FOODSERVICE EQUIPMENT ELECTRICAL SCHEDULE

ITEM #	DESCRIPTION		VOLTS	PHASE	AMPS	WATTS	HP	CONN. TYPE	RI HEIGHT	REMARKS
7A	WALK-IN REFRIGERATOR/FREEZER COMPLEX		120 V	1	20.0 A			DIRECT	114"	DFA / NOTE W / SEE DETAIL SD-191
7B	FREEZER FLOOR HEAT	A	208 V	1				DIRECT	48"	DFA / COOK'S ISSUANCE FLOOR HEAT / NOTE W / SEE DETAIL SD-188 / 30 AMP BREAKER / (1) CIRCUIT
7B	FREEZER FLOOR HEAT	B	208 V	1				DIRECT	48"	DFA / MAIN FREEZER FLOOR HEAT / NOTE W / SEE DETAIL SD-188 / 30 AMP BREAKER / (3) CIRCUITS ON ONE CONTACTOR
8A	RACKED REFRIGERATION SYSTEM	A	208 V	3	138.9 A			DIRECT	0"	NOTE D & W / MAX FUSE SIZE 175.0 AMPS / MIN CIRCUIT AMPACITY 148.4 AMPS
8B	REFRIGERATION SYSTEM COIL - PRODUCE REFRIGERATOR	B	120 V	1	1.8 A			DIRECT	96"	NOTE W / (2) COILS @ 1.8 AMPS EACH
8C	REFRIGERATION SYSTEM COIL - MEAT & DAIRY REFRIGERATOR	C	120 V	1	1.8 A			DIRECT	96"	NOTE W / (2) COILS @ 1.8 AMPS EACH
8D	REFRIGERATION SYSTEM COIL - TEMPERING REFRIGERATOR	D	208 V	1	13.7 A			DIRECT	96"	NOTE W
8E	FREEZER SYSTEM COIL - MAIN FREEZER	E	208 V	1	22.8 A			DIRECT	96"	NOTE W / (2) COILS @ 22.8 AMPS EACH
8F	FREEZER SYSTEM COIL - BAKERY FREEZER	F	208 V	1	9.1 A			DIRECT	96"	NOTE W
8G	REFRIGERATION SYSTEM COIL - BAKERY REFRIGERATOR	G	120 V	1	1.8 A			DIRECT	96"	NOTE W
11	HEATED AIR CURTAIN	A	480 V	3	22.0 A		1/2, 1/2	DIRECT	96"	PROVIDE 30 AMP CIRCUIT
11	HEATED AIR CURTAIN	B	480 V	3	28.3 A		1/2, 1/2	DIRECT	96"	PROVIDE 35 AMP CIRCUIT
12	AIR CURTAIN		120 V	1	3.4 A		1/5, 1/5	DIRECT	96"	PROVIDE 15 AMP CIRCUIT
13	MANUAL SLIDING DOOR (FRZ)		120 V	1	3.0 A			DIRECT	86"	ELECTRICAL TRADES TO PROVIDE AND INSTALL FROSTOP DISCONNECT KEYSWITCH / FINAL CONNECTIONS BY ELECTRICAL TRADES
26	BENCH SCALE		120 V	1				RECEPT.	18"	AC ADAPTER W/INTERNAL BATTERY
34	FOOD CUTTER		120 V	1	13.0 A		1	RECEPT.	60"	INTERCHANGEABLE PLUG IN LOCATION W/ITEM #114 / ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH IN AND CAP AS NEEDED
40	MOBILE HOT/COLD TRANSPORT CART		120 V	1				RECEPT.	0"	VFY. UTILITIES W/OWNER / (13) CIRCUITS SERVICED THRU #41A & B
41A	UTILITY DISTRIBUTION SYSTEM		120 V	1				DIRECT	126"	(6) 20.0 AMP CIRCUITS TO SERVICE (6) #40 / FSEC TO PREWIRE RECEPTACLES IN UDS / FINAL CONNECTIONS BY ELECTRICAL TRADES / SEE SHEET FSE101
41B	UTILITY DISTRIBUTION SYSTEM		120 V	1				DIRECT	126"	(7) 20.0 AMP CIRCUITS TO SERVICE (7) #40 / FSEC TO PREWIRE RECEPTACLES IN UDS / FINAL CONNECTIONS BY ELECTRICAL TRADES / SEE SHEET FSE102
62	WORKCOUNTER W/SINK		120 V	1				DIRECT	10"	NOTE A / STUB UP THRU ADJACENT WALL / (3) 20.0 AMP CIRCUITS TO SERVICE (1) #71 & (2) CONV. DRS
63	140 QUART MIXER		208 V	3	14.8 A		5	DIRECT	60"	ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
64	WATER METER W/TEMPERATURE RANGE		120 V	1	5.0 A			RECEPT.	54"	ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
67	SPIRAL MIXER		208 V	3	32.0 A		15	DIRECT	48"	ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
69	SHEETER		120 V	1	8.3 A			RECEPT.	60"	ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
71	DIGITAL BENCH SCALE	A	120 V	1				DUPLEX	0"	AC ADAPTER W/INTERNAL BATTERY
71	DIGITAL BENCH SCALE	B	120 V	1				DUPLEX	0"	SERVICED THRU #77A / ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED / AC ADAPTER W/INTERNAL BATTERY
74	ROLL-IN PROOFER, 2 DOUBLE RACKS		208 V	3		5000 W		DIRECT	90"	NEUTRAL WIRE CIRCUITRY NEEDED TO PROVIDE 120V CONTROL / ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
77	BAKERY WORKCOUNTER W/RICHLITE TOP	A	120 V	1				DIRECT	10"	NOTE A / STUB UP THRU CURB / (4) 20.0 AMP CIRCUITS TO SERVICE (2) CONV. DRS & #71B & 79
77	BAKERY WORKCOUNTER W/RICHLITE TOP	AA	120 V	1				DIRECT	10"	NOTE A / STUB UP THRU CURB / (4) 20.0 AMP CIRCUITS TO SERVICE (3) CONV. DRS & (1) #83
77	BAKERY WORKCOUNTER W/RICHLITE TOP	B	208 V	3				DIRECT	10"	NOTE A / STUB UP THRU CURB / (1) 20.0 AMP CIRCUIT TO SERVICE #78
78	DIVIDER ROUNDER		208 V	3	10.0 A		3/4	DIRECT	0"	SERVICED THRU #77B / ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
79	BREAD SLICER		120 V	1	7.0 A		1/2	RECEPT.	0"	SERVICED THRU #77A / ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
83	BUN SLICER		120 V	1	6.8 A	816 W	1/3	RECEPT.	0"	SERVICED THRU #77AA / ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
85	ROLL-IN BLAST CHILLER	A	208 V	3	10.6 A	3400 W		DIRECT	106"	
85	BLAST CHILLER REMOTE CONDENSING UNIT	B	208 V	3	53.3 A	16400 W	9	DIRECT	0"	
87	RACK OVEN, 2-SEC.		120/208 V	3		1800 W		DIRECT	90"	NOTE I & L / ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
89	FIRE PROTECTION SYSTEM	A	120 V	1				DIRECT		NOTE J, K & L / AT CEILING / WIRING FOR CONTROLS / SEE DETAIL / TO SERVE (1) #87
89	ELECTRIC GAS VALVE	B	120 V	1				DIRECT	120"	DFA DEDICATED, NON-INTERRUPTED CIRCUIT
90	FIRE PROTECTION SYSTEM	A	120 V	1				DIRECT		NOTE J, K & L / AT CEILING / WIRING FOR CONTROLS / SEE DETAIL / TO SERVE (1) #87
90	ELECTRIC GAS VALVE	B	120 V	1				DIRECT	120"	DFA / DEDICATED, NON-INTERRUPTED CIRCUIT
91	ICE MAKER		208 V	1	4.2 A			RECEPT.	66"	
109	FOOD PROCESSOR		120 V	1	12.0 A		1.5	RECEPT.	52"	VFY. UTILITIES W/OWNER
112	REACH-IN REFRIGERATOR, 2-SEC.		120 V	1	10.7 A		1/3	RECEPT.	84"	ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
114	SLICER		120 V	1	6.0 A	720 W	1/2	RECEPT.	60"	INTERCHANGEABLE PLUG IN LOCATION W/ITEM #34 / ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
116	HORIZONTAL CUTTER/MIXER		208 V	3	22.0 A		5	RECEPT.	18"	PROVIDE 30 AMP CIRCUIT / ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH IN AND CAP AS NEEDED
132	STACKED WASHER/DRYER	A	120 V	1			.9	RECEPT.	30"	PROVIDE 15 AMP CIRCUIT
132	STACKED WASHER/DRYER	B	120 V	1			1/3	RECEPT.	30"	PROVIDE 15 AMP CIRCUIT
142	MOBILE WARMING CABINET	A	120 V	1	12.0 A	1500 W		RECEPT.	0"	(1) SERVICED THRU #145 A (2) SERVICED THRU #146
142	MOBILE WARMING CABINET	B	120 V	1	12.0 A	1500 W		RECEPT.	30"	
144	80 QUART MIXER		208 V	3	12.0 A		3	DIRECT	0"	SERVICED THRU #145 B / ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
145	WORKCOUNTER W/SINKS	A	120 V	1				DIRECT	10"	NOTE A / STUB UP THRU CURB / (4) 20.0 AMP CIRCUITS TO SERVICE (3) CONV. DRS & (1) #142A
145	WORKCOUNTER W/SINKS	B	208 V	3				DIRECT	10"	NOTE A / STUB UP THRU CURB / (1) 20.0 AMP CIRCUIT TO SERVICE #144
146	WORKCOUNTER W/SINKS		120 V	1				DIRECT	10"	NOTE A / STUB UP THRU CURB / (6) 20.0 AMP CIRCUITS TO SERVICE (4) CONV. DRS & (2) #142
148	EXHAUST HOOD (TYPE I)	A	120 V	1		400 W		DIRECT	108"	DFA / NOTE I / SEE DETAIL
148	EXHAUST HOOD (TYPE I)	B	120 V	1		400 W		DIRECT	108"	DFA / NOTE I / SEE DETAIL
148	EXHAUST HOOD (TYPE I)	C	120 V	1		400 W		DIRECT	108"	DFA / NOTE I / SEE DETAIL
150	UTILITY DISTRIBUTION SYSTEM		120/208 V	3	20.0 A			DIRECT	110"	DFA / NOTE Y
151	FIRE PROTECTION SYSTEM	A	120 V	1				DIRECT		NOTE J, K & L / AT CEILING / WIRING FOR CONTROLS / SEE DETAIL / TO SERVE #148 A, B & C
151	ELECTRIC GAS VALVE	B	120 V	1				DIRECT	120"	DFA / DEDICATED, NON-INTERRUPTED CIRCUIT
153	DEMAND CONTROL VENTILATION SYSTEM		120 V	1	15.0 A			DIRECT	36"	SEE DETAIL / TO SERVICE HOOD #148
154	60 GALLON KETTLE		120 V	1	10.0 A			RECEPT.	0"	NOTE L / SERVICED THRU #150
155	80 GALLON KETTLE		120 V	1	10.0 A			RECEPT.	0"	NOTE L / SERVICED THRU #150
158	STEAMER, 2-SEC.	A	120 V	1	2.0 A			DIRECT	0"	NOTE L / SERVICED THRU #150 / FLEXIBLE CONDUIT / ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
160	STEAMER, 2-SEC.	A	120 V	1	2.0 A			DIRECT	0"	NOTE L / SERVICED THRU #150 / FLEXIBLE CONDUIT / ADD ALTERNATE / ELECTRICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
161	STEAMER, 2-SEC.	A	120 V	1	2.0 A			DIRECT	0"	NOTE L / SERVICED THRU #150 / FLEXIBLE CONDUIT
163	RACK OVEN, 2-SEC.		120/208 V	3		1800 W		DIRECT	90"	NOTE I & L
169	FIRE PROTECTION SYSTEM	A	120 V	1				DIRECT		NOTE J, K & L / AT CEILING / WIRING FOR CONTROLS / SEE DETAIL / TO SERVE (1) #163
169	ELECTRIC GAS VALVE	B	120 V	1				DIRECT	120"	DFA / DEDICATED, NON-INTERRUPTED CIRCUIT
170	FIRE PROTECTION SYSTEM	A	120 V	1				DIRECT		NOTE J, K & L / AT CEILING / WIRING FOR CONTROLS / SEE DETAIL / TO SERVE (1) #163
170	ELECTRIC GAS VALVE	B	120 V	1				DIRECT	120"	DFA / DEDICATED, NON-INTERRUPTED CIRCUIT
174	DISPOSER		208 V	3	8.8 A		3	DIRECT	18"	NOTE C / SEE DETAIL
182	HOSE STATION		120 V	1			2	RECEPT.	84"	
187	DISPOSER		208 V	3	8.8 A		3	DIRECT	18"	NOTE C / SEE DETAIL
189	FLIGHT-TYPE DISHMACHINE W/DRYER	A	480 V	3	86.3 A			DIRECT	80"	DFA / NOTE I

GENERAL NOTES - ELECTRICAL

NOTE: GENERAL NOTES REFER TO GENERAL CONDITIONS. ALL CONDITIONS MAY NOT EXIST ON THIS PROJECT.

1. THESE DRAWINGS ARE FOR USE BY THE PROJECT ENGINEERS IN PREPARING THEIR DRAWINGS. THESE DRAWINGS ARE INCIDENTAL TO OUR SERVICES AND MUST BE REVIEWED AND APPROVED BY A PROPERLY LICENSED DESIGN PROFESSIONAL BEFORE BEING USED FOR ANY OTHER PURPOSES. RIPPE ASSOCIATES IS NOT LICENSED AS A DESIGN PROFESSIONAL AND DOES NOT HOLD ITSELF OUT AS SUCH.
2. SERVICES SHOWN ON THIS PLAN ARE EQUIPMENT REQUIREMENTS FOR FOODSERVICE EQUIPMENT ONLY. LOCATIONS, SIZES AND HEIGHTS ABOVE FINISHED FLOOR ARE APPROXIMATELY AS REQUIRED BY EQUIPMENT TO BE FURNISHED. SINCE MULTIPLE SOURCES FOR THE EQUIPMENT MAY BE SPECIFIED, SLIGHT VARIATIONS IN UTILITY LOADS, CONNECTION SIZES AND NEMA PLUG CONFIGURATIONS CAN OCCUR. DESIGN BUILDING UTILITY SYSTEM ACCORDINGLY AND ADD NOTES TO THE ELECTRICAL CONTRACT DOCUMENTS INDICATING SLIGHT VARIATIONS ARE TO BE INCLUDED IN ELECTRICAL TRADES WORK AT NO ADDITIONAL COST.
3. THESE DRAWINGS ARE NOT TO BE USED TO ROUGH-IN AND/OR TO SET SLEEVES BY, SINCE REQUIRED ALLOWANCES MUST BE MADE FOR MULTIPLE EQUIPMENT SOURCES AND FOR VALVES, FITTINGS, DISCONNECTS, ETC. WHICH WILL BE FURNISHED UNDER ELECTRICAL TRADES. FSEC IS RESPONSIBLE FOR PREPARING DIMENSIONED ROUGH-IN AND SLEEVE LOCATION PLANS PER SPECIFICATIONS TO ACCOMMODATE THE EXACT EQUIPMENT BEING PROVIDED.
4. ALL 120V DUPLEX RECEPTACLES TO BE MINIMUM 20 AMP. CIRCUIT AND MOUNTED VERTICALLY, UNLESS OTHERWISE NOTED ON PLAN.
5. ELECTRICAL TRADES TO PROVIDE ALL NECESSARY DISCONNECT SWITCHES FOR EQUIPMENT INSTALLED AHEAD OF EQUIPMENT CONTROL OR SWITCH.
6. THE FSEC IS RESPONSIBLE FOR SETTING THE EQUIPMENT IN PLACE. FINAL CONNECTION FOR THIS EQUIPMENT IS THE RESPONSIBILITY OF THE ELECTRICAL TRADES.
7. HOLES IN FOODSERVICE EQUIPMENT FOR ELECTRICAL SERVICES PROVIDED BY FSEC.
8. BUILDING POWER PANEL BREAKERS SERVING FOODSERVICE EQUIPMENT SHOULD BE EQUIPPED WITH GROUND FAULT INTERRUPT PROTECTION IN ACCORDANCE WITH NATIONAL ELECTRIC CODE FOLLOWED BY MUNICIPALITY AND/OR LOCAL CODE. DO NOT PROVIDE GROUND FAULT INTERRUPT RECEPTACLES AT THE EQUIPMENT UNLESS RECEPTACLE IS READILY ACCESSIBLE WITHOUT HAVING TO MOVE EQUIPMENT OR EMPLOY A STEP LADDER.
9. UTILITY CONNECTIONS SHOWN ARE THOSE REQUIRED TO SERVICE FOOD SERVICE EQUIPMENT ONLY. MECHANICAL TRADES SHOULD VERIFY WITH OWNER WHETHER ADDITIONAL UTILITIES ARE REQUIRED FOR EXISTING, FUTURE OR VENDOR FURNISHED NON-FOODSERVICE EQUIPMENT LOCATED WITHIN THE AREA SHOWN ON THIS PLAN.
10. DESIGN INCOMING UTILITY SERVICES TO ACCOMMODATE 100% OF THE LOADS INDICATED; DO NOT APPLY DIVERSITY FACTOR AS ALL EQUIPMENT CAN BE OPERATING SIMULTANEOUSLY DURING PEAK SERVICE PERIODS.

SCHEDULE NOTES - ELECTRICAL

NOTE: SCHEDULE NOTES PERTAIN TO INDIVIDUAL ITEMS AS INDICATED IN THE FOODSERVICE EQUIPMENT ELECTRICAL SCHEDULE.

A. THE FSEC WILL PROVIDE RECEPTACLES IN FABRICATED EQUIPMENT AS REQUIRED AND WILL PREWIRE ELECTRICAL COMPONENTS IN COUNTER TO JUNCTION BOXES IN COUNTER BASE FOR FINAL CONNECTION BY ELECTRICAL TRADES. INTERCONNECTIONS BETWEEN SECTIONS OF FABRICATED COUNTERS BY FSEC.

C. WIRE THRU TIME DELAY RELAY, SOLENOID VALVE AND CONTROL PANEL TO DISPOSER.

D. ALL REFRIGERATION SYSTEMS ARE LOCATED APPROXIMATELY WHERE SHOWN ON THE PLAN UNLESS OTHERWISE NOTED. THE FOLLOWING ITEMS ARE NOT BY THE FSEC: ROOF CURBS/CONCRETE PADS; SLEEVED & SEALED PENETRATIONS IN ROOFS/FLOORS/CEILINGS/WALLS. VERIFY EXACT LOCATON WITH ARCHITECT/ENGINEER.

I. ELECTRICAL TRADES TO WIRE AUTOMATIC CONTROLS OR INTERLOCK DEVICE BETWEEN EQUIPMENT AND EXHAUST FAN SO EXHAUST FAN TURNS ON ONCE EQUIPMENT IS OPERATIONAL.

J. ELECTRICAL TRADES TO INTERWIRE FIRE PROTECTION SYSTEM WITH BUILDING ALARM SYSTEM AND TO MAKE-UP AIR FAN SHUT-OFF.

K. FIRE PROTECTION SYSTEM REQUIRES 24 HOUR, EMERGENCY SEPARATE ELECTRICAL SERVICE. ELECTRICAL TRADES TO INTERWIRE FIRE PROTECTION SYSTEM WITH ELECTRICAL GAS SHUT-OFF VALVE FOR ALL COOKING EQUIPMENT BELOW HOODS. ELECTRICAL TRADES TO ALSO INTERWIRE FIRE PROTECTION SYSTEM WITH BUILDING ALARM SYSTEM.

L. ELECTRICAL TRADES TO INTERWIRE FIRE PROTECTION SYSTEM TO POWER SHUT-OFF DEVICE, SUPPLIED BY ELECTRICAL TRADES, SO THAT POWER TO ALL ELECTRIC COOKING EQUIPMENT AND CONVENIENCE RECEPTACLES BELOW HOODS IS SHUT OFF UPON ACTIVATION OF THE FIRE PROTECTION SYSTEM.

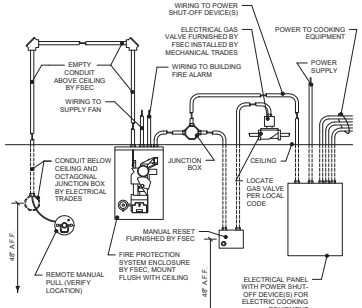
W. INTERCONNECT THIS EQUIPMENT WITH BUILDING EMERGENCY POWER.

Y. WHEN A UTILITY DISTRIBUTION SYSTEM IS SPECIFIED, ELECTRICAL TRADES SHALL:
1.INSTALL MAIN SERVICE FEEDERS AND OVERCURRENT PROTECTION DEVICES. INSTALL ELECTRICAL CONDUIT AND WIRING FROM ROUGH-IN LOCATION TO RACEWAY TERMINALS IN VERTICAL CHASE BY SYSTEM MANUFACTURER.
2.CONNECT UL LISTED POWER SUPPLY CORDS AND PREWIRED FLEXIBLE CONDUIT SET, ALL PROVIDED BY SYSTEM MANUFACTURER WITH APPROPRIATE EQUIPMENT ITEMS.
3.INTERCONNECT FIRE PROTECTION SYSTEM MICROSWITCH OR RELAY TO POWER SHUT-OFF DEVICE FOR MAIN SERVICE FEEDERS.
4.PROVIDE 24 VOLT POWER SUPPLY CIRCUIT FROM CONTROL BOX IN RISER TO AUTOMATIC STEAM SHUT-OFF VALVE, SEE DETAIL.
5.SPECIAL NOTE – NO MODIFICATION OF ANY MANUFACTURED RACEWAY SHALL BE UNDERTAKEN BY ANY ENTITY WITHOUT THE EXPRESS, WRITTEN APPROVAL AND/OR SUPERVISION OF THE RACEWAY MANUFACTURER.

THE FSEC WILL:

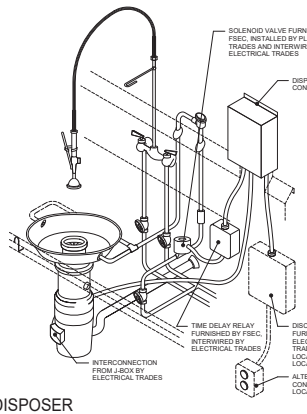
1.INTERCONNECT FIELD JOINTS BY BOLTING BUSBAR AND/OR WIRING TOGETHER. ALL FITTINGS, BOLTS, ETC. SHALL BE PRE-FITTED AND FURNISHED BY THE SYSTEM MANUFACTURER. THE CONTROL WIRE FIELD JOINT WILL BE PROVIDED WITH A QUICK-DISCONNECT DEVICE.

2.INSPECT FOR LOOSE CONNECTIONS CAUSED BY SHIPPING AND TIGHTEN AS REQUIRED.

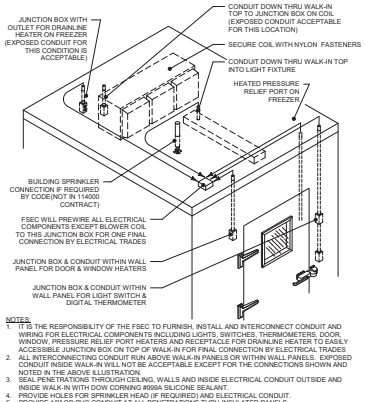


NOTE:
1. ELECTRICAL COMPONENTS AND INTERWIRING BY ELECTRICAL TRADES UNLESS NOTED OTHERWISE.
2. CONDUIT CONCEALED IN WALL WHEREVER POSSIBLE. EXPOSED CONDUIT TO BE CHROME-PLATED.

WET CHEMICAL FIRE PROTECTION SYSTEM
WIRING DIAGRAM - ELECTRIC GAS VALVE

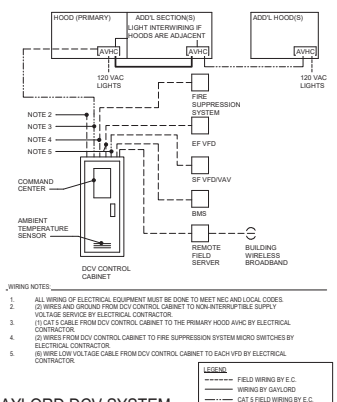


DISPOSER
WITH TIME DELAY RELAY



NOTES:
1. IT IS THE RESPONSIBILITY OF THE FSEC TO FURNISH, INSTALL AND INTERCONNECT CONDUIT AND WIRING FOR ELECTRICAL COMPONENTS INCLUDING LIGHTS, SWITCHES, THERMOMETERS, DOOR, WINDOW, PRESSURE RELIEF PORT HEATERS AND RECEPTACLE FOR DRAINLINE HEATER TO EASILY ACCESSIBLE JUNCTION BOX ON TOP OF WALK-IN FOR FINAL CONNECTION BY ELECTRICAL TRADES
2. ALL INTERCONNECTING CONDUIT RUN ABOVE WALK-IN PANELS OR WITHIN WALL PANELS. EXPOSED CONDUIT INSIDE WALK-IN WILL NOT BE ACCEPTABLE EXCEPT FOR THE CONNECTIONS SHOWN AND NOTED IN THE ABOVE ILLUSTRATION.
3. SEAL PENETRATIONS THROUGH CEILING, WALLS AND INSIDE ELECTRICAL CONDUIT OUTSIDE AND INSIDE WALK-IN WITH DOW CORNING #999A SILICONE SEALANT.
4. PROVIDE HOLES FOR SPRINKLER HEAD (IF REQUIRED) AND ELECTRICAL CONDUIT.
5. PROVIDE 1/2" OD PVC CONDUIT AT ALL PENETRATIONS THRU INSULATED PANELS

WALK-IN REFRIGERATOR/FREEZER SD-191



WIRING NOTES:
1. ALL WIRING OF ELECTRICAL EQUIPMENT MUST BE DONE TO MEET NEC AND LOCAL CODES.
2. (2) WIRES AND GROUND FROM DCV CONTROL CABINET TO NON-INTERRUPTIBLE SUPPLY VOLTAGE SERVICE BY ELECTRICAL CONTRACTOR.
3. (1) CAT-5 CABLE FROM DCV CONTROL CABINET TO THE PRIMARY HOOD AVHC BY ELECTRICAL CONTRACTOR.
4. (2) WIRES FROM DCV CONTROL CABINET TO FIRE SUPPRESSION SYSTEM MICRO SWITCHES BY ELECTRICAL CONTRACTOR.
5. (6) WIRE LOW VOLTAGE CABLE FROM DCV CONTROL CABINET TO EACH VFD BY ELECTRICAL CONTRACTOR.

LEGEND:
- FIELD WIRING BY E.C.
- WIRING BY GAYLORD
- CAT 5 FIELD WIRING BY E.C.
- CAT 5 FIELD WIRING BY GAYLORD

GAYLORD DCV SYSTEM
ELECTRICAL WIRING DETAIL

ELECTRICAL LEGEND

⊖	DR	DUPLEX RECEPTACLE
○	SR	SINGLE RECEPTACLE
⊟	FR	FLOOR RECEPTACLE
S	SW	SWITCH
	V	VOLTS
	AMP	AMPERES
ϕ	PH	PHASE
	W	WATTS
	KW	KILOWATT
	HP	HORSEPOWER
⊘	JB	JUNCTION BOX
○		EMPTY JUNCTION BOX
	*	DISTANCE ABOVE FINISHED FLOOR
	DN+	BRING SERVICE DOWN FROM ABOVE CEILING TO A DISTANCE ABOVE FINISHED FLOOR
	COMP	COMPRESSOR
		MOTOR
		SOLENOID
		DATA OUTLET
		VOICE OUTLET
	AFF	ABOVE FINISHED FLOOR
	CLG	CEILING
	DFA	DOWN FROM ABOVE
	ET	ELECTRICAL TRADES
	ELEC	ELECTRICAL
	FSEC	FOODSERVICE EQUIPMENT CONTRACTOR

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RIPPE ASSOCIATES
FOODSERVICE DESIGN + CONSULTING

kpff

IMEG

Bishop Engineering

ISSUE:
DATE: DESCRIPTION:

IFC
04/08/2024

PROJECT:
STATE OF IOWA DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

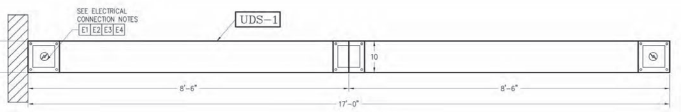
2000 N 16TH ST, CLARINDA, IA 51632

DATE: 02/09/2024
DESIGNED: EG/TP
DRAWN: MM
REVIEWED: EG/RB

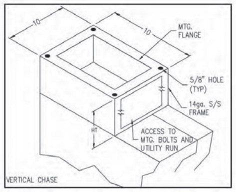
SHEET TITLE:
FOODSERVICE EQUIPMENT ELECTRICAL SCHEDULE & DETAILS

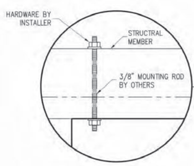
SHEET NUMBER:
FSE100

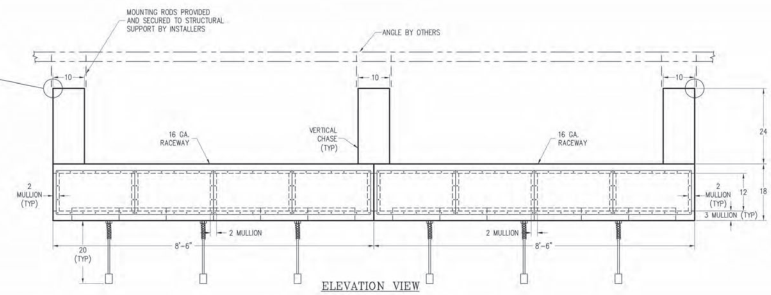
PROJECT NO.: 0240202.00
RFB922300-02



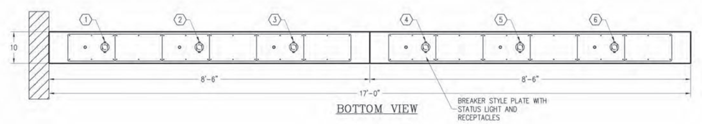
PLAN VIEW



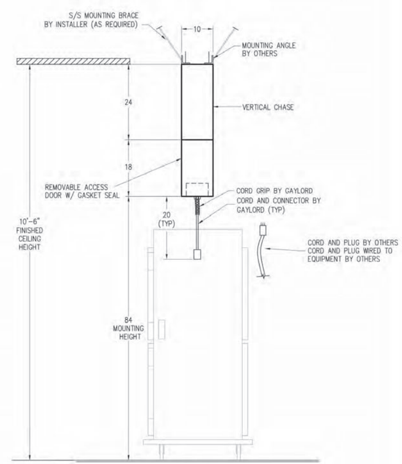




ELEVATION VIEW



BOTTOM VIEW



SECTION VIEW

ELECTRICAL CONTRACTOR

- ☒ E1. COOKING EQUIPMENT CIRCUIT BREAKERS MOUNTED IN A REMOTE LOCATION. PROVIDED BY OTHERS.
- ☒ E2. RECEPTACLES MOUNTED IN UDS BY GAYLORD. ALL WIRING FROM REMOTE CIRCUIT BREAKERS PANEL TO RECEPTACLES BY ELECTRICAL CONTRACTOR.
- ☒ E3. POWER SOURCE STUB-IN LOCATION (DOWN FROM CEILING)
- ☒ E4. CONNECT ALL WIRES AT FIELD JOINTS. TERMINAL BLOCKS ARE MARKED FOR APPROPRIATE CONNECTION. (REFER TO PLAN OR ELEVATION VIEW FOR FIELD JOINT LOCATIONS)
- ☒ E5. INSPECT FOR ANY LOOSE CONNECTIONS CAUSED BY SHIPPING AND TIGHTEN AS NEEDED.

SYMBOL CHART

⊘	ELECTRICAL CONNECTION
⊛	AIR INLET
⬡	EQUIPMENT CONNECTION CALLOUT
□	ELECTRICAL CALLOUT
◇	PLUMBING CALLOUT

NSF UL CSA

VERIFY CEILING CONDITIONS

EXACT FLOOR TO STRUCTURAL CEILING AND FLOOR TO FINISH CEILING HEIGHTS MUST BE VERIFIED FOR UTILITY DISTRIBUTION SYSTEM DESIGN. INCORRECT HEIGHTS MAY CAUSE THE UDS TO NOT FIT PROPERLY, UTILITY CONNECTION MAT NOT REACH EQUIPMENT PROPERLY OR COMPLY WITH CLEARANCES SPECIFIED IN APPLICABLE CODES AND STANDARDS.

FLOOR TO STRUCTURAL CEILING: (VERIFY)

FLOOR TO FINISH CEILING: 10'-6" (VERIFY)

ELECTRICAL NOTE

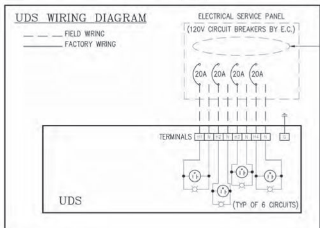
ELECTRICAL CONTRACTOR TO PROVIDE EACH BRANCH CIRCUIT BREAKER AND WIRING TO THE UDS TERMINAL BLOCKS, AND GROUND TERMINAL LUG. FOR COMPLETE SHUT OFF OF ELECTRICAL POWER, MAIN CIRCUIT BREAKER SHOULD BE TURNED OFF.

IMPORTANT NOTES:

1) EQUIPMENT MAKE, MODEL MUST BE VERIFIED TO ASSURE CORRECT UTILITY LOADS, PRIOR TO RELEASE FOR FABRICATION. ANY CHANGES TO THE EQUIPMENT AFTER APPROVAL OR RELEASE, WILL ADD COST AND EFFECT SHIPPING DATES.

2) SEE U.D.S. SCHEDULE FOR EQUIPMENT CONNECTIONS

UDS WIRING DIAGRAM



UDS SCHEDULE

EQUIPMENT					ELECTRICAL											REMARKS	BILL NUMBER				
ITEM NO.	CONN. NO.	DESCRIPTION	MFG.	MODEL	K.W.	VOLTS	PH.	AMPS	BREAKER SIZE	BREAKER POLE	WIRE SIZE	CORD SIZE	CORD LENGTH	CIRCUIT TYPE				QTY		QTY	CONN. NO.
	1	ELEC. CONN.	JONES ZYLON	JZHR-168	1.80	120	1	15	20	1	12	–	–	GFCI		NEMA 5-20R CONNECTOR					1
	2	ELEC. CONN.	JONES ZYLON	JZHR-168	1.80	120	1	15	20	1	12	–	–	GFCI		NEMA 5-20R CONNECTOR					2
	3	ELEC. CONN.	JONES ZYLON	JZHR-168	1.80	120	1	15	20	1	12	–	–	GFCI		NEMA 5-20R CONNECTOR					3
	4	ELEC. CONN.	JONES ZYLON	JZHR-168	1.80	120	1	15	20	1	12	–	–	GFCI		NEMA 5-20R CONNECTOR					4
	5	ELEC. CONN.	JONES ZYLON	JZHR-168	1.80	120	1	15	20	1	12	–	–	GFCI		NEMA 5-20R CONNECTOR					5
	6	ELEC. CONN.	JONES ZYLON	JZHR-168	1.80	120	1	15	20	1	12	–	–	GFCI		NEMA 5-20R CONNECTOR					6
																REMARKS					
TOTAL CONNECTED LOAD																					
RESERVE FOR FUTURE																					
SERVICE SIZE BY OTHERS																					

UDS COMPONENTS

		DESCRIPTION	MANUFACTURER	MODEL #	REMARKS	BILL #	QTY
		120/1PH/20A CONNECTOR (NEMA 5-20)	HUBBELL	HBL5369		50382	6
		CORD GRIP (1/2" NPT, 0.625"-0.75")	HUBBELL	074011247		50024	6

SHOP NOTES (T2)

* CEILING MOUNT UDS

DIMENSION TOLERANCE ± 1/4" (6mm)

DH-CM-E3-17 (T2)	UDS-1	22168901
MODEL #	ITEM #	WORK ORDER #

INSTALLATION INFORMATION

REV	DRWN.BY	DATE	REVISIONS	CHECKED BY
01	RD	09-06-22	REVISED EQUIPMENT TO 1.8 KW, 15 AMPS	
00	EP	08-25-22	INITIAL DESIGN	

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DRAWN BY:	CHECKED BY:	ELECT. CHECK:	F.P. CHECK:	S.E. APPROVAL:
EP				

CLARINDA CORRECTIONAL FACILITY

CLARINDA, IA

DRAWING NO.:	DATE:		REV.:	SHEET NO.:
22-1689	08-25-22		00	01

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FOODSERVICE DESIGN + CONSULTING

kpff

IMEG

Bishop Engineering

ISSUE:

#	DATE:	DESCRIPTION:

IFC
04/08/2024

PROJECT:

STATE OF IOWA DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	EG/TP
DRAWN:	MM
REVIEWED:	EG/RB

SHEET TITLE:

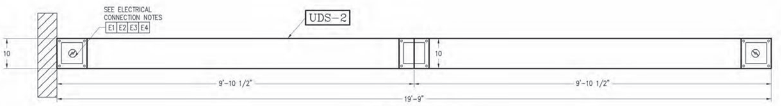
FOODSERVICE EQUIPMENT ELECTRICAL DETAILS - UDS #41A

SHEET NUMBER:

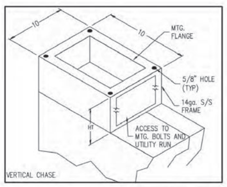
FSE101

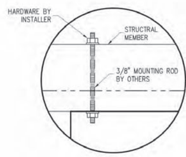
PROJECT NO.: 0240202.00

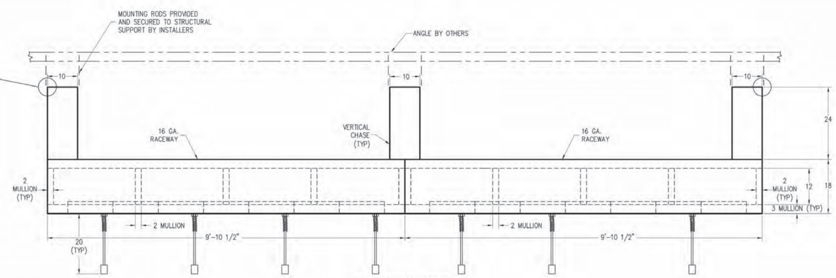
RFB922300-02



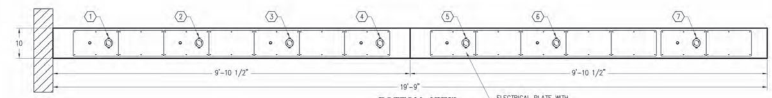
PLAN VIEW



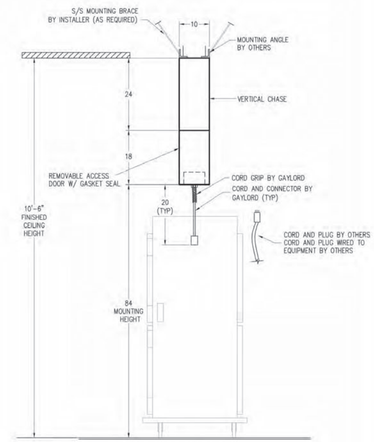




ELEVATION VIEW



BOTTOM VIEW



SECTION VIEW

ELECTRICAL CONTRACTOR

- ☒ E1. COOKING EQUIPMENT CIRCUIT BREAKERS MOUNTED IN A REMOTE LOCATION. PROVIDED BY OTHERS.
- ☒ E2. RECEPTACLES MOUNTED IN UDS BY GAYLORD. ALL WIRING FROM REMOTE CIRCUIT BREAKERS PANEL TO RECEPTACLES BY ELECTRICAL CONTRACTOR.
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SYMBOL CHART

⊘	ELECTRICAL CONNECTION
⊛	AIR INLET
⬡	EQUIPMENT CONNECTION CALLOUT
□	ELECTRICAL CALLOUT
◇	PLUMBING CALLOUT

VERIFY CEILING CONDITIONS

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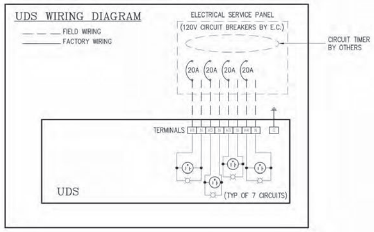
2) SEE U.D.S. SCHEDULE FOR EQUIPMENT CONNECTIONS

UDS WIRING DIAGRAM



UDS SCHEDULE

EQUIPMENT					ELECTRICAL											REMARKS	BILL NUMBER				
ITEM NO.	CONN. NO.	DESCRIPTION	MFG.	MODEL	K.W.	VOLTS	PH.	AMPS	BREAKER SIZE	BREAKER POLE	WIRE SIZE	CORD SIZE	CORD LENGTH	CIRCUIT TYPE				QTY		QTY	CONN. NO.
	1	ELEC. CONN.	JONES ZYLON	JZHR-168	1.80	120	1	15	20	1	12	–	–	GFCI		NEMA 5-20R CONNECTOR					1
	2	ELEC. CONN.	JONES ZYLON	JZHR-168	1.80	120	1	15	20	1	12	–	–	GFCI		NEMA 5-20R CONNECTOR					2
	3	ELEC. CONN.	JONES ZYLON	JZHR-168	1.80	120	1	15	20	1	12	–	–	GFCI		NEMA 5-20R CONNECTOR					3
	4	ELEC. CONN.	JONES ZYLON	JZHR-168	1.80	120	1	15	20	1	12	–	–	GFCI		NEMA 5-20R CONNECTOR					4
	5	ELEC. CONN.	JONES ZYLON	JZHR-168	1.80	120	1	15	20	1	12	–	–	GFCI		NEMA 5-20R CONNECTOR					5
	6	ELEC. CONN.	JONES ZYLON	JZHR-168	1.80	120	1	15	20	1	12	–	–	GFCI		NEMA 5-20R CONNECTOR					6
	7	ELEC. CONN.	JONES ZYLON	JZHR-168	1.80	120	1	15	20	1	12	–	–	GFCI		NEMA 5-20R CONNECTOR					7
																REMARKS					
TOTAL CONNECTED LOAD																					
RESERVE FOR FUTURE																					
SERVICE SIZE BY OTHERS																					

UDS COMPONENTS

DESCRIPTION	MANUFACTURER	MODEL #	REMARKS	BILL #	QTY
120/1PH/20A CONNECTOR (NEMA 5-20)	HUBBELL	HBL5369		50382	7
CORD GRIP (1/2" NPT, 0.625"-0.75")	HUBBELL	074011247		50024	7

SHOP NOTES (T2)

* CEILING MOUNT UDS

DIMENSION TOLERANCE ± 1/4" (6mm)

MODEL #	ITEM #	WORK ORDER #
DH-CM-E3-19.75 (T2)	UDS-2	22168902

INSTALLATION INFORMATION

REV	DRWN.BY	DATE	REVISIONS	CHECKED BY
01	RD	09-06-22	REVISED EQUIPMENT TO 1.8 KW, 15 AMPS	
00	EP	08-25-22	INITIAL DESIGN	

This plan is made from available information, but measurements are to be verified by contractors, installers and others in connection with this job. Gaylord Industries accepts no responsibility for work done by contractors, installers and others, and will not stand any expense for charges made necessary by local building codes, ordinances, structural conditions or by the substitution or changes in equipment shown in this plan. This plan must be verified and approved by proper parties before fabrication can be started and approval shall not be made unless contractors, installers and others have reviewed applicable codes with code authorities. Reference is made to the general notes, which are a part of these plans and all contractors, installers and others utilizing these plans are advised they are responsible for examining and becoming familiar with said general notes before commencing any work hereunder. Any inconsistencies between these plans and the general notes, or between these plans, the general notes, and local building codes or ordinances must be immediately called to the attention of Gaylord Industries in writing so that any such inconsistencies can be resolved. Gaylord Industries must be notified of any changes made to the plan in a clear and conspicuous manner. Gaylord Industries will not be responsible for any incidental or consequential damages incurred by others as a result of contractors, installers and others failure to notify Gaylord of changes to the plan.

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DRAWN BY:	CHECKED BY:	ELECT. CHECK:	F.P. CHECK:	S.E. APPROVAL:
EP				

CLARINDA CORRECTIONAL FACILITY

CLARINDA, IA

DRAWING NO.:	DATE:		REV.:	SHEET NO.:
22-1689	08-25-22		00	02

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FOODSERVICE DESIGN + CONSULTING

kpff

IMEG

Bishop Engineering

ISSUE:

#	DATE:	DESCRIPTION:

IFC
04/08/2024

PROJECT:

STATE OF IOWA DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	EG/TP
DRAWN:	MM
REVIEWED:	EG/RB

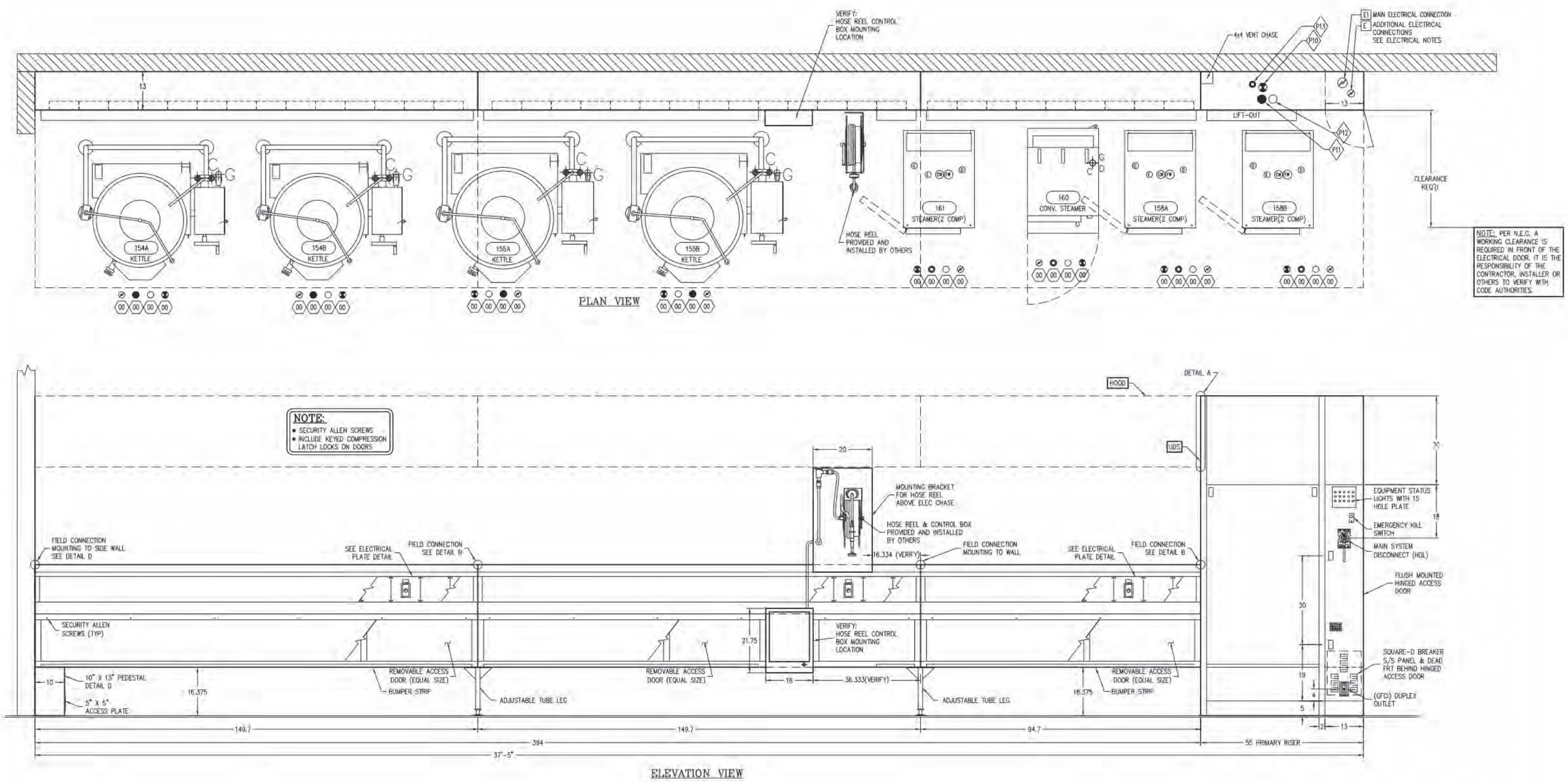
SHEET TITLE:

FOODSERVICE EQUIPMENT ELECTRICAL DETAILS - UDS #41B

SHEET NUMBER:

FSE102

PROJECT NO.: 0240202.00
RFB922300-02



DIMENSION TOLERANCE ± 1/4" (6mm)

DH-WM-E3-HC-G-37.42	148.1	
MODEL #	ITEM #	WORK ORDER #

INSTALLATION INFORMATION

REV	DRWN.BY	DATE	REVISIONS	CHECKED BY
09	EP	11-11-22	MOVED PRIMARY RISER BACK BEHIND HOOD	
08	JA	11-02-22	REVISE UDS RISER OUTSIDE OF HOOD	
07	JA	10-25-22	REVISE FOR HOSE REEL BRACKET ABOVE ELEC CHASE AND 13" UDS DEPTH	
06	JA	10-11-22	ADD UDS TO DRAWINGS	

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TOLL FREE: (800) 547-9696
FAX NO.: (503) 692-6048
E-MAIL: gaylord@gaylordusa.com

DRAWN BY:	CHECKED BY:	ELECT. CHECK:	F.P. CHECK:	S.E. APPROVAL:
JA				

CLARINDA CORRECTIONAL FACILITY
CLARINDA, IA

DRAWING NO.:	DATE:	REV.:	SHEET NO.:
22-1632	08-26-22	09	04

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Bishop Engineering

ISSUE: #	DATE:	DESCRIPTION:

IFC
04/08/2024

PROJECT:
STATE OF IOWA DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	EG/TP
DRAWN:	RB
REVIEWED:	EG/RB

SHEET TITLE:
FOODSERVICE EQUIPMENT ELECTRICAL DETAILS - UDS #150

SHEET NUMBER:
FSE103

PROJECT NO.: 0240202.00
RFB922300-02

ITEM	DESCRIPTION	MAKE	MODEL	ELECTRICAL 120/208 (127/220)							GAS		WATER			NOTES
				KW	VOLTS	PH	AMPS/PH L1	AMPS/PH L2	AMPS/PH L3	BREAKER	MBH	CONN	FILTERED WATER	H.W. CONN	C.W. CONN	
154A	KETTLE	CLEVELAND	KGL-60-T		120	1	10			20	190	3/4		1/2	1/2	
154B	KETTLE	CLEVELAND	KGL-60-T		120	1		10		20	190	3/4		1/2	1/2	
155A	KETTLE	CLEVELAND	KGL-80-T		120	1			10	20	190	3/4		1/2	1/2	
155B	KETTLE	CLEVELAND	KGL-80-T		120	1	10			20	190	3/4		1/2	1/2	
158A	STEAMER	CLEVELAND	24-CGA-10	0.2	120	1		2			125	3/4	3/4		3/4	
158B	STEAMER	CLEVELAND	24-CGA-10	0.2	120	1		2			125	3/4	3/4		3/4	
160	STEAMER	VULCAN	C24GA	0.2	120	1		2			125	3/4	3/4		3/4	
161	STEAMER	CLEVELAND	24-CGA-10	0.2	120	1		2			125	3/4	3/4		3/4	
	HOSE REEL BY OTHERS													1/2	1/2	
	DUPLEX OUTLET				120	1			3	20						
	HOOD LIGHTS				120	1			3	20						
	HOOD CONTROLS				120	1			3	20						
TOTAL CONNECTED LOAD						3	20	18	19		1260		3/4	3/4	3/4	
							31.25	28.125	29.6875							
RESERVE FOR FUTURE						3	80	82	81							
TOTAL SERVICE SIZE						AMPS		100			1575					
											3" SINGLE					

INSTALLATION INFORMATION

REV	DRWN BY	DATE	REVISIONS:	CHECKED BY
09	EP	11-11-22	NO CHANGE	
08	JA	11-02-22	NO CHANGE	
07	JA	10-25-22	NO CHANGE	
06	JA	10-11-22	ADD UDS TO DRAWINGS	

This plan is made from available information, but measurements are to be verified by contractors, installers and others in connection with this job. Gaylord Industries accepts no responsibility for work done by contractors, installers and others, and will not stand any expense for changes made necessary by the substitution or changes in equipment shown in this plan. This plan must be verified and approved by proper parties before fabrication can be started and approval shall not be made unless contractors, installers and others have reviewed applicable codes with code authorities. Reference is made to the general notes, which are a part of these plans and all contractors, installers and others utilizing these plans shall be responsible for familiarizing themselves and becoming familiar with said general notes before commencing any work hereunder. Any inconsistencies between these plans and the general notes, or between these plans, the general notes, and local building codes or ordinances must be immediately called to the attention of Gaylord Industries in writing so that any such inconsistencies can be resolved.

Gaylord Industries must be notified of any changes made to the plan in a clear and comprehensive manner. Gaylord Industries will not be responsible for any incidental or consequential damages incurred by others as a result of contractors, installers and others failure to notify Gaylord of changes to the plan.

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E-MAIL: gaylord@gaylordusa.com

DIMENSION TOLERANCE ± 1/4" (6mm)

DH-WM-E3-HC-G-37.42 | 148.1

MODEL # | ITEM # | WORK ORDER #

DRAWN BY: JA	CHECKED BY:	SUBST. CHECK:	F.P. CHECK:	E.E. APPROVAL:

CLARINDA CORRECTIONAL FACILITY
CLARINDA, IA

DRAWING NO.: 22-1632 | DATE: 08-26-22 | REV.: 09 | SHEET NO.: 06

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IMEG

Bishop Engineering

ISSUE:

#	DATE:	DESCRIPTION:

IFC
04/08/2024

PROJECT:
STATE OF IOWA DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

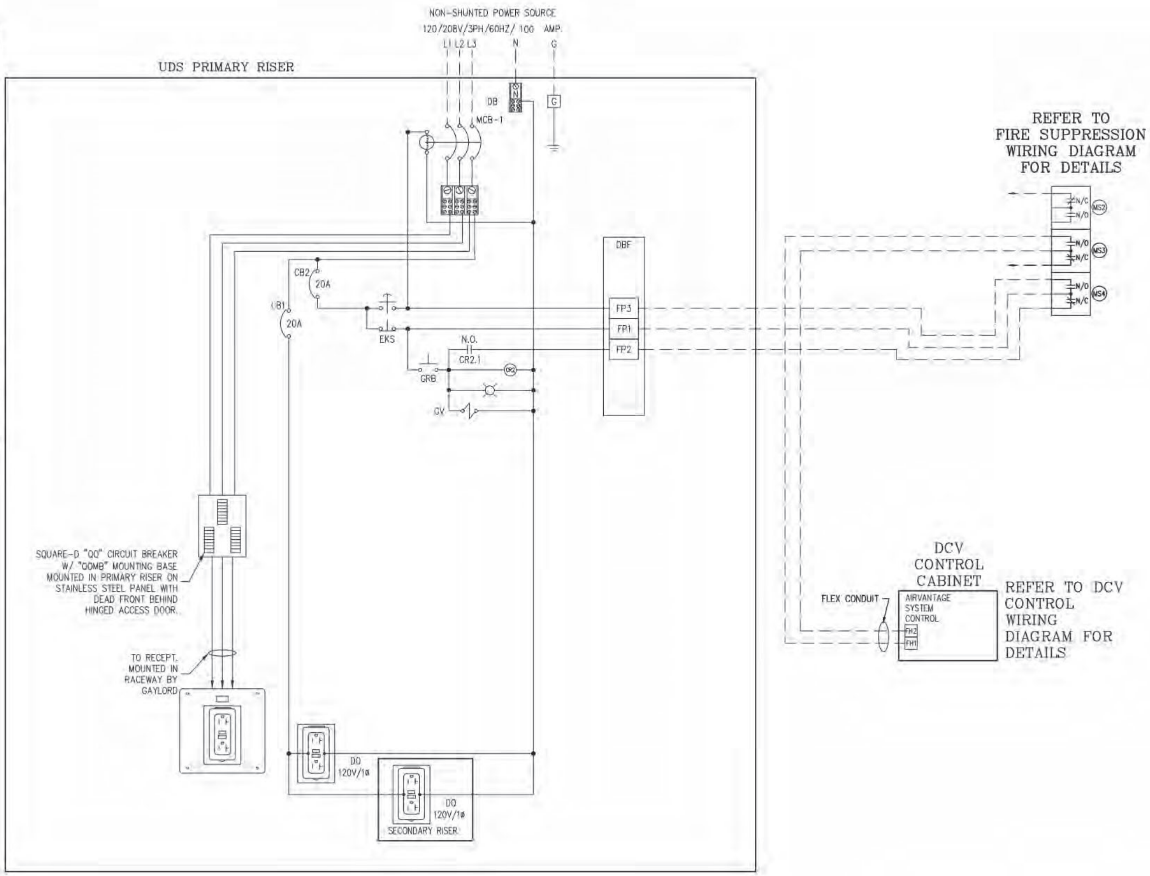
DATE:	02/09/2024
DESIGNED:	EG/TP
DRAWN:	RB
REVIEWED:	EG/RB

SHEET TITLE:
FOODSERVICE EQUIPMENT ELECTRICAL DETAILS - UDS #150

SHEET NUMBER:
FSE104

PROJECT NO.: 0240202.00
RFB922300-02

LEGEND	
TAG	DESCRIPTION
CB1	CIRCUIT BREAKER FOR OUTLET
CB2	CIRCUIT BREAKER FOR LIGHTS & CONTROL
CR_	RELAY
	RELAY BASE
DB	DISTRIBUTION BLOCK
DO	DUPLEX OUTLET (GFCI)
EKS	EMERGENCY KILL SWITCH
	N.O. & N.C. CONTACTS
HLS	HOOD LIGHT SWITCH
GRB	GAS RESET BUTTON
	N.O. & N.C. CONTACTS
	LAMP HOLDER
	BULB 6V
	TRANSFORMER 120V/6V
GV	GAS VALVE(S)
DBF	DISTRIBUTION BLOCK FIELD CONNECTION
MCB	MAIN SHUNT TRIP BREAKER(S)
C-150	FAN ON OFF SWITCH
SW_	FIRE SYSTEM DUAL MICRO SWITCH
— — —	FIELD WIRING
———	FACTORY WIRING



INSTALLATION INFORMATION

REV	DRWN.BY	DATE	REVISIONS	CHECKED BY
09	EP	11-11-22	ADDED WIRING DIAGRAM	
08	JA	11-02-22	NO CHANGE	
07	JA	10-25-22	NO CHANGE	
06	JA	10-11-22	ADD UDS TO DRAWINGS	

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DIMENSION TOLERANCE ± 1/4" (6mm)

MODEL #	ITEM #	WORK ORDER #
DH-WM-E3-HC-G-37.42	148.1	

DRAWN BY:	CHECKED BY:	ELECT. CHECK:	F.P. CHECK:	S.E. APPROVAL:
JA				

CLARINDA CORRECTIONAL FACILITY
CLARINDA, IA

DRAWING NO.:	DATE:		REV.:	SHEET NO.:
22-1632	08-26-22		09	07

GAYLORD.

