



MARION COUNTY BOARD OF COMMISSIONERS

Board Session Agenda Review Form

[Print Form](#)

Meeting date: January 22, 2020

Department: Business Services Agenda Planning Date: January 16, 2020 Time required: 10

☐ Audio/Visual aids

Contact: Colleen Coons-Chaffins Phone: 503-373-4426

Department Head Signature: 

TITLE

Marion County Business Services is requesting approval for the replacement of six existing boiler, back up water heater and control systems Public Improvement Agreement with Hydro Temp Mechanical, Inc.

Issue, Description & Background

Marion County Business Services conducted an Invitation to Bid (ITB), for a public improvement contract for the jail boiler, water heater and control systems contract on September 9, 2019. A total of three bids were received. Hydro Temp Mechanical provided the lowest base bid.

Financial Impacts:

Contract Award base bid, plus all bid alternates \$269,700.00

Impacts to Department & External Agencies

Business Services, Jail, and Jail Population

Options for Consideration:

1. Approve the PIA with Hydro Temp Mechanical, Inc.
2. Withhold approval at this time

Recommendation:

Business Services staff recommends approval of the PIA with Hydro Temp Mechanical, Inc

List of attachments:

Hydro Temp Mechanical Inc., Public Improvement Agreement

Presenter:

Kevin Burton & Larry Tilford

Copies of completed paperwork sent to the following: (Include names and e-mail addresses.)

Copies to:

Tina Toney, Business Services ttoney@co.marion.or.us



Marion County
OREGON

FINANCE DEPARTMENT

Contract Review Sheet

Contract #: **BS-3234-19**

Person Sending: **Tina Toney**

Department: **Business Services**

Contact Phone #: **x4388**

Date Sent: **Tuesday, January 7, 2020**

☒ Contract ☐ Amendment# ☐ Lease ☐ IGA ☐ MOU ☐ Grant (attach approved grant award transmittal form)

Title: **MC Jail Boiler Replacment**

Contractor's Name: **Hydro Temp**

Term - Date From: **Upon Notice to Proceed**

Expires: **10/5/2020**

Contract Total: **\$269,700.00**

Amendment Amount: _____

New Contract Total: _____

Source Selection Method: **Formal Bid (attach transmittal)**

624-19

Additional Considerations (check all that apply)

☐ Board Order# _____

☐ Incoming Funds

☐ Independent Contractor (LECS) approval date: _____

☐ Insurance Waiver (attach)

☐ CIP# **19-014** (required for all goods /software greater than \$5,000)

☐ Feasibility Determination (attach approved form)

☐ Federal Funds (attach sub-recipient / contractor analysis)

☐ Reinstatement (attach written justification)

☐ Retroactive (attach written justification)

Description of Services or Grant Award:

Contractor was successful bidder on the ITB 624-19 (CMS SOL ID#654)

Contractor is to complete Jail Boiler Replacement per plans and specification. Payment and Performance Bond to be supplied once contract is executed. No work to be performed until bonds are secured and notice to proceed issued. Contract shall remain active for a period of ninety (90) business days beyond the Final Completion date to perform final administrative contract closeout procedures as defined in MC General Conditions Section E and K. CA: Kevin Burton

FOR FINANCE USE

Date Finance Received: _____

BOC Planning Date: _____

Date Legal Received: _____

Comments: _____

REQUIRED APPROVALS:

Finance - Contracts

Date

Risk Manager

Date

Legal Counsel

Date

Chief Administrative Officer

Date

Date _____ ☐ To be filed ☐ Added to Finance Table

☐ Date _____ Returned to department for signature



Marion County
OREGON
FINANCE DEPARTMENT

Solicitation Award Transmittal

Submitted By: Tina Toney Department: Business Services

Contact Phone #: X4388 Date Sent: Tuesday, November 19, 2019

Solicitation Name: MC Jail Boiler Replacement C25102-BS624-19

Formal: ☒ Bid ☐ RFP Advertising Date: 2019-09-25 Close Date: 2019-10-23
Quote: ☐ Verbal ☐ Written ☐ IRFP

Addenda Issued/Date
#1 2019-10-04 #2 #3 #4

Solicitations Received From (or attach solicitation summary)

Contractor Name	Bid-Quote Amount/Proposal Score
Hydro Temp Mechanical	Base Bid \$183,400
Ellis Mechanical	Base Bid \$188,200
Oregon Cascade	Base Bid \$193,000

Bid/Proposal in compliance for all requirements: ☒ Yes ☐ No (Detailed explanation required if "No" is checked)

Fiscal Impact (Description of impact)

Base Bid, plus all Alternates total award \$269,700.00 ✓

Service: 8022 Account: 534100 Project #080285

DEPARTMENT RECOMMENDATION

Name: Hydro Temp Mechanical

- ☒ Award to Low Bid-Quote/Highest Rank Proposal ☐ Multiple Awards
☐ Award to other than Low Bid-Quote/Highest Rank Proposal (Attach written support)
☐ Reject All Bids/Proposals (Attach written justification for rejection of all bids/proposals)

Finance Use: (when required)

Date Finance Received: 11/25/19

Comments:

* Awarded to Lowest "BASE" Bid.

* Cms is up to date

Solicitation Award Approval:

[Signature] 11/25/19 [Signature] 11/26/19
Finance Contracts / Date Chief Administrative Officer / Date

Date paperwork returned to department: 11/29/19



PROJECT: Jail Boiler Replacement (C25102-BS-624-19)

Advertised Date: June 25, 2019 Close Date: October 23, 2019 2:30 PM (PST)

Bidder's Name	AMOUNT Bid	Pricing Submittal Form Exhibit 1	Bid Security Requirements Section D	CCB Registration Section G	Addenda Acknowledgement Section H	Responsibility Contractor Reference Section I	Signature of Bidder Section O	Residency Information Section K	Responsive Bidder	No
1 Hydro Temp	Base 183,400	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1st TIE Receiv
	Alt 1 36,900									
	Alt 2 49,400									
	Total 269,700									
2 Oregon Cascade Plumbing & Heating	Base 193,000	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1st TI Rece
	Alt 1 29,995									
	Alt 2 44,000									
	Total 266,995									
Ellis Mechanical	Base 188,200	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1st TIE Receiv
	Alt 1 33,200									
	Alt 2 38,600									
	Total 260,000									



HYDRMEC-01

CSPHINNEY

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

12/23/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Anchor Insurance & Surety, Inc. 1201 SW 12th Ave. Suite 500 Portland, OR 97205	CONTACT NAME: Charris Sonne-Phinney	
	PHONE (A/C, No, Ext): (503) 224-2500 FAX (A/C, No): (503) 224-9830	
	E-MAIL ADDRESS: CSPhinney@anchorias.com	
INSURED Hydro-Temp Mechanical, Inc. 28465 SW Boberg Road Wilsonville, OR 97070	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A: Valley Forge Insurance Co.	20508
	INSURER B: Continental Insurance Company	35289
	INSURER C: SAIF Corporation	36196
	INSURER D: Great American E & S Insurance	37532
	INSURER E:	
	INSURER F:	

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	X	X	5088404468	10/1/2019	10/1/2020	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 15,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 WA STOP GAP \$ 1,000,000
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY	X	X	6072797074	10/1/2019	10/1/2020	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$	X	X	6072429199	10/1/2019	10/1/2020	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory In NH) <input type="checkbox"/> Y/N If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	X	786072	10/1/2019	10/1/2020	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
A	Builders Risk/Instal			5088404468	10/1/2019	10/1/2020	Deduct 2,500/Blanket \$ 1,000,000
D	Professional & Poll			PCM 3949055 07	10/1/2019	10/1/2020	Occ 2,000,000/ Aggre \$ 4,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Job HTM #20-05-011

C25102-BS-624-19 ITB MC Jail Boiler Replacement

Certificate Holder and All Required Entities are Additional Insured; Coverage is Primary & Non-Contributory, and Waiver of Subrogation Applies When Required by Written Contract. Endorsements Attached: CNA74705XX 01/15, CNA75079XX 10/16, CNA74987XX 01/15, CNA63359XX 04/12, WC000313.

CERTIFICATE HOLDER

Marion County Oregon
PO Box 14500
Salem, OR 97309

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

**Contractors' General Liability Extension Endorsement****1. ADDITIONAL INSURED**

- a. **WHO IS AN INSURED** is amended to include as an Insured any person or organization described in paragraphs A. through H. below whom a Named Insured is required to add as an additional Insured on this Coverage Part under a written contract or written agreement, provided such contract or agreement:

(1) is currently in effect or becomes effective during the term of this Coverage Part; and

(2) was executed prior to:

(a) the bodily injury or property damage; or

(b) the offense that caused the personal and advertising injury,

for which such additional Insured seeks coverage.

- b. However, subject always to the terms and conditions of this policy, including the limits of insurance, the Insurer will not provide such additional Insured with:

(1) a higher limit of insurance than required by such contract or agreement; or

(2) coverage broader than required by such contract or agreement, and in no event broader than that described by the applicable paragraph A. through H. below.

Any coverage granted by this endorsement shall apply only to the extent permissible by law.

A. Controlling Interest

Any person or organization with a controlling interest in a Named Insured, but only with respect to such person or organization's liability for bodily injury, property damage or personal and advertising injury arising out of:

1. such person or organization's financial control of a Named Insured; or

2. premises such person or organization owns, maintains or controls while a Named Insured leases or occupies such premises;

provided that the coverage granted by this paragraph does not apply to structural alterations, new construction or demolition operations performed by, on behalf of, or for such additional Insured.

B. Co-owner of Insured Premises

A co-owner of a premises co-owned by a Named Insured and covered under this insurance but only with respect to such co-owner's liability for bodily injury, property damage or personal and advertising injury as co-owner of such premises.

C. Lessor of Equipment

Any person or organization from whom a Named Insured leases equipment, but only with respect to liability for bodily injury, property damage or personal and advertising injury caused, in whole or in part, by the Named Insured's maintenance, operation or use of such equipment, provided that the occurrence giving rise to such bodily injury, property damage or the offense giving rise to such personal and advertising injury takes place prior to the termination of such lease.

D. Lessor of Land

Any person or organization from whom a Named Insured leases land but only with respect to liability for bodily injury, property damage or personal and advertising injury arising out of the ownership, maintenance or use of such land, provided that the occurrence giving rise to such bodily injury, property damage or the offense giving rise to such personal and advertising injury takes place prior to the termination of such lease. The

**Contractors' General Liability Extension Endorsement**

a. the Named Insured's acts or omissions; or

b. the acts or omissions of those acting on the Named Insured's behalf,

in the performance of the Named Insured's ongoing operations at the trade show event premises during the trade show event.

2. The coverage granted by this paragraph does not apply to bodily injury or property damage included within the products-completed operations hazard.

2. ADDITIONAL INSURED - PRIMARY AND NON-CONTRIBUTORY TO ADDITIONAL INSURED'S INSURANCE

The Other Insurance Condition in the COMMERCIAL GENERAL LIABILITY CONDITIONS Section is amended to add the following paragraph:

If the Named Insured has agreed in writing in a contract or agreement that this Insurance is primary and non-contributory relative to an additional Insured's own insurance, then this Insurance is primary, and the Insurer will not seek contribution from that other insurance. For the purpose of this Provision 2., the additional Insured's own insurance means insurance on which the additional Insured is a named Insured. Otherwise, and notwithstanding anything to the contrary elsewhere in this Condition, the insurance provided to such person or organization is excess of any other insurance available to such person or organization.

3. BODILY INJURY - EXPANDED DEFINITION

Under DEFINITIONS, the definition of bodily injury is deleted and replaced by the following:

Bodily injury means physical injury, sickness or disease sustained by a person, including death, humiliation, shock, mental anguish or mental injury sustained by that person at any time which results as a consequence of the physical injury, sickness or disease.

4. BROAD KNOWLEDGE OF OCCURRENCE/ NOTICE OF OCCURRENCE

Under CONDITIONS, the condition entitled Duties In The Event of Occurrence, Offense, Claim or Suit is amended to add the following provisions:

A. BROAD KNOWLEDGE OF OCCURRENCE

The Named Insured must give the Insurer or the Insurer's authorized representative notice of an occurrence, offense or claim only when the occurrence, offense or claim is known to a natural person Named Insured, to a partner, executive officer, manager or member of a Named Insured, or an employee designated by any of the above to give such notice.

B. NOTICE OF OCCURRENCE

The Named Insured's rights under this Coverage Part will not be prejudiced if the Named Insured fails to give the Insurer notice of an occurrence, offense or claim and that failure is solely due to the Named Insured's reasonable belief that the bodily injury or property damage is not covered under this Coverage Part. However, the Named Insured shall give written notice of such occurrence, offense or claim to the Insurer as soon as the Named Insured is aware that this Insurance may apply to such occurrence, offense or claim.

5. BROAD NAMED INSURED

WHO IS AN INSURED is amended to delete its Paragraph 3. in its entirety and replace it with the following:

3. Pursuant to the limitations described in Paragraph 4. below, any organization in which a Named Insured has management control:
- a. on the effective date of this Coverage Part; or

**Contractors' General Liability Extension Endorsement**

(2) If the cause of loss to the damaged work arises as a result of:

- (a) fire;
- (b) smoke;
- (c) collapse; or
- (d) explosion.

B. The following paragraph is added to LIMITS OF INSURANCE:

Subject to 5. above, \$100,000 is the most the Insurer will pay under Coverage A for the sum of damages arising out of any one occurrence because of property damage to your product and your work that is caused by fire, smoke, collapse or explosion and is included within the product-completed operations hazard. This sublimit does not apply to property damage to your work if the damaged work, or the work out of which the damage arises, was performed on the Named Insured's behalf by a subcontractor.

C. This Broadened Liability Coverage For Damage To Your Product And Your Work Provision does not apply if an endorsement of the same name is attached to this policy.

7. CONTRACTUAL LIABILITY – RAILROADS

With respect to operations performed within 50 feet of railroad property, the definition of Insured contract is replaced by the following:

Insured Contract means:

- a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for damage by fire to premises while rented to a Named Insured or temporarily occupied by a Named Insured with permission of the owner is not an insured contract;
- b. A sidetrack agreement;
- c. Any easement or license agreement;
- d. An obligation, as required by ordinance, to indemnify a municipality, except in connection with work for a municipality;
- e. An elevator maintenance agreement;
- f. That part of any other contract or agreement pertaining to the Named Insured's business (including an indemnification of a municipality in connection with work performed for a municipality) under which the Named Insured assumes the tort liability of another party to pay for bodily injury or property damage to a third person or organization. Tort liability means a liability that would be imposed by law in the absence of any contract or agreement.

Paragraph f. does not include that part of any contract or agreement:

(1) That indemnifies an architect, engineer or surveyor for injury or damage arising out of:

- (a) Preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
- (b) Giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage;

(2) Under which the Insured, if an architect, engineer or surveyor, assumes liability for an injury or damage arising out of the Insured's rendering or failure to render professional services, including those listed in (1) above and supervisory, inspection, architectural or engineering activities.

8. ELECTRONIC DATA LIABILITY

CNA74705XX (1-15)

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VALLEY FORGE INSURANCE COMPANY

Insured Name: HYDRO-TEMP MECHANICAL, INC.

Policy No: 5088404468

Endorsement No: 3

Effective Date: 10/01/2019

**Contractors' General Liability Extension Endorsement**

claims arising solely out of their capacity or status as such and, in the case of a spouse, where such claim seeks damages from marital community property, jointly held property or property transferred from such natural person insured to such spouse. No coverage is provided for any act, error or omission of an estate, heir, legal representative, or spouse outside the scope of such person's capacity or status as such, provided however that the spouse of a natural person Named Insured and the spouses of members or partners of joint venture or partnership Named Insureds are Insureds with respect to such spouses' acts, errors or omissions in the conduct of the Named Insured's business.

10. EXPECTED OR INTENDED INJURY – EXCEPTION FOR REASONABLE FORCE

Under COVERAGES, Coverage A – Bodily Injury and Property Damage Liability, the paragraph entitled Exclusions is amended to delete the exclusion entitled Expected or Intended Injury and replace it with the following:

This insurance does not apply to:

Expected or Intended Injury

Bodily injury or property damage expected or intended from the standpoint of the insured. This exclusion does not apply to bodily injury or property damage resulting from the use of reasonable force to protect persons or property.

11. GENERAL AGGREGATE LIMITS OF INSURANCE - PER PROJECT

A. For each construction project away from premises the Named Insured owns or rents, a separate Construction Project General Aggregate Limit, equal to the amount of the General Aggregate Limit shown in the Declarations, is the most the insurer will pay for the sum of:

1. All damages under Coverage A, except damages because of bodily injury or property damage included in the products-completed operations hazard; and
2. All medical expenses under Coverage C,

that arise from occurrences or accidents which can be attributed solely to ongoing operations at that construction project. Such payments shall not reduce the General Aggregate Limit shown in the Declarations, nor the Construction Project General Aggregate Limit of any other construction project.

B. All:

1. Damages under Coverage B, regardless of the number of locations or construction projects involved;
2. Damages under Coverage A, caused by occurrences which cannot be attributed solely to ongoing operations at a single construction project, except damages because of bodily injury or property damage included in the products-completed operations hazard; and
3. Medical expenses under Coverage C caused by accidents which cannot be attributed solely to ongoing operations at a single construction project,

will reduce the General Aggregate Limit shown in the Declarations.

C. The limits shown in the Declarations for Each Occurrence, for Damage To Premises Rented To You and for Medical Expense continue to apply, but will be subject to either the Construction Project General Aggregate Limit or the General Aggregate Limit shown in the Declarations, depending on whether the occurrence can be attributed solely to ongoing operations at a particular construction project.

D. When coverage for liability arising out of the products-completed operations hazard is provided, any payments for damages because of bodily injury or property damage included in the products-completed operations hazard will reduce the Products-Completed Operations Aggregate Limit shown in the Declarations, regardless of the number of projects involved.

**Contractors' General Liability Extension Endorsement**

any actual or alleged violation of law with respect to Medicare, Medicaid, Tricare or any similar federal, state or local governmental program.

Services Excluded by Endorsement

Any health care incident for which coverage is excluded by endorsement.

C. DEFINITIONS is amended to:**I. add the following definitions:**

Health care incident means an act, error or omission by the Named Insured's employees or volunteer workers in the rendering of:

- a. professional health care services on behalf of the Named Insured or
- b. Good Samaritan services rendered in an emergency and for which no payment is demanded or received.

Professional health care services means any health care services or the related furnishing of food, beverages, medical supplies or appliances by the following providers in their capacity as such but solely to the extent they are duly licensed as required:

- a. Physician;
- b. Nurse;
- c. Nurse practitioner;
- d. Emergency medical technician;
- e. Paramedic;
- f. Dentist;
- g. Physical therapist;
- h. Psychologist;
- i. Speech therapist;
- j. Other allied health professional; or

Professional health care services does not include any services rendered in connection with human clinical trials or product testing.

II. delete the definition of occurrence and replace it with the following:

Occurrence means a health care incident. All acts, errors or omissions that are logically connected by any common fact, circumstance, situation, transaction, event, advice or decision will be considered to constitute a single occurrence;

III. amend the definition of Insured to:**a. add the following:**

the Named Insured's employees are Insureds with respect to:

- (1) bodily injury to a co-employee while in the course of the co-employee's employment by the Named Insured or while performing duties related to the conduct of the Named Insured's business; and

**Contractors' General Liability Extension Endorsement****J. Damage to Property**

Property damage to:

- (1) Property the **Named Insured** owns, rents, or occupies, including any costs or expenses incurred by you, or any other person, organization or entity, for repair, replacement, enhancement, restoration or maintenance of such property for any reason, including prevention of injury to a person or damage to another's property;
- (2) Premises the **Named Insured** sells, gives away or abandons, if the property damage arises out of any part of those premises;
- (3) Property loaned to the **Named Insured**;
- (4) Personal property in the care, custody or control of the **Insured**;
- (5) That particular part of real property on which the **Named Insured** or any contractors or subcontractors working directly or indirectly on the **Named Insured's** behalf are performing operations, if the property damage arises out of those operations; or
- (6) That particular part of any property that must be restored, repaired or replaced because your work was incorrectly performed on it.

Paragraphs (1), (3) and (4) of this exclusion do not apply to property damage (other than damage by fire) to premises rented to the **Named Insured** or temporarily occupied by the **Named Insured** with the permission of the owner, nor to the contents of premises rented to the **Named Insured** for a period of 7 or fewer consecutive days. A separate limit of insurance applies to Damage To Premises Rented To You as described in **LIMITS OF INSURANCE**.

Paragraph (2) of this exclusion does not apply if the premises are your work.

Paragraphs (3), (4), (5) and (6) of this exclusion do not apply to liability assumed under a sidetrack agreement.

Paragraph (6) of this exclusion does not apply to property damage included in the products-completed operations hazard.

Paragraphs (3) and (4) of this exclusion do not apply to property damage to:

- i. tools, or equipment the **Named Insured** borrows from others, nor
- ii. other personal property of others in the **Named Insured's** care, custody or control while being used in the **Named Insured's** operations away from any **Named Insured's** premises.

However, the coverage granted by this exception to Paragraphs (3) and (4) does not apply to:

- a. property at a job site awaiting or during such property's installation, fabrication, or erection;
- b. property that is mobile equipment leased by an **Insured**;
- c. property that is an auto, aircraft or watercraft;
- d. property in transit; or
- e. any portion of property damage for which the **Insured** has available other valid and collectible insurance, or would have such insurance but for exhaustion of its limits, or but for application of one of its exclusions.

A separate limit of insurance and deductible apply to such property of others. See **LIMITS OF INSURANCE** as amended below.

**Contractors' General Liability Extension Endorsement**

B. Under COVERAGES, the Insuring Agreement of Coverage C – Medical Payments is amended to replace Paragraph 1.a.(3)(b) with the following:

(b) The expenses are incurred and reported to the Insurer within three years of the date of the accident; and

18. NON-OWNED AIRCRAFT

Under COVERAGES, Coverage A – Bodily Injury and Property Damage Liability, the paragraph entitled Exclusions is amended as follows:

The exclusion entitled Aircraft, Auto or Watercraft is amended to add the following:

This exclusion does not apply to an aircraft not owned by any Named Insured, provided that:

1. the pilot in command holds a currently effective certificate issued by the duly constituted authority of the United States of America or Canada, designating that person as a commercial or airline transport pilot;
2. the aircraft is rented with a trained, paid crew to the Named Insured; and
3. the aircraft is not being used to carry persons or property for a charge.

19. NON-OWNED WATERCRAFT

Under COVERAGES, Coverage A – Bodily Injury and Property Damage Liability, the paragraph entitled Exclusions is amended to delete subparagraph (2) of the exclusion entitled Aircraft, Auto or Watercraft, and replace it with the following.

This exclusion does not apply to:

(2) a watercraft that is not owned by any Named Insured, provided the watercraft is:

- (a) less than 75 feet long; and
- (b) not being used to carry persons or property for a charge.

20. PERSONAL AND ADVERTISING INJURY –DISCRIMINATION OR HUMILIATION

A. Under DEFINITIONS, the definition of personal and advertising injury is amended to add the following tort:

Discrimination or humiliation that results in injury to the feelings or reputation of a natural person.

B. Under COVERAGES, Coverage B – Personal and Advertising Injury Liability, the paragraph entitled Exclusions is amended to:

1. delete the Exclusion entitled Knowing Violation Of Rights Of Another and replace it with the following:

This insurance does not apply to:

Knowing Violation of Rights of Another

Personal and advertising injury caused by or at the direction of the Insured with the knowledge that the act would violate the rights of another and would inflict personal and advertising injury. This exclusion shall not apply to discrimination or humiliation that results in injury to the feelings or reputation of a natural person, but only if such discrimination or humiliation is not done intentionally by or at the direction of:

- (a) the Named Insured; or
 - (b) any executive officer, director, stockholder, partner, member or manager (if the Named Insured is a limited liability company) of the Named Insured.
2. add the following exclusions:

**Contractors' General Liability Extension Endorsement**

- B. Solely for the purpose of the coverage provided by this **PROPERTY DAMAGE – ELEVATORS** Provision, the Other Insurance conditions is amended to add the following paragraph:

This Insurance is excess over any of the other Insurance, whether primary, excess, contingent or on any other basis that is Property Insurance covering property of others damaged from the use of elevators.

23. SUPPLEMENTARY PAYMENTS

The section entitled **SUPPLEMENTARY PAYMENTS – COVERAGES A AND B** is amended as follows:

- A. Paragraph 1.b. is amended to delete the \$250 limit shown for the cost of bail bonds and replace it with a \$5,000. limit; and
- B. Paragraph 1.d. is amended to delete the limit of \$250 shown for daily loss of earnings and replace it with a \$1,000. limit.

24. UNINTENTIONAL FAILURE TO DISCLOSE HAZARDS

If the Named Insured unintentionally fails to disclose all existing hazards at the inception date of the Named Insured's Coverage Part, the Insurer will not deny coverage under this Coverage Part because of such failure.

25. WAIVER OF SUBROGATION - BLANKET

Under **CONDITIONS**, the condition entitled **Transfer Of Rights Of Recovery Against Others To Us** is amended to add the following:

The Insurer waives any right of recovery the Insurer may have against any person or organization because of payments the Insurer makes for injury or damage arising out of:

1. the Named Insured's ongoing operations; or
2. your work included in the products-completed operations hazard.

However, this waiver applies only when the Named Insured has agreed in writing to waive such rights of recovery in a written contract or written agreement, and only if such contract or agreement:

1. is in effect or becomes effective during the term of this Coverage Part; and
2. was executed prior to the bodily injury, property damage or personal and advertising injury giving rise to the claim.

26. WRAP-UP EXTENSION: OCIP, CCIP, OR CONSOLIDATED (WRAP-UP) INSURANCE PROGRAMS

Note: The following provision does not apply to any public construction project in the state of Oklahoma, nor to any construction project in the state of Alaska, that is not permitted to be insured under a consolidated (wrap-up) insurance program by applicable state statute or regulation.

If the endorsement **EXCLUSION – CONSTRUCTION WRAP-UP** is attached to this policy, or another exclusionary endorsement pertaining to Owner Controlled Insurance Programs (O.C.I.P.) or Contractor Controlled Insurance Programs (C.C.I.P.) is attached, then the following changes apply:

- A. The following wording is added to the above-referenced endorsement:

With respect to a consolidated (wrap-up) insurance program project in which the Named Insured is or was involved, this exclusion does not apply to those sums the Named Insured become legally obligated to pay as damages because of:

1. Bodily injury, property damage, or personal or advertising injury that occurs during the Named Insured's ongoing operations at the project, or during such operations of anyone acting on the Named Insured's behalf; nor



ENDORSEMENT: EXTENDED COVERAGE (E.C.O.) - BUSINESS AUTO POLICY

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

I. LIABILITY COVERAGE

A. Who Is An Insured

The following is added to **Section II, Paragraph A.1., Who Is An Insured:**

1. a. Any incorporated entity of which the Named Insured owns a majority of the voting stock on the date of inception of this Coverage Form; provided that,
 - b. The insurance afforded by this provision A.1. does not apply to any such entity that is an insured under any other liability "policy" providing auto coverage.
2. Any organization you newly acquire or form, other than a limited liability company, partnership or joint venture, and over which you maintain majority ownership interest.

The insurance afforded by this provision A.2.:

- a. Is effective on the acquisition or formation date, and is afforded only until the end of the policy period of this Coverage Form, or the next anniversary of its inception date, whichever is earlier.
- b. Does not apply to:
 - (1) Bodily injury or property damage caused by an accident that occurred before you acquired or formed the organization; or
 - (2) Any such organization that is an insured under any other liability "policy" providing auto coverage.
3. Any person or organization that you are required by a written contract to name as an additional insured is an insured but only with respect to their legal liability for acts or omissions of a person, who qualifies as an insured under **SECTION II - WHO IS AN INSURED** and for whom Liability Coverage is afforded under this policy. If required by written contract, this insurance will be primary and non-contributory to insurance on which the additional insured is a Named Insured.
4. An employee of yours is an insured while operating an auto hired or rented under a contract or agreement in that employee's name, with your permission, while performing duties related to the conduct of your business.

"Policy", as used in this provision A. Who Is An Insured, includes those policies that were in force on the inception date of this Coverage Form but:

1. Which are no longer in force; or
2. Whose limits have been exhausted.

B. Bail Bonds and Loss of Earnings

Section II, Paragraphs A.2. (2) and A.2. (4) are revised as follows:

1. In a.(2), the limit for the cost of bail bonds is changed from \$2,000 to \$5,000; and
2. In a.(4), the limit for the loss of earnings is changed from \$250 to \$500 a day.

Form No: CNA63359XX (04-2012)

Endorsement Effective Date:

Endorsement No: 10; Page: 1 of 4

Underwriting Company: The Continental Insurance Company, 151 N Franklin St, Chicago, IL 60606

Endorsement Expiration Date:

Policy No: BUA 6072797074

Policy Effective Date: 10/01/2019



F. Electronic Equipment

Section III, Paragraphs B.4.c and B.4.d, are deleted and replaced by the following:

- c. Physical Damage Coverage on a covered auto also applies to loss to any permanently installed electronic equipment including its antennas and other accessories
- d. A \$100 per occurrence deductible applies to the coverage provided by this provision.

G. Diminution In Value

The following is added to Section III, Paragraph B.6.:

Subject to the following, the diminution in value exclusion does not apply to:

- a. Any covered auto of the private passenger type you lease, hire, rent or borrow, without a driver for a period of 30 days or less, while performing duties related to the conduct of your business; and
- b. Any covered auto of the private passenger type hired or rented by your employee without a driver for a period of 30 days or less, under a contract in that individual employee's name, with your permission, while performing duties related to the conduct of your business.
- c. Such coverage as is provided by this provision is limited to a diminution in value loss arising directly out of accidental damage and not as a result of the failure to make repairs; faulty or incomplete maintenance or repairs; or the installation of substandard parts.
- d. The most we will pay for loss to a covered auto in any one accident is the lesser of:
 - (1) \$5,000; or
 - (2) 20% of the auto's actual cash value (ACV).

III. Drive Other Car Coverage – Executive Officers

The following is added to Sections II and III:

- 1. Any auto you don't own, hire or borrow is a covered auto for Liability Coverage while being used by, and for Physical Damage Coverage while in the care, custody or control of, any of your "executive officers", except:
 - a. An auto owned by that "executive officer" or a member of that person's household; or
 - b. An auto used by that "executive officer" while working in a business of selling, servicing, repairing or parking autos.

Such Liability and/or Physical Damage Coverage as is afforded by this provision.

- (1) Equal to the greatest of those coverages afforded any covered auto; and
- (2) Excess over any other collectible insurance.

- 2. For purposes of this provision, "executive officer" means a person holding any of the officer positions created by your charter, constitution, by-laws or any other similar governing document, and, while a resident of the same household, includes that person's spouse.

Such "executive officers" are insureds while using a covered auto described in this provision.

IV. BUSINESS AUTO CONDITIONS

A. Duties In The Event Of Accident, Claim, Suit Or Loss

The following is added to Section IV, Paragraph A.2.a.:

Form No: CNA63359XX (04-2012)

Endorsement Effective Date:

Endorsement No: 10; Page: 3 of 4

Underwriting Company: The Continental Insurance Company, 151 N Franklin St, Chicago, IL 60606

Endorsement Expiration Date:

Policy No: BUA 6072797074

Policy Effective Date: 10/01/2019



CNA PARAMOUNT

**Blanket Additional Insured - Owners, Lessees or
Contractors - with Products-Completed
Operations Coverage Endorsement**

This endorsement modifies Insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

It is understood and agreed as follows:

- I. The **WHO IS AN INSURED** section is amended to add as an Insured any person or organization whom the Named Insured is required by written contract to add as an additional Insured on this coverage part, including any such person or organization, if any, specifically set forth on the Schedule attachment to this endorsement. However, such person or organization is an Insured only with respect to such person or organization's liability for:
 - A. unless paragraph B. below applies,
 1. bodily injury, property damage, or personal and advertising injury caused in whole or in part by the acts or omissions by or on behalf of the Named Insured and in the performance of such Named Insured's ongoing operations as specified in such written contract; or
 2. bodily injury or property damage caused in whole or in part by your work and included in the products-completed operations hazard, and only if
 - a. the written contract requires the Named Insured to provide the additional insured such coverage; and
 - b. this coverage part provides such coverage.
 - B. bodily injury, property damage, or personal and advertising injury arising out of your work described in such written contract, but only if:
 1. this coverage part provides coverage for bodily injury or property damage included within the products completed operations hazard; and
 2. the written contract specifically requires the Named Insured to provide additional insured coverage under the 11-85 or 10-01 edition of CG2010 or the 10-01 edition of CG2037.
- II. Subject always to the terms and conditions of this policy, including the limits of insurance, the Insurer will not provide such additional insured with:
 - A. coverage broader than required by the written contract; or
 - B. a higher limit of insurance than required by the written contract.
- III. The insurance granted by this endorsement to the additional insured does not apply to bodily injury, property damage, or personal and advertising injury arising out of:
 - A. the rendering of, or the failure to render, any professional architectural, engineering, or surveying services, including:
 1. the preparing, approving, or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; and
 2. supervisory, inspection, architectural or engineering activities; or
 - B. any premises or work for which the additional insured is specifically listed as an additional insured on another endorsement attached to this coverage part.
- IV. Notwithstanding anything to the contrary in the section entitled **COMMERCIAL GENERAL LIABILITY CONDITIONS**, the Condition entitled **Other Insurance**, this insurance is excess of all other insurance available to the additional insured whether on a primary, excess, contingent or any other basis. However, if this insurance is required by written

CNA75079XX (1-15)

Page 1 of 2

VALLEY FORGE INSURANCE COMPANY

Insured Name: HYDRO-TEMP MECHANICAL, INC.

Policy No: 5088404468

Endorsement No: 10

Effective Date: 10/01/2019





CNA PARAMOUNT

**Primary and Noncontributory - Other Insurance
Condition Endorsement**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

It is understood and agreed that the condition entitled **Other Insurance** is amended to add the following:

Primary And Noncontributory Insurance

Notwithstanding anything to the contrary, this insurance is primary to and will not seek contribution from any other insurance available to an additional insured under this policy provided that:

- a. the additional insured is a named insured under such other insurance; and
- b. the Named Insured has agreed in writing in a contract or agreement that this insurance would be primary and would not seek contribution from any other insurance available to the additional insured.

All other terms and conditions of the Policy remain unchanged.

This endorsement, which forms a part of and is for attachment to the Policy issued by the designated Insurers, takes effect on the effective date of said Policy at the hour stated in said Policy, unless another effective date is shown below, and expires concurrently with said Policy.

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CNA74987XX (1-15)

Page 1 of 1

VALLEY FORGE INSURANCE COMPANY

Insured Name: HYDRO-TEMP MECHANICAL, INC.

Policy No: 5088404468

Endorsement No: 17

Effective Date: 10/01/2019

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MARION COUNTY PUBLIC IMPROVEMENT AGREEMENT
for
JAIL BOILER REPLACEMENT

This Agreement for the **Marion County Jail Boiler Replacement** (the "Agreement"), made by and between Marion County, a political subdivision of the state of Oregon, on behalf of **Business Services**, hereinafter called Owner, and **Hydro Temp Mechanical, Inc.**, hereinafter called the Contractor (collectively the "Parties"), is effective on the date this Agreement has been signed by all the Parties and all required Marion County governmental approvals have been obtained. Unless otherwise defined in the Invitation to Bid or in this Agreement, the capitalized terms used herein are defined in Section A.1 of the Marion County General Conditions for Public Improvement Contracts

WITNESSETH:

1. Contract Price, Contract Documents and Work.

The Contractor, in consideration of the sum of **\$269,700.00** (the "Contract Price"), to be paid to the Contractor by Owner in the manner and at the time hereinafter provided, and subject to the terms and conditions provided for in the Invitation to Bid, this Public Improvement Agreement, Marion County General Conditions for Public Improvement Contracts and other Contract Documents, all of which are incorporated herein by reference, hereby agrees to perform all Work described and reasonably inferred from the Contract Documents.

The Contract Price includes the following items:

Base Bid \$ 183,400.00

Alt #1 \$ 36,900.00

Alt #2 \$49,400.00

Total Contract \$269,700.00

2. Representatives.

Unless otherwise specified in the Contract Documents, the Owner designates **Colleen Coons-Chaffins** as its Authorized Representative in the administration of this Contract. The above-named individual shall be the initial point of contact for matters related to performance, payment, authorization, and to carry out the responsibilities of the Owner. Contractor has named **Jared Carkin** its Authorized Representative to act on its behalf.

3. Contract Dates.

PROJECT START DATE: **Upon Notice to Proceed**

SUBMISSION OF SCHEDULE OF VALUES: Fourteen days from execution of this Agreement

SUBSTANTIAL COMPLETION: **May 1, 2020**

FINAL COMPLETION: **June 1, 2020**

4. RESERVED

5. Integration

THE CONTRACT DOCUMENTS CONSTITUTE THE ENTIRE AGREEMENT BETWEEN THE PARTIES. NO WAIVER, CONSENT, MODIFICATION OR CHANGE OF TERMS OF THIS CONTRACT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY BOTH PARTIES. SUCH WAIVER, CONSENT, MODIFICATION OR CHANGE, IF MADE, SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. THERE ARE NO OTHER UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS CONTRACT. CONTRACTOR, BY THE SIGNATURE BELOW OF ITS AUTHORIZED REPRESENTATIVE, HEREBY ACKNOWLEDGES THAT IT HAS READ THIS CONTRACT, UNDERSTANDS IT, AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

6. Authority to Execute

Contractor covenants, represents and warrants to Owner that the person(s) executing this Contract on behalf of the Contractor have the actual authority to bind the Contractor to the terms of the Agreement.

In witness whereof, Marion County, a political subdivision of the state of Oregon, on behalf of **Board of Commissioners**, executes this Agreement and the Contractor does execute the same as of the day and year of this Agreement first above written.

7. CONTRACTOR

CONTRACTOR NAME: Hydro Temp Mechanical, Inc.

CONTRACTOR ADDRESS: 28465 SW Boberg Rd

CONTRACTOR ADDRESS: Wilsonville, OR 97070

CONTRACTOR'S CCB # 63907 Expiration Date: 5/1/2020

CONTRACTOR'S SIGNATURE: _____
Date


8. MARION COUNTY

BOARD OF COMMISSIONERS:

Chair Date

Commissioner Date

Commissioner Date

 1-8-2020
Department Head Date

Marion County Procurement and Contracts Date

Marion County Legal Date

Chief Administrative Officer Date

CBD ENGINEERING, LLC

MECHANICAL SYSTEMS DESIGN

MARION COUNTY JAIL BOILER REPLACEMENT PROJECT

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SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

- 1.1 Work Covered by Contract Documents
 - A. Work covers Boiler Replacement at the Marion County Jail, located at 4000 Aumsville Hwy, Salem OR.
- 1.2 Related Requirements Specified Elsewhere:
 - A. Section 15050: Basic Mechanical Materials and Methods.
 - B. Section 16050: Basic Electrical Materials and Methods.
- 1.3 General Summary of Work
 - A. Refer to specifications and details for further requirements.
 - B. Replace existing boilers, typical of 6.
 - C. Replace existing boiler pumps, typical of 6.
 - D. Reconnect new boilers to existing Automated Logic Building Control System.
- 1.4 Contractor's Duties
 - A. Except as specifically noted, Contractor shall provide and pay for:
 - 1. Labor, materials and equipment, tools, construction equipment and machinery.
 - 2. Transportation and other facilities and services essential for proper execution and completion of his work.
 - B. Give required notices, comply with codes, ordinances, rules regulations and other legal requirements of public authorities which bear on performance of work.
 - C. Promptly submit written notice to The Engineer of observed variance of Contract Documents from legal requirements. Assume responsibility for work known to be contrary to such requirements when notice is not forwarded.
 - D. Maintain safe and healthy work environment.
 - E. Enforce strict discipline and good order among employees.
 - F. Employ only persons skilled in assigned tasks.
- 1.5 Permits and Fees
 - A. The contractor secures the building permit.
 - B. The Contractor will pay all plan checking and permit fees.
 - C. It is not the SubContractor's responsibility to make certain that drawings and specifications comply with codes and regulations.

MARION COUNTY JAIL BOILER REPLACEMENT PROJECT

1.6 Contractor's use of premises

- A. Confine operations at site to areas permitted by law, ordinances, permits and Contract Documents.
- B. Do not unreasonably encumber site with materials or equipment.
- C. Do not load structure with weight that will endanger structure.
- D. Assume full responsibility for protection and safekeeping of products stored on premises.
- E. Move any stored products which interfere with operations of Owner or other Subcontractors.
- F. Contractor or contractor's force will not have access to the Project Site or improvements outside the limits-of-work, except as expressly invited and accompanied by Owner Representative.

1.7 Building Activities During Construction

- A. The building and site will be occupied and open for business during construction. Schedule all activity with the Project Coordinator.
- B. Subcontractors are to schedule work around activities of owner.
- C. Noisy work is to be conducted with approval from the owner.
- D. Coordinate all activities with the Owner to assure full and continuing use of the occupied facilities.
- E. Boiler down time is to be limited, boilers are typically operating year round.

END OF SECTION

MARION COUNTY JAIL BOILER REPLACEMENT PROJECT

SECTION 01027

APPLICATION FOR PAYMENT

PART 1. GENERAL

1.1 Schedule of Values

- A. Prior to initiation of work, submit a Schedule of Values covering various line item parts of work including quantities aggregating the total sum of the Contract. Form and content shall be acceptable to Owner and Engineer.
- B. Submit updated Schedule of Values with application for payment and progress schedule form every 30 days.

1.2 Application for Payment

- A. Execute Applications for Payment on AIA Document G702 and G703.
- B. Include itemized statements of original sum, additions and deductions due to Change Orders, deduction for previous payments and sum remaining due. Round off values to the nearest dollar.
- C. Obtain original sums from Schedule of Values.
- D. Include Retainage as required by General Conditions and Supplementary conditions.
- E. Submit Application for Payment every 30 days.

1.3 Change Order Procedure

- A. Execute a copy of AIA Document G713, Construction Change Directive.
- B. Complete accounting and indicate new Contract Sum and new Date of Completion as revised by Change Order.
- C. Submit an itemized list of labor and materials including overhead and profit with each Construction Change Directive.
- D. Submit copies of estimating sheets when requested by the Engineer.
- E. Owner will complete authorized Change Directives using AIA Form G701, Change Order, to adjust Contract Sum or Contract Time as applicable.
- F. When field instructions or document interpretations are issued which, in the opinion of the Contractor, require additional costs to the Owner, do not proceed without written authorization. Additional work undertaken without written directive by the Engineer, for whatever reason, will not be considered for additional cost.

END OF SECTION

SECTION 01050

COORDINATION OF WORK

PART 1 GENERAL

1.1 General

- A. The General Contractor is responsible for overall coordination of the Project.
- B. Cooperation among the various crafts and contracts is essential for the proper execution of the work and is the responsibility of each Subcontractor.

1.2 Job Conditions

- A. Contract Documents show and describe overall installation, capacities and characteristics of equipment.
- B. Mechanical and electrical drawings are diagrammatic and do not show every offset, bend or elbow which may be required for installation in the space provided.
- C. Include all items required for a complete installation whether or not shown or described.
- D. Follow indicated routing of pipes, ducts and conduits as closely as practicable.
- E. Provide clearances and headroom and utilize spaces efficiently to maintain adequate accessibility for future maintenance, repairs and additions.
- F. Relocate installed work which does not provide adequate accessibility.
- G. Existing facilities are located as accurately as can be determined from existing drawings and on-site inspections. Verify actual conditions.

1.3 Coordination

- A. Perform all essential work to receive or join with work of all trades, cut new services into existing mains, extend piping and make essential connections required to prevent interruption of service to existing facilities.
- B. Coordinate work to provide adequate clearances for installation and maintenance of equipment.
- C. Contract Documents are arranged for convenience only and do not necessarily determine which trades perform the various portions of the work.

END OF SECTION

MARION COUNTY JAIL BOILER REPLACEMENT PROJECT

SECTION 01070

CUTTING AND PATCHING

PART 1 GENERAL

1.1 Related Requirements Specified Elsewhere

- A. Section 01010: Summary of Work
- B. Section 15050: Basic Mechanical Materials and Methods.
- C. Section 16050: Basic Electrical Materials and Methods.

1.2 General

- A. Execute cutting, fitting or patching of work required to:
 - 1. Make several parts fit properly
 - 2. Uncover work
 - 3. Remove and replace defective work
 - 4. Remove and replace work not conforming to requirements of Contract Documents
 - 5. Install specified work in existing construction.
- B. In addition to contract requirements, upon written instructions of Owner's Authorized Representative, uncover work to provide for Owner's Authorized Representative observation of covered work and remove samples of installed material for testing.
- C. Do not endanger any work by cutting or altering work or any part of it.

1.3 Submittals

- A. Prior to cutting which affects structural safety request consent to proceed with cutting by written notice to Engineer.
- B. Include identification of Project, description of affected work, necessity for cutting and effect on other work or structural integrity of Project.
- C. Describe proposed work and designate scope of cutting, patching and refinishing.
- D. Designate party responsible for cost of cutting and patching.

1.4 Payment for Costs

- A. Cost caused by ill-timed or defective work or work not conforming to Contract Documents including costs for additional services of Owner is to be borne by the party responsible for the deficiency.

PART 2 PRODUCTS

2.1 Materials

- A. For replacement of work removed, comply with specifications for type of work to be done.

PART 3 EXECUTION

3.1 Inspection

- A. Inspect existing conditions of work including elements subject to movement or damage during cutting, and patching.
- B. After uncovering work, inspect conditions affecting installation of new products.

3.2 Preparation

- A. Prior to cutting provide shoring, bracing and support as required to maintain structural integrity of Project.
- B. Provide protection from elements for other portions of Project.
- C. Protect all surfaces during construction including but not limited to counter tops, floors, cabinetry, walls and ceilings. Clean affected areas on a continual basis. Protect surrounding surfaces as required.

3.3 Performance

- A. Execute fitting and adjustment of products to provide finished installation conforming with specified tolerances.
- B. Execute cutting and demolition by methods which will prevent damage to other work and provide proper surfaces to receive installation of repairs and new work.
- C. Restore work which has been cut or removed; install new products to provide completed work in accord with requirements of Contract Documents.
- D. Refinish entire surface as necessary to provide an even finish. Refinish continuous surfaces to nearest intersections. Refinish assemblies in entirety.
- E. Protect all surfaces (i.e., counter tops, floors, cabinetry, walls and ceilings) during construction.
- F. Clean affected area on a continuous basis. Protect surrounding surfaces as required.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.1 General

- A. Submit to the Engineer all shop drawings, product data and samples required by the Specifications.
- B. The contractor for each bid package is solely responsible for the submittals pertaining to that work.

1.2 Subcontractor's Responsibilities

- A. Each Subcontractor is required to review submittal information prior to submitting it to the Engineer to insure that it is in full compliance with the Contract Documents.
- B. The Subcontractor will indicate clearly if any portion of the submittal deviates from the Contract Documents.
- C. Begin no work requiring submittals prior to receiving the Engineers review.
- D. Any work begun prior to the Engineer's review is at the Contractors risk.
- E. The Contractor is solely responsible for installing work in accordance with the plans and specifications.
- F. The review of shop drawings and product data does not relieve the Contractor of the responsibility of complying fully with the Contract Documents.
- G. Errors and omissions in shop drawings not noted during the Engineers review are still the Contractor's responsibility.
- H. Deviations from the Contract Documents must be specifically approved in writing by the Engineer.

1.3 Submittal Requirements

- A. Schedule submission at least twenty (10) calendar days prior to the date the reviewed submittal will be needed.
- B. The Engineer will review and return all submittals within seven (7) working days.
- C. Resubmittal may be required for submittals not in compliance with the Contract Documents.
- D. Unless otherwise noted in the specifications submit five (3) copies of all required shop drawings and product information.
- E. One copy will be retained by the Engineer and the remaining copies will be returned along with the review comments.
- F. Include a transmittal form with all submittals listing the following information:
 - 1. Date of Submission
 - 2. Project Title
 - 3. The names of Contractor, Supplier and Manufacturer

MARION COUNTY JAIL BOILER REPLACEMENT PROJECT

4. Identification of the product and specification section to which it applies.
5. Identification of any deviations from the Contract Documents.
6. Contractor's stamp signed by the Contractor indicating that the submittal has been reviewed and is in compliance with the Contract Documents.
7. Transmittal Form: AIA Document G810 or Contractor's typical office transmittal form, as selected at Preconstruction Conference.

END OF SECTION

SECTION 01350

PROJECT SCHEDULE

PART 1 - GENERAL

1.1 General

- A. Completion of this project on schedule is critical.
- B. Contractor is expected to furnish labor, materials and equipment as required to meet the project schedule.

1.2 Project Schedule

- A. Substantial Completion Date – 30 days from date of Notice to Proceed.
- B. Final Completion Date – 60 days from date of Notice to Proceed.
- C. The General Contractor will provide an initial Project Schedule indicating the start dates and durations of all contract work at the preconstruction meeting.
- D. Notify the Engineer immediately if for any reason the schedule cannot be met.
- E. Inability to meet the schedule may be grounds to select another Contractor.
- F. Review the schedule for conflicts which may affect the work.

1.3 Schedule Contents

- A. Contractor's Construction Progress Schedule:
 - 1. Show complete sequence or construction by activity.
 - 2. Show dates for beginning, and completion, of each major element of work.
- B. Submittal Schedule for Shop Drawings, Product Data, and Samples:
 - 1. Show dates for Contractor's submittals.
 - 2. Show dates approved submittals will be required from the Engineer.
- C. Products Delivery Schedule

1.4 Compliance with Schedules

- A. Contractor furnished materials, labor and equipment necessary to comply with the schedule.
- B. The Contractor will begin work promptly when notified by the Engineer and continue with sufficient men so as not to delay the progress of the job.
- C. Liquidated damages will be assessed at the rate of \$300 per calendar day with the accumulated total damages not to exceed 5% of the Contractor's total Contract amount.
- D. If any site condition prevents a contractor from keeping the Schedule, the Contractor must notify the Engineer immediately.
- E. If the situation cannot be remedied within 24 hours the Contractor may notify the Engineer within 72 hours and request an extension of time.

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- F. Contract Time Extensions will be issued solely at the discretion of the Owner.
 - G. Delays which are not brought to the attention of the Engineer as outlined above will not be considered for extensions.
 - H. Should the Contractor fail to employ sufficient competent help to complete the work in the given time, the Owner may, after giving forty-eight hours written notice, by letter or telegram mailed to the last known address of the Contractor, employ help to complete the work and charge the same to the Contractors account and/or charge the Contractor any penalties due to their failure to complete on the given date.
 - I. If the cost of completing the work exceeds the contract price, the Contractor agrees to reimburse the Owner for any sums over and above the contract price.
 - J. If the cost of completing the work does not exceed the remaining contract amount, any excess will be paid to the Contractor.
- 1.5 Revision of Schedule
- A. The Owner reserves the right to update the Project Schedule Periodically to reflect the actual progress of the Project.
 - B. Revised schedules will be distributed to all Contractors.
 - C. In the event that the Contractor feels for any reason unable to comply with the revised schedule he must notify the Engineer in writing within 48 hours.
 - D. If the Engineer is not notified of any problems, the new schedule will become the official job schedule.

END of SECTION

SECTION 01500

CONSTRUCTION FACILITIES AND SERVICES

PART 1. GENERAL

1.1 Temporary Utilities

A. Temporary Water

1. Water and toilets will be provided by the Owner for construction purposes.
2. The Owner will pay for cost of water for clean-up and general wash down functions.

B. Temporary Heat and Ventilation

1. General Contractor to provide temporary heating if work is not completed per schedule. Facility to be maintained at 68 degrees Fahrenheit.
2. Do not use direct vented heaters.
3. Comply with manufacturer's directions and these specifications for necessary environmental conditions

C. Temporary Barricades

1. Sub-contractor provides barricades and lighting to protect pedestrian and vehicular traffic during their work.

D. Temporary Fire Suppression

1. Sub-contractor provides fire extinguishing equipment suitable for suppression of fire in combustible materials on site.
2. Maintain current inspection tags on all fire suppression equipment.

E. Construction Phone.

1. At all times during construction, from date of Project initiation until substantial completion, Contractor agrees to maintain a representative, capable of administering contract matters, and in contact by cellular phone, 24 hours a day, 7 days a week, same number maintained through duration of project or in person at the job site.

1.2 Requirements of Regulatory Agencies

- A. Comply with applicable federal, state and local codes.

1.3 Submittal

- A. Before beginning construction of each temporary facility, provide information and drawings as required to describe fully the facilities.

1.4 Toilet Facilities

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- A. Contractor may use existing building toilet facilities for normal personal use. Restrooms and fixtures may not be used for any construction purpose. Contractor to clean any soil or debris, repair any damage resulting from use of the building toilet facilities.

PART 2 PRODUCTS

2.1 Materials

- A. All materials and equipment to be fully listed for the actual use.

PART 3 - EXECUTION

3.1 Preparation

- A. Consult with Owner to review jobsite areas required for field offices, material storage and stockpiles, equipment storage, access to different locations, etc., for approval of the Owner. At no time is the Contractor to drive any vehicle over the septic system.

3.2 Performance

- A. Confine equipment, apparatus and storage of materials to minimum areas acceptable to the Engineer.
- B. The Owner will not be responsible for protection of materials and equipment from damage, pilfering, etc.
- C. Install temporary facilities in such manner that finished work will not be damaged.
- D. Keep facilities well maintained.
- E. Fires from burning debris, scrap, etc., will not be permitted.

3.3 Vehicle Parking & Material Storage Spaces

- A. Locate vehicle parking and material storage as determined at Preconstruction Conference.

3.4 Roads, Traffic Way

- A. Traffic to building site will be allowed only where roadways are indicated, and then only where use will not damage work of other contracts.
- B. Do not allow vehicles with lugs or flanges on paved surfaces.
- C. Provide heavier traffic bearing surfaces where required for construction equipment.

3.5 Dust Control

- A. Protect persons and property, both on and off site and within existing buildings, from injury and discomfort caused by dust as a result of work.
- B. Use industry accepted materials which will produce no detrimental effects

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on completed work.

3.6 Protection of Existing Facilities

- A. Protect existing survey monuments, fence lines, underground utilities and drainage facilities not indicated to be removed against displacement, damage or removal.
- B. Fully restore, to original condition, existing facilities disturbed by operations of this Contract at no additional cost to Owner.

3.7 Adjust and Clean

- A. Relocate temporary facilities as required during job progress.
- B. Except as otherwise directed, remove temporary facilities at completion of job in accordance with Owners' direction.
- C. Restore disturbed areas to a satisfactory condition, similar to surrounding areas.

END of SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes special procedures and Work described as part of project closeout, and a description of closeout submittals such as record drawings, operation manuals, and warranties.
- B. Items to be Completed or Corrected: Contractor inspects the Work and prepares a list of deficiencies for submittal to the Engineer.

1.2 SYSTEM DESCRIPTION

- A. When the Contractor considers the Work substantially complete, he shall submit to the Engineer a written notice that Work (or designated portion thereof) is substantially complete, together with a list of minor work to be completed or corrected. Within a reasonable time after receipt of this notice, the Engineer will make an inspection to determine the actual status of completion.
- B. Should the Engineer determine that the work is in fact not substantially complete, he will promptly notify the Contractor in writing, giving the reasons. The Contractor shall remedy the deficiencies in the Work, and send a second written notice of Substantial Completion to the Engineer.
- C. When the Engineer concurs that the Work is substantially complete, he will:
 - 1. Notify the Owner of, and accompany the Owner on an inspection of the Project.
 - 2. Prepare a Certificate of Substantial Completion on AIA Form G704, accompanied by Contractor's list of items to be completed or corrected, as verified and amended by the Engineer and the Owner.
 - 3. Submit the Certificate to the Contractor and the Owner for their written acceptance of the responsibilities assigned to them in the Certificate.
- D. The Contractor will be allowed no longer than 30 calendar days from the date of Substantial Completion to request that the Engineer make his final inspection for acceptance as final completion.
- E. When the Contractor considers the Work Complete, he shall submit a letter to the Engineer stating that the Contract Documents have been reviewed, and that the Work has been inspected for compliance with Contract Documents.
 - 1. Submission implies that the Contractor has, to the best of his knowledge, completed the Work in accordance with the Contract Documents, including "punch list" items, that equipment and systems have been tested in the presence of the Owner and are operational, and that the Work is completed and ready for final inspection and for

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certificate of occupancy by the local code enforcement agency.

2. The Engineer will make an inspection to verify the status of completion with reasonable promptness after receipt of the Contractor's letter.
- F. If the Engineer considers the Work incomplete or defective, he will promptly notify the Contractor in writing, listing the incomplete or defective Work, and send a copy to the Owner. The Contractor shall then take immediate steps to remedy the stated deficiencies, and send second written notice indicating that the Work is complete, whereupon the Work will be re-inspected. When the Project is determined to be acceptable under the Contract Documents, the Contractor may proceed with closeout submittals.

1.3 SUBMITTALS

- A. Project record documents/drawings (three copies).
- B. Evidence of compliance with requirements of governing authorities including the certificate of occupancy, and certain other certificates of inspection and use permits as required for elevators, wheelchair lifts, and other mechanical and electrical equipment.
- C. Schedules, Reports, and Product Data: Finalized copies of schedules, reports, and product data submitted under Division 1 Section "Submittal Procedures". Also comply with all requirement of Divisions 15 and 16.
- D. Operations and Maintenance Manuals: Operation instructions and maintenance data, including maintenance personnel instructions, service manuals, and specifications, to be bound in black 3-ring binders, indexed with dividers, for a legible, permanent reference. Submit three copies of instruction books which shall include the following information:
 1. Binder covers with title "Operations and Maintenance Manuals", the title of the Project, and subject matter for the binder when multiple binders are used.
 2. Name, address, and phone number of the firm/person who installed the equipment or system.
 3. Name, address and phone number of the nearest service facility authorized by the manufacturer.
 4. Complete technical information, such as electrical and mechanical schematics, diagrams, parts lists, data sheets, connection details, and similar data.
 5. Operating instructions such as start up procedures, inspection and maintenance routines.
 6. If standard product literature covers more than one model type, the correct model number and data for the item installed shall be neatly checked off in ink.
 7. If the system or equipment is unique, custom written information shall be provided.

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8. Schedule as many training sessions as necessary with the maintenance personnel. Cover topics such as system start-up, operation and maintenance procedures. Training sessions shall be conducted by the appropriate subcontractors, with the assistance from the Engineer.
 - E. All warranties and bonds.
 - F. Keys and badges.
 - G. Spare parts and extra stock.
 - H. Evidence of payment, release of liens and final wage certificates.
 - I. Certificate of insurance for products and completed operations.
 - J. Final payment and release of retainage will be withheld until all closeout submittals have been received and approved by the Owner.
- 1.4 Related Requirements
- A. Section 00700 – General Conditions: Fiscal Provisions, legal submittals and related administrative requirements.
 - B. Section 01010 – Summary of Work
 - C. Section 01500 – Construction Facilities and Services, Cleaning During Construction.
 - D. Other related Sections.

END OF SECTION

SECTION 01710

CLEANING

PART 1 GENERAL

- 1.1 Related Requirements Specified Elsewhere
 - A. Section 01010: Summary of Work
 - B. Section 01050: Coordination.
 - C. Section 01700: Contract Closeout.
 - D. Respective specification sections.
- 1.2 General
 - A. Maintain Owner's property and public properties free from accumulations of waste, debris and rubbish caused by operations.
 - B. Remove crates, cartons and other flammable waste materials from work areas at end of each working day.
 - C. Areas inaccessible after completion of project are to be left free of debris before space is closed in.
 - D. Exercise caution to avoid marring, soiling or otherwise defacing finished surfaces.
 - E. Clean and restore defaced surfaces to original condition.
 - F. Clean up immediately following completion of each trade's work. Clean up to be performed on a continuous basis. Remove all debris at the end of each shift.
 - G. At completion of work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials; clean all sight-exposed surfaces and leave project clean and ready for occupancy.
- 1.3 Safety Requirements
 - A. Maintain project in accord with applicable safety and insurance standards.
 - B. Prevent accumulations of waste, debris and rubbish which create hazardous conditions.
 - C. Provide adequate ventilation during use of volatile or noxious substances.
 - D. Do not burn rubbish and waste materials; remove from Owner's property and legally dispose.
- 1.4 Cleaning Materials
 - A. Use only materials recommended by manufacturer of surface to be cleaned.
 - B. Use cleaning material only on surfaces recommended by cleaning materials manufacturer.
- 1.5 Cleaning During Construction

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- A. Contractor to provide waste removal during construction.
- B. General Contractors are to clean up debris generated by their subcontract and deposit in designated containers.
- C. Affected areas are to be cleaned on a continuing basis.
- D. Protect all surfaces during work.
- E. Subcontractors are to ensure that building, grounds and public properties are maintained free from accumulations of waste materials and rubbish.
- F. At reasonable intervals during progress of work clean site and public properties and dispose of waste materials, debris and rubbish.
- G. Handle waste materials, debris and rubbish in a controlled manner with as few handling as possible; do not drop or throw materials from heights.

1.6 Final Cleaning

- A. Each subcontractor is to gather all debris generated by their subcontract and place it in the designated containers.
- B. Clean up performed for any subcontractor will be charged against the subcontract amount.
- C. Leave equipment in an undamaged, bright, clean and polished condition.
- D. Recleaning will not be required after the project has been inspected and accepted unless later operations of Contractor make recleaning of certain portions necessary.
- E. After completion of work, remove temporary buildings, structures, fences, scaffolding, surplus materials and rubbish of every nature from Owner's property.

END OF SECTION

SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for project record drawings.
- B. Maintain at Project Site for Owner, one (1) record copy of:
 - 1. Contract Drawings and Project Manual.
 - 2. Addenda
 - 3. Change Orders and other Contract modifications.
 - 4. Field Orders and other written instructions.
 - 5. Approved shop drawings, product data, and samples.
 - 6. Field test reports.
- C. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Contract Modification Procedures".
 - 2. Division 1 Section "Submittals".
 - 3. Division 1 Section "Quality Control".
 - 4. Division 1 Section "Contract Modification Procedures".
 - 5. Division 1 Section "Contract Closeout".
 - 6. Division 15 Section – Mechanical
 - 7. Division 16 Section – Electrical

1.3 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Store record documents apart from documents used for construction.
 - 1. Do not use record documents for construction purpose.
 - 2. Provide files, shelving, and cabinets necessary to safely and securely store documents and samples.
- B. Maintain documents clean, dry, legible, and in good order.

1.4 DRAFTSMAN'S QUALIFICATIONS

- A. Drafting must be accurate and legible.
- B. If Engineer deems submitted drafting to be unacceptable, redraft until acceptable at no additional cost to Owner.

1.5 MARKING DEVICES

- A. Waterproof, felt-tip pens.
- B. Color code, unless otherwise directed or approved.

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1. Red: Document changes.
2. Green: Work deleted.
3. Blue: Dimensional and other notations.

1.6 REQUIRED DRAWINGS

- A. Maintain one (1) black-line photocopy of Contract drawings as work set, using marking devices specified above to record all Contract changes.
- B. Prior to submittal, transfer recorded information to CADD disks provided by Owner; submit revised CADD disks and reproducible transparency, provided by Contractor.
 1. Changes made to the Drawings pursuant to changes in the Work which are not Owner-initiated, including all changes made for the coordination of Contractor or subcontractor work or for the convenience of Contractor or a subcontractor, will be made on CADD disks at Contractor's or subcontractor's cost. This includes, without limitation, changes to the Work of site utilities and Divisions 15 and 16.
- C. Contractor may retain work-set for his records.
- D. Drawings for use as base drawings are available from the Engineer as electronic computer data.

1.7 RECORDING

- A. Label each document PROJECT RECORD in neat, large, printed letters.
- B. Record information concurrently with construction progress. Project records will be reviewed on a monthly basis with Contractor's Application for Payment.
- C. Do not conceal any work until required information is recorded.
- D. Legible mark drawings to record the following actual construction:
 1. Location of internal utilities and appurtenances, including backing materials, concealed in construction, referenced to visible and accessible features of structure.
 2. Field changes of dimensions and details.
 3. Changes made by Change Order, Job Instruction or Engineer's Supplemental Instruction with reference to document number.
 4. Details not shown on original Contract drawings.
- E. Legibly mark specifications and any addenda to record the following:
 1. Manufacturer, trade name, catalog number, and supplier of each product actually installed.
 2. Changes made by change order, job instruction, or Engineer's supplemental instruction.
 3. Note related record drawings and product data, where applicable.

1.8 SUBMITTALS

- A. Review status of record documents will be required by Engineer at 75% Project completion.
- B. Contractor will provide (1) one set of current dated record documents to

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- be reviewed by Engineer.
- C. Engineer will review documents for accuracy and information quality to date.
- D. Engineer will return documents to Contractor with comments and or corrections as required.
- E. At Contract close-out deliver record documents to Engineer for forwarding to Owner.
- F. At Contract close-out Contractor shall review with the Owner's Representative and the Engineer which submitted samples are to be submitted to Owner for record purpose.
- G. Accompany submittal with transmittal letter in duplicate, containing:
 - 1. Project title.
 - 2. Date.
 - 3. Contractor's name and address.
 - 4. Title and number of each record document.
 - 5. Signature of Contractor or his authorized representative.

END OF SECTION

SECTION 01730

OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for:
 - 1. Compiling product data and related information appropriate for Owner's maintenance and operation of products furnished under Contract.
 - 2. Instructing Owner's personnel in maintenance of products and in operation of equipment and systems.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Submittals".
 - 2. Division 1 Section "Project Record Documents".
 - 3. Division 1 Section "Contract Closeout".

