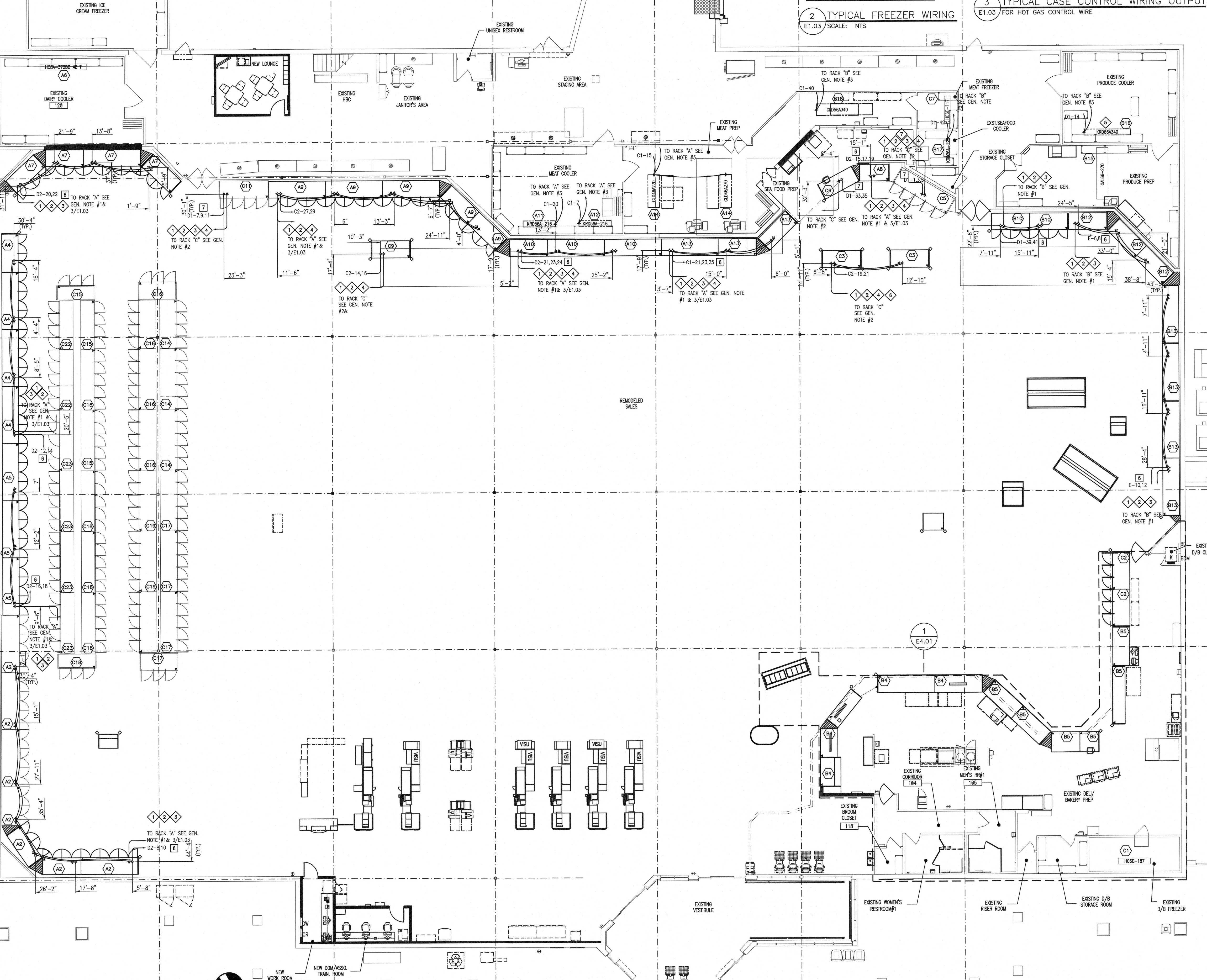
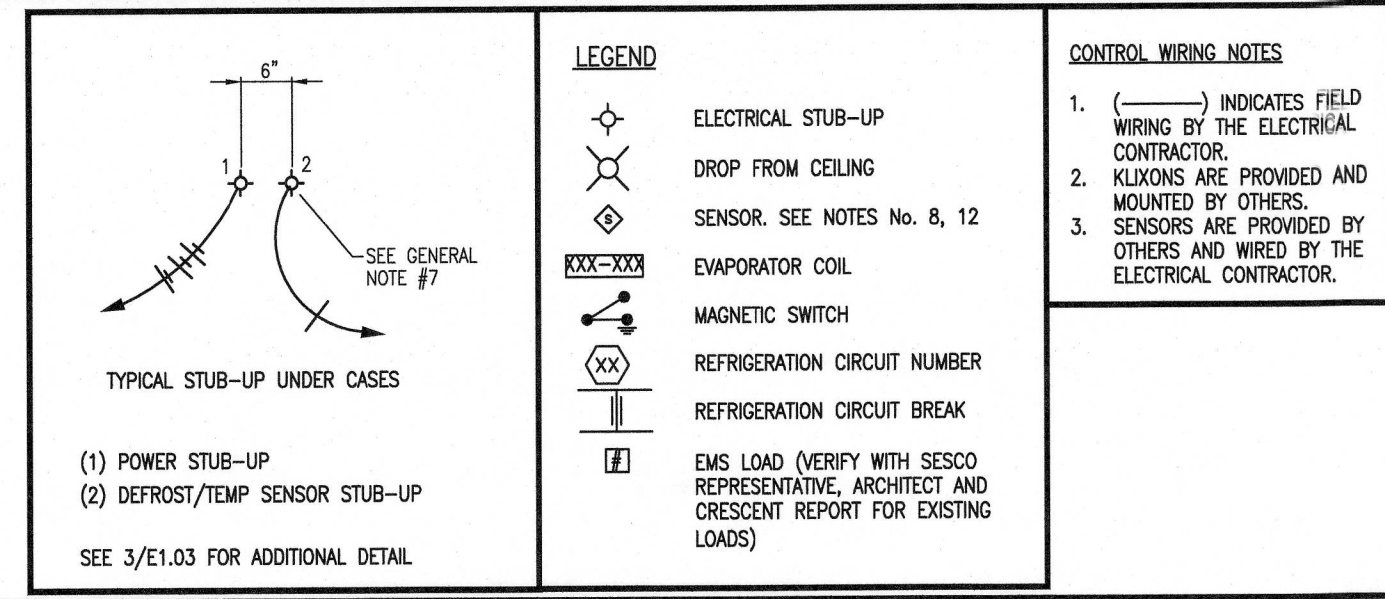
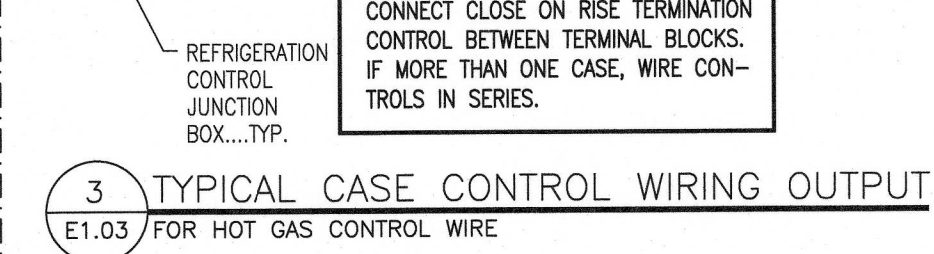
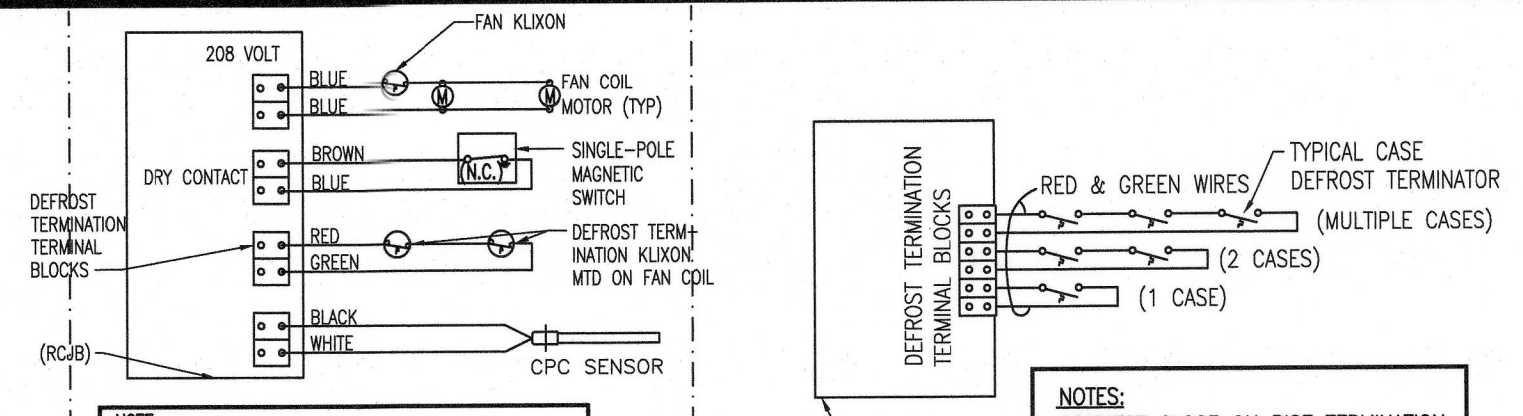


DISCLAIMER

- NO CALCULATIONS WERE DONE TO CONFIRM THAT THE ELECTRICAL PANEL ON THE REFRIGERATION RACK CAN ACCOMMODATE THE NEW BREAKERS. ELECTRICAL CONTRACTOR TO CONFIRM THE RACK CAPACITY & COORDINATE ALL REQUIREMENTS WITH REFRIGERATION CONTRACTOR PRIOR TO BID AND ROUGH-IN.
