WORK SCOPE

The work under this Contract is to provide the labor, material, and equipment for the complete installation of the systems described. Contractor is responsible for installation, balancing, testing, startup, and operational checkout for a fully functional system.

The drawings and work scope are not intended to be comprehensive of all work to be done under this Contract. Specifications, drawings, and work scope must be used in their entirety to develop full understanding of the work to be done under this Contract.

Base Bid:
Provide and install total refrigeration and integral freeze protection floor system and fire protection system for food storage warehouse per Drawings. Refrigeration equipment to be located in mechanical room allocated. The system includes furnishing of all components and installation of a custom engineered refrigeration system that has the capability to maintain operating temperature of $-20^{\circ}F$. Some demolition of existing refrigeration and fire protection equipment required.

Refrigeration system to include evaporators, pumps, piping, evaporative condenser, compressors, expansion tanks, accumulator, oil separator system, valves, fittings, micro-processor controls, alarms, and related equipment for fully functional system. Provide equipment room ventilation system, emergency shut down switching, and related Oregon Code requirements for safe refrigeration operation and containment. Provide also equipment isolation pads, pipe supports and hangers, and seismic restraints for each major equipment component. Provide computer based control of system including hydronic floor freeze protection for fully automatic operation. Provide and install exhaust fans for freezer condensation control.

Coordinate initial start-up and temperature pull-down proceedures with Contractor's Commissiong Agent in accordance with Specification Section 01820.

The radiant under floor freeze protection system is to include continuous engineered cross-linked polyethylene (PEX) tubing coupled with a shell and tube heat exchanger in the refrigerant discharge piping. Loop temperatures shall be maintained by mixing valves and a central control panel tied into temperature sensors. A backup, gas fired, hot water boiler will also be plumbed in. radiant tube manifolds and connecting fittings to be accessible for service. Underground connections are not allowed. Glycol ground loop to be maintained at $45^{\circ}F$ to $55^{\circ}F$.

Two fire protection systems are to be installed. Work to include design and approval of the two systems. System #1 is a double interlocked pre-action dry system using compressed nitrogen gas with extra large orifice $286^{\circ}F$ dry pendant sprinklers installed in ceiling of the $-20^{\circ}F$ freezer. System #1 replaces 8" Grinnell dry valve and trim marked "8A." Install $140^{\circ}F$ fire detectors in ceiling of freezer. Install electrical release control designed and manufactured by the same manufacturer as valve on system #1. Release control to have a minimum of 90 hour backup battery and automatic recharging capability. System #2 is to reuse existing Grinnell 8" dry valve marked "7AA" and air compressor. Provide and install new piping and large orifice $286^{\circ}F$ upright sprinklers for protection of the intertistal space between the top of the freezer and the roof.

Perform water quantity and pressure test on existing hydrants. Obtain approval to reuse existing standpipes, fire department connections, hose connections, wall fire hydrants, and other ancillary existing system parts.

Provide and install interface to existing fire alarm system, two emergency pull boxes, and visual and auditory alarms. Provide and install two cabinets for spare sprinklers, tools, spares, and instructions. Provide two spare 300 cubic feet high pressure nitrogen gas cylinders, fully charged.

Test operation of existing air compressor, existing dry valve "7AA", and all new equipment per fire departments requirements. Final fire department approval of both systems shall be required for Substantial Completion.

GENERAL NOTES

Provide submittals of product information to Engineer for approval.

Manufacturers listed represent minimum standards. Other manufacturers will be considered following prior approval. Final approval is at time of submittal.

All work shall comply with applicable codes and regulations as enforced by the State of Oregon and the local Code Authority.

Contractor is responsible for any damage to roof membrane resulting from this work.

Reports will be submitted to Engineer in duplicate giving observations and results of test, indicating compliance or non-compliance with specified standards and with Contract Documents.

Install all work parallel and plumb to building lines.

All piping and equipment shall be installed in a manner and in locations to avoid obstruction, preserve head room, and keep openings and passageways clear.

Existing facilities are drawn as accurately as can be determined from existing drawings and on-site inspections. Verify at Project.

No attempt has been made to show all pipe supports, locations and expansion joints. Refer to specifications for this.

Visitation of the job site is required before bidding, existing conditions may affect the extent of the work. Additional costs will not be authorized due to lack of understanding of the scope of work and existing conditions.

To insure the structural integrity of the building, all cutting required for the installation of ducts, piping, and conduit is to be cleared through the Engineer before work is done.

INITIAL START UP AND TEMPERATURE PULL-DOWN REQUIREMENTS

1. Contraction joints must be able to prevent structural damage during pull-down.
2. First stage of temperature reduction should be from ambient down to $35^{\circ}F$. Usually takes about 4 to 5 days.
3. Hold room at $35^{\circ}F$ until evaporators are clear of ice.
4. Doors should be partially open during pull-down to relieve the internal vacuum caused by cooling air.
5. At end of holding period caulk any open joints. Concrete slab will contract during pull-down.
6. After above steps pull-down to $-20^{\circ}F$. Expect rate of $5^{\circ}F$ per day total drying. Total pull-down process can take up to 4 weeks.

EQUIPMENT LIST

Compressor C-1:
Screw compressor with minimum capacity of 55 tons refrigeration @ $-30^{\circ}F$ suction and $85^{\circ}F$ condensing temperatures using R-22 refrigerant. Liquid injection oil cooling. Two speed motor. 550 cfm displacement. 4,000 lbs. Vilter VSS 451, M & M Refrigeration, Chandler, or prior approved equal.

Compressor C-2:
Screw compressor with minimum capacity of 55 tons refrigeration @ $-30^{\circ}F$ suction and $85^{\circ}F$ condensing temperatures using R-22 refrigerant. Liquid injection oil cooling. Single speed motor. 550 cfm displacement. 4,000 lbs. Vilter VSS 451, Bitzer, Chandler, or prior approved equal.

Evaporative Condenser CU-1:
Factory assembled evaporative condenser capable of rejecting minimum 1,960,000 Btu/hr. $1\frac{1}{2}$ Hp, 220 gpm. 26,500 cfm fan with two 3 Hp motors and variable frequency drive. 10,000 lbs. Vilter VSA 142, BAC, Evapco, or prior approved equal.

Evaporators AU-1 to AU-8:
Eight (8) evaporators at 95,000 Btu/hr capacity 4 fins per inch, min. 100 foot throw, hot gas bypass defrost. Two 1 Hp fan motors. Vilter HP23-64-1, Colmac, Krack, or prior approved equal.

Pressure Vessels:
Suction accumulator: Shell and tube accumulator with high level float control, 36" diameter X 8' high. 120 VAC.

High pressure receiver: Welded steel tank, 24" diameter X 12' long.

Boiler B-1:
Gas fired, condensing boiler, minimum capacity 115 MBH. Weil McClain GV-5, or approved equal.

Heat Exchanger HX-1:
Shell and tube heat exchanger capable of transfering 60,000 BTU/Hr.. Stainless steel tubes.
Tube Side: 5 GPM glycol solution, EWT $40^{\circ}F$, LWT $60^{\circ}F$.
Shell Side: R22 refrigerant, 155 PSIG.

Viltor, E.L. Nickel, or approved equal.

Circulations Pump:
Inline circulation, 15 gpm at 25 feet head. Motor, $\frac{1}{2}$Hp, 120 volt. Grundfos UPC-50-160, B&G, Armstrong, Taco, or approved equal. Two (2) required.

Exhaust fans:
Aluminum, sidewall mounted exhaust fan with capacities as noted below:

Mechanical Room Fan	EF-1	900 cfm, $\frac{1}{10}$ Hp, 1 required
Attic fan	EF-2	2,500 cfm, $\frac{1}{3}$ Hp, 1 required
Wall Cavity Fans	EF-3	1,200 cfm, $\frac{1}{8}$ Hp, 2 required
Purge Fan	EF-4	5,000 cfm, $\frac{1}{2}$ Hp, 1 required

Greenheck, Cook, Acme, or approved equal.

CONTROL SEQUENCES

Compressors:

Compressor C-1 starts logic (primary). Call for compressor or "hand" switch on unless plant fault or trip relay active. If compressor C-1 faulted, buffer timer active before compressor C-2 starts. If C-1 does not start in grace period, C-2 starts. Compressor C-2 is a stand-by compressor. C-2 operates only if freezer capacity is too great for C-1 or compressor #1 is faulted or will not start. Compressor #2 has fault trip relays as C-1. Compressor C-2 capacity enable occures if suction pressure is greater or equal to setpoint.