1.3 QUALITY ASSURANCE

- A. Arrange for data to be prepared by personnel:
 - 1. Trained and experienced in maintenance and operation of described products.
 - 2. Completely familiar with requirements of this Section.
 - 3. Sufficiently skilled as technical writer to communicate essential data.
 - 4. Sufficiently skilled as draftsmen to competently prepare required drawings.

1.4 FORM OF SUBMITTALS

- A. Prepare data in form of instructional manual for use by Owner's personnel.
- B. Format:
 - 1. Size: 8 ½ x 11 inches.
 - 2. Paper for Typing: 20 lb minimum, recycled white.
 - 3. Text: Manufacturer's printed data or neatly typed.
 - 4. Drawings:
 - a. Reinforced edges against tear-out.
 - b. Bind-in with text.
 - c. Fold larger drawings to match size of text pages.
 - 5. Provide fly-leaf for each separate product.
 - 6. Identify each fly-leaf with labeled tabs.

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7. Cover: Identify each volume with typed or printed title "Operating and Maintenance Instruction", and list the following:
 - a. Project Title
 - b. Identity of general subject matter contained in manual.

1.5 BINDERS

- A. Commercial quality, 3-ring type with durable and cleanable plastic covers.
- B. When multiple binders are used, correlate data into related consistent groupings.

1.6 MANUAL CONTENT, GENERAL

- A. Contractor, name of responsible principal, address and telephone number.
- B. Each product, including name, address and telephone number of:
 1. Subcontractor or installer.
 2. Recommended maintenance contractor.
 3. Local source of replacement parts.
 4. Product name and other identifying symbols as set forth in Contract Documents.
 5. Product data:
 - a. Include only those sheets which are pertinent to specific product.
 6. Annotate each sheet to:
 - a. Clearly identify specific product or part installed.
 - b. Clearly identify data applicable to installation.
 - c. Delete references to inapplicable data.

1.7 DRAWINGS:

- A. Supplement product data with drawings where necessary to clearly illustrate:
 1. Relation of component parts.
 2. Control and flow diagrams.
 3. Do not use Project Record Documents as maintenance drawings.

1.8 WRITTEN TEXT:

- A. Provide where necessary to supplement product data drawings.
 1. Organize in consistent format under separate headings for different procedures.
 2. Provide logical sequence of instruction for each procedure

1.9 WARRANTIES, BONDS, AND MAINTENANCE CONTRACTS:

- A. Provide copy of each
 1. Include the following:
 - a. Proper procedures in event of failure.
 - b. Instances which might affect validity of warranties, bonds or Contracts.

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1.10 ADDITIONAL DATA

- A. Prepare and include the following:
 - 1. Additional data when need becomes apparent during instruction of Owner's personnel.
 - 2. Additional data specified in other sections of Specifications to be included.

1.11 SUBMITTAL SCHEDULE

- A. Preliminary Draft:
 - 1. Submit two (2) copies of proposed format.
 - 2. Owner's Representative and Engineer will review and return one (1) copy with comments.
- B. Final submittal:
 - 1. Submit, in final form, one (1) copy of complete data 15 days prior to Final inspection.
 - 2. Copy will be returned with comments.
 - 3. Submit four (4) copies in approved final form, within 10 days of Final Inspection

END OF SECTION

SECTION 15010

GENERAL MECHANICAL REQUIREMENTS

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. Section 15010 details the general requirements for the Division 15 contractor for the installation of the mechanical equipment and systems described in the Contract Documents.
- B. Division 15 contractor to provide labor, materials for a complete and operable system complying to all the conditions in the Contract Documents. Order of priority of Contract Documents are as follows:
 - 1. Change Orders
 - 2. Addendums
 - 3. Schedules
 - 4. Specifications
 - 5. Details
 - 6. Drawings
- C. Drawings are diagrammatic only, to show general arrangement of mechanical equipment and accessories. Coordinate location of all mechanical equipment with other trades prior to rough in. Provide necessary offsets or transitions as required to install the system in the space provided.
- D. Provide all required accessories for a complete and operable system as intended, review all manufacturer installation requirements prior to rough in. Notify engineer of any conflict between manufacturer's requirements and Contract Documents prior to proceeding with installation.
- E. Contractor to verify all installation requirements prior to ordering of equipment. Verify correct voltage, amperage, physical size, mounting, and access requirements prior to ordering. Notify engineer of discrepancies prior to ordering.
- F. Contractor to provide all required transitions from duct or pipe size shown to unit connections. Contractor to provide flexible connections at mechanical equipment per Contract Documents.
- G. Contractor to notify owner if asbestos is found on the project immediately. No materials containing asbestos are to be used on project.
- H. Contractor to submit for and obtain all permits required to perform the work as described. Contractor is responsible for the payment of the permits and coordination of all inspections required by the local authority having jurisdiction.
- I. Contractor to install all equipment and accessories in a professional

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manner, run piping and duct work parallel to the building, install equipment plumb and level, with adequate access for maintenance. Provide permanent plastic laminate labels with equipment identification matching Contract Documents.

- J. Contractor to provide seismic restraints for all equipment as required by the AHJ. Provide stamped structural calculations as required and submit to the AHJ as requested for approval. Provide all special inspections as required by the AHJ.

1.2 RELATED DOCUMENTS

- A. Division 15 contractor is bound by Division 1, Division 15, Division 16, Supplemental General Conditions and the associated drawings.

1.3 REFERENCE STANDARDS

- A. Compliance with the codes and standards of the following organizations as applicable to the work being performed:

1. Codes, Rules and Regulations of the State of Oregon.
2. Local county/city Codes, Rules and Regulations
3. AMCA
Air Moving and Conditioning Association
4. ADC
Air Diffusion Council
5. NEMA
National Electrical Manufacturers Association
6. FM
Factory Mutual
7. NFPA
National Fire Protection Association
8. ASTM
American Society for Testing Materials
9. UL
Underwriters Laboratories, Inc.
10. NEC
National Electrical Code
11. ASME
American Society of Mechanical Engineers
12. ANSI
American National Standards Institute
13. OSHA
Occupational Safety and Health Act
14. BSA
Board of Standards and Appeals
15. MEA
Materials and Equipment Acceptance
16. ASHRAE

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American Society of Heating, Refrigeration
and Air Conditioning Engineers.

17. AWWA

American Water Works Association

18. ARI

American Refrigeration Institute

19. SMACNA

Sheet Metal and Air Conditioning Contractor's
National Association

20. ASA

Acoustical Society of America

21. AGA

American Gas Association

22. AABC

American Air Balance Council

23. NEBB

National Environmental Balancing Bureau

1.4 DEFINITIONS

- A. "Provide" means furnish and install, complete, with the specified material or equipment and perform all required labor to make a complete and functioning installation.
- B. "Install" means to provide labor and materials to receive, unload, assemble, place, mount, seismically brace, connect to all required services, clean, start-up, adjust and commission.
- C. "Clean" means to remove all debris, to wash cabinet inside and out with applicable cleaning solution, chemically clean coils as required to remove trapped dirt, comb coils straight after cleaning, remove all dirt and debris from fan blades, provide new filters, acid flush coils to remove sediment, flush out piping systems until discharge is clear, remove sediment from all strainers, lubricate and place back in service when completed.
- D. "Service" means to clean equipment, lubricate equipment per manufacturer, replace belts, replace sheaves (as required), replace filters, cycle all dampers/actuators, tighten/adjust all linkage, run equipment through all cycles and verify correct operation. Provide documentation of recorded inputs/outputs after servicing.
- E. "AHJ" Authority Having Jurisdiction.

1.5 PROTECTION

- A. Contractor is responsible for all mechanical equipment and accessories until final completion of the project. Contractor to protect all mechanical equipment and accessories provided from damage, theft, and contamination. Contractor is responsible for the repair/replacement of any damaged or stolen equipment or

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accessories. Contactor is responsible for cleaning any and all equipment contaminated before final completion. Any equipment used prior to final completion must be protected from debris by temporary placement of filters on all intakes. Contractor responsible for entire system to be clean at the time of final completion, if debris has contaminated the system during construction the contractor is responsible for removal of debris prior to final acceptance.

1.6 CUTTING AND PATCHING

- A. Contractor to coordinate all required penetrations with other trades prior to rough in.
- B. Contractor is not to cut or notch any framing material without direction from engineer. Contractor will be required to repair/replace any framing member damaged by cutting or notching if done so without prior approval.
- C. Contractor to patch all penetrations or wall coverings where equipment has been removed, replaced or abandoned to match the adjacent surface.

1.7 SUBMITTALS

- A. Provide submittals per Division 1 Submittals.
- B. The contractor shall submit prior to ordering or construction of the following equipment and accessories for review. Submittals to include shop drawings, equipment performance, equipment efficiencies, listings, coatings, accessories, warranties and supplier information. Submittals to note on first page any differences between specified item and submitted item.
 - 1. Air Handlers
 - 2. Duct work
 - 3. Piping materials, valves, hangers, supports and accessories

1.8 OPERATION AND MAINTENANCE MANUALS (O&M)

- A. O&M manuals to include submitted information.
- B. Manufacturer's factory start up forms completed as required for warranty. Warranty information for all equipment.
- C. Equipment suppliers contact information.
- D. Equipment service requirements and spare parts list.
- E. Material Safety Data Sheets on all chemicals provided on the project.
- F. Reports.
 - 1. Compliance with listings and approvals for equipment and for fire ratings.
 - 2. Acceptance certificates from inspecting agencies.

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3. Laboratory water tests.
 4. Manufacturer's performance tests on operating equipment.
 5. Field pipe pressure testing reports.
 6. Field operating test results for operating equipment.
 7. Performance report on the balancing of hydronic system.
 8. Performance reports for vibration isolation equipment.
- G. Record drawings showing all significant changes to the Contract Documents. Location of all valves and mechanical equipment access.
- H. Construction pictures, provide construction pictures showing location of all equipment and accessories covered up by building materials, such as but not limited to piping in walls, above hard lid ceilings or connections/offsets not readily accessible. Label each picture and make note on as-built drawings of picture location.

1.9 SUBSTITUTIONS

- A. Contractor is required to provide substitution requests per Division 1, prior to bid closing. All substituted equipment or accessories must be of the same quality of the specified item, the contractor is responsible to verify all installation requirements prior to submission. All variations to the specified item is to be listed on the front page of the substitution request.

1.10 ACCESSIBILITY

- A. Contractor is to provide manufacturer's minimum access for all equipment provided.
- B. Contractor to provide adequate access to all valves, test ports, manual vents, gauges and controls for all equipment.
- C. Contractor responsible to coordinate installation of all panels, ceilings, doors for adequate access.
- D. Contractor responsible to maintain all access paths to new or existing equipment, locate piping, duct work out of access paths.

1.11 DEMOLITION

- A. Contractor responsible for the removal of all equipment shown in the contract documents shown to be removed. Contractor to dispose of items off site.
- B. Contractor responsible for patching all surfaces exposed after demolition of any existing equipment to match the adjacent surface.
- C. Contractor responsible to remove all components associated with equipment being removed, including but not limited to controls, electrical back to nearest panel, duct work, piping back to the nearest main.
- D. Contractor responsible to maintain all access paths to new or existing

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equipment. Locate piping, duct work and accessories out of access paths.

END OF SECTION

SECTION 15900

DIRECT DIGITAL CONTROL SYSTEM

PART 1: GENERAL

1.1 RELATED SECTIONS

- A. The General Conditions of the Contract, Supplementary Conditions, and General Requirements are part of this specification and shall be used in conjunction with this section as part of the contract documents.
- B. The following sections constitute related work:
 - 1. Section 15010 - Basic Mechanical Materials and Methods
 - 2. Section 15990 - Testing, Adjusting, and Balancing
 - 3. Section 16050 - Basic Electrical Materials and Methods

1.2 DESCRIPTION

- A. General: The control system shall consist of a high-speed, peer-to-peer network of DDC controllers, a control system server, and a web-based operator interface. Integrated into to the Auto-mated Logic Control System located at the Marion County Jail.
- B. System software shall be based on a server/thin client architecture, designed around the open standards of web technology. The control system server shall be accessed using a Web browser over the control system network, the owner's local area network, and (at the owner's discretion) over the Internet.

The intent of the thin-client architecture is to provide operators complete access to the control system via a Web browser. No special software other than a web browser shall be required to access graphics, point displays, and trends, configure trends, configure points and controllers, or to download programming into the controllers.
- C. System shall use the BACnet protocol for communication to the operator workstation or web server and for communication between control modules. I/O points, schedules, setpoints, trends and alarms specified in 15900 Appendix A shall be BACnet objects.

1.3 CONTROL SYSTEM HARDWARE

- A. The contractor shall provide Automated Logic hardware to interface to the existing Marion County WebCTRL server.
- B. The Contractor shall use only operator workstation software, controller software, custom application programming language, and controllers from the corresponding manufacturer.
- C. Other products specified herein (such as sensors, valves, dampers, and actuators) need not be manufactured by the above manufacturers.
- D.

1.4 QUALITY ASSURANCE

- A. Installer and Manufacturer Qualifications

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1. Installer shall have an established working relationship with Control System Manufacturer.
2. Installer shall have successfully completed Control System Manufacturer's control system training. Upon request, Installer shall present record of completed training including course outlines.

1.5 CODES AND STANDARDS

- A. Work, materials, and equipment shall comply with the most restrictive of local, state, and federal authorities' codes and ordinances or these plans and specifications. As a minimum, the installation shall comply with the current editions in effect 30 days prior to the receipt of bids of the following codes:
1. National Electric Code (NEC)
 2. International Building Code (IBC)
 - a. Section 719 Ducts and Air Transfer Openings
 - b. Section 907 Fire Alarm and Detection Systems
 3. ANSI/ASHRAE Standard 135, BACnet - A Data Communication Protocol for Building Automation and Control Systems

1.6 SYSTEM PERFORMANCE

- A. Performance Standards. System shall conform to the following minimum standards over network connections. Systems shall be tested using manufacturer's recommended hardware and software for operator workstation (server and browser for web-based systems).
1. Graphic Display. A graphic with 20 dynamic points shall display with current data within 10 sec.
 2. Graphic Refresh. A graphic with 20 dynamic points shall update with current data within 8 sec. and shall automatically refresh every 15 sec.
 3. Configuration and Tuning Screens. Screens used for configuring, calibrating, or tuning points, PID loops, and similar control logic shall automatically refresh within 6 sec.
 4. Object Command. Devices shall react to command of a binary object within 2 sec. Devices shall begin reacting to command of an analog object within 2 sec.
 5. Alarm Response Time. An object that goes into alarm shall be annunciated at the workstation within 45 sec.
 6. Program Execution Frequency. Custom and standard applications shall be capable of running as often as once every 5 sec. Select execution times consistent with the mechanical process under control.
 7. Performance. Programmable controllers shall be able to completely execute DDC PID control loops at a frequency adjustable down to once per sec. Select execution times consistent with the mechanical process under control.
 8. Multiple Alarm Annunciation. Each workstation on the network shall receive alarms within 5 sec of other workstations.
 9. Reporting Accuracy. System shall report values with minimum end-to-end accuracy listed in Table 1.

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10. Control Stability and Accuracy. Control loops shall maintain measured variable at setpoint within tolerances listed in Table 2.

Table-1
Reporting Accuracy

Measured Variable	Reported Accuracy
Space Temperature	±0.5°C (±1°F)
Ducted Air	±0.5°C (±1°F)
Outside Air	±1.0°C (±2°F)
Delta-T	±0.15° (±0.25°F)
Relative Humidity	±5% RH
Airflow (terminal)	±10% of full scale (see Note 1)
Airflow (measuring stations)	±5% of full scale
Airflow (pressurized spaces)	±3% of full scale
Air Pressure (ducts)	±25 Pa (±0.1 in. w.g.)
Air Pressure (space)	±3 Pa (±0.01 in. w.g.)
Carbon Dioxide (CO2)	±50 ppm

Note 1: Accuracy applies to 10%–100% of scale

Note 2: For both absolute and differential pressure

Note 3: Not including utility-supplied meters

Table 2
Control Stability and Accuracy

Controlled Variable	Control Accuracy	Range of Medium
Air Pressure	±50 Pa (±0.2 in. w.g.) ±3 Pa (±0.01 in. w.g.)	0–1.5 kPa (0–6 in. w.g.) -25 to 25 Pa (-0.1 to 0.1 in. w.g.)
Airflow	±10% of full scale	
Space Temperature	±1.0°C (±2.0°F)	
Duct Temperature	±1.5°C (±3°F)	

1.7 SUBMITTALS

- A. Product Data and Shop Drawings: Meet requirements of Section 01 on Shop Drawings, Product Data, and Samples. In addition, the contractor shall provide shop drawings or other submittals on hardware, software, and equipment to be installed or provided. No work may begin on any segment of this project until submittals have been approved for conformity with design intent. Provide drawings as AutoCAD 2006 (or newer) compatible files on magnetic or optical disk (file format: .DWG, .DXF, .VSD, or comparable) and three 11" x 17" prints of each drawing. When manufacturer's cutsheets apply to a product series rather than a specific product, the data specifically applicable to the project shall be highlighted or clearly indicated by other means. Each submitted piece of literature and drawing shall clearly reference the specification and/or drawing that the submittal is to cover. General catalogs shall not be accepted as cutsheets to fulfill submittal requirements. Select and show submittal quantities appropriate to scope of work. Submittal approval does not relieve Contractor of responsibility to supply sufficient

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quantities to complete work. Submittals shall be provided within 12 weeks of contract award. Submittals shall include:

1. DDC System Hardware

- a. A complete bill of materials to be used indicating quantity, manufacturer, model number, and relevant technical data of equipment to be used.
- b. Manufacturer's description and technical data such as performance curves, product specifications, and installation and maintenance instructions for items listed below and for relevant items not listed below:
 - i. Direct digital controllers (controller panels)
 - ii. Transducers and transmitters
 - iii. Sensors (including accuracy data)
 - iv. Actuators
 - v. Valves
 - vi. Relays and switches
 - vii. Control panels
 - viii. Power supplies
 - ix. Batteries
 - x. Operator interface equipment
 - xi. Wiring
- c. Wiring diagrams and layouts for each control panel. Show termination numbers.
- d. Schematic diagrams for all field sensors and controllers. Provide floor plans of all sensor locations and control hardware. Riser diagrams showing control network layout, communication protocol, and wire types.

2. Central System Hardware and Software

- a. A complete bill of material of equipment used indicating quantity, manufacturer, model number, and relevant technical.
- b. Manufacturer's description and technical data such as product specifications and installation and maintenance instructions for items listed below and for relevant items furnished under this contract not listed below:
 - i. Interface equipment between CPU or server and control panels
 - ii. Operating System software
 - iii. Operator interface software
 - iv. Color graphic software
 - v. Third-party software
- c. Schematic diagrams for all control, communication, and power wiring. Provide a schematic drawing of the central system installation. Label all cables and ports with computer manufacturers' model numbers and functions. Show interface wiring to control system.
- d. Network riser diagrams of wiring between central control unit and control panels.

3. Controlled Systems

- a. Riser diagrams showing control network layout, communication protocol, and wire types.
- b. A schematic diagram of each controlled system. The schematics shall have all control points labeled with point names shown or listed. The

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schematics shall graphically show the location of all control elements in the system.

- c. A schematic wiring diagram of each controlled system. Label control elements and terminals. Where a control element is also shown on control system schematic, use the same name.
 - d. An instrumentation list (Bill of Materials) for each controlled system. List each control system element in a table. Show element name, type of device, manufacturer, model number, and product data sheet number.
 - e. A mounting, wiring, and routing plan-view drawing. The design shall take into account HVAC, electrical, and other systems' design and elevation requirements. The drawing shall show the specific location of all concrete pads and bases and any special wall bracing for panels to accommodate this work.
 - f. A complete description of the operation of the control system, including sequences of operation. The description shall include and reference a schematic diagram of the controlled system.
 - g. A point list for each control system. List I/O points and software points specified in Section 15900 Appendix A. Indicate alarmed and trended points.
4. Quantities of items submitted shall be reviewed but are the responsibility of the Contractor.
 5. Description of process, report formats, and checklists to be used in Section 15900 Article 3.17 (Control System Demonstration and Acceptance).
 6. BACnet Protocol Implementation Conformance Statement (PICS) for each submitted type of controller and operator interface.
- B. Schedules
1. Within one month of contract award, provide a schedule of the work indicating the following:
 - a. Intended sequence of work items
 - b. Start date of each work item
 - c. Duration of each work item
 - d. Planned delivery dates for ordered material and equipment and expected lead times
 - e. Milestones indicating possible restraints on work by other trades or situations
 2. Weekly written status reports indicating work completed and revisions to expected delivery dates. Include updated schedule of work.
- C. Project Record Documents. Upon completion of installation, submit three copies of record (as-built) documents of the documents shall be submitted for approval prior to final completion and shall include:
1. Project Record Drawings. As-built versions of submittal shop drawings provided as AutoCAD 2006 (or newer) compatible files on magnetic or optical media (file format: .DWG, .DXF, .VSD, or comparable) and as 11" x 17" prints.
 2. Testing and Commissioning Reports and Checklists. Completed versions of reports, checklists, and trend logs used to meet requirements of Section 15900 Article 3.17 (Control System Demonstration and Acceptance).

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3. Operation and Maintenance (O&M) Manual.
 4. As-built versions of submittal product data.
 5. Names, addresses, and telephone numbers of installing contractors and service representatives for equipment and control systems.
 6. Operator's manual with procedures for operating control systems: logging on and off, handling alarms, producing point reports, trending data, overriding computer control, and changing setpoints and variables.
 7. Programming manual or set of manuals with description of programming language and syntax, of statements for algorithms and calculations used, of point database creation and modification, of program creation and modification, and of editor use.
 8. Engineering, installation, and maintenance manual or set of manuals that explains how to design and install new points, panels, and other hardware; how to perform preventive maintenance and calibration; how to debug hardware problems; and how to repair or replace hardware.
 9. Documentation of programs created using custom programming language including setpoints, tuning parameters, and object database. Electronic copies of programs shall meet this requirement if control logic, setpoints, tuning parameters, and objects can be viewed using furnished programming tools.
 10. Graphic files, programs, and database on magnetic or optical media.
 11. List of recommended spare parts with part numbers and suppliers.
 12. Complete original-issue documentation, installation, and maintenance information for furnished third-party hardware including computer equipment and sensors.
 13. Complete original-issue copies of furnished software, including operating systems, custom programming language, operator workstation or web server software, and graphics software.
 14. Licenses, guarantees, and warranty documents for equipment and systems.
 15. Recommended preventive maintenance procedures for system components, including schedule of tasks such as inspection, cleaning, and calibration; time between tasks; and task descriptions.
- D. Training Materials: Provide course outline and materials for each class at least six weeks before first class. Training shall be furnished via instructor-led sessions, computer-based training, or web-based training. Engineer will modify course outlines and materials if necessary to meet Owner's needs. Engineer will review and approve course outlines and materials at least three weeks before first class.

1.8 WARRANTY

- A. Warrant work as follows:
1. Warrant labor and materials for specified control system free from defects for a period of 12 months after final acceptance. Control system failures during warranty period shall be adjusted, repaired, or replaced at no additional cost or reduction in service to Owner. Respond during normal business hours within 24 hours of Owner's warranty service request.
 2. Work shall have a single warranty date, even if Owner receives beneficial use due to early system start-up. If specified work is split into multiple contracts or a multi-phase

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contract, each contract or phase shall have a separate warranty start date and period.

3. If the engineer determines that equipment and systems operate satisfactorily at the end of final start-up, testing, and commissioning phase, the engineer will certify in writing that control system operation has been tested and accepted in accordance with the terms of this specification. Date of acceptance shall begin warranty period.
4. Provide updates to operator workstation or web server software, project-specific software, graphic software, database software, and firmware that resolve the contractor-identified software deficiencies at no charge during warranty period. If available, Owner can purchase in-warranty service agreement to receive upgrades for functional enhancements associated with above-mentioned items. Do not install updates or upgrades without Owner's written authorization.
5. Exception: Contractor shall not be required to warrant reused devices except those that have been rebuilt or repaired. Installation labor and materials shall be warranted. Demonstrate operable condition of reused devices at time of Engineer's acceptance.

1.9 OWNERSHIP OF PROPRIETARY MATERIAL

- A. Project-specific software and documentation shall become Owner's property. This includes, but is not limited to:
 1. Graphics
 2. Record drawings
 3. Database
 4. Application programming code
 5. Documentation

PART 2: PRODUCTS

2.1 MATERIALS

- A. Use new products the manufacturer is currently manufacturing and selling for use in new installations. Do not use this installation as a product test site unless explicitly approved in writing by Owner. Spare parts shall be available for at least five years after completion of this contract.

2.2 COMMUNICATION

- A. Control products, communication media, connectors, repeaters, hubs, and routers shall comprise a BACnet internetwork. Controller and operator interface communication shall conform to ANSI/ASHRAE Standard 135, BACnet.
- B. Install new wiring and network devices as required to provide a complete and workable control network.
- C. Each controller shall have a communication port for temporary connection to a laptop computer or other operator interface. Connection shall support memory downloads and other commissioning and troubleshooting operations.
- D. Internetwork operator interface and value passing shall be transparent to internetwork architecture.
 - 1. An operator interface connected to a controller shall allow the operator to interface with each internetwork controller as if directly connected. Controller information such as data, status, and control algorithms shall be viewable and editable from each internetwork controller.
 - 2. Inputs, outputs, and control variables used to integrate control strategies across multiple controllers shall be readable by each controller on the internetwork. Program and test all cross-controller links required to execute control strategies specified in Section 15900 Appendix A. An authorized operator shall be able to edit cross-controller links by typing a standard object address or by using a point-and-click interface.
- E. Workstations, Building Control Panels, and Controllers with real-time clocks shall use the BACnet Time Synchronization service. System shall automatically synchronize system clocks daily from an operator-designated device via the internetwork. The system shall automatically adjust for daylight saving and standard time as applicable.
- F. System shall be expandable to at least twice the required input and output objects with additional controllers, associated devices, and wiring.
- G. System shall support Web services data exchange with any other system that complies with XML (extensible markup language) and SOAP (simple object access protocol) standards specified by the Web Services Interoperability Organization (WS-I) Basic Profile 1.0 or higher. Web services support shall as a minimum be provided at the workstation or web server level and shall enable data to be read from or written to the system.
 - 1. System shall support Web services read data requests by retrieving requested trend data or point values (I/O hardware points, analog value software points, or binary value software points) from any system controller or from the trend history database.
 - 2. System shall support Web services write data request to each analog and binary object that can be edited through the system operator interface by downloading a numeric value to the specified object.

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3. For read or write requests, the system shall require user name and password authentication and shall support SSL (Secure Socket Layer) or equivalent data encryption.
4. System shall support discovery through a Web services connection or shall provide a tool available through the Operator Interface that will reveal the path/identifier needed to allow a third party Web services device to read data from or write data to any object in the system which supports this service.

2.3 CONTROLLER SOFTWARE

- A. Furnish the following applications for building and energy management. All software application shall reside and operate in the system controllers. Applications shall be editable through operator workstation, web browser interface, or engineering workstation.
- B. Scheduling. Provide the capability to execute control functions according to a user created or edited schedule. Each schedule shall provide the following schedule options as a minimum:
 1. Weekly Schedule. Provide separate schedules for each day of the week. Each schedule shall be able to include up to 5 occupied periods (5 start-stop pairs or 10 events).
 2. Exception Schedules. Provide the ability for the operator to designate any day of the year as an exception schedule. Exception schedules may be defined up to a year in advance. Once an exception schedule has executed, the system shall discard and replace the exception schedule with the standard schedule for that day of the week.
 3. Holiday Schedules. Provide the capability for the operator to define up to 24 special or holiday schedules. These schedules will be repeated each year. The operator shall be able to define the length of each holiday period.
- C. System Coordination. Operator shall be able to group related equipment based on function and location and to use these groups for scheduling and other applications.
- D. Binary Alarms. Each binary object shall have the capability to be configured to alarm based on the operator-specified state. Provide the capability to automatically and manually disable alarming.
- E. Analog Alarms. Each analog object shall have both high and low alarm limits. The operator shall be able to enable or disable these alarms.
- F. Alarm Reporting. The operator shall be able to determine the action to be taken in the event of an alarm. An alarm shall be able to start programs, print, be logged in the event log, generate custom messages, and display on graphics.
- G. Remote Communication. System shall automatically contact operator workstation or server on receipt of critical alarms. If no network connection is available, system shall use a modem connection.
- H. Maintenance Management. The system shall be capable of generating maintenance alarms when equipment exceeds adjustable runtime, equipment starts, or performance limits. Configure and enable maintenance alarms as specified in Section 15900 Appendix A (Sequences of Operation).
- I. Sequencing. Application software shall sequence chillers, boilers, and pumps as specified in Section 15900 Appendix A (Sequences of Operation).
- J. PID Control. System shall provide direct- and reverse-acting PID (proportional-integral-derivative) algorithms. Each algorithm shall have anti-windup and selectable controlled variable, setpoint, and PID gains. Each algorithm shall calculate a time-varying analog value that can be used to position an output or to stage a series of outputs. The

calculation interval, PID gains, and other tuning parameters shall be adjustable by a user with the correct security level.

- K. Staggered Start. System shall stagger controlled equipment restart after power outage. Operator shall be able to adjust equipment restart order and time delay between equipment restarts.
- L. Anti-Short Cycling. All binary output objects shall be protected from short cycling by means of adjustable minimum on-time and off-time settings.
- M. On and Off Control with Differential. Provide an algorithm that allows a binary output to be cycled based on a controlled variable and a setpoint. The algorithm shall be direct-acting or reverse-acting.
- N. Runtime Totalization. Provide software to totalize runtime for each binary input and output. Operator shall be able to enable runtime alarm based on exceeded adjustable runtime limit. Configure and enable runtime totalization and alarms as specified in Section 15900 Appendix A (Sequence of Operations).

2.4 CONTROLLERS

- A. Provide an adequate number of Building Controllers (BC), Advanced Application Controllers (AAC), Application Specific Controllers (ASC), Smart Actuators (SA), and Smart Sensors (SS) as required to achieve performance specified in Section 15900. Every device in the system which executes control logic and directly controls HVAC equipment must conform to a standard BACnet Device profile as specified in ANSI/ASHRAE 135, BACnet Annex L. Unless otherwise specified, hardwired actuators and sensors may be used in lieu of BACnet Smart Actuators and Smart Sensors.
- B. BACnet.
 - 1. Building Controllers (BCs). Each BC shall conform to BACnet Building Controller (B-BC) device profile as specified in ANSI/ASHRAE 135, BACnet Annex L, and shall be listed as a certified B-BC in the BACnet Testing Laboratories (BTL) Product Listing.
 - 2. Advanced Application Controllers (AACs). Each AAC shall conform to BACnet Advanced Application Controller (B-AAC) device profile as specified in ANSI/ASHRAE 135, BACnet Annex L and shall be listed as a certified B-AAC in the BACnet Testing Laboratories (BTL) Product Listing.
 - 3. Application Specific Controllers (ASCs). Each ASC shall conform to BACnet Application Specific Controller (B-ASC) device profile as specified in ANSI/ASHRAE 135, BACnet Annex L and shall be listed as a certified B-ASC in the BACnet Testing Laboratories (BTL) Product Listing.
 - 4. Smart Sensors (SSs). Each SS shall conform to BACnet Smart Sensor (B-SS) device profile as specified in ANSI/ASHRAE 135, BACnet Annex L and shall be listed as a certified B-SS in the BACnet Testing Laboratories (BTL) Product Listing.
 - 5. BACnet Communication.
 - a. Each BC shall reside on or be connected to a BACnet network using ISO 8802-3 (Ethernet) Data Link/Physical layer protocol and BACnet/IP addressing.
 - b. BACnet routing shall be performed by BCs or other BACnet device routers as necessary to connect BCs to networks of AACs and ASCs.
 - c. Each AAC shall reside on a BACnet network using ISO 8802-3 (Ethernet) Data Link/Physical layer protocol with BACnet/IP addressing, or it shall reside on a BACnet network using the ARCNET or MS/TP Data Link/Physical layer protocol.

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- d. Each ASC shall reside on a BACnet network using the ARCNET or MS/TP Data Link/Physical layer protocol.
 - e. Each SA shall reside on a BACnet network using the ARCNET or MS/TP Data Link/Physical layer protocol.
 - f. Each SS shall reside on a BACnet network using ISO 8802-3 (Ethernet) Data Link/Physical layer protocol with BACnet/IP addressing, or it shall reside on a BACnet network using ARCNET or MS/TP Data Link/Physical layer protocol.
- C. Communication
 - 1. Service Port. Each controller shall provide a service communication port for connection to a Portable Operator's Terminal. Connection shall be extended to space temperature sensor ports where shown on drawings.
 - 2. Signal Management. BC and ASC operating systems shall manage input and output communication signals to allow distributed controllers to share real and virtual object information and to allow for central monitoring and alarms.
 - 3. Data Sharing. Each BC and AAC shall share data as required with each networked BC and AAC.
 - 4. Stand-Alone Operation. Each piece of equipment specified in Section 15900 Appendix A shall be controlled by a single controller to provide stand-alone control in the event of communication failure. All I/O points specified for a piece of equipment shall be integral to its controller. Provide stable and reliable stand-alone control using default values or other method for values normally read over the network such as outdoor air conditions, supply air or water temperature coming from source equipment, etc.
- D. Environment. Controller hardware shall be suitable for anticipated ambient conditions.
 - 1. Controllers used outdoors or in wet ambient conditions shall be mounted in waterproof enclosures and shall be rated for operation at -29°C to 60°C (-20°F to 140°F).
 - 2. Controllers used in conditioned space shall be mounted in dust-protective enclosures and shall be rated for operation at 0°C to 50°C (32°F to 120°F).
- E. Keypad. Provide a local keypad and display for each BC and AAC. Operator shall be able to use keypad to view and edit data. Keypad and display shall require password to prevent unauthorized use. If the manufacturer does not normally provide a keypad and display for each BC and AAC, provide the software and any interface cabling needed to use a laptop computer as a Portable Operator's Terminal for the system.
- F. Real-Time Clock. Controllers that perform scheduling shall have a real-time clock.
- G. Serviceability. Provide diagnostic LEDs for power, communication, and processor. All wiring connections shall be made to a field-removable modular terminal strip or to a termination card connected by a ribbon cable. Each BC and AAC shall continually check its processor and memory circuit status and shall generate an alarm on abnormal operation. System shall continuously check controller network and generate alarm for each controller that fails to respond.
- H. Memory.
 - 1. Controller memory shall support operating system, database, and programming requirements.
 - 2. Each BC and AAC shall retain BIOS and application programming for at least 72 hours in the event of power loss.

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3. Each ASC and SA shall use nonvolatile memory and shall retain BIOS and application programming in the event of power loss. System shall automatically download dynamic control parameters following power loss.
- I. Immunity to Power and Noise. Controllers shall be able to operate at 90% to 110% of nominal voltage rating and shall perform an orderly shutdown below 80% nominal voltage. Operation shall be protected against electrical noise of 5 to 120 Hz and from keyed radios up to 5 W at 1 m (3 ft).
- J. Transformer. ASC power supply shall be fused or current limiting and shall be rated at a minimum of 125% of ASC power consumption.

2.5 INPUT AND OUTPUT INTERFACE

- A. General. Hard-wire input and output points to BCs, AACs, ASCs, or SAs.
- B. Protection. All input points and output points shall be protected such that shorting of the point to itself, to another point, or to ground shall cause no damage to the controller. All input and output points shall be protected from voltage up to 24 V of any duration, such that contact with this voltage will cause no controller damage.
- C. Binary Inputs. Binary inputs shall allow the monitoring of ON/OFF signals from remote devices. The binary inputs shall provide a wetting current of at least 12 mA to be compatible with commonly available control devices and shall be protected against contact bounce and noise. Binary inputs shall sense dry contact closure without application of power external to the controller.
- D. Pulse Accumulation Inputs. Pulse accumulation inputs shall conform to binary input requirements and shall also accumulate up to 10 pulses per second.
- E. Analog Inputs. Analog inputs shall monitor low-voltage (0–10 Vdc), current (4–20 mA), or resistance (thermistor or RTD) signals. Analog inputs shall be compatible with and field configurable to commonly available sensing devices.
- F. Binary Outputs. Binary outputs shall provide for ON/OFF operation or a pulsed low-voltage signal for pulse width modulation control. Binary outputs on Building Controllers shall have three-position (on-off-auto) override switches and status lights. Outputs shall be selectable for normally open or normally closed operation.
- G. Analog Outputs. Analog outputs shall provide a modulating signal for the control of end devices. Outputs shall provide either a 0–10 Vdc or a 4–20 mA signal as required to properly control output devices. Each Building Controller analog output shall have a two-position (auto-manual) switch, a manually adjustable potentiometer, and status lights. Analog outputs shall not drift more than 0.4% of range annually.
- H. Tri-State Outputs. Control three-point floating electronic actuators without feedback with tri-state outputs (two coordinated binary outputs). Tri-State outputs may be used to provide analog output control in zone control and terminal unit control applications such as VAV terminal units, duct-mounted heating coils, and zone dampers.
- I. System Object Capacity. The system size shall be expandable to at least twice the number of input/ output objects required for this project. Additional controllers (along with associated devices and wiring) shall be all that is necessary to achieve this capacity requirement. The operator interfaces installed for this project shall not require any hardware additions or software revisions in order to expand the system

2.6 POWER SUPPLIES AND LINE FILTERING

- A. Power Supplies. Control transformers shall be UL listed. Furnish Class 2 current-limiting type or furnish over-current protection in primary and secondary circuits for Class 2

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service in accordance with NEC requirements. Limit connected loads to 80% of rated capacity.

1. DC power supply output shall match output current and voltage requirements. Unit shall be full-wave rectifier type with output ripple of 5.0 mV maximum peak-to-peak. Regulation shall be 1.0% line and load combined, with 100-microsecond response time for 50% load changes. Unit shall have built-in over-voltage and over-current protection and shall be able to withstand 150% current overload for at least three seconds without trip-out or failure.
 - a. Unit shall operate between 0°C and 50°C (32°F and 120°F). EM/RF shall meet FCC Class B and VDE 0871 for Class B and MILSTD 810C for shock and vibration.
 - b. Line voltage units shall be UL recognized and CSA listed.

B. Power Line Filtering.

1. Provide internal or external transient voltage and surge suppression for workstations and controllers. Surge protection shall have:
 - a. Dielectric strength of 1000 V minimum
 - b. Response time of 10 nanoseconds or less
 - c. Transverse mode noise attenuation of 65 dB or greater
 - d. Common mode noise attenuation of 150 dB or greater at 40–100 Hz

2.7 AUXILIARY CONTROL DEVICES

A. Motorized Control Dampers, unless otherwise specified elsewhere, shall be as follow.

1. Type. Control dampers shall be the parallel or opposed-blade type as specified below or as scheduled on drawings.
 - a. Outdoor and return air mixing dampers and face-and-bypass dampers shall be parallel-blade and shall direct airstreams toward each other.
 - b. Other modulating dampers shall be opposed-blade.
 - c. Two-position shutoff dampers shall be parallel- or opposed-blade with blade and side seals.
2. Frame. Damper frames shall be 2.38 mm (13 gauge) galvanized steel channel or 3.175 mm (1/8 in.) extruded aluminum with reinforced corner bracing.
3. Blades. Damper blades shall not exceed 20 cm (8 in.) in width or 125 cm (48 in.) in length. Blades shall be suitable for medium velocity (10 m/s [2000 fpm]) performance. Blades shall be not less than 1.5875 mm (16 gauge).
4. Shaft Bearings. Damper shaft bearings shall be as recommended by manufacturer for application, oil impregnated sintered bronze, or better.
5. Seals. Blade edges and frame top and bottom shall have replaceable seals of butyl rubber or neoprene. Side seals shall be spring-loaded stainless steel. Blade seals shall leak no more than 50 L/s·m² (10 cfm per ft²) at 1000 Pa (4 in. w.g.) differential pressure. Blades shall be airfoil type suitable for wide-open face velocity of 7.5 m/s (1500 fpm).
6. Sections. Individual damper sections shall not exceed 125 cm x 150 cm (48 in. x 60 in.). Each section shall have at least one damper actuator.
7. Modulating dampers shall provide a linear flow characteristic where possible.
8. Linkages. Dampers shall have exposed linkages.

B. Electric Damper and Valve Actuators.

1. Stall Protection. Mechanical or electronic stall protection shall prevent actuator damage throughout the actuator's rotation.

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2. Spring-return Mechanism. Actuators used for power-failure and safety applications shall have an internal mechanical spring-return mechanism or an uninterruptible power supply (UPS).
 3. Signal and Range. Proportional actuators shall accept a 0–10 Vdc or a 0–20 mA control signal and shall have a 2–10 Vdc or 4–20 mA operating range. (Floating motor actuators may be substituted for proportional actuators in terminal unit applications as described in paragraph 2.6H.)
 4. Wiring. 24 Vac and 24 Vdc actuators shall operate on Class 2 wiring.
 5. Manual Positioning. Operators shall be able to manually position each actuator when the actuator is not powered. Non-spring-return actuators shall have an external manual gear release. Spring-return actuators with more than 7 N·m (60 in.-lb) torque capacity shall have a manual crank.
- C. Temperature Sensors.
1. Type. Temperature sensors shall be Resistance Temperature Device (RTD) or thermistor.
 2. Duct Sensors. Duct sensors shall be averaging. Averaging sensors shall be a minimum of 1.5 m (5 ft) in length per 1 m²(10 ft²) of duct cross-section.
 3. Immersion Sensors. Provide immersion sensors with a separable stainless steel well. Well pressure rating shall be consistent with system pressure it will be immersed in. Well shall withstand pipe design flow velocities.
 4. Space Sensors. Space sensors shall have setpoint adjustment, override switch, display, and communication port.
 5. Differential Sensors. Provide matched sensors for differential temperature measurement.
- D. Relays.
1. Control Relays. Control relays shall be plug-in type, UL listed, and shall have dust cover and LED “energized” indicator. Contact rating, configuration, and coil voltage shall be suitable for application.
 2. Time Delay Relays. Time delay relays shall be solid-state plug-in type, UL listed, and shall have adjustable time delay. Delay shall be adjustable $\pm 100\%$ from setpoint shown. Contact rating, configuration, and coil voltage shall be suitable for application. Provide NEMA 1 enclosure for relays not installed in local control panel.
- E. Override Timers.
1. Unless implemented in control software, override timers shall be spring-wound line voltage, UL Listed, with contact rating and configuration required by application. Provide 0–6 hour calibrated dial unless otherwise specified. Flush mount timer on local control panel face or where shown.
- F. Voltage Transformers.
1. AC voltage transformers shall be UL/CSA recognized, 600 Vac rated, and shall have built-in fuse protection.
 2. Transformers shall be suitable for ambient temperatures of 4°C–55°C (40°F–130°F) and shall provide $\pm 0.5\%$ accuracy at 24 Vac and 5 VA load.
 3. Windings (except for terminals) shall be completely enclosed with metal or plastic.
- G. Current Switches.
1. Current-operated switches shall be self-powered, solid-state with adjustable trip current. Select switches to match application current and DDC system output requirements.
- H. Pressure Transducers.

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1. Transducers shall have linear output signal and field-adjustable zero and span.
2. Transducer sensing elements shall withstand continuous operating conditions of positive or negative pressure 50% greater than calibrated span without damage.
- I. Differential Pressure Switches. Differential pressure switches shall be UL listed, SPDT snap-acting, pilot duty rated (125 VA minimum) and shall have scale range and differential suitable for intended application and NEMA 1 enclosure unless otherwise specified.
- J. Local Control Panels.
 1. All indoor control cabinets shall be fully enclosed NEMA 1 construction with (hinged door) key-lock latch and removable subpanels. A single key shall be common to all field panels and subpanels.
 2. Interconnections between internal and face-mounted devices shall be prewired with color-coded stranded conductors neatly installed in plastic troughs and/or tie-wrapped. Terminals for field connections shall be UL listed for 600 volt service, individually identified per control/ interlock drawings, with adequate clearance for field wiring. Control terminations for field connection shall be individually identified per control drawings.
 3. Provide ON/OFF power switch with overcurrent protection for control power sources to each local panel.

2.8 WIRING AND RACEWAYS

- A. General. Provide copper wiring, plenum cable, and raceways as specified in applicable sections of Division 16.
- B. Insulated wire shall use copper conductors and shall be UL listed for 90°C (200°F) minimum service.

PART 3: EXECUTION

3.1 EXAMINATION

- A. The contractor shall inspect the site to verify that equipment may be installed as shown. Any discrepancies, conflicts, or omissions shall be reported to the engineer for resolution before rough-in work is started.
- B. The contractor shall examine the drawings and specifications for other parts of the work. If head room or space conditions appear inadequate—or if any discrepancies occur between the plans and the contractor's work and the plans and the work of others—the contractor shall report these discrepancies to the engineer and shall obtain written instructions for any changes necessary to accommodate the contractor's work with the work of others. Any changes in the work covered by this specification made necessary by the failure or neglect of the contractor to report such discrepancies shall be made by—and at the expense of—this contractor.

3.2 PROTECTION

- A. The contractor shall protect all work and material from damage by his/her work or employees and shall be liable for all damage thus caused.
- B. The contractor shall be responsible for his/her work and equipment until finally inspected, tested, and accepted. The contractor shall protect any material that is not immediately installed. The contractor shall close all open ends of work with temporary covers or plugs during storage and construction to prevent entry of foreign objects.

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3.3 COORDINATION

A. Site

1. Where the mechanical work will be installed in close proximity to, or will interfere with, work of other trades, the contractor shall assist in working out space conditions to make a satisfactory adjustment. If the contractor installs his/her work before coordinating with other trades, so as to cause any interference with work of other trades, the contractor shall make the necessary changes in his/her work to correct the condition without extra charge.
2. Coordinate and schedule work with other work in the same area and with work dependent upon other work to facilitate mutual progress.

B. Submittals. See Section 15900 Article 1.10 (Submittals).

C. Test and Balance.

1. The contractor shall furnish a single set of all tools necessary to interface to the control system for test and balance purposes.
2. The contractor shall provide training in the use of these tools. This training will be planned for a minimum of 4 hours.
3. In addition, the contractor shall provide a qualified technician to assist in the test and balance process, until the first 20 terminal units are balanced.
4. The tools used during the test and balance process will be returned at the completion of the testing and balancing.

D. Life Safety.

1. Duct smoke detectors required for air handler shutdown. Interlock smoke detectors to air handlers for shutdown as specified in Section 15900 Appendix A (Sequences of Operation).

E. Coordination with controls specified in other sections or divisions. Other sections and/or divisions of this specification include controls and control devices that are to be part of or interfaced to the control system specified in this section. These controls shall be integrated into the system and coordinated by the contractor as follows:

1. All communication media and equipment shall be provided as specified in Section 15900.
2. Each supplier of a controls product is responsible for the configuration, programming, start up, and testing of that product to meet the sequences of operation described in Section 15900 Appendix A.
3. The contractor shall coordinate and resolve any incompatibility issues that arise between control products provided under this section and those provided under other sections or divisions of this specification.
4. The contractor is responsible for providing all controls described in the contract documents regardless of where within the contract documents these controls are described.
5. The contractor is responsible for the interface of control products provided by multiple suppliers regardless of where this interface is described within the contract documents.

3.4 GENERAL WORKMANSHIP

- #### A.
- Install equipment, piping, and wiring/raceway parallel to building lines (i.e. horizontal, vertical, and parallel to walls) wherever possible.

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- B. Provide sufficient slack and flexible connections to allow for vibration of piping and equipment.
- C. Install equipment in readily accessible locations as defined by Chapter 1 Article 100 Part A of the National Electrical Code (NEC).
- D. Verify integrity of all wiring to ensure continuity and freedom from shorts and grounds.
- E. All equipment, installation, and wiring shall comply with industry specifications and standards for performance, reliability, and compatibility and be executed in strict adherence to local codes and standard practices.

3.5 FIELD QUALITY CONTROL

- A. All work, materials, and equipment shall comply with rules and regulations of applicable local, state, and federal codes and ordinances as identified in Section 15900.
- B. Contractor shall continually monitor the field installation for code compliance and quality of workmanship.
- C. Contractor shall have work inspection by local and/or state authorities having jurisdiction over the work.

3.6 EXISTING EQUIPMENT

- A. Wiring. The contractor may reuse any abandoned wires. The integrity of the wire and its proper application to the installation are the responsibility of the contractor. The wire shall be properly identified and tested in accordance with this specification. Unused or redundant wiring must be removed from site unless directed to abandon in place.
- B. Local Control Panels. The contractor may reuse any existing local control panel to locate new equipment. All redundant equipment within these panels must be removed. Panel face cover must be patched to fill all holes caused by removal of unused equipment or replaced with new.
- C. Repair. Unless otherwise directed, the contractor is not responsible for repair or replacement of existing energy equipment and systems, valves, dampers, or actuators. Contractor to lubricate and exercise all dampers and valves through full range of operation, prior to connecting new controls. Should the contractor find existing equipment that requires repair, the engineer is to be notified immediately. Contractor responsible for replacement of any existing damper, valve or actuator not compatible with new control system.
- D. Room Thermostats. Room thermostats may be reused. Remove and deliver unnecessary thermostats to Owner unless otherwise noted. Patch and finish holes and marks left by removal to match existing walls.
- E. Electronic Sensors and Transmitters. Unless specifically noted otherwise, existing sensors and transmitters may be reused. Remove and deliver unnecessary sensors and transmitters to Owner.
- F. Controllers and Auxiliary Electronic Devices. Existing controllers and auxiliary electronic devices may be reused unless specifically noted otherwise. Recondition as necessary. Remove unnecessary sensors and transmitters.
- G. Damper Actuators, Linkages, and Appurtenances. Existing damper actuators, linkages, and appurtenances may be reused unless specifically noted otherwise. Recondition as necessary. Remove and deliver unnecessary equipment to Owner.
- H. Existing System Operating Schedule. The mechanical system must remain in operation and shall maintain space comfort at all times between the hours of 6 a.m. and 9 p.m., Monday through Friday. No modifications to the system shall cause mechanical system to

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be shut down for more than 15 minutes or to fail to maintain space comfort conditions during any such period. Perform cut-over of controls that cannot meet these conditions outside of operational hours.

- I. The scheduling of fans through existing or temporary time clocks or control system shall be maintained throughout the DDC system installation
- J. Modify existing starter control circuits, if necessary, to provide hand-off-auto control of each controlled starter. If new starters or starter control packages are required, these shall be included as part of this contract.
- K. Patch holes and finish to match existing walls.

3.7 WIRING

- A. All control and interlock wiring shall comply with national and local electrical codes, and Division 16 of this specification, Where the requirements of this section differ from Division 16, the requirements of this section shall take precedence.
- B. All NEC Class 1 (line voltage) wiring shall be UL listed in conduit according to NEC and Division 16 requirements.
- C. All low-voltage wiring shall meet NEC Class 2 requirements. Low-voltage power circuits shall be subfused when required to meet Class 2 current limit.
- D. Where NEC Class 2 (current-limited) wires are in accessibly concealed locations, including ceiling return air plenums, approved cables not in raceway may be used provided that cables are UL listed for the intended application.
- E. All wiring in mechanical, electrical, or service rooms – or where subject to mechanical damage – shall be installed in conduit.
- F. Do not install Class 2 wiring in raceways containing Class 1 wiring. Boxes and panels containing high-voltage wiring and equipment may not be used for low-voltage wiring except for the purpose of interfacing the two (e.g. relays and transformers).
- G. Do not install wiring in raceway containing tubing.
- H. Where Class 2 wiring is run without conduit, wiring is to be run parallel along a surface or perpendicular to it and neatly tied at 3 m (10 ft) intervals. Clearly labeled every 6 m (20 ft).
- I. Where plenum cables are used without raceway, they shall be supported from or anchored to structural members. Cables shall not be supported by or anchored to ductwork, electrical raceways, piping, or ceiling suspension systems.
- J. All wire-to-device connections shall be made at a terminal block or terminal strip. All wire-to-wire connections shall be at a terminal block.
- K. All wiring within enclosures shall be neatly bundled and anchored to permit access and prevent restriction to devices and terminals.
- L. Maximum allowable voltage for control wiring shall be 120 V. If only higher voltages are available, the contractor shall provide step-down transformers.
- M. All wiring shall be installed as continuous lengths, with no splices permitted between termination points.
- N. Install plenum wiring in sleeves where it passes through walls and floors. Maintain fire rating at all penetrations.
- O. Size of raceway and size and type of wire type shall be the responsibility of the contractor in keeping with the manufacturer's recommendations and NEC requirements, except as noted elsewhere.
- P. Include one pull string in each raceway 2.5 cm (1 in.) or larger.
- Q. Use color-coded conductors throughout with conductors of different colors.

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- R. Control and status relays are to be located in designated enclosures only. These enclosures include packaged equipment control panel enclosures unless they also contain Class 1 starters.
- S. Conceal all raceways except within mechanical, electrical, or service rooms. Install raceway to maintain a minimum clearance of 15 cm (6 in.) from high-temperature equipment (e.g. steam pipes or flues).
- T. Secure raceways with raceway clamps fastened to the structure and spaced according to code requirements. Raceways and pull boxes may not be hung on flexible duct strap or tie rods. Raceways may not be run on or attached to ductwork.
- U. Install insulated bushings on all raceway ends and openings to enclosures. Seal top end of vertical raceways.
- V. The contractor shall terminate all control and/or interlock wiring and shall maintain updated (as-built) wiring diagrams with terminations identified at the job site.
- W. Flexible metal raceways and liquid-tight flexible metal raceways shall not exceed 1 m (3 ft) in length and shall be supported at each end. Flexible metal raceway less than ½ in. electrical trade size shall not be used. In areas exposed to moisture, including chiller and boiler rooms, liquid-tight, flexible metal raceways shall be used.
- X. Raceway must be rigidly installed, adequately supported, properly reamed at both ends, and left clean and free of obstructions. Raceway sections shall be joined with couplings (according to code). Terminations must be made with fittings at boxes, and ends not terminating in boxes shall have bushings installed.

3.8 COMMUNICATION WIRING

- A. The contractor shall adhere to the items listed in the "Wiring" article in Part 3 of the specification.
- B. All cabling shall be installed in a neat and workmanlike manner. Follow manufacturer's installation recommendations for all communication cabling
- C. Do not install communication wiring in raceways and enclosures containing Class 1 or other Class 2 wiring.
- D. Maximum pulling, tension, and bend radius for the cable installation, as specified by the cable manufacturer, shall not be exceeded during installation.
- E. Contractor shall verify the integrity of the entire network following cable installation. Use appropriate test measures for each particular cable.
- F. When a cable enters or exits a building, a lightning arrestor must be installed between the lines and ground. The lightning arrestor shall be installed according to manufacturer's instructions.
- G. All runs of communication wiring shall be unspliced length when that length is commercially available.
- H. All communication wiring shall be labeled to indicate origination and destination data.
- I. Grounding of coaxial cable shall be in accordance with NEC regulations article on "Communications Circuits, Cable, and Protector Grounding."
- J. BACnet MS/TP communications wiring shall be installed in accordance with ASHRAE/ANSI Standard 135. This includes but is not limited to:
 - 1. The network shall use shielded, twisted-pair cable with characteristic impedance between 100 and 120 ohms. Distributed capacitance between conductors shall be less than 100 pF per meter (30 pF per foot.)

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2. The maximum length of an MS/TP segment is 1200 meters (4000 ft) with AWG 18 cable. The use of greater distances and/or different wire gauges shall comply with the electrical specifications of EIA-485.
3. The maximum number of nodes per segment shall be 32, as specified in the EIA 485 standard. Additional nodes may be accommodated by the use of repeaters.
4. An MS/TP EIA-485 network shall have no T connections.

3.9 INSTALLATION OF SENSORS

- A. Install sensors in accordance with the manufacturer's recommendations.
- B. Mount sensors rigidly and adequately for environment within which the sensor operates.
- C. Room temperature sensors shall be installed on concealed junction boxes properly supported by wall framing.
- D. All wires attached to sensors shall be sealed in their raceways or in the wall to stop air transmitted from other areas from affecting sensor readings.
- E. Sensors used in mixing plenums and hot and cold decks shall be of the averaging type. Averaging sensors shall be installed in a serpentine manner vertically across the duct. Each bend shall be supported with a capillary clip.
- F. Low-limit sensors used in mixing plenums shall be installed in a serpentine manner horizontally across duct. Each bend shall be supported with a capillary clip. Provide 3 m (1 ft) of sensing element for each 1 m²(1 ft²) of coil area.
- G. Install outdoor air temperature sensors on north wall, complete with sun shield at designated location.
- H. Differential Air Static Pressure.
 1. Supply Duct Static Pressure. Pipe the high-pressure tap to the duct using a pitot tube. Pipe the low-pressure port to a tee in the high-pressure tap tubing of the corresponding building static pressure sensor (if applicable) or to the location of the duct high-pressure tap and leave open to the plenum.
 2. Return Duct Static Pressure. Pipe high-pressure tap to duct using a pitot tube. Pipe the low-pressure port to a tee in the low-pressure tap tubing of the corresponding building static pressure sensor.
 3. Building Static Pressure. Pipe the low-pressure port of the pressure sensor to the static pressure port located on the outside of the building through a high-volume accumulator. Pipe the high-pressure port to a location behind a thermostat cover.
 4. All pressure transducers, other than those controlling VAV boxes, shall be located in field device panels, not on the equipment monitored or on ductwork. Mount transducers in a location accessible for service without use of ladders or special equipment.
 5. All air differential pressure sensors shall have gauge tees mounted adjacent to the taps. Water gauges shall also have shut-off valves installed before the tee.
- I. Smoke detectors, freezestats, high-pressure cut-offs, and other safety switches shall be hard-wired to de-energize equipment as described in the sequence of operation. Switches shall require manual reset. Provide contacts that allow DDC software to monitor safety switch status.

3.10 ACTUATORS

- A. General. Mount and link control damper actuators according to manufacturer's instructions.

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1. To compress seals when spring-return actuators are used on normally closed dampers, power actuator to approximately 5° open position, manually close the damper, and then tighten the linkage.
2. Check operation of damper/actuator combination to confirm that actuator modulates damper smoothly throughout stroke to both open and closed positions.
3. Provide all mounting hardware and linkages for actuator installation.

B. Electric/Electronic

1. Dampers: Actuators shall be direct mounted on damper shaft or jackshaft unless shown as a linkage installation. For low-leakage dampers with seals, the actuator shall be mounted with a minimum 5° travel available for tightening the damper seal. Actuators shall be mounted following manufacturer's recommendations.
2. Valves: Actuators shall be connected to valves with adapters approved by the actuator manufacturer. Actuators and adapters shall be mounted following the actuator manufacturer's recommendations.

3.11 WARNING LABELS

- A. Permanent warning labels shall be affixed to all equipment that can be automatically started by the control system.
1. Labels shall use white lettering (12-point type or larger) on a red background.
 2. Warning labels shall read as follows.

CAUTION

This equipment is operating under automatic control and may start or stop at any time without warning. Switch disconnect to "Off" position before servicing.

- B. Permanent warning labels shall be affixed to all motor starters and control panels that are connected to multiple power sources utilizing separate disconnects.
1. Labels shall use white lettering (12-point type or larger) on a red background.
 2. Warning labels shall read as follows.

CAUTION

This equipment is fed from more than one power source with separate disconnects. Disconnect all power sources before servicing.

3.12 IDENTIFICATION OF HARDWARE AND WIRING

- A. All wiring and cabling, including that within factory-fabricated panels shall be labeled at each end within 5 cm (2 in.) of termination with control system address or termination number.
- B. Permanently label or code each point of field terminal strips to show the instrument or item served.
- C. Identify control panels with minimum 1 cm (½ in.) letters on laminated plastic nameplates.
- D. Identify all other control components with permanent labels. All plug-in components shall be labeled such that label removal of the component does not remove the label.
- E. Identify room sensors related to terminal boxes or valves with nameplates.
- F. Manufacturers' nameplates and UL or CSA labels shall be visible and legible after equipment is installed.
- G. Identifiers shall match record documents.

3.13 CONTROLLERS

- A. Provide a separate controller for each AHU or other HVAC system. A DDC controller may control more than one system provided that all points associated with the system are assigned to the same DDC controller. Points used for control loop reset, such as outside air or space temperature, are exempt from this requirement.
- B. Building Controllers and Custom Application Controllers shall be selected to provide the required I/O point capacity required to monitor all of the hardware points listed in 15900 Appendix A (Sequences of Operation).

3.14 PROGRAMMING

- A. Provide sufficient internal memory for the specified sequences of operation and trend logging.
- B. Point Naming. Name points as shown on the equipment points list provided with each sequence of operation. See Section 15900 Appendix A (Sequences of Operation). Where multiple points with the same name reside in the same controller, each point name may be customized with its associated Program Object number. For example, "Zone Temp 1" for Zone 1, "Zone Temp 2" for Zone 2.
- C. Software Programming.
 - 1. Provide programming for the system and adhere to the sequences of operation provided. All other system programming necessary for the operation of the system, but not specified in this document, also shall be provided by the contractor. Embed into the control program sufficient comment statements to clearly describe each section of the program. The comment statements shall reflect the language used in the sequences of operation. Use the appropriate technique based on the following programming types:
 - a. Text-based:
 - i. Must provide actions for all possible situations
 - ii. Must be modular and structured
 - iii. Must be commented
 - b. Graphic-based:
 - i. Must provide actions for all possible situations
 - ii. Must be documented
 - c. Parameter-based:
 - i. Must provide actions for all possible situations
 - ii. Must be documented.
- D. Operator Interface.
 - 1. Standard Graphics. Provide graphics for all mechanical systems and floor plans of the building. This includes each chilled water system, hot water system, chiller, boiler, air handler, and all terminal equipment. Point information on the graphic displays shall dynamically update. Show on each graphic all input and output points for the system. Also show relevant calculated points such as setpoints. As a minimum, show on each equipment graphic the input and output points and relevant calculated points as indicated on the applicable Points List in Section 15900 Appendix A.
 - 2. The contractor shall provide all the labor necessary to install, initialize, start up, and troubleshoot all operator interface software and its functions as described in this section. This includes any operating system software, the operator interface database,

and any third-party software installation and integration required for successful operation of the operator interface.

3.15 CONTROL SYSTEM CHECKOUT AND TESTING

- A. Startup Testing. All testing listed in this article shall be performed by the contractor and shall make up part of the necessary verification of an operating control system. This testing shall be completed before the owner's representative is notified of the system demonstration.
1. The contractor shall furnish all labor and test apparatus required to calibrate and prepare for service of all instruments, controls, and accessory equipment furnished under this specification.
 2. Verify that all control wiring is properly connected and free of all shorts and ground faults. Verify that terminations are tight.
 3. Enable the control systems and verify calibration of all input devices individually. Perform calibration procedures according to manufacturers' recommendations.
 4. Verify that all binary output devices (relays, solenoid valves, two-position actuators and control valves, magnetic starters, etc.) operate properly and that the normal positions are correct.
 5. Verify that all analog output devices (I/Ps, actuators, etc.) are functional, that start and span are correct, and that direction and normal positions are correct. The contractor shall check all control valves and automatic dampers to ensure proper action and closure. The contractor shall make any necessary adjustments to valve stem and damper blade travel.
 6. Verify that the system operation adheres to the sequences of operation. Simulate and observe all modes of operation by overriding and varying inputs and schedules. Tune all DDC loops.
 7. Alarms and Interlocks:
 - a. Check each alarm separately by including an appropriate signal at a value that will trip the alarm.
 - b. Interlocks shall be tripped using field contacts to check the logic, as well as to ensure that the fail-safe condition for all actuators is in the proper direction.
 - c. Interlock actions shall be tested by simulating alarm conditions to check the initiating value of the variable and interlock action

3.16 CONTROL SYSTEM DEMONSTRATION AND ACCEPTANCE

- A. Demonstration.
1. Prior to acceptance, the control system shall undergo a series of performance tests to verify operation and compliance with this specification. These tests shall occur after the Contractor has completed the installation, started up the system, and performed his/her own tests.
 2. The tests described in this section are to be performed in addition to the tests that the contractor performs as a necessary part of the installation, start-up, and debugging process and as specified in the "Control System Checkout and Testing" article in Part 3 of this specification. The engineer will be present to observe and review these tests. The engineer shall be notified at least 10 days in advance of the start of the testing procedures.