- BREAKER SIZES ASSIGNED TO ELECTRICAL DEFROST CIRCUITS ARE BASED ON EOR BEST ESTIMATE GIVEN DATA SHOWN ON REFRIGERATION SCHEDULES AND SHALL NOT BE HELD LIABLE FOR INADEQUATE SIZES DUE TO SPECIAL CASE REQUIREMENTS. CONTRACTOR SHALL CONFIRM REQUIRED BREAKER SIZES WITH REFRIGERATION DESIGNER PRIOR TO BID AND ROUGH-IN AND SHALL UPDATE WIRING ACCORDINGLY.



- GENERAL NOTES:**
- MEDIUM TEMPERATURE CASES (PER CIRCUIT ELECTRICAL REQUIREMENTS AND COLOR CODES)
 - FANS: 12GA 1-BLACK, 1-WHITE
 - LIGHTS: 12GA 1-RED, 1-WHITE, RUN THROUGH EMS LOAD #5
 - ANTI-SWEAT HEATERS: 12GA 1-BLUE, 1-WHITE, RUN THROUGH THE SWEATMISER PANEL. ONE CIRCUIT FOR DAIRY, ONE CIRCUIT FOR LUNCH MEAT AND ONE CIRCUIT FOR BEER. MARK NEUTRAL WITH PROPER PANEL LETTER AND CIRCUIT NUMBER. THERE WILL BE A 4x4 JUNCTION BOX INSTALLED ON TOP OF THE CASES BY THE RETIRED DOOR COMPANY THAT THE EC WILL RUN HIS WIRES TO. SEE ENVIRONMENTAL NOTES ON THIS SHEET.
