

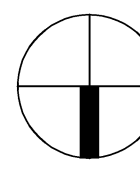
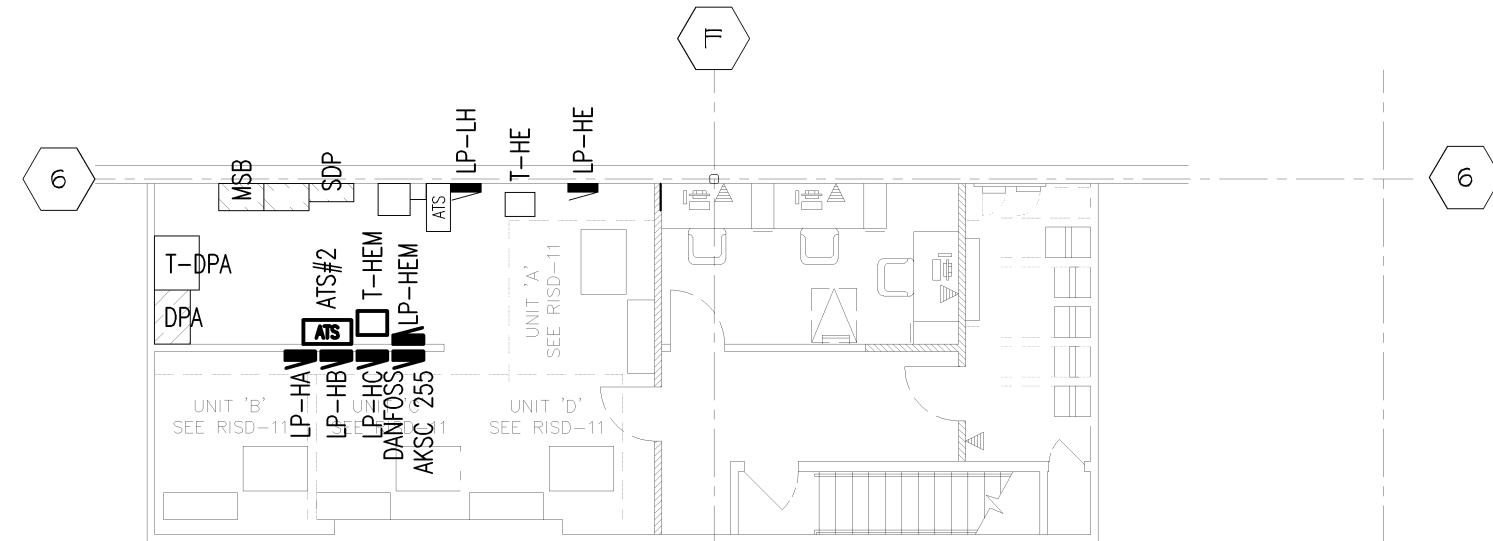
SYMBOL	
	REFRIGERATION CIRCUIT DESIGNATION
	DEFROST TERMINATION THERMOSTAT
	ANALOG TEMPERATURE SENSOR
	DOOR SWITCH
	PHASE MONITOR
	SMOKE DETECTOR
	SUCTION STOP SOLENOID

1. WHEN CASES ARE FED FROM LOOP-RING, SUCTION STOP SOLENOIDS WILL BE ON REFRIGERATION CIRCUITS ON SALES FLOOR.  
2. REFER TO PIPING DRAWINGS (P3, P4, P5) FOR EXACT LOCATIONS.