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3. The demonstration process shall follow that approved in Part 1, "Submittals." The approved checklists and forms shall be completed for all systems as part of the demonstration.
4. The contractor shall provide at least two persons equipped with two-way communication and shall be prepared to demonstrate actual field operation of a random selection of control and sensing points for all modes of operation including day, night, occupied, unoccupied, fire/smoke alarm, seasonal changeover, and power failure modes. The purpose is to demonstrate the calibration, response, and action of the system. Any test equipment required to prove the proper operation shall be provided by and operated by the contractor.
5. As each control input and output is checked, a log shall be completed showing the date, technician's initials, and any corrective action taken or needed.
6. Demonstrate compliance with Part 1, "System Performance."
7. Demonstrate compliance with sequences of operation through all modes of operation.
8. Demonstrate complete operation of operator interface.
9. Additionally, the following items shall be demonstrated:
 - a. DDC loop response. The contractor shall supply trend data output in a graphical form showing the step response of each DDC loop. The test shall show the loop's response to a change in set point, which represents a change of actuator position of at least 25% of its full range. The sampling rate of the trend shall be from 10 seconds to 3 minutes, depending on the speed of the loop. The trend data shall show for each sample the set point, actuator position, and controlled variable values. Any loop that yields unreasonably under-damped or over-damped control shall require further tuning by the Contractor.
 - b. Demand limiting. The contractor shall supply a trend data output showing the action of the demand limiting algorithm. The data shall document the action on a minute-by-minute basis over at least a 30-minute period. Included in the trend shall be building kW, demand limiting set point, and the status of sheddable equipment outputs.
 - c. Optimum start/stop. The contractor shall supply a trend data output showing the capability of the algorithm. The change-of-value or change-of-state trends shall include the output status of all optimally started and stopped equipment, as well as temperature sensor inputs of affected areas.
 - d. Interface to the building fire alarm system.
 - e. Operational logs for each system that indicate all set points, operating points, valve positions, mode, and equipment status shall be submitted to the architect/engineer. These logs shall cover three 48-hour periods and have a sample frequency of not more than 10 minutes. The logs shall be provided in both printed and disk formats.
10. Any tests that fail to demonstrate the operation of the system shall be repeated at a later date. The contractor shall be responsible for any necessary repairs or revisions to the hardware or software to successfully complete all tests.

B. Acceptance.

1. All tests described in this specification shall have been performed to the satisfaction of both the engineer and owner prior to the acceptance of the control system as meeting the requirements of completion. Any tests that cannot be performed due to

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circumstances beyond the control of the contractor may be exempt from the completion requirements if stated as such in writing by the engineer. Such tests shall then be performed as part of the warranty.

2. The system shall not be accepted until all forms and checklists completed as part of the demonstration are submitted and approved as required in Part 1, "Submittals."

3.17 CLEANING

- A. The contractor shall clean up all debris resulting from his/her activities daily. The contractor shall remove all cartons, containers, crates, etc., under his/her control as soon as their contents have been removed. Waste shall be collected and placed in a designated location.
- B. At the completion of work in any area, the contractor shall clean all work, equipment, etc., keeping it free from dust, dirt, and debris, etc.
- C. At the completion of work, all equipment furnished under this section shall be checked for paint damage, and any factory-finished paint that has been damaged shall be repaired to match the adjacent areas. Any cabinet or enclosure that has been deformed shall be replaced with new material and repainted to match the adjacent areas.

3.18 DUCT SMOKE DETECTION

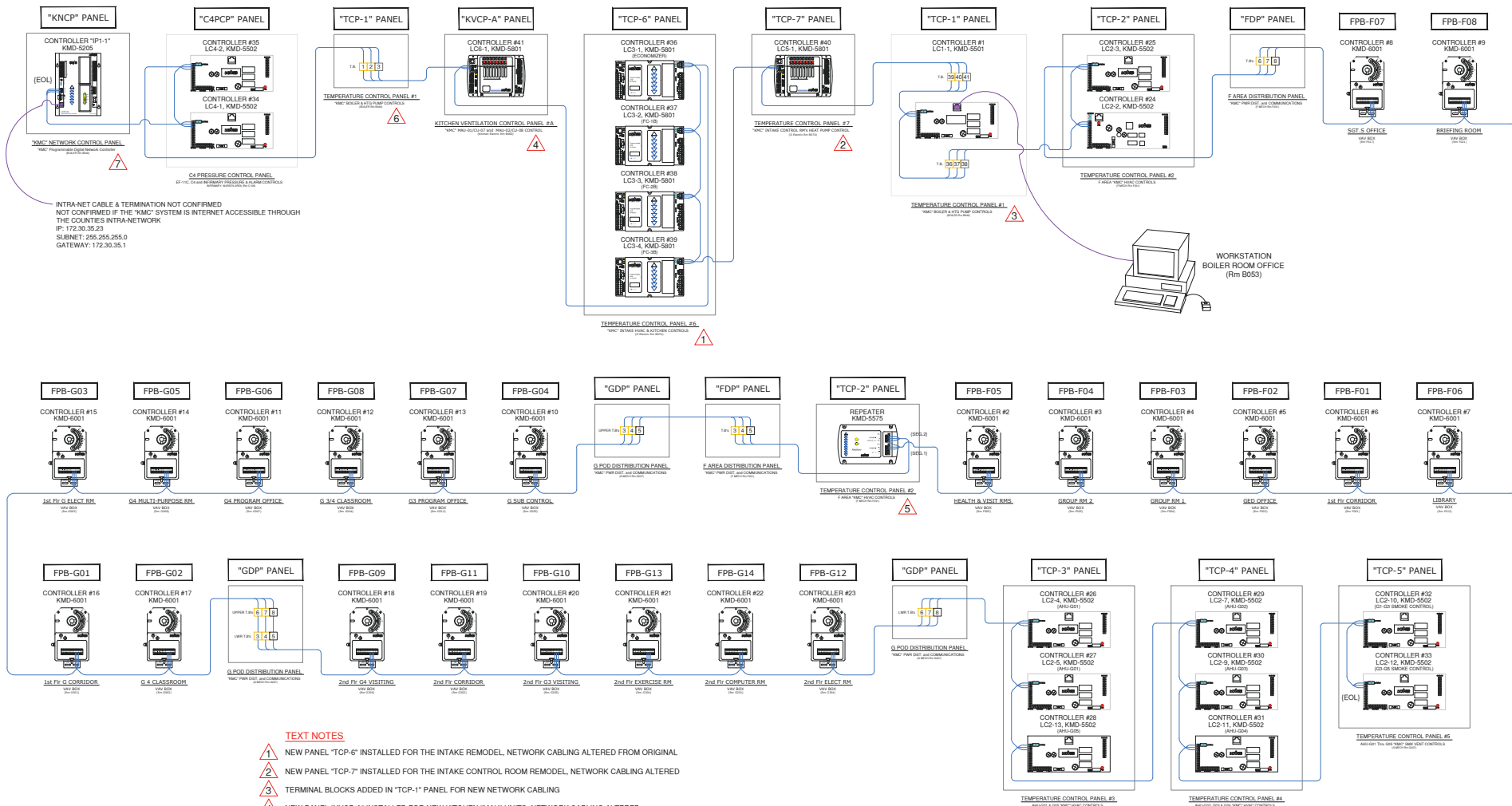
- A. Submit data for coordination of duct smoke detector interface to HVAC systems as required in Part 1, "Submittals."
- B. This Contractor shall provide a dry-contact alarm output in the same room as the HVAC equipment to be controlled.

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PART 4: APPENDIX

APPENDIX A: KMC CONTROL SYSTEM DOCUMENTATION.

The following pages are from existing documentation on the KMC system, the information is provided as reference information only. The controls contractor is to review existing equipment and controls to determine the extent of their work in order to replace the existing KMC controls with new Automated Logic controls.



TEXT NOTES

- 1 NEW PANEL "TCP-6" INSTALLED FOR THE INTAKE REMODEL, NETWORK CABLING ALTERED FROM ORIGINAL
 - 2 NEW PANEL "TCP-7" INSTALLED FOR THE INTAKE CONTROL ROOM REMODEL, NETWORK CABLING ALTERED
 - 3 TERMINAL BLOCKS ADDED IN "TCP-1" PANEL FOR NEW NETWORK CABLING
 - 4 NEW PANEL "KVCP-A" INSTALLED FOR NEW KITCHEN "MAU" UNITS, NETWORK CABLING ALTERED
 - 5 NEW REPEATER INSTALLED IN "TCP-2" PANEL, NETWORKING ISSUES, REPEATER INSTALLED IN THE MIDDLE OF NETWORK
 - 6 TERMINAL BLOCK NETWORK CABLING ALTERED
 - 7 NEW PANEL "KNCP" INSTALLED w/ NEW CONTROLLER "IP1-1", KMD-5205 LANLine Programmable Digital Network Controller
- IMPORTANT NOTE:** NOT ALL LABELS ON NETWORK CABLING ARE CORRECT DUE TO NEW INSTALLS AND ALTERATIONS

MARION COUNTY JAIL
 "KMC" NETWORK RISER DIAGRAM
 07/15/2016

HVAC CONTROL PANELS LEGEND

BOILER RM

"BRCP-1" : BOILER RM CONTROL PANEL #1, PNEU CONTROLS -- Dwgs. 1A, 10A, 10A-1
"BRCP-2" : BOILER RM CONTROL PANEL #2, "Automated-Logic" LGR Module -- Dwgs. 1A, 10D
"BRCP-3" : BOILER RM CONTROL PANEL #3, "Automated-Logic" CENTRAL PLANT CONTROL -- Dwgs. 1A, 10C
"BCP-1" : BOILERS CONTROL PANEL #1, BOILERS PLC CONTROLS -- Dwgs. 1A and See BOILER CONTROL Dwgs. A Thru G
"TCP-1" : TEMPERATURE CONTROL PANEL #1, "KMC" BOILER RM CONTROLS -- Dwgs. 1A, 13
"TCP-6" : TEMPERATURE CONTROL PANEL #6, "KMC" INTAKE & KITCHEN CONTROLS -- Dwgs. 1A, 4B thru 4E & 5B
"TCP-6A" : TEMPERATURE CONTROL PANEL #6A, "KMC" KITCHEN VENTILATION & WALK-INS CONTROLS -- Dwgs. 1A, 4E, 5B
"TCP-7" : TEMPERATURE CONTROL PANEL #7, "KMC" INTAKE CONTROL RM HEAT PUMP CONTROLS -- Dwgs. 1A, 4F
"KNCP" : KMC NETWORK CONTROL PANEL, "KMC" PROGRAMMABLE NETWORK MODULE -- Dwgs. 1A and See "KMC" Network Riser Dia.

GENERATOR RM

"GDCP" : GENERATOR DAMPER CONTROL PANEL, GENERATOR DAMPER & TEMP CONTROLS -- Dwgs. 1A, 10A, 10A-2, 10B
"BSVFCP" : B Section SVF CONTROL PANEL, SVF-2B, 3B, 6B, 7B CONTROLS -- Dwgs. 1A, 10A, 10B, 10B-1

MAIN ELECTRIC RM

"BEFCP" : B Section EF CONTROL PANEL, EF-6B, 10B CONTROLS -- Dwgs. 1A, 4A1, 4A1-B

COURTS ELECTRIC RM

"ASVFCP" : A SECTION SVF & EF CONTROL PANEL, SVF-1A, 2A & EF-3A, 4A CONTROLS -- Dwgs. 1A, 3A, 3A-1

ADMIN ELECTRIC RM

"AEFCR" : A SECTION EF CONTROL RELAYS, EF-1A, 2A, 6A CONTROLS -- Dwgs. 1A, 4A1, 4A1-A

D ELECTRIC RM

"DSVFCP" : D & B SECTIONS SVF CONTROL PANEL, SVF-2D & SVF-1B, 1B #2 CONTROLS -- Dwgs. 1A, 8A1-A

KITCHEN OFFICE & ELECTRIC RM

"KOVCP" : KITCHEN OFFICE VENTILATION CONTROL PANEL -- Dwgs. 1A, 5B, 5C, 5D
"KVCP" : KITCHEN VENTILATION CONTROL PANEL -- Dwgs. 1A, 5B, 5C, 5D
"KVCP-A" : KITCHEN VENTILATION CONTROL PANEL A, "KMC" MAU-01, 02 & CU-07, 08 CONTROLS -- Dwgs. 1A, 5B, 5C
"EF3,5CP"- EXHAUST FAN 3B & 5B CONTROL PANEL -- Dwgs. 1A, 5B, 5D

INFIRMARY

"C4PCP" : C4 POD PRESSURE CONTROL PANEL, "KMC" PRESSURE, ALARM & EF CONTROLS -- Dwgs. 1A, 12

2Flr COURTS MECH RM

"AH1CP" : AHU-01 CONTROL PANEL, COURT ANNEX AHU/CU "LG" & Pneumatic CONTROLS -- Dwgs. 2A, 3A, 3B

2Flr ADMIN MECH RM

"AH2CP" : AHU-02 CONTROL PANEL, ADMIN/VISITING AHU/CU "Automated-Logic" & Pneumatic CONTROLS -- Dwgs. 2A, 4A, 4A1
"AH3CP" : AHU-03 CONTROL PANEL, KITCHEN AHU/CU "Automated-Logic" & Pneumatic CONTROLS -- Dwgs. 2A, 5A

2Flr C MECH RM

"AH4CP" : AHU-04 CONTROL PANEL, C POD AHU/CU "Automated-Logic" & Pneumatic CONTROLS -- Dwgs. 2A, 6A, 7A
"AH7CP" : AHU-07 CONTROL PANEL, C4 POD AHU FA/DAMPER Shut-Down CONTROLS -- Dwgs. 2A, 11

2Flr D MECH RM

"AH5CP" : AHU-05 CONTROL PANEL, D POD AHU/CU "Automated-Logic" & Pneumatic CONTROLS -- Dwgs. 2A, 8A, 8B
"DCECP" : D POD CAPSTUN EVAC CONTROL PANEL, EVAC RELAY CONTROLS -- Dwgs. 2A, 8A1

2Flr E MECH RM

"AH6CP" : AHU-06 CONTROL PANEL, E POD AHU/CU "Automated-Logic" & Pneumatic CONTROLS -- Dwgs. 2A, 9A, 9B

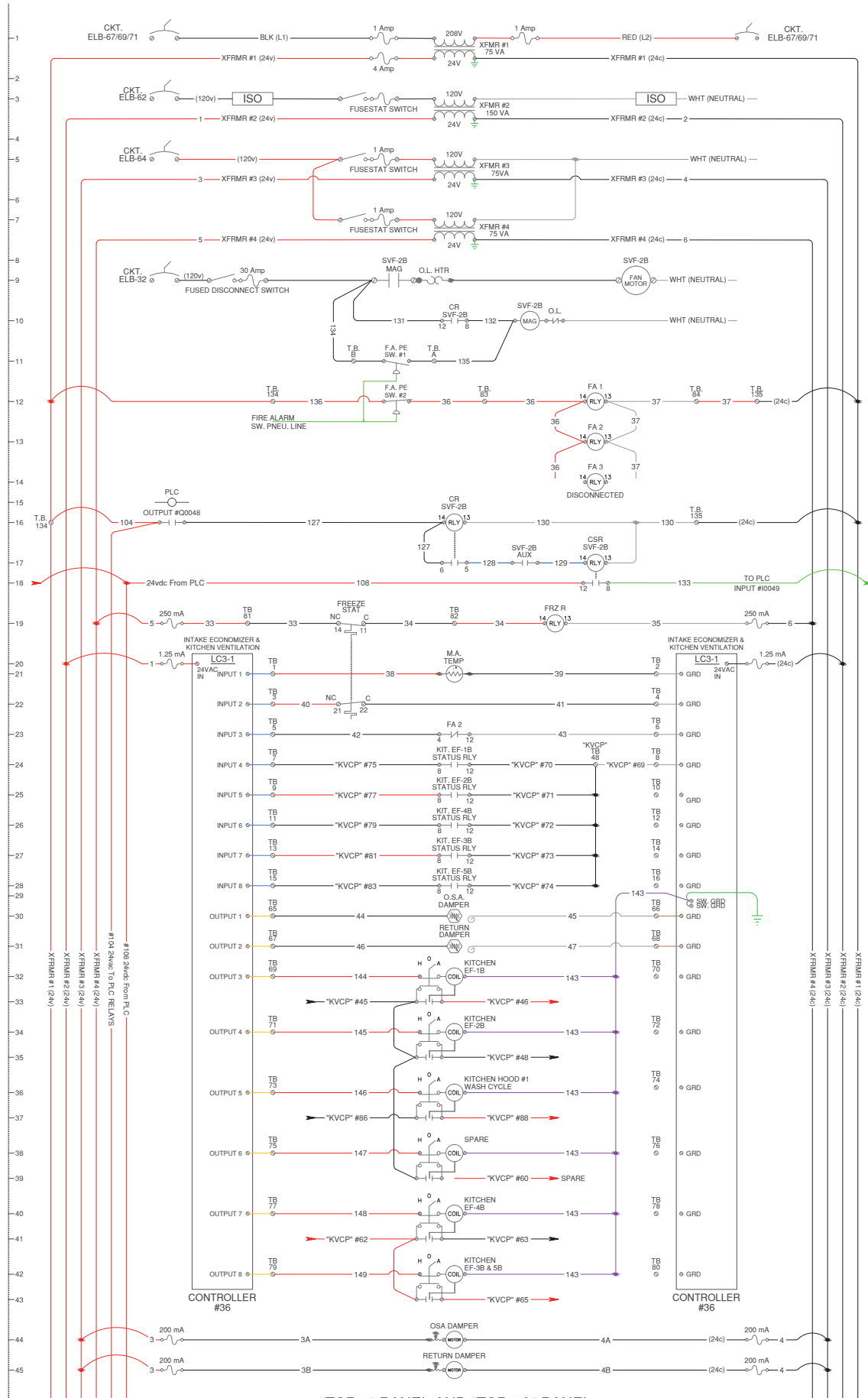
2Flr F MECH RM

"TCP-2" : TEMPERATURE CONTROL PANEL #2, F AREA AHU-F01 & CU "KMC" CONTROLS -- Dwgs. 2A, 14, 15
"FDP" : F AREA DISTRIBUTION PANEL, TCP PANELS POWER DIST. AND "KMC" COMM CABLE T.BLKS -- Dwgs. 2A, 14

2FLR G MECH RM

"TCP-3" : TEMPERATURE CONTROL PANEL #3, G POD AHU-G01, G05 "KMC" CONTROLS -- Dwgs. 2A, 16, 17
"TCP-4" : TEMPERATURE CONTROL PANEL #4, G POD AHU-G02, G03, G04 & "KMC" CONTROLS -- Dwgs. 2A, 18
"TCP-5" : TEMPERATURE CONTROL PANEL #5, G POD AHU-G01, G02, G03, G04, G05 "KMC" SMK VENT CONTROLS -- Dwgs. 2A, 19
"GDP" : G POD DISTRIBUTION PANEL, TCP PANELS POWER DIST. AND "KMC" COMM CABLE T.BLKS -- Dwgs. 2A, 16, 18, 19

INTAKE and KITCHEN HVAC CONTROLS



FOR MORE INFORMATION AND DETAILS
for the KITCHEN HVAC CONTROLS
SEE: (Dwg. #5B)

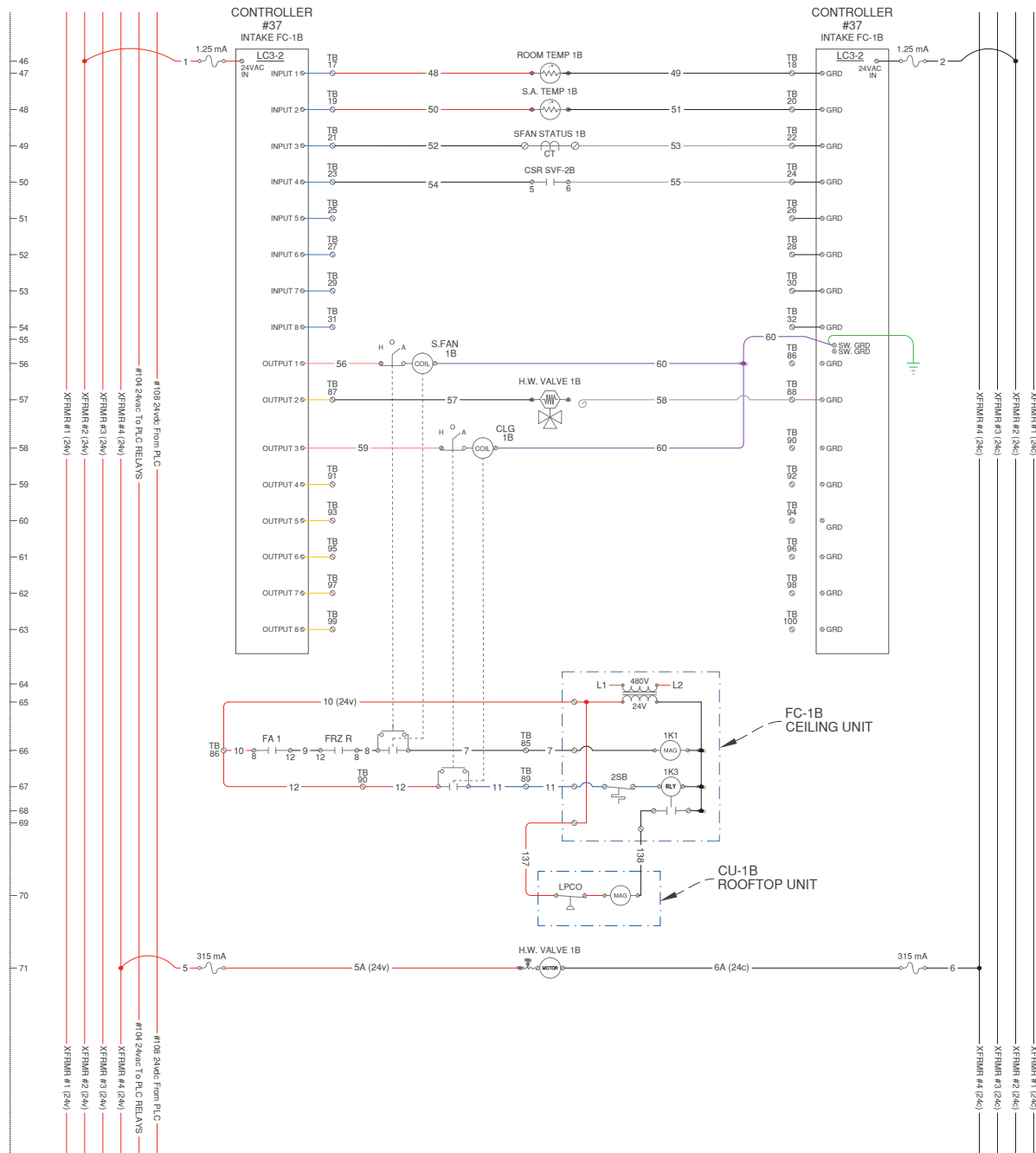
"TCP-6" PANEL AND "TCP-6A" PANEL
"KMC" TEMPERATURE CONTROL PANEL #6 & #6A
Power Supply's, Intake Economizer & Kitchen Ventilation and Equipment
(BOILER Rm B049)

MARION COUNTY JAIL
HVAC CONTROL
"KMC" TCP-6 PANEL
Intake and Kitchen HVAC Control



DATE:
06/19/2016
REVISED
HVAC
CONTROLS
DRAWING No.
4B
(1 of 5)

INTAKE HVAC "FC-1B" CONTROLS



"TCP-6" PANEL
"KMC" TEMPERATURE CONTROL PANEL #6
 Intake "FC-1B" and "CU-1B" Controls
 (BOILER Rm B049)



DATE:
06/19/2016

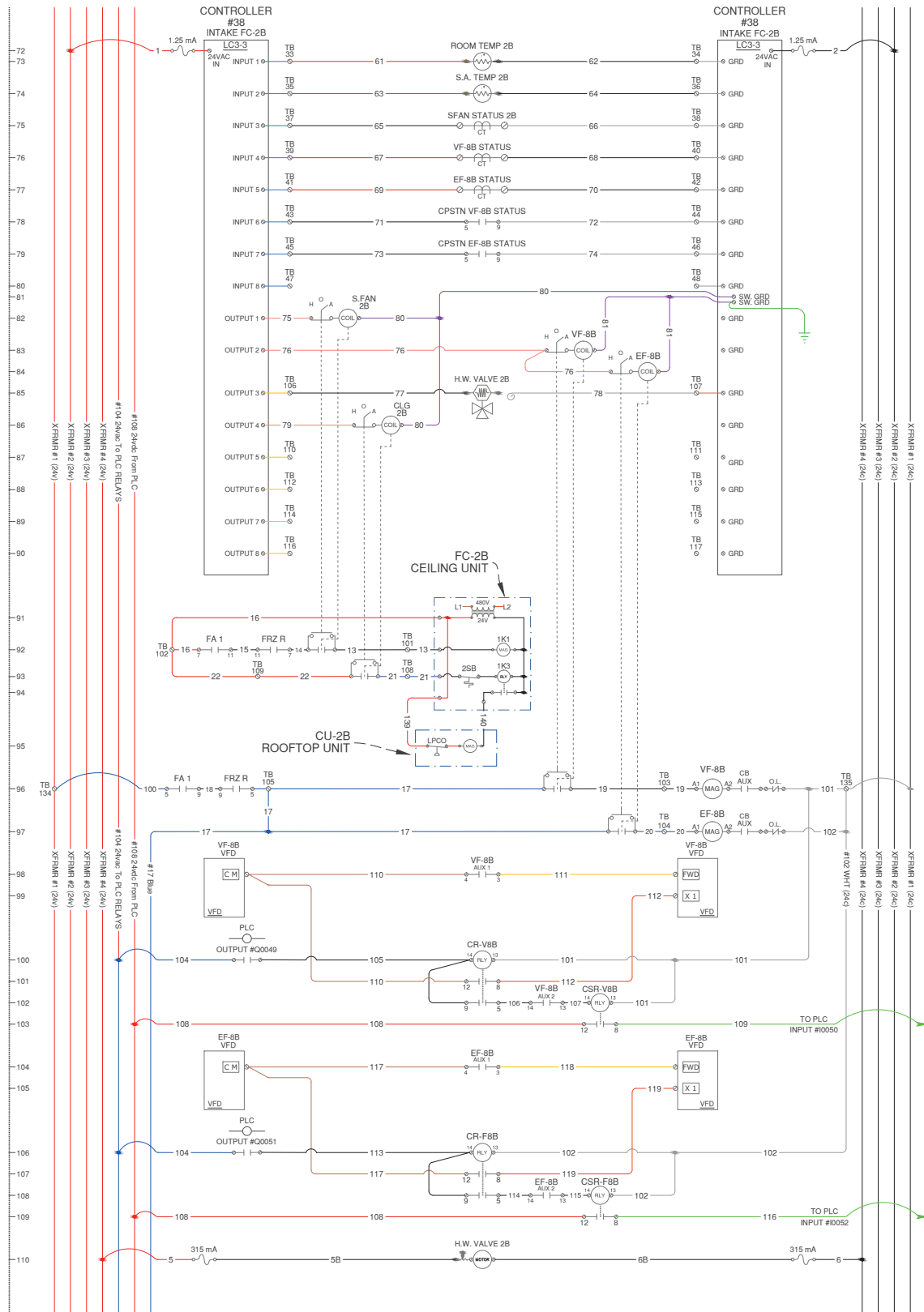
REVISED
HVAC
CONTROLS

MARION COUNTY JAIL
HVAC CONTROL

"KMC" TCP-6 PANEL
Intake "FC-1B" HVAC Control

DRAWING No.
4C
(2 of 5)

INTAKE HVAC "FC-2B" "VF-8VB" "EF-8B" CONTROLS



"TCP-6" PANEL
"KMC" TEMPERATURE CONTROL PANEL #6
 Intake "FC-2B" and "VF-8B" & "EF-8B" Controls
 (BOILER Rm B049)



DATE:
06/21/2016

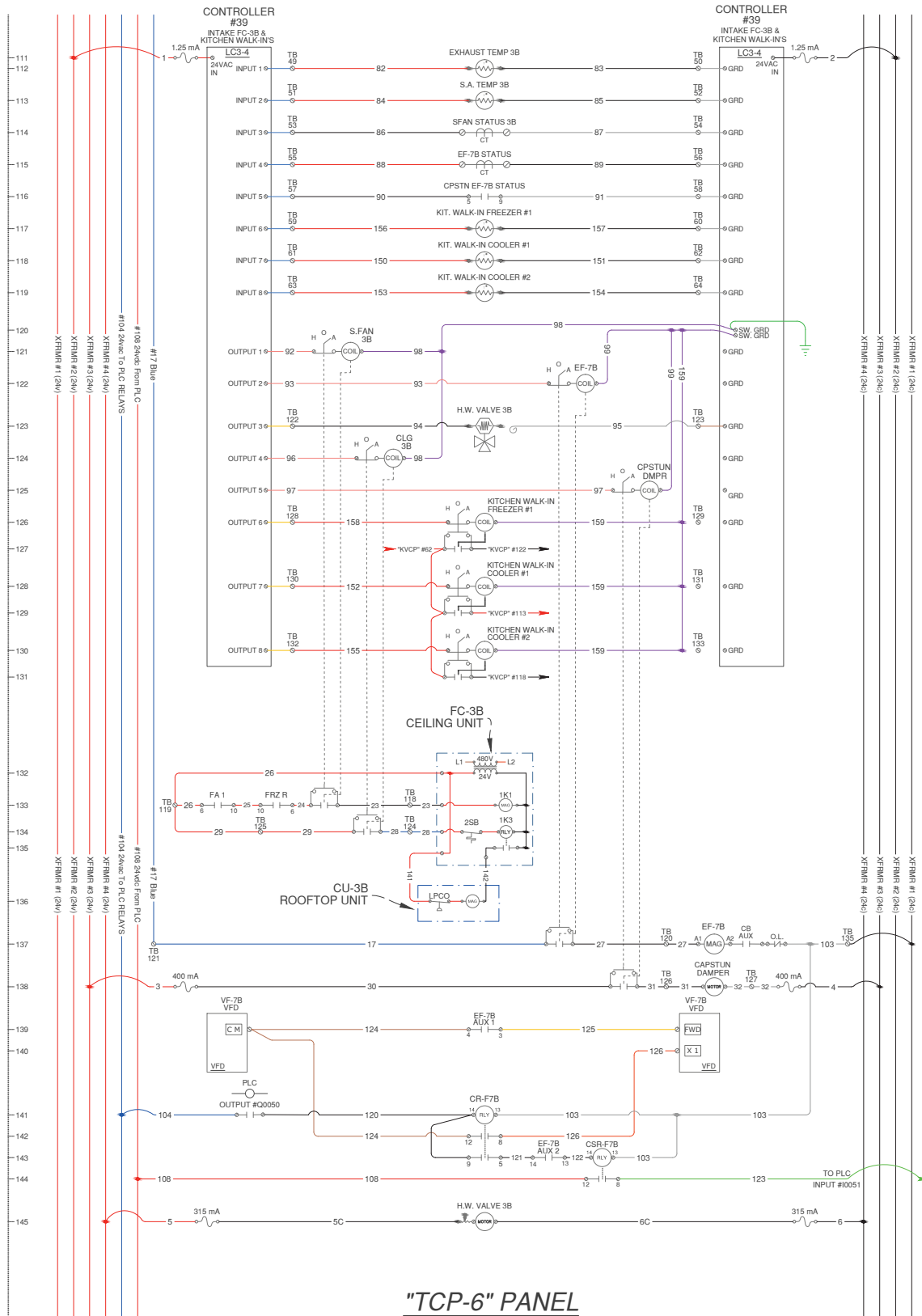
REVISED
HVAC CONTROLS

MARION COUNTY JAIL
HVAC CONTROLS

"KMC" TCP-6 PANEL
Intake "FC-2B" & EF HVAC Control

DRAWING No.
4D
(3 of 5)

INTAKE HVAC "FC-3B" and KITCHEN REFER CONTROL



"TCP-6" PANEL
"KMC" TEMPERATURE CONTROL PANEL #6
 Intake "FC-3B" and Kitchen Walk-In Refer Alarm Controls
 (BOILER Rm B049)

FOR MORE INFORMATION AND DETAILS
 for the KITCHEN WALK-IN CONTROLS
 SEE: (Dwg. #5B)



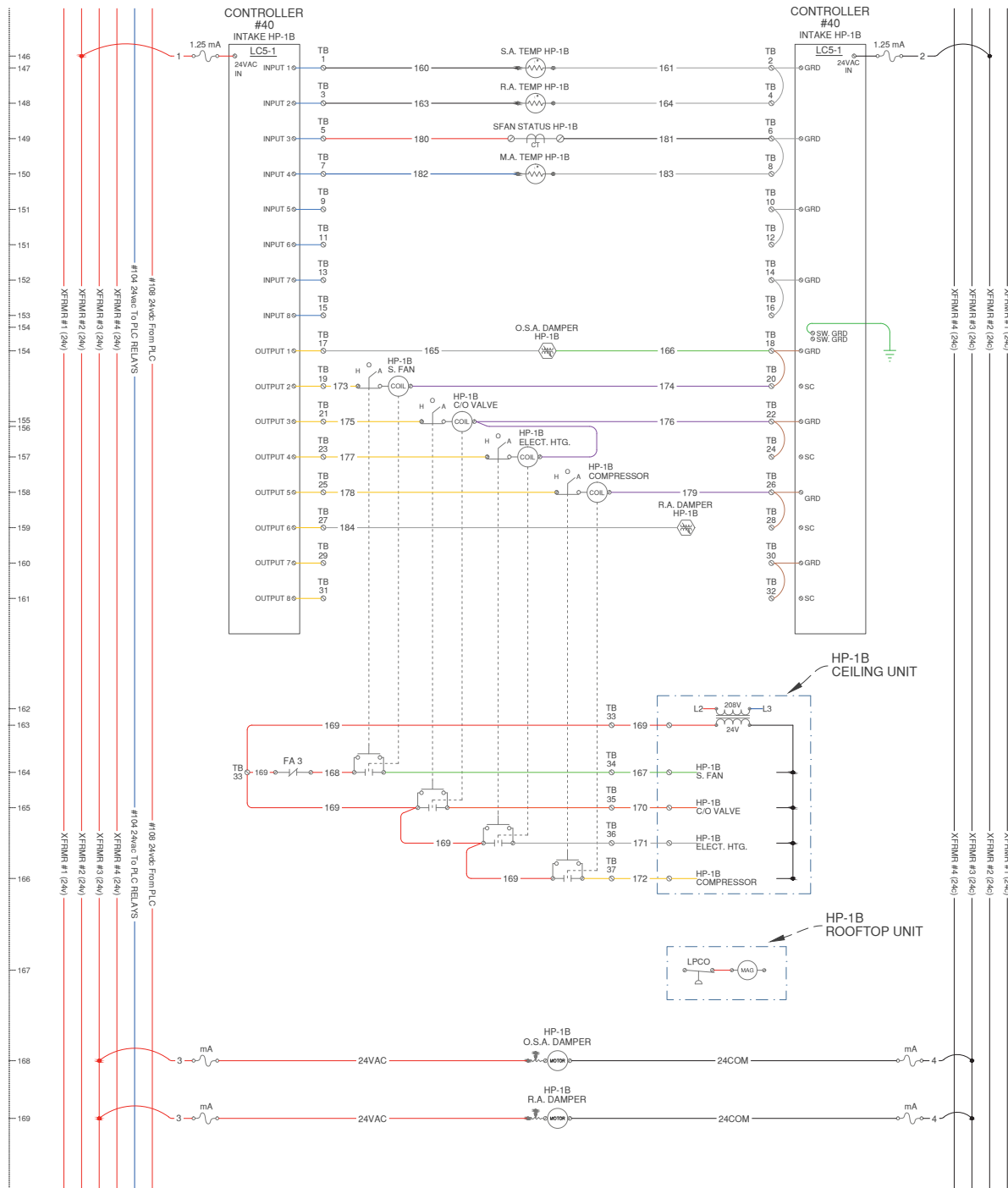
DATE:
07/25/2016

REVISED
HVAC
CONTROLS

MARION COUNTY JAIL
 HVAC CONTROL
 "KMC" TCP-6 PANEL
 Intake "FC-1B" & Kitchen Refer Control

DRAWING No.
4E
 (4 of 5)

INTAKE HVAC "HP-1B" CONTROLS



"TCP-7" PANEL
 "KMC" TEMPERATURE CONTROL PANEL #7
 Intake "HP-1B" HVAC Controls
 (BOILER Rm B049)



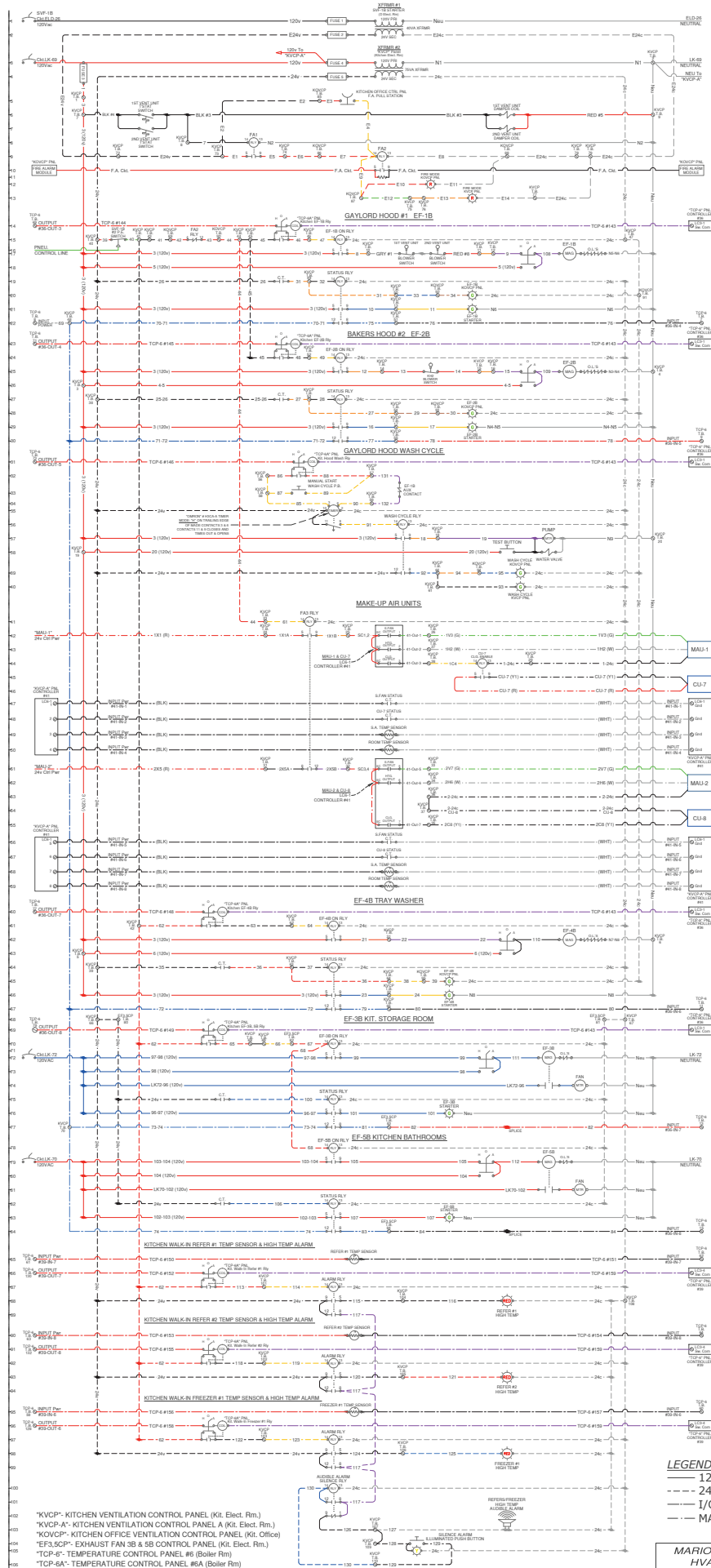
DATE:
 06/24/2016

REVISED
 HVAC
 CONTROLS

MARION COUNTY JAIL
 HVAC CONTROL
 "KMC" TCP-7 PANEL
 Intake "HP-1B" HVAC Control

DRAWING No.
 4F
 (5 of 5)

KITCHEN HVAC and UTILITY EQUIPMENT CONTROL SCHEMATIC



DATE: 06/30/2016

REVISED HVAC CONTROLS

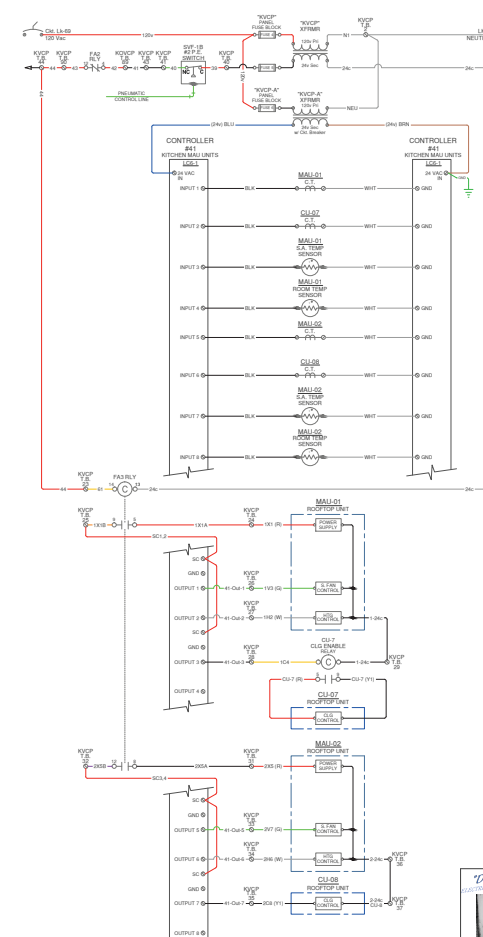
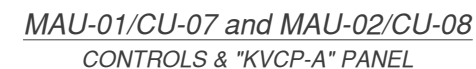
MARION COUNTY JAIL
HVAC CONTROL
Kitchen HVAC and Utility Equipment Control Schematic

DRAWING No. 5B

KITCHEN VENTILATION CONTROL PANEL



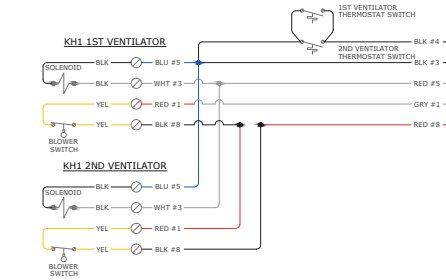
KITCHEN OFFICE VENTILATION CONTROL PANEL



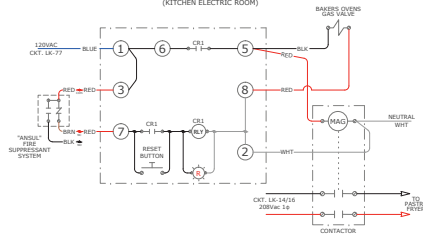
KITCHEN EXHAUST FANS & HOOD CONTROLS

KITCHEN EF-1B, -2B, -3B, -4B, -5B AND HOOD'S EQUIPMENT

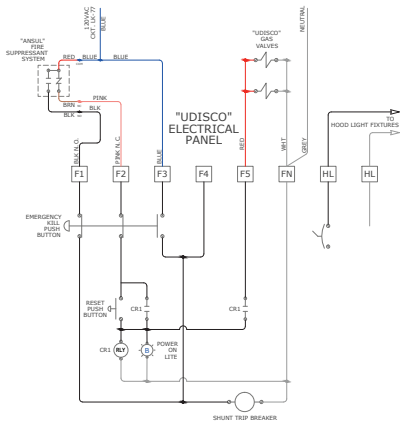
"GAYLORD" KITCHEN HOOD #1 DAMPER CONTROL



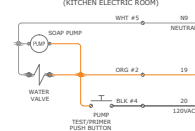
BAKERS KITCHEN HOOD #2 GAS VALVE CONTROL



"GAYLORD" KITCHEN HOOD #1 GAS VALVE CONTROL

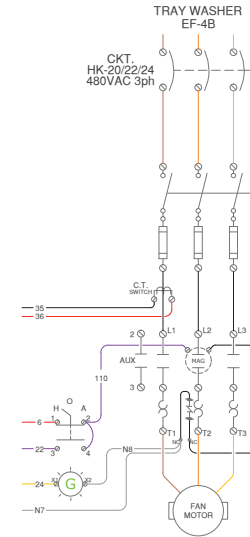
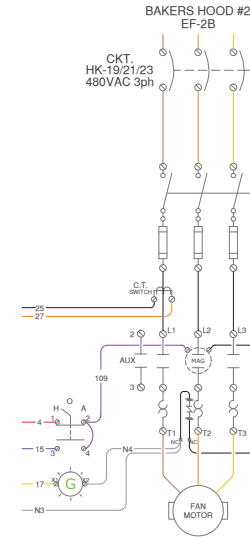
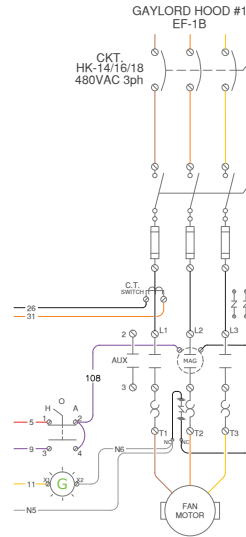


"GAYLORD" KITCHEN HOOD #1 WASH CYCLE CONTROL PANEL

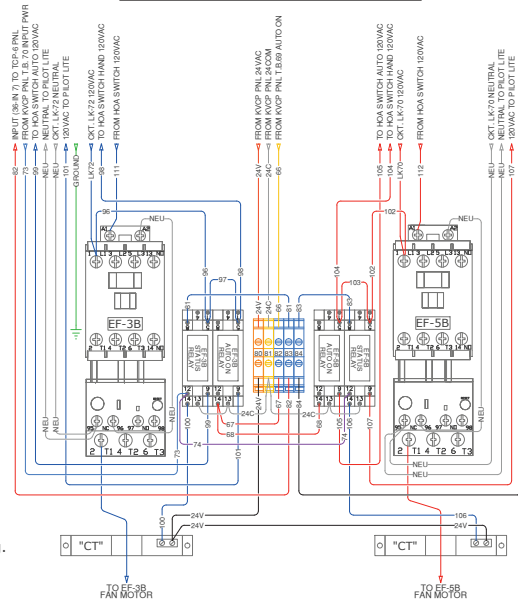


"KVCP"- KITCHEN VENTILATION CONTROL PANEL (Kit. Elect. Rm.)
 "KVCP-A"- KITCHEN VENTILATION CONTROL PANEL A (Kit. Elect. Rm.)
 "KOVCP"- KITCHEN OFFICE VENTILATION CONTROL PANEL (Kit. Office)
 "EF3,5CP"- EXHAUST FAN 3B & 5B CONTROL PANEL (Kit. Elect. Rm.)
 "TCP-6"- TEMPERATURE CONTROL PANEL #6 (Boiler Rm)
 "TCP-6A"- TEMPERATURE CONTROL PANEL #6A (Boiler Rm)

FOR MORE DETAILS SEE:
 Dwg.5B: KITCHEN HVAC and UTILITY EQUIPMENT CONTROL Schematic
 Dwg.5C: KITCHEN "KVCP", "KOVCP" PANELS and MAU-1 & 2 CONTROLS Dwg.



"EF3,5CP" EXHAUST FANS 3B & 5B CONTROL PANEL



DATE:
07/03/2016

MARION COUNTY JAIL
 HVAC CONTROL
 Kitchen Exhaust Fans and
 Hood Equipment Controls

NEW
 HVAC
 CONTROLS
 DRAWING No.
 5D

INTAKES' HVAC CONTROL SCHEMATIC LEGEND

ABBREVIATIONS	DESCRIPTION	SCHEMATIC LINE #	LOCATION
XFMR # 1	24 VAC CONTROL POWER FOR EXH. FANS, CAPSTUN & FIRE ALARM RELAYS	1, 2	GENERATOR ROOM, ATTACHED TO VF-8B ENCLOSURE
XFMR # 2	24 VAC CONTROL POWER FOR "KMC" CONTROLLERS	3, 4	BOILER RM, NEXT TO TCP-6 PANEL
XFMR # 3	24 VAC POWER FOR DAMPER MOTORS	5, 6	BOILER RM, NEXT TO TCP-6 PANEL
XFMR # 4	24 VAC POWER FOR HTG. H.W. VALVES & FREEZE STAT	7, 8	BOILER RM, NEXT TO TCP-6 PANEL
ISO	ISOLATION SURGE PROTECTOR, 120VAC LINE SIDE FOR "KMC" CONTROLLERS	3	BOILER RM, NEXT TO TCP-6 PANEL
SVF-2B	SMOKE VENTILATION FAN 2B, SERVES INTAKE ARE	9	ROOFTOP ABOVE INTAKE
SVF-2B AUX	SVF-2B MOTOR STARTER AUX CONTACTS	16	GENERATOR RM, INSIDE SVF-2B MAG. STARTER
SVF-2B MAG	SVF-2B MOTOR STARTER	9, 10	GENERATOR ROOM
CR SVF-2B	CAPSTUN RELAY FOR SVF-2B	10, 14, 15	GENERATOR RM, INSIDE SVF-2B MAG. STARTER
CSR-SVF-2B	CAPSTUN STATUS RELAY FOR SVR-2B	16, 49	GENERATOR RM, INSIDE SVF-2B MAG. STARTER
PLC INPUT #	SVF-2B STATUS INPUT FOR CAPSTUN EVAC TO INTAKES PLC	17	INTAKES PLC CABINET IN PHONE COMPUTER ROOM
PLC OUTPUT #	PLC OUTPUT RELAY FOR SVF-2B CAPSTUN EVAC	14	INTAKES PLC CABINET IN PHONE COMPUTER ROOM
F.A. PE # 1	FIRE ALARM PE SWITCH # 1 TO TURN ON SVF-2B FOR SMOKE VENTILATION	11	GENERATOR RM, INSIDE SVF-2B,3B,4B,6B,7B CONTROL PNL
F.A. PE # 2	FIRE ALARM PE SWITCH # 2 TO DE-ENERGIZE FIRE ALARM RELAYS #1 & 2	12	GENERATOR RM, INSIDE SVF-2B,3B,4B,6B,7B CONTROL PNL
FA 1	FIRE ALARM RELAY # 1	12,65,91,132,95	BOILER RM, INSIDE TCP-6 PANEL
FA 2	FIRE ALARM RELAY # 2	13, 22	BOILER RM, INSIDE TCP-6 PANEL
FREEZE STAT	FREEZE STAT, LOW TEMPERATURE CUT-OUT SWITCH	18, 21	ABOVE CEILING IN INTAKES PROPERTY RM
FRZ R	FREEZE STAT CONTROL RELAY	18,65,91,95,132	BOILER RM, INSIDE TCP-6 PANEL

INTAKES' HVAC CONTROL SCHEMATIC LEGEND

ABBREVIATIONS	DESCRIPTION	SCHEMATIC LINE #	LOCATION
LC3-1	"KMC" LOCAL CONTROLLER LC-3-1 (INTAKE's ECONOMIZER AND KITCHEN VENTILATION)	19 THRU 41	BOILER RM, INSIDE TCP-6 PANEL
MA TEMP	MIXED AIR DUCT TEMPERATURE SENSOR	20	ABOVE CEILING IN INTAKES PROPERTY RM
OSA DMPR	OUTSIDE AIR DUCT DAMPER	29, 43	ABOVE CEILING IN INTAKES PROPERTY RM
RTN DMPR	RETURN AIR DUCT DAMPER	30, 44	ABOVE CEILING IN INTAKES PROPERTY RM
KIT. EF-1B STATUS	KITCHEN EF-1B STATUS RELAY	23	KITCHEN ELECTRIC ROOM "KVCP" PANEL
KIT. EF-2B STATUS	KITCHEN EF-2B STATUS RELAY	24	KITCHEN ELECTRIC ROOM "KVCP" PANEL
KIT. EF-4B STATUS	KITCHEN EF-4B STATUS RELAY	25	KITCHEN ELECTRIC ROOM "KVCP" PANEL
KIT. EF-3B STATUS	KITCHEN EF-3B STATUS RELAY	26	KITCHEN ELECTRIC ROOM "EF3,5CP" PANEL
KIT. EF-5B STATUS	KITCHEN EF-5B STATUS RELAY	27	KITCHEN ELECTRIC ROOM "EF3,5CP" PANEL
KIT. EF-1B RELAY	KITCHEN EF-1B OUTPUT RELAY	31, 32	BOILER RM, ENCLOSURE BELOW TCP-6 PANEL
KIT. EF-2B RELAY	KITCHEN EF-2B OUTPUT RELAY	33, 34	BOILER RM, ENCLOSURE BELOW TCP-6 PANEL
KIT. Wash Cycle RELAY	KITCHEN HOOD #1 WASH CYCLE OUTPUT RELAY	35, 36	BOILER RM, ENCLOSURE BELOW TCP-6 PANEL
KIT. MAU'S RELAY	KITCHEN MAU-1 & MAU-2 OUTPUT RELAY	37, 38	BOILER RM, ENCLOSURE BELOW TCP-6 PANEL
KIT. EF-4B RELAY	KITCHEN EF-4B OUTPUT RELAY	39, 40	BOILER RM, ENCLOSURE BELOW TCP-6 PANEL
KIT. EF-3B & 5B RELAY	KITCHEN EF-3B & EF-5B OUTPUT RELAY	41, 42	BOILER RM, ENCLOSURE BELOW TCP-6 PANEL

INTAKES' HVAC CONTROL SCHEMATIC LEGEND

ABBREVIATIONS	DESCRIPTION	SCHEMATIC LINE #	LOCATION
LC3-2	"KMC" LOCAL CONTROLLER LC3-2 (FC-1B SERVES: MAIN INTAKE AREA)	45 THRU 62	BOILER RM, INSIDE TCP-6 PANEL
RM TEMP 1B	ROOM WALL TEMPERATURE SENSOR FOR FC-1B	46	ON WALL JUST INSIDE BACK DOOR TO INTAKE FROM PROPERTY RM
SA TEMP 1B	SUPPLY DUCT AIR TEMPERATURE SENSOR FOR FC-1B	47	ABOVE CEILING IN INTAKES PROPERTY RM
HOA SFAN 1B	HAND-OFF AUTO CONTROL SWITCH/RELAY FOR FC-1B SUPPLY FAN	55, 65	BOILER RM, INSIDE TCP-6 PANEL
SFAN STATUS 1B	FC-1B SUPPLY FANS "CT" PROVEN SWITCH	48	IN FC-1B UNITS CONTROL PANEL ABOVE CEILING IN INTAKES PROPERTY RM
HOA CLG 1B	HAND-OFF AUTO CONTROL SWITCH/RELAY FOR FC-1B COOLING UNIT	57, 66	BOILER RM, INSIDE TCP-6 PANEL
HW VLV 1B	HEATING HOT WATER VALVE FOR FC-1B	56, 70	NEXT TO FC-1B UNIT ABOVE CEILING IN INTAKES PROPERTY RM
FC-1B	FAN COIL 1B UNIT (SERVES: MAIN INTAKE AREA)	63 THRU 68	ABOVE CEILING IN INTAKES PROPERTY RM
CU-1B	CONDENSING UNIT 1B (SERVES: FC-1B)	69	ROOFTOP ABOVE INTAKES PROPERTY ROOM

INTAKES' HVAC CONTROL SCHEMATIC LEGEND

ABBREVIATIONS	DESCRIPTION	SCHEMATIC LINE #	LOCATION
LC3-3	"KMC" LOCAL CONTROLLER LC3-3 (FC-2B SERVES: BOOK SALLY, DUII AREA)	71 THRU 89	BOILER RM, INSIDE TCP-6 PANEL
RM TEMP 2B	ROOM WALL TEMPERATURE SENSOR FOR FC-2B	72	ON WALL INSIDE BOOKING SALLYPORT
SA TEMP2B	SUPPLY DUCT AIR TEMPERATURE SENSOR FOR FC-2B	73	ABOVE CEILING IN INTAKES PROPERTY RM
HOA SFAN 2B	HAND-OFF AUTO CONTROL SWITCH/RELAY FOR FC-2B SUPPLY FAN	81, 91	BOILER RM, INSIDE TCP-6 PANEL
SFAN STATUS 2B	FC-2B SUPPLY FAN "CT" PROVEN SWITCH	74	IN FC-2B UNITS CONTROL PANEL ABOVE CEILING IN INTAKES PROPERTY RM
HOA VF-8B	HAND-OFF AUTO CONTROL SWITCH/RELAY FOR VF-8B VENT FAN	82, 95	BOILER RM, INSIDE TCP-6 PANEL
VF-8B STATUS	VF-8B VENT FAN "CT" PROVEN SWITCH	75	GENERATOR ROOM IN VF-8B ENCLOSURE
VF-8B	VF-8B MOTOR STARTER	95	GENERATOR ROOM IN VF-8B ENCLOSURE
VF-8B AUX 1	VF-8B MOTOR STARTER # 1 AUXILIARY CONTACTS	97	GENERATOR ROOM IN VF-8B ENCLOSURE
VF-8B AUX 2	VF-8B MOTOR STARTER # 2 AUXILIARY CONTACTS	101	GENERATOR ROOM IN VF-8B ENCLOSURE
VF-8B VFD	VF-8B VARIABLE FREQUENCY DRIVE	97, 98	GENERATOR ROOM IN VF-8B ENCLOSURE
CR-V8B	CAPSTUN RELAY FOR VF-8B	99, 100, 101	GENERATOR ROOM IN VF-8B ENCLOSURE
CSR-V8B	CAPSTUN STATUS RELAY FOR VF-8B	77, 101, 102	GENERATOR ROOM IN VF-8B ENCLOSURE
PLC INPUT #	VF-8B STATUS INPUT FOR CAPSTUN EVAC TO INTAKES PLC	102	INTAKES PLC CABINET IN PHONE COMPUTER ROOM
PLC OUTPUT #	PLC OUTPUT RELAY FOR VF-8B CAPSTUN EVAC	99	INTAKES PLC CABINET IN PHONE COMPUTER ROOM
HOA EF-8B	HAND-OFF AUTO CONTROL SWITCH/RELAY FOR EF-8B VENT FAN	83, 96	BOILER RM, INSIDE TCP-6 PANEL
EF-8B STATUS	EF-8B EXHAUST FAN "CT" PROVEN SWITCH	76	GENERATOR ROOM IN EF-8B ENCLOSURE
EF-8B	EF-8B MOTOR STARTER	96	GENERATOR ROOM IN EF-8B ENCLOSURE
EF-8B AUX 1	EF-8B MOTOR STARTER # 1 AUXILIARY CONTACTS	97	GENERATOR ROOM IN EF-8B ENCLOSURE
EF-8B AUX 2	EF-8B MOTOR STARTER # 2 AUXILIARY CONTACTS	101	GENERATOR ROOM IN EF-8B ENCLOSURE
EF-8B VFD	EF-8B VARIABLE FREQUENCY DRIVE	103, 104	GENERATOR ROOM IN EF-8B ENCLOSURE
CR-F8B	CAPSTUN RELAY FOR EF-8B	105, 106, 107	GENERATOR ROOM IN EF-8B ENCLOSURE
CSR-F8B	CAPSTUN STATUS RELAY FOR EF-8B	78, 107, 108	GENERATOR ROOM IN EF-8B ENCLOSURE
PLC INPUT #	EF-8B STATUS INPUT FOR CAPSTUN EVAC TO INTAKES PLC	102	INTAKES PLC CABINET IN PHONE COMPUTER ROOM
PLC OUTPUT #	OUTPUT RELAY FOR EF-8B CAPSTUN EVAC	105	INTAKES PLC CABINET IN PHONE COMPUTER ROOM
HOA CLG 2B	HAND-OFF AUTO CONTROL SWITCH/RELAY FOR FC-2B COOLING UNIT	85, 92	BOILER RM, INSIDE TCP-6 PANEL
HW VLV 2B	HEATING HOT WATER VALVE FOR FC-2B	84, 109	NEXT TO FC-2B UNIT ABOVE CEILING IN INTAKES PROPERTY RM
FC-2B	FAN COIL 2B UNIT (SERVES: MAIN INTAKE AREA)	90 THRU 93	ABOVE CEILING IN INTAKES PROPERTY RM
CU-2B	CONDENSING UNIT 2B (SERVES: FC-2B)	94	ROOFTOP ABOVE INTAKES PROPERTY ROOM

INTAKES' HVAC CONTROL SCHEMATIC LEGEND

ABBREVIATIONS	DESCRIPTION	SCHEMATIC LINE #	LOCATION
LC3-4	"KMC" LOCAL CONTROLLER LC3-4 (FC-3B SERVES: HOLDING CELLS 1-6)	110 THRU 129	BOILER RM, INSIDE TCP-6 PANEL
EXHAUST TEMP 3B	EXHAUST DUCT TEMPERATURE SENSOR FOR FC-3B	111	ABOVE CEILING IN FRONT OF HOLDING CELL # 2
SA TEMP 3B	SUPPLY DUCT AIR TEMPERATURE SENSOR FOR FC-3B	112	ABOVE CEILING IN INTAKES PROPERTY RM
HOA SFAN 3B	HAND-OFF AUTO CONTROL SWITCH/RELAY FOR FC-3B SUPPLY FAN	120, 132	BOILER RM, INSIDE TCP-6 PANEL
SFAN STATUS 3B	FC-3B SUPPLY FAN "CT" PROVEN SWITCH	113	IN FC-3B UNITS CONTROL PANEL ABOVE CEILING IN INTAKES PROPERTY RM
HOA EF-7B	HAND-OFF AUTO CONTROL SWITCH/RELAY FOR EF-7B VENT FAN	121, 136	BOILER RM, INSIDE TCP-6 PANEL
EF-7B STATUS	EF-7B VENT FAN "CT" PROVEN SWITCH	114	GENERATOR ROOM IN EF-7B ENCLOSURE
EF-7B	EF-7B MOTOR STARTER	136	GENERATOR ROOM IN EF-7B ENCLOSURE
EF-7B AUX 1	EF-7B MOTOR STARTER # 1 AUXILIARY CONTACTS	138	GENERATOR ROOM IN EF-7B ENCLOSURE
EF-7B AUX 2	EF-7B MOTOR STARTER # 2 AUXILIARY CONTACTS	142	GENERATOR ROOM IN EF-7B ENCLOSURE
EF-7B VFD	EF-7B VARIABLE FREQUENCY DRIVE	138, 139	GENERATOR ROOM IN EF-7B ENCLOSURE
CR-F7B	CAPSTUN RELAY FOR VF-EF-7B	140, 141, 142	GENERATOR ROOM IN EF-7B ENCLOSURE
CSR-F7B	CAPSTUN STATUS RELAY FOR EF-7B	142, 143	GENERATOR ROOM IN EF-7B ENCLOSURE
PLC INPUT #	EF-7B STATUS INPUT FOR CAPSTUN EVAC TO INTAKES PLC	143	INTAKES PLC CABINET IN PHONE COMPUTER ROOM
PLC OUTPUT #	OUTPUT RELAY FOR EF-7B CAPSTUN EVAC	140	INTAKES PLC CABINET IN PHONE COMPUTER ROOM
HOA CLG 3B	HAND-OFF AUTO CONTROL SWITCH/RELAY FOR FC-3B COOLING UNIT	123, 133	BOILER RM, INSIDE TCP-6 PANEL
HOA CPST DMPR	HAND-OFF AUTO CONTROL SWITCH/RELAY FOR CAPSTUN DUCT DAMPER	124, 137	BOILER RM, INSIDE TCP-6 PANEL
CAPSTUN DAMPER	DAMPER IN EXH DUCT FOR EF-7B WHEN IN CAPSTUN EVAC	137	ABOVE CEILING IN FRONT OF HOLDING CELLS # 3 & 4
HW VLV 3B	HEATING HOT WATER VALVE FOR FC-3B	122, 144	NEXT TO FC-3B UNIT ABOVE CEILING IN INTAKES PROPERTY RM
FC-3B	FAN COIL 3B UNIT (SERVES: HOLDING CELLS 1-6)	131 THRU 134	ABOVE CEILING IN INTAKES PROPERTY RM
CU-3B	CONDENSING UNIT 3B (SERVES: FC-3B)	135	ROOFTOP ABOVE INTAKES PROPERTY ROOM
KIT WLK-IN FRZR #1	KITCHEN WALK-IN FREEZER #1 TEMPERATURE SENSOR	116	KITCHEN, CEILING OF WALK-IN FREEZER #1
KIT WLK-IN COOLR #1	KITCHEN WALK-IN COOLER #1 TEMPERATURE SENSOR	117	KITCHEN, CEILING OF WALK-IN COOLER #1
KIT WLK-IN COOLR #2	KITCHEN WALK-IN COOLER #2 TEMPERATURE SENSOR	118	KITCHEN, CEILING OF WALK-IN COOLER #2
KIT WLK-IN FRZR #1	KITCHEN WALK-IN FREEZER #1 HI TEMP ALARM OUTPUT RELAY	125, 126	BOILER RM, ENCLOSURE BELOW TCP-6 PANEL
KIT WLK-IN COOLR #1	KITCHEN WALK-IN COOLER #1 HI TEMP ALARM OUTPUT RELAY	127, 128	BOILER RM, ENCLOSURE BELOW TCP-6 PANEL
KIT WLK-IN COOLR #2	KITCHEN WALK-IN COOLER #2 HI TEMP ALARM OUTPUT RELAY	129, 130	BOILER RM, ENCLOSURE BELOW TCP-6 PANEL