 - LOW TEMPERATURE CASES (PER CIRCUIT ELECTRICAL REQUIREMENTS AND COLOR CODES)
 - FANS: 12GA 1-BLACK, 1-WHITE
 - LIGHTS: 12GA 1-RED, 1-WHITE, RUN THROUGH EMS LOAD #5
 - ANTI-SWEAT HEATERS: 12GA 1-BLUE, 1-WHITE, RUN THROUGH THE SWEATMISER PANEL. MARK NEUTRAL WITH PROPER PANEL LETTER AND CIRCUIT NUMBER.
 - 22GA 4-WIRE SHIELDED CABLE (BELDEN CAT-SE) 1-BLACK AND 1-WHITE FOR CASE SENSOR, 1-RED AND 1-GREEN FOR DEFROST TERMINATION.
 - MEDIUM TEMPERATURE WALK-IN COOLERS (PER CIRCUIT ELECTRICAL REQUIREMENTS AND COLOR CODES)
 - FANS: 12GA 1-BLACK, 1-WHITE
 - LIGHTS: 12GA 1-RED, 1-WHITE, RUN THROUGH EMS LOAD #1
 - 22GA 4-WIRE SHIELDED CABLE (BELDEN CAT-SE) 1-BLACK AND 1-WHITE FOR CASE SENSOR, 1-RED AND 1-GREEN FOR DEFROST TERMINATION, 1-BROWN AND 1-BLUE FOR MAGNETIC DOOR SWITCH.
 - LOW TEMPERATURE WALK-IN FREEZERS (PER CIRCUIT ELECTRICAL REQUIREMENTS AND COLOR CODES)
 - FANS: 12GA 1-BLACK, 1-WHITE (FAN WIRING FROM THE LOW-TEMP RACK EVAPORATOR CONTRACTOR)
 - LIGHTS: 12GA 1-RED, 1-WHITE, RUN THROUGH EMS LOAD #1
 - 22GA 6-WIRE SHIELDED CABLE (BELDEN CAT-SE) 1-BLACK AND 1-WHITE FOR CASE SENSOR, 1-RED AND 1-GREEN FOR TERMINATION, 1-BROWN AND 1-BLUE FOR MAGNETIC DOOR SWITCH.
 - ALL CONTROL WIRES FOR CASES AND WALK-INS SHALL TERMINATE AT THE ASSOCIATED REFRIGERATION RACK OR REMOTE MANIFOLD.
 - THE EC SHALL MOUNT THE DOOR SWITCH PROVIDED BY THE RACK MFG (IN RC PARTS). EC SHALL PROVIDE WIRE AND CONDUIT FROM FREEZER TO RACK CONTROL PANEL. COORDINATE WITH THE FOOD LION REFRIGERATION REPRESENTATIVE.
 - ALL CONDUIT FOR REFRIGERATED CASES SHALL BE 1" EXTREME SALES AREA STUB-UP TO 1" OF DIMENSION.
 - DIMENSIONS PULLED FROM INSIDE FACE OF MASONRY WALL UNLESS OTHERWISE INDICATED ON PLANS.
 - ALL WIRING SHALL BE DONE IN ACCORDANCE WITH N.E.C. STANDARDS AND WITH FOOD LION STANDARDS. INSTALL USING PROPER WORKMANSHIP. EC IS TO MAKE SURE THAT NO MC OR BX OR ANY OTHER FLEX CABLES ARE USED (UNLESS OTHERWISE NOTED). MC OR BX CAN ONLY BE USED FOR SHORT RUNS FOR LIGHTING FEEDS. EMT MUST BE USED TO CONNECT PANEL TO JUNCTION BOX AND HAVE COMPRESSION-TYPE FITTINGS. SEE SPECIFICATIONS FOR STANDARD PRACTICES.
 - RUN A SEPARATE 3/4" CONDUIT FROM EACH REFRIGERATION CONTROLLER TO ITS RESPECTIVE CONDENSER, CONTAINING (1) 4-WIRE SHIELDED CABLE FOR COMMUNICATION. ONLY SHIELDED CABLES SHALL BE RUN IN THIS CONDUIT.
 - ALL WIRE SHALL BE STRIPPED FOR CONTACTS AND GOLD JOLTS FOR BRANCH CIRCUITS.
