.
- 2. Excluded items shall be considered as: foundations, structural supports, fan ductwork, domestic water lines, drains, tower fill/slats/basin, hydronic & domestic piping, etc.
- 3. This specification covers only that equipment in place at the time the bid was submitted, and in the event the system components are altered, changed, or if any equipment is added, or not included in this specification, then that portion shall be added or deleted as required, and shall be in accordance with this specification.
- 4. Supplies, accessories, or any items defined as replaceable by us such as printer ribbons, paper, lights, etc.
- 5. Unless otherwise specified, erosion, corrosion, acid cleaning, and damage beyond control due to freezing weather shall be excluded.
- 6. Service resulting from vandalism, misuse, abuse, operator error, or site related problems.

#### C. SERVICES INCLUDED

- The Contractor shall be responsible for scheduling of the preventative maintenance; and task functions to be performed on each scheduled call by calendar periods; and operating hours as pertinent to each task. Master records shall be maintained in the owner's office and such schedules will be adhered to.
- 2. The Contractor shall have in his possession the manufacturer's specified maintenance and repair procedures and complete parts lists for all equipment to be maintained.

- 3. As work is scheduled under Item #1 the Contractor shall issue, to the mechanic on the job, the necessary and appropriate manufacturer's recommended maintenance procedures and a listing of any special lubricants, tools, etc., that are required for proper maintenance of the apparatus concerned.
- 4. As work is performed, it shall be checked off on the service sheets and then kept on file by the Contractor <u>and</u> a copy shall be left with the Owner. The Department of Physical Plants reserves the right to have access to the Contractor's file within 48 hours of notification of the Contractor. These files must be kept for the life of the contract. This and all other work is to be performed in a professional manner by properly trained personnel. All maintenance shall include parts, labor and materials. Preventative maintenance calls shall include checking the performance of all components and testing, adjusting, calibrating and cleaning of all system components.
- 5. The Contractor shall report to the Owner daily when on the job. One individual shall be responsible for reporting the number of men working on the job on a daily basis and for completion and submission of reports.
  - a. After each service call, a service report shall be left with the owner, detailing work accomplished.
  - b. Two of the scheduled service calls shall include the system start-up and the system shut-down, for the appropriate season.
- 6. AT A MINUIMUM, scheduled service calls should include the following:
  - a. Comprehensive Annual Inspections Tasks listed under these inspections are to be performed as a single service at least once annually, (during a seasonal start-up when applicable.
  - Operational Inspection The tasks listed under these inspections are to be performed as a single service while equipment is operational.

- 7. The Contractor shall provide maintenance and repair service to keep subject equipment in good operating condition, as follows:
  - a. Furnish and install as required, all replacement and repair parts and/or system components.
  - Furnish, as required, all labor, refrigerant, materials, parts components, and supplies, including freight and delivery.

NOTE: All refrigeration controls are the responsibility of the Contractor. In the event of damage caused by the compressor failure, ELECTRIC STARTERS will also be the responsibility of the Contractor.

#### D. SPECIAL INCLUSIONS

Repair and replacement of all moving parts which suddenly or accidentally fail including gears, motors, stators, bearings, shafts, contactors, etc. Also included is any sudden or accidental failure of tubes, cracking of vessels and refectories and resulting damage to other equipment. Correctional steps determined as required from diagnostic tests and maintenance procedures that are necessary to maintain ORIGINAL DESIGN PERFORMANCE of the equipment are also included.

#### E. PREVENTATIVE MAINTENANCE INSPECTIONS:

Inspection Tasks – The minimum required task to be performed under the comprehensive annual inspections and operational inspections for specific pieces of equipment are as follows:

#### COMPREHENSIVE ANNUAL INSPECTION – AIR HANDLING UNIT

#### FAN AND MOTOR

- 1. Verify operation of system motor, gages, etc.
- 2. Inspect flexible connections and ductwork for damage and leaks repair as required.
- 3. Inspect tension on drive and fan belts, and change as needed.
- 4. Lubricate fan shaft bearings.
- 5. Lubricate motor bearings.
- Lubricate dampers.
- Clean intake screen on motor.
- 8. Inspect fan wheel for free rotation, cracks and alignment.

- 9. Inspect for vibration and unusual noises.
- 10. Inspect coils for water leaks.
- 11. Report condition of dampers.
- 12. Test secureness of guards, doors and panels.
- 13. Inspect all major stop valves and report condition.
- 14. Inspect all structural elements for corrosion and damage.
- 15. Report condition of coils clean/dirty clean as required.

#### **STARTER**

- 1. Inspect wiring for secureness and damage.
- 2. Megger motor at starter and record readings.
- 3. Inspect switch gear, starter and contactor points.
- 4. Inspect starter for signs of wear, arcing, overheating, burns, etc.
- Inspect electrical connections for tightness and absence of moisture.
- 6. Measure and record operating voltage.
- 7. Measure and record operating amperage.

#### OPERATIONAL INSPECTIONS - AIR HANDLING UNIT

#### FAN AND MOTOR

- 1. Verify operation of system motor, gages, etc.
- 2. Inspect tension on drive and fan belts, and change as needed.
- 3. Lubricate fan shaft bearings.
- 4. Lubricate motor bearings.
- 5. Lubricate dampers.
- 6. Inspect for vibrations and unusual noises.
- 7. Inspect coils for water leaks.
- 8. Report condition of dampers
- 9. Report condition of coils clean/dirty.
- 10. Report condition of motor windings clean/dirty.
- 11. Clean intake screen on motor.

#### STARTER

- 1. Inspect starter for signs of wear, arcing, overheating, burns, etc.
- 2. Measure and record operating amperage.

#### COMPREHENSIVE ANNUAL INSPECTION - PUMP

- 1. Inspect for vibrations, unusual noises, odors, etc.
- 2. Inspect mounting points for secureness and tighten.
- 3. Inspect packing; adjust to a slow drip if necessary.
- Inspect mechanical seal.

- 5. Verify flow in sealing/flushing line.
- Lubricate coupling.
- 7. Lubricate motor bearings.
- 8. Inspect system for leaks in piping, flange connections, etc.
- 9. Lubricate pump bearings.
- 10. Inspect motor windings for dirt buildup.
- 11. Clean ventilation openings (grills and/or screens).
- 12. Visually inspect coupling.

## STARTER OR CONTACTOR

- 1. Inspect wiring for secureness and damage, and record condition.
- 2. Megger motor at starter and record reading.
- Clean enclosure.
- 4. Tighten terminal connections at starter.
- 5. Inspect contacts for signs of wear, arcing, overheating, etc., and record condition.
- 6. Measure operating amperage and record readings.

