

# BROWN ELEMENTARY - KITCHEN RENOVATION

## ST. JOSEPH PUBLIC SCHOOLS

2027 Brown School Rd, St Joseph, MI 49085

**MEP Engineer / Project Manager:**

IGNYTE DESIGN  
38 COMMERCE SW, SUITE 450  
GRAND RAPIDS, MI 49503

WWW.IGNYTE.DESIGN

**Architect:**

PURE ARCHITECTS  
GRAND RAPIDS, MI  
616.485.5715

WWW.PUREARCHITECTS.COM

**Structural Engineer:**

ABONMARCHE  
95 W MAIN STREET  
BENTON HARBOR, MI 49022  
269.343.5351

WWW.ABONMARCHE.COM

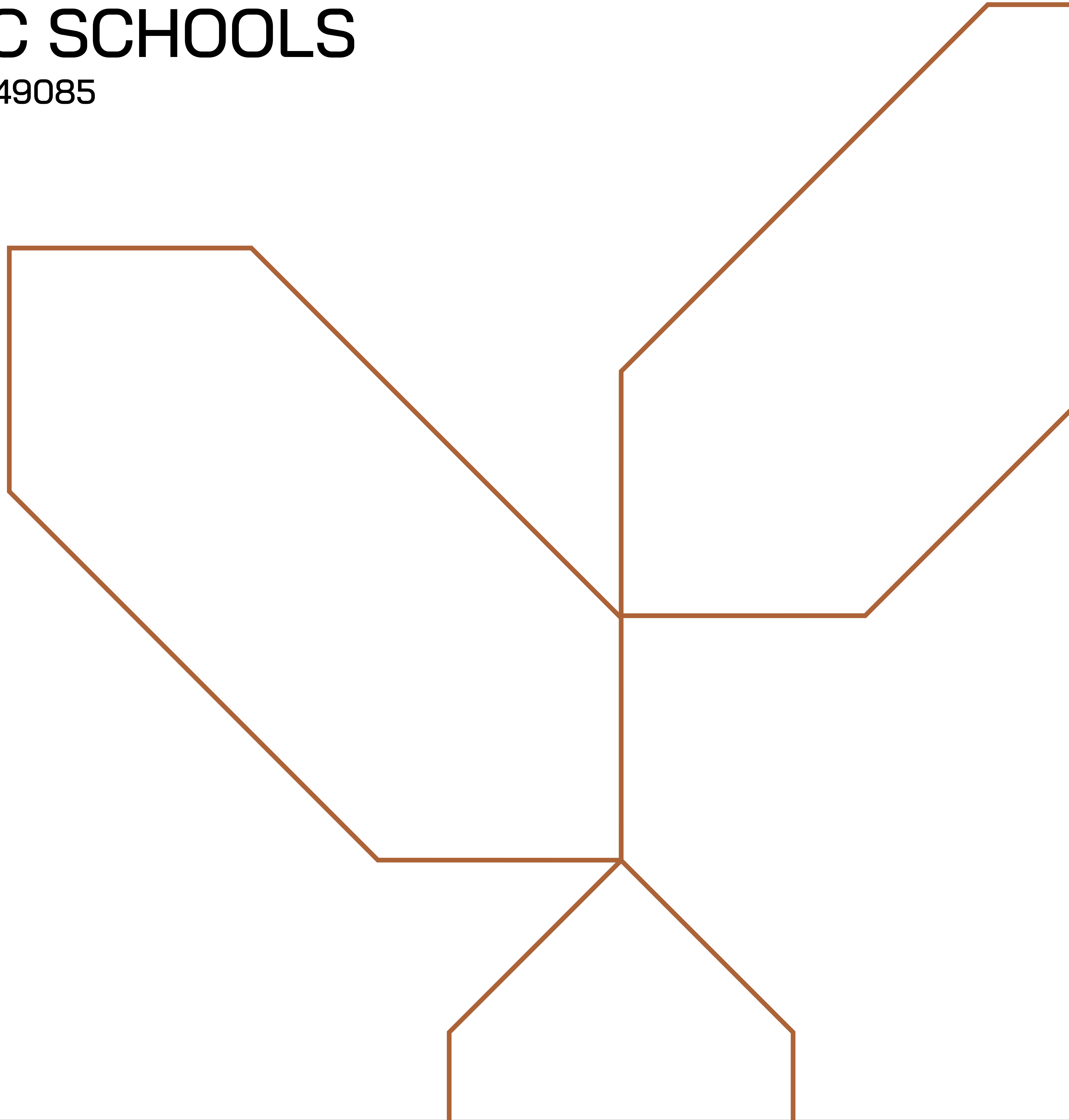
**Construction Manager:**

ELITE COMPANIES  
KALAMAZOO, MI  
269.920.1347

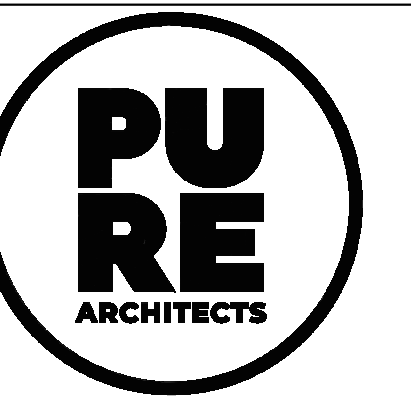
WWW.ELITE-COMPANIES.COM

**Applicable Codes:**

- 2015 MICHIGAN BUILDING CODE
- 2015 MICHIGAN MECHANICAL CODE
- 2018 MICHIGAN PLUMBING CODE
- 2015 MICHIGAN ENERGY CODE
- 2017 NATIONAL ELECTRIC CODE