 - ANTI-SWEAT SENSOR MOUNTED ON CHASE/COLUMN ABOVE FROZEN FOOD CASE LINE-UP, BY ELECTRICAL CONTRACTOR. COORDINATE EXACT LOCATION WITH FOOD LION REPRESENTATIVE. SEE ENVIRONMENTAL CONTROL NOTES THIS SHEET.
 - PROVIDE SHIELDED CABLE LABELS FOR REFRIGERATED CASES. THIS INCLUDES NEW, EXISTING-RELOCATED, AND EXISTING TO REMAIN CASES. COOLERS AND FREEZERS WILL BE INCLUDED IN THIS PROCESS IF THIS PROCESS IS REQUIRED. SEE GENERAL NOTES #1-4. VERIFY EXTENT OF WORK IN REMAIN CASES. EACH REFRIGERATION CIRCUIT WILL HAVE ITS OWN ELECTRICAL CIRCUIT. AS AN EXAMPLE, IF ONE REFRIGERATION CIRCUIT IS REMOVED AND IS REPLACED BY TWO REFRIGERATION CIRCUITS AN ADDITIONAL ELECTRICAL CIRCUIT WILL BE REQUIRED. THIS CIRCUIT WILL HAVE LIGHTS AND FANS SEPARATED AND ANTI-SWEAT RUN THROUGH THE ANTI-SWEAT CONTROLLER FOR ALL NEW AND RELOCATED GLASS DOOR FROZEN FOOD CASES.
 - INSTALL A 6" X 6" X 36" WIRING TROUGH WHERE THE CABLES ENTER THE MECHANICAL ROOM, CONDUIT FROM THE TROUGH TO THE RESPECTIVE RACK/HEADER, LABELING BOTH ENDS OF EACH CABLE WITH CIRCUIT DESIGNATION. REFRIGERATION CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING THE SENSOR CABLES TO THE RACK/HEADER AND CASE/COOLERS.
 - IMPORTANT NOTE: ELECTRICAL CONTRACTOR SHALL RUN SENSOR CABLES THE NIGHT OF THE CASE MOVES.
 - BIDDING ELECTRICAL CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING A COPY OF THE REFRIGERATION INSTALLATION SCOPE OF WORK & SUMMARY TO VERIFY A INCLUDE ANY NEW OR RESSID BREAKERS. NOTE: NEW LOW TEMP RACK PROVIDE EVAPORATOR POWER TO WALK-IN FREEZERS. INCLUDE RELOCATING EVAPORATOR CIRCUITS WHEN A NEW RACK IS INDICATED. WHEN NEW EXE CONTROLLERS ARE INDICATED IN THE REFRIGERATION SCOPE OF WORK, PROVIDE 3/4" CONDUIT FROM ENVIRONMENTAL CONTROL PANEL.
 - TO A 1-11 BOX AT RECLAM WATER HEATERS, INCLUDE 4 WIRE SHIELDED.
 - TO REFRIGERATION RACKS, DASHY CHAIN BACK TO RACK, INCLUDE (2) 4 WIRE SHIELDED CABLE FOR COM B & C ON CONTROLLERS. IN NEW RACKS PROVIDE 3/4" CONDUIT FROM ANY NEW RACKS TO ROOFTOP CONDENSER (2) 14'S AND (4) WIRE SHIELDED.
 - ALL NEW AND RELOCATED CASE WORK REQUIRES A SEPARATE NEUTRAL FOR EACH: LIGHTS, FANS & ANTI-SWEAT HEATERS. NO DOUBLE POLE BREAKERS ARE ALLOWED FOR SHARED NEUTRALS.
- SENSORS**
- ALL NEW AND EXISTING LOW VOLTAGE CABLING SHALL BE PROPERLY SUPPORTED AND NEATLY SECURED. ALL NEW CABLES SHALL BE IN CONDUIT VERTICALLY AND SECURED NEATLY TO STEEL OVERHEAD. ANY NEW CABLING TO BE RUN PARALLEL & PERPENDICULAR TO EXTERIOR WALLS. ALL BANNONED CABLES TO BE REMOVED.