## OPERATIONAL TEST

- 1. Inspect level in system expansion tank and record reading.
- 2. Record discharge pressure.
- 3. Measure operating voltage and record reading.
- 4. Test accuracy of all pressure gages.
- 5. Record suction pressure.

## <u>OPERATIONAL INSPECTION – PUMP</u>

- 1. Inspect for vibrations, unusual noises, odor, etc.
- 2. Inspect packing; adjust to a slow drip if necessary.
- Inspect mechanical seal.
- 4. Verity flow in sealing/flushing line.
- Lubricate coupling.
- 6. Lubricate motor bearings.
- 7. Inspect system for leaks in piping, flange connections, etc., and record condition.
- 8. Lubricate pump bearings.
- 9. Clean ventilation openings (grills and/or screens).
- 10. Visually Inspect coupling.

#### STARTER OR CONTACTOR

- 1. Inspect contacts for signs of wear, arcing, overheating, etc., and record condition.
- Measure operating amperage and record reading.

## OPERATIONAL TEST

- 1. Inspect level in system expansion tank and record reading.
- 2. Record suction and discharge pressures.

## COMPREHENSIVE ANNUAL INSPECTION - FURNANCE

#### FAN AND MOTOR

- 1. Verify operation of system motor, gage, etc.
- 2. Inspect flexible connections and ductwork for damage and leaks.
- 3. Inspect tension on drive and fan belts, and change as needed.
- Lubricate fan shaft bearing.
- Lubricate motor bearings.
- 6. Verify operation of dampers and damper linkage.
- 7. Clean intake screen on motor.
- 8. Inspect fan wheel for free rotation, cracks and alignment.
- 9. Inspect for vibrations and unusual noises.
- 10. Report condition of dampers.
- 11. Test secureness of guards, doors and panels.
- 12. Inspect all structural elements for corrosion and damage.
- 13. Test air flow switch operation.
- 14. Inspect motor winding for cleanliness.
- 15. Test operating controls.
- 16. Test high limit.

#### STARTER

- 1. Inspect wiring for secureness and damage.
- Megger motor at starter and record reading.
- 3. Inspect starter and contactor points.
- 4. Inspect starter for signs of wear, arcing, overheating, burns, etc.
- 5. Inspect electrical connections for tightness and absence of moisture.
- 6. Measure and record operating voltage.
- 7. Measure and record operating amperage.

#### GAS BURNER

- 1. Inspect and clean all combustion/primary air passages.
- Test all burner linkages for secureness and/or damage.
- 3. Test linkage for ease of operation and lubricate as required.
- 4. Remove, clean and inspect nozzles.
- 5. Inspect condition of, and replace or clean air filter element.
- 6. Test secureness of mounting points and tighten all major points.

- 7. Inspect ignition assembly and electrode and clean if necessary.
- 8. Inspect pilot and clean pilot orifice if necessary.
- 9. Inspect high tension wire for deterioration.
- 10. Inspect and set spark gap.
- 11. Perform combustion test and adjust fuel/air ration as required.
- 12. Test operation and setting of the gas pressure regulators.
- 13. Inspect area around oil pump seals for seal leakage.
- 14. Inspect for unusual noises, vibrations, odors, etc.
- 15. Inspect flame detector and clean if necessary.

## **PROGRAMMER**

- 1. Test main and pilot flame failure protection.
- 2. Test signal from flame detector.
- Test flame detector with hot refractory.
- 4. Test minimum pilot function.

## OPERATIONAL INSPECTIONS - FURNACE

## **FAN AND MOTOR**

- 1. Verify operation of system motor, gages, etc.
- Inspect tension on drive and fan belts, and change as needed.
- 3. Lubricate fan shaft bearings.
- 4. Lubricate motor bearings.
- 5. Inspect for vibrations and unusual noises.
- 6. Report condition of dampers, lubricate.
- 7. Report condition of motor windings clean/dirty.
- Clean intake screen on motor.

# STARTER

- 1. Inspect starter for signs of wear, arcing, overheating, burns, etc.
- 2. Measure and record operating amperage.

## GAS BURNER

- 1. Inspect all burner linkages for secureness and/or damage.
- 2. Visually inspect accessible fuel delivery system for leaks.
- 3. Inspect and clean all air intake screens
- 4. Inspect linkages for ease of operation and lubricate as required.
- 5. Inspect area around pump seals for seal leakage.

# <u>PROGRAMMER</u>

1. Test main and pilot flame failure protection.

#### OPERATIONAL TEST

- 1. Test combustion air flow safety circuit.
- 2. Verify operation of high operating limit controls.
- 3. Verify operation of operating controls.
- 4. Inspect flame condition.

## COMPREHENSIVE ANNUAL INSPECTION – HOT WATER BOILERS

- 1. Drain boiler as required to perform tests and inspections.
- 2. Perform slow drain test of low water cutoff.
- 3. Verify operation of makeup water system.
- 4. Inspect condition of flues and report.
- Inspect refractory for defects and reports.
- 6. Visually inspect boiler exterior for possible leaks and report.
- 7. Test boiler room floor drains for proper functioning.
- 8. Inspect fireside of boiler and report.
- 9. Inspect waterside of boiler for scale buildup and/or oil and report.
- 10. Reassemble and fill boiler fire burner to boil off oxygen.

#### **BOILER TRIM**

- 1. Disassemble, clean and inspect low water fuel cutoff.
- 2. Clean or replace sight glass.
- 3. Disassemble, clean and inspect water feeder.

## **CONTROLS**

- 1. Clean or replace expansion tank sight glass.
- 2. Inspect electrical connections for tightness.
- 3. Verify boiler room supply vents are free from obstructions.
- 4. Verify accuracy of temperature gages.

# <u>OPERATIONAL INSPECTIONS – HOT WATER BOILERS</u>

## CONTROLS

- 1. Verify boiler room supply vents are free from obstructions.
- 2. Verify operation of makeup water system.
- 3. Verify operation of pressure or temperature, primary and backup controls.

#### OPERATIONAL TEST

1. Test accuracy of stack temperature gage.

- Test low water cutoff.
- 3. Try lever test safety relief valve.