BROWN  
ELEMENTARY -  
KITCHEN  
RENOVATION



CONSTRUCTION DOCUMENTS 7.11.2023  
Issued For: Date

STAMP  
THE FOLLOWING DIMENSION EQUALS  
ONE INCH WHEN PRINTED TO SCALE.  
SCALE

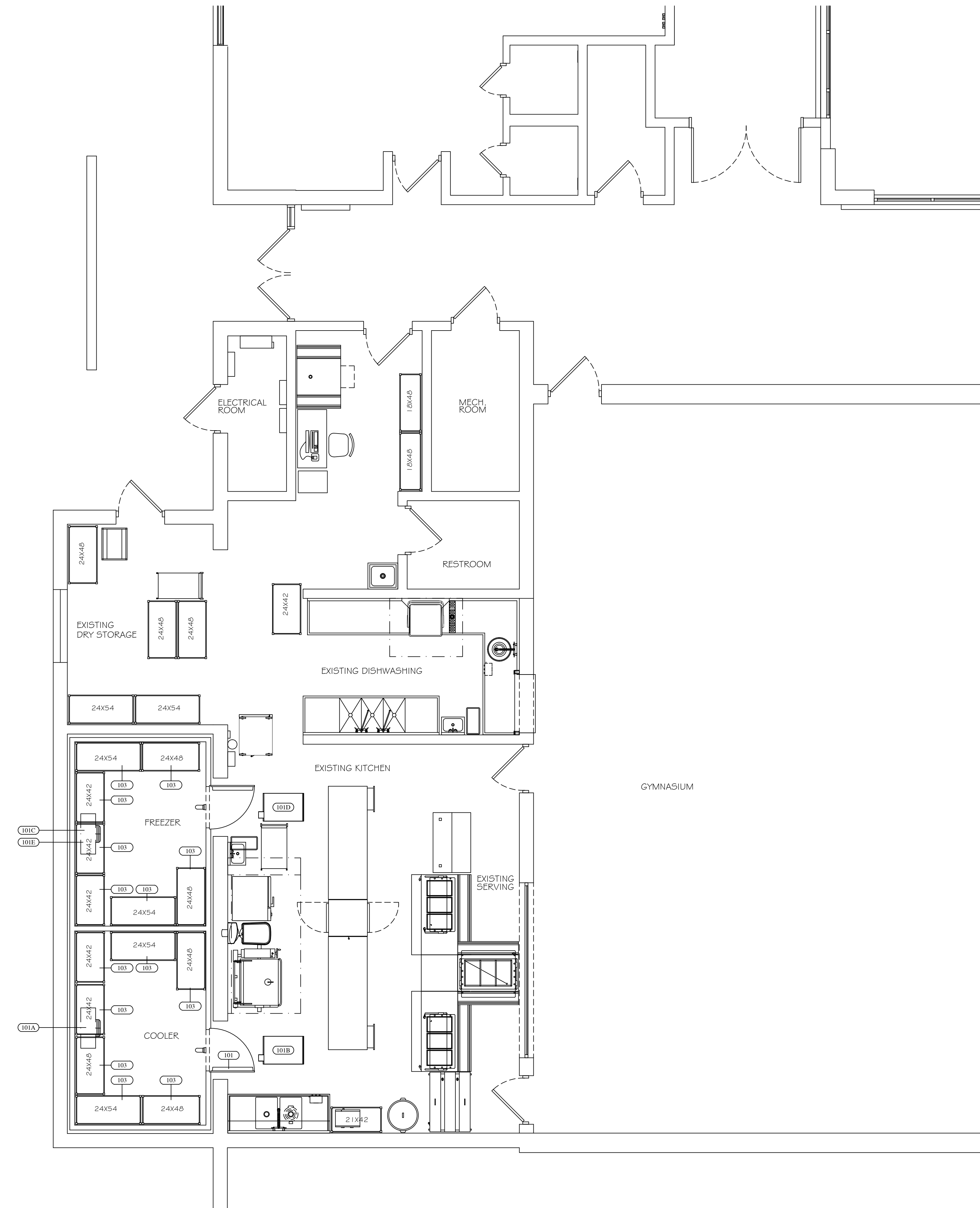


Drawing Title:

COVER SHEET

Project No: 22.019.02

G000



ARCHITECT:

PROJECT:  
ST. JOSEPH PUBLIC SCHOOLS  
BROWN ELEMENTARY  
2027 BROWN SCHOOL RD  
ST. JOSEPH, MI 49085

SHEET TITLE:  
FOOD SERVICE  
EQUIPMENT  
FLOOR PLAN  
SCALE 1/4" = 1'-0"

NOTE:

1. FSEC SHALL VERIFY ROUGHIN REQUIREMENTS FOR FUTURE, PURVEYOR SUPPLIED, OWNERS RELOCATED EQUIPMENT, OWNER SUPPLIED EQUIPMENT, ETC.
2. TRADES TO REUSE EXISTING ROUGHINS WHERE APPLICABLE.
3. TRADES SHALL DISCONNECT, REMOVE, STORE & RECONNECT ANY EXISTING EQUIPMENT AS REQUIRED FOR CONSTRUCTION PURPOSES.
4. EQUIPMENT NOT BEING REUSED TO BE DISCONNECTED BY TRADES AND STORED OR DISCARDED BY THE FSEC AS DIRECTED BY OWNER.
5. EQUIPMENT DESIGNATED AS RELOCATED SHALL BE DISCONNECTED BY THE TRADES AND RELOCATED BY THE FSEC AS PER PLANS AND SPECIFICATIONS.

EQUIPMENT SCHEDULE

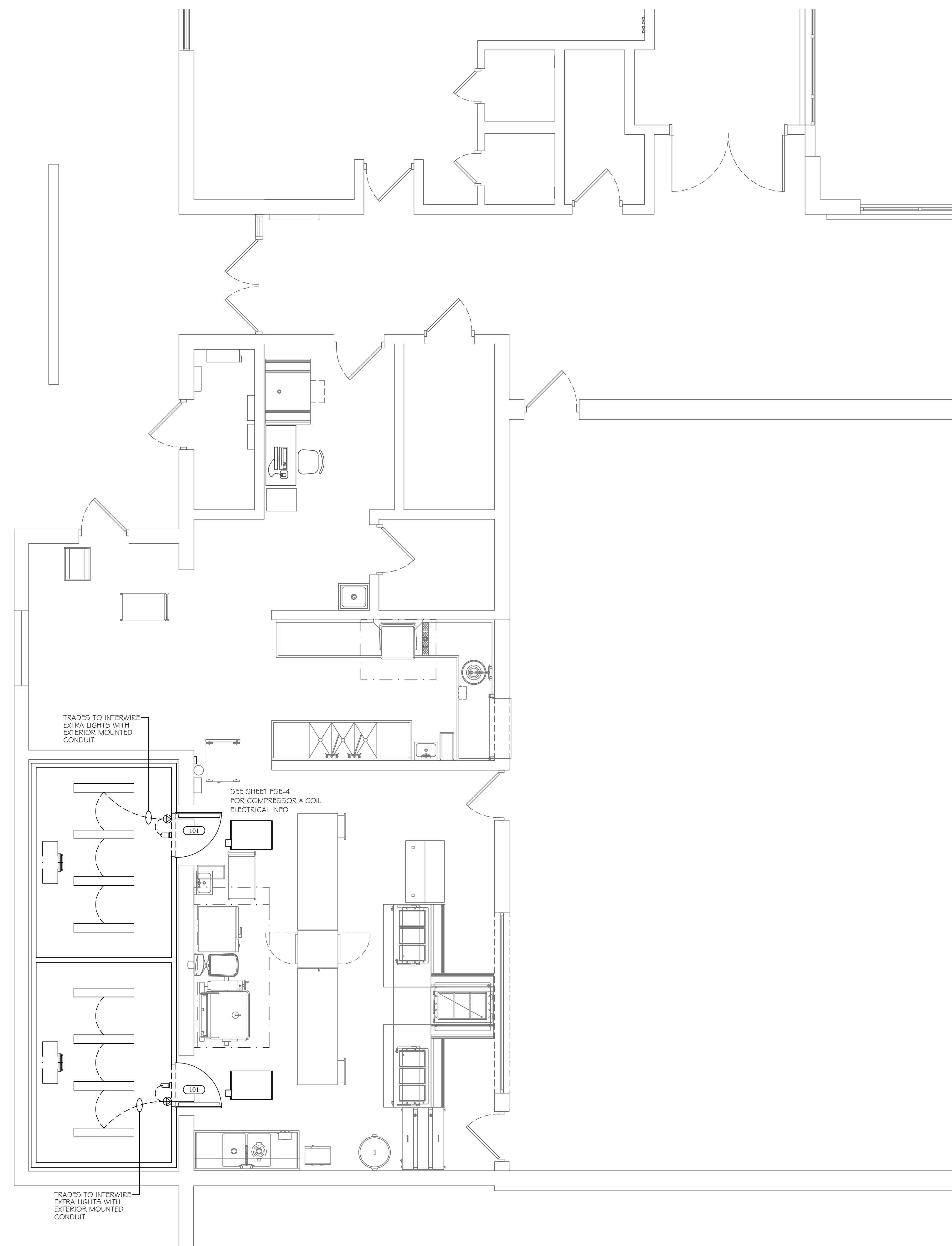
Item	Qty	DESCRIPTION	CW (in)	HW (in)	INDIRECT DRAIN	DIRECT DRAIN (IN)	GAS (in)	MBTUH	EXH DUCT	EXH CFM	MUA DUCT	MUA CFM	Volts	Ph	Amps load	Equipment Remarks
101	1	WALK-IN COOLER/FREEZER											120	1	(2) 8.0	INSULATED FLOOR: SEE REFRIGERATION PLAN
101A	1	COOLER COIL			FFD								120	1	5.0	
101B	1	COOLER COMPRESSOR											208	3	10.0	ROOF CURBS BY FSEC
101C	1	FREEZER COIL			FFD								208	1	15.0	
101D	1	FREEZER COMPRESSOR											208	3	15.0	ROOF CURBS BY FSEC
101E	1	FREEZER COIL HEAT TAPE											120	1	5.0	
102	1	SPARE NUMBER														
103	14	SHELVING - POLYMER														