Farnsworth GROUP
14225 UNIVERSITY AVENUE, SUITE 110
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www.f-w.com
Engineers | Architects | Surveyors | Scientists

RIPPE ASSOCIATES
FOODSERVICE DESIGN + CONSULTING
kpff
IMEG
Bishop Engineering

ISSUE:
#	DATE:	DESCRIPTION:

IFC
04/08/2024

PROJECT:
STATE OF IOWA DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

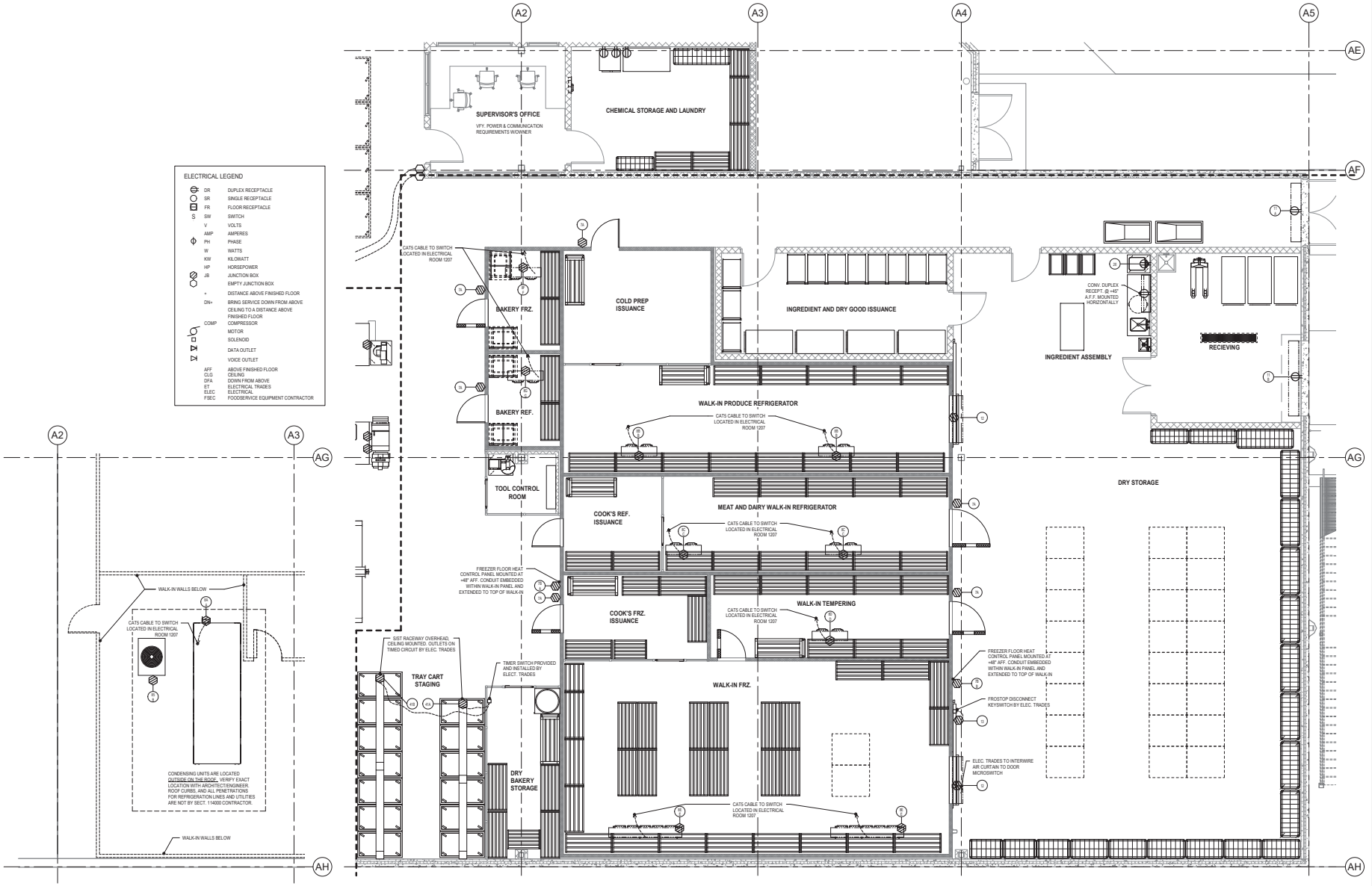
2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	EG/TP
DRAWN:	RB
REVIEWED:	EG/RB

SHEET TITLE:
FOODSERVICE EQUIPMENT ELECTRICAL DETAILS - UDS #150

SHEET NUMBER:
FSE105

PROJECT NO.: 0240202.00
RFB922300-02



2 FOODSERVICE ELECTRICAL PLAN - ROOF
1/4" = 1'-0"

1 FOODSERVICE ELECTRICAL PLAN - AREA 1
1/4" = 1'-0"

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PROJECT:
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CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

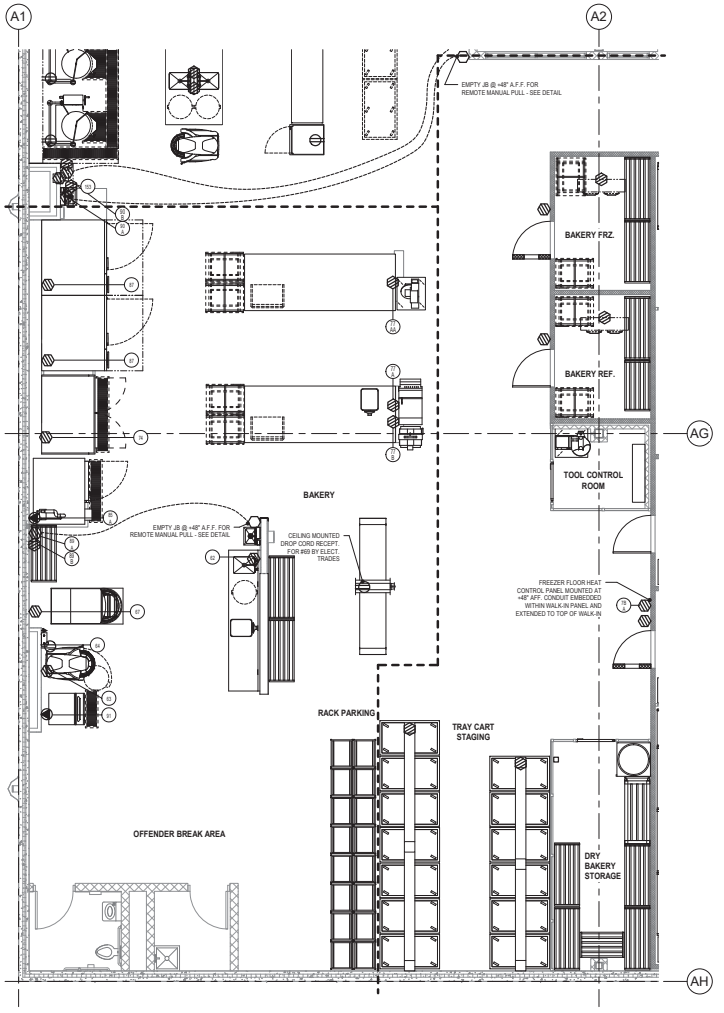
2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	EG/TP
DRAWN:	MM
REVIEWED:	EG/RB

SHEET TITLE:
FOODSERVICE EQUIPMENT ELECTRICAL PLAN - AREA 1

SHEET NUMBER:
FSE106

PROJECT NO.: 0240202.00
RFB922300-02



1 FOODSERVICE ELECTRICAL PLAN - AREA 2
1/4" = 1'-0"

ELECTRICAL LEGEND

	DR	DUPLEX RECEPTACLE
	SR	SINGLE RECEPTACLE
	FR	FLOOR RECEPTACLE
S	SW	SWITCH
	V	VOLTS
	AMP	AMPERES
ϕ	PH	PHASE
	W	WATTS
	KW	KILOWATT
	HP	HORSEPOWER
	JB	JUNCTION BOX
		EMPTY JUNCTION BOX
	"	DISTANCE ABOVE FINISHED FLOOR
	DN+	BRING SERVICE DOWN FROM ABOVE CEILING TO A DISTANCE ABOVE FINISHED FLOOR
	COMP	COMPRESSOR
		MOTOR
		SOLENOID
		DATA OUTLET
		VOICE OUTLET
	AFF	ABOVE FINISHED FLOOR
	CLG	CEILING
	DFA	DOWN FROM ABOVE
	ET	ELECTRICAL TRADES
	ELEC	ELECTRICAL
	FSEC	FOODSERVICE EQUIPMENT CONTRACTOR

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CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

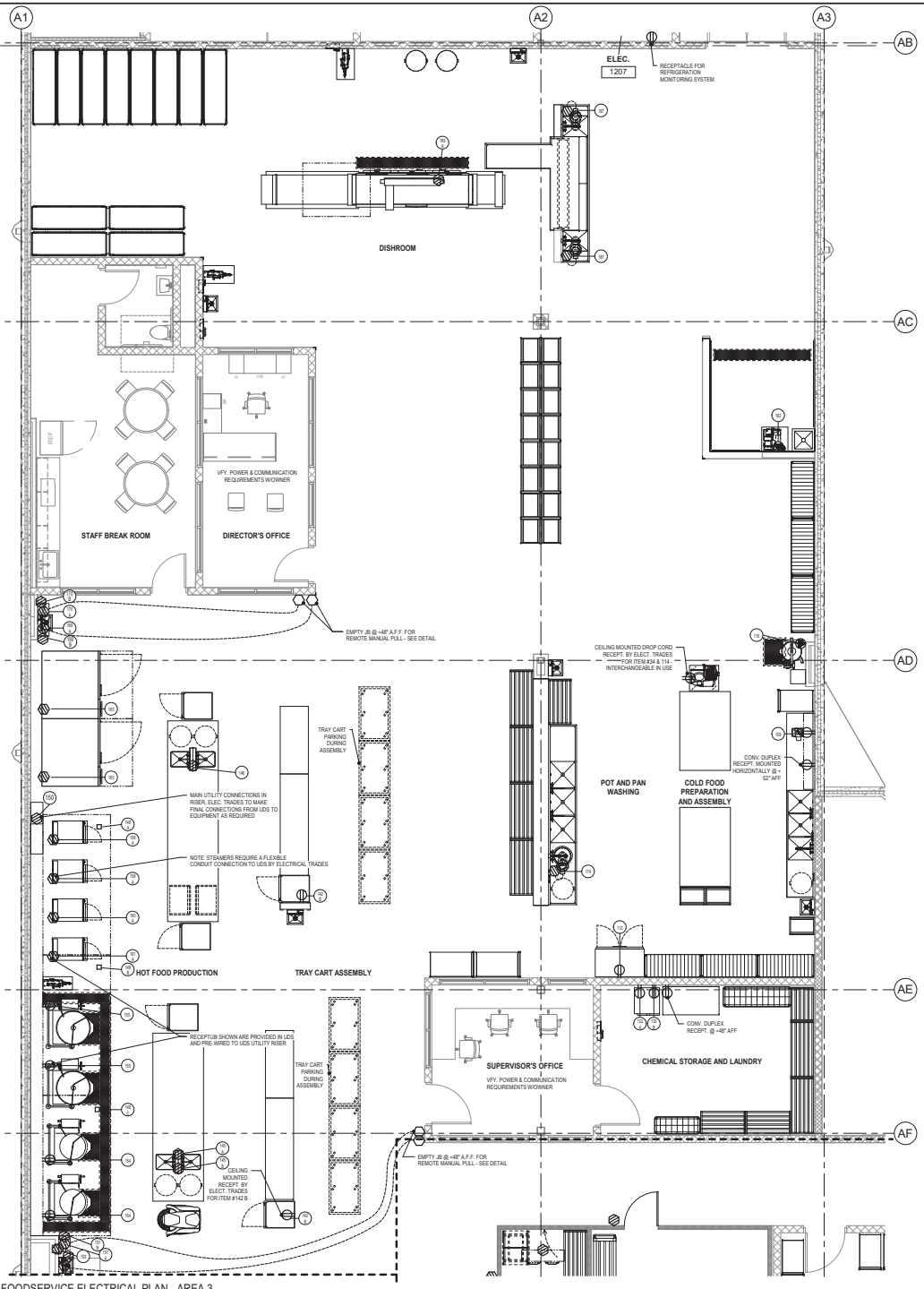
2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	EG/TP
DRAWN:	MM
REVIEWED:	EG/RB

SHEET TITLE:
FOODSERVICE EQUIPMENT ELECTRICAL PLAN - AREA 2

SHEET NUMBER:
FSE107

PROJECT NO.: 0240202.00
RFB922300-02



1 FOODSERVICE ELECTRICAL PLAN - AREA 3
1/4" = 1'-0"

ELECTRICAL LEGEND

	DR	DUPLEX RECEPTACLE
	SR	SINGLE RECEPTACLE
	FR	FLOOR RECEPTACLE
S	SW	SWITCH
	V	VOLTS
	AMP	AMPERES
ϕ	PH	PHASE
	W	WATTS
	KW	KILOWATT
	HP	HORSEPOWER
	JB	JUNCTION BOX
		EMPTY JUNCTION BOX
	"	DISTANCE ABOVE FINISHED FLOOR
	DN+	BRING SERVICE DOWN FROM ABOVE CEILING TO A DISTANCE ABOVE FINISHED FLOOR
	COMP	COMPRESSOR
		MOTOR
		SOLENOID
		DATA OUTLET
		VOICE OUTLET
	AFF	ABOVE FINISHED FLOOR
	CLG	CEILING
	DFA	DOWN FROM ABOVE
	ET	ELECTRICAL TRADES
	ELEC	ELECTRICAL
	FSEC	FOODSERVICE EQUIPMENT CONTRACTOR

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ISSUE:

#	DATE:	DESCRIPTION:

IFC
04/08/2024

PROJECT:
STATE OF IOWA DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	EG/TP
DRAWN:	MM
REVIEWED:	EG/RB

SHEET TITLE:
FOODSERVICE EQUIPMENT ELECTRICAL PLAN - AREA 3

SHEET NUMBER:
FSE108

PROJECT NO.: 0240202.00
RFB922300-02

FOODSERVICE EQUIPMENT MECHANICAL SCHEDULE

ITEM #	DESCRIPTION		DIRECT WASTE SIZE	DIRECT WASTE HEIGHT	INDIRECT WASTE SIZE	COLD WATER SIZE	COLD WATER HEIGHT	HOT WATER SIZE	HOT WATER HEIGHT	GAS SIZE	GAS HEIGHT	GAS INPUT MBTU/HR	W.C.	REMARKS
8A	RACKED REFRIGERATION SYSTEM	A												NOTE M
8B	REFRIGERATION SYSTEM COIL - PRODUCE REFRIGERATOR	B			1"									NOTE G
8C	REFRIGERATION SYSTEM COIL - MEAT & DAIRY REFRIGERATOR	C			1"									NOTE G
8D	REFRIGERATION SYSTEM COIL - TEMPERING REFRIGERATOR	D			1"									NOTE G
8E	FREEZER SYSTEM COIL - MAIN FREEZER	E			1"									NOTE G
8F	FREEZER SYSTEM COIL - BAKERY FREEZER	F			1"									NOTE G
8G	REFRIGERATION SYSTEM COIL - BAKERY REFRIGERATOR	G			1"									NOTE G
18	HAND SINK		1 1/2"	22"		1/2"	24"	1/2"	24"					
20	FLOOR TROUGH		4"	-4"										FURNISHED BY FSEC / INSTALLED BY MECH TRADES
22	WORKCOUNTER W/SINK				2"	1/2"	22"	1/2"	22"					(1) CW & HW CONNECTION / (1) INDIRECT WASTE CONNECTION
62	WORKCOUNTER W/SINK				2"	1/2"	22"	1/2"	22"					(1) CW & HW CONNECTION / (1) INDIRECT WASTE CONNECTION
64	WATER METER W/TEMPERATURE RANGE					1/2"	72"	1/2"	72"					NOTE D / TREATED CW FROM BLDG RO SYSTEM / ADD ALTERNATE / MECHANICAL TRADES TO ROUGH IN AND CAP AS NEEDED
68	HAND SINK		1 1/2"	22"		1/2"	24"	1/2"	24"					
74	ROLL-IN PROOFER, 2 DOUBLE RACKS				3/4"	1/2"	90"							NOTE D & E / TREATED CW BLDG RO SYSTEM / ADD ALTERNATE / MECHANICAL TRADES TO ROUGH IN AND CAP AS NEEDED
75	FLOOR TROUGH		4"	-4"										FURNISHED BY FSEC / INSTALLED BY MECH TRADES
85	ROLL-IN BLAST CHILLER	A			1 1/2"									
87	RACK OVEN, 2-SEC.				3/4"	1/2"	100"			1"	90"	290	5.0"	NOTE D, E, H, I, J, V & W / TREATED CW FROM BLDG RO SYSTEM / 40 PSI MIN @ 9 GPM / WATER HARDNESS 2-4 GPG / ADD ALTERNATE / MECHANICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
89	FIRE PROTECTION SYSTEM	A												NOTE J / SEE DETAIL / TO SERVE ITEM (1) #87
90	FIRE PROTECTION SYSTEM	A												NOTE J / SEE DETAIL / TO SERVE ITEM (1) #87
91	ICE MAKER				1/2"	3/8"	54"							NOTE D / TREATED CW FROM BLDG RO SYSTEM
92	ICE BIN				3/4"									
93	FLOOR TROUGH		4"	-4"										FURNISHED BY FSEC / INSTALLED BY MECH TRADES
100	HAND SINK		1 1/2"	22"		1/2"	24"	1/2"	24"					
104	WORKCOUNTER W/SINKS				2"	1/2"	22"	1/2"	22"					(2) CW & HW CONNECTIONS / (3) DIRECT WASTE CONNECTIONS
107	SPRAY RINSE					3/4"	20"	1/2"	20"					
117	FLOOR TROUGH		4"	-4"										FURNISHED BY FSEC / INSTALLED BY MECH TRADES
118	HOSE STATION					1/2"	48"	1/2"	48"					
132	STACKED WASHER/DRYER	A			1 1/4"	3/4"	48"	3/4"	48"	3/8"	30"	22	5.0"	NOTE I, V & W / DRAIN TO STANDPIPE IN WALL
145	WORKCOUNTER W/SINKS					1/2"	10"	1/2"	10"					(2) CW & HW CONNECTIONS / (2) INDIRECT WASTE CONNECTIONS
146	WORKCOUNTER W/SINKS				2"	1/2"	10"	1/2"	10"					(2) CW & HW CONNECTIONS / (2) INDIRECT WASTE CONNECTIONS
150	UTILITY DISTRIBUTION SYSTEM					1"	110"	1"	110"	3"	110"	1260	7.0"	DFA / NOTE S / 3/4" FILTERED CW FROM BUILDING RO SYSTEM
151	FIRE PROTECTION SYSTEM	A												NOTE J / SEE DETAIL / TO SERVE ITEM #148
154	60 GALLON KETTLE					1/2"	24"	1/2"	24"	3/4"	30"	190	4.0"	NOTE I, J, V & W
155	80 GALLON KETTLE					1/2"	24"	1/2"	24"	3/4"	30"	190	4.0"	NOTE I, J, V & W
156	FLOOR TROUGH		4"	-4"										FURNISHED BY FSEC / INSTALLED BY MECH TRADES
158	STEAMER, 2-SEC.	A			1 1/2"	3/4"	24"			3/4"	30"	125	4.0"	NOTE D, E, H, I, J, V & W / (1) TREATED CW CONNECTION FROM BLDG RO SYSTEM @ 35-60 PSI / ADD ALTERNATE / MECHANICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
158	STEAMER, 2 SEC.	B				3/4"	24"							NOTE D / (1) UNFILTERED CW CONNECTION @ 35-60 PSI / ADD ALTERNATE / MECHANICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
160	STEAMER, 2-SEC.	A			1 1/2"	3/4"	24"			3/4"	30"	125	4.0"	NOTE D, E, H, I, J, V & W / (1) TREATED CW CONNECTION FROM BLDG RO SYSTEM @ 20-60 PSI / ADD ALTERNATE / MECHANICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
160	STEAMER, 2 SEC.	B				3/4"	24"							NOTE D / (1) UNFILTERED CW CONNECTION @ 20-60 PSI / ADD ALTERNATE / MECHANICAL TRADES TO ROUGH-IN AND CAP AS NEEDED
161	STEAMER, 2-SEC.	A			1 1/2"	3/4"	24"			3/4"	30"	125	4.0"	NOTE D, E, H, I, J, V & W / (1) TREATED CW CONNECTION FROM BLDG RO SYSTEM @ 35-60 PSI
161	STEAMER, 2 SEC.	B				3/4"	24"							NOTE D / (1) UNFILTERED CW CONNECTION @ 35-60 PSI
162	HOSE REEL					1/2"	44"	1/2"	44"					NOTE D / SEE DETAIL
163	RACK OVEN, 2-SEC.				3/4"	1/2"	100"			1"	102"	290	5.0"	NOTE D, E, H, I, J, V, & W / TREATED CW FROM BLDG RO SYSTEM / 40 PSI MIN @ 9 GPM / WATER HARDNESS 2-4 GPG
169	FIRE PROTECTION SYSTEM	A												NOTE J / SEE DETAIL / TO SERVE ITEM (1) #163
170	FIRE PROTECTION SYSTEM	A												NOTE J / SEE DETAIL / TO SERVE ITEM (1) #163
173	POT & PAN SINK		2"	10"		3/4"	18"	3/4"	18"					NOTE Y / (2) CW & HW CONNECTIONS / (3) DIRECT WASTE CONNECTIONS
174	DISPOSER		2"	10"										NOTE A & B / SEE DETAIL / TEE-OFF 1/2" CW FROM #175
175	SPRAY RINSE					3/4"	20"	1/2"	20"					BRANCH 1/2" CW TO ITEM #174
182	HOSE STATION					3/4"	12"							HOSE BIB W/ 2.1 GPM MIN. @ 30 PSI MIN. / 120°F INCOMING HW
183	FLOOR TROUGH		4"	-4"										FURNISHED BY FSEC / INSTALLED BY MECH TRADES
184	HOSE REEL					1/2"	44"	1/2"	44"					NOTE D / SEE DETAIL
185	EYE/FACE WASH STATION		2"	24"		1/2"	29"	1/2"	29"					MIXING VALVE FURNISHED BY FSEC / INSTALLED BY MECH TRADES
187	DISPOSER		2"	10"										NOTES A & B / SEE DETAIL / TEE-OFF 1/2" CW FROM #191
189	FLIGHT-TYPE DISHMACHINE W/DRYER	A			2"	3/4"	6"	1"	6"					NOTE F & Q
189	FLIGHT-TYPE DISHMACHINE W/DRYER	B			2"									UNLOAD END
191	SPRAY RINSE					3/4"	20"	1/2"	20"					BRANCH 1/2" CW TO ITEM #187
192	FLOOR TROUGH		4"	-4"										FURNISHED BY FSEC / INSTALLED BY MECH TRADES
194	FLOOR TROUGH		4"	-4"										FURNISHED BY FSEC / INSTALLED BY MECH TRADES

FOODSERVICE EQUIPMENT EXHAUST SCHEDULE

ITEM #	DESCRIPTION		VOLUME	VENT DEPTH	VENT WIDTH	VENT DIAMETER	STATIC PRESSURE	RI HEIGHT	FAN #	FIRE PROTECTION ITEM #	DVC ITEM #	REMARKS
87	RACK OVEN, 2-SEC.		800 CFM			8"	0.300	104"		89	N/A	NOTE X & Z / DIRECTLY VENTED
87	RACK OVEN, 2-SEC.		800 CFM			8"	0.300	104"		90	N/A	NOTE X & Z / DIRECTLY VENTED
132	STACKED WASHER/DRYER		220 CFM			4"		48"		N/A	N/A	
148	EXHAUST HOOD	L1	1422 CFM	12"	12"		1.105	116"	1	151	153	
148	EXHAUST HOOD	L1	1777 CFM	12"	15"		1.170	116"	1	151	153	
148	EXHAUST HOOD	L1	1777 CFM	12"	15"		1.170	116"	1	151	153	
148	EXHAUST HOOD	R1	1422 CFM	12"	12"		1.105	116"	1	151	153	
148	EXHAUST HOOD	R1	1777 CFM	12"	15"		1.170	116"	1	151	153	
148	EXHAUST HOOD	R1	1777 CFM	12"	15"		1.170	116"	1	151	153	
163	RACK OVEN, 2-SEC.		800 CFM			8"	0.300	104"		169	N/A	NOTE Z / DIRECTLY VENTED
163	RACK OVEN, 2-SEC.		800 CFM			8"	0.300	104"		170	N/A	NOTE Z / DIRECTLY VENTED
190	EXHAUST DUCT RISER		300 CFM	31 1/2"	4"		0.250	132"	2	N/A	N/A	CAPTURES LOAD END OF DISHMACHINE
195	CONDENSATE HOOD		2400 CFM	20"	12"		0.250	106 1/2"	2	N/A	N/A	CAPTURES UNLOAD END OF DISHMACHINE

FOODSERVICE EQUIPMENT DISHMACHINE SCHEDULE

ITEM #	DESCRIPTION	GPH	APPROX. HOUR	LATENT HEAT	SENSIBLE HEAT
189	FLIGHT-TYPE DISHMACHINE W/DRYER	58	6	85000	36400

MECHANICAL LEGEND

CW	COLD WATER	
HW	HOT WATER	
W	DIRECT WASTE	
AGW	AIR GAP WASTE	
IW	INDIRECT WASTE	
FD	FLOOR DRAIN	
FS	FLOOR SINK	
FSH	FLOOR SINK w/HALF GRATE	
TTFD	TELL-TALE FLOOR DRAIN	
S	STEAM	
CR	CONDENSATE RETURN	
G	GAS	
CWR	COOLING TOWER / CHILLED WATER SUPPLY/RETURN	
	COMPRESSED AIR	
	CO2	
	EXHAUST	
	SUPPLY	
AFF	ABOVE FINISHED FLOOR	
CLG	CEILING	
DFA	DOWN FROM ABOVE	
FSEC	FOODSERVICE EQUIPMENT CONTRACTOR	
OOW	OUT OF WALL	
MT	MECHANICAL TRADES	
PLBG	PLUMBING	
WC	WATER COLUMN	

GENERAL NOTES - MECHANICAL

NOTE: GENERAL NOTES REFER TO GENERAL CONDITIONS. ALL CONDITIONS MAY NOT EXIST ON THIS PROJECT.

1. THESE DRAWINGS ARE FOR USE BY THE PROJECT ENGINEERS IN PREPARING THEIR DRAWINGS. THESE DRAWINGS ARE INCIDENTAL TO OUR SERVICES AND MUST BE REVIEWED AND APPROVED BY A PROPERLY LICENSED DESIGN PROFESSIONAL BEFORE BEING USED FOR ANY OTHER PURPOSES. RIPPE ASSOCIATES IS NOT LICENSED AS A DESIGN PROFESSIONAL AND DOES NOT HOLD ITSELF OUT AS SUCH.
2. SERVICES SHOWN ON THIS PLAN ARE EQUIPMENT REQUIREMENTS FOR FOODSERVICE EQUIPMENT ONLY. LOCATIONS, SIZES AND HEIGHTS ABOVE FINISHED FLOOR ARE APPROXIMATELY AS REQUIRED BY EQUIPMENT TO BE FURNISHED. SINCE MULTIPLE SOURCES FOR THE EQUIPMENT MAY BE SPECIFIED, SLIGHT VARIATIONS IN UTILITY LOADS AND CONNECTION SIZES CAN OCCUR. DESIGN BUILDING UTILITY SYSTEM ACCORDINGLY AND ADD NOTES TO THE MECHANICAL CONTRACT DOCUMENTS INDICATING SLIGHT VARIATIONS ARE TO BE INCLUDED IN THE MECHANICAL TRADES WORK AT NO ADDITIONAL COST.
3. THESE DRAWINGS ARE NOT TO BE USED TO ROUGH-IN UTILITIES AND/OR LOCATE SLEEVES. SINCE REQUIRED ALLOWANCES MUST BE MADE FOR MULTIPLE EQUIPMENT SOURCES AND FOR VALVES, TRAPS, FITTINGS, DISCONNECTS, ETC. WHICH WILL BE FURNISHED UNDER MECHANICAL TRADES. FSEC IS RESPONSIBLE FOR PREPARING DIMENSIONED ROUGH-IN AND SLEEVE LOCATION PLAN PER SPECIFICATIONS TO ACCOMMODATE THE EXACT EQUIPMENT BEING PROVIDED.
4. MECHANICAL TRADES TO PROVIDE ALL NECESSARY SHUT-OFF VALVES, PRESSURE REGULATORS, INDIVIDUAL EQUIPMENT SUPPLY STOPS, ETC. REQUIRED UPSTREAM OF THE FINAL SUPPLY CONNECTION(S) TO FOODSERVICE EQUIPMENT UNLESS NOTED OTHERWISE.
5. ALL INDIRECT WASTES FOR FOODSERVICE EQUIPMENT WILL BE EXTENDED TO FLOOR DRAINS BY MECHANICAL TRADES, EXCEPT FOR THE WALK-IN REFRIGERATOR/FREEZER BLOWER COIL DRAINLINES AND DRAINLINES WITHIN THE CUSTOM FABRICATED COUNTERS WHICH WILL BE EXTENDED TO FLOOR DRAINS BY THE FSEC.
6. THE FSEC IS RESPONSIBLE FOR SETTING EQUIPMENT IN PLACE. FINAL CONNECTIONS AND INTERCONNECTIONS FOR THIS EQUIPMENT ARE THE RESPONSIBILITY OF THE MECHANICAL TRADES.
7. TRADE CONTRACTORS TO PROVIDE HOLES, SLEEVES THROUGH CEILING, ROOFS, AND WALLS FOR BEVERAGE, OIL, COMPRESSED AIR, ICE, SLURRY AND REFRIGERATION LINES. SEAL THEM IN ACCORDANCE WITH LOCAL FIRE, BUILDING CODES AND IN ACCORDANCE WITH SIZES SPECIFIED. TRADE CONTRACTORS TO PROVIDE ALL DUCT FIRE SEPARATIONS, ENCLOSURES, WRAPPINGS, ETC., AS MAY BE REQUIRED BY LOCAL BUILDING AND FIRE CODES. HOLES IN FOODSERVICE EQUIPMENT FOR MECHANICAL SERVICES PROVIDED BY FSEC.
8. SINK FAUCETS FURNISHED LOOSE BY FSEC FOR INSTALLATION BY MECHANICAL TRADES. SINK ROTARY DRAIN & OVERFLOW FURNISHED AND INSTALLED BY FSEC; TAILPIECE, P-TRAP, ESCUTCHEON PLATES AND DRAIN CONNECTION FURNISHED AND INSTALLED BY MECHANICAL TRADES EXCEPT FOR TAILPIECE AND P-TRAP FOR WALL MOUNTED HANDSINKS WHICH ARE PROVIDED BY FSEC AND INSTALLED BY MECHANICAL TRADES.
9. HEALTH CODES REQUIRE THAT ALL PLUMBING BE ENCLOSED IN WALLS OR FLOOR AND THAT EXPOSED PIPING RUNS BE AS SHORT AS POSSIBLE. GAS PIPING TO BE SLEEVED AND VENTED PER CODE SO IT IS CONCEALED WITHIN THE WALL. EXPOSED HORIZONTAL PIPING MUST BE 6' ABOVE THE FLOOR AND AT LEAST 1" OFF THE WALL. ANY EXPOSED UNINSULATED STEAM PIPING/FITTINGS AND HAND SINK PIPING (BOTH DRAIN AND SUPPLY LINES) ARE TO BE CHROME PLATED.
10. SIZE EXHAUST AND SUPPLY FAN CAPACITY FOR 125% OF AIR VOLUMES INDICATED. THE CFM LISTED IN THE SCHEDULE IS THE DESIGN MINIMUM AND THE TEST & BALANCE REPORT MUST BE EQUAL TO OR GREATER THAN THE LISTED CFM.
11. ON EXHAUST HOODS SHOWN OVER COOKING EQUIPMENT, INCLUDING EQUIPMENT WITH INTEGRAL HOODS THAT ARE TYPE I HOODS, PROVIDE APPROPRIATE FIRE-RATED HOODDUCT ENCLOSURE ABOVE CEILING. VERIFY WITH LOCAL CODE AUTHORITIES WHETHER FIRE-RATED ENCLOSURE IS REQUIRED AT PORTION OF EXHAUST HOOD THAT EXTENDS ABOVE THE CEILING. IF ENCLOSURE IS NEEDED, ADVISE CONSULTANT AS TO FINAL ENCLOSURE DETAIL AT HOOD.
12. ALL HOSE BIBBS BY MECHANICAL TRADES TO HAVE HOT WATER AND COLD WATER MIXING VALVE.
13. ENGINEERS TO VERIFY WITH LOCAL CODE AUTHORITIES IF USE OF A GREASE INTERCEPTOR IS REQUIRED. IF REQUIRED RUN DRAINLINES THRU GREASE INTERCEPTOR AS REQUIRED BY CODE. CENTRAL GREASE TRAP TO BE LOCATED OUTSIDE OF FOODSERVICE AREA. POINT OF USE GREASE TRAP TO BE FLUSH W/FLOOR & LOCATION TO BE COORDINATED WITH FOODSERVICE CONSULTANT.
14. BENEATH ALL EXHAUST HOODS, INSTALL ALL EXPOSED PIPING AS CLOSE TO WALL AS POSSIBLE, USING 90 DEGREE ELBOWS AS NEEDED SO COOKING EQUIPMENT MAY BE PUSHED BACK FROM FRONT EDGE OF HOOD FOR PROPER CAPTURE.
15. TO MINIMIZE CROSS DRAFTS THAT WOULD AFFECT HOOD CAPTURE, EFFECTIVE INTRODUCTION OF REPLACEMNT AIR (WHETHER SUPPLIED THROUGH DISPLACEMENT VENTILATION DIFFUSERS, PERFORATED DIFFUSERS LOCATED IN THE CEILING, AND/OR TRANSFER AIR FROM ADJACENT SPACES) SHOULD BE DESIGNED TO LIMIT VELOCITIES APPROACHING THE HOOD TO LESS THAN 75 FPM.
16. FOODSERVICE EQUIPMENT WATER PRESSURE REQUIREMENTS, UNLESS NOTED OTHERWISE, IS 40-70 PSI. MECHANICAL TRADES TO PROVIDE PRV'S AS REQUIRED TO ACHIEVE PRESSURE AS NOTED.
17. RECOMMENDED HOT WATER TEMPERATURES FOR SINKS SHOULD BE AS FOLLOWS: POT & PAN SINKS SET AT 120° F MAXIMUM, HAND SINKS SET AT 110° F MAXIMUM AND ALL OTHER SINKS SET AT 110-120° F MAXIMUM. HOT WATER TEMPERATURES MUST CONFORM TO CODE REQUIREMENTS.
18. TO MAXIMIZE EXHAUST HOOD CAPTURE & PROPER AIR VOLUME BALANCING, WE DO NOT RECOMMEND HAVING MORE THAN TWO DUCT COLLARS ON ONE FAN W/OUT THE USE OF A UL LISTED BALANCING DAMPER/BAFFLE AT EACH DUCT COLLAR. THE LISTED DAMPER REQUIRES AT LEAST 8" OF ADDITIONAL VERTICAL CLEARANCE DEPENDING ON THE MANUFACTURE & APPROVAL FROM THE LOCAL AUTHORITY HAVING JURISDICTION. PLEASE ADVISE CONSULTANT IF THE DAMPER NEEDS TO BE SPECIFIED.
19. UTILITY CONNECTIONS SHOWN ARE THOSE REQUIRED TO SERVICE FOOD SERVICE EQUIPMENT ONLY. MECHANICAL TRADES SHOULD VERIFY WITH OWNER WHETHER ADDITIONAL UTILITIES ARE REQUIRED FOR EXISTING, FUTURE OR VENDOR FURNISHED NON-FOODSERVICE EQUIPMENT LOCATED WITHIN THE AREA SHOWN ON THIS PLAN.
20. FLOOR SINKS IN FOODSERVICE AREAS TO BE ACID RESISTANT, PORCELAIN ENAMEL-COATED BOWL AND SPLASH RESISTANT GRATE REMOVABLE WITHOUT TOOLS. BASKET STRAINER TO BE REMOVABLE IN OPENING LESS THAN 6" IN HEIGHT.

SCHEDULE NOTES - MECHANICAL

NOTE: SCHEDULE NOTES PERTAIN TO INDIVIDUAL ITEMS AS INDICATED IN THE MECHANICAL SPOT CONNECTION SCHEDULE.

A. MECHANICAL TRADES TO INSTALL BACKFLOW PREVENTION DEVICE SUPPLIED BY FSEC.

B. BRANCH CW FROM SPRAY RINSE OR FAUCET THRU SOLENOID VALVE AND VACUUM BREAKER; CONNECT TO DISPOSER THROAT, BOWL OR DISPOSER TROUGH AS SHOWN. SEE DETAIL.

D. MECHANICAL TRADES TO PROVIDE A CODE APPROVED BACKFLOW PREVENTION DEVICE FOR THIS ITEM.

E. THIS ITEM HAS SPECIAL WATER QUALITY REQUIREMENTS. VERIFY PARTS PER MILLION COUNT (PPM) OF TOTAL DISSOLVED SOLIDS IN THE WATER. IF IT IS 30 PPM OR HIGHER, MECHANICAL TRADES TO PROVIDE CONDITIONED WATER.

F. IF WATER EXCEEDS 3 GRAINS OF HARDNESS, THE DISHMACHINE MANUFACTURER RECOMMENDS SOFTENED WATER BE PROVIDED TO THE DISHMACHINE AND BOOSTER HEATER. SEE FOODSERVICE EQUIPMENT DISHMACHINE SCHEDULE FOR THE APPROXIMATE HOURS OF OPERATION AND AMOUNT OF WATER USED PER HOUR.

G. INDIRECT WASTE FOR THIS ITEM EXTENDED TO FLOOR DRAIN/SINK BY FSEC.

H. PROVIDE CAST IRON OR STAINLESS STEEL WASTE PIPING TO ACCOMMODATE ACCIDENTAL DISCHARGE OF EXCESSIVELY HOT WATER

I. THE FSEC WILL PROVIDE A QUICK-DISCONNECT FLEXIBLE HOSE WITH THIS PIECE OF EQUIPMENT FOR INSTALLATION BY MECHANICAL TRADES. SEE DETAIL.

J. THE FSEC WILL PROVIDE A MECHANICALLY OPERATED GAS SHUT-OFF VALVE FOR INSTALLATION BY MECHANICAL TRADES. FSEC TO INTERCONNECT TO FIRE PROTECTION SYSTEM FOR FUEL SHUT-OFF TO COOKING EQUIPMENT BENEATH EXHAUST HOODS UPON ACTIVATION OF FIRE PROTECTION SYSTEM.

M. ALL REFRIGERATION SYSTEMS ARE LOCATED APPROXIMATELY WHERE SHOWN ON THE PLAN UNLESS OTHERWISE NOTED. THE FOLLOWING ITEMS ARE NOT BY THE FSEC: ROOF CURBS/CONCRETE PADS, SLEEVED & SEALED PENETRATIONS IN ROOFS/FLOORS/CEILINGS/WALLS. VERIFY EXACT LOCATON WITH ARCHITECT/ENGINEER.

Q. SEE FOODSERVICE EQUIPMENT DISHMACHINE SCHEDULE FOR THE SENSIBLE AND LATENT HEAT DISSIPATION FROM THE DISHMACHINE. VENTILATE THE DISHROOM ACCORDINGLY. THESE VALUES ARE TO CALCULATE VENTILATION REQUIRED IN ADDITION TO EXHAUST LISTED IN SCHEDULE. THIS HEAT IS ADDITIONAL HEAT NOT EXHAUSTED THRU MACHINE VENTS.

S. WHEN A UTILITY DISTRIBUTION SYSTEM IS SPECIFIED, MECHANICAL TRADES SHALL:

1.PROVIDE AND INSTALL WATER, AND STEAM SUPPLY PIPES INSIDE SYSTEM'S VERTICAL CHASES FROM ROUGH-IN LOCATIONS TO RACEWAY PIPING CONNECTION POINTS.

2.INSTALL METAL FLEXIBLE HOSES (PROVIDE WITH UNION) AND RIGID PIPE ASSEMBLIES, ALL FURNISHED BY RACEWAY MANUFACTURER, BETWEEN APPROPRIATE EQUIPMENT AND RACEWAY.

3.PROVIDE AND INSTALL BRASS ELLS, NIPPLES, AND REDUCING FITTINGS NECESSARY TO PRESENT A NEAT APPEARANCE AND TO PREVENT FLEXIBLE HOSES FROM TOUCHING THE FLOOR.

4.INSTALL VACUUM BREAKER, AIR GAP ASSEMBLY, AND DRAINLINE FURNISHED BY SYSTEM MANUFACTURER BETWEEN EXHAUST HOOD OUTLET AND AIR GAP DRAIN AT FLOOR. FITTINGS AS REQUIRED BY PLUMBING CONTRACTOR.

5.SPECIAL NOTE – NO MODIFICATION OF ANY MANUFACTURED RACEWAY SHALL BE UNDERTAKEN BY ANY ENTITY WITHOUT THE EXPRESS, WRITTEN APPROVAL AND/OR SUPERVISION OF THE RACEWAY MANUFACTURER.

THE FSEC WILL:

1.INTERCONNECT PLUMBING AND FIELD JOINTS BY TIGHTENING UNIONS: UNIONS PRE-FITTED AND SUPPLIED BY RACEWAY MANUFACTURER. EACH FIELD JOINT WILL CONSIST OF ONE UNION FOR EACH SERVICE.

2.TEST INTERNAL PIPING SYSTEM FOR LEAKS CAUSED BY SHIPPING AND TIGHTEN AS REQUIRED.

V. MECHANICAL TRADES TO PROVIDE GAS PRESSURE REGULATORS TO REDUCE NATURAL GAS PRESSURE TO 10" W.C. (PROPANE TO 15" W.C.); GAS PRESSURE REGULATOR FURNISHED WITH EQUIPMENT WILL REDUCE PRESSURE FROM 10" W.C. (OR 15" W. C.) TO REQUIRED PRESSURE.

W. MECHANICAL TRADES TO CONCEAL MAIN GAS PIPING IN CHASE. DO NOT RUN EXPOSED ON FACE OF WALL. MINIMIZE EXPOSED PIPING FOR FINAL CONNECTIONS.

Y. PIPE DRAINLINE SERVING THIS EQUIPMENT IN LINE UPSTREAM FROM TELLTALE FLOOR DRAIN (I.E. FLOOR DRAIN WITHOUT BACKWATER VALVE).

Z. MECHANICAL TRADES TO FURNISH AND INSTALL DEDICATED EXHAUST FAN AND DUCTWORK TO SERVE THIS EQUIPMENT.

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ISSUE:
DATE: DESCRIPTION:

IFC
04/08/2024

PROJECT:
STATE OF IOWA DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

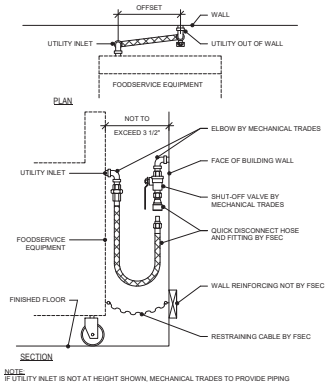
2000 N 16TH ST, CLARINDA, IA 51632

DATE: 02/09/2024
DESIGNED: EG/TP
DRAWN: MM
REVIEWED: EG/RB

SHEET TITLE:
FOODSERVICE EQUIPMENT MECHANICAL SCHEDULE

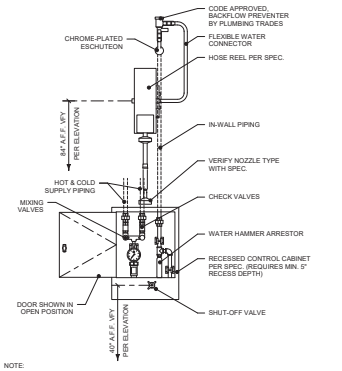
SHEET NUMBER:
FSM100

PROJECT NO.: 0240202.00
RFB922300-02



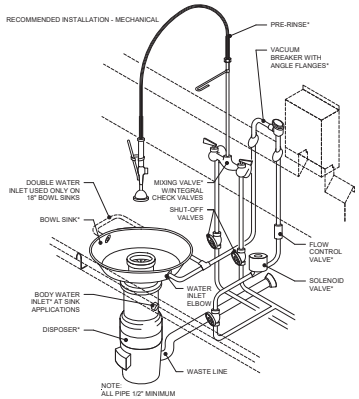
NOTE:
IF UTILITY INLET IS NOT AT HEIGHT SHOWN, MECHANICAL TRADES TO PROVIDE PIPING WITH ELBOWS TO RAISE INLET.

QUICK DISCONNECT



NOTE:
DASHED PIPING AND BACKFLOW PREVENTER PROVIDED AND INSTALLED BY MECHANICAL TRADES. ALL OTHER COMPONENTS SUPPLIED BY FOODSERVICE EQUIPMENT CONTRACTOR AND INSTALLED BY PLUMBING TRADES.

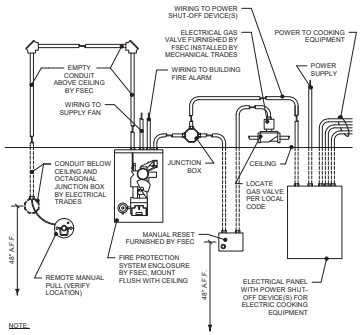
HOSE REEL



NOTE:
ALL PIPE 1/2" MINIMUM

DISPOSER

*THESE COMPONENTS FURNISHED BY FSEC. ALL OTHER COMPONENTS AND INSTALLATION PROVIDED BY PLUMBING TRADES.



NOTE:
1. ELECTRICAL COMPONENTS AND INTERWIRING BY ELECTRICAL TRADES UNLESS NOTED OTHERWISE.
2. CONDUIT CONCEALED IN WALL WHEREVER POSSIBLE. EXPOSED CONDUIT TO BE CHROME-PLATED.

WET CHEMICAL FIRE PROTECTION SYSTEM

WIRING DIAGRAM - ELECTRIC GAS VALVE

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PROJECT:
STATE OF IOWA DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

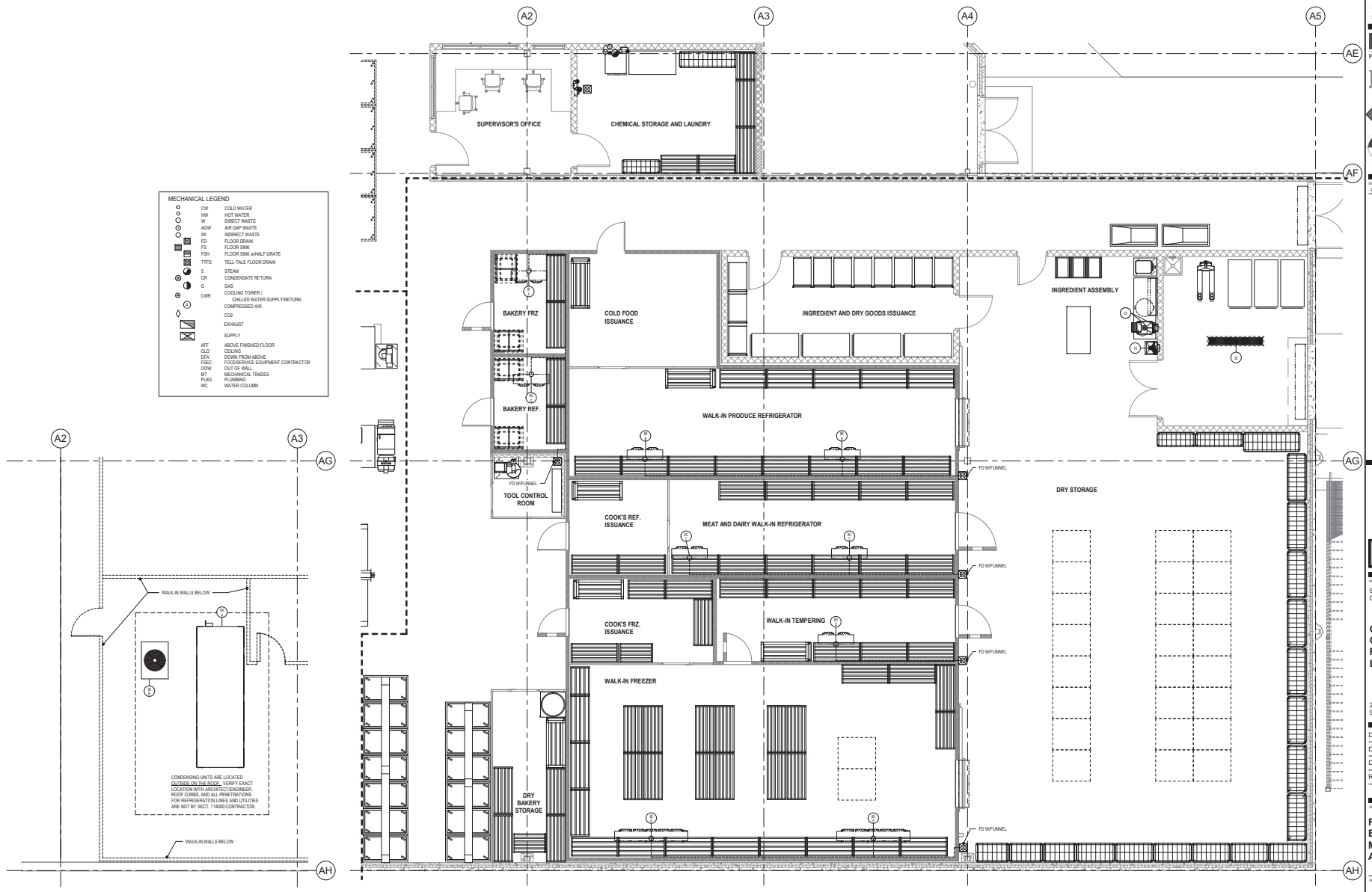
2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	EG/TP
DRAWN:	MM
REVIEWED:	EG/RB

SHEET TITLE:
FOODSERVICE EQUIPMENT MECHANICAL DETAILS

SHEET NUMBER:
FSM101

PROJECT NO.: 0240202.00
RFB922300-02



2 FOODSERVICE MECHANICAL PLAN - ROOF
1/4" = 1'-0"

1 FOODSERVICE MECHANICAL PLAN - AREA 1
1/4" = 1'-0"

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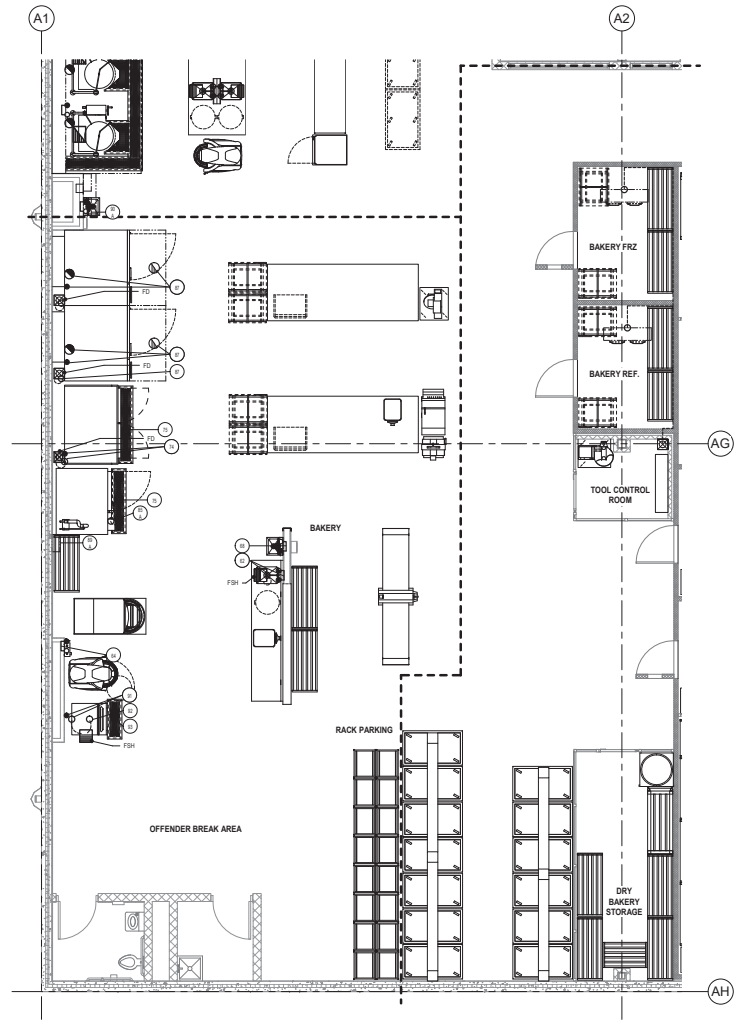
2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	EG/TP
DRAWN:	MM
REVIEWED:	EG/RB

SHEET TITLE:
FOODSERVICE EQUIPMENT MECHANICAL PLAN - AREA 1

SHEET NUMBER:
FSM102

PROJECT NO.: 0240202.00
RFB922300-02



1 FOODSERVICE MECHANICAL PLAN - AREA 2
1/4" = 1'-0"

MECHANICAL LEGEND

	CW	COLD WATER
	HW	HOT WATER
	W	DIRECT WASTE
	AGW	AIR GAP WASTE
	IW	INDIRECT WASTE
	FD	FLOOR DRAIN
	FS	FLOOR SINK
	FSH	FLOOR SINK w/HALF GRATE
	TTFD	TELL-TALE FLOOR DRAIN
	S	STEAM
	CR	CONDENSATE RETURN
	G	GAS
	CWR	COOLING TOWER / CHILLED WATER SUPPLY/RETURN
		COMPRESSED AIR
		CO2
		EXHAUST
		SUPPLY
	AFF	ABOVE FINISHED FLOOR
	CLG	CEILING
	DFA	DOWN FROM ABOVE
	FSEC	FOODSERVICE EQUIPMENT CONTRACTOR
	OOW	OUT OF WALL
	MT	MECHANICAL TRADES
	PLBG	PLUMBING
	WC	WATER COLUMN

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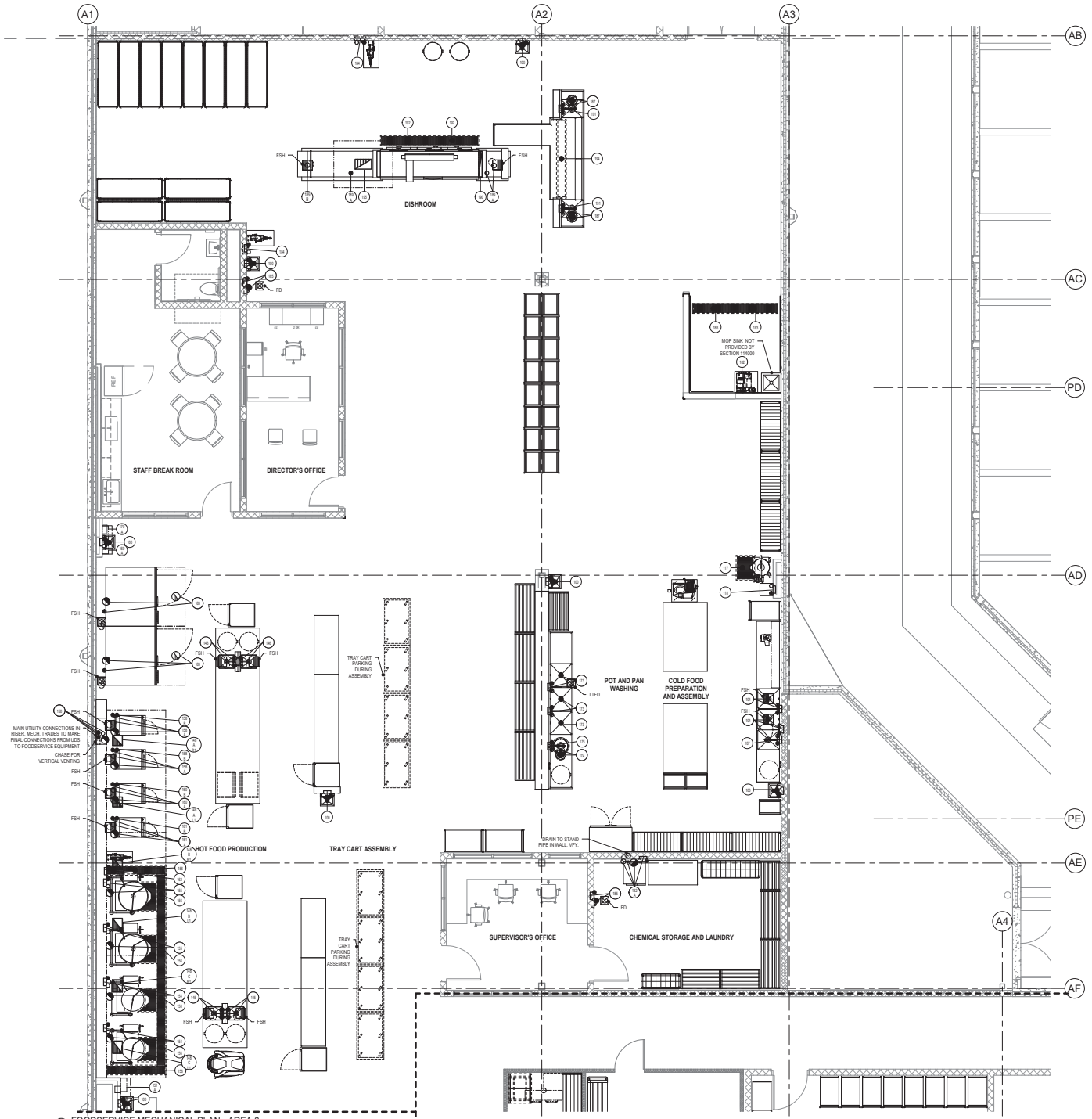
SHEET TITLE:
FOODSERVICE EQUIPMENT MECHANICAL PLAN - AREA 2

SHEET NUMBER:
FSM103

PROJECT NO.: 0240202.00
RFB922300-02



1 FOODSERVICE MECHANICAL PLAN - AREA 3
1/4" = 1'-0"

MECHANICAL LEGEND

	CW	COLD WATER
	HW	HOT WATER
	W	DIRECT WASTE
	AGW	AIR GAP WASTE
	IW	INDIRECT WASTE
	FD	FLOOR DRAIN
	FS	FLOOR SINK
	FSH	FLOOR SINK w/HALF GRATE
	TTFD	TELL-TALE FLOOR DRAIN
	S	STEAM
	CR	CONDENSATE RETURN
	G	GAS
	CWR	COOLING TOWER / CHILLED WATER SUPPLY/RETURN
		COMPRESSED AIR
		CO2
		EXHAUST
		SUPPLY

AFF	ABOVE FINISHED FLOOR
CLG	CEILING
DFA	DOWN FROM ABOVE
FSEC	FOODSERVICE EQUIPMENT CONTRACTOR
OOW	OUT OF WALL
MT	MECHANICAL TRADES
PLBG	PLUMBING
WC	WATER COLUMN

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PROJECT:
STATE OF IOWA DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	EG/TP
DRAWN:	MM
REVIEWED:	EG/RB

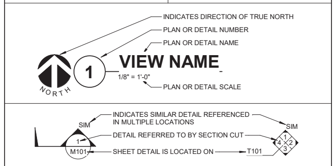
SHEET TITLE:
FOODSERVICE EQUIPMENT MECHANICAL PLAN - AREA 3

SHEET NUMBER:
FSM104

PROJECT NO.: 0240202.00
RFB922300-02

VIEW KEY

NAME — LEVEL NAME; 10'-0" — HEIGHT ABOVE PROJECT 0'-0"	(1) INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL



LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
- NEW
- EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
- NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)
- EXISTING
- EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)
- EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E	TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING
TAG	UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST
	INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL
###	INDICATES A PLUMBING CONNECTION TO A FOOD SERVICE EQUIPMENT. REFERENCE FOOD SERVICE DRAWINGS FOR ADDITIONAL INFORMATION IN REGARDS TO TYPE OF EQUIPMENT, ROUGH-IN SIZES, AND ADDITIONAL COMMENTS.

APPLICABLE CODES

CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES AND LOCAL AMENDMENTS.

BUILDING CODE:	IBC 2015 EDITION
FIRE CODE:	IFC 2015 EDITION
PLUMBING CODE:	UPC 2021 EDITION
MECHANICAL CODE:	IMC 2021 EDITION
ELECTRICAL CODE:	NFPA 70 (NEC) 2020 EDITION
LIFE SAFETY CODE:	NFPA 101 2012 EDITION
ENERGY CONSERVATION CODE:	IECC 2012
HEALTH DEPARTMENT CODE:	CURRENT EDITION
LOCAL BUILDING CODE:	CURRENT EDITION

CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
C.C.	CIVIL CONTRACTOR
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
S.C.	SECURITY CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR

CONTACT PERSONS:

DESCRIPTION:	PERSON:
PROJECT MANAGER	MIKE MCCARTY
MECHANICAL	MIKE MCCARTY
ELECTRICAL	KRISTEN SPINA
TECHNOLOGY	MIKE MCCARTY

FIRE PROTECTION SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
DFP	DRAIN
FP	FIRE PROTECTION
	PIPE CAP
	PIPE DOWN
	PIPE UP OR UP/DOWN
	UNION/FLANGE
	DIRECTION OF FLOW IN PIPE
	ROUTE TO DRAIN
	SHUTOFF VALVE NORMALLY OPEN
	AUTOMATIC DRAIN VALVE
	ANGLE VALVE
	BUTTERFLY VALVE WITH MONITOR SWITCH
	CHECK VALVE
	INSPECTOR TEST AND DRAIN VALVE
F	FLOW SWITCH
P	PRESSURE GAUGE (FURNISHED WITH BALL VALVE)
	MONITOR SWITCH
	AREA BOUNDARY
NO HATCH	LIGHT HAZARD
	ORDINARY GROUP 1
	SPRINKLER - WALL MOUNTED
	SPRINKLER
	SPRINKLER - CONCEALED

FIRE PROTECTION ABBREVIATION KEY

ABBR:	DESCRIPTION:
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTES

MECHANICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
2. NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
4. EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF THEIR WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO THEIR AREA OF WORK.
5. EACH CONTRACTOR SHALL CUT AND PATCH ROOFS, WALLS, AND FLOORS ASSOCIATED WITH THEIR WORK.
6. THIS CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK REQUIRED BY THEIR WORK.
7. WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.
8. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS THAT REMAIN ACTIVE.
9. OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED.
10. MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR TIE IN AND SWITCHOVER. DRAIN SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER BEFORE PARTIALLY OR COMPLETELY DRAINING SYSTEM. MAKE CHANGEOVER TO NEW SYSTEMS WITH MINIMUM OUTAGE.
11. DISCONNECT AND REMOVE MECHANICAL DEVICES AND EQUIPMENT SERVING EQUIPMENT THAT HAS BEEN REMOVED.

FIRE PROTECTION GENERAL NOTES:

1. THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.
2. CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR COMPLETE DESCRIPTION OF MATERIAL ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL TAKES PRECEDENCE OVER THE CATALOG NUMBER. THE FIRST MANUFACTURER IS THE BASIS OF DESIGN.
3. CENTER SPRINKLERS IN CEILING TILES IN BOTH DIRECTIONS IN ALL AREAS. IN AREAS WITH 2'X4' CEILING TILES CENTERING USING A 2'X2' CEILING PATTERN IS ACCEPTABLE. SPRINKLER HEADS SHALL BE ALIGNED WITH OTHER SPRINKLER HEADS, LIGHTING, DIFFUSERS, AND ANY OTHER FEATURES IN THE CEILING.
4. NEW SPRINKLERS SHALL BE QUICK RESPONSE TYPE, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL NOT MIX STANDARD RESPONSE SPRINKLERS WITH QUICK RESPONSE SPRINKLERS IN UNPARTITIONED SPACES.
5. PROVIDE COVERAGE ABOVE AND BELOW ALL DUCTWORK GREATER THAN 48" WIDE.
6. FIRE PROTECTION PIPE ROUTING IS SHOWN FOR GENERAL LAYOUT. DETERMINE EXACT NUMBER OF SPRINKLERS, PIPE SIZING, AND PIPE ROUTING.
7. ALL BUILDING AREAS SHALL BE FULLY SPRINKLERED INCLUDING CANOPIES, WALKWAYS, OVERHANGS, SOFFITS, AND BUILDING PROJECTIONS. ALL ACCESSIBLE COMBUSTIBLE CONCEALED SPACES SHALL BE FULLY PROTECTED BY THE SPRINKLER SYSTEM.
8. EACH RISER ASSEMBLY SHALL INCLUDE CHECK VALVE BUTTERFLY CONTROL VALVE INDICATING "OPEN" OR "CLOSED" POSITION, TEST INSPECTION VALVE, FLOW SWITCH AND PRESSURE GAUGES.
9. PROVIDE RISER ROOM IDENTIFICATION SIGNAGE OUTSIDE THE FIRE RISER ROOM. COORDINATE EXACT SIGN LANGUAGE WITH AHJ.
10. WHERE FEASIBLE INSTALL PIPES HIGH AS POSSIBLE TO AVOID CONFLICT WITH OTHER DISCIPLINES.
11. INSTALL SYSTEM DRAINS AT LOW POCKET AREAS CONTAINING FIVE GALLONS OF WATER OR MORE, PROVIDE WITH ISOLATION VALVE AND THREADED HOSE CONNECTION.
12. FOLLOW STRUCTURAL DETAILS WHEN PENETRATING OR PASSING THROUGH STRUCTURAL ELEMENTS. ALTERNATE DESIGNS WILL NEED TO BE APPROVED THROUGH THE STRUCTURAL ENGINEER.
13. PROVIDE INTERMEDIATE TEMPERATURE SPRINKLER HEADS WHERE REQUIRED BY NFPA 13 UNLESS OTHERWISE NOTED.
14. FINAL HEAD LOCATION, TYPE AND FINISH SHALL BE REVIEWED AND APPROVED BY THE ARCHITECT.
15. THE OWNER MUST BE NOTIFIED PRIOR TO EACH AND EVERY DRAINING OR RECHARGING OF THE SPRINKLER SYSTEM.
16. THE CONTRACTOR SHALL PREPARE A COORDINATED SET OF SHOP DRAWINGS AND SHALL OBTAIN APPROVAL FROM THE AUTHORITIES HAVING JURISDICTION AND THE LOCAL FIRE DEPARTMENT PRIOR TO ANY INSTALLATION.
17. DRAWING SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC. AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
18. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS. INCLUDING THOSE OF OTHER TRADES.