Freeze Protection System:

Coldest slab temperature sensor control heating valves. Heating valve V-1 opens to full heat prior to heat valve V-2 opening. Controller operates both valves to maintain minimum setpoint of $85^{\circ}F$ (operator adjustable).

Defrost Cycle:

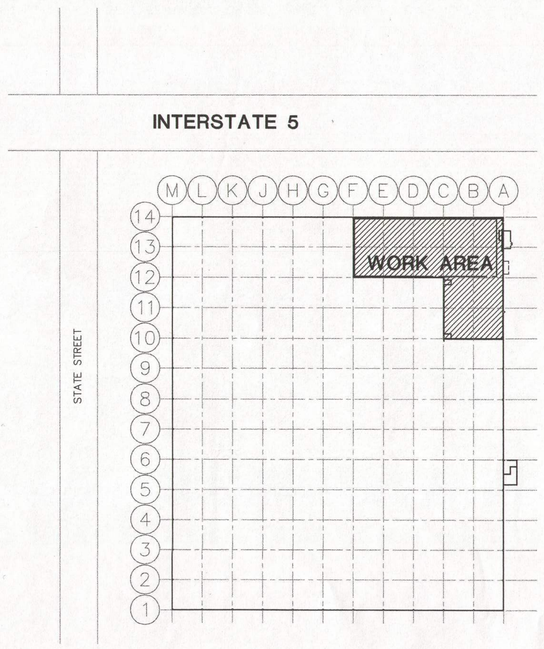
Step 1: Pump down accumulator below flow level, main discharge reg de-energized and hot gas reg energized (hot gas bypass defrost).
Step 2: Evaporator fans off and enable suction stop relay.
Step 3: Enable hot gas bypass solenoid.
Step 4: Disable hot gas bypass solenoid and defrost relief energized for 5 minutes.
Step 5: Disable defrost: Main gas and discharge revert back to normal suction. Stop relay remains open this step.

Time delay between the eight evaporator starts so all do not start same time. A one minute timer. Assure time delay betwen defrost cycles and only two evaporators defrosting at a time. Sequence so that only one evaporator on the south branch (AU-1 to AU-4) and that one evaporator on the north branch (AU-5 to AU-8) defrost simultaneously.

Alarms:

- Low level or high level refrigerant leak - horn/light alarm
- Freezer high temperature alarm
- Compressor C-1 and C-2 faulted lights
- Overflow trap
- Emergency refrigeration switch - glycol pump.

Refrigeration leak detection & alarm on low/high levels. Start emergency machine room vent fan EF-4 on high limit.



SITE PLAN
SCALE: 1" = 100' (GRID LINES ARE 42' O.C.)

FILE: 01ODCM01.DWG

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DRAWN BY: R.L.P. | DATE: MAR. 8, 99
REVISION:

CONSULTING STRUCTURAL ENGINEERS
1045 13th ST. SE. SALEM, OREGON 97302 PH: (503) 399-1389 FAX: (503) 399-8269
19 NW. 5th. AVE. PORTLAND, OREGON 97209 PH: (503) 222-6886 FAX: (503) 222-1859
ENGINEERS, INC.

DOC DISTRIBUTION CENTER FREEZER REMODEL

MECHANICAL AND ELECTRICAL ENGINEERS
687 NW 5TH STREET
CORVALLIS, OREGON 97330
TELEPHONE (541) 754-1062
FAX (541) 753-3948
EMAIL: engineering@eesnet.com
Environmental & Engineering Services Inc.

CENTRAL DISTRIBUTION WAREHOUSE
3601 STATE STREET SE
SALEM, OREGON

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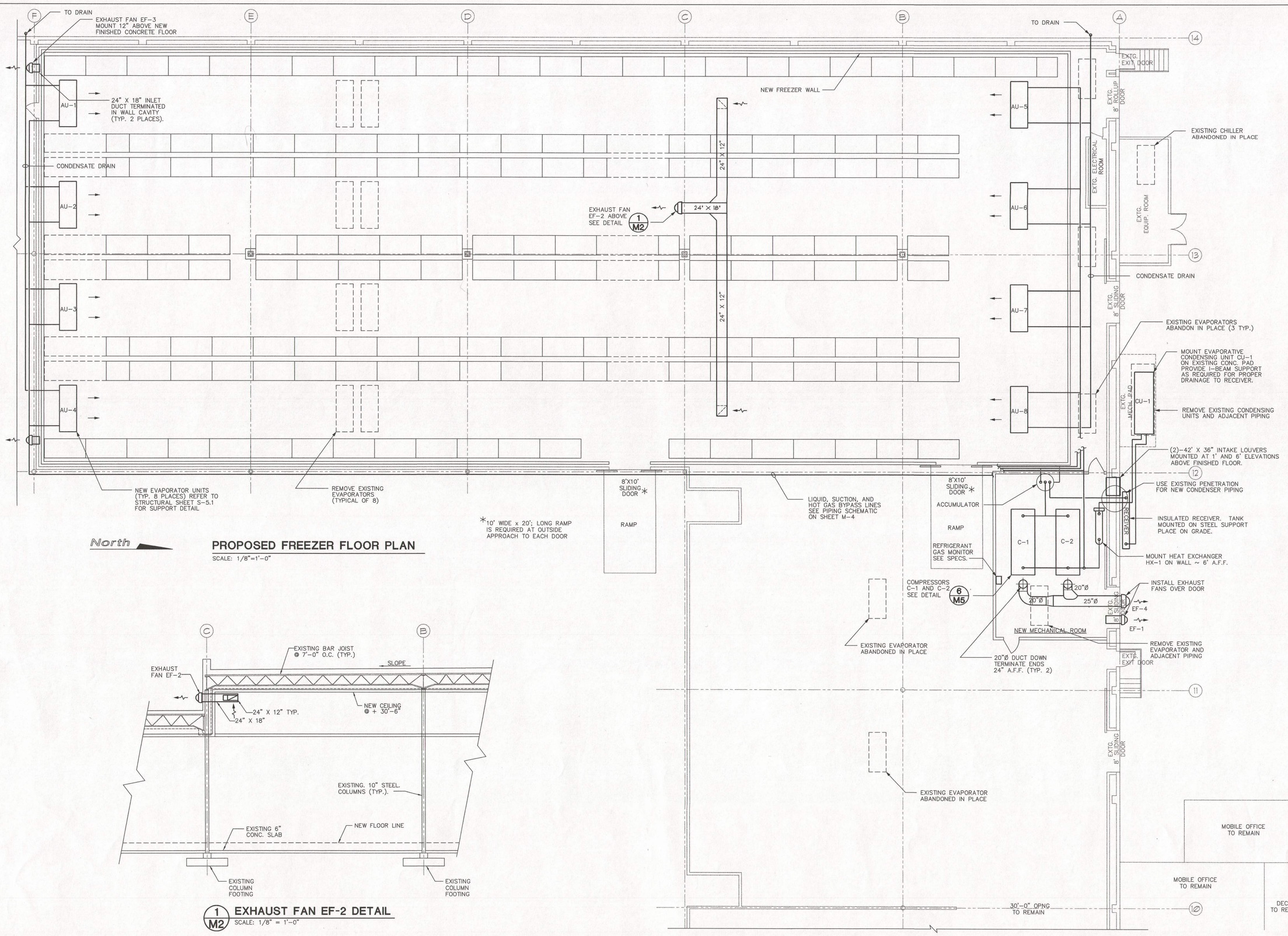

PROPOSED FREEZER FLOOR PLAN

SCALE: 1/8"=1'-0"

1/M2 EXHAUST FAN EF-2 DETAIL

SCALE: 1/8" = 1'-0"

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CONSULTING STRUCTURAL ENGINEERS

19 NW. 5th. AVE.
PORTLAND, OREGON 97209
PH: (503) 223-1199
FAX: (503) 222-1859

1045 13th ST. SE.
SALEM, OREGON 97302
PH: (503) 399-8259
FAX: (503) 399-8259

ENGINEERS, INC.