 - REFRIGERATION SENSOR WIRING MAY BE FREE WIRED AND TE-WRAPPED TO THE STRUCTURE ABOVE LAY-IN CEILING AND IN EXPOSED CEILING BACK ROOM AREAS, IF ALLOWED BY CODE (UNLESS CALLED OUT TO BE UNDER SLAB). SENSOR WIRING IN EXPOSED STRUCTURE CEILING (ROCKWOLLS) SHALL BE RUN IN EMT CONDUIT IN MACHINE ROOMS. SENSOR WIRING SHALL BE INSTALLED IN A 6" X 6" X 36" TROUGH WHERE THE CABLES ENTER THE ROOM IN EXIT CONDUIT FROM THE TROUGH TO ABOVE THE RESPECTIVE RACK/HEADER, THEN IN FLEXIBLE CONDUIT TO THE RACK/HEADER, LABELING BOTH ENDS OF EACH CABLE WITH CIRCUIT DESIGNATION. REFRIGERATION CONTRACTOR TO TERMINATE THE SENSOR CABLES TO THE RACK/HEADER AND CASES/COOLERS.
 - REFRIGERATION CONTRACTOR SHALL SUPPLY AND INSTALL SOLENOID VALVE AT THE RACK FOR THE GARDEN COOLER & PRODUCE PREP EVAPORATOR COILS.
 - RELOCATE COLUMN MOUNTED SENSORS FOR ANTI-SWEATS WHEN FROZEN FOOD CASES ARE REPOSITIONED IN THE SALES AREA.
 - ALL CTS CABLE SHALL BE BELDEN CAT-SE.
 - THE ELECTRICAL CONTRACTOR WILL REUSE EXISTING STUB-UPS FOR NEW CASES WHERE POSSIBLE. IN THE EVENT THERE'S NO EXISTING STUB UP HE WILL COORDINATE WITH THE FOOD LION CONSTRUCTION SUPERVISOR RUNNING WIRE OVERHEAD. (REFER TO NOTE #1-4). FIELD VERIFY EXTENT OF WORK REQUIRED PRIOR TO BID.
 - THE ELECTRICAL CONTRACTOR TO PROPERLY SEAL ALL CONDUITS ENTERING WALK-IN COOLERS AND FREEZERS TO PREVENT MOISTURE. WHERE A CONDUIT PASSES THROUGH AN INSULATED PANEL AND INTO A REFRIGERATED SPACE, THAT CONDUIT INTERIOR AND PENETRATION SHALL BE SEALED TO PREVENT MOISTURE TRANSFER AND ACCUMULATION. ANY MOISTURE ACCUMULATION / CONDENSATION OR ICE PRESENT WITHIN A REFRIGERATION SPACE, CONDUIT BODY, ELECTRICAL BOX OR FITTINGS SHALL BE REMOVED WHILE ENTRY POINT IS PROPERLY REPAIRED / SEALED.
 - GENERAL CONTRACTOR SHALL PAINT ALL EXPOSED REFRIGERATION LINES IN MEAT PREP, GARDEN COOLER, AND PRODUCE PREP TO MATCH WALL COLOR.

- REFRIGERATION PLAN KEY NOTES**
- EXTEND AND REUSE CIRCUITS MADE SPARE BY DEMOLITION OF EXISTING/RELOCATED REFRIGERATED CASES. VERIFY LIGHTING CIRCUITS (CONTROLLED BY EMS) ARE RECONNECTED TO LIGHTING LOADS AND ANTI-SWEAT CIRCUITS CONTROLLED BY ANTI-SWEAT SYSTEM ARE RECONNECTED TO ANTI-SWEAT LOADS. REUSE EXISTING UNDERSLAB STUBS WHERE POSSIBLE. REUSE EXISTING SENSOR CABLING WHERE POSSIBLE. SEE GENERAL NOTE #4. COORDINATE REQUIREMENTS WITH THE REFRIGERATION CONTRACTOR. RUN CONDUITS OVERHEAD AND DOWN IN WALL OR THROUGH FALSE COLUMN WITH REFRIGERATION PIPING WHERE EXISTING UNDERSLAB STUBS ARE NOT REUSED. FIELD VERIFY EXISTING CONDITIONS AND EXTENT OF WORK. CASES CIRCUITS ARE NOT ALLOWED TO SHARE NEUTRALS.
