SYSTEM D DISCHARGE AIR TEMPERATURE AND DEFROST PARAMETERS

Updated: 2/14/2020

					DISCHARGE AIR TEMP SETTING FOR CASES/ RETURN AIR TEMP SETTING FOR WALK-IN BOXES			DEFROST						DEFROST SCHEDULE					
CIRCUIT #	APPLICATION	MODEL NUMBER	MFR	EQUIP. NUMBER	MANUFACTURER'S TARGET (°F)	OWNER'S OPERATING SETPOINT (°F)	DUAL TEMP TARGET (°F)	DEFROST TYPE	FREQUENCY PER DAY	PUMP OUT TIME (MIN)	MAX DURATION (MIN)	TERMINATION TEMP (°F)	DRIP TIME (MIN)	Defrost 1	Defrost 2	Defrost 3	Defrost 4	Defrost 5	Defrost 6
D5	M.D. Beer	IM-05-EC10	HUSSMANN	RD4048.452/RD4047.452 - 4/25/2019	32	32	--	OT	8	-	20	48	-	1:00	5:00	9:00	13:00	17:00	21:00
D10	M.D. Beer	IM-05-EC10	HUSSMANN	RD4046.452/RD4047.452 - 4/25/2019	32	32	--	OT	6	-	20	48	-	3:00	7:00	11:00	15:00	19:00	23:00

1.) Information included in this schedule is taken from manufacturer's submittals.
2.) Contractor to verify information against latest submittals available at time cases/coils are delivered.
3.) Parameters above are to be used in programming new/replaced cases/coils only.

EMS EQUIPMENT SALVAGE REQUIREMENTS

11.02.18

ALL DEMOLISHED NOVAR EMS EQUIPMENT SHALL BE RETURNED TO OWNER'S MECHANICAL SERVICES CONSTRUCTION MANAGER. EQUIPMENT TO BE RETURNED INCLUDES: EXECUTIVE CONTROLLER(S), IOM(S), CIM(S), CCM(S), ETC. PROVIDE DOCUMENTATION FOR ALL EQUIPMENT REMOVED IN ACCORDANCE WITH SPECIFICATIONS AND REQUIRED CLOSE-OUT DOCUMENTS.

GENERAL REFRIGERATION EMS NOTES

RM-03.12.18

1. EMS CONTRACTOR SHALL CONTACT THE EMS SUPPLIER(S) TO OBTAIN A CURRENT MODULE CONFIGURATION PRINTOUT BEFORE TERMINATING SENSOR LEADS AT INPUT MODULES. THE REQUEST FOR THE CONFIGURATION PRINTOUT SHALL BE MADE PRIOR TO THE INSTALLATION OF EMS CABLES. WIRING TERMINATIONS SHALL BE LANDED ACCORDING TO THE EMS SUPPLIER CONFIGURATION SHEETS.
2. EMS CONTRACTOR SHALL PROVIDE COMPLETED REFRIGERATION SENSOR INPUT VERIFICATION FORMS TO THE EMS SUPPLIER AT THE BEGINNING OF THE REFRIGERATION EQUIPMENT STARTUP. EMS INSTALLER SHALL PROVIDE ASSISTANCE TO THE EMS SUPPLIER FOR SPOT CHECKING OF SENSORS FOR ACCURACY.
3. ALL EMS CABLE ON THE SALES FLOOR SHALL BE ROUTED IN CONDUIT AND CONCEALED FROM VIEW AND ROUTED ALONGSIDE OTHER PIPING OR CONDUIT AS MUCH AS POSSIBLE.
4. EMS CONTRACTOR SHALL BE PRESENT AND AVAILABLE TO RESOLVE ISSUES AND PROVIDE REFRIGERATION STARTUP ASSISTANCE UNTIL RELEASED BY THE EMS SUPPLIER AND OWNER'S REFRIGERATION CONSTRUCTION COORDINATER.
5. DURING THE REFRIGERATION STARTUP, EMS CONTRACTOR SHALL COMPLETE ALL UNRESOLVED REFRIGERATION WORK PRIOR TO WORKING ON OTHER EMS INSTALLATION ITEMS.
6. WHEN THE EMS SUPPLIER IS NOT SCHEDULED TO PERFORM THE ON SITE REFRIGERATION STARTUP, THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL CHECKS AND TEST TO ENSURE A FULLY FUNCTIONAL REFRIGERATION CONTROL SYSTEM. CONTACT THE EMS SUPPLIER FOR THE BLANK TEST VERIFICATION FORMS AND INSTRUCTIONS FOR COMPLETING. ALL COMPLETED TEST VERIFICATION FORMS SHALL BE RETURNED TO THE OWNER'S MECHANICAL SERVICES CONSTRUCTION MANAGER.
7. REFER TO ARCHITECTURAL DRAWINGS FOR PIPING INSTALLATION AND SEALING REQUIREMENTS FOR DEVICES SHOWN ON COOLER/FREEZER PANELS. DO NOT INSTALL PIPING WITHIN COOLER/FREEZER PANELS.
8. ROUTE ALL UTILITY SERVICE LINES (PIPES AND CONDUIT) WITHIN STUD WALLS WHEREVER POSSIBLE. ON COOLER/FREEZER PANELS IN FOOD PREP AREAS WHERE UTILITIES MUST BE EXPOSED, CONTRACTOR TO HAVE THE OPTION OF THE FOLLOWING:
   A. SURFACE MOUNT UTILITIES WITH NON-CORROSIVE ANCHORS; SEAL BOTH SIDES OF PIPE/CONDUIT TO PANEL CONTINUOUSLY WITH SEALANT.
   B. INSTALL UTILITIES 1/2" OFF FACE OF PANEL TO ALLOW FOR CLEANING; USE ONLY NON-CORROSIVE MATERIALS FOR SPACERS AND ANCHORS.
   C. COVER UTILITIES WITH 20 GAUGE STAINLESS STEEL BENT PLATES MOUNTED TO WALL WITH NON-CORROSIVE ANCHORS; APPLY CONTINUOUS SEALANT ALONG EDGES AND JOINTS.
9. REFERENCE ARCHITECTURAL DEMOLITION PLANS FOR FULL EXTENT OF DEMOLITION WORK REQUIRED.
10. 24 HOURS PRIOR TO SHUTTING DOWN ANY REFRIGERATION SYSTEMS, HVAC SYSTEMS OR ENERGY MANAGEMENT CONTROLS SYSTEMS. SEND EMAIL TO NSRM@WALMART.COM. THE E-MAIL SHALL STATE WHAT, WHY, AND WHEN IT IS BEING SHUT DOWN AND HOW LONG IT IS ANTICIPATED TO BE SHUT DOWN. THEN SEND A FOLLOW UP EMAIL TO NSRM@WALMART.COM AFTER THE WORK IS COMPLETE AND THE SYSTEM IS BACK UP AND RUNNING.