# COMPREHENSIVE ANNUAL INSPECTIONS - GAS BURNER

## POWER BURNER

- 1. Inspect and clean air intake screens.
- Test linkage for ease of operation and lubricate as required.
- 3. Verify operation of primary and secondary air dampers and clean as required.
- 4. Test secureness of mounting points and tighten all major points.
- 5. Visually inspect coupling for abnormal conditions.
- 6. Lubricate coupling.
- 7. Inspect starter for signs of wear, overheating, arcing, burns, etc.
- Test all burner linkages for secureness and/or damage.
- 9. Test primary and secondary shutoff damper(s) for tight closure.
- 10. Inspect condition of, and clean blowers and passages.
- 11. Inspect for unusual noises, vibrations, odors, etc.
- 12. Lubricate blower bearings.
- 13. Inspect motor windings for dirt buildup.

## UL, IRI OR FM GAS TRAIN

- 1. Bubble leak test the vent line(s).
- 2. Inspect operation and setting of gas pressure regulators.
- 3. Leak test accessible gas train (soap test).
- 4. Inspect gas train support and general condition.

#### IRI GAS TRAIN (ONLY)

- 1. Verify operation of the vent line solenoid.
- 2. Test high gas pressure safety circuit.
- Bubble leak test the gas shutoff valve.
- Test low gas pressure safety circuit.

#### FM GAS TRAIN (ONLY)

- 1. Bubble leak test the gas shutoff valves.
- Test low gas pressure safety circuit.
- Test high gas pressure safety circuit.

## PILOT

1. Leak test pilot gas train (soap test).

- 2. Inspect ignition assembly and electrode and clean if necessary.
- 3. Inspect pilot and clean pilot orifice if necessary.
- 4. Inspect high tension wire for deterioration.
- Inspect and set spark gap.

## FLAME SAFEGUARD

- Clean flame detector.
- 2. Test main flame failure protection.
- 3. Test scanner viewing of main flame.
- 4. Test for detection with hot chamber.
- Test pilot flame failure protection.
- 6. Test scanner viewing of pilot flame.
- 7. Test minimum pilot test.
- 8. Perform combustion test and adjust air mixture as required.

## OPERATIONAL INSPECTION – GAS BURNER

#### POWER BURNER

- 1. Inspect and clean air intake screens.
- 2. Test linkage for ease of operation and lubricate as required.
- 3 Lubricate power bearings.
- 4. Visually inspect coupling for abnormal conditions.
- Lubricate coupling.
- 6. Inspect starter for signs of wear, overheating, arcing, burns, etc.
- 7. Test all burner linkages for secureness and/or damage.
- 8. Inspect condition of, and clean blowers and passages.
- 9. Inspect for unusual noises, vibrations, odors, etc.
- 10. Inspect drive belts; replace if necessary.
- 11. Lubricate motor bearings.
- 12. Inspect motor windings for dirt buildup.

## UL, IRI OR FM GAS TRAIN

- 1. Bubble leak test vent line(s).
- 2. Inspect operation and setting of the gas pressure regulators.
- 3. Leak test accessible gas train (soap test).
- 4. Inspect gas train support and general condition.

#### IRI GAS TRAIN (ONLY)

- 1. Verify operation of the vent line solenoid.
- 2. Test high gas pressure safety circuit.
- 3. Bubble leak test the gas shutoff valve.
- 4. Test low gas pressure safety circuit.

## FM GAS TRAIN (ONLY)

- 1. Bubble leak test the gas shutoff valves.
- Test low gas pressure safety circuit.
- Test high gas pressure safety circuit.

## PILOT

- 1. Leak test pilot gas train (soap test).
- 2. Inspect ignition assembly and electrode and clean if necessary.
- 3. Inspect pilot and clean pilot orifice if necessary.
- 4. Inspect high tension wire for deterioration.
- 5. Inspect and set spark gap.

#### FLAME SAFEGUARD

- 1. Clean flame detector.
- 2. Perform turn-down test.

## OPERATIONAL TEST

- 1. Test combustion air flow safety circuit.
- 2. Verify operation of high operating limit controls.
- 3. Verify operation of operating controls.
- 4. Inspect flame condition.

#### COMPREHENSIVE ANNUAL INSPECTION – EMERGENCY GENERATOR

#### **ENGINE**

- Measure and record coolant level.
- 2. Inspect hoses, piping, and connections for tightness.
- 3. Inspect fan belt for wear and proper tension.
- 4. Determine fan operation and wear condition for report.
- 5. Clean an inspect intake air filtering system.
- 6. Change oil and oil filters.
- 7. Examine condition of exhaust system.
- 8. Inspect fuel supply system.
- Measure antifreeze concentration.
- 10. Lubricate fan drive bearing.

#### DIESEL ENGINE

- 1. Change fuel filters.
- 2. Inspect and adjust rack on unit injector of fuel distributor pump according to manufacturer's instruction.

3. Inspect governor and adjust as needed.

## CONTROLS, SAFETIES, AND CHARGING SYSTEM

- 1. Visually inspect panel interior for signs of system leaks or problems.
- 2. Verify proper operation of alarm indicators.
- 3. Check gages against operating conditions.
- 4. Measure and report status of battery electrolyte.
- 5. Report water level and corrective measures, if any.
- 6. Verify and record battery charging rate and voltage.
- 7. Examine condition of battery posts and cables, and remove corrosion.
- 8. Verify operation of low oil level and low water indicators.
- 9. Verify overspeed and reverse power indicators.
- 10. Confirm operation of alarm silence, alarm horn and alarm reset.
- 11. Verify high temperature indicator.

#### GENERATOR

- 1. Clean, inspect and report condition of brushes regarding wear and tension.
- 2. Clean and examine appearance of generator windings and report.
- Visually inspect commutator and collector rings and report condition. Follow manufacturer's adjustment procedure if necessary.

#### OPERATIONAL INSPECTION – EMERGENCY GENERATOR

#### ENGINE

- 1. Measure and record coolant level.
- 2. Inspect hoses, piping and connections for tightness.
- 3. Inspect fan belt for wear and proper tension.
- 4. Determine fan operation and report.

## CONTROLS, SAFETIES AND CHARGING SYSTEM

- 1. Visually inspect panel interior for signs of system leaks or problems.
- 2. Verify proper operation of alarm indicators.
- 3. Check gages against operating conditions.
- 4. Measure and report status of battery electrolyte.
- 5. Report water level and corrective measures, if any.

6. Examine condition of battery posts and cables, and remove corrosion.

#### GENERATOR

- 1. Inspect brushes for wear and check for proper tension. Report condition.
- 2. Examine appearance of generator windings and report.
- 3. Visually inspect commutator and collector rings. Report condition.