 - WHERE TOTAL CASE LINEUP LOAD EXCEEDS 150AMPS (LIGHTING) OR 240AMPS (ANTI SWEATS), SPLIT BETWEEN (2) CIRCUITS AS INDICATED. DIVIDE CASE LINEUP AS EVENLY AS POSSIBLE. IF EXISTING CASE LIGHTING CIRCUITRY IS FED FROM A BREAKER LARGER THAN 20AMP OR ANTI-SWEATS CIRCUITRY IS FED FROM A BREAKER LARGER THAN 30AMP, REPLACE THE EXISTING BREAKER WITH A NEW 20AMP (LIGHTING) OR 30AMP (ANTI-SWEAT) TRIP BREAKER OF SIMILAR TYPE AND AIC RATING. FIELD VERIFY EXISTING CONDITIONS AND EXTENT OF WORK.
 - CASE LIGHTING AND UP-LIGHTING CIRCUITS TO BE CONTROLLED BY ENERGY MANAGEMENT SYSTEM (LOADS #6, #7 AND #14, SEE E6.04). PROVIDE CONTRACTORS IN ENCLOSURE IF REQUIRED. FIELD VERIFY EXISTING.
 - CASE ANTI-SWEAT CIRCUITS TO BE CONTROLLED BY SWEAT-MISER SYSTEM. FIELD VERIFY EXISTING CONDITIONS. PROVIDE AND INSTALL ALL EQUIPMENT NECESSARY. COORDINATE REQUIREMENTS WITH THE REFRIGERATION CONTRACTOR.
 - NEW EVAP COIL TO REPLACE EXISTING. RECONNECT TO EXISTING CIRCUIT AS REQUIRED.
 - ELECTRICAL CONTRACTOR TO PROVIDE NEW 2-POLE 20A BREAKER IN ELECTRICAL DEFROST PANEL MOUNTED IN RACK 'C' FOR CASE C3 IF EXISTING BREAKER DOES NOT MATCH THIS SIZE. EC SHALL EXTEND 3#8 AWG CU, 1#8 CU GND IN 3/4" C. FROM CASE C3 TO RACK 'C' LOCATED IN MECHANICAL ROOM. ESTIMATED WIRING SIZE BASED ON 200 FT RUN EC SHALL CONFIRM ACTUAL RUN LENGTH IN THE FIELD AND UP-SIZE WIRING AS REQUIRED. ELECTRICAL CONTRACTOR TO COORDINATE ALL ELECTRICAL REQUIREMENTS WITH REFRIGERATION CONTRACTOR PRIOR TO ROUGH-IN.
 - ELECTRICAL CONTRACTOR TO PROVIDE NEW 2-POLE 30A BREAKER IN ELECTRICAL DEFROST PANEL MOUNTED IN RACK 'C' FOR CASE C5. EC SHALL EXTEND 3#8 AWG CU, 1#8 CU GND IN 3/4" C. FROM CASE C5 TO RACK 'C' LOCATED IN MECHANICAL ROOM. ESTIMATED WIRING SIZE BASED ON 170 FT RUN EC SHALL CONFIRM ACTUAL RUN LENGTH IN THE FIELD AND UP-SIZE WIRING AS REQUIRED. ELECTRICAL CONTRACTOR TO COORDINATE ALL ELECTRICAL REQUIREMENTS WITH REFRIGERATION CONTRACTOR PRIOR TO ROUGH-IN.