DATE CODE	PROJECT PHASE	BY
06/01/23 SIBEIFP	SCHEMATIC DESIGN	CM
06/22/23 SIBIEFP	CONSTRUCTION DOCUMENTS	AH

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SHEET NUMBER:

FSE-1



EQUIPMENT SCHEDULE								
Item	EQUIPMENT DESCRIPTION	VOLTS	PH	AMPS LOAD	DIRECT BY EC	CORDSET BY FSEC	AFF (in)	REMARKS
101	WALK-IN COOLER/FREEZER	120	1	8.0	X		DFA	TRADES WIRE TO JB FOR LIGHTS, DOOR HEATER

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BROWN ELEMENTARY  
2027 BROWN SCHOOL RD  
ST. JOSEPH, MI 49085

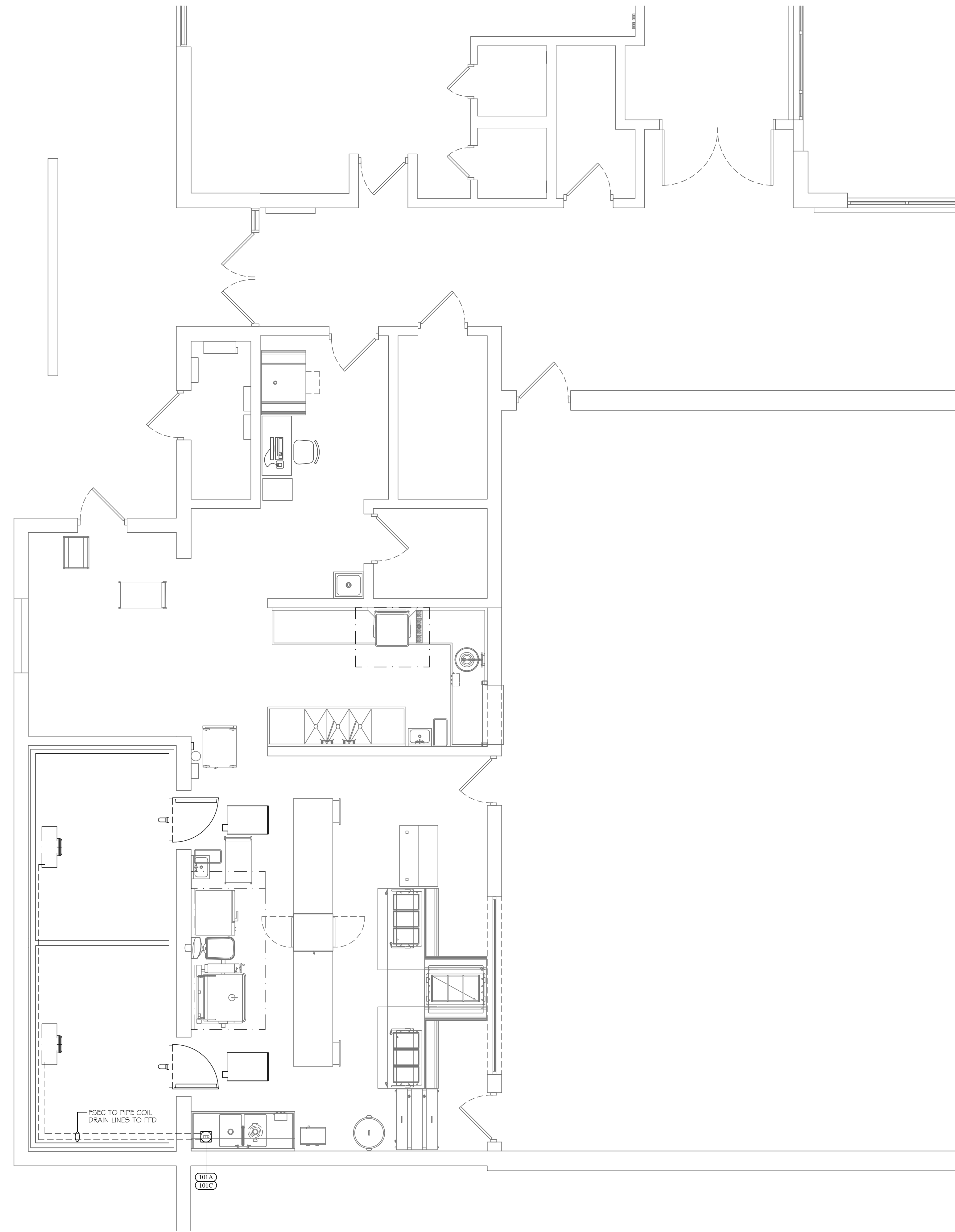
SHEET TITLE:  
FOOD SERVICE  
ELECTRICAL  
FLOOR PLAN  
SCALE 1/4" = 1'-0"

DATE CODE	PROJECT PHASE	BY
06/22/23 SIB2E	CONSTRUCTION DOCUMENTS	AH

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SHEET NUMBER:

**FSE-2**



ARCHITECT:

PROJECT:  
ST. JOSEPH PUBLIC SCHOOLS  
BROWN ELEMENTARY  
2027 BROWN SCHOOL RD  
ST. JOSEPH, MI 49085

SHEET TITLE:  
FOOD SERVICE  
PLUMBING  
FLOOR PLAN  
SCALE 1/4" = 1'-0"

DATE CODE	PROJECT PHASE	BY
06/22/23 SIB2P	CONSTRUCTION DOCUMENTS	AH

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SHEET NUMBER:

