

REVISIONS

REV	DATE	BY	APP	DESCRIPTION OF REVISION
99	14 FEB 22	GH		DRAWING CREATED

NOTES

OVERVIEW	
TEMPERATURE:	-40°C TO -80°C ± 5.0°C VOL. UNIFORMITY -20°C ± 5.0°C VOL. UNIFORMITY UNCONDITIONED ANTEROOM PRODUCT AT TEMPERATURE WHEN LOADED INTO FREEZER, NO PRODUCT LOAD ASSUMED
PRODUCT:	
L.T. FREEZER STORAGE:	108 FT ³ PER SIDE 212 FT ³ TOTAL 848 FT ³ PER SIDE, 1,696 FT ³ TOTAL AT 8'-0" (HEIGHT) OF STORAGE
CONDENSERS:	WATER-COOLED
DOOR OPENING:	-20°C = 15 SECONDS
DOOR RECOVER TIME:	-20°C = 3 MINUTES (OPEN TO ANTEROOM) L.T. FREEZER = 30 SECOND
ARCHITECTURAL	
PANEL FINISH:	INTERIOR/EXTERIOR = EMBOSSED GALVANIZED STEEL PRE-PAINTED WHITE
DOOR SIZE:	3'-0" WIDE X 7'-6" TALL (ANTEROOM) 3'-0" WIDE X 8'-0" TALL (-20°C CORRIDOR) 3'-0" WIDE X 8'-0" TALL (LOW TEMP STORAGE FREEZER)
FM 4880:	OUTSIDE CHAMBER ONLY (4" PANELS)
FLOOR RATING:	600 LBS/SQ.FT.
CEILING RATING:	15 LBS/SQ.FT. (5 LBS/SQ.FT. DEAD LOAD/ 10 LBS/SQ.FT. LIVE LOAD)
MECHANICAL	
REFRIGERATION:	REDUNDANT MECHANICAL REFRIGERATION SYSTEM FOR -20°C AND LOW TEMP. FREEZER CHAMBERS.
PIPING:	MAX. DISTANCE FROM SKID TO CHAMBER NOT TO EXCEED 50' HORIZ/50' VERTICAL
ELECTRICAL	
CONTROLS:	ALLEN-BRADLEY COMPACTLOGIX PLC (NON-REDUNDANT)
CONTROL PANELS:	NEMA 4-1/2 (GRAY)
LIGHTING:	LED LIGHTING
SAFETY PERSON-IN-BOX:	TIMED OCCUPANCY ALARM OF CORRIDOR
PERSONNEL ALARM:	EMERGENCY PUSH-BUTTON LOCATED IN THE CORRIDOR AT THE DOOR LOCATION 16" A.F.F.
OPTIONS	
PANEL FINISH:	304 STAINLESS STEEL INTERIOR OR EXTERIOR
FLOOR RATING:	1,000 LBS/SQ.FT. (OVERLAY)
RAMP:	DIAMOND TREAD OR NON-SKID STRIPS
CEILING RATING:	20 LBS/SQ.FT.
FM 4880:	OPTION TO NOT INCLUDE
SHELVING:	CUSTOMER TO SPECIFY NUMBER OF TIERS & IF COIL GUARD IS PREFERRED.
AIR-COOLED CONDENSERS:	OPTIONAL IF WATER IS NOT AVAILABLE.
LOW RISE DEFROST:	OPTIONAL FOR CORRIDOR (-20°C) ONLY.
CONDENSATE PUMP:	OPTIONAL TERTIARY BACKUP INCLUDES OXYGEN MONITOR INSIDE THE CORRIDOR AND AT THE LN2 VALVE RACK.
LN2:	LN2 VALVE RACK
CONTROL PANEL:	NEMA 4X
UPS BACKUP:	CONTROLS ONLY (20 MINUTE)
EMERGENCY LIGHTING:	BATTERY BACKUP YOKOGAWA
RECORDER:	
ALARM CONTACTS - FORM-C (N.C./N.O.) CONNECTION BY OTHERS	
-20°C CORRIDOR	<ul style="list-style-type: none">HIGH TEMPERATURE DEVIATIONLOW TEMPERATURE DEVIATIONHIGH TEMPERATURE LIMITLOW TEMPERATURE LIMITDOOR ALARMEVAPORATOR FAN FAILURE (SYSTEM 1)EVAPORATOR FAN FAILURE (SYSTEM 2)CONDENSER FAILURE (SYSTEM 1)CONDENSER FAILURE (SYSTEM 2)PERSONNEL/PERSON-IN-BOX ALARM
LOW TEMP. FREEZER	<ul style="list-style-type: none">HIGH TEMPERATURE DEVIATIONLOW TEMPERATURE DEVIATIONHIGH TEMPERATURE LIMITLOW TEMPERATURE LIMITDOOR ALARMCONDENSER FAILURE (SYSTEM 1)CONDENSER FAILURE (SYSTEM 2)
LN2 (OPTION)	<ul style="list-style-type: none">O2 ALARMLN2 EMERGENCY VALVE CLOSEDLN2 ACTIVELN2 OFFLINE
NOTES:	<ol style="list-style-type: none">THE MAXIMUM DESIGN NOISE LEVEL OF THE EQUIPMENT MAY EXCEED 80 DBA, MEASURED AT 3'-0" AWAY.REFRIGERANT RELIEF PIPING IF REQUIRED IS BY OTHERS.CONDENSATE DRAIN CONNECTION TO BE WITHIN 10' OF THE CHAMBER.