MECHANICAL AND ELECTRICAL ENGINEERS

Environmental & Engineering Services Inc.
687 NW 5TH STREET
CORVALLIS, OREGON 97330
TELEPHONE (541) 754-1062
FAX (541) 753-3948
EMAIL: engineering@eesinet.com

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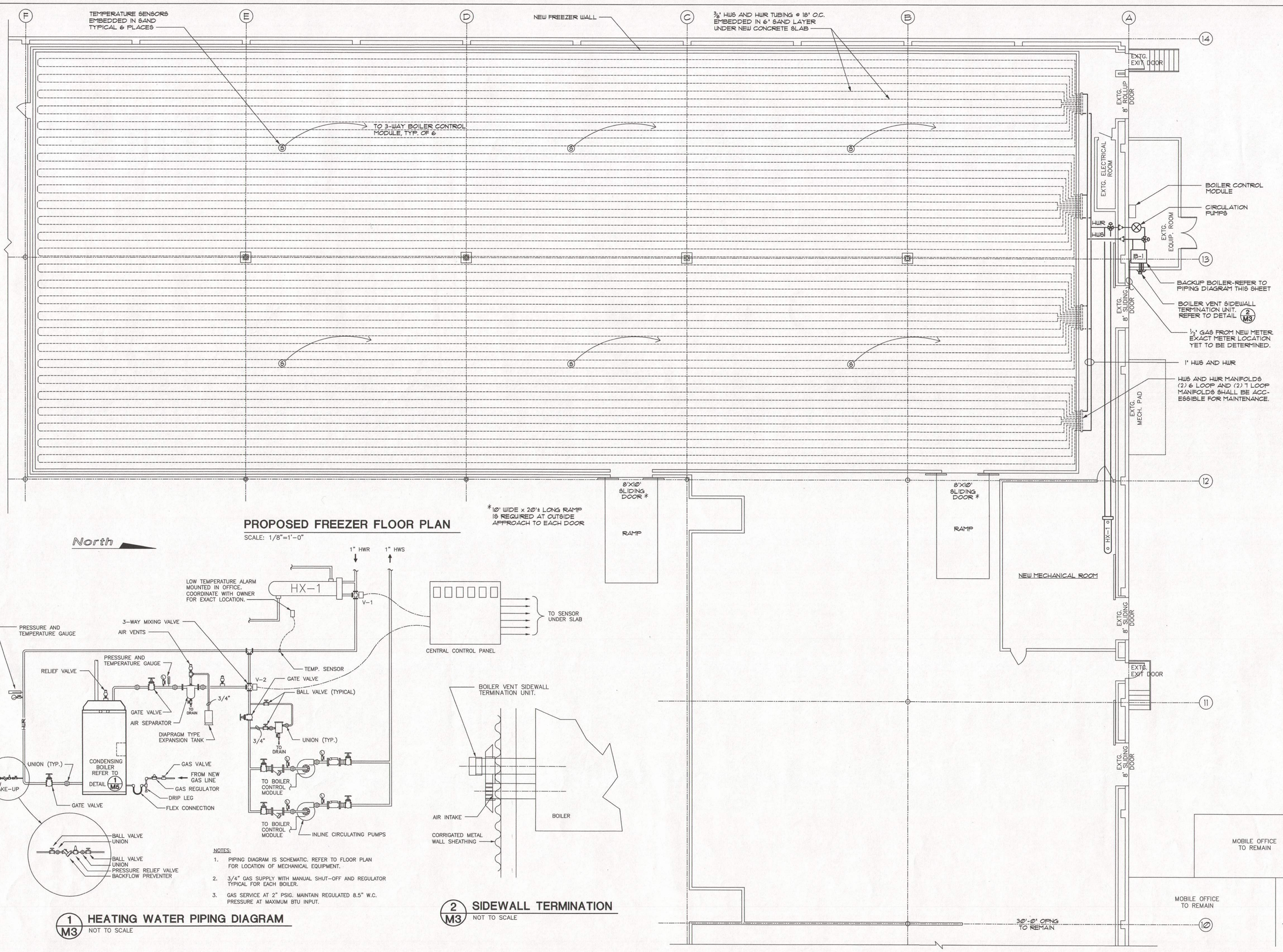

PROPOSED FREEZER FLOOR PLAN

SCALE: 1/8"=1'-0"

North

NOTES:

1. PIPING DIAGRAM IS SCHEMATIC. REFER TO FLOOR PLAN FOR LOCATION OF MECHANICAL EQUIPMENT.
2. 3/4" GAS SUPPLY WITH MANUAL SHUT-OFF AND REGULATOR TYPICAL FOR EACH BOILER.
3. GAS SERVICE AT 2" PSIG. MAINTAIN REGULATED 8.5" W.C. PRESSURE AT MAXIMUM BTU INPUT.

1/M3 HEATING WATER PIPING DIAGRAM

NOT TO SCALE

2/M3 SIDEWALL TERMINATION

NOT TO SCALE

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1045 13th ST. SE, SALEM, OREGON 97302, PH: (503) 399-1389, FAX: (503) 399-8259
19 NW. 5th AVE, PORTLAND, OREGON 97209, PH: (503) 222-8886, FAX: (503) 222-1859

ENGINEERS, INC.

MECHANICAL AND ELECTRICAL ENGINEERS
687 NW 5TH STREET
CORVALLIS, OREGON 97330
TELEPHONE (541) 754-1052
FAX (541) 753-3948
EMAIL: engineering@eesinet.com

Environmental & Engineering Services Inc.