MECHANICAL GENERAL NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
3. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
4. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
5. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
6. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE DRY WALL CONTRACTOR FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE DRY WALL CONTRACTOR OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
10. SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.
11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
12. WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
13. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
14. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
15. MAINTAIN A MINIMUM WORKING CLEARANCE OF 3'-6" IN FRONT OF ALL ELECTRICAL EQUIPMENT REQUIRING MAINTENANCE, INSPECTION, AND TESTING INCLUDING BUT NOT LIMITED TO PANELS, DISTRIBUTION PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, EQUIPMENT DISCONNECTS AND STARTERS.
16. MAINTAIN THE DEDICATED ELECTRICAL EQUIPMENT SPACE DEFINED BY THE WIDTH / DEPTH OF ELECTRICAL EQUIPMENT MEASURED FROM THE FLOOR TO A HEIGHT 6'-0" ABOVE THE EQUIPMENT OR THE STRUCTURAL CEILING, WHICHEVER IS LOWER. SYSTEMS FOREIGN TO THE ELECTRICAL DISTRIBUTION SYSTEM ARE NOT ALLOWED IN THE DEDICATED ELECTRICAL SPACE INCLUDING; DUCTWORK, PIPING, ETC.
17. PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
18. DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

FIRE PROTECTION SHEET INDEX

F0.0	FIRE PROTECTION COVERSHEET
F1.1	LEVEL 01 PLAN - AREA A - FIRE PROTECTION
F1.2	LEVEL 01 PLAN - AREA B - FIRE PROTECTION
F1.3	LEVEL 02 PLAN - AREA A - FIRE PROTECTION
F1.4	LEVEL 02 PLAN - AREA B - FIRE PROTECTION
F4.1	FIRE PROTECTION DETAILS & SCHEDULES
GRAND TOTAL: 6	

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REF. SCALE IN INCHES PROJECT #21007688.00

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ISSUE:

#	DATE:	DESCRIPTION:

IFC
04/08/2024

PROJECT:

STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DELLLE

SHEET TITLE:

FIRE PROTECTION COVERSHEET

SHEET NUMBER:

F0.0

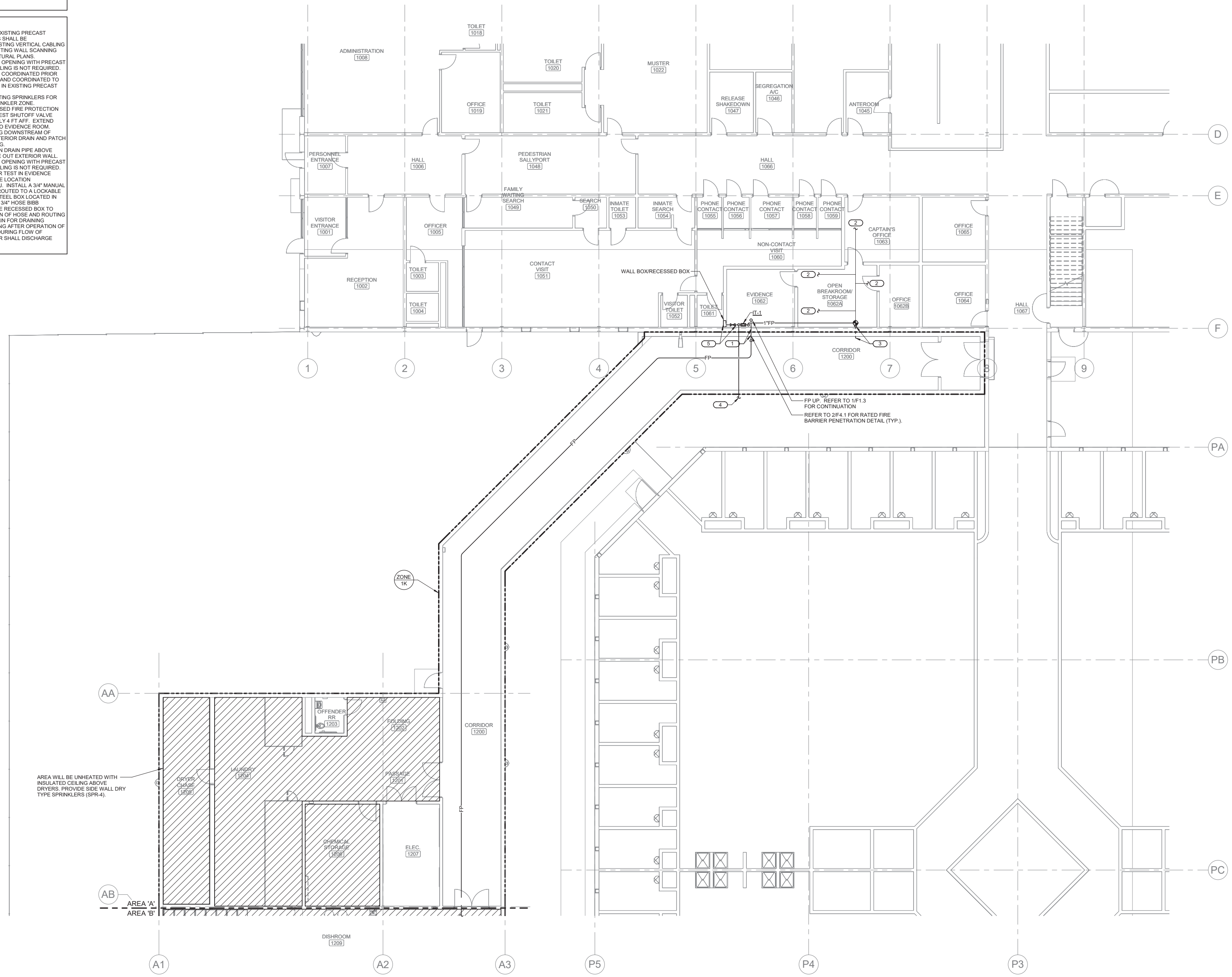
PROJECT NO.: 0240202.00
RFB922300-02

GENERAL NOTES:

1. REFER TO F4.1 FOR SPRINKLER USAGE SCHEDULE AND FIRE PROTECTION MATERIAL LIST.
2. REFER TO DETAILS 1/F4.1, 2/F4.2 AND 3/F4.3 FOR SPRINKLER MOUNTING DETAILS AND PIPING THROUGH FIRE RATED WALL DETAIL.
3. REFER TO F0.0 FOR GENERAL FIRE PROTECTION NOTES.

KEYNOTES: (#)

1. CORE DRILL THROUGH EXISTING PRECAST EXTERIOR WALL. CORES SHALL BE COORIDNATED WITH EXISTING VERTICAL CABLING IN WALL. REFER TO EXISTING WALL SCANNING DATA FOUND ON STRUCTURAL PLANS. COORDINATE NEW WALL OPENING WITH PRECAST SUPPLIER SO CORE DRILLING IS NOT REQUIRED. ALL OPENINGS SHALL BE COORDINATED PRIOR TO ORDERING PRECAST AND COORDINATED TO ALIGN WITH NEW CORES IN EXISTING PRECAST WALL.
2. PIPING ROUTED TO EXISTING SPRINKLERS FOR FIRST FLOOR WEST SPRINKLER ZONE.
3. REMOVE EXISTING EXPOSED FIRE PROTECTION PIPE WITH INSPECTOR TEST SHUTOFF VALVE LOCATED APPROXIMATELY 4 FT AFF. EXTEND PIPING ABOVE CEILING TO EVIDENCE ROOM. REMOVE EXISTING PIPING DOWNSTREAM OF INSPECTOR TEST TO EXTERIOR DRAIN AND PATCH EXTERIOR WALL OPENING.
4. ROUTE FIRE PROTECTION DRAIN PIPE ABOVE CEILING AND DISCHARGE OUT EXTERIOR WALL. COORDINATE NEW WALL OPENING WITH PRECAST SUPPLIER SO CORE DRILLING IS NOT REQUIRED.
5. INSTALL NEW INSPECTOR TEST IN EVIDENCE ROOM AT AN ACCESSIBLE LOCATION ACCEPTABLE TO THE AHJ. INSTALL A 3/4" MANUAL DRAIN VALVE AND PIPE ROUTED TO A LOCKABLE RECESSED STAINLESS STEEL BOX LOCATED IN TOILET 1061. PROVIDE A 3/4" HOSE BIBB CONNECTION WITHIN THE RECESSED BOX TO ALLOW FOR CONNECTION OF HOSE AND ROUTING TO EXISTING FLOOR DRAIN FOR DRAINING TRAPPED WATER IN PIPING AFTER OPERATION OF THE INSPECTOR TEST. DURING FLOW OF INSPECTOR TEST, WATER SHALL DISCHARGE OUTSIDE.



LEVEL 01 PLAN - AREA A - FIRE PROTECTION

1/8" = 1'-0"

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#	DATE:	DESCRIPTION:

IFC
04/08/2024

PROJECT:
STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DELLLE

SHEET TITLE:
LEVEL 01 PLAN - AREA A - FIRE PROTECTION

SHEET NUMBER:
F1.1

PROJECT NO.: 0240202.00
RFB922300-02

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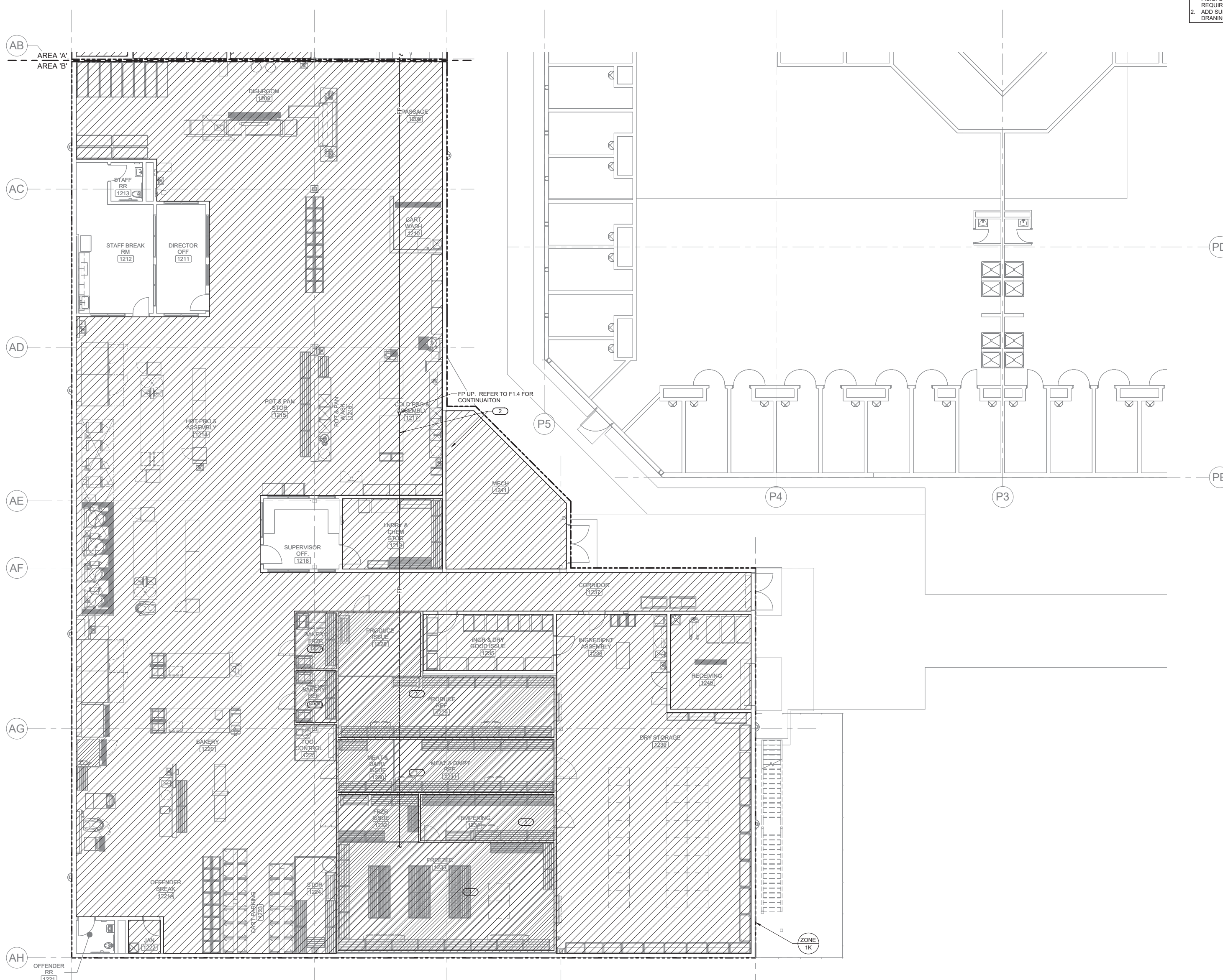
PROJECT #21007688.00

GENERAL NOTES:

1. REFER TO F4.1 FOR SPRINKLER USAGE SCHEDULE AND FIRE PROTECTION MATERIAL LIST.
2. REFER TO DETAILS 1/F4.1, 2/F4.2 AND 3/F4.3 FOR SPRINKLER MOUNTING DETAILS AND PIPING THROUGH FIRE RATED WALL DETAIL.
3. REFER TO F0.0 FOR GENERAL FIRE PROTECTION NOTES.

KEYNOTES: (#)

1. PROVIDE DRY TYPE SPRINKLER (SPR-4) IN COOLER OR FREEZER. F.S.C. SHALL PROVIDE PENETRATION, TRIM RING AND SEAL AROUND SPRINKLER. F.P.C. SHALL COORDINATE WITH F.S.C. ON LOCATIONS WHERE PENETRATIONS ARE REQUIRED.
2. ADD SUPPLEMENTAL DRAIN VALVE TO ALLOW DRANING TO FLOOR SINK IN ROOM 1241.



LEVEL 01 PLAN - AREA B - FIRE PROTECTION

1/8" = 1'-0"

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CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DELLE

SHEET TITLE:

LEVEL 01 PLAN - AREA B - FIRE PROTECTION

SHEET NUMBER:

F1.2

PROJECT NO.: 0240202.00
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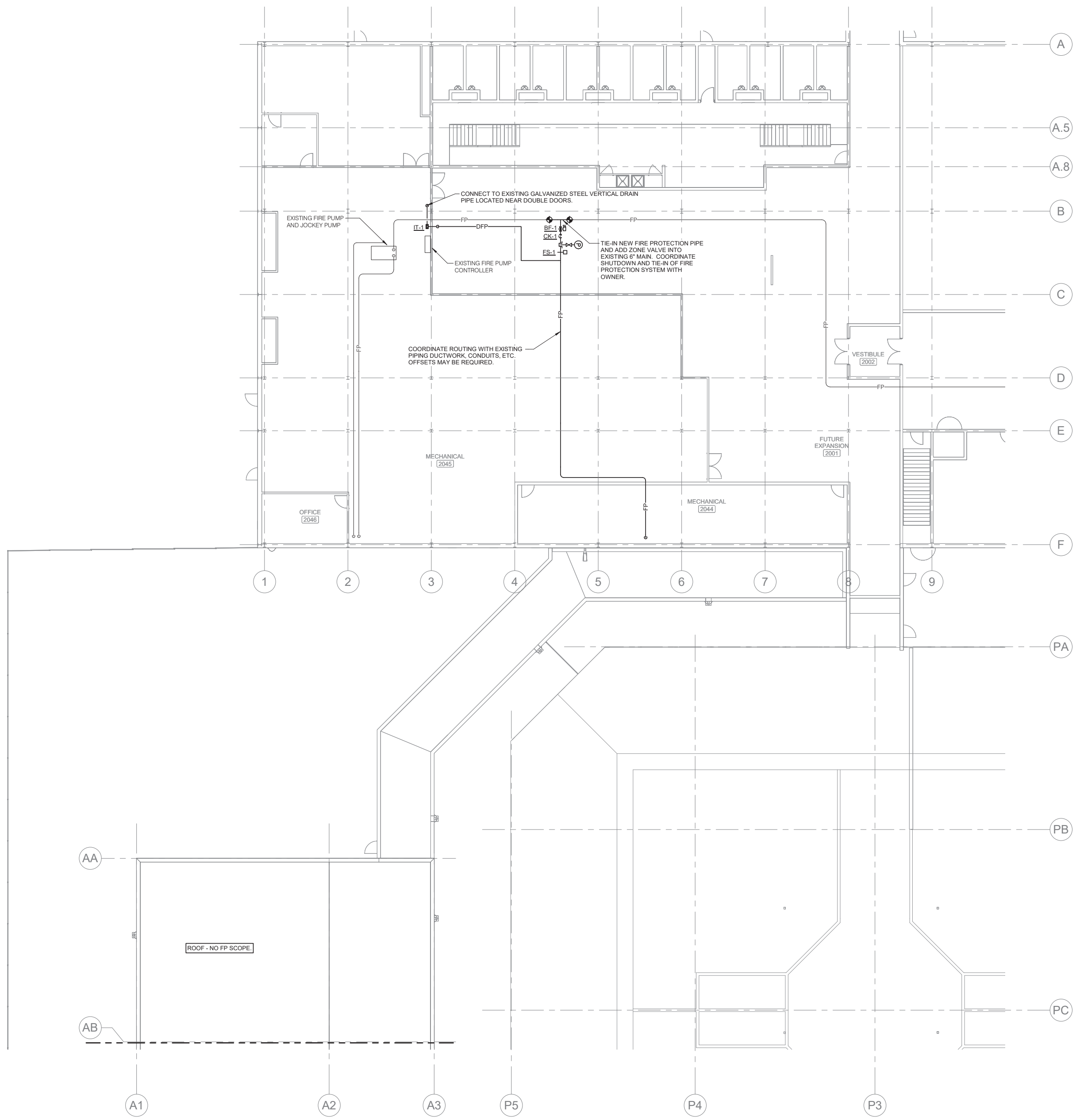
2. REFER TO F0.0 FOR GENERAL FIRE PROTECTION NOTES.



1 LEVEL 02 PLAN - AREA A - FIRE PROTECTION

3/32" = 1'-0"

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2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DELLE

SHEET TITLE:
LEVEL 02 PLAN - AREA A - FIRE PROTECTION

SHEET NUMBER:
F1.3

PROJECT NO.: 0240202.00
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GENERAL NOTES:

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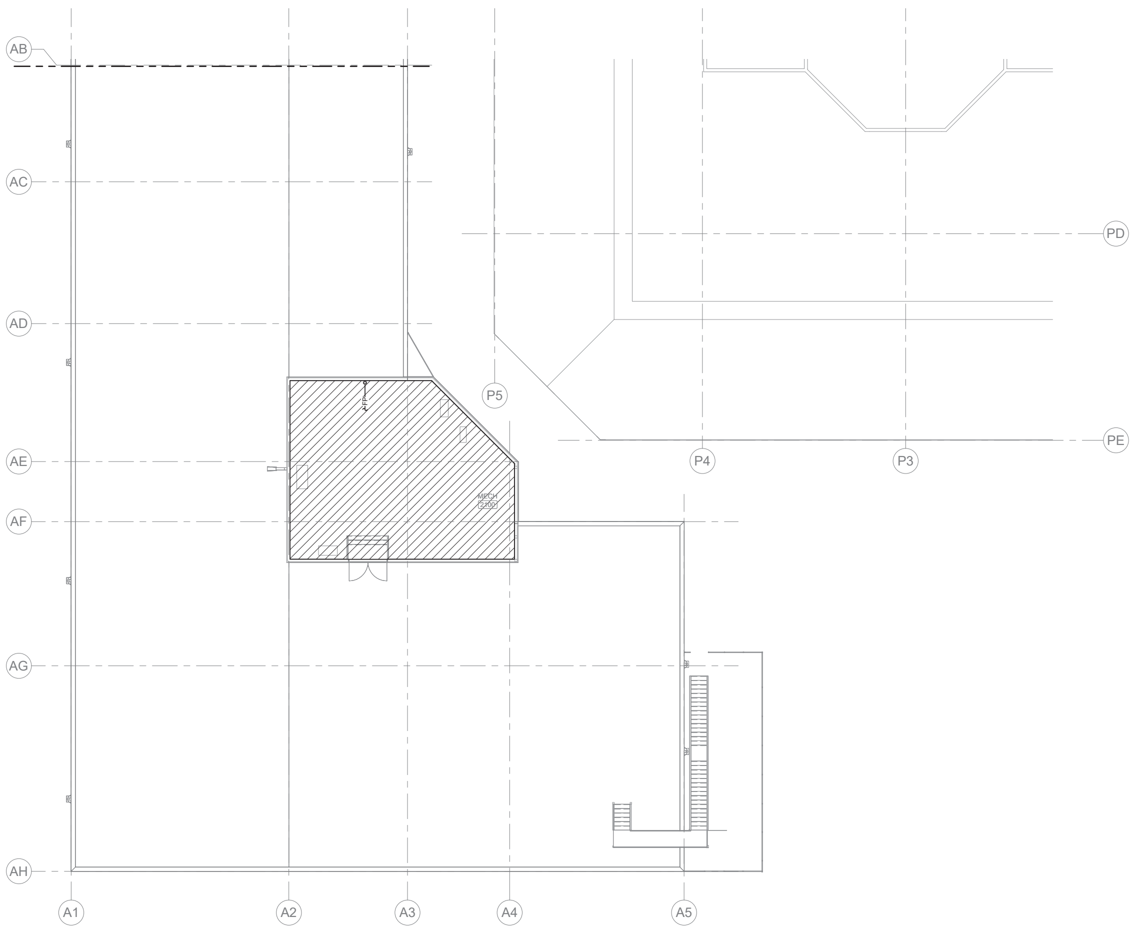
2. REFER TO F0.0 FOR GENERAL FIRE PROTECTION NOTES.



1 LEVEL 02 PLAN - AREA B - FIRE PROTECTION

3/32" = 1'-0"

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STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DELLE

SHEET TITLE:
LEVEL 02 PLAN - AREA B - FIRE PROTECTION

SHEET NUMBER:
F1.4

PROJECT NO.: 0240202.00
RFB922300-02

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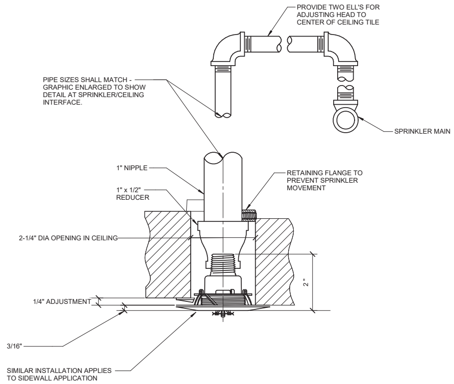
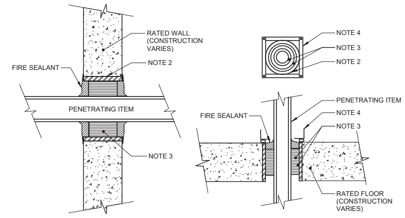


1 INSTITUTIONAL QUICK RESPONSE STANDARD COVERAGE FLUSH PENDENT SPRINKLER DETAIL

NO SCALE

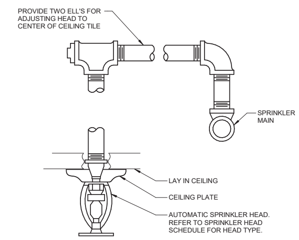


NOTES:

1. THIS GENERAL DETAIL APPLIES TO ALL ITEMS PENETRATING FIRE RATED WALLS OR FLOORS. THE INTENT IS TO MAINTAIN THE FIRE RATING AND TO ALLOW LONGITUDINAL MOVEMENT. REFER TO SPECIFICATION SECTION 07 84 00 FOR SELECTION OF THROUGH PENETRATION FIRE STOPPING.
2. SCHEDULE 5 PIPE SLEEVE EMBEDDED IN WALL OR FLOOR, OR SMOOTH CORE DRILL. EACH CONTRACTOR FURNISHES SLEEVE TO DIVISION 3 OCNTRACTOR, COORDINATES SLEEVE LOCATIONS AND DEBURS SLEEVE. DIVISION 3 CONTRACTOR 3 BUILDS SLEEVE INTO WALL OR FLOOR ALLOWING NO GAP AROUND SLEEVE. IF SLEEVE IS NOT PROVIDED WHEN WALL OR FLOOR IS BUILT, CONTRACTOR SHALL INSTALL SLEEVE. SLEEVE SIZE SHALL ALLOW ANNULAR SPACE REQUIRED BY THE SELECTED FIRE STOP SYSTEM.
3. INSTALL BACKING MATERIAL, SUCH AS MINERAL WOOL SAFING, AS REQUIRED FOR FIRE STOP SYSTEM. INSTALL IN ACCORDANCE WITH FIRE STOP SYSTEM APPLICATION LISTING. SECURE TO WALL OR FLOOR TO ALLOW LONGITUDINAL MOVEMENT OF PENETRATING ITEM WITHOUT MOVEMENT OF FIRE BARRIER.
4. WATERTIGHT WELDED 1"x1" 20 GAUGE MINIMUM GALVANIZED SHEET METAL ANGLE FRAME, BY CONTRACTOR IN EQUIPMENT ROOMS FOR WATER STOP. PLACE A BEAD OF WATERPROOF SEALANT BETWEEN FLOOR AND BOTTOM OF ANGLE FRAME. SECURE TO FLOOR WITH MASONRY ANCHORS IN CORNERS AND ON 12" MAXIMUM CENTERS. MULTIPLE PENETRATING ITEMS MAY BE ENCLOSED IN ONE FRAME.

2 FLOOR/WALL PENETRATION - RATED FIRE BARRIER

NO SCALE



4 DRY SPRINKLER HEAD MOUNTING DETAIL

NO SCALE

FIRE SPRINKLER USAGE SCHEDULE

NOTES:
1. SEE FLOOR PLANS FOR ZONING REQUIREMENTS.
2. SPRINKLER SHALL HAVE COLOR CODED BULB THERMAL ELEMENT.
3. ALL SPRINKLERS SHALL BE UL LISTED.
4. CONTRACTOR TO VERIFY SPRINKLER REQUIREMENTS BASED ON ACTUAL INSTALLATION, USAGE, ARCHITECTURAL CEILING PLAN AND NFPA 13 REQUIREMENTS.
5. TAG NAME IS PRIMARILY FOR IDENTIFIYING SPRINKLERS IN SUBMITTALS. IT MAY OR MAY NOT BE FOUND ELSEWHERE ON THE DRAWINGS. CONTRACTOR TO SUBMIT ALL SPRINKLER TYPES TO BE USED.
6. AREAS ARE GENERAL IN NATURE. CONTRACTOR TO MATCH UNSCHEDULED AREAS TO SIMILAR SPACES.
7. SPRINKLERS SHALL HAVE A 3mm QUICK RESPONSE BULB.
8. SPRINKLERS SPECIFIED WITHIN FIRE SPRINKLER USAGE SCHEDULE ARE STANDARD COVERAGE TYPE. EXTENDED COVERAGE SPRINKLERS ARE PERMITTED PROVIDED SPRINKLERS MEET THE REQUIREMENTS OF UL.

AREA TYPE (NOTE 1 & 6)	AREA HAZARD	SPRINKLER				TEMPERATURE RATING	MANUFACTURER & MODEL	NOTES
		TAG NAME (NOTE 4 & 5)	SPRINKLER TYPE	RESPONSE CATEGORY	FINISH			
AREAS WITHOUT CEILING UNLESS NOTED OTHERWISE	SEE PLANS	SPR-1	UPRIGHT	QUICK	ROUGH BRASS	PER NFPA	VIKING VK, RELIABLE F1FR, TYCO TY-FRB, VICTAULIC V2704	NOTE 2, 3, 7, 8
AREAS WITH CEILINGS UNLESS NOTED OTHERWISE	SEE PLANS	SPR-2	INSTITUTIONAL PENDENT	QUICK	WHITE	PER NFPA	TYCO RAVEN, VIKING VK426	NOTE 2, 3, 7, 8
SIDEWALL APPLICATIONS	SEE PLANS	SPR-3	INSTITUTIONAL SIDEWALL	QUICK	WHITE	PER NFPA	TYCO RAVEN, VIKING VK427	NOTE 2, 3, 7, 8
COOLER AND FREEZER AREAS, DRYER CHASE	SEE PLANS	SPR-4	DRY CONCEALED W/ WHITE FLAT COVERPLATE	QUICK	WHITE	PER NFPA	VIKING VK, RELIABLE F3QR, VICTAULIC V3618	NOTE 2, 3, 7, 8
DRYER CHASE	SEE PLANS	SPR-5	DRY SIDEWALL	QUICK	ROUGH BRASS	PER NFPA	VIKING VK, RELIABLE F3QR, TYCO DS, VICTAULIC V3610	NOTE 2, 3, 7, 8

FIRE PROTECTION MATERIAL LIST

TAG NAME	DESCRIPTION	MANUFACTURER AND MODEL
BF-1	INDICATING BUTTERFLY VALVE, NORMALLY OPEN, 175 PSI WWP, GROOVED TYPE, DUCTILE IRON BODY WITH PROTECTIVE COATING, ELECTROLESS NICKEL OR EPDM COATED DUCTILE IRON DISC, STAINLESS STEEL STEM AND SCREWS, CAST OR DUCTILE IRON HANDWHEEL, EPDM SEAT, INDICATOR FLAG, FACTORY MOUNTED INTEGRAL MONITOR SWITCHES, UL/FM. LUGGED OR WAFER VALVES ARE ACCEPTABLE PROVIDED THEY HAVE THE FEATURES LISTED ABOVE.	NIBCO GD-4765-8N, VICTAULIC SERIES 705, TYCO BFV-300, KENNEDY G300, GLOBE GLR300G, REL-BFG-300
CK-1	SWING CHECK VALVE, 300 PSI WWP, GROOVED/FLANGED TYPE, DUCTILE IRON BODY, STAINLESS STEEL HINGE ASSOCIATED WITH RUBBER FACED CLAPPER, BRASS SEAT RING, ACCESS COVER, 1/2" OR 3/4" TAPPED BOSSES, VALVE LISTED FOR HORIZONTAL OR VERTICAL INSTALLATION, UL/FM. FLANGED TYPE IS ACCEPTABLE PROVIDED VALVE HAS THE FEATURES LISTED ABOVE.	VIKING G-1, TYCO CV-1F
FS-1	FLOW SWITCH - VANE TYPE, 450 PSI, FLOW SENSITIVITY OF 4-10 GPM, TWO SINGLE POLE DOUBLE THROW SWITCHES, PNEUMATIC RETARD ADJUSTABLE FROM 0-90 SECONDS WITH AUTOMATIC RESET, NEMA 4 INDOOR/OUTDOOR RATED METAL HOUSING, UL/FM.	POTTER VSR, SYSTEM SENSOR WFD
IT-1	COMBINATION INSPECTOR'S TEST AND DRAIN VALVE, 300 PSI, INTEGRAL SIGHT GLASS, BALL VALVE PLATE INDICATING OFF-TEST-DRAIN POSITIONS, FURNISHED WITH TEST ORIFICE GIVING FLOW EQUIVALENT TO ONE SPRINKLER OF A TYPE HAVING THE SMALLEST ORIFICE INSTALLED ON THE SYSTEM, PRESSURE RELIEF VALVE, UL/FM.	AGF M1011A, RELIABLE MODEL TD, VICTAULIC TESTMASTER, GLOBE UTD W/ MODEL ARV PRV

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CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DELLE

SHEET TITLE:

FIRE PROTECTION DETAILS & SCHEDULES

SHEET NUMBER:

F4.1

PROJECT NO.: 0240202.00

RFB922300-02

VIEW KEY

NAME ← LEVEL NAME
10'-0" ← HEIGHT ABOVE PROJECT 0'-0"

(1) ← INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL

INDICATES DIRECTION OF TRUE NORTH
PLAN OR DETAIL NUMBER
PLAN OR DETAIL NAME
NORTH (1) **VIEW NAME**
1/8" = 1'-0"
PLAN OR DETAIL SCALE

INDICATES SIMILAR DETAIL REFERENCED IN MULTIPLE LOCATIONS (SIM)
DETAIL REFERRED TO BY SECTION CUT (1, M101 / 1, 2, 3, 4, T101)
SHEET DETAIL IS LOCATED ON

LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
- NEW
- EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
- NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)
- EXISTING
- EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)
- EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E	TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING
TAG	UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST
	INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL
###	INDICATES A PLUMBING CONNECTION TO A FOOD SERVICE EQUIPMENT. REFERENCE FOOD SERVICE DRAWINGS FOR ADDITIONAL INFORMATION IN REGARDS TO TYPE OF EQUIPMENT, ROUGH-IN SIZES, AND ADDITIONAL COMMENTS.

APPLICABLE CODES

CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES AND LOCAL AMENDMENTS.

BUILDING CODE:	IBC 2015 EDITION
FIRE CODE:	IFC 2015 EDITION
PLUMBING CODE:	UPC 2021 EDITION
MECHANICAL CODE:	IMC 2021 EDITION
ELECTRICAL CODE:	NFPA 70 (NEC) 2020 EDITION
LIFE SAFETY CODE:	NFPA 101 2012 EDITION
ENERGY CONSERVATION CODE:	IECC 2012
HEALTH DEPARTMENT CODE:	CURRENT EDITION
LOCAL BUILDING CODE:	CURRENT EDITION

CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
C.C.	CIVIL CONTRACTOR
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
S.C.	SECURITY CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR

MECHANICAL ABBREVIATION KEY

ABBR:	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
C	COMMON
CO	CLEANOUT
CFSD	CONTROL/FIRE/SMOKE DAMPER
DPG (0-2")	DIFFERENTIAL PRESSURE GAUGE (RANGE)
DPS	DIFFERENTIAL PRESSURE SWITCH
EA	EXHAUST/RELIEF AIR
ECFSD	EXISTING CONTROL FIRE SMOKE DAMPER
EFD	EXISTING FIRE DAMPER
EFSD	EXISTING FIRE SMOKE DAMPER
EP	ELECTRICAL TO PNEUMATIC VALVE
ESD	EXISTING SMOKE DAMPER
FD	FIRE DAMPER
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FSD	FIRE/SMOKE DAMPER
MA	MIXED AIR
MV	MIXING VALVE
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
OA	OUTSIDE AIR
PS	PRESSURE SWITCH
RA	RETURN AIR
SA	SUPPLY AIR
SCCR	SHORT CIRCUIT CURRENT RATING
SD	SMOKE DAMPER
TAB	TERMINAL AIR BOX
TD	TRANSFER DUCT
TYP	TYPICAL
UC-1	DOOR UNDERCUT BY OTHERS (1" TYPICAL)
UON	UNLESS OTHERWISE NOTES

CONTACT PERSONS:

DESCRIPTION:	PERSON:
PROJECT MANAGER	MIKE MCCARTY
MECHANICAL	MIKE MCCARTY
ELECTRICAL	KRISTEN SPINA
TECHNOLOGY	MIKE MCCARTY

MECHANICAL SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
DPP	DRAIN
HG	REFRIGERANT HOT GAS
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
LIQ	REFRIGERANT LIQUID
SUC	REFRIGERANT SUCTION
	PIPE CAP
	PIPE DOWN
	PIPE UP OR UP/DOWN
	PITCH PIPE IN DIRECTION
	DIRECTION OF FLOW IN PIPE
	SHUTOFF VALVE NORMALLY OPEN
	DIFFERENTIAL PRESSURE SENSOR
SP	STATIC SWITCH
	DIRECTION OF AIR FLOW
	FLEXIBLE DUCT
	MANUAL VOLUME DAMPER
R	RISE IN DIRECTION OF AIR FLOW
D	DROP IN DIRECTION OF AIR FLOW
	DUCT CAP
	DUCT DOWN
	DUCT UP
	SUPPLY/OUTSIDE AIR DUCT SECTION
	RETURN AIR DUCT SECTION
	EXHAUST/RELIEF AIR DUCT SECTION
	4-WAY DIFFUSER WITH BLANKOFF IN ONE DIRECTION
SD-1 6/115	AIR TERMINAL PROPERTIES SYMBOL NECK SIZE/CFM
###	TERMINAL AIR BOX w/REHEAT COIL (REFER TO SCHEDULE)
	FAN POWERED TERMINAL AIR BOX w/REHEAT COIL (REFER TO SCHEDULE)
	OPPOSED BLADE DAMPER (REFER TO SCHEDULE)
	PARALLEL BLADE DAMPER (REFER TO SCHEDULE)
	DIFFERENTIAL PRESSURE SENSOR
H	HUMIDISTAT SENSOR
	HUMIDISTAT / SENSOR
P	PRESSURE SENSOR/MONITOR
P	PRESSURE SENSOR (DUCT MOUNTED)
S1	THERMOSTAT/SENSOR TYPE 1 (SENSOR ONLY)
T	TEMPERATURE SENSOR
	THERMOSTAT/SENSOR WITH HEAVY DUTY ENCLOSURE
	TEMPERATURE SENSOR WITH WELL
	THERMOMETER WITH WELL (DIAL TYPE)
	THERMOMETER WITH WELL (FILLED TYPE)
T	AVERAGING TEMPERATURE SENSOR
T	LOW LIMIT TEMPERATURE SWITCH
T	PROBE TEMPERATURE SENSOR

SYMBOL:	DESCRIPTION:	SYMBOL:	DESCRIPTION:
AI	ANALOG INPUT	DI	DIGITAL INPUT
AO	ANALOG OUTPUT	DO	DIGITAL OUTPUT
FM	DUCT FLOW METER	H	HUMIDISTAT SENSOR
			HUMIDISTAT / SENSOR
		H	HUMIDITY SENSOR (DUCT MOUNTED)
DSD	DUCT SMOKE DETECTOR		FILTER
	HEATING/ COOLING COIL		TERMINAL AIR BOX W/ REHEAT
	MANUAL MOTOR STARTER W/THERMAL OVERLOAD	O	OCCUPANCY SENSOR
		S	SENSOR
			ACTUATOR
	FAN		DIFFERENTIAL PRESSURE SWITCH
			CURRENT SWITCH
MTR	MOTOR		NORMALLY CLOSED CONTACT
			NORMALLY OPEN CONTACT
R	CONTACTOR		OPPOSED BLADE DAMPER
			PARALLEL BLADE DAMPER
	PUMP		

MECHANICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
2. NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
4. EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF THEIR WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO THEIR AREA OF WORK.
5. EACH CONTRACTOR SHALL CUT AND PATCH ROOFS, WALLS, AND FLOORS ASSOCIATED WITH THEIR WORK.
6. THIS CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK REQUIRED BY THEIR WORK.
7. WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.
8. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS THAT REMAIN ACTIVE.
9. OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED.
10. MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR TIE IN AND SWITCHOVER. DRAIN SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER BEFORE PARTIALLY OR COMPLETELY DRAINING SYSTEM. MAKE CHANGEOVER TO NEW SYSTEMS WITH MINIMUM OUTAGE.
11. DISCONNECT AND REMOVE MECHANICAL DEVICES AND EQUIPMENT SERVING EQUIPMENT THAT HAS BEEN REMOVED.

TEMPERATURE CONTROL GENERAL NOTES:

1. REFER TO EQUIPMENT SCHEDULES TO CROSS REFERENCE WHICH CONTROL DIAGRAMS APPLY TO WHICH ITEMS OF EQUIPMENT. REFER TO TERMINAL AIR BOX (TAB) SCHEDULES FOR TEMP SENSOR REQUIREMENTS FOR EACH TAB.
2. EACH D.I., D.O., A.I. AND A.O. POINT SHOWN FOR ALL CONTROL DIAGRAMS SHALL BE DISCRETE FROM ALL OTHER POINTS EXCEPT AS SPECIFICALLY NOTED.
3. ALL WIRING, CONTROL COMPONENTS, DEVICES AND PROGRAMMING SHOWN ON THESE CONTROL DRAWINGS SHALL BE PROVIDED BY THE TCC UNLESS SPECIFICALLY NOTED OTHERWISE.
4. TEMPERATURE CONTROL CABLING, CONDUIT, BOXES, IDENTIFICATION: REFER TO THE SPECIFICATIONS FOR A COMPLETE LIST OF REQUIREMENTS. THE FOLLOWING SCHEDULE IS PROVIDED AS A CONVENIENCE. REFER TO SECTION 23 09 00 AND DIV 26 FOR ADDITIONAL DETAILED REQUIREMENTS.
   A. CABLE/WIRE JACKET COLOR: BLUE
   B. CONDUIT BOX COLOR ABOVE FINISHED CEILINGS AND UNFINISHED SPACES WITHOUT CEILINGS: BLUE
   C. CONDUIT BOX COLOR IN SPACES WITH EXPOSED FINISHED STRUCTURE: **BLUE**
   D. CABLE/WIRE INSTALLATION: IN CONDUIT WHEN CONCEALED IN WALLS AND OTHER ASSEMBLIES. PLENUM-RATED CABLE SHALL BE USED ABOVE FINISHED ACCESSIBLE CEILINGS, INDEPENDENTLY SUPPORTED FROM OTHER SYSTEM CABLING/WIRE EVERY 4 FT WITH BRIDAL RINGS AND CABLE SADDLES. ALL CABLING SHALL BE IN CONDUIT IN SPACES WITH EXPOSED FINISHED STRUCTURE.
5. ALL ACTUATORS SHALL BE OF THE ELECTRICAL TYPE FOR THIS PROJECT UNLESS AN ACTUATOR IS SPECIFICALLY INDICATED ON THE DRAWINGS OR SPECIFICATIONS TO BE PNEUMATIC.
6. ALL MODULATING DAMPER AND VALVE ACTUATORS SHOWN WITH POSITION FEEDBACK SHALL HAVE THE VALVE POSITION DISPLAYED ON GRAPHICAL SCREEN ADJACENT TO THE DAMPER/VALVE COMMAND SIGNAL. DISPLAYED VALVE POSITION SHALL BE FROM THE FEEDBACK DEVICE/CIRCUIT (OUTPUT SIGNAL FROM THE FMCS TO THE ACTUATOR IS NOT ACCEPTABLE)
7. MODULATING SIGNALS SHALL BE DISPLAYED AS % OPEN (SIGNALS DISPLAYED AS % CLOSED ARE NOT ACCEPTABLE).
8. PRESSURE TRANSMITTERS WHOSE SIGNAL IS UTILIZED FOR MAINTAINING DUCT STATIC PRESSURE SHALL BE WIRED DIRECTLY TO THE CONTROLLER THAT MODULATES FAN SPEED. SIGNAL SHALL BE COMPLETELY INDEPENDENT OF THE FMCS NETWORK.
9. ALL CONTROL COMPONENTS SUCH AS RELAYS, SWITCHES, DDC CONTROLLERS, ETC. SHALL BE MOUNTED IN STEEL ENCLOSURES WITH STEEL MOUNTING BACKPLATES PER SPECIFICATION 23 09 00.
10. EACH CONTROL PANEL SHALL HAVE A LAMINATED COPY OF THE APPLICABLE SEQUENCE OF OPERATION AND CONTROL DIAGRAM INDICATING THE POINTS, COMPONENTS AND OPERATION OF EQUIPMENT ASSOCIATED WITH EACH PANEL. REFER TO SECTION 23 09 00 FOR ADDITIONAL REQUIREMENTS.
11. TCC SHALL EXTEND CONTROL SIGNAL FROM ADDRESSABLE RELAY DEVICE SERVING EACH AIR HANDLING UNIT. REFER TO ELECTRICAL DRAWINGS FOR LOCATIONS. TCC SHALL EXTEND AND TERMINATE WIRING AS REQUIRED FOR EQUIPMENT SHUTDOWN.
12. TCC SHALL PROVIDE POWER SUPPLIES FOR ALL 24VAC POWER REQUIREMENTS TO INCLUDE, BUT NOT LIMITED TO, APPLICATION SPECIFIC, TERMINAL AIR BOX CONTROLLERS, DAMPER AND VALVE ACTUATORS, BUILDING PRESSURE SENSORS, AND OTHER CONTROL COMPONENTS AND DEVICES. REFER TO CONTROLS SPECIFICATIONS FOR POWER SUPPLY REQUIREMENTS. REFER TO MECHANICAL FLOOR PLANS FOR POWER SUPPLY LOCATIONS. PROVIDE LOW VOLTAGE WIRING FROM POWER SUPPLIES TO ALL CONTROLLERS, MONITORS, COMPONENTS AND DEVICES REQUIRING 24 VAC POWER. ADDITIONAL POWER SUPPLIES NOT SHOWN AND REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM SHALL BE PROVIDED BY THE TEMPERATURE CONTROL CONTRACTOR. THE TEMPERATURE CONTROL CONTRACTOR SHALL PROVIDE FINANCIAL PROVISIONS WITHIN THEIR BID FOR THE ELECTRICAL CONTRACTOR TO PROVIDE BRANCH POWER TO THE ADDITIONAL POWER SUPPLIES. COORDINATE THE LOCATION OF ADDITIONAL POWER SUPPLY CABINET WITH THE ELECTRICAL CONTRACTOR.
13. TCC SHALL PROVIDE CONDUIT RUNS AS REQUIRED FOR OUTDOOR EQUIPMENT AND FOR EQUIPMENT INSTALLED REMOTELY FROM THE MAIN BUILDING THAT IS BEING MONITORED OR CONTROLLED BY THE FMCS.
14. ELEMENT LENGTHS FOR BOTH MIXED AIR TEMP SENSORS AND LOW LIMIT TEMP SWITCHES SHALL BE MINIMUM 1 LINEAR FOOT PER SQUARE FOOT OF COIL SURFACE AREA. PROVIDE MULTIPLE SENSORS AND SWITCHES AS NEEDED TO ACHIEVE REQUIRED ELEMENT LENGTHS. LOCATE RESET SWITCHES MAX. 6'-6" ABOVE ADJACENT STANDING SURFACE (E.G. ROOF, PLATFORM OR FLOOR) SO THE RESET SWITCH CAN BE CYCLED WITHOUT THE NEED FOR A LADDER.
15. TO PREVENT GENERATOR OVERLOADING, TCC SHALL PROGRAM A STAGGERED START TIME FOR ALL MECHANICAL EQUIPMENT THAT IS CONTROLLED BY FMCS TO INCLUDE, BUT NOT LIMITED TO, AIR HANDLERS, CONDENSING UNITS AND, EXHAUST FANS. THE FIRST EQUIPMENT SHALL START 2 MINUTES (ADJ.) FROM THE TIME THE FMCS RECEIVES THE SIGNAL THAT THE TRANSFER SWITCH CHANGED TO EMERGENCY POWER SOURCE WITH ALL EQUIPMENT BEING ENERGIZED WITHIN A 20 MINUTE (ADJ.) TIME SPAN. COORDINATE ORDER OF EQUIPMENT STAGING WITH OWNER'S REPRESENTATIVE.
16. CONTROL DIAGRAMS ARE SCHEMATIC IN NATURE AND DO NOT SHOW ALL REQUIRED CONTROL DEVICES AND COMPONENTS. REFER TO FLOOR PLANS, FLOW DIAGRAMS AND DETAILS FOR ADDITIONAL CONTROL DEVICES, COMPONENTS AND REQUIREMENTS NOT SHOWN ON THESE CONTROL DRAWINGS.
17. TCC SHALL PROVIDE ALL CONTROL COMPONENTS AND ACCESSORIES AS REQUIRED FOR EQUIPMENT TO BE CONTROLLED AS DESCRIBED IN THE SEQUENCE OF OPERATION REGARDLESS OF WHETHER ALL CONTROL COMPONENTS OR POINTS ARE SHOWN IN THE ASSOCIATED CONTROL DIAGRAM.
18. COORDINATE DDC CONTROL PANEL EMERGENCY POWER SUPPLY REQUIREMENT WITH ELECTRICAL CONTRACTOR. ALL CONTROLS ASSOCIATED WITH MECHANICAL SYSTEM REQUIRING EMERGENCY POWER SHALL BE CONNECTED TO THE EMERGENCY POWER SYSTEM.

PIPING GENERAL NOTES:

1. PIPE DRAIN LINES FROM EQUIPMENT TO NEAREST FLOOR DRAIN.
2. INSTALL ALL REFRIGERANT LIQUID AND SUCTION PIPING SIZED PER EQUIPMENT MANUFACTURER RECOMMENDATIONS.

VENTILATION GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, THE SIZE OF EACH BRANCH DUCT TO A TERMINAL AIR BOX (TAB) SHALL MATCH THE INLET SIZE UNLESS THE BRANCH IS GREATER THAN 6 FEET IN LENGTH, IN WHICH CASE THE BRANCH DUCT SHALL BE SIZED AT A PRESSURE DROP OF 0.07"W.C. PER 100' OF DUCTWORK.
2. UNLESS NOTED OTHERWISE, THE SIZE OF EACH BRANCH DUCT TO AN AIR TERMINAL SHALL MATCH THE INLET SIZE.
3. ALIGN TEMPERATURE SENSORS WITH LIGHT SWITCHES AND WHEN IN CLOSE PROXIMITY TO EACH OTHER.
4. PROVIDE ACCESS DOORS AT ALL DUCT MOUNTED EQUIPMENT.
5. REFER TO 6/M4.1 FOR DUCT BRANCH CONNECTIONS DETAIL.
6. ALL RADIUS ELBOWS SHALL BE TYPE RE1 WITHOUT VANES (CENTER RADIUS R/W=1.0). EXCEPTION: RADIUS ELBOWS LABELED "RE3" SHALL BE TYPE RE3 WITH VANES (CENTER RADIUS R/W=0.6). REFER TO SPECIFICATIONS AND DETAIL 6/M4.2 FOR ADDITIONAL REQUIREMENTS.
7. REFER TO 4/M4.2 FOR FLEX DUCT CONNECTION (STRAIGHT/WRAPPED) DETAIL.
8. REFER TO 5/M4.2 FOR TRAPEZE HANGER DUCT WRAP VAPOR SEAL DETAIL.

MECHANICAL GENERAL NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
3. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
4. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
5. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
6. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE DRY WALL CONTRACTOR FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE DRY WALL CONTRACTOR OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
10. SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.
11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
12. WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
13. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
14. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
15. MAINTAIN A MINIMUM WORKING CLEARANCE OF 3'-6" IN FRONT OF ALL ELECTRICAL EQUIPMENT REQUIRING MAINTENANCE, INSPECTION, AND TESTING INCLUDING BUT NOT LIMITED TO PANELS, DISTRIBUTION PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, EQUIPMENT DISCONNECTS AND STARTERS.
16. MAINTAIN THE DEDICATED ELECTRICAL EQUIPMENT SPACE DEFINED BY THE WIDTH / DEPTH OF ELECTRICAL EQUIPMENT MEASURED FROM THE FLOOR TO A HEIGHT 6'-0" ABOVE THE EQUIPMENT OR THE STRUCTURAL CEILING, WHICHEVER IS LOWER. SYSTEMS FOREIGN TO THE ELECTRICAL DISTRIBUTION SYSTEM ARE NOT ALLOWED IN THE DEDICATED ELECTRICAL SPACE INCLUDING; DUCTWORK, PIPING, ETC.
17. PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
18. DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

MECHANICAL DESIGN CONDITIONS:

DESIGN CONDITIONS: **BASED ON WEATHER DATA FOR: {CLARINDA, IA}**

SUMMER:	91°F DRY BULB, 73°F WET BULB
WINTER:	-10°F DRY BULB

TYPICAL ROOM SETPOINTS:

KITCHEN SUMMER DESIGN:	80°F DRY BULB, 60% RELATIVE HUMIDITY
LAUNDRY, OFFICES, STORAGE SUMMER DESIGN:	72°F DRY BULB, 60% RELATIVE HUMIDITY
WINTER DESIGN:	68°F DRY BULB, NO HUMIDITY REQUIREMENT

MECHANICAL SHEET INDEX

M0.0	MECHANICAL COVERSHEET
MD1.1	LEVEL 01 DEMOLITION PLAN - MECHANICAL
M1.1	LEVEL 01 PLAN - AREA A - MECHANICAL
M1.2	LEVEL 01 PLAN - AREA B - MECHANICAL
M1.3	LEVEL 02 PLAN - AREA A - MECHANICAL
M1.4	LEVEL 02 PLAN - AREA B - MECHANICAL
M3.0	ENLARGED PLAN - MECHANICAL
M4.1	MECHANICAL DETAILS
M4.2	MECHANICAL DETAILS
M4.3	MECHANICAL DETAILS
M5.1	CONTROL DIAGRAMS
M5.2	CONTROL DIAGRAMS
M5.3	CONTROL DIAGRAMS
M6.1	MECHANICAL SCHEDULES
M6.2	MECHANICAL SCHEDULES
GRAND TOTAL: 15	

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0 1 2 3
REF. SCALE IN INCHES
PROJECT #21007688.00

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RIPPE ASSOCIATES
FOODSERVICE DESIGN + CONSULTING

kpff

IMEG

Bishop Engineering

ISSUE:

#	DATE:	DESCRIPTION:

IFC
04/08/2024

PROJECT:
STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DAVING

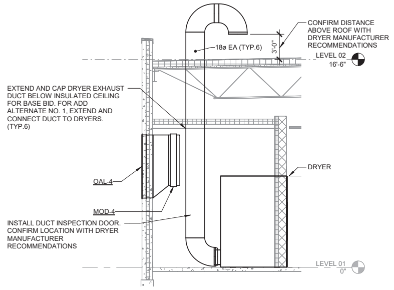
SHEET TITLE:
MECHANICAL COVERSHEET

SHEET NUMBER:
M0.0

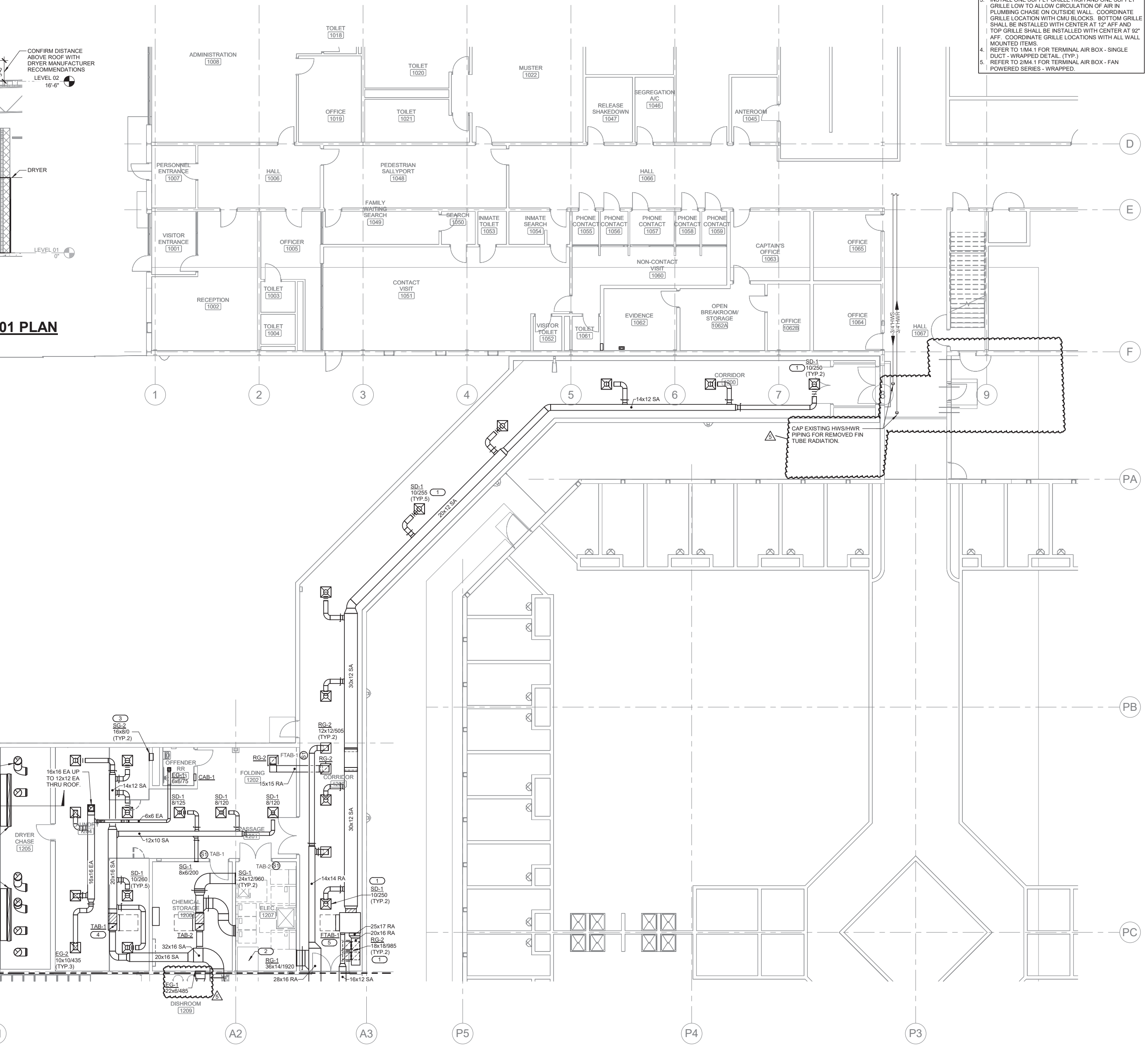
PROJECT NO.: 0240202.00
RFB922300-02

KEYNOTES: #

1. BALANCE DIFFUSER/GRILLE TO LISTED CFM WHEN THE ASSOCIATED FAN POWERED TAB IS AT THE MAXIMUM SCHEDULED HEATING PRIMARY AIRFLOW PLUS TAB FAN CFM.
2. CONNECT COOLER/FREEZER REFRIGERATION SYSTEM TO FMCS FOR MONITORING PER CONTROL DIAGRAM 11/M5.1. CONFIRM FINAL LOCATION WITH FMCS.
3. INSTALL ONE SUPPLY GRILLE HIGH AND ONE SUPPLY GRILLE LOW TO ALLOW CIRCULATION OF AIR IN PLUMBING CHASE ON OUTSIDE WALL. COORDINATE GRILLE LOCATION WITH CMU BLOCKS. BOTTOM GRILLE SHALL BE INSTALLED WITH CENTER AT 12" AFF AND TOP GRILLE SHALL BE INSTALLED WITH CENTER AT 92" AFF. COORDINATE GRILLE LOCATIONS WITH ALL WALL MOUNTED ITEMS.
4. REFER TO 1/M4.1 FOR TERMINAL AIR BOX - SINGLE DUCT - WRAPPED DETAIL. (TYP.)
5. REFER TO 2/M4.1 FOR TERMINAL AIR BOX - FAN POWERED SERIES - WRAPPED.