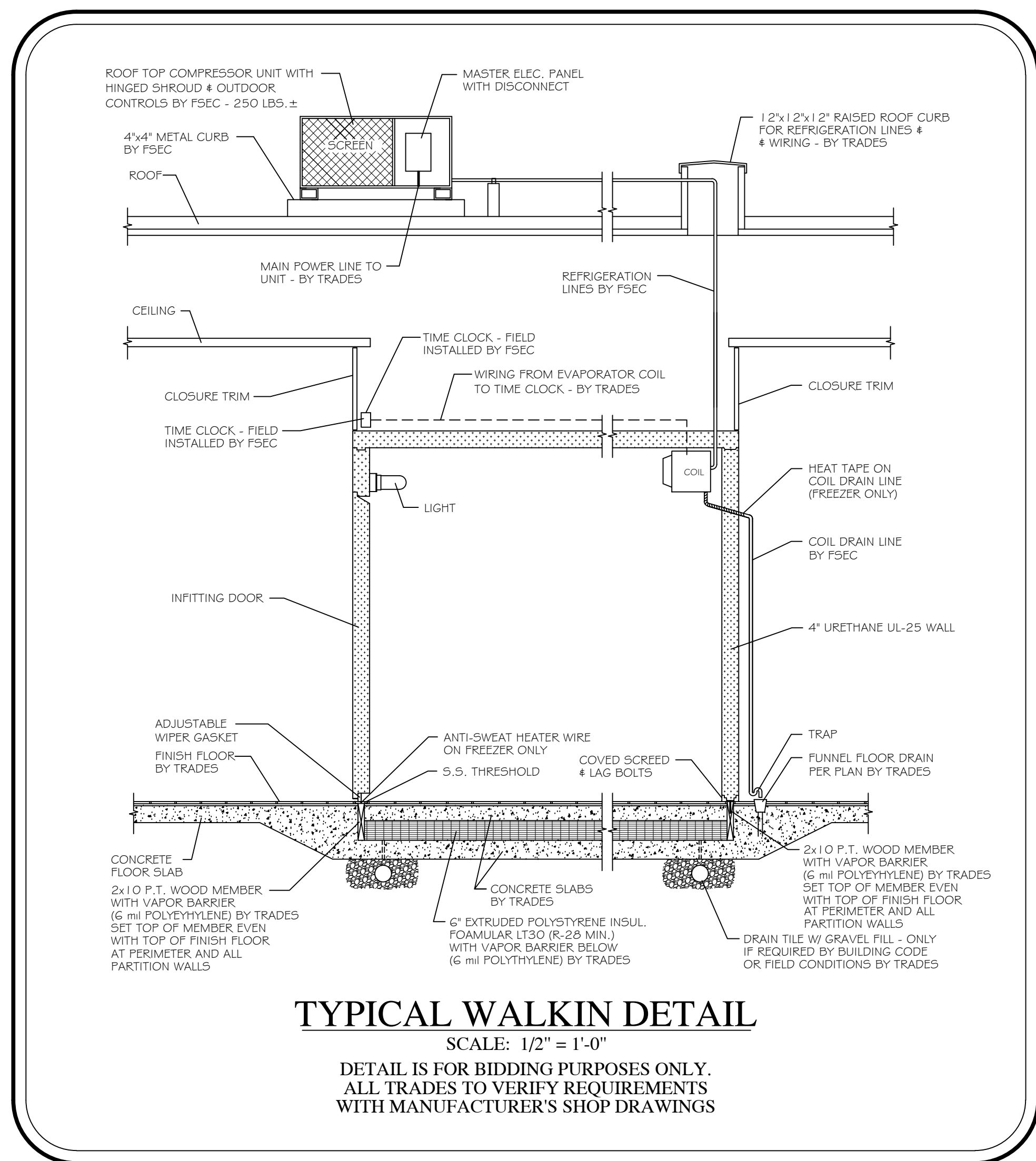
**FSE-3**

**EQUIPMENT SCHEDULE**

Item	EQUIPMENT DESCRIPTION	CW (in)	HW (in)	AFF (in)	DIRECT DRAIN (in)	AFF (in)	INDIRECT AIR GAP	GAS (in)	AFF (in)	MBTUH	REMARKS
101A	COOLER COIL						FFD				FSEC PIPE COIL TO FFD
101C	FREEZER COIL						FFD				FSEC PIPE COIL TO FFD

**NOTE:**

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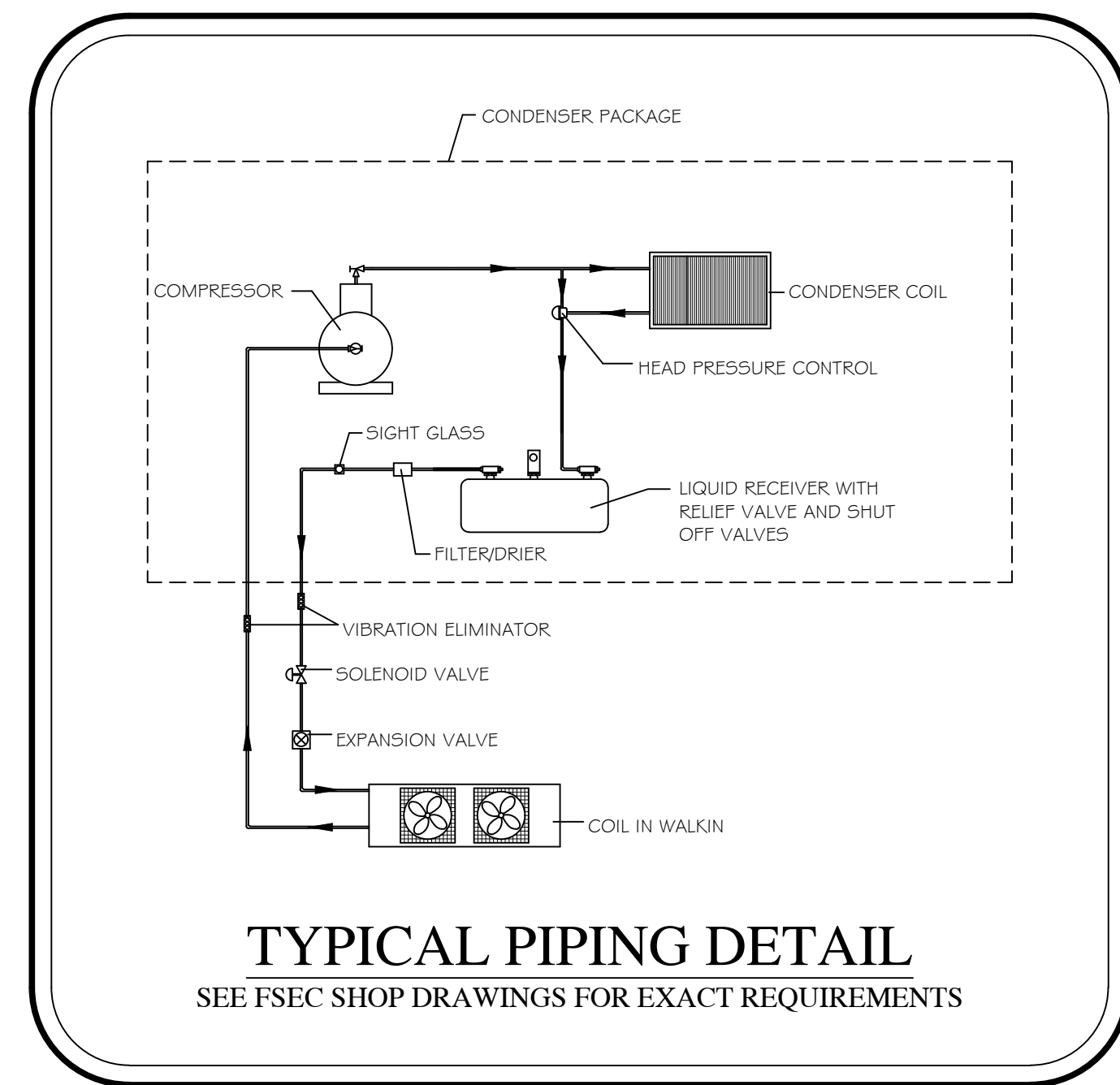
**TYPICAL WALKIN DETAIL**