INTAKES CONTROLLERS I.O. AND EQUIPMENT SPECS

ECONOMIZER Serves: FC-1B, FC-2B, FC-3B		DIGITAL IN	ANALOG IN	DIGITAL OUT	ANALOG OUT	"KMC" # KMD-5802 DIRECT DIGITAL CONTROLLER
1 INPUT	M.A. SUPPLY TEMP SENSOR		4-20 ma 0-5 VDC			"KMC" # STE-1414 20' DUCT AVERAGING SENSOR (10K Ohms @ 77 deg F)
2 INPUT	FREEZE STAT	N.O. CONTACTS				"KMC" # CTE-3017 LOW LIMIT CONTROLLER (Manual Set point, Manual Reset)
3 INPUT	FIRE ALARM MODE	N.O. CONTACTS				"IDEC" RELAY via HONEYWELL" P.E. SWITCH (N.O. Contact closes when Intake area is in Fire Alarm)
1 OUTPUT	O.S.A. DAMPER ACTUATOR				2 - 10 VDC	"BELIMO" # NM24-SR US PROPORTIONAL DAMPER ACTUATOR (0-95 deg Angle of Rotation) (24vac at 1.3 Watts Load)(70# Torque)
2 OUTPUT	M.A. DAMPER ACTUATOR				2 - 10 VDC	"BELIMO" # NM24-SR US PROPORTIONAL DAMPER ACTUATOR (0-95 deg Angle of Rotation) (24vac at 1.3 Watts Load)(70# Torque)
FAN COIL 1B CONTROLLER Serves: Intake Central Area		DIGITAL IN	ANALOG IN	DIGITAL OUT	ANALOG OUT	"KMC" # KMD-5802 DIRECT DIGITAL CONTROLLER
1 INPUT	ROOM TEMP WALL SENSOR		4-20 ma 0-5 VDC			PRECON" # ST-S3 FLUSH WALL MOUNT THERMISTER (10K Ohms @ 77 deg F)
2 INPUT	SUPPLY AIR TEMP SENSOR		4-20 ma 0-5 VDC			"KMC" # STE-1404 12" RIGID DUCT SENSOR (10K Ohms @ 77 deg F)
3 INPUT	SUPPLY FAN STATUS	N.C. CONTACTS				VERIS" # H808 ADJUSTABLE CURRENT CT SWITCH (Adj. to Full Load Amps Opens with Current Drop)
4 INPUT	CAPSTUN EVAC STATUS (SVF-2B)	N.O. CONTACTS				SEPARATE "IDEC" CONTROL RELAY (Dry Contacts Close upon Activation)
1 OUTPUT	SUPPLY FAN START/STOP			RELAY 12VDC		"RIB" # RIBMU1S SPST-N.O. RELAY W/ HOA SWITCH (12vdc coil @ 12ma)
2 OUTPUT	HOT WATER HEAT VALVE				4-20 ma 2-10 VDC	"BELIMO" # B312 LF24-SR US 3-WAY PROPORTIONAL VALVE (Valve Max 95 deg Rotation)(24vac at 2.5 Watts Running)
3 OUTPUT	1 STAGE COOLING ON/OFF			RELAY 12VDC		"RIB" # RIBMU1S SPST-N.O. RELAY W/ HOA SWITCH (12vdc coil @ 12ma)

INTAKES CONTROLLERS I.O. AND EQUIPMENT SPECS

FAN COIL 2B CONTROLLER Serves: Booking Saly,DUII Rooms, Release Saly,Holding Cell #8		DIGITAL IN	ANALOG IN	DIGITAL OUT	ANALOG OUT	"KMC" # KMD-5802 DIRECT DIGITAL CONTROLLER
1 INPUT	ROOM TEMP WALL SENSOR		4-20 ma 0-5 VDC			PRECON" # ST-S3 FLUSH WALL MOUNT THERMISTER (10K Ohms @ 77 deg F)
2 INPUT	SUPPLY AIR TEMP SENSOR		4-20 ma 0-5 VDC			"KMC" # STE-1404 12" RIGID DUCT SENSOR (10K Ohms @ 77 deg F)
3 INPUT	SUPPLY FAN STATUS	N.C. CONTACTS				VERIS" # H808 ADJUSTABLE CURRENT CT SWITCH (Adj. to Full Load Amps Opens with Current Drop)
4 INPUT	EXHAUST FAN STATUS (VF-8B)	N.C. CONTACTS				VERIS" # H808 ADJUSTABLE CURRENT CT SWITCH (Adj. to Full Load Amps Opens with Current Drop)
5 INPUT	EXHAUST FAN STATUS (EF-8B)	N.C. CONTACTS				VERIS" # H808 ADJUSTABLE CURRENT CT SWITCH (Adj. to Full Load Amps Opens with Current Drop)
6 INPUT	CAPSTUN EVAC STATUS (VF-8B)	N.O. CONTACTS				SEPARATE "IDEC" CONTROL RELAY (Dry Contacts Close upon Activation)
7 INPUT	CAPSTUN EVAC STATUS (EF-8B)	N.O. CONTACTS				SEPARATE "IDEC" CONTROL RELAY (Dry Contacts Close upon Activation)
1 OUTPUT	SUPPLY FAN START/STOP			RELAY 12VDC		"RIB" # RIBMU1S SPST-N.O. RELAY W/ HOA SWITCH (12vdc coil @ 12ma)
2 OUTPUT	EXHAUST FANS START/STOP			2 RELAYS 12VDC		2 - "RIB" # RIBMU1S SPST-N.O. RELAY W/ HOA SWITCH (12vdc coil @ 12ma)
3 OUTPUT	HOT WATER HEAT VALVE				4-20 ma 2-10 VDC	"BELIMO" # B310 LF24-SR US 3-WAY PROPORTIONAL VALVE (Valve Max 95 deg Rotation)(24vac at 2.5 Watts Running)
4 OUTPUT	1 STAGE COOLING ON/OFF			RELAY 12VDC		"RIB" # RIBMU1S SPST-N.O. RELAY W/ HOA SWITCH (12vdc coil @ 12ma)
FAN COIL 3B CONTROLLER Serves: Holding Cells 1-6		DIGITAL IN	ANALOG IN	DIGITAL OUT	ANALOG OUT	"KMC" # KMD-5802 DIRECT DIGITAL CONTROLLER
1 INPUT	EXHAUST TEMP DUCT SENSOR		4-20 ma 0-5 VDC			"KMC" # STE-1405 4" RIGID DUCT SENSOR W/O BOX (10K Ohms @ 77 deg F)
2 INPUT	SUPPLY AIR TEMP SENSOR		4-20 ma 0-5 VDC			"KMC" # STE-1404 12" RIGID DUCT SENSOR (10K Ohms @ 77 deg F)
3 INPUT	SUPPLY FAN STATUS	N.C. CONTACTS				VERIS" # H808 ADJUSTABLE CURRENT CT SWITCH (Adj. to Full Load Amps Opens with Current Drop)
4 INPUT	EXHAUST FAN STATUS (EF-7B)	N.C. CONTACTS				VERIS" # H808 ADJUSTABLE CURRENT CT SWITCH (Adj. to Full Load Amps Opens with Current Drop)
5 INPUT	CAPSTUN EVAC STATUS (EF-7B)	N.O. CONTACTS				SEPARATE "IDEC" CONTROL RELAY (Dry Contacts Close upon Activation)
1 OUTPUT	SUPPLY FAN START/STOP			RELAY 12VDC		"RIB" # RIBMU1S SPST-N.O. RELAY W/ HOA SWITCH (12vdc coil @ 12ma)
2 OUTPUT	EXHAUST FAN START/STOP			RELAY 12VDC		"RIB" # RIBMU1S SPST-N.O. RELAY W/ HOA SWITCH (12vdc coil @ 12ma)
3 OUTPUT	HOT WATER HEAT VALVE				4-20 ma 2-10 VDC	"BELIMO" # B309 LF24-SR US 3-WAY PROPORTIONAL VALVE (Valve Max 95 deg Rotation)(24vac at 2.5 Watts Running)
4 OUTPUT	1 STAGE COOLING ON/OFF			RELAY 12VDC		"RIB" # RIBMU1S SPST-N.O. RELAY W/ HOA SWITCH (12vdc coil @ 12ma)
5 OUTPUT	CAPSTUN EVAC DAMPER OPEN			RELAY 12VDC		"RIB" # RIBMU1S SPST-N.O. RELAY W/ HOA SWITCH (12vdc coil @ 12ma)
						"BELIMO" # LF24-3 ON-OFF DAMPER ACTUATOR (Spring Return Safety)(24vac @ 2.5 Watts Running)(35# Torque)

INTAKES HVAC SYSTEM

CONTROLLER # 39 INTAKES FAN COIL UNIT 3B				
VARIABLES				
ADDRESS	DESCRIPTION	VALUE	UNITS	LABEL
39-VAR 1	FC-3B DEADBAND		Deg.F	FC3BDB
39-VAR 2	FC-3B ROOM SETPOINT		Deg.F	FC3BRMSP
39-VAR 3	FC-3B OCCUPIED		Unocc/Occ	FC3BOCCV
39-VAR 4	FC-3B HTG SETPOINT		Deg.F	FC3BHTSP
39-VAR 5	FC-3B CLG SETPOINT		Deg.F	FC3BCLSP
39-VAR 6	FC-3B CAPSTUN		Off/On	FC3BCAPV
39-VAR 7	FC-3B FAN FAIL		Off/On	FC3BFAIL
39-VAR 8	FC-3B HTG FAIL		Off/On	FC3BHTFL
39-VAR 9	FC-3B EXH FAIL		Off/On	FC3BEXFL
39-VAR 10	FC-3B CLG FAIL		Off/On	FC3BCLFL
39-VAR 11	FC-3B HV DRIVE TIME		Seconds	DRV-TIME
39-VAR 12	ALARM LIGHT		Normal/Alarm	
INPUTS				
ADDRESS	DESCRIPTION	VALUE	UNITS	LABEL
39-IN 1	FC-3B Exh Air Temp.		Deg.F	FC3BEXAT
39-IN 2	FC-3B Sup Air Temp		Deg.F	FC3BSAT
39-IN 3	FC-3B Sup Fan Status		Off/On	FC3BFANS
39-IN 4	FC-3B EF EF-7B Stat		Off/On	EF7B
39-IN 5	EF-7B CpstnEVAC Stat		Off/On	FC3BCPST
39-IN 6	FREZZER STAT		Deg.F	FREEZST
39-IN 7	COOLER 1 STAT		Deg.F	COOL1ST
39-IN 8	COOLER 2 STAT		Deg.F	COOL2ST
OUTPUTS				
ADDRESS	DESCRIPTION	VALUE	UNITS	LABEL
39-OUT 1	FC-3B Sup Fan S/S		Stop/Start	FC3BSFAN
39-OUT 2	FC-3B Exh. Fan S/S		Stop/Start	EF7BS/S
39-OUT 3	FC-3B Hot Water Vlv		% Open	FC3BHVLV
39-OUT 4	FC-3B Cooling Stage		Off/On	FC3BCLG
39-OUT 5	EF7B CpstnEVAC Dmpr		Closed/Ope	EF7BCDPR
39-OUT 6	FREEZER ALARM OUTPUT		Off/On	FREEZALA
39-OUT 7	WALK IN COOLER 1		Off/On	WINC1ALA
39-OUT 8	WALK IN COOLER 2		Off/On	WINC2ALA

INTAKES HVAC SYSTEM

CONTROLLER #40 INTAKE CONTROL ROOM HEAT PUMP UNIT 1B

VARIABLES

ADDRESS	DESCRIPTION	VALUE	UNITS	LABEL
40-VAR 6	OCCUPIED		Unocc/Occ	HP1BOCCU
40-VAR 13	CALL FOR COOLING		Dis/Enabled	HP1BC4CL
40-VAR 14	EVAC ALARM		Normal/Alarm	HP1BEVAC
40-VAR 15	FIRE ALARM		Normal/Alarm	HP1BFIRE
40-VAR 16	MAT LO LIMIT ALARM		Normal/Alarm	HP1BMAAL
40-VAR 17	ECONOMIZER ENABLE		Dis/Enabled	HP1BECON
40-VAR 18	LEAD HEAT SOURCE		HEATPUMP/ELECHEAT	HP1BHSRC
40-VAR 19			Unused	
40-VAR 20	FAN/DMP ST DELAY		Minutes	HP1BDMPD
40-VAR 21	FAN STATUS ALARM		Normal/Alarm	HP1BFNAL
40-VAR 22	OSA DMP ENA SP		deg.F	HP1BMOENA
40-VAR 23	MIXED AIR SETPOINT		deg.F	HP1BMATS
40-VAR 24	OSA LO LIMIT SP		deg.F	HP1BOALL
40-VAR 25	OSA DEADBAND		deg.F	HP1BDBND
40-VAR 26	MIXED AIR LO LIMIT		deg.F	HP1BMALL
40-VAR 27	MALL DEADBAND		deg.F	HP1BMLDB
40-VAR 28	DAMPER MIN POSITION		%	HP1BMINP
40-VAR 29			Unused	
40-VAR 30	SPACE SETPOINT		deg.F	HP1BSP
40-VAR 31	HEATING 1 OFFSET		deg.F	HTG1Ofst
40-VAR 32	HEATING 2 OFFSET		deg.F	HTG2Ofst
40-VAR 33	COOLING OFFSET		deg.F	CLGOfst

INPUTS

ADDRESS	DESCRIPTION	VALUE	UNITS	LABEL
1-IN 1	Outside Air Temperature		deg.F	OAT
40-IN 1	HP1B SUPPLY TEMP		deg.F	HP1BSAT
40-IN 2	HP1B RETURN AIR TEMP		deg.F	HP1BRAT
40-IN 3	HP1B SUP FAN STATUS		Off/On	HP1BSFST
40-IN 4	HP1B MIXED AIR TEMP		deg.F	HP1BMAT

OUTPUTS

ADDRESS	DESCRIPTION	VALUE	UNITS	LABEL
40-OUT 1	HP1B OS Air Damper		%	HP1BOADR
40-OUT 2	HP1B Supply Fan S/S		Start/Stop	HP1BSFAN
40-OUT 3	HP1B CO Valve		Heat/Cool	HP1BCOVL
40-OUT 4	HP1B Elec Heat S/S		Start/Stop	HP1BEHTG
40-OUT 5	HP1B Compressor		Start/Stop	HP1BCOMP
40-OUT 6	HP1B RET AIR DAMPER		%	HP1BRAD

INTAKES CONTROLLERS I.O. AND EQUIPMENT SPECS

HEAT PUMP 1B CONTROLLER Serves: Intake Control Room		DIGITAL IN	ANALOG IN	DIGITAL OUT	ANALOG OUT	"KMC" # KMD-5802 DIRECT DIGITAL CONTROLLER
1 INPUT	SUPPLY AIR TEMP SENSOR		4-20 ma 0-5 VDC			"GREYSTONE" # _____ ? " RIGID DUCT SENSOR ? (10K Ohms @ 77 deg F) ?
2 INPUT	RETURN AIR TEMP SENSOR		4-20 ma 0-5 VDC			"GREYSTONE" # _____ ? " RIGID DUCT SENSOR ? (10K Ohms @ 77 deg F) ?
1 OUTPUT	O.S.A. DAMPER ACTUATOR				? 2 - 10 VDC	"BELEMO" OR "HONEYWELL" ??
2 OUTPUT	SUPPLY FAN START/STOP			RELAY 12VDC		"RIB" # RIBMU1S SPST-N.O. RELAY W/ HOA SWITCH (12vdc coil @ 12ma)
3 OUTPUT	CHANGEOVER VALVE HEATING STAGE 1			RELAY 12VDC		"RIB" # RIBMU1S SPST-N.O. RELAY W/ HOA SWITCH (12vdc coil @ 12ma)
4 OUTPUT	HEATING STAGE 2 ELECT. HEAT STRIPS			RELAY 12VDC		"RIB" # RIBMU1S SPST-N.O. RELAY W/ HOA SWITCH (12vdc coil @ 12ma)
5 OUTPUT	COOLING STAGE 1 ON/OFF			RELAY 12VDC		"RIB" # RIBMU1S SPST-N.O. RELAY W/ HOA SWITCH (12vdc coil @ 12ma)

CABLE #	WIRE COLOR	WIRE #	TERMINATIONS	TO	TERMINATIONS
CABLE # 1 4 Wire #18 Awg	BLACK	E24V	"KVCP" T.B. 72	TO	XFRMR IN SVF-1B STARTER
	RED	39	"KVCP" T.B. 40	TO	SVF-1B P.E. SWITCH #2 CONTACT
	WHITE	E24C	"KVCP" T.B. 79	TO	XFRMR IN SVF-1B STARTER
	GREEN	40	"KVCP" T.B. 41	TO	SVF-1B P.E. SWITCH #2 CONTACT
CABLE # 2 4 Wire #18 Awg	BLACK	#45	"KVCP" T.B. 45	TO	"TCP-6" OUTPUT RELAY CONTACTS
	RED	#62	"KVCP" T.B. 42	TO	"TCP-6" OUTPUT RELAY CONTACTS
	WHITE	#69	"KVCP" T.B. 48	TO	"TCP-6" T.B. 8
	GREEN	SPARE			
CABLE # 3 9 Pair #18 Awg	BLACK 1	# 76	"KVCP" T.B. 51	TO	"TCP-6" T.B. 7
	RED 1	# 78	"KVCP" T.B. 55	TO	"TCP-6" T.B. 9
	BLACK 2	# 80	"KVCP" T.B. 65	TO	"TCP-6" T.B. 11
	RED 2	# 82	"KVCP" SPLICE	TO	"TCP-6" T.B. 13
	BLACK 3	# 84	"KVCP" SPLICE	TO	"TCP-6" T.B. 15
	RED 3	# 46	"KVCP" T.B. 46	TO	"TCP-6" EF1B OUTPUT RELAY CONTACTS
	BLACK 4	# 48	"KVCP" T.B. 52	TO	"TCP-6" EF2B OUTPUT RELAY CONTACTS
	RED 4	# 60	"KVCP" T.B. 23	TO	"TCP-6" MAU-1&2 OUTPUT RELAY CONTACTS
	BLACK 5	# 86	"KVCP" T.B. 56	TO	"TCP-6" WASH CYCLE OUTPUT RELAY CONTACTS
	RED 5	# 88	"KVCP" T.B. 57	TO	"TCP-6" WASH CYCLE OUTPUT RELAY CONTACTS
	BLACK 6	# 63	"KVCP" T.B. 62	TO	"TCP-6" EF4B OUTPUT RELAY CONTACTS
	RED 6	# 65	"KVCP" T.B. 68	TO	"TCP-6" EF3B & 5B OUTPUT RELAY CONTACTS
	BLACK 7	# 122	"KVCP" T.B. 103	TO	"TCP-6" WALK-IN FREEZER #1 ALARM OUTPUT RELAY CONTACTS
	RED 7	# 113	"KVCP" T.B. 101	TO	"TCP-6" WALK-IN COOLER #1 ALARM OUTPUT RELAY CONTACTS
	BLACK 8	# 118	"KVCP" T.B. 102	TO	"TCP-6" WALK-IN COOLER #2 ALARM OUTPUT RELAY CONTACTS
	RED 8	SPARE			
	BLACK 9	SPARE			
	RED 9	SPARE			
CABLE # 4 8 Wire #18 awg	BLACK	# 84	"KVCP" SPLICE	TO	"EF-3B & 5B PNL" T.B. 84
	RED	# 82	"KVCP" SPLICE	TO	"EF-3B & 5B PNL" T.B. 83
	BLUE	#73	"KVCP" T.B. 70	TO	"EF-3B & 5B PNL" EF3B STATUS RELAY
	BROWN	SPARE			
	ORANGE	# 24V	"KVCP" T.B. 66	TO	"EF-3B & 5B PNL" T.B. 80
	YELLOW	# 66	"KVCP" T.B. 69	TO	"EF-3B & 5B PNL" T.B. 82
	WHITE	# 24C	"KVCP" T.B. 67	TO	"EF-3B & 5B PNL" T.B. 81
	GREEN	SPARE			

CABLE #	WIRE COLOR	WIRE #	TERMINATIONS	TO	TERMINATIONS
CABLE # 5 2 Wire #18 Awg	BLACK	# 35	"KVCP" T.B. 39	TO	"EF-4B" STARTERS C.T.Switch
	RED	# 36	"KVCP" T.B. 63	TO	"EF-4B" STARTERS C.T.Switch
CABLE # 6 8 Wire #18 awg	BLACK	# 41	"KVCP" T.B. 43	TO	"KOVCP" T.B. 89
	RED	# 44	"KVCP" T.B. 44	TO	"KOVCP" T.B. 90
	BLUE	# 33	"KVCP" T.B. 50	TO	"KOVCP" T.B. 92
	BROWN	# 29	"KVCP" T.B. 54	TO	"KOVCP" T.B. 93
	ORANGE	# 94	"KVCP" T.B. 60	TO	"KOVCP" T.B. 94
	YELLOW	# 38	"KVCP" T.B. 64	TO	"KOVCP" T.B. 95
	WHITE	# 24C	"KVCP" T.B. 47	TO	"KOVCP" T.B. 91
	GREEN	SPARE			
CABLE # 7 4 Wire #18 Awg	BLACK	# E2	"KVCP" T.B. 73	TO	"KOVCP" T.B. 85
	RED	# E6	"KVCP" T.B. 74	TO	"KOVCP" T.B. 86
	WHITE	# E24C	"KVCP" T.B. 78	TO	"KOVCP" T.B. 88
	GREEN	# E12	"KVCP" T.B. 75	TO	"KOVCP" T.B. 87
CABLE # 8 2 Pair #18 Awg (ORG)	BLACK	# 157	"TCP-6" T.B. 60	TO	WALK-IN FREEZER #1 TEMP SENSOR
	RED	# 156	"TCP-6" T.B. 59	TO	WALK-IN FREEZER #1 TEMP SENSOR
	WHITE	SPARE			
	GREEN	SPARE			
CABLE # 9 2 Pair #18 Awg (GRN)	BLACK	# 151	"TCP-6" T.B. 62	TO	WALK-IN COOLER #1 TEMP SENSOR
	RED	# 150	"TCP-6" T.B. 61	TO	WALK-IN COOLER #1 TEMP SENSOR
	WHITE	SPARE			
	GREEN	SPARE			
CABLE # 10 2 Pair #18 Awg (RED)	BLACK	# 154	"TCP-6" T.B. 64	TO	WALK-IN COOLER #2 TEMP SENSOR
	RED	# 153	"TCP-6" T.B. 63	TO	WALK-IN COOLER #2 TEMP SENSOR
	WHITE	SPARE			
	GREEN	SPARE			
CABLE # 11 8 Wire #18 Awg	BLACK	# 116	"KVCP" T.B. 104	TO	Splice Box Above Cooler #1 for WALK-IN COOLER #1 ALARM LITE
	RED	# 121	"KVCP" T.B. 105	TO	Splice Box Above Cooler #1 for WALK-IN COOLER #2 ALARM LITE
	BLUE	# 125	"KVCP" T.B. 106	TO	Splice Box Above Cooler #1 for WALK-IN FREEZER #1 ALARM LITE
	BROWN	# 127	"KVCP" T.B. 107	TO	Splice Box Above Cooler #1 for WALK-IN's AUDIBLE ALARM
	ORANGE	SPARE			
	YELLOW	SPARE			
	WHITE	# 24C	"KVCP" T.B. 108	TO	Splice Box Above Cooler #1 for WALK-IN's AUDIBLE ALARM & ALARM LITES
	GREEN	SPARE			
CABLE # 12 4 Wire #18 Awg	BLACK	# 116	Splice Box Above Cooler #1	TO	WALK-IN COOLER #1 ALARM LITE
	RED	# 121	Splice Box Above Cooler #1	TO	WALK-IN COOLER #2 ALARM LITE
	GREEN	# 125	Splice Box Above Cooler #1	TO	WALK-IN FREEZER #1 ALARM LITE
	WHITE	# 24C	Splice Box Above Cooler #1	TO	Common for WALK-IN's AUDIBLE ALARM & ALARM LITES

SEQUENCE OF OPERATION

FOR INTAKE CONTROL ROOM'S HEAT PUMP-1B

OCCUPIED MODE:

In Occupied Mode the Weekly Schedule Starts daily at 00:01 and Stops at 24:00, there is a 5 minute delay variable that will not let the Unit shut off for the 01 second. The Heat Pump Supply Fan {"G"Fan(Output)} will be energized and run continuously along with Heating and Cooling Modes enabled.

During normal occupied mode if there is no Supply Fan Status, The Damper Delay Variable will Time-Out for 5min.(Adj.) then the O.S.A. and R.A. Dampers will close to 0% and send an alarm to the monitoring station (visual & audible).

ECONOMIZER CONTROL:

If the O.S.A. Enable Setpoint temperature is 72°(Adj.) or less than, the Outside and Return Air Dampers shall modulate to maintain a Mixed Air Setpoint Temperature of 60°(Adj.). When the O.S.A. is greater than 72°(Adj.). the Return Air Damper will open to 100% and the Outside Air Damper will close to its Minimum Position 5%(Adj.). The existing OAT in the current program will be used for the Outside Air Temperature (Input 1-IN1). Also when the O.S.A Low Limit Setpoint Temp is 35°(Adj.) or less than, the O.S.A Dampers will close to 0% and RA Dampers will open 100%. There is an O.S.A Temp Deadband Variable that will allow the O.S.A Dampers to modulate open once the O.S.A Temp rises.

MIXED AIR LOW TEMP CONTROL (Safety Failure Control):

There is no Electrical/Mechanical Freeze Stat. Although if the M.A. Low Limit Setpoint Temp is 45°(Adj.) or less than, The Cooling and Heating Modes of the Heat Pump will Disable, the O.S.A Damper will close to 0% & R.A. Damper will open to 100% and the Electric Heat will Enable. Once the temp goes back up to the M.A. Setpoint Temp plus the Temp Deadband the Unit will resume Normal operations. The Controller will also send an alarm to the monitoring station (visual & audible).

FIRE ALARM MODE:

When there is a Fire Alarm for the Intake Area the Heat Pump Controller will receive an input for the Fire Alarm Mode(Input 36-IN3 or Variable 36-VAR7). [Note: During the fire alarm mode in the Intake area SVF-2B (Smoke Vent Fan 2B) comes on (controlled by fire alarm circuit)].

The Heat Pump Supply Fan will continue to run and the O.S.A. Damper will open to 100% and R.A. Dampers will close to 0%. [Note: By keeping the supply fan on and opening the OSA damper and closing the RA damper is to provide the Intake Control Room with a more positive air pressure to eliminate the possibility of smoke infiltrating into the control room]. If the S.A. temperature is less than 45°F(Adj.), then O.S.A Damper will close to 5% Min Position {Note: This is to ensure that the evaporator coil doesn't freeze up, it's possible under this type of condition that the freeze-stat program will also be enabled}.

NOTE: The Fire Alarm Mode will take priority over any and all other controlling functions. The Intake Economizer Controller {A36} will also send an alarm to the monitoring station (visual & audible). Once the Fire Alarm input has cleared the Heat Pump will resume normal operation.

CAPSTUN EVAC MODE:

The Intakes Capstun EVAC Mode is controlled through the Door Control Touchscreen system. When a Capstun EVAC Exhaust Fan is selected the VFD for that fan will ramp up to 100%. The Heat Pump controller will receive a Variable Input(36-VAR5) that one or all of Intakes Fan Coil Units FC-1B, FC-2B, FC-3B are in the EVAC Mode. Then the Heat Pumps O.S.A. Damper will open 100% and the R.A. Damper will close to 0%. The Supply Fan will continue to run and the Heating/Cooling modes still enabled {Note: By opening the O.S.A. damper and closing the R.A. damper with the supply fan running is to provide the Intake Control Room with a more Positive Air pressure so that the Capstun [Pepper Spray] cannot infiltrate into the Control Rm.} it's possible under this type of condition that the freeze-stat program will also be enabled. When the Capstun EVAC Mode Times-Out (thru the Touchscreen Control) and turns off, The Heat Pump will resume normal operation.

Capstun EVAC General Information:

Fan Coil Unit-1B will utilize SVF-2B.

Fan Coil Unit-2B has VF-8B and EF-8B will also double as the unit's capstun evac.

Fan Coil Unit-3B has EF-7B will also double as the units capstun evac.

HEAT PUMP UNIT HEATING MODE:

The Heat Pump has 2 stages of heating: Which can be selected for a Lead/Lag normally Lead/1st Stage = Heat Pump Heat and Lag/2nd Stage = Electric Heat
The 1st Stage will energize {"W1"Htg(Output)}, Energizing the heat pump Compressor and the Changeover Valve will be De-energize to maintain the Space Set Point (Adj.) with Heating Offset of 2°F(Adj.). If the 1st stage heating cannot satisfy the heating call the 2nd Stage will energize {"W2"Htg.(Output)} heat will come on utilizing the Electric Heat Elements with Heating Offset of 4°F(Adj.). The 1st Stage ("W1"Htg) and 2nd Stage ("W2"Htg) Heating will have the capability of being Reversed as far as a Lead/Lag Sequence.

{Note: Normally the Auxiliary Electric Heating Elements are 2nd stage, but due to the Heat Pump being over sized for the control room we don't want to constantly cycle the reversing valve and the Heat Pump due to a light heating Load thus reversing the Stage Sequence having the Electric Heating Elements the 1st Stage and the Heat Pump Coils the 2nd Stage}

HEAT PUMP UNIT COOLING MODE:

The Heat Pump has 1 stage of cooling:

The Heat Pump will utilize the Economizer Mode to maintain the Space Set Point(Adj.) if the economizer cannot maintain the cooling call, The 1st Stage will energize {"W1"Htg(Output)} energizing the heat pump Compressor and Energize the Changeover Valve {"CO"Clg.(Output)} to maintain the Space Set Point (Adj.) with Cooling Offset of 2°F(Adj.).

INTAKE'S SEQUENCE OF OPERATION **FOR FAN COILS FC-1B, FC-2B, FC-3B AND ECONOMIZER**

OCCUPIED MODE:

In occupied mode the fan coil units supply fans and their exhaust fans will run continuously and also the economizer.

ECONOMIZER CONTROL:

If the O.S.A. temperature is 72 deg.(Adj) or less than, the Outside and Return Air Dampers shall modulate to maintain a Mixed Air Temperature of 55 deg.(Adj). When the O.S.A. is greater than 72 deg.(Adj) the Return Air Damper will open to 100% and the Outside Air Damper will close to its Minimum Position (Adj). The existing OAT in the current program will be used for the Outside Air Temperature (input address {1 IN 1})

During normal operations if there is no status of all of the Fan Coil Units and their Exhaust Fans (i.e. power outage) the O.S.A. and R.A. Dampers will close to 0%.

FREEZE-STAT CONTROL:

The Economizer will have a mechanical Freeze-stat (manual reset) in the Mixed Air Duct. If mixed air is less than 38 deg.(Adj.) it will mechanically open the control circuits for the Fan Coil Unit Fans and their Exhaust Fans and create an input to the Economizer Controller and thus turn off the Fan Coil Units cooling stages (if running) and open their heat valves 100% and the O.S.A. Damper will close to 0%.

The Controller will also send an alarm to the monitoring station (visual & audible).

Once the Freeze-stat is reset the Fan Coil Units will resume normal operations.

FIRE ALARM MODE:

When there is a Fire Alarm for the Intake Area the Fan Coil Units and their Exhaust Fan control circuits will open (controlled by fire alarm circuit) and the Economizer Controller will receive an input for the Fire Alarm Mode. [Note: During the fire alarm mode in the Intake area SVF-2B (Smoke Vent Fan 2B) comes on (controlled by fire alarm circuit)].

The Fan Coil Unit Controllers will shut off the cooling stages if they are on.

The O.S.A. and R.A. Dampers will open 100%. [Note: By opening the dampers is to provide a source of free air to ventilate smoke]. If the O.S.A. temperature is less than 38 deg.(Adj.) all of the Fan Coil Units heat valves open 100% [Note: This is to ensure that the heat coils don't freeze up, it's possible under this type of condition that the freeze-stat will also open and send in an input].

NOTE: The Fire Alarm Mode will take priority over any and all other controlling functions.

The Controller will also send an alarm to the monitoring station (visual & audible).

Once the Fire Alarm input has cleared have fan coils resume normal operation.

CAPSTUN EVAC MODE:

FC-1B, FC-2B and FC-3B each will have a Capstun Evac Mode inputs. When an input is present the O.S.A. and R.A. Dampers will open to 100%. [Note: By opening the dampers is to provide a source of free air to ventilate Capstun (pepper spray)]. Also if the O.S.A. temperature is less than 38 deg.(Adj.) all of the fan coil units heat valves will open to 100% [Note: This is to ensure that the heat coils don't freeze up, it's possible under this type of condition that the freeze-stat will also send in an input].

Fan Coil Unit-1B will utilize SVF-2B for capstun evac that will come on (controlled by touch screen) the Fan Coils' fan will remain running.

Fan Coil Unit-2B has VF-8B and EF-8B will also double as the unit's capstun evac (controlled by touch screen and the frequency drives for these fans will drive the fans to 100%) the Fan Coils' fan will remain running.

Fan Coil Unit-3B has EF-7B will also double as the units capstun evac (controlled by touch screen and the frequency drives for this fan will drive the fan to 100%). Also FC-3B will have the controller send an output to open a Duct Damper, which has more vents that will be used during this mode beside the vents in the cells and the Fan Coils' fan will remain running.

During a Capstun EVAC Mode the Fan Coil Unit Controllers will also send an alarm to the monitoring station (visual & audible).

Once the Capstun Mode is off the unit or units and the economizer will resume normal operations

FAN COIL UNITS HEATING MODE:

The heating valve will modulate to maintain the Heating Set Point (Adj).

FAN COIL UNITS COOLING MODE:

The Fan Coil Unit will utilize the economizer to maintain the Cooling Set Point (Adj) if not, the cooling stage will come on to maintain the Cooling Set Point (Adj).

INTAKE'S SEQUENCE OF OPERATION
FOR FAN COILS FC-1B, FC-2B, FC-3B AND ECONOMIZER
(REVISED 2/20/09)

OCCUPIED MODE:

In occupied mode the Fan Coil Units supply fans, Htg/Clg enabled and their exhaust fans will run continuously and also the economizer. During normal occupied mode if there is no status of the All the Supply Fans running, the FC-1B, FC-2B and FC-3B's No Status Inputs will Time-Out for 5min.(Adj.) then the O.S.A. and R.A. Dampers will close to 0% and send an alarm to the monitoring station (visual & audible).

ECONOMIZER CONTROL:

If the O.S.A. temperature is 72°(Adj.) or less than, the Outside and Return Air Dampers shall modulate to maintain a Mixed Air Temperature of 55°(Adj.) When the O.S.A. is greater than 72°(Adj.) the Return Air Damper will open to 100% and the Outside Air Damper will close to its Minimum Position(Adj.). The existing OAT in the current program will be used for the Outside Air Temperature (Input 1-IN1). Also when the O.S.A Temp is 35°(Adj.) the O.S.A Dampers will close to 0% and RA Dampers will open 100%.

FIRE ALARM MODE:

When there is a Fire Alarm for the Intake Area the Fan Coil Units and their Exhaust Fan control circuits will open via control Relay (controlled by fire alarm circuit) and the Economizer Controller will receive an input for the Fire Alarm Mode. [Note: During the fire alarm mode in the Intake area SVF-2B (Smoke Vent Fan 2B) comes on (controlled by fire alarm circuit)]. The Fan Coil Unit Controllers will disable the cooling stages if they are on. The O.S.A. Damper and R.A. Damper will open 100%. [Note: By opening the dampers is to provide a source of free air to ventilate smoke]. If the O.S.A. temperature is 35°(Adj.) or less, all of the Fan Coil Units heat valves open 100% [Note: This is to ensure that the heat coils don't freeze up, it's possible under this type of condition that the freeze-stat will also open and send in an alarm input].

NOTE: The Fire Alarm Mode will take priority over any and all other controlling functions.

The Controller will also send an alarm to the monitoring station (visual & audible).

Once the Fire Alarm input has cleared have fan coils resume normal operation.

CAPSTUN EVAC MODE:

FC-1B, FC-2B and FC-3B each will have a Capstun Evac Mode inputs. When an input is present All of the Fan Coil Units will shut off and the O.S.A. and R.A. Dampers will open to 100%. {Note: By shutting of the Fan Coil Unit Fans the only air movement will be through the Exhaust Fan/s in the EVAC mode and by opening the OSA & RA dampers is to provide a source of free air to ventilate the Capstun (pepper spray)}. Also if the O.S.A. temperature is less than 35° (Adj.) all of the fan coils unit heat valves will open to 100% {Note: This is to ensure that the heat coils don't freeze up, it's possible under this type of condition that the freeze-stat will also send in an input}.

Fan Coil Unit-1B will utilize SVF-2B for capstun evac that will come on (controlled by touch screen).

Fan Coil Unit-2B has VF-8B and EF-8B will also double as the unit's capstun evac (controlled by touch screen and the frequency drives for these fans will drive the fans to 100%).

Fan Coil Unit-3B has EF-7B will also double as the units capstun evac (controlled by touch screen and the frequency drives for this fan will drive the fan to 100%). Also FC-3B will have the controller send an output to open a Duct Damper, which has more vents that will be used during this mode beside the vents in the cells.

During a Capstun EVAC Mode the Fan Coil Unit Controllers will also send an alarm to the monitoring station (visual & audible).

Once the Capstun Mode is off the units and the economizer will resume normal operations.

FAN COIL UNITS HEATING MODE:

The heating valve will modulate to maintain the Heating Set Point (Adj).

FAN COIL UNITS COOLING MODE:

The Fan Coil Unit will utilize the economizer to maintain the Cooling Set Point (Adj) if not, the cooling stage will come on to maintain the Cooling Set Point (Adj).

KITCHEN VENTILATION SEQUENCE OF OPERATION

This applies to the
"Gaylord" Hood #1, Exh Fan-1B, MAU-1, Wash Cycle
Bakers Hood #2, Exh Fan-2B, MAU-2
Small Storage Room Exh Fan-3B
Traywasher Exh Fan-4B
Kitchen Restrooms & Locker Rm Exh Fan-5B

NORMAL WORK HOURS:

All Exhaust Fans and MAU's (Make-up Air Units) & "Gaylord" Wash Cycle are programmed with Daily time schedules for On/Off and Start times thru the "KMC" Digital Programming HVAC System of the Jail.

DAILY OPERATIONS:

EXHAUST FANS: During normal working hours EF-1B, EF-2B & EF-4B will be on and pilot lights in "Kitchen Office Ventilation Control Panel" ("KOVCP") will be on, indicating fans are running. If Fan is turned off manually or Fan fails, pilot lights will go off, after a time delay this will also alert the "KMC" System for Bldg. Maint. Also during normal working hours EF-3B & EF-5B will be on, these Fans will also alert the "KMC" System of failures or manually shutting off with a time delay.

MAKE-UP AIR UNITS: MAU-1 (Gaylord Hood #1) and MAU-2 (Bakers Hood #2) will also run during normal working hours supplying Outside Air through the vents in the Kitchen Hoods. Control of Heating and Cooling are controlled through the "KMC" system with Heating and Cooling Setpoints. Heating and Cooling temperature set points are adjustable through the "KMC" system.

GAYLORD HOOD #1 WASH CYCLE: After normal working hours when EF-1B shuts off the Wash Cycle is programmed to do a Start-One-Shot, on trailing edge of Start the Timing Relay in the "Kitchen Ventilation Control Panel" ("KVCP" in Kitchen Electric Rm.) will start the wash cycle (adjustable time). Pilot lights in both "KOVCP" & "KVCP" Control Panels will come on during wash. Wash Cycle will energize a water solenoid valve & detergent pump (Cabinet in Kitchen Electric Rm.) which will spray out nozzles inside the hood and wash down and drain out on the one side of the "Udisco" Unit into a floor drain. There is also a manual start push button on the "KVCP" panel for extra washing. The wash cycle through an interlocking circuit will not start when EF-1B is running. Wash cycle can also be started manually during a Fire Mode with normal electrical power on.

KITCHEN FIRE ALARM ZONE:

All of the above mentioned ventilation equipment controls are wired through the Kitchen Fire Alarm Zone Control. If the Kitchen Zone goes into a fire alarm SVF-1B Pneumatic Electric Switch #1 (P.E.Sw #1 located in D Elect. Rm.) Will close and turn on Smoke Ventilation Fan-1B (SVF-1B) for the Kitchen, also SVF-1B P.E.Switch #2 (P.E.Sw #2 located in D Elect. Rm.) will open control circuit and All of the above mentioned Units will shut off until Fire Alarm has been Cleared and Reset.

GAYLORD HOOD #1 FIRE ALARM MODE:

MANUAL: On the "Kitchen Office Ventilation Control Panel" ("KOVCP") there is a Pull Station. When pulled down the Pilot lights will illuminate on both "KOVCP" & "KVCP" panels and shut down the Gaylord Hood #1 EF-1B, MAU-1 & Bakers Hood #2 EF-2B, MAU-2. This will also send a fire alarm to the Jails Fire Alarm System {TRX-2/3 Switch Input, Kitchen Hood Range Alarm (B079)}. Once the Fire Alarm Pull Station is opened and reset the units will come back on. During a power outage and the Jail is under Generator E-Pwr Pull Station will still send an alarm to Fire Alarm system and pilot lights will illuminate.

AUTOMATIC: The Gaylord Hood #1 is configured into 2 ventilating units that are ducted to 1 Exhaust Fan. Each ventilating unit has 1 Thermostat Switch, 1 Blower Switch & 1 Damper Solenoid with Damper Arm and a set of Fire Dampers. If the Exhausting Air reaches 350 deg. F, one or both Thermostat Switches will close and energize both Damper Solenoids, which will close both Fire Dampers and open one or both Blower Switches, which will open the control circuit and shut off EF-1B, MAU-1, EF-2B & MAU-2. At the same time it will send an Alarm {TRX-2/3 Switch Input, Kitchen Hood Range Alarm (B079)} to the Jails Fire Alarm System and the pilot lights will illuminate on both "KOVCP" & "KVCP" panels. When the exhausting air cools down below 350 deg. + temp. differential the Thermostat switches will open and MAU-1, MAU-2 & EF-2B will come back on. Then you will have to manually Push In and reset both Damper Arms under the hood to close the Blower switch or switches and EF-1B will start. Fire Alarm system can then be cleared and reset.

BAKERS HOOD #2 FIRE ALARM MODE:

The Bakers Hood #2 and EF-2B is configured differently, That if there is a fire or excessive heat inside the hood it will open a Blower Switch, which will open the control circuit and shut off EF-2B. No Fire Alarm notifications or alarms. You will have to get access inside the hood to reset Blower Switch.

"ANSUL" FIRE SUPPRESSANT SYSTEMS:

****NOTE**** These systems Do Not Activate any Fire Alarm or Shut Down any Ventilation Units.

Both Hoods have a Fire Suppressant System. These systems are operated on a cable system so no electricity is applied. There are Fusible links under the hoods and each hood system has a manual pull station on the wall right outside of the Kitchen office stairs near the door headed to the Service Sallyport door.

GAYLORD HOOD #1: When the Manual Pull Station is pulled or if one of the Fusible Links melt (at a rated temperature) this will activate that hoods suppressant system which will discharge a pressurized solution through the nozzles under the hood, It will also close a circuit to energize a Shunt Trip Breaker that will kill the "Udisco" Electric Panel, it will also open a circuit to de-energize the 2 Gas valves feeding the "Udisco" Unit. Once everything is cleared the "Ansul" system would have to be reset then the "Udisco" Elect. Panel will be energized and Push the Gas Reset Button on the panel to energize the gas valves. *Note: After power outages Gas reset Button needs to be pushed to energize the gas valves

BAKERS HOOD #2: When the Manual Pull Station is pulled or if one of the Fusible Links melt (at a rated temperature) this will activate that hoods suppressant system which will discharge a pressurized solution through the nozzles under the hood, it will also open a circuit to de-energize the Gas valve & open circuit LK-14/16 that feeds the Pastry Fryer Receptacle. Once everything is cleared the "Ansul" system would have to be reset and Push the Gas Reset Button in the Kitchens Electric Rm. to energize the gas valve & circuit LK-14/16. *Note: After power outages Gas reset Button needs to be pushed to energize the gas valve.

TCP-6 PANEL INPUTS T.BLOCK LEGEND

8/29/2018

T. BLOCK #	T.B.COLOR	FUNCTION
FUSE	ORANGE	LC3-1 CONTROLLER POWER 24VAC HOT FROM XFMR # 2
FUSE	ORANGE	LC3-1 CONTROLLER POWER 24VAC COM FROM XFMR # 2
GRD/SHLD	GRN/YEL	GROUND/SHIELDS
1	BLUE	LC3-1, INPUT 1, INTAKE, M.A. TEMP DUCT SENSOR
2	GREY	LC3-1, SIGNAL RETURN GROUND # 1 M.A. DUCT TEMP SENSOR
3	BLUE	LC3-1, INPUT 2, INTAKE, FREEZE STAT
4	GREY	LC3-1, SIGNAL RETURN GROUND # 2 FREEZE STAT
5	BLUE	LC3-1, INPUT 3, INTAKE, FA2 RELAY CONTACTS
6	GREY	LC3-1, SIGNAL RETURN GROUND # 3 FA2 RELAY CONTACTS
7	BLUE	LC3-1, INPUT 4, KITCHEN, "GAYLORD" HOOD EF-1B, STATUS
8	GREY	LC3-1, SIGNAL RETURN GROUND # 4
9	BLUE	LC3-1, INPUT 5, KITCHEN, BAKERS HOOD EF-2B, STATUS
10	GREY	LC3-1, SIGNAL RETURN GROUND # 5
11	BLUE	LC3-1, INPUT 6, KITCHEN, TRAYWASHER EF-4B, STATUS
12	GREY	LC3-1, SIGNAL RETURN GROUND # 6
13	BLUE	LC3-1, INPUT 7, KITCHEN, EF-3B, STATUS
14	GREY	LC3-1, SIGNAL RETURN GROUND # 7
15	BLUE	LC3-1, INPUT 8, KITCHEN, EF-5B, STATUS
16	GREY	LC3-1, SIGNAL RETURN GROUND # 8
GRD/SHLD	GRN/YEL	GROUND/SHIELDS
FUSE	GREY	O.S.A. DAMPER POWER 24VAC HOT FROM XFMR # 3
FUSE	GREY	O.S.A. DAMPER POWER 24VAC COM FROM XFMR # 3
FUSE	GREY	RETURN DAMPER POWER 24VAC HOT FROM XFMR # 3
FUSE	GREY	RETURN DAMPER POWER 24VAC COM FROM XFMR # 3
T. BLOCK #	T.B.COLOR	FUNCTION
FUSE	ORANGE	LC3-2 CONTROLLER POWER 24VAC HOT FROM XFMR # 2
FUSE	ORANGE	LC3-2 CONTROLLER POWER 24VAC COM FROM XFMR # 2
GRD/SHLD	GRN/YEL	GROUND/SHIELDS
17	BLUE	LC3-2, INPUT 1, ROOM TEMP SENSOR (Main Intake Area)
18	GREY	LC3-2, SIGNAL RETURN GROUND # 1 ROOM TEMP SENSOR
19	BLUE	LC3-2, INPUT 2, S.A. DUCT TEMP SENSOR (FC-1B)
20	GREY	LC3-2, SIGNAL RETURN GROUND # 2 S.A. DUCT TEMP SENSOR
21	BLUE	LC3-2, INPUT 3, SUPPLY FAN STATUS (FC-1B)
22	GREY	LC3-2, SIGNAL RETURN GROUND # 3 SUPPLY FAN STATUS
23	BLUE	LC3-2, INPUT 4, CSR-SVF-2B (Capstun Status Rly for SVF-2B)
24	GREY	LC3-2, SIGNAL RETURN GROUND # 4 CSR-SVF-2B
25	BLUE	LC3-2, INPUT 5,
26	GREY	LC3-2, SIGNAL RETURN GROUND # 5
27	BLUE	LC3-2, INPUT 6,
28	GREY	LC3-2, SIGNAL RETURN GROUND # 6
29	BLUE	LC3-2, INPUT 7,
30	GREY	LC3-2, SIGNAL RETURN GROUND # 7
31	BLUE	LC3-2, INPUT 8,
32	GREY	LC3-2, SIGNAL RETURN GROUND # 8
GRD/SHLD	GRN/YEL	GROUND/SHIELDS
FUSE	GREY	FC-1B HEATING VALVE POWER 24VAC HOT FROM XFMR # 4
FUSE	GREY	FC-1B HEATING VALVE POWER 24VAC COM FROM XFMR # 4

TCP-6 PANEL INPUTS T.BLOCK LEGEND

8/29/2018

T. BLOCK #	T.B.COLOR	FUNCTION
FUSE	ORANGE	LC3-3 CONTROLLER POWER 24VAC HOT FROM XFMR # 2
FUSE	ORANGE	LC3-3 CONTROLLER POWER 24VAC COM FROM XFMR # 2
GRD/SHLD	GRN/YEL	GROUND/SHIELDS
33	BLUE	LC3-3, INPUT 1, ROOM TEMP SENSOR (FC-2B Booking Salyport)
34	GREY	LC3-3, SIGNAL RETURN GROUND # 1 ROOM TEMP SENSOR
35	BLUE	LC3-3, INPUT 2, S.A. DUCT TEMP SENSOR (FC-2B)
36	GREY	LC3-3, SIGNAL RETURN GROUND # 2 S.A. DUCT TEMP SENSOR
37	BLUE	LC3-3, INPUT 3, SUPPLY FAN STATUS (FC-2B)
38	GREY	LC3-3, SIGNAL RETURN GROUND # 3 SUPPLY FAN STATUS
39	BLUE	LC3-3, INPUT 4, VENT FAN 8B STATUS (Booking Salyport)
40	GREY	LC3-3, SIGNAL RETURN GROUND # 4 VENT FAN 8B STATUS
41	BLUE	LC3-3, INPUT 5, EXHAUST FAN 8B STATUS (Duii Rooms)
42	GREY	LC3-3, SIGNAL RETURN GROUND # 5 EXHAUST FAN 8B STATUS
43	BLUE	LC3-3, INPUT 6, CAPSTUN EVAC VF-8B STATUS (Booking Salyport)
44	GREY	LC3-3, SIGNAL RETURN GROUND # 6 CAPSTUN EVAC VF-8B STATUS
45	BLUE	LC3-3, INPUT 7, CAPSTUN EVAC EF-8B STATUS (Duii Rooms)
46	GREY	LC3-3, SIGNAL RETURN GROUND # 7 CAPSTUN EVAC EF-8B STATUS
47	BLUE	LC3-3, INPUT 8,
48	GREY	LC3-3, SIGNAL RETURN GROUND # 8
GRD/SHLD	GRN/YEL	GROUND/SHIELDS
FUSE	GREY	FC-2B HEATING VALVE POWER 24VAC HOT FROM XFMR # 4
FUSE	GREY	FC-2B HEATING VALVE POWER 24VAC COM FROM XFMR # 4
T. BLOCK #	T.B.COLOR	FUNCTION
FUSE	ORANGE	LC3-4 CONTROLLER POWER 24VAC HOT FROM XFMR # 2
FUSE	ORANGE	LC3-4 CONTROLLER POWER 24VAC COM FROM XFMR # 2
GRD/SHLD	GRN/YEL	GROUND/SHIELDS
49	BLUE	LC3-4, INPUT 1, EXHAUST DUCT TEMP SENSOR (FC-3B Holding Cells)
50	GREY	LC3-4, SIGNAL RETURN GROUND # 1 EXHAUST DUCT TEMP SENSOR
51	BLUE	LC3-4, INPUT 2, S.A. DUCT TEMP SENSOR (FC-3B)
52	GREY	LC3-4, SIGNAL RETURN GROUND # 2 S.A. DUCT TEMP SENSOR
53	BLUE	LC3-4, INPUT 3, SUPPLY FAN STATUS (FC-3B)
54	GREY	LC3-4, SIGNAL RETURN GROUND # 3 SUPPLY FAN STATUS
55	BLUE	LC3-4, INPUT 4, EXHAUST FAN 7B STATUS (Holding Cell 1-6)
56	GREY	LC3-4, SIGNAL RETURN GROUND # 4 EXHAUST FAN 7B STATUS
57	BLUE	LC3-4, INPUT 5, CAPSTUN EVAC EF-7B STATUS (Holding Cell 1-6)
58	GREY	LC3-4, SIGNAL RETURN GROUND # 5 CAPSTUN EVAC EF-8B STATUS
59	BLUE	LC3-4, INPUT 6, KITCHEN, WALK-IN FREEZER #1 TEMP SENSOR
60	GREY	LC3-4, SIGNAL RETURN GROUND # 6 KIT. WALK-IN FRZER #1 TEMP SNSR
61	BLUE	LC3-4, INPUT 7, KITCHEN, WALK-IN COOLER #1 TEMP SENSOR
62	GREY	LC3-4, SIGNAL RETURN GROUND # 7 KIT. WALK-IN COOLR #1 TEMP SNSR
63	BLUE	LC3-4, INPUT 8, KITCHEN, WALK-IN COOLER #2 TEMP SENSOR
64	GREY	LC3-4, SIGNAL RETURN GROUND # 8 KIT. WALK-IN COOLR #2 TEMP SNSR
GRD/SHLD	GRN/YEL	GROUND/SHIELDS
FUSE	GREY	FC-3B HEATING VALVE POWER 24VAC HOT FROM XFMR # 4
FUSE	GREY	FC-3B HEATING VALVE POWER 24VAC COM FROM XFMR # 4
FUSE	GREY	FC-3B CAPSTUN EVAC DUCT DAMPER HOT FROM XFMR # 3
FUSE	GREY	FC-3B CAPSTUN EVAC DUCT DAMPER COM FROM XFMR # 3

TCP-6 PANEL OUTPUTS T.BLOCK LEGEND

8/29/2018

T. BLOCK # T.B.COLOR FUNCTION

GRD/SHLD	GRN/YEL	GROUPS/SHIELDS
65	YELLOW	LC3-1, OUTPUT 1, INTAKE OSA DAMPER ECONOMIZER
66	GREY	LC3-1, SIGNAL RETURN GROUND # 1
67	YELLOW	LC3-1, OUTPUT 2, INTAKE RETURN AIR DAMPER ECONOMIZER
68	GREY	LC3-1, SIGNAL RETURN GROUND # 2
69	YELLOW	LC3-1, OUTPUT 3, KITCHEN, GAYLORD HOOD #1 EF-1B (Relay)
70	GREY	LC3-1, SIGNAL RETURN GROUND # 3
71	YELLOW	LC3-1, OUTPUT 4, KITCHEN, BAKERS HOOD #2 EF-2B (Relay)
72	GREY	LC3-1, SIGNAL RETURN GROUND # 4
73	YELLOW	LC3-1, OUTPUT 5, KITCHEN, GAYLORD HOOD WASH CYCLE (Relay)
74	GREY	LC3-1, SIGNAL RETURN GROUND # 5
75	YELLOW	LC3-1, OUTPUT 6, KITCHEN, MAU-1 & MAU-2 (Relay)
76	GREY	LC3-1, SIGNAL RETURN GROUND # 6
77	YELLOW	LC3-1, OUTPUT 7, KITCHEN, KITCHEN, TRAYWASHER EF-4B (Relay)
78	GREY	LC3-1, SIGNAL RETURN GROUND # 7
79	YELLOW	LC3-1, OUTPUT 8, KITCHEN, EF-3B & EF-5B (Relay)
80	GREY	LC3-1, SIGNAL RETURN GROUND # 8
GRD/SHLD	GRN/YEL	GROUPS/SHIELDS

FUSE	GREY	FREEZE STAT 24VAC HOT POWER FROM XFMR # 4
FUSE	GREY	FREEZE STAT 24VAC COM POWER FROM XFMR # 4

81	BEIGE	TO FREEZE STAT 24VAC HOT FROM XFMR # 4
82	BEIGE	SIGNAL FROM FREEZE STAT 24VAC
83	RED	FIRE ALARM 24VAC SIGNAL FROM "F.A. PE # 2 (XFMR #1)
84	RED	FIRE ALARM 24VAC COM FROM (XFMR # 1)

TCP-6 PANEL OUTPUTS T.BLOCK LEGEND

8/29/2018

T. BLOCK #	T.B.COLOR	FUNCTION
GRD/SHLD	GRN/YEL	GROUNDS/SHIELDS
85	YELLOW	SW. 24VAC SIGNAL TO FC-1B SUPPLY FAN
86	ORANGE	24VAC HOT FROM FC-1B UNIT'S CONTROL XFMR
87	YELLOW	LC3-2, OUTPUT 2, SIGNAL TO FC-1B H.W. VALVE
88	GREY	LC3-2, SIGNAL RETURN GROUND # 2 FC-1B H.W. VALVE
89	YELLOW	SW. 24VAC SIGNAL TO FC-1B COOLING CONTROLS
90	ORANGE	24VAC HOT FROM FC-1B UNIT'S CONTROL XFMR
91	YELLOW	LC3-2, OUTPUT 4,
92	GREY	LC3-2, SIGNAL RETURN GROUND # 4
93	YELLOW	LC3-2, OUTPUT 5,
94	GREY	LC3-2, SIGNAL RETURN GROUND # 5
95	YELLOW	LC3-2, OUTPUT 6,
96	GREY	LC3-2, SIGNAL RETURN GROUND # 6
97	YELLOW	LC3-2, OUTPUT 7,
98	GREY	LC3-2, SIGNAL RETURN GROUND # 7
99	YELLOW	LC3-2, OUTPUT 8,
100	GREY	LC3-2, SIGNAL RETURN GROUND # 8
GRD/SHLD	GRN/YEL	GROUNDS/SHIELDS

T. BLOCK #	T.B.COLOR	FUNCTION
GRD/SHLD	GRN/YEL	GROUNDS/SHIELDS
101	YELLOW	SW. 24VAC SIGNAL TO FC-2B SUPPLY FAN
102	ORANGE	24VAC HOT FROM FC-2B UNIT'S CONTROL XFMR
103	YELLOW	SW. 24VAC SIGNAL TO VF-8B CONTROLS
104	YELLOW	SW. 24VAC SIGNAL TO EF-8B CONTROLS
105	BEIGE	24VAC EF & VF CONTROL POWER
106	YELLOW	LC3-3, OUTPUT 3, SIGNAL TO FC-2B H.W. VALVE
107	GREY	LC3-3, SIGNAL RETURN GROUND # 3 FC-2B H.W. VALVE
108	YELLOW	SW. 24VAC SIGNAL TO FC-2B COOLING CONTROLS
109	ORANGE	24VAC HOT FROM FC-2B UNITS' CONTROL XFMR
110	YELLOW	LC3-3, OUTPUT 5,
111	GREY	LC3-3, SIGNAL RETURN GROUND # 5
112	YELLOW	LC3-3, OUTPUT 6,
113	GREY	LC3-3, SIGNAL RETURN GROUND # 6
114	YELLOW	LC3-3, OUTPUT 7,
115	GREY	LC3-3, SIGNAL RETURN GROUND # 7
116	YELLOW	LC3-3, OUTPUT 8,
117	GREY	LC3-3, SIGNAL RETURN GROUND # 8
GRD/SHLD	GRN/YEL	GROUNDS/SHIELDS

TCP-6 PANEL OUTPUTS T.BLOCK LEGEND

8/29/2018

T. BLOCK #	T.B.COLOR	FUNCTION
GRD/SHLD	GRN/YEL	GROUNDS/SHIELDS
118	YELLOW	SW. 24VAC SIGNAL TO FC-3B SUPPLY FAN
119	ORANGE	24VAC HOT FROM FC-3B UNITS' CONTROL XFMR
120	YELLOW	SW. 24VAC SIGNAL TO EF-7B CONTROLS
121	BEIGE	24VAC EF & VF CONTROL POWER
122	YELLOW	LC3-4, OUTPUT 3, SIGNAL TO FC-3B H.W. VALVE
123	GREY	LC3-4, SIGNAL RETURN GROUND # 3 FC-3B H.W. VALVE
124	YELLOW	SW. 24VAC SIGNAL TO FC-3B COOLING CONTROLS
125	ORANGE	24VAC HOT FROM FC-3B UNITS' CONTROL XFMR
126	YELLOW	24VAC SW. HOT TO EF-7B CAPSTUN DUCT DAMPER
127	GREY	24VAC COM TO EF-7B CAPSTUN DUCT DAMPER
128	YELLOW	LC3-4, OUTPUT 6, KITCHEN, WALK-IN FREEZER #1 Hi-Temp Alarm (Relay)
129	GREY	LC3-4, SIGNAL RETURN GROUND # 6
130	YELLOW	LC3-4, OUTPUT 7, KITCHEN, WALK-IN COOLER #1 Hi-Temp Alarm (Relay)
131	GREY	LC3-4, SIGNAL RETURN GROUND # 7
132	YELLOW	LC3-4, OUTPUT 8, KITCHEN, WALK-IN COOLER #1 Hi-Temp Alarm (Relay)
133	GREY	LC3-4, SIGNAL RETURN GROUND # 8
GRD/SHLD	GRN/YEL	GROUNDS/SHIELDS

REMOTE TERMINAL BLOCKS IN VF-8B ENCLOSURE IN GENERATOR ROOM

134	GREY	24VAC HOT FROM XFMR # 1
135	GREY	24VAC COM FROM XFMR # 1

TCP-7 PANEL T.BLOCK LEGEND

8/29/2018

T. BLOCK #	T.B.COLOR	FUNCTION
FUSE	ORANGE	LC5-1 CONTROLLER POWER 24VAC HOT FROM XFMR # 2
FUSE	ORANGE	LC5-1 CONTROLLER POWER 24VAC COM FROM XFMR # 2
GRD/SHLD	GRN/YEL	GROUND/SHIELDS
1	BLUE	LC5-1, INPUT 1, INTAKE CONTROL RM, S.A. TEMP DUCT SENSOR
2	GREY	LC5-1, SIGNAL RETURN GROUND # 1 S.A. DUCT TEMP SENSOR
3	BLUE	LC5-1, INPUT 2, INTAKE CONTROL RM, R.A. TEMP DUCT SENSOR
4	GREY	LC5-1, SIGNAL RETURN GROUND # 2 S.A. DUCT TEMP SENSOR
5	BLUE	LC5-1, INPUT 3,
6	GREY	LC5-1, SIGNAL RETURN GROUND # 3
7	BLUE	LC5-1, INPUT 4,
8	GREY	LC5-1, SIGNAL RETURN GROUND # 4
9	BLUE	LC5-1, INPUT 5,
10	GREY	LC5-1, SIGNAL RETURN GROUND # 5
11	BLUE	LC5-1, INPUT 6,
12	GREY	LC5-1, SIGNAL RETURN GROUND # 6
13	BLUE	LC5-1, INPUT 7,
14	GREY	LC5-1, SIGNAL RETURN GROUND # 7
15	BLUE	LC5-1, INPUT 8,
16	GREY	LC5-1, SIGNAL RETURN GROUND # 8
GRD/SHLD	GRN/YEL	GROUND/SHIELDS
FUSE	GREY	INTAKE CONTROL RM, O.S.A. DAMPER POWER 24VAC HOT FROM XFMR # 3
FUSE	GREY	INTAKE CONTROL RM, O.S.A. DAMPER POWER 24VAC COM FROM XFMR # 3
GRD/SHLD	GRN/YEL	GROUND/SHIELDS
17	YELLOW	LC5-1, OUTPUT 1,(RELAY) INTAKE CONTROL RM, OSA DAMPER
18	GREY	LC5-1, SIGNAL RETURN GROUND # 1
19	YELLOW	LC5-1, OUTPUT 2,(RELAY) INTAKE CONTROL RM, HP-1B, SUPPLY FAN
20	GREY	LC5-1, SIGNAL RETURN GROUND # 2
21	YELLOW	LC5-1, OUTPUT 3,(RELAY) INTAKE CONTROL RM, HP-1B, C/O VLV, HTG #1
22	GREY	LC5-1, SIGNAL RETURN GROUND # 2 & # 3
23	YELLOW	LC5-1, OUTPUT 4,(RELAY) INTAKE CONTROL RM, HP-1B, HTG #2
24	GREY	
25	YELLOW	LC5-1, OUTPUT 5,(RELAY) INTAKE CONTROL RM, HP-1B, COOLING
26	GREY	LC5-1, SIGNAL RETURN GROUND # 5
27	YELLOW	LC5-1, OUTPUT 6,
28	GREY	LC5-1, SIGNAL RETURN GROUND # 6
29	YELLOW	LC5-1, OUTPUT 7,
30	GREY	LC5-1, SIGNAL RETURN GROUND # 7
31	YELLOW	LC5-1, OUTPUT 8,
32	GREY	LC5-1, SIGNAL RETURN GROUND # 8
GRD/SHLD	GRN/YEL	GROUND/SHIELDS
33	ORANGE	24VAC POWER FROM HP-1B UNIT
34	ORANGE	24VAC TO SUPPLY FAN HP-1B UNIT
35	ORANGE	24VAC TO CHANGE/OVER VALVE HTG. STAGE #1 HP-1B UNIT
36	ORANGE	24VAC TO HTG. STAGE #2 HP-1B UNIT
37	ORANGE	24VAC TO COOLING HP-1B UNIT

SECTION 15990

BALANCING OF HYDRONIC SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Requirements for testing, adjusting, and balancing of all new hydronic systems (typical of 3 new pumps and 3 new boilers), including the associated equipment.
- B. The work includes setting speed and flow, adjusting equipment and devices installed for systems, recording data and recommending solutions to deficiencies in the installed system.

1.2 RELATED WORK

- A. Contract Drawings, Supplemental General Conditions, and Division 1.

1.3 SUBMITTALS

- A. Submit proof that the prepared testing, adjusting and balancing agency meet the specified requirements.
- B. Submit sample forms of the test reports that will be submitted by entity performing work of this Section, indicating all data and parameters included.
- C. Provide certified test reports, signed by the authorized representative of the testing and balancing firm. The reports shall be certified proof that the systems have been tested, adjusted and balanced in accordance with the selected reference standards (NEBB); are an accurate representation of how the systems are operating. Reports to include a minimum of:
 - 1. Design flow compared to actual flow.
 - 2. Model numbers and serial numbers.
 - 3. Amperage and voltage readings.
 - 4. Notes of any discrepancies.

1.4 QUALITY ASSURANCE

- A. The systems shall be tested, adjusted and balanced by mechanics regularly employed by an independent testing, adjusting and balancing Subcontractor. The testing, adjusting and balancing Subcontractor shall have a minimum of 3 years experience.
- B. The project supervisor shall be certified by the National Environmental Balancing Bureau (NEBB).