## OPERATIONAL TEST

- 1. Manually start and transfer to line.
- Measure and record oil level.
- 3. Read and record oil and water temperature.
- 4. Confirm and record all operating temperatures, pressures, amperage, control panel readings, etc.

#### COMPREHENSIVE ANNUAL INSPECTION – HEAT EXCHANGER

- 1. Check control set point.
- 2. Verify operation of control valve.
- 3. Confirm flow level through heat exchanger.
- 4. Perform operation test.
- 5. Test pressure control switch.
- 6. Try lever test safety valve.

#### COMPREHENSIVE ANNUAL INSPECTION – WATER HEATER

- 1. Manually flush and try lever test pressure relief valve.
- 2. Open and close isolation valves and check piping and valves for leaks.
- 3. Record hot water supply temperature.
- 4. Bottom-blow heater tank to remove sediment.
- 5. Check all wiring, insulation, and connections on heater and controls.
- 6. Check safety power cutoff on heater.
- 7. Inspect flue system.
- 8. Test operation of automatic vent dampers.
- 9. Test flame failure protection device.

## COMPREHENSIVE ANNUAL INSPECTIONS - EXPANSION TANK UNIT

- 1. Check air pressure.
- 2. Inspect connecting piping for leaks.

- 3. Confirm proper water level indication at sight glass.
- 4. Charge tank to adjust water level, if necessary.
- 5. Inspect overflow drain function.
- 6. Test float valve operation.
- 7. Test operation of automatic fill system.

## COMPREHENSIVE ANNUAL INSPECTIONS - COOLING TOWER

#### SYSTEM

- 1. Test mounting points for secureness and tighten if necessary.
- 2. Inspect structural elements for corrosion and damage.
- 3. Inspect for scale buildup on eliminators.
- 4. Adjust float assembly.
- 5. Clean sump and condenser strainers.
- 6. Test for secureness of guards, doors and panels.
- 7. Inspect spray orifice/nozzles.
- 8. Inspect system for leaks in piping, flange connections, etc.
- 9. Inspect heater elements for scale buildup.
- 10. Tighten terminal connections on heater elements.
- 11. Verify operation of heaters.
- 12. Verify operation of dump valve and drain system.

## CONTROLS

- 1. Verify operation of the fan/damper/load control systems.
- 2. Verify that overflow drain is clear.
- 3. Verify operation of water level probes.
- 4. Verify operation of water feed and controls.
- 5. Verify operation of bleed system.
- 6. Verify operation of low ambient temperature controls.
- 7. Test low water level heater shutdown and record results.
- 8. Measure operating amperage and record.
- 9. Inspect contacts for signs of wear, arcing, overheating, etc.
- 10. Measure operating voltage and record.

## COOLING TOWER FAN MOTOR(S)

- 1. Inspect wiring for secureness and damage.
- 2. Inspect for unusual noises in bearings, motors, etc.
- Lubricate motor adjustment screws.
- 4. Inspect contacts for signs of wear, arcing, overheating, etc.
- 5. Megger motor (at starter) and record reading.

## FAN(S)

- 1. Lubricate fan bearing.
- 2. Inspect pulley groves and belts for alignment, wear and tension.
- 3. Inspect fan wheel for free rotation, cracks and alignment.
- 4. Replace belts as necessary.

## <u>COMPREHENSIVE ANNUAL INSPECTION – UNIT HEATER</u>

## FAN AND MOTOR

- 1. Verify operation of system motor, gages, etc.
- 2. Inspect flexible connections and ductwork for damage and leaks.
- 3. Inspect tension on drive and fan belts, and change as needed.
- 4. Lubricate fan shaft bearings.
- Lubricate motor bearings.
- 6. Verify operation of dampers and damper linkage.
- 7. Clean intake screen on motor.
- 8. Inspect fan wheel for free rotation, cracks and alignment.
- 9. Inspect for vibrations and unusual noises.
- 10. Report condition of dampers.
- 11. Test secureness of guards, doors and panels.
- 12. Inspect roof curb flashing.
- 13. Inspect all structural elements for corrosion and damage.
- 14. Test air flow switch operation.
- 15. Inspect motor windings for cleanliness.
- 16. Test high limit.

## STARTER

- 1. Inspect wiring for secureness and damage.
- 2. Megger motor at starter and record readings.
- 3. Inspect starter for signs of wear, arcing, overheating and moisture.
- Remove, clean and inspect nozzles.
- 5. Inspect condition of, and replace or clean air filter element.
- 6. Test secureness of mounting points, and tighten all major points.
- 7. Inspect ignition assembly and electrode and clean if necessary.
- 8. Inspect pilot and clean pilot orifice if necessary.
- 9. Inspect high tension wire for deterioration.
- 10. Inspect and set spark gap.
- 11. Perform combustion test and adjust fuel/air ratio as required.
- 12. Test operation and setting of the gas pressure regulators.
- 13. Inspect area around oil pump seals for seal leakage.
- 14. Inspect flame detector and clean if necessary.

#### PROGRAMMER

- 1. Test main and pilot flame failure protection.
- 2. Test signal from flame detector.
- 3. Test flame detection with hot refractory.
- 4. Test minimum pilot function.

#### COMPREHENSIVE ANNUAL INSPECTION - EXHAUST FAN AND BLOWER

## FAN AND MOTOR

- 1. Verify operation of system motor.
- 2. Inspect flexible connections and ductwork for damage and leaks.
- 3. Inspect tension on drive and fan belts, and change as needed.
- 4. Lubricate fan shaft bearings.
- 5. Lubricate motor bearings.
- 6. Lubricate dampers.
- 7. Clean intake screen on motor.
- 8. Inspect fan wheel for free rotation, cracks and alignment.
- 9. Inspect for vibrations and unusual noises.
- 10. Test secureness of guards, doors and panels.
- 11. Verify operation of all indicators.
- 12. Inspect all structural elements for corrosion and damage.
- 13. Inspect motor windings for cleanliness.

## STARTER

- 1. Inspect wiring for secureness and damage.
- Megger motor at starter and record reading. \*\*
- 3. Inspect starter for signs of wear, arcing, overheating, burns, etc.
- 4. Inspect electrical connections for tightness and absence of moisture.
- 5. Measure and record operating voltage.
- 6. Measure and record operating amperage. \*\*

# <u>COMPREHENSIVE INSPECTION AND CALIBRATION – AUTOMATIC</u> TEMPERATURE CONTROLS

## AIR COMPRESSOR

- 1. Drain tank and check traps.
- Change oil and check oil pressure.
- 3. Check belt and sheaves; change as required.