2 SECTION - LEVEL 01 PLAN
1/4" = 1'-0"



1 LEVEL 01 PLAN - AREA A - MECHANICAL
1/8" = 1'-0"

NORTH

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RIPPE ASSOCIATES
FOODSERVICE DESIGN + CONSULTING

kpff

IMEG

Bishop Engineering

#	DATE:	DESCRIPTION:
5	8/16/2024	RFQ 4.0

IFC
04/08/2024

PROJECT:

STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DAVING

SHEET TITLE:

LEVEL 01 PLAN - AREA A - MECHANICAL

SHEET NUMBER:

M1.1

PROJECT NO.: 0240202.00

RFB922300-02

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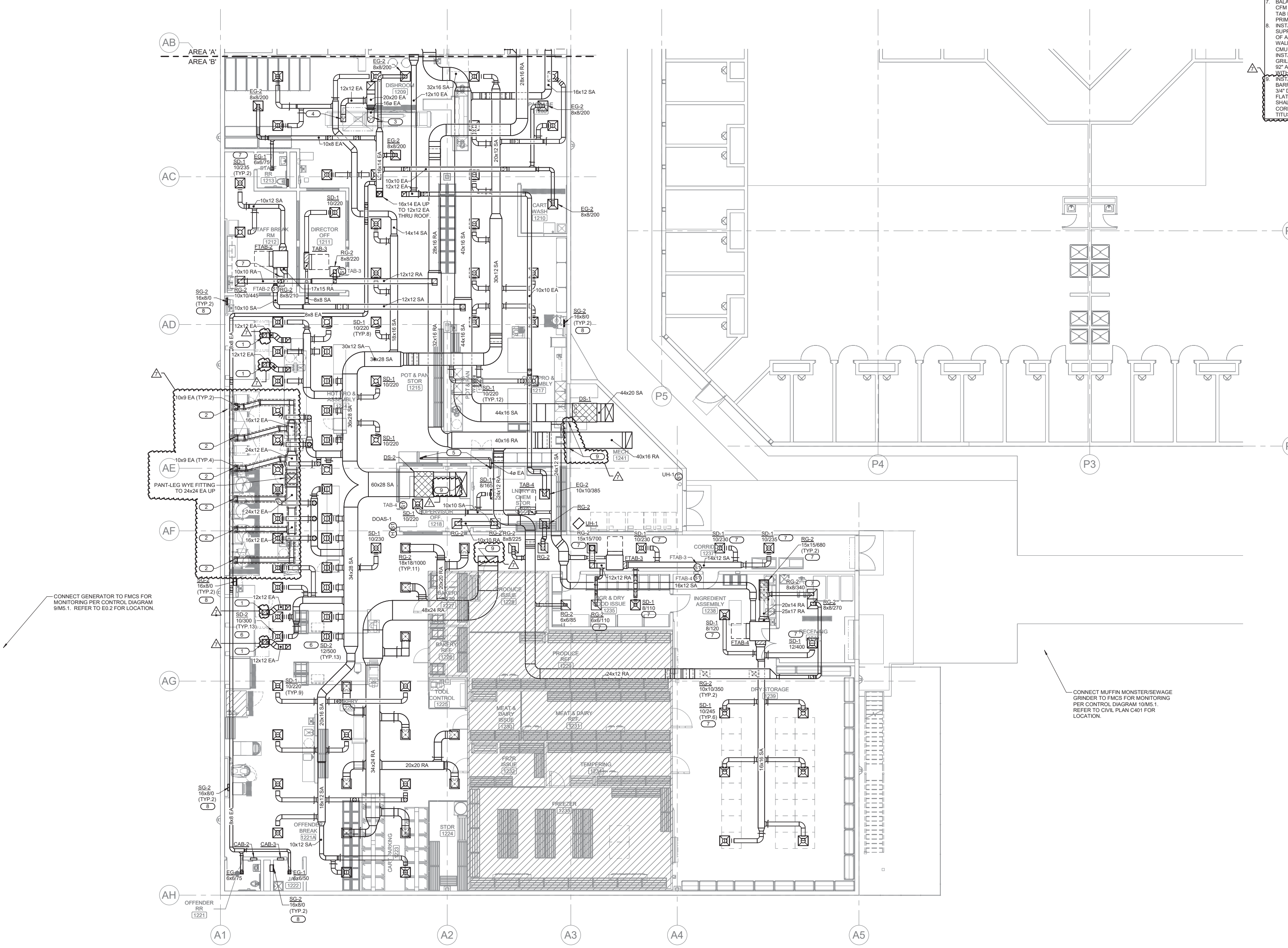
REF. SCALE IN INCHES
PROJECT #21007688.00



1 **LEVEL 01 PLAN - AREA B - MECHANICAL**

1/8" = 1'-0"

NORTH

KEYNOTES: #

1. CONNECT 10"Ø EXHAUST DUCT TO ROTATING RACK OVEN AND ROUTE UP TO EXHAUST FAN ON ROOF ABOVE.
2. 10"x9" EA DN TO KITCHEN HOOD RISER.
3. CONNECT EXHAUST DUCT TO DISHWASHER DUCT RISER.
4. CONNECT EXHAUST DUCT TO DISHWASHER EXHAUST HOOD RISER.
5. ROUTE 4" ALUMINUM DRYER EXHAUST DUCT FROM DRYER UP TO ROOF. TERMINATE WITH DRYER VENT PER DETAIL 5/M4.1.
6. TYPICAL DIFFUSERS REFERS TO ALL DIFFUSERS SHOWN NORTH TO SOUTH IN COLUMN.
7. BALANCE DIFFUSER(S)/GRILLE(S) TO LISTED CFM WHEN THE ASSOCIATED FAN POWERED TAB IS AT THE MAXIMUM SCHEDULED HEATING PRIMARY AIRFLOW PLUS TAB FAN CFM.
8. INSTALL ONE SUPPLY GRILLE HIGH AND ONE SUPPLY GRILLE LOW TO ALLOW CIRCULATION OF AIR IN PLUMBING CHASE ON OUTSIDE WALL. COORDINATE GRILLE LOCATION WITH CMU BLOCKS. BOTTOM GRILLE SHALL BE INSTALLED WITH CENTER AT 12" AFF AND TOP GRILLE SHALL BE INSTALLED WITH CENTER AT 92" AFF. COORDINATE GRILLE LOCATIONS WITH ALL WALL MOUNTED ITEMS.
9. INSTALL BARRIER GRILLE IN WALL OR FLOOR. BARRIER GRILLE SHALL BE CONSTRUCTED OF 3/4" DIAMETER STEEL BARS AND 2 1/2" X 1/4" FLAT BARS LOCATED AT 6" CENTERS. FRAME SHALL BE 2 1/2" X 1/4" STEEL WITH WELDED CORNERS. ALL WELDED CONSTRUCTION. TITUS SG-BG OR APPROVED EQUAL.

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ISSUE:

#	DATE:	DESCRIPTION:
4	8/16/2024	ASI 2.0
5	8/16/2024	RFQ 4.0
7	1/14/2025	RFQ 9.0

IFC
04/08/2024

PROJECT:

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SHEET TITLE:

LEVEL 01 PLAN - AREA B - MECHANICAL

SHEET NUMBER:

M1.2

PROJECT NO.: 0240202.00

RFB922300-02

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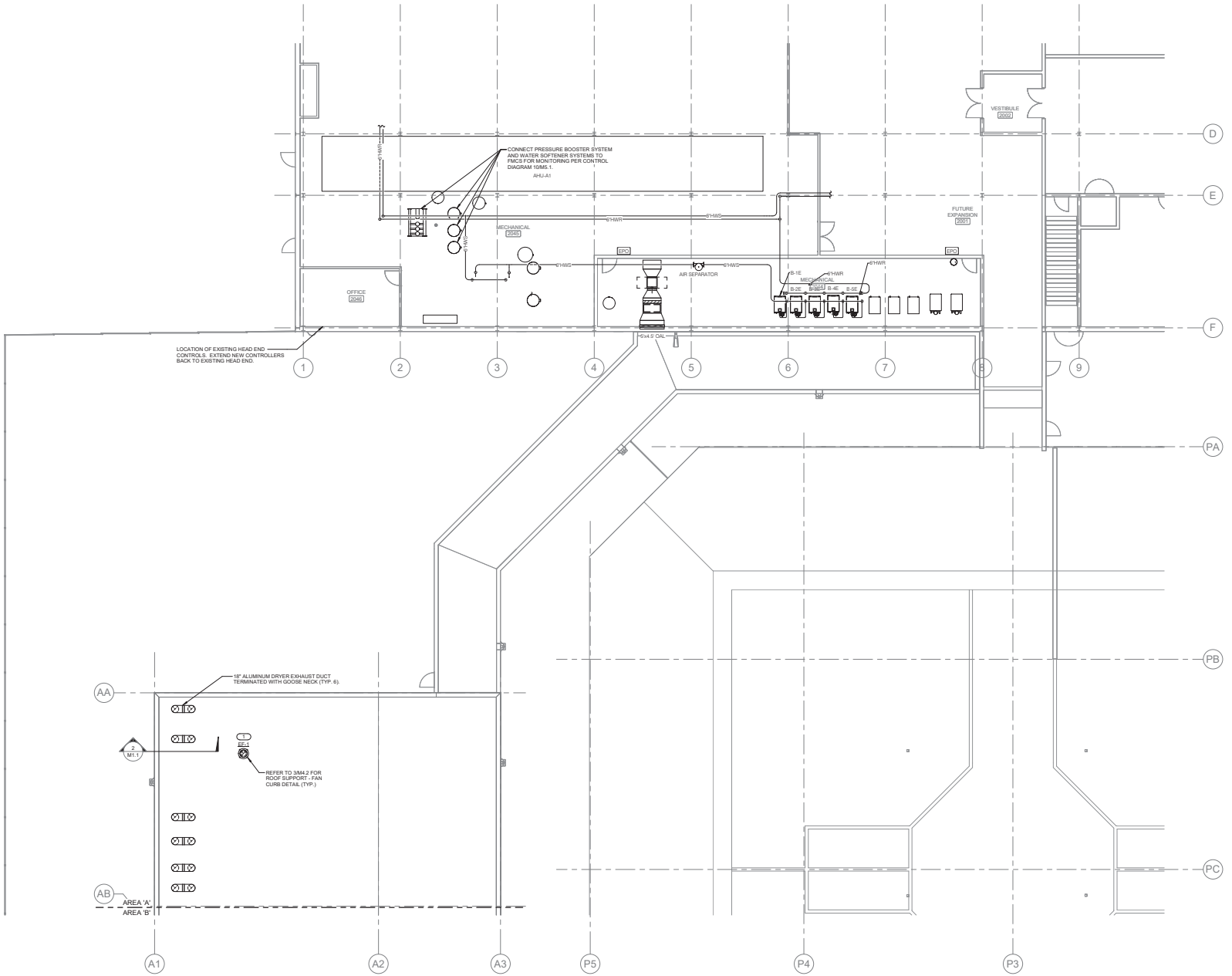

1 LEVEL 02 PLAN - AREA A - MECHANICAL
1/8" = 1'-0"

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SHEET TITLE:
LEVEL 02 PLAN - AREA A - MECHANICAL

SHEET NUMBER:
M1.3

PROJECT NO.: 0240202.00
RFB922300-02

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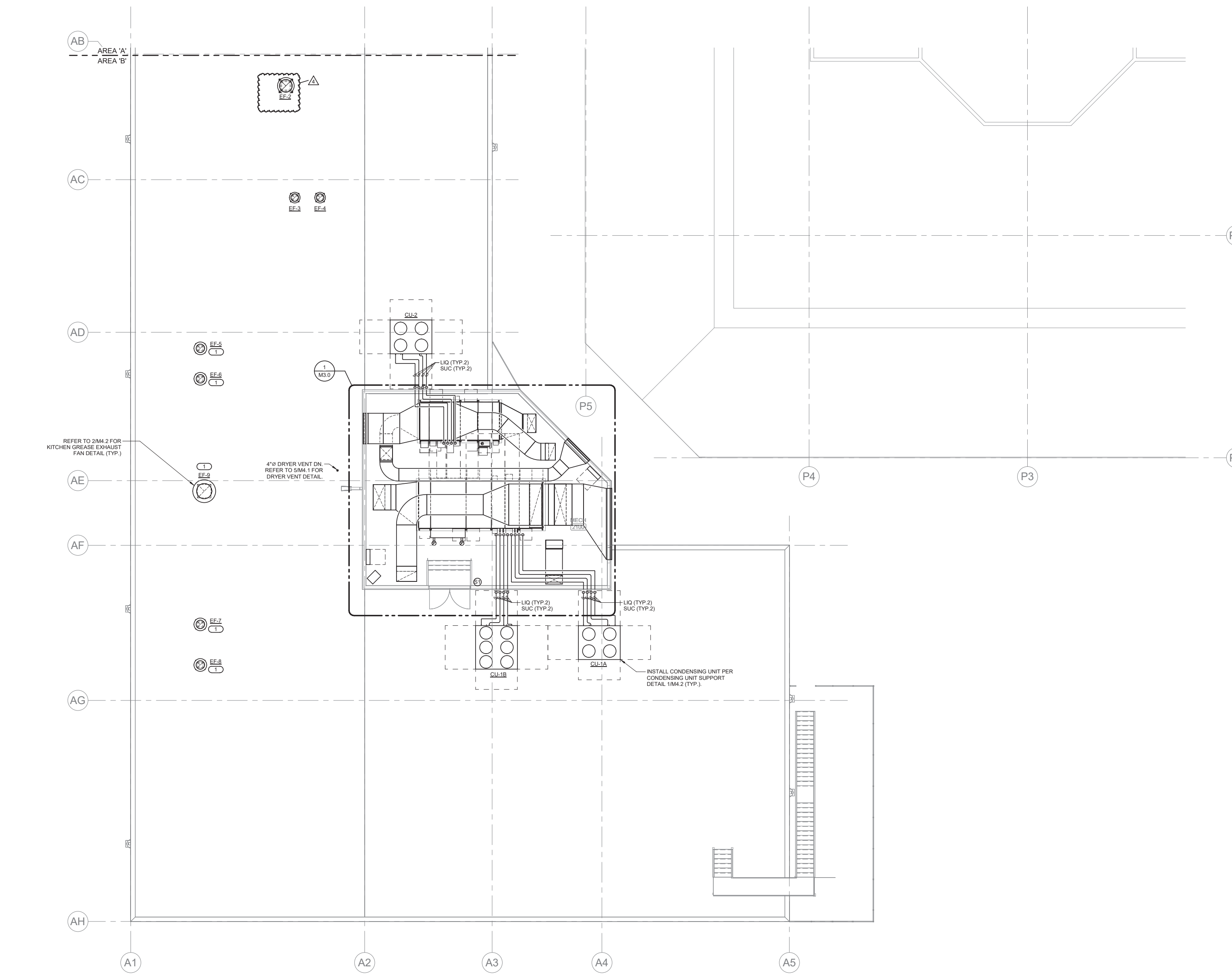
KEYNOTES: (#)

1. LOCATE FAN 10FT MINIMUM FROM ROOF EDGE SO RAILING IS NOT REQUIRED.



NORTH

1 **LEVEL 02 PLAN - AREA B - MECHANICAL**

1/8" = 1'-0"

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LEVEL 02 PLAN - AREA B - MECHANICAL

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SHEET NUMBER:

M1.4

PROJECT NO.: 0240202.00
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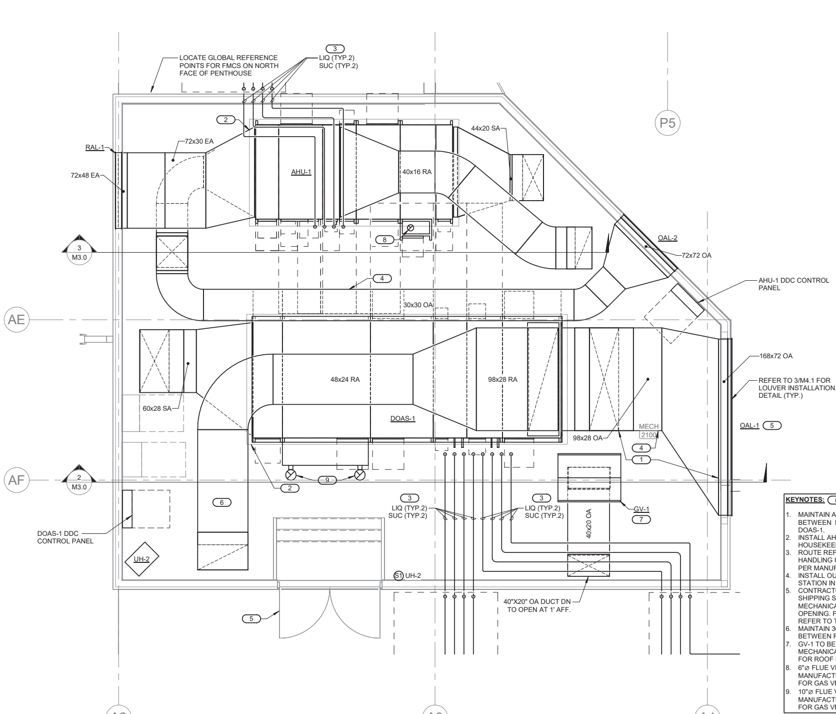
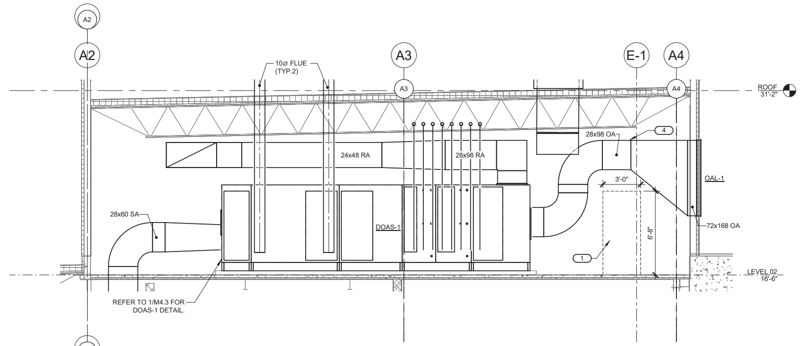


LEVEL 02 PLAN - AREA B - MECHANICAL ENLARGED PLAN

1/4" = 1'-0"

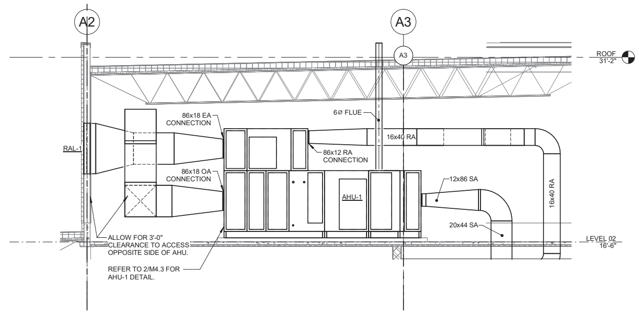
KEYNOTES: #

1. MAINTAIN A 36"X80" MINIMUM CLEAR PATHWAY BETWEEN LOUVER AND VERTICAL DUCT AT DOAS-1.
2. INSTALL AHU-1 AND DOAS-1 ON A 4" HOUSEKEEPING PAD.
3. ROUTE REFRIGERANT PIPING FROM AIR HANDLING UNIT/DOAS TO CONDENSING UNIT PER MANUFACTURER RECOMMENDATIONS.
4. INSTALL OUTSIDE AIR FLOW MEASURING STATION IN STRAIGHT SECTION OF DUCTWORK.
5. CONTRACTOR TO FIT ALL EQUIPMENT AND SHIPPING SPLITS THROUGH EITHER THE MAIN MECHANICAL ROOM DOORS OR OAL-1 OPENING. FOR THE LOUVER OPENING SIZE, REFER TO THE ARCHITECTURAL PLANS.
6. MAINTAIN 36"X80" MINIMUM CLEAR PATHWAY BETWEEN RETURN DUCT AND FLOOR.
7. GV-1 TO BE LOCATED ON ROOF OF MECHANICAL PENTHOUSE. REFER TO 3/M4.2 FOR ROOF SUPPORT - FAN/HOOD CURB DETAIL.
8. 6"⌀ FLUE VENT UP THRU ROOF TO MANUFACTURER'S VENT KIT. REFER TO 4/M4.1 FOR GAS VENT THRU ROOF DETAIL.
9. 10"⌀ FLUE VENT UP THRU ROOF TO MANUFACTURER'S VENT KIT. REFER TO 4/M4.1 FOR GAS VENT THRU ROOF DETAIL. (TYP.2)



2 SECTION - DOAS-1

1/4" = 1'-0"



3 SECTION - AHU-1

1/4" = 1'-0"

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SHEET TITLE:

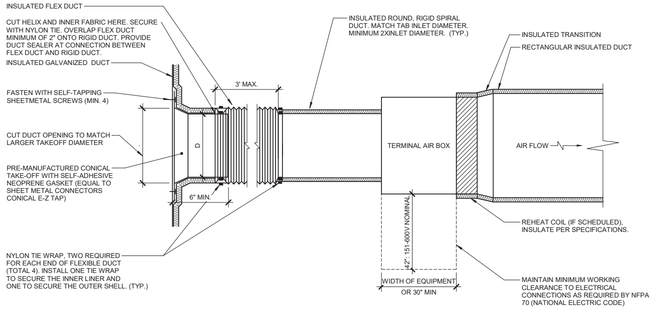
ENLARGED PLAN - MECHANICAL

SHEET NUMBER:

M3.0

PROJECT NO.: 0240202.00

RFB922300-02

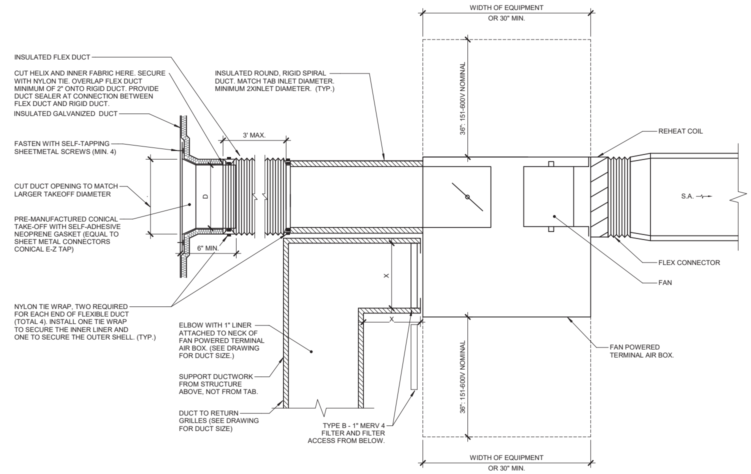


1 TERMINAL AIR BOX - SINGLE DUCT - WRAPPED

NO SCALE

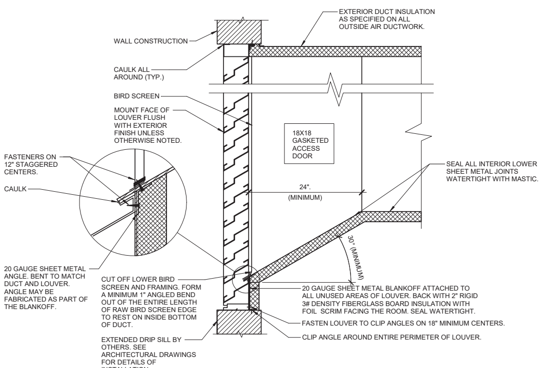
NOTES:

1. THIS DETAIL APPLIES ONLY TO TAPS OFF WRAPPED DUCTS.
2. THIS DETAIL APPLIES TO TERMINAL AIR BOXES WITH ROUND INLETS AND RECTANGULAR OUTLETS.
3. DUCT LEADING TO TAB INLET MUST BE STRAIGHT FOR 1.5 DIAMETER UPSTREAM.
4. MAINTAIN VAPOR BARRIER FROM MAIN TO BRANCH DUCT.



2 TERMINAL AIR BOX - FAN POWERED SERIES - WRAPPED

NO SCALE

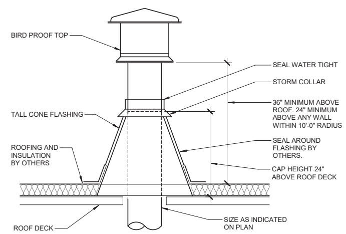


3 LOUVER INSTALLATION DETAIL

NO SCALE

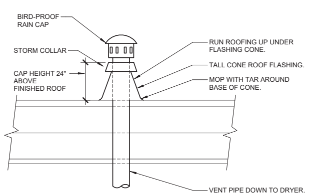
NOTES:

1. SEAL ALL JOINTS ON BOTTOM INTERIOR SURFACE OF DUCT WITHIN 6'-0" OF THE LOUVER WATER TIGHT.
2. MOUNT BOTTOM OF INTAKE LOUVERS AT LEAST 40" ABOVE GRADE OR ROOF ELEVATION TO MINIMIZE CHANCES OF SNOW DRIFTING INTO THE LOUVER.
3. CAULK SHEETMETAL SCREWS WHERE THEY PENETRATE METAL.



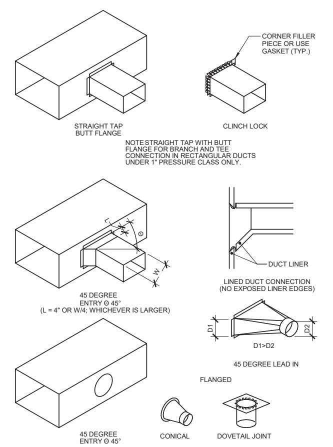
4 GAS VENT THRU ROOF (MEMBRANE ROOF)

NO SCALE



5 DRYER VENT DETAIL

NO SCALE



6 BRANCH CONNECTIONS

NO SCALE

NOTES:

1. DO NOT USE CONNECTIONS WITH SCOOPS.
2. FIT ALL CONNECTIONS TO AVOID VISIBLE OPENINGS AND SECURE THEM SUITABLY FOR THE PRESSURE CLASS.
3. ADDITIONAL MECHANICAL FASTENERS ARE REQUIRED FOR 4"W.G. AND OVER.
4. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

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MECHANICAL DETAILS

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M4.1

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RFB922300-02

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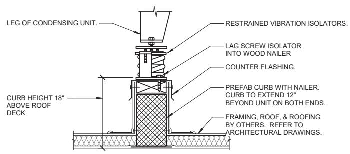
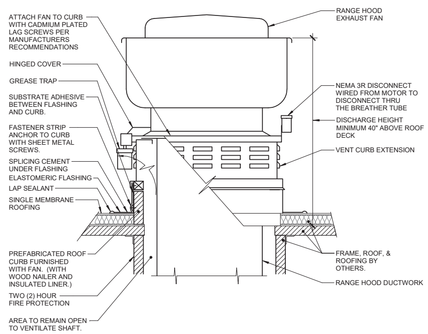


1 CONDENSING UNIT SUPPORT (MEMBRANE ROOF)

NO SCALE

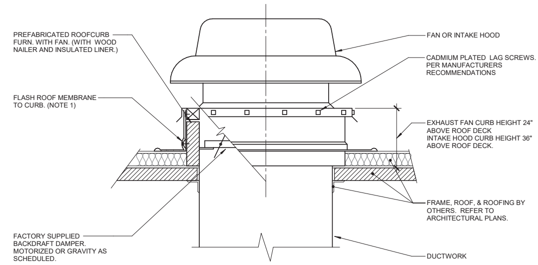


2 FAN - KITCHEN GREASE EXHAUST FAN

NO SCALE

NOTES:

1. ALL ROOF FLASHING SHALL BE PER ROOFING MANUFACTURERS RECOMMENDATIONS.

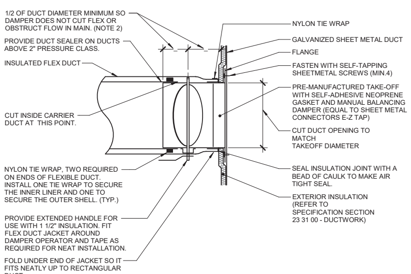


3 ROOF SUPPORT - FAN/HOOD CURB

NO SCALE

NOTES:

1. ALL ROOF FLASHING SHALL BE PER ROOFING MANUFACTURERS RECOMMENDATIONS.

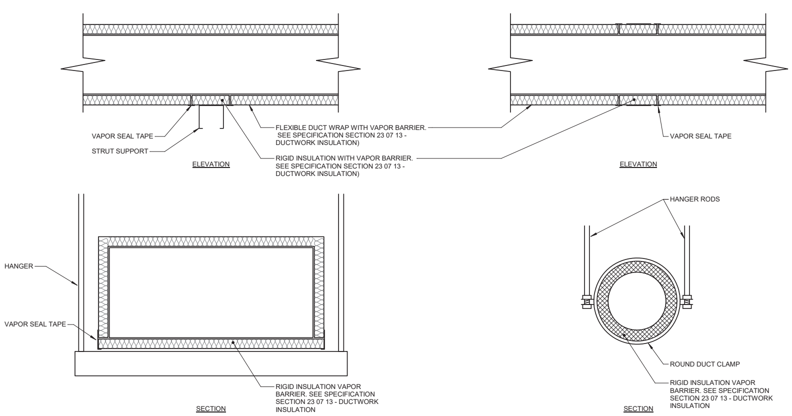


4 FLEX DUCT CONNECTION (STRAIGHT/WRAPPED)

NO SCALE

NOTES:

1. THIS DETAIL APPLIES ONLY TO TAPS OFF UNLINED DUCTS.
2. MANUFACTURED TAP/DAMPER COMBINATIONS WITH LESS THAN 1/2 DUCT DIAMETER SPACING BETWEEN THE MAIN DUCT AND THE DAMPER SHAFT ARE ACCEPTABLE ONLY IF THE DAMPER SHAFT IS INSTALLED PARALLEL TO THE AIR FLOW IN THE MAIN DUCT.

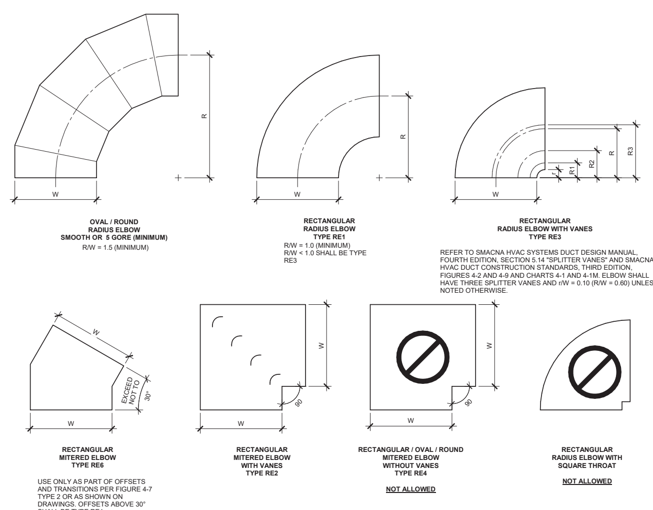


5 TRAPEZE HANGER DUCT WRAP VAPOR SEAL

NO SCALE

NOTES:

1. DETAIL FOR USE WHERE DUCTS REQUIRE TRAPEZE OR DOUBLE ROD HANGERS (36" DIA. OR EQUIVALENT)



6 ELBOW CONSTRUCTION

NO SCALE

NOTES:

1. BEAD, CROSSBREAK, AND REINFORCE FLAT SURFACES AS IN STRAIGHT DUCT.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. DEFAULT ELBOW SHALL BE TYPE "RE1".
4. ELBOW TYPES SHALL BE INSTALLED AS SHOWN AND NOT BE SUBSTITUTED WITHOUT PERMISSION. EXCEPTION: RE1 OR RE3 MAY BE SUBSTITUTED FOR RE2.

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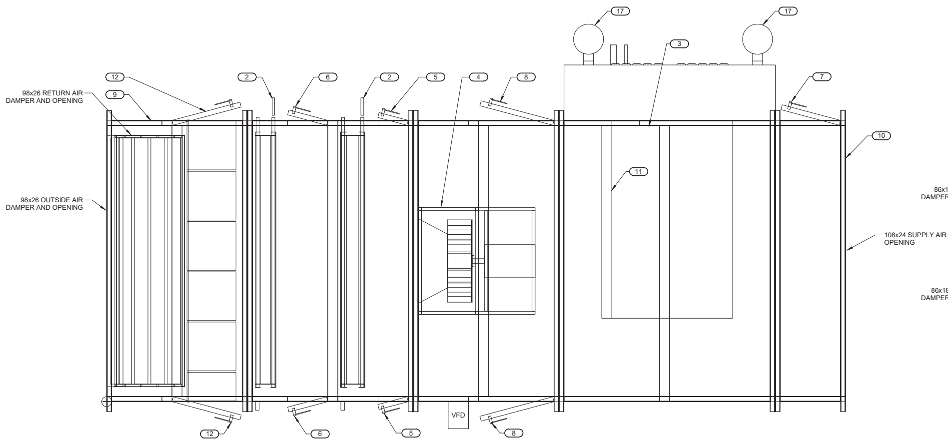
MECHANICAL DETAILS

SHEET NUMBER:
M4.2

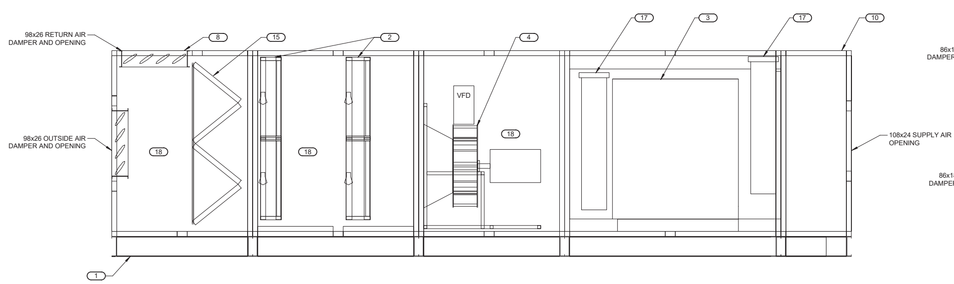
PROJECT NO.: 0240202.00
RFB922300-02

KEYNOTES: (#)

1. 8" BASERAIL.
2. DX COOLING COIL.
3. INDIRECT FIRED NATURAL GAS HEATING COIL.
4. CENTRIFUGAL PLENUM SUPPLY FAN.
5. ACCESS DOOR, MINIMUM WIDTH OF 12".
6. ACCESS DOOR, MINIMUM WIDTH OF 16".
7. ACCESS DOOR, MINIMUM WIDTH OF 24".
8. ACCESS DOOR, MINIMUM WIDTH OF 30" OR LARGER IF REQUIRED FOR FAN ACCESS AND MOTOR REMOVAL.
9. MIXING BOX WITH ANGLED FILTER SECTION, MERV 8 FILTERS.
10. DISCHARGE PLENUM.
11. DAMPERS OVER THE SINGLE STAGE HEATING COIL SECTIONS (QUANTITY: 3). NO COIL OVER MODULATING COIL.
12. ACCESS DOOR, MINIMUM WIDTH OF 28" OR LARGER IF REQUIRED FOR FILTER REMOVAL.
13. VERTICAL ECONOMIZER SECTION.
14. CENTRIFUGAL PLENUM RETURN FAN.
15. MERV 8 FILTER RACK.
16. 6"Ø STAINLESS STEEL FLUE.
17. 10"Ø STAINLESS STEEL FLUE.
18. MODULE TO CONTAIN LED MARINE LIGHTS.
19. ACCESS DOOR, MINIMUM WIDTH OF 14".
20. ACCESS DOOR, MINIMUM WIDTH OF 28" OR LARGER IF REQUIRED FOR FAN ACCESS AND MOTOR REMOVAL.
21. ACCESS DOOR, MINIMUM WIDTH OF 18" OR LARGER IF REQUIRED FOR FILTER REMOVAL.
22. ACCESS DOOR, MINIMUM WIDTH OF 10".
23. ACCESS DOOR, MINIMUM WIDTH OF 20".

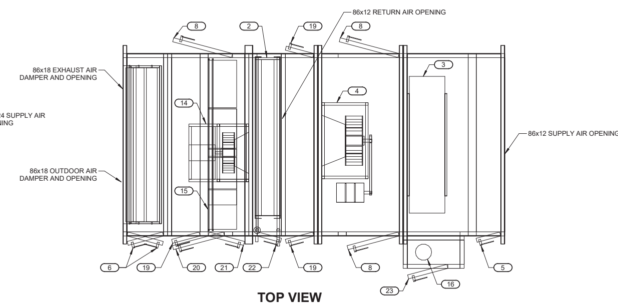


TOP VIEW

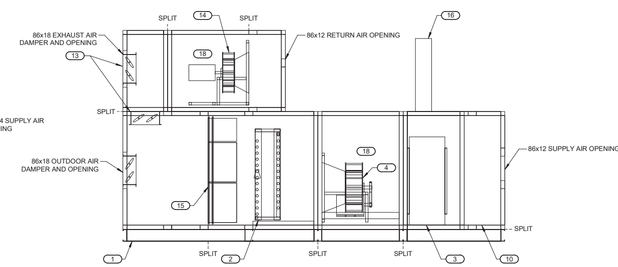


PROFILE VIEW

1 DOAS-1 DETAIL
NO SCALE



TOP VIEW



PROFILE VIEW

2 AHU-1 DETAIL
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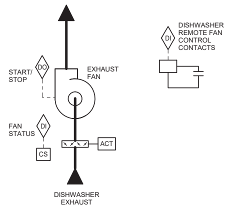


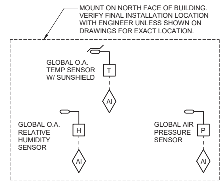
SEQUENCE OF OPERATION:
FMCS SHALL MONITOR CONTACTS THAT ARE PART OF THE DISHWASHER CONTROLS TO DETERMINE WHEN THE DISHWASHER CONTROLS ARE CALLING FOR REMOTE EXHAUST FAN START/STOP COMMANDS.
WHEN THE DISHWASHER CONTROLS CALL FOR REMOTE FAN START, FMCS SHALL ENERGIZE DISHWASHER EXHAUST FAN. WHEN DISHWASHER CONTROLS CALL FOR REMOTE FAN STOP, FMCS SHALL DE-ENERGIZE DISHWASHER EXHAUST FAN AFTER 30 MINUTES (ADJ.) TO ALLOW DUCTWORK TO DRY.

2-POSITION DAMPER SHALL FULLY OPEN WHEN FAN IS ENERGIZED. WHEN FAN IS DE-ENERGIZED, 2-POSITION DAMPER SHALL FULLY CLOSE.

EXHAUST FAN MAY ALSO BE ENABLED/DISABLE PER DOAS-1 CONTROL SEQUENCE. COMMAND FROM DOAS-1 SEQUENCE MAY NOT DISABLE FAN IF DISHWASHER CONTROLS ARE CALLING FOR FAN TO RUN.

ALARMS, INTERLOCKS AND SAFETIES:
AN ALARM SHALL BE GENERATED AT THE FMCS OPERATOR WORKSTATION IN THE EVENT THE FMCS COMMANDS THE EXHAUST FAN TO OPERATE AND THE CURRENT SENSING RELAY DETECTS INSUFFICIENT CURRENT DRAW.

1 DISHWASHER FAN CONTROL - FAN-(EF-2)
NO SCALE

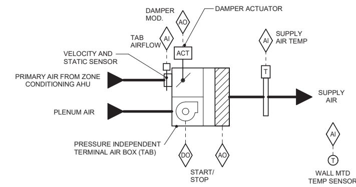


SEQUENCE OF OPERATION:
PROVIDE GLOBAL O.A. DRY-BULB TEMPERATURE, OUTSIDE AIR REFERENCE PRESSURE, AND RELATIVE HUMIDITY TRANSMITTERS.

OUTSIDE AIR PRESSURE SHALL BE INSTALLED ON ALL FOUR SIDES OF THE BUILDING AND PIPED WITH EQUAL LENGTHS OF 1/4" TUBING TO A PIPE MANIFOLD. PIPING BY TCC. LOCATIONS TO BE DETERMINED PER MANUFACTURER'S RECOMMENDATIONS AND ENGINEER'S APPROVAL. TCC SHALL PRIME AND PAINT THE DEVICE ENCLOSURE.

GLOBAL SENSORS SHALL CONTINUOUSLY UPDATE FMCS FOR USE IN CONTROLLING MECHANICAL EQUIPMENT AS REQUIRED IN SEQUENCES OF OPERATION.

2 GLOBAL REFERENCE POINTS
NO SCALE



SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE TAB DAMPER, TAB ELECTRIC REHEAT COIL, AND FAN, TO MAINTAIN SPACE TEMPERATURE OF 72°F (ADJ.) WITH 5°F (ADJ.) DEAD BAND BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. SEE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS. SPACES WITH ADJUSTABLE THERMOSTATS WILL ALLOW A +/- 3°F (ADJ.) OFFSET FROM THE DDC SETPOINT.
- AT FULL COOLING, THE TAB SHALL BE OPEN TO MAXIMUM CFM POSITION. THE REHEAT COIL SHALL BE DE-ENERGIZED AND THE SUPPLY FAN SHALL BE OFF.
- UPON A FALL IN SPACE TEMPERATURE, THE TAB SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED, OR UNTIL IT REACHES ITS MINIMUM SCHEDULED CFM POSITION PER THE TAB SCHEDULE. THE REHEAT COIL SHALL BE DE-ENERGIZED AND THE SUPPLY FAN SHALL BE OFF.
- UPON A FURTHER FALL IN SPACE TEMPERATURE THE SUPPLY FAN SHALL BE ENERGIZED. THE REHEAT COIL SHALL REMAIN DE-ENERGIZED AND THE TAB DAMPER SHALL REMAIN AT MINIMUM SCHEDULED CFM POSITION PER THE TAB SCHEDULE.
- ON A FURTHER REDUCTION THE REHEAT COIL SHALL BE ENERGIZED AND MODULATE TO MAINTAIN SPACE SETPOINT.
- THE FMCS SHALL UTILIZE OUTPUT FROM ALL TERMINAL AIR BOX POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.

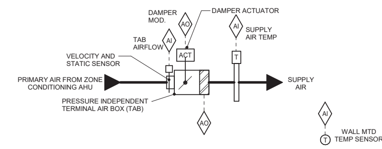
UNOCCUPIED MODE:

UPON A FALL IN SPACE TEMPERATURE BELOW UNOCCUPIED SETPOINT, THE PARALLEL FAN MOTOR SHALL BE ENERGIZED AND THE ELECTRIC REHEAT SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE.

ALARMS, INTERLOCKS & SAFETIES:

- SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS MORE THAN 10°F (ADJ.) ABOVE OR BELOW SETPOINT.
- IF THE AIR FLOW SWITCH DOES NOT PROVE OPERATION, AN ALARM SHALL BE SENT TO THE OPERATOR INTERFACE.
- IF THE HIGH TEMPERATURE SAFETY DEVICE EXCEEDS MANUFACTURER'S SETPOINT, AN ALARM SHALL BE SENT TO THE OPERATOR INTERFACE.
- WHEN FIRE ALARM CONTROL PANEL INDICATES AN ALARM CONDITION AT THE AHU SERVING FAN POWERED BOXES, ALL FAN POWERED BOX SUPPLY FANS SHALL STOP.

3 TAB CONTROL PARALLEL FAN POWERED - W/ ELECTRIC REHEAT - TAB-FP
NO SCALE



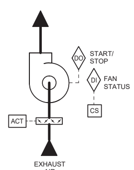
SEQUENCE OF OPERATION:

- FMCS TAB CONTROLLER SHALL MODULATE THE TAB DAMPER AND TAB ELECTRIC REHEAT COIL TO MAINTAIN SPACE TEMPERATURE OF 72°F (ADJ.) WITH 5°F (ADJ.) DEAD BAND BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. SEE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS. SPACES WITH ADJUSTABLE THERMOSTATS WILL ALLOW A +/- 3°F (ADJ.) OFFSET FROM THE DDC SETPOINT.
- AT FULL COOLING, THE TAB SHALL BE OPEN TO MAXIMUM CFM POSITION. THE REHEAT COIL SHALL BE DE-ENERGIZED.
- UPON A FALL IN SPACE TEMPERATURE, THE TAB SHALL MODULATE CLOSED UNTIL SPACE SETPOINT IS MAINTAINED, OR UNTIL IT REACHES ITS MINIMUM SCHEDULED CFM POSITION PER THE TAB SCHEDULE. THE REHEAT COIL SHALL REMAIN DE-ENERGIZED.
- UPON A FURTHER FALL IN SPACE TEMPERATURE, THE ELECTRIC REHEAT COIL AND TAB SHALL MODULATE OPEN IN UNISON TO MAINTAIN SPACE SETPOINT UNTIL TAB AIR FLOW REACHES ITS MAXIMUM HEATING SETTING.
- THE FMCS SHALL UTILIZE OUTPUT FROM ALL TERMINAL AIR BOX POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.

ALARMS, INTERLOCKS & SAFETIES:

- SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS MORE THAN 10°F (ADJ.) ABOVE OR BELOW SETPOINT.
- IF THE HIGH TEMPERATURE SAFETY DEVICE EXCEEDS MANUFACTURER'S SETPOINT, AN ALARM SHALL BE SENT TO THE OPERATOR INTERFACE.

4 TAB CONTROL W/ ELECTRIC REHEAT - TAB-RH
NO SCALE

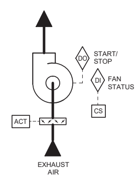


SEQUENCE OF OPERATION:
EXHAUST FAN SHALL BE INTERLOCKED TO RUN CONTINUOUSLY WHEN RESPECTIVE AHU IS OPERATING.

2-POSITION DAMPER SHALL FULLY OPEN WHEN FAN IS ENERGIZED. WHEN FAN IS DE-ENERGIZED, 2-POSITION DAMPER SHALL FULLY CLOSE.

ALARMS, INTERLOCKS AND SAFETIES:
AN ALARM SHALL BE GENERATED AT THE FMCS OPERATOR WORKSTATION IN THE EVENT THE FMCS COMMANDS THE EXHAUST FAN TO OPERATE AND THE CURRENT SENSING RELAY DETECTS INSUFFICIENT CURRENT DRAW.

5 EXHAUST FAN CONTROL - AHU INTERLOCK - FAN - (EF-1, EF-3)
NO SCALE

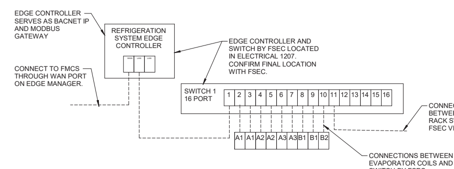


SEQUENCE OF OPERATION:
EXHAUST FAN SHALL RUN CONTINUOUSLY.

2-POSITION DAMPER SHALL FULLY OPEN WHEN FAN IS ENERGIZED. WHEN FAN IS DE-ENERGIZED, 2-POSITION DAMPER SHALL FULLY CLOSE.

ALARMS, INTERLOCKS AND SAFETIES:
AN ALARM SHALL BE GENERATED AT THE FMCS OPERATOR WORKSTATION IN THE EVENT THE FMCS COMMANDS THE EXHAUST FAN TO OPERATE AND THE CURRENT SENSING RELAY DETECTS INSUFFICIENT CURRENT DRAW.

6 EXHAUST FAN CONTROL - CONTINUOUS OPERATION - FAN - (EF-4)
NO SCALE



SEQUENCE OF OPERATION:

FMCS SHALL MONITOR AND GRAPHICALLY DISPLAY ALL AVAILABLE INFORMATION FROM THE EDGE CONTROLLER AT THE OPERATOR WORKSTATION.

AT A MINIMUM, THE FOLLOWING POINTS SHALL BE MONITORED AND ALARM FOR THE COMPRESSORS:

*EXTERNAL ALARM	*SUCTION PRESSURE SENSOR
*DISCHARGE PRESSURE SENSOR	*SUCTION TEMPERATURE
*DISCHARGE TEMPERATURE	*HIGH DISCHARGE PRESSURE.

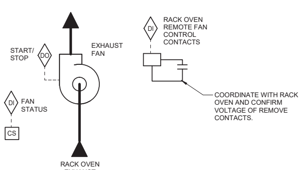
AT A MINIMUM, THE FOLLOWING POINTS SHALL BE MONITORED AND ALARM FOR EACH EVAPORATOR:

*SUCTION PRESSURE SENSOR	*AIR TEMPERATURE SENSOR
*HIGH SUPERHEAT	*EXCESSIVE DEFROST
*DEFROST TURN ON TIME	*LOW AIR TEMPERATURE
*HIGH AIR TEMPERATURE	*COIL SENSOR
*SUCTION SENSOR	*COMMUNICATION ALARM

PROVIDE ALARMS FOR EACH COOLER AND FREEZER TO SEND A TEXT, EMAIL OR CALL OUT IF THE COOLER OR FREEZER TEMPERATURE EXCEEDS THE SPECIFIED MAXIMUM SETPOINT.

PROVIDE A COOLER/FREEZER REPORT:
DDC FMCS SHALL MONITOR THE FOLLOWING POINTS ON 10 MINUTE (ADJ.) INTERVALS WITHIN A SINGLE TREND. THE TREND SHALL RUN FOR A 100-DAY (ADJ.) DURATION AT WHICH POINT THE NEWEST VALUES SHALL AUTOMATICALLY OVERWRITE THE OLDEST VALUES:
* DATE
* TIME
* WALK-IN PRODUCE REFRIGERATOR TEMPERATURE [°F]
* WALK-IN PRODUCE REFRIGERATOR TEMPERATURE SETPOINT [°F]
* MEAT AND DAIRY WALK-IN REFRIGERATOR TEMPERATURE [°F]
* MEAT AND DAIRY WALK-IN REFRIGERATOR TEMPERATURE SETPOINT [°F]
* WALK-IN TEMPERING TEMPERATURE [°F]
* WALK-IN TEMPERING TEMPERATURE SETPOINT [°F]
* WALK-IN FREEZER TEMPERATURE [°F]
* WALK-IN FREEZER TEMPERATURE SETPOINT [°F]
* BAKERY FREEZER TEMPERATURE [°F]
* BAKERY FREEZER TEMPERATURE SETPOINT [°F]
* BAKERY REFRIGERATOR TEMPERATURE [°F]
* BAKERY REFRIGERATOR TEMPERATURE SETPOINT [°F]

7 REFRIGERATION SYSTEM CONTROLS
NO SCALE



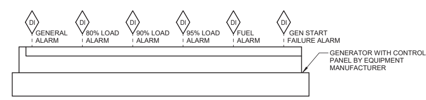
SEQUENCE OF OPERATION:
FMCS SHALL MONITOR CONTACTS THAT ARE PART OF THE RACK OVEN CONTROLS TO DETERMINE WHEN THE RACK OVEN CONTROLS ARE CALLING FOR REMOTE EXHAUST FAN START/STOP COMMANDS.

WHEN THE RACK OVEN CONTROLS CALL FOR REMOTE FAN START, FMCS SHALL ENERGIZE RACK OVEN EXHAUST FAN. WHEN RACK OVEN CONTROLS CALL FOR REMOTE FAN STOP, FMCS SHALL DE-ENERGIZE DISHWASHER EXHAUST FAN

EXHAUST FAN MAY ALSO BE ENABLED/DISABLE PER DOAS-1 CONTROL SEQUENCE. COMMAND FROM DOAS-1 SEQUENCE MAY NOT DISABLE FAN IF DISHWASHER CONTROLS ARE CALLING FOR FAN TO RUN.

ALARMS, INTERLOCKS AND SAFETIES:
AN ALARM SHALL BE GENERATED AT THE FMCS OPERATOR WORKSTATION IN THE EVENT THE FMCS COMMANDS THE EXHAUST FAN TO OPERATE AND THE CURRENT SENSING RELAY DETECTS INSUFFICIENT CURRENT DRAW.

8 RACK OVEN FAN CONTROL - FAN (EF-5, EF-6, EF-7, EF-8)
NO SCALE



SEQUENCE OF OPERATION:
OPERATION OF GENERATOR SHALL BE CONTROLLED BY MANUFACTURER'S SUPPLIED CONTROL PANEL.

FMCS SHALL MONITOR THE ALARM CONTACT PROVIDED WITH EACH CONTROL. AN ALARM AT ANY CONTROL PANEL SHALL ALSO BE INDICATED AT THE OPERATOR WORKSTATION.

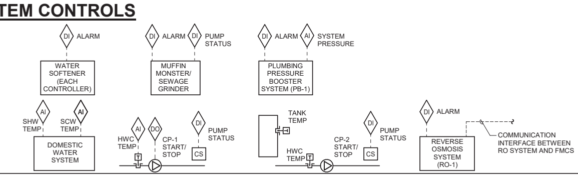
FMCS SHALL MONITOR THE 80% LOAD ALARM, 90% LOAD ALARM AND 95% LOAD ALARM.

UPON LOSS OF NORMAL POWER AND ACTIVATION OF THE GENERATOR, AFTER A 5 MINUTE DELAY (ADJ.), THE FMCS SHALL ALLOW THE FOLLOWING EQUIPMENT TO OPERATE AT 100% OF THEIR FULL LOAD MAXIMUM AMP DRAW. THE EQUIPMENT SHALL BE STAGED ON AT 30 SECOND INTERVALS TO PREVENT THE GENERATOR FROM OVERLOADING.
1. DOAS-1
2. EF-3 & E-9
3. AHU-1
4. EF-4, EF-5, EF-6, EF-7, EF-8
5. TERMINAL AIR BOXES AND FAN POWERED TERMINAL AIR BOXES (SEE SCHEDULES)
6. CU-1A
7. CU-1B
8. CU-2
9. CABINET HEATERS
10. UNIT HEATERS

IF OUTSIDE AIR TEMPERATURE IS ABOVE 55°F (ADJ.), ALL UNIT HEATERS AND CABINET HEATERS SHALL BE LOCKED OUT AND NOT ENABLED WHEN GENERATOR IS IN OPERATION. IF OUTSIDE AIR TEMPERATURE IS BELOW 55°F (ADJ.), THE CONDENSING UNITS (CU-1A, CU-1B & CU-2) SHALL BE LOCKED OUT NOT NOT ENABLED WHEN GENERATOR IS IN OPERATION.

IF FMCS RECEIVES AN 80% LOAD ALARM, THE FMCS SHALL LIMIT CU-1B FROM OPERATING MORE THAN 4 STAGES OF COOLING.
IF FMCS RECEIVES A 90% LOAD ALARM, THE FMCS SHALL LIMIT CU-1B FROM OPERATING MORE THAN 2 STAGES OF COOLING AND LIMIT CU-2 FROM OPERATING MORE THAN 2 STAGES OF COOLING AND SHALL ALSO DISABLE UNIT HEATERS AND CABINET HEATERS.
IF FMCS RECEIVES A 95% LOAD ALARM, THE FMCS SHALL START DISABLING COOLING STAGES ON CU-1B, CU-2 AND THEN CU-1A IN THAT ORDER. CONTINUE TO DISABLE UNTIL LOAD DROPS BELOW 90%. IF LOAD DOES NOT DROP BELOW 90%, DISABLE THE HEATING ON THE TERMINAL AIR BOXES AND FAN POWERED TERMINAL AIR BOXES.

9 GENERATOR MONITORING CONTROLS
NO SCALE



SEQUENCE OF OPERATION:
OPERATION OF THE WATER SOFTENER, MUFFIN MONSTER/SEWAGE GRINDER AND PLUMBING PRESSURE BOOSTER SYSTEM SHALL BE CONTROLLED BY MANUFACTURER'S SUPPLIED CONTROL PANELS OR CONTROLLERS.

FMCS SHALL MONITOR ALL ALARM CONTACTS PROVIDED WITH EACH WATER SOFTENER CONTROLLER AND DISPLAY AT OPERATOR WORKSTATION.

FMCS SHALL MONITOR ALL STATUS CONTACTS PROVIDED WITH EACH MUFFIN MONSTER/SEWAGE GRINDER CONTROL AND DISPLAY AT OPERATOR WORKSTATION.

FMCS SHALL MONITOR SYSTEM PRESSURE AND ALARM OF PRESSURE BOOSTER AND DISPLAY AT THE OPERATOR WORKSTATION.

FMCS SHALL MONITOR REVERSE OSMOSIS SYSTEM ALARM AND DISPLAY AT THE OPERATOR WORKSTATION. FMCS SHALL CONNECT TO COMMUNICATION INTERFACE AT REVERSE OSMOSIS SYSTEM AND BRING IN ANY ADDITIONAL INFORMATION AVAILABLE FOR MONITORING.

FMCS SHALL MONITOR THE DOMESTIC WATER SYSTEM TEMPERATURES WHERE NOTED ON THE DOMESTIC WATER FLOW DIAGRAM AND DISPLAY THEM ON THE OPERATOR WORKSTATION.

FMCS SHALL MONITOR THE TEMPERATURE AT THE 140°F CIRCULATION PUMP (CP-1). THE CIRCULATION PUMP SHALL TURN ON WHEN THE TEMPERATURE FALLS BELOW 132°F (ADJ.) AND SHALL TURN OFF WHEN THE TEMPERATURE RISES ABOVE 137°F (ADJ.).

FMCS SHALL MONITOR THE TANK TEMPERATURE AND THE HWC TEMP AT CIRCULATION PUMP (CP-2). THE CIRCULATION PUMP SHALL OPERATE WHENEVER THE WATER HEATERS ARE IN OPERATION AND SHALL TURN ON WHEN THE TANK TEMPERATURE DROPS BELOW 137°F (ADJ.) AND SHALL TURN OFF WHEN THE TANK TEMPERATURE RISES ABOVE 142°F (ADJ.).

FMCS SHALL MONITOR THE

ALARMS, INTERLOCKS & SAFETIES:
FMCS SHALL TIE INTO BACNET CONTROLLER AND INDICATE AN ALARM TO THE FMCS OPERATOR WORKSTATION IN THE EVENT THE FOLLOWING OCCUR:
- ANY WATER HEATER INDICATES AN ALARM CONDITION.
- ANY HOT WATER CIRCULATION PUMP INDICATES AN ALARM CONDITION.
- THE LEAVING HOT WATER TEMPERATURE IS ABOVE 145ºF (ADJ.) OR BELOW 135ºF (ADJ.) FOR MORE THAN 5 MINUTES.(ADJ.)
- ANY ALARMS INDICATED AT THE WATER HEATER CONTROLLERS.
- ANY ALARMS INDICATED AT THE MUFFIN MONSTER/SEWAGE GRINDER CONTROLLER.
- ANY ALARMS INDICATED AT THE PRESSURE BOOSTER SYSTEM CONTROLLER.

10 MISCELLANEOUS CONTROLS
NO SCALE

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REF. SCALE IN INCHES
PROJECT #21007686.00

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ISSUE:
DATE: DESCRIPTION:

IFC
04/08/2024

PROJECT:
STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

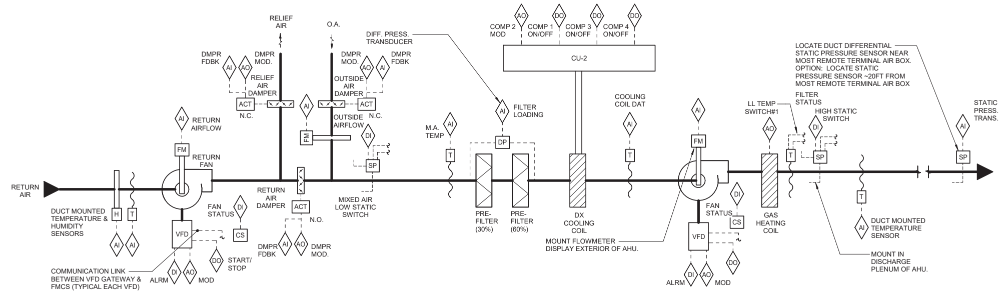
2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DAVING

SHEET TITLE:
CONTROL DIAGRAMS

SHEET NUMBER:
M5.1

PROJECT NO.: 0240202.00
RFB922300-02



AHU REPORT GENERATION:
DDC FMCS SHALL MONITOR THE FOLLOWING POINTS ON 10 MINUTE (ADJ.) INTERVALS WITHIN A SINGLE TREND. THE TREND SHALL RUN FOR A 100-DAY (ADJ.) DURATION AT WHICH POINT THE NEWEST VALUES SHALL AUTOMATICALLY OVERWRITE THE OLDEST VALUES:

- DATE
- TIME
- GLOBAL OUTSIDE AIR TEMP [°F]
- GLOBAL OUTSIDE AIR HUMIDITY [%RH]
- SUPPLY AIRFLOW [CFM]
- SUPPLY AIR TEMP (SAT) [°F]
- SUPPLY AIR TEMP SETPOINT [°F]
- RETURN AIRFLOW [CFM]
- RETURN AIR TEMP (RAT) [°F]
- RETURN AIR RELATIVE HUMIDITY [%]
- OUTSIDE AIRFLOW [CFM]
- MIXED AIR TEMP [°F]
- COOLING COIL DISCHARGE AIR TEMP [°F]
- FILTER LOADING [STATUS]
- HEATING COIL SIGNAL [% FULL HEATING]
- COMPRESSOR 2 SIGNAL [% FULL COOLING]
- COMPRESSOR 1 SIGNAL [ENABLED/DISABLED]
- COMPRESSOR 3 SIGNAL [ENABLED/DISABLED]
- COMPRESSOR 4 SIGNAL [ENABLED/DISABLED]
- SUPPLY DUCT STATIC PRESSURE SETPOINT [INCHES W.G.]
- SUPPLY DUCT STATIC PRESSURE [INCHES W.G.]
- SUPPLY FAN VFD OUTPUT [% FULL SPEED]
- RETURN FAN VFD OUTPUT [% FULL SPEED]
- OUTSIDE AIR DAMPER POSITION [% OPEN]
- RETURN AIR DAMPER POSITION [% OPEN]
- RELIEF AIR DAMPER POSITION [% OPEN]

THIS INFORMATION SHALL BE ACCESSIBLE TO VIEW IN GRAPHICAL FORM ON THE FMCS OPERATOR WORKSTATION.

ONCE PER MONTH, THE DDC FMCS SHALL RECORD THE LARGEST AHU AIRFLOW WHICH OCCURRED DURING THAT MONTH. THE DATE, TIME, OUTSIDE AIR TEMP (AND ALL OTHER VALUES LISTED ABOVE) THAT COINCIDED WITH THAT EVENT SHALL ALSO BE RECORDED. THIS INFORMATION SHALL BE STORED TO A MEMORY LOCATION ON THE FMCS OPERATOR WORKSTATION THAT IS MAINTAINED (NOT AUTOMATICALLY OVERWRITTEN).

AIR HANDLER REPORT GENERATION
TYPICAL FOR AHU-1

RETURN FAN AIRFLOW SCHEDULE

SYSTEM	SUPPLY CFM	EXHAUST FANS	PRESSURIZATION CFM	REMARKS
AHU-1	7,000	EF-1	0	NOTES 1,2,3

NOTES:

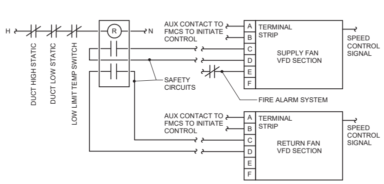
1. **RETURN FAN AIRFLOW SETPOINT SHALL BE THE SUPPLY FAN AIRFLOW (AS MEASURED BY THE AFMS) MINUS THE SUM OF THE EXHAUST FAN AIRFLOW MINUS THE PRESSURIZATION CFM.**
2. **FMCS SHALL DETERMINE THE OPERATIONAL STATUS OF EACH EXHAUST FAN VIA THE CURRENT SENSING RELAY TO DETERMINE WHETHER THE CFM ASSOCIATED WITH THAT FAN SHOULD BE INCLUDED IN THE RETURN FAN AIRFLOW CALCULATION.**
3. **EXHAUST FAN AIRFLOWS SHALL NOT BE THE CFM INDICATED ON THE FAN SCHEDULE, BUT SHALL BE THE AIRFLOW INDICATED IN THE FINAL TAB REPORT.**

FAN INTERLOCK SCHEDULE

SYSTEM	INTERLOCKED EXHAUST FANS	REMARKS
AHU-1	EF-8	NOTE 1

NOTES:

1. **INTERLOCK EXHAUST FAN OPERATION THROUGH THE FMCS WITH RESPECTIVE AHU IN ACCORDANCE WITH AHU SEQUENCE OF OPERATION.**



SUPPLY & RETURN FAN VFD CONTROL

CONNECT FIRE ALARM TO AHU START/STOP CIRCUIT SO FIRE ALARM CAN SHUT DOWN AND SO AHU CAN AUTOMATICALLY RESTART AFTER A FIRE ALARM TEST

SEQUENCE OF OPERATION:

WHEN AHU IS INDEXED TO RUN, THE FOLLOWING SHALL OCCUR:
- AFTER A 30 SECOND DELAY (ADJ.) TO ALLOW FOR OPENING OF DAMPERS, SUPPLY FAN SHALL BE ENABLED TO RUN.
- WHEN THE SUPPLY FAN HAS STARTED THE RETURN FAN AND INTERLOCKED EXHAUST FANS SHALL START AS SHOWN IN THE FAN INTERLOCK SCHEDULE.

