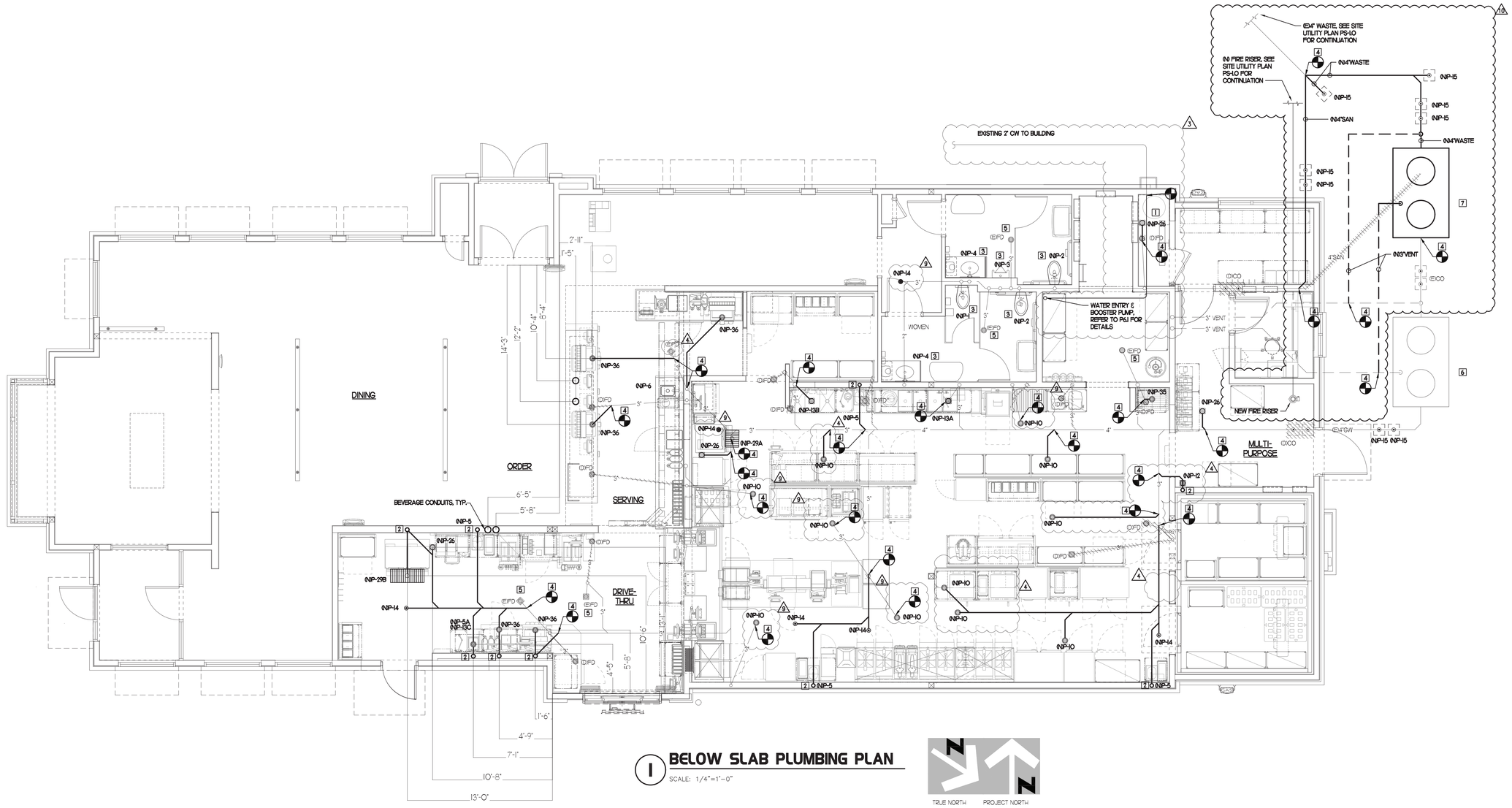


1 BELOW SLAB PLUMBING PLAN

SCALE: 1/4"=1'-0"

TRUE NORTH PROJECT NORTH

PLUMBING KEY NOTES

1. RELOCATED P-19 WATER HEATER (9)
2. PROVIDE NEW 2" VENT IN WALL. MAKE FINAL PLUMBING MODIFICATIONS.
3. CONNECT NEW RESTROOM FIXTURE TO EXISTING SANITARY WASTE LINE.
4. CONNECT TO EXISTING WASTE LINE AS INDICATED, VERIFY FALL, FLOW DIRECTION AND CONNECTING INVERTS.
5. GENERAL CONTRACTOR TO CHECK EXISTING FLOOR DRAIN FOR PROPER CONNECTION TO AND FUNCTION OF EXISTING TRAP PRIMER AND TRAP PRIMER CONNECTING VALVE. IF PROPER WORKING CONDITIONS ARE NOT MET, OWNER TO PROVIDE NEW. SNAKE DRAIN TO REMOVE ANY EXISTING BLOCKAGES RESPONSIBLE FOR BACKUP/ODOR ISSUES.
6. EXISTING GREASE TRAP TO REMAIN.
7. NEW 1500 GALLON GREASE TRAP. SEE 2/P-1.1 FOR MORE INFORMATION AND PS-1.0 FOR EXACT LOCATION. (10)

LEGEND

(E)	EXISTING		PIPING TO BE REMOVED
(N)	NEW		
(R)	RELOCATED		POINT OF DISCONNECTION
(D)	DEMOLISHED		POINT OF CONNECTION
FS	FLOOR SINK	XXX	KITCHEN EQUIPMENT TAG
HS	HAND SINK		
FD	FLOOR DRAIN		
HD	HUB DRAIN		

2. SHEET NOTES

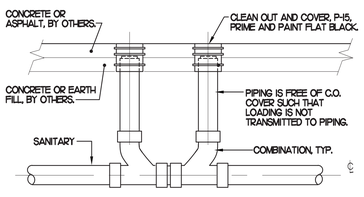
1. COORDINATE INSTALLATION OF SANITARY PIPING WITH FOOTINGS IN THE FIELD. SLEEVE PENETRATIONS IN FOOTINGS WITH PVC.
2. WHERE REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION, PROVIDE SAFE-WASTE SYSTEM AS OUTLINED IN STATE AND LOCAL CODE AMENDMENTS.
3. ALL VENT PIPING TO BE 1-1/2" DIAMETER U.N.O. SEE VP-5.1 FOR VENT LAYOUT.

FIELD VERIFY ALL CONDITIONS

NOTE! AS NOTED IN THE SPECIFICATIONS, ALL WIRING LAYOUTS, PIPING LAYOUTS AND DUCT LAYOUTS ARE SCHEMATIC. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONSTRUCTION AND STRUCTURE OF THE BUILDING AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD. EACH TRADE CONTRACTOR SHALL VERIFY WITH THE GENERAL CONTRACTOR THAT HE HAS THOROUGHLY REVIEWED AND COORDINATED ALL LOCATIONS AND ROUTINGS WITH ALL OTHER TRADES PRIOR TO FABRICATION OF CONDUITS, DUCTS, OR PIPING, AND START OF INSTALLATION OF SAME INCLUDING SPRINKLER PIPING WHEN PRESENT ON JOB. ANY INSTALLATION OR CONSTRUCTION CONFLICTS WHICH OCCUR IN THE FIELD SHALL BE RESOLVED BY THE TRADE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ARCHITECT AND AT NO EXPENSE TO THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR.

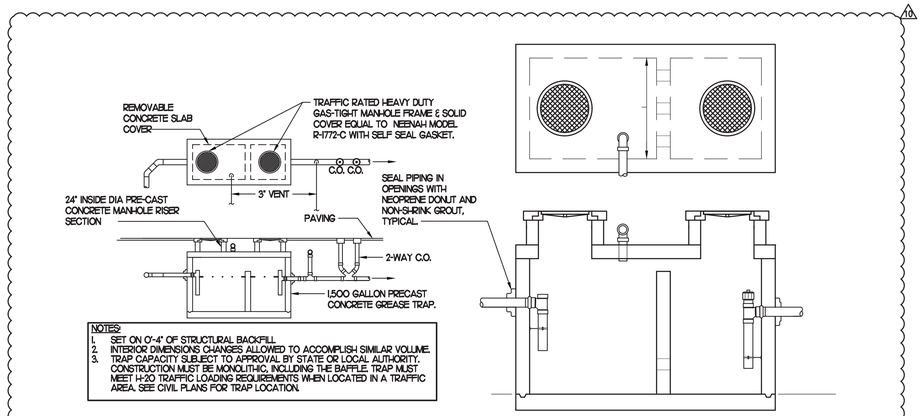
THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.



3 SAN. C.O. OUTSIDE BUILDING

SCALE: NONE



2 GREASE INTERCEPTOR

SCALE: NONE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

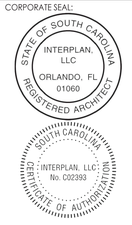
INTERPLAN
INTERPLAN LLC

ARCHITECTURE
ENGINEERING
PERMITTING

220 E. CENTRAL PKWY, STE 4000
ALTAMONTE SPRINGS, FL 32701
407.645.5008

SEAL:

CORPORATE SEAL:



CHICK-FIL-A
CENTRE POINTE FSU
4926 CENTRE POINTE DR.
NORTH CHARLESTON, SC 29418

FSR#01936

BUILDING TYPE / SIZE: S06-C-R
RELEASE: 2023-004
PRINTED FOR
CONSTRUCTION

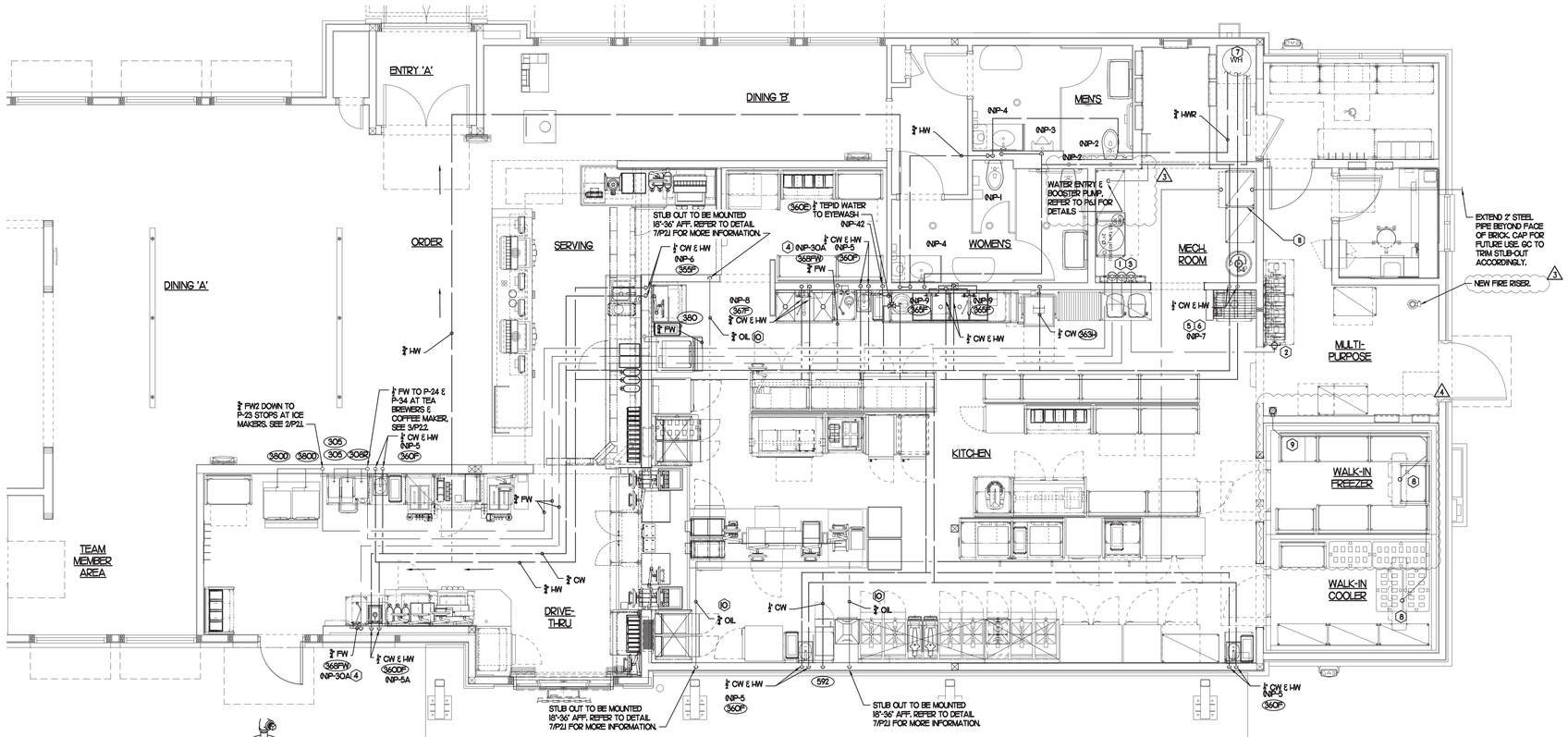
REVISION SCHEDULE

NO.	DATE	DESCRIPTION
3	11/20/2023	ARCH / CIVIL COORDINATION
4	11/28/2023	GP REVISIONS
9	01/12/2024	CONSTRUCTION UPDATES
10	01/30/2024	GREASE TRAP UPDATE

CONSULTANT PROJECT # 2022.0771
DATE 03/13/23
DRAWN BY SE
CHECKED BY DAK

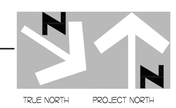
SHEET
BELOW SLAB PLUMBING PLAN

SHEET NUMBER
P1.1



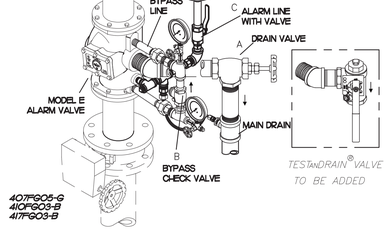
1 WATER PIPING PLAN

SCALE: 1/4"=1'-0"



KEY NOTES

1. PROVIDE NEW WATER FILTERS TO REPLACE EXISTING. VERIFY EXACT LOCATION AND CONNECTIONS PRIOR TO BID & CONSTRUCTION. SEE DETAILS.
2. OWNER PROVIDED, PLUMBER INSTALLED STOP/BFP PANEL. SEE K-SHEET ELEVATIONS FOR EXACT LOCATION. PROVIDE EXPOSED ¾" BALL VALVE AT CONNECTION TO PANEL. CONNECT 1" DIA SCH-ED 40 PVC TO FACTORY PROVIDED COUPLING MOUNTED ON BACK WALL AND ROUTE BFP DRAIN TIGHT TO WALL TO 12" A.F.F. EIGHT (8) ASSE 1022 RATED BFP'S. PIPING FROM BFPS TO CARBONATES SHALL BE BY THE LOCAL SOFT DRINK VENDOR.
3. RUN NEW FW AND FW2 FROM NEW WATER FILTERS, AND DEMOLISH ALL EXISTING FW AND FW2.
4. ¾" FW DROP TO TWO-HANDLE FAUCET, P-30A. MOUNT FAUCET ON WALL. SEE K-SHEETS FOR EXACT LOCATION. PIPE ½" FW TO EACH FAUCET INLET WITH 6" SPREAD. PROVIDE BALL VALVE ABOVE CEILING.
5. 1" HW AND CW DROPS TO MOP SINK FAUCET SET P-7. PROVIDE BALL VALVE FOR EACH ABOVE CEILING WITH P-22 BALL CHECK VALVE IN EACH DROP.
6. INSTALL P-16 3-WAY VALVE WITH BACKFLOW PREVENTER ON P-7 FAUCET SPOUT FOR CONNECTION TO ECOLAB DETERGENT DISPENSER. SEE DETAIL 5/P2.1.
7. RELOCATED P-19 WATER HEATER. (A)
8. TURN 3/4" CONDENSATE PIPING OUT OF COOLER AND EXTEND OUTLET TO FLOOR SINK. SECURE PIPING TO COOLER WALL WITH RUBBER INSULATED PIPE CLAMPS TO PREVENT GALVANIC CORROSION. SEAL ALL PENETRATIONS IN WALLS WITH PERMAGUM CORD. TERMINATE ABOVE FUNNEL WITH ELBOW AND AIR GAP.
9. ¾" TYPE L COPPER. PROVIDE 12" OF FALL BEFORE PENETRATING WALL PANEL. COVER WITH 1-⅜" I.D. X ¾" ARMACELL A/P ARMAFLEX OVER HEAT TRACE CABLE.
10. PROVIDE SCH-EDULE 40 (BLACK OR GALVANIZED) STEEL PIPING BACK TO FUTURE DARPRO OIL TANK. PIPING TO BE ROUTED TO ALLOW AS MUCH FALL AS POSSIBLE TO THE TANK.
11. TURN 3/4" AND 2" SCH-EDULE 40 STEEL PIPE DOWN THROUGH CEILING FOR FUTURE DARPRO OIL TANK AND CAP ACCORDINGLY. PROVIDE CHROMED ESCUTCHEONS AT CEILING PENETRATIONS. 3/4" OIL LINE TO BE CAPPED 2' BELOW CEILING.



4 FIRE RISER DETAIL

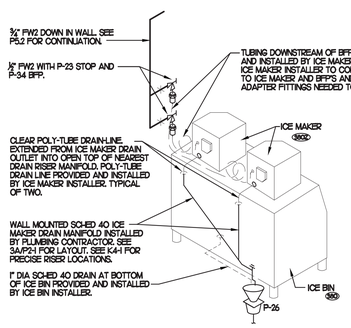
NO SCALE

PIPING LEGEND

- CW - COLD WATER
- HW - HOT WATER
- TW - TEMPERED WATER
- FW - FILTERED WATER, TO P-30, CARBONATORS, COFFEE, TEA, AND ICE MAKERS
- EXISTING PIPING

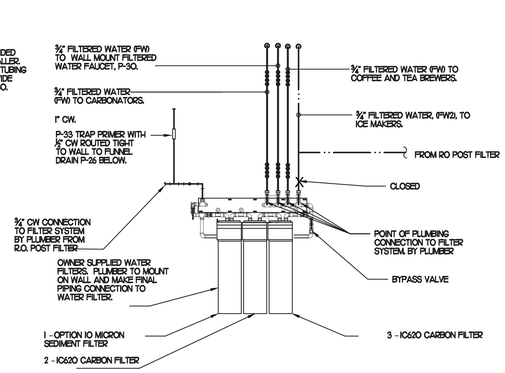
SHEET NOTES

1. COORDINATE VENT TERMINAL LOCATIONS WITH FRESH AIR HOODS ON ROOFTOP EQUIPMENT SO AS TO MAINTAIN MINIMUM 10'-0" CLEARANCE.
2. HOLD ALL PIPING ABOVE THE CEILING TIGHT TO STRUCTURE. DUCT LOCATIONS TAKE PRIORITY. SEE DRAWING M-1 FOR DUCT LAYOUT. COORDINATE CONFLICTS WITH GC.
3. SEE K-SHEET ELEVATIONS FOR KITCHEN EQUIPMENT LOCATIONS.
4. SEE SHEET P-2.2 FOR BEVERAGE CONDUIT PIPING.
5. SEE RISER DIAGRAM I/P5.1 FOR VENT PIPING. SEE ROOF PLAN I/P4.1 FOR VENT THRU ROOF (VTR) LOCATION.
6. COORDINATE ABOVE-CEILING PIPING LOCATIONS AND ROUTING WITH HVAC CONTRACTOR AND M-SHEETS PRIOR TO INSTALLATION. ALL MAIN DUCT TRUNK LOCATIONS SHALL TAKE PRIORITY. PIPING MAY REQUIRE REMOVAL AND REINSTALLATION AT PLUMBING CONTRACTOR'S EXPENSE IF PIPING OBSTRUCTS THE M-SHEET DUCT LAYOUT AS SHOWN OR PREVENTS ACCESS TO GREASE DUCT CLEANOUT OPENINGS.



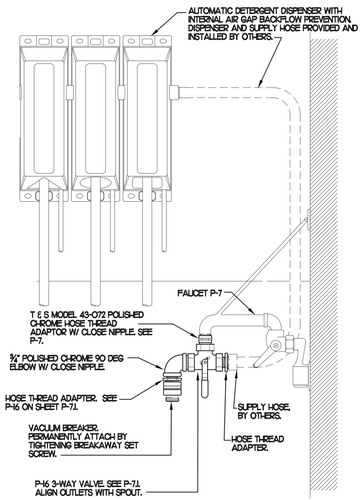
2 ICE MACHINE PIPING

NO SCALE



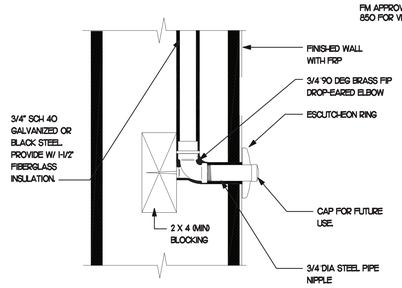
3 PIPING AT WATER FILTER

SCALE: 1/4"=1'-0"



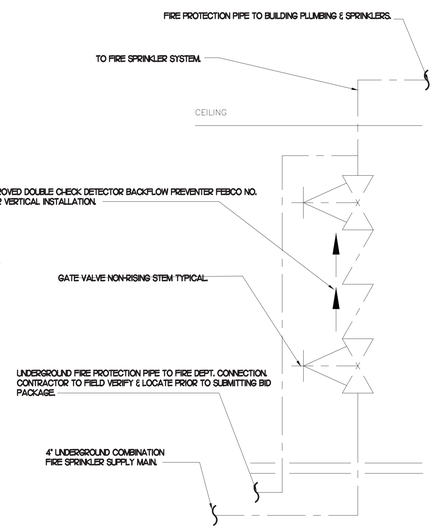
5 3-WAY VALVE AT MOP SINK

NO SCALE



7 DARPRO OIL PIPING SECTION WITHIN WALL

NO SCALE



5 FIRE RISER DETAIL

NO SCALE

Chick-fil-A
5200 Buffington Road
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SEAL:

CORPORATE SEAL:

CHICK-FIL-A
CENTRE POINTE FSU
4926 CENTRE POINTE DR.
NORTH CHARLESTON, SC 29418

FSR#01936

BUILDING TYPE / SIZE: S06-C-R
RELEASE: 2023-004
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CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
3	11/20/2023	ARCH / CIVIL COORDINATION
4	11/28/2023	OP REVISIONS
5	01/12/2024	CONSTRUCTION UPDATES

CONSULTANT PROJECT # 2022.0771
DATE 03/13/23
DRAWN BY SE
CHECKED BY DAK

SHEET
WATER PIPING PLAN AND DETAILS

SHEET NUMBER
P2.1

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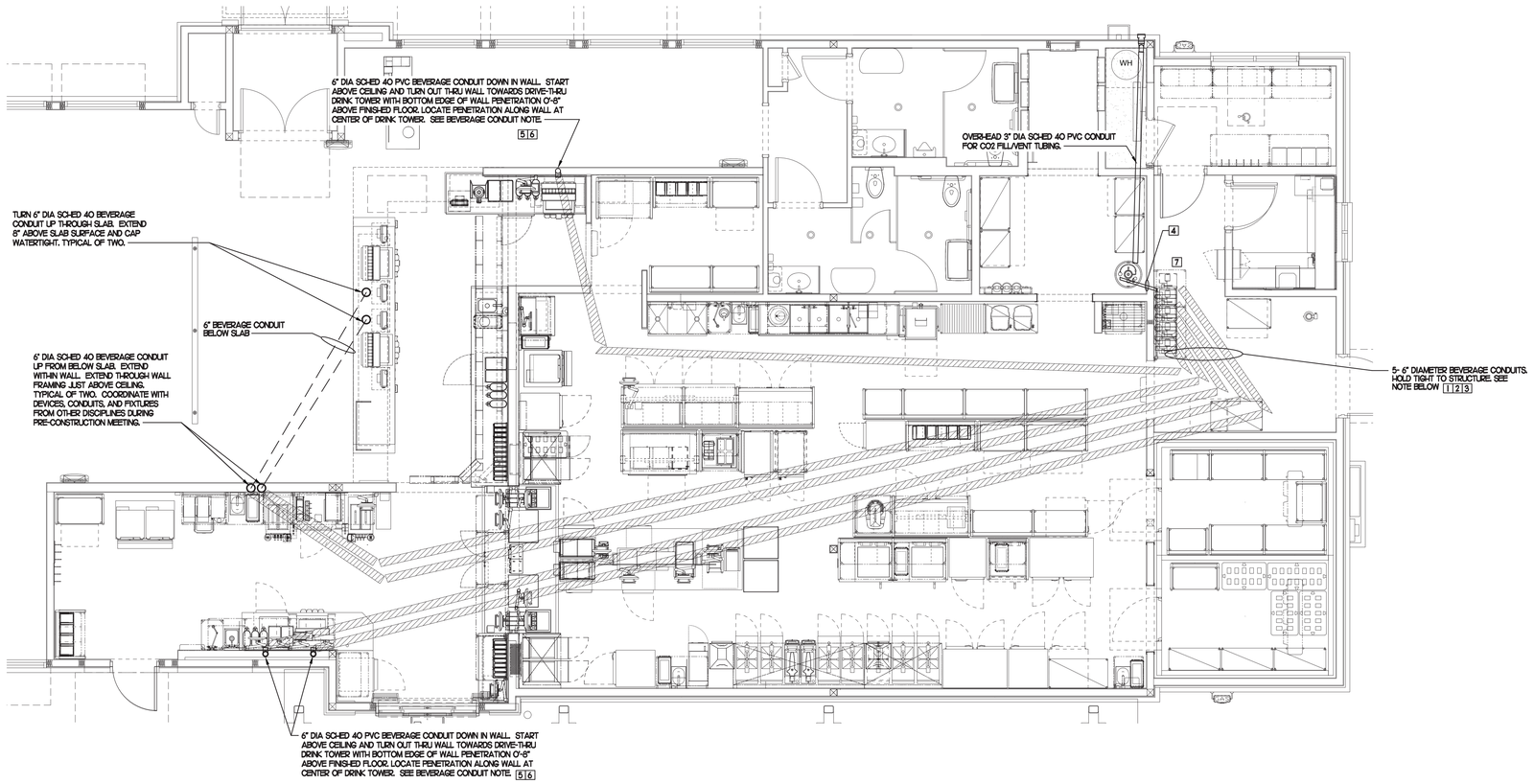


1 BEVERAGE CONDUIT PLAN

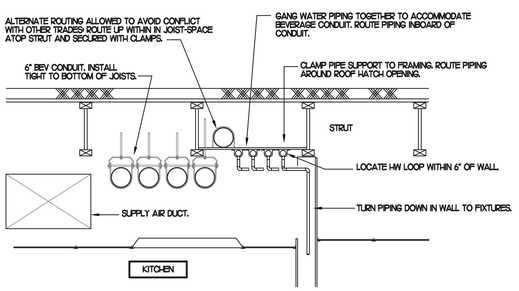
1/4"=1'-0"

TRUE NORTH PROJECT NORTH

BEVERAGE CONDUIT NOTES

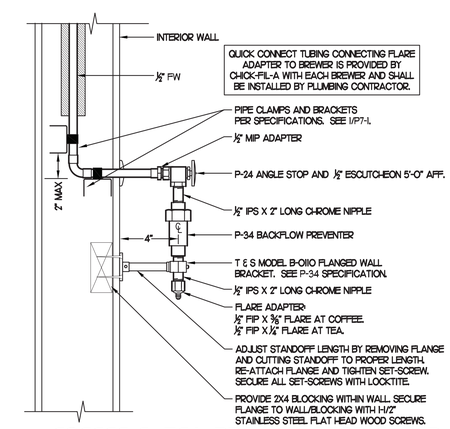
1. ROUTE BEVERAGE SYSTEM PIPING OVER-HEAD FROM THE BEVERAGE RACK TO DRINK TOWERS IN 6" DIA. SCH. 40 PVC CONDUITS. ALL CONDUIT SHALL BE HELD TIGHT TO STRUCTURE AND SUPPORTED WITH THREADED ROD AND CLEVIS HANGERS AT INTERVALS SHOWN IN SPECIFICATIONS FOR HORIZONTAL OVER-HEAD PIPING. COORDINATE ROUTING WITH THE GENERAL CONTRACTOR TO AVOID MECHANICAL AND ELECTRICAL SYSTEMS.
2. COORDINATE ROUTING OF ALL CONDUITS WITH HVAC DUCT IN KITCHEN. SEE SHEET M-1 FOR LOCATION OF AC UNITS AND DUCT ROUTING.
3. TURN THE 6" DIA. CONDUIT DOWN THROUGH THE CEILING AT THE BEVERAGE RACK AND PROVIDE CHROMED ESCUTCHEONS AT CEILING PENETRATIONS. TERMINATE OPPOSITE END ABOVE CEILING WHERE SHOWN ON PLANS.
4. ROUTE 2" CO2 PIPE FROM NEW CO2 TANK TO NEW BIB RACK.
5. AT CONDUIT DROPS IN DRIVE-THRU AND SERVING AREA, PROVIDE 1/8TH BEND FITTINGS WITH SHORT PIPE STUB AT BASE OF DROP. CUT STUB AND FITTING FLUSH WITH FINISHED WALL.
6. FOR BEVERAGE CONDUIT DROPS AT WALLS WITH SHEATHING, PROVIDE APPROPRIATE FITTING TO EXTEND TOP OF PIPE DROP BEYOND FACE OF SHEATHING.
7. NEW BIB RACK WITH CARBONATORS AND PUMPS.

NOTE:
ALL BEVERAGE CONDUIT LAYOUTS ARE SCHEMATIC. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONSTRUCTION AND STRUCTURE OF THE BUILDING AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD TO REVIEW ALL NEW & EXISTING EQUIPMENTS. EACH TRADE CONTRACTOR SHALL VERIFY WITH THE GENERAL CONTRACTOR THAT HAS THOROUGHLY REVIEWED AND COORDINATED ALL LOCATIONS AND ROUTINGS WITH ALL OTHER TRADES PRIOR TO INSTALLATION & FABRICATION OF CONDUITS, DUCTS, OR PIPING. RUN BEVERAGE CONDUITS AS STRAIGHT AS POSSIBLE AVOIDING EXISTING STRUCTURE, PIPING, DUCTS, & ALL EQUIPMENTS. ANY INSTALLATION OR CONSTRUCTION CONFLICTS WHICH OCCUR IN THE FIELD SHALL BE RESOLVED BY THE TRADE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ARCHITECT AND AT NO EXPENSE TO THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR.



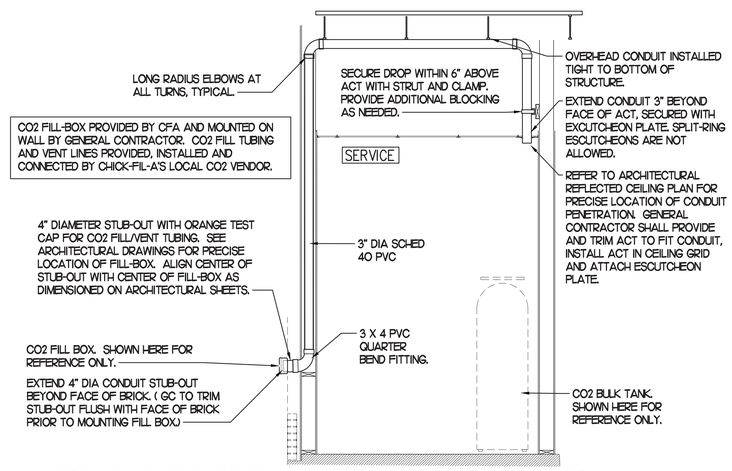
2 SECTION AT WET WALL

SCALE: NONE



3 COFFEE & TEA BREWER STOP & BFP

SCALE: NONE



4 CO2 FILL/VENT CONDUIT AND FILL-BOX INSTALLATION

SCALE: NONE

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INTERPLAN LLC

ARCHITECTURE
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ALTAMONTE SPRINGS, FL 32701
407.645.5008

SEAL:

STATE OF SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 34876 — STACY TREVOR HINSON

CORPORATE SEAL:

STATE OF SOUTH CAROLINA — INTERPLAN, LLC — ORLANDO, FL — 01060 — REGISTERED ARCHITECT

SOUTH CAROLINA — INTERPLAN, LLC No. C02393 — CERTIFICATE OF AUTHORIZATION

CHICK-FIL-A
CENTRE POINTE FSU
4926 CENTRE POINTE DR.
NORTH CHARLESTON, SC 29418

FSR#01936

BUILDING TYPE / SIZE: S06-C-R
RELEASE: 2023-004
PRINTED FOR: CONSTRUCTION

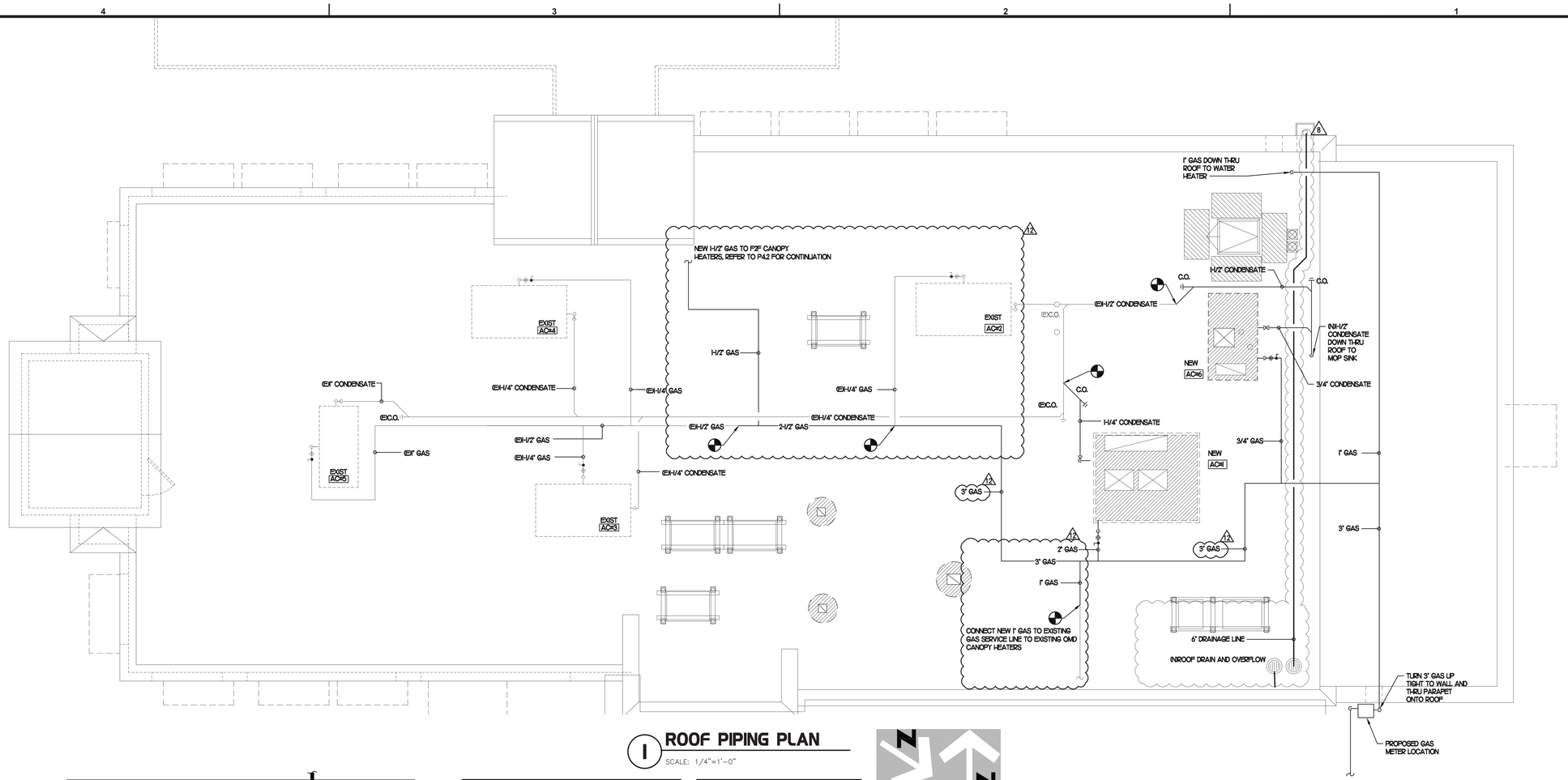
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2022.0771
DATE 03/13/23
DRAWN BY SE
CHECKED BY DAK

SHEET: PLUMBING DETAILS & BEVERAGE CONDUIT

SHEET NUMBER: **P2.2**



1 ROOF PIPING PLAN

SCALE: 1/4"=1'-0"

PIPING LEGEND	
(E)	EXISTING
(N)	NEW
	NEW PIPING
	EXISTING PIPING
	BELOW GRADE (E)/(G) PIPING

PIPING ON ROOF SHALL NOT BE INSTALLED NEARER THAN 1'-0" FROM INSIDE EDGE OF PARAPET. U.N.O.