SCALE: 1/2" = 1'-0"

DETAIL IS FOR BIDDING PURPOSES ONLY.  
ALL TRADES TO VERIFY REQUIREMENTS  
WITH MANUFACTURER'S SHOP DRAWINGS

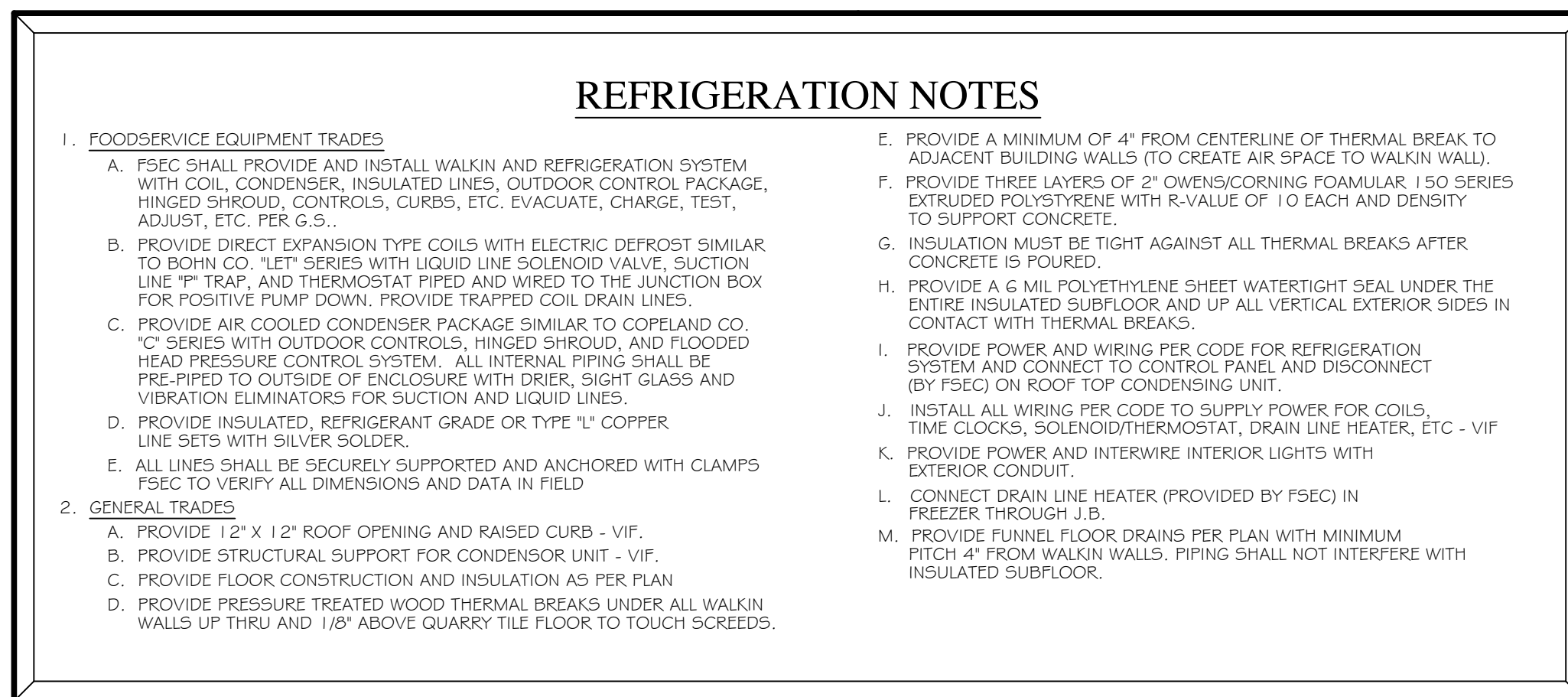
**ELECTRICAL CONNECTIONS SCHEDULE**

CONN.	VOLTS	PH	KW	HP	AMPS	CONNECTION	HEIGHT	REMARKS
E101A	120	1			5.0	DIRECT	DFA	WIRING FROM COIL TO TIME CLOCK
E101B	208	3			10.0	DIRECT	ROOF	WIRING FROM COIL TO TIME CLOCK
E101C	208	1			15.0	DIRECT	DFA	WIRING FROM COIL TO TIME CLOCK
E101D	208	3			15.0	DIRECT	ROOF	FREEZER COIL HEAT TAPE
E101E	120	1			5.0	DIRECT	DFA	FREEZER COIL HEAT TAPE



**TYPICAL PIPING DETAIL**

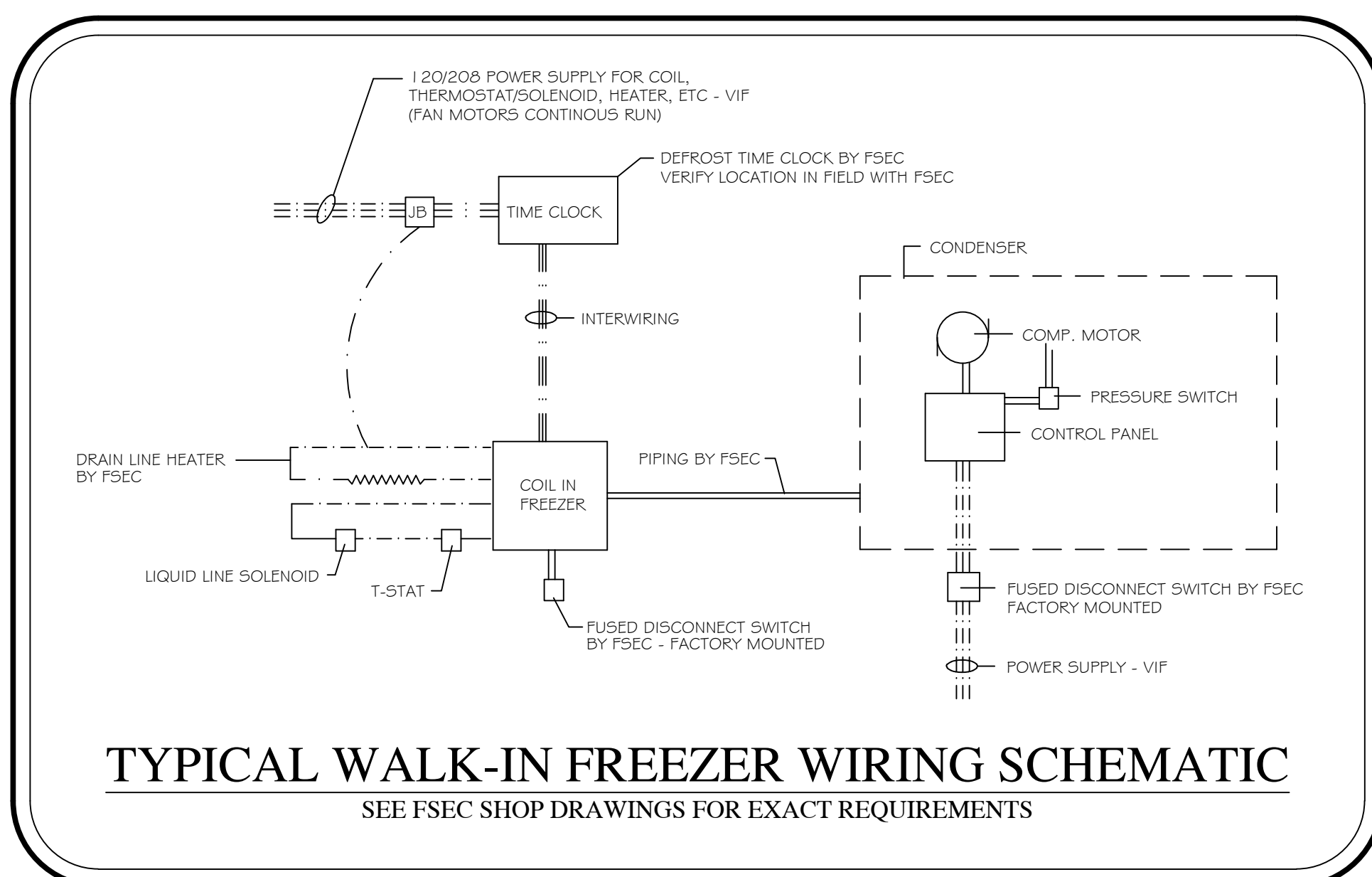
SEE FSEC SHOP DRAWINGS FOR EXACT REQUIREMENTS