SUPPLY FAN OPERATION:
FMCS SHALL MODULATE SIGNAL TO SUPPLY FAN VFD TO MAINTAIN DUCT STATIC PRESSURE AS MEASURED BY STATIC PRESSURE TRANSMITTER NEAR THE END OF THE CRITICAL DUCT BRANCH.

RETURN FAN OPERATION:
RETURN FAN SHALL BE INDEXED TO RUN WHENEVER THE SUPPLY FAN IS INDEXED TO RUN. FMCS SHALL MODULATE SIGNAL TO RETURN FAN VFD AS REQUIRED TO MAINTAIN THE AIRFLOW OFFSET AS INDICATED IN THE RETURN FAN AIRFLOW SCHEDULE.

STATIC PRESSURE RESET:
FMCS SHALL RESET SUPPLY DUCT STATIC PRESSURE SETPOINT BELOW THE MAXIMUM SETPOINT AS REQUIRED TO MAINTAIN AT LEAST ONE SUPPLY TAB DAMPER 90% (ADJ.) OPEN. FMCS SHALL MONITOR ALL SUPPLY TERMINAL AIR BOX POSITIONS TO RESET THE SUPPLY DUCT DIFFERENTIAL STATIC PRESSURE.

DISCHARGE AIR TEMPERATURE SET POINT:
DISCHARGE AIR SET POINT SHALL BE 55ºF (ADJ.).

DISCHARGE AIR TEMPERATURE RESET:
RESET DISCHARGE AIR TEMPERATURE BASED ON THE ZONE WITH THE GREATEST CALL FOR COOLING. RESET THE TEMPERATURE AS FOLLOWS:
- WHEN WORST CASE TAB IS LESS THAN 90% (ADJ.) OPEN FOR TEN MINUTES (ADJ.) THEN THE DISCHARGE AIR TEMPERATURE SHALL INCREASE BY 1ºF (ADJ.). THIS SHALL CONTINUE UNTIL AHU MAXIMUM DISCHARGE AIR TEMPERATURE OF 60ºF (ADJ.) IS ACHIEVED.
- WHEN WORST CASE TAB IS MORE THAN 90% OPEN FOR TEN MINUTES (ADJ.) THEN THE DISCHARGE AIR TEMPERATURE SHALL DROP BY 1ºF (ADJ.). THIS SHALL CONTINUE UNTIL AHU MINIMUM DISCHARGE AIR TEMPERATURE OF 55ºF (ADJ.) IS ACHIEVED.
- THE MAXIMUM ALLOWABLE RETURN AIR HUMIDITY SETPOINT SHALL BE 60% (ADJ.). IF RETURN AIR HUMIDITY IS GREATER THAN SETPOINT, RESET DISCHARGE AIR TEMPERATURE TO 55°F UNTIL RETURN AIR HUMIDITY IS 5% LESS THAN MAXIMUM SETPOINT FOR 10 MINUTES (ADJ.).

STATIC PRESSURE AND DISCHARGE AIR TEMPERATURE RESET PRIORITY:
RESET THE DISCHARGE AIR TEMPERATURE PRIOR TO RESETTING THE DUCTWORK STATIC PRESSURE SETPOINT. ONCE THE MAXIMUM SUPPLY TEMPERATURE IS REACHED THEN THE SYSTEM SHALL ENABLE THE STATIC PRESSURE RESET.

VENTILATION AIR CONTROL:
WHENEVER THE AIR HANDLING UNIT IS IN OCCUPIED MODE, THE OUTSIDE AIR DAMPER SHALL BE FULLY OPEN. THE RETURN AIR AND RELIEF AIR DAMPER SHALL MODULATE IN OPPOSITION TO MAINTAIN THE MINIMUM OUTSIDE AIR FLOW RATE, OR TO SATISFY THE ECONOMIZER DISCHARGE AIR SEQUENCE.

COOLING COIL OPERATION:
WHEN IN MINIMUM OUTSIDE AIR MODE, FMCS SHALL STAGE ON/OFF COMPRESSORS AND MODULATE THE DIGITAL SCROLL COMPRESSOR TO MAINTAIN DISCHARGE AIR TEMPERATURE. THE DIGITAL SCROLL COMPRESSOR (COMPRESSOR 2) SHALL BE ENABLED FIRST AND THE SPEED MODULATED TO MAINTAIN DISCHARGE AIR TEMPERATURE. IF SETPOINT CANNOT BE MAINTAINED AFTER 5 MINUTES (ADJ.) OF RUN TIME, REDUCE THE DIGITAL SCROLL COMPRESSOR TO MINIMUM AND THEN ENABLE COMPRESSOR 1. THE DIGITAL SCROLL COMPRESSOR SHALL CONTINUE TO MODULATE TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT. ENABLE COMPRESSOR 3 AND COMPRESSOR 4 ON AS NEEDED TO MAINTAIN SPACE TEMPERATURE SETPOINT. THE OPPOSITE SHALL OCCUR IF DISCHARGE AIR TEMPERATURE IS BELOW SETPOINT.

FMCS SHALL ROTATE THE LEAD COMPRESSOR ON A WEEKLY BASIS TO ALLOW MORE EVEN RUN TIMES ON COMPRESSORS. THE DIGITAL SCROLL COMPRESSOR SHALL ALWAYS BE THE FIRST COMPRESSOR ON BUT THE SECOND COMPRESSOR ON SHALL BE ROTATED.

THE MINIMUM OFF TIME FOR A STAGE OF COOLING SHALL BE 5 MINUTES (ADJ.). THE MINIMUM ON TIME FOR A STAGE SHALL BE 5 MINUTES (ADJ.). COORDINATE FINAL MINIMUM ON AND MINIMUM OFF TIMES OF STAGES WITH CONDENSING UNIT MANUFACTURER. THE MINIMUM ON/OFF TIME FOR THE DIGITAL SCROLL COMPRESSOR MAY BE DIFFERENT AND SHALL BE PROGRAMMED SEPARATELY IF REQUIRED.

WHEN IN ECONOMIZER MODE, FMCS SHALL NOT ENABLE DX COOLING UNLESS RETURN AIR DAMPER IS 5% (ADJ.) OPEN AND RELIEF AIR DAMPER IS 95% (ADJ.) OPEN.

GAS HEATING COIL OPERATION:
GAS HEATING COIL CONTROLS SHALL BE ENABLED WHENEVER OUTSIDE AIR TEMP DROPS BELOW 50°F (ADJ.). GAS HEATING COIL CONTROLS SHALL BE DISABLED WHEN OUTSIDE AIR TEMP RISES ABOVE 54°F (ADJ.).

FMCS SHALL MODULATE GAS HEATING AS REQUIRED TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT.

ECONOMIZER OPERATION:
WHEN THE OUTSIDE AIR DRY BULB TEMPERATURE IS LESS THAN THE RETURN AIR DRY BULB TEMPERATURE THE FMCS SHALL ENABLE ECONOMIZER CONTROLS. WHEN OUTSIDE AIR DRY BULB TEMPERATURE IS GREATER THAN THE RETURN AIR DRY BULB TEMPERATURE FOR 10 MINUTES THE FMCS SHALL DISABLE ECONOMIZER CONTROLS AND SHALL RETURN THE UNIT TO MINIMUM OUTSIDE AIR MODE. ONCE ECONOMIZER CONTROLS HAVE BEEN ENABLED OR DISABLED, THE UNIT SHALL CONTINUE TO OPERATE IN THAT MODE FOR A MINIMUM OF 10 MINUTES (ADJ.) BEFORE BEING ALLOWED TO SWITCH BACK (TO PREVENT SHORT CYCLING).

IN ECONOMIZER MODE THE FMCS SHALL MODULATE THE RETURN AND RELIEF DAMPERS AS REQUIRED TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT.

ALARMS, INTERLOCKS, AND SAFETIES:
WHEN FIRE ALARM CONTROL PANEL INDICATES AN ALARM CONDITION, AHU SHALL BE SHUTDOWN.

THE FOLLOWING CONDITIONS SHALL SHUTDOWN THE AHU AND SHALL INDICATE AN ALARM CONDITION AT THE FMCS WORKSTATION:
- LOW STATIC PRESSURE SWITCH INDICATES MIXED AIR PRESSURE LESS THAN THE SPECIFIED DUCT PRESSURE CLASS OF THE OUTSIDE AIR DUCTWORK.
- HIGH STATIC PRESSURE SWITCH INDICATES SUPPLY DUCT STATIC PRESSURE GREATER THAN THE SPECIFIED DUCT PRESSURE CLASS.
- SHOULD ANY ONE FOOT SECTION OF THE MANUAL RESET LOW LIMIT TEMPERATURE SWITCH #1 SENSE AIR TEMP <34°F (ADJ.). IF MULTIPLE FREEZE STATS ARE REQUIRED, WIRE ALL TO A COMMON RESET SWITCH.

THE FOLLOWING CONDITIONS SHALL INDICATE AN ALARM AT THE FMCS, HOWEVER AHU SHALL CONTINUE TO OPERATE:
- AN ALARM IS INDICATED AT ANY SUPPLY FAN VFD OR RETURN FAN VFD.
- DIFFERENTIAL PRESSURE TRANSDUCER ACROSS FILTER BANK EXCEEDS 1.6 INCHES W.G. (ADJ.)
- SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE DISCHARGE AIR TEMPERATURE IS MORE THAN 5°F (ADJ.) ABOVE OR BELOW SETPOINT.

IN THE EVENT SUPPLY FAN IS NOT RUNNING (AS INDICATED BY THE CURRENT SENSING RELAYS) RETURN AIR FAN SHALL BE DE-ENERGIZED.

WHENEVER AHU IS SHUTDOWN THE FOLLOWING SHALL OCCUR:
- THE OUTSIDE AIR DAMPER AND RELIEF AIR DAMPER SHALL FULLY CLOSE.
- RETURN AIR DAMPER SHALL FULLY OPEN.
- GAS HEATING SHALL BE DISABLED.
- CONDENSING UNITS SHALL BE DISABLED.
- SUPPLY FAN AND RETURN FAN VFDS SHALL BE DE-ENERGIZED.
- INTERLOCKED EXHAUST FANS SHALL BE DE-ENERGIZED.

UNOCCUPIED MODE:
PROVIDE TIME OF DAY SCHEDULE TO ALLOW AHU TO ENTER UNOCCUPIED MODE PER SCHEDULE. COORDINATE SCHEDULE WITH OWNER.

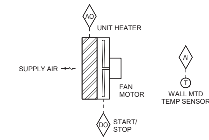
- THE SUPPLY AND RETURN FANS SHALL CONTINUE RUNNING. WHEN USING CONSTANT VOLUME OFFSET FOR RETURN AIR FAN CONTROL, THE OFFSET SHALL GO TO ZERO AND THE SUPPLY FAN SHALL BE LIMITED TO THE MAXIMUM RETURN FAN AIRFLOW.
- THE OUTSIDE AIR AND RELIEF AIR DAMPERS SHALL CLOSE AND THE RETURN AIR DAMPER SHALL OPEN. ECONOMIZER CYCLE SHALL TAKE PRECEDENCE OVER DAMPER POSITION.
- ALL SPACE TEMPERATURES SHALL BE ALLOWED TO VARY +/- 10°F (ADJ.) FROM OCCUPIED SETPOINT.

HEATING OPTIMUM START-UP:
- THIS CYCLE SHALL OVERRIDE THE UNOCCUPIED CYCLE. IF THE SYSTEM WAS OPERATING AS A RESULT OF THE UNOCCUPIED CYCLE, THE SYSTEM SHALL CONTINUE TO OPERATE. THE DDC SYSTEM SHALL DETERMINE THE MINIMUM RUNTIME TO WARM THE SPACES TO THEIR SETPOINT WHEN THE COMPUTED START TIME IS REACHED. THE AIR HANDLING UNIT DISCHARGE AIR TEMPERATURE SHALL BE MAINTAINED AT A SETPOINT OF 85ºF (ADJ.). THE SYSTEM SHALL CONTINUE TO OPERATE IN THIS MODE UNTIL ALL TEMPERATURES EXCEED A SETPOINT OF 68ºF (ADJ.). AT THAT TIME, THE DDC SYSTEM SHALL SWITCH TO OCCUPIED CONTROL.

COOLING OPTIMUM START-UP:
- THIS CYCLE SHALL OVERRIDE THE UNOCCUPIED CYCLE. IF THE SYSTEM WAS OPERATING AS A RESULT OF THE UNOCCUPIED CYCLE, THE SYSTEM SHALL CONTINUE TO OPERATE. THE DDC SYSTEM SHALL DETERMINE THE MINIMUM RUNTIME TO COOL THE SPACES TO THEIR SETPOINT WHEN THE COMPUTED START TIME IS REACHED. THE AIR HANDLING UNIT DISCHARGE AIR TEMPERATURE SHALL BE MAINTAINED AT A SETPOINT OF 55ºF (ADJ.). THE SYSTEM SHALL CONTINUE TO OPERATE IN THIS MODE UNTIL ALL TEMPERATURES ARE LESS THAN A SETPOINT OF 75ºF (ADJ.). AT THAT TIME, THE DDC SYSTEM SHALL SWITCH TO OCCUPIED CONTROL.

GRAPHICAL DISPLAY:
DISPLAY THE GLOBAL OUTSIDE AIR TEMPERATURE AND HUMIDITY ON AHU GRAPHIC PAGE.

1 AIR HANDLING UNIT CONTROL - AHU-1
NO SCALE



SEQUENCE OF OPERATION:

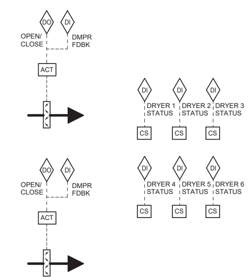
WHEN THE OUTDOOR AIR TEMPERATURE IS ABOVE 40°F (ADJ.), TEMPERATURE SENSOR SHALL ENERGIZE FAN AND ELECTRIC COIL TO MAINTAIN A SPACE TEMPERATURE OF 70°F (ADJ.). WHEN SPACE TEMPERATURE IS SATISFIED THE FAN SHALL TURN OFF.

WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW 40°F (ADJ.), TEMPERATURE SENSOR SHALL ENERGIZE THE ELECTRIC COIL TO MAINTAIN A SPACE TEMPERATURE OF 70°F (ADJ.) AND THE UNIT FAN SHALL RUN CONTINUOUSLY.

ALARMS, INTERLOCKS & SAFETIES:

SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF SPACE TEMPERATURE FALLS 10°F (ADJ.) BELOW SETPOINT.

2 UNIT HEATER CONTROL - ELECTRIC
NO SCALE



SEQUENCE OF OPERATION:

PROVIDE A CURRENT STATUS SWITCH TO MONITOR THE POWER OF ALL DRYERS OR CONNECT TO AUXILIARY CONTACTS ON DRYER OR STARTER IF AVAILABLE TO MONITOR POWER DRAW.

WHENEVER ANY OF THE DRYERS ARE ON, THE OUTSIDE AIR DAMPER SHALL OPEN TO ALLOW MAKEUP AIR FOR THE DRYERS.

PROVIDE A GRAPHIC DISPLAY AT THE FMCS SHOWING THE STATUS OF EACH DRYER AS WELL AS THE STATUS OF EACH OUTSIDE AIR DAMPER.

ALARMS, INTERLOCKS AND SAFETIES:
MONITOR THE DAMPER FEEDBACK AND SEND AN ALARM TO THE FMCS IF THE DAMPER IS COMMANDED OPEN AND STATUS DOES NOT PROVE OPEN OR IF COMMANDED CLOSED AND THE DAMPER DOES NOT PROVE CLOSED.

3 DRYER OUTSIDE AIR DAMPER CONTROL
NO SCALE

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04/08/2024

PROJECT:
STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DAVING

SHEET TITLE:
CONTROL DIAGRAMS

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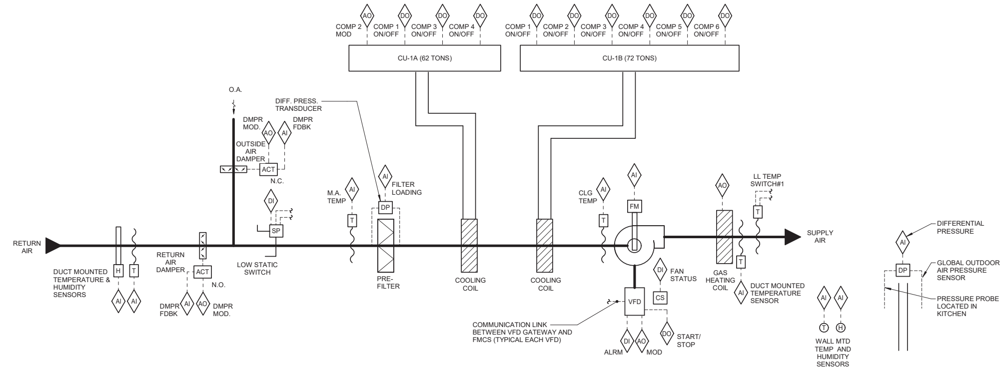
0 1 2 3
REF. SCALE IN INCHES
PROJECT #21007688.00

SHEET NUMBER:
M5.2

PROJECT NO.: 0240202.00
RFB922300-02



<u>AHU REPORT GENERATION:</u>
DDC FMCS SHALL MONITOR THE FOLLOWING POINTS ON 10 MINUTE (ADJ.) INTERVALS WITHIN A SINGLE TREND. THE TREND SHALL RUN FOR A 14-DAY (ADJ.) DURATION AT WHICH POINT THE NEWEST VALUES SHALL AUTOMATICALLY OVERWRITE THE OLDEST VALUES:

- DATE
- TIME
- GLOBAL OUTSIDE AIR TEMP [°F]
- GLOBAL OUTSIDE AIR HUMIDITY [%RH]
- SUPPLY AIRFLOW [CFM]
- SUPPLY AIR TEMP (SAT) [°F]
- ROOM AIR TEMP SETPOINT [°F]
- ROOM AIR RELATIVE HUMIDITY SETPOINT [%]
- ROOM AIR RELATIVE HUMIDITY [%]
- RETURN AIR RELATIVE HUMIDITY [%]
- COOLING AIR TEMP [°F]
- MIXED AIR TEMP [°F]
- PRE-FILTER LOADING [STATUS]
- HEATING COIL SIGNAL [% FULL HEATING]
- CU-1A COMPRESSOR 2 SIGNAL [% FULL COOLING]
- CU-1A COMPRESSOR 1 SIGNAL [ENABLED/DISABLED]
- CU-1A COMPRESSOR 3 SIGNAL [ENABLED/DISABLED]
- CU-1A COMPRESSOR 4 SIGNAL [ENABLED/DISABLED]
- CU-1B COMPRESSOR 1 SIGNAL [ENABLED/DISABLED]
- CU-1B COMPRESSOR 2 SIGNAL [ENABLED/DISABLED]
- CU-1B COMPRESSOR 3 SIGNAL [ENABLED/DISABLED]
- CU-1B COMPRESSOR 4 SIGNAL [ENABLED/DISABLED]
- CU-1B COMPRESSOR 5 SIGNAL [ENABLED/DISABLED]
- CU-1B COMPRESSOR 6 SIGNAL [ENABLED/DISABLED]
- SUPPLY FAN VFD OUTPUT [% FULL SPEED]
- OUTSIDE AIR DAMPER POSITION [% OPEN]
- RETURN AIR DAMPER POSITION [% OPEN]

THIS INFORMATION SHALL BE ACCESSIBLE TO VIEW IN EITHER TABULAR OR GRAPHICAL FORM ON THE FMCS OPERATOR WORKSTATION.

ONCE PER MONTH, THE DDC FMCS SHALL RECORD THE LARGEST AHU AIRFLOW WHICH OCCURRED DURING THAT MONTH. THE DATE, TIME, OUTSIDE AIR TEMP (AND ALL OTHER VALUES LISTED ABOVE) THAT COINCIDED WITH THAT EVENT SHALL ALSO BE RECORDED. THIS INFORMATION SHALL BE STORED TO A MEMORY LOCATION ON THE FMCS OPERATOR WORKSTATION THAT IS MAINTAINED (NOT AUTOMATICALLY OVERWRITTEN).

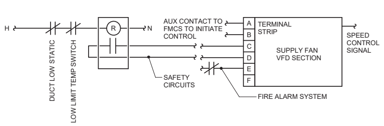
<u>AIR HANDLER REPORT GENERATION</u>

FAN INTERLOCK SCHEDULE

SYSTEM	INTERLOCKED EXHAUST FANS	REMARKS
DOAS-1	EF-3, EF-9	NOTE 1

<u>NOTES:</u>

1. **INTERLOCK EXHAUST FAN OPERATION THROUGH THE FMCS WITH RESPECTIVE AHU IN ACCORDANCE WITH AHU SEQUENCE OF OPERATION.**



<u>SUPPLY FAN VFD CONTROL</u>

CONNECT FIRE ALARM TO AHU START/STOP CIRCUIT SO FIRE ALARM CAN SHUT DOWN AND SO AHU CAN AUTOMATICALLY RESTART AFTER A FIRE ALARM TEST

<u>SEQUENCE OF OPERATION:</u>

<u>WHEN AHU IS INDEXED TO RUN, THE FOLLOWING SHALL OCCUR:</u>
- WHEN THE SUPPLY FAN HAS STARTED THE INTERLOCKED EXHAUST FANS SHALL START AS SHOWN IN THE FAN INTERLOCK SCHEDULE.

<u>SUPPLY FAN AND TEMPERATURE CONTROL OPERATION:</u>
THE FMCS WILL MODULATE THE SUPPLY FAN TO MAINTAIN THE KITCHEN SPACE AT A SLIGHT POSITIVE PRESSURE SETPOINT RELATIVE TO THE EXTERIOR OF 0.01" (ADJ.) TO ACCOMMODATE THE QUANTITY OF EXHAUST FANS IN OPERATION AND THE MAIN KITCHEN HOOD EXHAUST FAN AIR FLOW WHICH IS DEPENDENT ON DEMAND CONTROLLED VENTILATION.
THE FMCS WILL MODULATE THE SUPPLY FAN, STAGE/MODULATE DX COOLING, AND MODULATE HEATING SIGNAL TO ACHIEVE THE ROOM TEMPERATURE OF 80°F (ADJ.) DURING COOLING AND 68°F(ADJ.) DURING HEATING WITH 5°F (ADJ.) DEAD BAND BASED ON A SIGNAL FROM A WALL MOUNTED TEMPERATURE SENSOR. SEE DRAWINGS FOR TEMPERATURE SENSOR REQUIREMENTS.

- ON STARTUP OF THE AHU, THE OUTSIDE AIR DAMPER SHALL BE FULLY OPEN AND THE RETURN AIR DAMPER SHALL BE FULLY CLOSED.
- THE SUPPLY FAN SPEED SHALL MODULATE TO MAINTAIN SPACE PRESSURE SETPOINT.
- KITCHEN EXHAUST FANS WILL BE CONTROLLED BY THE CONTROL SEQUENCES NOTED IN OTHER ARES OF THE DRAWINGS. KITCHEN EXHAUST FANS MAY BE OVERRIDDEN TO PROVIDE ECONOMIZER COOLING AS STATED IN THIS CONTROL SEQUENCE SECTION.
- THE COOLING COILS OR HEATING COIL SIGNAL SHALL MODULATE TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT TO MAINTAIN SPACE TEMPERATURE SETPOINT.

IF THE DISCHARGE AIR TEMPERATURE SETPOINT IS AT LOWER OR UPPER LIMIT AND SPACE TEMPERATURE CAN NOT BE MET:
1. RETURN AIR DAMPER SHALL MODULATE OPEN 5%(ADJ.) AND THE SUPPLY FAN SPEED SHALL STILL MAINTAIN SPACE PRESSURE SETPOINT. THE DISCHARGE AIR TEMPERATURE SETPOINT SHALL REMAIN AT IT'S LOWER OR UPPER LIMIT.
2. IF AFTER 3 MINUTES (ADJ.), THE SPACE TEMPERATURE SETPOINT STILL CANNOT BE MAINTAINED, MODULATE OPEN RETURN AIR DAMPER ANOTHER 5% (ADJ.) AND ALLOW SUPPLY FAN SPEED TO MAINTAIN SPACE PRESSURE SETPOINT. THE DISCHARGE AIR TEMPERATURE SETPOINT SHALL REMAIN AT IT'S LOWER OR UPPER LIMIT.
3. CONTINUE PROCESS UNTIL SPACE TEMPERATURE IS MET.
4. THE GOAL IS MAINTAIN CONSTANT DISCHARGE AIR TEMPERATURE AND RAMP UP THE SUPPLY FAN AIR FLOW AS NEEDED TO MAINTAIN TEMPERATURE SETPOINT.

<u>DISCHARGE AIR TEMPERATURE:</u>
THE DISCHARGE SHALL BE BETWEEN 55°F (ADJ.) AND 95°F (ADJ.) TO MAINTAIN ROOM TEMPERATURE SETPOINT.

<u>VENTILATION AIR CONTROL:</u>
WHENEVER THE AIR HANDLING UNIT IS OPERATING, THE OUTSIDE AIR DAMPER SHALL BE FULLY OPEN. THE RETURN AIR DAMPER SHALL NORMALLY BE CLOSED AND MODULATE AS NOTED IN OTHER AREAS OF SEQUENCE TO MAINTAIN SPACE TEMPERATURE SETPOINT OR TO SATISFY THE ECONOMIZER CONTROL SEQUENCE.

<u>COOLING COIL CONTROLS:</u>

WHEN IN MINIMUM OUTSIDE AIR MODE,

FMCS SHALL STAGE ON/OFF COMPRESSORS AND MODULATE THE DIGITAL SCROLL COMPRESSOR TO MAINTAIN DISCHARGE AIR TEMPERATURE. THE DIGITAL SCROLL COMPRESSOR SHALL BE ENABLED FIRST AND THE SPEED MODULATED TO MAINTAIN DISCHARGE AIR TEMPERATURE. IF SETPOINT CANNOT BE MAINTAINED AFTER 5 MINUTES (ADJ.) OF RUN TIME, ANOTHER STAGE/COMPRESSOR SHALL BE ENABLED. THE DIGITAL SCROLL COMPRESSOR SHALL CONTINUE TO MODULATE TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT. CONTINUE TO ENABLE COMPRESSORS AS NEEDED TO MAINTAIN SPACE TEMPERATURE SETPOINT AS NOTED BELOW. THE OPPOSITE SHALL OCCUR IF DISCHARGE AIR TEMPERATURE IS BELOW SETPOINT.

CU-1A - DIGITAL SCROLL (COMP 2)
CU-1B - COMP 1
CU-1A - COMP 1
CU-1B - COMP 2
CU-1A - COMP 3
CU-1B - COMP 3
CU-1A - COMP 4
CU-1B - COMP 4
CU-1B - COMP 5
CU-1B - COMP 6

FMCS SHALL ROTATE THE LEAD COMPRESSOR ON A WEEKLY BASIS TO ALLOW MORE EVEN RUN TIMES ON COMPRESSORS. THE DIGITAL SCROLL COMPRESSOR SHALL ALWAYS BE THE FIRST COMPRESSOR ON BUT THE SECOND COMPRESSOR ON SHALL BE ROTATED.

THE MINIMUM OFF TIME FOR A STAGE OF COOLING SHALL BE 5 MINUTES (ADJ.). THE MINIMUM ON TIME FOR A STAGE SHALL BE 5 MINUTES (ADJ.). COORDINATE FINAL MINIMUM ON AND MINIMUM OFF TIMES OF STAGES WITH CONDENSING UNIT MANUFACTURER. THE MINIMUM ON/OFF TIME FOR THE DIGITAL SCROLL COMPRESSOR MAY BE DIFFERENT AND SHALL BE PROGRAMMED SEPARATELY IF REQUIRED.

WHEN IN ECONOMIZER MODE, FMCS SHALL NOT ENABLE DX COOLING UNLESS RETURN AIR DAMPER IS 5% (ADJ.) OPEN AND RELIEF AIR DAMPER IS 95% (ADJ.) OPEN.

<u>HEATING COIL CONTROLS:</u>
FMCS SHALL MODULATE HEATING COIL OUTPUT AS TO MAINTAIN DISCHARGE AIR TEMPERATURE CONTROL. IF DISCHARGE AIR TEMPERATURE IS LESS THAN SETPOINT, INCREASE HEATING COIL OUTPUT. THE OPPOSITE SHALL OCCUR IF DISCHARGE AIR TEMPERATURE IS HIGHER THAN SETPOINT. HEATING COIL MANUFACTURER PROVIDED CONTROLLER SHALL OPEN/CLOSE BURNER DAMPERS BASED ON HEATING COIL OUTPUT FROM FMCS. HEATING COIL SHALL NOT BE ENABLED WHEN COOLING COIL IS ENABLED UNLESS IN DEHUMIDIFICATION MODE.

<u>DEHUMIDIFICATION CONTROLS:</u>
IF SPACE HUMIDITY EXCEEDS 60% RH (ADJ.), DEHUMIDIFICATION CONTROLS SHALL BE ENABLED. DURING DEHUMIDIFICATION MODE, THE COOLING COIL DISCHARGE TEMPERATURE SHALL BE SET TO 55°F (ADJ.) AND THE HEATING COIL OUTPUT SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE SETPOINT. THIS SHALL OCCUR UNTIL THE SPACE HUMIDITY DROPS BELOW 55% RH (ADJ.) AT WHICH TIME THE DEHUMIDIFICATION MODE SHALL BE DISABLED.

<u>ECONOMIZER OPERATION:</u>
ECONOMIZER MODE #1: IF COOLING IS ENABLED, THE UNIT IS 100% OUTSIDE AIR, AND THE OUTSIDE AIR DRY BULB TEMPERATURE IS LESS THAN THE SPACE AIR DRY BULB TEMPERATURE THE FMCS SHALL ENABLE ECONOMIZER CONTROLS. WHEN THE OUTSIDE AIR DRY BULB TEMPERATURE IS GREATER THAN THE SPACE AIR DRY BULB TEMPERATURE FOR 10 MINUTES THE FMCS SHALL DISABLE ECONOMIZER CONTROLS AND SHALL RETURN TO NORMAL MODE. ONCE ECONOMIZER CONTROLS HAVE BEEN ENABLED OR DISABLED, THE UNIT SHALL CONTINUE TO OPERATE IN THAT MODE FOR A MINIMUM OF 10 MINUTES (ADJ.) BEFORE BEING ALLOWED TO SWITCH BACK (TO PREVENT SHORT CYCLING).

ECONOMIZER MODE #2: IF COOLING IS ENABLED, THE UNIT IS NOT IN 100% OUTSIDE AIR, AND THE OUTSIDE AIR DRY BULB TEMPERATURE IS LESS THAN THE RETURN AIR DRY BULB TEMPERATURE THE FMCS SHALL ENABLE ECONOMIZER CONTROLS. WHEN OUTSIDE AIR DRY BULB TEMPERATURE IS GREATER THAN THE RETURN AIR DRY BULB TEMPERATURE FOR 10 MINUTES THE FMCS SHALL DISABLE ECONOMIZER CONTROLS AND SHALL RETURN THE UNIT TO MINIMUM OUTSIDE AIR MODE. ONCE ECONOMIZER CONTROLS HAVE BEEN ENABLED OR DISABLED, THE UNIT SHALL CONTINUE TO OPERATE IN THAT MODE FOR A MINIMUM OF 10 MINUTES (ADJ.) BEFORE BEING ALLOWED TO SWITCH BACK (TO PREVENT SHORT CYCLING).

IN ECONOMIZER MODE THE FMCS SHALL MODULATE THE RETURN AIR DAMPER CLOSED AND THE OUTSIDE AIR DAMPER OPEN AS REQUIRED TO MAINTAIN THE DISCHARGE AIR TEMPERATURE AND MAINTAIN SPACE TEMPERATURE SETPOINT. IF OR WHEN UNIT IS OPERATING WITH 100% OUTSIDE AIR, THE EXHAUST AIR FLOW IN THE KITCHEN SHALL BE INCREASED.
1. THE FIRST STAGE OF ECONOMIZER IS TO RAMP UP THE SPEED ON EF-9 TO MAINTAIN SPACE PRESSURE WITH THE SUPPLY FAN AND RELIEF DAMPERS AS REQUIRED TO MAINTAIN DISCHARGE AIR TEMPERATURE SETPOINT.
2. THE NEXT STAGE OF ECONOMIZER IS TO TURN ON EF-2 UNLESS ALREADY IN OPERATION.
3. THE NEXT STAGE OF ECONOMIZER IS TO TURN ON EF-5 UNLESS ALREADY IN OPERATION.
4. THE NEXT STAGE OF ECONOMIZER IS TO TURN ON EF-6 UNLESS ALREADY IN OPERATION.
5. THE NEXT STAGE OF ECONOMIZER IS TO TURN ON EF-7 UNLESS ALREADY IN OPERATION.
6. THE NEXT STAGE OF ECONOMIZER IS TO TURN ON EF-8 UNLESS ALREADY IN OPERATION.

ALLOW FOR A 5 MINUTE (ADJ.) TIME DELAY BETWEEN ENABLING ADDITIONAL FANS TO ALLOW FOR THE SUPPLY FAN SPEED TO RAMP UP AND MAINTAIN SPACE PRESSURE SETPOINT. ONCE FANS HAVE BEEN ENABLED OR DISABLED, THEY SHALL CONTINUE TO OPERATE IN THAT MODE A MINIMUM OF 10 MINUTES (ADJ.). BEFORE BEING ALLOWED TO SWITCH BACK (TO PREVENT SHORT CYCLING) UNLESS FAN IS COMMANDED ON BY IT'S LOCAL CONTROLLER AT THE KITCHEN EQUIPMENT.

<u>ALARMS, INTERLOCKS, AND SAFETIES:</u>
WHEN FIRE ALARM CONTROL PANEL INDICATES AN ALARM CONDITION, AHU SHALL BE SHUTDOWN.

THE FOLLOWING CONDITIONS SHALL SHUTDOWN THE AHU AND SHALL INDICATE AN ALARM CONDITION AT THE FMCS WORKSTATION:
- LOW STATIC PRESSURE SWITCH INDICATES RETURN DUCT PRESSURE LESS THAN THE SPECIFIED DUCT PRESSURE CLASS.
- LOW STATIC PRESSURE SWITCH INDICATES MIXED AIR PRESSURE LESS THAN THE SPECIFIED DUCT PRESSURE CLASS OF THE OUTSIDE AIR DUCTWORK.
- HIGH STATIC PRESSURE SWITCH INDICATES SUPPLY DUCT STATIC PRESSURE GREATER THAN THE SPECIFIED DUCT PRESSURE CLASS.
- SHOULD ANY ONE FOOT SECTION OF THE MANUAL RESET LOW LIMIT TEMPERATURE SWITCH #1 SENSE AIR TEMP <34°F (ADJ.).

THE FOLLOWING CONDITIONS SHALL INDICATE AN ALARM AT THE FMCS, HOWEVER AHU SHALL CONTINUE TO OPERATE:
- AN ALARM IS INDICATED AT SUPPLY FAN VFD.
- DIFFERENTIAL PRESSURE TRANSDUCER ACROSS PRE-FILTER BANK EXCEEDS 0.8 INCHES W.G. (ADJ.)
- SEND AN ALARM TO THE FMCS OPERATOR INTERFACE IF THE SPACE TEMPERATURE IS MORE THAN 10°F (ADJ.) ABOVE OR BELOW SETPOINT.

<u>WHENEVER AHU IS SHUTDOWN THE FOLLOWING SHALL OCCUR:</u>
- THE OUTSIDE AIR DAMPER, SHALL FULLY CLOSE.
- RETURN AIR DAMPER SHALL FULLY OPEN.
- GAS HEATING SHALL BE DISABLED.
- CONDENSING UNITS SHALL BE DISABLED.
- SUPPLY FAN VFD SHALL BE DE-ENERGIZED.
- INTERLOCKED EXHAUST FANS SHALL BE DE-ENERGIZED.

<u>UNOCCUPIED MODE:</u>
PROVIDE TIME OF DAY SCHEDULE TO ALLOW DOAS-1 TO ENTER UNOCCUPIED MODE PER SCHEDULE. COORDINATE SCHEDULE WITH OWNER.

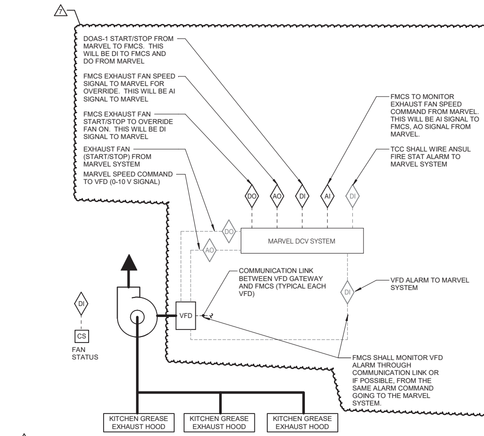
- THE SUPPLY SHALL CONTINUE RUNNING.
- THE OUTSIDE AIR SHALL CLOSE AND THE RETURN AIR DAMPER SHALL OPEN. ECONOMIZER CYCLE SHALL TAKE PRECEDENCE OVER DAMPER POSITION.
- ALL SPACE TEMPERATURES SHALL BE ALLOWED TO VARY +/- 10°F (ADJ.) FROM OCCUPIED SETPOINT.

HEATING OPTIMUM START-UP:
- THIS CYCLE SHALL OVERRIDE THE UNOCCUPIED CYCLE. IF THE SYSTEM WAS OPERATING AS A RESULT OF THE UNOCCUPIED CYCLE, THE SYSTEM SHALL CONTINUE TO OPERATE. THE DDC SYSTEM SHALL DETERMINE THE MINIMUM RUNTIME TO WARM THE SPACES TO THEIR SETPOINT WHEN THE COMPUTED START TIME IS REACHED. THE AIR HANDLING UNIT DISCHARGE AIR TEMPERATURE SHALL BE MAINTAINED AT A SETPOINT OF 85ºF (ADJ.). THE SYSTEM SHALL CONTINUE TO OPERATE IN THIS MODE UNTIL ALL TEMPERATURES EXCEED A SETPOINT OF 68ºF (ADJ.). AT THAT TIME, THE DDC SYSTEM SHALL SWITCH TO OCCUPIED CONTROL.

COOLING OPTIMUM START-UP:
- THIS CYCLE SHALL OVERRIDE THE UNOCCUPIED CYCLE. IF THE SYSTEM WAS OPERATING AS A RESULT OF THE UNOCCUPIED CYCLE, THE SYSTEM SHALL CONTINUE TO OPERATE. THE DDC SYSTEM SHALL DETERMINE THE MINIMUM RUNTIME TO COOL THE SPACES TO THEIR SETPOINT WHEN THE COMPUTED START TIME IS REACHED. THE AIR HANDLING UNIT DISCHARGE AIR TEMPERATURE SHALL BE MAINTAINED AT A SETPOINT OF 55ºF (ADJ.). THE SYSTEM SHALL CONTINUE TO OPERATE IN THIS MODE UNTIL ALL TEMPERATURES ARE LESS THAN A SETPOINT OF 75ºF (ADJ.). AT THAT TIME, THE DDC SYSTEM SHALL SWITCH TO OCCUPIED CONTROL.

<u>GRAPHICAL DISPLAY:</u>
DISPLAY THE GLOBAL OUTSIDE AIR TEMPERATURE AND HUMIDITY ON AHU GRAPHIC PAGE.

1 AIR HANDLING UNIT CONTROL - DOAS-1
NO SCALE



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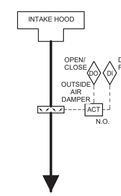
<u>SEQUENCE OF OPERATION:</u>
FSEC SHALL PROVIDE GREASE HOOD AND ASSOCIATED MARVEL SYSTEM CABINET. FMCS SHALL MONITOR RUN COMMAND, RUN DOAS-1 START/STOP COMMAND AND SPEED SIGNAL FROM MARVEL SYSTEM.

* FMCS SHALL INTERLOCK THE EXHAUST FAN WITH DOAS-1. INTERLOCK SHALL BE ACCOMPLISHED BY SENDING AN EXHAUST FAN START/STOP COMMAND TO THE MARVEL SYSTEM WHICH WILL THEN ENABLE THE FAN. THE FAN SPEED SHALL BE SET TO MAINTAIN 5,000 CFM AIR FLOW WHENEVER DOAS-1 IS IN OCCUPIED MODE TO PROVIDE THE CODE REQUIRED MINIMUM KITCHEN EXHAUST AIR FLOW RATE CFM SHALL BE DETERMINED BY BALANCING CONTRACTOR AND COORDINATED WITH MINIMUM SPEED SETTING OF MARVEL SYSTEM.
* MARVEL SYSTEM SHALL START EXHAUST FAN UPON RECEIVING THE RUN COMMAND FROM THE FMCS OR BASED ON MARVEL CONTROLS. FAN SPEED SHALL BE SET TO MAINTAIN A MINIMUM OF 5,000 CFM.
* MARVEL SYSTEM SHALL START EXHAUST FAN AND RAMP FAN UP TO MAXIMUM SPEED (60HZ) BASED UPON ANSUL SYSTEM FIRE STAT STATUS.. THIS FUNCTION IS ESSENTIAL FOR THE PROPER RESPONSE TO A FIRE PROTECTION SYSTEM DISCHARGE. THIS SIGNAL SHALL OVERRIDE ANY EXISTING CONTROL FUNCTIONS/SIGNALS TO THE FAN.
* MARVEL SYSTEM SHALL CONTROL FAN SPEED.
* FMCS MAY ALSO SEND A FAN SPEED MODULATION SIGNAL TO THE MARVEL SYSTEM TO MODULATE FAN SPEED BASED ON THE BUILDING PRESSURE SENSOR. REFER TO DOAS-1 CONTROL DIAGRAM FOR ADDITIONAL INFORMATION. THIS SIGNAL MAY INCREASE FAN SPEED BEYOND SIGNAL FROM MARVEL SYSTEM BUT MAY NOT REDUCE FAN SPEED BELOW DCV CABINET SIGNAL.

<u>ALARMS, INTERLOCKS AND SAFETIES:</u>
* AN ALARM SHALL BE GENERATED AT THE FMCS OPERATOR WORKSTATION IN THE EVENT THE FMCS COMMANDS THE EXHAUST FAN TO OPERATE AND THE CURRENT STATUS SENSING RELAY DETECT INSUFFICIENT CURRENT DRAW.
* AN ALARM SHALL BE GENERATED AT THE FMCS OPERATOR WORKSTATION IN THE EVENT THE THE VFD HAS AN ALARM.

2 GREASE EXHAUST FAN CONTROL - (EF-9)
NO SCALE



<u>SEQUENCE OF OPERATION:</u>
FMCS SHALL INTERLOCK COMBUSTION AIR DAMPER WITH DOAS-1 AND AHU-1 HEATING COMMANDS. FMCS SHALL OPEN DAMPER AND PROVE OPEN BY DAMPER END SWITCHES PRIOR TO ENABLING THE HEATING COMMAND AT DOAS-1 AND AHU-1. WHEN HEATING IS DISABLED IN BOTH DOAS-1 AND AHU-1, THE DAMPER SHALL CLOSE.

PROVIDE GRAPHIC THAT ALLOWS USER TO COMMAND DAMPER OPEN OR CLOSED.

<u>ALARMS, INTERLOCKS AND SAFETIES:</u>
* AN ALARM SHALL BE GENERATED AT THE FMCS OPERATOR WORKSTATION IN THE EVENT THE FMCS COMMANDS THE DAMPER OPEN BUT THE DAMPER END SWITCH DOES NOT PROVE OPEN WITHIN 5 MINUTES (ADJ.).
* AN ALARM SHALL BE GENERATED AT THE FMCS OPERATOR WORKSTATION IN THE EVENT THE FMCS COMMANDS THE DAMPER CLOSED BUT THE DAMPER END SWITCH DOES NOT PROVE CLOSED WITHIN 5 MINUTES (ADJ.).

3 COMBUSTION AIR DAMPER CONTROL
NO SCALE

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ISSUE: #	DATE:	DESCRIPTION:
7	1/14/2025	RFQ 9.0

IFC
04/08/2024

PROJECT:
STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DAVING

SHEET TITLE:
CONTROL DIAGRAMS

SHEET NUMBER:
M5.3

PROJECT NO.: 0240202.00
RFB922300-02

AIR HANDLING SCHEDULE

NOTES:
1.PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 13.
2.EC SHALL PROVIDE 120V POWER CONNECTION FOR HEATER AND A SECOND 120V POWER CONNECTION FOR THE LIGHTS.
3.FAN SELECTION SHALL BE BASED ON DIRTY FILTER PRESSURE DROP AS NOTED IN SCHEDULE.

		SUPPLY FAN (NOTE 1)							RETURN FAN (NOTE 1)								ELECTRICAL										HEATING - NATURAL GAS			
																				DISCONNECT(S)		CONTROLLER STARTER(S)								
TAG NAME	AREA SERVED	CFM TOTAL	MIN. CFM	EXT. S.P.	TYPE	RPM (NOTE D)	BHP (NOTE E)	MHP (NOTE E)	CFM TOTAL	MIN. CFM	EXT. S.P.	TYPE	RPM (NOTE D)	BHP (NOTE E)	MHP (NOTE E)	MINIMUM OUTSIDE AIR CFM	NO. OF POWER CONNECTIONS	VOLTAGE	PHASES	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE C)	SCCR	NO. OF AUXILIARY CONNECTIONS (NOTE 2)	THIS REQUIRES EMERGENCY POWER	MINIMUM EFFICIENCY AFUE (%)	MINIMUM OUTPUT MBH	TURN DOWN/STEPS	GAS PRESSURE IN. W.C.
AHU-1	KITCHEN/LAUNDRY	7000	2900	2.0	PLENUM	1549	6.3	7.5	5060	960	0.8	PLENUM	1647	1.5	3	1940	2	480	3	EC	NA	EC	NA	10000	2	Yes	80	171	5:1	8

AIR HANDLING SCHEDULE - CONT.

	COOLING COIL									FILTER (NOTE 3)								MAX. DIMENSIONS						
										PRE-FILTER				FINAL-FILTER										
												PRESSURE DROP				PRESSURE DROP								
TAG NAME	EAT DB °F	EAT WB °F	LAT DB °F	LAT WB °F	TOTAL MBH	MAX. A.P.D. IN. W.C.	REFRIGERANT	CIRCUITING	CFM	TYPE	FACE VELOCITY	DIRTY	CLEAN	TYPE	FACE VELOCITY	DIRTY	CLEAN	LENGTH	WIDTH	HEIGHT	WEIGHT	MANUFACTURER	MODEL	NOTES
AHU-1	80.6	67.7	52.8	51.5	344	0.4	R-410A	INTERTWINED	7000	MERV 8	253	0.6	0.1	MERV 13	253	1.0	0.1	188"	110"	98"	6265	DAIKIN APPLIED	CAH	

FAN SCHEDULE

NOTES:
1.PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 13.
2.CONDENSATE HOOD PRESSURE DROP IS 0.25" W.C. AND DISHWASHER CONNECTION PRESSURE REQUIRED IS 0.75" BASED ON SUBMITTED EQUIPMENT.
3.RACK OVEN HOOD PRESSURE DROP IS 0.6" W.C. WITH 900 CFM REQUIRED BASED ON THE SUBMITTED EQUIPMENT.
4.GREASE HOOD PRESSURE DROP IS 0.23" W.C. AT 4,992 CFM AND 0.33" W.C. AT 6,500 CFMP BASED ON THE SUBMITTED EQUIPMENT.

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												ELECTRICAL (NOTE 1)									
												DISCONNECT		CONTROLLER/ STARTER							
TAG NAME	AREA SERVED	CFM	S.P. IN. W.C.	FAN RPM (NOTE F)	DRIVE TYPE	MAX. AMCA SONES	BACKDRAFT DAMPER TYPE	CURB TYPE (NOTE G)	BHP	MHP	VOLTAGE	PHASES	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE C)	SCCR	THIS REQUIRES EMERGENCY POWER	WEIGHT	MANUFACTURER	MODEL	NOTES
EF-1	LAUNDRY	1380	0.50	1235	BELT	10.2	MOTORIZED	MFR	0.25	0.33	120	1	MFR	NF	TCC	FV	5000	No	60	GREENHECK	GB	
EF-2	ITEM #190/#195 - DISHWASHER/CONDENSATE HOOD	2700	1.25	1220	BELT	15.5	MOTORIZED	MFR	1.04	1.5	480	3	EC	NF	EC	FV	5000	Yes	160	COOK	195 ACRUB-HP	NOTE 2
EF-3	GENERAL KITCHEN EXHAUST	1200	0.75	1290	BELT	10.4	MOTORIZED	MFR	0.28	0.33	120	1	MFR	NF	TCC	FV	5000	Yes	60	GREENHECK	GB	
EF-4	CHEMICAL STORAGE	870	0.50	1378	BELT	7.6	MOTORIZED	MFR	0.18	0.25	120	1	MFR	NF	TCC	FV	5000	Yes	51	GREENHECK	GB	
EF-5	ITEM #87 - EXISTING RACK OVEN	900	1.20	1639	BELT	12	NONE	MFR	0.43	0.5	120	1	MFR	NF	TCC	FV	5000	Yes	73	COOK	150 ACRUB-HP	NOTE 3
EF-6	ITEM #87 - EXISTING RACK OVEN	900	1.20	1639	BELT	12	NONE	MFR	0.43	0.5	120	1	MFR	NF	TCC	FV	5000	Yes	73	COOK	150 ACRUB-HP	NOTE 3
EF-7	ITEM #163 - FUTURE RACK OVEN	900	1.20	1639	BELT	12	NONE	MFR	0.43	0.5	120	1	MFR	NF	TCC	FV	5000	Yes	73	COOK	150 ACRUB-HP	NOTE 3
EF-8	ITEM #163 - FUTURE RACK OVEN	900	1.20	1639	BELT	12	NONE	MFR	0.43	0.5	120	1	MFR	NF	TCC	FV	5000	Yes	73	COOK	150 ACRUB-HP	NOTE 3
EF-9	ITEM 148 - GREASE HOOD	6500	1.50	853	BELT	18	NONE	MFR	2.95	5	480	3	MFR	NF	EC	VFD	5000	Yes	229	COOK	300 ACRUB-HP	NOTE 4

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MOTOR OPERATED DAMPER SCHEDULE

NOTES:
1.COORDINATE DAMPER ACTUATOR LOCATION AND MOUNTING REQUIREMENTS WITH TEMPERATURE CONTROL CONTRACTOR.

		SIZE		CFM										
TAG NAME	AREA SERVED	WIDTH	HEIGHT	MAX.	MIN.	BLADE CONFIGURATION	BLADE ORIENTATION	INSULATED	ACTUATOR TYPE (NOTE 1)	ACTUATOR STYLE	POWER FAILURE POSITION	POSITIVE POSITION FEEDBACK REQUIRED	THIS REQUIRES EMERGENCY POWER	NOTES
MOD-4	DRYER CHASE	120	48	0	0	OPPOSED	HORIZONTAL	Yes	ELECTRIC	TWO POSITION	NORMALLY CLOSED (NC)	Yes	No	
MOD-5	DRYER CHASE	120	48	0	0	OPPOSED	HORIZONTAL	Yes	ELECTRIC	TWO POSITION	NORMALLY CLOSED (NC)	Yes	No	

LOUVER SCHEDULE

NOTES:
1.FINISH TYPES: TYPE 4 - BAKED EPOXY FINISH ON PRIME COATED METAL. STANDARD COLOR - SELECTION BY ARCHITECT.

			SIZE (INCHES)							
TAG NAME	AREA SERVED	CFM	WIDTH	HEIGHT	FREE AREA VELOCITY	S.P. IN. W.C.	FINISH (NOTE 1)	MANUFACTURER	MODEL	NOTES
OAL-1	DOAS-1	17000	168	72	420	0.04	TYPE 4	RUSKIN	ELF375	
OAL-2	AHU-1	7000	72	72	390	0.04	TYPE 4	RUSKIN	ELF375	
OAL-4	DRYER CHASE	8400	120	60	300	0.03	TYPE 4	RUSKIN	ELF375	
OAL-5	DRYER CHASE	8400	120	60	300	0.03	TYPE 4	RUSKIN	ELF375	
RAL-1	AHU-1	5060	72	48	420	0.04	TYPE 4	RUSKIN	ELF375	

AIR TERMINAL SCHEDULE

NOTES:
1.CONTRACTOR SHALL DETERMINE PROPER BORDER TYPE TO MATCH CEILING CONSTRUCTION.
2.REFER TO DRAWINGS FOR NECK SIZE. ALL BRANCH DUCTWORK TO AIR TERMINALS SHALL BE NECK SIZE UNLESS NOTED OTHERWISE.

TAG NAME	FACE SIZE (IN.) (NOTE 2)	TYPE	BORDER (NOTE 1)	MATERIAL	FINISH	VOLUME DAMPER REQUIRED	MANUFACTURER	MODEL	NOTES
EG-1	INLET +2	35 DEGREE DEFLECTION	1 1/4"	ALUMINUM	WHITE	NO	TITUS	350F	
EG-2	24x24	PERFORATED FACE	LAY-IN	ALUMINUM	WHITE	NO	TITUS	PAR	
RG-1	INLET +2	35 DEGREE DEFLECTION	1 1/4"	ALUMINUM	WHITE	NO	TITUS	350F	
RG-2	24x24	PERFORATED FACE	LAY-IN	ALUMINUM	WHITE	NO	TITUS	PAR	DUCTED RETURN
SD-1	24x24	PANEL FACE	LAY-IN	ALUMINUM	WHITE	NO	TITUS	OMNI	FLUSH FACE PANEL
SD-2	24x24	PERFORATED FACE	LAY-IN	ALUMINUM	WHITE	NO	TITUS	PAR	PERFORATED FACE SUPPLY
SG-1	INLET +2	DOUBLE DEFLECTION	1 1/4"	ALUMINUM	WHITE	NO	TITUS	300F	FRONT BLADES VERTICAL UNLESS NOTED OTHERWISE
SG-2	INLET +2	PERFORATED FACE	1 1/4"	STAINLESS STEEL	WHITE	NO	TITUS	SG-PR	MAXIMUM SECURITY PERFORATE FACE GRILLE

DEDICATED OUTDOOR AIR UNIT

NOTES:
1.PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 23 05 13.
2.LAT LISTED IS AT LEAVING SIDE OF COOLING COIL.
3.EC SHALL PROVIDE 120V POWER CONNECTION FOR HEATER AND A SECOND 120V POWER CONNECTION FOR LIGHTS.
4.COOLING COIL CIRCUITING SHALL BE INTERTWINED.
5.UNIT TO BE CAPABLE OF TURNING DOWN TO SCHEDULED MINIMUM CFM. BASIS OF DESIGN ACHIEVES THIS WITH A MODULATING HEATER AND THREE STAGED SLAVE HEATERS WITH DAMPERS. DAMPERS TO OPERATE BASED ON SLAVE HEATERS CALL FOR HEAT.

		SUPPLY FAN								HEATING COIL - NATURAL GAS							COOLING COIL #1- DX (NOTES 2, 4)							COOLING COIL #2 - DX (NOTES 2, 4)							FILTER			ELECTRICAL (NOTE 1)										ELECTRICAL (NOTE 1)	MAX. DIMENSIONS						
																																						DISCONNECT(S)		CONTROLLER/ STARTER(S)											
TAG NAME	AREA SERVED	NO. OF FANS	CFM TOTAL	MIN. CFM (NOTE 5)	EXT. S.P.	TYPE	RPM (NOTE D)	BHP EACH (NOTE E)	MHP EACH (NOTE E)	EAT °F	LAT °F	INPUT MBH	OUTPUT MBH	TURNDOWN	MAX. A.P.D. IN. W.C.	GAS SUPPLY PRESSURE ("W.C.)	EAT °F DB	EAT °F WB	MAX. LAT °F DB	LAT °F WB	SENSIBLE MBH	TOTAL MBH	MAX. A.P.D. IN. W.C.	EAT °F DB	EAT °F WB	MAX. LAT °F DB	LAT °F WB	SENSIBLE MBH	TOTAL MBH	MAX. A.P.D. IN. W.C.	TYPE	VELOCITY	PRESSURE DROP DIRTY/CLEAN	NO. OF POWER CONNECTIONS	VOLTAGE	PHASES	FLA	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE C)	NO. OF AUXILIARY CONNECTIONS (NOTE 3)	SCCR	THIS REQUIRES EMERGENCY POWER	LENGTH	WIDTH	HEIGHT	WEIGHT	MANUFACTURER	MODEL	NOTES
DOAS-1	KITCHEN	1	17500	6200	1.30	PLENUM	1186	13.5	20	-10.0	62.0	1943.0	1555	20:1	0.1	8.00	91.0	76.3	72.4	66.9	355	647	0.3	72.4	66.7	54.4	53.8	345	697	0.8	MERV 8	249	1/0.09	1	480	3	27	EC	VFD	EC	VFD	1	10,000 A	Yes	294	112	74	10282	DAIKIN APPLIED	CAH	

CONDENSING UNIT SCHEDULE

NOTES:
1. REFER TO SPECIFICATION SECTION 23 62 13 FOR ADDITIONAL REQUIREMENTS.
2. PROVIDE A MINIMUM OF FOUR COMPRESSORS WITH AT LEAST ONE COMPRESSOR BEING A DIGITAL SCROLL COMPRESSOR TO ALLOW FOR MODULATION PLUS STAGING ON OF COMPRESSORS.
3. PROVIDE A MINIMUM OF SIX COMPRESSORS. COMPRESSOR CAN BE ON/OFF AND DO NOT NEED TO MODULATE.
4. UNIT REQUIRES 120V/1PH POWER CONNECTION FOR CONVIENENCE RECEPTACLE PROVIDED BY THE MANUFACTURER. E.C. SHALL PROVIDE POWER FOR THIS CIRCUIT.

													MAXIMUM ALLOWABLE SOUND POWER IN DB RE 10^{-12} WATTS OCTAVE BAND CENTER FREQUENCY																MAX. DIMENSIONS (INCHES)			WEIGHT	VIBRATION ISOLATION				
																								DISCONNECT		CONTROLLER/ STARTER											
TAG NAME	AREA SERVED	NOMINAL DESIGN TONS	REFRIGERANT	SATURATED SUCTION °F	AMBIENT TEMP °F	MIN. AMBIENT TEMP. °F	NUMBER OF COMPRESSORS	NUMBER OF STAGES	NUMBER OF CIRCUITS	EER AT AHRI	IEER AT AHRI	NUMBER OF FANS	125	250	500	1000	2000	4000	NO. OF POWER CONNECTIONS	VOLTAGE	PHASES	MCA	MOCP	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	SCCR	THIS REQUIRES EMERGENCY POWER	LENGTH	WIDTH	HEIGHT	OPERATING	TYPE	DEFL.	MANUFACTURER	MODEL (NOTE 1)	NOTES
CU-1A	DOAS-1	62	R-410A	42.0	95.0	50.0	4	0	2	10.8	14.1	6	100	95	93	92	89	85	1	480	3	112	125	MFR	NF	MFR	10000	Yes	80	99	73	2578	M4	1.50	DAIKIN APPLIED	RCS062D	NOTE 2, 4
CU-1B	DOAS-1	72	R-410A	42.0	95.0	50.0	6	6	2	10.6	14.5	8	101	96	94	93	90	86	1	480	3	138	150	MFR	NF	MFR	10000	Yes	103	99	73	3529	M4	1.50	DAIKIN APPLIED	RCS072D	NOTE 3, 4
CU-2	AHU-1	35	R-410A	42.0	95.0	50.0	4	0	2	11.3	14.2	4	94	92	91	88	85	84	1	480	3	72	80	MFR	NF	MFR	10000	Yes	80	99	55	2471	M4	1.50	DAIKIN APPLIED	RCS035D	NOTE 2, 4

SCHEDULE GENERAL NOTES:

A. DISCONNECT AND CONTROLLER STARTER FURNISHED AND INSTALLED BY:
MFR = MANUFACTURER
EC = ELECTRICAL CONTRACTOR.
MC = FURNISHED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR.
MFR/EC = FURNISHED LOOSE BY MANUFACTURER INSTALLED BY ELECTRICAL CONTRACTOR.

B. DISCONNECT TYPE:
F = FUSED
NF = NON-FUSED

C. CONTROLLER STARTER TYPE:
FV = FULL VOLTAGE
WYE = WYE-DELTA
SS = SOLID STATE (SOFT START)
MS = MANUAL STARTER
VFD = VARIABLE FREQUENCY DRIVE

D. FAN RPM SHALL NOT EXCEED 110% OF SCHEDULED VALUE, WITH THE SCHEDULED WHEEL TYPE. SUBSTITUTION OF BI OR BIA FANS FOR FC IS ACCEPTABLE IF EFFICIENCY IS NOT LOWER.

E. NO EQUIPMENT SHALL BE SELECTED ABOVE 90% OF MOTOR NAME PLATE RATING.

F. MUST BE WITHIN +/- 10% OF SCHEDULED RPM.

G. CURB TYPE:
MFR = STANDARD CURB BY MANUFACTURER
SAC = SOUND ATTENUATOR CURB

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ISSUE:

#	DATE:	DESCRIPTION:
4	8/16/2024	ASI 2.0
7	1/14/2025	RFQ 9.0

IFC
04/08/2024

PROJECT:
STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DAVING

SHEET TITLE:
MECHANICAL SCHEDULES

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REF. SCALE IN INCHES
PROJECT #21007688.00

SHEET NUMBER:
M6.1

PROJECT NO.: 0240202.00
RFB922300-02

TERMINAL AIR BOX SCHEDULE - FAN POWERED WITH ELECTRIC REHEAT

NOTES:
1.NEITHER RADIATED NOR DISCHARGE SOUND LEVELS SHALL EXCEED NC 35 AT 1.5" INLET STATIC PRESSURE WHEN TESTED PER AHRI STANDARD 885-2008 USING 5/8" 20-LB DENSITY MINERAL FIBER CEILING TILE.
2.TOTAL AIR PRESSURE DROP OF TAB AND REHEAT COIL SHALL NOT EXCEED 0.50" WC.
3.REFER TO 3/M5.1 FOR DESCRIPTION OF CONTROL TYPE.
4.SENSOR TYPES: 1 - SENSOR ONLY, 2 - SENSOR WITH ADJUSTMENT, 3 - SENSOR WITH OVERRIDE, 4 - SENSOR WITH ADJUSTMENT AND OVERRIDE.
5.PROVIDE TYPE B FILTER ON FAN INLET PER 23 40 00.