OFFSET PIPING A MINIMUM OF 6" ABOVE TOP EDGE OF FLASHING.

SEE DETAIL 6/A-1.6 FOR ROOFTOP PIPE PENETRATIONS.

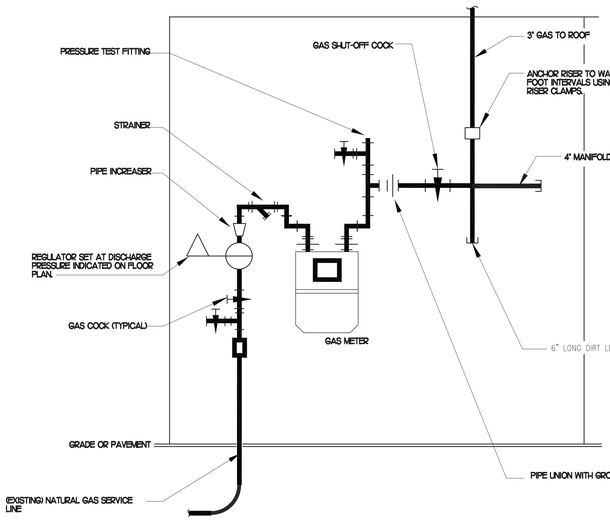
CONDENSATE PIPING SHALL BE SCHEDULE 40 PVC.

ROOF DRAIN SIZING CALCULATIONS

RAINFALL RATE = R X A X 0.0104 = 4 X 4385 X 0.0104 = 182.4 GPM	6" MINIMUM DRAIN

R = RAINFALL INTENSITY PER HOUR
A = ROOFTOP AREA
BASED ON INTERNATIONAL PLUMBING CODE 2021 EDITION SECTION 1106

ROOF DRAIN SPEC: ZURN Z164 12" DIAMETER ROOF DRAIN AND OVERFLOW DRAIN, DURA COATED CAST IRON BODIES WITH COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARDS, DOUBLE TOP-SET® DECK PLATE, AND LOW SILHOUETTE CAST IRON DOMES.

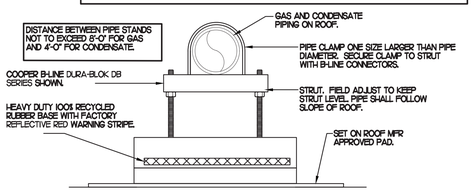


VERIFY REQUIREMENTS FOR METERING AND PIPING WITH GAS COMPANY. COORDINATE WITH GAS COMPANY WITH REGARD TO INSTALLATION OF OTHER PLUMBING UTILITIES IN THE VICINITY, IF ANY. APPLY FOR AND PAY GAS COMPANY FEES FOR INSTALLATION. USE PIPE AND FITTINGS PER PLUMBING SPECIFICATIONS.

5 GAS METER CONNECTION

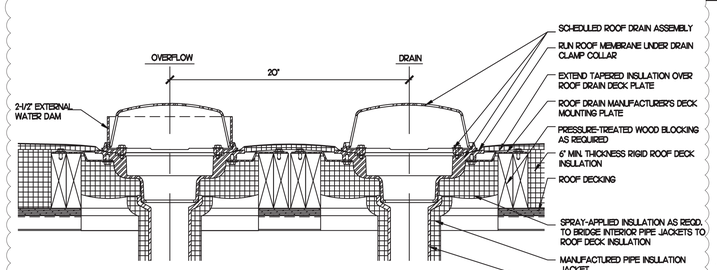
NO SCALE

NOTES:
1. NON ADJUSTABLE MODEL DB6IO PIPE STAND TO BE USED FOR NON-ELEVATED PIPING INSTALLED FLAT ON ROOF DECK.
2. PROVIDE MODEL DBE 10-8 OR DBE 10-12 OR DBE 10-16 AS NEEDED FOR ELEVATING CONDENSATE PIPING TO MAINTAIN PROPER SLOPE AND FOR GAS PIPING CROSSING OVER CONDENSATE PIPING.
3. ENSURE GAS AND CONDENSATE PIPING DO NOT OBSTRUCT ROOFTOP EQUIPMENT ACCESS OPENINGS. RE-PIPING OF SYSTEMS DUE TO CONFLICTS WITH EQUIPMENT ACCESS OPENINGS SHALL BE DONE AT PLUMBING CONTRACTOR'S EXPENSE.



3 PIPING SUPPORT

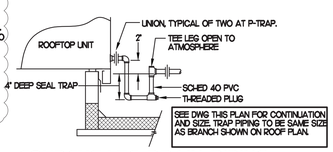
NO SCALE



5 ROOF DRAIN AND OVERFLOW DETAIL

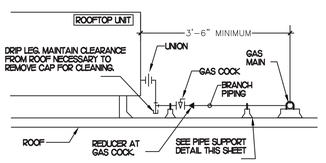
NO SCALE

NOTES:
1. INSTALL GAS PIPING SUCH THAT HVAC EQUIPMENT ACCESS PANELS AND/OR DOORS ARE IN NO WAY OBSTRUCTED BY PIPING, VALVES, OR SUPPORTS.
2. TO AVOID CONFLICT WITH AC UNIT ACCESS DOORS, INSTALL GAS PIPING NO CLOSER THAN 3'-6" FROM AC UNIT. (EXCEPT FOR BRANCH LINE CONNECTED TO AC UNIT.)
3. ROUTE BRANCH TAKE-OFF DIRECTLY FROM MAIN TO ROOFTOP UNIT AS SHOWN ON PLAN AND DETAILS WITHOUT LATERAL OFFSETS WHICH MAY OBSTRUCT UNIT ACCESS DOORS.



2 CONDENSATE DRAIN PIPING

NO SCALE



4 GAS PIPING AT RTU

NO SCALE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

INTERPLAN
INTERPLAN LLC

ARCHITECTURE
ENGINEERING
PERMITTING

220 E. CENTRAL PKWY, STE 4000
ALTAMONTE SPRINGS, FL 32701
407.645.5008

SEAL:

STATE OF SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 34876 — STACY TREVOR HINSON

CORPORATE SEAL:

STATE OF SOUTH CAROLINA — INTERPLAN, LLC — ORLANDO, FL — 01060 — REGISTERED ARCHITECT

SOUTH CAROLINA — INTERPLAN, LLC No. C02393 — CERTIFICATE OF AUTHORIZATION

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CENTRE POINTE FSU
4926 CENTRE POINTE DR.
NORTH CHARLESTON, SC 29418

FSR#01936

BUILDING TYPE / SIZE: S06-C-R
RELEASE: 2023-004
PRINTED FOR
CONSTRUCTION

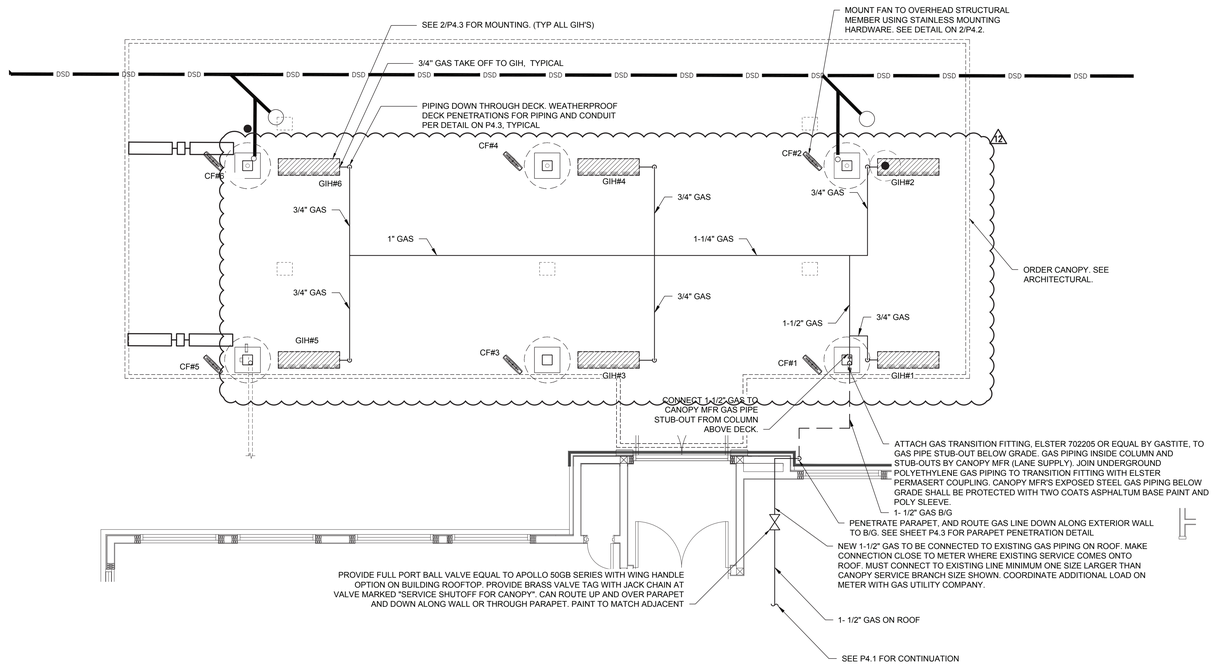
REVISION SCHEDULE

NO.	DATE	DESCRIPTION
8	01/09/24	RFI
12	02/06/24	GAS UPDATE

CONSULTANT PROJECT # 2022.0771
DATE 03/13/23
DRAWN BY SE
CHECKED BY DAK

SHEET
ROOF PIPING PLAN

SHEET NUMBER
P4.1



1 TIER 3 DOUBLE LANE ORDER CANOPY

1/4" = 1'-0"

GENERAL NOTES

1. COORDINATE NEW WORK WITH EXISTING CONDUIT, STRUCTURE, AND PIPING. FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.
2. COORDINATE LOCATION AND RESPONSIBILITIES FOR UNDERGROUND PIPING AND ASSOCIATED TRENCHING WITH GENERAL CONTRACTOR PRIOR TO START OF WORK.
3. EXPOSED GAS PIPING SHALL BE PAINTED BY GENERAL CONTRACTOR. USE ANTI-CORROSIVE PAINT AND COORDINATE WITH CFA CONSTRUCTION MANAGER.

LEGEND	
CF#1	CIRCULATING FAN #1 (TYP)
GIH#1	GAS INFRARED HEATER #1 (TYP)
———	NEW GAS PIPING ABOVE GRADE
- - - - -	NEW GAS PIPING BELOW GRADE
B/G	BELOW GRADE
EC	ELECTRICAL CONTRACTOR
MC	MECHANICAL CONTRACTOR

FIELD VERIFY ALL CONDITIONS

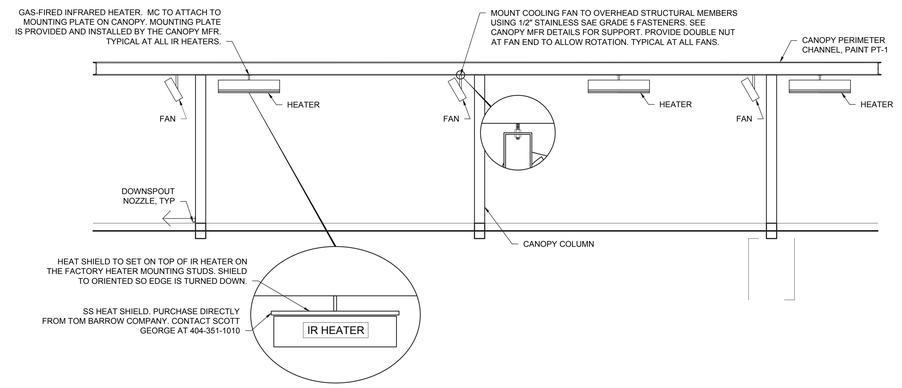
NOTE! AS NOTED IN THE SPECIFICATIONS, ALL WIRING LAYOUTS, PIPING LAYOUTS AND DUCT LAYOUTS ARE SCHEMATIC. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONSTRUCTION AND STRUCTURE OF THE BUILDING AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD. EACH TRADE CONTRACTOR SHALL VERIFY WITH THE GENERAL CONTRACTOR THAT HE HAS THOROUGHLY REVIEWED AND COORDINATED ALL LOCATIONS AND ROUTINGS WITH ALL OTHER TRADES PRIOR TO FABRICATION OF CONDUITS, DUCTS, OR PIPING, AND START OF INSTALLATION OF SAME (INCLUDING SPRINKLER PIPING WHEN PRESENT ON JOB). ANY INSTALLATION OR CONSTRUCTION CONFLICTS WHICH OCCUR IN THE FIELD SHALL BE RESOLVED BY THE TRADE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ARCHITECT AND AT NO EXPENSE TO THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

NATIONAL ACCOUNTS

1. SCHWANK INFRARED HEATER PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE HEATER PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. HEATERS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
2. COOK FAN PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE FAN PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.



2 HEATER FAN SECTION

NO SCALE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

INTERPLAN
INTERPLAN LLC

ARCHITECTURE
ENGINEERING
PERMITTING

220 E. CENTRAL PKWY, STE 4000
ALTAMONTE SPRINGS, FL 32701
407.645.5008

SEAL:

STATE OF SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 34876 — STACY TREVOR HINSON

CORPORATE SEAL:

STATE OF SOUTH CAROLINA — INTERPLAN, LLC — ORLANDO, FL — 01060 — REGISTERED ARCHITECT

SOUTH CAROLINA — INTERPLAN, LLC — No. C02393 — CERTIFICATE OF AUTHORIZATION

CHICK-FIL-A
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CHECKED BY DAK

SHEET
F2F CANOPY GAS PIPING PLAN

SHEET NUMBER
P4.2

MARIBR - 02/13/2024 8:50:36 AM

GAS CONNECTION SCHEDULE	
EQUIPMENT	GAS LOAD
NEW AC#1	480,000 BTU'S
EXISTING AC#2	240,000 BTU'S
EXISTING AC#3	240,000 BTU'S
EXISTING AC#4	240,000 BTU'S
EXISTING AC#5	125,000 BTU'S
NEW AC#6	65,000 BTU'S
WATER HEATER	75,000 BTU'S
EXISTING GAS HEATERS (2)	(2) 50,000 BTU'S
NEW GAS HEATERS (6)	(6) 50,000 BTU'S
TOTAL CONNECTED LOAD	1,865,000 BTU'S
REMARKS:	1. EQUIVALENT TO 1,865.0 CFH @ pressure drop 0.5 IN. W.C. W/ DEVELOP LENGTH OF 216 FT (METER TO GIH#6) 2. 7" w.c. DELIVERY PRESSURE. 3. VERIFY GAS LOAD OF EXISTING EQUIPMENT.

GAS FIRED INFRARED HEATER SCHEDULE							
MARK	INPUT (MBH)	FRAME SIZE			MOUNTING TYPE	MODEL	MANUFACTURER
		LENGTH	WIDTH	DEPTH			
GIH	50.0	48"	13"	10"	BRACKET	WB-N7-CM	SPACE-RAY
REMARKS	1. STEEL BURNER WITH CERAMIC BURNER TILES. 2. STAINLESS STEEL LENS WITH BLOCK EMISSIVE COATING. 3. PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. MOUNT TO CANOPY DECK, FACING DOWNWARD, 12" LATERALLY FROM THE SIDE OF THE HEATER. 4. MOUNTING BRACKET PROVIDED AND INSTALLED BY CANOPY MFR. 5. HEAT SHIELD PROVIDED WITH THE SPACE-RAY HEATER PACKAGE. MOUNT HEAT SHIELD ABOVE EACH HEATER AT THE BOTTOM OF THE BRACKET, ALIGNED WITH THE CENTER OF FLAT MOUNTED HEATERS, AND ALIGNED OFF-CENTER FOR ANGLE MOUNTED HEATERS.						

CIRCULATING FAN SCHEDULE					
MARK	CFM	RPM	HP	MODEL	MANUFACTURER
CF	5,750	1,625	1/8	U18TE-HD	TPI
REMARKS	1. ALUMINUM PADDLE WITH STEEL HUB/SPIDER PROPELLER 2. 360° ROTATING HEAD HORIZONTALLY AND VERTICALLY 3. OSHA COMPLIANT DOUBLE LOCKING, COATED STEEL WIRE GUARD 4. 3-SPEED, TOTALLY ENCLOSED, PERMANENTLY LUBRICATED BALL BEARING MOTOR 5. FACTORY PRE-WIPED POWER CORD 6. PROVIDE FACTORY WALL MOUNTING BRACKET. SEE DETAIL 3/M2.1 FOR TYPICAL INSTALLATION INSTRUCTIONS 7. PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. MOUNT TO UNDERSIDE OF CANOPY OR EXISTING OVERHANG, FACING DOWNWARD, 12" LATERALLY FROM THE FAN LOCATION 8. REMOVE PULL CHAIN EXTENSION AT ON/OFF SWITCH IN FIELD 9. FACTORY CERTIFIED FOR OUTDOOR INSTALLATION.				

NOTE:

CONTRACTOR TO VERIFY EXISTING GAS SYSTEM CAN HANDLE NEW GAS LOAD. RESIZE AND INSTALL NEW GAS PIPING AS REQUIRED IF EXISTING GAS PIPING IS UNDERSIZED FOR NEW GAS LOAD AND PIPE LENGTH. FIELD VERIFY EXACT CONDITIONS PRIOR TO BID.

NATIONAL ACCOUNTS	
1	SPACE-RAY INFRARED HEATER PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE HEATER PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. HEATERS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.
2	TPI FAN PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE FAN PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

IMPORTANT NOTE - PLEASE READ

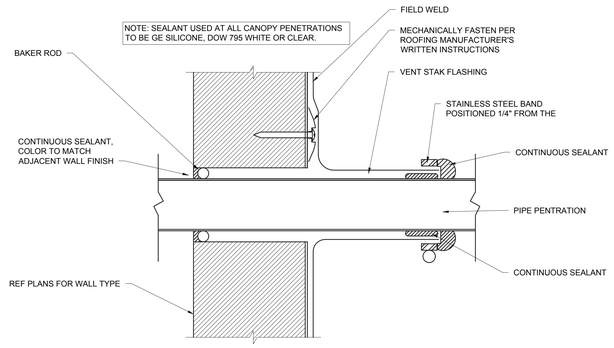
NUMBERS OF GAS INFRARED HEATERS AND CIRCULATING FANS WILL BE DETERMINED BY SITE-SPECIFIC CANOPY LAYOUT AND EQUIPMENT LOCATIONS, AS INDICATED ON ARCHITECTURAL PLANS.

GENERAL NOTES

GENERAL NOTES
1. COORDINATE NEW WORK WITH EXISTING CONDUIT, STRUCTURE AND PIPING. FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.

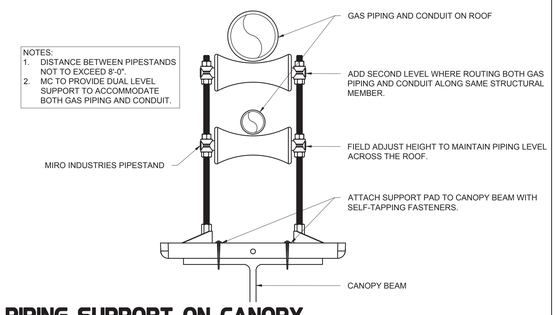
2. COORDINATE LOCATION AND RESPONSIBILITIES FOR UNDERGROUND PIPING AND ASSOCIATED TRENCHING WITH GENERAL CONTRACTOR PRIOR TO START OF WORK.

3. EXPOSED GAS PIPING SHALL BE PAINTED BY GENERAL CONTRACTOR.



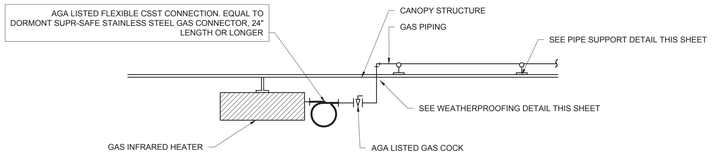
PARAPET PENETRATION DETAIL

NO SCALE



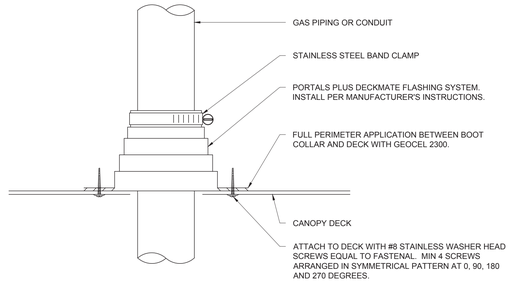
PIPING SUPPORT ON CANOPY

NO SCALE



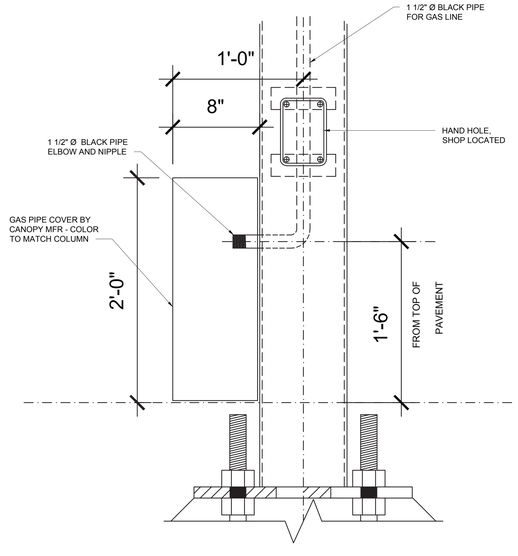
GAS CONNECTION AT APPLIANCE

NO SCALE



WEATHER PROOFING AT CANOPY PENETRATION

NO SCALE



COLUMN GAS PIPE COVER

NO SCALE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

INTERPLAN
INTERPLAN LLC

ARCHITECTURE
ENGINEERING
PERMITTING

220 E. CENTRAL PKWY. STE 4000
ALTAMONTE SPRINGS, FL 32701
407.645.5008

SEAL:

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 34876 STACY TREVOR HINSON

CORPORATE SEAL:

STATE OF SOUTH CAROLINA INTERPLAN, LLC ORLANDO, FL 01060 REGISTERED ARCHITECT

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION INTERPLAN, LLC No. C02393

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12	02/06/2024	GAS UPDATE

CONSULTANT PROJECT # 2022.0771
DATE 03/13/23
DRAWN BY SE
CHECKED BY DAK

SHEET
GAS PLUMBING DETAILS

SHEET NUMBER
P4.3

MARIBR - 02/13/2024 8:50:56 AM

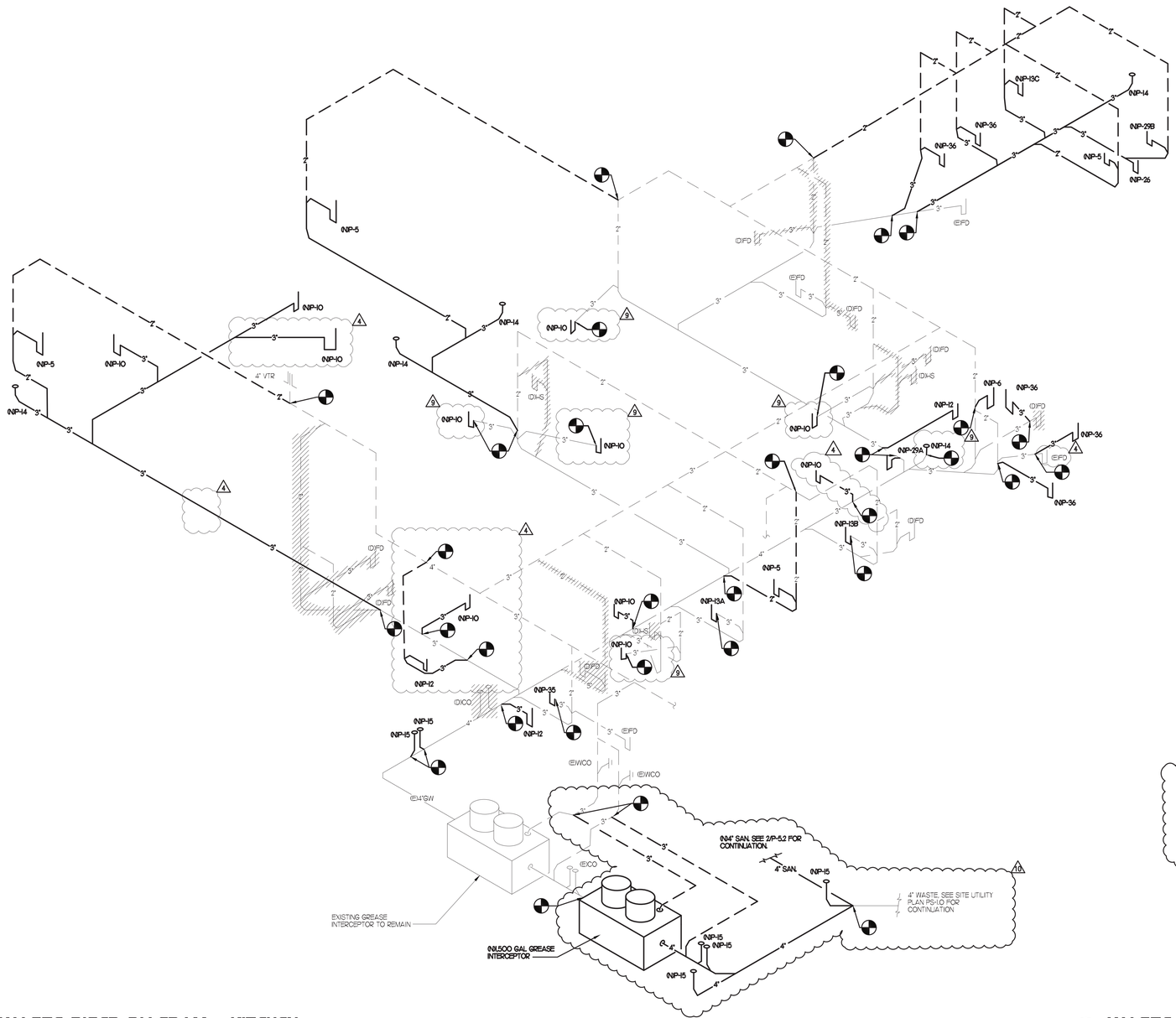
PIPING LEGEND

EXISTING BELOW SLAB PIPING	———
VENT	– – – – – –
SANITARY, GREASE WASTE	———

(XXX) KITCHEN EQUIPMENT NO. SEE KITCHEN EQUIPMENT SCHEDULE FOR EQUIPMENT DESCRIPTIONS.

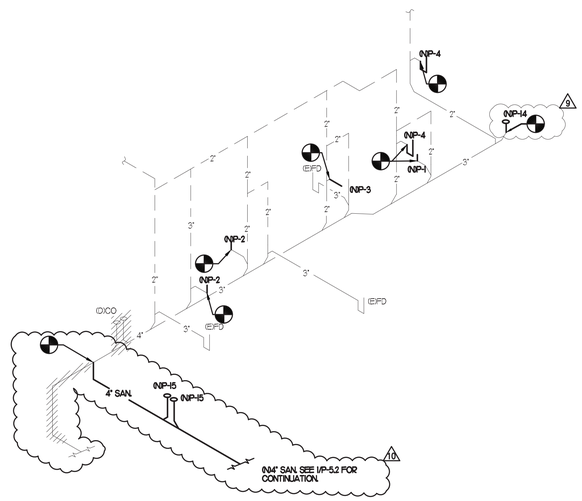
COORDINATE VENT TERMINAL LOCATION WITH FRESH AIR HOODS ON ROOFTOP EQUIPMENT SO AS TO MAINTAIN MINIMUM 10' CLEARANCE.

ALL VENT PIPING SHALL BE 1-1/2 DIAMETER U.N.O.



1 WASTE RISER DIAGRAM - KITCHEN

NO SCALE



2 WASTE RISER DIAGRAM - RESTROOMS

NO SCALE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

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INTERPLAN LLC

ARCHITECTURE
ENGINEERING
PERMITTING

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ALTAMONTE SPRINGS, FL 32701
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SOUTH CAROLINA — CERTIFICATE OF AUTHORIZATION — INTERPLAN, LLC — No. C02393

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NORTH CHARLESTON, SC 29418

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4	11/28/2023	OP REVISIONS
9	01/12/2024	CONSTRUCTION UPDATES
10	01/30/2024	GREASE TRAP UPDATE

CONSULTANT PROJECT # 2022.0771
DATE 03/13/23
DRAWN BY SE
CHECKED BY DAK

SHEET
WASTE RISER DIAGRAM

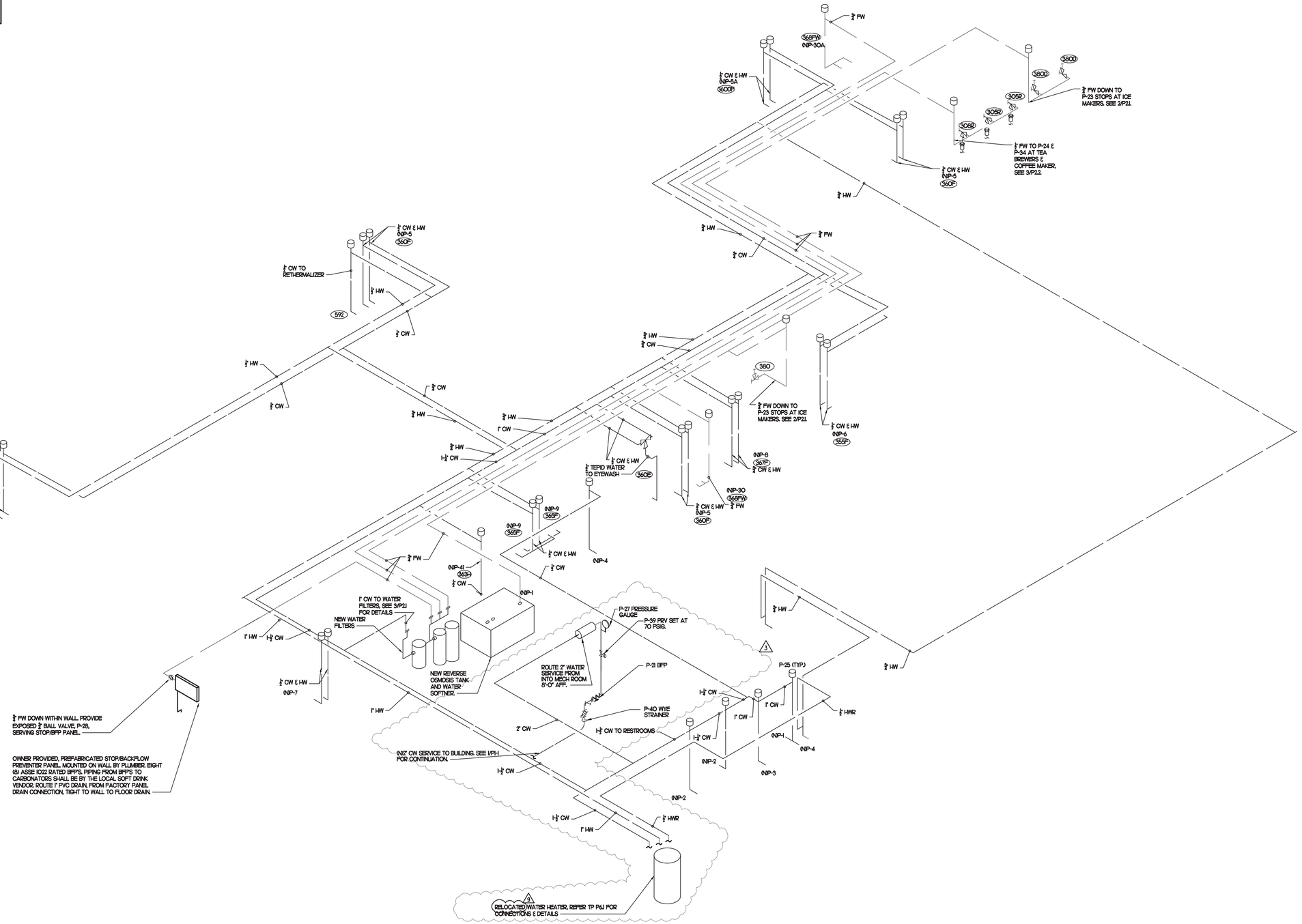
SHEET NUMBER
P5.1

MARIBR - 02/13/2024 8:49:46 AM

PIPING LEGEND

- CW - COLD WATER
- HW - HOT WATER
- TW - TEMPERED WATER
- FW - FILTERED WATER, TO P-30A, CARBONATORS, COFFEE, AND TEA
- EXISTING PIPING

(XXX) KITCHEN EQUIPMENT NO. SEE KITCHEN EQUIPMENT SCHEDULE FOR EQUIPMENT DESCRIPTIONS.



1 WATER RISER DIAGRAM

NO SCALE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

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INTERPLAN LLC

ARCHITECTURE
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PERMITTING

220 E. CENTRAL PKWY, STE 4000
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STATE OF SOUTH CAROLINA — INTERPLAN, LLC — ORLANDO, FL — 01060 — REGISTERED ARCHITECT

SOUTH CAROLINA — INTERPLAN, LLC — No. C02393 — CERTIFICATE OF AUTHORIZATION

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NORTH CHARLESTON, SC 29418

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DATE 03/13/23
DRAWN BY SE
CHECKED BY DAK

SHEET
WATER RISER DIAGRAM

SHEET NUMBER
P5.2

MARIBR - 02/13/2024 8:49:33 AM

VALVE TAG LEGEND	
VALVE	VALVE POSITION
① MAIN WATER SHUT-OFF	NORMALLY OPEN
② MAIN DRAIN	NORMALLY CLOSED
③ ACCESSORY SHUT-OFF	NORMALLY OPEN
④ WATER FILTER INLET	NORMALLY OPEN
⑤ RECIRC PUMP ISOLATION VALVE	NORMALLY OPEN
⑥ WATER HEATER INLET	NORMALLY OPEN
⑦ RESTROOM & KITCHEN COLD WATER	NORMALLY OPEN
⑧ POST HYDRANT COLD WATER	NORMALLY OPEN
⑨ GAS TO WATER HEATER	NORMALLY OPEN
⑩ WATER HEATER OUTLET	NORMALLY OPEN
NOTE: HANDLE IN-LINE WITH PIPING = VALVE OPEN	

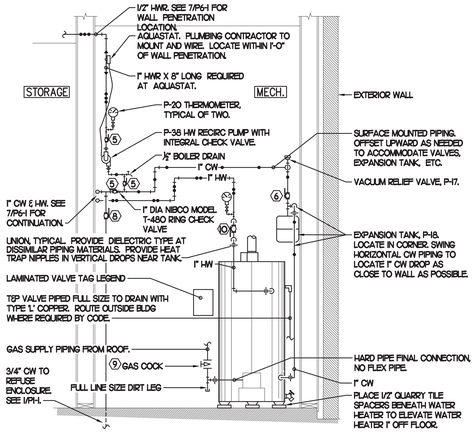
LAMINATE VALVE TAG LEGEND AND MOUNT PERMANENTLY WHERE SHOWN ON WATER HEATER DETAIL IN AN ALUMINUM FRAME EQUAL TO SETON #65624. SEE DETAIL 6/P6-1.