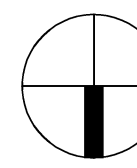
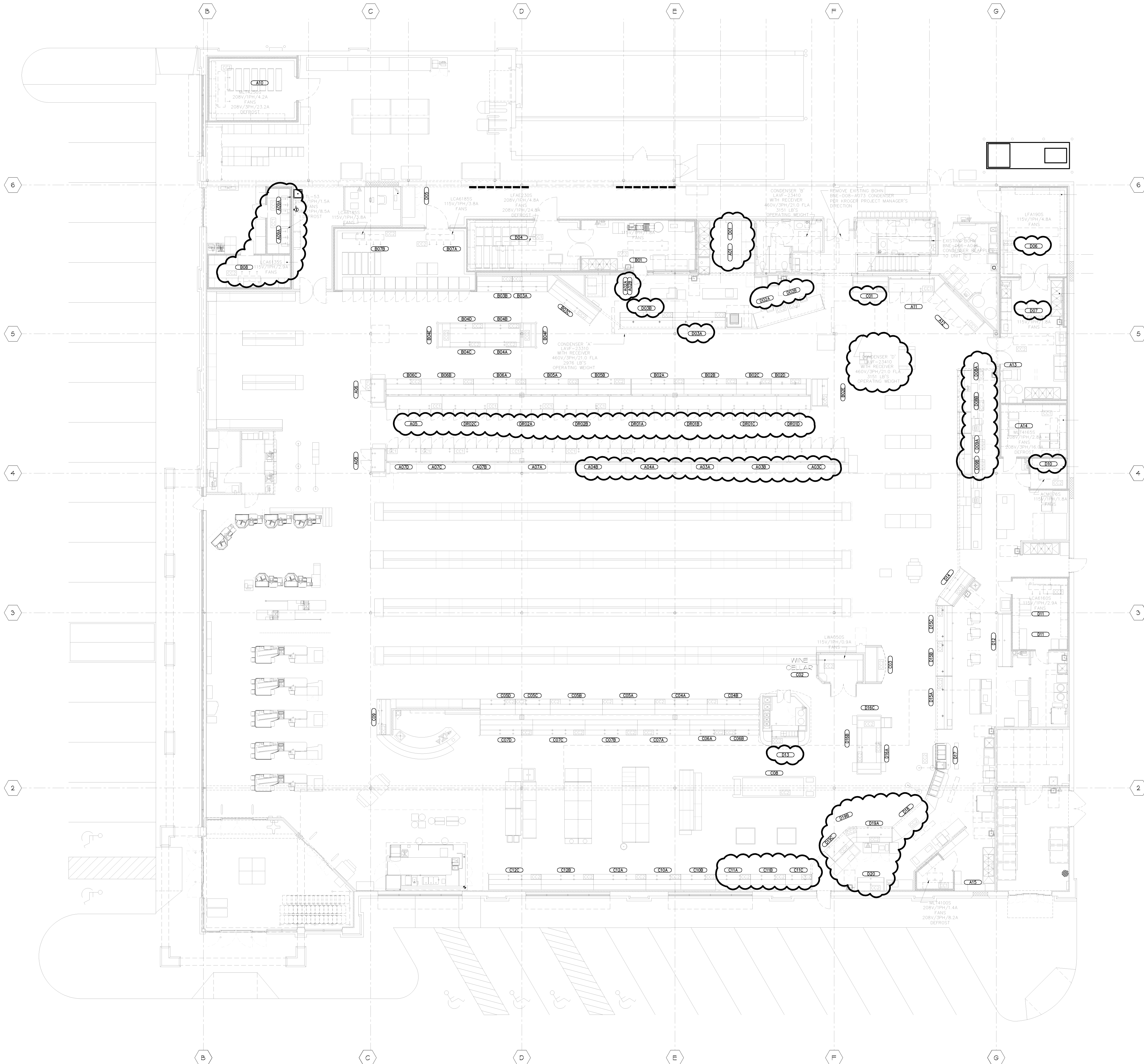
REFER TO R-SERIES REFRIGERATION SHEETS.