TAG NAME	AREA SERVED	CONFIGURATION	MINIMUM INLET SIZE (IN.) DIA.	CFM: COOLING MAX.	CFM: MIN.	CFM: HEATING PRIMARY AIRFLOW	FAN: CFM	FAN: S.P. IN. W.C.	FAN: HP	HEATING COIL: EAT °F	HEATING COIL: LAT °F	HEATING COIL: NUMBER OF STAGES	HEATING COIL: KW	ELECTRICAL: VOLTAGE	ELECTRICAL: PHASES	ELECTRICAL: DISCONNECT BY (NOTE A)	ELECTRICAL: DISCONNECT TYPE (NOTE B)	ELECTRICAL: CONTROLLER/ STARTER BY (NOTE A)	ELECTRICAL: SCCR	ELECTRICAL: THIS REQUIRES EMERGENCY POWER	CONTROL TYPE (NOTE 3)	SENSOR TYPE (NOTE 4)	MANUFACTURER	MODEL (NOTES 1, 2)	NOTES
FTAB-1	CORRIDOR	PARALLEL, COIL AT DISCHARGE	10"	1010	305	305	1970	0.4	0.75	55	107	SCR	25	480	3	MFR	NF	MFR	5000	Yes	TAB-FP	TYPE 1	TITUS	DTQP	NOTES 1, 2
FTAB-2	STAFF BREAK RM	PARALLEL, COIL AT DISCHARGE	8"	235	260	260	210	0.4	0.17	55	97.6	SCR	5	480	3	MFR	NF	MFR	5000	Yes	TAB-FP	TYPE 1	TITUS	DTQP	NOTES 1, 2
FTAB-3	CORRIDOR	PARALLEL, COIL AT DISCHARGE	6"	310	80	95	810	0.4	0.25	55	95.6	SCR	6.5	480	3	MFR	NF	MFR	5000	Yes	TAB-FP	TYPE 1	TITUS	DTQP	NOTES 1, 2
FTAB-4	INGREDIENT ASSEMBLY	PARALLEL, COIL AT DISCHARGE	12"	970	290	290	1700	0.4	0.75	55	95.9	SCR	15	480	3	MFR	NF	MFR	5000	Yes	TAB-FP	TYPE 1	TITUS	DTQP	NOTES 1, 2

TERMINAL AIR BOX SCHEDULE - SINGLE DUCT ELECTRIC REHEAT

NOTES:
1.NEITHER RADIATED NOR DISCHARGE SOUND LEVELS SHALL EXCEED NC 35 AT 1.5" INLET STATIC PRESSURE WHEN TESTED PER AHRI STANDARD 885-2008 USING 5/8" 20-LB DENSITY MINERAL FIBER CEILING TILE.
2.TOTAL AIR PRESSURE DROP OF TAB AND REHEAT COIL SHALL NOT EXCEED 0.50" WC.
3.REFER TO 4/M5.1 FOR DESCRIPTION OF CONTROL TYPE.
4.SENSOR TYPES: 1 - SENSOR ONLY, 2 - SENSOR WITH ADJUSTMENT, 3 - SENSOR WITH OVERRIDE, 4 - SENSOR WITH ADJUSTMENT AND OVERRIDE.

TAG NAME	AREA SERVED	MINIMUM INLET SIZE (IN.) DIA.	CFM: COOLING MAX.	CFM: HEATING MAX.	CFM: MIN.	HEATING COIL: EAT °F	HEATING COIL: LAT °F	HEATING COIL: NUMBER OF STAGES	HEATING COIL: KW	ELECTRICAL: VOLTAGE	ELECTRICAL: PHASE	ELECTRICAL: DISCONNECT BY (NOTE A)	ELECTRICAL: DISCONNECT TYPE (NOTE B)	ELECTRICAL: SCCR	THIS REQUIRES EMERGENCY POWER	CONTROL TYPE (NOTE 3)	SENSOR TYPE (NOTE 4)	MANUFACTURER	MODEL (NOTES 1, 2)	NOTES
TAB-1	LAUNDRY	14"	1865	1110	1110	55.0	94.9	SCR	14	480	3	MFR	NF	5000	No	TAB-RH	TYPE 1	TITUS	DESV	NOTES 1, 2
TAB-2	ELECTRICAL	14"	1920	325	325	55.0	98.8	SCR	4.5	480	3	MFR	NF	5000	Yes	TAB-RH	TYPE 1	TITUS	DESV	NOTES 1, 2
TAB-3	DIRECTOR OFFICE	5"	220	70	70	55.0	76.1	SCR	0.5	208	1	MFR	NF	5000	Yes	TAB-RH	TYPE 1	TITUS	DESV	NOTES 1, 2
TAB-4	SUPERVISOR OFFICE	6"	385	105	80	55.0	82.5	SCR	1	208	1	MFR	NF	5000	Yes	TAB-RH	TYPE 1	TITUS	DESV	NOTES 1, 2

UNIT HEATER SCHEDULE - ELECTRIC

NOTES:
1.REFER TO 2/M5.2 FOR ELECTRIC UNIT HEATER CONTROL.

TAG NAME	AREA SERVED	CONFIGURATION	CFM	HP	HEATING ELEMENT: NUMBER OF STAGES	HEATING ELEMENT: KW	ELECTRICAL: VOLTAGE	ELECTRICAL: PHASES	ELECTRICAL: DISCONNECT BY (NOTE A)	ELECTRICAL: DISCONNECT TYPE (NOTE B)	ELECTRICAL: CONTROLLER/ STARTER BY (NOTE A)	ELECTRICAL: CONTROLLER/ STARTER SCCR	ELECTRICAL: THIS REQUIRES EMERGENCY POWER	MAX. DIMENSIONS: LENGTH	MAX. DIMENSIONS: WIDTH	MAX. DIMENSIONS: HEIGHT	WEIGHT	MANUFACTURER	MODEL	NOTES
UH-1	MECHANICAL	HORIZONTAL	830	0.07	1	10	480	3	MFR	NF	MFR	5000	Yes	22"	17"	21"	67	MODINE	HER	NOTE 1
UH-2	MECHANICAL	HORIZONTAL	1300	0.07	1	25	480	3	MFR	NF	MFR	5000	Yes	27"	19"	24"	98	MODINE	HER	NOTE 1

ARCHITECTURAL ELECTRICAL WALL HEATER SCHEDULE

NOTES:
1.COORDINATE COLOR SELECTION WITH ARCHITECT. REFER TO ARCHITECTURAL ELECTRIC WALL HEATERS IN 23 82 00 FOR SPECIFICATION.

TAG NAME	AREA SERVED	CONFIGURATION	NOMINAL CFM	HEATING ELEMENT: NUMBER OF STAGES	HEATING ELEMENT: KW	ELECTRICAL: VOLTAGE	ELECTRICAL: PHASES	ELECTRICAL: DISCONNECT BY (NOTE A)	ELECTRICAL: DISCONNECT TYPE (NOTE B)	ELECTRICAL: CONTROLLER/ STARTER BY (NOTE A)	ELECTRICAL: CONTROLLER/ STARTER SCCR	ELECTRICAL: THIS REQUIRES EMERGENCY POWER	MAX. DIMENSIONS: WIDTH	MAX. DIMENSIONS: DEPTH	MAX. DIMENSIONS: HEIGHT	MANUFACTURER	MODEL	NOTES
CAB-1	RESTROOM	ARCHITECTURAL WALL RECESSED	100	1	1.5	120	1	MFR	NF	MFR	5000	Yes	16"	5"	20"	BERKO	FRC	NOTES 1, 2
CAB-2	RESTROOM	ARCHITECTURAL WALL RECESSED	100	1	1.5	120	1	MFR	NF	MFR	5000	No	16"	5"	20"	BERKO	FRC	NOTES 1, 2
CAB-3	JANITOR	ARCHITECTURAL WALL RECESSED	100	1	1.5	120	1	MFR	NF	MFR	5000	Yes	16"	5"	20"	BERKO	FRC	NOTES 1, 2

PIPE INSULATION SCHEDULE (HYDRONIC)

GENERAL NOTES:
1. REFER TO THE SPECIFICATIONS FOR TYPE DESCRIPTIONS AND JACKETING REQUIREMENTS. VALUES LISTED BELOW ARE BASED ON ASHRAE / IECC REQUIREMENTS.
2. TYPE A INSULATION IS NOT ALLOWED IN NON-AIR CONDITIONED SPACES (SUCH AS MECHANICAL ROOMS, EXTERIOR, ATTICS, ETC) ON PIPE SYSTEMS WITH FLUID TEMPERATURES BELOW 60 DEG. F.
3. TYPE B INSULATION GREATER THAN 1" THICK SHALL BE INSTALLED USING MULTIPLE LAYERS OF 3/4" OR 1" WITH STAGGERED SEAMS.
4. TYPE E IS NOT ALLOWED IN RETURN AIR PLENUMS, UNLESS LISTED AND LABELED AS 25/50 RATED PER ASTM E84/UL723
5. PROVIDE RIGID INSERT AT HANGERS, EITHER PRE-MANUFACTURED COUPLINGS OR TYPE C, D(HOT PIPE ONLY), E (WHERE ALLOWED BY CODE) OR F INSULATION. SEE SPEC FOR MORE DETAILS.

PIPE SYSTEM	INSULATION TYPE AND THICKNESS PER NOMINAL PIPE OR TUBE SIZE: < 1"	1" TO < 1.5"	1.5" TO < 4"	NOTES
DPP - DRAIN - PIPING	A 0.5", B 0.5", E 0.5"	A 0.5", B 0.5", E 0.5"	A 1", B 1", E 1"	APPLY INSULATION ONLY TO LOW TEMP DRAINS (55 DEG AND LOWER IE: COOLING COIL CONDENSATE, ICE MACHINE DRAINS, ETC.)
HG - REFRIGERANT HOT GAS	A 1", B 1", E 1"	A 1", B 1", E 1"	A 1.5", E 1"	
HWR - HEATING WATER RETURN	A 1.5"	A 1.5"	A 2"	
HWS - HEATING WATER SUPPLY	A 1.5"	A 1.5"	A 2"	
LIQ - REFRIGERANT LIQUID	B 0.5", F 0.5"	B 0.5", F 0.5"	B 1", E 1", F 1"	
MISC RELIEF VENTS, INTAKES, AND DISCHARGES	A 0.5", B 0.5	A 0.5", B 0.5	A 1", B 1", E 1"	APPLY INSULATION ONLY WITHIN 10' OF EXTERIOR PENETRATION ON COMPRESSOR INTAKES, VACUUM DISCHARGES, VENT/RELIEF LINES, ETC.
REFRIGERATION PIPING - VRF, SPLIT SYSTEMS	REFER TO EQPT. SPEC	REFER TO EQPT. SPEC	REFER TO EQPT. SPEC	
SUC - REFRIGERANT SUCTION	B 0.5", F 0.5"	B 0.5", F 0.5"	B 1", E 1", F 1"	

RADIATION SCHEDULE

NOTES:
1.REUSE EXISTING CONTROL VALVE AND TEMPERATURE SENSOR.

TAG NAME	AREA SERVED	MBH	GPM	ELEMENT: MAT'L	ELEMENT: LENGTH FT.	ELEMENT: PIPE SIZE	ELEMENT: FIN HEIGHT	ELEMENT: FIN WIDTH	ELEMENT: NUMBER OF ROWS	ELEMENT: FINS PER FOOT	CABINET: LENGTH	CABINET: HEIGHT	CABINET: DEPTH	AVERAGE WATER TEMP °F	MANUFACTURER	MODEL	NOTES
FTR-1	HALL 1067	7.6	1.0	ALUMINUM	3'-6"	3/4"	4 1/4"	4 1/4"	3	48	4' - 0"	2' - 0"	0' - 5 1/2"	172	RITTLING	S-SP5	NOTE 1

DUCT SILENCER SCHEDULE

NOTES:
1.PRESSURE DROP VALUES LISTED ARE PER ASTM E477-99 TEST PROCEDURE AND DO NOT INCLUDE SYSTEM EFFECTS.
2.WITH FIBERGLASS CLOTH SEPARATING MEDIA FROM AIRSTREAM.
3.SILENCER SHALL BE CONSTRUCTED TO KEEP THE BREAKOUT NOISE CONTRIBUTION TO THE AFFECTED ROOM BELOW 40 Dba. SILENCER SHALL BE FACTORY MANUFACTURED AND ALL EXPOSED SURFACES SHALL BE SHEETMETAL (EXCEPT FOR SPECIFIED EXTERNAL DUCT INSULATION FOR UNITS THAT DO REQUIRE DUAL-WALL CONSTRUCTION.)

ACOUSTICAL PERFORMANCE AT +1000 FPM — MINIMUM DYNAMIC INSERTION LOSS IN DB (OCTAVE BAND CENTER FREQUENCY); MAXIMUM ALLOWABLE GENERATED NOISE IN DB RE 10^{-12} WATTS (OCTAVE BAND CENTER FREQUENCY)

TAG NAME	AREA SERVED	CFM	VELOCITY	MAX. S.P. DROP IN. W.C. (NOTE 1)	IL 63	IL 125	IL 250	IL 500	IL 1000	IL 2000	IL 4000	IL 8000	NOISE 63	NOISE 125	NOISE 250	NOISE 500	NOISE 1000	NOISE 2000	NOISE 4000	NOISE 8000	DIMENSIONS (INCHES): LENGTH	WIDTH	HEIGHT	MANUFACTURER	MODEL	NOTES
DS-1	AHU-1 SUPPLY	7000	1145	0.14	0	0	18	16	14	12	10	6	60	50	35	50	40	45	40	50	60	44	20	PRICE	RH60/5E	NOTES 2 & 3
DS-2	DOAS-1 SUPPLY	17500	1500	0.15	0	7	13	23	24	23	17	13	50	55	50	50	55	45	50	50	48	60	28	PRICE	RH48/2D	NOTES 2 & 3

HOOD & LOUVERED PENTHOUSE SCHEDULE

TAG NAME	AREA SERVED	THROAT SIZE: WIDTH	THROAT SIZE: LENGTH	FREE AREA (FT^2)	CONFIGURATION	DAMPER TYPE	CURB TYPE	MAX. DIMENSIONS: LENGTH	MAX. DIMENSIONS: WIDTH	MAX. DIMENSIONS: HEIGHT	WEIGHT	MANUFACTURER	MODEL	NOTES
GV-1	MECHANICAL	20	40	6	GRAVITY HOOD	MOTORIZED	MFR	63"	44"	28"	98	GREENHECK	FGI	

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RIPPE ASSOCIATES
FOODSERVICE DESIGN + CONSULTING

kpff

IMEG

Bishop Engineering

ISSUE:
#	DATE:	DESCRIPTION:

IFC
04/08/2024

PROJECT:
STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DAVING

SHEET TITLE:
MECHANICAL SCHEDULES

IMEG
2882 106TH STREET
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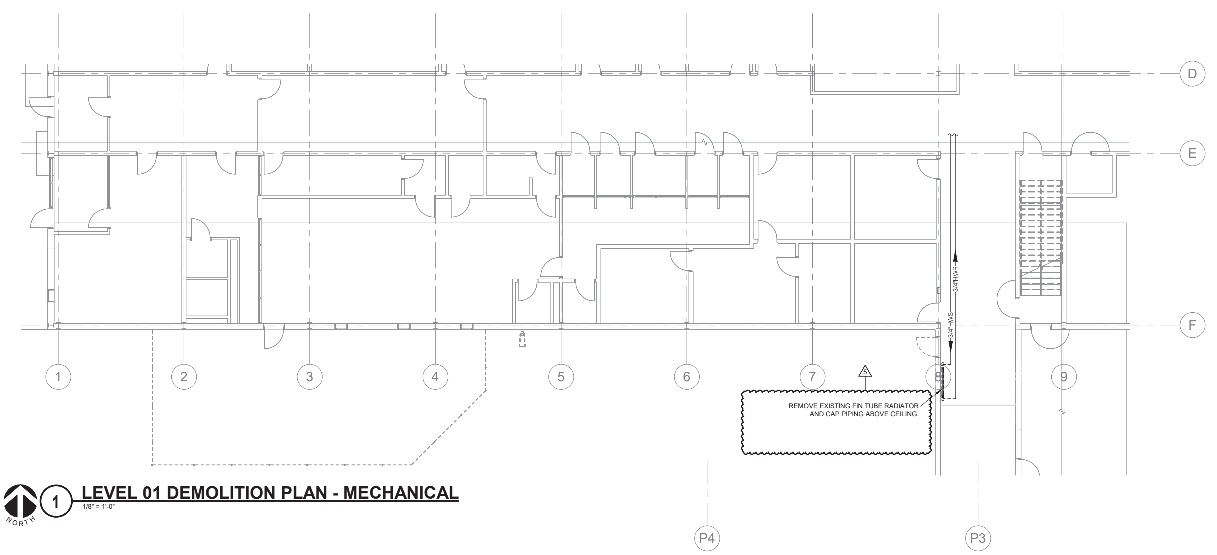
0 1 2 3
REF. SCALE IN INCHES
PROJECT #21007688.00

SHEET NUMBER:
M6.2

PROJECT NO.: 0240202.00
RFB922300-02



NORTH

1 LEVEL 01 DEMOLITION PLAN - MECHANICAL

1/8" = 1'-0"

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ISSUE:

#	DATE:	DESCRIPTION:
5	8/16/2024	RFQ 4.0

IFC
04/08/2024

PROJECT:
STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DAVING

SHEET TITLE:

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0 1 2 3
REF. SCALE IN INCHES
PROJECT #21007688.00

SHEET NUMBER:

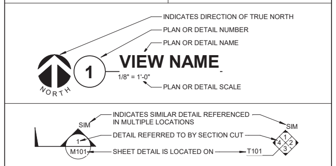
MD1.1

PROJECT NO.: 0240202.00
RFB922300-02

8/15/2024 11:00:30 AM

VIEW KEY

NAME — LEVEL NAME; 10'-0" — HEIGHT ABOVE PROJECT 0'-0"	(1) INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL



LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
- NEW
- EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
- NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)
- EXISTING
- EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)
- EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E	TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING
TAG	UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST
	INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL
###	INDICATES A PLUMBING CONNECTION TO A FOOD SERVICE EQUIPMENT. REFERENCE FOOD SERVICE DRAWINGS FOR ADDITIONAL INFORMATION IN REGARDS TO TYPE OF EQUIPMENT, ROUGH-IN SIZES, AND ADDITIONAL COMMENTS.

APPLICABLE CODES

CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES AND LOCAL AMENDMENTS.

BUILDING CODE:	IBC 2015 EDITION
FIRE CODE:	IFC 2015 EDITION
PLUMBING CODE:	UPC 2021 EDITION
MECHANICAL CODE:	IMC 2021 EDITION
ELECTRICAL CODE:	NFPA 70 (NEC) 2020 EDITION
LIFE SAFETY CODE:	NFPA 101 2012 EDITION
ENERGY CONSERVATION CODE:	IECC 2012
HEALTH DEPARTMENT CODE:	CURRENT EDITION
LOCAL BUILDING CODE:	CURRENT EDITION

CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
C.C.	CIVIL CONTRACTOR
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
S.C.	SECURITY CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR
T.C.C.	TEMPERATURE CONTROLS CONTRACTOR

CONTACT PERSONS:

DESCRIPTION:	PERSON:
PROJECT MANAGER	MIKE MCCARTY
MECHANICAL	MIKE MCCARTY
ELECTRICAL	KRISTEN SPINA
TECHNOLOGY	MIKE MCCARTY

PLUMBING SYMBOL LIST

NOT ALL SYMBOLS MAY APPLY.

SYMBOL:	DESCRIPTION:
AV	ACID VENT
AW	ACID WASTE
CA	COMPRESSED AIR
CW	COLD WATER - POTABLE
D	DRAIN
DI	DEIONIZED WATER
DT	DRAIN TILE
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
G	NATURAL GAS
GRV	GAS REGULATOR VENT
GSAN	SANITARY DRAINAGE (GREASE SANITARY DRAINAGE)
GV	GREASE VENT
HW	HOT WATER - POTABLE
HWC	HOT WATER CIRCULATING - POTABLE
HW140	HOT WATER - POTABLE NUMBER INDICATES TEMP
HWC140	HOT WATER CIRC. - POTABLE NUMBER INDICATES TEMP
IA	INSTRUMENT AIR
MA	MEDICAL AIR
MPG	MEDIUM PRESSURE GAS
MV	MEDICAL VACUUM
N	NITROGEN
NCW	NON-POTABLE COLD WATER
NHW	NON-POTABLE HOT WATER
NO	NITROUS OXIDE
O	OXYGEN
P	PROPANE GAS
PD	PUMPED DISCHARGE
PW	PURE WATER
RO	REVERSE OSMOSIS WATER
SAN	SANITARY DRAINAGE
SCW	SOFT COLD WATER
SHW	SOFT HOT WATER
ST(1,000)	STORM DRAINAGE (ROOF SQUARE FOOTAGE)
STS	STORM DRAINAGE (SECONDARY)
STW	SOFT TEMPERED WATER
TW	TEMPERED WATER
V	VENT
VAC	LAB VACUUM
W	SERVICE WATER - POTABLE
WAGD	WASTE ANETHESIA GAS DISPOSAL
	PIPE CONTINUATION
	PIPE CAP
	PIPE DOWN
	PIPE UP OR UP/DOWN
FD	PIPE SERVING FIXTURE ON FLOOR ABOVE (EXAMPLE: FD = FLOOR DRAIN)
	PITCH PIPE IN DIRECTION
	DIRECTION OF FLOW IN PIPE
	ROUTE TO DRAIN
RD-1 / 6"(1000)	ROOF DRAIN PROPERTIES SYMBOL / SIZE (ROOF SQ. FT.)
	DIELECTRIC CONNECTION
	UNION/FLANGE
	SHUTOFF VALVE NORMALLY OPEN
	SHUTOFF VALVE NORMALLY CLOSED
GPM	BALANCING VALVE (NUMBER INDICATES GPM)
	CHECK VALVE
	BACKFLOW PREVENTER
	SOLENOID VALVE
	SAFETY/RELIEF VALVE
	VACUUM BREAKER
P	PRESSURE GAUGE (FURNISHED WITH BALL VALVE)
P	PRESSURE SENSOR (FURNISHED WITH BALL VALVE)
T	TEMPERATURE SENSOR WITH WELL
T	THERMOMETER WITH WELL (DIAL TYPE)
	THERMOMETER WITH WELL (FILLED TYPE)
	REDUCER - REFERENCE SPECIFICATION FOR CONCENTRIC/ECCENTRIC AND FOT/FOB
	PRESSURE REDUCING VALVE (LIQUID/GAS)
	PUMP
M	METER
	ALIGNMENT GUIDE
	PIPE ANCHOR
EJ-# (#.#")	EXPANSION JOINT #.#" IS THE EXPANSION TRAVEL INCHES
	AIR ADMITTANCE VALVE

PLUMBING ABBREVIATION KEY

ABBR:	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BT	BATHTUB
CB	CATCH BASIN
CI	CAST IRON
CO	CLEANOUT
CS	CLINICAL SINK
DB	DIALYSIS BOX
DF	DRINKING FOUNTAIN
DI	DUCTILE IRON
E	EXISTING
EE	EMERGENCY EYEWASH
ES	EMERGENCY SHOWER
ESE	EMERGENCY SHOWER/EYEWASH
EWC	ELECTRIC WATER COOLER
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FM	FLOW METER
FS	FLOOR SINK
FSP	FOOD SERVICE PLANS
GD	GARBAGE DISPOSER
GI	GREASE INTERCEPTOR
HB	HOSE BIBB
I.E.	INVERT ELEVATION (FOR REFERENCE ONLY)
IW	INDIRECT WASTE
LAV	LAVATORY
MB	MOP BASIN
MH	MANHOLE
MV	MIXING VALVE
NIC	NOT IN CONTRACT
NT	NEUTRALIZATION TANK
OS	OIL SEPARATOR
RD	ROOF DRAIN
SCCR	SHORT CIRCUIT CURRENT RATING
SH	SHOWER
SK	SINK
SS	SERVICE SINK
TD	TRENCH DRAIN
TP	TRAP PRIMER
TYP	TYPICAL
UR	URINAL
VTR	VENT THROUGH ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WH	WATER HEATER
WMF	WASHING MACHINE FIXTURE
WM	WATER METER
WS	WATER SOFTENER
UB	UTILITY BOX
UON	UNLESS OTHERWISE NOTES
YCO	YARD CLEANOUT

PLUMBING ROUGH-IN SCHEDULE

NOTES: (APPLIES TO ALL PLUMBING FIXTURES LISTED BELOW)
1) SIZES SHOWN ARE MINIMUMS. LARGER SIZES SHOWN ON THE DRAWING SHALL DICTATE THE ROUGH-IN SIZE. 2) SANITARY RISERS UP IN WALL TO FIXTURES SHALL BE A MINUMUM OF 2". 3) DOMESTIC WATER BRANCH PIPING OUTSIDE OF THE WALL/CHASE SHALL BE A MINIMUM OF 3/4" UNLESS NOTED OTHERWISE. ONLY THE FINAL RISE-DROP SHALL BE SMALLER. 4) FINAL SANITARY SIZE SHALL MATCH P-TRAP SIZE (REFER TO MATERIAL LIST).

TAG NAME	DESCRIPTION	COLD WATER	HOT WATER	SANITARY	VENT
EE-1	EMERGENCY EYE-FACE WASH	1/2"	1/2"	2"	1 1/2"
FD-1	FLOOR DRAIN	-	-	2"	1 1/2"
FD-2	FLOOR DRAIN	-	-	2"	1 1/2"
FD-3	FLOOR DRAIN	-	-	4"	2"
FD-4	FLOOR DRAIN	-	-	3"	1 1/2"
FS-1	FLOOR SINK	-	-	3"	1 1/2"
FS-2	FLOOR SINK	-	-	4"	2"
FS-3	FLOOR SINK	-	-	3"	1 1/2"
FSE-18	HAND SINK, REFER TO FSP.	1/2"	1/2"	1 1/2"	1 1/2"
FSE-22	WORK COUNTER WITH SINK, REFER TO FSP.	1/2"	1/2"	2" IW	-
FSE-62	WORK COUNTER WITH SINK, REFER TO FSP.	1/2"	1/2"	2" IW	-
FSE-64	HOSE REEL, REFER TO FSP.	1/2"	1/2"	-	-
FSE-68	HAND SINK, REFER TO FSP.	1/2"	1/2"	1 1/2"	1 1/2"
FSE-74	ROLL IN PROOFER, REFER TO FSP.	1/2"	-	3/4" IW	-
FSE-87	RACK OVEN, REFER TO FSP.	1/2	-	3/4" IW	-
FSE-91	ICE MAKER, REFER TO FSP.	3/8"	-	1/2" IW	-
FSE-100	HAND SINK, REFER TO FSP.	1/2"	1/2"	1 1/2"	1 1/2"
FSE-104	WORK COUNTER WITH SINK, REFER TO FSP.	1/2	1/2"	2" IW	-
FSE-107	SPRAY RINSE, REFER TO FSP.	3/4"	1/2"	-	-
FSE-118	HOSE STATION, REFER TO FSP.	1/2	1/2"	-	-
FSE-145	WORK COUNTER WITH SINK, REFER TO FSP.	1/2	1/2"	2" IW	-
FSE-146	WORK COUNTER WITH SINK, REFER TO FSP.	1/2	1/2"	2" IW	-
FSE-154	HOSE REEL, REFER TO FSP.	1/2"	1/2"	-	-
FSE-155	HOSE REEL, REFER TO FSP.	1/2"	1/2"	-	-
FSE-158	STEAMER, REFER TO FSP.	3/4"	-	1 1/2" IW	-
FSE-160	STEAMER, REFER TO FSP.	3/4"	-	1 1/2" IW	-
FSE-161	STEAMER, REFER TO FSP.	3/4"	-	1 1/2" IW	-
FSE-162	HOSE REEL, REFER TO FSP.	1/2"	1/2"	-	-
FSE-163	RACK OVEN, REFER TO FSP.	1/2"	-	3/4" IW	-
FSE-173	POT & PAN SINK, REFER TO FSP.	3/4"	3/4"	2" IW	-
FSE-175	SPRAY RINSE, REFER TO FSP.	3/4"	1/2"	-	-
FSE-184	HOSE REEL, REFER TO FSP.	1/2	1/2"	-	-
FSE-184	HOSE REEL, REFER TO FSP.	1/2"	1/2"	-	-
FSE-185	EYE/FACE WASHER, REFER TO FSP.	1/2"	1/2"	2"	-
FSE-189	DISHWASHER, REFER TO FSP.	3/4"	1"	2" IW	-
FSE-191	SPRAY RINSE, REFER TO FSP.	3/4"	1/2"	-	-
L-1	LAVATORY (ACCESSIBLE)	1/2"	1/2"	1 1/2"	1 1/2"
L-2	LAVATORY (ACCESSIBLE)	1/2"	1/2"	1 1/2"	1 1/2"
MB-1	MOP BASIN	3/4"	3/4"	3"	1 1/2"
MBT-1	MOP BASIN FAUCET	3/4"	3/4"	-	-
SK-1	SINK (ACCESSIBLE)	1/2"	1/2"	1 1/2"	1 1/2"
TD-1	TRENCH DRAIN	-	-	6"	3"
TD-2	TRENCH DRAIN	-	-	6"	3"
WC-1	WATER CLOSET (ACCESSIBLE)	1 1/2"	-	4"	2"
WC-2	WATER CLOSET (ACCESSIBLE)	1 1/2"	-	4"	2"
WMF-1	UTILITY BOX (WASHING MACHINE)	3/4"	3/4"	2"	1 1/4"

MECHANICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
2. NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
3. FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
4. EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF THEIR WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO THEIR AREA OF WORK.
5. EACH CONTRACTOR SHALL CUT AND PATCH ROOFS, WALLS, AND FLOORS ASSOCIATED WITH THEIR WORK.
6. THIS CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK REQUIRED BY THEIR WORK.
7. WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.
8. PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS THAT REMAIN ACTIVE.
9. OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED.
10. MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR TIE IN AND SWITCHOVER. DRAIN SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER BEFORE PARTIALLY OR COMPLETELY DRAINING SYSTEM. MAKE CHANGEOVER TO NEW SYSTEMS WITH MINIMUM OUTAGE.
11. DISCONNECT AND REMOVE MECHANICAL DEVICES AND EQUIPMENT SERVING EQUIPMENT THAT HAS BEEN REMOVED.

MECHANICAL GENERAL NOTES:

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, VENTILATION, PIPING AND TEMPERATURE CONTROL.

1. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
2. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
3. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
4. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
5. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
6. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
7. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
8. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
9. IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE DRY WALL CONTRACTOR FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE DRY WALL CONTRACTOR OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
10. SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.
11. CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
12. WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
13. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
14. DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
15. MAINTAIN A MINIMUM WORKING CLEARANCE OF 3'-6" IN FRONT OF ALL ELECTRICAL EQUIPMENT REQUIRING MAINTENANCE, INSPECTION, AND TESTING INCLUDING BUT NOT LIMITED TO PANELS, DISTRIBUTION PANELS, SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, EQUIPMENT DISCONNECTS AND STARTERS.
16. MAINTAIN THE DEDICATED ELECTRICAL EQUIPMENT SPACE DEFINED BY THE WIDTH / DEPTH OF ELECTRICAL EQUIPMENT MEASURED FROM THE FLOOR TO A HEIGHT 6'-0" ABOVE THE EQUIPMENT OR THE STRUCTURAL CEILING, WHICHEVER IS LOWER. SYSTEMS FOREIGN TO THE ELECTRICAL DISTRIBUTION SYSTEM ARE NOT ALLOWED IN THE DEDICATED ELECTRICAL SPACE INCLUDING; DUCTWORK, PIPING, ETC.
17. PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
18. DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

PLUMBING GENERAL NOTES:

1. THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.
2. CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR A COMPLETE DESCRIPTION OF MATERIAL ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL TAKES PRECEDENCE OVER THE CATALOG NUMBER. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.
3. CONTRACTOR SHALL VERIFY THAT FIXTURES SUPPLIED ARE APPROVED PER ALL APPLICABLE STATE, LOCAL AND GOVERNING AUTHORITIES.
4. ALL FIXTURES SHALL CONFORM TO FEDERAL ACT S.3874
5. INVERT ELEVATIONS ARE FROM EXISTING DRAWINGS AND MAY NOT BE ACCURATE. VERIFY ALL ELEVATIONS BEFORE BEGINNING WORK.
6. VERIFY UNDERGROUND PIPE SIZES, INVERT ELEVATIONS, AND LOCATIONS PRIOR TO BEGINNING ANY WORK.
7. REFER TO THE PLUMBING ROUGH-IN SCHEDULE FOR THE SIZES OF BRANCH PIPES TO PLUMBING FIXTURES.
8. EXISTING CONDITIONS ON DEMOLITION PLANS ARE PROVIDED TO INDICATE THE GENERAL SCOPE OF ITEMS TO BE REMOVED. REFER TO SPECIFICATION SECTION 22 05 05 FOR ADDITIONAL DEMOLITION INFORMATION.
9. P.C. SHALL CUT AND PATCH EXISTING AS REQUIRED FOR NEW OR DEMOLITION WORK UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION SECTION 22 05 05 FOR ADDITIONAL INFORMATION.
10. P.C. SHALL REFERENCE ALL PLANS WITHIN DRAWING SET FOR SCOPE OF WORK. P.C. SHALL REVIEW FOOD SERVICE DRAWINGS FOR COORDINATION OF WORK BETWEEN P.C. AND FSEC.
11. P.C. SHALL PROVIDE ALL NECESSARY SHUT-OFF VALVES, PRESSURE REGULATORS, INDIVIDUAL EQUIPMENT SUPPLY STOPS, ETC. REQUIRED UPSTREAM OF FINAL SUPPLY CONNECTION(S) TO FOOD SERVICE EQUIPMENT UNLESS NOTED OTHERWISE.
12. ALL INDIRECT WASTES FOR FOODSERVICE EQUIPMENT WILL BE EXTENDED TO FLOOR DRAINS BY MECHANICAL TRADES, EXCEPT FOR THE WALK-IN REFRIGERATOR/FREEZER BLOWER COIL DRAINLINES AND DRAINLINES WITHIN THE CUSTOM FABRICATED COUNTERS WHICH WILL BE EXTENDED TO FLOOR DRAINS BY THE FSEC.
13. THE FSEC IS RESPONSIBLE FOR SETTING FOOD SERVICE EQUIPMENT IN PLACE. FINAL CONNECTIONS AND INTERCONNECTIONS FOR THIS EQUIPMENT ARE THE RESPONSIBILITY OF THE P.C.
14. SINK FAUCETS FURNISHED LOOSE BY FSEC FOR INSTALLATION BY P.C. SINK ROTARY DRAIN & OVERFLOW FURNISHED AND INSTALLED BY FSEC; TAILPIECE, P-TRAP, ESCUTCHEON PLATES AND DRAIN CONNECTION FURNISHED AND INSTALLED BY P.C. EXCEPT FOR TAILPIECE AND P-TRAP FOR WALL MOUNTED HANDSINKS WHICH ARE PROVIDED BY FSEC AND INSTALLED BY P.C.
15. HEALTH CODES REQUIRE THAT ALL PLUMBING BE ENCLOSED IN WALLS OR FLOOR AND THAT EXPOSED PIPING RUNS BE AS SHORT AS POSSIBLE. GAS PIPING TO BE SLEEVED AND VENTED PER CODE SO IT IS CONCEALED WITHIN THE WALL. EXPOSED HORIZONTAL PIPING MUST BE 6" ABOVE THE FLOOR AND AT LEAST 1" OFF THE WALL. ANY EXPOSED HAND SINK PIPING (BOTH DRAIN AND SUPPLY LINES) ARE TO BE CHROME PLATED.
16. RECOMMENDED HOT WATER TEMPERATURES FOR SINKS SHOULD BE AS FOLLOWS: POT & PAN SINKS SET AT 120° F MAXIMUM, HAND SINKS SET AT 110° F MAXIMUM AND ALL OTHER SINKS SET AT 110-120° F MAXIMUM. HOT WATER TEMPERATURES MUST CONFORM TO CODE REQUIREMENTS.
17. FLOOR TROUGHS NOTED ON FOOD SERVICE PLANS SHALL BE PROVIDED BY FSEC, INSTALLED BY P.C. REFER TO 6/FS300 FOR FLOOR TROUGH DETAIL.

WATER HEATER SIZING:

1. KITCHEN WATER HEATER DEMAND
   A. 3000 MEALS PER DAY SERVED
   B. ASHRAE APPLICATIONS, CHAPTER 51 FOR SERVICE WATER HEATING, FIG. 20 - FOOD SERVICE INDICATES 1.5 GPH RECOVERY CAPACITY PER MAXIMUM MEALS PER HOUR
   C. ESTIMATE 500 MEALS PER HOUR
   D. 500*1.5 = 750 GPH RECOVERY CAPACITY REQUIRED FOR KITCHEN
2. LAUNDRY WATER HEATER DEMAND
   A. AO SMITH ONLINE SIZING
   B. COMMERCIAL LAUNDRY
   C. (6) 100 LB WASHERS
   D. PEAK DEMAND = 1,680 GPH
3. MAXIMUM SYSTEM DEMAND:
   A. KITCHEN = 750 GPH
   B. LAUNDRY = 1680 GPH
   C. TOTAL = 2,430 GPH
4. AVAILABLE SYSTEM CAPACITY:
   A. WH-4 = 1572 GPH
   B. WH-5 = 1572 GPH
   C. TOTAL = 3144 GPH

PLUMBING SLOPE REQUIREMENTS:

BASED ON PLUMBING CODE: UPC-2021

INTERIOR:	
SANITARY WASTE:	1/4" PER FOOT
GREASE WASTE:	1/4" PER FOOT
CONDENSATE AND INDIRECT DRAINAGE:	1/8" PER FOOT
SANITARY AND GREASE VENT:	NO SPECIFIC PITCH, PITCH TO FIXTURES
DOMESTIC WATER:	NO SPECIFIC PITCH, PITCH TO FIXTURES

PLUMBING SHEET INDEX

P0.0	PLUMBING COVERSHEET
PD1.1	LEVEL 01 DEMOLITION PLAN - PLUMBING
P0.1	UNDERFLOOR PLAN - AREA A - PLUMBING
P0.2	UNDERFLOOR PLAN - AREA B - PLUMBING
P1.1	LEVEL 01 PLAN - AREA A - PLUMBING
P1.2	LEVEL 01 PLAN - AREA B - PLUMBING
P1.3	LEVEL 02 PLAN - AREA A - PLUMBING
P1.4	LEVEL 02 PLAN - AREA B - PLUMBING
P3.0	ENLARGED PLAN - PLUMBING
P3.1	ENLARGED PLAN - PLUMBING
P4.1	PLUMBING DETAILS
P4.2	PLUMBING DETAILS
P5.1	PLUMBING DIAGRAMS
P6.1	PLUMBING SCHEDULES
P6.2	PLUMBING SCHEDULES
GRAND TOTAL: 15	

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04/08/2024

PROJECT:
STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DELLLE

SHEET TITLE:
PLUMBING COVERSHEET

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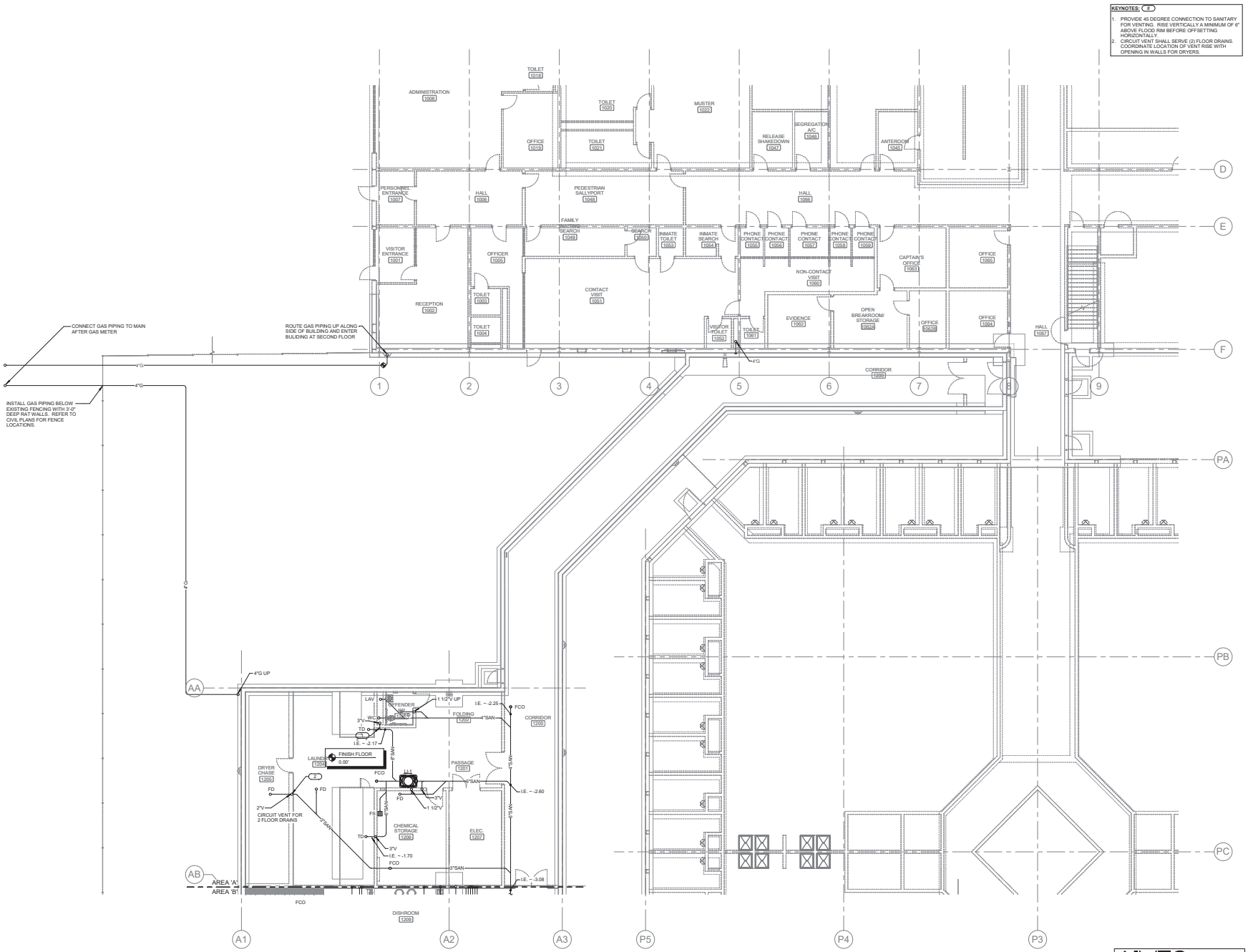

NORTH

1 UNDERFLOOR PLAN - AREA A - PLUMBING

1/8" = 1'-0"

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UNDERFLOOR PLAN - AREA A - PLUMBING

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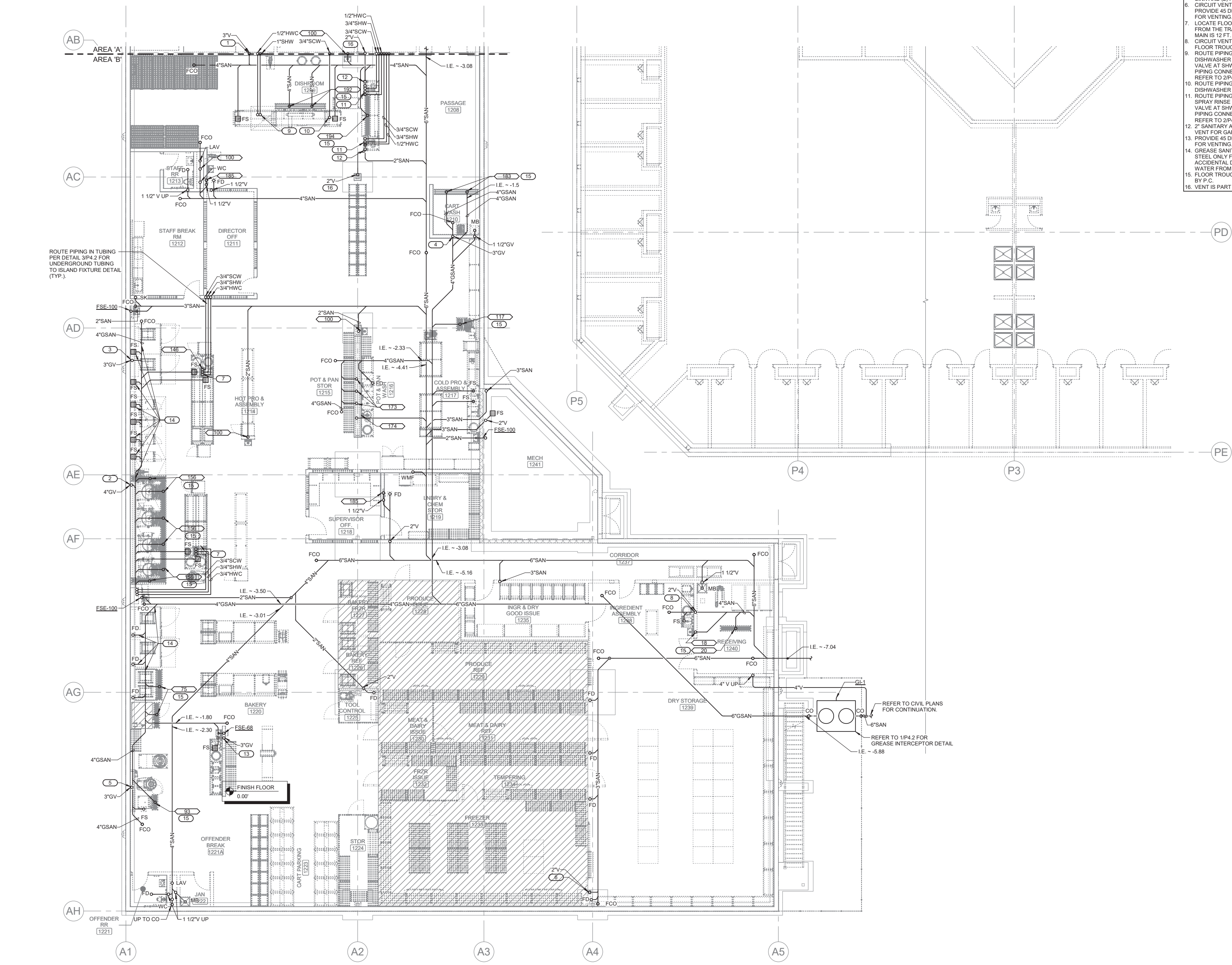

UNDERFLOOR PLAN - AREA B - PLUMBING

1/8" = 1'-0"

KEYNOTES: #

1. CIRCUIT VENT SERVING (2) FLOOR SINKS, (2) 192 FLOOR TROUGHS AND (1) 194 FLOOR TROUGH. PROVIDE 45 DEGREE CONNECTION TO SANITARY FOR VENTING.
2. CIRCUIT VENT SERVING (6) 156 FLOOR TROUGHS AND (2) FLOOR SINK.
3. CIRCUIT VENT SERVING (8) FLOOR SINKS.
4. CIRCUIT VENT SERVING (2) 183 FLOOR TROUGHS, (1) 117 FLOOR TROUGH AND (2) FLOOR SINKS.
5. 3" CIRCUIT VENT SERVING (1) FSE-93 FLOOR TROUGH, (2) FSE-75 FLOOR TROUGHS, (1) FLOOR SINK AND (2) FLOOR DRAINS.
6. CIRCUIT VENT SERVING (4) FLOOR DRAINS. PROVIDE 45 DEGREE CONNECTION TO SANITARY FOR VENTING.
7. LOCATE FLOOR SINK SO THE MAXIMUM DISTANCE FROM THE TRAP ARM TO THE CIRCUIT VENTED MAIN IS 12 FT.
8. CIRCUIT VENT SERVING (1) FLOOR SINK AND (1) FLOOR TROUGH.
9. ROUTE PIPING IN UNDERGROUND TUBING UP TO DISHWASHER (FSE- 189). PROVIDE SHUTOFF VALVE AT SHW PIPE ABOVE FLOOR WITH HWC PIPING CONNECTED PRIOR TO SHUTOFF VALVE. REFER TO 2/P4.2.
10. ROUTE PIPING IN UNDERGROUND TUBING UP TO DISHWASHER (FSE- 189). REFER TO 2/P4.2.
11. ROUTE PIPING IN UNDERGROUND TUBING UP TO SPRAY RINSE (FSE-191). PROVIDE SHUTOFF VALVE AT SHW PIPE ABOVE FLOOR WITH HWC PIPING CONNECTED PRIOR TO SHUTOFF VALVE. REFER TO 2/P4.2.
12. 2" SANITARY AND 2" VENT PIPING FROM ISLAND VENT FOR GARBAGE DISPOAL (FSE-187).
13. PROVIDE 45 DEGREE CONNECTION TO SANITARY FOR VENTING.
14. GREASE SANITARY PIPING SHALL BE STAINLESS STEEL ONLY FOR THIS SECTION IN CASE OF ACCIDENTAL DISCHARGE OF EXCESSIVELY HOT WATER FROM STEAMERS AND RACK OVENS.
15. FLOOR TROUGH PROVIDED BY FSEC, INSTALLED BY P.C.
16. VENT IS PART OF ISLAND VENTING FOR FSE-187.

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SHEET TITLE:
UNDERFLOOR PLAN - AREA B - PLUMBING

SHEET NUMBER:
P0.2

PROJECT NO.: 0240202.00
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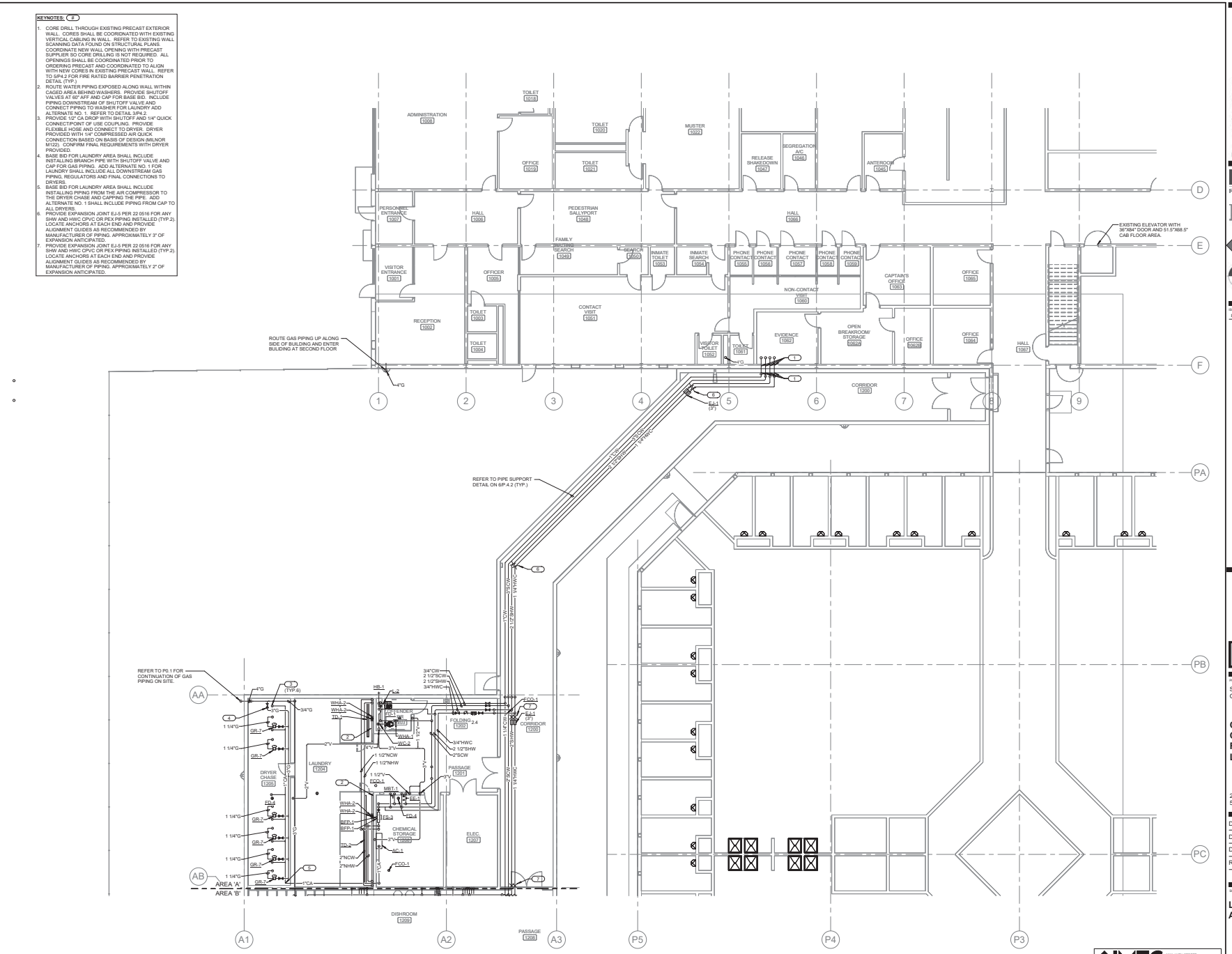

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SHEET TITLE:
LEVEL 01 PLAN - AREA A - PLUMBING

SHEET NUMBER:
P1.1

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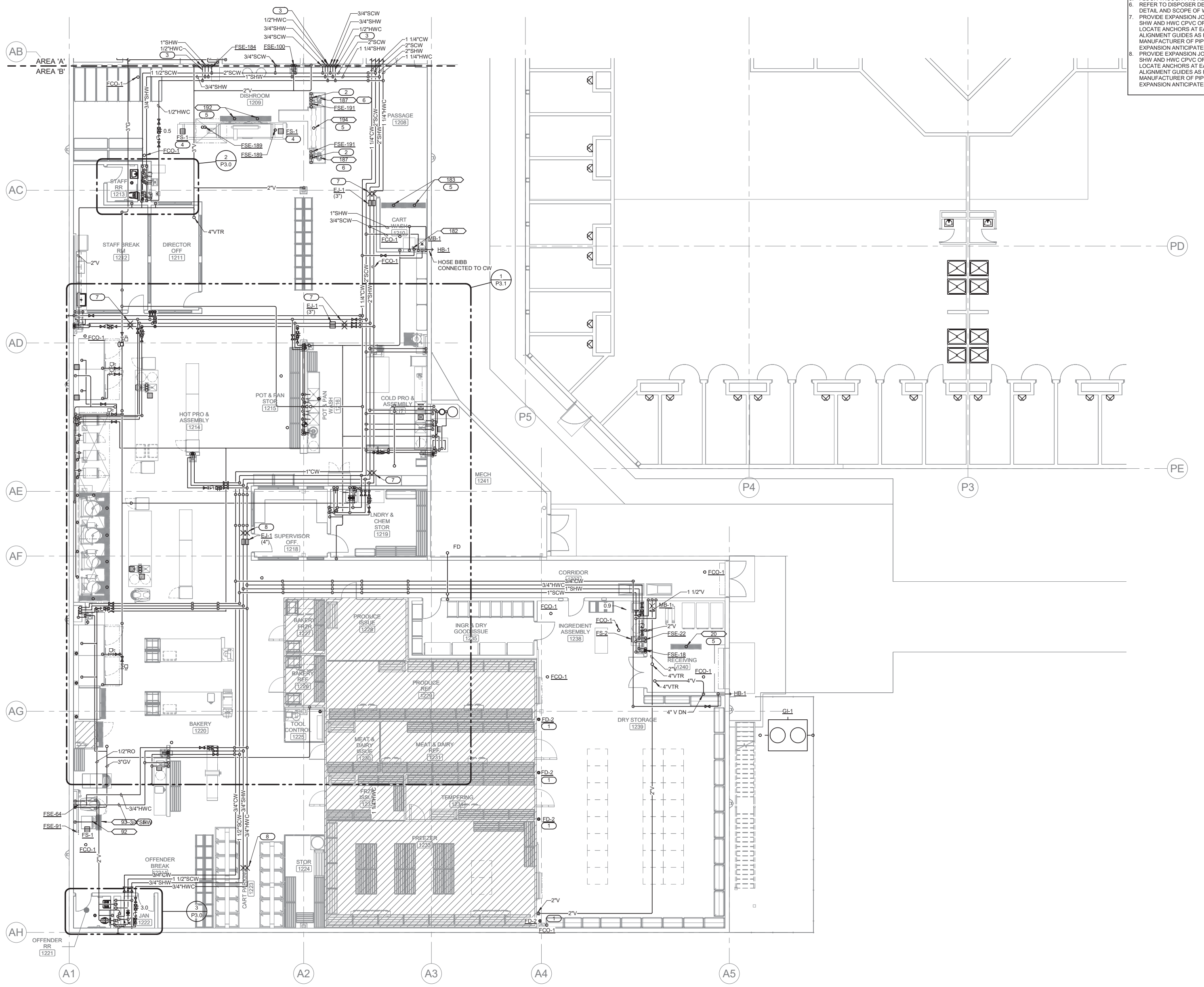

1 LEVEL 01 PLAN - AREA B - PLUMBING

1/8" = 1'-0"

NORTH

KEYNOTES: #

1. FLOOR DRAIN SHALL RECEIVE REFRIGERATION SYSTEM COIL CONDENSATE. ROUTING OF CONDENSATE PIPING TO FLOOR DRAIN SHALL BE BY FSEC.
2. PROVIDE ISLAND SINK VENT PER DETAIL 3/P4.1 FOR CONNECTION TO FSE-187.
3. PROVIDE SHUTOFF, BALANCE, CHECK AND SHUTOFF VALVES ON HWC PIPING. SET BALANCE VALVE TO 0.5 GPM.
4. P.C. SHALL COORDINATE FLOOR SINK LOCATION WITH DISHWASHER DRAIN DISCHARGE LOCATION. P.C. SHALL ROUTE INDIRECT WASTE FROM DISHWAHSER TO FLOOR SINK.
5. FLOOR TROUGH PROVIDED BY FSEC, INSTALLED BY P.C.
6. REFER TO DISPOSER DETAIL ON FSM101 FOR PIPING DETAIL AND SCOPE OF WORK BETWEEN FSEC AND P.C.
7. PROVIDE EXPANSION JOINT EJ-5 PER 22 0516 FOR ANY SHW AND HWC CPVC OR PEX PIPING INSTALLED (TYP.2). LOCATE ANCHORS AT EACH END AND PROVIDE ALIGNMENT GUIDES AS RECOMMENDED BY MANUFACTURER OF PIPING. APPROXIMATELY 3" OF EXPANSION ANTICIPATED.
8. PROVIDE EXPANSION JOINT EJ-5 PER 22 0516 FOR ANY SHW AND HWC CPVC OR PEX PIPING INSTALLED (TYP.2). LOCATE ANCHORS AT EACH END AND PROVIDE ALIGNMENT GUIDES AS RECOMMENDED BY MANUFACTURER OF PIPING. APPROXIMATELY 4" OF EXPANSION ANTICIPATED.