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1.5 PERFORMANCE REQUIREMENTS

- A. Procedures, measurements, instruments and test reports for testing, adjusting and balancing work shall comply with all applicable Federal, State and Local laws, ordinances, regulations and codes, and the latest industry standards including, but not limited to the entities listed below:
 - 1. National Environmental Balancing Bureau (NEBB)
- B. Balance systems to within 10% of design criteria. Coordinate with mechanical contractor to modify the systems as required to meet the 10% requirement.

1.6 JOB CONDITIONS

- A. The contractor shall furnish and install balancing valves, pressure taps, gauges, valves, and other components as required for a properly balanced system, whether or not specified herein or shown on the Contract Drawings, all at no additional cost to the owner. Adjustment or replacement parts recommended by the testing and balancing specialist shall be made in strict accordance with the respective equipment manufacturer's recommendations.

PART 2 PRODUCTS

2.1 BALANCING EQUIPMENT

- A. Balance report to include equipment used by the balancing contractor, along with documentation of last calibration.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Balancing contractor responsible to provide all equipment required to perform balancing. Contractor is responsible for coordination of the controls system in order to perform the balancing as required.
- B. Balancing contractor responsible for obtaining the Contract Documents and understanding the design concepts.
- C. Balancing contractor responsible for review of installation of mechanical systems noting any instances where the installation does not meet the standards as specified.

3.2 TESTING, ADJUSTING AND BALANCING

- A. Balancing contractor to record all equipment data.
- B. Record voltage and amperage readings
- C. Adjust flow at each supply loop as shown on Contract Drawings.

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- D. Review correct operation of controls as system is tested in all modes.
- E. Permanently mark all settings
- F. Record all data required and prepare report for O&M manuals

END OF SECTION

SECTION 16050

BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. General wiring devices.
- B. Electrical delivery systems.
- C. Demolition of existing electrical.

1.2 RELATED SECTIONS

- A. Division 1

1.3 REFERENCES

- A. EIA/TIA 569A, Commercial Building Wiring Standard.
- B. Federal Communications Commission (FCC), Code of Federal Regulations, Part 68.
- C. National Electric Code (NEC).
- D. National Electrical Manufacturer's Association (NEMA).
- E. National Fire Protection Association (NFPA):
 - 1. NFPA 70: National Electrical Code (copyrighted by NFPA, ANSI approved) - hereinafter referred to as NEC.
- F. Underwriters Laboratory, Inc. (UL).

1.4 SUBMITTALS

- A. Submit under provisions in Division 1.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: Provide diagrams, schematics of networked systems indicating system performance and identifying components with location.
 - 1. Panel Drawings: Submit dimensional drawings.
 - 2. One Line Diagrams: Submit one line diagrams of the system configuration proposed if it differs from that illustrated in the riser diagram included in these Construction Documents. Submit one line drawings indicating location and addresses of all hardware, including, but not limited to, panel board or load center, circuit breaker, and charging stations.

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3. Wiring Diagrams: Submit wiring diagrams detailing power, signal, and control systems, clearly differentiating between manufacturer installed wiring and field installed wiring, and between components provided by the manufacturer and those provided by others.
 - a. Submit typical connection diagrams for all components including, but not limited to, panel boards, communications devices, and personal computers.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Installer shall be a licensed electrical firm that shall have minimum of 2 years documented successful installation experience with projects utilizing similar equipment that is required for this project.
- B. Product Requirements:
 1. Product shall be manufactured by an ISO 9001-2000 Certified facility.
 2. Product shall be free from defects in material or workmanship.
 3. Critical manufacturing processes of the product shall have documented in-process inspections and production testing according to ISO 9001-2000.
 4. Product shall be lot-traceable by date code.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the Project site in supplier's or manufacturer's original wrappings and containers, labeled with supplier's or manufacturer's name, material or product brand name, and lot number, if any.
- B. Store materials in their original, undamaged packages and containers, inside a well ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity. Ambient temperature range between -22 degrees F to 131 degrees F (-30 degrees C to 55 degrees C). Ambient humidity range 0% to 95%, non-condensing.
- C. Store on a pallet or shelf elevated from the ground.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 DEMOLITION

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- A. Contractor responsible for the removal of all equipment shown in the contract documents shown to be removed. Contractor to dispose of items off site.
- B. Contractor responsible for patching all surfaces exposed after demolition of any existing equipment to match the adjacent surface.
- C. Contractor responsible to remove all components associated with equipment being removed, including but not limited to controls and electrical back to nearest panel. Contractor may reuse any circuits that are sized and located for equipment being served.
- D. Contractor responsible to maintain all access paths to new or existing equipment, locate electrical conduit and components out of access paths.

1.9 WARRANTY

- A. Provide manufacturer's standard warranty. Product is warranted free of defects in material or workmanship. Product is warranted to perform the intended function within design limits.
- B. Field-applied paint coatings on raceway, boxes, plates or fittings shall be excluded from raceway manufacturer's warranty.
- C. Provide a one year warranty on parts and service.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Hubbell Wiring Devices-Kellems used for performance and standard reference.

2.2 ELECTRICAL DELIVERY SYSTEMS

- A. Conduits:
 - 1. Electric Metallic Tubing (EMT)
 - 2. Minimum $\frac{3}{4}$ " conduit size, see drawings for required size.

2.3 WIRE AND CABLE

- A. Refer to drawings for size and type.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates and supporting structures have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify

MARION COUNTY JAIL BOILER REPLACEMENT PROJECT

engineer of unsatisfactory preparation before proceeding.

- C. Review all equipment shown on mechanical plans, electrical contractor to verify correct voltage, phase and circuit size prior to equipment ordering and rough in. Notify engineer of any discrepancy prior to ordering or rough in.

3.2 INSTALLATION

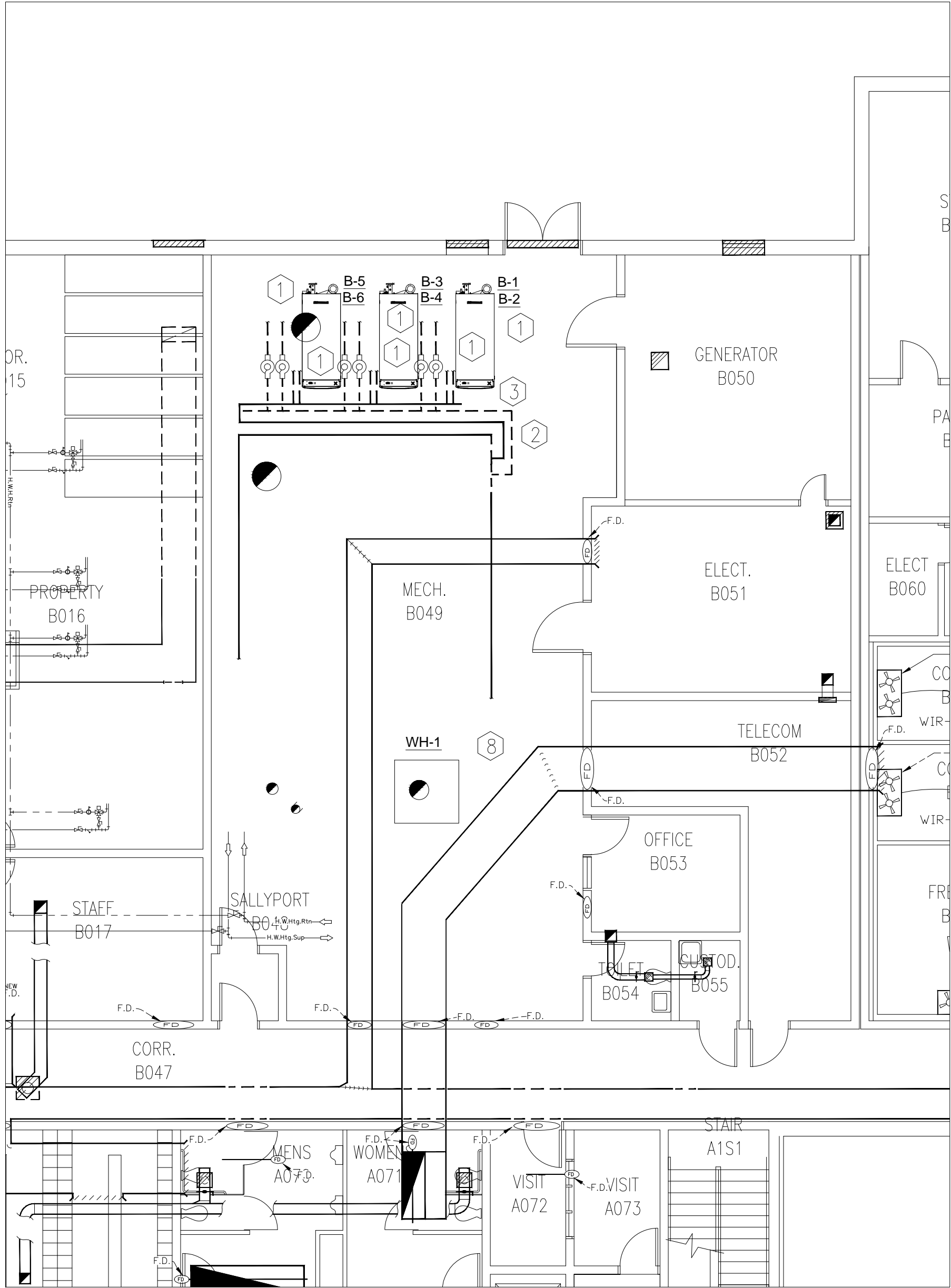
- A. Install in strict accordance with the NEC, manufacturer's instructions and requirements indicated on the Drawings.
- B. Raceway system shall be free of open gaps and exposed uneven cuts.
- C. All outlets, boxes, and enclosures shall be fastened securely to walls or permanent structures.
- D. Verify power wires and data cables are separated by a physical barrier. Power wires and data cables shall not be combined in any channel.
- E. Contractor is not to cut or notch any structural member without prior approval from engineer.
- F. All low voltage wiring is to be concealed in EMT within walls, in mechanical rooms, and in any location visible to the occupants during normal occupancy
- G. All low voltage connections are to be performed in a junction box with cover.

3.3 PROTECTION

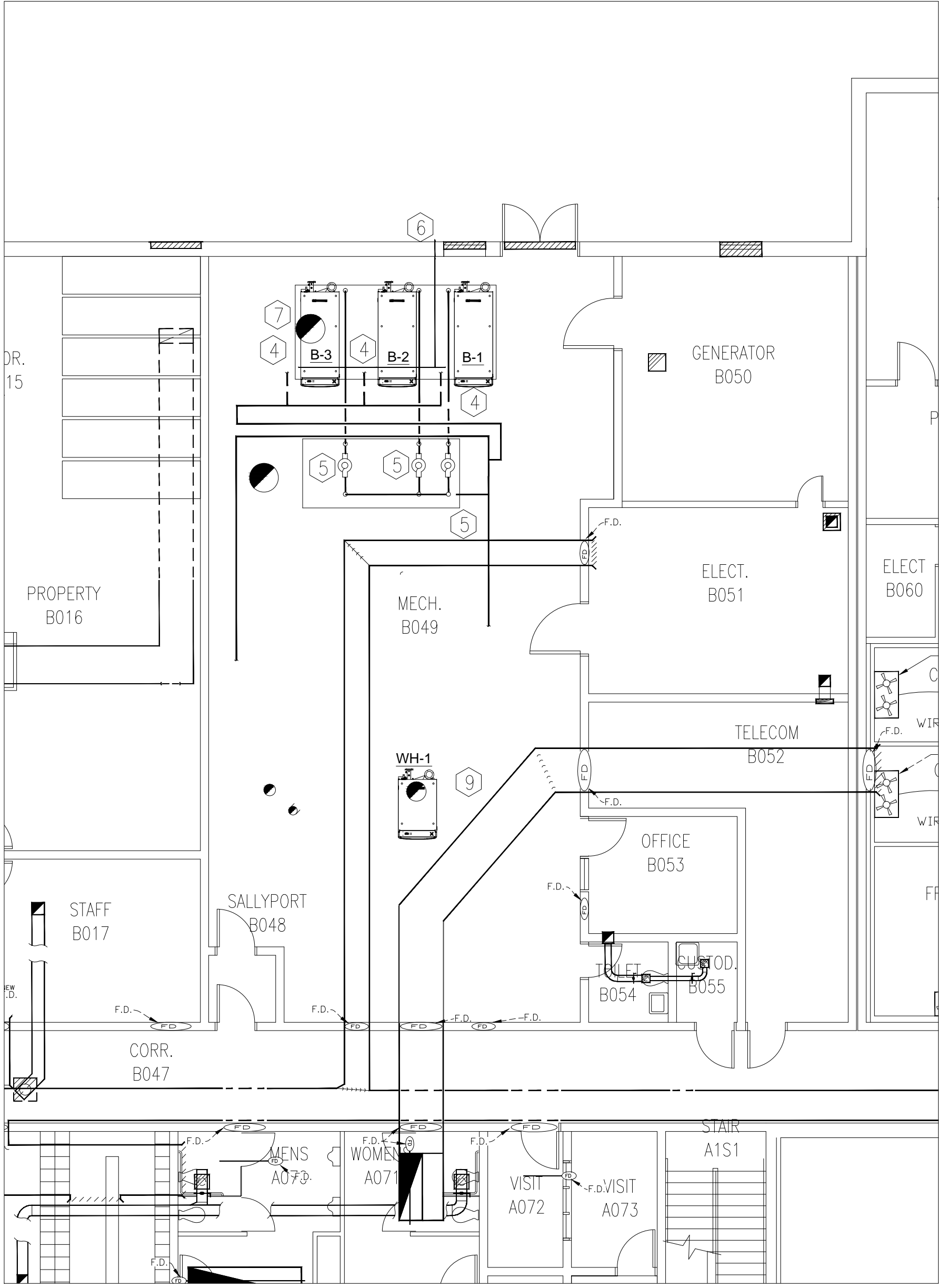
- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

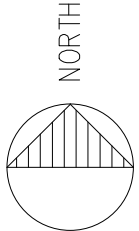
ATTACHMENT B



1 PARTIAL FIRST FLOOR DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



2 PARTIAL FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

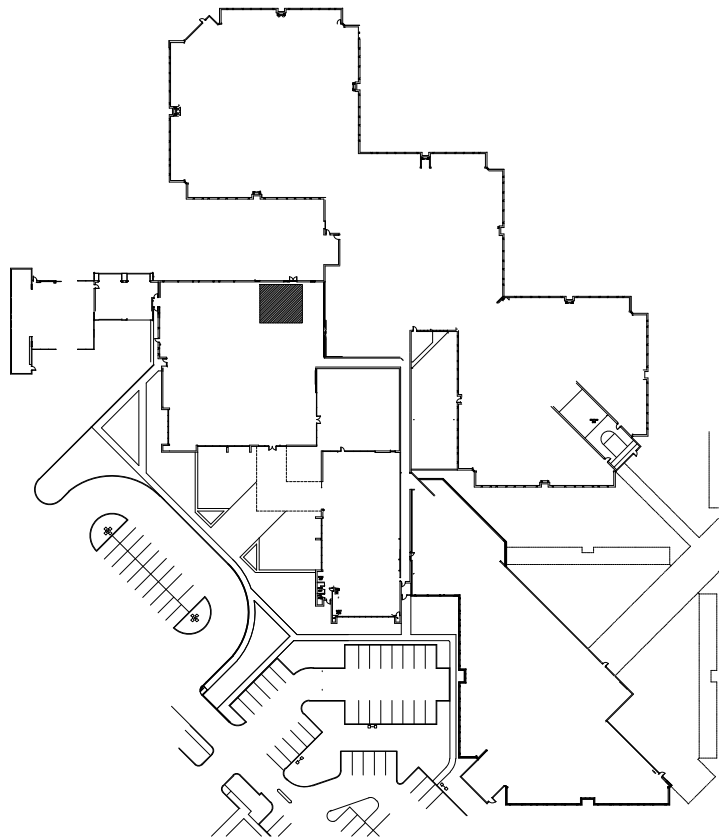


MECHANICAL GENERAL NOTES

- CONTRACTOR TO MODIFY EXISTING AUTOMATED LOGIC CONTROLS FOR BOILERS. CONTRACTOR TO COMMISSION CONTROLS TO VERIFY CORRECT OPERATION OF CONTROLS. CONTRACTOR TO PROVIDE DOCUMENTATION SHOWING CORRECT OPERATION OF CONTROLS
- CONTRACTOR TO REMOVE EXISTING BOILERS, FLUES, PUMPS AND PIPING AS SHOWN PER DEMOLITION PLAN THIS SHEET. CONTRACTOR TO EMPTY AND DRY BOILERS AND PUMPS, SEAL CONNECTION POINTS AND RETURN TO OWNER.
- INSTALL ALL COMPONENTS PER 2014 OREGON MECHANICAL CODE, 2014 OREGON ENERGY EFFICIENCY SPECIALTY CODE, 2017 OREGON PLUMBING CODE, MANUFACTURER'S RECOMMENDATIONS, SPECIFICATIONS AND DETAILS.
- CONTRACTOR RESPONSIBLE FOR MODIFYING EXISTING ELECTRICAL CIRCUITS TO BOILERS AND PUMPS TO ACCOMMODATE NEW BOILERS, PUMPS AND CONTROLS.
- CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO FABRICATION OF PIPING. CONTRACTOR TO PROVIDE OFFSETS AND PIPE ROUTING AS REQUIRED TO INSTALL PIPING IN EXISTING SPACE AVAILABLE. CONTRACTOR TO MAINTAIN CLEAR PASSAGE BETWEEN PUMPS AND BOILERS, MINIMUM 6'6" HEAD ROOM WIDTH OF ISLE BETWEEN HOUSEKEEPING PADS.
- ALL PIPING TO BE INSULATED AND LABELED WITH DIRECTIONAL ARROWS.

- CONTRACTOR TO DOCUMENT THE EXECUTION OF MANUFACTURER START-UP AND INITIAL CHECKOUT BY THE MANUFACTURER REPRESENTATIVE AND PROVIDE A COPY TO THE COMMISSIONING PROVIDER.
- CONTRACTOR TO EXECUTE FUNCTIONAL TESTING FOR THE HEATING HOT WATER SYSTEM UNDER THE DIRECTION OF, AND DOCUMENTED BY THE COMMISSIONING PROVIDER.
- CONTRACTOR TO COORDINATE NEWLY INSTALLED PIPING SIZING REQUIREMENTS (AND PIPING VALVES, RELIEF VALVES, CONTROLS ACCESSORIES, ETC.) WITH NEW BOILER AND NEW PUMP O&M REQUIREMENTS.
- DURING THE WARRANTY PERIOD, CONTRACTOR TO CORRECT DEFICIENCIES AND MAKE NECESSARY ADJUSTMENTS TO O&M MANUALS AND RED-LINE DOCUMENTS FOR APPLICABLE ISSUES IDENTIFIED IN ANY SEASONAL OR WARRANTY PERIOD OBSERVATIONS AND TESTING COMPLETED.
- CONTRACTOR TO FLUSH EXISTING PIPING SYSTEM OF ANY FOREIGN MATERIAL INTRODUCED DURING BOILER AND PUMP REPLACEMENT. CONTRACTOR TO PROVIDE INITIAL WATER TREATMENT PER BOILER MANUFACTURER. INCLUDE \$8,000 WATER TREATMENT ALLOWANCE IN BID.

- CONTRACTOR TO INSULATE ALL NEW HWS AND HWR PIPING TO MATCH EXISTING INCLUDING PVC COVER JACKET.
- EXISTING AIR DIRT SEPARATOR, MAKE UP WATER, CHEMICAL FEED POT TO REMAIN.
- CONTRACTOR TO CONNECT NEW BOILERS TO LATCHING MUSHROOM SWITCH AT EACH EXIT FOR EMERGENCY SHUT DOWN OF ALL BOILERS.



KEYPLAN

M1 MECHANICAL PLAN NOTES


- CONTRACTOR TO REMOVE EXISTING BOILER, FLUES, CONDENSATE DRAINS, PUMPS, WIRING, CONTROLS HEATING WATER SUPPLY AND HEATING WATER RETURN PIPING. PREPARE HOUSEKEEPING PAD, HEATING WATER TAPS, AND ELECTRICAL FOR NEW PUMPS AND BOILERS PER DETAILS, SPECIFICATIONS AND MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR TO REMOVE HEATING WATER RETURN PIPING BACK TO MAIN, MODIFY EXISTING TEE IN MAIN HEATING WATER LOOP TO RELOCATE BOILER PUMPS ON ADJACENT HOUSEKEEPING SLAB AS SHOWN, REFER TO PIPING DETAIL SHEET M2.
- CONTRACTOR TO MODIFY EXISTING HEATING WATER SUPPLY PIPING TO CONNECT NEW HEATING WATER SUPPLY PIPING FROM NEW BOILERS, REFER TO PIPING DETAIL SHEET M2.
- CONTRACTOR TO INSTALL OWNER PROVIDED KN16+ BOILERS SEE INFORMATION SHEET M2, INSTALL PER MANUFACTURER AND DETAILS. PROVIDE 6" STAINLESS STEEL AL294C BOILER FLUE FOR EACH BOILER INDEPENDENTLY, ROUTE UP THROUGH EXISTING FLUE ROOF PENETRATION ROUTE AND INSTALL PER BOILER MANUFACTURER. PROVIDE MANUFACTURER'S ROOF CAP, FLASHING AND NEW CURB CAP. PROVIDE CONDENSATE DRAIN WITH CONDENSATE NEUTRALIZING FILTER. PROVIDE CONTROLS PER SPECIFICATIONS. MODIFY EXISTING ELECTRICAL CIRCUITS TO SERVE NEW BOILERS AND PUMPS. SUPPORT PER SHEETS M3 AND M4.
- CONTRACTOR TO PROVIDE NEW PUMP PER SHEET M2, PROVIDE PIPING PER DETAIL SHEET M2, CONTROLS AND CIRCUIT. PROVIDE WITH MANUFACTURER'S BASE FOR FLOOR MOUNTING. PROVIDE REQUIRED ACCESSORIES TO PROPERLY SET FLOW INCLUDING SUCTION DIFFUSER, TIPPLE DUTY VALVE (BALANCING VALVE), ISOLATION VALVES AND FLEX CONNECTIONS.
- CONTRACTOR TO PROVIDE 3" LPG GAS PIPING FROM EXTERIOR OF BUILDING (FIELD VERIFY EXACT LOCATION WITH MARION COUNTY FACILITIES PRIOR TO ROUGH IN) TO 1-1/2" LPG DROP TO EACH BOILER. PROVIDE ISOLATION VALVE AND CAP ON PIPING ON EXTERIOR OF BUILDING FOR FUTURE TANK CONNECTION. LABEL PIPING WITH DIRECTIONAL ARROWS.
- ROUTE NEW FLUES UP THROUGH EXISTING ROOF PENETRATION, SEE DETAILS M2.

ALTERNATE BID #1:

- CONTRACTOR TO REMOVE EXISTING HOT WATER HEATER WH-1, REMOVE EXISTING FLUE, GAS PIPING, AND DOMESTIC WATER AS REQUIRED TO INSTALL OWNER PROVIDED REPLACEMENT HOT WATER HEATER.
- CONTRACTOR TO INSTALL OWNER PROVIDED LOCHINVAR ARMOR X2 AWN1500PM 1500MBU AND WATER HEATER PUMPS. CONTRACTOR TO INSTALL PER MANUFACTURER, CONTRACTOR TO PROVIDE AND INSTALL Y STRAINER ON WATER HEATER SUPPLY PIPING PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO PROVIDE AND INSTALL MANUFACTURER'S ROOM AIR COMBUSTION KIT. CONTRACTOR TO INSTALL 6 INCH STAINLESS STEEL FLUE UP THROUGH EXISTING FLUE PENETRATION, PROVIDE STAINLESS STEEL CURB CAP FOR MODIFIED FLUE SIZE. CONTRACTOR TO PROVIDE 4'x6' BY 3" DEEP HOUSEKEEPING PAD UNDER NEW WATER HEATER, INSTALL WITH #4 REBAR 12" ON CENTER EACH WAY, CENTERED IN PAD, 3" IN FROM EDGE. CONNECT WATER HEATER TO EXISTING GAS PIPING AND DOMESTIC WATER PIPING. FIELD VERIFY GAS PRESSURE AND REGULATOR, REPLACE AS REQUIRED TO MEET MANUFACTURER'S REQUIREMENTS. CONNECT WATER HEATER TO EXISTING AUTOMATED LOGIC BUILDING CONTROL SYSTEM FOR ENABLE/DISABLE FUNCTION AND MONITORING. PROVIDE ELECTRICAL CIRCUIT FOR BOILER AND PUMPS, UTILIZE EXISTING CIRCUITS ABANDONED FOR BOILER PUMPS. LABEL PANELS ACCORDINGLY.

ALTERNATE BID #2:

- CONTRACTOR TO REPLACE EXISTING KMC CONTROLS FOR INTAKE AND KITCHEN WITH NEW AUTOMATED LOGIC CONTROLS. TYPICAL OF HP-1B, FC-1B, FC-2B, FC-3B, FC-3B, KITCHEN VENTILATION, KITCHEN EXHAUST SYSTEMS AND ECONOMIZERS. REFER TO SUPPLEMENTAL PAGES IN SPECIFICATIONS FOR EXISTING CONTROL DRAWINGS AND SEQUENCE OF OPERATION. SEE SHEET M4 FOR AREA OF WORK. CONTROLS TO BE INCORPORATED INTO THE EXISTING SITE AUTOMATED LOGIC CONTROL SYSTEM. ALL MODIFICATIONS TO THE EXISTING AUTOMATED LOGIC CONTROLS SYSTEM, INCLUDING INTEGRATION/REPLACEMENT OF AN EXISTING CONTROLS SYSTEM/SYSTEM COMPONENTS INTO THE AUTOMATED LOGIC CONTROLS SYSTEM, ARE SUBJECT TO FUNCTIONAL TESTING BY THE CONTRACTOR UNDER THE DIRECTION OF AND DOCUMENTED BY THE COMMISSIONING PROVIDER.

MARION COUNTY JAIL BOILER REPLACEMENT PROJECT 4000 AUMSVILLE HWY. SALEM OREGON		Designed DB Drawn DB Checked DB
		MAY 2019
		
EXPIRES: 12/31/2019		
CBD ENGINEERING, LLC 35468 RIVERSIDE DR. SW ALBANY, OREGON 97321 (541) 619-7287		
REVISIONS	Approved	
	Description	
	Date	
File No. M1.DWG		
Drawing No. M1		
Sheet 1 of 4		

(E) ROOF PENETRATION

CCA06RC ROOF CAP

CCA06RC ROOF CAP (TYP.)

ROUTE NEW HEATFAB OR APPROVED 6" AL29-4C BOILER FLUE FOR EACH BOILER. EXTEND UP THROUGH EXISTING ROOF PENETRATION, OFFSET FLUES AS FAR AS POSSIBLE TO PREVENT ROOF CAPS FROM OVERLAPPING. OFFSET FLUES HEIGHTS TO MAINTAIN 24" BETWEEN OVERLAPPING ROOF CAPS.

SUPPORT FROM STRUCTURE EVERY 3 FEET, (TYP.)

FABRICATE NEW CURB CAP FOR EXISTING ROOF PENETRATION

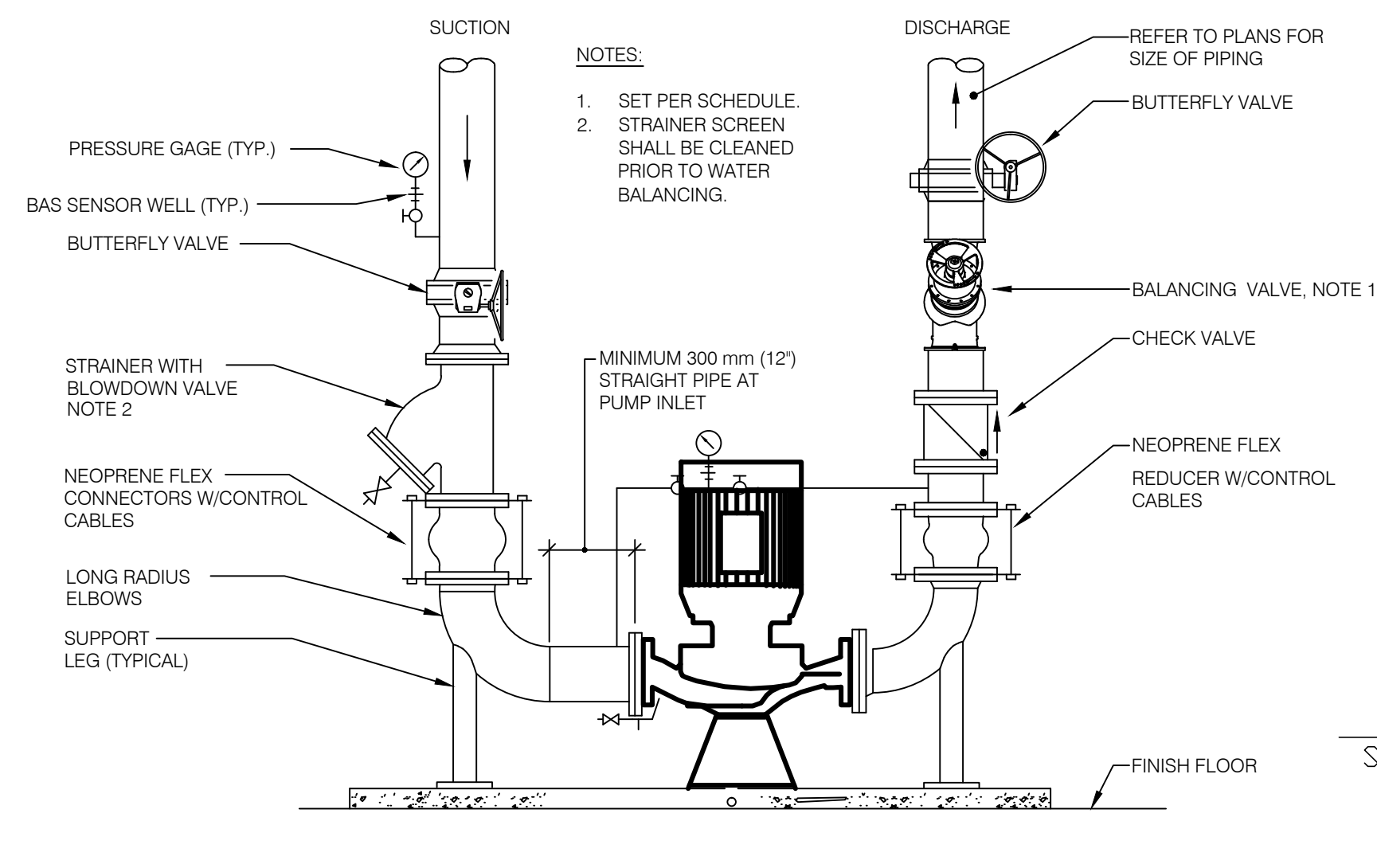
CCA06E90 ELBOW (TYP.)

CCA06LXX STRAIGHT LENGTHS (TYP.)

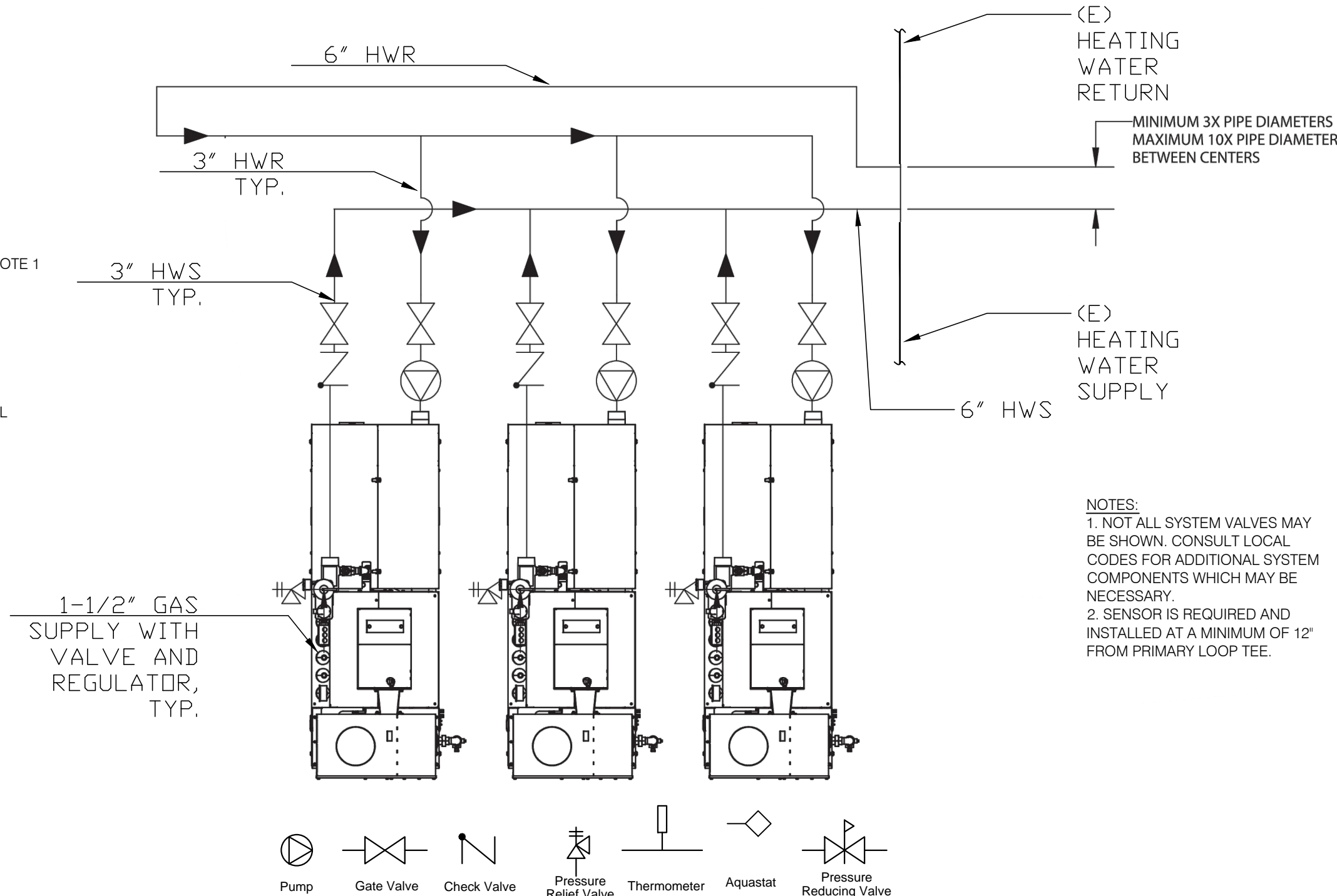
FLUES TO BE INSTALLED IN STRICT CONFORMANCE TO MANUFACTURER'S RECOMMENDATIONS, SLOPE FLUES BACK TO BOILER 1/4" PER FOOT.

1 BOILER FLUE

NTS



6 PUMP INSTALLATION DETAIL



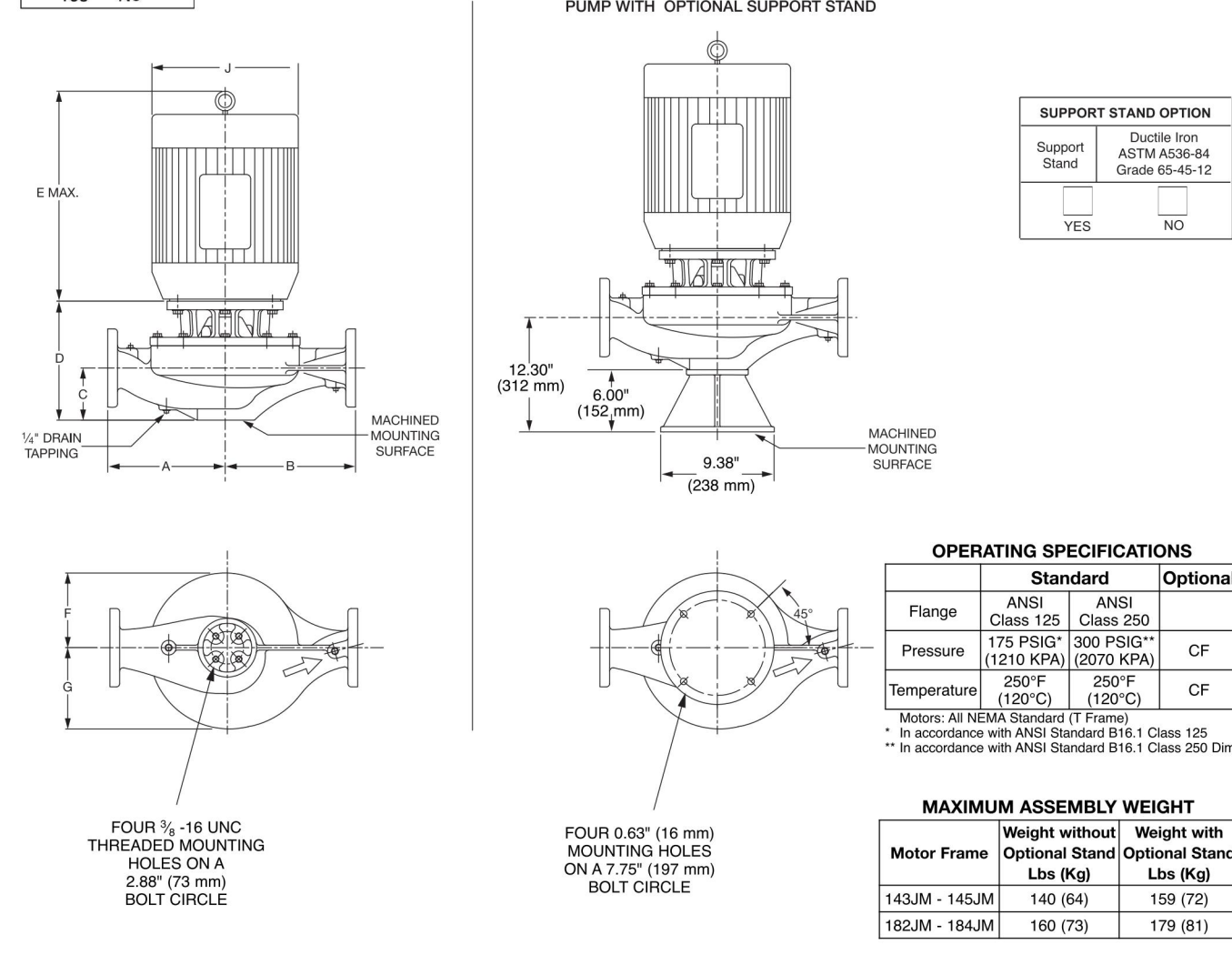
3 MULTIPLE BOILER PIPING



JOB Marion County Jail ENGINEER _____

CONTRACTOR _____ REP. _____

ITEM NO. BP-1	MODEL NO. KV3007	IMPELLER DIA. 5.7	G.P.M. 153	HEAD/FT. 10	H.P. 1	ELEC. CHAR.
NSF 61 Certified <input type="checkbox"/> Yes <input type="checkbox"/> No				WEIGHT _____ PUMP/MOTOR _____		



DIMENSIONS				*A & B Dimensions apply for all pump sizes.								
Model	Conn.	Motor Frame HP 1160 FPM	Flange Size ASA	A"	B"	C	D	E MAX	F	G	H	J DIA
3007 (76 x 76)	3 x 3	143M	0.75	3	10.00 (254) I ANSI Class 125	10.53 (268) I ANSI Class 125	6.30	10.53 (268) 12.06 (305)	5.29	6.31	0.25	6.82 (168)
		152M	1					10.53 (268) 12.06 (305)				6.82 (168)
		152M	1.5					10.53 (268) 13.94 (354)				7.88 (200)
				(76)	10.37 (263) I ANSI Class 250	10.37 (263) I ANSI Class 250	(160)		(154)	(160)	(8)	

English dimensions are in inches. Metric dimensions are in millimeters. Metric data is presented in ().
Do not use for construction purposes unless certified.

5 PUMP SPECIFICATIONS AND DIMENSIONS

NOTE: PROVIDE WITH MANUFACTURER'S FLOOR MOUNT BASE. NTS

[illegible]

4 BOILER DIMENSIONS

A.G.A. CERTIFIED RATINGS & CAPACITIES			
Fuel Type	Natural/LP Gas	Boiler FLA	13.9 A*
Input BTU/hr.	1,600,000 / 469 KW	Min. Gas Pressure Required	3" W.C.
Output BTU/hr.	1,537,600 / 450 KW	Max. Gas Pressure Allowed	14" W.C.
Boiler HP	45.9	Water Volume	21.0 gal.
Electrical Requirements	230VAC/60 Hz/1PH (with neutral)	Operating Weight	2690 lbs. / 1220 kg.



Main Gas Valve	Dungs MBC	Air Switch	Huba
Firing Valve	1-1/2" Apollo	Flow Sensor	SIKA
Ignition Control	Honeywell RM789SC	Blocked Flue Switch	Cleveland NS2
Operating Control	HeatNet®	Blower Motor	Ametek
High Limit	Honeywell L400EE	L.W.C.O.	800
Main Ball Valve	1-1/2" Apollo	Relief Valve	30, 50, 75 & 100 PSI
Pilot Cock	1/4" Conbraco	Pilot Regulator	Maxtrol RV12LT

ASME Sect IV Fire Side Htg Surface	433.5 Sq. Ft. / 40.3 Sq. M.	Design Data	100 PSI & 250°F
ASME Sect IV Water Side Htg Surface	72.91 Sq. Ft. / 6.77 Sq. M.		
CV. GPM (1PSID)	140		

*Add circulator amps.

20°F / 11.1°C				40°F / 22.2°C				60°F / 33.3°C				80°F / 44.4°C				100°F / 55.5°C			
Flow Rate		Pressure Drop		Flow Rate		Pressure Drop		Flow Rate		Pressure Drop		Flow Rate		Pressure Drop		Flow Rate		Pressure Drop	
GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa	GPM	L/s	Ft	kPa
153.8	9.70	2.79	8.33	76.9	4.85	7.0	2.08	51.3	3.23	3.1	.93	38.5	2.43	.17	.52	30.8	1.94	.11	.33
Flow GPM				Temp. Rise** (°F)				Vent Length (Eqv. Ft.)				Air Inlet Length (Eqv. Ft.)							
Min		Max		Min		Max		Min		Max		Min		Max					
30.8		153.8		20		100		6		100		0		100					

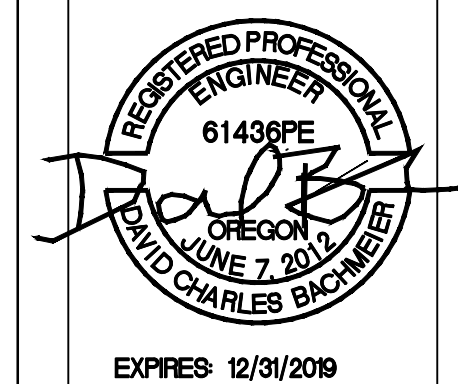
**Min/Max delta t reflects boiler operation at full input. For applications requiring operation above/below these parameters please consult factory.

REP FIRM	_____	<div style="text-align: center;">  <h1>KN16+</h1> <p>Category II or Category IV Appliance (see Installation and Operation Manual for venting information)</p> </div>
SUBMITTED BY	_____	
JOB NAME	_____	
ARCHITECT	_____	
ENGINEER	_____	
CONTRACTOR	_____	
DATE	_____	<div style="text-align: center;">  <p>A Division of Mestek, Inc. Westfield, MA 01085 (413) 564-5515</p> </div>

SKNP-16-1

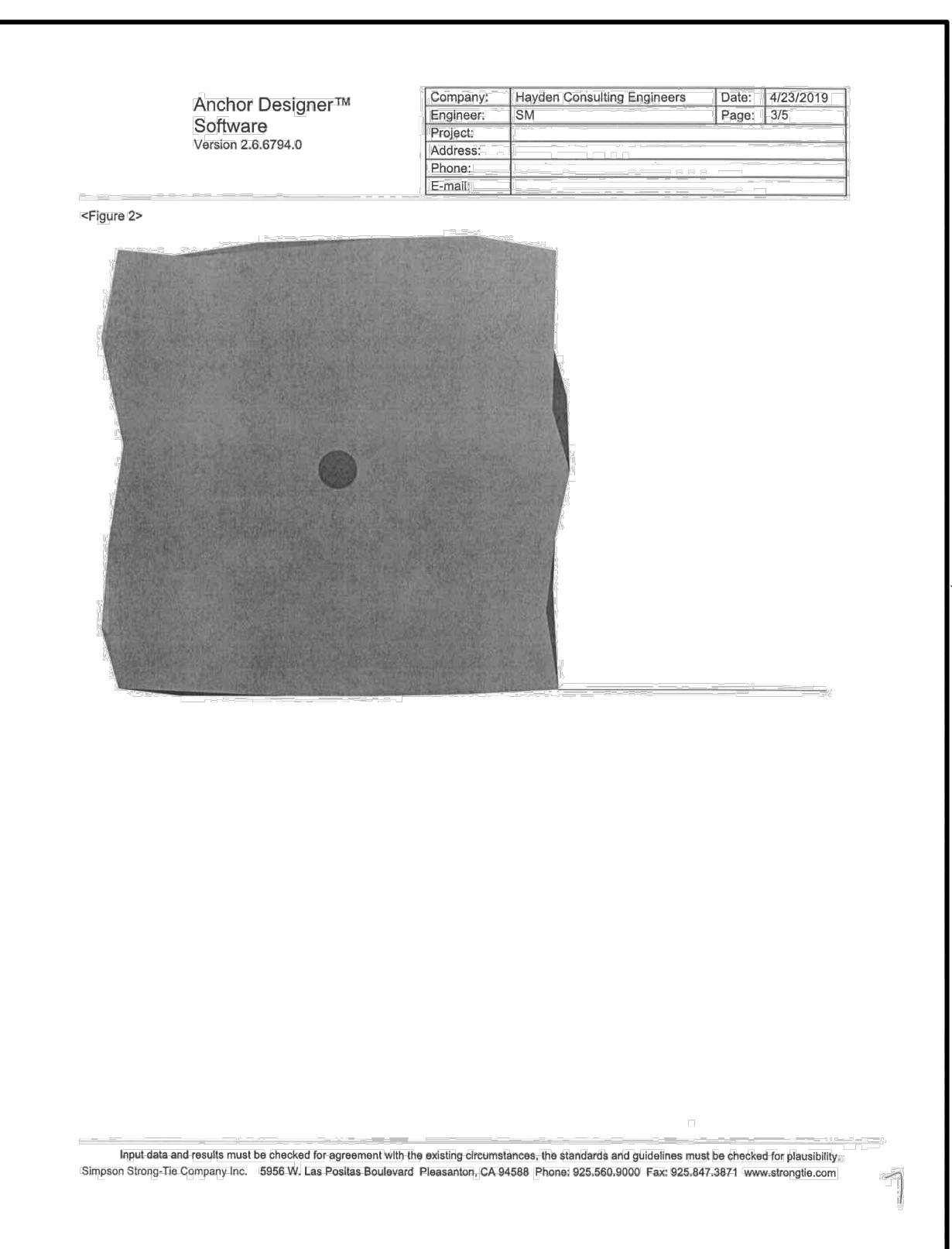
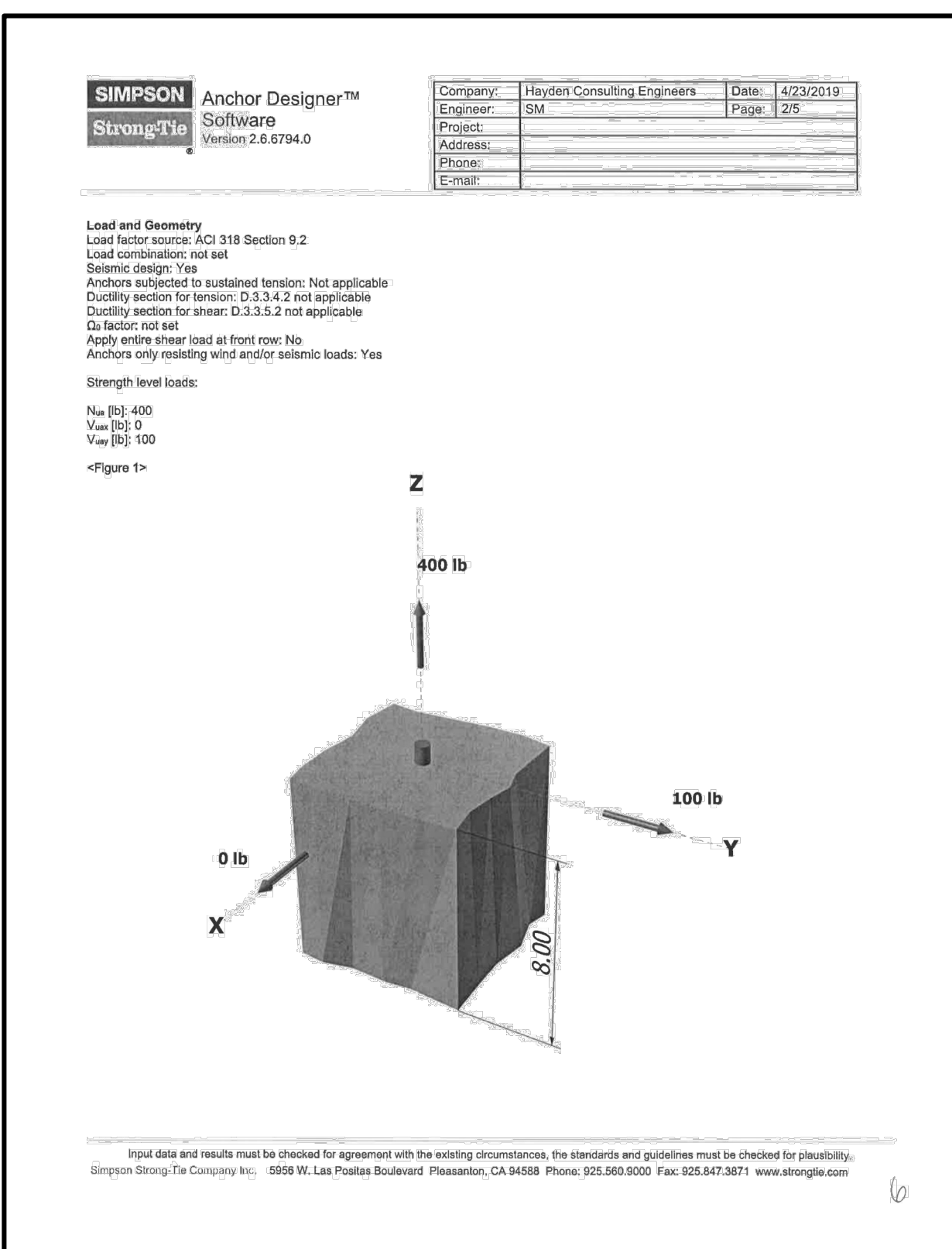
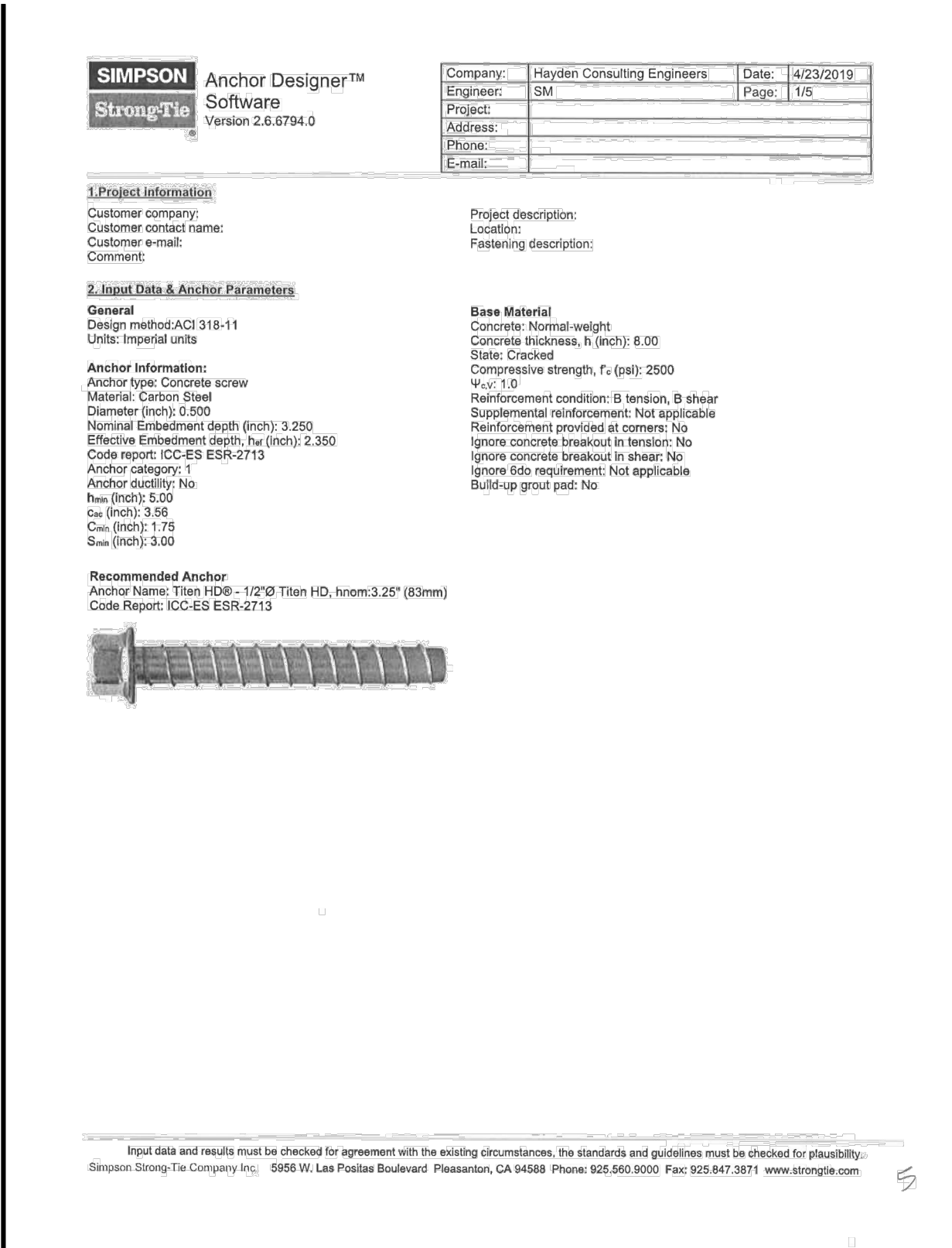
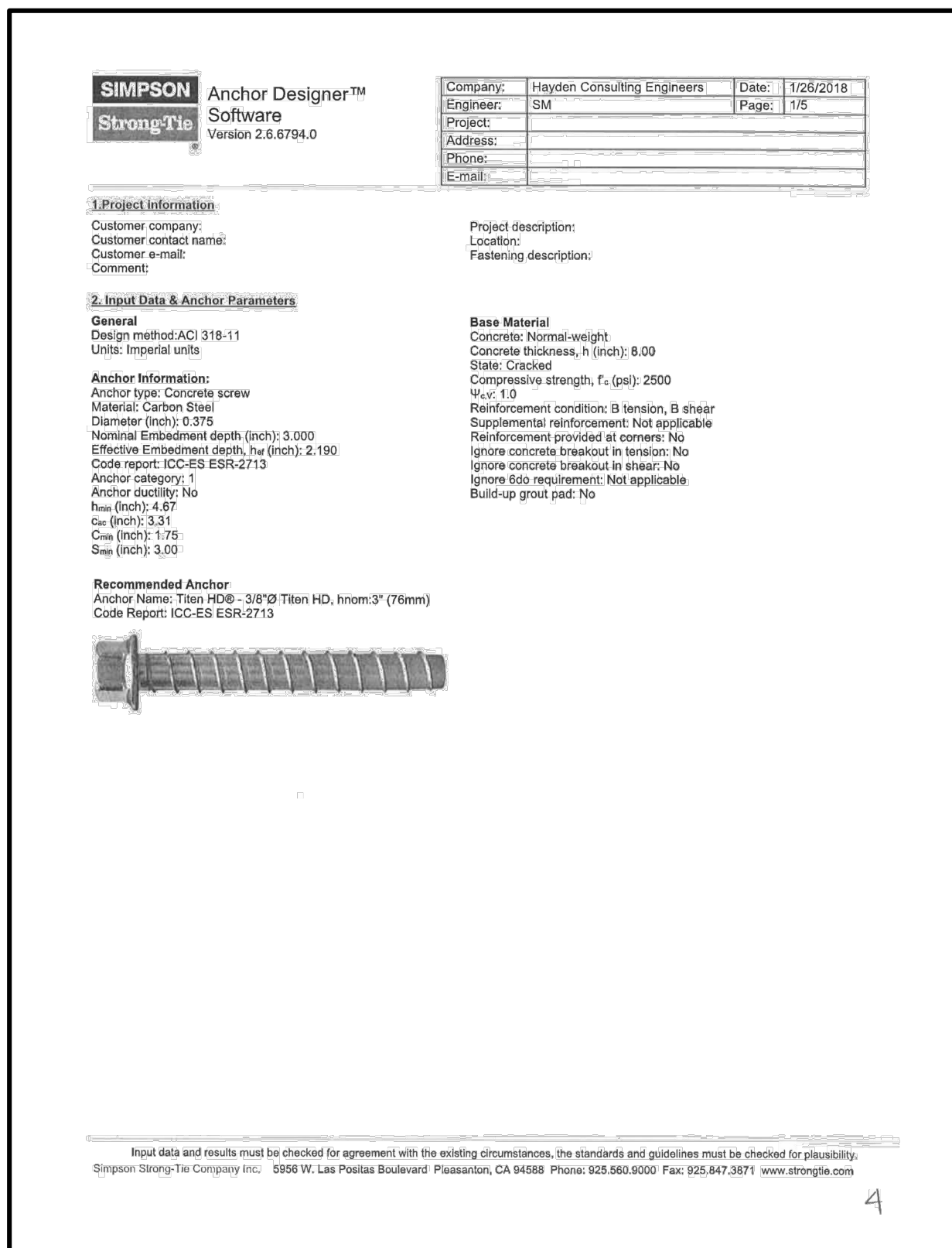
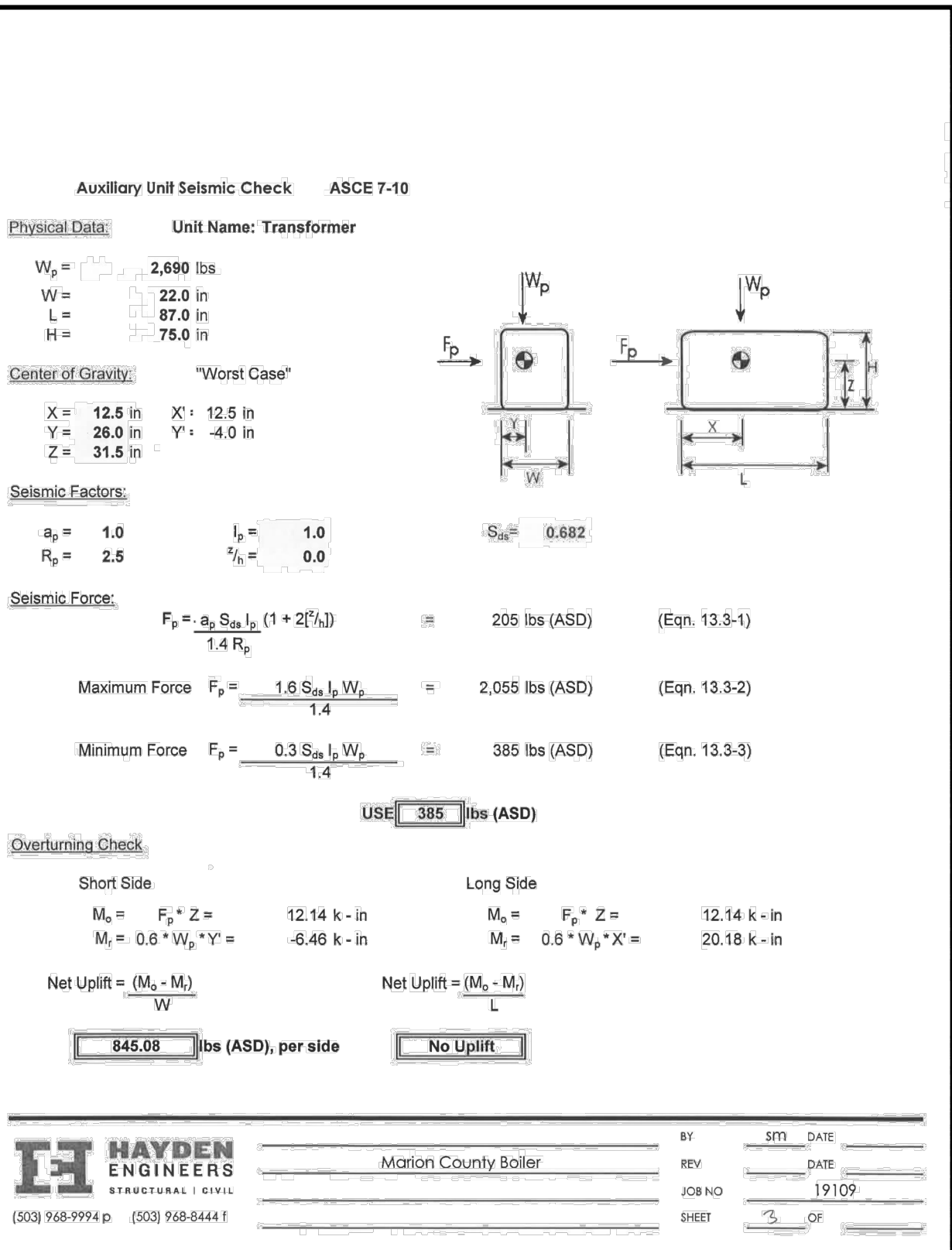
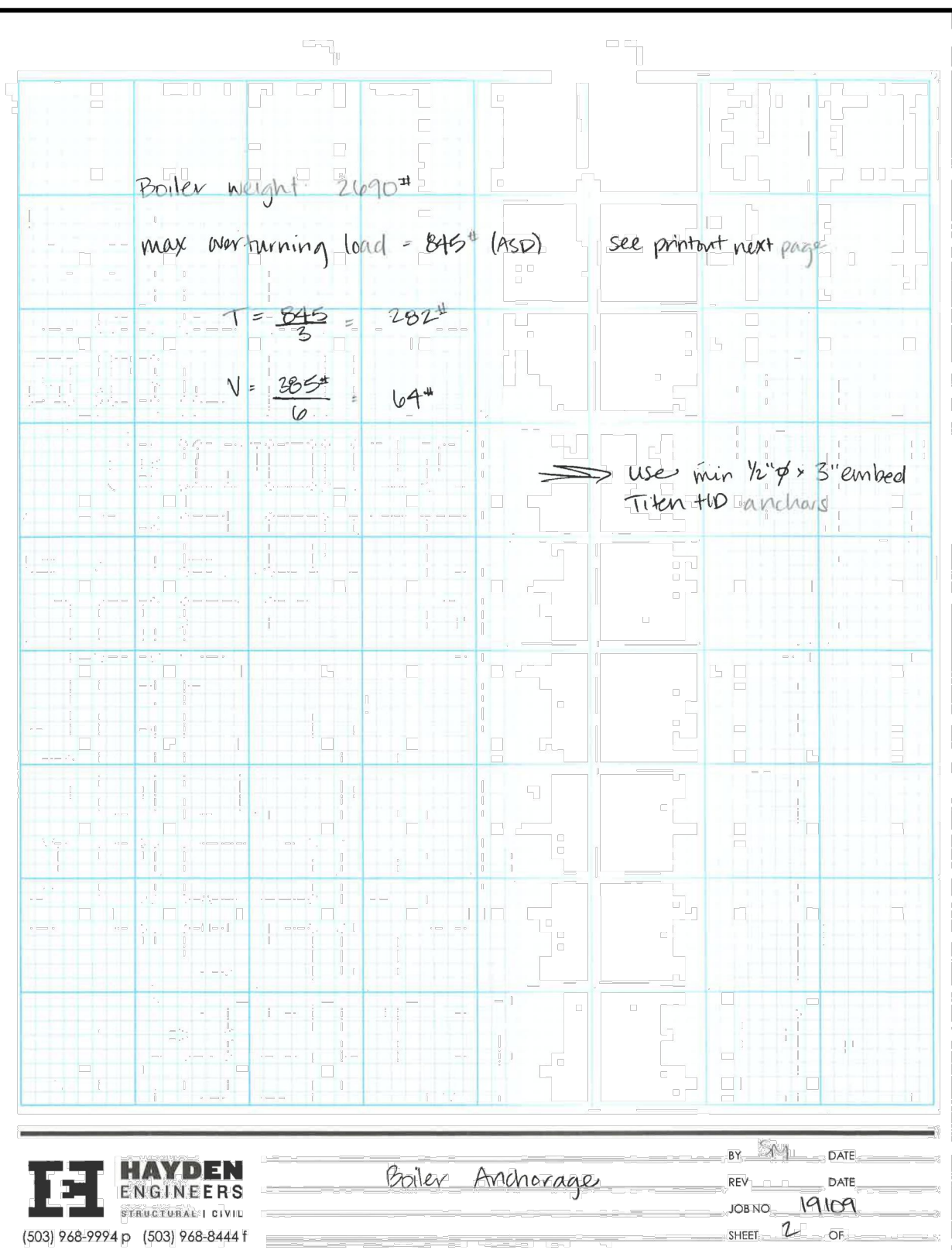
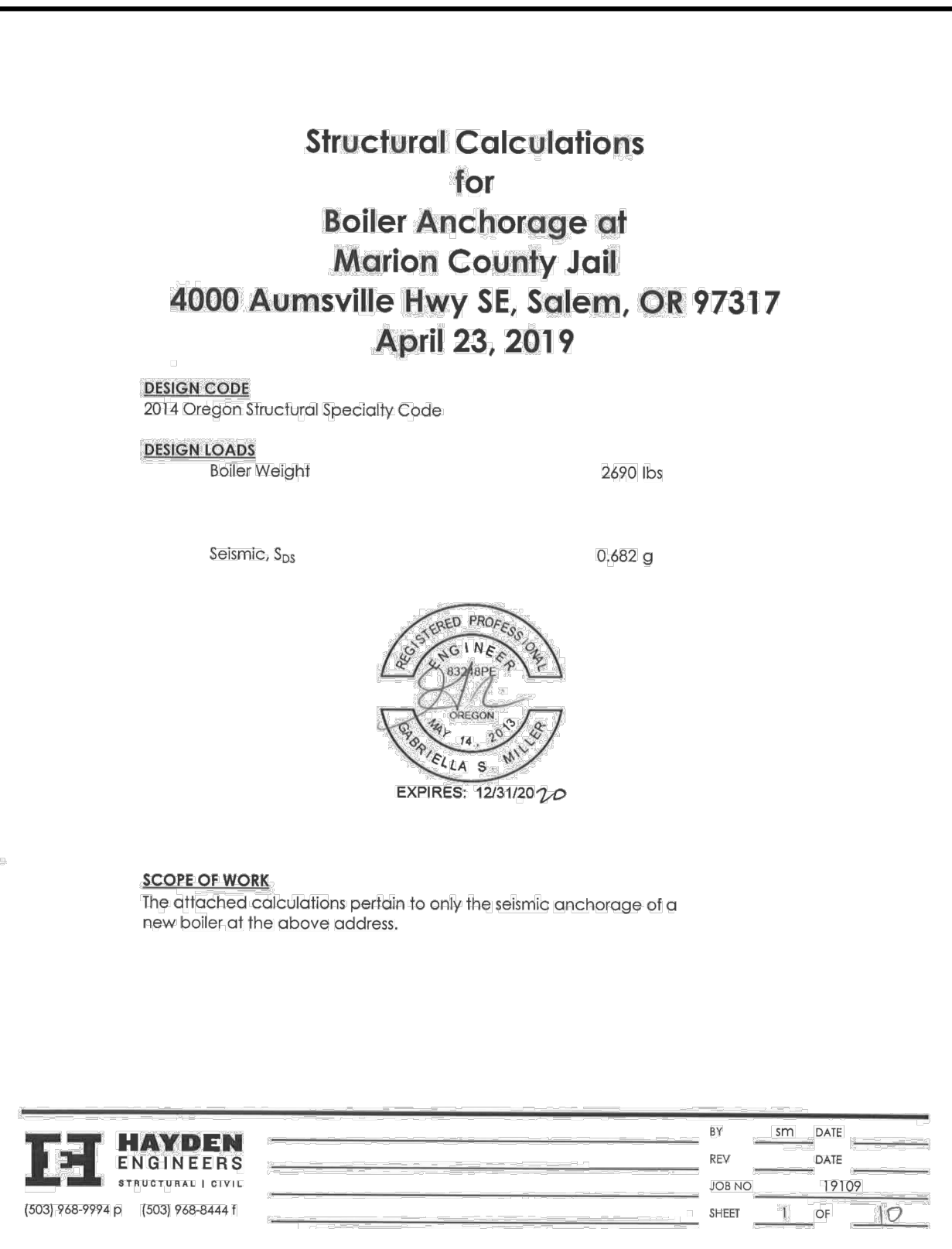
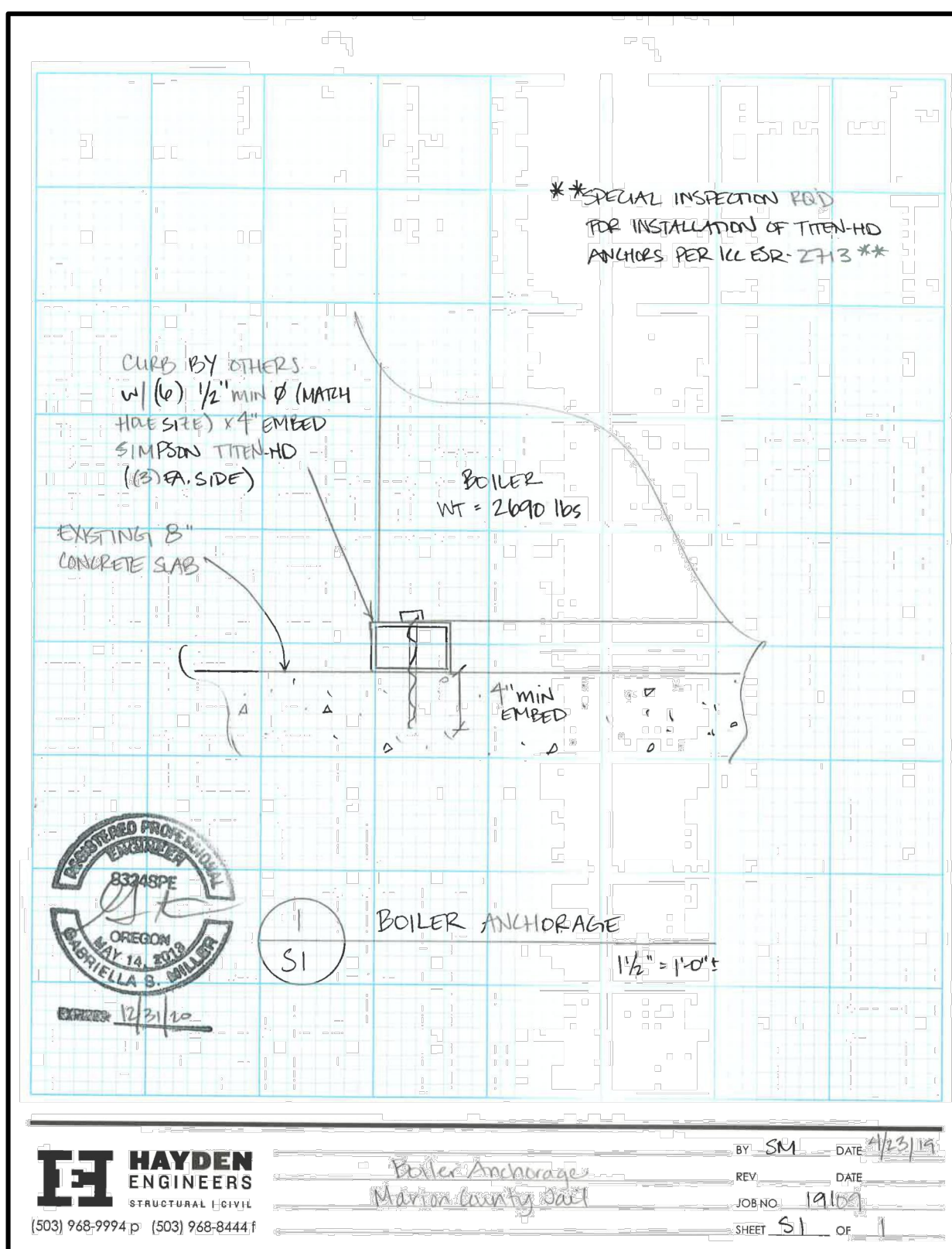
2 BOILER SPECIFICATIONS

MARION COUNTY JAIL BOILER REPLACEMENT PROJECT 4000 AUMSVILLE HWY.	SALEM OREGON	Designed DB
		Drawn DB
		Checked DB
		APRIL 2019



CBD ENGINEERING, LLC
35468 RIVERSIDE DR. SW
ALBANY, OREGON 97321
(541) 619-7287

REVISIONS	Date	Description	Approved
File No. M2.DWG			
Drawing No. M2			
Sheet 2 of 4			



Designed DB	Drawn DB	Checked DB	APRIL 2019
MARION COUNTY JAIL BOILER REPLACEMENT PROJECT SALEM OREGON 4000 AUMSVILLE HWY.			
REVISIONS	Description	Approved	
Date			
File No. M3.DWG			
Drawing No. M3			
Sheet 3 of 4			

EXHIBIT 6

Marion County

GENERAL CONDITIONS

FOR

PUBLIC IMPROVEMENT CONTRACTS



SEPTEMBER 1, 2014 Edition Revised July 21, 2017

Changes to the General Conditions (including any additions, deletions or substitutions) should only be made by Supplemental General Conditions, unless the General Conditions are specifically modified in the Public Improvement Agreement (which has a higher order of precedence under Section A.3 of the General Conditions). The text of these General Conditions should not otherwise be altered.