VALVE TAG

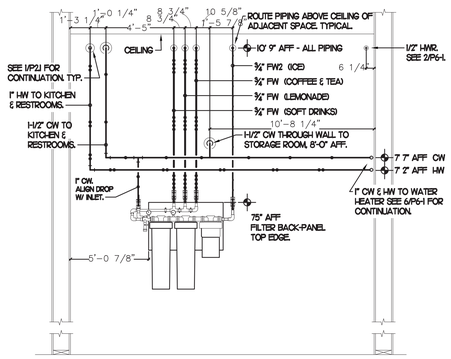
2
PLBG

② VALVE TAG SYMBOL AS SHOWN ON DETAIL THIS SHEET. PROVIDE 1-1/2" ROUND BRASS VALVE TAG WITH 1/2" HIGH BLACK FILLED LETTERING. EACH TAG SHALL INDICATE VALVE NUMBER AND WILL ALSO HAVE "PLBG" STAMPED ON THE TAG IN 1/4" HIGH BLACK FILLED LETTERING EQUAL TO SETON #M4506. HANG WITH BRASS JACK CHAIN ON VALVE HANDLE.

1 VALVE TAGS AND LEGEND
NO SCALE

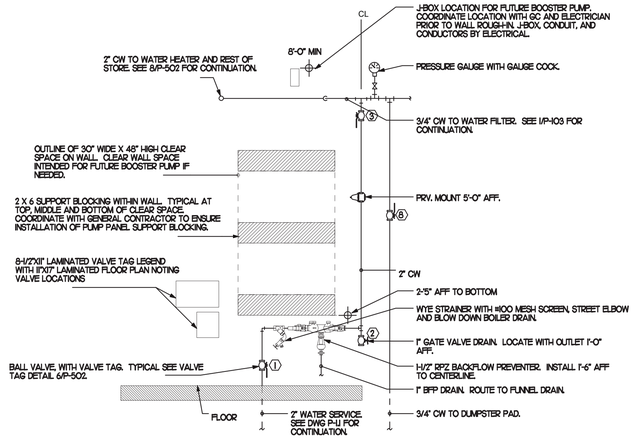


2 PIPING AT WATER HEATER
NO SCALE



4 WATER PIPING LOCATIONS - MECH ROOM
NO SCALE

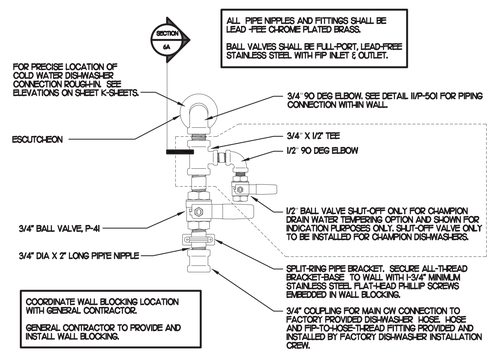
NOTE OF SPECIAL IMPORTANCE
1. LOCATIONS OF 2" CW RISER AND CLEAR SPACE ARE DIMENSIONED BECAUSE THEY ARE CRITICAL FOR THE FUTURE PUMP PANEL INSTALLATION.
2. GENERAL CONTRACTOR SHALL ENSURE OTHER TRADES SHALL NOT INSTALL ANY OTHER BUILDING COMPONENT WITHIN CLEAR SPACE OR WITHIN 10" OF EDGES.



3 PIPING AT WATER SERVICE ENTRANCE IN MECHANICAL ROOM
NO SCALE

ALL PIPE NIPPLES AND FITTINGS SHALL BE LEAD -FREE CHROME PLATED BRASS.

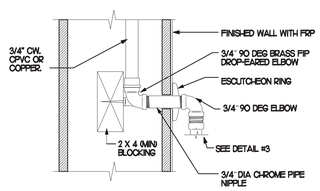
BALL VALVES SHALL BE FULL-PORT, LEAD-FREE STAINLESS STEEL WITH FIP INLET & OUTLET.



COORDINATE WALL BLOCKING LOCATION WITH GENERAL CONTRACTOR.

GENERAL CONTRACTOR TO PROVIDE AND INSTALL WALL BLOCKING.

5 DISHWASHER SUPPLY VALVE ASSEMBLY
NO SCALE



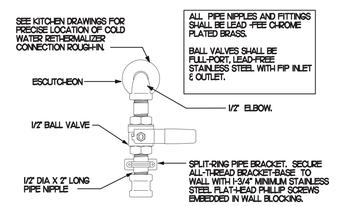
SECURE DROP-EARED ELBOW TO BLOCKING WITH 1-1/4" FLAT HEAD PHILLIP SCREWS.

5A SECTION AT PIPNG WITHIN WALL
NO SCALE

SEE KITCHEN DRAWINGS FOR PRECISE LOCATION OF COLD WATER RETHERMALIZER CONNECTION ROUGH-IN.

ALL PIPE NIPPLES AND FITTINGS SHALL BE LEAD -FREE CHROME PLATED BRASS.

BALL VALVES SHALL BE FULL-PORT, LEAD-FREE STAINLESS STEEL WITH FIP INLET & OUTLET.



COORDINATE WALL BLOCKING LOCATION WITH GENERAL CONTRACTOR.

GENERAL CONTRACTOR TO PROVIDE AND INSTALL WALL BLOCKING, SEE DETAIL II/P-501.

6 RETHERMALIZER SUPPLY VALVE
NO SCALE

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

INTERPLAN
INTERPLAN LLC

ARCHITECTURE
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CORPORATE SEAL:

STATE OF SOUTH CAROLINA — INTERPLAN, LLC — ORLANDO, FL 01060 — REGISTERED ARCHITECT

SOUTH CAROLINA — INTERPLAN, LLC No. C02393 — CERTIFICATE OF AUTHORITY

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P6.1

MARIBR - 02/13/2024 8:49:15 AM

1. SECTION C15100 - PLUMBING SPECIFICATIONS

PART I - PRODUCTS (C15100)

1.01 GENERAL REQUIREMENTS

A. THE FOLLOWING SPECIFICATIONS ARE THE MINIMUM REQUIREMENT. WHERE FEDERAL, STATE OR LOCAL REQUIREMENTS DIFFER FROM THIS SPECIFICATION, THE MORE RESTRICTIVE OF THE TWO SHALL BE FOLLOWED.

1.02 SCOPE

A. HOT AND COLD POTABLE WATER PIPING ABOVE SLAB SHALL BE TYPE 'L' HARD DRAWN COPPER OR FLOWGUARD GOLD CPVC AS MANUFACTURED BY NIBCO OR CHARLOTTE PIPE & FOUNDRY AND MEETING ASTM D-2846. FILTERED WATER PIPING SHALL BE FLOWGUARD GOLD CPVC. HOT AND COLD PIPING WITHIN WALLS BEHIND KITCHEN HOODS SHALL BE COPPER.

B. POTABLE WATER PIPING BELOW SLAB AND OUTSIDE BELOW GRADE SHALL BE TYPE "K" SOFT ANNEALED SEAMLESS. NO JOINTS SHALL BE ALLOWED BELOW SLAB. POTABLE WATER PIPING BELOW GRADE SHALL BE SLEEVED FOR ITS ENTIRE LENGTH WITH POLY SLEEVE AS MADE BY IPS WATER-TITE. ALL SLAB PENETRATIONS SHALL BE SLEEVED WITH POLY SLEEVE TO PROTECT PIPING FROM CORROSION BY CONCRETE.

C. COPPER PIPE FITTINGS SHALL BE WROUGHT COPPER SWEEP PATTERN FITTINGS SOLDERED USING 95-5 LEAD-FREE SOLDER MEETING ASTM B-32 OR BRAZED WITH SIL-FOS. SOLDER FLUXES SHALL MEET ASTM B-813 AND SHALL BE LEAD FREE. BRAZING FLUXES SHALL MEET AWS FB3-A OR FB3-C.

D. WATER PIPING DOWNSTREAM OF SOFT DRINK CARBONATORS SHALL BE PROVIDED AND INSTALLED BY LOCAL SOFT DRINK VENDOR.

E. CPVC FITTINGS FOR PIPING SHALL BE SOLVENT WELD TYPE MEETING ASTM D-2846 WITH CEMENTS MEETING ASTM F-493 AND PRIMER MEETING ASTM F-656. CURE TIME MUST COMPLY WITH MANUFACTURER'S RECOMMENDATIONS. FOR CPVC PIPING INSTALLATION, WALL STUBS AT FIXTURES AND EQUIPMENT SHALL BE COPPER AND SHALL BE SERIES 630-C. CPVC-TO-COPPER STUB OUT ELBOWS BY SIOUX CHIEF.

F. NIPPLES, ELBOWS, AND OTHER ACCESSORY FITTINGS REQUIRED TO COMPLETE ANY WATER PIPING CONNECTION SHALL BE BRASS OR OF SIMILAR TYPE METAL AS THE FITTING TO WHICH IT IS CONNECTED. GALVANIZED FITTINGS ARE PROHIBITED. (EXCEPTION: GALVANIZED HEAT TRAP WATER HEATER NIPPLES IF INTERNALLY PROTECTED WITH TEFLON OR POLYMER CORROSION-RESISTANT COATING.)

G. ALL HVAC CONDENSATE PIPING SHALL BE SCHEDULE 40 PVC DWV AS MANUFACTURED BY CHARLOTTE PIPE AND MEETING ASTM D-1784, D-1785 AND D-2665.

H. U.N.O., ALL SANITARY WASTE, VENT, STORM DRAINAGE PIPING AND FITTINGS INSIDE THE BUILDING, ABOVE AND BELOW GRADE, AND FOR ROOFTOP CONDENSATE, SHALL BE SOLID WALL SCHEDULE 40 PVC DWV AS MANUFACTURED BY CHARLOTTE PIPE AND MEETING ASTM D-2665 AND D-2949. FOAM CORE AND/OR CELLULAR CORE PVC PIPING SHALL NOT BE ALLOWED. PVC PIPING OUTSIDE THE BUILDING, BELOW GRADE, SHALL BE TYPE SDR-35 MEETING ASTM D-3034, U.N.O.

I. DWV PIPE AND FITTINGS WITHIN WALLS BEHIND KITCHEN HOODS SHALL BE SERVICE WEIGHT HUBLESS CAST IRON WITH SLEEVE, SHIELD, AND DRAWBAND JOINTS MEETING ASTM A-888 AND ASTM C-564.

J. PVC-DWV FITTINGS FOR PIPING SHALL BE SOLVENT WELD TYPE INSIDE AND UNDERSLAB MEETING ASTM D-2665, D-3311 AND F-186. CEMENTS SHALL MEET ASTM D-2564 AND PRIMER MEETING ASTM F-656. CURE TIME MUST COMPLY WITH MANUFACTURER'S RECOMMENDATIONS. EXTERIOR PIPING JOINTS SHALL BE NEOPRENE PUSH-ON TYPE.

K. PROVIDE 1" THICK PIPE INSULATION FOR ALL ABOVE SLAB HOT AND TEMPERED WATER PIPING. PROVIDE ½" THICK INSULATION FOR ALL ABOVE SLAB COLD WATER, FILTERED WATER, CONDENSATE PIPING, AND HORIZONTAL RAIN WATER CONDUCTORS INSIDE THE BUILDING. PIPING INSULATION SHALL BE KNAUF 1000F 25/50 FIBERGLASS PIPE COVERING, WHITE KRAFT PAPER VAPOR BARRIER (.02 PERMS) BONDED TO ALUMINUM FOIL AND REINFORCED WITH GLASS FIBERS. MAXIMUM THERMAL CONDUCTIVITY OF 0.23 AT 75F. LONGITUDINAL LAP SHALL BE SELF SEALING. INSULATION FOR WALK-IN COOLER/FREEZER CONDENSATE PIPING SHALL BE ARMACELL A/P ARMAFLEX WITH MINIMUM ½" WALL THICKNESS.

L. PIPE INSULATION AND COVERINGS SHALL HAVE A RATING OF NOT GREATER THAN 25 FLAME SPREAD, NO HIGHER THAN 50 SMOKE DEVELOPED, AND NO MORE THAN 50 FUEL CONTRIBUTED. THE ONLY EXCEPTION SHALL BE ARMAFLEX AP, WHEN SPECIFIED, WHICH SHALL NOT EXCEED 100 SMOKE DEVELOPED.

M. A PVC 25/50 PRE-FORMED COVER SHALL BE PROVIDED AT ALL INSULATED PIPING FITTINGS EQUAL TO PROTO PVC CORP LOSMOKE, 800-875-7768.

N. ALL NATURAL GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL MEETING ASTM A53 WITH SCREWED OR WELDED FITTINGS AND GASKET TYPE UNIONS AND FLANGES. FOR SCREWED PIPING, PIPING SHALL BE JOINED WITH BLACK 150 POUND MALLEABLE IRON SCREWED FITTINGS AS ALLOWED BY LOCAL AUTHORITY. CONTRACTOR SHALL VERIFY THE NEED FOR WELDED PIPING AS REQUIRED BY THE LOCAL GAS CODE AND/OR APPLICABLE LOCAL ORDINANCES AND AMENDMENTS.

O. EXPOSED SUPPORTS AND ATTACHMENTS SHALL BE STAINLESS STEEL, CHROME OR CHROME PLATED. GALVANIZED ATTACHMENTS WILL NOT BE ACCEPTED.

P. USE MATERIALS SPECIFIED ON THESE PLANS. SUBSTITUTIONS ARE ALLOWED ONLY IF SPECIFIED MATERIALS ARE UNAVAILABLE. PRODUCT SUBSTITUTIONS WILL NOT BE ACCEPTED WITHOUT PRIOR APPROVAL. ALL WATER PIPING, FITTINGS, FIXTURES AND ACCESSORIES SHALL BE CERTIFIED LEAD FREE AS DEFINED IN, AND PER THE INTENT OF, THE "REDUCTION IN LEAD IN DRINKING WATER ACT".

PART II -EXECUTION (C15100)

2.01 TRENCHING (C15100)

A. EXCAVATION, BACKFILLING, AND TRENCH WORK SHALL BE DONE IN ACCORDANCE WITH LATEST O.S.H.A. AND APPLICABLE SAFETY STANDARDS.

B. PROVIDE NECESSARY SHORING AND CLEANING TO KEEP TRENCHES IN GOOD WORKING CONDITION, INCLUDING PUMPING OUT WATER.

C. IN MOSTLY ROCK MATERIAL, TRENCHES SHALL BE EXCAVATED TO 6" BELOW THE ELEVATION OF THE BOTTOM OF THE PIPES. AFTER EXCAVATION, TRENCH SHALL THEN BE FILLED TO THE PROPER ELEVATION WITH CRUSHED LIMESTONE. GRAVEL SHALL BE REMOVED FROM UNDER PIPE BELLS SO THE PIPE RESTS FIRMLY ON THE TRENCH BOTTOM.

D. IN MOSTLY EARTH OR SAND MATERIAL, TRENCHES SHALL BE EXCAVATED TO 6" BELOW THE ELEVATION OF THE BOTTOM OF THE PIPES. AFTER EXCAVATION, TRENCH SHALL THEN BE FILLED TO THE PROPER ELEVATION WITH FINE SAND OR GRAVEL. TRENCH BOTTOM SHALL BE REMOVED AT PIPE BELLS SO THE PIPE RESTS FIRMLY ON THE TRENCH BOTTOM.

E. BACKFILLING AND TAMPING SHALL BE CAREFULLY DONE BY HAND SIMULTANEOUSLY ALONG BOTH SIDES OF THE PIPE USING ROCK FREE EARTH, CRUSHED STONE OR SAND UNTIL THE PIPE IS COVERED TO A DEPTH OF AT LEAST 12". BACKFILL SHALL BE ACCOMPLISHED IN SUCCESSIVE 6" LAYERS. THE REST OF THE FILL-UP TO THE TOPSOIL LAYER MAY BE GRAVEL OR ROCK FREE EARTH.

F. ACCEPTABLE SOIL MATERIALS FOR BACKFILL AND FILL SHALL BE FREE OF CLAY, ROCK OR GRAVEL LARGER THAN 2" IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS AND OTHER DELETERIOUS MATTER HAVING A PLASTICITY INDEX LESS THAN 30. BACKFILL SHALL BE ACCOMPLISHED IN LAYERS OF NOT MORE THAN 6" AND EACH LAYER SHALL BE COMPACTED. THE LAST 12" OF BACKFILL SHALL BE ROCK FREE TOPSOIL.

G. SURFACE SHALL BE RESTORED TO ITS ORIGINAL CONDITION.

2.02 INSTALLATION (C15100)

A. WATER PIPING IN EXTERIOR WALL SHALL BE INSTALLED ON THE HEATED SIDE OF WALL INSULATION.

EXPOSED HOT AND COLD WATER TRIM FITTINGS AND ACCESSORIES IN FINISHED AREAS SHALL BE CHROME FINISHED.

C. ACCEPTABLE METHODS OF PIPE SUPPORT WITHIN WALLS SHALL BE THE SUMNER SYSTEM, POSIFIX, STAKFIX, PIPEFIX, HOLDRITE OR CHANNEL.

D. PROVIDE J.R. SMITH OR APPROVED EQUAL SHOCK ABSORBERS #5005 THRU 5050 SIZE AS RECOMMENDED BY MANUFACTURER INSTALLED ON HOT AND COLD WATER BRANCH LINES CONTAINING SINGLE LEVER FAUCETS, FLUSH VALVES OR EQUIPMENT WITH QUICK CLOSING VALVES BETWEEN THE LAST TWO FIXTURES AS SHOWN ON THE CONTRACT DRAWINGS. SHOCK ABSORBERS SERVICING FIXTURES WITH FLUSH VALVES SHALL BE SECURELY ANCHORED IN THEIR VERTICAL POSITION.

E. SANITARY WASTE LINES SHALL BE UNIFORMLY GRADED TO ELEVATIONS SHOWN. IF NO ELEVATIONS ARE GIVEN, SEWERS SHALL BE PITCHED NOT LESS THAN 1/4" PER FOOT FOR ALL PIPING 2-1/2" IN DIAMETER AND SMALLER AND 1/8" PER FOOT FOR ALL PIPING 3" IN DIAMETER AND LARGER.

F. STORM PIPING SHALL BE SLOPED AT ¼" PER FT (2%) UNLESS NOTED OTHERWISE ON PLANS.

G. SUPPORT HORIZONTAL PIPING ACCORDING TO LOCAL PLUMBING CODE. HANGER RODS SHALL BE SIZED AS FOLLOWS:

NOMINAL PIPE SIZE (IN)	MINIMUM HANGER DIAMETER (IN)
1/2	3/8
3/4 TO 1-1/2	3/8
2 TO 2-1/2	3/8
3 TO 6	1/2

H. HANGERS FOR PIPING GREATER THAN 1" SHALL PASS OVER THE INSULATION. PROVIDE SADDLES FOR INSULATED PIPING.

I. INSULATION SHALL BE APPLIED WITH JOINTS TIGHTLY BUTTED, OPEN CRACKS, VOIDS AND DEPRESSIONS SHALL BE FILLED WITH HYDRAULIC SETTING CEMENT. LAPPING MATCHING THE FINISH SHALL BE PASTED NEATLY OVER JOINTS. FITTINGS AND VALVES SHALL BE INSULATED WITH THE SAME TYPE.

J. PROVIDE AND INSTALL A CUT-OFF VALVE, UNION AND FULL SIZE DIRT LEG AT CONNECTION TO EACH GAS-FIRED PIECE OF EQUIPMENT. INSTALL PIPING AT AND AROUND EQUIPMENT SO AS TO NO WAY OBSTRUCT EQUIPMENT ACCESS PANELS AND/OR ACCESS DOORS.

K. COORDINATE ABOVE-CEILING PIPING LOCATIONS AND ROUTING WITH HVAC CONTRACTOR AND M-SHEETS PRIOR TO INSTALLATION. ALL MAIN DUCT TRUNK LOCATIONS SHALL TAKE PRIORITY. PIPING MAY REQUIRE REMOVAL AND REINSTALLATION AT PLUMBING CONTRACTOR'S EXPENSE IF PIPING OBSTRUCTS THE M-SHEET DUCT LAYOUT AS SHOWN OR PREVENTS ACCESS TO GREASE DUCT CLEANOUT OPENINGS.

L. ALL GAS PIPING ABOVE ROOF SHALL BE CLEANED FREE OF RUST AND PAINTED WITH COAT OF ZINC RUST PRIMER AND ONE COAT OF ALUMINUM BASE PAINT. METER AND GAS RISER SHALL BE PRIMED AND PAINTED TO MATCH BUILDING. APPLY TWO COATS OF ASPHALTUM BASE PAINT TO PIPING BURIED UNDERGROUND.

2.03 TESTING (C15100)

A. POTABLE WATER PIPING SHALL BE PRESSURE TESTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND MANUFACTURERS RECOMMENDATIONS.

B. THE POTABLE WATER SYSTEM SHALL BE FLUSHED OUT PROGRESSIVELY BY OPENING OUTLETS AND FLOWING WATER UNTIL IT RUNS CLEAR. AFTER PIPE CLEANING IS COMPLETED, THE STRAINERS SHALL BE REMOVED, CLEANED, AND REPLACED. THEN THE ENTIRE POTABLE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION.

C. THE SANITARY WASTE SYSTEM SHALL BE FLUSHED OUT PROGRESSIVELY WITH FLOWING WATER UNTIL IT RUNS CLEAR.

D. THE ENTIRE SANITARY WASTE SYSTEM AND STORM DRAINAGE SYSTEM SHALL BE PRESSURE TESTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND MANUFACTURERS RECOMMENDATIONS.

E. NATURAL GAS PIPING SHALL BE LEAK TESTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND MANUFACTURERS RECOMMENDATIONS.

PART III - MANUFACTURERS

3.01 PRODUCTS - PIPING SYSTEMS, ETC (C15100)

A. HYDRANTS, CARRIERS, DRAINS, AND SHOCK ABSORBERS: JAY R. SMITH, JONES STEPHENS CORP, WATTS ZURN, OR JOSAM.

B. ALTERNATE FIXTURES: ONLY AS SHOWN ON PLANS. APPROVED JAY R. SMITH (JRS), WATTS (WTS), AND ZURN (ZRN) MODEL NUMBERS LISTED ON FIXTURE SCHEDULE, THIS SHEET.

3.02 PRODUCTS - RESTROOM FIXTURES PORCELAIN & VALVES (C15405)

A. PREFERRED FIXTURES: TOTO. NO EXCEPTION.

B. ALTERNATE FIXTURES: ONLY AS SHOWN ON PLANS.

C. FITTINGS: AS SPECIFIED ON THE PLANS. NO SUBSTITUTIONS ALLOWED.

D. FLUSH VALVES AND LAVATORY FAUCETS: TOTO MANUFACTURING. NO SUBSTITUTIONS ALLOWED.

E. PREFERRED TOILET SEATS: TOTO. ALTERNATE TOILET SEATS: CHURCH, BEMIS, AND BENEKE.

F. FLOOR SINKS: ZURN WITH ALUMINUM SEDIMENT BUCKETS. NO SUBSTITUTIONS ALLOWED.

NATIONAL ACCOUNTS

I.	TOTO VALVES AND FIXTURES (NO SUBSTITUTIONS). HAINES, JONES & CADBURY LLC. (H-J-C DISTRIBUTORS). PLEASE CONTACT H-J-C-CFA CUSTOMER SERVICE REPRESENTATIVE AT (800) 459-7099 OR VIA E-MAIL AT: CF@H-J-CINC.COM FOR NATIONAL ACCOUNT PRICING AND DELIVERY FOR ALL ITEMS ON PLUMBING FIXTURE SCHEDULE.

2. PLUMBING FIXTURES

RESTROOM FIXTURES (C15405)

P-1 WATER CLOSET: TOTO MODEL CT705ELNo01 BOWL WITH 1.28 GPF TET-1-LNC # 320P ECO-POWER FLUSH VALVE AND SC934 SEAT. NO SUBSTITUTIONS. WHITE, FLOOR MOUNTED, FLUSH VALVE TYPE, VITREOUS CHINA, 1-1/2" TOP SPUD, ELONGATED BOWL, ELECTRONIC SENSOR OPERATED HANDS-FREE FLUSH VALVE, WHITE OPEN FRONT SEAT WITH CHECK HINGE. CHICK-FIL-A HAS NATIONAL ACCOUNTS WITH TOTO. PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO FIXTURES.

P-2 WATER CLOSET (ADA): TOTO MODEL CT708ELLNo01 BOWL WITH 1.28 GPF TET1LA32#01 ECO-POWER FLUSH VALVE AND SC934 SEAT. NO SUBSTITUTIONS. H.C. ACCESSIBLE, WHITE, FLOOR MOUNTED, 1-1/2" HIGH FLUSH VALVE TYPE, VITREOUS CHINA, 1-1/2" TOP SPUD, ELONGATED BOWL, ELECTRONIC SENSOR OPERATED HANDS-FREE FLUSH VALVE, WHITE OPEN FRONT SEAT WITH CHECK HINGE. CHICK-FIL-A HAS NATIONAL ACCOUNTS WITH TOTO. PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO FIXTURES

P-3 URINAL: TOTO MODEL UT445U URINAL WITH TEU 1 I.1A 1"HCP. 0.125 GPF SELF SUSTAINED HYDROPOWER SELF-GENERATING ELECTRONIC SENSOR-OPERATED FLUSH VALVE. NO SUBSTITUTIONS. VITREOUS CHINA, 3/4" TOP SPUD, SENSOR OPERATED WITH MANUAL OVERRIDE BUTTON, INTERNAL VALVE FILTER PROTECTION. PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO PRODUCTS.

P-4 LAVATORY FAUCET: (BUILT-IN COUNTERTOP LAVATORY PROVIDED BY OWNER) TOTO MODEL TEL 105 - D10ET # CP ECO-POWER SENSOR HOT/COLD FAUCET WITH THERMOSTATICALLY CONTROLLED ASSE 1070 MIXING VALVE FAUCET. 0.09 GALLONS PER CYCLE. NO SUBSTITUTIONS. PROVIDE MCGUIRE LF175 SUPPLY WITH STOP, MCGUIRE 155-WC GRID DRAIN WITH OFFSET TAILPIECE, MCGUIRE 8872 POLISH-ED CHROME P-TRAP, P-TRAP SHALL BE PARALLEL WITH BACK WALL. PROVIDE A TRUESEAL P/C, HANDI LAV-GUARD INSULATION KITS MODELS 1016-Z AND 1056-Z. CHICK-FIL-A HAS NATIONAL ACCOUNTS WITH TOTO. PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO FIXTURES.

PLUMBING (C15100)

P-5 KITCHEN HAND SINK: ROUGH-IN: 0.5 GPM, SINK: BY TMS, FAUCET: TOTO MODEL#TEL65-C20E#CP - PROVIDED BY HJC WITH TH-P3094 NOZZLE. CONTRACTOR SHALL INSTALL WALL HUNG, STAINLESS STEEL SINK AND FAUCET SET AND MAKE FINAL CONNECTIONS. MCGUIRE LF175 SUPPLIES WITH STOPS AND A MCGUIRE 8912C POLISHED CHROME P-TRAP PROVIDED BY HJC). ADJUST FAUCET OUTLET TEMPERATURE TO 110 DEGREES F (OR HIGHER AS REQUIRED BY LOCAL JURISDICTION).

P-5A KITCHEN DUMP SINK: ROUGH-IN: 0.5 GPM, (SINK: BY TMS, FAUCET: T&S MODEL#B-1146-CFA-VF05 - PROVIDED BY HJC WITH TH-P3094 NOZZLE) CONTRACTOR SHALL INSTALL WALL HUNG, STAINLESS STEEL SINK AND FAUCET SET AND MAKE FINAL CONNECTIONS. MCGUIRE LF175 SUPPLIES WITH STOPS (PROVIDED BY HJC).

P-6 SERVING COUNTER DROP IN SINK: ROUGH-IN (SINK: PROVIDED BY CLAYTON FIXTURE, FAUCET- TOTO T24715ET WITH 1.0 GPM AERATOR PROVIDED BY HJC)CONTRACTOR SHALL INSTALL SINK AND FAUCET SET AND MAKE FINALCONNECTIONS. MCGUIRE 8912C POLISHED CHROME P-TRAP AND MCGUIRE LF175220 STOPS WITH 20" CHROME PLATED 3/8" COPPER RISERS (PROVIDED BY HJC). ADJUST FAUCET OUTLET TEMPERATURE TO 110 DEGREES F (OR HIGHER AS REQUIRED BY LOCAL JURISDICTION).

P-7 MOP SINK FAUCET: (MOP SINK BASIN BUILT BY GENERAL CONTRACTOR) PROVIDE T&S BRASS MODEL B-2345 FAUCET WITH CERAMA SPRING CHECK VALVE CARTRIDGES, HOSE THREAD SPOUT OUTLET, TOP BRACE, ADJUSTABLE INLET SPREAD FROM 3" TOP 8", INCLUDE T&S BRASS MODEL 43-072 HOSE THREAD X ¾" FEMALE NPT CHROME ADAPTOR. NO SUBSTITUTIONS. SEE ALSO P-16.

P-8 VEGETABLE PREP SINK: ROUGH-IN: (SINK: PROVIDED BY TMS, FAUCET T&S B-0152-14-CRBCT WITH 0.65 GPM SPRAY HEAD BY HJC) CONTRACTOR SHALL INSTALL SINK AND MAKE FINAL CONNECTIONS. MCGUIRE LF5708 STOPS AND BRASSCRAFT 36" CHROME PLATED 1/2" OD COPPER RISERS MODEL 9-36AC (PROVIDED BY HJC). ASSEMBLE AND MOUNT TWO HANDLE FAUCET WITH PRE-RINSE SPRAY ARM. INSTALL ADD-ON FAUCET WITH SPOUT AT BASE OF PRE-RINSE RISER). SEE K-SHEET ELEVATIONS. PROVIDE 1-1/2" SCHED 80 PVC PIPE AND FITTINGS) INDIRECT WASTE LINES FROM EACH SINK BASIN TO FLOOR SINK P-13B, NO P-TRAPS REQUIRED. HJC TO PROVIDE FISHER #22209 DRAINS WITH FLAT STRAINERS.

P-9 FOUR COMPARTMENT POT SINK: ROUGH-IN: (SINK: PROVIDED BY TMS, FAUCET: T&S B-0152-14CRBCT & B2299-CR WITH 0.65 GPM SPRAY HEAD PROVIDED BY HJC) CONTRACTOR SHALL INSTALL SINK, ASSEMBLE & MOUNT TWO FAUCETS, AND MAKE FINAL CONNECTIONS. MCGUIRE LF5708 STOPS AND BRASSCRAFT 36" CHROME PLATED 1/2" OD COPPER RISERS MODEL 9-36AC (PROVIDED BY HJC). ASSEMBLE AND MOUNT ONE TWO-HANDLE FAUCET WITH PRE-RINSE SPRAY. INSTALL ADD-ON FAUCET WITH SPOUT AT BASE OF PRE-RINSE RISER. ASSEMBLE AND MOUNT ONE TWO-HANDLE FAUCET WITH DOUBLE JOINT SPOUT ON OPPOSITE SIDE SEE K-SHEET ELEVATIONS FOR FAUCET LOCATIONS. PROVIDE 1-1/2" SCHED 80 PVC PIPE AND FITTINGS) INDIRECT WASTE LINES FROM EACH SINK BASIN TO FLOOR SINK P-13A, NO P-TRAPS REQUIRED. HJC TO PROVIDE FISHER #22209 DRAINS WITH FLAT STRAINERS.

P-10 FLOOR DRAIN (3"): ZURN EZ1-PV3-R6 PVC BODY, BRONZE SPUD WITH 8" DIAMETER NICKEL BRONZE STRAINER (PROVIDED BY HJC). ALT: JONES STEPHENS CORP D53-144.

P-11 WALL HYDRANT (NON-FREEZE): WOODFORD MODEL 67-C AUTOMATIC DRAINING WALL HYDRANT WITH DUAL CHECK BFP, ASSE 1052 APPROVED, WALL CLAMP, POLISHED BRASS FINISH, "C" STYLE INLET. SEE WALL HYDRANT NOTES ON 1/P2-1 FOR WALL THICKNESS AT WALL HYDRANTS. ALT: (WTS) HY-42.

P-12 FUNNEL DRAIN (3"): ZURN MODEL ZN415-3NL-6S-4 FLOOR DRAIN W/FUNNEL. INDIRECT WASTE RECEIVER WITH NICKEL BRONZE STRAINER AND FUNNEL. PROVIDE 6" SQUARE STRAINER WITH 4" ROUND FUNNEL AT ICE MAKING & WALK-IN COOLER (PROVIDED BY HJC). 4" ROUND FUNNEL (ZURN) ZN-6284.

P-13A FLOOR SINK (POT SINK): ZURN MODEL Z190H-NL-1-23-KC CAST IRON INDIRECT WASTE RECEIVER WITH 12" SQUARE BODY, FLASHING CLAMP, 8" DEEP, ALUMINUM SEDIMENT BUCKET, AND NO GRATE. NO SUBSTITUTIONS (PROVIDED BY HJC).

P-13B FLOOR SINK (VEGETABLE SINK): ZURN MODEL Z1910-KC-2-23 CAST IRON INDIRECT WASTE RECEIVER WITH FLASHING CLAMP, 8" SQ. BODY, ALUMINUM SEDIMENT BUCKET, AND NO GRATE (PROVIDED BY HJC). NO SUBSTITUTIONS.

P-13C FLOOR SINK (DUMP SINK: 3" WASTE CONNECTION): ZURN MODEL Z1910-NL-KC-2-23 CAST IRON BODY WITH INDIRECT WASTE RECEIVER, NEO-LOC OUTLET, ANCHOR FLANGE WITH SEEPAGE HOLES AND CLAMP COLLAR, WITH HALF GRATE, AND ALUMINUM BUCKET. (PROVIDE BY HJC) NO SUBSTITUTIONS.

P-14 CLEANOUTS INSIDE BUILDING: ZURN ZN1400-XN-T-BP CLEANOUT WITH 6" SQUARE NICKEL BRONZE TOP AND TAPER THREAD BRONZE PLUG. SEE PLAN FOR SIZE. (X=PIPE DIA) (PROVIDED BY HJC).

P-15 CLEANOUTS OUTSIDE BUILDING: ZURN Z1474-NX EXTRA HEAVY DUTY CAST IRON CLEANOUT, "CO." CAST IN COVER, ABS PLUG, NEO-LOOCK OUTLET. (X=PIPE DIA) (PROVIDED BY HJC). ALT: (ZURN) Z1474-X-N.

P-16 3-WAY DIVERTER VALVE ASSEMBLY: WATTS MODEL LFB 6780 ROUGH BRASS LEAD-FREE DIVERTER BALL VALVE WITH ¾" FIP INLET AND OUTLETS AND QUARTER TURN LEVER HANDLE. PROVIDE WITH TWO (2) FORGED BRASS ¾" MIP X ¾" MALE GARDEN HOSE THREAD ADAPTERS (PLUMBEST MODEL G20-003 OR EQUAL). PROVIDE WITH ONE ASSE 1011 APPROVED CHROME PLATED VACUUM BREAKER (WOODFORD MODEL 34HCH OR EQUAL). FOR INSTALLATION AT MOP SINK. SEE 4/P2-1. PROVIDE ALSO TWO ¾" CLOSE CHROME PLATED BRASS NIPPLE AND ¾" POLISHED CHROME 90 DEGREE ELBOW.

P-17 VACUUM RELIEF VALVE: WATTS MODEL #LFN36MI, 3/4" CONNECTION.

P-18 EXPANSION TANK: STATE INDUSTRIES MODEL ETC-5X, ACCEPTANCE 3.05 GALLONS AT 40 PSI PRECHARGE, 3/4" CONNECTION. ALTERNATE MODELS SIZED PER WATER HEATER MANUFACTURER RECOMMENDATIONS ARE ACCEPTABLE.

P-19 RELOCATED EXISTING WATER HEATER. (STATE INDUSTRIES MODEL#PR6-75-XRVIT, 75 GALLON, 75,000 BTUH.) 3

P-20 THERMOMETER: PROVIDE TRERICE MODEL B834 - 04 - 04 3" DIAL TYPE THERMOMETER WITH BOTTOM 1/2" N.P.T. CONNECTION, 4" STEM AND O DEG F TO 200 DEG F RANGE. LEAD FREE.

P-21 BACKFLOW PREVENTERS: COORDINATE LOCATION WITH CIVIL SITE UTILITY PLAN. BACKFLOW PREVENTER TYPE AND MODEL IS DETERMINED BY CIVIL ENGINEER IF LOCATED OUTSIDE THE BUILDING.