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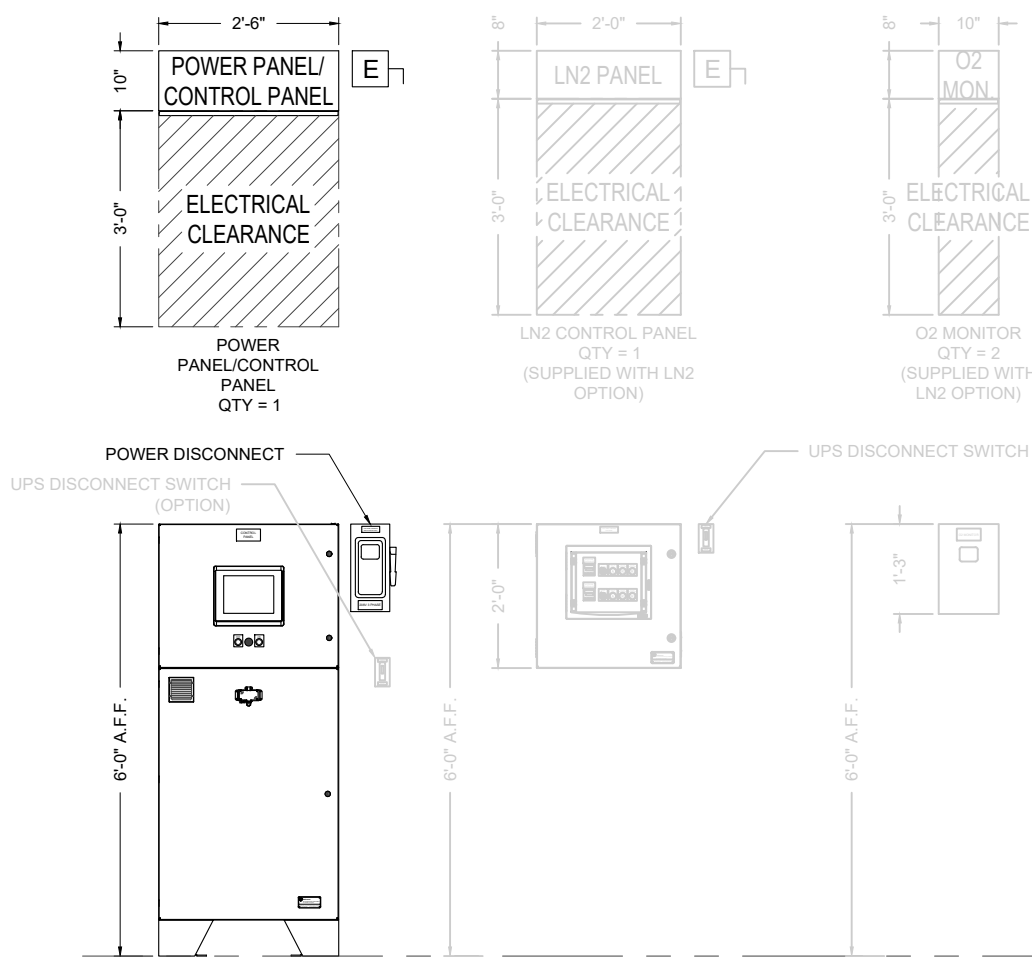
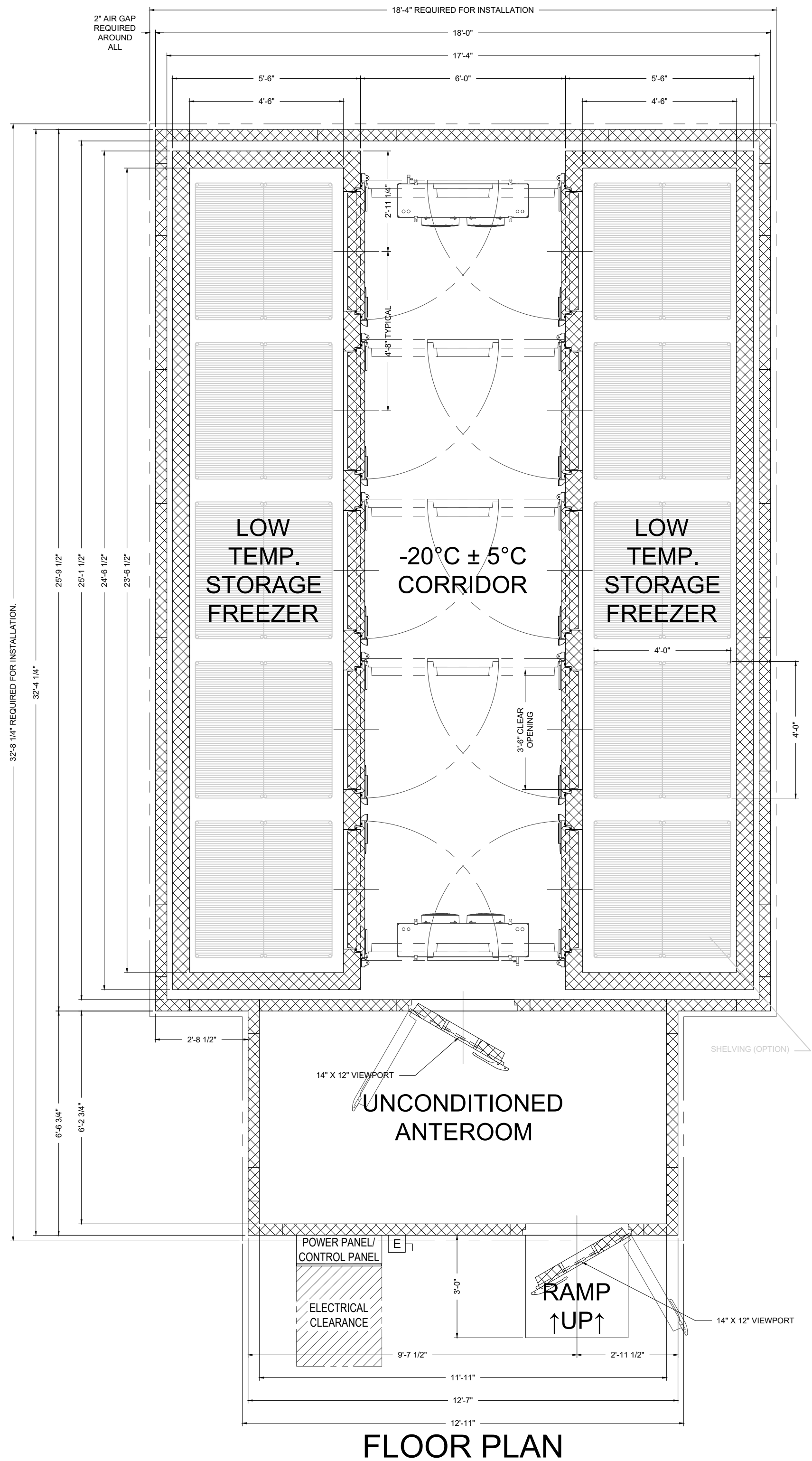
THIS DRAWING IS TO BE USED IN CONJUNCTION WITH PROJECT SUBMITTAL TEXT FOR COMPLETE CHAMBER DETAILS.