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LEVEL 01 PLAN - AREA B - PLUMBING

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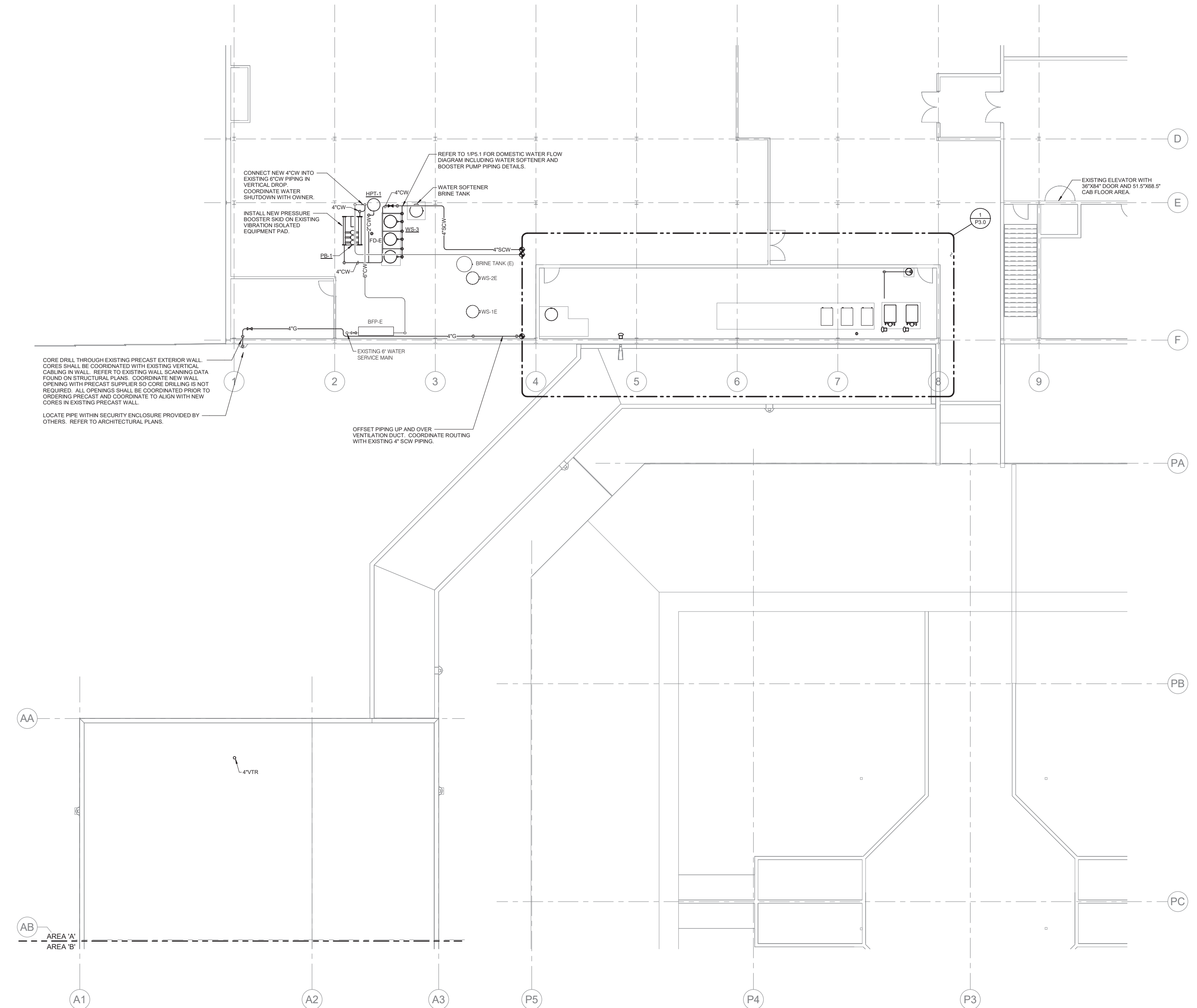

1 **LEVEL 02 PLAN - AREA A - PLUMBING**

1/8" = 1'-0"

NORTH

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LEVEL 02 PLAN - AREA A - PLUMBING

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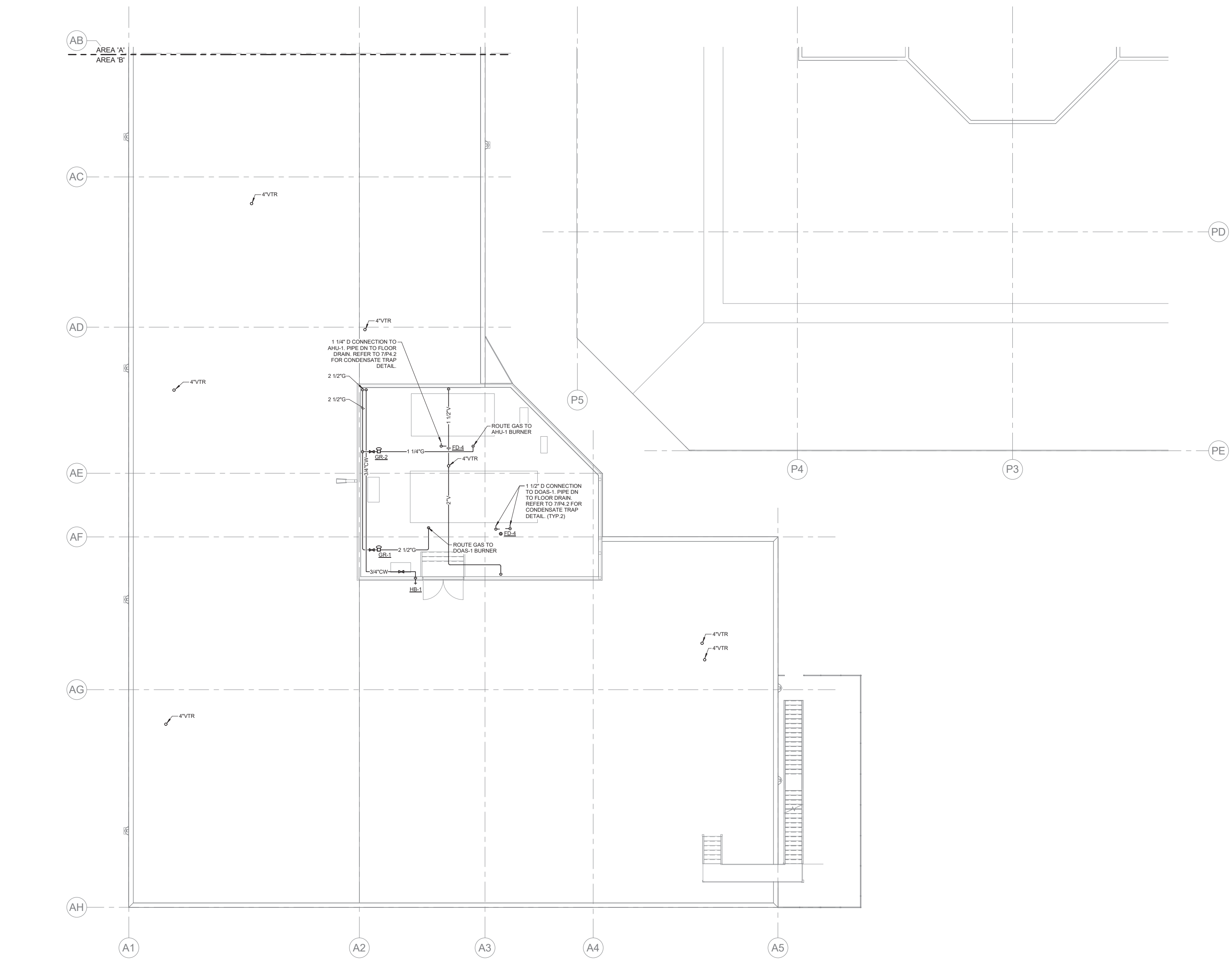

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1 **LEVEL 02 PLAN - AREA B - PLUMBING**

1/8" = 1'-0"

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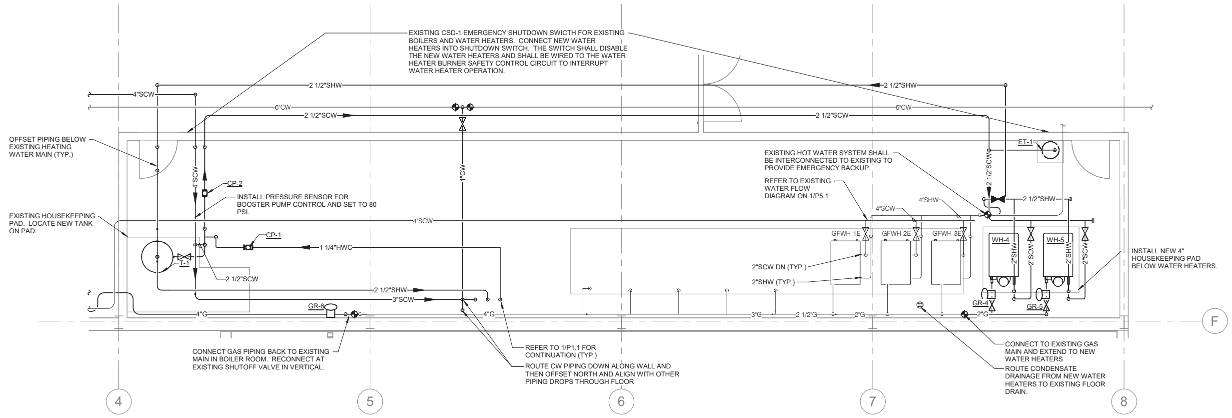
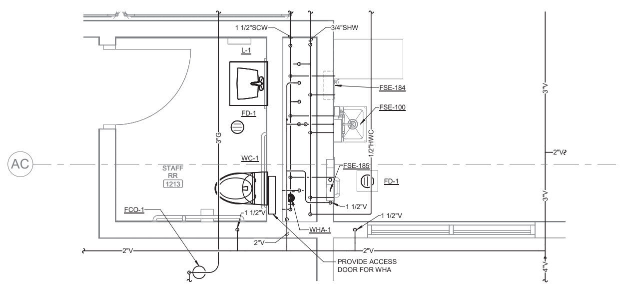


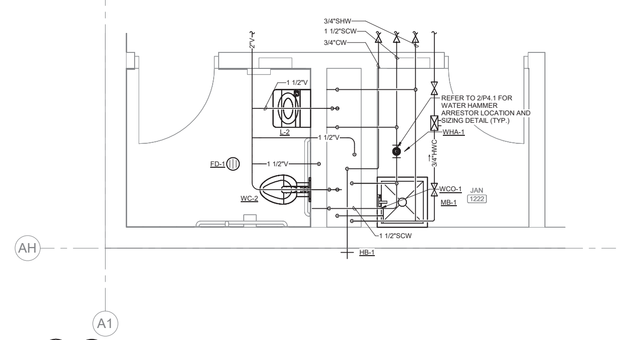
1 LEVEL 02 PLAN - AREA A - PLUMBING - EXISTING BOILER/WATER HEATER ROOM

1/4" = 1'-0"



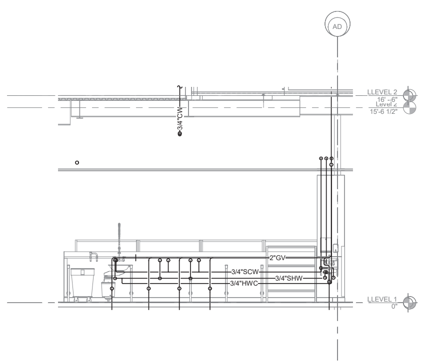
2 ENLARGED STAFF RR PLAN - AREA B - PLUMBING

1/2" = 1'-0"



3 ENLARGED OFFENDER RR/JC PLAN - AREA B - PLUMBING

1/2" = 1'-0"



4 POT AND PAN WASHING SECTION

1/4" = 1'-0"

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ISSUE:		
#	DATE:	DESCRIPTION:

IFC
04/08/2024

PROJECT:
STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

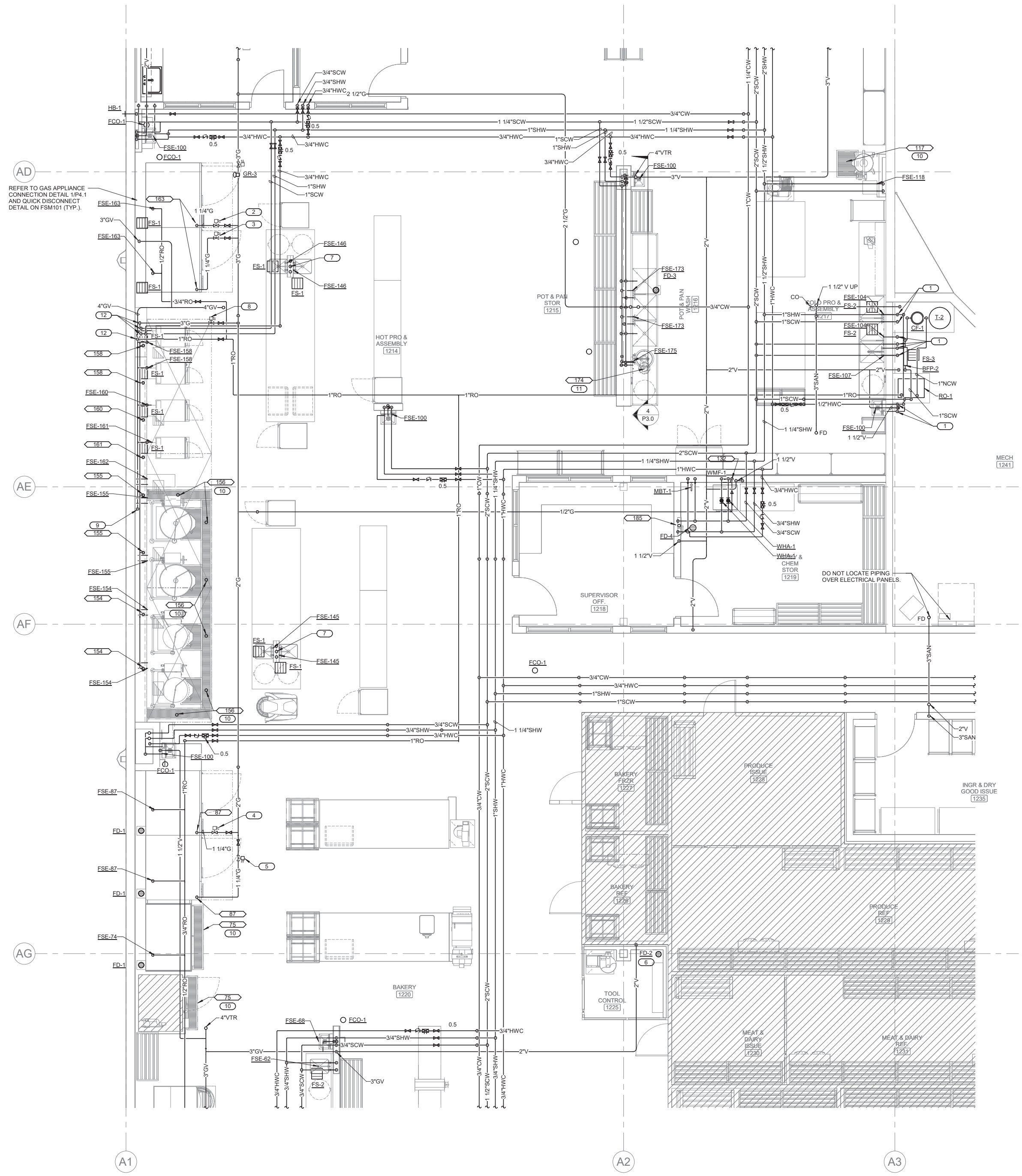
2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DELLLE

SHEET TITLE:
ENLARGED PLAN - PLUMBING

SHEET NUMBER:
P3.0

PROJECT NO.: 0240202.00
RFB922300-02



1 LEVEL 01 PLAN - AREA B - PLUMBING - MAIN KITCHEN AREAS

1/4" = 1'-0"

NORTH

KEYNOTES: (#)

1. ROUTE PIPING EXPOSED IN MECHANICAL ROOM AND STUB THROUGH CMU TO FIXTURE.
2. INSTALL GAS SHUT-OFF VALVE FURNISHED BY FSEC AS PART OF HOOD FIRE PROTECTION SYSTEM (FSE #169) SERVING RACK OVERN (FSE # 163).
3. INSTALL GAS SHUT-OFF VALVE FURNISHED BY FSEC AS PART OF HOOD FIRE PROTECTION SYSTEM (FSE #170) SERVING RACK OVERN (FSE # 163).
4. INSTALL GAS SHUT-OFF VALVE FURNISHED BY FSEC AS PART OF HOOD FIRE PROTECTION SYSTEM (FSE #89) SERVING RACK OVEN (FSE #87).
5. INSTALL GAS SHUT-OFF VALVE FURNISHED BY FSEC AS PART OF HOOD FIRE PROTECTION SYSTEM (FSE #90) SERVING RACK OVEN (FSE #87).
6. FLOOR DRAIN SHALL RECEIVE REFRIGERATION SYSTEM COIL CONDENSATE. ROUTING OF CONDENSATE PIPING TO FLOOR DRAIN SHALL BE BY FSEC.
7. ROUTE PIPING UP TO ISLAND FIXTURES. REFER TO 3/P4.2.
8. INSTALL GAS SHUT-OFF VALVE FURNISHED BY FSEC AS PART OF HOOD FIRE PROTECTION SYSTEM (FSE #151) SERVING MAIN GREASE EXHAUST HOOD (FSE #148).
9. 4" GV CIRCIT VENT SERVING FLOOR SINKS AND TROUGHS. COORDINATE ROUTING OF 4" GV WITH FSEC AND UDS CONFIGURATION. 4" GV SHALL ROUTE HORIZONTALLY IN UDS AND THEN RISE AT NORTH END WITH ALL UDS CONNECTIONS.
10. FLOOR TROUGH PROVIDED BY FSEC, INSTALLED BY P.C.
11. REFER TO DISPOSER DETAIL ON FSM101 FOR PIPING DETAIL AND SCOPE OF WORK BETWEEN FSEC AND P.C.
12. P.C. TO ROUTE PIPING TO UTILITY DISTRIBUTION SYSTEM (UDS) PROVIDED BY FSEC. PIPING ALONG WALL BENEATH HOOD WILL BE PART OF THE UDS. THE UDS WILL HAVE STUB OUTS FOR EACH PIECE OF EQUIPMENT. P.C. SHALL CONNECT TO STUB OUTS AND EXTEND TO EQUIPMENT. ROUGH-IN SIZES FOR UDS SHALL BE 2 1/2"G, 1"SCW, 1"SHW AND 1"RO.

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REF. SCALE IN INCHES
PROJECT #21007688.00

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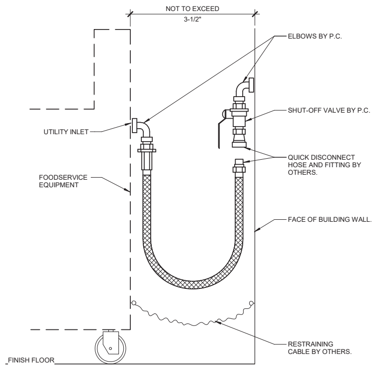


1 GAS APPLIANCE CONNECTION DETAIL

NO SCALE

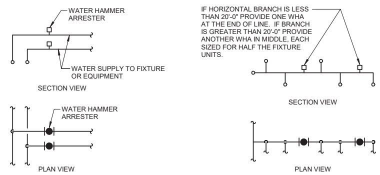
NOTES:

1. VERIFY UTILITY INLET LOCATION ON KITCHEN APPLIANCE AND EXTEND PIPING AS REQUIRED TO ABOVE CONFIGURATION.
2. INSTALL GAS PRESSURE REGULATOR(PROVIDE BY OTHERS) DOWNSTREAM OF SHUT-OFF VALVE IF REQUIRED BY MANUFACTURER. PIPE GAS VENTS TO EXTERIOR.

PROVIDE WATER HAMMER ARRESTER (WHA-#) AT PLUMBING FIXTURES AND QUICK CLOSING VALVES AS INDICATED ON DRAWINGS AND AS RECOMMENDED BY STANDARD PDI-WH201. REFER TO PLUMBING MATERIAL LIST FOR WATER HAMMER ARRESTER DESCRIPTION.

SINGLE / DOUBLE FIXTURE

MULTIPLE FIXTURES



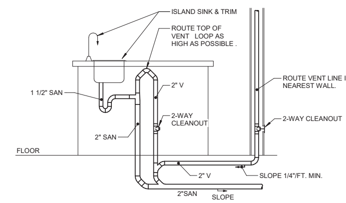
PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
A	1/2"	1-11
B	3/4"	12-32
C	1"	33-60
D	1-1/4"	61-113
E	1-1/2"	114-154
F	2"	155-330

INSTALL WHA'S PER PDI STANDARDS AND MANUFACTURER'S INSTRUCTIONS. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE WHA AS SHOWN PER THE TABLES ABOVE. PROVIDE ACCESSIBILITY TO WHA WITH ACCESS PANEL OR INSTALL ABOVE ACCESSIBLE CEILING.

FIXTURE UNIT CALCULATION		
FIXTURE	COLD	HOT
WATER CLOSET (F.V.)	10	--
WATER CLOSET (TANK)	5	--
URINAL	5	--
LAVATORY	1.5	1.5
JANITOR'S SINK	3	3
SHOWER/BATHTUB	2	3
DRINKING FOUNTAIN	2	-
KITCHEN SINK	2	2
ICE MAKER / BEVERAGE	1	-

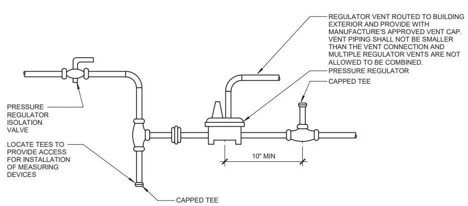
2 WATER HAMMER ARRESTER LOCATION DETAIL

NO SCALE



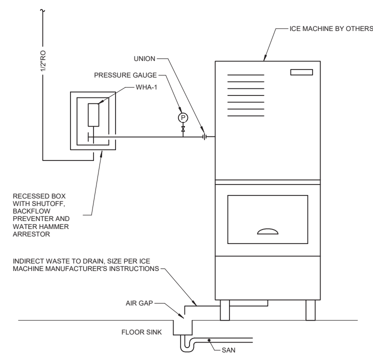
3 ISLAND SINK VENT DETAIL

NO SCALE



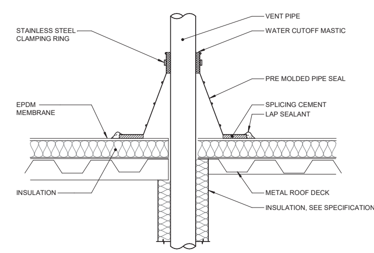
4 GAS PRESSURE REGULATOR DETAIL

NO SCALE



5 ICE MACHINE DETAIL

NO SCALE



6 VENT PIPE FLASHING

NO SCALE

NOTES:

1. VENT PIPE SHALL BE A MINIMUM OF 3" DIAMETER UNLESS NOTED LARGER ON FLOOR PLANS. INCREASERS, IF REQUIRED TO TRANSITION TO THE LARGER VTR SIZE, MUST BE INSTALLED AT LEAST 12 INCHES BELOW THE THERMAL ENVELOPE OF THE BUILDING.

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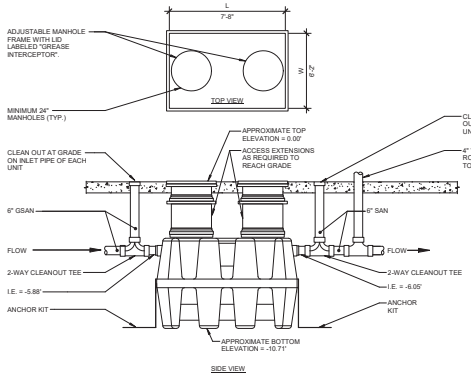
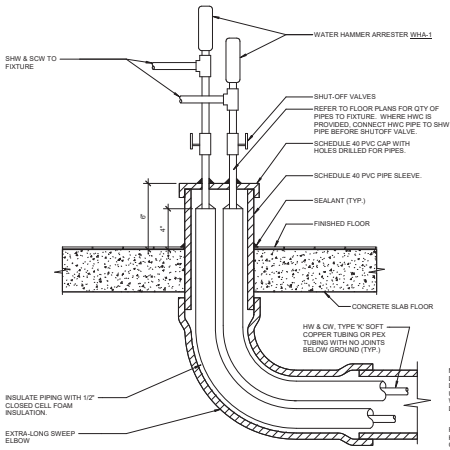


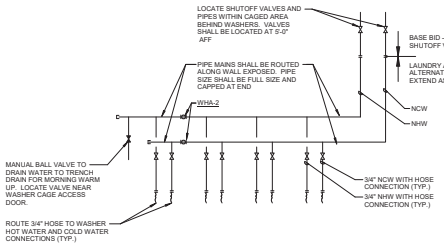
1 GREASE INTERCEPTOR DETAIL (EXTERIOR)
NO SCALE

NOTES:

1. REFER TO MANUFACTURERS RECOMMENDATIONS FOR SPECIFIC VENTING REQUIREMENTS.



2 UNDERGROUND TUBING TO ISLAND FIXTURES
NO SCALE



3 WASHING MACHINE PIPING DETAIL
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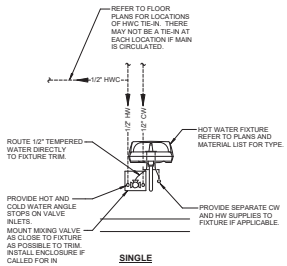
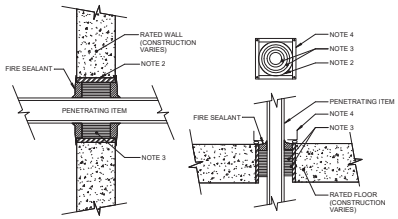


LAVATORY SHOWN. DETAIL IS APPLICABLE TO ALL HW FIXTURES AND DEVICES (E.G. LAVATORIES, SINKS, MOP SINKS, LAUNDRY TUBS, ETC.). REFER TO ROUGH-IN SCHEDULES FOR PIPE SIZES.

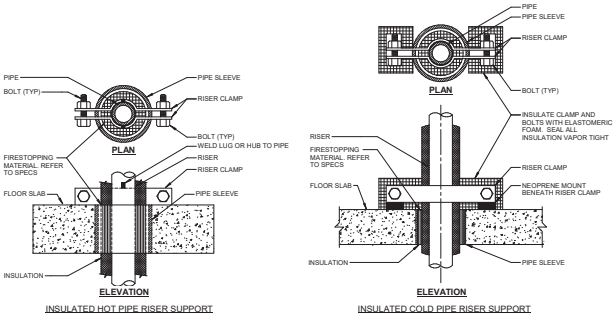
4 FIXTURE HOT WATER ROUTING DETAIL
NO SCALE

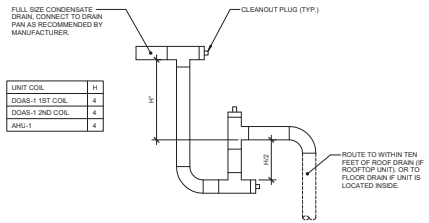


NOTES:

1. THIS GENERAL DETAIL APPLIES TO ALL ITEMS PENETRATING FIRE RATED WALLS OR FLOORS. THE INTENT IS TO MAINTAIN THE FIRE RATING AND TO ALLOW LONGITUDINAL MOVEMENT. REFER TO SPECIFICATION SECTION 07 84 00 FOR SELECTION OF THROUGH PENETRATION FIRE STOPPING.
2. SCHEDULE 5 PIPE SLEEVE EMBEDDED IN WALL OR FLOOR, OR SMOOTH CORE DRILL. EACH CONTRACTOR FURNISHES SLEEVE TO DIVISION 3 CONTRACTOR, COORDINATES SLEEVE LOCATIONS AND DEBURS SLEEVE. DIVISION 3 CONTRACTOR BUILDS SLEEVE INTO WALL OR FLOOR ALLOWING NO GAP AROUND SLEEVE. IF SLEEVE IS NOT PROVIDED WHEN WALL OR FLOOR IS BUILT, CONTRACTOR SHALL INSTALL SLEEVE. SLEEVE SIZE SHALL ALLOW ANNULAR SPACE REQUIRED BY THE SELECTED FIRE STOP SYSTEM.
3. INSTALL BACKING MATERIAL, SUCH AS MINERAL WOOL SAFING, AS REQUIRED FOR FIRE STOP SYSTEM. INSTALL IN ACCORDANCE WITH FIRE STOP SYSTEM APPLICATION LISTING. SECURE TO WALL OR FLOOR TO ALLOW LONGITUDINAL MOVEMENT OF PENETRATING ITEM WITHOUT MOVEMENT OF FIRE BARRIER.
4. WATERTIGHT WELDED 1"x1" 20 GAUGE MINIMUM GALVANIZED SHEET METAL ANGLE FRAME, BY CONTRACTOR IN EQUIPMENT ROOMS FOR WATER STOP. PLACE A BEAD OF WATERPROOF SEALANT BETWEEN FLOOR AND BOTTOM OF ANGLE FRAME. SECURE TO FLOOR WITH MASONRY ANCHORS IN CORNERS AND ON 12" MAXIMUM CENTERS. MULTIPLE PENETRATING ITEMS MAY BE ENCLOSED IN ONE FRAME.

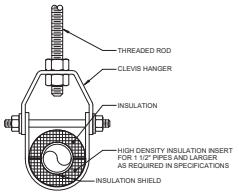
5 FLOOR/WALL PENETRATION - RATED FIRE BARRIER
NO SCALE



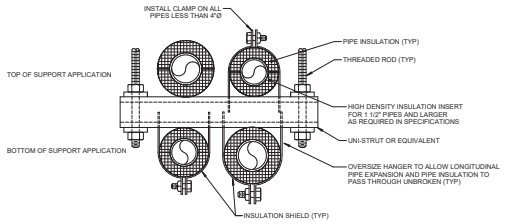


UNIT COIL	H
DOAS-1 1ST COIL	4
DOAS-1 2ND COIL	4
AHU-1	4

7 CONDENSATE TRAP DETAIL (DRAW-THROUGH)
NO SCALE



INSULATED COLD PIPE HANGER



TRAPEZE HANGER

NOTES:

1. REFER TO SPECIFICATION SECTION 22 05 29-PLUMBING.

6 PIPE - HANGERS AND SUPPORTS
NO SCALE

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SHEET TITLE:
PLUMBING DETAILS

SHEET NUMBER:
P4.2

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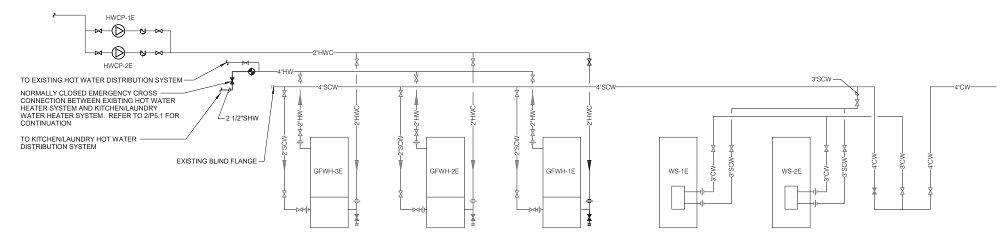
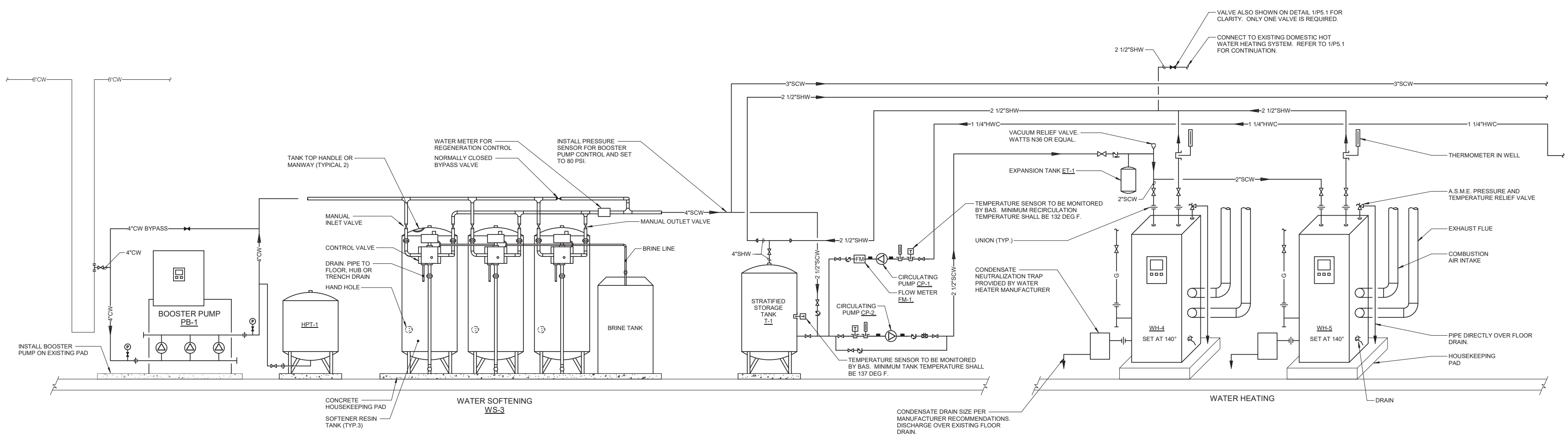
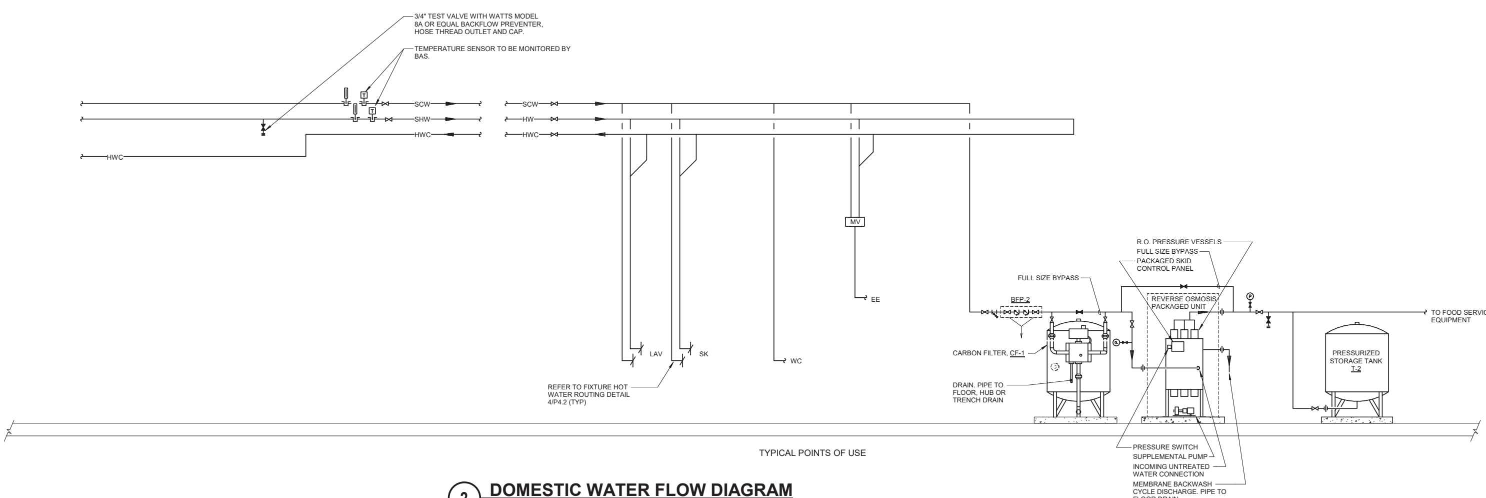


1 EXISTING WATER FLOW DIAGRAM

NO SCALE





2 DOMESTIC WATER FLOW DIAGRAM

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PLUMBING DIAGRAMS

SHEET NUMBER:
P5.1

PROJECT NO.: 0240202.00
RFB922300-02

4/5/2024 11:40:01 AM

PLUMBING MATERIAL LIST

TAG NAME	DESCRIPTION	MANUFACTURER AND MODEL
BFP-1	BACK FLOW PREVENTER - REDUCED PRESSURE ZONE, LEAD FREE BRONZE CONSTRUCTION, 2", NON-CORROSIVE INTERNAL PARTS, STAINLESS STEEL SPRINGS, DIFFERENTIAL PRESSURE RELIEF VALVE BETWEEN SPRING-LOADED CHECK VALVES, BALL STYLE SHUT-OFF VALVES ON INLET AND OUTLET OF UNIT, AIR GAP DRAIN FITTING, TEST PORTS WITH SHUT-OFF VALVES, RATED FOR 175 PSI AT 33°F TO 140°F, 15 PSI (MAXIMUM) PRESSURE DROP AT 10 FPS, FACTORY TESTED, ALL PARTS TO BE SERVICEABLE WITHOUT REMOVING UNIT FROM LINE, APPROVED BY USC FCCC & HR, AWWA C511-92, ASSE 1013, IAPMO AND SBCCI LISTED. MOUNT WITHIN 60" OF FINISHED FLOOR. ROUTE DRAIN PIPE FROM AIR GAP FITTING TO FLOOR DRAIN. PROVIDE AND INSTALL BRONZE OR EPOXY COATED STRAINER UPSTREAM OF EACH UNIT AND ADDITIONAL VALVE UPSTREAM OF EACH STRAINER. FLOW PRESSURE DROP CURVES SHALL BE SUBMITTED.	APOLLO (RPLF4A), WATTS (LF919), WILKINS (975XL2)
BFP-2	BACK FLOW PREVENTER - REDUCED PRESSURE ZONE, LEAD FREE BRONZE CONSTRUCTION, 1", NON-CORROSIVE INTERNAL PARTS, STAINLESS STEEL SPRINGS, DIFFERENTIAL PRESSURE RELIEF VALVE BETWEEN SPRING-LOADED CHECK VALVES, BALL STYLE SHUT-OFF VALVES ON INLET AND OUTLET OF UNIT, AIR GAP DRAIN FITTING, TEST PORTS WITH SHUT-OFF VALVES, RATED FOR 175 PSI AT 33°F TO 140°F, 15 PSI (MAXIMUM) PRESSURE DROP AT 10 FPS, FACTORY TESTED, ALL PARTS TO BE SERVICEABLE WITHOUT REMOVING UNIT FROM LINE, APPROVED BY USC FCCC & HR, AWWA C511-92, ASSE 1013, IAPMO AND SBCCI LISTED. MOUNT WITHIN 60" OF FINISHED FLOOR. ROUTE DRAIN PIPE FROM AIR GAP FITTING TO FLOOR DRAIN. PROVIDE AND INSTALL BRONZE OR EPOXY COATED STRAINER UPSTREAM OF EACH UNIT AND ADDITIONAL VALVE UPSTREAM OF EACH STRAINER. FLOW PRESSURE DROP CURVES SHALL BE SUBMITTED.	APOLLO (RPLF4A), WATTS (LF919), WILKINS (975XL2)
BFP-3	VACUUM BREAKER - ATMOSPHERIC, LEAD FREE BRASS CONSTRUCTION, CHROME-PLATED FINISH, 1/2" I.P.S. FEMALE INLET AND OUTLET, FULL SIZE ORIFICE, ASSE 1001 AND ANSI A112.1.1 COMPLIANT. PROVIDE ESCUTCHEONS AND WALL BRACKETS AS REQUIRED. INSTALL AT 6" MINIMUM ABOVE FLOOD RIM OF FIXTURE.	WATTS (LF288AC), CHICAGO FAUCET (892-ABCP), MIFAB (ASVB.50)
BFP-5	BACK FLOW PREVENTER - PRESSURE VACUUM BREAKER, ANTI-SIPHON, SPILL RESISTANT, COPPER SILICON ALLOY BODY, HEAVY DUTY FDA APPROVED RUBBER DIAPHRAGMS, SIZE SAME AS PIPE, FULL PORT BALL VALVE ON INLET AND OUTLET OF UNIT, RATED FOR 150 PSI AT 33°F TO 130°F, APPROVED BY ASSE 1056.	WATTS (LF008PCQT), WILKINS (460XL)
CF-1	CARBON FILTER - SIMPLEX HIGH EFFICIENCY CARBON FILTER SYSTEM, SUITABLE FOR FOOD AND BEVERAGE INDUSTRY, REMOVES CHLORINE, PROGRAMMABLE CONTROLLER WITH REGENERATION BY TIME CLOCK, FLOW METER OR DIFFERENTIAL PRESSURE SWITCH, FIBERGLASS REINFORCED POLYESTR TANK. CONTINUOUS FLOW RATE OF 5 GPM AT 1 PSI PRESSURE DROP MAXIMUM FLOW RATE OF 11 GPM AT 2 PSI PRESSURE DROP DESIGN FLOW RATE OF 5.6 GPM AT 1 PSI PRESSURE DROP BACKWASH OF 10 GPM 3 CUBIC FEET OF MEDIA FILTER TANKS SIZE: 14"X47" ELECTRICAL REQUIREMENTS - PROVIDE 120V-1 PHASE RECEPTACLE. THIS EQUIPMENT REQUIRES EMERGENCY POWER.	CULLIGAN HE CF 12, MARLO ACE-12G-1
CP-1	CIRCULATING PUMP - VARIABLE SPEED, LEAD FREE BRONZE OR STAINLESS STEEL CONSTRUCTION, PERMANENTLY LUBRICATED SEALED BEARINGS, MECHANICAL SEAL, OIL LUBRICATED, ECM MOTOR WITH INTEGRATED VARIABLE SPEED CONTROL AND THERMAL OVERLOAD PROTECTION, ONE SET OF DRY CONTACTS FOR STATUS OUTPUT TO BMS, FLANGED CONNECTIONS, RATED FOR 125 PSIG AT 225°F, MANUFACTURER PROVIDED PUMP BODY INSULATION KIT, UL LISTED. 13 GPM @ 36 FEET OF HEAD. MOTOR SHALL BE 1/2 HP. ELECTRICAL REQUIREMENTS - 120V, 1 PHASE (HARD-WIRE). THIS EQUIPMENT REQUIRES EMERGENCY POWER.	PUMP - B&G (ECOCIRC XL SERIES), GRUNDFOS (MAGNA SERIES), WILO (STRATOS Z SERIES)
CP-2	CIRCULATING PUMP - VARIABLE SPEED, LEAD FREE BRONZE OR STAINLESS STEEL CONSTRUCTION, PERMANENTLY LUBRICATED SEALED BEARINGS, MECHANICAL SEAL, OIL LUBRICATED, ECM MOTOR WITH INTEGRATED VARIABLE SPEED CONTROL AND THERMAL OVERLOAD PROTECTION, ONE SET OF DRY CONTACTS FOR STATUS OUTPUT TO BMS, FLANGED CONNECTIONS, RATED FOR 125 PSIG AT 225°F, MANUFACTURER PROVIDED PUMP BODY INSULATION KIT, UL LISTED. 54 GPM @ 30 FEET OF HEAD. MOTOR SHALL BE 1 HP. ELECTRICAL REQUIREMENTS - 208/230V, 1 PHASE (HARD-WIRE). THIS EQUIPMENT REQUIRES EMERGENCY POWER.	PUMP - B&G (ECOCIRC XL SERIES), GRUNDFOS (MAGNA SERIES), WILO (STRATOS Z SERIES)
EE-1	EMERGENCY EYE/FACE WASH - ACCESSIBLE, WALL MOUNTED, STAINLESS STEEL BOWL WITH HINGED DUST COVER, TWIN SPRAY HEADS WITH CAPS AND RETAINING CHAINS/STRAPS, BRASS SUPPLY ARMS, INTEGRAL FLOW CONTROL FITTING, BRASS PIPING AND FITTINGS WITH BRASS/BRONZE STAY OPEN BALL VALVE, 1-1/4" DRAIN OUTLET WITH CHROME PLATED BRASS TAILPIECE AND TRAP, UNIVERSAL IDENTIFICATION SIGN, ANSI Z358.1-2004 COMPLIANT. MINIMUM FLOW RATE OF 3.0 GPM AT 30 PSI. ACTIVATION TIME SHALL BE 1 SECOND OR LESS. BRASS/BRONZE PIPING, FITTINGS, AND VALVES SHALL BE CHROME-PLATED OR CHEMICAL-RESISTANT POWDER COATED. MOUNT WITH OUTLET HEADS AT 36" ABOVE FINISH FLOOR WITH MINIMUM 27" OF KNEE CLEARANCE BELOW, AND MINIMUM OF 19" OF CLEARANCE FROM CENTER OF BOWL TO WALL OR OBSTRUCTION. IN COMPLIANCE WITH LATEST ADA AND ANSI 117.1 STANDARDS. MIXING VALVE - THERMOSTATIC MIXING VALVE FOR EMERGENCY EYEWASH OR COMBINATION EYEWASH/FACEWASH FIXTURE, BRONZE BODY CONSTRUCTION, COLD WATER BYPASS, OUTLET THERMOMETER, COMBINATION CHECK STOPS OR SEPARATE SUPPLY CHECK VALVES AND SHUT OFF VALVES, MOUNTING BRACKET. CONTRACTOR SHALL PROVIDE A LOCKING CABINET TO PREVENT UNAUTHORIZED CLOSURE. CABINET SHALL BE RECESSED 18 GAUGE STAINLESS STEEL WITH 16 GAUGE LOCKING DOOR TO ENCLOSE VALVE, INLET CHECK STOPS, OUTLET THERMOMETER. THERMOSTATIC MIXING AND PRESSURE REGULATING VALVES TO DELIVER 3 GPM OF TEMPERED WATER (60-100 DEGREE F) WITH 10 PSI PRESSURE DIFFERENTIAL. EYEWASH SHALL COMPLY WITH ANSI Z358.1 AND ASME A112.18.1. MIXING VALVE SHALL BE ASSE 1071 LISTED AND APPROVED.	BRADLEY (S19224T), ACORN SAFETY (S0440), ENCON (01045501), GUARDIAN (G1750), SPEAKMAN (SE-490) MIXING VALVE - LEONARD (TA-LF), ACORN CONTROLS (ET71 SERIES), ARMSTRONG (Z358), APOLLO (34ELF), BRADLEY (S19 SERIES), HAWS (TWBS.EWE), LAWLER (911E/F), POWERS (ES), SPEAKMAN (TW), GUARDIAN (G6020)
ET-1	EXPANSION TANK - WELDED STEEL CONSTRUCTION, ASME STAMPED, GUARANTEED AIRTIGHT AND LEAKPROOF, STAINLESS STEEL SYSTEM CONNECTION, HEAVY DUTY BUTYL DIAPHRAGM AND RIGID POLYPROPYLENE LINER MECHANICALLY BONDED TO TANK TO PROVIDE A 100% NON-CORROSIVE WATER RESERVOIR, DIAPHRAGM AND LINER SHALL BE APPROVED FOR USE IN POTABLE WATER SYSTEMS, ALL WETTED COMPONENTS OF FDA APPROVED MATERIALS. PROVIDE STANDARD SCHRADER AIR VALVE FOR FIELD CHARGING. TANK SHALL COMPLY WITH FEDERAL ACT S.3874. MINIMUM TANK VOLUME TO BE 53 GALLONS MINIMUM ACCEPTING VOLUME TO BE 15 GALLONS TANK SHALL HAVE A WORKING TEMPERATURE OF 200°F AND A WORKING PRESSURE OF 150 PSIG. FACTORY PRE-CHARGED FOR SHIPPING. FIELD CHARGE TANK TO 80 PSIG.	EXPANSION TANK - AMTROL (THERM-X-TROL ST-80V-C), B&G (PTA), ELBI (DTS, DTL), TACO (PAX SERIES), WATTS (DETA), WESSELS (TTA)
FCO-1	FLOOR CLEANOUT - ADJUSTABLE, CAST IRON HOUSING, ANCHOR FLANGE, TAPERED THREAD PLUG, SECURED NICKEL BRONZE TOP. TOP STYLE SHALL MATCH FLOOR FINISH AS FOLLOWS: UNFINISHED FLOOR - ROUND SOLID SCORIATED TOP TILE OR TERRAZZO - ROUND RECESSED TOP PROVIDE TAMPER RESISTANT PLUG/VANDAL PROOF TOP.	ZURN (Z1400), JOSAM (55000), MIFAB (C1100), SMITH (4000), WADE (6000), WATTS (CO-200)
FD-1	FLOOR DRAIN - CAST IRON BODY, NICKEL BRONZE ADJUSTABLE TOP, 7" ROUND , 2" BOTTOM OUTLET, FLASHING COLLAR, SURFACE MEMBRANE CLAMP, VANDAL PROOF SECURITY SCREWS.	FLOOR DRAIN - ZURN (Z-415), SMITH (2005), WADE (1100), JOSAM (30000), WATTS (FD-100), MIFAB (F1100), SUN (FD1000)
FD-2	FLOOR DRAIN - CAST IRON BODY, NICKEL BRONZE ADJUSTABLE TOP, 7" ROUND, 4" DIAMETER FUNNEL, 2" BOTTOM OUTLET, FLASHING COLLAR, VANDAL PROOF SECURITY SCREWS.	FLOOR DRAIN - ZURN (Z-415), SMITH (2010), WADE (1100), JOSAM (30000), WATTS (FD-100), MIFAB (F1100), SUN (FD1000)
FD-3	FLOOR DRAIN - CAST IRON BODY, NICKEL BRONZE ADJUSTABLE TOP, 7" ROUND , 4" BOTTOM OUTLET, FLASHING COLLAR, SURFACE MEMBRANE CLAMP, VANDAL PROOF SECURITY SCREWS.	FLOOR DRAIN - ZURN (Z-415), SMITH (2005), WADE (1100), JOSAM (30000), WATTS (FD-100), MIFAB (F1100), SUN (FD1000)
FD-4	FLOOR DRAIN - CAST IRON BODY, NICKEL BRONZE ADJUSTABLE TOP, 7" ROUND , 3" BOTTOM OUTLET, FLASHING COLLAR, SURFACE MEMBRANE CLAMP, VANDAL PROOF SECURITY SCREWS. TRAP SEAL - 3", PLASTIC HOUSING WITH FLEXIBLE DIAPHRAGM, SEALING GASKETS, RECLOSES AND SEALS WHEN DISCHARGE IS COMPLETED, ASSE 1072.	FLOOR DRAIN - ZURN (Z-415), SMITH (2005), WADE (1100), JOSAM (30000), WATTS (FD-100), MIFAB (F1100), SUN (FD1000) TRAP SEAL - SURE SEAL (SS), PROVENT (TRAP GUARD), SMITH (QUAD CLOSE), GREEN DRAIN, MIFAB (MI-GARD)
FM-1	FLOW METER - INLINE SIGHT GAUGE FLOW INDICATOR, SUITABLE FOR USE WITH POTABLE WATER, FLOW METER PIPE CONNECTION SIZE SHALL MATCH PIPE SIZE, STAINLESS STEEL CONNECTIONS, POLYSULFONE PLASTIC BODY, PISTON AND CONE, T300-SERIES STAINLESS SPRING, BUNA-N FLOW INDICATOR RING AND PRESSURE SEALS, PRESSURE RATING OF NOT LESS THAN 325 PSI AND TEMPERATURE RATING OF NOT LESS THAN 250oF, ACCURACY WITHIN 5% OF FULL SCALE, MANUFACTURER APPROVED INSTALLATION IN ANY ORIENTATION, SELECT APPROPRIATE SCALE FOR APPLICATION AND LOCATION. FLOW METER FLOW RANGE: 3 - 18 GPM, MAXIUMUM PRESSURE DROP OF 3.8 PSI AT 18 GPM.	FLOW METER - HEDLAND (EZ-VIEW H600 SERIES), OMEGA (EZ-VIEW FL-9000 SERIES OR FL-500 SERIES), LAKE MONITORS (STYLE B)
FS-1	FLOOR SINK - CAST IRON BODY, NICKEL BRONZE RIM AND HALF GRATE, 12" SQUARE, 3" BOTTOM OUTLET, 6" DEEP RECEPTOR WITH ALUMINUM DOME STRAINER ACID RESISTANT COATED INTERIOR, SEEPAGE FLANGE WITH CLAMP, VANDAL-PROOF STRAINER AND VANDAL-PROOF SECURE TOP. FLOOR SINKS SHALL BE INSTALLED FLUSH WITH THE FLOOR.	ZURN (Z1901), SMITH (3151), WADE (9140), JOSAM (49340A), WATTS (FS-740), SIOUX CHIEF (861-2xXFNWC), SUN (FS2000), MIFAB (FS1730)
FS-2	FLOOR SINK - CAST IRON BODY, NICKEL BRONZE RIM AND HALF GRATE, 12" SQUARE, 4" BOTTOM OUTLET, 6" DEEP RECEPTOR WITH ALUMINUM DOME STRAINER ACID RESISTANT COATED INTERIOR, SEEPAGE FLANGE WITH CLAMP, VANDAL-PROOF STRAINER AND VANDAL-PROOF SECURE TOP. FLOOR SINKS SHALL BE INSTALLED FLUSH WITH THE FLOOR.	ZURN (Z1901), SMITH (3151), WADE (9140), JOSAM (49340A), WATTS (FS-740), SIOUX CHIEF (861-2xXFNWC), SUN (FS2000), MIFAB (FS1730)

PLUMBING MATERIAL LIST

TAG NAME	DESCRIPTION	MANUFACTURER AND MODEL
FS-3	FLOOR SINK - CAST IRON BODY, NICKEL BRONZE RIM AND FULL GRATE, 12" SQUARE, 3" BOTTOM OUTLET, 6" DEEP RECEPTOR WITH ALUMINUM DOME STRAINER ACID RESISTANT COATED INTERIOR, SEEPAGE FLANGE WITH CLAMP, VANDAL-PROOF STRAINER AND VANDAL-PROOF SECURE TOP. FLOOR SINKS SHALL BE INSTALLED FLUSH WITH THE FLOOR.	ZURN (Z1901), SMITH (3151), WADE (9140), JOSAM (49340A), WATTS (FS-740), SIOUX CHIEF (861-2xXFNWC), SUN (FS2000), MIFAB (FS1730)
FSE-18	HAND SINK - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P-TRAP PROVIDED BY FSEC, INSTALLED BY P.C. P.C. TO PROVIDE MIXING VALVE (MV-3) AND ACCESSORIES. ACCESSORIES - QUARTER-TURN BALL VALVE TYPE 3/8" CHROME-PLATED BRASS ANGLE SUPPLIES WITH LOOSE KEY STOPS, CHROME-PLATED SOFT COPPER SUPPLY LINES.	HAND SINK - REFER TO FOOD SERVICE PLANS MIXING VALVE - MV-3, REFER TO PLUMBING MATERIAL LIST
FSE-22	WORK COUNTER WITH SINKS - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE MIXING VALVE (MV-3) AND ACCESSORIES. ACCESSORIES - 2" 17 GAUGE CHROME-PLATED BRASS TAILPIECE AND P-TRAP, QUARTER-TURN BALL VALVE TYPE 3/8" CHROME-PLATED BRASS ANGLE SUPPLIES WITH LOOSE KEY STOPS, CHROME-PLATED SOFT COPPER SUPPLY LINES. PROVIDE INDIRECT DRAIN PIPING FROM SINK TO FLOOR SINK AND DISCHARGE WITH AN AIR GAP.	WORK COUNTER WITH SINKS - REFER TO FOOD SERVICE PLANS MIXING VALVE - MV-3, REFER TO PLUMBING MATERIAL LIST
FSE-62	WORK COUNTER WITH SINKS - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE MIXING VALVE (MV-3) AND ACCESSORIES. ACCESSORIES - 2" 17 GAUGE CHROME-PLATED BRASS TAILPIECE AND P-TRAP, QUARTER-TURN BALL VALVE TYPE 3/8" CHROME-PLATED BRASS ANGLE SUPPLIES WITH LOOSE KEY STOPS, CHROME-PLATED SOFT COPPER SUPPLY LINES. PROVIDE INDIRECT DRAIN PIPING FROM SINK TO FLOOR SINK AND DISCHARGE WITH AN AIR GAP.	WORK COUNTER WITH SINKS - REFER TO FOOD SERVICE PLANS MIXING VALVE - MV-3, REFER TO PLUMBING MATERIAL LIST
FSE-64	WATER METER WITH TEMPERATURE RANGE - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE SHUTOFF VALVES AND BACKFLOW PREVENTER (BFP-3).	WATER METER WITH TEMPERATURE RANGE - REFER TO FOOD SERVICE PLANS BACKFLOW PREVENTER - BFP-3, REFER TO PLUMBING MATERIAL LIST.
FSE-68	HAND SINK - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P-TRAP PROVIDED BY FSEC, INSTALLED BY P.C. P.C. TO PROVIDE MIXING VALVE (MV-3) AND ACCESSORIES. ACCESSORIES - QUARTER-TURN BALL VALVE TYPE 3/8" CHROME-PLATED BRASS ANGLE SUPPLIES WITH LOOSE KEY STOPS, CHROME-PLATED SOFT COPPER SUPPLY LINES.	HAND SINK - REFER TO FOOD SERVICE PLANS MIXING VALVE - MV-3, REFER TO PLUMBING MATERIAL LIST
FSE-74	ROLL-IN PROOFER - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. SHALL PROVIDE SHUT OFF VALVE AND BACKFLOW PREVENTER (BFP-3).	ROLL-IN PROOFER, REFER TO FOOD SERVICE PLANS. BACKFLOW PREVENTER - BFP-3, REFER TO PLUMBING MATERIAL LIST.
FSE-87	RACK OVEN - PROVIDED BY FSEC. THIS PIECE OF EQUIPMENT IS EXISTING LOCATED IN THE EXISTING KITCHEN LOCATED ELSEWHERE ON CAMPUS. P.C. SHALL DISCONNECT , FSEC TO RELOCATE, AND P.C. SHALL RECONNECT WITH NEW. P.C. SHALL PROVIDE SHUT OFF VALVE AND BACKFLOW PREVENTER (BFP-3).	RACK OVER, REFER TO FOOD SERVICE PLANS. BACKFLOW PREVENTER - BFP-3, REFER TO PLUMBING MATERIAL LIST.
FSE-91	ICE MACHINE - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE SHUTOFF VALVE, RECCESSED BOX, WATER HAMMER ARRESTOR (WHA-1) AND BACKFLOW PREVENTER (BFP-4). SUPPLY SHUT OFF VALVE SHALL BE INSTALLED IN A LOCKING CABINET TO PREVENT UNAUTHORIZED CLOSURE. CABINET SHALL BE RECESSED 18 GAUGE STAINLESS STEEL WITH 16 GAUGE LOCKING DOOR TO ENCLOSE VALVE, BACKFLOW PREVENTER AND WATER HAMMER ARRESTOR.	ICE MACHINE - REFER TO FOOD SERVICE PLANS BACKFLOW PREVENTER - BFP-4, REFER TO PLUMBING MATERIAL LIST. WATER HAMMER ARRESTOR - WHA-1, REFER TO PLUMBING MATERIAL LIST.
FSE-100	HAND SINK - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P-TRAP PROVIDED BY FSEC, INSTALLED BY P.C. P.C. TO PROVIDE MIXING VALVE (MV-3) AND ACCESSORIES. ACCESSORIES - QUARTER-TURN BALL VALVE TYPE 3/8" CHROME-PLATED BRASS ANGLE SUPPLIES WITH LOOSE KEY STOPS, CHROME-PLATED SOFT COPPER SUPPLY LINES.	HAND SINK - REFER TO FOOD SERVICE PLANS MIXING VALVE - MV-3, REFER TO PLUMBING MATERIAL LIST
FSE-104	WORK COUNTER WITH SINKS - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE MIXING VALVE (MV-3) AND ACCESSORIES. ACCESSORIES - 2" 17 GAUGE CHROME-PLATED BRASS TAILPIECE AND P-TRAP, QUARTER-TURN BALL VALVE TYPE 3/8" CHROME-PLATED BRASS ANGLE SUPPLIES WITH LOOSE KEY STOPS, CHROME-PLATED SOFT COPPER SUPPLY LINES. PROVIDE INDIRECT DRAIN PIPING FROM SINK TO FLOOR SINK AND DISCHARGE WITH AN AIR GAP.	WORK COUNTER WITH SINKS - REFER TO FOOD SERVICE PLANS MIXING VALVE - MV-3, REFER TO PLUMBING MATERIAL LIST
FSE-107	SPRAY RINSE - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE MIXING VALVE (MV-2) TO REDUCE HOT WATER TEMPERATURE AND SHUTOFF VALVES FOR HOT WATER AND COLD WATER.	SPRAY RINSE - REFER TO FOOD SERVICE PLANS. MIXING VALVE - MV-2, REFER TO PLUMBING MATERIAL LIST.
FSE-118	HOSE STATION - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE MIXING VALVE (MV-2) TO REDUCE HOT WATER TEMPERATURE, SHUTOFF VALVES AND INLET CHECK VALVES FOR HOT WATER AND COLD WATER.	HOSE STATION - REFER TO FOOD SERVICE PLANS. MIXING VALVE - MV-2, REFER TO PLUMBING MATERIAL LIST.
FSE-145	WORK COUNTER WITH SINKS - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE MIXING VALVE (MV-3) AND ACCESSORIES. ACCESSORIES - 2" 17 GAUGE CHROME-PLATED BRASS TAILPIECE AND P-TRAP, QUARTER-TURN BALL VALVE TYPE 3/8" CHROME-PLATED BRASS ANGLE SUPPLIES WITH LOOSE KEY STOPS, CHROME-PLATED SOFT COPPER SUPPLY LINES. PROVIDE INDIRECT DRAIN PIPING FROM SINK TO FLOOR SINK AND DISCHARGE WITH AN AIR GAP.	WORK COUNTER WITH SINKS - REFER TO FOOD SERVICE PLANS MIXING VALVE - MV-3, REFER TO PLUMBING MATERIAL LIST
FSE-146	WORK COUNTER WITH SINKS - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE MIXING VALVE (MV-3) AND ACCESSORIES. ACCESSORIES - 2" 17 GAUGE CHROME-PLATED BRASS TAILPIECE AND P-TRAP, QUARTER-TURN BALL VALVE TYPE 3/8" CHROME-PLATED BRASS ANGLE SUPPLIES WITH LOOSE KEY STOPS, CHROME-PLATED SOFT COPPER SUPPLY LINES. PROVIDE INDIRECT DRAIN PIPING FROM SINK TO FLOOR SINK AND DISCHARGE WITH AN AIR GAP.	WORK COUNTER WITH SINKS - REFER TO FOOD SERVICE PLANS MIXING VALVE - MV-3, REFER TO PLUMBING MATERIAL LIST
FSE-154	60 GALLON KETTLE - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE SHUTOFF VALVE. FSEC WILL PROVIDE A QUICK-DISCONNECT FLEXIBLE HOSE FOR INSTALLATION BY P.C. REFER TO QUICK DISCONNECT DETAIL ON FSM101. PIPING TO KETTLE WILL BE PART OF UDS.	60 GALLON KETTLE - REFER TO FOOD SERVICE PLANS.
FSE-155	80 GALLON KETTLE - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE SHUTOFF VALVE. FSEC WILL PROVIDE A QUICK-DISCONNECT FLEXIBLE HOSE FOR INSTALLATION BY P.C. REFER TO QUICK DISCONNECT DETAIL ON FSM101. PIPING TO KETTLE WILL BE PART OF UDS.	60 GALLON KETTLE - REFER TO FOOD SERVICE PLANS.
FSE-158	STEAMER - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE SHUTOFF VALVES, PRESSURE REDUCING VALVE (PRV-1) AND BACKFLOW PREVENTER (BFP-3). FSEC WILL PROVIDE A QUICK-DISCONNECT FLEXIBLE HOSE FOR INSTALLATION BY P.C. REFER TO QUICK DISCONNECT DETAIL ON FSM101. PIPING TO KETTLE WILL BE PART OF UDS.	STEAMER - REFER TO FOOD SERVICE PLANS. PRESSURE REDUCING VALVE - PRV-1, REFER TO PLUMBING MATERIAL LIST. BACKFLOW PREVENTER - BFP-3, REFER TO PLUMBING MATERIAL LIST.
FSE-160	STEAMER - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE SHUTOFF VALVES, PRESSURE REDUCING VALVE (PRV-1) AND BACKFLOW PREVENTER (BFP-3). FSEC WILL PROVIDE A QUICK-DISCONNECT FLEXIBLE HOSE FOR INSTALLATION BY P.C. REFER TO QUICK DISCONNECT DETAIL ON FSM101. PIPING TO KETTLE WILL BE PART OF UDS.	STEAMER - REFER TO FOOD SERVICE PLANS. PRESSURE REDUCING VALVE - PRV-1, REFER TO PLUMBING MATERIAL LIST. BACKFLOW PREVENTER - BFP-3, REFER TO PLUMBING MATERIAL LIST.
FSE-161	STEAMER - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE SHUTOFF VALVES, PRESSURE REDUCING VALVE (PRV-1) AND BACKFLOW PREVENTER (BFP-3). FSEC WILL PROVIDE A QUICK-DISCONNECT FLEXIBLE HOSE FOR INSTALLATION BY P.C. REFER TO QUICK DISCONNECT DETAIL ON FSM101. PIPING TO KETTLE WILL BE PART OF UDS.	STEAMER - REFER TO FOOD SERVICE PLANS. PRESSURE REDUCING VALVE - PRV-1, REFER TO PLUMBING MATERIAL LIST. BACKFLOW PREVENTER - BFP-3, REFER TO PLUMBING MATERIAL LIST.
FSE-162	HOSE REEL - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. REFER TO HOSE REEL DETAIL ON FSM101 FOR ADDITIONAL COMPONENTS PROVIDED BY FSEC AND SCOPE OF WORK BETWEEN FSEC AND P.C. P.C. TO PROVIDE SHUTOFF VALVES AND BACKFLOW PREVENTER (BFP-3).	HOSE REEL - REFER TO FOOD SERVICE PLANS. BACKFLOW PREVENTER - BFP-3, REFER TO PLUMBING MATERIAL LIST.