DOC DISTRIBUTION CENTER FREEZER REMODEL

CENTRAL DISTRIBUTION WAREHOUSE
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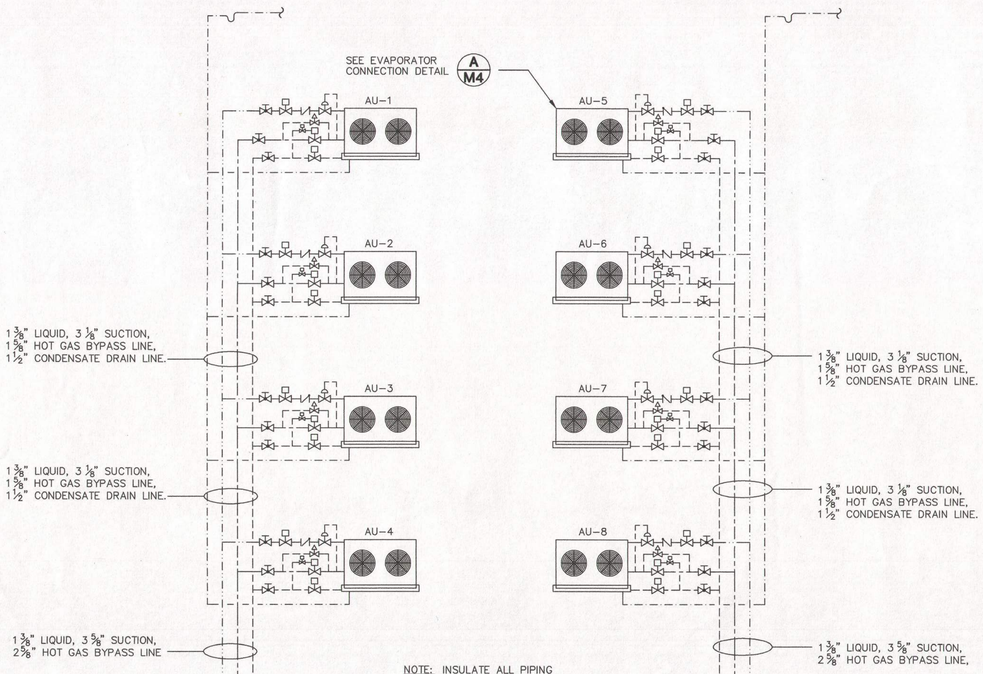
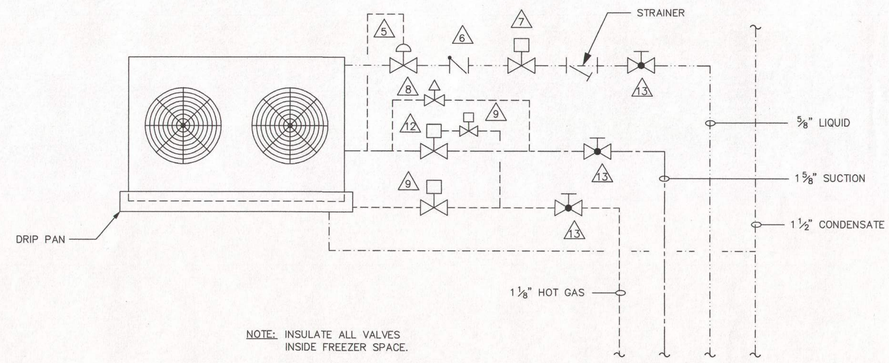
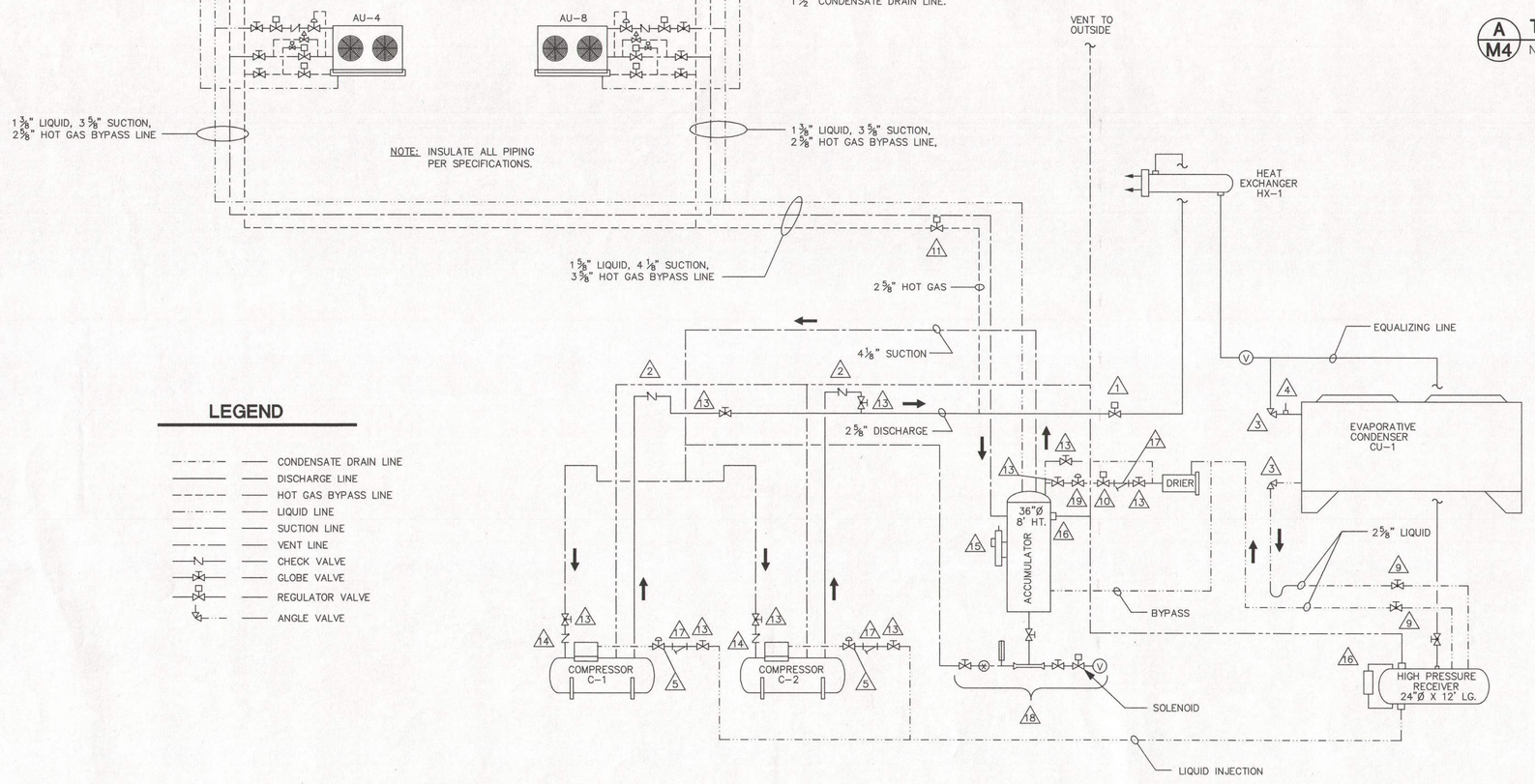




A M4 **TYPICAL EVAPORATOR CONNECTION DETAIL**
NOT TO SCALE



LEGEND

- CONDENSATE DRAIN LINE
- DISCHARGE LINE
- HOT GAS BYPASS LINE
- LIQUID LINE
- SUCTION LINE
- VENT LINE
- CHECK VALVE
- GLOBE VALVE
- REGULATOR VALVE
- ANGLE VALVE

Valve Schedule

Mark	Descr.	Notes
1	Discharge Regulator	2 1/2" Hansen HA4A RNG A, 2 5/8" ODS
2	Stop Check Valve	included w/ compressor
3	Angle Valve	
4	Relief Valve	Hansen H5600 w/RDA, set 250 psi
5	Thermal Expansion Valve	Sporlan TXV
6	Check Valve	Hansen HCK4-2 w/MAR, liquid line check valve
7	Solenoid Valve	Hansen HS8, liquid line solenoid
8	Defrost Relief Valve	3/4" Hansen HA4AB
9	Solenoid Valve	3/4" Hansen HS4A ODS conn., hot gas solenoid
10	Solenoid Valve	Hansen HS7
11	Hot Gas Regulator	2 1/2" Hansen HA4AO 2 5/8"
12	Suction Regulator	Hansen HCK2 w/pilot ODS suction stop
13	Isolation Globe Valve	
14	Stop Check Valve	included w/ compressor
15	Float Control	Hansen HLC
16	Relief Valve	Hansen H5602 w/RDA, set 250 psi
17	Strainer	
18	Oil Bleed Assembly	Venturi Assembly / Oil recovery system
19	Hand Expansion Valve	Hansen RS150

1 M4 **PIPING SCHEMATIC**
NOT TO SCALE

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CONSULTING STRUCTURAL ENGINEERS
1045 13th ST. SE
SALEM, OREGON 97302
PH: (503) 399-1399
FAX: (503) 399-8259

19 NW 5th AVE.
PORTLAND, OREGON 97209
PH: (503) 222-0886
FAX: (503) 222-1859

ENGINEERS, INC.

DOC DISTRIBUTION CENTER FREEZER REMODEL

CENTRAL DISTRIBUTION WAREHOUSE
3601 STATE STREET SE
SALEM, OREGON

MECHANICAL AND ELECTRICAL ENGINEERS
687 NW 5TH STREET
CORVALLIS, OREGON 97330
TELEPHONE (541) 754-1002
FAX (541) 753-3948
EMAIL: engineering@eesinet.com

Environmental & Engineering Services Inc.