**REFRIGERATION NOTES**

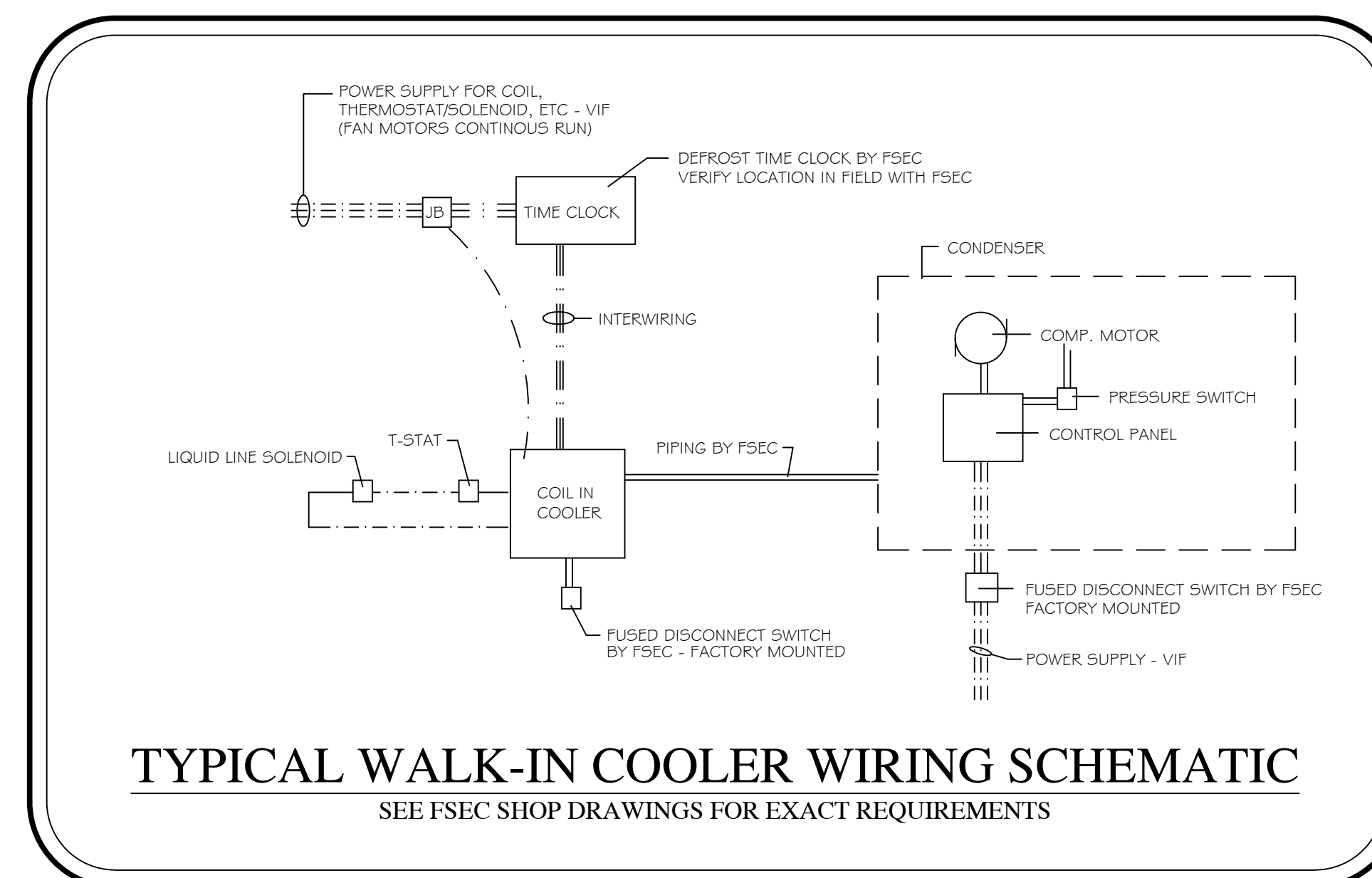
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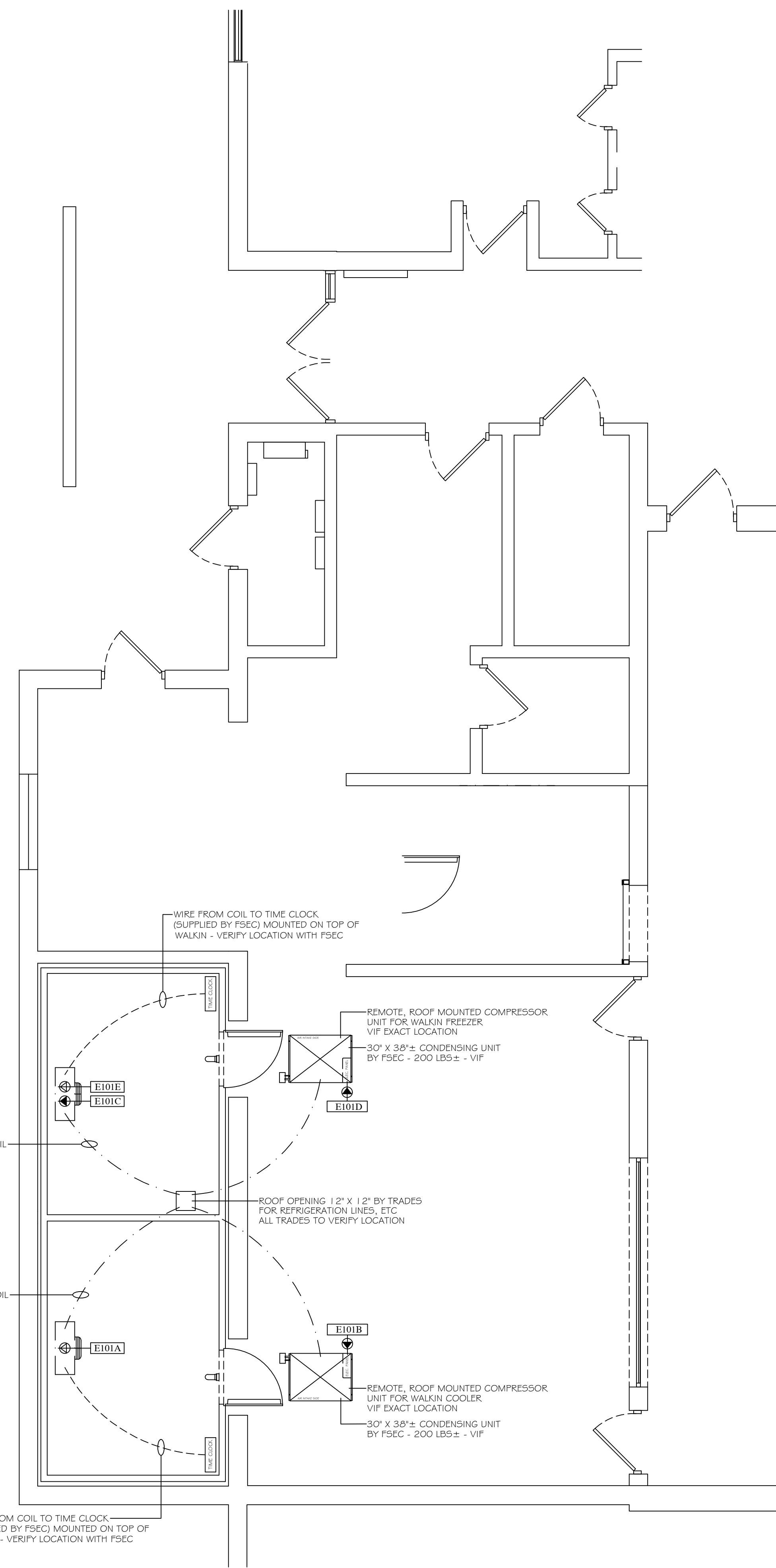
**TYPICAL WALK-IN FREEZER WIRING SCHEMATIC**