DOUBLE CHECK TYPE:
WATTS NO. LFUCDVMQT H-1/2" DUAL CHECK MODULAR TYPE BACKFLOW PREVENTER MEETING ASSE 1015 AND AWWA C510-92. WHERE REQUIRED BY LOCAL AUTHORITY, USE THE RPZ TYPE BFP SHOWN BELOW. ALT: (ZRN) 112-350XL.

REDUCED PRESSURE ZONE (RPZ) TYPE:
WATTS NO. LFUCQ9MZ H-1/2" MODULAR TYPE WITH TEST PORTS AND INTERMEDIATE RELIEF VALVE MEETING ASSE 1013 AND AWWA C511-89. PROVIDE WATTS NO. 909-AG-C AIR GAP DEVICE. ALT: (ZRN) 112-975XL2.0.

P-22 MOP SINK CHECK VALVES: T&S BRASS 1/2" MODEL B-CVH-2 BALL CHECK.

P-23 UTILITY CONNECTION (ICEMAKER): PROVIDE A MCGUIRE MODEL LFHST0658 LEAD-FREE CHROME WHEEL ANGLE STOP, 1/2" FIP INLET AND OUTLET. PROVIDE CHROME WALL ESCUTCHEON. INSTALL WITH BFP P-34. SEE DETAIL 3/P2-1 FOR PIPING AT ICE MAKERS.

P-24 UTILITY CONNECTION (COFFEE & TEA BREWERS): PROVIDE A MCGUIRE MODEL LFHST0658 LEAD-FREE CHROME WHEEL ANGLE STOP, 1/2" FIP INLET AND OUTLET. PROVIDE CHROME WALL ESCUTCHEON. INSTALL WITH BFP P-34.

P-25 SHOCK ABSORBER: ZURN Z1700-100 THRU Z1700-300 AS NEEDED, SIZE AS RECOMMENDED BY MANUFACTURER (PROVIDED BY HJC). ALT: (WTS) SSA + SSB, (JRS 5005 THROUGH 5050)

P-26 FUNNEL DRAIN (3"): ZURN ZN415-3NL-6S-OF FLOOR DRAIN W/FUNNEL. INDIRECT WASTE RECEIVER WITH NICKEL BRONZE STRAINER AND FUNNEL. PROVIDE 6"X6" SQUARE STRAINER WITH 3.25"X 8.25" OBLONG FUNNEL (DRAIN AND STRAINER PROVIDED BY HJC). ALT: (JRS) 350LO3-F22NB.

P-26A TRAP SEAL PROTECTOR: PROVENT TRAP GUARD MODEL TG3H 3" TRAP SEAL INSERT FOR INTERIOR INSTALLATION AND REPLACEMENT ACCESS THROUGH STRAINER. PROVIDE AT P-35 FLOOR DRAINS IN RESTROOMS, P-37 FLOOR DRAINS IN DINING ROOM, AND P-10/P-26 DRAINS IN SERVICE ROOM. PROVIDE PROSET MODEL TG33-ZURN WHEN USING ZURN FLOOR FIXTURES.

P-27 WATER PRESSURE GAUGE: TRERICE MODEL 800B, 2-1/2" ROUND, BOTTOM OUTLET WITH 1/4" N.P.T. CONNECTION AND 0 TO 100 PSI RANGE.

P-28 BALL VALVE: NIBCO MODEL 4660-T, 3/4", WITH IPS INLET AND OUTLET.

P-29A ICE MACHINE TRENCH DRAIN: ZURN/STAINLESS DRAINS TR12-CFA-18 STAINLESS STEEL TRENCH DRAIN, 14.5" X 18", STAINLESS STEEL SEDIMENT CUP AND STAINLESS STEEL SERRATED LADDER GRATE (PROVIDED BY HJC). NO SUBSTITUTIONS.

P-29B ICE MACHINE TRENCH DRAIN: ZURN/STAINLESS DRAINS TR12-CFA-36 STAINLESS STEEL TRENCH DRAIN, 14.5" X 36", STAINLESS STEEL SEDIMENT CUP AND STAINLESS STEEL SERRATED LADDER GRATE (PROVIDED BY HJC). NO SUBSTITUTIONS.

P-29C ICE MACHINE TRENCH DRAIN: ZURN/STAINLESS DRAINS TR12-CFA-48 STAINLESS STEEL TRENCH DRAIN, 14.5" X 48", STAINLESS STEEL SEDIMENT CUP AND STAINLESS STEEL SERRATED LADDER GRATE (PROVIDED BY HJC). NO SUBSTITUTIONS.

P-30 FILTERED WATER FAUCET: (FAUCET PROVIDED BY OWNER) TWO-HANDLE WALL MOUNT FAUCET WITH SWING SPOUT. MOUNT ON WALL AS SHOWN ON K-SHEETS. PIPE FILTERED WATER TO BOTH SIDES OF FAUCET. CONNECT TO SUPPLY PIPING WITH BRASS OR CHROME NIPPLES, GALVANIZED NOT ALLOWED.

P-30A FILTERED WATER FAUCET: (FAUCET: T&S B-0599-CR PROVIDED BY HJC) TWO-HANDLE WALL MOUNT FAUCET WITH SWING SPOUT. MOUNT ON WALL AS SHOWN ON K-SHEETS. PIPE FILTERED WATER TO BOTH SIDES OF FAUCET. CONNECT TO SUPPLY PIPING WITH BRASS OR CHROME NIPPLES, GALVANIZED NOT ALLOWED

P-31 DUMPSTER POST HYDRANT (NON-FREEZE): WOODFORD MODEL Y2 LEVER TYPE POST HYDRANT, 3/4 HOSE CONNECTION, LOCKABLE LEVER HANDLE, BRASS CASING, BRASS OPERATING ROD, ASSE 1052 APPROVED AND 24" DEPTH OF BURY.

P-32 DUMPSTER PAD DRAIN: J.R. SMITH FIGURE NO. 2280CO3 3" FLOOR DRAIN WITH 7-1/2" HINGED CAST IRON SLOTTED GRATE AND SEDIMENT BUCKET. PROVIDED AND INSTALLED BY SITE CONTRACTOR. ALT: (ZRN) Z56O-3NL-Y.

P-33 TRAP PRIMER (MECHANICAL TYPE): PRECISION PRODUCTS PR-500. PROVIDE DISTRIBUTION UNIT WHERE SERVING MULTIPLE DRAINS. PROVIDE SCREWDRIVER STOP AT PRIMER INLET. ALT: (WTS) TP-300A-DR.

P-34 DISPENSER BACKFLOW PREVENTER: WATTS MODEL #WLFTUZ2D ASSE 1024 RATED WITH 1/2" FIP INLET AND OUTLET, DUAL CHECK TYPE. PROVIDE 1/2" DIA X 2" LONG CHROME NIPPLE AT BFP INLET AND OUTLET

(1) LIGHTING FIXTURE (LUMINAIRE) SCHEDULE - CHICK-FIL-A

MARK	MANUFACTURER	CATALOG NUMBER	NO. LAMPS/TYPE	SYL LAMP NO.	WATTS	VOLTS	MOUNTING	REMARKS
A	LITHONIA	2GTL-472L-A12125V-EZ1-LP840	INTEGRAL WITH FIXTURE	–	52.3	120	RECESSED	2'X4' STATIC LED TROFFER RATED 7200 LUMENS, 4000K COLOR TEMP
AE	LITHONIA	2GTL-472L-A12125V-EZ1-LP840-EL14L	INTEGRAL WITH FIXTURE	–	52.3	120	RECESSED	SAME AS 'A' WITH EMERGENCY BATTERY PACK. SEE PLAN NOTES ABOUT LAMP SWITCHING
A2	LITHONIA	2RTBS-217-MVOLT-BSNP	2-FO17/835/XP/SS/ECO	22491	34	120	RECESSED	2'X2' STATIC TROFFER. SMOOTH SIDE OF PRISMATIC LENS DOWN.
A3	LITHONIA	2PM3NGB-2-17-9-LD-MVOLT-GEB10IS	2-FO17W T8 (24")		34	120	RECESSED	2'X2' STATIC TROFFER. SMOOTH SIDE OF PRISMATIC LENS DOWN.
A3E	LITHONIA	2PM3NGB-2-17-9-LD-MVOLT-GEB10IS-EL14	2-FO17W T8 (24")		34	120	RECESSED	SAME AS 'A3' WITH EMERGENCY BATTERY PACK. SEE PLAN NOTES ABOUT LAMP SWITCHING
B1	METALUX	2VT3-LD5-UNV-L840-CD1-SSL-U	INTEGRAL WITH FIXTURE	–	35	120	SURFACE	MOUNT LIGHT TO BTM OF OVERHEAD WIRE SHELVING & PROVIDE CORD & PLUG
B3	CON-TECH	UF228-P WITH PLUG & CORDSET	1-FP28/835/ECO	20901	31	120	SURFACE	REFER TO SHEET E2.4, KEYNOTE #11, FOR ADDITIONAL INFORMATION.
C	LSI INDUSTRIES	LSI CRUS-SC-LED-LW-30-CW-UE-WHT	LED	–	74	120	CANOPY DECK	
D1	LITHONIA	REAL6CD6/MW/1000L/30K/.955C-LP6LN	FURNISHED	–	14.2	120	RECESSED	LED DOWNLIGHT WITH WHITE TRIM
D2	LITHONIA	REAL6CD6/BZA/1000L/30K/.955C-LP6LN	FURNISHED	–	14.2	120	RECESSED	LED DOWNLIGHT WITH BRONZE TRIM – USED ONLY IN WOOD OR COLORED CLGS
D3	LITHONIA	LDN6-30/20-L06AR-LSS-MVOLT	FURNISHED	–	22.6	120	RECESSED	
D3E	LITHONIA	LDN6-30/20-L06AR-LSS-MVOLT-EL		–	22.6	120	RECESSED	
D	LITHONIA	2RTL4-48L-EZ1-LP830/DGA24	LED	–	48	120	RECESSED	2'x4' VOLUMETRIC RECESSED LIGHTING SYSTEM WITH DRYWALL GRID ADAPTER TRIM
DE	LITHONIA	2RTL4-48L-EZ1-EL14L-LP830/DGA24	LED	–	48	120	RECESSED	SAME AS "D" WITH EMERGENCY BATTERY PACK. SEE PLAN NOTES ABOUT LAMP SWITCHING
F	COOPER/ HALO	SLDSL6069S1EMWR	LED	–	8.5	120	SURFACE	
G	LITHONIA	C-132-AL-MVOLT-OS10IS	1-FO28/835/XP/SS/ECO	22178	25	120	SURFACE	STRIP FLUORESCENT WITH LOW TEMP BALLAST, MOUNT WITHIN AWNING ON FRAME
G1	LITHONIA	C-232-AL-MVOLT-OS10IS-WGCUN	2-FO28/835/XP/SS/ECO	22178	50	120	WALL	STRIP FLUORESCENT WITH LOW TEMP BALLAST AND WIREGUARD, MTD ABOVE DOOR FRAME
J	LITHONIA	CA-132-MVOLT-OS10IS	1-FO28/835/XP/SS/ECO	22178	25	120	WALL	MOUNT ABOVE DOOR FRAME
J1	LITHONIA	Z-132-MVOLT-OS10IS	1-FO28/835/XP/SS/ECO	22178	32	120	COVE	MOUNT IN MENUBOARD COVE AND PROVIDE TUBE GUARDS ON LAMPS
J2	LITHONIA	AV-G232-MDR-ASY-MVOLT-OS10IS	2-FO28/835/XP/SS/ECO	22178	50	120	RECESSED	1'X4' ASYMMETRIC WITH LIGHT DIRECTED TOWARDS THE CENTER OF THE ROOM
K2	JUNO / INDY	MS302-WH/HB-28/T5621/HB-28 142776	LED	PHILLIPS	28	120	RECESSED	WHITE HOUSING 2 LAMP MULIT-SPOT WITH LED RETROFIT LAMPS, AIM AS DIRECTED
K4	JUNO / INDY	MS302-BL/HB-28/T5621/MS570BL	2-12PAR30S/END/F22/27K	PHILLIPS	24	120	RECESSED	SAME AS K2 WITH BLACK HOUSING – USED ONLY IN WOOD OR COLORED CLGS
L	LITHONIA	VSL-232-MVOLT-DL-OS10IS	2-FO28/835/XP/SS/ECO	22178	50	120	SURFACE	LOW PROFILE DAMP LOCATION FLUORESCENT.
MS	LEVITON	PS110-10W	N/A		4	120	WALL	MOTION SENSOR ON FLUSH BACKBOX, PROVIDE COVERPLATE W/ CENTER THREADED KNOCKOUT
M	LITHONIA	2GT8-G-232-A12V-MVOLT-OS10ISH	2-FO28/835/XP/SS/ECO	22178	50	120	RECESSED	SAME AS 'A' EXCEPT WITH TWO LAMPS. SEE PLAN NOTES ABOUT LAMP SWITCHING.
ME	LITHONIA	2GT8-G-232-A12V-MVOLT-OS10ISH-EL	2-FO28/835/XP/SS/ECO	22178	50	120	RECESSED	SAME AS "AE" EXCEPT WITH TWO LAMPS. SEE PLAN NOTES ABOUT LAMP SWITCHING.
N	MINKA	4531-267B	1-CF19EL/MINI-TWIST/2700	29396	19	120	WALL	"COW BELL" LAVATORY WALL SCONCE WITH SHADE POINTED DOWN
P1	MEYDA	142776	2-CF19EL/MINI-TWIST/2700	29396	38	120	PENDANT	PEACH BASKET PENDANT WITH BTM AT 6'-6" AFF ABV TABLE, 7'-6" OTHERWISE
Q	TROY	KF14856-1	FURNISHED	–	43	120	PENDANT	CUSTOM 48"X12"X12" COCA-COLA BOTTLE PENDANT, BTM AT 6'-3" AFF
R	LITHONIA	2RTL4-48L-EZ1-LP830	LED	–	48	120	RECESSED	2'X4' VOLUMETRIC RECESSED LIGHTING
RE	LITHONIA	2RTL4-48L-EZ1-EL14L-LP830	LED	–	48	120	RECESSED	SAME AS R WITH EMERGENCY BATTERY PACK
S	LITHONIA	RTL2-33L-EZ1-LP830	LED	–	33	120	RECESSED	2'X2' VOLUMETRIC RECESSED LIGHTING
SE	LITHONIA	RTL2-33L-EZ1-EL14L-LP830	LED	–	33	120	RECESSED	SAME AS S WITH EMERGENCY BATTERY PACK
U	BESA LIGHTING	BES00298-060	FURNISHED	–	7.5	120	PENDANT	RED FRIT GLASS, BRONZE CABLE & CANOPY, 6'-6" AFF
	CON-TECH	LA-17A-P	N/A			120	TRACK	PENDANT ADAPTER FOR CON-TECH 'LT SERIES' LIGHTING TRACK
U1	CON-TECH	LT-4 OR 8-P TRACK, LA9 END FEED, LA2 MINI-CONNECTORS AND LA-17A-P PENDANT ADAPTORS				120	CEILING	LIGHTING TRACK WITH ACCESSORIES AS REQ'D, LENGTH AS NOTED
V	VISUAL COMFORT	SL2923BZ	1-LED8A19/DIM/O/827	78935	8	120	WALL	BOSTON LIBRARY LIGHT WITH RETROFIT LED LAMP, MOUNT BACKBOX AT 86" AFF
XA	LITHONIA	LHQM-S-W-1-R-120	INTEGRAL WITH FIXTURE	–	4	120	WALL	EXIT SIGN WITH BATTERY PACK AND TWO INTEGRAL ADJUSTABLE LAMPHEADS
XB	CHLORIDE	CAX6	INTEGRAL WITH FIXTURE	–	3	120	CEILING	WHITE THERMOPLASTIC BATTERY PACK UNIT WITH TWO LAMPHEADS
XC	LITHONIA	AFN-BN-EXT (TWO LAMP UNIT)	INTEGRAL WITH FIXTURE	–	21	120	WALL	EXTERIOR WALL MOUNTED EMERGENCY LIGHTING UNIT, LOCATE NEAR EGRESS DOOR
OB	LUMUX	SL563SS-PL26-120	1-CFTR26W/GX24D/827	20767	31	120	SEMI-REC	7 INCH DIAMETER TEMPERED FROSTED LENS WITH STAINLESS STEEL GRID & POLYMER HOUSING
OC	LITHONIA	TFR-400M-TA-TB-SCWA-IS-LPI	1-M400/PS/U	64321	456	120	PIPE	FLOODLIGHT MTD ON ROOF ON 2" PIPE SUPPORT (BY OTHERS) AND AIMED AT FLAG AFTER DARK
OD	LITHONIA	DSXO-LED-40C-1000-40K SERIES (DISTRIBUTION TYPES TO BE DETERMINED BYTHE REGIONAL TEAM SPECIFIC TO THE SITE.)	FURNISHED	–	138	120	POLE	COORDINATE WITH THE SPECIFIC SITE CONDITIONS FOR DISTRIBUTION TYPE(S) AND POLE STYLE & HEIGHT. REFER TO THE ELECTRICAL SITE PLAN FOR FURTHER INFORMATION.
* OG	REFER TO SHEET ES2.1 (PHOTOMETRIC PLAN) FOR THE SITE SPECIFIC LIGHTING FIXTURE USED IN LIEU OF TYPE OD WHEN REQUIRED.							
OH	LITHONIA	L3LED-T24/40PA-TRMW-30K-90CRI	FURNISHED	–	11.2	120	RECESSED	4" OPEN CLEAR DIFFUSER DOWNLIGHT WITH 3000K. 93 CRI, 600LUMEN
OJ	SECURITY LTG	RWSC-72LLED-UD-DB-UNV-3K (DARK BRONZE)	FURNISHED	–	25	120	WALL	UP/DOWN DECORATIVE EXTERIOR WALL SCONCE, SEE ELEVATIONS FOR MOUNTING HEIGHT
OK	LITHONIA	TWA-50M-120-LPI	FURNISHED	–	12.9	120	WALL	CENTERLINE OF FIXTURE AT 8'-0" ABV 0'-0" (FINISH FLOOR LINE)
W	HOWARD LIGHTING	EVSL44040MVS	INTEGRAL WITH FIXTURE		40	120	SURFACE	50" VAPOR-TIGHT LED FIXTURE PROVIDED BY THERMO-KOOL
Z1	COOPER/HALO	SLD405930WH	INTEGRAL WITH FIXTURE	–	12	120	RECESSED	LED DOWNLIGHT

NOTES:
1. LUMINAIRES UTILIZING DOUBLE-ENDED LAMPS AND CONTAIN BALLASTS THAT CAN BE SERVICED IN PLACE SHALL HAVE A DISCONNECTING MEANS EITHER INTERNAL OF EXTERNAL TO EACH LUMINAIRE PER NEC 410.130(G).
2. THE LIGHTING FIXTURE PACKAGE IS AVAILABLE THROUGH A NATIONAL ACCOUNT PROGRAM. REFER TO SHEET E4.2, SECTION 16500 FOR VENDOR INFORMATION.
3. THE FLUORESCENT BALLAST CATALOG NUMBER INDICATES OSRAM AND ALL LAMP DESIGNATIONS ARE FOR OSRAM/SYLVANIA PER A NATIONAL ACCOUNT AGREEMENT.
4. THE ASTERIK (*) BESIDE THE FIXTURE MARK IN THE ABOVE SCHEDULE INDICATES THE FIXTURE IS A NON-PROTOTYPICAL LIGHT FIXTURE PER THE CFA NATIONAL HERITAGE PROTOTYPE.

(2) ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	MTG HT AFF TO CL
	LIGHTING FIXTURES	
	SURFACE MTD FLUORESCENT LIGHTING FIXTURE	
	RECESSED FLUORESCENT LIGHTING FIXTURE	
	SURFACE MTD FLUORESCENT OR HID LIGHTING FIXTURE	
	RECESSED FLUORESCENT OR HID LIGHTING FIXTURE	
	WALL MOUNTED LIGHTING FIXTURE, SEE LIGHTING FIXTURE SCHEDULE (FLUORESCENT OR H.I.D. FIXTURE)	AS NOTED
	WALL MOUNTED EXIT SIGN, SHADING INDICATES FACES, PROVIDE WITH CHEVRON DIRECTIONAL ARROWS WHERE INDICATED ON PLANS PROVIDED WITH BATTERY PACK	6" BELOW CEILING TO TOP
	CEILING MOUNTED EXIT SIGN, SHADING INDICATES FACES, PROVIDE WITH CHEVRON DIRECTIONAL ARROWS WHERE INDICATED ON PLANS PROVIDED WITH BATTERY PACK	
	COMBO EXIT WITH TWO LAMPHEADS, SEE LIGHTING FIXTURE SCHEDULE	
	WALL MOUNTED EMERGENCY BATTERY PACK LIGHTING FIXTURE	AS NOTED
	CEILING MOUNTED EMERGENCY BATTERY PACK LIGHTING FIXTURE	
	FLUORESCENT STRIP LIGHTING FIXTURE	
	WALLWASHER STYLE RECESSED DOWNLIGHT, AIM LIGHT TOWARD WALL	
	RECESSED LIGHTING FIXTURE WITH EMERGENCY BATTERY PACK	
	PENDANT LIGHTING FIXTURE	AS NOTED
	LIGHTING TRACK WITH TRACK HEADS	
	WIRING DEVICES	
	120 VOLT DUPLEX RECEPTACLE, 20 AMPS U.O.N.	18"
	120 VOLT DUPLEX AT SPECIAL MOUNTING HEIGHT, 20 AMPS U.O.N.	44" U.O.N.
	120 VOLT QUADRAPLEX RECEPTACLE, 20 AMPS U.O.N.	18" U.O.N.
	120 VOLT QUADRAPLEX AT SPECIAL MOUNTING HEIGHT, 20 AMPS U.O.N.	44"
	120 VOLT SIMPLEX RECEPTACLE, 20 AMPS U.O.N.	18" U.O.N.
	SINGLE SPECIAL PURPOSE RECEPTACLE WITH VOLTS, AMPS, AND PHASE AS NOTED, NEMA CONFIGURATION AS REQUIRED BY EQUIPMENT	18" U.O.N.
	RECEPTACLE MOUNTED ON CORD DROP, 120 VOLT, 20 AMP, U.O.N., OUTLET BOX FLUSH WITH CEILING	
S	SINGLE POLE TOGGLE SWITCH	48"
S_2	DOUBLE POLE TOGGLE SWITCH	48"
S_3	THREE WAY TOGGLE SWITCH	48"
S_M	MANUAL MOTOR STARTER SWITCH (WP-NEMA 3R)	48"
S_P	SWITCH WITH PILOT LIGHT (ON WHEN SWITCH IS ON)	48"
S_K	KEY OPERATED SWITCH	48"
	CEILING OCCUPANCY SENSOR	
	WALL OCCUPANCY SENSOR	
M	MUD RING	

NOTE: RECEPTACLES ON A DEDICATED CIRCUIT (THAT IS, NO OTHER LOAD CONNECTED TO THE BRANCH CIRCUIT) SHALL HAVE AMPACITY RATING NOT LESS THAN THE AMPERAGE OF THE CIRCUIT BREAKER SERVING THE DEVICE.

CONDUIT/RACEWAYS	
	CONDUIT CONCEALED ABOVE CEILING OR IN WALL
	CIRCUIT HOMERUN TO PANELBOARD WITH MINIMUM 2#12, 1#12G, 3/4"C
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	CONDUIT CONCEALED IN OR BELOW SLAB (OUTSIDE + UNDERGROUND)
	FLEXIBLE LIGHT FIXTURE WHIP, SIX FOOT MAXIMUM LENGTH
MC	METAL CLAD CABLE ASSEMBLY - ONLY WHERE INDICATED ON DWGS OR SPECS

NOTES: FOR ALL CONDUITS: REFER TO PLANS FOR OTHER CONDUITS, REFER TO VENDOR DRAWINGS FOR CONDUIT AND WIRING REQUIREMENTS FOR LOW VOLTAGE SYSTEMS AND CONTROL WIRING.

MULTIPLE 1PH CIRCUITS MAY OCCUPY THE SAME CONDUIT IN ACCORDANCE WITH THE NEC, MAXIMUM OF TH-REE AND OF DIFFERENT PHASES.

LOW VOLTAGE AND CONTROL WIRING SHALL BE IN SEPARATE CONDUIT FROM POWER WIRING.

DISTRIBUTION EQUIPMENT		6'-6" *
	NON-FUSIBLE SAFETY SWITCH, SIZE AND TYPE AS NOTED ON PLANS (AMP/POLES/ENCLOSURE) OR ON SCHEDULE. NEMA 1 ENCLOSURE UNLESS NOTED WP FOR NEMA 3R ENCLOSURE.	6'-6" *
	FUSIBLE SAFETY SWITCH, SIZE AND TYPE AS NOTED ON PLANS (AMP/POLES/FUSE AMPS/ENCLOSURE) OR ON SCHEDULE . NEMA 1 ENCLOSURE UNLESS NOTED WP FOR NEMA 3R.	6'-6" *
	FLUSH MOUNTED LIGHTING PANELBOARD	6'-6" *
	SURFACE MOUNTED LIGHTING PANELBOARD	
T	TRANSFORMER, PROVIDE SECONDARY GROUNDING PER NEC	6'-6" *
ECB	ENCLOSED CIRCUIT BREAKER, SIZE AND TYPE AS NOTED (AMPS/POLES/ ENCLOSURE) NEMA 1 ENCLOSURE IF NOT NOTED, WP-NEMA 3R	
	* 6'-6" DISTANCE IS TO TOP-MOST DISCONNECTING DEVICE OR HIGHEST POSITION OF OPERATING HANDLE OF DISCONNECTING DEVICE	

SYMBOL	DESCRIPTION	MTG HT AFF TO CL
	MISCELLANEOUS SYMBOLS	
	GROUND	
M	MOTOR	
EF	EXHAUST FAN MOTOR	
J	JUNCTION BOX	
1	CONDUIT AND WIRE 'MARK' NUMBER, REFER TO CONDUCTORS AND CONDUIT SCHEDULE FOR SIZE	
101	KITCHEN EQUIPMENT 'MARK' NUMBER, REFER TO KITCHEN EQUIPMENT SCHEDULE FOR REQUIREMENTS	
1	NOTE NUMBER	
A	HOOD EXTINGUISHING ANSULL PULL STATION	
D	SMOKE DETECTORS REMOTE STATUS INDICATOR W/ 1/2" CONDUIT STUB-UP	
■	PUSH-BUTTON	
B	BELL, TYPE AS NOTED ON PLANS	
PE	PHOTO-ELECTRIC CELL	
	ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR	
AFG	ABOVE FINISHED GRADE	
AHU	AIR HANDLING UNIT	
C	CONDUIT	
CL	CENTER-LINE	
EF	EXHAUST FAN	
ETR	EXISTING TO REMAIN	
FLA	FULL LOAD AMPS	
GF/GFI	GROUND FAULT CIRCUIT INTERRUPTER	
GND/GRD	GROUND	
HT	HEIGHT	
IG	ISOLATED GRD, PROVIDE ORANGE DEVICE WHEN ADJACENT TO WIRING DEVICE	
MOCP	MAXIMUM OVER-CURRENT PROTECTION	
MUA	MAKE UP AIR UNIT	
NEC	LOCALLY ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70)	
NL	NIGHT LIGHT (ON 24 HOURS)	
OC	ON CENTER	
POS	POINT OF SALE EQUIPMENT	
RTU	ROOF TOP UNIT	
TL	TWIST-LOCK TYPE DEVICE	
TR	TAMPER-RESISTANT	
UON	UNLESS OTHERWISE NOTED	
WP	WEATHERPROOF (NEMA 3R)	
	TELEPHONE	
	TELEPHONE OUTLET	18" U.O.N.
	TELEPHONE OUTLET AT SPECIAL MOUNTING HEIGHT	60" U.O.N.
	CCTV / SECURITY SYSTEM	
C	CLOSED CIRCUIT TELEVISION CAMERA	
SK	SECURITY ALARM KEYPAD	
HU	SECURITY ALARM HOLD-UP BUTTON	
S1	SECURITY SYSTEM KEY NOTE	

NOTE: EACH TELEPHONE OUTLET (FLOOR OR WALL MOUNTED) SHALL BE PROVIDED WITH A 3/4" EMPTY CONDUIT, WITH PULL WIRE, TO ACCESSIBLE CEILING SPACE.

(3) SIGNAGE COORDINATION NOTE

THE ELECTRICAL SUBCONTRACTOR SHALL INCLUDE THE ELECTRICAL ROUGH-IN AND FINAL CONNECTIONS OF ALL SIGNAGE (BUILDING MOUNTED AND GROUND MOUNTED ON THE SITE) IN HIS SCOPE OF WORK AND UNDER HIS LOCAL CODE PERMITTING PROCESS.
PROVIDE A COPY OF THE PERMIT (WHICH SPECIFICALLY INCLUDES THE SIGNAGE) TO THE SIGN VENDOR IN ORDER TO EXPEDITE THE SIGN VENDOR'S PERMIT PROCESS.

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

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INTERPLAN LLC

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SEAL:

CORPORATE SEAL:

CHICK-FIL-A
CENTRE POINTE FSU
4926 CENTRE POINTE DR.
NORTH CHARLESTON, SC 29418

FSR#01936

BUILDING TYPE / SIZE: SD6-C-R
RELEASE: 2023-004
PRINTED FOR
CONSTRUCTION

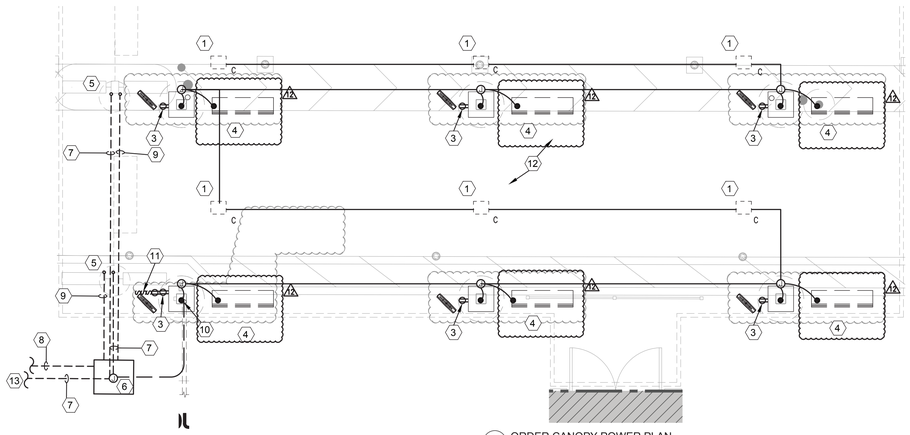
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2022.0771
DATE 03/13/23
DRAWN BY RZ
CHECKED BY MI/SN

SHEET
SCHEDULE AND DETAILS

SHEET NUMBER
E1.1

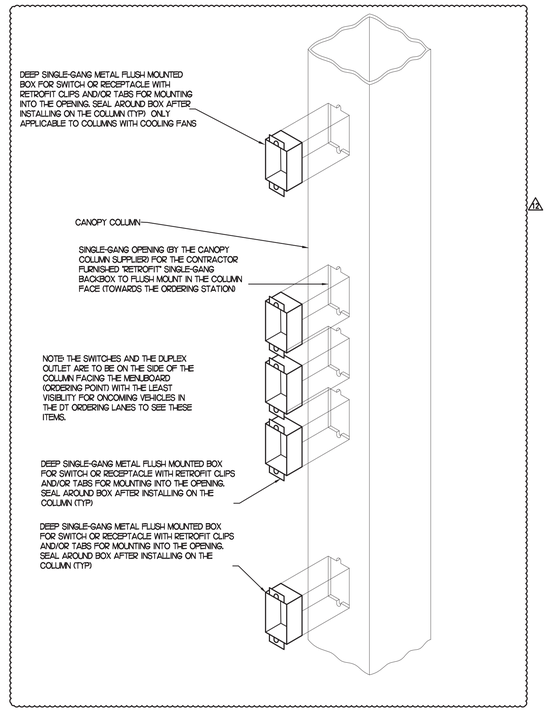


2 ORDER CANOPY POWER PLAN
SCALE: 1/4" = 1'-0"

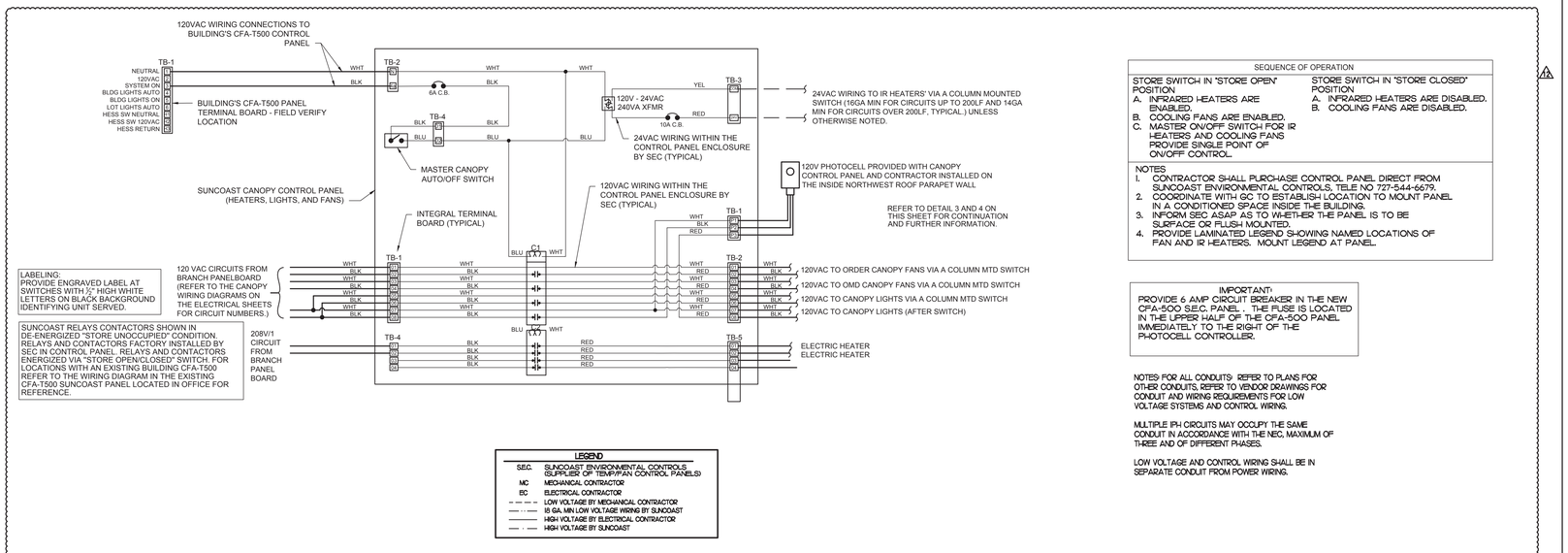
LEGEND	
- - - - - - - - - - - -	UNDERGROUND
————————	ABOVE GROUND

KEYED NOTES

1. CEILING LIGHT PROVIDED BY CANOPY SUPPLIER AND INSTALLED BY EC .
2. NOT USED.
3. AIR CIRCULATING FAN (WITH INTEGRAL ON-OFF SWITCH) PROVIDED BY OTHERS. PROVIDE A GFCI DUPLEX OUTLET (WITH IN-USE WP COVER PLATE) FLUSH MTD. IN CUT-OUT FOR FANS PLUG & CORD. LOCATE CUT-OUT AT TOP OF COLUMN ON DOWNSTREAM SIDE.
4. INFRARED GAS HEATER WITH INTEGRAL ON-OFF SWITCH PROVIDED BY OTHERS.
5. MENUBOARD PROVIDED BY OTHERS.
6. PROVIDE IN-GROUND QUASITE PULLBOX FOR MLOP DATA CABLES WITH POWER NEMA 3R JUNCTION BOX MOUNTED INSIDE THE PULLBOX.
7. 2" UNDERGROUND SCH40 PVC CONDUIT WITH POWER CONDUCTORS, SEE WIRING SCHEMATIC.
8. 2" UNDERGROUND SCH40 PVC CONDUIT FOR OWNER'S AUDIO SYSTEM / DETECTOR LOOP CABLES.
9. 1" EMPTY UNDERGROUND SCH40 PVC CONDUIT FOR OWNER'S AUDIO SYSTEM / DETECTOR LOOP CABLES.
10. INSTALL UNDERGROUND 3" SCH40 PVC CONDUIT UP INTO THE CANOPY COLUMN WITH TYPE MC CABLE (GALVANIZED STEEL WITH PVC JACKET) RUN WITHIN FOR THE 120V POWER FOR LIGHTS, 120 VOLT POWER FOR FANS, AND 24 VOLT POWER FOR THE INFRARED GAS HEATERS.
11. PROVIDE ONE DUPLEX GFCI (WITH IN-USE WP COVER PLATE), ONE DOUBLE-POLE SWITCH AND THREE 120V SINGLE-POLE SWITCHES (EACH WITH HUBBELL #DRW5155O WP COVER PLATE) MOUNTED ON THE COLUMN IN FLUSH MOUNTED METAL SINGLE GANG BOXES FOR LOCAL ON-OFF CONTROL OF THE FAN, HEATERS, AND CANOPY LIGHTS. SEE WIRING SCHEMATIC DETAIL #1 ON E1.3 AND CANOPY COLUMN DETAIL ON THIS SHEET FOR FURTHER INFORMATION. ALL SURFACE MOUNTED ITEMS AND COVER PLATE TO BE FIELD PAINTED MATTE BLACK. INSTALL BLANK COVERPLATE WHEN HEATERS ARE NOT INSTALLED AND THE THIRD SWITCH IS NOT REQUIRED.
12. ALL CONDUIT AND BOXES SHALL BE CONCEALED FROM NORMAL VIEW, UNDERGROUND, IN COLUMNS, OR ABOVE THE CANOPY (ON THE ROOF). MC CABLE (GALVANIZED STEEL WITH PVC JACKET) TO BE USED INSIDE THE COLUMNS, BUT MUST CONVERT BACK TO IMC ABOVE THE ROOF. ALL EXPOSED ELECTRICAL BOXES TO BE NEMA 3R CAST-METAL
13. PROVIDE ONE (1) #8CU EQUIPMENT GROUND TO BE BONDED TO CANOPY STRUCTURE PER MANUFACTURER'S RECOMMENDATIONS.