REGISTERED PROFESSIONAL ENGINEER
16482
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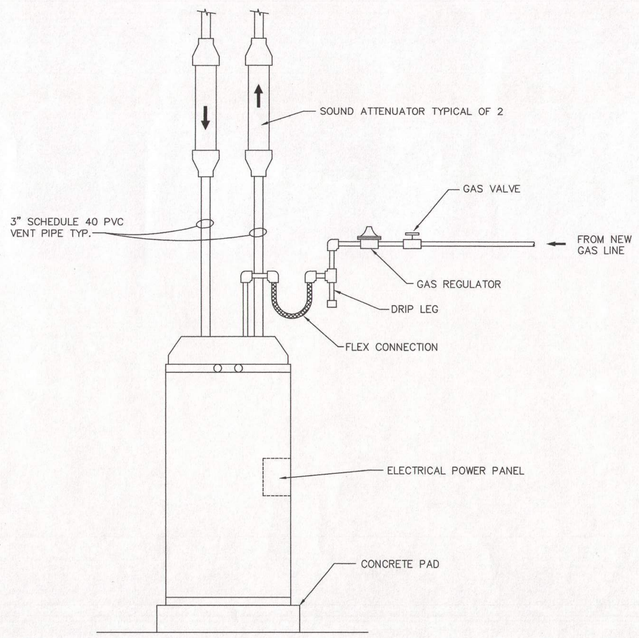
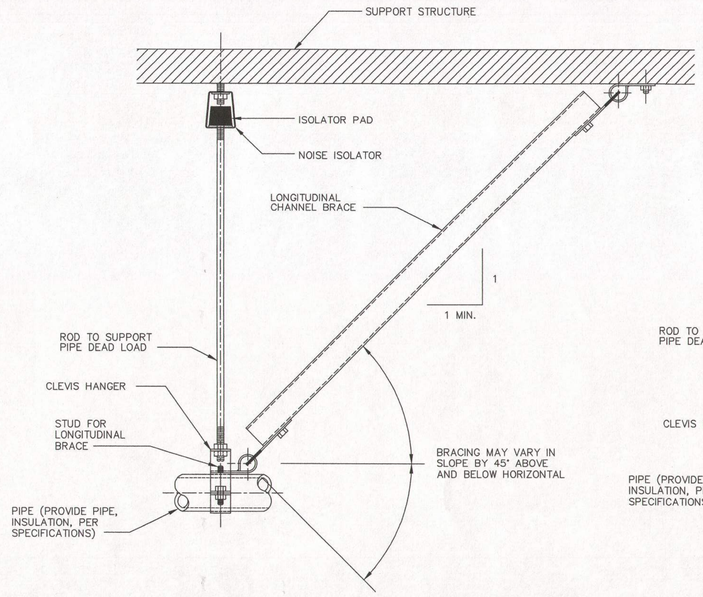
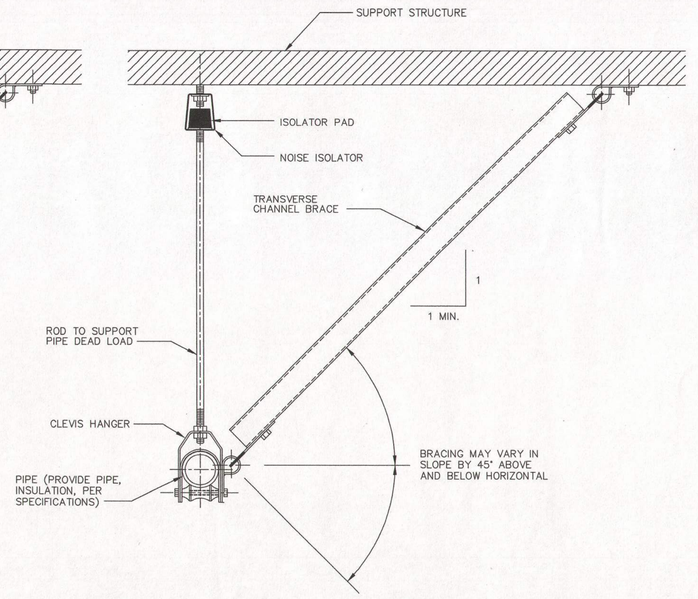


1 M5 **HEATING BOILER ELEVATION DETAIL (B-1)**
NOT TO SCALE



3 M5 **SEISMIC LONGITUDINAL BRACING FOR PIPING**
NOT TO SCALE



4 M5 **SEISMIC TRANSVERSE BRACING FOR PIPING**
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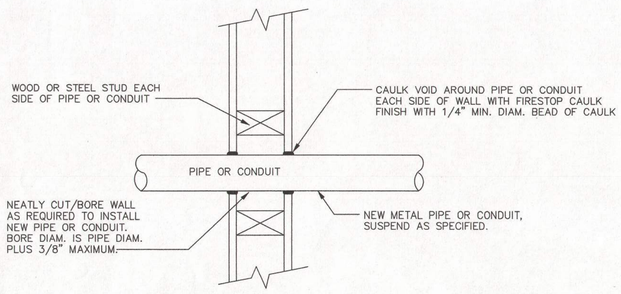

2 M5 **FIRE RATED WALL PIPE PENETRATION DETAIL**
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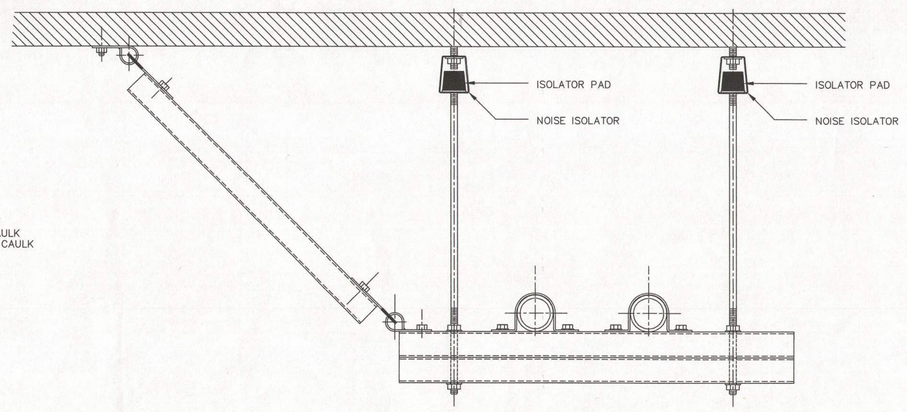
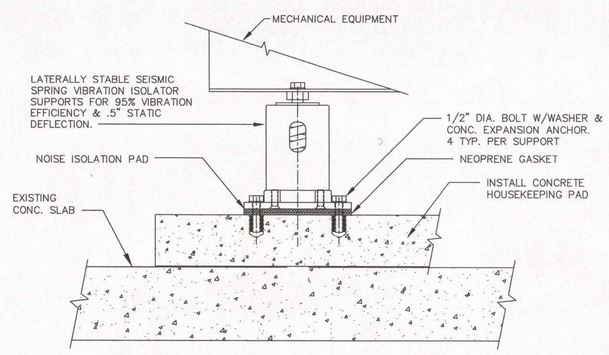


5 M5 **DOUBLE CHANNEL TRAPEZE SEISMIC TRANSVERSE BRACING FOR PIPING**
NOT TO SCALE



6 M5 **TYP. COMPRESSOR SIESMIC SUPPORT DETAIL**
NOT TO SCALE

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DRAWN BY: R.L.P. | DATE: MAR. 8, 99

CONSULTING STRUCTURAL ENGINEERS
1045 13th ST. SE
SALEM, OREGON 97302
PH: (503) 399-1399
FAX: (503) 399-8259
19 NW. 5th AVE.
PORTLAND, OREGON 97209
PH: (503) 222-6886
FAX: (503) 222-1858
MECHANICAL AND ELECTRICAL ENGINEERS
687 NW 5TH STREET
CORVALLIS, OREGON 97330
TELEPHONE (541) 754-1062
FAX (541) 753-3948
EMAIL: engineering@eesnet.com
Environmental & Engineering Services Inc.

REGISTERED PROFESSIONAL ENGINEER
8482
OREGON
JULY 28, 1978
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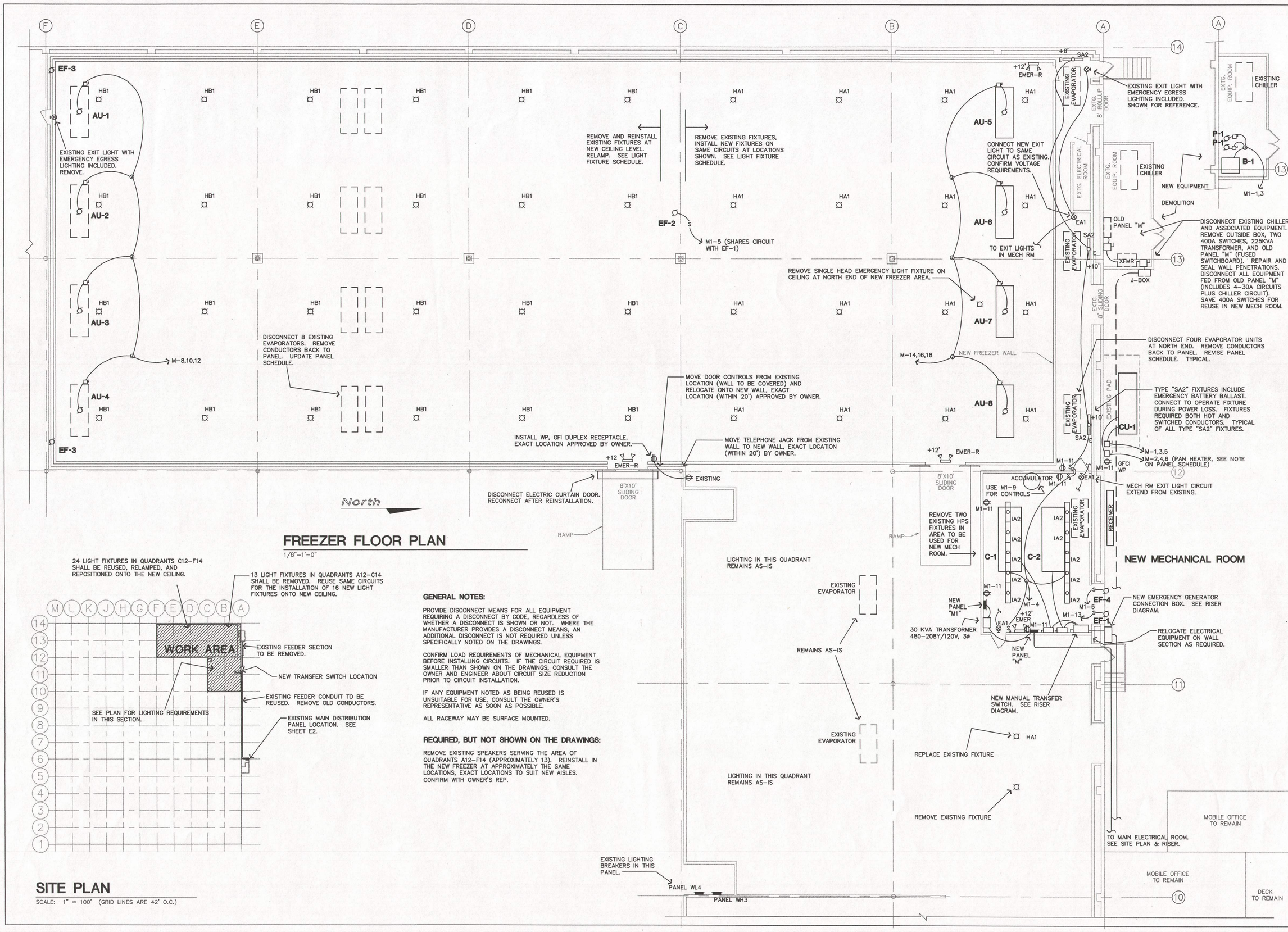