### CONTROL NOTES:

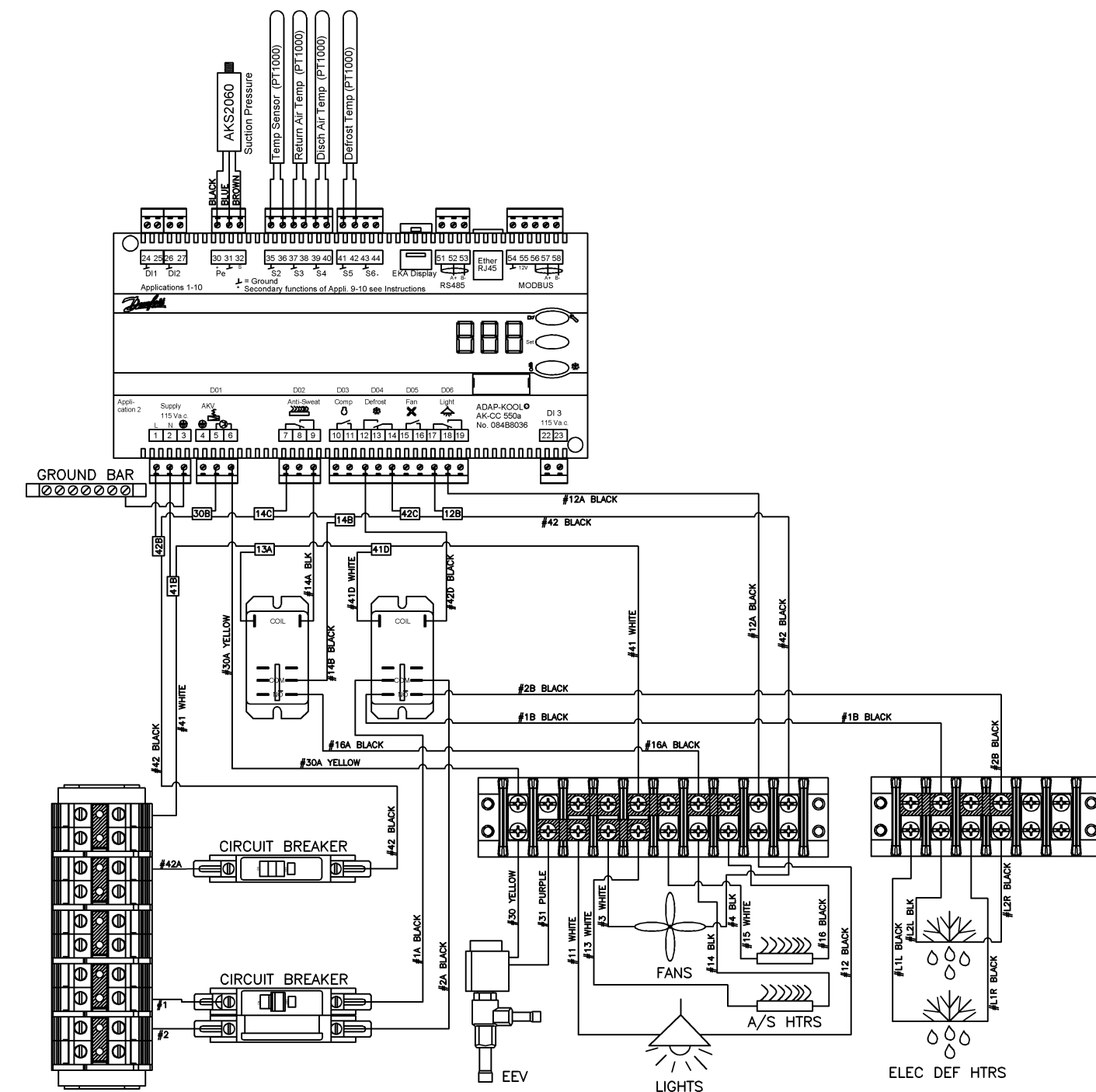
- CC1** DANFOSS MODEL AK-CC 550A CASE CONTROLLER(S) AND ASSOCIATED COMPONENTS IN ENCLOSURE PROVIDED BY REFRIGERATED CASE OR COOLING COIL SUPPLIER. REFRIGERATION EMS INSTALLER TO WIRE INPUTS & OUTPUTS FROM SENSORS TO CONTROLLER WHEN FIELD MOUNTED. REFRIGERATED MERCHANDISER SUPPLIER TO WIRE INPUTS AND OUTPUTS ON CASE MOUNTED CONTROLLERS. EMS INSTALLER TO WIRE NETWORK COMMUNICATION. ELECTRICIAN TO CONNECT 120V CONTROL POWER AND 208V DEFROST POWER.
- CC2** DANFOSS MODEL AK-CC 550A CASE CONTROLLER(S) AND ASSOCIATED COMPONENTS IN ENCLOSURE PROVIDED BY REFRIGERATED CASE OR COOLING COIL SUPPLIER. REFRIGERATION EMS INSTALLER TO WIRE INPUTS & OUTPUTS FROM SENSORS TO CONTROLLER WHEN FIELD MOUNTED. REFRIGERATED MERCHANDISER SUPPLIER TO WIRE INPUTS AND OUTPUTS ON CASE MOUNTED CONTROLLERS. EMS INSTALLER TO WIRE NETWORK COMMUNICATION. ELECTRICIAN TO CONNECT 120V CONTROL POWER.