REM SYMBOLS

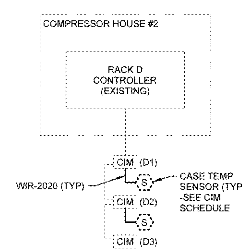
03.01.19

ES1	NOVAR EDGE SERVER GATEWAY
E2E	EMERSON RX300 GATEWAY
RC2-XE	NOVAR SPECTRUM RACK CONTROLLER
XCM.20R	NOVAR OPUS RACK CONTROLLER
EMS	ENERGY MANAGEMENT SYSTEM
TEMP	TEMPERATURE
VFD	VARIABLE FREQUENCY DRIVE
XFMR	TRANSFORMER
COMM	COMMUNICATION PORT/MODULE
CIM	CASE INPUT MODULE
LTA-X	REFRIGERATION CIRCUIT
S	REMOTE TEMPERATURE SENSOR
D	DEFROST TERMINATION SENSOR
DTS	DUAL TEMP SWITCH
RIB	RELAY IN BOX
RCC	NOVAR CIRCUIT CONTROLLER
CMS	CASE MANAGEMENT SYSTEM MODULE
AOM	ANALOG OUTPUT MODULE
8IM	UNIVERSAL INPUT MODULE
RIM	RACK INPUT MODULE
S3C	SPORLAN WALK-IN CONTROLLER
S3C	SPORLAN CASE CONTROLLER
═══	EMS BACKBOARD
DS	DOOR SWITCH
XIO	BACNET INPUT/OUTPUT MODULE
———	NEW FIELD INSTALLED EQUIPMENT
·········	EXISTING EQUIPMENT
- - - - -	NEW FACTORY INSTALLED EQUIPMENT
--- ---- ---	EQUIPMENT TO BE DEMOLISHED

CIM-D1 SCHEDULE (E)			
1	D1a	SENSOR	(E)
2	D1b	SENSOR	(E)
3	D2a	SENSOR	(E)
4	D2b	SENSOR	(E)
5	D9	SENSOR	(E)
6	**D5a**	**SENSOR**	**(N)**
7	**D5b**	**SENSOR**	**(N)**
8	**D5c**	**SENSOR**	**(N)**
AUX	SPARE		

CIM-D2 SCHEDULE (E)			
1	D3a	SENSOR	(E)
2	D3b	SENSOR	(E)
3	D4	SENSOR	(E)
4	**D10a**	**SENSOR**	**(N)**
5	**D10b**	**SENSOR**	**(N)**
6	**D10c**	**SENSOR**	**(N)**
7	SPARE		
8	SPARE		
AUX	SPARE		

EXISTING CIM BACKBOARD (ACROSS FROM GROCERY FREEZER)



REFRIGERATION EMS ONE-LINE REFLECTS THE INTENDED DESIGN BASED ON NEW CASES AND EXISTING SYSTEM NUMBERS. VERIFY ALL EXISTING CONDITION AND LOCATION OF ALL EMS EQUIPMENT PRIOR TO ROUGH-IN.