FREEZER FLOOR PLAN

1/8"=1'-0"

SITE PLAN

SCALE: 1" = 100' (GRID LINES ARE 42' O.C.)

GENERAL NOTES:

PROVIDE DISCONNECT MEANS FOR ALL EQUIPMENT REQUIRING A DISCONNECT BY CODE, REGARDLESS OF WHETHER A DISCONNECT IS SHOWN OR NOT. WHERE THE MANUFACTURER PROVIDES A DISCONNECT MEANS, AN ADDITIONAL DISCONNECT IS NOT REQUIRED UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.

CONFIRM LOAD REQUIREMENTS OF MECHANICAL EQUIPMENT BEFORE INSTALLING CIRCUITS. IF THE CIRCUIT REQUIRED IS SMALLER THAN SHOWN ON THE DRAWINGS, CONSULT THE OWNER AND ENGINEER ABOUT CIRCUIT SIZE REDUCTION PRIOR TO CIRCUIT INSTALLATION.

IF ANY EQUIPMENT NOTED AS BEING REUSED IS UNSUITABLE FOR USE, CONSULT THE OWNER'S REPRESENTATIVE AS SOON AS POSSIBLE.

ALL RACEWAY MAY BE SURFACE MOUNTED.

REQUIRED, BUT NOT SHOWN ON THE DRAWINGS:

REMOVE EXISTING SPEAKERS SERVING THE AREA OF QUADRANTS A12-F14 (APPROXIMATELY 13). REINSTALL IN THE NEW FREEZER AT APPROXIMATELY THE SAME LOCATIONS, EXACT LOCATIONS TO SUIT NEW AISLES. CONFIRM WITH OWNER'S REP.

REVISED PER PLAN REVIEW 3-4-99

JOB NO. ODC01 | CHECKED BY:

DRAWN BY: RMB | DATE: 1-15-99

REVISION:

CONSULTING STRUCTURAL ENGINEERS

R.S.I.N.C.

19 NW 5th AVE.
PORTLAND, OREGON 97209
PH: (503) 222-6886
FAX: (503) 222-1639

DOC DISTRIBUTION CENTER FREEZER REMODEL

MECHANICAL AND ELECTRICAL ENGINEERS

Environmental & Engineering Services Inc.

687 NW 5TH STREET
CORVALLIS, OREGON 97330
TELEPHONE (541) 754-1062
FAX (541) 753-3948
EMAIL engineering@eesnet.com

CENTRAL DISTRIBUTION WAREHOUSE
3601 STATE STREET SE
SALEM, OREGON

REGISTERED PROFESSIONAL ENGINEER
13629
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JULY 16, 1987
RANDY BOYD
EXPIRES 12-31-99

DWG. NO.
E1
of 2

LIGHT FIXTURE SCHEDULE

Fixture Type	Made By	Model Number (All operate at 120 vac)	Fixture Type	Lamps per Fixture	Lamp Type and Color (See Specs)	Fixture Color / Finish	Additional Features and Notes
EMER	Lithonia *	ELU8X-H1212	Emerency lighting pack	2	halogen, 12w		
EMER-R	Lithonia *	ELA-T-N2512	Remote lights	2	incand, 25w		Power from unit EMER.
IA2	Lithonia *	EJ232-120-CW	Industrial style fluorescent	2	F32T8	white	Chain hang at 10', or higher if required to suit equipment. 3 require twist-lock.
EA1	Lithonia *	LES-W-1-R-120/277	LED exit with battery pack	(na)	LED, red	white	Univeral mount type, surface mounted, knockout direction indicators.
SA2	Lithonia *	VDC232-PCLW-120-CW-EL	Fluorescent 4' wall bracket	2	F32T8	white	Fixture requires both hot and switched conductors.
HA1	Lithonia *	TXP250S A26 TB LCPP, PPH (OR TPH)	Low bay style HPS	1	250 HPS		Potted ballast - quietest ballast available.
HB1	(EXISTING)		Surface type HID fixture	1	250W OR 400W		Move existing fixture from old ceiling and reinstall at new ceiling level at same location. Install new lamp to match existing, exact wattage and type not known. Probably metal halide. Report faulty fixtures to Owner immediately so that replacement can be arranged.
	* or equal by Hubbell, Metalux, Columbia, or Lightolier.						

PANEL "M" (OLD PANEL "M" REMOVED)

CIR #	LOCATION/DESCRIPTION	CB AMPS	VOLT-AMPS OR PH		WATTS	CB AMPS	LOCATION/DESCRIPTION	CIR #
1	CONDENSING UNIT CU-1(NOTE 1)	3P	3300	A	1666	3P	PAN HEATER FOR CU-1(NOTE 1)	2
3	"	X	3300	B	1666	X	"	4
5	"	20	3300	C	1666	20	"	6
7	PANEL M1 (THRU 30 KVA XFMR)	3P	2890	A	4400	3P	EVAPORATORS	8
9	"	X	2050	B	4400	X	AU-1 THRU AU-4	10
11	"	40	2520	C	4400	30	(8 - 1 HP FANS TOTAL)	12
13	SPACE			A	4400	3P	EVAPORATORS	14
15	SPACE			B	4400	X	AU-5 THRU AU-8	16
17	SPACE			C	4400	30	(8 - 1 HP FANS TOTAL)	18
19	SPACE			A			SPACE	20
21	SPACE			B			SPACE	22
23	SPACE			C			SPACE	24
25	SPACE			A			SPACE	26
27	SPACE			B			SPACE	28
29	SPACE			C			SPACE	30

PANEL DESCRIPTION:

3 PHASE, 3 WIRE , 480V
125 AMPS, 14,000 AIC BUS , 125A MAIN
BOLT-TO-BUS BREAKERS, 14,000 AIC
SURFACE, DOOR-IN-DOOR STYLE REQUIRED
FED BY: MAIN DISTRIBUTION PANEL

CONNECTED LOAD:

PHASE A 60 AMPS
PHASE B 57 AMPS
PHASE C 59 AMPS
ALL 49 KVA

MADE BY: SEIMENS-ITE, GE, SQUARE D, CHALLENGER, OR WESTINGHOUSE

NOTE: LOADS AND BREAKER SIZES INDICATED FOR MECHANICAL EQUIPMENT ARE ESTIMATES AND MAY VARY FROM THE FIGURES GIVEN HERE DUE TO CHANGES IN DESIGN OR AN EQUIPMENT SUBSTITUTION. SIZE BREAKERS PER N.E.C. BASED ON NAMEPLATE AMPS AND/OR MANUFACTURER'S RECOMMENDATIONS, NOT THIS SCHEDULE. SIZE CONDUCTORS PER N.E.C. BASED ON NAMEPLATE AMPS. EXCEPTIONS WHERE LARGER SIZES ARE REQUIRED MAY BE SHOWN ON THE DRAWINGS OR IN THE SPECIFICATIONS..
PROVIDE AS-BUILT DRAWINGS AND PANEL SCHEDULES TO THE ENGINEER PRIOR TO JOB CLOSEOUT.
INSTALL TYPEWRITTEN PANEL SCHEDULES SHOWING FINAL AS-BUILT CIRCUITING.