- 4. Change suction filter semi-annually.
- 5. Inspect unloader and check valve.
- 6. Inspect high pressure safety valve.
- 7. Analyze motor operating conditions and lubricate.
- 8. Check PE switch, starter and alternator.
- Record compressor run time.
- 10. Record oil carryover rate. \*\*

#### REFRIGERATED AIR DRYER

- 1. Check refrigerant pressure and record.
- 2. Record refrigerant temperature.
- 3. Brush condenser and cover grills as required.
- 4. Operate drain trap and bypass valves.

## FILTER AND PRESSURE REDUCING STATION

- 1. Inspect coalescent filters and change.
- 2. Inspect charcoal filter and change.
- 3. Record pressure reducing valve setting, adjust as required.
- Operate drain trap and bypass valves.

## BOILER, CHILLER, COVERTOR, PUMPS AND ZONE CONTROLS

- 1. Check and calibrate all controllers.
- 2. Calibrate all transmitters and set receiver gages, as required.
- 3. Check all PE switches.
- Check all control valves.
- 5. Check all pilot positioners.
- 6. Check auxiliary control devices.

## FAN SYSTEMS AND HVAC UNIT CONTROLS

- 1. Review sequence of operation.
- 2. Check operation of all dampers and lubricate.
- 3. Check pilot positioners, calibrate.
- 4. Calibrate all controllers at least once annually.
- 5. Calibrate all transmitters and set receiver gauges, as required.
- 6. Check all solenoid air valves, PE switches and air valves for proper operation.
- Check auxiliary control devices.

#### ROOM-TERMINAL UNIT CONTROLS

- 1. Check all room stats and calibrate at least once annually.
- 2. Check operation of unit coil steam traps.

- Check operation of all dampers.
- 4. Check all PE switches, solenoid air valves and limit controls.
- 5. Check operation of auxiliary devices.

#### TERMINAL UNITS

Boxes – Mixing and Variable Air Volume (without Fan)

- 1. Inspect box for ductwork connection.
- 2. Lubricate and adjust dampers and linkage.
- 3. Verify operation of control.

#### **Electric Duct Heaters**

- 1. Inspect coil for damage to element.
- 2. Inspect isolators for damage or cracks.
- 3. Brush coil. Remove dust and debris (where accessible).
- 4. Torque heating terminals
- 5. Verify operation of control.
- 6. Verify staging of heating elements.

#### Induction Units

- 1. Visually inspect coil. Clean as required.
- 2. Check and clean drains and drain pans.

## OPERATIONAL INSPECTIONS - AUTOMATIC TEMPERATURE CONTROL

#### AIR COMPRESSOR

- Drain tank and check traps.
- 2. Check belt, sheaves, filter; change as required.
- Change suction filter as required.
- 4. Analyze motor operating conditions and lubricate.
- 5. Check PE switch, starter and alternator.

#### REFRIGERATED AIR DRYER

- 1. Check refrigerant pressure and record.
- 2. Record refrigerant temperature.
- 3. Brush condenser and cover grills as required.
- 4. Operate drain trap and bypass valves.

## COMPREHENSIVE ANNUAL INSPECTION CENTRIFUGAL CHILLERS

#### LUBE SYSTEM

- 1. Megger oil pump motor and record readings.
- 2. Measure and record oil pump voltage and amperage.
- 3. Inspect the starter for signs of overheating, arcing, burns, etc.
- 4. Verify operation of oil cooling system. \*\*
- 5. Tighten terminal connections on the oil pump motor.
- 6. Verify operation of the oil heater.
- 7. Change the compressor oil and filter.

## MOTOR AND STARTER

- 1. Clean starter cabinet.
- 2. Inspect starter and starter components for signs of discoloration, burns, moisture, etc.
- 3. Inspect wires for discoloration and burns.
- 4. Test accuracy of motor current (amp meter).
- Test tightness of terminal connections.
- 6. Check dash pot oil and add as necessary.
- 7. Megger motor at the starter terminals; record readings.
- 8. Measure operating voltage and record.

#### CONTROLS AND SAFETIES

- 1. Inspect the control panel for cleanliness, control air leaks, etc.
- 2. Inspect wiring and connections for signs of overheating, burns.
- 3. Verify operation of the van control system:
  - A. Check for free and smooth operation.
  - B. Check mechanical linkages for wear and secureness.
- 4. Report accuracy of all gauges and thermometers (use masters).
- 5. Verify working condition of all indicator and alarm lights.
- 6. Verify operation of start, stop and anti-recycle timers.
- 7. Test all flow switch cutouts (cw, chw). \*\*
- 8. Verify operation of oil temperature and pressure controller(s).
- 9. Test high oil temperature switch.
- 10. Test high compressor discharge switch.
- 11. Test high suction temperature switch.
- 12. Test high discharge temperature switch.
- 13. Test low suction pressure switch.
- 14. Verify operation of automatic and manual capacity control.
- 15. Test the operation of all pump auxiliary contacts (chw, cw, oil, etc.) \*\*

## COMPRESSOR AND VESSELS

- 1. Check for leaks and report results.
- 2. Check refrigerant charge.
- 3. Replace filter/dryer in motor cooling line. \*\*
- 4. Test the secureness of mounting points; tighten all major points.
- 5. Record refrigerant level.
- 6. Review machine operation with operator.
- 7. Log machine at departure.
- 8. Run complete interlocking circuit where possible.
- 9. Report machine condition and repair requirements (if any) where applicable.

## OPERATIONAL INSPECTION - HERMETIC CENTRIFUGAL CHILLERS

#### <u>SYSTEM</u>

- 1. Run and record a complete test log on the equipment.
- 2. Report unusual noises, vibrations, odors, etc.
- 3. Verify capacity control reaction.
- 4. Verify operation of van linkage.
- 5. Verify operation of flow switch.
- 6. Record refrigerant level as seen in sight glass.
- 7. Test complete interlocking circuit where possible.
- Record oil level as seen in sight glass.
- 9. Run full load test if operating conditions permit.
- 10. Check for leaks (high side).

#### STARTER

1. Open starter cabinet; check starter contacts for signs of overheating, arcing, burns, discoloration, etc.

#### LUBE SYSTEM

- 1. Inspect oil pump starter enclosure for cleanliness, moisture, and signs of oil.
- 2. Inspect the starter for overheating, arcing, burns, etc.
- Measure and record motor amperage.
- 4. Verify operation of the oil heater and oil cooler.
- 5. Confirm and record all operating temperatures, pressures, amperage, control panel readings, etc.
- 6. Upon completion, review machine operation with operator.
- 7. Report machine condition and repair requirements (if any).