UNLESS NOTED OTHERWISE, DEVICES AND CABLING SHOWN IN THIS ONE-LINE DIAGRAM ARE VENDOR FURNISHED; REFRIGERATION ENERGY MANAGEMENT CONTRACTOR TO INSTALL CABLING AND DEVICES AND MAKE FINAL TERMINATIONS. REFER TO PLANS FOR DEVICE LOCATIONS.

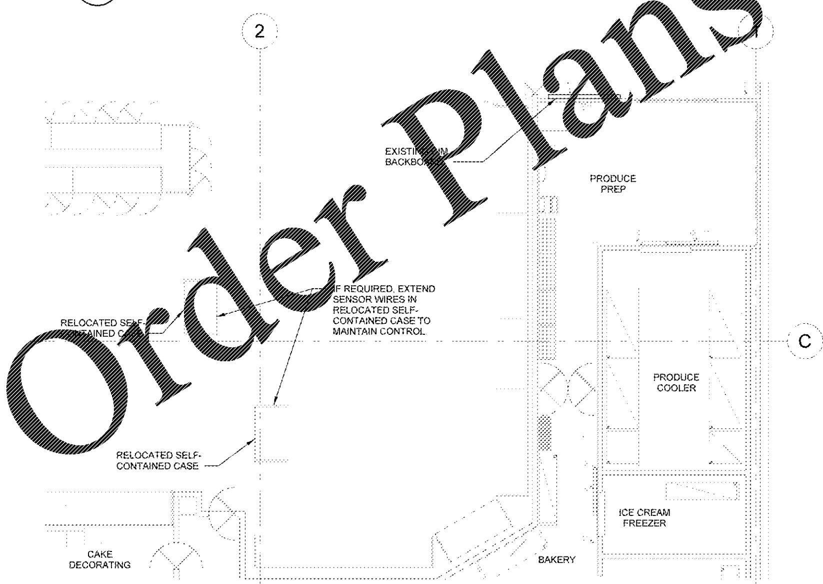
WIRE LEGEND	NOVAR
WIR-1010 (TAN CABLE 18-2, 20-2 TWISTED PAIR)	
WIR-2020 (BLUE CABLE 22-2 TWISTED PAIR)	

NOTES:
1. ALL CABLE WIR-2020 UNLESS NOTED OTHERWISE.
2. ALL CABLE FURNISHED AND INSTALLED BY EMS CONTRACTOR

EMS ONE-LINE AND SCHEDULE NOTES	
E ········	EXISTING EMS DEVICE, SENSOR, OR WIRE FOR REUSE.
RL	EXISTING EMS DEVICE OR SENSOR TO RELOCATE AND RECONNECT. INSTALL NEW CABLE FOR RELOCATED DEVICE OR SENSOR AS NECESSARY.
RD	REDESIGNATED EMS DEVICE OR SENSOR.
RP	REPLACED EMS DEVICE OR SENSOR.
N	NEW EMS DEVICE OR SENSOR.
FI ———	NEW FIELD INSTALLED EMS DEVICE, SENSOR, OR WIRE.
FA - - - -	NEW FACTORY INSTALLED EMS DEVICE, SENSOR, OR WIRE.
M	EMS DEVICE OR SENSOR USED FOR MONITORING ONLY.
DI	DIGITAL INPUT.
DO	DIGITAL OUTPUT.
AI	ANALOG INPUT.