**MARION COUNTY
GENERAL CONDITIONS FOR PUBLIC IMPROVEMENT CONTRACTS
SEPTEMBER 1, 2014**

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**MARION COUNTY
GENERAL CONDITIONS FOR PUBLIC IMPROVEMENT CONTRACTS
("General Conditions")**

**SECTION A
GENERAL PROVISIONS**

A.1 DEFINITION OF TERMS

In the Contract Documents the following terms shall be as defined below:

ARCHITECT/ENGINEER, means the Person appointed by the Owner to make drawings and specifications and, to provide contract administration of the Work contemplated by the Contract to the extent provided herein or by supplemental instruction of Owner (under which Owner may delegate responsibilities of the Owner's Authorized Representative to the Architect/Engineer), in accordance with ORS Chapter 671 (Architects) or ORS Chapter 672 (Engineers) and administrative rules adopted thereunder.

CHANGE ORDER, means a written order issued by the Owner's Authorized Representative to the Contractor requiring a change in the Work within the general scope of the Contract Documents, issued under the changes provisions of Section D.1 including Owner's written change directives as well as changes reflected in a writing executed by the parties to this Contract and, if applicable, establishing a Contract Price or Contract Time adjustment for the changed Work.

CLAIM, means a demand by Contractor pursuant to Section D.3 for review of the denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, submitted in accordance with the requirements and within the time limits established for review of Claims in these General Conditions.

CONTRACT, means the written agreement between the Owner and the Contractor comprised of the Contract Documents which describe the Work to be done and the obligations between the parties.

CONTRACT DOCUMENTS, means the Solicitation Document and addenda thereto, the Marion County Public Improvement Agreement Form, General Conditions, Supplemental General Conditions, if any, the accepted Offer, Plans, Specifications, amendments and Change Orders.

CONTRACT PERIOD, as set forth in the Contract Documents, means the total period of time beginning with the issuance of the Notice to Proceed and concluding upon Final Completion.

CONTRACT PRICE, means the total of the awarded Offer amount, as increased or decreased by the price of approved alternates and Change Orders.

CONTRACT TIME, means any incremental period of time allowed under the Contract to complete any portion of the Work as reflected in the project schedule.

CONTRACTOR, means the Person awarded the Contract for the Work contemplated.

DAYS, are calendar days, including weekdays, weekends and holidays, unless otherwise specified.

DIRECT COSTS, means, unless otherwise provided in the Contract Documents, the cost of materials, including sales tax, cost of delivery; cost of labor, including social security, old age and unemployment insurance, and fringe benefits required by agreement or custom; worker's compensation insurance; project specific insurance (including, without limitation, Builder's Risk Insurance and Builder's Risk Installation Floater); bond premiums, rental cost of equipment, and machinery required for execution of the work; and the additional costs of field personnel directly attributable to the Work.

FINAL COMPLETION, means the final completion of all requirements under the Contract, including Contract Closeout as described in Section K but excluding Warranty Work as described in Section I.2, and the final payment and release of all retainage, if any, released.

FORCE MAJEURE, means an act, event or occurrence caused by fire, riot, war, acts of God, nature, sovereign, or public enemy, strikes, freight embargoes or any other act, event or occurrence that is beyond the control of the party to this Contract who is asserting Force Majeure.

NOTICE TO PROCEED, means the official written notice from the Owner stating that the Contractor is to proceed with the Work defined in the Contract Documents. Notwithstanding the Notice to Proceed, Contractor shall not be authorized to proceed with the Work until all initial Contract requirements, including the Contract, performance bond and payment bond, and certificates of insurance, have been fully executed and submitted to Owner in a suitable form.

OFFER, means a bid in connection with an invitation to bid and a proposal in connection with a request for proposals.

OFFEROR, means a bidder in connection with an invitation to bid and a proposer in connection with a request for proposals.

OVERHEAD, means those items which may be included in the Contractor's markup (general and administrative expense and profit) and that shall not be charged as Direct Cost of the Work, including without limitation such Overhead expenses as wages or salary of personnel above the level of foreman (i.e., superintendents and project managers), expenses of Contractor's offices at the job site (e.g. job trailer) including expenses of personnel staffing the job site office, and Commercial General Liability Insurance and Automobile Liability Insurance.

OWNER, means Marion County acting by and through the governmental entity identified in the Solicitation Document.

OWNER'S AUTHORIZED REPRESENTATIVE, means those individuals identified in writing by the Owner to act on behalf of the Owner for this project. Owner may elect, by written notice to Contractor, to delegate certain duties of the Owner's Authorized Representative to more than one party, including without limitation, to an Architect/Engineer. However, nothing in these General Conditions is intended to abrogate the separate design professional responsibilities of Architects under ORS Chapter 671 or of Engineers under ORS Chapter 672.

PERSON, means an entity doing business as a sole proprietorship, a partnership, a joint venture, a corporation, a limited liability company or partnership, or any other entity possessing the legal capacity to contract.

PLANS, means the drawings which show the location, type, dimensions, and details of the Work to be done under the Contract.

PUNCHLIST, means the list of Work yet to be completed or deficiencies which need to be corrected in order to achieve Final Completion of the Contract.

RECORD DOCUMENT, means the as-built Plans, Specifications, testing and inspection records, product data, samples, manufacturer and distributor/supplier warranties evidencing transfer to Owner, operational and maintenance manuals, shop drawings, Change Orders, correspondence, certificate(s) of occupancy, and other documents listed in Subsection B.9.1 of these General Conditions, recording all Services performed.

SOLICITATION DOCUMENT, means an invitation to bid or request for proposal or request for quotes.

SPECIFICATION, means any description of the physical or functional characteristics of the Work, or of the nature of a supply, service or construction item. Specifications may include a description of any requirement for inspecting, testing or preparing a supply, service or construction item for delivery and the quantities or qualities of materials to be furnished under the Contract. Specifications generally will state the results or products to be obtained and may, on occasion, describe the method and manner of doing the work to be performed. Specifications may be incorporated by reference and/or may be attached to the Contract.

SUBCONTRACTOR, means a Person having a direct contract with the Contractor, or another Subcontractor, to perform one or more items of the Work.

SUBSTANTIAL COMPLETION, means the date when the Owner accepts in writing the construction, alteration or repair of the improvement to real property or any designated portion thereof as having reached that state of completion when it may be used or occupied for its intended purpose. Substantial Completion of facilities with operating systems occurs only after thirty (30) continuous Days of successful, trouble-free operation of the operating systems as provided in Section K.4.2.

SUBSTITUTIONS, means items that in function, performance, reliability, quality, and general configuration are the same or better than the product(s) specified. Approval of any substitute item shall be solely determined by the Owner's Authorized Representative. The decision of the Owner's Authorized Representative is final.

SUPPLEMENTAL GENERAL CONDITIONS, means those conditions that remove from, add to, or modify these General Conditions. Supplemental General Conditions may be

included in the Solicitation Document or may be a separate attachment to the Contract.

WORK, means the furnishing of all materials, equipment, labor, transportation, services and incidentals necessary to successfully complete any individual item or the entire Contract and the carrying out of duties and obligations imposed by the Contract Documents.

A.2 SCOPE OF WORK

The Work contemplated under this Contract includes all labor, materials, transportation, equipment and services for, and incidental to, the completion of all construction work in connection with the project described in the Contract Documents. The Contractor shall perform all Work necessary so that the project can be legally occupied and fully used for the intended use as set forth in the Contract Documents.

A.3 INTERPRETATION OF CONTRACT DOCUMENTS

A.3.1 Unless otherwise specifically defined in the Contract Documents, words which have well-known technical meanings or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Contract Documents are intended to be complementary. Whatever is called for in one, is interpreted to be called for in all. However, in the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following descending order of precedence:

1. Contract amendments and Change Orders, with those of later date having precedence over those of an earlier date;
2. The Supplemental General Conditions;
3. The Marion County Public Improvement Agreement Form;
4. The General Conditions
5. The Plans and Specifications
6. The Solicitation Document and any addenda thereto;
7. The accepted Offer.

A.3.2 In the case of an inconsistency between Plans and Specifications or within either document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Owner or Owner's Authorized Representative's interpretation in writing.

A.3.3 If the Contractor finds discrepancies in, or omissions from the Contract Documents, or if the Contractor is in doubt as to their meaning, the Contractor shall at once notify the Owner or Owner's Authorized Representative. Matters concerning performance under, and interpretation of requirements of, the Contract Documents will be decided by the Owner's Authorized Representative, who may delegate that duty in some instances to the Architect/Engineer. Responses to Contractor's requests for interpretation of Contract Documents will be made in writing by Owner's Authorized Representative (or the Architect/Engineer) within any time limits agreed upon or otherwise with reasonable promptness.

Interpretations and decisions of the Owner's Authorized Representative (or Architect/Engineer) will be consistent with the intent of and reasonably inferable from the Contract Documents. Contractor shall not proceed without direction in writing from the Owner's Authorized Representative (or Architect/Engineer).

- A.3.4 References to standard specifications, manuals, codes of any technical society, organization or association, to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws or regulations in effect in the jurisdiction where the project is occurring on the first published date of the Solicitation Document, except as may be otherwise specifically stated.

A.4 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE

- A.4.1 It is understood that the Contractor, before submitting an Offer, has made a careful examination of the Contract Documents; has become fully informed as to the quality and quantity of materials and the character of the Work required; and has made a careful examination of the location and conditions of the Work and the sources of supply for materials. The Owner will in no case be responsible for any loss or for any unanticipated costs that may be suffered by the Contractor as a result of the Contractor's failure to acquire full information in advance in regard to all conditions pertaining to the Work. No oral agreement or conversation with any officer, agent, or personnel of the Owner, or with the Architect/Engineer either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.
- A.4.2 Should the Plans or Specifications fail to particularly describe the materials, kind of goods, or details of construction of any aspect of the Work, Contractor shall have the duty to make inquiry of the Owner and Architect/Engineer as to what is required prior to performance of the Work. Absent Specifications to the contrary, the materials or processes that would normally be used to produce first quality finished Work shall be considered a part of the Contract requirements.
- A.4.3 Any design errors or omissions noted by the Contractor shall be reported promptly to the Owner's Authorized Representative, including without limitation, any nonconformity with applicable laws, statutes, ordinances, building codes, rules and regulations.
- A.4.4 If the Contractor believes that additional cost or Contract Time is involved because of clarifications or instructions issued by the Owner's Authorized Representative (or Architect/Engineer) in response to the Contractor's notices or requests for information, the Contractor must submit a written request to the Owner's Authorized Representative, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt by Contractor of the clarifications or instructions issued. If the Owner's Authorized Representative denies Contractor's request for additional compensation, additional Contract Time, or other relief that Contractor believes results from

the clarifications or instructions, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process. If the Contractor fails to perform the obligations of Sections A.4.1 to A.4.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations.

A.5 INDEPENDENT CONTRACTOR STATUS

The service or services to be performed under this Contract are those of an independent contractor as defined in ORS 670.600. Contractor represents and warrants that it is not an officer, employee or agent of the Owner.

A.6 RETIREMENT SYSTEM STATUS AND TAXES

Contractor represents and warrants that it is not a contributing member of the Public Employees' Retirement System and will be responsible for any federal or state taxes applicable to payment received under this Contract. Contractor will not be eligible for any benefits from these Contract payments of federal Social Security, employment insurance, workers' compensation or the Public Employees' Retirement System, except as a self-employed individual. Unless the Contractor is subject to backup withholding, Owner will not withhold from such payments any amount(s) to cover Contractor's federal or state tax obligations.

A.7 GOVERNMENT EMPLOYMENT STATUS

- A.7.1 If this payment is to be charged against federal funds, Contractor represents and warrants that it is not currently employed by the Federal Government. This does not preclude the Contractor from holding another contract with the Federal Government.
- A.7.2 Contractor represents and warrants that Contractor is not an employee of the Marion County for purposes of performing Work under this Contract.

SECTION B ADMINISTRATION OF THE CONTRACT

B.1 OWNER'S ADMINISTRATION OF THE CONTRACT

- B.1.1 The Owner's Authorized Representative will provide administration of the Contract as described in the Contract Documents (1) during construction (2) until final payment is due and (3) during the one-year period for correction of Work. The Owner's Authorized Representative will act on behalf of the Owner to the extent provided in the Contract Documents, unless modified in writing in accordance with other provisions of the Contract. In performing these tasks, the Owner's Authorized Representative may rely on the Architect/Engineer or other consultants to perform some or all of these tasks.
- B.1.2 The Owner's Authorized Representative will visit the site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. The Owner's Authorized Representative

will not make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Owner's Authorized Representative will neither have control over or charge of, nor be responsible for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work.

- B.1.3 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized, the Owner and Contractor shall endeavor to communicate with each other through the Owner's Authorized Representative or designee about matters arising out of or relating to the Contract. Communications by and with the Architect/Engineer's consultants shall be through the Architect/Engineer. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner's Authorized Representative.
- B.1.4 Based upon the Architect/Engineer's evaluations of the Contractor's Application for Payment, or unless otherwise stipulated by the Owner's Authorized Representative, the Architect/Engineer will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

B.2 CONTRACTOR'S MEANS AND METHODS: MITIGATION OF IMPACTS

- B.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures.
- B.2.2 The Contractor is responsible to protect and maintain the Work during the course of construction and to mitigate any adverse impacts to the project, including those caused by authorized changes, which may affect cost, schedule, or quality.
- B.2.3 The Contractor is responsible for the actions of all its personnel, laborers, suppliers, and Subcontractors on the project. The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of persons who are unfit or unskilled for the tasks assigned to them.
- B.2.4 Contractor agrees that it will commence performance of the Work in a timely manner and will achieve the Contract Times in the Contract Documents.

B.3 MATERIALS AND WORKMANSHIP

- B.3.1 The intent of the Contract Documents is to provide for the construction and completion in every detail of the Work described. All Work shall be performed in a professional manner and unless the means or

methods of performing a task are specified elsewhere in the Contract Documents, Contractor shall employ methods that are generally accepted and used by the industry, in accordance with industry standards.

- B.3.2 The Contractor is responsible to perform the Work as required by the Contract Documents. Defective Work shall be corrected at the Contractor's expense.
- B.3.3 Work done and materials furnished shall be subject to inspection and/or observation and testing by the Owner's Authorized Representative to determine if they conform to the Contract Documents. Inspection of the Work by the Owner's Authorized Representative does not relieve the Contractor of responsibility for the Work in accordance with the Contract Documents.
- B.3.4 Contractor shall furnish adequate facilities, as required, for the Owner's Authorized Representative to have safe access to the Work including without limitation walkways, railings, ladders, tunnels, and platforms. Producers, suppliers, and fabricators shall also provide proper facilities and access to their facilities.
- B.3.5 The Contractor shall furnish Samples of materials for testing by the Owner's Authorized Representative and include the cost of the Samples in the Contract Price.

B.4 PERMITS

Contractor shall obtain and pay for all necessary permits and licenses, except for those specifically excluded in the Supplemental General Conditions, for the construction of the Work, for temporary obstructions, enclosures, opening of streets for pipes, walls, utilities, environmental Work, etc., as required for the project. Contractor shall be responsible for all violations of the law, in connection with the construction or caused by obstructing streets, sidewalks or otherwise. Contractor shall give all requisite notices to public authorities. The Contractor shall pay all royalties and license fees. The Contractor shall defend all suits or claims for infringement of any patent or other proprietary rights and save harmless and blameless from loss, on account thereof, Marion County, and its departments, divisions, members and employees.

B.5 COMPLIANCE WITH GOVERNMENT LAWS AND REGULATIONS

- B.5.1 Contractor shall comply with all federal, state and local laws, codes, regulations and ordinances applicable to the Work and the Contract. Failure to comply with such requirements shall constitute a breach of Contract and shall be grounds for Contract termination. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with the following as applicable: i) Title VI and VII of Civil Rights Act of 1964, as amended; (ii) Section 503 and 504 of the Rehabilitation Act of 1973, as amended; (iii) the Health Insurance Portability and Accountability Act of 1996; (iv) the Americans with Disabilities Act of 1990, as amended; (v) ORS Chapter 659A; as amended (vi) all regulations and administrative rules established pursuant to the foregoing laws; and (vii) all other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations. Owner's performance under the Contract is conditioned upon Contractor's compliance with the provisions of ORS 279C.505, 279C.510, 279C.515,

279C.520, and 279C.530, which are incorporated by reference herein.

- B.5.2 Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations; and
- (a) Contractor shall not discriminate against Disadvantaged, Minority, Women or Emerging Small Business enterprises, as those terms are defined in ORS 200.005, or a business enterprise that is owned or controlled by or that employs a disabled veteran, as that term is defined in ORS 408.225, in the awarding of subcontracts.
 - (b) Contractor shall maintain, in current and valid form, all licenses and certificates required by law, regulation, or this Contract when performing the Work.
- B.5.3 Unless contrary to federal law, Contractor shall certify that it shall not accept a bid from Subcontractors to perform Work as described in ORS 701.005 under this Contract unless such Subcontractors are registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time they submit their bids to the Contractor.
- B.5.4 Unless contrary to federal law, Contractor shall certify that each landscape contractor, as defined in ORS 671.520(2), performing Work under this Contract holds a valid landscape contractor's license issued pursuant to ORS 671.560.
- B.5.5 The following notice is applicable to Contractors who perform excavation Work. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center at (503)232-1987.
- B.5.6 Failure to comply with any or all of the requirements of B.5.1 through B.5.5 shall be a breach of Contract and constitute grounds for Contract termination. Damages or costs resulting from such noncompliance shall be the responsibility of Contractor.

B.6 SUPERINTENDENCE

Contractor shall keep on the site, during the progress of the Work, a competent superintendent and any necessary assistants who shall be satisfactory to the Owner and who shall represent the Contractor on the site. Directions given to the superintendent by the Owner's Authorized Representative shall be confirmed in writing to the Contractor.

B.7 INSPECTION

- B.7.1 Owner's Authorized Representative shall have access to the Work at all times.
- B.7.2 Inspection of the Work will be made by the Owner's Authorized Representative at its discretion. The Owner's Authorized Representative will have authority to reject Work that does not conform to the Contract Documents. Any Work found to be not in conformance with the Contract Documents, in the discretion of the Owner's Authorized Representative, shall be removed and replaced at the Contractor's

expense.

- B.7.3 Contractor shall make or obtain at the appropriate time all tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall give the Owner's Authorized Representative timely notice of when and where tests and inspections are to be made so that the Owner's Authorized Representative may be present for such procedures. Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner's Authorized Representative.
- B.7.4 As required by the Contract Documents, Work done or material used without inspection or testing by the Owner's Authorized Representative may be ordered removed at the Contractor's expense.
- B.7.5 If directed to do so any time before the Work is accepted, the Contractor shall uncover portions of the completed Work for inspection. After inspection, the Contractor shall restore such portions of Work to the standard required by the Contract. If the Work uncovered is unacceptable or was done without sufficient notice to the Owner's Authorized Representative, the uncovering and restoration shall be done at the Contractor's expense. If the Work uncovered is acceptable and was done with sufficient notice to the Owner's Authorized Representative, the uncovering and restoration will be paid for as a Change Order.
- B.7.6 If any testing or inspection reveals failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Owner's Authorized Representative's and Architect/Engineer's services and expenses, shall be at the Contractor's expense.
- B.7.7 When the United States government participates in the cost of the Work, or the Owner has an agreement with other public or private organizations, or if any portion of the Work is being performed for a third party or in close proximity to third party facilities, representatives of these organizations have the right to inspect the Work affecting their interests or property. Their right to inspect shall not make them a party to the Contract and shall not interfere with the rights of the parties of the Contract. Instructions or orders of such parties shall be transmitted to the Contractor, through the Owner's Authorized Representative.

B.8 SEVERABILITY

If any provision of this Contract is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular

provision held to be invalid.

B.9 ACCESS TO RECORDS

B.9.1 Contractor shall keep, at all times on the Work site, one record copy of the complete Contract Documents, including the Plans, Specifications, Change Orders and addenda, in good order and marked currently to record field changes and selections made during construction, and one record copy of Shop Drawings, Product Data, Samples and similar submittals, and shall at all times give the Owner's Authorized Representative access thereto.

B.9.2 Contractor shall retain and the Owner and its duly authorized representatives shall have access to, for a period not less than ten (10) years, all Record Documents, financial and accounting records, and other books, documents, papers and records of Contractor which are pertinent to the Contract including records pertaining to Overhead and indirect costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Contract is involved in litigation, Contractor shall retain all such records until all litigation is resolved. The Owner and/or its agents shall continue to be provided full access to the records during litigation.

B.10 WAIVER

Failure of the Owner to enforce any provision of this Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of this Contract.

B.11 SUBCONTRACTS AND ASSIGNMENT

B.11.1 Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound by the terms and conditions of these General Conditions, and to assume toward the Contractor all of the obligations and responsibilities which the Contractor assumes toward the Owner thereunder, unless (1) the same are clearly inapplicable to the subcontract at issue because of legal requirements or industry practices, or (2) specific exceptions are requested by Contractor and approved in writing by Owner. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors at any level.

B.11.2 At Owner's request, Contractor shall submit to Owner prior to their execution either Contractor's form of subcontract, or the subcontract to be executed with any particular Subcontractor. If Owner disapproves such form, Contractor shall not execute the form until the matters disapproved are resolved to Owner's satisfaction. Owner's review, comment upon or approval of any such form shall not relieve Contractor of its obligations under this Agreement or be deemed a waiver of such obligations of Contractor.

B.11.3 Contractor shall not assign, sell, or transfer its rights, or delegate its responsibilities under this Contract, in whole or in part, without the prior written approval of the Owner. No such written approval shall relieve Contractor of any obligations of this Contract, and any transferee shall be considered the agent of the Contractor and bound to perform in accordance with

the Contract Documents. Contractor shall remain liable as between the original parties to the Contract as if no assignment had occurred.

B.12 SUCCESSORS IN INTEREST

The provisions of this Contract shall be binding upon and shall accrue to the benefit of the parties to the Contract and their respective permitted successors and assigns.

B.13 OWNER'S RIGHT TO DO WORK

Owner reserves the right to perform other or additional work at or near the project site with other forces than those of the Contractor. If such work takes place within or next to the project site, Contractor will coordinate work with the other contractors or forces, cooperate with all other contractors or forces, carry out the Work in a way that will minimize interference and delay for all forces involved, place and dispose of materials being used so as not to interfere with the operations of another, and join the Work with the work of the others in an acceptable manner and perform it in proper sequence to that of the others. The Owner's Authorized Representative will resolve any disagreements that may arise between or among Contractor and the other contractors over the method or order of doing all work (including the Work). In case of unavoidable interference, the Owner's Authorized Representative will establish work priority (including the Work) which generally will be in the sequence that the contracts were awarded.

B.14 OTHER CONTRACTS

In all cases and at any time, the Owner has the right to execute other contracts related to or unrelated to the Work of this Contract. The Contractor of this Contract will fully cooperate with any and all other contractors without additional cost to the Owner in the manner described in section B.13.

B.15 GOVERNING LAW

This Contract shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflict of laws.

B.16 LITIGATION

Any Claim between Owner and Contractor that arises from or relates to this Contract and that is not resolved through the Claims Review Process in Section D.3 shall be brought and conducted solely and exclusively within the Circuit Court of Marion County for the State of Oregon; provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the Marion County on any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. CONTRACTOR BY EXECUTION OF THIS CONTRACT HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF THE COURTS REFERENCED IN THIS SECTION B.16.

B.17 ALLOWANCES

B.17.1 The Contractor shall include in the Contract Price all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such

amounts and by such persons or entities as the Owner may direct.

B.17.2 Unless otherwise provided in the Contract Documents:

- (a) when finally reconciled, allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- (b) Contractor's costs for unloading and handling at the site, labor, installation costs, Overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Price but not in the allowances;
- (c) whenever costs are more than or less than allowances, the Contract Price shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (i) the difference between actual costs and the allowances under Section B.17.2(a) and (2) changes in Contractor's costs under Section B.17.2(b).
- (d) Unless Owner requests otherwise, Contractor shall provide to Owner a proposed fixed price for any allowance work prior to its performance.

B.18 SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

B.18.1 The Contractor shall prepare and keep current, for the Architect's/Engineer's approval (or for the approval of Owner's Authorized Representative if approval authority has not been delegated to the Architect/Engineer), a schedule and list of submittals which is coordinated with the Contractor's construction schedule and allows the Architect/Engineer reasonable time to review submittals. Owner reserves the right to finally approve the schedule and list of submittals. Submittals include, without limitation, Shop Drawings, Product Data, and Samples which are described below:

- (a) Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor (including any sub-subcontractor), manufacturer, supplier or distributor to illustrate some portion of the Work.
- (b) Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- (c) Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

B.18.2 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed

in the Contract Documents. Review of submittals by the Architect/Engineer is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, or for approval of safety precautions or, unless otherwise specifically stated by the Architect/Engineer, of any construction means, methods, techniques, sequences or procedures, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect/Engineer's review of the Contractor's submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect/Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component. Informational submittals upon which the Architect/Engineer is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect/Engineer without action.

B.18.3 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect/Engineer Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect/Engineer without action.

B.18.4 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

B.18.5 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect/Engineer.

B.18.6 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect/Engineer's review or approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect/Engineer in writing of such deviation at the time of submittal and (i) the Architect/Engineer has given written approval to the specific deviation as a minor change in the Work, or (ii) a Change Order has been executed by Owner authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar by the Architect/Engineer's review or approval thereof.

B.18.7 In the event that Owner elects not to have the obligations and duties described under this Section

B.18 performed by the Architect/Engineer, or in the event no Architect/Engineer is employed by Owner on the project, all obligations and duties assigned to the Architect/Engineer hereunder shall be performed by the Owner's Authorized Representative.

B.19 SUBSTITUTIONS

The Contractor may make Substitutions only with the consent of the Owner, after evaluation by the Owner's Authorized Representative and only in accordance with a Change Order. Substitutions shall be subject to the requirements of the bid documents. By making requests for Substitutions, the Contractor represents that the Contractor has personally investigated the proposed substitute product; represents that the Contractor will provide the same warranty for the Substitution that the Contractor would for the product originally specified unless approved otherwise; certifies that the cost data presented is complete and includes all related costs under this Contract including redesign costs, and waives all claims for additional costs related to the Substitution which subsequently become apparent; and will coordinate the installation of the accepted Substitution, making such changes as may be required for the Work to be completed in all respects.

B.20 USE OF PLANS AND SPECIFICATIONS

Plans, Specifications and related Contract Documents furnished to Contractor by Owner or Owner's Architect/Engineer shall be used solely for the performance of the Work under this Contract. Contractor and its Subcontractors and suppliers are authorized to use and reproduce applicable portions of such documents appropriate to the execution of the Work, but shall not claim any ownership or other interest in them beyond the scope of this Contract, and no such interest shall attach. Unless otherwise indicated, all common law, statutory and other reserved rights, in addition to copyrights, are retained by Owner.

B.21 FUNDS AVAILABLE AND AUTHORIZED

Owner reasonably believes at the time of entering into this Contract that sufficient funds are available and authorized for expenditure to finance the cost of this Contract within the Owner's appropriation or limitation. Contractor understands and agrees that, to the extent that in the event the Board of Commissioners of the County reduces, changes, eliminates or otherwise modifies the funding the cost of this contract, the CONTRACTOR agrees to abide by any such decision, including termination of this agreement.

B.22 NO THIRD PARTY BENEFICIARIES

Owner and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

SECTION C WAGES AND LABOR

C.1 MINIMUM WAGE RATES ON PUBLIC WORKS

Contractor shall comply fully with the provisions of ORS 279C.800 through 279C.870. Documents establishing those conditions, as determined by the Commissioner of the Bureau of Labor and Industries (BOLI), are included as attachments to or are incorporated by reference in the Contract Documents. Contractor shall pay workers at not less than the specified minimum hourly rate of wage, and shall include that requirement in all subcontracts.

C.2 PAYROLL CERTIFICATION: ADDITIONAL RETAINAGE; FEE REQUIREMENTS

C.2.1 In accordance with ORS 279C.845, the Contractor and every Subcontractor shall submit written certified statements to the Owner's Authorized Representative, on the form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each worker which the Contractor or the Subcontractor has employed on the project and further certifying that no worker employed on the project has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the Contract, which certificate and statement shall be verified by the oath of the Contractor or the Subcontractor that the Contractor or Subcontractor has read the certified statement, that the Contractor or Subcontractor knows the contents of the certified statement and that to the Contractor's or Subcontractor's best knowledge and belief the certified statement is true. The certified statements shall set out accurately and completely the payroll records for the prior week including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, deductions made and actual wages paid. Certified statements for each week during which the Contractor or Subcontractor has employed a worker on the project shall be submitted once a month, by the fifth business day of the following month.

The Contractor and Subcontractors shall preserve the certified statements for a period of ten (10) years from the date of completion of the Contract.

C.2.2 Pursuant to ORS 279C.845(7), the Owner shall retain 25 percent of any amount earned by the Contractor on this public works project until the Contractor has filed the certified statements required by section C.2.1. The Owner shall pay to the Contractor the amount retained under this subsection within 14 days after the Contractor files the required certified statements, regardless of whether a Subcontractor has failed to file certified statements.

C.2.3 Pursuant to ORS 279C.845(8), the Contractor shall retain 25 percent of any amount earned by a first-tier Subcontractor on this public works project until the first-tier Subcontractor has filed with the Owner the certified statements required by C.2.1. Before paying any amount retained under this subsection, the Contractor shall verify that the first-tier Subcontractor has filed the certified statement. Within 14 days after the first-tier Subcontractor files the required certified statement the Contractor shall pay the first-tier Subcontractor any amount retained under this subsection.

C.2.4 In accordance with statutory requirements, and administrative rules promulgated by the Commissioner of the Bureau of Labor and Industries, the fee required by ORS 279C.825(1) will be paid by Owner to the Commissioner.

C.3 PROMPT PAYMENT AND CONTRACT CONDITIONS

C.3.1 Pursuant to ORS 279C.505 and as a condition to Owner's performance hereunder, the Contractor shall:

C.3.1.1 Make payment promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the Work provided for in this Contract.

C.3.1.2 Pay all contributions or amounts due the State Industrial Accident Fund from such Contractor or Subcontractor incurred in the performance of the Contract.

C.3.1.3 Not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished. Contractor will not assign any claims that Contractor has against Owner, or assign any sums due by Owner, to Subcontractors, suppliers, or manufacturers, and will not make any agreement or act in any way to give Subcontractors a claim or standing to make a claim against the Owner.

C.3.1.4 Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

C.3.1.5 Demonstrate that an employee drug testing program is in place as follows:

(a) Contractor represents and warrants that Contractor has in place at the time of the execution of this Contract, and shall maintain during the term of this Contract, a Qualifying Employee Drug Testing Program for its employees that includes, at a minimum, the following:

- (1) A written employee drug testing policy,
- (2) Required drug testing for all new Subject Employees or, alternatively, required testing of all Subject Employees every 12 months on a random selection basis, and
- (3) Required testing of a Subject Employee when the Contractor has reasonable cause to believe the Subject Employee is under the influence of drugs.

A drug testing program that meets the above requirements will be deemed a "Qualifying Employee Drug Testing Program." For the purposes of this section, an employee is a "Subject Employee" only if that employee will be working on the project job site.

(b) Contractor shall require each Subcontractor providing labor for the project to:

- (1) Demonstrate to the Contractor that it has a Qualifying Employee Drug Testing Program for the Subcontractor's Subject Employees,

and represent and warrant to the Contractor that the Qualifying Employee Drug Testing Program is in place at the time of subcontract execution and will continue in full force and effect for the duration of the subcontract, or

- (2) Require that the Subcontractor's Subject Employees participate in the Contractor's Qualifying Employee Drug Testing Program for the duration of the subcontract.

C.3.2 Pursuant to ORS 279C.515, and as a condition to Owner's performance hereunder, Contractor agrees:

C.3.2.1 If Contractor fails, neglects or refuses to pay promptly a person's claim for labor or services that the person provides to the Contractor or a Subcontractor in connection with the project as such claim becomes due, the proper officer that represents the Owner may pay the amount of the claim and charge the amount of the payment against funds due or to become due Contractor under this Contract. Paying a claim in this manner shall not relieve the Contractor or the Contractor's surety from obligation with respect to an unpaid claim.

C.3.2.2 If the Contractor or a first-tier Subcontractor fails, neglects or refuses to pay a person that provides labor or materials in connection with the public contract for a public improvement within thirty (30) Days after receiving payment from Owner or a contractor, the contractor or first-tier Subcontractor owes the person the amount due plus interest charges that begin at the end of the 10-Day period within which payment is due under ORS 279C.580(4) and that end upon final payment, unless payment is subject to a good faith dispute as defined in ORS 279C.580. The rate of interest on the amount due is nine percent per annum. The amount of interest may not be waived.

C.3.2.3 If the Contractor or a Subcontractor fails, neglects or refuses to pay a person that provides labor or materials in connection with the Contract, the person may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279C.580. Every contract related to this Contract must contain a similar clause.

C.3.3 Pursuant to ORS 279C.580, Contractor shall include in each subcontract for property or services the Contractor enters into with a first-tier Subcontractor, including a material supplier, for the purpose of performing a construction contract:

- (a) A payment clause that obligates the Contractor to pay the first-tier Subcontractor for satisfactory performance under the subcontract within ten (10) Days out of amounts the Owner pays to the Contractor under the Contract;
- (b) A clause that requires the Contractor to provide the first-tier Subcontractor with a standard form that the first-tier Subcontractor may use as an application for payment or as another method by which the Subcontractor may claim a payment due from the Contractor;

- (c) A clause that requires the Contractor, except as otherwise provided in this paragraph, to use the same form and regular administrative procedures for processing payments during the entire term of the subcontract. The Contractor may change the form or the regular administrative procedures the Contractor uses for processing payments if the Contractor:

- (1) Notifies the Subcontractor in writing at least 45 days before the date on which the Contractor makes the change; and
- (2) Includes with the written notice a copy of the new or changed form or a description of the new or changed procedure.

- (d) An interest penalty clause that obligates the Contractor, if the Contractor does not pay the first-tier Subcontractor within thirty (30) Days after receiving payment from Owner, to pay the first-tier Subcontractor an interest penalty on amounts due in each payment the Contractor does not make in accordance with the payment clause included in the subcontract under paragraph (a) of this subsection. Contractor or first-tier Subcontractor is not obligated to pay an interest penalty if the only reason that the Contractor or first-tier Subcontractor did not make payment when payment was due is that the Contractor or first-tier Subcontractor did not receive payment from Owner or Contractor when payment was due. The interest penalty applies to the period that begins on the day after the required payment date and that ends on the date on which the amount due is paid; and is computed at the rate specified in ORS 279C.515(2).

- (e) A clause which requires each of Contractor's Subcontractors to include, in each of their contracts with lower-tier Subcontractors or suppliers, provisions to the effect that the first-tier Subcontractor shall pay its lower-tier Subcontractors and suppliers in accordance with the provisions of paragraphs (a) through (d) above and requiring each of their Subcontractors and suppliers to include such clauses in their subcontracts and supply contracts.

C.3.4 All employers, including Contractor, that employ subject workers who work under this contract in the Marion County shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.

C.4 PAYMENT FOR MEDICAL CARE

Pursuant to ORS 279C.530, and as a condition to Owner's performance hereunder, Contractor shall promptly, as due, make payment to any person, partnership, association or corporation furnishing medical, surgical, and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Contractor, all sums of which the Contractor agrees to pay for such services and all moneys and sums which the Contractor has collected or deducted from the wages of personnel pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

C.5 HOURS OF LABOR

As a condition to Owner's performance hereunder, Contractor shall comply with ORS 279C.520, as amended from time to time and incorporated herein by this reference:

Pursuant to ORS 279C.520 and as a condition to Owner's performance hereunder, no person shall be employed to perform Work under this Contract for more than ten (10) hours in any one day or forty (40) hours in any one week, except in cases of necessity, emergency or where public policy absolutely requires it. In such instances, Contractor shall pay the employee at least time and a half pay:

- (a) For all overtime in excess of eight (8) hours a day or forty (40) hours in any one week when the work week is five consecutive Days, Monday through Friday; or
- (b) For all overtime in excess of ten (10) hours a day or forty (40) hours in any one week when the work week is four consecutive Days, Monday through Friday; and
- (c) For all Work performed on Saturday and on any legal holiday specified in ORS 279C.540.

This section C.5 will not apply to Contractor's Work under this Contract if Contractor is currently a party to a collective bargaining agreement with any labor organization.

This Section C.5 shall not excuse Contractor from completion of the Work within the time required under this Contract.

SECTION D **CHANGES IN THE WORK**

D.1 CHANGES IN WORK

D.1.1 The terms of this Contract shall not be waived, altered, modified, supplemented or amended in any manner whatsoever without prior written approval of the Owner's Authorized Representative, and then only in a manner consistent with the Change Order provisions of this Section D.1 and after any necessary approvals required by public contracting laws have been obtained. Otherwise, a formal contract amendment is required, which shall not be effective until its execution by the parties to this Contract and all approvals required by public contracting laws have been obtained.

D.1.2 It is mutually agreed that changes in Plans, quantities, or details of construction are inherent in the nature of construction and may be necessary or desirable during the course of construction. Within the general scope of this Contract, the Owner's Authorized Representative may at any time, without notice to the sureties and without impairing the Contract, require changes consistent with this Section D.1. All Change Order Work shall be executed under the conditions of the Contract Documents. Such changes may include, but are not limited to:

- (a) Modification of specifications and design.
- (b) Increases or decreases in quantities.
- (c) Increases or decreases to the amount of Work.

- (d) Addition or elimination of any Work item.
- (e) Change in the duration of the project.
- (f) Acceleration or delay in performance of Work.
- (g) Deductive changes.

Deductive changes are those that reduce the scope of the Work, and shall be made by mutual agreement whenever feasible, as determined by Owner. In cases of suspension or partial termination under Section J, Owner reserves the right to unilaterally impose a deductive change and to self-perform such Work, for which the provisions of B.13 (Owner's Right to Do Work) shall then apply.

Adjustments in compensation shall be made under the provisions of D.1.3, in which costs for deductive changes shall be based upon a Direct Costs adjustment together with the related percentage markup specified for profit, Overhead and other indirect costs, unless otherwise agreed to by Owner.

D.1.3 The Owner and Contractor agree that Change Order Work shall be administered and compensated according to the following:

- (a) *Unit pricing* may be utilized at the Owner's option when unit prices or solicitation alternates were provided that established the cost for additional Work, and a binding obligation exists under the Contract on the parties covering the terms and conditions of the additional Work.
- (b) If the Owner elects not to utilize unit pricing, or in the event that unit pricing is not available or appropriate, *fixed pricing* may be used for Change Order Work. In fixed pricing the basis of payments or total price shall be agreed upon in writing between the parties to the Contract, and shall be established before the Work is done whenever feasible. The mark-ups set forth in D.1.3(c) shall be utilized by the parties as a guide in establishing fixed pricing, and will not be exceeded by Owner without adequate justification. Cost and price data relating to Change Orders shall be supplied by Contractor to Owner upon request, but Owner shall be under no obligation to make such requests.
- (c) In the event that unit pricing and fixed pricing are not utilized, then Change Order Work shall be performed on a *cost reimbursement* basis for Direct Costs. Such Work shall be compensated on the basis of the actual, reasonable and allowable cost of labor, equipment, and material furnished on the Work performed. In addition, the following markups shall be added to the Contractor's or Subcontractor's Direct Costs as full compensation for profit, Overhead and other indirect costs for Work directly performed with the Contractor's or Subcontractor's own forces:

On Labor.....	15%
On Equipment.....	10%
On Materials.....	10%

When Change Order Work under D.1.3(c) is invoiced by an authorized Subcontractor at any level, each ascending

tier Subcontractor or Contractor will be allowed a 5% supplemental mark-up on each piece of subcontract Work covered by such Change Order.

Payments made to the Contractor shall be complete compensation for Overhead, profit, and all costs that were incurred by the Contractor or by other forces furnished by the Contractor, including Subcontractors, for Change Order Work. Owner may establish a maximum cost for Change Order Work under this Section D.1.3(c), which shall not be exceeded for reimbursement without additional written authorization from Owner. Contractor shall not be required to complete such Change Order Work without additional authorization.

D.1.4 Any necessary adjustment of Contract Time that may be required as a result of a Change Order must be agreed upon by the parties before the start of the Change Order Work unless Owner's Authorized Representative authorizes Contractor to start the Work before agreement on Contract Time adjustment. Contractor shall submit any request for additional compensation (and additional Contract Time if Contractor was authorized to start Work before an adjustment of Contract Time was approved) as soon as possible but no later than thirty (30) Days after receipt of the Change Order. If Contractor's request for additional compensation or adjustment of Contract Time is not made within the thirty (30) day time limit, Contractor's requests pertaining to that Change Order are barred. The thirty (30) day time limit for making requests shall not be extended for any reason, including without limitation Contractor's claimed inability to determine the amount of additional compensation or adjustment of Contract Time, unless an extension is granted in writing by Owner. If the Owner's Authorized Representative denies Contractor's request for additional compensation or adjustment of Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process. No other reimbursement, compensation, or payment will be made, except as provided in Section D.1.5 for impact claims.

D.1.5 If any Change Order Work under Section D.1.3 causes an increase or decrease in the Contractor's cost of, or the Contract Time required for the performance of, any other part of the Work under this Contract, the Contractor must submit a written request to the Owner's Authorized Representative, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt of the Change Order by Contractor.

The thirty (30) day time limit applies to claims of Subcontractors, suppliers, or manufacturers that may be affected by the Change Order and that request additional compensation or an extension of Contract Time to perform; Contractor has responsibility for contacting its Subcontractors, suppliers, or manufacturers within the thirty (30) day time limit, and including their requests with Contractor's requests. If the request involves Work to be completed by Subcontractors, or materials to be furnished by suppliers or manufacturers, such requests shall be submitted to the Contractor in writing with full analysis and justification for the compensation and additional Contract Time

requested. The Contractor will analyze and evaluate the merits of the requests submitted by Subcontractors, suppliers, and manufacturers to Contractor prior to including those requests and Contractor's analysis and evaluation of those requests with Contractor's requests for additional compensation or Contract Time that Contractor submits to the Owner's Authorized Representative. Failure of Subcontractors, suppliers, manufacturers or others to submit their requests to Contractor for inclusion with Contractor's requests submitted to Owner's Authorized Representative within the time period and by the means described in this section shall constitute a waiver of these Subcontractor claims. The Owner's Authorized Representative and the Owner will not consider direct requests or claims from Subcontractors, suppliers, manufacturers or others not a party to this Contract. The consideration of such requests and claims under this section does not give any person, not a party to the Contract the right to bring a claim against the Marion County, whether in this claims process, in litigation, or in any dispute resolution process.

If the Owner's Authorized Representative denies the Contractor's request for additional compensation or an extension of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

D.1.6 No request or Claim by the Contractor for additional costs or an extension of Contract Time shall be allowed if made after receipt of final payment application under this Contract. Contractor agrees to submit its final payment application within ninety (90) days after Substantial Completion, unless written extension is granted by Owner. Contractor shall not delay final payment application for any reason, including without limitation nonpayment of Subcontractors, suppliers, manufacturers or others not a party to this Contract, or lack of resolution of a dispute with Owner or any other person of matters arising out of or relating to the Contract. If Contractor fails to submit its final payment application within ninety (90) days after Substantial Completion, and Contractor has not obtained written extension by Owner, all requests or Claims for additional costs or an extension of Contract Time shall be waived.

D.1.7 It is understood that changes in the Work are inherent in construction of this type. The number of changes, the scope of those changes, and the effect they have on the progress of the original Work cannot be defined at this time. The Contractor is notified that numerous changes may be required and that there will be no compensation made to the Contractor directly related to the number of changes. Each change will be evaluated for extension of Contract Time and increase or decrease in compensation based on its own merit.

D.2 DELAYS

D.2.1 Delays in construction include "Avoidable Delays", which are defined in Section D.2.1.1, and "Unavoidable Delays", which are defined in Section D.2.1.2. The effect of Avoidable Delays is described in Section D.2.2 and the effect of Unavoidable Delays is described in Section D.2.3.

D.2.1.1 Avoidable Delays include any delays other than Unavoidable Delays, and include delays that

otherwise would be considered Unavoidable Delays but that:

- (a) Could have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- (b) Affect only a portion of the Work and do not necessarily prevent or delay the prosecution of other parts of the Work nor the completion of the whole Work within the Contract Time.
- (c) Do not impact activities on the accepted critical path schedule.
- (d) Are associated with the reasonable interference of other contractors employed by the Owner that do not necessarily prevent the completion of the whole Work within the Contract Time.

D.2.1.2 Unavoidable Delays include delays other than Avoidable Delays that are:

- (a) Caused by any actions of the Owner, Owner's Authorized Representative, or any other employee or agent of the Owner, or by separate contractor employed by the Owner.
- (b) Caused by any site conditions which differ materially from what was represented in the Contract Documents or from conditions that would normally be expected to exist and be inherent to the construction activities defined in the Contract Documents. The Contractor shall notify the Owner's Authorized Representative immediately of differing site conditions before the area has been disturbed, but not more than fourteen (14) days after the condition has been encountered. The Owner's Authorized Representative will investigate the area and make a determination as to whether or not the conditions differ materially from either the conditions stated in the Contract Documents or those which could reasonably be expected in execution of this particular Contract. If Contractor and the Owner's Authorized Representative agree that a differing site condition exists, any additional compensation or additional Contract Time will be determined based on the process set forth in Section D.1.5 for Change Order Work. If the Owner's Authorized Representative disagrees that a differing site condition exists and denies Contractor's request for additional compensation or Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process.
- (c) Caused by Force Majeure acts, events or occurrences that could not have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- (d) Caused by adverse weather conditions. Any adverse weather conditions must be substantiated by documentary evidence that weather conditions were abnormal for the specific time period claimed, could not have been anticipated by the Contractor, and adversely impacted the project in a manner that could not be avoided by rescheduling the Work or by implementing measures to protect against the weather so that the Work could proceed. A

rain, windstorm, high water, or other natural phenomenon for the specific locality of the Work, which might reasonably have been anticipated from the previous 10-year historical records of the general locality of the Work, shall not be construed as abnormal. The parties agree that rainfall greater than the following levels cannot be reasonably anticipated:

- (i) Daily rainfall equal to, or greater than, 0.50 inch during a month when the monthly rainfall exceeds the normal monthly average by twenty-five percent (25 %) or more.
- (ii) daily rainfall equal to, or greater than, 0.75 inch at any time.

The Office of the Environmental Data Service of the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce nearest the project site shall be considered the official agency of record for weather information.

- D.2.2 Except as otherwise provided in ORS 279C.315, Contractor shall not be entitled to additional compensation or additional Contract Time for Avoidable Delays.
- D.2.3 In the event of Unavoidable Delays, based on principles of equitable adjustment, Contractor may be entitled to the following:
 - (a) Contractor may be entitled to additional compensation or additional Contract Time, or both, for Unavoidable Delays described in Section D.2.1.2 (a) and (b).
 - (b) Contractor may be entitled to additional Contract Time for Unavoidable Delays described in Section D.2.1.2(c) and (d).

In the event of any requests for additional compensation or additional Contract Time, or both, as applicable, arising under this Section D.2.3 for Unavoidable Delays, other than requests for additional compensation or additional Contract Time for differing site conditions for which a review process is established under Section D.2.1.2 (b), Contractor shall submit a written notification of the delay to the Owner's Authorized Representative within two (2) Days of the occurrence of the cause of the delay. This written notification shall state the cause of the potential delay, the project components impacted by the delay, and the anticipated additional Contract Time or the additional compensation, or both, as applicable, resulting from the delay. Within seven (7) Days after the cause of the delay has been mitigated, or in no case more than thirty (30) Days after the initial written notification, the Contractor shall submit to the Owner's Authorized Representative, a complete and detailed request for additional compensation or additional Contract Time, or both, as applicable, resulting from the delay. If the Owner's Authorized Representative denies Contractor's request for additional compensation or adjustment of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

If Contractor does not timely submit the notices required under this Section D.2., then unless otherwise prohibited by law, Contractor's Claim shall be barred.

D.3 CLAIMS REVIEW PROCESS

- D.3.1 All Contractor Claims shall be referred to the Owner's Authorized Representative for review. Contractor's Claims, including Claims for additional compensation or additional Contract Time, shall be submitted in writing by Contractor to the Owner's Authorized Representative within five (5) Days after a denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, provided that such initial request has been submitted in accordance with the requirements and within the time limits established in these General Conditions. Within thirty (30) Days after the initial Claim, Contractor shall submit to the Owner's Authorized Representative, a complete and detailed description of the Claim (the "Detailed Notice") that includes all information required by Section D.3.2. Unless the Claim is made in accordance with these time requirements, it shall be waived.
- D.3.2 The Detailed Notice of the Claim shall be submitted in writing by Contractor and shall include a detailed, factual statement of the basis of the Claim, pertinent dates, Contract provisions which support or allow the Claim, reference to or copies of any documents which support the Claim, the dollar value of the Claim, and the Contract Time extension requested for the Claim. If the Claim involves Work to be completed by Subcontractors, the Contractor will analyze and evaluate the merits of the Subcontractor claim prior to forwarding it and that analysis and evaluation to the Owner's Authorized Representative. The Owner's Authorized Representative and the Owner will not consider direct claims from Subcontractors, suppliers, manufacturers, or others not a party to this Contract. Contractor agrees that it will make no agreement, covenant, or assignment, nor will it commit any other act that will permit or assist any Subcontractor, supplier, manufacturer, or other to directly or indirectly make a claim against Owner.
- D.3.3 The Owner's Authorized Representative will review all Claims and take one or more of the following preliminary actions within ten (10) Days of receipt of the Detailed Notice of a Claim: (1) request additional supporting information from the Contractor; (2) inform the Contractor and Owner in writing of the time required for adequate review and response; (3) reject the Claim in whole or in part and identify the reasons for rejection; (4) based on principles of equitable adjustment, recommend approval of all or part of the Claim; or (5) propose an alternate resolution.
- D.3.4 The Owner's Authorized Representative's decision shall be final and binding on the Contractor unless appealed by written notice to the Owner within fifteen (15) Days of receipt of the decision. The Contractor must present written documentation supporting the Claim within fifteen (15) Days of the notice of appeal. After receiving the appeal documentation, the Owner, through its Chief Administrative Officer (CAO), shall review the materials and render a decision within thirty (30) Days after receiving the appeal documents.
- D.3.5 The decision of the Owner shall be final and binding unless the Contractor delivers to the Owner its requests for mediation, which shall be a non-binding process, within fifteen (15) Days of the date of the Owner's decision.

D.3.6 The parties are fully committed to working with each other throughout the Project and agree to communicate regularly with each other at all times so as to avoid or minimize disputes or disagreements. If disputes or disagreements do arise, Contractor and Owner each commit to resolving such disputes or disagreements in an amicable, professional and expeditious manner so as to avoid unnecessary losses, delays and disruptions to the Work.

D.3.7 The mediation process will be considered to have commenced as of the date the Contractor delivers the request. Both parties acknowledge and agree that participation in mediation is a prerequisite to commencement of litigation of any disputes relating to the Contract. Both parties further agree to exercise their best efforts in good faith to resolve all disputes within sixty (60) Days of the commencement of the mediation through the mediation process set forth herein.

In the event that a lawsuit must be filed within this sixty (60) day period in order to preserve a cause of action, the parties agree that notwithstanding the filing, they shall proceed diligently with the mediation to its conclusion prior to actively prosecuting the lawsuit, and shall seek from the Court in which the lawsuit is pending such stays or extensions, including the filing of an answer, as may be necessary to facilitate the mediation process. Further, in the event settlements are reached on any issues through mediation, the parties agree to promptly submit the appropriate motions and orders documenting the settlement to the Court for its signature and filing.

D.3.6 The mediator shall be an individual mutually acceptable to both parties, but in the absence of agreement each party shall select a temporary mediator and the temporary mediators shall jointly select the permanent mediator. Each party shall pay its own costs for the time and effort involved in mediation. The cost of the mediator shall be split equally between the two parties. Both parties agree to exercise their best effort in good faith to resolve all disputes in mediation. Participation in mediation is a mandatory requirement of both the Owner and the Contractor. The schedule, time and place for mediation will be mutually acceptable, or, failing mutual agreement, shall be as established by the mediator. The parties agree to maintain the confidentiality of mediation, if any, and shall execute all necessary documents to give effect to such confidentiality to the extent allowed by law. In any event, the parties shall not subpoena the mediator or otherwise require the mediator to produce records, notes or work product, or to testify in any future proceedings as to information disclosed or representations made in the course of mediation, except to the extent disclosure is required by law.

D.3.7 Owner may at any time and at its discretion issue a construction change directive adding to, modifying or reducing the scope of Work. Contractor and Owner shall negotiate the need for any additional compensation or additional Contract Time related to the change, subject to the procedures for submitting requests or Claims for additional compensation or additional Contract Time established in this Section D. Unless otherwise directed by Owner's Authorized Representative, Contractor shall proceed with the Work while any request or Claim is pending, including but not limited to, a request or Claim for additional compensation or additional Contract Time

resulting from Work under a Change Order or construction change directive. Regardless of the review period or the final decision of the Owner's Authorized Representative, the Contractor shall continue to diligently pursue the Work as identified in the Contract Documents. In no case is the Contractor justified or allowed to cease Work without a written stop work order from the Owner or Owner's Authorized Representative.

SECTION E PAYMENTS

E.1 SCHEDULE OF VALUES

The Contractor shall submit, at least ten (10) Days prior to submission of its first application for progress payment, a schedule of values ("Schedule of Values") for the contracted Work. This schedule will provide a breakdown of values for the contracted Work and will be the basis for progress payments. The breakdown will demonstrate reasonable, identifiable, and measurable components of the Work. Unless objected to by the Owner's Authorized Representative, this schedule shall be used as the basis for reviewing Contractor's applications for payment. If objected to by Owner's Authorized Representative, Contractor shall revise the schedule of values and resubmit the same for approval of Owner's Authorized Representative.

E.2 APPLICATIONS FOR PAYMENT

E.2.1 Owner shall make progress payments on the Contract monthly as Work progresses. Payments shall be based upon estimates of Work completed and the Schedule of Values. All payments shall be approved by the Owner's Authorized Representative. A progress payment shall not be considered acceptance or approval of any Work or waiver of any defects therein. Owner shall pay to Contractor interest on the progress payment, not including retainage, due the Contractor. The interest shall commence thirty (30) Days after the receipt of invoice ("application for payment") from the Contractor or fifteen (15) Days after the payment is approved by the Owner's Authorized Representative, whichever is the earlier date. The rate of interest shall equal three times the discount rate on 90-day commercial paper in effect at the Federal Reserve Bank in the Federal Reserve district that includes Oregon on the date that is thirty (30) Days after receipt of the application for payment from the Contractor or fifteen (15) Days after the payment is approved by the Owner, whichever is the earlier date, but the rate of interest shall not exceed thirty (30) percent. Notwithstanding the foregoing, in instances when an application for payment is filled out incorrectly, or when there is any defect or impropriety in any submitted application or when there is a good faith dispute, Owner shall so notify the Contractor within fifteen (15) Days stating the reason or reasons the application for payment is defective or improper or the reasons for the dispute. A defective or improper application for payment, if corrected by the Contractor within seven (7) Days of being notified by the Owner, shall not cause a payment to be made later than specified in this section unless interest is also paid. Accrual of interest will be postponed when payment on the principal is delayed because of disagreement between the Owner and the Contractor.

Owner reserves the right, instead of requiring the Contractor to correct or resubmit a defective or improper application for payment, to reject the

defective or improper portion of the application for payment and pay the remainder of the application for payment that is correct and proper. Owner makes this election, the Contractor will be required to arrange to receive EFT/ACH payments.

E.2.2 Contractor shall submit to the Owner's Authorized Representative, an application for each payment and, if required, receipts or other vouchers showing payments for materials and labor, including payments to Subcontractors. Contractor shall include, in its application for payment, a schedule of the percentages of the various parts of the Work completed, based on the Schedule of Values which shall aggregate to the payment application total, and shall include, on the face of each copy thereof, a certificate in substantially the following form:

"I, the undersigned, hereby certify that the above bill is true and correct, and the payment therefore, has not been received.