4 CANOPY COLUMN ISOMETRIC
NOT TO SCALE



SEQUENCE OF OPERATION	
STORE SWITCH IN "STORE OPEN" POSITION A. INFRARED HEATERS ARE ENABLED. B. COOLING FANS ARE ENABLED. C. MASTER ON/OFF SWITCH FOR IR HEATERS AND COOLING FANS PROVIDE SINGLE POINT OF ON/OFF CONTROL.	STORE SWITCH IN "STORE CLOSED" POSITION A. INFRARED HEATERS ARE DISABLED. B. COOLING FANS ARE DISABLED.

NOTES
1. CONTRACTOR SHALL PURCHASE CONTROL PANEL DIRECT FROM SUNCOAST ENVIRONMENTAL CONTROLS, TELE NO 727-544-6679.
2. COORDINATE WITH GC TO ESTABLISH LOCATION TO MOUNT PANEL IN A CONDITIONED SPACE INSIDE THE BUILDING.
3. INFORM SEC ASAP AS TO WHETHER THE PANEL IS TO BE SURFACE OR FLUSH MOUNTED.
4. PROVIDE LAMINATED LEGEND SHOWING NAMED LOCATIONS OF FAN AND IR HEATERS. MOUNT LEGEND AT PANEL.

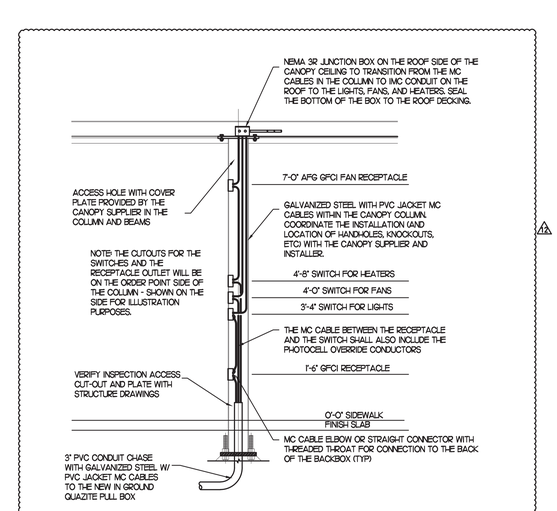
IMPORTANT:
PROVIDE 6 AMP CIRCUIT BREAKER IN THE NEW CFA-500 S.E.C. PANEL. THE FUSE IS LOCATED IN THE UPPER HALF OF THE CFA-500 PANEL IMMEDIATELY TO THE RIGHT OF THE PHOTOCELL CONTROLLER.

NOTES FOR ALL CONDUITS: REFER TO PLANS FOR OTHER CONDUITS. REFER TO VENDOR DRAWINGS FOR CONDUIT AND WIRING REQUIREMENTS FOR LOW VOLTAGE SYSTEMS AND CONTROL WIRING.

MULTIPLE 1PH CIRCUITS MAY OCCUPY THE SAME CONDUIT IN ACCORDANCE WITH THE NEC, MAXIMUM OF THREE AND OF DIFFERENT PHASES.

LOW VOLTAGE AND CONTROL WIRING SHALL BE IN SEPARATE CONDUIT FROM POWER WIRING.

2 SUNCOAST PANEL WIRING DIAGRAM DBL LANE ORDER POINT-1 COOLING FANS
1/4"= 1'-0"



3 SECTION - ORDER CANOPY COLUMN
NOT TO SCALE

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Atlanta, Georgia
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No. 34876
STACY TREVOR HINSON

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ORLANDO, FL
01060
REGISTERED ARCHITECT

SOUTH CAROLINA
CERTIFICATE OF AUTHORIZATION
INTERPLAN, LLC
No. C02393

CHICK-FIL-A
CENTRE POINTE FSU
4926 CENTRE POINTE DR.
NORTH CHARLESTON, SC 29418

FSR#01936

BUILDING TYPE / SIZE: S06-C-R
RELEASE: 2023-004
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
12	2/6/24	GAS UPDATES

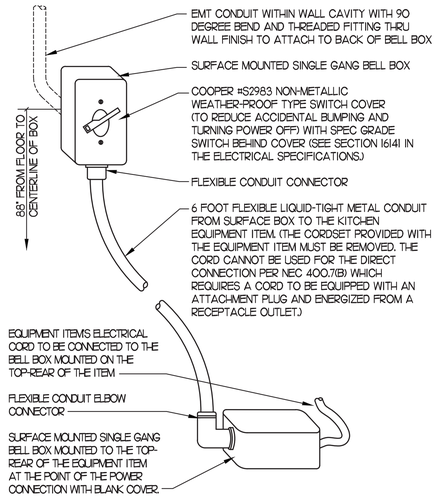
CONSULTANT PROJECT # 2022.0771
DATE 03/13/23
DRAWN BY RZ
CHECKED BY MI/SN

SHEET
CANOPY POWER PLAN AND LGT PLAN

SHEET NUMBER
E1.1A

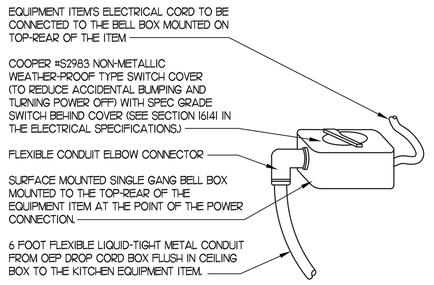
KITCHEN EQUIPMENT SCHEDULE - CHICK-FIL-A S08-V8.2 EDITION1

REQUIRES IG/GF WIRING	ITEM NO.	EQUIPMENT	MANUFACTURER	ELECTRICAL VOLT	PH	WIRES	KW	AMP	NEMA CONFIG	COOPER/ARROW HART (UON) RECEP CAT. NO.	Wire/Conduit MARK NO.	(ALL ITEMS BY CHICK-FIL-A UNLESS OTHERWISE NOTED)
	180R	ORDER REGISTER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	182	RECEIPT PRINTER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	183R	ORDER MONITOR	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	184R	IPAD	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	190R	DRIVE-THRU VIDEO MONITOR	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	300aR	MILKSHAKE BASE DISPENSER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			MOUNTED ON ITEM #300bR
	300XR	DOUBLE BARREL ICE CREAM MACHINE	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	305	TEA BREWER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	308dR	DRY & DAIRY DISPENSER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	308R	SINGLE COFFEE MAKER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	310R	DOUBLE JUICE DISPENSER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	363	DISHWASHER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	380Z	ICE MACHINE REMOTE CONDENSING UNIT	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			AIR COOLED UNIT, G.C. SHALL PLACE AND INSTALL CONDENSER ON ROOF - NOT SHOWN ON DRAWING
	400R	SGL. SECTION REACH-IN FREEZER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	420R	SGL. UNDERCOUNTER REFRIGERATOR	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	432R	REFRIGERATED WORK TABLE	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			ELECTRICIAN TO CHANGE (1) PLUG TO TWIST LOCK
	439	40" COLD RAIL	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	440R	BREADING TABLE	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			ELECTRICIAN TO CHANGE PLUG TO TWIST LOCK
	441	SALAD PREP TABLE	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			ELECTRICIAN TO CHANGE PLUG TO TWIST LOCK PLUG
	444R	THAWING CABINET - DOUBLE	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			CONVERT TO DIRECT CONNECT IF NEEDED - G.C. TO INSTALL LIQUID TIGHT FLEX. CONDUIT
	500AR	VERTICAL CONTACT TOASTER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			LOCATED ON ITEM #120c
	500BR	RADIANT TOASTER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			LOCATED ON ITEM #120c
	500R	BUN WARMER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			LOCATED ON ITEM #120c - FRANKE TABLE CIRCUIT #12 & #13
	505VL	VICTOR OVEN	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	522R	OPEN FRYER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	523R	PRESSURE FRYER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	524R	DUAL-SIDED XPRESS BROILER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	560S	FRY HOLDING STATION	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	560R	FRY HOLDING STATION	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			ON ITEM #105
	562A	HIGH DENSITY HOT HOLDING TOWER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	564A	PRODUCT HOLDING CABINET	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	565C	FOOD COOKER/ WARMER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	600R	FLOOR MIXER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	607R	LEMON JUICER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	669R	OFFICE SAFE	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	123	MIDLINE 66" TOAST TABLE	ATLANTA CUSTOM FABRICATORS									
	124	MIDLINE 120" TABLE	ATLANTA CUSTOM FABRICATORS									
	182L	LABEL PRINTER	RADIANT KITCHEN PRODUCTION SYSTEM	120	1				NEMA 6-20P			
	183	ORDER MONITOR	RADIANT KITCHEN PRODUCTION SYSTEM	120	1	2		0.125	NEMA 5-20R			
	211B	FLY SYSTEM	PESTWEST MANTIS QUALIS IN WHITE (MODEL#125-000502)	120	1	2	0.078	0.65	NEMA 5-15R		1	PROVIDED BY CFA WAREHOUSE - CLOCK STYLE RECEPTACLE REQUIRED
	211C	FLY SYSTEM	PESTWEST MANTIS SIRIUS IN WHITE (MODEL#125-000513)	120	1	2	0.078	0.65			1	
	269	ANSUL FIRE SUPPRESSION SYSTEM	HALTON HOODS	120	1	2		VERIFY	DIRECT CONNECTION			LOCATED ABOVE HOOD - BEHIND CLOSURE PANEL - REFER TO SHOP DRAWINGS - FED FROM CFA-T500 PANEL
	270	ANSUL FIRE SUPPRESSION SYSTEM	HALTON HOODS	120	1	2		VERIFY	DIRECT CONNECTION		1	LOCATED ABOVE HOOD - BEHIND CLOSURE PANEL - REFER TO SHOP DRAWINGS - FED FROM CFA-T500 PANEL
	315W	10-HEAD DRINK TOWER/ICE BIN	LANCER #85-23710-111-07 MODEL 2300	120	1	2		10.0	NEMA 5-20R		1	DUPLEX RECEPTACLE REQUIRED FOR EACH BEVERAGE TOWER
	320	TURBO CARBONATOR	LANCER #85-1923-03	115	1	2		6.2	NEMA 5-20R		1	ORDER (3) #44231, (2) #44233, (5) DR. PEPPER PUMPS, & (2) #T5274SN-01
	380X	ICE MACHINE	FOLLETT HORIZON CHEWBELET MODEL #HMF1650RBT	120	1	2		6	NEMA 5-15R		1	INSTALLED ON ITEM #380 - PROVIDE WITH 35' LINE SETS
	401	FREEZER/WORK TABLE	TRAULSEN MODEL #ULT48-ZCF-LR	120	1	2		7.3	NEMA L5-20R		1	ORDER ON 4" CASTERS WITH WORK TOP AND BACKSPLASH; PROVIDE WITH TWIST LOCK
	410	WALK-IN FREEZER	THERMOKOOL	120	1	2		3.3	DIRECT CONNECTION		1	EXTERIOR BOX DIMENSIONS - 8'-0" W X 12'-3" D X 9'-6" H - CENTER LINE OF DOOR IS 48" FROM RIGHT EXTERIOR CORNER - HINGE LEFT
	410a	WALK-IN FREEZER CONDENSER	THERMOKOOL	208	3	3		16.5	DIRECT CONNECTION			G.C. SHALL INSTALL CONDENSER ON ROOF - NOT SHOWN ON DRAWING
	410b	WALK-IN FREEZER EVAPORATOR	THERMOKOOL	208	1	2		8.8	DIRECT CONNECTION			POWER FED FROM CONDENSER
	421	DOUBLE UNDERCOUNTER REFRIGERATOR	TRAULSEN MODEL #UHT48-ZCF	120	1	2	0.48	5.7	NEMA 5-20R		1	ORDER ON 4" CASTERS
	422T	REFRIGERATOR	TRAULSEN MODEL #TE048HT	115	1	2	0.33	6.7	5-15P			
	431W	REFRIGERATOR	TRAULSEN MODEL #UHT48-ZCF-LR	115	1	2	0.756	6.3	5-15P			
	440	BREADING TABLE	RANDELL MODEL #52365WPRM-CFA	120	1	2		12.0	NEMA L5-20R		1	ORDER ON 4" CASTERS - ELECTRICIAN TO CHANGE PLUG TO TWIST LOCK
	444S	THAWING CABINET - SINGLE	TRAULSEN MODEL #RET132EWUT-FHS	120	1	2		16.0	DIRECT CONNECTION		1	HINGE LEFT - G.C. TO INSTALL LIQUID TIGHT FLEX. CONDUIT
	505V	VECTOR OVEN	ALTO-SHAAM	208	3			7.9	15-30P			
	560E	FRY WARMER	BKI MODEL #UW-17	120	1			1				
	449	WALK-IN COOLER	THERMOKOOL	120	1	2		2.4	DIRECT CONNECTION		1	EXTERIOR BOX DIMENSIONS - 10'-2" W X 10'-0" D X 9'-6" H - CENTER LINE OF DOOR IS 50" FROM RIGHT EXTERIOR CORNER - HINGE RIGHT
	449a	WALK-IN COOLER CONDENSER	THERMOKOOL	208	3	3		9.5	DIRECT CONNECTION			G.C. SHALL INSTALL CONDENSER ON ROOF - NOT SHOWN ON DRAWING
	449b	WALK-IN COOLER EVAPORATOR	THERMOKOOL	208	1	2		1.0	DIRECT CONNECTION			POWER FED FROM CONDENSER
	503T	EGG STATION	ANTUNES MODEL #ES-600R 9300657	208	1	2		12.5	NEMA L6-20R		1	ORDER ON 4" CASTERS WITH WORK TOP AND BACKSPLASH; PROVIDE WITH TWIST LOCK
	505G	RANGE/CONVECTION OVEN	LANG MODEL #9P-R30CAPF208CF	208	3	3	19.8	57.6	NEMA 15-60R		17	HINGE LEFT - FULL GRIDDLE TOP - OVEN MOUNTED ON 4" CASTERS - PROVIDE 6' CORD & ANGLE PLUG
	521	WARMING EYES WITH STAND	STAR-MAX MODEL #502FD	208	1	3	3.9	18.8	NEMA 6-30R		8	ORDER WITH CUSTOM EAGLE STAND AND BRACKET - PROVIDE WITH 6' CORD & PLUG
	522	OPEN FRYER	HENNY PENNY MODEL #CFE-410	208	3	3	22.0	61	PIN&SLEEVE			PIN&SLEEVE PROVIDED WITH EQUIPMENT AND RECEPTACLE BOX PROVIDED WITH HALTON ITEMS
	523	PRESSURE FRYER	HENNY PENNY MODEL #PFE-500	208	3	3	13.5	38.0	NEMA 15-50R		14	SUPPLIED WITH 6' SO CORD AND PLUG
	524	DUAL-SIDED XPRESS BROILER	GARLAND #CXBE12	208	3	3	16.04	47.0	NEMA 15-50R		14	REPLACE PLUG & CORD-SET IN FIELD - PART OF ROLLOUT
	550	DOUBLE WARMING DRAWER	TOASTMASTER MODEL #3B80A	120	1	2	1.00	8.3	NEMA 5-15R			LOCATED IN ITEM #120 - FRANKE TABLE CIRCUIT #2 & #3
	560	FRY HOLDING STATION	BKI MODEL #FW-15BB	120	1	2	1.84	15.4	NEMA 5-20R		1	ON ITEM #105
	563D	SANDWICH SLIDE	BKI MODEL #2TSM-2624L	120	1	2	1.09	9.13	NEMA 5-20R		1	6' CORD & PLUG - PLACED ON ITEM #105
	563S	SANDWICH SLIDE	BKI MODEL #SM-2624R	120	1	2	0.548	4.56	NEMA 5-20R		1	6' CORD & PLUG - PLACED ON ITEM #105
	564	PRODUCT HOLDING CABINET	DUKE MODEL #FWM3-24CF6-120	120	1	2	1.6	13.3	NEMA 5-15R		1	LOCATED IN ITEM #120b - FRANKE TABLE CIRCUIT #7 & #14
	580H	MULTI-USE HOLDING CABINET	DUKE MODEL #MUHC-52-120	120	1	2	2.88	24	NEMA L5-30R		7	PROVIDE WITH TWIST LOCK PLUG
	592	RETHERMALIZER	PITCO SRTE 14	208	3		8	22	15-50P			
	671	FLAT-VU MENU BOX	C3 LIGHTING SOLUTIONS SIZE B	120	1	2	0.054	0.45	NEMA 5-20R		1	VERIFY MENU BOARD LAYOUT



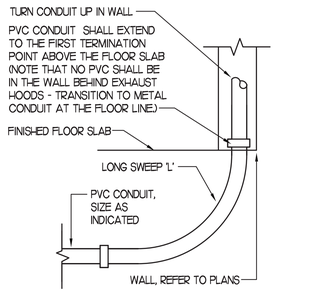
2 KITCHEN EQUIP DIRECT CONNECTION

NOT TO SCALE — WALL MOUNT CONDITION



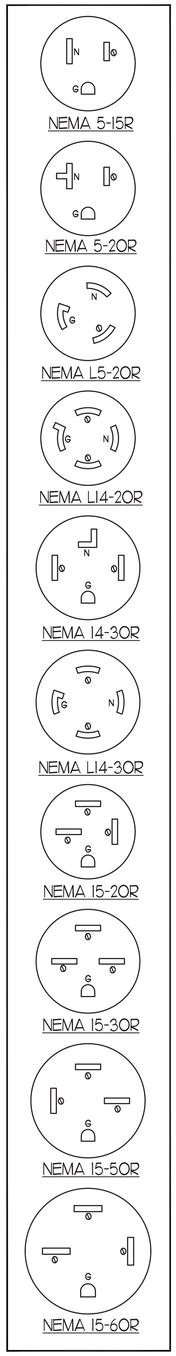
3 KITCHEN EQUIP DIRECT CONNECTION

NOT TO SCALE — DROP CORD - ISLAND MOUNT CONDITION



4 INTERIOR PVC CONDUIT DETAIL

NOT TO SCALE



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CORPORATE SEAL:

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NORTH CHARLESTON, SC 29418

FSR#01936

BUILDING TYPE / SIZE: S06-C-R
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REVISION SCHEDULE

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CONSULTANT PROJECT # 2022.0771
DATE 03/13/23
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SHEET
EQUIP SCHEDULE AND DETAILS
SHEET NUMBER

E1.2

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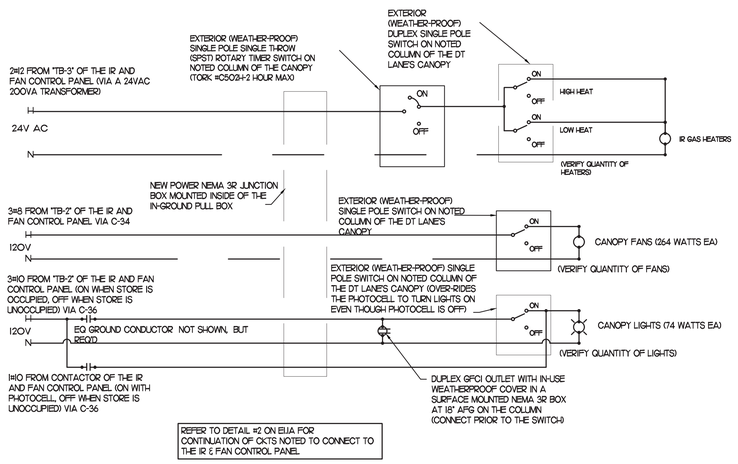
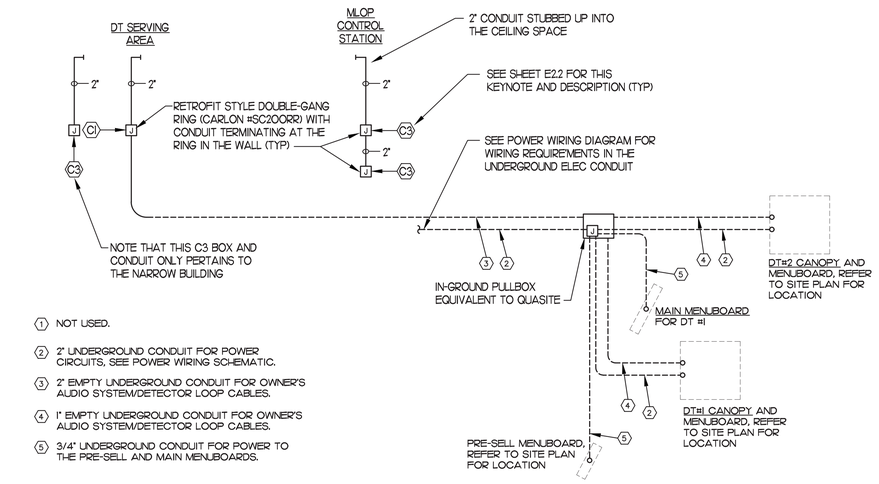


1 DUAL DT LANES CANOPY POWER WIRING SCHEMATIC - NEW MLOP

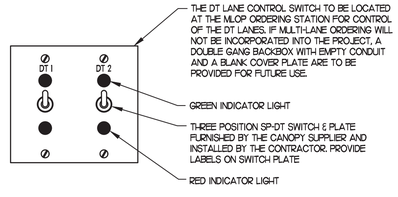
NO SCALE



1. NOT USED.
2. 2" UNDERGROUND CONDUIT FOR POWER CIRCUITS, SEE POWER WIRING SCHEMATIC.
3. 2" EMPTY UNDERGROUND CONDUIT FOR OWNER'S AUDIO SYSTEM/DETECTOR LOOP CABLES.
4. 1" EMPTY UNDERGROUND CONDUIT FOR OWNER'S AUDIO SYSTEM/DETECTOR LOOP CABLES.
5. 3/4" UNDERGROUND CONDUIT FOR POWER TO THE PRE-SELL AND MAIN MENUBOARDS.

2 MULTI-LANE DRIVE-THRU ORDER AREA CONDUIT REQUIREMENTS

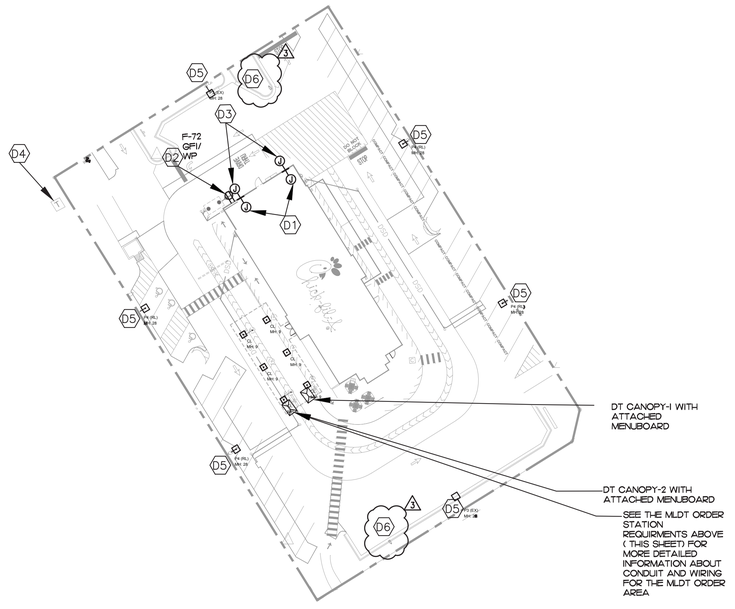
NO SCALE



3 POSITION DT LANE CONTROL STATION

NO SCALE

3 MULTI-LANE ORDER POINT (MLOP) DRIVE-THRU REQUIREMENTS



4 ELECTRICAL SITE PLAN
SCALE: 3/8"=1'-0"

D1 LOCATION OF A 360 DEGREE BUILDING MOUNTED EXTERIOR CAMERA (BY OTHERS) . PROVIDE A 3/4" CONDUIT AT 9'-4" AFF TO AN EXTERIOR WALL MOUNTED WP JUNCTION BOX WITH THE CONDUIT ABOVE THE INTERIOR CEILING AND EXTENDED TO AN ACCESSIBLE CEILING AREA FOR CAMERA CABLES BY OTHERS.

D2 PROVIDE AN EXTERIOR DUPLEX 120V , 20A RECEPTACLE AT 18" AFF WITH "IN-USE" STYLE LOCKABLE WP COVER AND CONNECT TO A GENERAL PURPOSE 120V RECEPTACLE CIRCUIT.

D3 PROVIDE A JUNCTION BOX 18" ABOVE ROOF LINE ON THE INSIDE PARAPET WALL ABOVE THE ROOF WITH A 3/4" CONDUIT STUBBED DOWN INTO AN ACCESSIBLE CEILING SPACE AREA BELOW FOR THE OWNER PROVIDED WI-FI EXTERIOR ANTENNAE.

D4 EXISTING TRANSFORMER TO REMAIN

D5 REFER TO SHEET ES1.0 FOR LIGHTING FIXTURE SCHEDULE. CONNECT TO EXISTING CIRCUIT & CONTROL SERVING SITE LIGHTING IN THIS AREA. LIGHTING LOAD ON CIRCUIT NOT TO EXCEED 1.8 KW. FIELD VERIFY NUMBER OF SPARES/SPACES PRIOR TO BID. REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO CONSTRUCTION.

D6 PROVIDE 3/4" UNDERGROUND CONDUIT TO JUNCTION BOX IN OFFICE FOR POLE MOUNTED SECURITY CAMERA. REFER TO SHEET E2.2 FOR LOCATION OF JUNCTION BOX IN OFFICE AND REQUIRED SIZE OF CONDUIT. COORDINATE EXACT CAMERA LOCATION WITH CHICK-FIL-A SECURITY SYSTEM REPRESENTATIVE PRIOR TO ROUGH-IN.

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SEAL:

STATE OF SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 34876 — STACY TREVOR HINSON

CORPORATE SEAL:

STATE OF SOUTH CAROLINA — INTERPLAN, LLC — ORLANDO, FL 01060 — REGISTERED ARCHITECT

SOUTH CAROLINA — INTERPLAN, LLC No. C02393 — CERTIFICATE OF AUTHORIZATION

CHICK-FIL-A
CENTRE POINTE FSU
4926 CENTRE POINTE DR.
NORTH CHARLESTON, SC 29418

FSR#01936

BUILDING TYPE / SIZE: S06-C-R
RELEASE: 2023-004
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CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
03	11/20/23	ARCH/ CIVIL COORDINATION

CONSULTANT PROJECT # 2022.0771
DATE 03/13/23
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CHECKED BY MI/SN

SHEET
DRIVE-THRU ORDER DETAILS
SHEET NUMBER

E1.3

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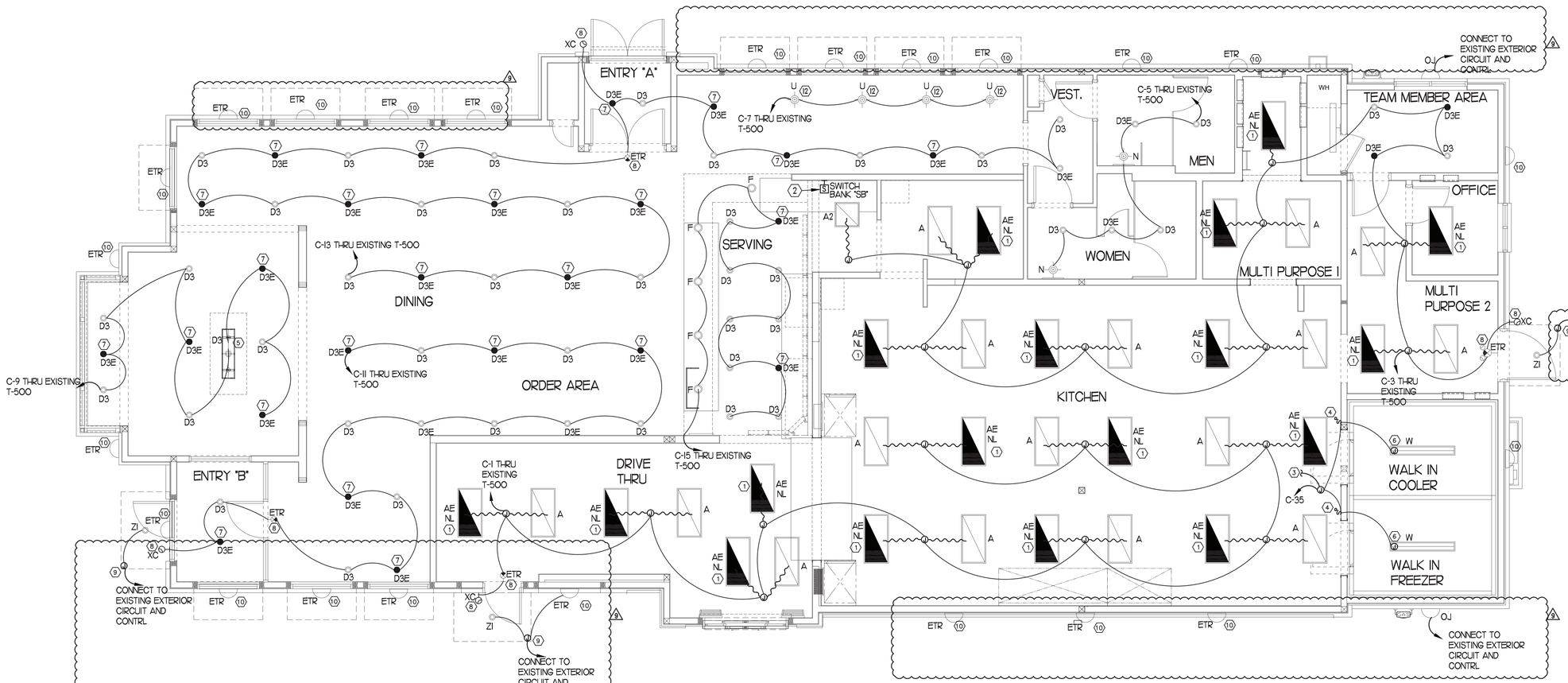
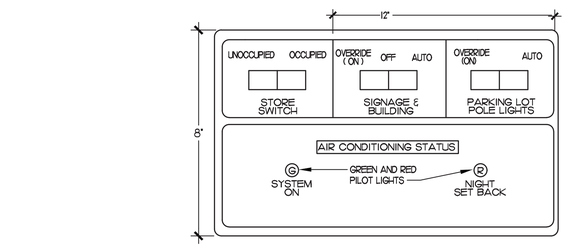


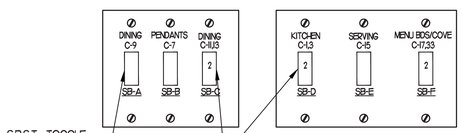
1 LIGHTING PLAN

SCALE: 1/4"=1'-0"



3 STORE OPEN-CLOSE CONTROL SWITCH UNIT

NO SCALE



NOTE: LOCATE JUNCTION BOXES IN CEILING SPACE ABOVE THE LOCATION OF THE SWITCH-BANK FOR SPLICING OF LINE, LOAD, AND SWITCHED CONDUCTORS. PROVIDE GANGED BACKBOX FOR SWITCHES AS REQUIRED AND LABEL ALL CONDUCTORS SO AS TO INDICATE THEIR USE (LINE, LOAD, SWITCH), THE LOAD SERVED, AND THE CIRCUIT NUMBER.

4 SWITCH BANK "SB" DETAIL

NO SCALE

2 KEYNOTES (APPLY TO THIS SHEET ONLY)

1. CONNECT FIXTURE SO THAT FIXTURE AND BATTERY BACK-UP ARE NOT SWITCHED. 'NL' ADJACENT TO FIXTURE INDICATES THAT FIXTURE SHALL BE ON 24 HOURS.
2. APPROXIMATE LOCATION OF SWITCH BANK 'SB'. SEE DETAIL #4 THIS SHEET FOR MORE INFORMATION.
3. TO WALK-IN DOOR FRAME HEATER AND INTERIOR LIGHTS. J-BOX TO BE ABOVE THE UNITS AND EXTEND DOWN ALONG THE FRONT AT 9'-6" AFF TO HEATERS AND LIGHT SWITCHES.
4. FOR CONTROL OF LIGHTING FIXTURE IN WALK-IN COOLER/FREEZER. FURNISHED WITH EQUIPMENT, INSTALLED BY ELECTRICAL CONTRACTOR.
5. CENTER LIGHT 'D3' OVER THE COKE FIXTURE
6. FOR CONNECTION TO LIGHTING FIXTURES IN THE WALK-IN COOLER AND WALK-IN FREEZER WHICH ARE FURNISHED WITH EQUIPMENT. CONTRACTOR SHALL ROUGH-IN AND CONNECT ALL FIXTURES AS REQUIRED BY THE EQUIPMENT MANUFACTURER. PROVIDE FLUORESCENT LAMPS TYPE AS REQUIRED BY EQUIPMENT MANUFACTURER.
7. CONNECT FIXTURE SO THAT BATTERY PACK IS NOT SWITCHED WITH LIGHTS, BUT ALL LAMPS ARE SWITCHED.
8. CONNECT FIXTURE TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS. THIS FIXTURE SHALL NOT BE SWITCHED.
9. CANOPY LIGHTING WILL BE PROVIDED BY THE CANOPY MANUFACTURER. ELECTRICAL CONTRACTOR SHALL CONNECT BRANCH CIRCUIT AND PROVIDE ROUGH-IN FOR LIGHTING. COORDINATE LOCATIONS WITH SIGNS CONTRACTOR PRIOR TO ROUGH-IN.
10. CLEAN, RELAMP AND RELENSE ANY RELOCATED / EXISTING LIGHT FIXTURES TO LIKE NEW CONDITION, RECONNECT TO EXISTING AREA LIGHTING CIRCUIT AND CONTROL.

INSTALL EMERGENCY LIGHTS IN ACCORDANCE WITH SCFC 1008. LIGHTS TO BE TESTED AT INSPECTION.

INSTALL EXIT LIGHTS IN ACCORDANCE WITH SCFC 1013. LIGHTS TO BE TESTED AT INSPECTION.

THE MEANS OF EGRESS, INCLUDING THE EXIT DISCHARGE, SHALL BE ILLUMINATED AT ALL TIMES THE BUILDING SPACE, SERVED BY THE MEANS OF EGRESS IS OCCUPIED IN ACCORDANCE WITH SCFC 1008.2.