**MEZZANINE PLAN**  
SCALE: 3/32" = 1'-0"

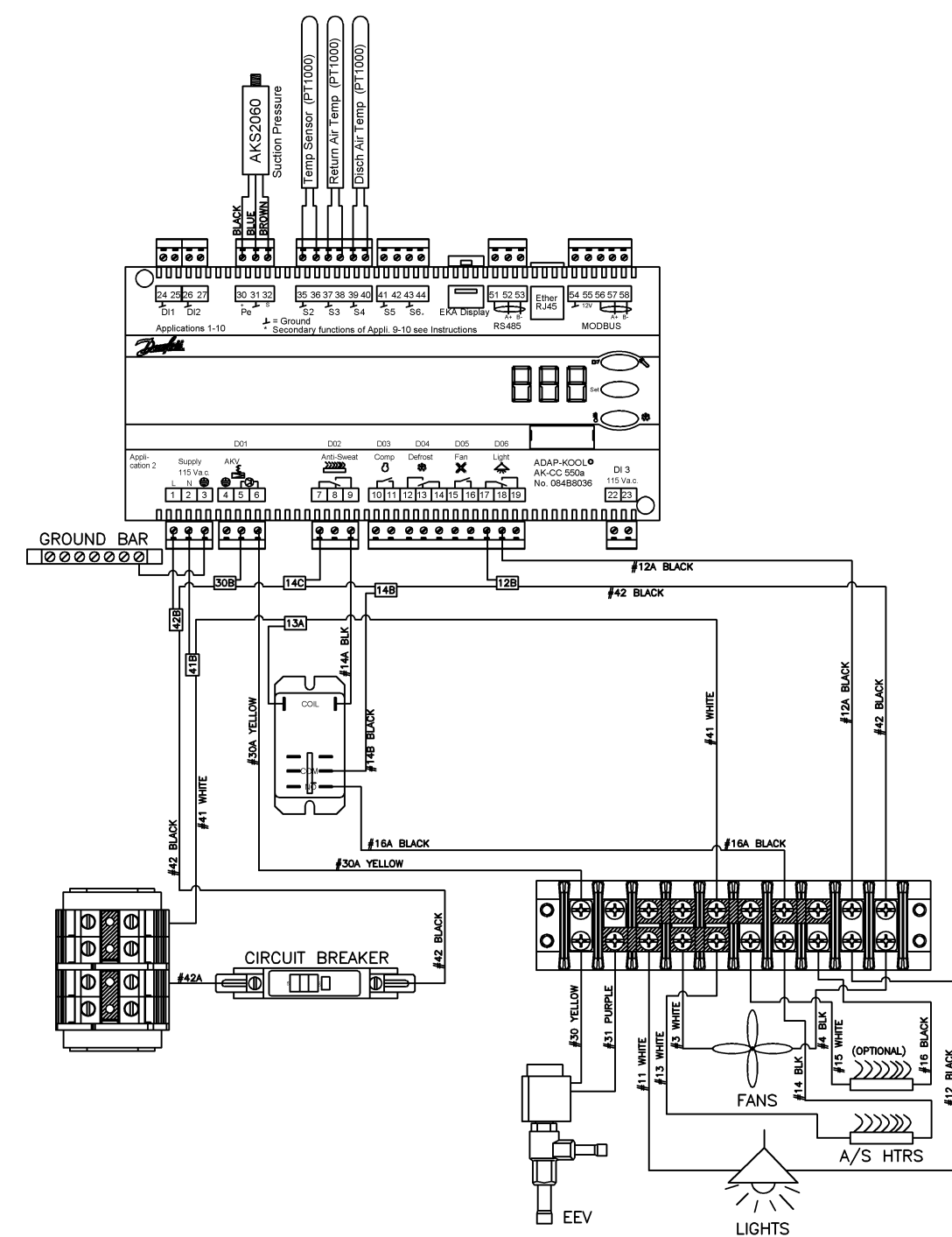


**ENERGY MANAGEMENT REFRIGERATION LAYOUT PLAN**  
SCALE: 3/32" = 1'-0"



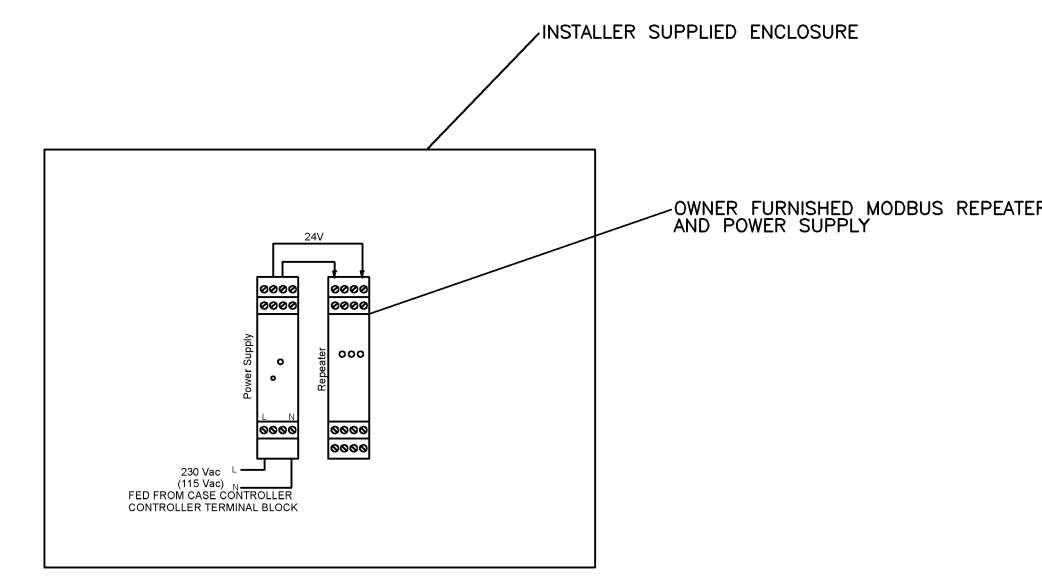
**CC1 SAMPLE SCHEMATIC**

SCALE: NONE



**CC2 SAMPLE SCHEMATIC**

SCALE: NONE



- NOTES:  
1. UTILIZE A MODBUS REPEATER AFTER EVERY 32 CASE CONTROLLERS ON A LOOP.  
2. LOCATE REPEATER INSIDE AN ENCLOSURE NEXT TO THE 32ND CASE CONTROLLER ENCLOSURE.

**MODBUS REPEATER SAMPLE SCHEMATIC**

### NOTES

1. ALL HVAC SENSORS (I.E. ANALOG TEMPERATURE SENSORS, RELATIVE HUMIDITY SENSORS, CO2 SENSORS) TO BE MOUNTED AT 7'-6" ABOVE FINISHED FLOOR.  
2. LIGHTING OVERRIDE SWITCHES TO BE MOUNTED AT 6'-4" ABOVE FINISHED FLOOR.  
3. A MODBUS REPEATER IS NEEDED AFTER EVERY 32 CASE CONTROLS IN A HUBBORD ALARM OUTPUTS TO BE WIRED TO THE SPARE DIGITAL INPUT OF CASE CONTROLLER. MULTIPLE EVAPORATORS IN A BOX SHOULD BE DAISY-CHAINED TOGETHER.  
4. ISLAND DESIGNATED AS DUAL TEMP WILL HAVE AN OEM INSTALLED TOGGLE SWITCH ON EACH SECTION WIRED TO THE RESPECTIVE CASE CONTROLLER SPARE DIGITAL INPUT.

BULLETIN NO. 3  
BIDS & PERMITS  
80% OWNER REVIEW  
08-31-2015  
08-28-2015  
08-22-2015

PROPOSED INTERIOR REMODEL FOR:



STORE NO. D-361

425 N. CENTER STREET  
NORTHVILLE, MI 48167

THE KROGER CO. OF MICHIGAN

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ENERGY MGMT REF LAYOUT PLAN

project no.

sheet no.

15100

EM-2A