Signed: _____

E.2.3 Generally, applications for payment will be accepted only for materials that have been installed. Under special conditions, applications for payment for stored materials will be accepted at Owner's sole discretion. Such a payment, if made, will be subject to the following conditions:

- (a) The request for stored material shall be submitted at least thirty (30) Days in advance of the application for payment on which it appears. Applications for payment shall be entertained for major equipment, components or expenditures only.
- (b) The Contractor shall submit applications for payment showing the quantity and cost of the material stored.
- (c) The material shall be stored in a bonded warehouse and Owner's Authorized Representative shall be granted the right to access the material for the purpose of removal or inspection at any time during the Contract Period.
- (d) The Contractor shall name the Owner as co-insured on the insurance policy covering the full value of the property while in the care and custody of the Contractor until it is installed. A certificate noting this coverage shall be issued to the Owner.
- (e) Payments shall be made for materials only. The submitted amount of the application for payment shall be reduced by the cost of transportation and for the cost of an inspector to check the delivery at out of town storage sites. The cost of said inspection shall be borne solely by the Contractor.
- (f) Within sixty (60) Days of the application for payment, the Contractor shall submit evidence of payment covering the material stored.
- (g) Payment for stored materials shall in no way indicate acceptance of the materials or waive any rights under this Contract for the rejection of the Work or materials not in conformance with the Contract Documents.

- (h) All required documentation must be submitted with the respective application for payment.

E.2.4 The Owner reserves the right to withhold all or part of a payment, or may nullify in whole or part any payment previously made, to such extent as may be necessary in the Owner's opinion to protect the Owner from loss because of:

- (a) Work that is defective and not remedied, or that has been demonstrated or identified as failing to conform with the Contract Documents,
- (b) third party claims filed or evidence reasonably indicating that such claims will likely be filed unless security acceptable to the Owner is provided by the Contractor;
- (c) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment (in which case Owner may issue checks made payable jointly to Owner and such unpaid persons under this provision, or directly to Subcontractors and suppliers at any level under Section C.3.2.1);
- (d) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;
- (e) damage to the Owner or another contractor;
- (f) reasonable evidence that the Work will not be completed within the Contract Time required by the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- (g) failure to carry out the Work in accordance with the Contract Documents; or
- (h) assessment of liquidated damages, when withholding is made for offset purposes.

E.2.5 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- (a) Take that portion of the Contract Price properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Price allocated to that portion of the Work in the Schedule of Values, less retainage as provided in Section E.5. Pending final determination of cost to the Owner of changes in the Work, no amounts for changes in the Work can be included in application for payment until the Contract Price has been adjusted by Change Order;
- (b) Add that portion of the Contract Price properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner pursuant to Section E.2.3, suitably stored off the site at a location agreed upon in writing), less retainage as provided in Section E.5;
- (c) Subtract the aggregate of previous payments made by the Owner; and

- (d) Subtract any amounts for which the Owner's Authorized Representative has withheld or nullified payment as provided in the Contract Documents.

E.2.6 Contractor's applications for payment may not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier.

E.2.7 The Contractor warrants to Owner that title to all Work covered by an application for payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an application for payment all Work for which payments are received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

E.2.8 If Contractor disputes any determination by Owner's Authorized Representative with regard to any application for payment, Contractor nevertheless shall continue to prosecute expeditiously the Work. No payment made hereunder shall be or be construed to be final acceptance or approval of that portion of the Work to which such partial payment relates or shall relieve Contractor of any of its obligations hereunder.

E.3 PAYROLL CERTIFICATION REQUIREMENT

Payroll certification is required before payments are made on the Contract. Refer to Section C.2 for this information.

E.4 DUAL PAYMENT SOURCES

Contractor shall not be compensated for Work performed under this Contract from any state agency other than the agency that is a party to this Contract.

E.5 RETAINAGE

E.5.1 Retainage shall be withheld and released in accordance with ORS 279C.550 to 279C.580:

E.5.1.1 Owner may reserve as retainage from any progress payment an amount not to exceed five percent of the payment. As Work progresses, Owner may reduce the amount of the retainage and may eliminate retainage on any remaining monthly Contract payments after 50 percent of the Work under the Contract is completed if, in the Owner's opinion, such Work is progressing satisfactorily. Elimination or reduction of retainage shall be allowed only upon written application by the Contractor, which application shall include written approval of Contractor's surety; except that when the Work is 97-1/2 percent completed the Owner may, at its discretion and without application by the Contractor, reduce the retained amount to 100 percent of the value of the Work remaining to be done. Upon receipt of written application by the Contractor, Owner shall respond in writing

within a reasonable time.

E.5.1.2 Alternatives to cash retainage are available to Contractor as provided in ORS 279C.560

E.5.1.3 The retainage held by Owner shall be included in and paid to the Contractor as part of the final payment of the Contract Price. The Owner shall pay to Contractor interest at the rate of one and one-half percent per month on the final payment due Contractor, interest to commence thirty (30) Days after the Work under the Contract has been completed and accepted and to run until the date Contractor shall notify Owner in writing when the Contractor considers the Work complete and Owner shall, within fifteen (15) Days after receiving the written notice, either accept the Work or notify the Contractor of Work yet to be performed on the Contract. If Owner does not within the time allowed notify the Contractor of Work yet to be performed to fulfill contractual obligations, the interest provided by this subsection shall commence to run thirty (30) Days after the end of the 15-Day period.

E.5.1.4 In accordance with the provisions of ORS

279C.560, if the Owner accepts bonds, securities or other instruments deposited as provided in paragraphs (a) and (c) of subsection E.5.1.2, the Owner shall reduce the moneys held as retainage in an amount equal to the value of the bonds, securities and other instruments and pay the amount of the reduction to the Contractor in accordance with ORS 279C.570.

E.5.1.5 Contractor agrees that if Contractor elects to reserve a retainage from any progress payment due to any Subcontractor or supplier, such retainage shall not exceed five percent of the payment, and such retainage withheld from Subcontractors and suppliers shall be subject to the same terms and conditions stated in Subsection E.5 as apply to Owner's retainage from any progress payment due to Contractor. Provided, however, if in accordance with the provisions of ORS 279C.560 the Contractor has deposited bonds, securities or other instruments or has elected to have the Owner deposit accumulated retainage in an interest-bearing account, the Contractor shall comply with the provisions of ORS 701.435 respecting the deposit of bonds, securities or other instruments by Subcontractors and suppliers and the sharing of interest earnings with Subcontractors and suppliers.

E.5.2 As provided in subsections C.2.2 and C.2.3, additional retainage in the amount of 25% of amounts earned shall be withheld and released in accordance with ORS 279C.845(7) when the Contractor fails to file

certified statements as required by section C.2.1.

unsettled at the time of final application for payment.

E.6 FINAL PAYMENT

E.6.1 Upon completion of all the Work under this Contract, the Contractor shall notify the Owner's Authorized Representative, in writing, that Contractor has completed Contractor's part of the Contract and shall request final payment. Upon receipt of such notice the Owner's Authorized Representative will inspect the Work, and if acceptable, submit to the Owner a recommendation as to acceptance of the completed Work and the final estimate of the amount due the Contractor. If the Work is not acceptable, Owner will notify Contractor within fifteen (15) Days of Contractor's request for final payment. Upon approval of this final estimate by the Owner and compliance by the Contractor with provisions in Section K. 3 AFFIDAVIT/RELEASE OF LIENS AND CLAIMS, and other provisions as may be applicable, the Owner shall pay to the Contractor all monies due under the provisions of these Contract Documents.

E.6.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Owner's Authorized Representative (1) a notarized affidavit/release of liens and claims in a form satisfactory to Owner that states that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) Days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if

any, to final payment and (5), if required by the

Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a

Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

E.6.3 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as

SECTION F JOB SITE CONDITIONS

F.1 USE OF PREMISES

Contractor shall confine equipment, storage of materials and operation of Work to the limits indicated by Contract Documents, law, ordinances, permits or directions of the Owner's Authorized Representative. Contractor shall follow the Owner's Authorized Representative's instructions regarding use of premises, if any.

F.2 PROTECTION OF WORKERS, PROPERTY, AND THE PUBLIC

F.2.1 Contractor shall maintain continuous and adequate protection of all of the Work from damage, and shall protect the Owner's Authorized Representative, workers and property from injury or loss arising in connection with this Contract. Contractor shall remedy acceptably to the Owner, any damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by authorized representatives or personnel of the Owner. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents.

F.2.2 Contractor shall take all necessary precautions for the safety of all personnel on the job site, and shall comply with the Contract Documents and all applicable provisions of federal, state and municipal safety laws and building codes to prevent accidents or injury to persons on, about or adjacent to the premises where the Work is being performed. Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for protection of workers and the public against any hazards created by construction. Contractor shall designate a responsible employee or associate on the Work site, whose duty shall be the prevention of accidents. The name and position of the person designated shall be reported to the Owner's Authorized Representative. The Owner's Authorized Representative has no responsibility for Work site safety. Work site safety is the responsibility of the Contractor.

F.2.3 Contractor shall not enter upon private property without first obtaining permission from the property owner or its duly authorized representative. Contractor shall be responsible for the preservation of all public and private property along and adjacent to the Work contemplated under the Contract and shall use every precaution necessary to prevent damage thereto. In the event the Contractor damages any property, the Contractor shall at once notify the property owner and make, or arrange to make, full restitution. Contractor shall immediately and in writing, report to the Owner's Authorized Representative, all pertinent facts relating to such property damage and the ultimate disposition of the claim for damage.

F.2.4 Contractor is responsible for protection of adjacent work areas including impacts brought about by activities, equipment, labor, utilities, and materials on the site.

F.2.5 Contractor shall at all times direct its activities in such a manner as to minimize adverse effects on the environment. Handling of all materials will be conducted so no release will occur that may pollute or become hazardous.

F.2.6 In an emergency affecting the safety of life or of the Work or of adjoining property, the Contractor, without special instruction or authorization from the Owner's Authorized Representative, shall act reasonably to prevent threatened loss or injury, and shall so act, without appeal, if instructed by the Owner's Authorized Representative. Any compensation claimed by the Contractor on account of emergency work shall be determined in accordance with Section D.

F.3 CUTTING AND PATCHING

F.3.1 Contractor shall be responsible for coordinating all cutting, fitting, or patching of the Work to make its several parts come together properly and fit to receive or be received by work of other contractors or Subcontractors shown upon, or reasonably implied by, the Contract Documents.

F.3.2 Contractor shall be responsible for restoring all cut, fitted, or patched surfaces to an original condition; provided, however, that if a different condition is specified in the Contract Documents, then Contractor shall be responsible for restoring such surfaces to the condition specified in the Contract Documents.

F.4 CLEANING UP

From time to time as may be ordered by the Owner the Contractor shall, at its own expense, clean up and remove all refuse and unused materials of any kind resulting from the Work. If Contractor fails to do so within twenty-four hours after notification by the Owner the work may be done by others and the cost charged to the Contractor and deducted from payment due the Contractor.

F.5 ENVIRONMENTAL CONTAMINATION

F.5.1 Contractor will be held responsible for and shall indemnify, defend (with counsel of Owner's choice) and hold harmless Owner from and against any costs, expenses, damages, claims, and causes of action, (including attorney fees), or any of them, resulting from all spills, releases, discharges, leaks and disposal of environmental pollution, including storage, transportation, and handling during the performance of the Contract which occur as a result of, or are contributed by, the negligence or actions of Contractor or its personnel, agents, or Subcontractors or any failure to

perform in accordance with the Contract Documents (except to the extent otherwise void under ORS 30.140). Nothing in this section F.5.1 shall limit Contractor's responsibility for obtaining insurance coverages required under Section G.3 of these General Conditions, and Contractor shall take no action that would void or impair such coverages

F.5.1.1 Contractor agrees to promptly dispose of such spills, releases, discharge or leaks to the satisfaction of Owner and proper regulatory agencies in a manner that complies with applicable federal, state, and local laws and regulations. Cleanup shall be at no cost to the Owner and be performed by properly qualified personnel.

F.5.1.2 Contractor shall obtain the Owner's written consent prior to bringing onto the Work site any (i) environmental pollutants or (ii) hazardous substances or materials, as the same or reasonably similar terms are used in any applicable federal, state, or local statutes, rules or ordinances. Notwithstanding such written consent from the Owner, the Contractor, at all times, shall:

- (a) properly handle, use and dispose of all environmental pollutants and hazardous substances or materials brought onto the Work site, in accordance with all applicable federal, state, or local statutes, rules, or ordinances;
- (b) be responsible for any and all spills, releases, discharges, or leaks of (or from) environmental pollutants or hazardous substances or materials which Contractor has brought onto the Work site; and
- (c) promptly clean up, without cost to the Owner, such spills, releases, discharges, or leaks to the Owner's satisfaction and in compliance with all applicable federal, state, or local statutes, rules or ordinances.

F.5.2 Contractor shall report all reportable quantity releases to applicable federal, state, and local regulatory and emergency response agencies. Reportable quantities are found in 40 CFR Part 302, Table 302.4 for hazardous substances and in OAR 340-142-0050 for all products addressed therein. Upon discovery, regardless of quantity, Contractor must telephonically report all releases to the Owner. A written follow-up report shall be submitted to Owner within 48 hours of the telephonic report. Such written report shall contain, as a minimum:

- (a) Description of items released (identity, quantity, manifest no., and all other documentation required by law.)
- (b) Whether amount of items released is EPA/DEQ reportable, and, if so, when it was reported.
- (c) Exact time and location of release, including a description of the area involved.

- (d) Containment procedures initiated.
- (e) Summary of communications about the release Contractor has had with members of the press or State officials other than Owner.
- (f) Description of cleanup procedures employed or to be employed at the site, including disposal location of spill residue.
- (g) Personnel injuries, if any, resulting from, or aggravated by, the release.

F.6 ENVIRONMENTAL CLEAN-UP

F.6.1 Unless disposition of environmental pollution is specifically a part of this Contract, or was caused by the Contractor (reference F.5 Environmental Contamination), Contractor shall immediately notify Owner of any hazardous substance(s) which Contractor discovers or encounters during performance of the Work required by this Contract. "Hazardous substance(s)" means any hazardous, toxic and radioactive materials and those substances defined as "hazardous substances," "hazardous materials," "hazardous wastes," "toxic substances," or other similar designations in any federal, state, or local law, regulation, or ordinance, including without limitation asbestos, polychlorinated biphenyl (PCB), or petroleum, and any substances, materials or wastes regulated in 40 CFR, Part 261 and defined as hazardous in 40 CFR S 261.3. In addition to notifying Owner of any hazardous substance(s) discovered or encountered, Contractor shall immediately cease working in any particular area of the project where a hazardous substance(s) has been discovered or encountered if continued work in such area would present a risk or danger to the health or well being of Contractor's or any Subcontractor's work force.

F.6.2 Upon being notified by Contractor of the presence of hazardous substance(s) on the project site, Owner shall arrange for the proper disposition of such hazardous substance(s).

F.7 FORCE MAJEURE

A party to this Contract shall not be held responsible for delay or default due to Force Majeure acts, events or occurrences unless they could have been avoided by the exercise of reasonable care, prudence, foresight, and diligence by that party. The Owner may terminate this Contract upon written notice after determining that delay or default caused by Force Majeure acts, events or occurrences will reasonably prevent successful performance of the Contract.

SECTION G INDEMNITY, BONDING, AND INSURANCE

G.1 RESPONSIBILITY FOR DAMAGES / INDEMNITY

G.1.1 Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay that may be caused by, or result from, the carrying out of the Work to be done under this Contract, or from any act, omission or neglect of the Contractor, its

Subcontractors, personnel, or agents.

G.1.2 Contractor agrees to indemnify, defend (with counsel approved by Owners), reimburse and hold harmless Owners, their partners, owners, board members, officers, employees, agents and volunteers (the "Indemnified Parties") for, from and against any and all threatened, alleged or actual all claims, suits, allegations, damages, liabilities, costs, expenses, losses and judgments, including, but not limited to, those which relate to personal or real property damage (including to the Project itself or otherwise), personal injury or death, attorney and expert/consultant fees and costs, and both economic and non-economic losses, to the extent caused by the negligence, breach of contract, breach of warranty (express or implied), or other act or omission of Contractor, its employees, Design Consultant and SubContractors, or anyone for whose acts Contractor is responsible (the Indemnitor). If claims are asserted against any of the Indemnified Parties by an employee of the Indemnitor, the Contractor's indemnification obligation and other obligations under this section shall not be limited by any limitation on the amount or type of damages, compensation, or benefits payable to the employee by or for the Indemnitor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

G.2 PERFORMANCE AND PAYMENT SECURITY: PUBLIC WORKS BOND

G.2.1 When the Contract Price is \$100,000 or more (or

\$50,000 or more in the case of Contracts for highways, bridges and other transportation projects) the Contractor shall furnish and maintain in effect at all times during the Contract Period, a performance bond

in a sum equal to the Contract Price, and a separate payment bond also in a sum equal to the Contract Price. The bonds may be required if the Contract Price is less than the above thresholds, if required by the Contract Documents.

G.2.2 Bond forms furnished by the Owner and notarized by awarded Contractor's surety company authorized to do business in Oregon are the only acceptable forms of performance and payment security, unless otherwise specified in the Contract Documents.

G.2.3 Before execution of the Contract Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by Oregon Laws 2005, Chapter 360, and OAR 839-025-0015, unless otherwise exempt under those provisions. The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the Construction Contractors Board before starting Work, unless otherwise exempt, and shall verify that the Subcontractor has filed a public works bond before permitting the Subcontractor to start Work.

G.3 INSURANCE

G.3.1 Primary Coverage: Insurance carried by Contractor under this Contract shall be the primary coverage and non-contributory with any other insurance and self-insurance, and the Owner's insurance is excess and solely for damages or losses for which the Owner is responsible. The coverages indicated are minimums unless otherwise specified in the Contract Documents.

G.3.2 Workers' Compensation: All employers, including Contractor, that employ subject workers who work under this contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. This shall include Employer's Liability Insurance with coverage limits of not less than \$100,000 for each accident. Contractors who perform the Work without the assistance or labor of any employee need not obtain such coverage if the Contractor certifies so in writing. Contractor shall ensure that each of its Subcontractors complies with these requirements. The Contractor shall require proof of such Workers' Compensation by receiving and keeping on file a certificate of insurance from each Subcontractor or anyone else directly employed by either the Contractor or its Subcontractors.

G.3.3 Builder's Risk Insurance:

G.3.3.1 Builder's Risk: During the term of this Contract, for new construction the Contractor shall obtain and keep in effect Builder's Risk insurance on an all risk form, including earthquake and flood, for an amount equal to the full amount of the Contract. Any deductible shall not exceed \$50,000 for each loss, except the earthquake and flood deductible shall not exceed 2 percent of each loss or \$50,000, whichever is more. The policy will include as loss payees the Owner, the Contractor and its Subcontractors as their interests may appear.

G.3.3.2 Builder's Risk Installation Floater: For other than new construction the Contractor shall obtain and keep in effect during the term of this Contract, a Builder's Risk Installation Floater for coverage of the Contractor's labor, materials and equipment to be used for completion of the Work performed under this Contract. The minimum amount of coverage to be carried shall be equal to the full amount of the Contract. This insurance shall include as loss payees the Owner, the Contractor and its Subcontractors as their interests may appear.

G.3.3.3 Such insurance shall be maintained until Owner has occupied the facility.

G.3.3.4 A loss insured under the Builder's Risk insurance shall be adjusted by the Owner and made payable to the Owner for the insureds, as their interests may appear. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner. The Owner

shall have power to adjust and settle a loss with insurers.

G.3.4 Liability Insurance:

G.3.4.1 Commercial General Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Commercial General Liability Insurance covering bodily injury and property damage in a form and with coverages that are satisfactory to the Owner. This insurance shall include personal injury liability, products and completed operations, and contractual liability coverage for the indemnity provided under this Contract (to the extent contractual liability coverage for the indemnity is available in the marketplace), and shall be issued on an occurrence basis. Contractor shall provide proof of insurance of not less than combined single limit, or the equivalent, of not less than: ☐ \$200,000; ☐ \$500,000; ☐ \$1,000,000; ☒ \$2,000,000 each occurrence for Bodily Injury and Property Damage. The policy, or an endorsement or amendment to the policy, must provide that the County and its agents, board members, officers, employees and volunteers are "additional insureds", but only with respect to the Contractor's Services to be provided under this Contract.

G.3.4.2 Automobile Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Automobile Liability Insurance covering owned, non-owned and/or hired vehicles, as applicable. The coverage may be written in combination with the Commercial General Liability Insurance. Contractor shall provide proof of insurance of not less than the amounts ☐ Minimum amounts required by the Oregon Financial Responsibility Law (ORS 806.060 and 806.070); ☐ \$200,000; ☒ \$500,000; or ☐ \$1,000,000 per occurrence, for Bodily Injury and Property Damage, including coverage for all owned, hired or non-owned vehicles, as applicable. The policy, or an endorsement or amendment to the policy, must provide that the County and its board members, officers, agents, employees and volunteers are "additional insureds", but only with respect to the Consultant's Services to be provided under this Contract.

G.3.4.3 "Tail" Coverage: If any of the required liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of this Contract for a duration of 24 months or the maximum time period available in the marketplace if less than 24 months. Contractor will be responsible for furnishing certification of "tail" coverage as described or continuous "claims made" liability coverage for 24 months following Final Completion. Continuous "claims made" coverage will be acceptable in lieu of "tail" coverage, provided its retroactive date is on or before the effective date of this Contract. This will be a condition of the final acceptance of Work or services and related warranty (if any).

G.3.5 Excess/Umbrella Insurance: A combination of primary and excess/umbrella insurance is acceptable to meet the minimum coverage requirements for Commercial General Liability and Automobile Liability Insurance. In

such case, the insurance certificate must include a list of the policies that fall under the excess/umbrella insurance. Sample wording is "The Excess/Umbrella policy is excess over primary Commercial General Liability and primary Automobile Liability Insurance."

- G.3.6 Additional Insured: The liability insurance coverage, except Professional Liability if included, required for performance of this Contract shall include the Marion County, its departments, divisions, officers, and employees, as Additional Insureds but only with respect to the Contractor's activities to be performed under this Contract.

If Contractor cannot obtain an insurer to name the Marion County, its departments, divisions, officers and employees as Additional Insureds, Contractor shall obtain at Contractor's expense, and keep in effect during the term of this Contract, Owners and Contractors Protective Liability Insurance, naming the Marion County, its departments, divisions, officers and employees as Named Insureds with not less than a \$1,500,000.00 limit per occurrence. This policy must be kept in effect for 12 months following Final Completion. As evidence of coverage, Contractor shall furnish the actual policy to Owner prior to execution of the Contract.

- G.3.7 Certificate(s) of Insurance: As evidence of the insurance coverage required by this Contract, the Contractor shall furnish certificate(s) of insurance to the Owner prior to execution of the Contract. The certificate(s) will specify all of the parties who are Additional Insureds or Loss Payees. Insurance coverage required under this Contract shall be obtained from insurance companies or entities acceptable to the Owner that are allowed to provide such insurance under Oregon law. Eligible insurers include admitted insurers that have been issued a certificate of authority from the Oregon Department of Consumer and Business Services authorizing them to do an insurance business in the state of Oregon, and certain non-admitted surplus lines insurers that satisfy the requirements of applicable Oregon law and are approved by the Owner. The Contractor shall be financially responsible for all deductibles, self-insured retentions and/or self-insurance included hereunder. Any deductible, self-insured retention and/or self-insurance in excess of \$50,000 shall be approved by the Owner in writing prior execution of the Contract and is subject to Owner's approval. The Contractor shall immediately notify the Owner's Authorized Representative in writing of any change in insurance coverage.

SECTION H

SCHEDULE OF WORK

H.1 CONTRACT PERIOD

- H.1.1 **Time is of the essence on this Contract.** The Contractor shall at all times carry on the Work diligently, without delay and punctually fulfill all requirements herein. Contractor shall commence Work on the site within fifteen (15) Days of Notice to Proceed, unless directed

otherwise.

- H.1.2 Unless specifically extended by Change Order, all Work shall be complete by the date contained in the Contract Documents. The Owner shall have the right to accelerate the completion date of the Work, which may require the use of overtime. Such accelerated Work schedule shall be an acceleration in performance of Work under Section D.1.2 (f) and shall be subject to the Change Order process of Section D.1.

- H.1.3 The Owner shall not waive any rights under the Contract by permitting the Contractor to continue or complete in whole or in part the Work after the date described in Section H.1.2 above.

H.2 SCHEDULE

- H.2.1 Contractor shall provide, by or before the pre-construction conference, a detailed schedule for review and acceptance by the Owner. The submitted schedule must illustrate Work by significant project components, significant labor trades, long lead items, broken down by building and/or floor where applicable. Each schedule item shall account for no greater than 5 % of the monetary value of the project or 5 % of the available Contract Time. Schedules with activities of less than one day or valued at less than 1% of the Contract will be considered too detailed and will not be accepted. Schedules lacking adequate detail, or unreasonably detailed, will be rejected. Included within the schedule are the following: Notice to Proceed, Substantial Completion, and Final Completion. Schedules will be updated monthly and submitted with the monthly payment application. Acceptance of the Schedule by the Owner does not constitute agreement by the Owner, as to the Contractor's sequencing, means, methods, or allocated Contract Time. Any positive difference between the Contractor's scheduled completion and the Contract completion date is float owned by the Owner. Owner reserves the right to negotiate the float if it is deemed to be in Owner's best interest to do so. In no case shall the Contractor make a request for additional compensation for delays if the Work is completed within the Contract Time but after Contractor's scheduled completion.

H.3 PARTIAL OCCUPANCY OR USE

- H.3.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage, provided such occupancy or use is consented to by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have reasonably accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, insurance or self-insurance, maintenance, heat, utilities, and damage to the Work, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents with respect to such portion of the Work. Approval by the Contractor to partial

occupancy or use shall not be unreasonably withheld. Immediately prior to such partial occupancy or use, the Owner and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work. Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

SECTION I CORRECTION OF WORK

I.1 CORRECTION OF WORK BEFORE FINAL PAYMENT

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects, and that the Work will conform to the requirements of the Contract Documents. Work failing to conform to these requirements shall be deemed defective. Contractor shall promptly remove from the premises and replace all defective materials and equipment as determined by the Owner's Authorized Representative, whether incorporated in the Work or not. Removal and replacement shall be without loss or expense to the Owner, and Contractor shall bear the cost of repairing all Work destroyed or damaged by such removal or replacement. Contractor shall be allowed a period of no longer than thirty (30) Days after Substantial Completion for completion of defective (punch list) work, unless otherwise agreed. At the end of that period, or earlier if requested by the Contractor, Owner shall arrange for inspection of the Work by the Architect/Engineer. Should the Work not be complete, and all corrections made, the costs for all subsequent re-inspections shall be borne by the Contractor. If Contractor fails to complete the punch list work within the above time period, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) days after demand without affecting Contractor's obligations.

I.2 WARRANTY WORK

- I.2.1 Neither the final certificate of payment nor any provision of the Contract Documents shall relieve the Contractor from responsibility for defective Work and, unless a longer period is specified, Contractor shall correct all defects that appear in the Work within a period of one year from the date of issuance of the written notice of Substantial Completion by the Owner except for latent defects which will be remedied by the Contractor at any time they become apparent.

The Owner shall give Contractor notice of defects with reasonable promptness. Contractor shall perform such warranty work within a reasonable time after Owner's demand. If Contractor fails to complete the warranty work within such period as Owner determines reasonable, or at any time in the event of warranty work consisting of emergency repairs, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10)

Days after demand without affecting Contractor's obligations.

- I.2.2 This provision does not negate guarantees or warranties for periods longer than one year including without limitation such guarantees or warranties required by other sections of the Contract Documents for specific installations, materials, processes, equipment or fixtures.

- I.2.3 In addition to Contractor's warranty, manufacturer's warranties shall pass to the Owner and shall not take effect until affected Work has been accepted in writing by the Owner's Authorized Representative.

- I.2.4 The one-year period for correction of Work shall be extended with respect to portions of Work performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work, and shall be extended by corrective Work performed by the Contractor pursuant to this Section, as to the Work corrected. The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

- I.2.5 Nothing contained in this Section I.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the period for correction of Work as described in this Section I.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

- I.2.6 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Price will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

SECTION J SUSPENSION AND/OR TERMINATION OF THE WORK

J.1 OWNER'S RIGHT TO SUSPEND THE WORK

- J.1.1 The Owner and/or the Owner's Authorized Representative has the authority to suspend portions or all of the Work due to the following causes:

- (a) Failure of the Contractor to correct unsafe conditions;
- (b) Failure of the Contractor to carry out any provision of the Contract;

- (c) Failure of the Contractor to carry out orders;
- (d) Conditions, in the opinion of the Owner's Authorized Representative, which are unsuitable for performing the Work;
- (e) Time required to investigate differing site conditions;
- (f) Any reason considered to be in the public interest.

J.1.2 The Owner shall notify Contractor and the Contractor's Surety in writing of the effective date and time of the suspension and Owner shall notify Contractor and Contractor's surety in writing to resume Work.

J.2 CONTRACTOR'S RESPONSIBILITIES

J.2.1 During the period of the suspension, Contractor is responsible to continue maintenance at the project just as if the Work were in progress. This includes, but is not limited to, protection of completed Work, maintenance of access, protection of stored materials, temporary facilities, and clean-up.

J.2.2 When the Work is recommenced after the suspension, the Contractor shall replace or renew any Work damaged during the suspension, remove any materials or facilities used as part of temporary maintenance, and complete the project in every respect as though its prosecution had been continuous and without suspension.

J.3 COMPENSATION FOR SUSPENSION

J.3.1 Depending on the reason for suspension of the Work, the Contractor or the Owner may be due compensation by the other party. If the suspension was required due to acts or omissions of Contractor, the Owner may assess the Contractor actual costs of the suspension in terms of administration, remedial work by the Owner's forces or another contractor to correct the problem associated with the suspension, rent of temporary facilities, and other actual costs related to the suspension. If the suspension was caused by acts or omissions of the Owner, the Contractor shall be due compensation which shall be defined using Section D, Changes in Work. If the suspension was required through no fault of the Contractor or the Owner, neither party owes the other for the impact.

J.4 OWNER'S RIGHT TO TERMINATE CONTRACT

J.4.1 The Owner may, without prejudice to any other right or remedy, and after giving Contractor seven (7) Days' written notice and an opportunity to cure, terminate the Contract in whole or in part under the following conditions:

- (a) If Contractor should voluntarily or involuntarily, seek protection under the United States Bankruptcy Code and Contractor as debtor-in- possession or the Trustee for the estate fails to assume the

Contract within a reasonable time;

- (b) If Contractor should make a general assignment for the benefit of Contractor's creditors;

- (c) If a receiver should be appointed on account of Contractor's insolvency;

- (d) If Contractor should repeatedly refuse or fail to supply an adequate number of skilled workers or proper materials to carry on the Work as required by the Contract Documents, or otherwise fail to perform the Work in a timely manner;

- (e) If Contractor should repeatedly fail to make prompt payment to Subcontractors or for material or labor, or should disregard laws, ordinances or the instructions of the Owner or its Authorized Representative; or

- (f) If Contractor is otherwise in material breach of any part of the Contract.

J.4.2 At any time that any of the above occurs, Owner may exercise all rights and remedies available to Owner at law or in equity, and in addition, Owner may take possession of the premises and of all materials and appliances and finish the Work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive further payment until the Work is completed. If the Owner's cost of finishing the Work exceeds the unpaid balance of the Contract Price, Contractor shall pay the difference to the Owner.

J.5 TERMINATION FOR CONVENIENCE

J.5.1 Owner may terminate the Contract in whole or in part whenever Owner determines that termination of the Contract is in the best interest of the public.

J.5.2 The Owner will provide the Contractor with seven (7) Days' prior written notice of a termination for public convenience. After such notice, the Contractor shall provide the Owner with immediate and peaceful possession of the premises and materials located on and off the premises for which the Contractor received progress payment under Section E. Compensation for Work terminated by the Owner under this provision will be according to Section E. In no circumstance shall Contractor be entitled to lost profits for Work not performed due to termination.

J.6 ACTION UPON TERMINATION

J.6.1 Upon receiving a notice of termination, and except as directed otherwise by the Owner, Contractor shall immediately cease placing further subcontracts or orders for materials, services, or facilities. In addition, Contractor shall terminate all subcontracts or orders to the extent they relate to the Work terminated and, with the prior written approval of the Owner, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts and orders.

- J.6.2 As directed by the Owner, Contractor shall upon termination transfer title and deliver to the Owner all Record Documents, information, and other property that, if the Contract had been completed, would have been required to be furnished to the Owner.

SECTION K CONTRACT CLOSE OUT

K.1 RECORD DOCUMENTS

As a condition of final payment (refer also to section E.6), Contractor shall comply with the following: Contractor shall provide to Owner's Authorized Representative, three sets of Record Documents of the entire project. Record Documents shall depict the project as constructed and shall reflect each and every change, modification, and deletion made during the construction. Record Documents are part of the Work and shall be provided prior to the Owner's issuance of final payment. Record Documents include all modifications to the Contract Documents unless otherwise directed.

K.2 OPERATION AND MAINTENANCE MANUALS

As part of the Work, Contractor shall submit three completed operation and maintenance manuals ("O & M Manuals") and one (1) digital copy for review by the Owner's Authorized Representative prior to submission of any pay request for more than 75% of the Work. No payments beyond 75% will be made by the Owner until the O & M Manuals have been received. The O & M Manuals shall contain a complete set of all submittals, all product data as required by the specifications, training information, phone list of consultants, manufacturers, installer and suppliers, manufacturer's printed data, record and shop drawings, schematic diagrams of systems, appropriate equipment indices, warranties and bonds. The Owner's Authorized Representative shall review and return one O & M Manual for any modifications or additions required. Prior to submission of its final pay request, Contractor shall deliver three (3) complete and approved sets and one (1) digital copy of O & M Manuals to the Owner's Authorized Representative.

K.3 AFFIDAVIT/RELEASE OF LIENS AND CLAIMS

As a condition of final payment, the Contractor shall submit to the Owner's Authorized Representative a notarized affidavit/release of liens and claims form, in a form satisfactory to Owner, which states that all Subcontractors and suppliers have been paid in full, all disputes with property owners have been resolved, all obligations on the project have been satisfied, all monetary claims and indebtedness have been paid, and that, to the best of the Contractor's knowledge, there are no claims of any kind outstanding against the project. The Contractor shall indemnify, defend (with counsel of Owner's choice) and hold harmless the Owner from all claims for labor and materials finished under this Contract. The Contractor shall furnish complete and valid releases or waivers, satisfactory to the Owner, of all liens arising out of or filed in connection with the Work.

K.4 COMPLETION NOTICES

- K.4.1 Contractor shall provide Owner notice of both Substantial and Final Completion. The certificate of Substantial Completion shall state the date of Substantial Completion, the responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and the time within which the Contractor shall finish all items on the punchlist accompanying the Certificate. Both completion notices must be signed by the Contractor and the Owner to be valid. The Owner shall provide the final signature on the notices. The notices shall take effect on the date they are signed by the Owner.

- K.4.2 Substantial Completion of a facility with operating systems (e.g., mechanical, electrical, HVAC) shall be that degree of completion that has provided a minimum of thirty (30) continuous Days of successful, trouble-free operation, which period shall begin after all performance and acceptance testing has been successfully demonstrated to the Owner's Authorized Representative. All equipment contained in the Work, plus all other components necessary to enable the Owner to operate the facility in the manner that was intended, shall be complete on the Substantial Completion date. The Contractor may request that a punch list be prepared by the Owner's Authorized Representative with submission of the request for the Substantial Completion notice.

K.5 TRAINING

As part of the Work, and prior to submission of the request for final payment, the Contractor shall schedule with the Owner's Authorized Representative, training sessions for all equipment and systems, as required in the individual specifications sections. Contractor shall schedule training sessions at least four weeks in advance of the date of training to allow Owner personnel adequate notice. The O & M Manual shall be used as a basis for training. Training shall be a formal session, held after the equipment and/or system is completely installed and operational in its normal operating environment.

K.6 EXTRA MATERIALS

As part of the Work, Contractor shall provide spare parts, extra maintenance materials, and other materials or products in the quantities specified in the specifications, prior to final payment. Delivery point for extra materials shall be designated by the Owner's Authorized Representative.

K.7 ENVIRONMENTAL CLEAN-UP

As part of the Final Completion notice, or as a separate written notice submitted with or before the notice of Final Completion, the Contractor shall notify the Owner that all environmental pollution clean-up performed as a part of this Contract has been disposed of in accordance with all applicable rules, regulations, laws, and statutes of all agencies having jurisdiction over such environmental pollution. The notice shall reaffirm the indemnification given under Section F.5.1 above.

K.8 CERTIFICATE OF OCCUPANCY

The Contractor shall not be granted Final Completion or receive final payment if the Owner has not received an unconditioned certificate of occupancy from the appropriate state and/or local building officials, unless failure to obtain an unconditional certificate of occupancy is due to the fault or neglect of Owner.

K.9 OTHER CONTRACTOR RESPONSIBILITIES

The Contractor shall be responsible for returning to the Owner all items issued during construction such as keys, security passes, site admittance badges, and all other pertinent items. The Contractor shall be responsible for notifying the appropriate utility companies to transfer utility charges from the Contractor to the Owner. The utility transfer date shall not be before Substantial Completion and may not be until Final Completion, if the Owner does not take beneficial use of the facility and the Contractor's forces continue with the Work.

K.10 SURVIVAL

All warranty and indemnification provisions of this Contract, and all of Contractor's other obligations under this Contract that are not fully performed by the time of Final Completion or termination, shall survive Final Completion or any termination of the Contract

SECTION L LEGAL RELATIONS & RESPONSIBILITIES

L.1 LAWS TO BE OBSERVED

In compliance with ORS 279C.525, Sections L.2 through L.4 contain lists of federal, state and local agencies of which the Owner has knowledge that have enacted ordinances or regulations relating to environmental pollution and the preservation of natural resources that may affect the performance of the Contract:

L.2 FEDERAL AGENCIES

Agriculture, Department of Forest Service
Soil Conservation Service
Coast Guard
Defense,
Department of
Army Corps of
Engineers Energy,
Department of
Federal Energy Regulatory Commission
Environmental Protection Agency
Health and Human Services, Department of
Housing and Urban Development,
Department of Solar Energy and Energy
Conservation Bank Interior, Department of
Bureau of Land
Management Bureau of
Indian Affairs Bureau of
Mines
Bureau of Reclamation
Geological Survey
Minerals Management
Service U.S. Fish and
Wildlife Service Labor,
Department of
Mine Safety and Health Administration
Occupation Safety and Health
Administration Transportation,
Department of
Federal Highway Administration

Water Resources Council

L.3 STATE AGENCIES

Administrative Services, Department of
Agriculture, Department of
Soil and Water Conservation Commission
Columbia River Gorge Commission
Energy, Department of
Environmental Quality, Department of
Fish and Wildlife, Department of
Forestry, Department of
Geology and Mineral Industries, Department of
Human Resources, Department of
Consumer and Business Services, Department of
Land Conservation and Development Commission
Parks and Recreation, Department of
State Lands, Division of
Water Resources Department of

L.4 LOCAL AGENCIES

City Councils
County Courts
County Commissioner, Board of
Design Commissions
Historical Preservation Commission
Planning Commissions

MARION COUNTY TRANSITION CENTER

4000 Aumsville Hwy. S.E. Salem, OR 97317

(503)-581-1183 / (503)-588-6818 – Fax

WAIVER FOR RELEASE OF INFORMATION

TO WHOM IT MAY CONCERN:

I request and authorize you to furnish the Marion County Jail with any and all information that you may have concerning me, my employment, my citizenship, and my criminal history. Your cooperation in this reply will be used to assist the Marion County Jail in determining my qualifications to be a provider or volunteer with the Marion County Jail.

I hereby release you, your organization, and others from any liability or damage, which may result from furnishing the information requested. **While under contract and assigned to the jail, ANY arrest will immediately be reported to the Jail.** **Applicant's Initials:** _____

A photocopy reproduction of this request shall be, for all intents and purposes, as valid as the original, even though the said photocopy does not contain an original writing of my signature. You may retain this form for your files.

*Applicant's signature needs to be witnessed either by
Marion County Jail staff, or if unable to bring to the office, it
may be notarized and mailed to the address above.*

PRINT Applicant's Name _____

Other names used: _____

Address: _____ Gender M ___ F ___ DOB ___/___/___

City: _____ State: _____ Zip: _____

SSN: _____ - _____ - _____ Driver's License # _____ State: _____

Day Phone: _____ Cell/Message Phone: _____

Religious Volunteer: Program: _____ Leader: _____

OR - Check One: Interpreter ☐ Language _____ Contractor ☐ Evaluator ☐ Other ☐

Agency/Company: _____ Supervisor: _____

Applicant's Signature _____

Date _____

MC Jail Staff Signature _____

Date _____

Notary - If not signed in by Marion County Jail staff

State of Oregon. Subscribed & sworn to before me this _____ day of _____, 20____,

County of _____. Notary Signature _____

Commission Expires _____



MARION COUNTY SHERIFF'S OFFICE

JOE KAST, SHERIFF

PROFESSIONAL CONTRACTOR AGREEMENT

Visitor Name: _____ Date of Birth: _____
Last First MI

Occupation/Agency: _____

You must read, understand, and sign this Professional Contractor's Agreement before you may enter the security perimeter of the Marion County Jail.

SAFETY AND SECURITY ORIENTATION

RISKS OF BEING IN A SECURE FACILITY

Being in a jail is potentially dangerous. There are personal safety and security risks associated with inmate contact situations. In choosing to work in this setting, you assume those risks. The risks include, but are not limited to: physical or sexual assault, harassment, threats and the possibility of being taken hostage or of being killed.

SAFETY AND SECURITY

The doors to rooms are locked. You may not leave the room without staff opening one of the doors. Stand by the door when you finish with your work and someone will open a door for you. Note: other than the line up room, there may be a slight delay in the opening of the door.

JAIL DISTURBANCES

If a disturbance breaks out while you are here, staff will lock down all jail areas until the situation is under control. This means you may not leave the jail even if the disturbance is in another area of the jail. If you are involved in or near a disturbance, do the following:

1. Try to notify jail staff without jeopardizing your safety.
2. Take what cover you can find and protect yourself as best you can.
3. Do not try to control the situation by yourself.
4. Do not argue, confront, or fight with inmates.
5. Follow all instructions staff give you.

HOSTAGE SITUATIONS

Jail staff will take quick steps to free any hostages and restore jail operations safely during a hostage situation. If you are taken hostage:

1. Do what your captor tells you, unless you need to physically defend yourself from harm.
2. Do not talk to your captor unless it is necessary.

3. Do not agree or disagree with your captor's position—stay neutral.
4. Be alert. Watch everything. Keep mental notes of the situation.
5. Stay out of the way. Do not stand up unless you absolutely have to.
6. Wait, be patient and stay calm. Deputies will come and get you.
7. Do what responding deputies tell you when they re-take control of a hostage situation, using force as necessary.
8. Understand that deputies are likely to restrain all occupants in the hostage area until they can positively identify each person. This may include you.

During a hostage situation, jail staff will not negotiate an inmate release from custody or other requests in exchange for hostages.

SECURITY REQUIREMENTS

Specific security requirements you must abide by are the following:

1. **Do not discuss dates of future transports with inmates.** This jeopardizes the safety and security of jail staff, other inmates on the transport and members of the public.
2. **Do not pass personal mail or notes for inmates.** This is a breach of safety and security procedures for the jail. It would allow an inmate to circumvent the jail requirement that they use only the US Postal Service for written correspondence. It is also a contraband violation, which may result in your contractor privileges being revoked permanently and you being charged with a crime.
3. **Do not pass any verbal messages for inmates.** This is a breach of safety and security procedures for the jail. It would allow an inmate to circumvent the jail requirement that they only use the inmate telephone system or approved contact to communicate verbally with others outside their cell. Passing verbal messages may result in your contractor privileges being revoked permanently.
4. **Do not share any personal information with inmates.** This includes names of your family members, where you live and your personal telephone number. Giving such information could lead to safety and security issues for you and your family.

CONTRABAND ISSUES

Jail staff will not permit any contraband in the jail. Contraband is anything that a person possesses in a correctional facility that is prohibited by statute, rule, or order from being in the facility. Contraband may include items such as: cell phones, weapons, drugs and medications, cigarettes, lighters, sharp objects, pocket knives and food and drink not purchased through the jail commissary. For contact visits, it also includes items such as books, magazines, and newspapers. Generally, it is contraband if jail staff has not issued or authorized it or it endangers the safety and security of anyone at the jail or disrupts the good order of the jail.

To prevent introduction of contraband into the secure perimeter, jail staff may search any items and containers you bring into the jail before your work can take place. All contractors may be asked to submit to a pat-down search of their person. You may refuse to submit to a search of your person or belongings; however, jail staff will not allow you to conduct your work and will have you leave the premises. You will also be subject to possible permanent revocation of your contractor privileges. Searches may also occur during and after your work.

Do not bring any unnecessary items to a visit. Staff will let you take only those items needed to conduct the business of the visit. Jail staff may have you take off your coat, sweater, or similar outer layers of clothing that could conceal contraband. You may not take a cell phone or other two-way communication device into the facility. If you have a legitimate business reason for needing a laptop or other electronic device during a visit, you will need to request a **Marion County Jail Laptop/ Tablet User Agreement** from the Administration. Administrative staff will then review your request and notify you if you are approved to use your electronic device.

You may bring pens and pencils with you in order to complete any required paperwork. However, you may not allow an inmate to use or keep your pen or pencils. Pens and pencils not sold through our commissary system or provided by the jail are contraband. An inmate who possesses a writing implement not issued by the jail is subject to disciplinary action and sanctions.

Introduction of contraband into a correctional facility is a Class C felony under ORS 162.185 and is punishable by up to 5 years in prison and a fine of up to \$100,000.

Violation of any contraband statute, rule, or order is grounds for immediate and permanent revocation of all contractor privileges.

Jail staff may immediately end your work for violating a jail rule or condition. The Jail Commander has the discretion to revoke your contractor privileges permanently.

Contractors must undergo a criminal history check to identify possible security concerns.

CONTRACTOR DRESS STANDARDS

Jail staff will deny you entrance if you wear sexually suggestive or inappropriate clothing. Jail staff will consider clothing as being sexually suggestive for a jail setting if it exposes an undue amount of flesh on the chest, back, thigh, or midsection. This includes short shorts, skirts, and dresses; dresses or skirts with high slits; tank tops, halter or tube tops, or other clothing with plunging or low-cut necklines. Do not wear tight-fitting or see-through clothing or sheer and loose-weave fabrics. Footwear must be worn and be of adequate structure to prevent slipping and/or falling. Inappropriate clothing is that which displays insignias, language, symbols, or markings that indicate affiliation with a criminal gang, derogatory comments or slurs directed at a class of people, or may otherwise disrupt jail order or place a person's safety at risk.

ADDITIONAL RULES

1. Do not be under any influence of drugs or alcohol.
2. Do not take or attempt to bring contraband into the jail.
3. Do not behave in a manner that threatens the safety, security, and good order of the jail.
4. Do not engage in any type of sexual misconduct or harassment with inmates or others in the facility. Prohibited behavior includes, but is not limited to, kissing, hugging, caressing or hand-holding. The jail has zero tolerance for such conduct.
5. Abide by visitor dress standards.
6. Go directly to and from your assigned work area. All other areas are off limits.
7. Do not tamper with, damage, mark, or soil jail property.
8. Wear your contractor badge and return it at the end of the work.

PREA (PRISON RAPE ELIMINATION ACT)

The Prison Rape Elimination Act of 2003 ("PREA") was enacted to address the problem of sexual abuse of persons in the custody of U.S. correctional agencies. The Marion County Jail maintains a zero-tolerance policy for any sexual harassment or sexual abuse of any person in the jail. If you have any contact with inmates, however minimal, you are subject to the agency's zero-tolerance policy. Should you witness an event or hear any report or complaint of sexual harassment or abuse, you must notify Jail staff immediately.

STATEMENTS OF UNDERSTANDING AND CONDITIONS

Read, initial, and date each item below to acknowledge your understanding the content of the item and agreement to the stated condition. Sign after the indemnification statement on the next page.

1. I understand access to the jail for contractual work is a privilege granted to select professionals solely at the discretion of jail administration. I understand this privilege, may be revoked immediately and revoked permanently.

Initials and Date: _____

2. I understand while in the Marion County Jail, I will come in contact with people who have been charged with or convicted of misdemeanor or felony crimes. I understand this is potentially dangerous. I understand that I risk being physically or sexually assaulted, killed, or taken hostage.

Initials and Date: _____

3. I agree not to bring contraband into the jail. I understand contraband is anything a person possesses in a jail that is prohibited by statute, rule, or order from being in such a facility. It includes things like cell phones, weapons, drugs and medications, cigarettes, lighters, sharp objects, pocketknives, and food. This also includes items like books, magazines, and newspapers. I further understand violation of any contraband statute, rule, or order is grounds for the immediate and permanent revocation of contractor work privileges.

Initials and Date: _____

4. I understand supplying contraband in a jail is a crime and the Sheriff will support prosecution of violators.

Initials and Date: _____

5. I understand I may be asked to submit to a search of my person or property by jail staff before, during, or after work, and I will be removed from the premises if I refuse such a request. I further understand if I refuse such a request my contractor work privileges may be permanently revoked.

Initials and Date: _____

6. I understand I am prohibited from divulging any transport schedule information to inmates and violation of this provision is grounds for immediate and permanent revocation of all contractor working privileges.

Initials and Date: _____

7. I understand I am prohibited from passing mail, notes, or any messages to or from inmates. I further understand that doing so is grounds for the immediate and permanent revocation of all working privileges.

Initials and Date: _____

8. I have read and understand the instructions to follow if a disturbance occurs while working.

Initials and Date: _____

9. I have read and understand the instructions to follow if I am taken hostage while in the facility.

Initials and Date: _____

10. I agree to abide by any written or oral special conditions jail staff applies to any of my contractual work. I understand failure to do so would be grounds for the immediate and permanent revocation of working privileges.

Initials and Date: _____

11. I have read and fully understand the warnings, requirements, rules, and conditions of this Professional Contractor Agreement. I agree to abide by its requirements, rules, and conditions while I am conducting business at the Marion County Jail. I further understand any violation of this agreement is grounds for the immediate and permanent revocation of all contractor privileges.

Initials and Date: _____

12. I promise to notify the Marion County Jail if I am arrested or charged with a crime.

Initials and Date: _____

ACKNOWLEDGMENT OF RISKS AND INDEMNIFICATION

I am aware of the risks of working inside a jail, and I voluntarily assume those risks. By signing below I agree on behalf of myself, my heirs, executors, administrators and assigns, to release, waive, discharge, and relinquish any action or causes of action that arise for myself or my estate, and agree that under no circumstances will I or my heirs, executors, administrators and assigns prosecute or present any claim for personal injury, property damage or wrongful death against Marion County, or any of its officers, agents, servants, or employees for any of said causes of action, whether the same shall arise by the negligence of any of said persons, or otherwise. **It is my intention to exempt and relieve Marion County, its officers, agents, servants, or employees from liability for personal injury, property damage, or wrongful death that arises or results from my contractual work inside the Marion County Jail.**

Signature of Contractor

Date

Signature of Jail Staff Receiving Form

Date

LEDS check completed by:

Initials

Date

Administration Review completed by:

Alpha#

Date

Approved ☐

Denied ☐

Exhibit 8 ITB MC Jail Boiler

EXHIBIT 1
C25102-BS-624-19
PRICING SUBMITTAL FORM

PRICING SUBMITTAL INSTRUCTIONS:

Offerors shall enter pricing and other required information for all Bid Items listed in this Pricing Submittal Form. If this Pricing Submittal Form is replaced by Addendum, Offerors shall use the Addendum form to provide pricing and other required information. If the Pricing Submittal Form is only modified by Addendum, Offerors shall follow the instructions in the Addendum for making modifications to the Pricing Submittal Form. Failure to supply the required information in the Pricing Submittal Form or subsequent Addenda may result in Bid rejection as non-responsive.

BASE BID and ALTERNATES: To include all work described in the ITB, Plans, Specifications and any issued Addenda.

BASE BID - LUMP SUM: \$ 183,400

ALTERNATE #1- LUMP SUM: \$ 36,900

ALTERNATE #2- LUMP SUM: \$ 49,400

TOTAL BASE BID AND ALL ALTERNATES: \$ 269,700

BIDDER NAME: Hydro-Temp Mechanical, Inc.

FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

PROJECT NAME: Jail Boiler Replacement

BID #: C25102-BS-624-19 CLOSING: Date: 10/23/2019 Time: 2:30

This form must be submitted at the location specified in the Invitation to Bid on the advertised Closing date or within two working hours after the advertised Closing time.

List below the name of each subcontractor that will be furnishing labor or will be furnishing labor and materials and that is required to be disclosed, the category of work that subcontractor will be performing and the dollar value of the subcontract. Enter "NONE" if there are no subcontractors that need to be disclosed. (ATTACH ADDITIONAL SHEETS IF NEEDED.)

SUBCONTRACTOR NAME	CATEGORY	DOLLAR VALUE
<i>Clima-Tech</i>	<i>Controls</i>	<i>\$ 18,740</i>
		\$
		\$
		\$
		\$
		\$
		\$
		\$

Failure to submit this form by the disclosure deadline will result in a nonresponsive bid. A nonresponsive bid will not be considered for award.

Form submitted by (bidder name): Hydro-Temp Mechanical

Contact name: Mitch Gatzke Phone no.: 503-899-0311

SECTION I - RESPONSIBILITY INQUIRY/CONTRACTOR REFERENCES

The County reserves the right, pursuant to MCPCR 40-0390 to investigate and evaluate, at any time prior to award and execution of the Contract, the apparent successful Offeror's responsibility to perform the Contract. Submission of a signed Offer shall constitute approval for the County to obtain any information the County deems necessary to conduct the evaluation. The County shall notify the apparent successful Offeror, in writing, of any other documentation required. Failure to promptly provide this information shall result in Offer rejection. The County may postpone the award of the Contract after announcement of the apparent successful Offeror in order to complete its investigation and evaluation. Failure of the apparent successful Offeror to demonstrate responsibility, as required under MCPCR 40-0390, shall render the Offeror non-responsible and shall constitute grounds for Offer rejection, as required under MCPCR 40-0440.

11. CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

The Offeror certifies to the best of its knowledge and belief that neither it nor any of its principals:

- (1) Are presently debarred, suspended, proposed for debarment, or declared ineligible from submitting bids or proposals by any federal, state or local entity, department or agency;
- (2) Have within a three-year period preceding this offer, been convicted or had a civil judgement rendered against them for: commission of fraud or criminal offense in connection with obtaining, attempting to obtain, or performance of a public (Federal, state or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statement, tax evasion, or receiving stolen property;
- (3) Are presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of these offenses enumerated in paragraph 2 of this certification;
- (4) Have within a three-year period preceding this offer, had one or more contracts terminated for default or failure to complete by any Federal, state or local public agency.
- (5) Have within a 10-year period preceding this offer been the debtor in a bankruptcy case.
- (6) Have any present pending or unsatisfied judgements against it.
- (7) Have within a 10-year period preceding this offer, been party to litigation, arbitration or mediation on a matter related to payment to subcontractors or work performance on a contract.

The Offeror will provide immediate written notice to the County if at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

Where Offeror is unable to certify to any of the statements in this certification, Offeror shall attach an explanation to this offer. A certification that any of the items in the above paragraph exists will not necessarily be considered in connection with a determination of the Offeror's responsibility.

12. OFFEROR REFERENCES FOR COMPARABLE PROJECTS IN SIZE AND SCOPE

References for comparable projects in size and scope: Offeror shall provide a list of three different project references of projects that Offeror worked on within the last three years of comparable size and scope. Only Contractors that have experience on projects similar in both size and complexity within the last three (3) years will be considered for this project.

Offerors will use their own form to supply their list of references. The list of three different project references shall include the following information:

Name of Project
Project Location
Project Date
Firm Name for Contact Person #1
Name of Contact Person #1
Telephone Number for Contact Person #1
Fax number for Contact Person #1
Firm Name for Contact Person #2

Name of Contact Person #2
Telephone Number for Contact Person #2
Fax number for Contact Person #2

The references will be checked to determine if they are supportive of the Offeror's ability to meet the requirements of this ITB.

Offeror must provide references that can be contacted regarding the quality of workmanship and service provided to current and past customers.

The County reserves the right to choose and investigate any reference whether or not furnished by the Offeror, and to investigate past performance of any Offeror with respect to its successful performance of similar projects, compliance with specifications and contractual obligations, its completion or delivery of service on schedule, and its lawful payment of suppliers, subcontractors, and employees.

The County may postpone the award or execution of the Contract after the announcement of the apparent successful Offeror in order to complete its investigation. The County may reject a bid if, the opinion of the County, overall reference responses indicate inadequate performance.

The County will make three attempts to contact the references from the list provided by the Contractor.

Each reference contacted will be asked the same questions, including but not limited to the above factors, including: (1) quality of service; (2) delivery; (3) responsiveness to reported problems, including orders and billing; (4) how well Contractor met the terms of the contract; and (5) whether the reference would choose to hire the Contractor again.

Contractor's supervisor who is overseeing the work shall have experience on projects similar in both size and complexity and submit with the bid, references for three projects that were performed within the last three (3) years.

References provided for the Contractor's supervisor may be the same three (3) references that are provided for the Contractor.

The list of references will include the following information:

Name of Project
Project Location
Project Date
Firm Name for Contact Person #1
Name of Contact Person #1
Telephone Number for Contact Person #1
Fax number for Contact Person #1
Firm Name for Contact Person #2
Name of Contact Person #2
Telephone Number for Contact Person #2
Fax number for Contact Person #2

Offeror must provide references with the bid that can be contacted regarding the quality of workmanship and service that the Contractor's supervisor provided on current and past projects of similar size and complexity.

SECTION J - RECYCLED PRODUCTS; DEMOLITION WORK

Vendors shall use recyclable materials to the maximum extent economically feasible in the performance of the Contract Work set forth in this document. ORS 279A.010(ii) provides as follows: "'Recycled product' means all materials, goods and supplies, not less than 50 percent of the total weight of which consists of secondary and post-consumer waste with not less than 10 percent of total weight consisting of post-consumer waste. 'Recycled product' also includes any product that could have been disposed of as a solid waste, having completed its life cycle as a consumer item, but otherwise is refurbished for reuse without substantial alteration of the product's form."

ORS 279A.010(u) provides as follows: "'Post-consumer waste' means a finished material which would normally be disposed of as solid waste, having completed its life cycle as a consumer item. 'Post-consumer waste' does not include manufacturing waste."

ORS 279A.010(jj) provides as follows: "'Secondary waste materials' means fragments of products of finished products of a manufacturing process which has converted a virgin resource into a commodity of real economic value, and includes post-consumer waste, but does not include excess virgin resources of the manufacturing process. For paper, 'secondary waste materials' does not

include fibrous waste generated during the manufacturing process such as fibers recovered from waste water or trimmings of paper machine rolls, mill broke, wood slabs, chips, sawdust, or other wood residue from a manufacturing process."

ORS 279A.010(hh) provides as follows: "Recycled PETE" means post-consumer polyethylene terephthalate material."

Because this Contract includes demolition work, as required by ORS 279C.510(1), the Contractor shall salvage or recycle construction and demolition debris, if feasible and cost-effective.

By my signature in Section O, I, the undersigned duly authorized representative of the Offeror, hereby affirm that Offeror will comply with the above recycled products provisions and demolition work provisions.

SECTION K - RESIDENCY INFORMATION

MCPCR 40-0390 states "In determining the lowest responsive Bid, the County shall, in accordance with Section 40-0200, add a percentage increase to the Bid of a nonresident Bidder equal to the percentage, if any, of the preference given to that Bidder in the state in which the Bidder resides."

"Resident Bidder" means a Bidder/Offeror who has paid unemployment taxes or income taxes in this state during the 12 calendar months immediately preceding submission of the Bid, has a business address in this State, and has stated in the offer whether the Bidder/Offeror is a "resident Bidder".(MCPCR 10-0110)

"Non-resident Bidder" means a Bidder/Offeror who is not a resident Bidder/Offeror, as defined above. (MCPCR 10-0110)

a. Check one: Bidder is a (☒) Resident Bidder
(☐) Non-resident Bidder

b. If a Resident Bidder, enter your Oregon business address: 28465 SW Boberg Rd.
Wilsonville, OR 97070

c. If a Non-resident Bidder, enter state of residency: _____

FOREIGN CONTRACTOR: If the amount of the Contract exceeds ten thousand dollars (\$10,000), and if Contractor is not domiciled in or registered to do business in the State, Contractor shall promptly provide to the Oregon Department of Revenue all information required by that Department relative to the Contract. The County shall be entitled to withhold final payment under the Contract until Contractor has met this requirement.

SECTION L - CERTIFICATION OF COMPLIANCE WITH TAX LAWS

By my signature in Section O of this Contract, I, hereby attest or affirm under penalty of perjury: That I am authorized to act on behalf of the Contractor in this matter, that I have authority and knowledge regarding the payment of taxes, and that Contractor is, to the best of my knowledge, not in violation of any Oregon Tax Laws. For purposes of this certification, "Oregon tax laws" are those tax laws imposed by ORS 320.005 to 320.150 and ORS 403.200 to 403.250 and ORS Chapters 118, 314, 316, 317, 318, 321 and 323; the elderly rental assistance program under ORS 310.630 to 310.706; and any local tax laws administered by the Oregon Department of Revenue under ORS 305.620.

SECTION M - CERTIFICATION OF DRUG-TESTING LAW REQUIREMENTS

(1) Pursuant to MCPCR 40-0200, the Offeror certifies by its signature on these solicitation document forms that it has a Qualifying Drug Testing Program in place for its employees that includes, at a minimum, the following:

(a) A written employee drug testing policy, (b) Required drug testing for all new Subject Employees or, alternatively, required testing of all Subject Employees every 12 months on a random selection basis, and (c) Required testing of a Subject Employee when the Offeror has reasonable cause to believe the Subject Employee is under the influence of drugs.

(2) A drug testing program that meets the above requirements will be deemed a "Qualifying Employee Drug Testing Program." An employee is a "Subject Employee" only if that employee will be working on the Project job site.

(3) If awarded a Public Improvement Contract as a result of this solicitation, Offeror agrees that at the time of Contract execution it shall represent and warrant to the Agency that its Qualifying Employee Drug Testing Program is in place and will continue in full force and effect for the duration of the Public Improvement Contract. The Agency's performance obligation (which includes, without limitation, the Agency's obligation to make payment) shall be contingent on Contractor's compliance with this representation and warranty.

(4) If awarded a Public Improvement Contract as a result of this solicitation, Offeror also agrees that at the time of Contract execution, and as a condition to Agency's performance obligation (which includes, without limitation, the Agency's obligation to make payment), it shall require each subcontractor providing labor for the Project to:

(a) Demonstrate to the Contractor that it has a Qualifying Employee Drug Testing Program for the subcontractor's Subject Employees, and represent and warrant to the Contractor that the Qualifying Employee Drug Testing Program is in place at the time of subcontract execution and will continue in full force and effect for the duration of the subcontract; or (b) Require that the subcontractor's Subject Employees participate in the Contractor's Qualifying Employee Drug Testing Program for the duration of the subcontract.

SECTION N - CERTIFICATION OF COMPLIANCE WITH NON-DISCRIMINATION LAWS

By my signature in Section O, I certify that I am authorized to act on behalf of Bidder in this matter and that Bidder has not discriminated and will not discriminate against a subcontractor in awarding a subcontract because the subcontractor is: (a) a minority, women or emerging small business enterprise certified under ORS 200.055; or (b) a business enterprise that is owned or controlled by or that employs a disabled veteran, as defined in ORS 408.225.

SECTION O - SIGNATURE OF BIDDER'S DULY AUTHORIZED REPRESENTATIVE

THIS BID MUST BE SIGNED IN INK BY AN AUTHORIZED REPRESENTATIVE OF THE BIDDER; ANY ALTERATIONS OR ERASURES TO THE BID MUST BE INITIALED IN INK BY THE UNDERSIGNED AUTHORIZED REPRESENTATIVE.

The undersigned acknowledges, attests and certifies individually and on behalf of the Bidder that:

- (1) He/she is a duly authorized representative of the Bidder, has been authorized by Bidder to make all representations, attestations, and certifications contained in this Bid and all Addenda, if any, issued.
- (2) Bidder, acting through its authorized representatives, has read and understands all Bid instructions, Specifications, Plans, terms and conditions contained in this Bid document (including all listed attachments and Addenda, if any, issued);
- (3) The Bid submitted is in response to the specific language contained in the ITB, and Bidder has made no assumptions based upon either (a) verbal or written statements not contained in the ITB, or (b) any previously-issued ITB, if any.
- (4) The County shall not be liable for any claims or be subject to any defenses asserted by Bidder based upon, resulting from, or related to, Bidder's failure to comprehend all requirements of the ITB.
- (5) The C shall not be liable for any expenses incurred by Bidder in preparing and submitting its Offer or in participating in the Offer evaluation/selection process.
- (6) The Bidder agrees to be bound by and comply with all applicable requirements of ORS 279C.800 through ORS 279C.870 and the administrative rules of the Bureau of Labor and Industries (BOLI) regarding prevailing wage rates.
- (7) The Offer was prepared independently from all other Bidders, and without collusion, fraud, or other dishonesty.
- (8) Bidder is bound by and will comply with all requirements, Specifications, Plans, terms and conditions contained in this Bid (including all listed attachments and Addenda, if any, issued);
- (9) Bidder will furnish the designated item(s) or service(s) in accordance with the Specifications, Plans and requirements, and will comply in all respects with the terms of the resulting Contract upon award;
- (10) Bidder represents and warrants that Bidder has the power and authority to enter into and perform the Contract and that the Contract, when executed and delivered, shall be a valid and binding obligation of Contractor enforceable in accordance with its terms; and
- (11) All affirmations and certifications contained in Sections J, K, L, M and N are true and correct.