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CORPORATE SEAL:

STATE OF SOUTH CAROLINA — INTERPLAN, LLC — ORLANDO, FL 01060 — REGISTERED ARCHITECT

SOUTH CAROLINA — INTERPLAN, LLC No. C02393 — CERTIFICATE OF AUTHORIZATION

CHICK-FIL-A
CENTRE POINTE FSU
4926 CENTRE POINTE DR.
NORTH CHARLESTON, SC 29418

FSR#01936

BUILDING TYPE / SIZE: S06-C-R
RELEASE: 2023-004
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
5	12/04/23	FIRE COMMENTS
9	1/12/24	CONSTRUCTION UPDATES

CONSULTANT PROJECT # 2022.0771
DATE 03/13/23
DRAWN BY RZ
CHECKED BY MI/SN

SHEET
LIGHTING PLAN

SHEET NUMBER
E2.1

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SECTION C16124
SUPPORTING DEVICES AND HANGERS

PART 1 - PRODUCTS

1.01 ACCEPTABLE MANUFACTURERS
A. Supporting devices and hangers shall be manufactured by RACO Fasteners, or approved equivalent.

PART 2 - EXECUTION

2.01 INSTALLATION
A. Secure conduits to within 3' of each outlet box, junction box, cabinet, fitting, etc., and at intervals not to exceed ten feet (10') and in accordance with the National Electric Code. In seismic zones, support conduits 1" and under at 6' intervals.

B. Install clamps secured to structure for feeder and other conduits routed against the structure. Use drop rods and hangers or racks to support conduits run apart from the structure.

C. Provide and install suitable angle iron, channel iron or steel metal framing with accessories to support or brace electrical equipment including safety switches, fixtures, panelboards, etc.

D. Use of chains, perforated iron, baling wire, or tie wire for supporting conduit runs is not permitted.

E. For support of low voltage wiring not required to be in conduit, bundle cables together in a neat manner using approved nylon tie wraps. Bundled cables shall be supported with "J" hooks on telephone type bridle rings, a minimum of 6 feet on centers. Clearly identify all differing types of cables being run and tag with tape tags regarding telephone, POS System, music/communication, security, etc. for various system utilizing said cable. Identification tape shall be provided at minimum intervals of 25 feet on center and within each building space.

F. Provide a system of supporting devices and hangers to insure secure support or bracing for conduit, electrical equipment, including safety switches, fixtures, panelboards, outlet boxes, junction boxes, cabinets, etc.

SECTION C16140
WIRING DEVICES AND PLATES

PART 1 - PRODUCTS

1.01 WALL SWITCHES
a. Shall be purchased from the National Accounts Vendor indicated on the plans.

B. Ratings: 20 amps, 120/277 volts a.c. or as identified on drawings.

C. Devices: (Cooper/Arrow Hart catalog numbers are listed unless noted otherwise):
1.Single pole toggle switches:
20 AMP device - #AH1221-GY (Kitchen) or #AH1221-B (Dining)
20 AMP Pilot lights illuminated with load on - #AH1221-PL
2.Double pole toggle switches:
20 AMP device - #AH1222-GY (Kitchen) or #AH1222-B (Dining)

1.02 RECEPTACLES
A. Shall be purchased from the National Accounts Vendor indicated on the plans.

B. Devices: (Cooper/Arrow Hart catalog numbers are listed unless otherwise noted):
1. Specification grade devices (grey device color in Kitchen, brown device color in Dining, and orange for IG type) to be 20 amp, 125 volts, a.c. receptacles:
Single (simplex) device: #1877-GY (Kitchen) or #1877-B (Dining)
Duplex device: #CR20-GY (Kitchen) of #CR20-B (Dining)
Tamper resistant duplex device: #TR8200-B (Dining)
GF (ground-fault circuit interrupter) duplex device: #VGF20-GY (Kitchen) or #VGF20-B (Dining)
IG (isolated ground) duplex device: #IG5362-RN (orange face)

1.03 SPECIAL DEVICES
A. Manual motor starter switch: SQ. D Class 2510, Type F, for use on motors up to 3/4 horsepower. Provide NEMA 1 enclosure in dry locations; provide NEMA 3R enclosure in wet or exterior locations.

1.04 WALL PLATES
A. Provide Cooper/Arrow Hart, or approved equal, smooth satin stainless steel 302-SS series for switches and receptacles in the Kitchen areas. All other areas shall be brown Nylon plastic.

B. Provide blank plates on all outlet boxes for future outlets, or outlets without devices. Plate style shall match device plates.

C. Provide non-metallic weatherproof covers for duplex GF receptacles located outside or in wet locations that feature 'while-in-use' cover equivalent to Arrow Hart #WIU-1.

D. Where devices installed in exposed boxes or conduit fittings; provide properly designed plates and covers equal to Arrow Hart RS-Series exposed work covers.

E. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted boxes.

PART 2 - EXECUTION

2.01 INSTALLATION
A. Mounting
1. Mount switches and receptacles at height above finished floor as indicated on plans, and legend.
2. Mount switches on strike side of door maximum 8" from door frame. Outlet box for switch shall be located clear of door frame. Coordinate with architectural plans prior to rough-in.
3. Install switches with off position down.
4. Do not use the feed thru feature for the GF Type receptacle, unless required by the plans.
5. Use jumbo sized plates for outlets installed in masonry walls.
6. Each receptacle shall be provided with a #12 green grounding jumper between the ground terminal of the receptacle and the outlet box.
7. The grounding conductor to each receptacle shall be installed such that the removal of the device will not interfere with the continuity of the ground.

B. Testing
1. Test each switch and verify proper operation with energized circuit.
2. Test each receptacle for proper polarity on energized circuit.
3. Test each GF receptacle with a GF receptacle tester and verify circuit is opened by GF device at milli-ampere ranges established by the manufacturer.

SECTION C16440
PANELBOARDS

PART 1 - PRODUCTS

1.01 MANUFACTURER (VIA CHICK-FIL-A NATIONAL ACCOUNTS PROGRAM)
A. Siemens (West, Midwest and Southwest Regions) from Suncoast Environmental Controls (SEC) , Scott DYER (877) 544-6679.
B. Square -D (Northeast, Atlantic, and Southeast Regions) :from Accu-serv, Bob Harpring (502)961-0096

1.02 PANELBOARD FEATURES
A. Panelboards shall have a minimum symmetrical interrupting rating to meet or exceed the available symmetrical interrupting fault current at the device intended to interrupt current.

B. Bus bars shall be copper or tin plated aluminum.

C. Provide factory-installed copper ground bus in each panelboard with lugs or connectors on bar.

D. Provide electrically isolated, factory installed, neutral bus in each 3 phase, 4 wire or 1 phase 3 wire panelboard.

E. In addition to the ground bus required by paragraph 1.02D (above), provide factory installed, electrically isolated, copper ground bus in each panelboard serving isolated ground receptacles.

F. Main lugs and main circuit breaker lugs shall be UL Listed for use with both aluminum and copper conductors.

G. Provide panelboard doors with chrome-plated locks and catches. All locks shall be keyed alike. Provide two keys for each lock.

H. Provide thermal-magnetic circuit breakers which are rated for 40 degrees C ambient temperature. Breakers shall be quick-make, quick-break type trip with trip indication shown by handle position other than on or off. Multi-pole breakers shall have a common trip handle. Tandem type circuit breakers shall not be permitted.

I. Provide typed directory card with clear holder for each panelboard.

PART 2 - EXECUTION

2.01 INSTALLATION
A. Panelboards shall be mounted at height above finished floor such that the height of the top-most breaker in the panel is not more than 6-1/2 feet above finished floor in its highest position per the NEC.

B. Where multiple panelboards are installed on walls in common areas of buildings, the panelboards shall be installed with the top of all panelboards at the same height.

C. Provide blank filler plates over all unused spaces in panelboards.

D. A typed directory card shall indicate devices being served and the space name where the device is located.

E. Provide minimum of one (1) 3/4" empty spare conduit for every 3 poles of spare breaker or space in the panelboard. Stub conduit to nearest accessible ceiling space. Label conduit as spare at panelboard and termination point.

F. Non-isolated ground bars shall be grounded to panelboard can and main service entrance ground bus with a code sized grounding conductor installed in the same conduit as the phase and neutral conductors.

G. Circuits using a common neutral shall be installed in accordance with the National Electrical Code.

H. Inspect each panelboard for proper installation, physical damage, tightness and installation of overcurrent devices. Verify proper color coding of conductors. Correct or repair all items found in inspection.

I. Neutral wires, ground wires, and isolated ground wires shall be connected to the appropriate panel bus bar. Do not mix bus wire connections.

SECTION C16441
ENCLOSED SWITCHES

PART 1 - PRODUCTS

1.01 MANUFACTURERS
A. Square D.
B. General Electric.
C. Siemens

1.02 ENCLOSED SWITCHES
A. Nonfusible switch assemblies: NEMA KS 1, General Duty Type for 208 volt load interrupter enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in on position. Handle lockable in off position. Provide equipment ground lug in each switch.

B. Enclosures: NEMA KS 1.
1. Interior dry locations: Type 1.
2. Exterior locations: Type 3R.

SECTION C16442
UTILITY SERVICE ENTRANCE AND DISTRIBUTION SYSTEM

PART 1 - GENERAL

1.01 SYSTEM DESCRIPTION
A. The underground electrical system service characteristics shall be 208Y/120 volts, Three Phase, Four Wire service and shall extend from utility company transformer secondary.

B. Metering of electrical usage shall be located as required by local electrical utility company. Coordinate requirements with local utility company.

C. Distribution system originates at secondary of utility transformer and includes service entrance conduit and conductors, distribution equipment, lighting panelboards, utilization equipment, overcurrent devices, disconnecting means, controls, branch and feeder circuits, etc.

PART 2 - PRODUCTS

2.01 MATERIALS
A. Furnish service entrance conduit, cable, and miscellaneous hardware as required by plans and specifications for electrical service entrance and system grounding at main electrical service.

PART 3 - EXECUTION

3.01 EXAMINATION AND PREPARATION
A. Coordinate exact locations of electrical service utility transformer, metering equipment, service lateral, etc. prior to commencement of installation. Contact engineer with conflicts prior to bid.

B. Ensure pad mounted transformer is not located within roadway or sidewalk.

C. Coordinate with local electrical utility for all utility company requirements and provide for the following items and any others required by the utility:
1. Concrete pad for utility transformer with required dimensions and details.
2. Primary underground conduit, excavation, and backfill requirements.
3. Pay for all fees associated with establishment of electrical service.
4. Furnish list of loads to the electrical utility company serving the facility.
5. Verify that utility company clearances are provided on all sides of utility equipment.

D. Ensure proper access to utility equipment is maintained.

E. Provide pull rope, excavation in accordance with electrical utility company requirements, backfill and concrete envelope for primary in accordance with electrical utility company requirements. Turn conduits up riser pole as required. cap spare conduits 12 inches above grade with plumbers pipe cap.

F. Provide secondary lugs on utility transformer and perform drilling and installation of lugs in accordance with utility requirements. Type of lugs shall be in accordance with electrical utility company requirements. Connect service conductor to transformer secondary lugs as directed by electrical utility.

SECTION C16500
LIGHTING FIXTURES (LUMINAIRES)

PART 1 - GENERAL

1.01 ACCEPTABLE MANUFACTURERS AND VENDORS
A. Lighting fixtures indicated on lighting fixture schedule are to be purchased from the National Account Vendor for the region of the project (verify region designation with Owner's Representative):

1. Accu-Serv Lighting - North region and Southeast region. Contact at Accu-Serv: Bob Harpring at 877-707-7378, fax - 502-961-0357, email - bharpring@accu-serv.com

2. Villa Lighting - Central region, Southwest region, and West region. Contact at Villa Lighting: Dave Christanell at 800-325-0963, fax-314-531-8720, email - davec@villalighting.com

B. Ballasts to be electronic ballast provided with lighting fixture by the manufacturer.

C. Lamps to be Osram-Sylvania and will typically be provided with the luminaire by the lighting manufacturer.

1.02 FIXTURE REQUIREMENTS
A. Provide regulating, HPF ballasts in all HID lighting fixtures. HID lamp types shall be as indicated on the drawings.

B. Recessed fluorescent lighting fixture ballasts shall be provided with integral thermal protection.

C. Provide energy-saving Instant or Rapid Start lamps for all fluorescent fixtures.

D. All lamps and ballasts shall meet or exceed the requirements of the National Energy Policy Act of 1992 and any other applicable Codes or Criteria.

E. All components of recessed fixtures shall be accessible without disturbing fixture in or on ceiling.

F. Energy saving ballasts and energy saving lamps provided shall be compatable for operation together.

G. Exterior fixtures and poles shall be suitable for exterior use, shall be UL Listed, and shall be a standard design for exterior application.

H. Exterior poles for fixtures with luminaires installed shall be designed for maximum constant velocity wind load with luminaires installed, applicable to the geographic area.

1.03 CONTROLS
A. Lighting contactors shall be Square-D, General Electric, Cutler-Hammer or Siemens of types and quantity shown on drawings, except those furnished with the switchgear as part of the National Account Program by Suncoast Environmental Controls (SEC).

1.04 EMERGENCY LIGHTING UNITS
A. BAtteries shall supply emergency power for lighting with minimum operating time of 1-1/2 hours.

B. Emergency lighting shall be automatically operational upon normal utility power failure.

PART 3 - EXECUTION

3.01 INSTALLATION
A. Lighting fixtures shall be structurally supported. Fluorescent fixtures mounted in suspended ceilings shall be supported by and attached to ceiling system as required by NEC Article 410. In addition, fluorescent troffers shall be supported at two opposite corners to building structure.

B. Recessed fixtures in dropped ceiling areas shall be connected to power source using flexible conduit. Flexible conduit shall contain a separate insulated green No. 12 copper ground wire. Flexible conduit shall be connected to junction box and fixture. Green ground wire shall provide ground continuity between conduit system and fixture. Grounding conductors shall be permanently and mechanically connected between fixture and conduit system so as to be electrically continuous.

C. Fixtures surface mounted on exposed tee bar ceilings shall use grip clamps on tee bars to support fixtures.

D. Wire shall be continuous from splice in outlet box of building wiring system to lamp socket or ballast terminals.

E. Maintain the integrity of enclosures on enclosed and gasketed fixtures. Minimize the number of enclosure penetrations and make such penetrations water and dust tight with appropriate gaskets and fittings.

F. Concrete bases shall be provided for all exterior ground mounted or pole mounted fixtures.

G. Install accessories furnished with each fixture.

H. Wiring from pole bases to pole mounted luminaire shall be No. 12 with fuse protection provided by a 30 amp, 600 volt waterproof fuseholder with Bussman 'Limitron' fuse of ampere rating 3 times the load current.

I. Surface and recessed fixtures on or in plastered or drywall ceilings shall be supported by support channels. Support channels shall span across main support channels and shall not depend upon ceilings for support.

3.02 FIELD QUALITY CONTROL
A. Relamp fixtures that have failed lamps at substantial completion.

SECTION C16596
SPECIAL SYSTEMS

PART 1 - GENERAL

1.01 WORK INCLUDED
A. Furnish and install raceway system for music/communications security, CCTV, POS, and other owner-furnished systems, consisting of empty conduits, junction boxes, outlet boxes, and device plates, etc., as specified and shown on owner selected vendor wiring schematics. Cable, equipment, and installation of the interior system will be provided by the owner's system vendor.

B. Interior system equipment will be furnished by Owner's Vendor.

C. Install special backboxes furnished by Owner's Vendor. Coordinate with the Vendor for the installation. Coordinate with the Vendor if backboxes are to be contractor provided in order to provide and install the appropriate item for the Vendor.

PART 2 - PRODUCTS

2.01 MATERIALS
A. Provide 4-11/16" square boxes, with plaster rings. Provide device plates for system outlets as specified in Section 16141. Provide separate conduit to nearest accessible ceiling space from each outlet.

B. Cable shall be in conduit where installed in walls or inaccessible ceilings.

C. Minimum conduit size shall be 3/4" .

PART 3 - EXECUTION

3.01 INSTALLATION
A. Furnish and install conduits, junction boxes, outlet boxes, and plates.

B. Provide one #10 equivalent nylon pull wire in each system empty conduit.

C. Provide a complete raceway system in accordance with interior system vendor requirements. Interior system vendor shall review the drawings. Contractor shall provide for any additional or varying requirements.

D. Final connections and testing of systems will be provided by the system vendor. Contractor shall contact the owner's vendor and schedule the work so as to complete system installation and testing prior to occupancy of the facility.

E. Terminate each conduit stub-up or termination with nylon insulated bushing.

SECTION C16597
TELEPHONE SERVICE

PART 1 - GENERAL

1.01 WORK INCLUDED
A. Furnish and install telephone system consisting of empty conduits, junction boxes, outlet boxes, device plates, etc., as specified and shown on owner selected vendor wiring schematics. Cable, equipment, and installation of the interior system will be provided by the owner's system vendor.

B. Provide underground PVC, Schedule 40, service conduit as required by plans.

C. Telephone Utility Company will provide service entrance cable.

D. Interior telephone system will be furnished by owner's vendor.

E. Special backboxes (unless otherwise noted) and faceplates will be furnished by the owner's vendor.

PART 2 - PRODUCTS

2.01 MATERIALS
A. Provide 4-11/16" square boxes, with plaster rings. Provide device plates for telephone outlets to match those specified in wiring device section. Provide separate conduit to nearest accessible ceiling space from each outlet.

B. Minimum conduit size shall be 3/4".

C. Provide lightning arrester for telephone service entrance at main telephone backboard in accordance with UL96A paragraph 11.2 and NFPA 780.

D. Cable shall be in conduit where installed in walls or above inaccessible ceiling spaces.

PART 3 - EXECUTION

3.01 INSTALLATION
A. Provide one #10 equivalent nylon pull wire in each empty telephone conduit.

B. Provide trenching, backfilling, etc., for installation of service entrance conduit in accordance with other divisions, plans, and telephone utility requirements. Provide pull wire in empty conduit.

C. Coordinate with the local utility for point of service and type of service required. Pay for any utility company charges and fees for establishment of service.

D. Provide a complete raceway system in accordance with telephone utility company and interior system vendor/utility requirements. Telephone utility company and interior system vendor shall review the drawings. Contractor shall provide for any additional or varying requirements.

E. Terminate each conduit stub-up or termination with nylon insulated bushings.

F. Final connections and testing of system will be provided by the system vendor. Contractor shall contact the owner and vendor and schedule the work.

CLOSE OUT DOCUMENT REQUIREMENTS

Provide the following to the building owner upon completion of construction:

1. Submittal data stating equipment rating and selected options for each piece of equipment requiring maintenance.

2. Operation manuals and maintenance manuals for each piece of equipment requiring maintenance. Required routine maintenance actions shall be clearly identified.

3. Operating and maintenance manuals will be provided to owner by electrical contractor in accordance to section C405.6.4.2 of FBCEC.

4. A complete narrative of how each system is intended to operate.

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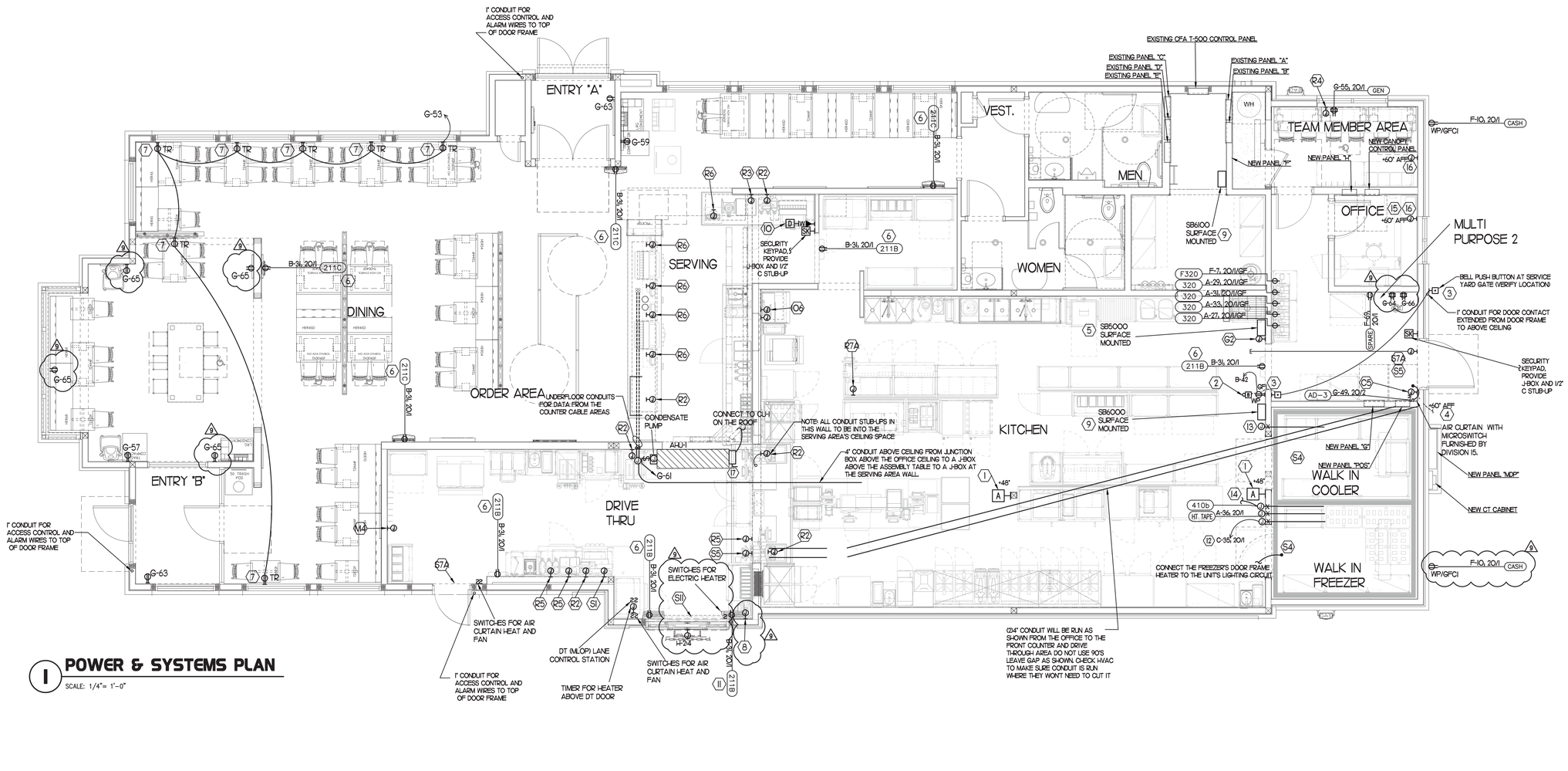
SHEET
ELECTRICAL
SPECIFICATIONS

SHEET NUMBER
E4.2



1 POWER & SYSTEMS PLAN

SCALE: 1/4"= 1'-0"

2 KEY NOTES - POWER:

1. PROVIDE 2 GANG DEEP BOX (2" MIN) FOR ANSUL PULL STATION. EXTEND 1/2" CONDUIT FROM BOX, STUBBED ABOVE CEILING.
2. PROVIDE EDWARDS #340-4N5 VIBRATING 4" DIAMETER BELL. BELL SHALL BE RATED AT 120 VOLTS.
3. PROVIDE 120 VOLT WEATHERPROOF DOORBELL PUSH-BUTTON AT DOOR. PUSH-BUTTON SHALL BE FLUSH MOUNTED. PROVIDE DORTRONICS SYSTEMS #W5286-P25 CLEAR ANODIZED ALUMINUM PUSH-BUTTON WITH SINGLE GANG SWITCH-PLATE.
4. ONE 3" ISP SERVICE CONDUIT. EXTEND WITH PULL STRING FROM THE J-BOX TO THE UTILITY SOURCE
5. SB5000 PANEL ENCLOSURE WITH 3 LITTLE FUSE SHOCK GFCI PROTECTION DEVICES #SB5060 RATED AT 60AMPS .
6. PROVIDE DUPLEX RECEPTACLE (SEE ELEVATIONS FOR MTG HT) IN AN ARLINGTON #DVER2W DOUBLE- GANG RECESSED BOX FOR THE FLY SYSTEM ITEMS. DO NOT CUT THE CORDSET FURNISHED WITH THE UNIT, BUT COIL THE CORD ON THE BACK OF THE UNIT AND TUCK INTO THE BACKBOX
7. TAMPER RESISTANT (TR) DUPLEX RECEPTACLE WITH USB CHARGER (IN THE DINING AREAS) SHALL BE COOPER/ARROW HART #TR7746-B (BROWN) WITH MATCHING COLOR 'DECOR' STYLE PLATE.
8. JUNCTION BOX WITH 3/4" CONDUIT STUB-UP INTO THE CEILING SPACE FOR OWNER'S INTERCOM FOR THE MLOP ORDERING CONTROL STATION. PROVIDE BLANK PLATE IF BLDG IS SINGLE LANE DRIVE-THRU.
9. SB6000 PANEL ENCLOSURE WITH 3 LITTLE FUSE SHOCK GFCI PROTECTION DEVICES AND SB6100 PANEL ENCLOSURE SHOCK BLOCK GFCI PROTECTION DEVICE. ENSURE CONDUITS ARE INSTALLED FOR LINE AND LOAD WIRES TO BE INSTALLED WITH PROPER WIRE BENDING SPACE. LABEL EACH SHOCK BLOCK WITH PANEL AND CIRCUIT NUMBER IT CONTROLS.
10. PROVIDE 2 GANG DEEP BOX (2" MIN) FOR EACH DUCT SMOKE DETECTOR INDICATED ON THE MECHANICAL DRAWINGS FOR INSTALLATION OF DUCT DETECTOR REMOTE ANNUNCIATORS BY MECHANICAL. THE DUCT SMOKE REMOTE ANNUNCIATORS ARE PROVIDED TO THE ELECTRICIAN WITH THE SUNCOAST ELECTRONICS PACKAGE OF GEAR AND CONTROLS. EXTEND 1/2" CONDUIT FROM EACH BOX AND STUB ABOVE CEILING.
11. NOT USED
12. FACTORY PROVIDED JUNCTION BOX FOR WALK-IN FREEZER PRESSURE RELIEF . ELECTRICAL CONTRACTOR TO PROVIDE FIELD WIRING FROM UNSWITCHED LEG OF LIGHTING CIRCUIT SERVING WALK-IN FREEZER FIXTURES RO JUNCTION BOX
13. CONNECT EVAPORATOR UNIT IN COOLER TO COOLER CONDENSING UNIT CONTROLS LOCATED ON ROOF. SEE SHEET E2.3.
14. CONNECT EVAPORATOR UNIT IN FREEZER TO FREEZER CONDENSING UNIT CONTROLS LOCATED ON ROOF. SEE SHEET E2.3.
15. PROVIDE CO2 CENTRAL CONTROL UNIT MOUNTED AT 60" AFF. ELECTRICAL CONTRACTOR TO PROVIDE SINGLE-GANG J-BOX WITH 1/2" CONDUIT EXTENDED TO ABOVE ACCESSIBLE CEILING SPACE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND PER LOCAL CODE. FIELD VERIFY EXACT LOCATION AND ALL REQUIREMENTS PRIOR TO BID AND CONSTRUCTION.
16. PROVIDE CO2 ANNUNCIATOR MOUNTED AT 60" AFF. ELECTRICAL CONTRACTOR TO PROVIDE SINGLE-GANG J-BOX WITH 1/2" CONDUIT EXTENDED TO ABOVE ACCESSIBLE CEILING SPACE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND PER LOCAL CODE. FIELD VERIFY EXACT LOCATION AND ALL REQUIREMENTS PRIOR TO BID AND CONSTRUCTION.
17. PROVIDE 2P30A NEMA 1 FUSED DISCONNECT SWITCH FOR AIR HANDLER UNIT. CONFIRM FUSE PER MANUFACTURER'S NAMEPLATE. CONNECT TO CIRCUIT AS SHOWN.

3 KEY NOTES - SECURITY:

S1. PROVIDE SINGLE GANG JUNCTION BOX AND STAINLESS STEEL COVER PLATE WITH 7/8" HOLE IN CENTER. EXTEND 1" E.C. UP IN WALL TO ABOVE ACCESSIBLE CEILING.

S2. PROVIDE 4"W X 4"H X 3"D FLUSH JUNCTION BOX WITH-OUT COVERPLATE. EXTEND 2" RIGID CONDUIT UP TO ABOVE ACCESSIBLE OFFICE CEILING AREA. PROVIDE BUSHING ON CONDUIT.

S3. PROVIDE 4"W X 4"H X 3" D JUNCTION BOX WITH-OUT COVERPLATE. EXTEND 2" RIGID E.C. UP TO ABOVE ACCESSIBLE OFFICE CEILING AREA. PROVIDE SINGLE-GANG J-BOX ADJACENT WITH 2" RIGID E.C. DOWN THROUGH SLAB AND BELOW GRADE TO REMOTE CAMERA LOCATION. USE ONLY LONG SWEEPS, 3 FEET PER 90 DEGREES. SEE ELECTRICAL SITE PLAN FOR CONTINUATION.

S4. PROVIDE TWO GANG WEATHERPROOF JUNCTION BOX AND STAINLESS STEEL PLATE WITH 7/8" HOLE IN CENTER FOR PANIC BUTTON. MOUNT AT APPROXIMATELY 48" A.F.F., EXTEND 1/2" RIGID CONDUIT OVER TO THE WALL AND THEN UP TO ABOVE ACCESSIBLE CEILING. SEAL PENETRATION AT WIC/WIF CEILING.

S5. PROVIDE SINGLE GANG BOX WITH-OUT COVER PLATE. EXTEND 1/2" CONDUIT UP IN WALL TO ABOVE ACCESSIBLE CEILING AND TURN TOWARD SERVING AREA SIDE OF WALL.

S6. PROVIDE SINGLE GANG JUNCTION BOX ON INSIDE FACE OF PARAPET WALL APPROX. 12" BELOW TOP OF PARAPET WALL. EXTEND 1/2" CONDUIT DOWN TO ABOVE ACCESSIBLE OFFICE CEILING.

S7A. EXTEND 3/4" RIGID CONDUIT FROM TOP OF STRIKE-SIDE DOOR FRAME CHANNEL TO ABOVE ACCESSIBLE CEILING.

S8. EXTEND 1/2" RIGID CONDUIT FROM A POINT 3" WITHIN EITHER HINGE-SIDE DOOR VERTICAL FRAME MULLION TO ABOVE ACCESSIBLE CEILING.

S9. PROVIDE SINGLE GANG JUNCTION BOX WITH-OUT COVERPLATE. EXTEND 1/2" CONDUIT UP IN WALL TO ABOVE ACCESSIBLE CEILING AND TURN TOWARD SERVING AREA SIDE OF WALL.

S10. PROVIDE SINGLE GANG, WEATHER-PROOF JUNCTION BOX WITH STAINLESS STEEL COVER PLATE MOUNTED 18" FROM THE CORNER OF THE SERVICE YARD AND JUST BELOW ROOF DECK MOUNTING BRACKETS. ROUTE 1" EMT CONDUIT FROM THE BOX SURFACE MOUNTED JUST BELOW THE ROOF DECK MOUNTING BRACKETS AND TERMINATE THE CONDUIT AT S12.

S11. EXTEND 1/2" RIGID CONDUIT FROM A POINT 3" WITHIN STRIKE-SIDE WINDOW FRAME MULLION TO ABOVE ACCESSIBLE CEILING.

S12. PROVIDE SINGLE GANG, WEATHER-PROOF JUNCTION BOX WITH STAINLESS STEEL COVER PLATE MOUNTED JUST ABOVE THE STRIKE SIDE OF OUTSIDE DOOR ON INSIDE OF SERVICE YARD. ROUTE 1" EMT CONDUIT SURFACE MOUNTED FROM BOX JUST BELOW THE ROOF DECK MOUNTING BRACKETS. TERMINATE CONDUIT IN THE ACCESSIBLE CEILING SPACE INSIDE THE BUILDING.

S13. NOT USED

S14. PROVIDE JUNCTION BOX ON THE LATCH SIDE OF THE ROOF ACCESS HATCH WITH 1/2" C ABOVE THE CLG TO THE OFFICE CEILING SPACE FOR A DOOR CONTACT.

4 GENERAL NOTES:

1. ALL SECURITY, POS, MUSIC, COMMUNICATIONS, AND POWER ROUGH-IN SHALL BE INSTALLED DURING THE FRAMING/ROUGH-IN PHASE OF CONSTRUCTION.
2. REFER TO KITCHEN EQUIPMENT SHEETS FOR EQUIPMENT ELECTRICAL ROUGH-IN ELEVATIONS ABOVE FINISHED FLOOR.
3. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRING.
4. PROVIDE INSULATED BUSHINGS AT TERMINATION POINTS OF ALL CONDUITS FOR LOW VOLTAGE WIRING.
5. THE ELECTRICAL INSTALLER SHALL COORDINATE THE ROUTING OF ALL CONDUIT IN THE BUILDING WITH OTHER TRADES (SPECIFICALLY THE DUCTWORK INSTALLATION) TO AVOID CONFLICTS OF SPACE REQUIREMENTS IN WALLS AND CEILING SPACES.

5 KEY NOTES - COMMUNICATIONS:

C1. PROVIDE DOUBLE-GANG RING (CARLON #SC2OORR) WITH STAINLESS STEEL COVER PLATE AND HOLE IN PLATE FOR AUDIO WITH 2" CONDUIT UNDERGROUND TO THE DT DUAL-LANE (MLOP) ORDERING AREA AND A 2" CONDUIT STUBBED UP INTO THE CEILING SPACE.

C2. PROVIDE JUNCTION BOX, LESS COVER PLATE, AND EXTEND 3/4" E.C. UP IN WALL TO ABOVE CEILING FOR INSTALLATION OF WIRELESS COMMUNICATION CONTROL UNIT.

C3. PROVIDE TWO DOUBLE-GANG RINGS (CARLON #SC2OORR) WITH STAINLESS STEEL COVER PLATE AND HOLE IN PLATE FOR AUDIO WITH 2" CONDUIT STUBBED UP INTO THE CEILING SPACE. ONE RINF SHALL BE ABOVE THE COUNTER AND ONE BELOW WITH A 2" CONDUIT BETWEEN THE RINGS.

C4. PROVIDE SINGLE-GANG JUNCTION BOX WITH A 1" EMPTY CONDUIT STUBBED UP INTO THE ACCESSIBLE CEILING SPACE FOR OWNER'S VOIP PHONE JACK AND CABLES.

C5. PROVIDE TWO 6'-1-X6"WX4'D J-BOX (ONE FOR TELEPHONE AND ONE FOR ISP) AT 6'-6" AFF AND EXTEND A 2" CONDUIT WITH PULL STRING IN THE WALL FROM EACH J-BOX INTO THE ACCESSIBLE CEILING SPACE.
PROVIDE A 36"X36"X¾" PLYWOOD BACKBOARD ON THE WALL ABOVE THE J-BOXES (AT THE CEILING) FOR USE BY THE ISP. PROVIDE A COPPER GROUND BAR AT THE BOTTOM OF THE BACKBOARD WITH #6 AWG INSULATED CU GROUNDING CONDUCTOR IN A 3/4"C FROM THE GROUND BAR TO THE BUILDING'S ELECTRICAL SERVICE GROUNDING ELECTRODE SYSTEM (GES). THE GROUND BAR SHALL HAVE TAPS FOR USE BY THE TELEPHONE AND ISP UTILITY COMPANIES AND FOR THE #6 COMMUNICATIONS GROUNDING CONDUCTOR TO THE GES. PROVIDE A 15 AMP ISOLATED GROUND (IG) ORANGE- FACED DUPLEX RECEPTACLE IN THE WALL BESIDE THE BACKBOARD. CONNECT TO CIRCUIT POS-12 (15A/1P BRANCH BREAKER) AND LABEL THE RECEPTACLE "FOR FIBER TO CABLE MODEM USE ONLY."

6 CO2 DETECTOR NOTES:

G1. CO2 CENTRAL CONTROL UNIT - PROVIDE SINGLE-GANG BACKBOX AT 60" AFF WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE.

G2. CO2 ANNUNCIATOR UNIT - PROVIDE SINGLE-GANG BACKBOX AT 60" AFF WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE.