ENVIRONMENTAL SPECIALTIES

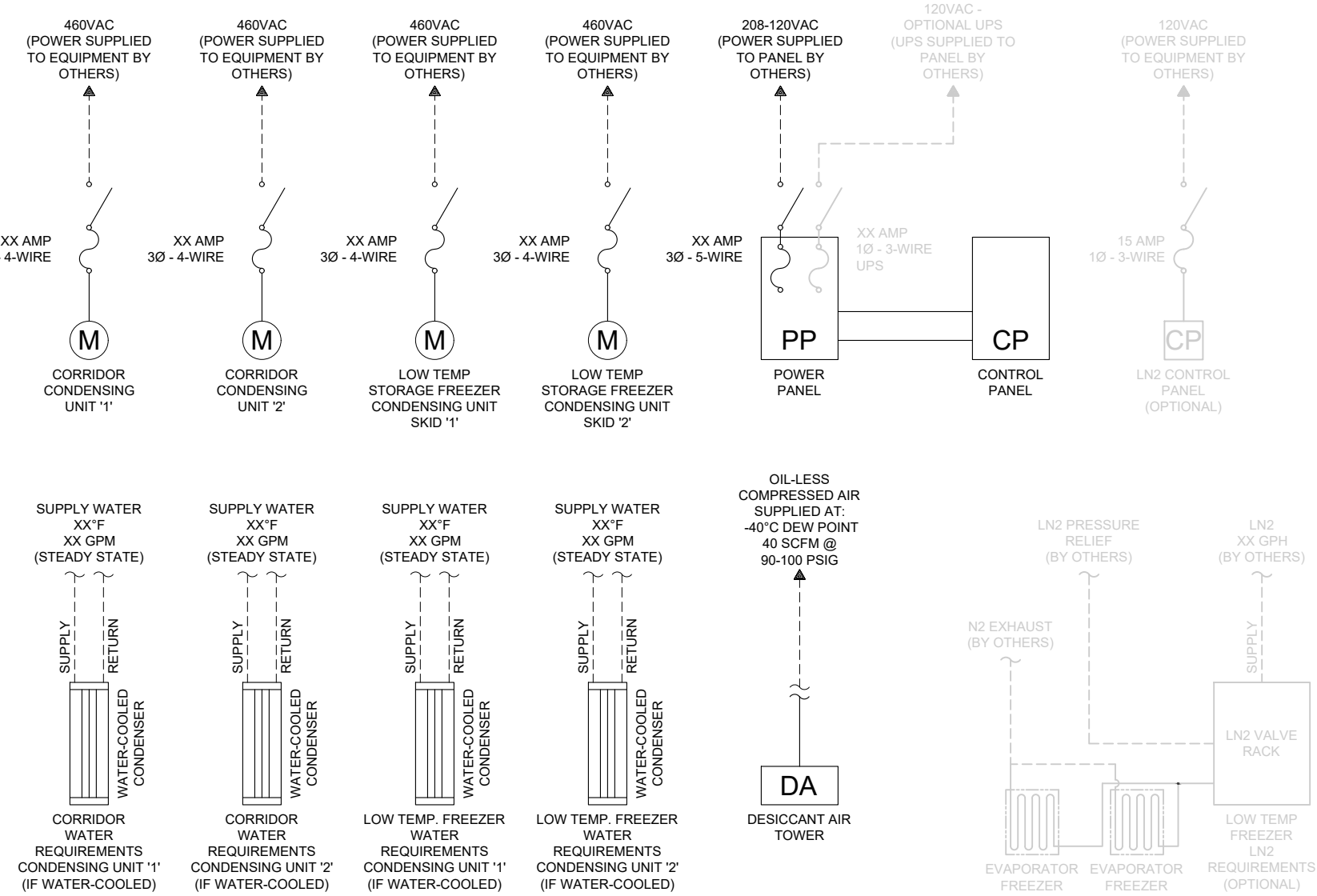
4412 TRYON RD.
RALEIGH, NC 27806

STANDARD MODEL