## ADDITIONAL REQUIRED SERVICES

## A. CHILLERS AND OTHER ROTATING EQUIPMENT

All chillers shall have the following additional services provided:

1. Eddy Current Test of evaporator and condenser tubes shall be performed in the third and fifth year of this agreement. Contractor responsible for providing all necessary equipment to perform the analysis and provide detailed report to Owner.

The Eddy Current Test shall include as a minimum:

- a. Analysis
  - 1. Probe the full length of every tube to detect stress corrosion, O.D. corrosion, mechanical wear at supports, erosion, pitting, holes.
  - 2. Remove and replace any tubes designated by the testing to be in danger of failing.

## b. Report

Provide an analysis of the report certified by a technician with an NDT Level III Certification.

The written report will include the following:

- 1. Provide, in writing, identification of equipment used in the analysis and the calibration settings (e.g. gain sensitivity, etc.)
- 2. Provide a definition of "Good", "Marginal", "Needs Replacement" recommendation as related to graph readings.
- 3. Provide calibration graphs of good finning areas and good support areas.
- 4. Provide a list of the limits of the analysis, if any.
- 5. The report will individually include all tubes with location on graph verification, by row and tube number, which deviate from "Good".

The analysis technician will discuss the condition of the tubes with the owner before closing the equipment in order to facilitate any necessary repairs.

The written report will be available within ten days and include all aforementioned certifications.

2. Two (2) spectrochemical oil analysis per refrigeration compressor per year. These should be performed at midseason and at shut down with a final report as follow up.

Test shall identify the following: wear, presence of metal, dirt, condition of additives, viscosity index, and presence of water. THE FIRST SAMPLES SHALL BE TESTED WITHIN 30 DAYS FROM THE CONTRACT COMMENCEMENT DATE. Corrective action shall be the responsibility of the Contractor and will be performed at NO ADDITIONAL COST TO SUMMIT COUNTY.

A written analysis and report shall be provided to the Owner including:

- a. Provide laboratory analysis to identify twenty metallic elements which are measured by a direct reading spectrometer.
- b. Identify water content which will be reported in ppm, detectable to less that 1 ppm.
- c. Measure the viscosity of the sample at 40 degree C and report in centistokes.
- d. Measure total acid number and report.
- e. Provide a written report of all conditions and contents, to include:
  - 1. Unit/oil condition (normal, abnormal, critical).
  - 2. Suitability of oil for continued use.
  - 3. Recommendations for corrective action (if required.
  - 4. Answer to specific questions submitted with the sample.
- 3. One (1) vibration analysis per refrigeration compressor per year. This should be performed at the shut down time of

each cooing season. The Owner reserves the right to request a second analysis, per compressor, per year. For any compressor showing an alert condition or significant change in readings a final report shall be given to the Owner for each compressor not more than thirty (30) days after seasonal shutdown. Written report and analysis shall include:

- a. Compare machine vibration signature to modelspecific failure norms to detect motor/electrical, mechanical and hydraulic conditions and defects.
- b. Compare current data to prior diagnostic vibration samples to determine wear, failure trends, if sample are available.
- c. Report imminent failure condition to Owner verbally at time located.
- d. A written report of results and recommendations will be provided to the owner.

The written report will be available within ten days and will include:

- Written description of analysis procedures used to take readings.
- 2. Classifications of severity based on scale for centrifugal chillers.
- 3. Chiller identification data.
- 4. Vibration data for type of system, amplitude, orientation and severity.
- 5. Analysis/results of specific findings based on chiller vibration analysis.
- 6. Recommendations to include any specific actions warranted by the analysis.
- 7. Chiller measurement diagram showing diagnostic frequencies and measurement points.
- 8. Spectral plots indicating frequency, magnitude and identification of spectral peaks above threshold.
- 4. Condenser and evaporator tubes to be brushed in the third and fifth year of this agreement. A head removal and replacement with new gaskets to be performed by the contractor.

## B. COOLING TOWER CLEANING

The cooling tubes shall be cleared at least once annually. This cleaning shall include strainer, fill, float, cold water sump, basin and eliminators. Adjust float assembly if necessary.

## C. BOILERS

Boilers shall have both their fire side and water side cleaned in third and fifth years of the contract at a minimum.

#### FLUE GAS ANALYSIS

Burners shall be set up to optimum efficiency at least once annually in the beginning of the heating season. Provide a written report indicating calculated burner efficiency to include excess air and theoretical CO2.

## D. PNUEMATIC TEMPERATURE CONTROLS

## Control Valves: Annual Inspections

Inspect and verify operation of control valves on an annual basis. Operation is to be verified by disconnecting from pneumatic system and using squeeze bulb pressure gauge to stroke valve and verify operating spring range. Any leaking shall be repaired.

#### Thermostats:

Calibrate each thermostat AT LEAST once annually.

# E. <u>DIRECT DIGITAL CONTROL</u>, <u>MICRO PROCESSOR BASED</u> SYSTEM

Any and all software revisions as designated by the manufacturer and requested by the Owner during the term of this contract shall be implemented and utilized as soon as they are commercially available AT NO ADDITIONAL COST to the County of Summit.

1. The Contractor shall provide a TRAINED TECHNICIAN to perform services as outlined below:

#### a. Semi-Annually

1. Verify regulated power assembly and battery voltages, adjust as required.

- 2. Insure cabinet is a earth ground potential
- 3. Verify proper system electrical ground isolation.
- 4. Inspect and secure interconnecting cables and electrical connections.
- Via CDB, exercise all control devises with manual command functions and verify proper response of field hardware. Check all alarms and overrides using the scan functions.

Note: Review specific alarm override conditions with County of Summit personnel.

6. Clean external surfaces of the panel enclosure and associated field equipment units.

Note: Some of this equipment is in a highly-restricted area and may require pre-scheduling.

- Exercise point value display and PCR diagnostic selftest.
- 8. Test and verify operation of UPS equipment for emergency operation of OWS. Replace parts as necessary.

## b. Annually:

- 1. Inspect interior surfaces and components of the panel enclosure and associated field equipment unit and clean if required. Insure all mounted devices and plug-in components are securely in place.
- 2. Evaluate binary and analog points for proper operation and reporting. At the CDB, make a general performance review of all points.
- Check each individual critical point. Determine new or revised calibration coefficients as required. Make adjustments to connected FEU/field hardware as required.