G3. CO2 SENSOR UNIT - PROVIDE SINGLE-GANG BACKBOX AT 12" AFF WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE.

G4. CO2 POWER SUPPLY - PROVIDE SINGLE-GANG BACKBOX AT 18" BELOW CEILING WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE. PROVIDE A DUPLEX OUTLET, AND CONNECT TO A LOCAL GENERAL OUTLET CIRCUIT. FIELD VERIFY EXACT LOCATION WITH STRONG SYSTEMS 800-500-5566.

7 KEY NOTES - MUSIC:

M1. PROVIDE JUNCTION BOX WITH STAINLESS STEEL COVER PLATE AND 3/4" HOLE IN PLATE WITH GROMMET ON HOLE IN PLATE. EXTEND 3/4" E.C. UP IN WALL TO ABOVE CEILING FOR MUSIC SYSTEM.

M2. PROVIDE JUNCTION BOX WITH STAINLESS STEEL COVER PLATE AND 3/4" HOLE IN PLATE WITH GROMMET ON HOLE IN PLATE. EXTEND 3/4" E.C. UP IN WALL TO PARAPET WALL FOR THE SATELITE DISH.

M3. PROVIDE THREE SINGLE GANG EXTRA DEEP J-BOXES AT 7.4" AFF WITH 1/2" CONDUIT FROM EACH TO THE CENTER BOX AND A 1" CONDUIT STUBBED INTO THE CEILING SPACE. FOR MUSIC SYSTEM VOLUME CONTROLS.

M4. PROVIDE A SINGLE GANG EXTRA DEEP JUNCTION BOX AT 7.4" AFF WITH 1/2" CONDUIT STUBBED INTO THE CEILING SPACE. FOR MUSIC SYSTEM VOLUME CONTROLS.

8 KEY NOTES - POS SYSTEM:

R1. PROVIDE A "RETROFIT" DOUBLE-GANG RING (CARLON #SC2OORR) FOR OWNER'S DEVICE PLATE WITH A 3" EMPTY CONDUIT AT THE OPENING IN THE WALL UP TO THE CEILING SPACE FOR OWNER'S DATA CABLES.

R2. PROVIDE JUNCTION BOX FOR TERMINATION OF 1" CONDUIT. PROVIDE 1" CONDUIT EXTENDING FROM CEILING AND TERMINATED AT JUNCTION BOX ON THE SERVING AREA SIDE OF THE WALL. COVER PLATE PROVIDED BY OWNER'S POS SYSTEM VENDOR.

R3. PROVIDE A 2" CONDUIT FROM FACE OF WALL AND EXTEND CONDUIT TO JUNCTION BOX IN CEILING SPACE ABOVE SERVING AREA. CONDUIT SHALL TERMINATE FLUSH WITH FACE OF WALL BELOW COUNTER. CUSTOM STAINLESS STEEL COVER PLATE IN WALL WITH GROMMET ON 2" DIAMETER HOLE AT CONDUIT TERMINATION IN WALL.

R4. PROVIDE A "RETROFIT" SINGLE GANG RING (CARLON #SC1OORR) FOR OWNER'S DEVICE PLATE WITH A 2" EMPTY CONDUIT AT THE OPENING IN THE WALL UP TO THE CEILING SPACE FOR OWNER'S DATA CABLES.

R5. PROVIDE JUNCTION BOX FOR TERMINATION OF 1" CONDUIT. PROVIDE 1" CONDUIT EXTENDING FROM CEILING AND TERMINATED AT JUNCTION BOX ON THE SERVING AREA SIDE OF THE WALL. POS SYSTEM SUPPLIER WILL PROVIDE COVER PLATE ON BOX.

R6. PROVIDE SINGLE GANG EXTRA DEEP JUNCTION BOX MOUNTED ON THE MOUNTING PLATE WITHIN THE FRONT SERVING COUNTER CASEWORK.

R7. PROVIDE SINGLE GANG EXTRA DEEP JUNCTION BOX MOUNTED FLUSH MOUNTED IN THE CEILING FOR POS DATA PLATE (BY OTHERS) FOR THE SALAD PREP AREA POS MONITOR AND PRINTER

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SOUTH CAROLINA — INTERPLAN, LLC — No. C02393 — CERTIFICATE OF AUTHORIZATION

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FSR#01936

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DATE 03/13/23
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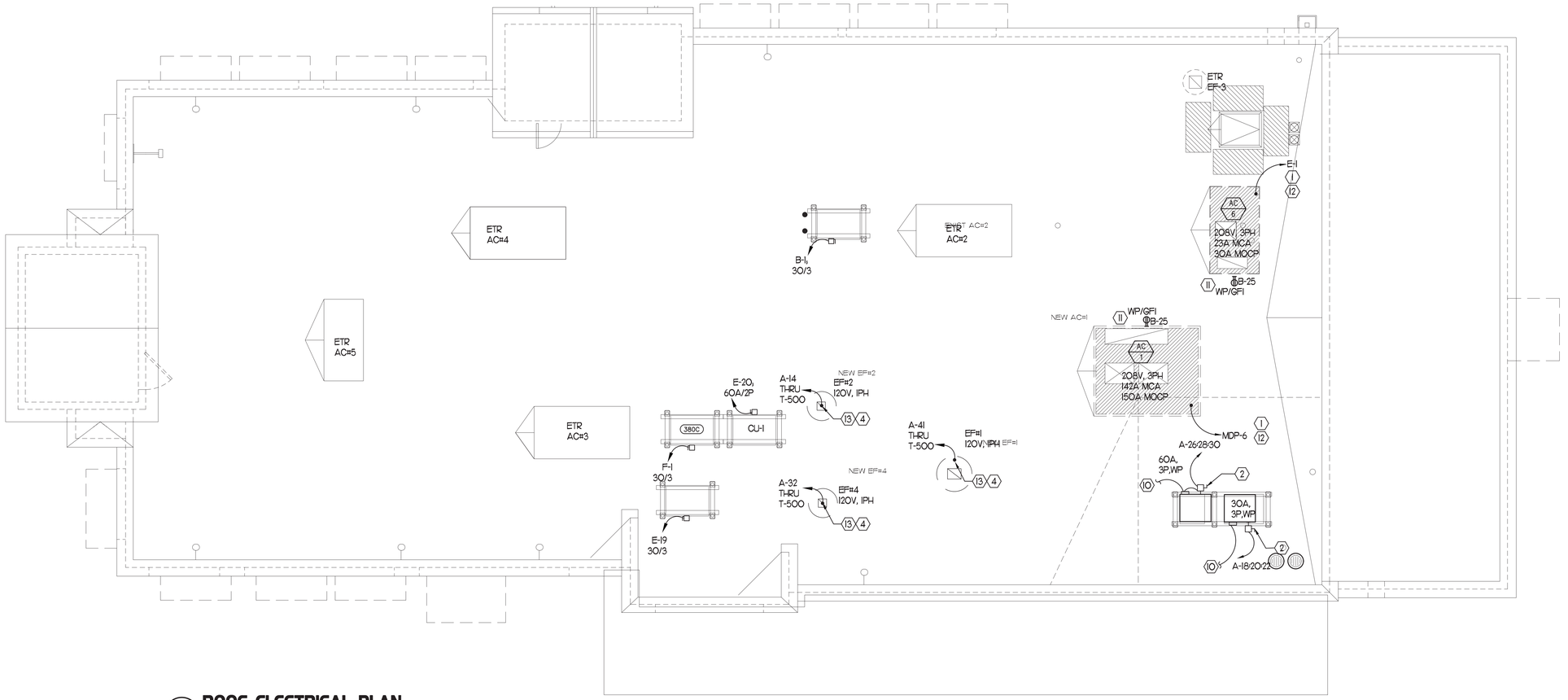
CHECKED BY MI/SN

SHEET
POWER & SYSTEMS PLAN & NOTES

SHEET NUMBER
E2.2



1 ROOF ELECTRICAL PLAN

SCALE: 1/4"= 1'-0"

2 KEY NOTES - ROOF ELECTRICAL PLAN:

1. ROUTE ELECTRICAL CONDUITS TO UNIT CONNECTIONS THROUGH WEATHERPROOF RACEWAY FURNISHED WITH UNIT. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATIONS.
2. MOUNT DISCONNECT SWITCHES FOR WIC AND WIF CONDENSERS ON UNISTRUT WITH CONDUIT DOWN INTO CEILING SPACE BELOW THRU ROOF PENETRATION DEVICE (NOT THRU ROOF). PROVIDE FUSE SIZE PER MANUFACTURER REQUIREMENTS.
3. NOT USED
4. COORDINATE EXACT LOCATION OF CONDUIT AND DISCONNECT AT EXHAUST FAN. CONDUIT SHALL BE INSTALLED THROUGH ROOF ON OUTSIDE OF FAN CURB. CONDUIT SHALL BE LOCATED AT FAN HINGE SUCH THAT THE FAN HOOD CAN BE FULLY HINGED OPEN AND NOT TOUCH THE CONDUIT. PROVIDE 14" DIAMETER LOOP IN THE FLEXIBLE CONDUIT BETWEEN THE ROOF AND THE FAN ELECTRICAL CONNECTION.
5. NOT USED
6. NOT USED.
7. NOT USED
8. NOT USED.
9. NOT USED
10. CONNECT POWER FROM EACH CONDENSING UNIT'S COMPRESSOR CONTACTOR TO THE EVAPORATOR COIL UNIT'S JUNCTION BOX BELOW. REFER TO E22 FOR LOCATION.
11. CONVENIENCE RECEPTACLE PROVIDED PRE-INSTALLED IN HVAC UNIT. CONNECT TO 120 VOLT CIRCUIT AS REQUIRED AND/OR AS INDICATED.
12. A/C UNIT DISCONNECT IS FURNISHED WITH A/C UNIT AND SHALL BE CONNECTED BY THE CONTRACTOR.
13. EXHAUST FAN IS FURNISHED WITH A PREWIRED DISCONNECT.

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SHEET
ROOF ELECT. PLAN

SHEET NUMBER
E2.3

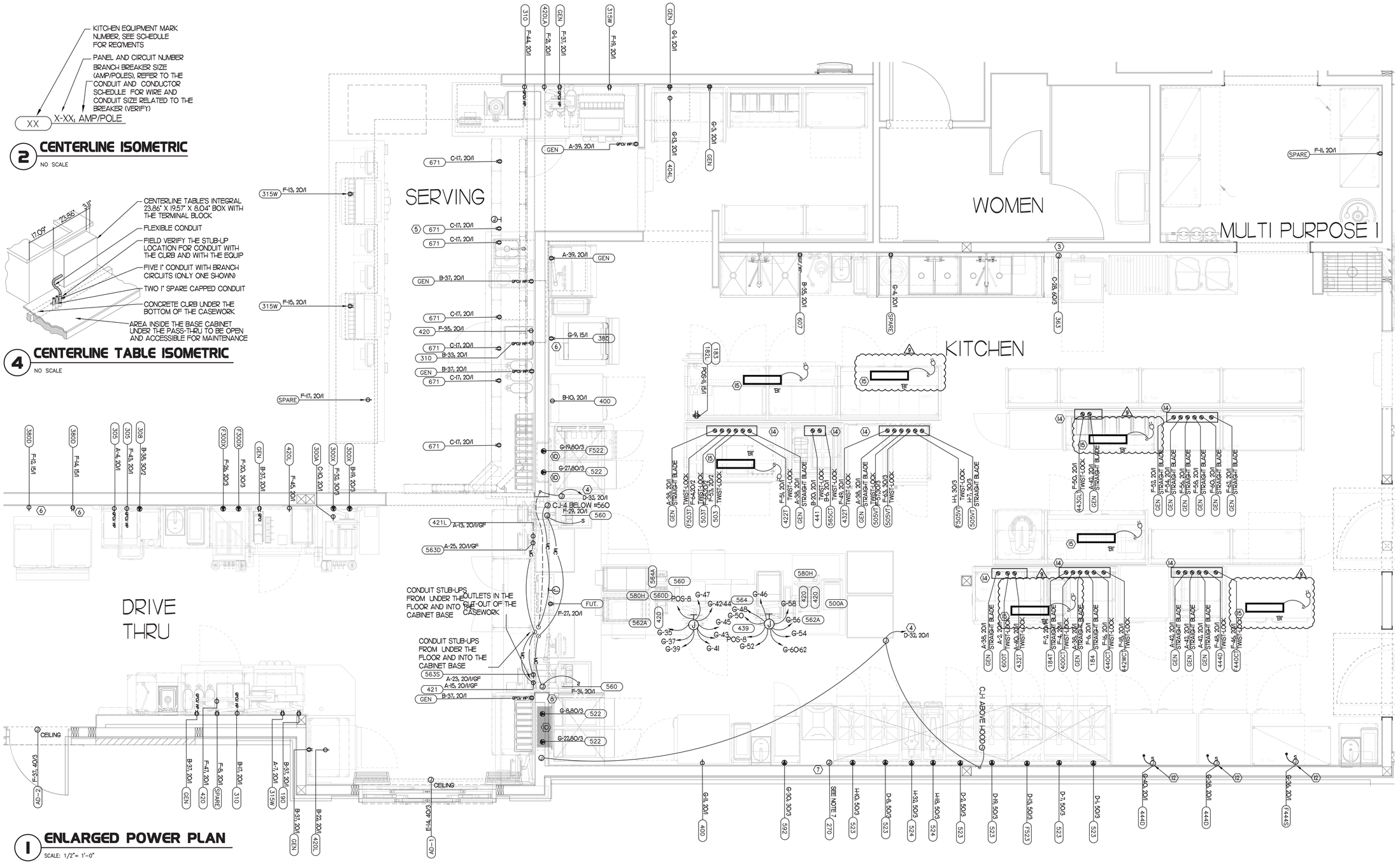
MARIBR - 02/13/2024 9:23:19 AM

2 CENTERLINE ISOMETRIC

NO SCALE

4 CENTERLINE TABLE ISOMETRIC

NO SCALE



1 ENLARGED POWER PLAN

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

3 KEY NOTES - POWER:

1. NOT USED
2. NOT USED
3. PROVIDE IN-SIGHT DISCONNECT SWITCH IF REQUIRED BY AHJ. OTHERWISE PROVIDE PAD-LOCKING DEVICE ON BRANCH BREAKER
4. CONNECT AS REQUIRED TO C.I FAN VIA SPEED CONTROLLER. CONNECT HOMERUN VIA RELAY IN "T-500" CONTROL SECTION.
5. ROUTE THROUGH LIGHTING CONTROL SWITCH-BANK "SB". CONTROLED BY SWITCHED "F". REFER TO SHEET E-2.1
6. SEE SHEET E2.3, ROOF ELECTRICAL PLAN, FOR THE LOCATION OF THE ICE MACHINE'S CONDENSER AND ADDITIONAL REQUIREMENTS.
7. PROVIDE 3#12 IN 1/2" CONDUIT BETWEEN THE T-500 CONTROL PANEL AND THE ANSUL SYSTEM PANEL.
8. PROVIDE GROUND FAULT CIRCUIT INTERRUPTER (GFCI) TYPE RECEPTACLE IN COMPLIANCE WITH THE NEC REQUIREMENT FOR KITCHENS. IF NOT NOTED AS GFCI, THEN THE BREAKER IS TO BE GFCI TYPE.
9. NOT USED.
10. THE OUTLETS FOR THE OPEN FRYERS (ITEM #522) ARE FURNISHED BY THE EXHAUST HOOD SUPPLIER AND INSTALLED BY THE CONTRACTOR.
11. NOT USED
12. LOCKABLE SINGLE POLE SWITCH SHALL SERVE AS THE LOCAL "IN-SIGHT" MEANS OF DISCONNECT FOR EQUIPMENT ITEM AS NOTED. THE SWITCH SHALL BE COOPER #S2983 AND INSTALLED PER THE DETAILS ON SHEET E1.2
13. NOT USED
14. OVER-HEAD EQUIPMENT POWER (OEP) DROP CORD RECEPTACLES FROM A FLUSH MOUNTED CEILING OEP BOX. PROVIDE A-C-S OEP ASSEMBLY #12360-10000. ASSEMBLY WILL CONSIST OF A FLUSH CEILING OUTLET BOX, TWIST-LOCK PENDANT RECEPTACLES, STRAIGHT BLADE PENDANT RECEPTACLES, CORDS, STRAIN RELIEF, AND TWISTLOCK PLUGS. CONTACT MR. JIM JACOBSON AT A-C-S AT 800-639-7584 TO PURCHASE OEP BOX AND DROP CORD RECEPTACLES. PROVIDE LIQUID-TIGHT CONDUIT WITH CONDUCTORS FOR DIRECT CONNECTED EQUIPMENT. CONDUIT SHALL NOT TOUCH THE FLOOR WHEN EQUIPMENT IS IN PLACE. USE SUPPORT GRIPS W/ SUPPORT HOOK ATTACHED TO SHELVING ABOVE AS NEEDED. PASS 5 SEYMOUR MODEL #TSQ75-U-GH-5 OR EQUIVALENT.
15. PROVIDE A TYPE BI LIGHT FIXTURE. MOUNT LIGHT TO THE UNDERSIDE OF THE WIRE SHELVING. PROVIDE A CORD FROM THE FIXTURE(S) TO A SWITCH IN AN FS BOX MOUNTED TO THE SHELF. FROM FS BOX PROVIDE AN SO CORD WITH PLUG AND CONNECT TO THE GEN RECEPTACLE (WALL OR DROP CORD).

ALL 125-VOLT THROUGH 250-VOLT RECEPTACLES SUPPLIED BY SINGLE-PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 50 AMPERES OR LESS, AND ALL RECEPTACLES SUPPLIED BY THREE-PHASE BRANCH CIRCUITS RATED 150 VOLTS OR LESS TO GROUND, 100 AMPERES OR LESS, INSTALLED IN THE LOCATIONS SPECIFIED IN 210.8(B)(1) THROUGH (B)(12) SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL.

NOTE THAT THE ISOLATED GROUNDING TYPE RECEPTACLES AND CLOCK TYPE RECEPTACLES LOCATED IN THE KITCHEN/SERVING AREA SHALL BE PROTECTED BY GROUND FAULT TYPE CIRCUIT BREAKERS RATHER THAN GROUND FAULT TYPE RECEPTACLES SINCE THESE RECEPTACLES ARE NOT AVAILABLE AS GROUND-FAULT TYPE RECEPTACLES. GFCI BREAKERS REQUIRE A DEDICATED NEUTRAL (NOT SHARED) TO OPERATE PROPERLY.

REFER TO THE KITCHEN ELEVATIONS FOR THE ROUGH-IN HEIGHT

NOTE: REFER TO SHEET E2.2 FOR KEYNOTES FOR SECURITY ("S"), COMMUNICATIONS ("C"), MUSIC ("M"), AND POS DATA SYSTEM ("R") IN THE OFFICE/MP ROOM AREA.

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SHEET
ENLARGED POWER PLAN

SHEET NUMBER
E2.4

MARIBR - 02/13/2024 9:22:11 AM

2 KEY NOTES - POS:

(P1) PROVIDE ORANGE ISOLATED GROUND (IG) DUPLEX RECEPTACLE.

(P2) PROVIDE GROUND FAULT PROTECTION FOR THESE DEVICES VIA A GROUND FAULT CIRCUIT BREAKER IF LOCAL CODE DEFINES THIS A FOOD PREPARATION AREA.

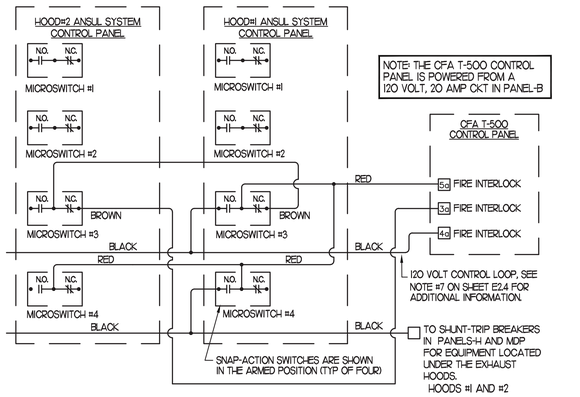
(P3) USE TYPE MC CABLE FOR THE ISOLATED GROUND CIRCUIT: #12 HOT, NEUTRAL, GREEN GROUND, STRIPED ISO GRD. EACH 15A HOMERUN SHALL BE DEDICATED TO A CIRCUIT BREAKER VIA DEDICATED CONDUCTORS WITHIN A CABLE ASSEMBLY. ALL MC CABLES SHALL BE RUN OVERHEAD ABOVE THE CEILING AND RACKED TOGETHER ON J-HOOKS. NO SPLICES IN ANY HOMERUN CABLES FROM FIRST RECEPTACLE TO BREAKER.

(P4) THE RECEPTACLE BACKBOX AND SYSTEM CABLE JUNCTION BOX FOR ITEMS 180 AND 182 SHALL BE TURNED HORIZONTAL. REFER TO THE KITCHEN EQUIPMENT ROUGH-IN ELEVATIONS FOR ADDITIONAL INFORMATION.

3 KEY NOTES - POWER:

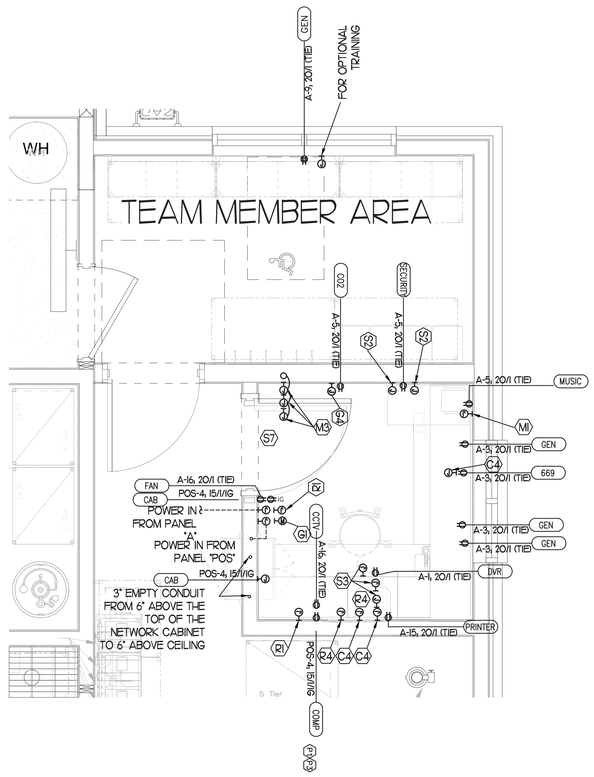
(1) CONNECT RELOCATED EQUIPMENT TO EXISTING CIRCUIT IN EXISTING PANELS EXTEND EXISTING WIRES AND CONDUIT AS NEEDED COORDINATE LOCATION WITH INTERIOR ELEVATION FIELD VERIFY LOCATION AND EXISTING CIRCUITS PRIOR TO BID.

(2) PROVIDE ONE (1) 15A/1P CIRCUIT FOR EQUIPMENT 180, 182 AND 183. CONNECT TO NEXT AVAILABLE SPARE/SPACE IN PANEL POS. LOAD ON CIRCUIT NOT TO EXCEED 1.8 KW. FIELD VERIFY NUMBER OF SPARES/SPACES PRIOR TO BID. REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO CONSTRUCTION.



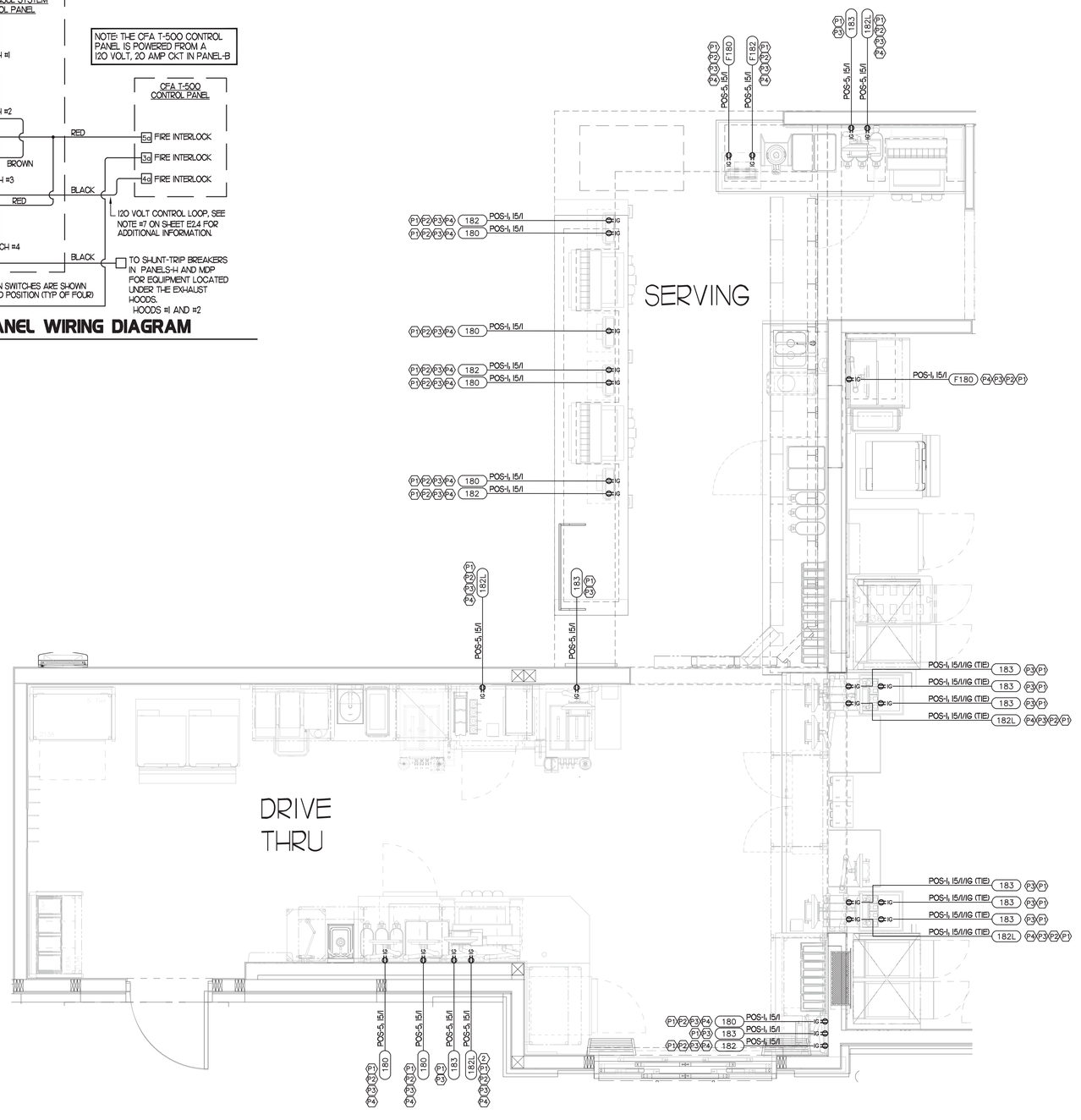
4 ANSUL SYSTEM PANEL WIRING DIAGRAM

NOT TO SCALE



1B LARGE SCALE POS POWER PLAN - OFFICE

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



1A LARGE SCALE POS POWER PLAN - SERVING AREA

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

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SHEET: ENLARGED POS POWER PLAN

SHEET NUMBER: **E2.5**

MARIBR - 02/13/2024 9:21:30 AM

(EXISTING) PANEL A

UPDATED: 9/13/2023 8:18 pm
ISSUED FOR: APPROVAL

LOCATION: ELECTRICAL ROOM
VOLTAGE: 208Y/120V
TRIM: FLUSH

MAIN: 225A MLO
SYSTEM: 3Φ, 4W
BUS RATING 225A

CONN. LOAD: 35.4 KVA
FEED: TOP
GROUND BUS: YES

ISOLATED GROUND BUS

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
1	TELEPHONE DT VIDEO	1/2"	#12	#12	#12	20/1	K	1178				K	20/1	1/2"	#12	#12	FLOOR MIXER	2 B
3	OFFICE GEN & MUSIC	1/2"	#12	#12	#12	20/1	R		720 1675			K	20/1	1/2"	#12	#12	TEA BREWER	4
5	OFF GEN PRINTERS	1/2"	#12	#12	#12	20/1	R			540 360		R	20/1	1/2"	#12	#12	GENERAL OUTLETS	6
7	FOUR DRINK TOWERS	1/2"	#12	#12	#12	20/1	K	720 1440				R	20/1	1/2"	#12	#12	WATER HEATER	8
9	GENERAL OUTLETS	1/2"	#12	#12	#12	20/1	R		1080 828			R	20/1	1/2"	#12	#12	POS	10
11	GENERAL OUTLETS	1/2"	#12	#12	#12	20/1	R			1080 828		R	20/1	1/2"	#12	#12	PLAY AREA OUTLET	12
13	TWO UC REFRIG	1/2"	#12	#12	#12	20/1	K	792 600				M	20/1	1/2"	#12	#12	(N)EF-2	14
15	TWO UC REFRIG	1/2"	#12	#12	#12	20/1	K		1224 1067			K	20/1	1/2"	#12	#12	SECURITY SYSTEM	16
17	WALL HEATER	1/2"	#12	#12	#12	20/2	W			750 667		K	15/3	1/2"	#12	#12	WALK-IN COOLER CONDENSER	18
19	"		#12				W	750 667				K		#12			"	20
21	SPARE	–	–	–	–	20/1	–					K					SPARE	22
23	SANDWICH SLIDE	1/2"	#12	#12	#12	20/1	K			600		K	20/1	–	–	–	SPARE	24
25	SANDWICH SLIDE	1/2"	#12	#12	#12	20/1	K	600 1067				K	35/3	3/4"	#8	#8 #10	FREEZER CONDENSER	26
27	CARBONATOR	1/2"	#12	#12	#12	20/1	K		600 1067			K			#8			28
29	CARBONATOR	1/2"	#12	#12	#12	20/1	K			600 1067		K			#8		"	30
31	CARBONATOR	1/2"	#12	#12	#12	20/1	K	600 1067				M	20/1	1/2"	#12	#12	(N)EF-4	32
33	CARBONATOR	1/2"	#12	#12	#12	20/1	K		864			–	20/1	–	–	–	SPARE	34
35	BOOSTER PUMP	1/2"	#12	#12	#12	20/2	K			1500 667		K	30/3	1/2"	#10	#10	FREEZER HEAT TAPE	36
37			#12				K	1200				K	20/1	1/2"	#12	#12	DROP CORD OUTLET	38 B
39	EMPLOYEE AREA OUTLETS	1/2"	#12	#12	#12	20/1	R		1200			K	20/1	1/2"	#12	#12	DROP CORD OUTLET	40 B
41	(E) EF-1	1/2"	#12	#12	#12	20/1	M			1200		K	20/1	1/2"	#12	#12	DROP CORD OUTLET	42 B

INTERRUPT RATING: EXISTING — 13452 | 11605 | 10344 — FROM: (NEW) PANEL MDP

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	0	1.25	0
RECEPTS TO 10 KVA	5868	1.0	5868
RECEPTS REMAINING	0	0.5	0
SPACE HEATING	0	0.0	0
AIR CONDITIONING	0	1.0	0

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	2400	1.0	2400
LARGEST MOTOR	0	0.25	0
WATER HEATING	2940	1.0	2940
KITCHEN EQUIP.	24193	0.65	15725

REMAINING			
CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	0	1.0	0
MISC. DEMAND LOADS	0	1.0	0
TOTAL CONNECTED LOAD	35.4 KVA	98.3 AMPS	
TOTAL DEMAND LOAD	26.9 KVA	74.8 AMPS	

Note 1. Feeder size: SEE RISER DIAGRAM

(EXISTING) PANEL B

UPDATED: 9/13/2023 8:28 pm
ISSUED FOR: APPROVAL

LOCATION: ELECTRICAL ROOM
VOLTAGE: 208Y/120V
TRIM: FLUSH

MAIN: 225A MLO
SYSTEM: 3Φ, 4W
BUS RATING 225A

CONN. LOAD: 32 KVA
FEED: TOP
GROUND BUS: YES

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
1	ICE MAKER	1/2"	#12	#12	#12	20/3	K	2000				K	20/1	1/2"	#12	#12	REFUSE ENCLOSURE	2
3	"		#12				K		2000 540			R	20/1	1/2"	#12	#12	GENERAL OUTLETS	4 B
5	"		#12				K			2000 600		K	20/1	1/2"	#12	#12	FOOD WARMER	6 B
7	SPARE	–	–	–	–	20/1	–	600				K	20/1	1/2"	#12	#12	REF DISPLAY CASE	8
9	SPARE	–	–	–	–	20/1	–		600			K	20/1	1/2"	#12	#12	SGL FREEZER	10 B
B 11	SANDWICH TOASTER	1/2"	#12	#12	#12	20/1	K			500 500		K	20/1	1/2"	#12	#12	HOLDING CABINET	12
B 13	HOLDING CABINET	1/2"	#12	#12	#12	20/1	K	600 600				K	20/1	1/2"	#12	#12	WARMING DRAWER	14
B 15	REFRIG WORK TABLE	1/2"	#12	#12	#12	20/1	K		900 500			K	20/1	1/2"	#12	#12	DT WINDOW	16
B 17	JUICE DISPENSER	1/2"	#12	#12	#12	20/1	K			500 500		K	20/1	1/2"	#12	#12	THAWING CABINET	18
B 19	ICE DREAM MACHINE	1/2"	#12	#12	#12	20/3	K	2040 500				K	20/1	1/2"	#12	#12	440-REF. BREAD TABLE	20
21			#12				K		2040 500			K	20/1	1/2"	#12	#12	REFRIGERATOR	22
23			#12				K			2040 180		K	20/1	1/2"	#12	#12	DROP CORD OUTLET	24 B
25	ROOF RECEPTS	1/2"	#12	#12	#12	20/1	R	540 180				K	20/1	1/2"	#12	#12	DROP CORD OUTLET	26 B
27	GENERAL OUTLETS	1/2"	#12	#12	#12	20/1	R		540 180			K	20/1	1/2"	#12	#12	DROP CORD OUTLET	28 B
B 29	REFRIG WORK TABLE	1/2"	#12	#12	#12	20/1	K			540 180		K	20/1	1/2"	#12	#12	DROP CORD OUTLET	30 B
31	FLY SYSTEM	1/2"	#12	#12	#12	15/1	K	600				K	20/1	1/2"	#12	#12	REF. WORK TABLE	32 B
B 33	JUICE DISPENSER	1/2"	#12	#12	#12	20/1	K		600			K	20/1	1/2"	#12	#12	REF. WORK TABLE	34 B
B 35	LEMON JUICE STAND	1/2"	#12	#12	#12	20/1	K			540		K	20/1	1/2"	#12	#12	T-500	36
B 37	GENERAL OUTLET	1/2"	#12	#12	#12	20/1	R	720 1500				K	30/2	1/2"	#10	#10	COFFEE MAKER	38 B
B 39	GENERAL OUTLET	1/2"	#12	#12	#12	20/1	R		720 1500								"	40
B 41	GENERAL OUTLET	1/2"	#12	#12	#12	20/1	R			720		R	20/1	1/2"	#12	#12	DOOR BELL	42

INTERRUPT RATING: EXISTING — 10460 | 11580 | 9920 — FROM: (NEW) PANEL F

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	0	1.25	0
RECEPTS TO 10 KVA	4500	1.0	4500
RECEPTS REMAINING	0	0.5	0
SPACE HEATING	0	0.0	0
AIR CONDITIONING	0	1.0	0

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	0	1.0	0
LARGEST MOTOR	0	0.25	0
WATER HEATING	0	1.0	0
KITCHEN EQUIP.	27460	0.65	17849

REMAINING			
CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	0	1.0	0
MISC. DEMAND LOADS	0	1.0	0
TOTAL CONNECTED LOAD	32 KVA	88.8 AMPS	
TOTAL DEMAND LOAD	22.3 KVA	62.1 AMPS	