PLUMBING MATERIAL LIST

TAG NAME	DESCRIPTION	MANUFACTURER AND MODEL
FSE-163	RACK OVEN - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. SHALL PROVIDE SHUT OFF VALVE AND BACKFLOW PREVENTER (BFP-3).	RACK OVER, REFER TO FOOD SERVICE PLANS. BACKFLOW PREVENTER - BFP-3, REFER TO PLUMBING MATERIAL LIST.
FSE-173	POT & PAN SINK - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE MIXING VALVE (MV-3) AND ACCESSORIES. ACCESSORIES - 2" 17 GAUGE CHROME-PLATED BRASS TAILPIECE AND P-TRAP, QUARTER-TURN BALL VALVE TYPE 3/8" CHROME-PLATED BRASS ANGLE SUPPLIES WITH LOOSE KEY STOPS, CHROME-PLATED SOFT COPPER SUPPLY LINES.	POT & PAN SINK - REFER TO FOOD SERVICE PLANS MIXING VALVE - MV-3, REFER TO PLUMBING MATERIAL LIST
FSE-175	SPRAY RINSE - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE MIXING VALVE (MV-2) TO REDUCE HOT WATER TEMPERATURE AND SHUTOFF VALVES FOR HOT WATER AND COLD WATER.	SPRAY RINSE - REFER TO FOOD SERVICE PLANS. MIXING VALVE - MV-2, REFER TO PLUMBING MATERIAL LIST.
FSE-184	HOSE REEL - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. REFER TO HOSE REEL DETAIL ON FSM101 FOR ADDITIONAL COMPONENTS PROVIDED BY FSEC AND SCOPE OF WORK BETWEEN FSEC AND P.C. P.C. TO PROVIDE SHUTOFF VALVES AND BACKFLOW PREVENTER (BFP-3).	HOSE REEL - REFER TO FOOD SERVICE PLANS. BACKFLOW PREVENTER - BFP-3, REFER TO PLUMBING MATERIAL LIST.
FSE-185	EYE/FACE WASH STATION INCLUDING MIXING VALVE WITH RECESSED CABINET- PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. INSTALL MIXING VALVE AND PROVIDE SHUTOFF, INLET CHECK STOPS AND OUTLET THERMOMETER WHICH SHALL BE INSTALLED WITHIN CABINET BY FSEC PREVENT UNAUTHORIZED CLOSURE.	EYE/FACE WASH STATION - REFER TO FOOD SERVICE PLANS.
FSE-189	FLIGHT-TYPE DISHWASHER - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE SHUTOFF VALVES, PRESSURE REDUCING VALVES (PRV-2) AND BACKFLOW PREVENTER (BFP-5).	DISHWASHER - REFER TO FOOD SERVICE PLANS. PRESSURE REDUCING VALVE - PRV-12 REFER TO PLUMBING MATERIAL LIST. BACKFLOW PREVENTER - BFP-5, REFER TO PLUMBING MATERIAL LIST.
FSE-191	SPRAY RINSE - PROVIDED BY FSEC, INSTALLED BY FSEC WITH FINAL CONNECTIONS BY P.C. P.C. TO PROVIDE MIXING VALVE (MV-2) TO REDUCE HOT WATER TEMPERATURE AND SHUTOFF VALVES FOR HOT WATER AND COLD WATER.	SPRAY RINSE - REFER TO FOOD SERVICE PLANS. MIXING VALVE - MV-2, REFER TO PLUMBING MATERIAL LIST.
GI-1	GREASE INTERCEPTOR - UNDERGROUND INSTALLATION, POLYETHYLENE, HDPE, OR FIBERGLASS REINFORCED POLYESTER CONSTRUCTION, REMOVABLE OR CLEANABLE INTAKE AND DISCHARGE BAFFLES, INTERNAL FLOW CONTROL FITTING IF NECESSARY FOR OPERATION, GASKETED H-20 RATED COVER, PDI G101 COMPLIANT, PDI APPROVED AND LISTED FOR USE, 30 YEAR WARRANTY. PROVIDE RISERS FOR EXTENDING COVER TO GRADE. PROVIDE TWO-WAY CLEANOUTS UPSTREAM AND DOWNSTREAM OF GREASE INTERCEPTOR. PROVIDE TANK HOLD DOWN SYSTEM AS REQUIRED BY MANUFACTURER FOR THE SOIL TYPE AND WATER TABLE. BASIS OF DESIGN SCHIER UNIT DOES NOT REQUIRE TANK OR FLOW CONTROL VENT PIPING. OTHER GREASE INTERCEPTOR MANUFACUTURES MAY REQUIRE TANK AND FLOW CONTROL FITTING VENT SYSTEMS. THESE ADDITIONAL SYSTEMS SHALL BE INSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT IF THESE ALTERNATIVE PRODUCTS ARE SUBMITTED AND INSTALLED. 200 GPM FLOW, 14,877 LB. GREASE CAPACITY, 1000 GALLONS HOLDING CAPACITY, 6" PIPE INLET AND OUTLET.	GREASE INTERCEPTOR - SCHIER (GREAT BASIN GB-1000), MIFAB (XL-MI-G-PL-1150), ZURN GREEN TURTLE (PROCEPTOR GMC300-PDI)
GR-1	DOAS-1 GAS PRESSURE REGULATOR - CAST IRON BODY, INTERNAL PRESSURE RELIEF, THREADED CONNECTIONS, ADJUSTABLE PRESSURE SETTING, TIGHT SHUTOFF. 1 PSI INLET PRESSURE, 11" OUTLET PRESSURE, 1,950 CFH CAPACITY, MINIMUM CONTROLLABLE FLOW of 50 CFH. CONTRACTOR SHALL SIZE AND ROUTE REGULATOR VENTING PER MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH A MAXIMUM EQUIVALENT LENGTH OF 60 FEET. ESTIMATED VENT SIZE IS 1" WITH VENT EXTENDING OUT ADJACENT EXTERIOR WALL FOR BASIS OF DESIGN REGULATOR.	FISHER (FSC800 SERIES), ITRON, SENSUS, MAXITROL
GR-2	AHU-1 GAS PRESSURE REGULATOR - CAST IRON BODY, INTERNAL PRESSURE RELIEF, THREADED CONNECTIONS, ADJUSTABLE PRESSURE SETTING, TIGHT SHUTOFF. 1 PSI INLET PRESSURE, 11" OUTLET PRESSURE, 215 CFH CAPACITY, MINIMUM CONTROLLABLE FLOW OF 10 CFH. CONTRACTOR SHALL SIZE AND ROUTE REGULATOR VENTING PER MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH A MAXIMUM EQUIVALENT LENGTH OF 60 FEET. ESTIMATED VENT SIZE IS 1" WITH VENT EXTENDING OUT ADJACENT EXTERIOR WALL FOR BASIS OF DESIGN REGULATOR.	FISHER (FSHRS SERIES), ITRON, SENSUS, MAXITROL
GR-3	KITCHEN GAS PRESSURE REGULATOR - CAST IRON BODY, INTERNAL PRESSURE RELIEF, THREADED CONNECTIONS, ADJUSTABLE PRESSURE SETTING, TIGHT SHUTOFF. 1 PSI INLET PRESSURE, 10" OUTLET PRESSURE, 2,442 CFH CAPACITY , MINIMUM CONTROLLABLE FLOW OF 45 CFH. CONTRACTOR SHALL SIZE AND ROUTE REGULATOR VENTING PER MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH A MAXIMUM EQUIVALENT LENGTH OF 60 FEET. ESTIMATED VENT SIZE IS 1" WITH VENT EXTENDING OUT ADJACENT EXTERIOR WALL FOR BASIS OF DESIGN REGULATOR.	FISHER (FSC800 SERIES), ITRON, SENSUS, MAXITROL
GR-4	WATER HEATER (WH-4) GAS PRESSURE REGULATOR - CAST IRON BODY, INTERNAL PRESSURE RELIEF, THREADED CONNECTIONS, ADJUSTABLE PRESSURE SETTING, TIGHT SHUTOFF. 1 PSI INLET PRESSURE, 11" OUTLET PRESSURE, 1,350 CFH CAPACITY, MINIMUM CONTROLLABLE FLOW OF 35 CFH. CONTRACTOR SHALL SIZE AND ROUTE REGULATOR VENTING PER MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH A MAXIMUM EQUIVALENT LENGTH OF 60 FEET. ESTIMATED VENT SIZE IS 1" WITH VENT EXTENDING OUT ADJACENT EXTERIOR WALL FOR BASIS OF DESIGN REGULATOR.	FISHER (FSC800 SERIES), ITRON, SENSUS, MAXITROL
GR-5	WATER HEATER (WH-5) GAS PRESSURE REGULATOR - CAST IRON BODY, INTERNAL PRESSURE RELIEF, THREADED CONNECTIONS, ADJUSTABLE PRESSURE SETTING, TIGHT SHUTOFF. 1 PSI INLET PRESSURE, 11" OUTLET PRESSURE, 1,350 CFH CAPACITY, MINIMUM CONTROLLABLE FLOW OF 35 CFH. CONTRACTOR SHALL SIZE AND ROUTE REGULATOR VENTING PER MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH A MAXIMUM EQUIVALENT LENGTH OF 60 FEET. ESTIMATED VENT SIZE IS 1" WITH VENT EXTENDING OUT ADJACENT EXTERIOR WALL FOR BASIS OF DESIGN REGULATOR.	FISHER (FSC800 SERIES), ITRON, SENSUS, MAXITROL
GR-6	BOILER ROOM GAS PRESSURE REGULATOR - CAST IRON BODY, EXTERNAL PRESSURE RELIEF, THREADED CONNECTIONS, ADJUSTABLE PRESSURE SETTING, TIGHT SHUTOFF. EXTERNAL PRESSURE RELIEF SHALL BE AS RECOMMENDED BY MANUFACTURER. BASIS OF DESIGN EXTERNAL PRESSURE RELIEF IS MODEL 289H. 2 PSI INLET PRESSURE, 1 PSI OUTLET PRESSURE, 10,700 CFH CAPACITY, MINIMUM CONTROLLABLE FLOW OF 200 CFH. CONTRACTOR SHALL SIZE AND ROUTE REGULATOR VENTING PER MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH A MAXIMUM EQUIVALENT LENGTH OF 60 FEET. ESTIMATED VENT SIZE IS 1" WITH VENT EXTENDING OUT ADJACENT EXTERIOR WALL FOR BASIS OF DESIGN REGULATOR.	FISHER (FS133 SERIES), ITRON, SENSUS, MAXITROL
GR-7	DRYER GAS PRESSURE REGULATOR (DRYERS) - CAST IRON BODY, INTERNAL PRESSURE RELIEF, THREADED CONNECTIONS, ADJUSTABLE PRESSURE SETTING, TIGHT SHUTOFF. 1 PSI INLET PRESSURE, 10" OUTLET PRESSURE, 415 CFH CAPACITY, MINIMUM CONTROLLABLE FLOW OF 15 CFH. CONTRACTOR SHALL SIZE AND ROUTE REGULATOR VENTING PER MANUFACTURER'S INSTALLATION INSTRUCTIONS WITH A MAXIMUM EQUIVALENT LENGTH OF 60 FEET. ESTIMATED VENT SIZE IS 1" WITH VENT EXTENDING OUT ADJACENT EXTERIOR WALL FOR BASIS OF DESIGN REGULATOR. CONFIRM OUTLET PRESSURE SETTING WITH PROVIDED DRYER. BASIS OF DESIGN REQUIRES OUTLET PRESSURE BETWEEN 6" AND 12" OF OUTLET PRESSURE.	FISHER (FSCS400 SERIES), ITRON, SENSUS, MAXITROL
HB-1	HOSE BIBB - FREEZELESS WALL HYDRANT, BRASS VALVE BODY AND SEAT, STANDARD FINISH, NON-FERROUS METAL STEM, AUTOMATIC DRAINING, VACUUM BREAKER, 3/4" MALE HOSE THREAD, WALL CLAMP, CONCEALED IN FLUSH MOUNTED LOCKABLE WALL BOX, KEY OPERATED, ASSE 1019 OR 1052 LISTED AND APPROVED. VERIFY NUMBER OF KEY OPERATORS TO BE PROVIDED WITH OWNER. BOX COVER AND HYDRANT SHALL USE A COMMON KEY. MOUNT AT 18" ABOVE GRADE UNLESS NOTED OTHERWISE ON DRAWINGS.	PRIER (C-634BX), WOODFORD (B67), ZURN (Z1300), WATTS (HY-725), MIFAB (MHY-20), SMITH (5509QT), WADE (8700)
HPT-1	HYDRO-PNEUMATIC TANK - CARBON STEEL OR FIBERGLASS SHELL AND REPLACABLE FDA-APROVED HEAVY-DUTY BLADDER TO SEPARATE THE AIR AND WATER. NO WATER SHALL COME IN CONTACT WITH THE METAL TANK WALLS. FEATURES SHALL INCLUDE AN AIR FILL VALVE AND BOTTOM SYSTEM CONNECTION SUITABLE FOR 100% DRAW-DOWN. TANK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION VIII OF THE ASME CODE AND BE N.B. STAMPED. MINIMUM TANK VOLUME TO BE 132 GALLONS. MINIMUM ACCCEPTANCE VOLUME TO BE 15 GALLONS.	HYDRON-PNEUMATIC TANK - AMTROL , B&G, ELBI, TACO, WATTS, WESSELS

PLUMBING MATERIAL LIST

TAG NAME	DESCRIPTION	MANUFACTURER AND MODEL
L-1	LAVATORY - ACCESSIBLE, WALL MOUNTED, WHITE VITREOUS CHINA, 20"x18", 4" HIGH CONTOURED BACKSPLASH, FAUCET HOLES ON 4" CENTERS, DRILLED FOR CONCEALED ARM CARRIER. LAVATORY TRIM - LAVATORY TRIM - SENSOR ACTIVATED MIXING FAUCET, HARD-WIRED, BRASS CONSTRUCTION, CHROME-PLATED FINISH, CONVENTIONAL SPOUT WITH LAMINAR FLOW, 4" DECK PLATE, PERFORATED GRID STRAINER WITH 1-1/4" 17 GAUGE TAILPIECE, SOLID BRASS SOLENOID WITH BUILT-IN FILTER, WATERPROOF CONNECTORS AND CABLE , UL APPROVED TRANSFORMER. ELECTRICAL REQUIREMENTS - 120 VAC INPUT MOUNT CONTROLS IN WATERPROOF VANDAL-RESISTANT ENCLOSURE BELOW LAVATORY. PROVIDE TRANSFORMER WITH CABLE EXTENSIONS (AS REQUIRED) OR PLUG-IN TRANSFORMER. MOUNT TRANSFORMER ABOVE CEILING OR IN ACCESSIBLE PIPE CHASE. COORDINATE LOCATION WITH ELECTRICAL CONTRACTOR. SELECT TRANSFORMER TO SERVE MAXIMUM NUMBER OF ELECTRONIC VALVES TO REDUCE AMOUNT OF TRANSFORMERS. MAXIMUM FLOW TO BE 0.5 GPM IN COMPLIANCE WITH ENERGY POLICY ACT OF 2005 AND ASME/ANSI STANDARD A112.18.1M AND WATERSENSE LABELED PER LEED REQUIREMENTS. FAUCET SHALL COMPLY WITH FEDERAL ACT S.3874. PROVIDE RESTRICTIVE DEVICE AS REQUIRED. MOUNT MIXING VALVE UNDER COUNTER/LAVATORY. MIXING VALVE SHALL NOT BE WYE PATTERN STYLE. MIXING VALVE - MV-1, REFER TO PLUMBING MATERIAL LIST. UNIT SHALL BE ASSE 1070 LISTED AND APPROVED. VALVE SHALL COMPLY WITH FEDERAL ACT S.3874. INSULATION KIT - PRE-MANUFACTURED FOR P-TRAP, STOP VALVES AND SUPPLY LINES. ACCESSORIES - QUARTER-TURN 3/8" CHROME PLATED HEAVY BRASS ANGLE SUPPLY LOOSE KEY STOPS, CHROME PLATED SOFT COPPER SUPPLY LINES, DRAIN AND OFFSET TAILPIECE, 1-1/4" 17 GAUGE CAST BRASS P-TRAP, SUPPORT CARRIER. MOUNT LAVATORY WITH SUPPORT CARRIER BOLTED SECURELY TO FLOOR. TOP OF RIM SHALL BE AT 34" ABOVE FLOOR IN COMPLIANCE WITH LATEST ADA STANDARD. PROVIDE 29" MINIMUM CLEARANCE FROM FLOOR TO BOTTOM OF APRON IN COMPLIANCE WITH LATEST ANSI A117.1 AND ADA STANDARDS. ARMAFLEX WITH TAPE IS NOT ACCEPTABLE IN LIEU OF INSULATION KIT.	LAVATORY - AMERICAN STANDARD (0355.012), KOHLER (K-2005), SLOAN (SS-3003), TOTO (LT307), ZURN (Z5364) LAVATORY TRIM - DELTA (590T0), AMERICAN STANDARD (775B.205/PK00.HAC), CHICAGO FAUCET (116.706.AB.1), HYDROTEK (H-2603C-LR), MOEN (8302), SPEAKMAN (S-8800), ZURN (Z6913-XL), AMTC (AEF-301) MIXING VALVE - MV-1, REFER TO PLUMBING MATERIAL LIST. INSULATION KIT - TRUEBRO (LAV-GUARD), BROCAR PRODUCTS (TRAP WRAP), MCGUIRE (PROWRAP), PLUMBEREX (PRO-EXTREME)
L-2	LAVATORY (ADA INSTITUTIONAL WALL MOUNT) ACCESSIBLE CORRECTIONS STYLE LAVATORY - WALL MOUNTED, 14 GAUGE TYPE 304 STAINLESS STEEL, SEAMLESS WELDED CONSTRUCTION, SATIN FINISH EXPOSED SURFACES, 18" RECTANGULAR BOWL, DECK MOUNTED SPOUT, PNEUMATICALLY OPERATED, METERING NON-HOLD OPEN PUSH BOTTON VALVE FOR BOTH HOT AND COLD, FRONT ACCCESS. FIXTURE SHALL BE ADA COMPLIANT. ACCESSORIES - QUARTER-TURN 3/8" CHROME PLATED HEAVY BRASS ANGLE SUPPLY LOOSE KEY STOPS, CHROME PLATED SOFT COPPER SUPPLY LINES, DRAIN AND OFFSET TAILPIECE, 1-1/4" 20 GAUGE CAST BRASS P-TRAP. MIXING VALVE - MV-1, REFER TO PLUMBING MATERIAL LIST. UNIT SHALL BE ASSE 1070 LISTED AND APPROVED. VALVE SHALL COMPLY WITH FEDERAL ACT S.3874.	LAVATORY - ACORN(1652FALRM-1-DMS-04-M-FMT) WILLOUBY, METACRAFT. MIXING VALVE - MV-1, REFER TO PLUMBING MATERIAL LIST.
LI-1	LINT INTERCEPTOR - SOLIDS INTERCEPTOR, POLYETHYLENE TANK, REMOVABLE CORROSION RESISTANT FILTER BASKET WITH 1/8" DIAMETER PERFORATIONS, INSTALLED BELOW GRADE, ADJUSTABLE RISER WITH WATER AND GAS TIGHT COVER, 16,000 LB LOAD RATED, 6" INLET AND OUTLET, MAXIMUM 150 GPM FLOW RATE, 104 GALLON LIQUID CAPACITY, 10 GALLONS SOLID CAPACITY.	STREIM AA-JK-6 OR APPROVED EQUAL
MB-1	MOP BASIN - 316 STAINLESS STEEL, 16 GAUGE, 24"x24"x10", STAINLESS STEEL DRAIN WITH GRID STRAINER, 2" OUTLET, VINYL BUMPER GUARD ON EXPOSED SIDES. TRIM - EXPOSED TWO HANDLE MIXING FAUCET, BRASS CONSTRUCTION, CHROME-PLATED FINISH, SINGLE WING HANDLES, 1/4 TURN CERAMIC DISC CARTRIDGE, 3/4" HOSE THREAD SPOUT WITH ASSE 1053 RATED INTEGRAL VACUUM BREAKER, WALL BRACE, PAIL HOOK, CHECK STOPS OR INLINE CHECK VALVES TO PREVENT THERMAL CROSSOVER. FAUCET SHALL COMPLY WITH FEDERAL ACT S.3874. ACCESSORIES - MOP HANGER, HOSE AND HOSE BRACKET, TRAP TWO 24" WIDE STAINLESS STEEL WALL GUARD	MOP BASIN - FRANKE COMMERCIAL (FSS222210/316-1) TRIM - DELTA (28C2383), AMERICAN STANDARD (8344.012), CHICAGO FAUCETS (897-CP), MOEN (8124), SPEAKMAN (SC-5812), SYMMONS (S-2490), ZURN (Z841M1-XL) VACUUM BREAKER - WATTS (8A), OR APPROVED EQUAL
MBT-1	MOP BASIN TRIM - EXPOSED TWO HANDLE MIXING FAUCET, BRASS CONSTRUCTION, CHROME-PLATED FINISH, SINGLE WING HANDLES, 1/4 TURN CERAMIC DISC CARTRIDGE, 3/4" HOSE THREAD SPOUT, ASSE 1053 RATED INTEGRAL VACUUM BREAKER, WALL BRACE, PAIL HOOK, CHECK STOPS OR INLINE CHECK VALVES TO PREVENT THERMAL CROSSOVER. FAUCET SHALL COMPLY WITH FEDERAL ACT S.3874. MOUNT AT 30" ABOVE FLOOR.	DELTA (28C2383), AMERICAN STANDARD (8344.012), CHICAGO FAUCETS (897-CP), MOEN (8124), SPEAKMAN (SC-5812), SYMMONS (S-2490), ZURN (Z841M1-XL) VACUUM BREAKER - WATTS (8A), OR APPROVED EQUAL
MV-1	MIXING VALVE - POINT-OF-USE ANTI-SCALD THERMOSTATIC MIXING VALVE FOR TEMPERED WATER CONTROL, ALL BRONZE/BRASS CONSTRUCTION, ROUGH FINISH, THREADED INLETS, TAMPER RESISTANT SETPOINT, 3/8" COMPRESSION INLETS AND OUTLETS, COLD WATER BYPASS IF USED WITH MIXING FAUCET. CABINET - SEMI-RECESSED 18 GAUGE STAINLESS STEEL CABINET WITH 16 GAUGE LOCKING DOOR TO ENCLOSE VALVE, INLET STOPS, OUTLET THERMOMETER, AND OUTLET VALVES. 0.5 GPM OUTPUT. UNIT TO MIX 140 DEGREE F HOT WATER SUPPLY AND 40 DEGREE F COLD WATER SUPPLY FOR 110 DEGREE F OUTLET. UNIT SHALL BE ASSE 1070 LISTED AND APPROVED. VALVE SHALL COMPLY WITH FEDERAL ACT S.3874.	WATTS (LFUSG-B), LEONARD (170D-LF), LAWLER (TMM-1070T), ACORN CONTROLS (ST70), APOLLO (34DLF), POWERS (LFE480), SLOAN (MIX-135-A), SYMMONS (8210CK), WILKINS (ZW3870XLT)
MV-2	MIXING VALVE - POINT-OF-USE ANTI-SCALD THERMOSTATIC MIXING VALVE ARRANGEMENT FOR TEMPERED WATER CONTROL, ALL BRONZE/BRASS CONSTRUCTION, ROUGH FINISH, UNION/THREADED INLETS WITH STRAINERS, COMBINATION CHECK STOPS OR SEPARATE SUPPLY CHECK VALVES AND SHUT OFF VALVES. CABINET - SEMI-RECESSED 18 GAUGE STAINLESS STEEL CABINET WITH 16 GAUGE LOCKING DOOR TO ENCLOSE VALVE, INLET STOPS, OUTLET THERMOMETER, AND OUTLET VALVES. RATED FOR 1.5 GPM OUTPUT MAXIMUM AT 5 PSI DIFFERENTIAL AND 0.5 GPM OUTPUT MINIMUM. UNIT TO MIX 140 DEGREE F HOT WATER SUPPLY AND 40 DEGREE F COLD WATER SUPPLY FOR 120 DEGREE F OUTLET. UNIT SHALL BE ASSE 1070 LISTED AND APPROVED. VALVE SHALL COMPLY WITH FEDERAL ACT S.3874.	LEONARD (170-LF/270-LF/370-LF), ACORN CONTROLS (ST7069), APOLLO (34BLF), BRADLEY (S59 SERIES), LAWLER (310/570), POWERS (SERIES LFLM495), SYMMONS (8210CK MAXLINE SERIES), WATTS (LFMMV), WILKINS (ZW1070XL)
MV-3	MIXING VALVE - POINT-OF-USE ANTI-SCALD THERMOSTATIC MIXING VALVE ARRANGEMENT FOR TEMPERED WATER CONTROL, ALL BRONZE/BRASS CONSTRUCTION, ROUGH FINISH, UNION/THREADED INLETS WITH STRAINERS, COMBINATION CHECK STOPS OR SEPARATE SUPPLY CHECK VALVES AND SHUT OFF VALVES. CABINET - SEMI-RECESSED 18 GAUGE STAINLESS STEEL CABINET WITH 16 GAUGE LOCKING DOOR TO ENCLOSE VALVE, INLET STOPS, OUTLET THERMOMETER, AND OUTLET VALVES. RATED FOR 2.2 GPM OUTPUT MAXIMUM AT 5 PSI DIFFERENTIAL AND 0.5 GPM OUTPUT MINIMUM. UNIT TO MIX 140 DEGREE F HOT WATER SUPPLY AND 40 DEGREE F COLD WATER SUPPLY FOR 110 DEGREE F OUTLET. CONFIRM OUTLET TEMPERATURE SETPOINT WITH FOOD SERVICE PLANS. UNIT SHALL BE ASSE 1070 LISTED AND APPROVED. VALVE SHALL COMPLY WITH FEDERAL ACT S.3874.	LEONARD (170-LF/270-LF/370-LF), ACORN CONTROLS (ST7069), APOLLO (34BLF), BRADLEY (S59 SERIES), LAWLER (310/570), POWERS (SERIES LFLM495), SYMMONS (8210CK MAXLINE SERIES), WATTS (LFMMV), WILKINS (ZW1070XL)
PRV-1	PRESSURE REGULATING VALVE - SELF CONTAINED TYPE UP TO 2" SIZE, DIAPHRAGM ACTUATED, LEAD FREE CAST COPPER-SILICON OR BRONZE BODY, STAINLESS STEEL SPRINGS, INTEGRAL REMOVABLE STAINLESS STEEL STRAINER SCREEN, STAINLESS STEEL TRIM AND SEATS FOR MAXIMUM OPERATING PRESSURE OF 300 PSIG GAUGE AND ADJUSTABLE FROM 25-75PSIG. NPT THREADED INLET/OUTLET ASSE 1003 LISTED. 75 PSIG INLET PRESSURE 60 PSIG OUTLET PRESSURE 2 GPM 1/2"ø VALVE	PRESSURE REGULATING VALVE - FISHER TYPE 95H, CASH ACME SERIES B, MASONEILAN 17 SERIES, TRERICE 921 OR 1002, WATTS LFU5B SERIES.
PRV-2	PRESSURE REGULATING VALVE - SELF CONTAINED TYPE UP TO 2" SIZE, DIAPHRAGM ACTUATED, LEAD FREE CAST COPPER-SILICON OR BRONZE BODY, STAINLESS STEEL SPRINGS, INTEGRAL REMOVABLE STAINLESS STEEL STRAINER SCREEN, STAINLESS STEEL TRIM AND SEATS FOR MAXIMUM OPERATING PRESSURE OF 300 PSIG GAUGE AND ADJUSTABLE FROM 25-75PSIG. NPT THREADED INLET/OUTLET ASSE 1003 LISTED. 75 PSIG INLET PRESSURE 40 PSIG OUTLET PRESSURE 8 GPM 3/4"ø OR 1" VALVE, TO MATCH ROUGH-IN SIZE.	PRESSURE REGULATING VALVE - FISHER TYPE 95H, CASH ACME SERIES B, MASONEILAN 17 SERIES, TRERICE 921 OR 1002, WATTS LFU5B SERIES.
RO-1	REVERSE OSMOSIS SYSTEM - 2.78 GPM PRODUCT FLOW AT 158 PSI, 5.57 GPM FEED FLOW, 2.79 GPM WASTE FLOW, 1.9 GPM RECIRCULATION FLOW, PRODUCT TDS 6.61 MG/L, WASTE TDS 970 MG/L. 2 HP, 208 VOLT, 3 PHASE, 60 HZ. THIS EQUIPMENT REQUIRES EMERGENCY POWER.	REFER TO SPECIFICATION 22 30 00 FOR ADDITIONAL INFORMATION

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ISSUE:
DATE: DESCRIPTION:

IFC
04/08/2024

PROJECT:
STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE: 02/09/2024
DESIGNED: MIKMCC
DRAWN: MIKMCC
REVIEWED: DELLLE

SHEET TITLE:
PLUMBING SCHEDULES

SHEET NUMBER:
P6.1

PROJECT NO.: 0240202.00
RFB922300-02

PLUMBING MATERIAL LIST CONTINUED

TAG NAME	DESCRIPTION	MANUFACTURER AND MODEL
SK-1	SINK - ACCESSIBLE, SELF-RIMMING SINGLE COMPARTMENT WITH FAUCET DECK [AND OVERFLOW], 18 GAUGE TYPE 304 STAINLESS STEEL, 31" (SIDE-TO-SIDE) x 21" (FRONT-TO-BACK) OVERALL SIZE, 28" x 16" x 6 3/8" DEEP BOWL, COMPLETELY UNDERCOATED, 3-1/2" DIAMETER DRAIN OUTLET LOCATION OFF-CENTERED REAR IN BOWL, PERFORATED TYPE 304 STAINLESS STEEL GRID STRAINER. SINK TRIM - SINGLE HANDLE MIXING FAUCET, BRASS CONSTRUCTION, CHROME-PLATED FINISH, CONVENTIONAL SWING SPOUT, NOMINAL 8" REACH, AERATOR, LEVER HANDLE, SUPPLIES AT 8" CENTERS. MAXIMUM FLOW TO BE 2.2 GPM IN COMPLIANCE WITH ENERGY POLICY ACT OF 2005 AND ASME/ANSI STANDARD A112.18.1M. FAUCET SHALL COMPLY WITH FEDERAL ACT S.3874. PROVIDE RESTRICTIVE DEVICE AND ESCUTCHEON PLATE AS REQUIRED. ACCESSORIES - OFFSET 1-1/2" 17 GAUGE CHROME-PLATED BRASS TAILPIECE AND P-TRAP, QUARTER-TURN BALL VALVE TYPE 3/8" CHROME-PLATED BRASS ANGLE SUPPLIES WITH LOOSE KEY STOPS, CHROME-PLATED SOFT COPPER SUPPLY LINES. INSULATION KIT - PRE-MANUFACTURED FOR P-TRAP, STOP VALVES, AND SUPPLY LINES.	SINK - ELKAY ([LRAD), JUST (SL-ADA/J-ADA-35), FRANKE (ALBS) SINK TRIM - DELTA (100LF-HDF), AMERICAN STANDARD (4175.500), CHICAGO FAUCET (431-ABCP), ELKAY (LK1000CR), KOHLER (K-15171), MOEN (67425), SPEAKMAN (S-3762), SYMMONS (S-23) INSULATION KIT - MCGUIRE (PROWRAP), JUST (J-ADA), PLUMBEREX (PRO-EXTREME), TRUEBRO (LAV-GUARD2)
T-1	STORAGE TANK - VERTICAL CEMENT-LINED, HEAVY GAUGE STEEL JACKET, BAKED ENAMEL FINISH, 250 GALLON CAPACITY, 30" DIAMETER x 87" HIGH, MAGNESIUM ANODE ROD(S), FIBERGLASS OR FOAM INSULATION TO MEET LATEST ASHRAE/IES 90.1B STANDARD, 4" INLET/OUTLET, DRAIN AND RELIEF VALVE OPENINGS, ASME T&P RELIEF VALVE, 4"x6" HANDHOLES ON TANKS UP TO 30" IN DIAMETER, 11"x15" MANWAY ON TANKS 30" IN DIAMETER AND LARGER, STRUCTURAL SUPPORTS AS REQUIRED FOR INSTALLATION, 125 PSIG WORKING PRESSURE, ASME STAMPED, 5-YEAR WARRANTY.	A.O. SMITH (HD SERIES), BOCK (ST SERIES), AJAX BOILER (ACE SERIES), STATE (PVG SERIES), LOCHINVAR (RG/RC SERIES), CEMLINE (JST SERIES), RECO USA
T-2	RO PRESSURIZED STORAGE TANK - VERTICAL, COPOLYMER POLYPROPYLENE TANK REINFORCED WITH FIBERGLASS AND WITH SEALED EXPOXY RESING. WATER CHAMBER WITH 100% BUTYL RUBBER DIAPHRAGM WITH COPOLYMER POLYPROPYLENE LOWER CHAMBER, 125 PSI MAX WORKING PRESSURE, 120°F MAXIMUM WORKING TEMPERATURE, PRE-CHARGED TO 20 PSI (ADJ.). 120 GALLONS WITH 79.6 GALLONS OF DRAWDOWN WITH 10 PSI PRE-CHARGE AND 60 PSI SUPPLY.	FLEXWAVE (FWRO 120) OR ENGINEER PREAPPROVED EQUAL
TD-1	TRENCH DRAIN - PRE-MANUFACTURED POLYSTYRENE TRENCH FORMING SYSTEM, 12" WIDE, 8 FOOT SECTIONS PRE-SLOPED AT 1/8" PER FOOT, ROUNDED BOTTOM, INTEGRAL DEFORMING GROVES, STEEL SUPPORT RAILS AND ANCHORING STUDS, HEAVY DUTY CAST IRON GRATE, H-20 RATED, INTEGRAL CATCH BASIN. TRENCH DRAIN SHALL BE 9'-0" LONG WITH CENTER CATCH BASIN AND 6" BOTTOM OUTLET. DEPTH AT SHALLOW END SHALL BE OF TRENCH SHALL BE 12".	ABT (TF-14) OR APPROVED EQUAL
TD-2	TRENCH DRAIN - PRE-MANUFACTURED POLYSTYRENE TRENCH FORMING SYSTEM, 12" WIDE, 8 FOOT SECTIONS PRE-SLOPED AT 1/8" PER FOOT, ROUNDED BOTTOM, INTEGRAL DEFORMING GROVES, STEEL SUPPORT RAILS AND ANCHORING STUDS, HEAVY DUTY CAST IRON GRATE, H-20 RATED, INTEGRAL CATCH BASIN. TRENCH DRAIN SHALL BE 21'-0" LONG WITH CENTER CATCH BASIN AND 6" BOTTOM OUTLET. DEPTH AT SHALLOW END SHALL BE OF TRENCH SHALL BE 12".	ABT (TF-14) OR APPROVED EQUAL
WC-1	WATER CLOSET - ACCESSIBLE, WALL MOUNTED, FLUSH VALVE TYPE, WHITE VITREOUS CHINA, SIPHON JET, WATER SAVING, ELONGATED BOWL, 1-1/2" TOP SPUD. FLUSH VALVE - EXPOSED, WALL MOUNTED SENSOR OPERATION, HARD WIRED, 1.6 GALLONS PER FLUSH, 11-1/2" ROUGH-IN, CHROME PLATED, 1" I.P.S. SCREWDRIVER STOP-CHECK VALVE WITH VANDAL RESISTANT CAP, HIGH BACK PRESSURE VACUUM BREAKER, ADJUSTABLE TAILPIECE, SPUD COUPLING AND FLANGE, WALL FLANGE WITH SET SCREW, MECHANICAL OVER-RIDE BUTTON, CHLORAMINE RESISTANT MATERIALS, CHROME PLATED COVER PLATE WITH TAMPER-PROOF SCREWS, TRANSFORMER AND LOW VOLTAGE WIRING, ADA COMPLIANT, 3 YEAR WARRANTY. ELECTRICAL REQUIREMENTS - 120VAC INPUT SEAT - WHITE, EXTRA HEAVY, OPEN FRONT, INJECTION MOLDED SOLID ANTI-MICROBIAL PLASTIC, SELF-SUSTAINING HINGE, STAINLESS STEEL OR PLATED STEEL POSTS AND NUTS. CONTRACTOR OPTION: COMBINATION WATER CLOSET/FLUSH VALVE PACKAGED SYSTEM BY AMERICAN STANDARD, KOHLER, SLOAN, OR ZURN ACCESSORIES - WATER CLOSET SUPPORT CARRIER RATED FOR 500 LBS. MOUNT WATER CLOSET WITH CARRIER BOLTED SECURELY TO FLOOR. TOP OF SEAT SHALL BE AT 17"-19" ABOVE FINISHED FLOOR (VERIFY EXACT MOUNTING HEIGHT WITH MANUFACTURER). VERIFY EQUIPMENT REQUIREMENTS AND ROUGH-IN LOCATIONS.	WATER CLOSET - AMERICAN STANDARD (2257.101), GERBER (25-030), KOHLER (K-84325), SLOAN (ST-2053), TOTO (CT708), ZURN (Z5610) FLUSH VALVE - ZURN (ZEMS6000AV), SLOAN (111 ES-S), AMERICAN STANDARD (6067.161), DELANY (1302), HYDROTEK (H-8000C), MOEN (8310AC16), AMTC (AEF-801-HWCT-16) SEAT - BEMIS (3155SSCT), CHURCH (3155C), BENEKE (533PC), OLSONITE (95), SAME AS WATER CLOSET MANUFACTURER
WC-2	WATER CLOSET - ACCESSIBLE, OFF FLOOR, WALL MOUNTED, WALL OUTLET, WALL SUPPLY, 14 GAUGE STAINLESS STEEL, SEAMLESS WELDED CONSTRUCTION, SATIN FINISHED EXPOSED SURFACES, BLOWOUT TYPE, ELONGATED BOWL WITH SELF-DRAINING FLUSHING RIM, INTEGRAL CONTOURED SEAT. INSTALLED ON FINISHED WALL FROM THE FRONT. WALL CONCEALED SUPPLY WITH 1.6 GPF FLUSH. ACCESSORIES - WATER CLOSET SUPPORT CARRIER RATED FOR 500 LBS. FLUSH VALVE - CONCEALED IN ACEESS PANEL SENSOR OPERATION, HARD WIRED, 1.6 GALLONS PER FLUSH, 11-1/2" ROUGH-IN, CHROME PLATED, 1" I.P.S. SCREWDRIVER STOP-CHECK VALVE WITH VANDAL RESISTANT CAP, HIGH BACK PRESSURE VACUUM BREAKER, ADJUSTABLE TAILPIECE, SPUD COUPLING AND FLANGE, WALL FLANGE WITH SET SCREW, MECHANICAL OVER-RIDE BUTTON, CHLORAMINE RESISTANT MATERIALS, CHROME PLATED COVER PLATE WITH TAMPER-PROOF SCREWS, TRANSFORMER AND LOW VOLTAGE WIRING, ADA COMPLIANT, 3 YEAR WARRANTY. ACCESS PANLE SHALL BE 14 GAUGE STAINLESS STEEL WITH SATIN FINISH, 18 GAUGE STAINLESS STEEL RECESSED WALL BOX WITH VANDAL RESISTANT SCREWS. ELECTRICAL REQUIREMENTS - 120VAC INPUT	WATER CLOSET - ACORN 2100-W-1-1.6GPF-FVBO-ADA, WILLOUGHBY, METCRAFT FLUSH VALVE - ZURN (ZEMS6000AV), SLOAN (111 ES-S), AMERICAN STANDARD (6067.161), DELANY (1302), HYDROTEK (H-8000C), MOEN (8310AC16), AMTC (AEF-801-HWCT-16)
WCO-1	WALL CLEANOUT - END CAP, CAST IRON ACCESS BODY, GAS AND WATERTIGHT BRONZE OR BRASS THREADED PLUG, ROUND STAINLESS STEEL ACCESS COVER, EXTENDED MACHINE SCREW.	ZURN (Z-1441), SMITH (4422), WADE (W-8480-R/8550), JOSAM (58600-CO), WATTS (CO-380-RD), MIFAB (C1450-RD)
WH-4	WATER HEATER - GAS FIRED, CONDENSING, VERTICAL, MINIMUM 92% EFFICIENT, SEALED COMBUSTION, MINIMUM 10:1 MODULATING HEAT OUTPUT, METAL CABINET, BAKED ENAMEL FINISH, 160 PSI WORKING PRESSURE, FIBERGLASS OR FOAM INSULATION, BRASS WATER CONNECTIONS AND DRAIN VALVE, ASME APPROVED T&P RELIEF VALVE, AUTOMATIC WATER THERMOSTAT, BUILT-IN GAS REGULATING VALVE, ADJUSTABLE TEMPERATURE RANGE, 5-YEAR WARRANTY, UL LISTED, COMPLIANT TO NAECA, ASHRAE 90.1 AND ASHRAE 90A. 1572 GPH AT 100°F TEMPERATURE RISE HEATING CAPACITY, 19 GALLON STORAGE CAPACITY, 1,350,000 BTUH INPUT NATURAL GAS. ELECTRICAL REQUIREMENTS - 120V CIRCUIT, 20 AMPS, FOR BLOWER, CIRCULATING PUMP AND CONTROLS, HARD-WIRED. THIS EQUIPMENT REQUIRES EMERGENCY POWER. SET WATER TEMPERATURE AT 140°F. SET SUPPLY GAS PRESSURE AT 10" W.C. PROVIDE INTEGRATED WATER HEATER MANAGEMENT SYSTEM TO CONTROL SEQUENCING OF BOTH WATER HEATERS. PROVIDE SEQUENCING VALVES. CONDENSATE DRAIN NEUTRALIZATION TANK - RATED FOR MAXIMUM 6,000 MBH WATER HEATER AND 45 GPH CONDENSATE FLOW, POLYPROPYLENE RECTANGULAR TANK, 1"FNPT INLET AND OUTLET, REMOVABLE ACCESS COVER FOR CLEANING AND PELLET REPLACEMENT, 25 LBS PH NEUTRALIZING PELLETS. REFER TO FLOOR PLANS FOR EXISTING ELEVATOR DOOR SIZE AND CAB SIZE. MAXIMUM WATER HEATER DIMENSIONS SHALL ALLOW FOR INSTALLATION BY MOVING THROUGH BUILDING AND EXISTING ELEVATOR TO SECOND FLOOR MECHANICAL ROOM. INCLUDE COMPLETE GAS TRAIN INCLUDING GAS SAFETY SHUTOFF VALVE CONFORMING TO CSD-1 REQUIREMENTS. VENT ALL GAS VALVES TO OUTDOORS SEPERATELY.	AERCO (INN 1350N), INTELLIHOT (iQ1501), LOCHINVAR (AWH1500NPM) NEUTRALIZATION TANK - JJM BOILER WORKS (NB-6), NUTRASAFE (CN6T)

PLUMBING MATERIAL LIST CONTINUED

TAG NAME	DESCRIPTION	MANUFACTURER AND MODEL
WH-5	WATER HEATER - GAS FIRED, CONDENSING, VERTICAL, MINIMUM 92% EFFICIENT, SEALED COMBUSTION, MINIMUM 10:1 MODULATING HEAT OUTPUT, METAL CABINET, BAKED ENAMEL FINISH, 160 PSI WORKING PRESSURE, FIBERGLASS OR FOAM INSULATION, BRASS WATER CONNECTIONS AND DRAIN VALVE, ASME APPROVED T&P RELIEF VALVE, AUTOMATIC WATER THERMOSTAT, BUILT-IN GAS REGULATING VALVE, ADJUSTABLE TEMPERATURE RANGE, 5-YEAR WARRANTY, UL LISTED, COMPLIANT TO NAECA, ASHRAE 90.1 AND ASHRAE 90A. 1572 GPH AT 100°F TEMPERATURE RISE HEATING CAPACITY, 19 GALLON STORAGE CAPACITY, 1,350,000 BTUH INPUT NATURAL GAS. ELECTRICAL REQUIREMENTS - 120V CIRCUIT, 20 AMPS, FOR BLOWER, CIRCULATING PUMP AND CONTROLS, HARD-WIRED. THIS EQUIPMENT REQUIRES EMERGENCY POWER. SET WATER TEMPERATURE AT 140°F. SET SUPPLY GAS PRESSURE AT 10" W.C. PROVIDE INTEGRATED WATER HEATER MANAGEMENT SYSTEM TO CONTROL SEQUENCING OF BOTH WATER HEATERS. PROVIDE SEQUENCING VALVES. CONDENSATE DRAIN NEUTRALIZATION TANK - RATED FOR MAXIMUM 6,000 MBH WATER HEATER AND 45 GPH CONDENSATE FLOW, POLYPROPYLENE RECTANGULAR TANK, 1"FNPT INLET AND OUTLET, REMOVABLE ACCESS COVER FOR CLEANING AND PELLET REPLACEMENT, 25 LBS PH NEUTRALIZING PELLETS. REFER TO FLOOR PLANS FOR EXISTING ELEVATOR DOOR SIZE AND CAB SIZE. MAXIMUM WATER HEATER DIMENSIONS SHALL ALLOW FOR INSTALLATION BY MOVING THROUGH BUILDING AND EXISTING ELEVATOR TO SECOND FLOOR MECHANICAL ROOM. INCLUDE COMPLETE GAS TRAIN INCLUDING GAS SAFETY SHUTOFF VALVE CONFORMING TO CSD-1 REQUIREMENTS. VENT ALL GAS VALVES TO OUTDOORS SEPERATELY.	AERCO (INN 1350N), INTELLIHOT (iQ1501), LOCHINVAR (AWH1500NPM) NEUTRALIZATION TANK - JJM BOILER WORKS (NB-6), NUTRASAFE (CN6T)
WHA-1	WATER HAMMER ARRESTOR - BELLOWS TYPE, PRE-CHARGED, ALL LEAD FREE STAINLESS STEEL CONSTRUCTION, ASSE 1010 APPROVED, PDI CERTIFIED, RATED FOR [1-11][12-32][33-60][61-113][114-154][155-300] FIXTURE UNITS. REFER TO DETAIL 2/P4.1 FOR WATER HAMMER ARRESTOR LOCATION AND SIZING INFORMATION. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.	ZURN (Z1700), JR SMITH (5005-5050), WADE (W5-100), JOSAM (75000 SERIES), WATTS (SS), MIFAB (WHB)
WHA-2	WATER HAMMER ARRESTOR - BELLOWS TYPE, PRE-CHARGED, ALL LEAD FREE STAINLESS STEEL CONSTRUCTION, ASSE 1010 APPROVED, PDI CERTIFIED, RATED FOR 155-300 FIXTURE UNITS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.	ZURN (Z1700), JR SMITH (5005-5050), WADE (W5-100), JOSAM (75000 SERIES), WATTS (SS), MIFAB (WHB)
WMF-1	WASHING MACHINE FIXTURE - STAINLESS STEEL ENCLOSURE, 2" CENTER DRAIN, INLET STRAINER, SCREEN OR SEDIMENT BASKET, TWO INDEXED 1/2" DOMESTIC VALVES WITH THREADED OUTLETS, INTEGRAL WATER HAMMER ARRESTORS.	GUY GRAY (SSWB3 SERIES)
WS-3	WATER SOFTENER - TRIPLEX SOFTENER TANKS, AUTOMATIC REGENERATION TYPE BASED ON MULTIPLE TANK PROGRESSIVE CONTROL SYSTEM, BRINE RECLAIMATION SYSTEM, POWER SUPPLY WITH CORD AND PLUG. SYSTEM DESIGN FLOW OF 150 GPM. EACH UNIT SHALL HAVE: CONTINOUS FLOW RATE OF 152 GPM AT 15 PSI LOSS MAXIMUM FLOW RATE OF 210 GPM AT 25 PSI LOSS DESIGN FLOW RATE OF 50 GPM AT 1.42 PSI LOSS. MINIMUM FLOW RATE OF 10 GPM TO AVOID CHANNELING MINIMUM CAPACITY OF 200,000 GRAINS PER TANK SALT DOSAGE OF 10 LBS PER CUBIC FOOT OF RESIN SOFTENER TANK SIZE: 30"X60" (QTY. 3) BRINE TANK SIZE: 30"X50" (QTY. 1) ELECTRICAL REQUIREMENTS - PROVIDE ONE 120V-1 PHASE RECEPTACLE PER CONTROL VALVE. THIS EQUIPMENT REQUIRES EMERGENCY POWER. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.	REFER TO SPECIFICATIONS BASIS OF DESIGN: CULLIGAN CSM-300-3

PRESSURE BOOSTER SYSTEM SCHEDULE

NOTES:
1.PROVIDE SHAFT GROUNDING AS REQUIRED IN THE MOTOR SPECIFICATION 22 05 13.
2.HP NOTED IS FOR EACH PUMP. SKID HAS A TOTAL OF THREE PUMPS.
3.GPM LISTED IS TOTAL DESIGN FLOW. FLOW OF EACH PUMP SHALL BE 50 GPM.
4.COORDINATE WIDTH OF BOOSTER PACKAGE TO ALLOW FOR MOVEMENT THROUGH BUIDING THROUGH 36" WIDE DOORS. PIPE MANIFOLD MAY NEED TO BE REMOVED WHILE BRING INTO BUILDING.

							ELECTRICAL (NOTE 1)											
											DISCONNECT							
TAG NAME	AREA SERVED	CONFIGURATION	INLET PRESSURE PSI	OUTLET PRESSURE PSI	GPM (NOTE 3)	MINIMUM HYDROPNEUMATIC TANK SIZE	HP (NOTE 2)	RPM	VOLTAGE	PHASES	BY (NOTE A)	TYPE (NOTE B)	CONTROLLER/ STARTER BY (NOTE A)	SCCR (AMPS)	THIS REQUIRES EMERGENCY POWER	MANUFACTURER	MODEL	NOTES
PB-1	KITCHEN/LAUNDRY	TRIPLEX	50	90	150	132	3	1800	480	3	MFR.	NF	MFR.	5000	Yes	BELL & GOSSET	V3VFD6F80B1CK	NOTE 4

PIPE INSULATION SCHEDULE (PLUMBING)

GENERAL NOTES:
1. REFER TO THE SPECIFICATIONS FOR TYPE DESCRIPTIONS AND JACKETING REQUIREMENTS. VALUES LISTED BELOW ARE BASED ON ASHRAE / IECC REQUIREMENTS.
2. TYPE A INSULATION IS NOT ALLOWED IN NON-AIR CONDITIONED SPACES, SUCH AS MECHANICAL ROOMS, EXTERIOR, ATTICS, ETC.
3. TYPE B INSULATION GREATER THAN 1" THICK SHALL BE INSTALLED USING MULTIPLE LAYERS OF 3/4" OR 1" WITH STAGGERED SEAMS.
4. TYPE E IS NOT ALLOWED IN RETURN AIR PLENUMS, UNLESS LISTED AND LABELED AS 25/50 RATED PER ASTM E84/UL723
5. PROVIDE RIGID INSERT AT HANGERS, EITHER PRE-MANUFACTURED COUPLINGS (REFER TO PIPE HANGER AND SUPPORTS SPECIFICATIONS) OR TYPE C, D, OR E INSULATION. SEE SPEC. FOR MORE DETAILS.

PIPE SYSTEM	INSULATION TYPE AND THICKNESS PER NOMINAL PIPE OR TUBE SIZE				INSULATION TYPE AND THICKNESS PER NOMINAL PIPE OR TUBE SIZE (DIRECT BURIED)			NOTES
	< 1"	1" TO < 1.5"	1.5" TO < 4"	4" TO < 8"	< 1"	1" TO < 1.5"	1.5" TO < 4"	
CW - COLD WATER - POTABLE	A 0.5", B 0.5", E 0.5"	A 0.5", B 0.5", E 0.5"	A 1", B 1", E 1"	A 1", B 1", E 1"				
D - DRAIN - PLUMBING	A 0.5", B 0.5", E 0.5"	A 0.5", B 0.5", E 0.5"	A 1", B 1", E 1"	A 1", B 1", E 1"				APPLY INSULATION ONLY TO LOW TEMP DRAINS (55 DEG AND LOWER IE: COOLING COIL CONDENSATE, ICE MACHINE DRAINS, ETC.)
GV - GREASE VENT	A 0.5", B 0.5", E 0.5"	A 0.5", B 0.5", E 0.5"	A 1", B 1", E 1"	A 1", B 1", E 1"				APPLY INSULATION ONLY WITHIN 10' OF EXTERIOR PENETRATION
HWC - HOT WATER CIRCULATING - POTABLE	A 1", B 1", E 1"	A 1", B 1", E 1"	A 1.5", E 1"	A 1.5", E 1"	C 1", E 1"	C 1", E 1"	C 1", E 1"	
MISC RELIEF VENTS, INTAKES, AND DISCHARGES	A 0.5", B 0.5", E 0.5"	A 0.5", B 0.5", E 0.5"	A 1", B 1", E 1"	A 1", B 1", E 1"				APPLY INSULATION ONLY WITHIN 10' OF EXTERIOR PENETRATION ON COMPRESSOR INTAKES, VACUUM DISCHARGES, VENT/RELIEF LINES, ETC.
NCW - NON-POTABLE COLD WATER	A 0.5", B 0.5", E 0.5"	A 0.5", B 0.5", E 0.5"	A 1", B 1", E 1"	A 1", B 1", E 1"				
NHW - NON-POTABLE HOT WATER	A 1", B 1", E 1"	A 1", B 1", E 1"	A 1.5", E 1"	A 1.5", E 1"	C 1", E 1"	C 1", E 1"	C 1", E 1"	
RO - REVERSE OSMOSIS	A 0.5", B 0.5", E 0.5"	A 0.5", B 0.5", E 0.5"	A 1", B 1", E 1"	A 1", B 1", E 1"				
SAN - SANITARY DRAINAGE	A 0.5", B 0.5", E 0.5"	A 0.5", B 0.5", E 0.5"	A 1", B 1", E 1"	A 1", B 1", E 1"				APPLY INSULATION ONLY TO FLOOR DRAIN BODY, P-TRAP AND 10' DOWNSTREAM AT LOW TEMP DRAIN DISCHARGE (55 DEG AND LOWER IE: COOLING COIL CONDENSATE, ICE MACHINE DRAINS, ETC.)
SCW - SOFT COLD WATER	A 0.5", B 0.5", E 0.5"	A 0.5", B 0.5", E 0.5"	A 1", B 1", E 1"	A 1", B 1", E 1"				
SHW - SOFT HOT WATER	A 1", B 1", E 1"	A 1", B 1", E 1"	A 1.5", E 1"	A 1.5", E 1"	C 1", E 1"	C 1", E 1"	C 1", E 1"	
V - VENT	A 0.5", B 0.5", E 0.5"	A 0.5", B 0.5", E 0.5"	A 1", B 1", E 1"	A 1", B 1", E 1"				APPLY INSULATION ONLY WITHIN 10' OF EXTERIOR PENETRATION

AIR COMPRESSOR SCHEDULE

NOTES:
1. FURNISH WITH NO LOSS AUTOMATIC CONDENSATE DRAIN.

					ELECTRICAL								MAX. DIMENSIONS					
									DISCONNECT		CONTROLLER/ STARTER							
TAG NAME	AREA SERVED	CONFIGURATION	CAP. SCFM AT 100 PSI	RECEIVER CAPACITY (GAL.)	HP EACH	NO. OF POWER CONNECTIONS	VOLTAGE	PHASES	BY (NOTE A)	TYPE (NOTE B)	BY (NOTE A)	TYPE (NOTE C)	LENGTH	WIDTH	HEIGHT	MANUFACTURER	MODEL	NOTES
AC-1	LAUNDRY	SIMPLEX	3.3	30	1	1	120	1	MFR	NF	MFR	FV	42	16	37	QUINCY	QR-25 F210	NOTE 1

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ISSUE:

#	DATE:	DESCRIPTION:

IFC
04/08/2024

PROJECT:
STATE OF IOWA - DEPARTMENT OF CORRECTIONS

CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE: 02/09/2024
DESIGNED: MIKMCC
DRAWN: MIKMCC
REVIEWED: DELLLE

SHEET TITLE:
PLUMBING SCHEDULES

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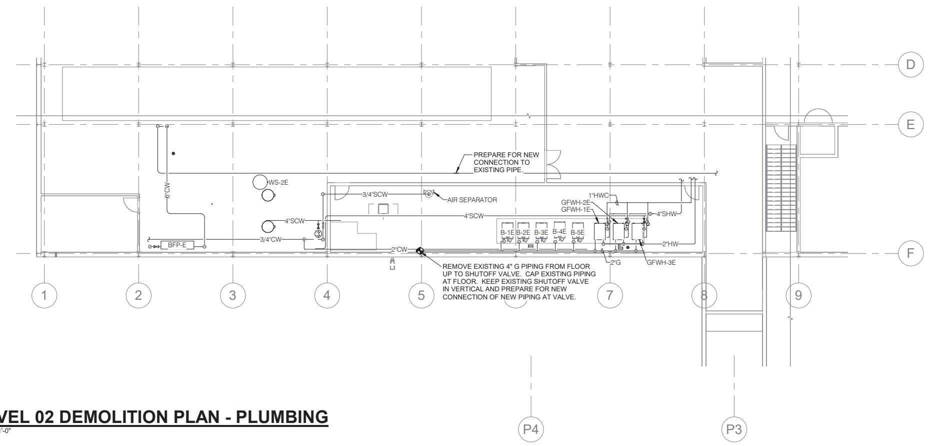
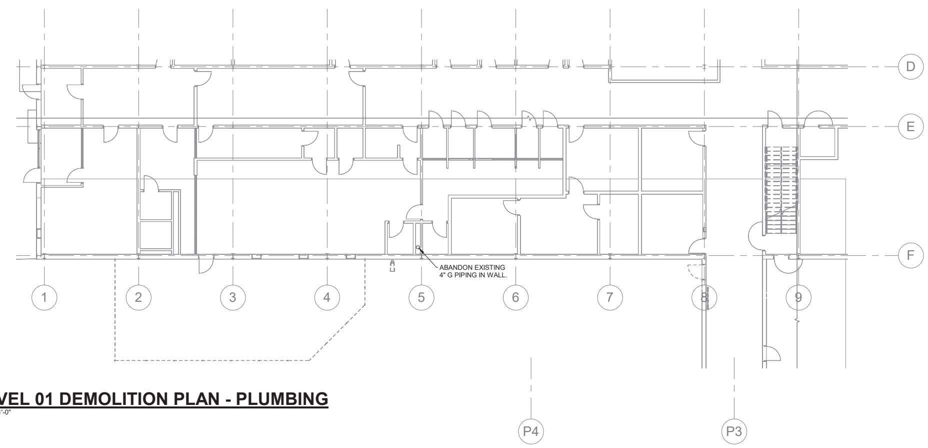
0 1 2 3
REF. SCALE IN INCHES
PROJECT #21007688.00

SHEET NUMBER:
P6.2

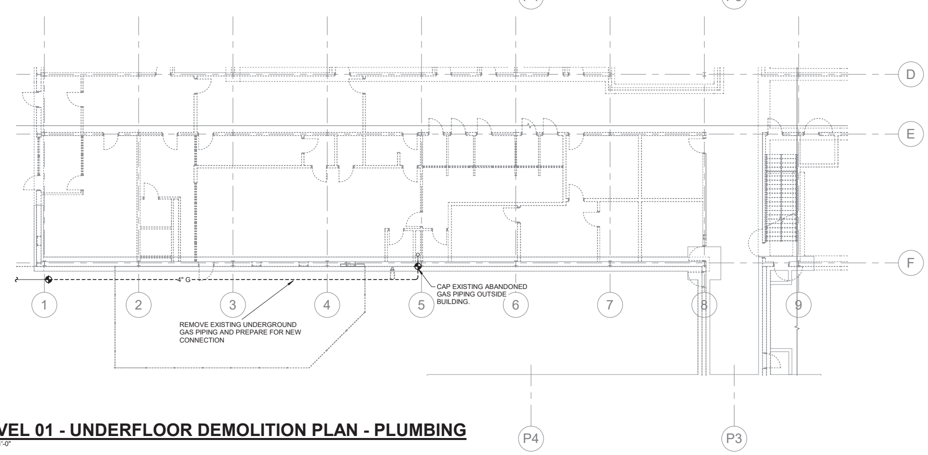
PROJECT NO.: 0240202.00
RFB922300-02



1 LEVEL 02 DEMOLITION PLAN - PLUMBING
3/32" = 1'-0"



2 LEVEL 01 DEMOLITION PLAN - PLUMBING
3/32" = 1'-0"



3 LEVEL 01 - UNDERFLOOR DEMOLITION PLAN - PLUMBING
3/32" = 1'-0"

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CLARINDA CORRECTIONAL FACILITY - KITCHEN & LAUNDRY ADDITION

2000 N 16TH ST, CLARINDA, IA 51632

DATE:	02/09/2024
DESIGNED:	MIKMCC
DRAWN:	MIKMCC
REVIEWED:	DELLE

SHEET TITLE:
LEVEL 01 DEMOLITION PLAN - PLUMBING

SHEET NUMBER:
PD1.1

PROJECT NO.: 0240202.00
RFB922300-02