SEE FSEC SHOP DRAWINGS FOR EXACT REQUIREMENTS



**TYPICAL WALK-IN COOLER WIRING SCHEMATIC**

SEE FSEC SHOP DRAWINGS FOR EXACT REQUIREMENTS



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SHEET TITLE:  
FOOD SERVICE  
REFRIGERATION  
FLOOR PLAN  
SCALE 1/4" = 1'-0"

DATE CODE	PROJECT PHASE	BY
06/22/23 SIBE2R	CONSTRUCTION DOCUMENTS	AH

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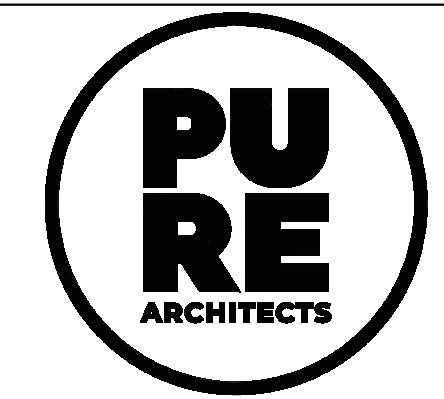
**FSE-4**



**BROWN  
ELEMENTARY -  
KITCHEN  
RENOVATION**

**IGNYTE**

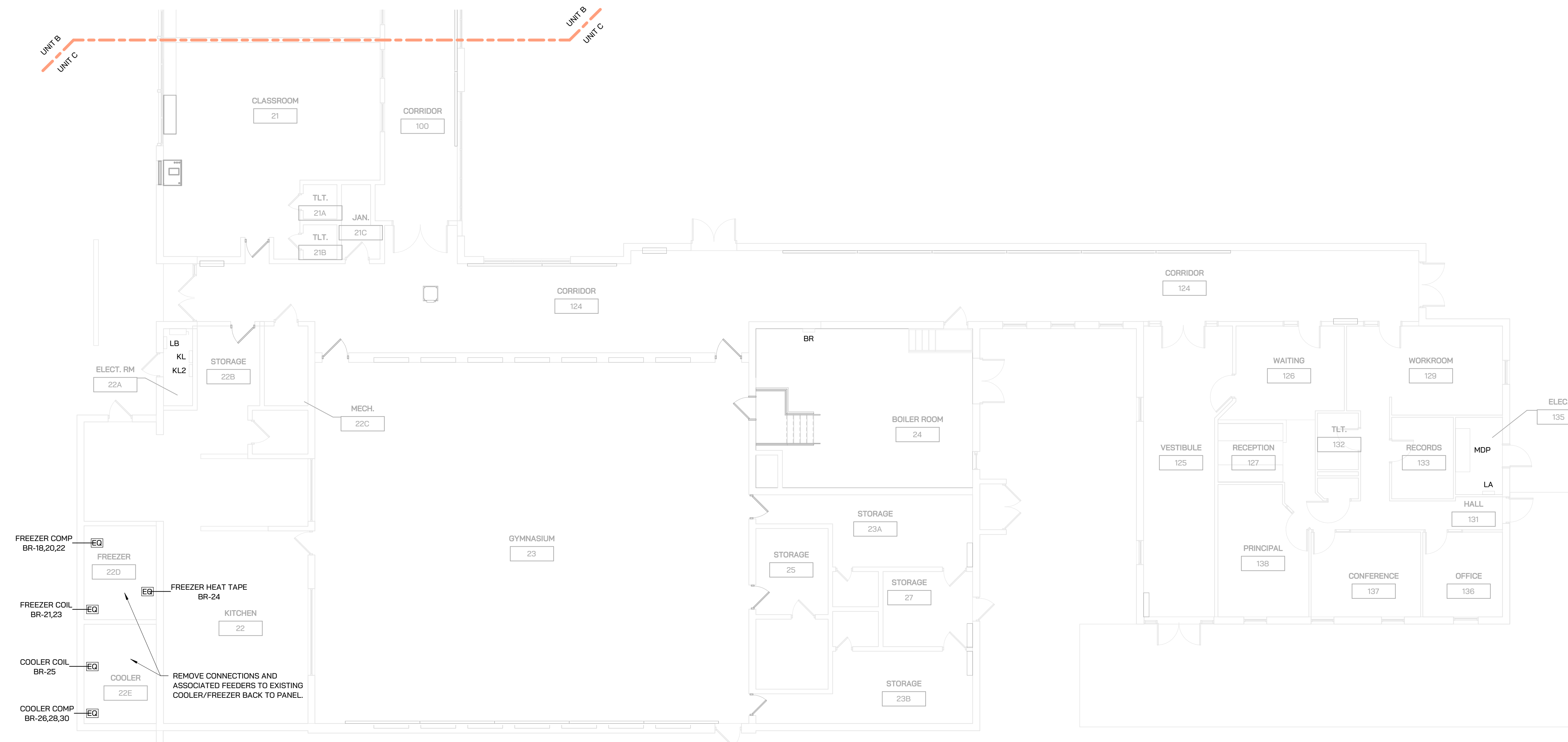
MECHANICAL + ELECTRICAL DESIGN



## ELECTRICAL SPECIFICATION

- CONTRACTOR TO PROCURE ALL REQUIRED BUILDING PERMITS AND INSPECTIONS TO COMPLETE PROJECT.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE MICHIGAN ELECTRICAL CODE.
- PROVIDE NEW ELECTRICAL SERVICES FROM CONSUMERS ENERGY AS INDICATED. COORDINATE SCOPE OF WORK AND PROVIDE ALL WORK TO PROVIDE A FULLY FUNCTIONAL ELECTRICAL SERVICE.
- REMOVE ALL ELECTRICAL EQUIPMENT, WIRE, CONDUIT, ETC ASSOCIATED WITH DEMOLISHED EQUIPMENT.
- REMOVE ALL ABANDONED ELECTRICAL CONDUIT AND WIRE BACK TO SOURCE.
- PROVIDE SHOP DRAWINGS FOR THE FOLLOWING:
  - CONDUIT.
  - CONDUCTORS.
  - WIRING DEVICES INCLUDING COVERPLATES.
  - DISCONNECT SWITCHES, ENCLOSED CIRCUIT BREAKERS AND FUSED SWITCHES.
  - PANELBOARDS AND SWITCHBOARDS
- PATCH, REPAIR, AND PAINT ANY OPENINGS THROUGH ROOF, CEILINGS, WALLS, OR FLOORS TO MATCH EXISTING CONDITION.
- THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL OF ALL DEMOLISHED EQUIPMENT.
- MINIMUM CONDUIT SIZE SHALL BE 1/2" TRADE SIZE.
- USE THE CONDUIT TYPE SUITABLE FOR THE ENVIRONMENT IN WHICH IS LOCATED:
  - INDOORS: EMT WITH SET SCREW FITTINGS. MC CABLE IS ACCEPTABLE FOR BRANCH CIRCUITS WHERE CONCEALED.
  - OUTDOORS: RIGID GALVANIZED STEEL.
  - UNDERGROUND: RIGID NON METALLIC SCHEDULE 80 PVC.
  - CONDUIT EXITING FROM UNDERGROUND SHALL TRANSITION TO EMT/RGS PRIOR TO BEING EXPOSED.
- PROVIDE CONDUIT SLEEVES FOR LOW VOLTAGE DATA CABLING.
- ALL CABLING SHALL BE IN CONDUIT UNLESS ABOVE AN ACCESSIBLE CEILING WHERE "J" HOOKS ARE ACCEPTABLE.
- ALL BOXES SHALL BE RECESSED IN WALLS AND CONDUIT CONCEALED WHERE POSSIBLE.
- MINIMUM CONDUCTOR SIZE FOR POWER SHALL BE #12 AWG. ANY BRANCH CIRCUITS OVER 100' IN LENGTH SHALL BE #10 AWG MINIMUM FOR VOLTAGE DROP.
- PROVIDE THHN-2 COPPER INDOORS AND THWN-2 COPPER OUTDOORS, UNLESS NOTED OTHERWISE OR DICTATED OTHERWISE BY THE NEC.
- PROVIDE GROUNDING ELECTRODE SYSTEM AND EQUIPMENT GROUNDING PER THE NATIONAL ELECTRIC CODE.