- 4. ENTER REVISED CALIBRATION COEFFICIENTS INTO SOFTWARE after completing critical point procedures.
- 5. Review control loop for proper operation; i.e., controlled positions are stable at setpoint. If necessary, verify or adjust tuning constants, set points, parameter values and reset schedules.
- 6. Record any parameter values which are different than those shown on the metasys program listing.
- 7. Permanently record all changes in CPU program and on back-up discs.

## 2. REPAIR

All repair labor and materials associated with the direct digital control systems are to be included in this contract.

## F. WATER TREATMENT SERVICE

This Contractor shall be responsible for total water treatment service including any necessary cleaning of any water side equipment such as, condensers, sumps and cooling towers. The selection of a water treatment shall be sufficient to hold monthly test results within 7.0-8.0 ph, 160 ppm Alkalinity "M", 400 ppm hardness, 700-800 micro-mho TDS, 140-160 ppm chlorides, and system shall be kept free from algae. Summit County will retain approval rights on the proposed water treatment vendor.

#### 1. Equipment Included

WATER TREATMENT SYSTEM: Hot water system, chilled water system (open or closed), evaporative condensers, cooling towers, chilled water system, condenser water system, water softeners, and chilled and hot water circulating pumps.

#### 2. Services Included

- a. The Service Company shall provide the necessary labor and chemicals to properly maintain all water within the heating and cooling circulating system to control metal corrosion, scale formation, biological fouling, or contaminated discharge.
- b. Drain the system of existing water and treatment.

- c. Refill system with clean water and the required dosage of chemical treatment.
- d. Meet all existing and anticipated pollution controls standards. The chemical treatment used must be approved by the Owner.
- e. The Contractor shall provide the necessary parts, labor and materials to test and maintain the proper treatment level.
- f. The Service Company shall provide all labor to take test samples, adjust feet rates, change settings, drain and flush systems, service automatic monitoring equipment, manually inject chemicals (for closed systems) and provide a detailed water analysis and service report after performing those services as outlined above.

#### G. AIR FILTER SERVICE

1. Contractor shall provide air filter service which includes labor, frames, and replacement filter media and other materials necessary for this service. Replacement shall be as needed, with a minimum of four (4) changes per year.

#### 2. Air Filters:

- a. Filters shall be extended surface, pleated panel disposable filters.
- b. Replacement filters are to be as recommended by the equipment manufacturer and must fit properly so as not to allow the passage of air around them.
- c. A wire grid shall be bonded to the leaving air side of the filter to support the media and to maintain the uniform shape of the pleats.
- d. The frame shall be two pieces, die-cut from heavy duty chipboard, one on the entering air side and one on the leaving air side. Then assembled, the two mating halves of the frame shall overlap to provide a double wall on all four sides. The pleated media rack shall be bonded to the inside of the frame, forming a totally unitized construction and providing a positive seal against leakage.

- e. Average efficiency shall be 25 to 30% based on ASHREA 52-76 test method. Performance tolerances shall conform to Section 7.4 of AR1 Standard 850-78.
- f. Filters shall be U.L. Class 2 approved band listed. Testing and performance shall be according to U.L. Standard 900.

NOTE: Accessibility to filters in some air handling units is very limited and special, multiple smaller filters may be required.

## H. COOLING COIL DRAIN PANS

Pans are to be inspected on a monthly basis to ensure that they are draining properly and do not contain biological growth. Pans are to be cleaned and disinfected quarterly during filter changing.

## I. <u>EMERGENCY SERVICE</u>

#### PREVENTATIVE MAINTENANCE AND EMERGENCY SERVICE CALL

- 1. The Service Company shall schedule and perform the preventative maintenance services on no less than a monthly basis.
  - a. After each service call a service report shall be left with the Owner detailing the work accomplished.
  - b. Two of the scheduled service calls shall include the system start-up and the system shut-down, for the appropriate season.
- 2. The Service Company shall provide emergency service on an as required basis. Emergency service shall be considered as calls in addition to the scheduled preventative maintenance calls.
  - a. All labor, overtime, travel costs, parts, supplies and any other expenses incurred and expended on such a call shall be provided by the Service Company and shall be included in the cost of the service program.
  - b. The emergency service shall be provided as often as needed, on a 24-hour basis, weekends and legal holidays included.
  - c. The Service Company shall be capable of having personnel on site and commencing corrective action to an emergency situation within two (2) hours.

d. Emergency service response system shall be professionally manned telephone answering service. <u>Automatic answering/recording machines or home telephone numbers are not acceptable.</u>

## J. MAINTENANCE PROCEDURES AND RECORDS

- 1. The Service Company shall utilize computer generated preventative maintenance directions, which indicate task functions to be performed on each scheduled service call, as determined by calendar periods, operating hours, (runtime), manufacturer's recommendations, and historical data bank, if available.
- 2. As work is due, the Service Company shall issue, to his mechanic on the job, the necessary and appropriate recommended maintenance procedures and a listing of any special lubricants, tools, etc., that are required for proper maintenance of the apparatus concerned.
- 3. The Service Company's administration system shall provide for continuous updating of maintenance procedures and frequencies. Breakdown experience and frequency shall determine the on-site material inventory level and preventative maintenance frequencies.
- 4. During the course of the service program, the Service Company shall advise and assist in the determination of improvements to the mechanical system that shall conserve energy and minimize utility expenditures.

#### K. PERFORMANCE REVIEW

- 1. The Owner's agent may review, at any time, the services provided and reports submitted, to verify that the preventative maintenance is, in fact, being properly and adequately performed. Any lack of maintenance service, complaints, or deficiencies in the performance of the services shall be submitted to the Service Company in writing for correction.
- 2. For problems or deficiencies of significant importance or of a continual nature, a time period of compliance shall be established after discussion and mutual agreement. Failure of the Service Company to correct the deficiencies within the time period agreed upon shall constitute cause for termination of the services and/or withholding of payment.

## L. PARTS AND COMPLETE REPLACEMENTS

- 1. The Contractor will repair or replace worn parts or complete components with new parts. Reconditioned components may be used only when delivery time of new components is excessive, and it is mandatory to get a piece of equipment in operation.
- Damage obviously due to vandalism will be reimbursable by the County of Summit Department of Physical Plants to the Contractor for replacement parts used plus the labor necessary to install parts.

#### M. PARTS INVENTORY

1. ON-SITE: The Contractor shall maintain an on-site inventory of maintenance and replacement parts for each type of machine, in an area designated by the agent of the County of Summit.