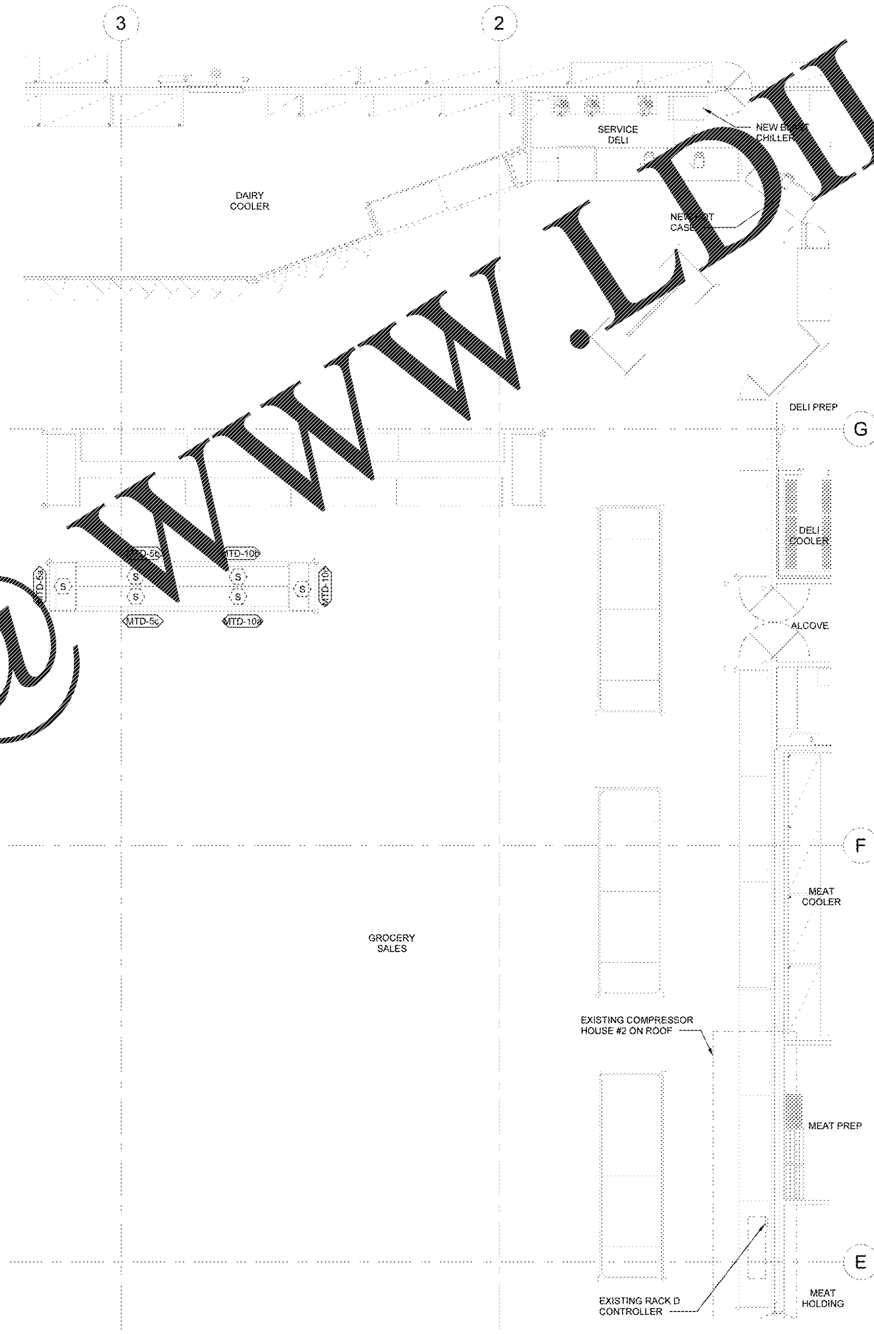
3 REFRIGERATION EMS ONE-LINE DIAGRAM

NTS



2 REFRIGERATION ENERGY MANAGEMENT PLAN - FRONT

1/8" = 1'-0"



1 REFRIGERATION ENERGY MANAGEMENT PLAN - REAR

1/8" = 1'-0"

ALL WORK ON THIS SHEET IS TO BE COMPLETED BY A WALMART APPROVED CONTRACTOR.

EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND MAY NOT REFLECT EXACT "AS-BUILT" CONDITIONS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. CONTRACTOR SHALL CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.

EACH SUBCONTRACTOR IS RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF ALL DRAWINGS AND SPECIFICATIONS IN THEIR RELATED FIELD. THE FAILURE TO ACQUAINT THEMSELF WITH THIS KNOWLEDGE DOES NOT RELIEVE THE RESPONSIBILITY OF PERFORMING THE WORK PROPERLY. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED BECAUSE OF CONDITIONS THAT OCCUR DUE TO FAILURE TO FAMILIARIZE WORKERS WITH THIS KNOWLEDGE.

STIPULATION FOR REUSE

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2020 SPRB

ISSUE BLOCK

CHECKED BY:	AEB
DRAWN BY:	SRK
PROTO CYCLE:	12/20/19
DOCUMENT DATE:	02/24/20

NOT FOR CONSTRUCTION

REFRIGERATION ENERGY MANAGEMENT PLANS

SHEET: REM1

ANTHONY R. WELTER

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