- PANELBOARDS SHALL BE FULLY RATED, SERIES RATED PANELS ARE NOT ACCEPTABLE. HAVE HINGED SWING DOOR-IN-DOOR. LOAD CENTERS ARE NOT ACCEPTABLE. SQUARE D NQOD OR EQUAL FOR 208/120V BRANCH PANELBOARDS. SQUARE D NF OR EQUAL FOR 480/277V PANELBOARDS. PROVIDE TYPED PANELBOARD CIRCUIT LABEL CARDS. UPDATE ALL EXISTING LABEL CARDS AS REQUIRED.
- RECEPTACLES SHALL BE TAMPER-RESISTANT EXTRA HEAVY DUTY GRADE, 20AMP MINIMUM, WHITE IN COLOR UNLESS NOTED OTHERWISE.
- ALL DEVICE COVERS SHALL MATCH DEVICE COLOR UNLESS STAINLESS STEEL COVERS ARE SPECIFIED.
- WEATHERPROOF RECEPTACLE COVERS SHALL BE METAL, WHILE-IN-USE TYPE.
- IT IS UNDERSTAND AND AGREED BY THE INSTALLER THAT WORK HEREIN DESCRIBED SHALL BE COMPLETE IN EVERY DETAIL, EVEN THOUGH EVERY ITEM INVOLVED IS NOT PARTICULARLY MENTIONED. INSTALLER SHALL BE HELD TO PROVIDE ALL LABOR AND MATERIALS NECESSARY FOR THE WORK INTENDED AND DESCRIBED FOR A COMPLETE AND OPERATIONAL SYSTEM. SUCH MATERIALS SHALL INCLUDE, BUT ARE NOT LIMITED TO, CONDUIT, FITTINGS, COVERPLATES, WIRING, BREAKERS, CONTROL DEVICES, LIGHTING ACCESSORIES, ETC. THIS ALSO INCLUDES EQUIPMENT REQUIRED BY STATE AND LOCAL CODES.

PANEL: BR											
LOCATION: CORRIDOR 124			VOLTS: 120/208 WYE, 3PH, 4W			A.I.C. RATING:			MOUNTING: Recessed		
FED FROM: MDP			RATING: 225 A.								
CKT	CIRCUIT DESCRIPTION	TRIP	POLES	A	B	C	POLES	TRIP	CIRCUIT DESCRIPTION	CKT	
1				3699	1701					2	
3					3699	1701				4	
5	P-1	60 A	3					35 A	AHU-1	6	
7				3699	1701					8	
9	P-2	60 A	3					25 A	AHU-2	10	
11										12	
13	B-1	25 A	1	2400	360			15 A	ROOF CONV. RECEPTACLE	14	
15	B-2	25 A	1		2400	180		20 A	RECEPTACLE BOILER ROOM 24	16	
17	QP-AHLD	20 A	1							18	
19	QP-AHLD	20 A	1	528	167			3	20 A	HVAC FREEZER 22D	20
21	HVAC FREEZER 22D	20 A	2		250	167				22	
23	HVAC FREEZER 22D	20 A	2			250	500	1	20 A	HVAC FREEZER 22D	24
25	HVAC COOLER 22E	20 A	1	500	167					26	
27								3	20 A	HVAC COOLER 22E	28
29										30	
31										32	
33										34	
35										36	
37										38	
39										40	
41										42	
<b>TOTAL LOAD:</b>				14920 VA	13962 VA	12410 VA					
<b>TOTAL AMPS:</b>				126 A	118 A	103 A					
LOAD CLASSIFICATION		CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND		PANEL TOTALS					
HVAC		40752 VA	100.00%	40752 VA		<b>TOTAL CONN. LOAD:</b> 41292 VA					
RECEPTACLE		540 VA	100.00%	540 VA		<b>TOTAL EST. DEMAND LOAD:</b> 41292 VA					
						<b>TOTAL CONN. LOAD (A):</b> 115 A					
						<b>TOTAL EST. DEMAND (A):</b> 115 A					
<b>NOTES:</b>											



**KITCHEN ELECTRICAL PLAN**  
1/8" = 1'-0"

ADDENDUM #2 10.20.2022  
CONSTRUCTION DOCUMENTS 7.11.2023  
Issued For: \_\_\_\_\_ Date \_\_\_\_\_

STAMP  
THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.  
SCALE

Drawing Title:  
**KITCHEN PLANS**

Project No: 22.019.02

**E150**