NOTE 1 - CONFIRM WITH MECHANICAL IF SEPARATE PAN HEATER CIRUIT IS REQUIRED. IF A SINGLE CIRCUIT, MAKE CIRCUIT 2,4,6 A SPARE AND INCREASE THE SIZE OF 1,3,5 AS REQUIRED.

PANEL "M1"

CIR #	LOCATION/DESCRIPTION	CB AMPS	VOLT-AMPS OR PH		WATTS	CB AMPS	LOCATION/DESCRIPTION	CIR #
1	PUMP P-1, 0.5 HP, BOILER CTLS	20	1200	A	300	20	LIGHTS - FREEZER EMER	2
3	PUMP P-1, 0.5 HP	20	1150	B	600	20	LIGHTS - MECH RM	4
5	EF-1 (1/8 HP) AND EF-2 (1/3 HP)	20	1320	C			SPACE	6
7	EF-3 (TWO FANS, 1/4 HP EACH))	20	1390	A			SPACE	8
9	CONTROLS, MECH RM	20	300	B			SPACE	10
11	RECT - MECH RM	20	1200	C			SPACE	12
13	EF-4 (1/2 HP)	20	900	A			SPACE	14
15	SPACE			B			SPACE	16
17	SPACE			C			SPACE	18
19	SPACE			A			SPACE	20
21	SPACE			B			SPACE	22
23	SPACE			C			SPACE	24

PANEL DESCRIPTION:

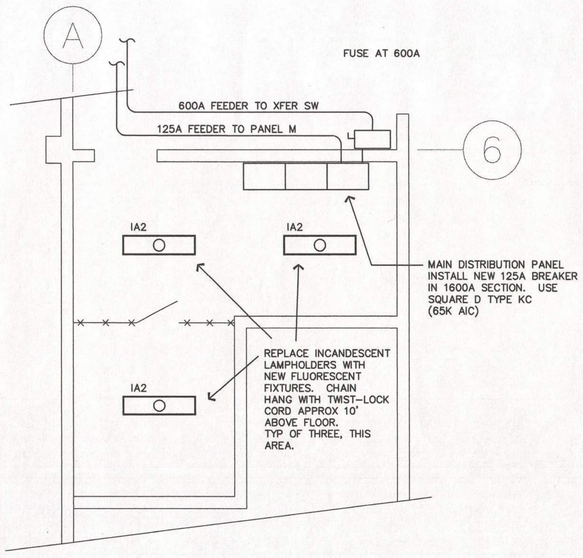
3 PHASE, 4 WIRE , 208Y/120V
125 AMPS, 10,000 AIC BUS , 90A MAIN BREAKER
BOLT-TO-BUS BREAKERS, 10,000 AIC
SURFACE, DOOR-IN-DOOR STYLE REQUIRED
FED BY: CIRCUIT FROM PANEL "M" THRU STEPDOWN TRANSFORMER

CONNECTED LOAD:

PHASE A 31 AMPS
PHASE B 17 AMPS
PHASE C 21 AMPS
ALL 8 KVA

MADE BY: SEIMENS-ITE, GE, SQUARE D, CHALLENGER, OR WESTINGHOUSE

NOTE: LOADS AND BREAKER SIZES INDICATED FOR MECHANICAL EQUIPMENT ARE ESTIMATES AND MAY VARY FROM THE FIGURES GIVEN HERE DUE TO CHANGES IN DESIGN OR AN EQUIPMENT SUBSTITUTION. SIZE BREAKERS PER N.E.C. BASED ON NAMEPLATE AMPS AND/OR MANUFACTURER'S RECOMMENDATIONS, NOT THIS SCHEDULE. SIZE CONDUCTORS PER N.E.C. BASED ON NAMEPLATE AMPS. EXCEPTIONS WHERE LARGER SIZES ARE REQUIRED MAY BE SHOWN ON THE DRAWINGS OR IN THE SPECIFICATIONS..
PROVIDE AS-BUILT DRAWINGS AND PANEL SCHEDULES TO THE ENGINEER PRIOR TO JOB CLOSEOUT.
INSTALL TYPEWRITTEN PANEL SCHEDULES SHOWING FINAL AS-BUILT CIRCUITING.



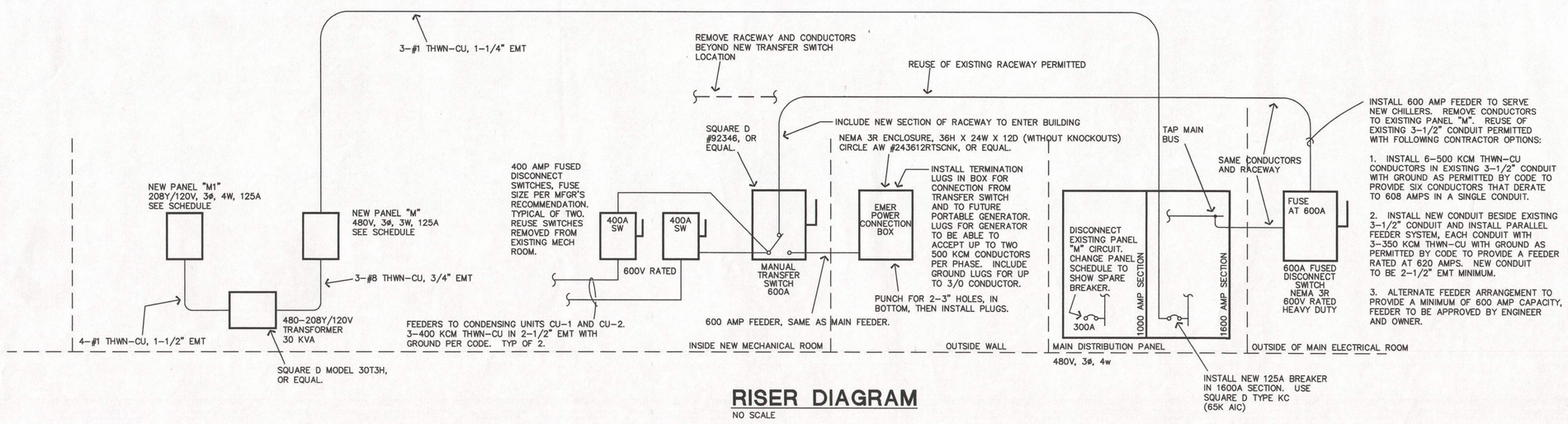
ELECTRICAL ROOM

SCALE: 1/4" = 1'0"

LEGEND

	DUPLEX RECEPTACLE. CIRCUIT NUMBER MAY BE SHOWN.
EA1	EXIT LIGHT WITH FIXTURE TYPE. ORIENT ARROWS IF REQUIRED TO SHOW DIRECTION OF EXIT. IF STEM IS SHOWN, WALL MOUNT.
M1-4 E IA2	FLUORESCENT FIXTURE WITH CIRCUIT NUMBER AND FIXTURE TYPE INDICATED. LETTER "E" INDICATES THAT FIXTURE ALSO HAS AN EMERGENCY BATTERY BACKUP KIT INSTALLED.
CU-1	MECHANICAL EQUIPMENT NUMBER (BOLD, LARGER LETTERS). DO NOT CONFUSE WITH CIRCUIT NUMBERS.
HA1	OTHER LIGHT FIXTURES. MAY BE FLUORESCENT OR HID.
	MOTOR LOAD
PANEL "M"	ELECTRICAL PANELBOARD WITH PANEL NAME
S S3 S4	SWITCHES: SINGLE POLE, 3-WAY, 4-WAY

NOTE: SOME SYMBOLS IN THIS LEGEND MAY NOT BE USED ON THIS DRAWING.