 - ELECTRICAL CONTRACTOR TO PROVIDE NEW 3-POLE 30A BREAKER IN ELECTRICAL DEFROST PANEL MOUNTED IN RACK 'C' FOR STORAGE ICE CREAM FREEZER C12. EC SHALL EXTEND 3#8 AWG CU, 1#8 CU GND IN 3/4" C. FROM STORAGE ICE CREAM FREEZER C12 TO RACK 'C' LOCATED IN MECHANICAL ROOM. ESTIMATED WIRING SIZE BASED ON 160 FT RUN EC SHALL CONFIRM ACTUAL RUN LENGTH IN THE FIELD AND UP-SIZE WIRING AS REQUIRED. ELECTRICAL CONTRACTOR TO COORDINATE ALL ELECTRICAL REQUIREMENTS WITH REFRIGERATION CONTRACTOR PRIOR TO ROUGH-IN.
 - ELECTRICAL CONTRACTOR TO PROVIDE NEW 3-POLE 30A BREAKER IN ELECTRICAL DEFROST PANEL MOUNTED IN RACK 'C' FOR STORAGE ICE CREAM FREEZER C13. EC SHALL EXTEND 3#8 AWG CU, 1#8 CU GND IN 3/4" C. FROM STORAGE ICE CREAM FREEZER C13 TO RACK 'C' LOCATED IN MECHANICAL ROOM. ESTIMATED WIRING SIZE BASED ON 160 FT RUN EC SHALL CONFIRM ACTUAL RUN LENGTH IN THE FIELD AND UP-SIZE WIRING AS REQUIRED. ELECTRICAL CONTRACTOR TO COORDINATE ALL ELECTRICAL REQUIREMENTS WITH REFRIGERATION CONTRACTOR PRIOR TO ROUGH-IN.

- ENVIRONMENTAL CONTROL PANEL CONDUIT SYSTEM**
- = SENSOR (TEMP./HUMIDITY) HANDY BOX MTD.
- ENTIRE CONDUIT SYSTEM FOR ENVIRONMENTAL CONTROL PANEL SHALL BE SUPPLIED BY THE ELECTRICAL CONTRACTOR (WITH PULL STRINGS). ALL WIRING AND TERMINATIONS FOR THE ENVIRONMENTAL CONTROL PANEL SHALL BE COMPLETED BY THE MECHANICAL CONTRACTOR. ALL WIRING AND TERMINATIONS FOR THE ENERGY MANAGEMENT PANEL SHALL BE COMPLETED BY THE ELECTRICAL CONTRACTOR.
 - ALL CONDUIT FOR ENVIRONMENTAL CONTROL SYSTEM SHALL BE 3/4". DO NOT COMBINE SENSOR AND 120 VOLT CONDUIT (VERIFIED BY MECHANICAL CONTRACTOR).
 - ALL MECHANICAL EQUIPMENT SHALL BE FLEXED TO A TERMINATING JUNCTION BOX WITHIN REASONABLE WORKING DISTANCE OF EQUIPMENT.
 - CONDUITS FROM 6"x6"x36" TROUGH TO:
 - a. SMOKE DETECTORS (SERIES BETWEEN A-I SMOKE DETECTORS)
 - b. AHU MOTOR STARTER & AIR PRESSURE SWITCH
 - c. A/C SOLENOIDS AND OUTSIDE AIR DAMPER MOTOR
 - d. A/C CONDENSING UNIT ON ROOF. SEAL TITE 3"-0" MAXIMUM TO EQUIPMENT
 - e. PRODUCE PREP DAMPER MOTOR, SENSOR AND SOLENOID VALVES
 - f. HEAT RECLAM SOLENOID VALVE
 - g. SALES FLOOR AND FRONT DOOR SENSORS
 - h. MAIN AHU DISCHARGE AIR SENSOR LOCATION
 - i. MECHANICAL ROOM & GROCERY STAGING SENSORS
 - j. RTU-1 & RTU-DB, AC-1, AC-2 & AC-3

1 ELECTRICAL REFRIGERATION PLAN
E1.03 SCALE: 3/32" = 1'-0"