This inventory shall contain at a minimum: (3) of each type of thermostats, (1) oil filter cartridge, (1) intake air filter cartridge, (2) universal sensors, (1) set of belts for air compressor cooling tower, (1) set of belts for each size of air handling units, (3) diaphragms for valve actuators or replacement valve actuators, (3) diaphragms for damper actuators or replacement damper actuators, 100 feet of polyethylene tubing, (2) pints compressor oil, (40) 12 vcd plug in relays (for use in energy management system), (1) E/P solenoid valve, miscellaneous pneumatic fittings, (1) mixed air low limit thermostat, (1) processor controller board (master).

The Contractor shall obtain all other needed parts in the quickest way possible at no additional cost to the County.

The above listed parts must meet the parts requirements as specified elsewhere in this specification.

2. TRUCK OR LOCAL WAREHOUSE INVENTORY: To assure the quickest repair time possible, the Contractor must maintain an inventory on the local service trucks or in the <u>local</u> warehouse consisting of a minimum of: (1) field interface controller, (1) control display board, (2) regulated power assemblies, (2) back-up batteries for digital system controllers, (2) electric to pneumatic analog transducers, (2) pressure to electric analog transducers, (1) process control board, (2) application specific controllers, (6) bulb temperature element sensors, (4) 120v to 24 vac transformers, (1) transmitter/receiver board, (1) communication enhancement board, (2) backup batteries to be replaced bi-annually.

The above listed parts must meet the part requirements as specified elsewhere in this specification.

## N. SPECIAL CONDITIONS

- 1. The Contractor shall not be required to install new equipment or additional controls as recommended by any governmental authority. Contractor shall be compensated for any expense, parts or labor which are incurred for such installation.
- 2. The Contractor shall coordinate, as required, all pressure vessel inspections.
- 3. It is agreed that the County of Summit Agent will provide general access to all devices which are to be serviced. The Contractor shall be free to start and stop all primary equipment incidental to the operation of the mechanical system(s) as arranged with and directed by the County of Summit Agent or other duly authorized representative. The County of Summit Agent will take responsibility for equipment malfunction where such access is denied.
- 4. The Contractor shall not be liable for any loss, delay, injury or damage, whether direct or consequential, that may be caused by conditions beyond the Contractor's direct control including, but not limited to, acts of government, strikes, lockouts, fire, explosions, theft, riot, civil commotion, war, malicious mischief, floods and other acts of God.
- 5. All employees of the Contractor who will be working within the facility will be required to submit to a background check conducted by the Summit County Sheriff's Department.
- 6. The following items pertaining to the system are not included under this agreement:
  - a. The replacement or repair of non-moving parts of heating, cooling, and ventilating equipment, such as fan ductwork, etc., unless damaged by the Contractor during the performance of his work.
  - Maintenance or repair of electrical wiring (other than as related to control system), plumbing, oil storage tanks, oil and/or gasoline and domestic water lines.

- 7. This maintenance contract shall begin \_\_\_\_\_\_ and continue for a period of five (5) years. The County of Summit Department of Physical Plants has the right to cancel this contract upon thirty (30) days notice to make the correction. Should cancellation occur, a refund of the sum paid by the County of Summit Department of Physical Plants will be pro-rated on the basis of unused portion of the contract period paid for. No service charge, handling fees or other penalties for cancellation will be accessible.
- 8. Both parties must agree that the contract is not transferable or assignable.
- 9. It is further understood that no other agreement, oral or written, expressed or implied, shall limit or qualify the terms of this agreement unless such additional agreement is accepted in writing by both parties.
- 10. It should further be understood that, should any major components of the system be replaced by the County of Summit Agent, a credit shall be issued by the Contractor pro-rated over the period of time in the contract period during which service and repair of the new equipment is covered by the manufacturer's or installer's warranty.

<sup>\*\*</sup> Where applicable

# SUMMIT COUNTY JAIL EQUIPMENT LIST

EQUIPMENT TYPE	MODEL / SIZE	QUANTITY
McQuay chiller	250 Tons	1
McQuay chiller	126 Tons	1
McQuay chiller	235 Tons #PFH050KAJ	1
Cooling Tower	425 Tons	1
Cooling Tower, EVAPCO	Model AT 8-318B	1
Heat Exchanger	1367 GPM	1
Ice Storage Pit	1367 GPM	1
Hot Water Boiler, York Shipley	80 HP	2 2
Hot Water Boiler, Reliance	40 HP	
Power Burners	2 HP	4
Pumps	5 – 7.5 HP	4
Pumps	15 HP	2
Pumps	20 HP	4
AHU	¾ to 3 HP	87
Fan Coil Units	¼ HP	8
Make Up Air Units	Gas Fired	2
Exhaust Fans Roof Exhaust Fans	1/6 to 5 HP	115
Cabinet Heaters	2 to 5 HP	5 4
Unit Heaters		23
Fin Tube Radiation Heaters		9
VAV Boxes – Pneumatic		34
VAV Boxes – Enviro-Tel		7
Air Compressor – Duplex	7.5 HP	1
Domestic Water Heaters	Aerco KC Series	8
Fire Pump	. 10.00 110 001100	1
Thermostats	Pneumatic	315
Thermostats	Electronic	7
Water Valves		207
Damper Actuator		244
Positioners		60
Air Switching Valves		88
Receiver Controllers		1
Air PRV's		5
Johnson Controls Elect. Valve Actua	27	
J.C. Butterfly Valves – VF Series	2 25	
J.C. 2 & 3 Way Terminal Unit Valves – VT Series		
Ruskin Low Leakage Dampers		14
Taco Air Separators	AC6 – AC8	3

# Equipment list continued:

Relia Relia Relia Relia	Expansion Tank  Ince VTAC 111 Controller  Ince VTAC 111 Controller  Ince VTAC 111 Controller  Ince VTACV Digital PWM Drive  Ince VTACV Digital PWM Drive  LER EMERGENCY GENERATORS	PS808, PS135, CA215, CA1400 3 HP 2 HP 1 HP 3 HP 7.5 HP	5 4 2 2 1 3
100, Aug Bulb Humi Press Elect Relay Relay Digita	125 and 350 KW Temp Sensors Temp Sensors idity Sensors sure Sensors keye 700 Status Sensors sure Feedback Transducers . Press Transducer	JAND TRANSPER SWITCHES	3 180 93 63 9 12 22 308 45 226 60 25
CPU Printe Color Mode Digita Digita Applio	er Monitor		2 2 2 4 8 7 68 1

The above equipment and quantities are approximate. The Contractor is responsible for his own count. Any equipment, device or quantity not listed here but designated as covered by the specification are also included.