RISER DIAGRAM

NO SCALE

REVISED PER PLAN REVIEW, MARCH 4, 1999
JOB NO. 981014-S | CHECKED BY:
DRAWN BY: S.H.C. | DATE: 1-15-99
REVISION:

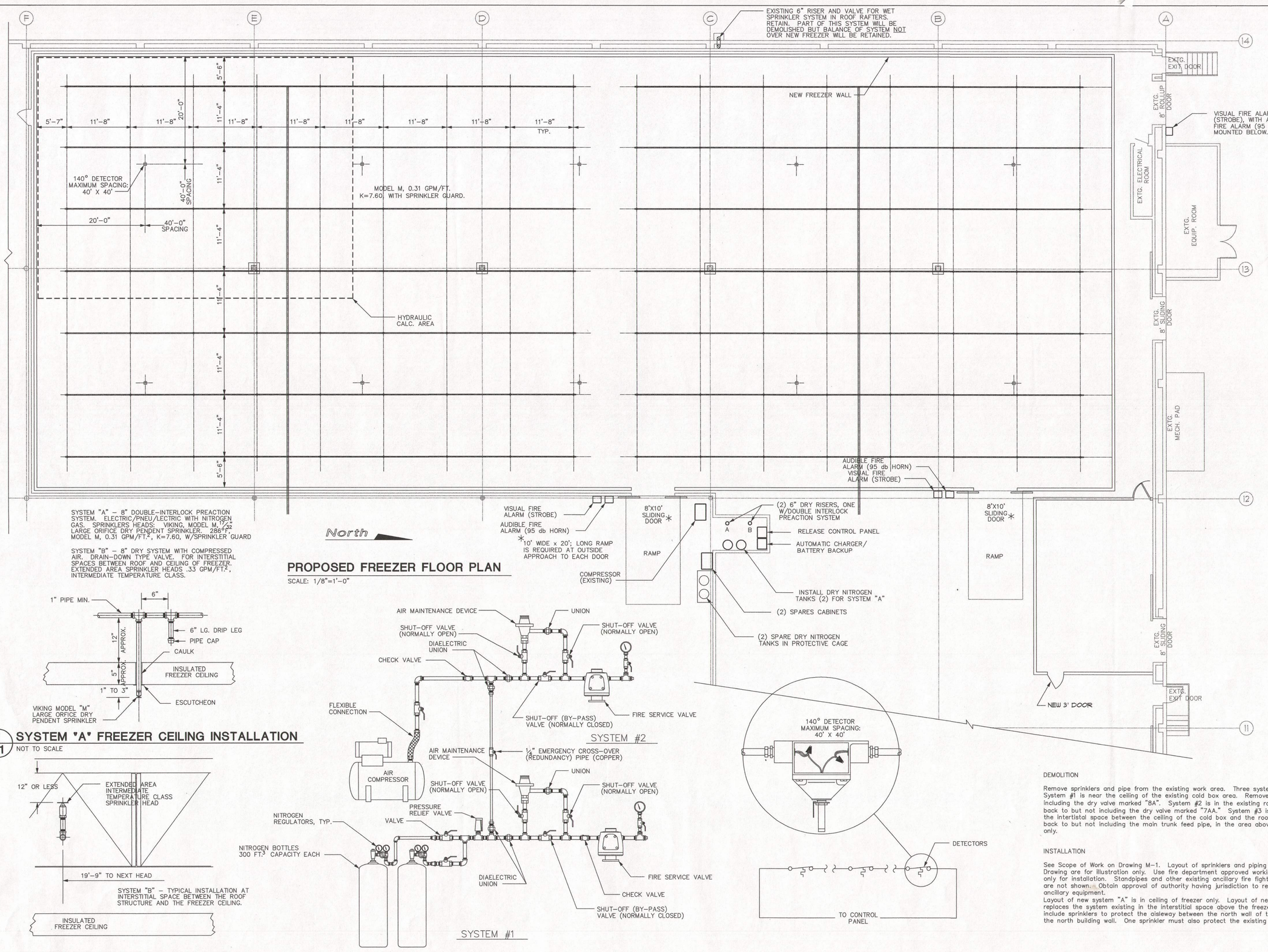
CONSULTING STRUCTURAL ENGINEERS
19 NW, 5th AVE.
PORTLAND, OREGON 97209
PH: (503) 222-4686
FAX: (503) 222-1659
E N G I N E E R S, I N C.

DOC DISTRIBUTION CENTER FREEZER REMODEL
CENTRAL DISTRIBUTION WAREHOUSE
3601 STATE STREET SE
SALEM, OREGON

MECHANICAL AND ELECTRICAL ENGINEERS
Environmental & Engineering Services Inc.
687 NW 5TH STREET
CORVALLIS, OREGON 97330
TELEPHONE (541) 754-1062
FAX (541) 753-3948
EMAIL engineering@eesnet.com

REGISTERED PROFESSIONAL ENGINEER
13629
OREGON
JULY 16, 1982
RANDY BOYD
EXPIRES 12-31-99

DWG. NO.
E2
of 2



SYSTEM "A" – 8" DOUBLE–INTERLOCK PREACTION SYSTEM. ELECTRIC/PNEU/LECTRIC WITH NITROGEN GAS. SPRINKLERS HEADS: VIKING, MODEL M, 1/2" LARGE ORIFICE DRY PENDENT SPRINKLER. 286°F MODEL M, 0.31 GPM/FT.², K=7.60, W/SPRINKLER GUARD

SYSTEM "B" – 8" DRY SYSTEM WITH COMPRESSED AIR. DRAIN–DOWN TYPE VALVE. FOR INTERSTITIAL SPACES BETWEEN ROOF AND CEILING OF FREEZER. EXTENDED AREA SPRINKLER HEADS .33 GPM/FT.², INTERMEDIATE TEMPERATURE CLASS.

PROPOSED FREEZER FLOOR PLAN

SCALE: 1/8"=1'-0"

1/F1 **SYSTEM "A" FREEZER CEILING INSTALLATION**

NOT TO SCALE

SYSTEM "B" BELOW ROOF STRUCTURE

2/F1 **ABOVE FREEZER CEILING INSTALLATION**

NOT TO SCALE

3/F1 **AIR SUPPLY FOR DRY SYSTEMS**

NOT TO SCALE

4/F1 **DETECTOR WIRING DIAGRAM**

NOT TO SCALE

DEMOLITION

Remove sprinklers and pipe from the existing work area. Three systems exist. System #1 is near the ceiling of the existing cold box area. Remove it back to and including the dry valve marked "8A". System #2 is in the existing racks. Remove it back to but not including the dry valve marked "7AA." System #3 is a wet system in the intertistal space between the ceiling of the cold box and the roof. Remove it back to but not including the main trunk feed pipe, in the area above the cold box only.

INSTALLATION

See Scope of Work on Drawing M–1. Layout of sprinklers and piping on this Drawing are for illustration only. Use fire department approved working drawings only for installation. Standpipes and other existing ancillary fire fighting equipment are not shown. Obtain approval of authority having jurisdiction to reuse existing ancillary equipment.
Layout of new system "A" is in ceiling of freezer only. Layout of new system "B" replaces the system existing in the interstitial space above the freezer and must include sprinklers to protect the aisleway between the north wall of the freezer and the north building wall. One sprinkler must also protect the existing electrical room.

FILE: 01ODCF01.DWG

REVISION:

JOB NO. 981014–S | CHECKED BY:

DRAWN BY: R.L.P. | DATE: MAR. 8, 99

CONSULTING STRUCTURAL ENGINEERS

1045 13th ST. SE.
SALEM, OREGON 97302
PH: (503) 399–1359
FAX: (503) 399–8259

19 NW. 5th. AVE.
PORTLAND, OREGON 97209
PH: (503) 222–6886
FAX: (503) 222–1505

E N G I N E E R S, I N C.

MECHANICAL AND ELECTRICAL ENGINEERS

Environmental & Engineering Services Inc.

687 NW 5TH STREET
CORVALLIS, OREGON 97330
TELEPHONE (541) 754–1062
FAX (541) 753–3948
EMAIL: engineering@eesinet.com

DOC DISTRIBUTION CENTER FREEZER REMODEL

CENTRAL DISTRIBUTION WAREHOUSE
3601 STATE STREET SE
SALEM, OREGON

REGISTERED PROFESSIONAL ENGINEER
10373
OREGON
SEPT 21, 1979
FRED E. SHAUB
EXPIRES 06–30–00

DWG. NO.

F1

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