10 DOOR ULTRA-LOW

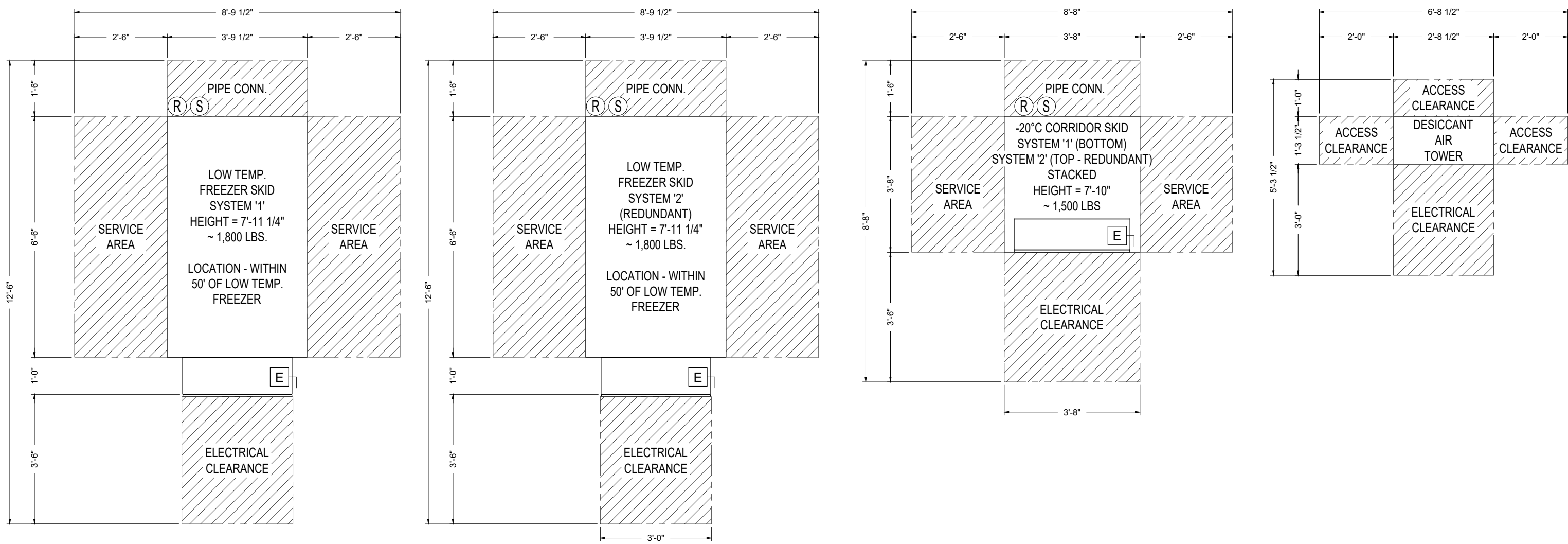
APPROVED BY: DATE CREATED: 14 FEB 22
DESIGNED BY: BAHN - 10D