Authorized Signature:  Title: VP of Preconstruction

Contact Person (Type or Print): Jared Carkin

Telephone Number: (503) 209-6048

Email: jaredc@hydrottempmech.com

**HYDRO-TEMP MECHANICAL, INC.**

28465 SW Boberg Road · Wilsonville, OR 97070
Tel 503.582.8525 · Fax 503.582.1914 · CCB# 63907
www.hydrotempmech.com

**Marion CO Jail Boiler Replacement
October 23, 2019 2:30PM**

**PROJECT REFERENCES
AND CONTRACTOR'S SUPERVISOR REFERENCES**

1. Name of Project Marion County Sheriff's Office
Project Location Salem, OR
Project Date 9/2017 – 7/2018
Firm Name for Contact Person #1 Emerick Construction
Name of Contact Person #1 Corey Lohman
Telephone Number for Contact Person #1 503.777.5531
Firm Name for Contact Person #2 Marion County
Name of Contact Person #1 Kevin Burton
Telephone Number for Contact Person #1 503.582.4763

2. Name of Project Oregon Convention Center CT, Pumps & Piping Replacement
Project Location OR Convention Center, Portland, OR 97220
Project Date November 2018 – January 2019
Firm Name for Contact Person #1 Oregon Convention Center
Name of Contact Person #1 Josh Lipscomb, Facilities Manager
Telephone Number for Contact Person #1 503.381.3369
Firm Name for Contact Person #2 Oregon Convention Center
Name of Contact Person #2 Dan Hoskin
Telephone Number for Contact Person #2 971.284.7765

3. Name of Project Marion County Transition Center
Project Location Salem, OR
Project Date 8/2017 – 5/2018
Firm Name for Contact Person #1 Marion County
Name of Contact Person #1 Kevin Burton
Telephone Number for Contact Person #1 503.582.4763
Firm Name for Contact Person #2 AC+Co Architects
Name of Contact Person #2 Richard Rothweiler, AIA
Telephone Number for Contact Person #2 503.581.4114



O R E G O N

**INVITATION TO BID
JAIL BOILER REPLACEMENT**

C25102-BS-624-19

Release Date: September 25, 2019

ITB Due Date: 2:30 p.m. (PST) on October 23, 2019

ITB Opening:

Marion County Business Services
555 Court Street NE
Salem, OR 97301
Room #: 4231

Submit ITB's to:

Marion County Business Services
Courthouse Square
555 Court Street NE Suite 4250
Salem, OR 97301

**Electronic copies of this ITB and attachments, if any, can be obtained from the ORPIN website
<http://orpin.oregon.gov/open.dll/welcome> and view Marion County Opportunity Number C25102-BS-624-19**

All Bid documents shall be submitted in hard copy. Electronic or facsimile submissions shall be rejected.

Notice

ORCPP Notice

ORCPP Bid/RFP

Marion County (ORCPP)

ITB Jail Boiler Replacement

Only Manual Bids Allowed

Page 1 of 3



Attachments Exist

Organization Attachments Do Not Exist

Documents for Purchase Do Not Exist

Issued By

Marion County (ORCPP)
555 Court St. NE
Salem, OR 97301

Contact: Tina L. Toney
Phone: 1 (503) 373-4388
Fax:
Email: ttoney@co.marion.or.us

Issued For

Marion County (ORCPP)
555 Court St. NE
Salem, OR 97301

Notice #
C25102-BS-624-19

Publish Date & Time
09/25/2019 12:00 PM

Closing Date & Time
10/23/2019 2:30:00 PM

Time Zone
Pacific Time

All dates are mm/dd/yyyy

Company Name _____
Address _____
City _____ State _____ Zip Code _____
Contact Name _____
Phone _____ Fax _____
Email _____
FID (Federal Business Number) _____
Resident Bidder ☐ Yes ☐ No FID _____
(Do not enter SSN)

Offerer Comments

Notice Summary

The purpose of the ITB is to establish a Contract for the Marion County Jail Boiler Replacement for the benefit of Business Services. The intent of this ITB is the removal and replacement of six (6) existing boilers, back up water heater and control systems with the least impact to jail population. Owner furnished boilers, contractor to install. The Work contemplated under this Contract includes all labor, materials (except boilers), transportation, permits, incidental costs, equipment and services for, the completion of all construction Work in connection with the Project described in the Contract Documents and Marion County General Conditions.

PRE-BID CONFERENCE:

MANDATORY PRE-BID CONFERENCE:

A mandatory pre-bid conference will be held on October 3, 2019 11:00 A.M (PST), located at 4000 Aumsville Hwy, Salem Oregon.

Any statements made at this conference will not change the Plans, Specifications or other Contract Documents unless an Addendum has been issued from COUNTY and advertised on the ORPIN System.

BIDDERS OR THEIR REPRESENTATIVE ARE REQUIRED TO ATTEND THIS MANDATORY PRE-BID CONFERENCE. BIDS WILL

Notice
ORCPP Notice
ORCPP Bid/RFP
Marion County (ORCPP)
ITB Jail Boiler Replacement
Only Manual Bids Allowed
Notice #: C25102-BS-624-19

Page 2 of 3

ONLY BE EVALUATED FROM BIDDERS OR THEIR REPRESENTATIVE WHO REGISTERED AND ATTENDED THE MANDATORY PRE-BID CONFERENCE, AND ALL OTHER BIDS WILL BE CONSIDERED NON-RESPONSIVE.

PROJECT ESTIMATE:

The following range is a project estimate for bonding purposes: \$300,000.00

CONTRACT DATES:

PROJECT START DATE: Upon Execution of this Agreement
SUBMISSION OF SCHEDULE OF VALUES: Fourteen days from execution of this Agreement
SUBSTANTIAL COMPLETION: May 30, 2020
FINAL COMPLETION: June 15, 2020

LIQUIDATED DAMAGES: None

PROJECT DESCRIPTION

Work would be in accordance with the construction drawings and specifications to replace the 6 ModCon boilers with 3 KN 16+ Owner supplied boilers. The ModCon boilers will remain the property of the Owner and coordination may be necessary to allow surplus or purchaser to receive these boilers.

The boilers provide heat to the inmates of the jail and the County is required to make every effort to ensure their comfort. Temporary heating or cooling may be necessary to achieve this requirement. The jail must remain secure even with temporary heating or cooling so no doorways can be blocked open, no cords or duct left where inmates may reach them and any other such precautions must be maintained.

Owner's Expectations:

- The jail facility will remain secure at all times.
- Construction shall not begin before March 2020 for alignment with steadier temperatures.
- All workers prime or subcontracted must be cleared through the County's criminal background check for required CJIS clearance prior to working at the facility (Attachment 7)
- Work with the county to provide necessary heating and or cooling for the jail population.
- Any special materials will be supplied by the contractor.
- Work will be performed between the hours of 7:00 AM and 5:00 PM Monday - Friday, or by special arrangement.

Proposer's Responsibilities:

- Evaluate the existing building, construction drawings and specifications and as built drawing to become familiar with the jail layout and systems.
- Keep track of all tools, materials and supplies at all times.
- Provide temp heat or cooling as necessary and determined by the authorized representative for the county.
- Perform all work in accordance with applicable local and state codes.
- Inform occupants of the work prior to starting.
- Perform all work in a professional manner.
- Ensure that reasonable protection will be implemented as to keep the areas from damage that may be caused by work.

Deliverables:

- Preliminary schedule
- Cost as a Schedule of Values showing
 - o Materials Cost
 - o Labor
 - o Profit and Overhead



**INVITATION TO BID
JAIL BOILER REPLACEMENT**

C25102-BS-624-19

Release Date: September 25, 2019

ITB Due Date: 2:30 p.m. (PST) on October 23, 2019

ITB Opening:

Marion County Business Services
555 Court Street NE
Salem, OR 97301
Room #: 4231

Submit ITB's to:

Marion County Business Services
Courthouse Square
555 Court Street NE Suite 4250
Salem, OR 97301

Electronic copies of this ITB and attachments, if any, can be obtained from the ORPIN website

<http://orpin.oregon.gov/open.dll/welcome> and view Marion County Opportunity Number C25102-BS-624-19

All Bid documents shall be submitted in hard copy. Electronic or facsimile submissions shall be rejected.

SECTION A - TABLE OF CONTENTS

SECTION A	TABLE OF CONTENTS
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ATTACHMENT B	PLANS

SECTION B - DEFINITIONS

B.1 DEFINITIONS: Together with the Definitions found in Section A.1 of the General Conditions, the following definitions apply to this ITB and the resulting Contract.

B.1.1 "Addendum" means an addition or deletion to, a material change in, or a clarification of, the ITB. Each Addendum shall be labeled as such and shall be made available to all interested Offerors in accordance with MCPCR 40-0250(2). The plural form of "Addendum" is "Addenda."

B.1.2 "Bid" means the Offeror's written offer submitted in response to the ITB, including all necessary attachments and information required to be submitted prior to award. Bid also means "Offer".

B.1.3 "Bidder" means an individual, organization or representative of an organization that submits a Bid in response to an ITB. Bidder also means "Offeror".

B.1.4 "Closing" means the date and time set in the ITB for Bid submission, after which Bids may not be submitted, modified, or withdrawn by Bidder.

B.1.5 "County" means Marion County, acting through its Business Services.

B.1.6 "Invitation to Bid" or "ITB" means all documents, whether attached or incorporated by reference, and any Addenda thereto, used for soliciting Bids.

B.1.7 "Opening" means the date/time set to read the Bid submittals.

B.1.8 "Oregon Procurement Information Network" or "ORPIN" or "ORPIN System" means the on-line electronic Oregon Automated Procurement System administered by County. The ORPIN System website is located at: <http://orpin.oregon.gov/open.dll/welcome>

SECTION C - GENERAL BIDDING INFORMATION/INSTRUCTIONS TO OFFERORS

C.1 GENERAL INFORMATION

C.1.0 MANDATORY PRE-BID CONFERENCE:

C.1.0.1 A mandatory pre-bid conference will be held on **October 3, 2019 11:00 A.M (PST)**, located at 4000 Aumsville Hwy, Salem Oregon.

C.1.0.2 Any statements made at this conference will not change the Plans, Specifications or other Contract Documents unless an Addendum has been issued from County and advertised on the ORPIN System.

BIDDERS OR THEIR REPRESENTATIVE ARE REQUIRED TO ATTEND THIS MANDATORY PRE-BID CONFERENCE. BIDS WILL ONLY BE EVALUATED FROM BIDDERS OR THEIR REPRESENTATIVE WHO REGISTERED AND ATTENDED THE MANDATORY PRE-BID CONFERENCE, AND ALL OTHER BIDS WILL BE CONSIDERED NON-RESPONSIVE.

C.1.1 POINT(S) OF CONTACT:

C.1.1.1 The single contact point for questions regarding the ITB, forms, Specifications, Plans, bidding process, change, clarification, the award process, protests and any other issues that may arise, is **Tina Toney** e-mail **ttoney@co.marion.or.us**

C.1.1.2 The contact point for requests for brand approval, or substitution requests is **Tina Toney** e-mail **ttoney@co.marion.or.us**

C.1.2 ENGINEER AND CONSULTANT INFORMATION:

The following is a list of any engineers and consultants used on this project. This list is for informational purposes only. Offerors are prohibited from contacting these engineers and consultants during the solicitation process, unless otherwise authorized in this ITB.

CBD Engineering, LLC

C.1.3 INVITATION TO BID DOCUMENT AVAILABILITY:

C.1.3.1 ITBs, ADDENDA AND ATTACHMENTS: ITBs, including all Addenda and most attachments, are posted on ORPIN as part of the solicitation document and will not be mailed to prospective Offerors. Offerors without access to ORPIN may order hardcopies at a Plan Center. .

C.1.3.2 ATTACHMENTS: Some exhibits and attachments cannot be viewed or downloaded through ORPIN. In these cases, the solicitation will include instructions on how to obtain these documents.

C.1.3.3 HARD COPY DOCUMENT FEES & DELIVERY:

Offeror may request copies of the Bid Documents from Marion County Business Services Attention: Tina Toney email requests to ttoney@co.marion.or.us. Bid documents will be in a PDF format and will emailed electronically to the requestor. The requestor will be responsible for printing full size copies of the bid documents.

C.1.3.4 ADDENDA: Addenda are incorporated with the original solicitation as an attachment and can be viewed and downloaded by registered suppliers. Offerors should consult the ORPIN System regularly until Closing to avoid missing any Addenda.

C.1.4 SUPPLIERS LIST:

To be listed on the suppliers list, interested parties must be registered on ORPIN. Suppliers can register in ORPIN at: orpin.oregon.gov

Interested parties who download ITB documents from ORPIN will automatically be added to the suppliers list. Interested parties who obtain the ITB documents from other means may add themselves to the suppliers list on ORPIN. Interested parties who have entered their company on ORPIN are responsible for making sure information is correct and accurate. Marion County assumes no responsibility for the content of the interested parties' information shown on ORPIN.

NOTE: OFFERORS WHO OBTAIN ITB DOCUMENTS, PLANS AND SPECIFICATIONS FROM PLAN CENTERS WILL NOT APPEAR ON THE SUPPLIERS LIST. See Section C.1.4.

C.1.5 TRADE SECRETS:

Any information Offeror submits in response to the ITB that Offeror considers a trade secret under ORS 192.501(2) or confidential proprietary information, and that Offeror wishes to protect from public disclosure, must be clearly labeled with the following: "This information constitutes a trade secret under ORS 192.501(2) or confidential proprietary information, and is not to be disclosed except in accordance with the Oregon Public Records Law, ORS Chapter 192." Offerors are cautioned that price information submitted in response to an ITB is generally not considered a trade secret under the Oregon Public Records Law. Further, information submitted by Offerors that is already in the public domain is not protected. The County shall not be liable for disclosure or release of information when authorized or required by law or court order to do so. The County shall also be immune from liability for disclosure or release of information under the circumstances set out in ORS 646.473(3).

C.1.6 SOLICITATION LAW, RULES AND GENERAL CONDITIONS:

This ITB and the resulting Contract are governed by Oregon Law. Specific laws and rules that govern the solicitation process are found in Chapters 279A and 279C of the Oregon Revised Statutes, and Section 10 and 40 of the Marion County Public Contracting Rules. The ITB and resulting Contract may be subject to other laws and rules. Offerors should obtain and become acquainted with the applicable provisions of the above laws and rules. Copies may be obtained as follows:

C.1.6.1 OREGON REVISED STATUTES (ORS Chapters 279A and 279C) - May be obtained from Legislative Counsel Committee, S101 State Capitol, Salem, OR 97310-0630. Phone (503) 378-8146, or on line at: <http://www.leg.state.or.us/ors/home.html>

C.1.6.2 Marion County Public Contracting Rules (MCPCR Section 10 and 40) can be obtained from <http://www.co.marion.or.us/FIN/Pages/contracts.aspx> or email PO_Contracts@co.marion.or.us.

C.1.6.3 In addition to the foregoing, this solicitation and the Contract are governed by the MARION COUNTY GENERAL CONDITIONS FOR PUBLIC IMPROVEMENT CONTRACTS, "General Conditions" dated July 7, 2017, which are incorporated herein by reference. See Exhibit 6.

C.1.7 BRAND NAME USAGE:

C.1.7.1 BRAND NAME: Any brand name listed in the specifications without an "or equal" "or approved equal" shall establish the minimum requirements for quality, utility, durability, function, and purpose. Other brand names may be used in the construction of the project as long as they are equal to or better than the product brand named, and the brand named is not mandated pursuant to a brand name exemption.

C.1.7.2 BRAND NAME "OR EQUAL": Any brand name listed in the specifications with an "or equal" shall establish the minimum requirements for quality, utility, durability, function, and purpose. Other brand names may be used in the construction of the project as long as they are equal to or better than the product brand named, and the proposed product has been approved in writing by the Owner's Authorized Representative prior to installation, and the brand named is not mandated pursuant to a brand name exemption.

The Owner's Authorized Representative shall determine, in its sole discretion, whether a product offered is "or equal".

C.1.7.3 BRAND NAME "OR APPROVED EQUAL": Any brand name listed in the specifications with an "or approved equal" or an "or approved equivalent" shall establish the minimum requirements for quality, utility, durability, function, and purpose. Other brand names may be used in the construction of the project as long as they are equal to or better than the product brand named, and the product has been pre-approved in writing **during the bidding process** detailed in Section C.2, and the brand named is not mandated pursuant to a brand name exemption.

County shall determine, in its sole discretion, whether a product offered is "or approved equal".

C.2 SOLICITATION PROTEST; REQUEST FOR CHANGE; REQUEST FOR CLARIFICATION; REQUEST FOR BRAND NAME / PRODUCT SUBSTITUTION

C.2.1 PROCEDURE: The appropriate means of seeking clarifications or modifications to provisions of an ITB are through (a) requests for approval of an "or approved equal" or an "or approved equivalent"; (b) requests for clarification; (c) formal submittal of requests for changes to contractual terms or Specifications or Plans; and (d) formal submittal of protests of contractual terms or Specifications or Plans. Any Bid response that includes non-approved alternate product brands where approval is required, or that takes exception to the Specifications or Plans or contractual terms of the ITB may be deemed non-responsive and may be rejected.

C.2.2 METHOD OF SUBMITTING REQUESTS FOR MODIFICATION OF ITB PROVISIONS: Envelopes containing requests for brand approval, requests for substitution, requests for clarification, requests for change, and Bid protests shall be marked as follows:

Bid Request for:

Brand Approval/Request for Substitution/Request for Clarification/Request Change/Protest

ITB Number: **C25102-BS-624-19**

Closing Date & Time:

and must be received by the appropriate point of contact as identified in Section C.1.1 by **4:00 P.M.** (Pacific time) on **October 10, 2019**. Unless this specific deadline is extended by subsequent Addenda, no requests for brand approval, requests for substitution, requests for clarification, requests for change or protests pertaining to provisions contained in the originally-issued ITB will be considered after the date specified herein.

C.2.3 REQUEST FOR APPROVAL OF AN "OR APPROVED EQUAL" OR AN "OR APPROVED EQUIVALENT": Pursuant to Section C.1.7.3, Offerors shall provide that product unless another is approved through a request for approval of an "or approved equal" or an "or approved equivalent, or a product exemption has been issued (ORS 279C.345). Other brands of equal quality, merit and utility will be considered upon proper submittal of the request with appropriate documentation.

Requests shall be made in writing and be submitted to the name of the Point of Contact under C.1.1.2 of the ITB document. To be considered, the request for changes must be received by the deadline specified in C.2.2.

- Requests shall provide all the information necessary for the County to determine product acceptability.
- Failure to provide sufficient information with the request shall be cause for the request not to be considered as equivalent
- Any product subsequently approved for substitution shall be listed on an Addendum issued by County and posted on ORPIN.
- Substitution Request shall be provided on the CSI Form. Forms are available from the Construction Specifications institute.

C.2.4 REQUEST FOR CLARIFICATION: Any Offeror that finds discrepancies in, or omissions from any provision of the ITB, Plans, Specifications, or Contract Documents or has doubt as to the meaning, shall make a request for clarification in writing, to the contact point listed in Section C.1.1.1. To be considered, the request for clarification must be received by COUNTY by the deadline specified in Section C.2.2.

C.2.5 REQUEST FOR CHANGES TO CONTRACTUAL TERMS OR SPECIFICATIONS OR PLANS: Any Offeror may submit a request for changes to contractual terms, Plans, or Specifications, in writing, to the contact point listed in Section C.1.1.1. To be considered, the request for changes must be received by County by the deadline specified in Section C.2.2. The request shall include the reason for requested changes, supported by factual documentation, and any proposed changes.

C.2.6 PROTEST OF CONTRACTUAL TERMS, PLANS, OR SPECIFICATIONS: Any Offeror who believes contractual terms, Plans, or Specifications are unnecessarily restrictive or limit competition may submit a protest, in writing, to the contact point listed in Section C.1.1.1. To be considered, the protest must be received by County by the deadline specified in Section C.2.2. The protest shall include the legal and factual grounds for the protest, a description of the resulting prejudice to the Offeror if the protest is not granted, and any proposed changes.

C.2.7 RESPONSE TO REQUESTS FOR CLARIFICATION: Clarifications, whether verbal, in writing, or included in an Addendum as a "clarification," do not change Plans, Specifications, contractual terms, or procurement requirements of an ITB. If a request for clarification raises an issue that County determines should be handled by formally amending the ITB, County will do so only by announcing such a change in an Addendum, not through information identified as a "clarification."

C.2.8 RESPONSE TO REQUESTS FOR BRAND APPROVAL, REQUESTS FOR SUBSTITUTION, REQUESTS FOR CHANGE AND PROTESTS: County shall promptly respond to each properly submitted written request for brand approval, request for substitution, request for change, and protest. Where appropriate, County will issue ITB revisions via Addenda posted on the ORPIN System. County may also informally respond to Offeror questions.

HOWEVER, INFORMAL RESPONSES DO NOT AFFECT THE PROVISIONS OF THE ITB. PLANS, SPECIFICATIONS, CONTRACTUAL TERMS, AND PROCUREMENT REQUIREMENTS OF THE ITB CAN ONLY BE CHANGED VIA ADDENDA ISSUED BY COUNTY AND POSTED ON THE ORPIN SYSTEM.

C.3 PROTEST OF ADDENDA

Requests for clarification, requests for change and protests of Addenda must be received by the time and date specified in the Addendum or they will not be considered. County will not consider requests or protests of matters not added or modified by the Addendum.

C.4 OFFER FORMAT

C.4.1 SIGNATURE IN INK REQUIRED: All Offer documents requiring signature must be signed in ink by an authorized representative of the Offeror.

C.4.2 IN WRITING: Offers and pricing information shall be prepared by typewriter, ink or by computer, but must be signed in ink by an authorized representative of the Offeror. No oral, telegraphic, telephone, e-mail or facsimile Bids will be accepted.

C.4.3 FORMS TO BE USED: Required information shall be submitted on the forms specified in the ITB. Any information Offeror submits that is not required to be included on forms prescribed by County shall be formatted in the manner called for in the ITB and submitted on Offeror's letterhead.

C.4.4 INFORMATION TO BE SUBMITTED WITH THE OFFER: The items listed below in this section shall be submitted or the Offer shall be found to be non-responsive.

The following shall be submitted prior to Closing:

- Pricing Submittal Form, Exhibit 1;
- Bid Security Requirements as per Section D;
- Construction Contractors Board (CCB) Registration Requirements; Asbestos Abatement Licensing Requirements, & Joint Venture - Partnership Declaration, Section G;
- Addenda Acknowledgement; Section H;
- Responsibility Inquiry & Contractor References; ESB Utilization, Section I;
- Residency Information, Section K;
- Signature of Bidder's Duly Authorized Representative, Section O;
- Addenda (If required)

The following shall be submitted either with the Bid submission or within two (2) working hours after the Closing:

- First Tier Subcontractor Disclosure Form, Section F

C.4.5 BID MODIFICATION PRIOR TO CLOSING: Alterations and erasures made before Offer submission must EACH be INDIVIDUALLY initialed in ink by the person signing the Offer. Offers, once submitted, may be modified in writing before Closing. Modifications made after Offer submission shall be prepared on Offeror's letterhead, be signed by an authorized representative, and state that the modifications amend and supersede the prior Offer. Failure to comply with the provisions of this paragraph of Section C.4.5 will result in Bid rejection.

C.4.5.1 Nothing in Section C.4.5 shall be construed as allowing the Offeror to alter or otherwise change the form of the Bid, the form of the Contract, the conditions of the Bid, or the Specifications or Plans attached to the Bid documents.

C.4.5.2 Modifications must be submitted in a sealed envelope marked as follows:

Bid Modification

ITB Number

Closing Date

Closing Time

C.4.5.3 Offerors may not modify Offers after Closing.

C.5 OFFER SUBMISSION

C.5.1 SIGNATURE REQUIRED: OFFER SUBMITTED BY OFFEROR MUST BEAR AN ORIGINAL SIGNATURE. FAILURE TO SUBMIT AN OFFER BEARING AN ORIGINAL SIGNATURE WILL RESULT IN REJECTION OF THE BID.

C.5.2 SEALED ENVELOPE; ADDRESS AND COVER INFORMATION: Offers shall be submitted in sealed packages or envelopes. To ensure proper identification and handling, all packages and envelopes shall be clearly marked as follows:

ITB Number
Closing Date & Time

MARION COUNTY
BUSINESS SERVICES
555 Court Street NE, Suite 4250
PO BOX 14500
SALEM, OR 97309

County shall not be responsible for the proper handling of any Offer not properly identified, marked and submitted in a timely manner.

C.6 OFFER WITHDRAWALS PRIOR TO CLOSING

C.6.1 IN WRITING: Offers may be withdrawn in writing when submitted on Offeror's letterhead, signed by an authorized representative, and received by County prior to Closing. Offer withdrawals submitted in writing must be labeled as such and contain the ITB number.

C.6.2 IN PERSON: Offers may also be withdrawn in person before Closing upon presentation of appropriate identification and evidence of authorization to act for Offeror. Signature confirmation of withdrawal may also be required.

C.7 CLOSING & OPENING / FIRST TIER SUBMITTAL

C.7.1 CLOSING: Offers must be received and date/time stamped at the Marion County, Business Services 555 Court Street, Salem, Oregon 97301, **Suite 4250** prior to the Closing date/time. Offers will not be accepted after the Closing date/time as stated on page one (1) of this ITB or as may be extended by any subsequently issued Addenda. Facsimile Offers will not be allowed or accepted. Failure to comply with this requirement will result in rejection of the Offer as non-responsive.

Offers will be publicly opened and read at the Opening at the Closing date/time specified on page one (1) of the ITB, at County, at Marion County: **Human Resources Room Suite # 4231**, Salem, Oregon. Only the name of the Offeror(s) and the total cost will be read at the opening. It is optional for Offerors to attend Opening. Award decisions will not be made at Opening. Bids received after the date/time for Closing will not be considered for award.

C.7.2 FIRST TIER SUBCONTRACTOR DISCLOSURE FORM: First tier subcontractor disclosure forms must be returned and date/time stamped within two working hours after the Closing to the Reception Desk of the Business Services at 555 Court Street NE Suite #4250 Salem, Oregon. Failure to comply with this requirement shall result in rejection of the Offer as non-responsive.

C.8 PRELIMINARY BID RESULTS

Prior to the Intent to Award Announcement, County may post preliminary bid results on the ORPIN System. Such postings may not be correct and are not final.

C.9 TIME FOR OFFER ACCEPTANCE

An Offeror's Offer is a firm Offer, irrevocable, valid and binding on the Offeror for not less than sixty (60) calendar days from the Closing date.

C.10 EXTENSION OF TIME FOR OFFER ACCEPTANCE

County may request, orally or in writing, that Offerors extend, in writing, the time during which County may consider their Offers. If an Offeror agrees to such extension, the Offer shall continue as a firm Offer, irrevocable, valid and binding on the Offeror for the agreed-upon extension period.

C.11 METHOD OF AWARD

The responsiveness of Bids and responsibility of Offerors and of their proposed subcontractors will be considered in making the award.

C.11.1 METHOD OF BID AWARD: Award will be made to the responsible Bidder submitting the lowest total for a responsive BASE BID. The County reserves the right to reject all Bids.

C.12 SUBSTANTIAL COMPLIANCE REQUIRED

Offers not in substantial compliance with ITB requirements cannot be considered, and cannot be supplemented by submissions delivered after Closing. However, County may waive minor informalities and irregularities, and may seek clarification of any response that, in its sole discretion, it deems necessary or advisable.

C.13 OFFER EVALUATION CRITERIA

Offers will be evaluated to identify the lowest responsive Offer submitted by a responsible Offeror and not otherwise disqualified. (Refer to MCPCR 40-0380) Adjustments made to account for reciprocal preferences will be for Offer evaluation purposes only. No such adjustments shall operate to amend Offeror's Offer or any Contract awarded pursuant thereto.

C.13.1 RESPONSIVENESS: For its Bid to be considered responsive, the Offeror must substantially comply in all material respects with applicable solicitation procedures and requirements and the solicitation documents. In making such evaluation, County may waive minor informalities and irregularities.

C.13.2 RESPONSIBILITY: Prior to award of a Contract, County will evaluate whether the apparent successful Offeror meets the applicable standards of responsibility identified in MCPCR 40-0390. In doing so, County may investigate Offeror and request information in addition to that already required in the ITB, when County, in its sole discretion, considers it necessary or advisable.

C.13.3 OREGON PREFERENCE: Awards shall be subject to preference for products produced or manufactured in Oregon, if price, fitness and quality are equal; and, solely for the purpose of evaluating Bids, County will add a percent increase to the Bid of a non-resident Bidder equal to the percent, if any, of the preference given to the Bidder in the state in which the Bidder resides. For example, if the Offeror is from a state that grants a ten (10) percent preference to local Offerors, County will add ten (10) percent to that Offeror's Offer price (MCPCR 10-0300).

C.14 PROCESSING OF BIDS

Neither the release of a Bid Security, nor acknowledgment that the selection process is complete (whether by posting of a Bid tabulation sheet, issuance of notice intent to award, or otherwise), shall operate as a representation by County that any Offer submitted was complete, sufficient, lawful in any respect, or otherwise in substantial compliance with the ITB requirements.

C.15 WITHDRAWAL BY COUNTY OF BID ITEMS PRIOR TO AWARD

County reserves the right to delete Bid items. The deletion of one or more Bid items will not affect the method of award.

C.16 REJECTION OF OFFERS

C.16.1 REJECTION OF ALL OFFERS: County may reject all Offers for good cause upon its finding that it is in the public interest to do so.

C.16.2 REJECTION OF PARTICULAR OFFERS: County may reject a particular Offer for any of the reasons listed under MCPCR 40-0440.

C.17 INTENT-TO-AWARD ANNOUNCEMENT

County reserves the right to announce its intent to award prior to formal Contract award by posting the tabulation sheet of Bid results on the ORPIN System, or by letter ("Notice of Intent-to-Award"). The Notice Intent-to-Award shall serve as notice to all Offerors that County intends to make an award.

C.18 PROTEST OF INTENT TO AWARD

Adversely-affected or aggrieved Offerors shall have seven (7) calendar days from the date of the Notice Intent-to-Award within which to file a written protest. Protests submitted after that date will not be considered. Protests must specify the grounds upon which the protest is based.

C.18.1 In order to be an adversely affected or aggrieved Offeror, the Offeror must claim to be eligible for award of the Contract as the responsible Offeror submitting the lowest responsive Offeror and that any and all lower Offerors are ineligible to receive Contract award.

C.18.2 An actual Offeror who is adversely affected or aggrieved by the award of the Contract to another Offeror may protest award, in writing, within the timeline established. The written protest shall state the grounds upon which the protest is based. No protest of award shall be considered after the deadline.

C.19 RESPONSE TO INTENT-TO-AWARD PROTESTS

County will respond in writing to intent-to-award protests submitted by adversely-affected or aggrieved Offerors. County may also respond to intent-to-award protests submitted by other Offerors for purposes of clarification. However, any response provided by County is not intended to, and shall not in and of itself constitute, confirmation that the Offeror is, in fact, adversely affected or aggrieved, and therefore entitled to protest an intent to award, or that the protest was timely filed.

C.20 AWARD

After expiration of the seven (7) calendar day intent-to-award protest period, and resolution of all protests, County will proceed with final award. (If County receives only one Bid, County may dispense with the intent-to-award protest period and proceed with award of a Contract.)

C.21 COMMENCEMENT OF WORK

Contractor shall not commence Work under the Contract until the Notice to Proceed has been issued.

C.22 REVIEW OF AWARDED BID FILES

Awarded Bid files are public records and available for review at County by appointment during regular business hours (Monday through Friday).

C.23 INFORMATION TO BE SUBMITTED BY THE APPARENT SUCCESSFUL OFFEROR

C.23.1 INSURANCE: The apparent successful Offeror shall provide all required proofs of insurance to County within fourteen (14) calendar days of notification of intent to award. Failure to present the required documents within the fourteen (14) calendar-day period may result in Offer rejection. Offerors are encouraged to consult their insurance agent(s) about the insurance requirements as identified in Section G.3 of the General Conditions and the Supplemental General Conditions in Exhibit 7 prior to Offer submission.

Offerors must satisfy these insurance requirements by obtaining insurance coverage from insurance companies or entities acceptable to the County that are allowed to provide such insurance under Oregon law. Eligible insurers include admitted insurers that have been issued a certificate of authority from the Oregon Department of Consumer and Business Services authorizing them to do an insurance business in the state of Oregon, and certain nonadmitted surplus lines insurers that satisfy the requirements of applicable Oregon law and are approved by County. County's approval will be based on its assessment of the nonadmitted surplus lines insurer and the suitability of surplus lines insurance for this particular procurement.

C.23.2 PERFORMANCE BOND and PAYMENT BOND: The successful Offeror shall be required to furnish a Performance Bond and a Payment Bond each in the total amount (100%) of the awarded Contract, executed in favor of Marion County, to ensure faithful performance of the Contract and payment for services and goods.

NOTE: THE COUNTY PROVIDED PERFORMANCE AND PAYMENT BONDS ARE THE FORMS APPROVED AND REQUIRED TO BE USED FOR THIS ITB.

Marion County Performance Bond and Payment Bond form are Exhibits 3 & 4, respectively.

The apparent successful Offeror shall provide all required bonding to Marion County within fourteen (14) calendar days of notification of award. Failure to present the required documents within fourteen (14) day calendar days may be grounds for award disqualification.

C.23.3 JOINT VENTURE/PARTNERSHIP INFORMATION: The apparent successful Offeror, if a Joint Venture/Partnership shall provide a copy of the joint venture agreement or partnership agreement evidencing authority to Offer and to enter into the resulting Contract that may be awarded, together with corporate resolutions (if applicable) evidencing corporate authority to participate as a joint venturer or partner. A contact person must also be designated for purposes of receiving all notices and communications under the Contract. All partners and joint venturers will be required to sign the Contract awarded.

SECTION D - BID SECURITY REQUIREMENTS

Each Offer shall be accompanied by a certified or cashier's check, irrevocable letter of credit (Bank), or Bid Bond, payable to Marion County in an amount equal to ten percent (10%) of the total amount of the Offer.

Bid Security shall be furnished to Marion County as security against the failure of the undersigned to comply with all requirements within the time frames established subsequent to notification of award.

If the undersigned fails to (1) execute the Contract, (2) furnish a Performance Bond and a Payment Bond, or (3) furnish certificates of insurance within thirty (30) calendar days of the written notification of intent to award a Contract, then COUNTY may cash the check, draw under the letter of credit or otherwise collect under the Bid Security.

The Marion County Bid Bond form is Exhibit 2.

SECTION E - PREVAILING WAGE RATES (BOLI REQUIREMENTS)

E.1 The Contractor and all subcontractors shall comply with the provisions of ORS 279C.800 through 279C.870, relative to Prevailing Wage Rates, as outlined in Sections C.1, C.2 and G.2.3 of the General Conditions.

Before starting Work the Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by ORS 279C.836 and OAR 839-025-0015, unless otherwise exempt under those provisions. The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the Construction Contractors Board before starting Work, unless otherwise exempt, and shall verify that the Subcontractor has filed a public works bond before permitting the Subcontractor to start Work.

E.2 This ITB and the resulting Contract are subject to the following Bureau of Labor and Industries (BOLI) wage requirements and the prevailing wages rates set forth in the following booklet, as amended, which is incorporated herein by reference with the same force and effect as though fully set forth herein, and is available at the following web link:

These BOLI wage rates are available on line at:

http://egov.oregon.gov/BOLI/WHDPWR/pwr_book.shtml

<https://www.oregon.gov/boli/WHDPWR/Pages/July-1,-2019-PWR-Rates.aspx>

E.3 The Work will take place in **Marion County**.

SECTION F - FIRST-TIER SUBCONTRACTOR DISCLOSURE INSTRUCTIONS AND FORM

(1) Pursuant to ORS 279C.370 and MCPCR 40-0360, Offerors are required to disclose information about certain first-tier subcontractors when COUNTY estimates the Contract value for a Public Improvement to be greater than \$100,000. Specifically, when the Contract amount of a first-tier subcontractor furnishing labor, or labor and materials, would be greater than or equal to: (i) 5% of the project Bid, but at least \$15,000, or (ii) \$350,000 regardless of the percentage, the Bidder must disclose the following information about that subcontract in its Bid submission or within two (2) working hours after Closing:

- (a) The subcontractor's name,
- (b) Dollar value and,
- (c) The category of work that the subcontractor would be performing.

If the Offeror will not be using any subcontractors that are subject to the above disclosure requirements, the Offeror is required to indicate "NONE" on the Disclosure Form.

COUNTY MUST REJECT AN OFFER IF THE OFFEROR FAILS TO SUBMIT THE DISCLOSURE FORM WITH THIS INFORMATION BY THE STATED DEADLINE.

(2) An Offeror shall submit the disclosure form required by MCPCR 40-0360 either in its Offer submission or within two (2) working hours after Closing.

Compliance with the disclosure and submittal requirements is a matter of responsiveness. Offers which are submitted by Closing, but for which the disclosure submittal has not been made by the specified deadline, are not responsive and shall not be considered for Contract award.

(3) County shall obtain, and make available for public inspection, the disclosure forms required by MCPCR 40-0360. County shall also provide copies of disclosure forms to the Bureau of Labor and Industries as required by ORS 279C.835. County is not required to determine the accuracy or completeness of the information submitted. Substitution of affected first-tier subcontractors shall be made only in accordance with ORS 279C.585.

FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

PROJECT NAME: _____

BID #: _____ CLOSING: Date: _____ Time: _____

This form must be submitted at the location specified in the Invitation to Bid on the advertised Closing date or within two working hours after the advertised Closing time.

List below the name of each subcontractor that will be furnishing labor or will be furnishing labor and materials and that is required to be disclosed, the category of work that subcontractor will be performing and the dollar value of the subcontract. Enter "NONE" if there are no subcontractors that need to be disclosed. (ATTACH ADDITIONAL SHEETS IF NEEDED.)

SUBCONTRACTOR NAME	CATEGORY	DOLLAR VALUE
		\$
		\$
		\$
		\$
		\$
		\$
		\$
		\$

Failure to submit this form by the disclosure deadline will result in a nonresponsive bid. A nonresponsive bid will not be considered for award.

Form submitted by (bidder name): _____

Contact name: _____ Phone no.: _____

SECTION G - CONSTRUCTION CONTRACTORS BOARD (CCB) REGISTRATION REQUIREMENTS / ASBESTOS ABATEMENT LICENSING REQUIREMENTS / JOINT VENTURE - PARTNERSHIP DISCLOSURE

G.1 CCB REQUIREMENTS

(1) Offerors shall be licensed with the State of Oregon Construction Contractors Board (CCB) prior to bidding on Public Improvement Contracts. Failure to comply with this requirement shall result in bid rejection.

(2) All subcontractors participating in the project shall be similarly registered with the Construction Contractors Board at the time they propose to engage in subcontract work. The CCB registration requirements apply to all public works contracts unless superseded by federal law.

Offerors shall provide their Construction Contractors Board (ORS 701.055) registration number below:

CONSTRUCTION CONTRACTORS BOARD REGISTRATION NO.: _____

EXPIRATION DATE OF CCB NO.: _____

G.2 ASBESTOS ABATEMENT LICENSING REQUIREMENTS

An asbestos abatement license under ORS 468A.720 will not be required of the Contractor or its subcontractors.

G.3 JOINT VENTURE/PARTNERSHIP DISCLOSURE

The Offeror shall disclose whether the Offer is submitted by either a partnership or joint venture.

NO: _____ **YES:** _____

If yes, the Offeror shall provide the name of the contact person for the partnership or joint venturer.

Name: _____

SECTION H - ADDENDA ACKNOWLEDGEMENT

(1) County reserves the right to make changes to the Invitation to Bid and the resulting Contract, by written Addenda, prior to the Closing time and date. Addenda will be advertised on the ORPIN System. County is not responsible for an Offerors failure to receive notice of Addenda if such are advertised in the foregoing manner. Addenda shall only be issued by County and upon issuance are incorporated into the Invitation to Bid or the resulting Contract.

(2) By Offeror's signature in Section O it ACKNOWLEDGES, AGREES and CERTIFIES TO THE FOLLOWING:

If any Addenda are issued in connection with this ITB, Offeror has received and duly considered such Addenda, and has completed the blanks below identifying all Addenda issued, and acknowledging and agreeing to the terms of all such Addenda as those terms revise the terms, conditions, Plans and Specifications of this ITB.

ADDENDA: No. ____ to No. ____ inclusive.

SECTION I - RESPONSIBILITY INQUIRY/CONTRACTOR REFERENCES

The County reserves the right, pursuant to MCPCR 40-0390 to investigate and evaluate, at any time prior to award and execution of the Contract, the apparent successful Offeror's responsibility to perform the Contract. Submission of a signed Offer shall constitute approval for the County to obtain any information the County deems necessary to conduct the evaluation. The County shall notify the apparent successful Offeror, in writing, of any other documentation required. Failure to promptly provide this information shall result in Offer rejection. The County may postpone the award of the Contract after announcement of the apparent successful Offeror in order to complete its investigation and evaluation. Failure of the apparent successful Offeror to demonstrate responsibility, as required under MCPCR 40-0390, shall render the Offeror non-responsible and shall constitute grounds for Offer rejection, as required under MCPCR 40-0440.

II. CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

The Offeror certifies to the best of its knowledge and belief that neither it nor any of its principals:

- (1) Are presently debarred, suspended, proposed for debarment, or declared ineligible from submitting bids or proposals by any federal, state or local entity, department or agency;
- (2) Have within a three-year period preceding this offer, been convicted or had a civil judgement rendered against them for: commission of fraud or criminal offense in connection with obtaining, attempting to obtain, or performance of a public (Federal, state or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statement, tax evasion, or receiving stolen property;
- (3) Are presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of these offenses enumerated in paragraph 2 of this certification;
- (4) Have within a three-year period preceding this offer, had one or more contracts terminated for default or failure to complete by any Federal, state or local public agency.
- (5) Have within a 10-year period preceding this offer been the debtor in a bankruptcy case.
- (6) Have any present pending or unsatisfied judgements against it.
- (7) Have within a 10-year period preceding this offer, been party to litigation, arbitration or mediation on a matter related to payment to subcontractors or work performance on a contract.

The Offeror will provide immediate written notice to the County if at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

Where Offeror is unable to certify to any of the statements in this certification, Offeror shall attach an explanation to this offer. A certification that any of the items in the above paragraph exists will not necessarily be considered in connection with a determination of the Offeror's responsibility.

II. OFFEROR REFERENCES FOR COMPARABLE PROJECTS IN SIZE AND SCOPE

References for comparable projects in size and scope: Offeror shall provide a list of three different project references of projects that Offeror worked on within the last three years of comparable size and scope. Only Contractors that have experience on projects similar in both size and complexity within the last three (3) years will be considered for this project.

Offerors will use their own form to supply their list of references. The list of three different project references shall include the following information:

Name of Project
Project Location
Project Date
Firm Name for Contact Person #1
Name of Contact Person #1
Telephone Number for Contact Person #1
Fax number for Contact Person #1
Firm Name for Contact Person #2

Name of Contact Person #2
Telephone Number for Contact Person #2
Fax number for Contact Person #2

The references will be checked to determine if they are supportive of the Offeror's ability to meet the requirements of this ITB.

Offeror must provide references that can be contacted regarding the quality of workmanship and service provided to current and past customers.

The County reserves the right to choose and investigate any reference whether or not furnished by the Offeror, and to investigate past performance of any Offeror with respect to its successful performance of similar projects, compliance with specifications and contractual obligations, its completion or delivery of service on schedule, and its lawful payment of suppliers, subcontractors, and employees.

The County may postpone the award or execution of the Contract after the announcement of the apparent successful Offeror in order to complete its investigation. The County may reject a bid if, the opinion of the County, overall reference responses indicate inadequate performance.

The County will make three attempts to contact the references from the list provided by the Contractor.

Each reference contacted will be asked the same questions, including but not limited to the above factors, including: (1) quality of service; (2) delivery; (3) responsiveness to reported problems, including orders and billing; (4) how well Contractor met the terms of the contract; and (5) whether the reference would choose to hire the Contractor again.

Contractor's supervisor who is overseeing the work shall have experience on projects similar in both size and complexity and submit with the bid, references for three projects that were performed within the last three (3) years.

References provided for the Contractor's supervisor may be the same three (3) references that are provided for the Contractor.

The list of references will include the following information:

Name of Project
Project Location
Project Date
Firm Name for Contact Person #1
Name of Contact Person #1
Telephone Number for Contact Person #1
Fax number for Contact Person #1
Firm Name for Contact Person #2
Name of Contact Person #2
Telephone Number for Contact Person #2
Fax number for Contact Person #2

Offeror must provide references with the bid that can be contacted regarding the quality of workmanship and service that the Contractor's supervisor provided on current and past projects of similar size and complexity.

SECTION J - RECYCLED PRODUCTS; DEMOLITION WORK

Vendors shall use recyclable materials to the maximum extent economically feasible in the performance of the Contract Work set forth in this document. ORS 279A.010(ii) provides as follows: "Recycled product' means all materials, goods and supplies, not less than 50 percent of the total weight of which consists of secondary and post-consumer waste with not less than 10 percent of total weight consisting of post-consumer waste. 'Recycled product' also includes any product that could have been disposed of as a solid waste, having completed its life cycle as a consumer item, but otherwise is refurbished for reuse without substantial alteration of the product's form."

ORS 279A.010(u) provides as follows: "Post-consumer waste' means a finished material which would normally be disposed of as solid waste, having completed its life cycle as a consumer item. 'Post-consumer waste' does not include manufacturing waste."

ORS 279A.010(jj) provides as follows: "Secondary waste materials' means fragments of products of finished products of a manufacturing process which has converted a virgin resource into a commodity of real economic value, and includes post-consumer waste, but does not include excess virgin resources of the manufacturing process. For paper, 'secondary waste materials' does not

include fibrous waste generated during the manufacturing process such as fibers recovered from waste water or trimmings of paper machine rolls, mill broke, wood slabs, chips, sawdust, or other wood residue from a manufacturing process."

ORS 279A.010(hh) provides as follows: "Recycled PETE" means post-consumer polyethylene terephthalate material."

Because this Contract includes demolition work, as required by ORS 279C.510(1), the Contractor shall salvage or recycle construction and demolition debris, if feasible and cost-effective.

By my signature in Section O, I, the undersigned duly authorized representative of the Offeror, hereby affirm that Offeror will comply with the above recycled products provisions and demolition work provisions.

SECTION K - RESIDENCY INFORMATION

MCPCR 40-0390 states "In determining the lowest responsive Bid, the County shall, in accordance with Section 40-0200, add a percentage increase to the Bid of a nonresident Bidder equal to the percentage, if any, of the preference given to that Bidder in the state in which the Bidder resides."

"Resident Bidder" means a Bidder/Offeror who has paid unemployment taxes or income taxes in this state during the 12 calendar months immediately preceding submission of the Bid, has a business address in this State, and has stated in the offer whether the Bidder/Offeror is a "resident Bidder".(MCPCR 10-0110)

"Non-resident Bidder" means a Bidder/Offeror who is not a resident Bidder/Offeror, as defined above. (MCPCR 10-0110)

a. Check one: Bidder is a () Resident Bidder
() Non-resident Bidder

b. If a Resident Bidder, enter your Oregon business address: _____

c. If a Non-resident Bidder, enter state of residency: _____

FOREIGN CONTRACTOR: If the amount of the Contract exceeds ten thousand dollars (\$10,000), and if Contractor is not domiciled in or registered to do business in the State, Contractor shall promptly provide to the Oregon Department of Revenue all information required by that Department relative to the Contract. The County shall be entitled to withhold final payment under the Contract until Contractor has met this requirement.

SECTION L - CERTIFICATION OF COMPLIANCE WITH TAX LAWS

By my signature in Section O of this Contract, I, hereby attest or affirm under penalty of perjury: That I am authorized to act on behalf of the Contractor in this matter, that I have authority and knowledge regarding the payment of taxes, and that Contractor is, to the best of my knowledge, not in violation of any Oregon Tax Laws. For purposes of this certification, "Oregon tax laws" are those tax laws imposed by ORS 320.005 to 320.150 and ORS 403.200 to 403.250 and ORS Chapters 118, 314, 316, 317, 318, 321 and 323; the elderly rental assistance program under ORS 310.630 to 310.706; and any local tax laws administered by the Oregon Department of Revenue under ORS 305.620.

SECTION M - CERTIFICATION OF DRUG-TESTING LAW REQUIREMENTS

(1) Pursuant to MCPCR 40-0200, the Offeror certifies by its signature on these solicitation document forms that it has a Qualifying Drug Testing Program in place for its employees that includes, at a minimum, the following:

(a) A written employee drug testing policy, (b) Required drug testing for all new Subject Employees or, alternatively, required testing of all Subject Employees every 12 months on a random selection basis, and (c) Required testing of a Subject Employee when the Offeror has reasonable cause to believe the Subject Employee is under the influence of drugs.

(2) A drug testing program that meets the above requirements will be deemed a "Qualifying Employee Drug Testing Program." An employee is a "Subject Employee" only if that employee will be working on the Project job site.

(3) If awarded a Public Improvement Contract as a result of this solicitation, Offeror agrees that at the time of Contract execution it shall represent and warrant to the Agency that its Qualifying Employee Drug Testing Program is in place and will continue in full force and effect for the duration of the Public Improvement Contract. The Agency's performance obligation (which includes, without limitation, the Agency's obligation to make payment) shall be contingent on Contractor's compliance with this representation and warranty.

(4) If awarded a Public Improvement Contract as a result of this solicitation, Offeror also agrees that at the time of Contract execution, and as a condition to Agency's performance obligation (which includes, without limitation, the Agency's obligation to make payment), it shall require each subcontractor providing labor for the Project to:

(a) Demonstrate to the Contractor that it has a Qualifying Employee Drug Testing Program for the subcontractor's Subject Employees, and represent and warrant to the Contractor that the Qualifying Employee Drug Testing Program is in place at the time of subcontract execution and will continue in full force and effect for the duration of the subcontract; or (b) Require that the subcontractor's Subject Employees participate in the Contractor's Qualifying Employee Drug Testing Program for the duration of the subcontract.

SECTION N - CERTIFICATION OF COMPLIANCE WITH NON-DISCRIMINATION LAWS

By my signature in Section O, I certify that I am authorized to act on behalf of Bidder in this matter and that Bidder has not discriminated and will not discriminate against a subcontractor in awarding a subcontract because the subcontractor is: (a) a minority, women or emerging small business enterprise certified under ORS 200.055; or (b) a business enterprise that is owned or controlled by or that employs a disabled veteran, as defined in ORS 408.225.

SECTION O - SIGNATURE OF BIDDER'S DULY AUTHORIZED REPRESENTATIVE

THIS BID MUST BE SIGNED IN INK BY AN AUTHORIZED REPRESENTATIVE OF THE BIDDER; ANY ALTERATIONS OR ERASURES TO THE BID MUST BE INITIALED IN INK BY THE UNDERSIGNED AUTHORIZED REPRESENTATIVE.

The undersigned acknowledges, attests and certifies individually and on behalf of the Bidder that:

- (1) He/she is a duly authorized representative of the Bidder, has been authorized by Bidder to make all representations, attestations, and certifications contained in this Bid and all Addenda, if any, issued.
- (2) Bidder, acting through its authorized representatives, has read and understands all Bid instructions, Specifications, Plans, terms and conditions contained in this Bid document (including all listed attachments and Addenda, if any, issued);
- (3) The Bid submitted is in response to the specific language contained in the ITB, and Bidder has made no assumptions based upon either (a) verbal or written statements not contained in the ITB, or (b) any previously-issued ITB, if any.
- (4) The County shall not be liable for any claims or be subject to any defenses asserted by Bidder based upon, resulting from, or related to, Bidder's failure to comprehend all requirements of the ITB.
- (5) The C shall not be liable for any expenses incurred by Bidder in preparing and submitting its Offer or in participating in the Offer evaluation/selection process.
- (6) The Bidder agrees to be bound by and comply with all applicable requirements of ORS 279C.800 through ORS 279C.870 and the administrative rules of the Bureau of Labor and Industries (BOLI) regarding prevailing wage rates.
- (7) The Offer was prepared independently from all other Bidders, and without collusion, fraud, or other dishonesty.
- (8) Bidder is bound by and will comply with all requirements, Specifications, Plans, terms and conditions contained in this Bid (including all listed attachments and Addenda, if any, issued);
- (9) Bidder will furnish the designated item(s) or service(s) in accordance with the Specifications, Plans and requirements, and will comply in all respects with the terms of the resulting Contract upon award;
- (10) Bidder represents and warrants that Bidder has the power and authority to enter into and perform the Contract and that the Contract, when executed and delivered, shall be a valid and binding obligation of Contractor enforceable in accordance with its terms; and
- (11) All affirmations and certifications contained in Sections J, K, L, M and N are true and correct.

Authorized Signature: _____ Title: _____

Contact Person (Type or Print): _____

Telephone Number: (____) _____

Email: _____

EXHIBIT 1
C25102-BS-624-19
PRICING SUBMITTAL FORM

PRICING SUBMITTAL INSTRUCTIONS:

Offerors shall enter pricing and other required information for all Bid Items listed in this Pricing Submittal Form. If this Pricing Submittal Form is replaced by Addendum, Offerors shall use the Addendum form to provide pricing and other required information. If the Pricing Submittal Form is only modified by Addendum, Offerors shall follow the instructions in the Addendum for making modifications to the Pricing Submittal Form. Failure to supply the required information in the Pricing Submittal Form or subsequent Addenda may result in Bid rejection as non-responsive.

BASE BID and ALTERNATES: To include all work described in the ITB, Plans, Specifications and any issued Addenda.

BASE BID - LUMP SUM: \$ _____

ALTERNATE #1- LUMP SUM: \$ _____

ALTERNATE #2- LUMP SUM: \$ _____

TOTAL BASE BID AND ALL ALTERNATES: \$ _____

BIDDER NAME: _____

EXHIBIT 2
Marion County Bid Security Form

KNOW ALL PERSONS BY THESE PRESENTS, that _____
_____, hereinafter called the Principal, and _____
_____, a Corporation organized and existing under and by virtue of the laws of the
state _____ duly authorized to do surety business in the State of Oregon as Surety, are held and
firmly bound unto Marion County hereinafter called the County, in the penal sum of _____
_____ Dollars (\$_____), for the payment of which, well and truly to be made, we bind
ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT, WHEREAS, the Principal herein is herewith submitting his or its Bid Proposal
for _____
said Bid Proposal, by reference thereto, being hereby made a part hereof.

NOW THEREFORE, if the said Bid Proposal submitted by the said Principal be accepted, and the Contract be awarded to said
Principal, and if the said Principal shall execute the proposed Contract as required by the bidding and the Contract Documents within
the time set by said Documents, then this obligation shall be void. If the Principal shall fail to execute the proposed Contract, the
Surety hereby agrees to pay to the County the penal sum as liquidated damages.

Signed and sealed this _____ day of _____, 20____.

A certified copy of the Agent's
Power-of-Authority must be
Attached hereto.

Principal

By: _____

Surety

By: _____
Attorney-in-Fact

EXHIBIT 3
Marion County Performance Bond Form

KNOW BY ALL PERSONS BY THESE PRESENTS:

We the undersigned _____ as PRINCIPAL (hereinafter called CONTRACTOR), and _____ a corporation organized and existing under and by virtue of the laws of the state of _____ duly authorized to do surety business in the state of Oregon and named on the current list of approved surety companies acceptable on federal bonds and conforming with the underwriting limitations as published in the Federal Register by the audit staff of the Bureau of Accounts and the U.S. Treasury Department and is of the appropriate class for the bond amount as determined by Best's Rating System, as SURETY, hereby hold and firmly bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, to pay to MARION COUNTY as OBLIGEE (hereinafter called MARION COUNTY), the amount of _____ Dollars (\$ _____) in lawful money of the United States of America.

WHEREAS, the CONTRACTOR entered into a contract with MARION COUNTY dated _____, 20____, which Contract is hereunto annexed and made a part hereof, for accomplishment of the project described as follows: _____.

NOW, THEREFORE, the condition of this obligation is such that if the CONTRACTOR shall promptly, truly and faithfully perform all the undertakings, covenants, terms, conditions, and agreements of the aforesaid contract and having performed its obligations thereunder, then this obligation shall be null and void; otherwise it shall remain in full force and effect until the expiration of any statutes of limitation or repose applicable to claims against Principal arising out of said Contract or for as long as CONTRACTOR is liable under the Contract.

Whenever CONTRACTOR shall be declared by MARION COUNTY to be in default under the Contract Documents for the project described herein, the SURETY may promptly remedy the default, or shall promptly complete the project in accordance with the Contract Documents and the project Specifications with a contractor approved by MARION COUNTY. SURETY, for value received, further stipulates and agrees that all changes, extensions of time, alterations, or additions to the terms of the Contract or Specifications for _____ are within the scope of the SURETY's undertaking on this bond, and SURETY hereby waives notice of any such change, extension of time, alteration or addition to the terms of the _____ or to the Work or to the Specifications. Any such change, extension of time, alteration or addition to the terms of the _____ or to the Work or to the Specifications shall automatically increase the obligation of the Surety hereunder in a like amount, provided that such increase shall not exceed twenty-five percent (25%) of the original amount of the obligation without the consent of the Surety.

This obligation shall continue to bind the PRINCIPAL and SURETY, notwithstanding successive payments made hereunder, until the full amount of the obligation is exhausted.

No right of action shall accrue on this bond to or for the use of any person or corporation other than MARION COUNTY or its heirs, executors, administrators, successors or assigns.

If more than one SURETY is on this bond, each SURETY hereby agrees that it is jointly and severally liable for obligations on this bond.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

SURETY

By: _____

Title: _____

Street Address

City State ZIP

Phone Number

CONTRACTOR

By: _____

Title: _____

Street Address

City State ZIP

Phone Number

EXHIBIT 4
Marion County Payment Bond Form

KNOW ALL PERSONS BY THESE PRESENTS:

We the Undersigned _____ as PRINCIPAL and _____ a corporation organized and existing under and by virtue of the laws of the state of _____, and duly authorized to do surety business in the state of Oregon and named on the current list of approved surety companies acceptable on federal bonds and conforming with the underwriting limitations as published in the Federal Register by the audit staff of the Bureau of Accounts and the U.S. Treasury Department and which carries an "A" rating and is of the appropriate class for the bond amount as determined by Best's Rating System, as SURETY, hereby hold and firmly bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, unto MARION COUNTY, as OBLIGEE, in the sum of _____ Dollars (\$ _____) in lawful money of the United States of America, for the payment of that sum for the use and benefit of claimants as defined below.

The condition of this obligation is such that whereas the PRINCIPAL entered into a contract with MARION COUNTY dated _____, 20____, which contract is hereunto annexed and made a part hereof, for accomplishment of the project described as follows: _____.

NOW THEREFORE, if the PRINCIPAL shall promptly make payments to all persons, firms, subcontractors, corporations and/or others furnishing materials for or performing labor in the prosecution of the Work provided for in the aforesaid _____, and any authorized extension or modification thereof, including all amounts due for materials, equipment, mechanical repairs, transportation, tools and services consumed or used in connection with the performance of such Work, and for all labor performed in connection with such Work whether by subcontractor or otherwise, and all other requirements imposed by law, then this obligation shall become null and void; otherwise this obligation shall remain in full force and effect, until the expiration of any statutes of limitation or repose applicable to claims against Principal arising out of said Contract or for as long as CONTRACTOR is liable under the Contract, subject, however, to the following conditions:

1. A claimant is as specified in ORS 279C.600 to 279C.620.
2. The above-named PRINCIPAL and SURETY hereby jointly and severally agree with the OBLIGEE and its assigns that every claimant as above-specified, who has not been paid in full, may sue on this bond for the use of such claimant, prosecute the suit to final judgment in accordance with ORS 279C.610 for such sum or sums as may be justly due claimant, and have execution thereon. The OBLIGEE shall not be liable for the payment of any judgment, costs, expenses or attorneys' fees of any such suit.

PROVIDED, FURTHER, that SURETY for the value received, hereby stipulates and agrees that all changes, extensions of time, alterations to the terms of the _____ or to Work to be performed thereunder or the Specifications accompanying the same shall be within the scope of the SURETY's undertaking on this bond, and SURETY does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the _____ or to the Work or to the Specifications. Any such change, extension of time, alteration or addition to the terms of the contract or to the Work or to the Specifications shall automatically increase the obligation of the SURETY hereunder in a like amount, provided that the total of such increases shall not exceed twenty-five percent (25%) of the original amount of the obligation without the consent of the SURETY.

This obligation shall continue to bind the PRINCIPAL and SURETY, notwithstanding successive payments made hereunder, until the full amount of the obligation is exhausted, or if the full amount of the obligation is not exhausted and no claim is pending resolution, until such time as no further claims can be made pursuant to law with regard to the above-described project, by any claimant specified in ORS 279C.600.

If more than one SURETY is on this bond, each SURETY hereby agrees that it is jointly and severally liable for all obligations of this bond.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

SURETY

By:_____

Title:_____

Street Address

City, State ZIP City, State ZIP

Phone Number

CONTRACTOR

By:_____

Title:_____

Street Address

Phone Number

EXHIBIT 5
Sample Public Improvement Agreement Form

COPIES OF THIS PUBLIC IMPROVEMENT AGREEMENT FORM WILL BE SENT TO THE INTENDED AWARDEE (CONTRACTOR) BY MARION COUNTY AT THE TIME OF THE COUNTY'S INTENT TO AWARD NOTICE. THE BLANKS IN THIS SAMPLE WILL BE FILLED IN BY THE COUNTY. THE INTENDED AWARDEE WILL THEN COMPLETE AND SIGN THE AGREEMENT. AFTER ALL REQUIREMENTS ARE MET, THE COUNTY WILL THEN SIGN THE PUBLIC IMPROVEMENT AGREEMENT FORM AND SEND AN ORIGINAL, SIGNED FULLY EXECUTED PUBLIC IMPROVEMENT AGREEMENT FORM TO THE CONTRACTOR ALONG WITH THE NOTICE TO PROCEED.

MARION COUNTY PUBLIC IMPROVEMENT AGREEMENT
for
JAIL BOILER REPLACEMENT

This Agreement for the **Marion County Jail Boiler Replacement** (the "Agreement"), made by and between Marion County, a political subdivision of the state of Oregon, on behalf of **Business Services**, hereinafter called Owner, and **(Insert Contractor's Name)** hereinafter called the Contractor (collectively the "Parties"), is effective on the date this Agreement has been signed by all the Parties and all required Marion County governmental approvals have been obtained. Unless otherwise defined in the Invitation to Bid or in this Agreement, the capitalized terms used herein are defined in Section A.1 of the Marion County General Conditions for Public Improvement Contracts

WITNESSETH:

1. Contract Price, Contract Documents and Work.

The Contractor, in consideration of the sum of **(Insert Price)** (the "Contract Price"), to be paid to the Contractor by Owner in the manner and at the time hereinafter provided, and subject to the terms and conditions provided for in the Invitation to Bid, this Public Improvement Agreement, Marion County General Conditions for Public Improvement Contracts and other Contract Documents, all of which are incorporated herein by reference, hereby agrees to perform all Work described and reasonably inferred from the Contract Documents.

The Contract Price includes the following items: **(Insert Items refer to Bid Form)**

2. Representatives.

Unless otherwise specified in the Contract Documents, the Owner designates **Colleen Coons-Chaffins** as its Authorized Representative in the administration of this Contract. The above-named individual shall be the initial point of contact for matters related to performance, payment, authorization, and to carry out the responsibilities of the Owner. Contractor has named **(Insert Name)** its Authorized Representative to act on its behalf.

3. Contract Dates.

PROJECT START DATE: **Upon Execution of this Agreement**

SUBMISSION OF SCHEDULE OF VALUES: **Fourteen days from execution of this Agreement**

SUBSTANTIAL COMPLETION: **May 1, 2020**

FINAL COMPLETION: **June 1, 2020**

4. Liquidated Damages. Reserved

5. Integration

THE CONTRACT DOCUMENTS CONSTITUTE THE ENTIRE AGREEMENT BETWEEN THE PARTIES. NO WAIVER, CONSENT, MODIFICATION OR CHANGE OF TERMS OF THIS CONTRACT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY BOTH PARTIES. SUCH WAIVER, CONSENT, MODIFICATION OR CHANGE, IF MADE, SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. THERE ARE NO OTHER UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS CONTRACT. CONTRACTOR, BY THE SIGNATURE BELOW OF ITS AUTHORIZED REPRESENTATIVE, HEREBY ACKNOWLEDGES THAT IT HAS READ THIS CONTRACT, UNDERSTANDS IT, AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

6. Authority to Execute

Contractor covenants, represents and warrants to Owner that the person(s) executing this Contract on behalf of the Contractor have the actual authority to bind the Contractor to the terms of the Agreement.

In witness whereof, Marion County, a political subdivision of the state of Oregon, on behalf of **Board of Commissioners**, executes this Agreement and the Contractor does execute the same as of the day and year of this Agreement first above written.

7. CONTRACTOR

CONTRACTOR NAME _____

CONTRACTOR ADDRESS _____

CONTRACTOR ADDRESS _____

CONTRACTOR'S CCB # _____ Expiration Date: _____

CONTRACTOR'S SIGNATURE: _____
Date

8. MARION COUNTY

Department Head Date

Marion County Procurement and Contracts Date

Marion County Legal Date

Chief Administrative Officer Date

BOARD OF COMMISSIONERS:

Chair Date

Commissioner Date

Commissioner Date