DRAWING NUMBER: 00



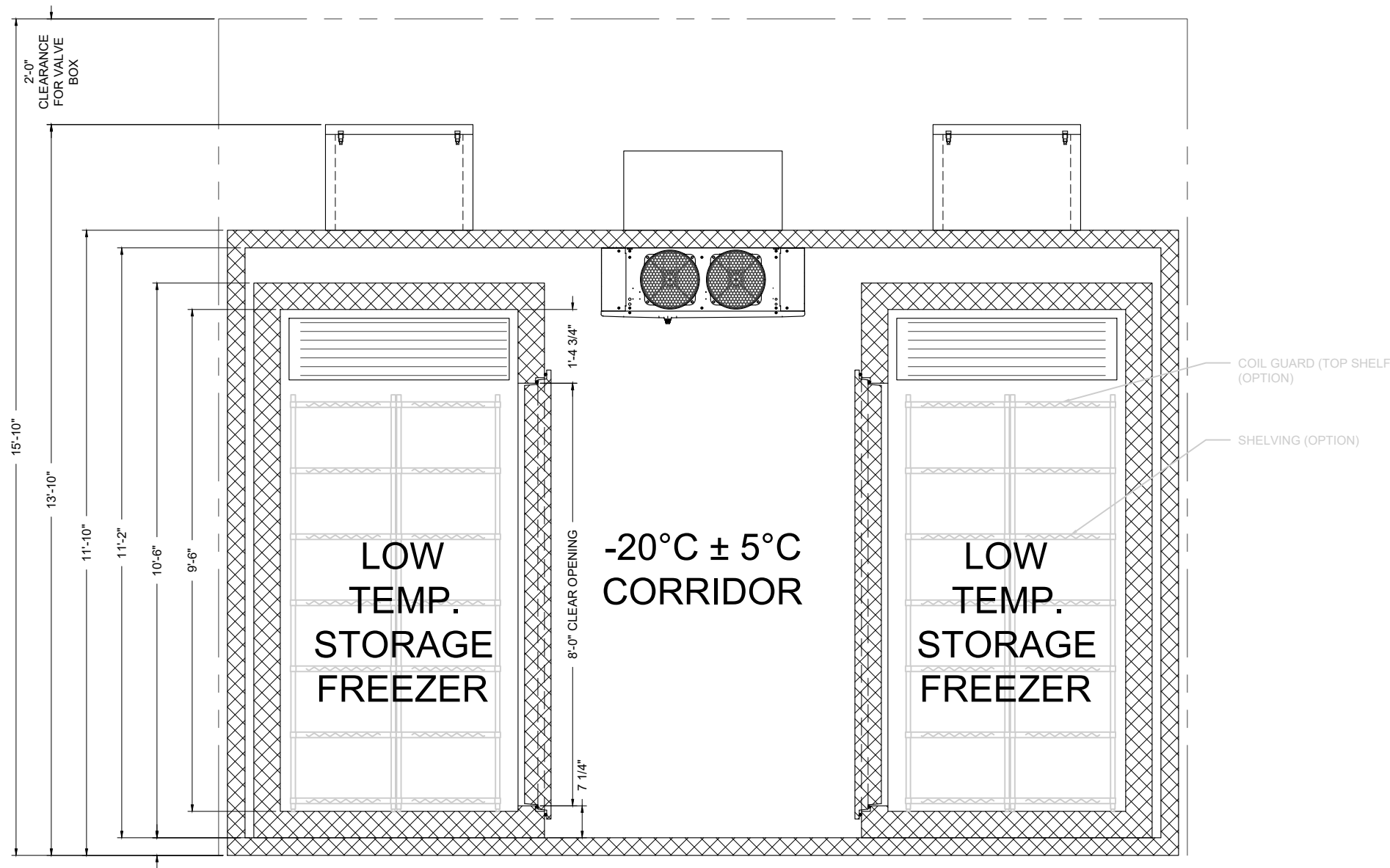
CONTROL PANELS



UTILITIES



EQUIPMENT SIZE



ELEVATION VIEW