Note 1. Feeder size: SEE RISER DIAGRAM

(EXISTING) PANEL E

UPDATED: 9/13/2023 8:36 pm
ISSUED FOR: APPROVAL

LOCATION: ELECTRICAL ROOM
VOLTAGE: 208Y/120V
TRIM: FLUSH

MAIN: 400A MLO
SYSTEM: 3Φ, 4W
BUS RATING 400A

CONN. LOAD: 90.4 KVA
FEED: TOP
GROUND BUS: YES

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
1	(N) AC-6	1/2"	#10	#10	#10	30/3	A	2760				A	60/3	1"	#6	#6 #10	AC-2	2
3	"		#10				A		2760			A			#6		"	4
5	"		#10				A			2760		A			#6		"	6
7	AC-3	1-1/4"	#4	#4	#8	70/3	A	6840 4920				A	50/3	3/4"	#8	#8 #10	AC-4	8
9	"		#4				A		6840 4920			A			#8		"	10
11	"		#4				A			6840 4920		A			#8		"	12
13	(E) AC-5	3/4"	#8	#8	#10	45/3	A	3600 3333				M	40/3	3/4"	#8	#8 #10	AD-1	14 L
15	"		#8				A		3600 3333			M			#8		"	16
17	"		#8				A			3600 3333		M			#8		"	18
19	ICE MAKER	1/2"	#12	#12	#12	20/3	K	1867 2225				A	35/2	3/4"	#8	#8 #10	CU	20
21	"		#12				K		1867 2225			A			#8		"	22
23	"		#12				K			1867								
25	SPARE	–	–	–	–	20/1	–					–	20/1	–	–	–	SPARE	24
27	SPARE	–	–	–	–	20/1	–					–	20/1	–	–	–	SPARE	26
29	SPARE	–	–	–	–	20/1	–					–	20/1	–	–	–	SPARE	28
												–	20/1	–	–	–	SPARE	30

INTERRUPT RATING: EXISTING — 30865 | 30865 | 28640 — FROM: (NEW) PANEL MDP

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	0	1.25	0
RECEPTS TO 10 KVA	0	1.0	0
RECEPTS REMAINING	0	0.5	0
SPACE HEATING	0	0.0	0
AIR CONDITIONING	75370	1.0	75370

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	9999	1.0	9999
LARGEST MOTOR	0	0.25	0
WATER HEATING	0	1.0	0
KITCHEN EQUIP.	5001	0.9	3251

REMAINING			
CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	0	1.0	0
MISC. DEMAND LOADS	0	1.0	0
TOTAL CONNECTED LOAD	90.4 KVA	251 AMPS	
TOTAL DEMAND LOAD	88.6 KVA	246.2 AMPS	

Note 1. Feeder size: SEE RISER DIAGRAM

(RELOCATED) PANEL POS

UPDATED: 9/13/2023 8:45 pm
ISSUED FOR: APPROVAL

LOCATION: MULTI PURPOSE
VOLTAGE: 120/208V
TRIM: FLUSH

MAIN: 100A MLO
SYSTEM: 1Φ, 3W
BUS RATING 100A

CONN. LOAD: 1.4 KVA
FEED: TOP
GROUND BUS: YES

ISOLATED GROUND BUS

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
1	COUNTER POS STATION	1/2"	#12	#12	#12	15/1	R	720 180				R	15/1	1/2"	#12	#12	5 POS MONITORS	2
3	COUNTER POS STATION	1/2"	#12	#12	#12	15/1	R		84 180			R	15/1	1/2"	#12	#12	OFFICE RECEPACLE	4
B 5	DT POS STATION	1/2"	#12	#12	#12	15/1	R	84 180				R	15/1	1/2"	#12	#12	OFFICE RECEPACLE	6
7	MLOP POS STATION	1/2"	#12	#12	#12	15/1	R		80 84			R	15/1	1/2"	#12	#12	4 CL TABLE MONITORS	8
9	MLOP MONITORS	1/2"	#12	#12	#12	15/1	R	64 –				–	15/1	–	–	–	SPARE	10
B 11	MLOP MONITORS	1/2"	#12	#12	#12	15/1	R		64 180			R	15/1	1/2"	#12	#12	MODEM	12
13	SPARE	–	–	–	–	15/1	–	–				–	15/1	–	–	–	SPARE	14
15	SPARE	–	–	–	–	15/1	–		–			–	15/1	–	–	–	SPARE	16
17	SPARE	–	–	–	–	15/1	–	–				–	15/1	–	–	–	SPARE	18
19	SPARE	–	–	–	–	15/1	–		–			–	15/1	–	–	–	SPARE	20
21	SPARE	–	–	–	–	15/1	–	–				–	15/1	–	–	–	SPARE	22
23	SPARE	–	–	–	–	15/1	–		–			–	20/1	–	–	–	BACKFED MAIN BREAKER	24

INTERRUPT RATING: EXISTING — 758 | 672 — FROM: PANEL "A"

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	0	1.25	0
RECEPTS TO 10 KVA	1430	1.0	1430
RECEPTS REMAINING	0	0.5	0
SPACE HEATING	0	0.0	0
AIR CONDITIONING	0	1.0	0

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	0	1.0	0
LARGEST MOTOR	0	0.25	0
WATER HEATING	0	1.0	0
KITCHEN EQUIP.	0	1.0	0

REMAINING			
CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	0	1.0	0
MISC. DEMAND LOADS	0	1.0	0
TOTAL CONNECTED LOAD	1.4 KVA	6.9 AMPS	
TOTAL DEMAND LOAD	1.4 KVA	6.9 AMPS	

Note 1. Feeder size: SEE RISER DIAGRAM

(EXISTING) PANEL C

UPDATED: 9/13/2023 8:26 pm
ISSUED FOR: APPROVAL

LOCATION: ELECTRICAL ROOM
VOLTAGE: 208Y/120V
TRIM: FLUSH

MAIN: 225A MLO
SYSTEM: 3Φ, 4W
BUS RATING 225A

CONN. LOAD: 56.4 KVA
FEED: TOP
GROUND BUS: YES

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
1	KITCHEN LGT	1/2"	#12	#12	#12	20/1	L	1485 1620				L	20/1	1/2"	#12	#12	BUILDING SIGNAGE	2
3	KITCHEN LIGHT	1/2"	#12	#12	#12	20/1	L		864 1620			L	20/1	1/2"	#12	#12	BUILDING SIGNAGE	4
5	RESTROOM LTG	1/2"	#12	#12	#12	20/1	L			878 –		L	20/1	–	–	–	SPARE	6
7	DINING LTG	1/2"	#12	#12	#12	20/1	L	432 180				R	20/1	1/2"	#12	#12	AUDIO GREETER OUTLET	8
9	DINING LTG	1/2"	#12	#12	#12	20/1	L		380			K	20/1	1/2"	#12	#12	MILKSHAKE	10 B
11	DINING AREA LTG	1/2"	#12	#12	#12	20/1	L			303 624		L	20/1	1/2"	#12	#12	SECURITY / FLAGPOLE LTG	12
13	DINING AREA LTG	1/2"	#12	#12	#12	20/1	L	909				–	20/1	–	–	–	SPARE	14
15	SERVICE AREA LIGHT	1/2"	#12	#12	#12	20/1	L		764			–	20/1	–	–	–	SPARE	16
17	MENU BOARD	1/2"	#12	#12	#12	20/1	L			1240 720		L	20/1	1/2"	#12	#12	BLDG EXTERIOR LTG	18
19	DIRECTIONAL SIGNS	1/2"	#12	#12	#12	20/1	L	1620 720				L	20/1	1/2"	#12	#12	BLDG EXTERIOR LTG	20
21	PARKING LOT LTG	1/2"	#12	#12	#12	20/1	L		1620 720			L	20/1	1/2"	#12	#12	BLDG EXTERIOR LTG	22
23	PARKING LOT LTG	1/2"	#12	#12	#12	20/1	L			1620 720		L	20/1	1/2"	#12	#12	BLDG EXTERIOR LTG	24
25	PARKING LOT LTG	1/2"	#12	#12	#12	20/1	L	1400				–	20/1	–	–	–	SPARE	26
27	PARKING LOT LTG	1/2"	#12	#12	#12	20/1	L		1400 5760			K	60/3	1"	#6	#6 #10	DISHWASHER	28 SB
29	PARKING LOT LTG	1/2"	#12	#12	#12	20/1	L			1400 5760		K			#6		"	30
31	PARKING LOT LTG	1/2"	#12	#12	#12	20/1	L	1400 5760				K			#6		"	32
33	MENU BOARD	1/2"	#12	#12	#12	20/1	L		1584			M	20/1	3/4"	#8	#8 #8	CANOPY FANS	34
35	FRZR/ COOLER LTG	1/2"	#12	#12	#12	20/1	L			444		L	20/1	1/2"	#10	#10 #10	CANOPY LIGHTS	36
37	MAIN ID SIGN	1/2"	#12	#12	#12	20/1	L	1620 780				L	20/1	1/2"	#12	#12	DRIVE- THRU CANOPY	38
39	MAIN ID SIGN	1/2"	#12	#12	#12	20/1	L		1620 780			L	20/1	1/2"	#12	#12	BUILDING SIGNAGE	40
41	MAIN ID SIGN	1/2"	#12	#12	#12	20/1	L			1620 780		L	20/1	1/2"	#12	#12	BUILDING SIGNAGE	42

INTERRUPT RATING: EXISTING — 17791 | 20332 | 18229 — FROM: (NEW) PANEL MDP

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	36928	1.25	46160
RECEPTS TO 10 KVA	180	1.0	180
RECEPTS REMAINING	0	0.5	0
SPACE HEATING	0	0.0	0
AIR CONDITIONING	0	1.0	0

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	1584	1.0	1584
LARGEST MOTOR	0	0.25	0
WATER HEATING	0	1.0	0
KITCHEN EQUIP.	17660	0.8	11479

REMAINING			
CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	0	1.0	0
TOTAL CONNECTED LOAD	56.4 KVA	156.5 AMPS	
TOTAL DEMAND LOAD	59.4 KVA	165 AMPS	

Note 1. Feeder size: SEE RISER DIAGRAM

(EXISTING) PANEL D

UPDATED: 9/13/2023 8:34 pm
ISSUED FOR: APPROVAL

LOCATION: ELECTRICAL ROOM
VOLTAGE: 208Y/120V
TRIM: FLUSH

MAIN: 400A MLO
SYSTEM: 3Φ, 4W
BUS RATING 400A

CONN. LOAD: 84.8 KVA
FEED: TOP
GROUND BUS: YES

EXISTING SHUNT TRIP MAIN IN MDP

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
B 1	PRESSURE FRYER	3/4"	#8	#8	#10	50/3	N	4500 4500				N		#8	#8	#10	PRESSURE FRYER	2 B
3	"		#8				N		4500 4500			N		#8			"	4
5	"		#8				N			4500 4500		N		#8			"	6
B 7	PRESSURE FRYER	3/4"	#8	#8	#10	50/3	N	4500 4500				N	50/3	3/4"	#8	#8 #10	PRESSURE FRYER	8 B
9	"		#8				N		4500 4500			N		#8			"	10
11	"		#8				N			4500 4500		N		#8			"	12
B 13	PRESSURE FRYER	3/4"	#8	#8	#10	50/3	N	4500 4500				–	20/1	–	–	–	SPARE	14
15	"		#8				N		4500 4500			–	20/1	–	–	–	SPARE	16
17	"		#8				N			4500 4500		–	20/1	–	–	–	SPARE	18
B 19	PRESSURE FRYER	3/4"	#8	#8	#10	50/3	N	4500 4500				–	20/1	–	–	–	SPARE	20
21	"		#8				N		4500 4500			–	20/1	–	–	–	SPARE	22
23	"		#8				N			4500 4500		–	20/1	–	–	–	SPARE	24
25	SPARE	–	–	–	–	20/1	–	1200				L	20/1	1/2"	#12	#12	HOLDING CABINET	26
27	SPARE	–	–	–	–	20/1	–		1160			L	20/1	1/2"	#12	#12	HEAT LAMPS	28
29	SPARE	–	–	–	–	20/1	–			1160		L	20/1	1/2"	#12	#12	HEAT LAMPS	30
31	SPARE	–	–	–	–	20/1	–	300				L	20/1	1/2"	#12	#12	HOOD LT/ CU FAN	32
33	SPARE	–	–	–	–	20/1	–	–	–			–	20/1	–	–	–	SPARE	34
35	SPARE	–	–	–	–	20/1	–		–	–		–	20/1	–	–	–	SPARE	36
37	SPARE	–	–	–	–	20/1	–	–		–		–	20/1	–	–	–	SPARE	38
39	SPARE	–	–	–	–	20/1	–		–			–	20/1	–	–	–	SPARE	40
41	SPARE	–	–	–	–	20/1	–			–		–	20/1	–	–	–	SPARE	42

INTERRUPT RATING: EXISTING — 28500 | 28160 | 28160 — FROM: (NEW) PANEL MDP

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	2620	1.25	3275
RECEPTS TO 10 KVA	0	1.0	0
RECEPTS REMAINING	0	0.5	0
SPACE HEATING	0	0.0	0
AIR CONDITIONING	0	1.0	0

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	0	1.0	0
LARGEST MOTOR	0	0.25	0
WATER HEATING	0	1.0	0
KITCHEN EQUIP.	1200	1.0	780

REMAINING			
CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	81000	1.0	81000
MISC. DEMAND LOADS	0	1.0	0
TOTAL CONNECTED LOAD	84.8 KVA	235.6 AMPS	
TOTAL DEMAND LOAD	85.1 KVA	236.3 AMPS	

Note 1. Feeder size: SEE RISER DIAGRAM

(NEW) PANEL H

UPDATED: 1/30/2024 3:32 pm
ISSUED FOR: APPROVAL

LOCATION: OFFICE
VOLTAGE: 208Y/120V
TRIM: FLUSH

MAIN: 250A MLO
SYSTEM: 3Φ, 4W
BUS RATING 250A

CONN. LOAD: 62.3 KVA
FEED: TOP
GROUND BUS: YES

FED THRU LUG

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
B 1	VICTOR OVEN	1/2"	#10	#10	#10	30/3	K	2633 3000				H	40/2	3/4"	#8	#8 #10	ELECTRIC HEATER	2
3	"		#10				K		2633 3000			H			#8		"	4
5	"		#10				K			2633		–	20/1	–	–	–	SPARE	6
B 7	VICTOR OVEN	1/2"	#10	#10	#10	30/3	K	2633				–	20/1	–	–	–	SPARE	8
9	"		#10				K		2633 4500			N	50/3	3/4"	#8	#8 #10	PRESSURE FRYER	10 B
11	"		#10				K			2633 4500		N			#8		"	12
13	SPARE	–	–	–	–	20/1	–	4500				N			#8		"	14
15	SPARE	–	–	–	–	20/1	–		4500			N	–	–	–	–	SHUNT TRIP SPACE	16
17	SPARE	–	–	–	–	20/1	–	–		4500		N	50/3	3/4"	#8	#8 #10	524- DUAL BROIL	18 B
19	SPARE	–	–	–	–	20/1	–	4500				N			#8		"	20
21	SPARE	–	–	–	–	20/1	–		4500			N			#8		"	22
23	SPARE	–	–	–	–	20/1	–	–		–		–	–	–	–	–	SHUNT TRIP SPACE	24
25	SPARE	–	–	–	–	20/1	–		–			–	20/1	–	–	–	SPARE	26
27	SPARE	–	–	–	–	20/1	–	–		–		–	20/1	–	–	–	SPARE	28
29	SPARE	–	–	–	–	20/1	–		–			–	20/1	–	–	–	SPARE	30
31	SPARE	–	–	–	–	20/1	–	4500				N	50/3	3/4"	#8	#8 #10	524- DUAL BROIL	32 B
33	SPARE	–	–	–	–	20/1	–		4500			N			#8		"	34
35	SPARE	–	–	–	–	20/1	–			4500		N			#8		"	36
37	SPARE	–	–	–	–	20/1	–	–		–		–	–	–	–	–	SHUNT TRIP SPACE	38
39	SPARE	–	–	–	–	20/1	–		–			–	20/1	–	–	–	SPARE	40
41	"	–	–	–	–	20/1	–			–		–	20/1	–	–	–	SPARE	42

INTERRUPT RATING: SERIES RATED PER MANUFACTURER'S LABEL — 21766 | 21766 | 18766 — FROM: (NEW) PANEL MDP

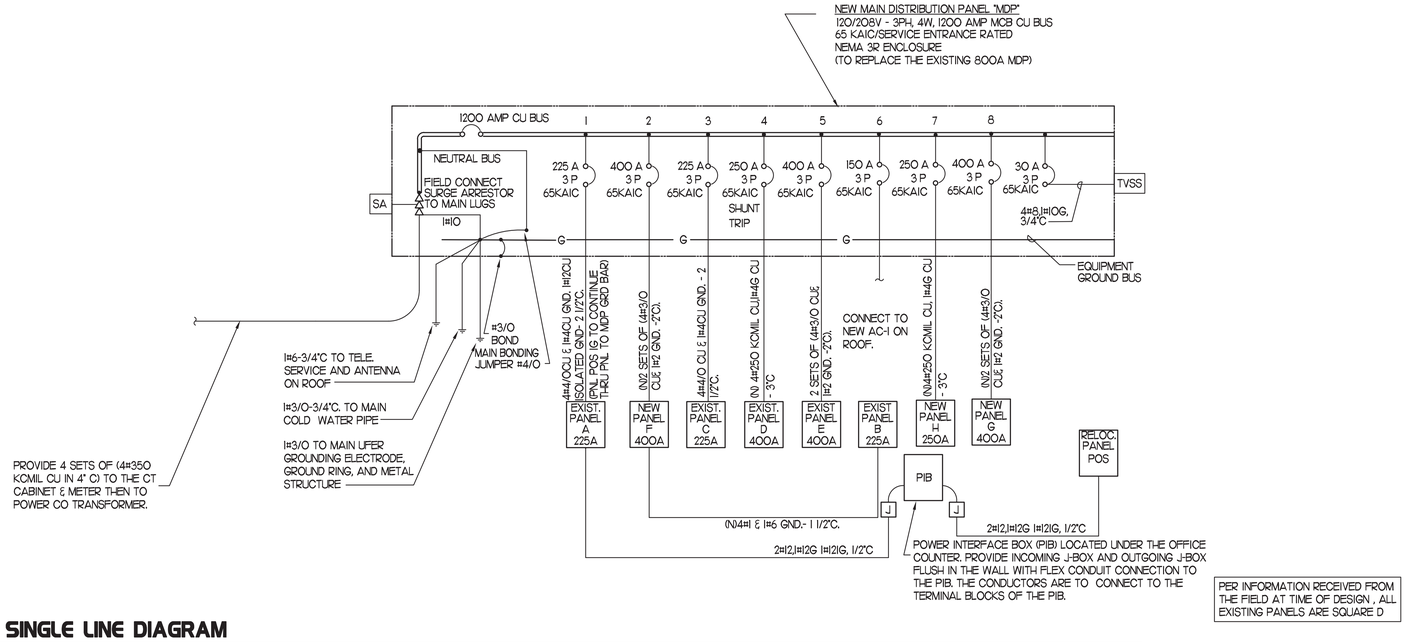
LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	0	1.25	0
RECEPTS TO 10 KVA	0	1.0	0
RECEPTS REMAINING	0	0.5	0
SPACE HEATING	6000	1.0	6000
AIR CONDITIONING	0	0.0	0

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	0	1.0	0
LARGEST MOTOR	0	0.25	0
WATER HEATING	0	1.0	0
KITCHEN EQUIP.	15798	0.65	10269

REMAINING			
CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	40500	1.0	40500
MISC. DEMAND LOADS	0	1.0	0
TOTAL CONNECTED LOAD	62.3 KVA	173.1 AMPS	
TOTAL DEMAND LOAD	56.8 KVA	157.7 AMPS	

Note 1. Feeder size: SEE RISER DIAGRAM

GC MUST OBTAIN ON-SITE ERMS TESTING THROUGH A CERTIFIED THIRD PARTY. THE NOTARIZED TESTING DOCUMENT MUST CONTAIN



PER INFORMATION RECEIVED FROM THE FIELD AT TIME OF DESIGN , ALL EXISTING PANELS ARE SQUARE D

1 NEW SINGLE LINE DIAGRAM

NOT TO SCALE

2 CONDUIT AND CONDUCTORS SCHEDULE (Based on 2005, 2008, 2011 2014, 2017 AND 2020 NEC)

Mark No.	OCP Device (Amp)	Conductors Total Ampacity 60d C	75d C	Conductors Phase & Neutral Qty	Size	Type	Min Eq Grd Qty	Size	Raceway Size (nominal inches) No. Sets	Phase, Neutral & Equip Grd EMT	IMC	RIGD	PVC	With Isolated Ground EMT	IMC	PVC
1	20	20	–	2	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
2	20	20	–	3	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
3	20	20	–	4	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
4	25	30	–	2	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
5	25	30	–	3	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
6	25	30	–	4	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
7	30	30	–	2	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
8	30	30	–	3	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
9	30	30	–	4	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
10	40	40	–	2	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
11	40	40	–	3	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
12	40	40	–	4	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	1.00
13	50	55	–	2	6	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
14	50	55	–	3	6	THHN	1	10	One	0.75	0.75	0.75	0.75	1.00	1.00	1.00
15	50	55	–	4	6	THHN	1	10	One	1.00	1.00	1.00	1.00	1.00	1.00	1.00
16	60	70	–	2	4	THW	1	8	One	1.00	1.00	1.00	1.00	1.25	1.00	1.25
17	60	70	–	3	4	THW	1	8	One	1.25	1.00	1.25	1.25	1.25	1.25	1.25
18	60	70	–	4	4	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	1.25	1.25
19	70	70	–	2	4	THW	1	8	One	1.00	1.00	1.00	1.00	1.25	1.00	1.25
20	70	70	–	3	4	THW	1	8	One	1.25	1.00	1.25	1.25	1.25	1.25	1.25
21	70	70	–	4	4	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	1.25	1.25
22	80	85	–	3	3	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	1.25	1.25
23	80	85	–	4	3	THW	1	8	One	1.25	1.25	1.25	1.25	1.50	1.25	1.50
24	90	95	–	3	2	THW	1	8	One	1.25	1.25	1.25	1.25	1.50	1.25	1.50
25	90	95	–	4	2	THW	1	8	One	1.50	1.25	1.50	1.50	1.50	1.50	1.50
26	100	110	–	3	1	THW	1	6	One	1.50	1.50	1.50	1.50	2.00	2.00	2.00
27	100	110	–	4	1	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
28	110	–	115	3	2	THW	1	6	One	1.25	1.25	1.25	1.25	1.50	1.25	1.50
29	110	–	115	4	2	THW	1	6	One	1.50	1.25	1.50	1.50	1.50	1.50	1.50
30	125	–	130	3	1	THW	1	6	One	1.50	1.50	1.50	1.50	2.00	2.00	2.00
31	125	–	130	4	1	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
32	150	–	150	3	1/0	THW	1	6	One	2.00	1.50	2.00	2.00	2.00	2.00	2.00
33	150	–	150	4	1/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
34	175	–	175	3	2/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
35	175	–	175	4	2/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.50	2.50	2.50
36	200	–	200	3	3/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.50	2.50	2.50
37	200	–	200	4	3/0	THW	1	6	One	2.50	2.50	2.50	2.50	2.50	2.50	2.50
38	225	–	230	3	4/0	THW	1	4	One	2.50	2.00	2.50	2.50	2.50	2.50	2.50
39	225	–	230	4	4/0	THW	1	4	One	2.50	2.50	2.50	2.50	3.00	3.00	3.00
40	250	–	255	4	250	THW	1	4	One	2.50	3.00	3.00	3.00	3.00	3.00	3.00
41A	300	–	285	4	300	THW	1	4	One	3.00	3.00	3.00	3.00	3.00	3.00	3.00
41B	300	–	310	4	350	THW	1	4	One	3.00	3.00	3.00	3.00	3.00	3.00	3.00
42A	350	–	335	4	400	THW	1	4	One	3.00	3.50	3.50	3.50	3.50	3.50	3.50
42B	350	–	380	4	500	THW	1	4	One	3.50	3.50	3.50	3.50	3.50	3.50	3.50
43A	400	–	380	4	500	THW	1	3	One	3.50	3.50	3.50	3.50	3.50	3.50	3.50
43B	400	–	400	4	3/0	THW	2	3	Two	2.50	2.50	2.50	2.50	2.50	2.50	2.50
44A	600	–	570	4	300	THW	2	1	Two	3.00	3.00	3.00	3.00	3.00	3.00	3.00
44B	600	–	620	4	350	THW	2	1	Two	3.00	3.00	3.00	3.00	3.00	3.00	3.50
45A	800	–	760	4	500	THW	2	1/0	Two	3.50	3.50	3.50	3.50	3.50	3.50	3.50
45B	800	–	820	4	600	THW	2	1/0	Two	4.00	4.00	4.00	4.00	4.00	4.00	4.00
46	1000	–	1005	4	400	THW	3	2/0	Three	3.50	3.50	3.50	3.50	3.50	3.50	3.50
47	1200	–	1240	4	350	THW	4	3/0	Four	3.50	3.50	3.50	3.50	3.50	3.50	4.00
48	1600	–	1675	4	400	THW	5	4/0	Five	4.00	4.00	4.00	4.00	4.00	4.00	4.00

Notes:

Conductors are rated at 600 volt or below and are to be copper.

NEC Table 310.16 (310.15(B)(16) in 2020) is used for the basis of the conductor ampacities, which is not more than three current carrying conductors in a raceway at an ambient temperature of 30 deg C with 60 deg C rated conductors and connectors per 110.14-C-1 for up to 100 amp rated and up to #1 AWG conductors for equipment terminations and 75 deg C rated conductors and termination connectors for larger than 100 amp or above #1 AWG conductors.

NEC Tables 4, 5, and Appendix C is used for the basis of the conduit sizes. Table C1 for EMT, Table C4 for IMC, Table C8 for Rigid, and Table C10 for PVC (Sch 40).

All Branch Feeders and Branch Circuits shall include a green Equipment Grounding Conductor.

Omit Grounding conductor on Service Entrance Feeders.

Omit Neutral conductor on all Delta primary transformer feeders or 3 phase loads not requiring a neutral.

The above conductors are not calculated for Voltage Drop. Any circuits that exceed 100 feet shall be calculated by the Installer to have less than a three percent voltage drop on feeders and five percent on branch circuits per the NEC.

3 SINGLE LINE DIAGRAM NOTES

1. VERIFY SERVICE LOCATIONS AND CONFORM TO THE REQUIREMENTS OF THE POWER COMPANY AND/OR DEVELOPER. POWER COMPANY AND/OR DEVELOPER SHALL BE CONTACTED PRIOR TO BEGINNING CONSTRUCTION TO ARRANGE AND VERIFY FOR THE INSTALLATION OF THE POWER COMPANY SERVICE, METER AND OTHER ITEMS.
2. GROUND ALL EQUIPMENT AND SERVICES IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE, LOCAL APPLICABLE CODES, AND ALSO AS INDICATED ON DRAWINGS.
3. MAKE THE NECESSARY INSPECTIONS OF EXISTING SITE AND SERVICE LOCATIONS AS REQUIRED FOR THIS WORK AND MAKE ALLOWANCE FOR EXISTING CONDITIONS BEFORE SUBMITTING BID. VERIFY WORK REQUIRED WITH POWER COMPANY AND TELEPHONE COMPANY.
4. CUT AND PATCH THE CONSTRUCTION WORK AS REQUIRED FOR PROPER INSTALLATION OF THE ELECTRICAL WORK. ALL PATCHING SHALL MATCH THE SURROUNDING WORK TO THE SATISFACTION OF THE ARCHITECT. ALL CONDUIT SHALL BE INSTALLED CONCEALED UNLESS SPECIFICALLY APPROVED BY THE ARCHITECT. COORDINATE SAW CUTTING WITH LANDLORD'S OR OWNER'S REPRESENTATIVE.
5. WIRE AND CABLE:
   A. CONDUCTORS SHALL BE COPPER, #12 AWG, MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE.
   B. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID AND #8 AWG AND LARGER SHALL BE STRANDED. INSULATION SHALL BE 600 VOLT, THN/THWN.
6. PROVIDE ENGRAVED LAMINATED PHENOLIC BLACK-ON-WHITE (UNLESS NOTED OTHERWISE) NAMEPLATES SECURED TO EQUIPMENT WITH ADHESIVE AND SCREWS FOR PANELBOARDS, RELAY CABINETS, TRANSFORMERS, DISTRIBUTION BOARDS, AND MAIN PANELBOARD - IDENTIFYING EQUIPMENT DESIGNATION (CORRESPONDING WITH DESIGNATION USED ON DRAWINGS) AND EQUIPMENT VOLTAGE. LETTERING SHALL BE 1/4" HIGH. PROVIDE LABELS FOR CIRCUIT BREAKERS, FUSIBLE SWITCHES AND STARTERS IN PANELBOARDS AND DISTRIBUTION BOARDS FOR EACH DEVICE IDENTIFYING EQUIPMENT CONTROLLED. LETTERING SHALL BE 1/8" HIGH.
7. ALL DEVICES SHALL HAVE AN INTERRUPTING CAPACITY NOT LESS THAN THE POWER COMPANY AVAILABLE FAULT CURRENT, OR AS INDICATED ON THE DRAWINGS.
8. AVAILABLE SPACE FOR MAIN PANELBOARD IS LIMITED. PANELBOARD MUST FIT IN ALLOCATED SPACE. COORDINATE WITH CONSTRUCTION AS REQUIRED.
9. 120/208 VOLT BRANCH CIRCUIT PANELBOARD BREAKERS SHALL HAVE A MINIMUM UL SERIES RATING OF 65 KAIC WITH UP-STREAM FEEDER BREAKERS AS NOTED.
10. ALL WIRING SHALL BE IN CONDUIT, E.M.T. OR RIGID. FLEXIBLE CONDUIT MAY ONLY BE USE FOR FINAL CONNECTIONS AND WITH GREEN EQUIPMENT GROUNDING CONDUCTOR.

NOTE!
AS NOTED IN THE SPECIFICATIONS, ALL WIRING LAYOUTS, PIPING LAYOUTS AND DUCT LAYOUTS ARE SCHEMATIC. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONSTRUCTION AND STRUCTURE OF THE BUILDING AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD. EACH TRADE CONTRACTOR SHALL VERIFY WITH THE GENERAL CONTRACTOR THAT HE HAS THOROUGHLY REVIEWED AND COORDINATED ALL LOCATIONS AND ROUTINGS WITH ALL OTHER TRADES PRIOR TO FABRICATION OF CONDUITS, DUCTS, OR PIPING, AND START OF INSTALLATION OF SAME (INCLUDING SPRINKLER PIPING WHEN PRESENT ON JOB). ANY INSTALLATION OR CONSTRUCTION CONFLICTS WHICH OCCUR IN THE FIELD SHALL BE RESOLVED BY THE TRADE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ARCHITECT AND AT NO EXPENSE TO THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

4 SWITCHGEAR AND CONTROL EQUIPMENT NOTES:

1. PURCHASE PANELBOARDS, SURGE ARRESTOR, AND TVSS FROM ONE OF THE TWO NATIONAL ACCOUNTS VENDORS (SEE SHEET E4.2 SECTION CI6440, PANELBOARDS) PROVIDING SIEMENS OR SQUARE D EQUIPMENT NO SUBSTITUTIONS ALLOWED
2. PURCHASE CONTROL PANEL "CFA-T500" OR ANY ADDITION SUB PANELS FROM SUNCOAST ENVIRONMENTAL, INC. (NO SUBSTITUTIONS ALLOWED.) ALL EQUIPMENT IN THE CONTROL PANEL SHALL BE INSTALLED, WIRED AND CONNECTED AT THE FACTORY, INCLUDING: AUTOMATIC LIGHTING CONTROL SYSTEM, LIGHTING RELAYS, HVAC STARTERS, POWER SUPPLIES, MISCELLANEOUS RELAYS AND CONTROLS, AND THERMOSTATS.
   CONTACT : SCOTT DYER (877)544-6679.
   CONTRACTOR SHALL PROVIDE PANEL FEEDERS A, B, C, D, E, F, G, H & POS BRANCH CIRCUIT CONDUIT AND WIRE, AND INSTALL ALL EQUIPMENT AS REQUIRED.
   ALL BREAKERS AND PANELS SHALL BE SIEMENS OR SQUARE D. DEPENDING ON THE CHICK-FIL-A REGION THE STORE IS LOCATED.
   SQUARE D EQUIPMENT: CONTACT GRAY BAR.
   SEIMENS EQUIPMENT : CONTACT SUNCOAST.
   SCOTT DYER (877)544-6679.

TVSS AND SURGE ARRESTOR UNITS SHALL BE MOUNTED DIRECTLY ADJACENT TO THE SIDE OF THE MAIN DISTRIBUTION PANEL IN NEMA 3R ENCLOSURES. CLOSE NIPPLE THE UNITS TO THE SIDE OF THE PANEL. PROVIDE CONNECTION OF TVSS UNIT TO BREAKER IN PANEL. CONNECT SURGE ARRESTOR TO MAIN INCOMING LUGS OF THE PANEL. CONNECT USING MINIMUM LENGTH OF WIRE WITHOUT SHARP BENDS IN THE WIRE AND NOT BE LENGTHENED FROM WIRE LENGTH PROVIDED WITH THE TVSS OR SURGE SUPPRESSOR DEVICE.

Voltage Drop Calculations

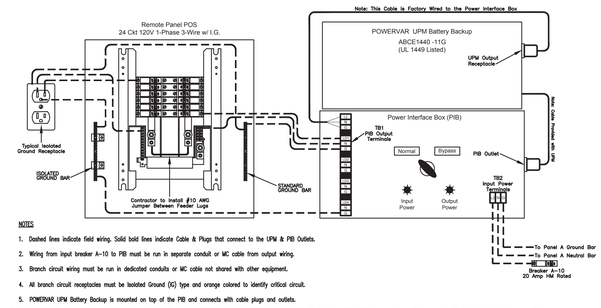
ORIGIN POINT	BUS/FEEDER DESCRIPTION	PHASE	SOURCE POINT	FEEDER CONDUIT TYPE	MATERIAL CU OR AL	#	WIRE/BUS SIZE	L-L VOLTS (E)	CIRCUIT LENGTH (L)	LOAD POWER FACTOR (PF)	CIRCUIT LOAD (A)	CONDUCTOR RESISTANCE (R)	CONDUCTOR REACTANCE (X)	KVA	DEGREE RISE	Z	V SEC	VOLTAGE DROP %VD	TOTAL V.D. %VD CUM	FAULT POINT (F#)
1	UTILITY SERVICE POINT																			1
2	NEW PANEL MDP	3	1	M	CU	4	SET(S) OF 350 KCMIL	208	50	0.9	1092	0.039	0.05					0.85	0.85	2
3	NEW AC-1	3	2	M	CU	1	SET(S) OF 1/0 AWG	208	25	0.9	142	0.120	0.055					0.39	1.04	3
4	NEW PANEL E	3	3	M	CU	2	SET(S) OF 3/0 AWG	208	65	0.9	246.2	0.079	0.052					0.62	1.27	4
5	EXISTING AC-3	3	4	M	CU	1	SET(S) OF 4 AWG	208	95	0.9	60	0.310	0.060					1.45	2.72	5

LOAD SUMMARY

(NOT ALL ELECTRIC RESTAURANT)

THE FOLLOWING IS BASED ON NEC 2020

LIGHTING	39548
RECEPTS TO 10 KVA	10000
RECEPTS REMAINING	15308
SPACE HEATING	0
AIR CONDITIONING	124690
NON-SEASONAL MOTORS	21669
WATER HEATER	2940
KITCHEN EQUIPMENT	192679
CONTINUOUS LOADS	0
NON-CONTINUOUS LOADS	209100
TOTAL CONNECTED KVA	615.9 KVA
IF TOTAL IS 0-200 KVA, THEN TOTAL LOAD 100%	
IF TOTAL IS 201-325 KVA, THEN LOAD OVER 200 AT 50% + 200	
IF TOTAL LOAD IS 326-800 KVA, THEN LOAD OVER 325 AT 45% + 262.5	393.4
IF TOTAL LOAD IS OVER 800 KVA, THEN LOAD OVER 800 AT 20% + 476.3	
DIVERSIFIED AMPS AT 208 VOLT	1092.0 AMPS



NOTES

1. Dashed lines indicate field wiring. Solid bold lines indicate Cable & Plugs that connect to the UPM & PIB Outlets.
2. Wiring from input breaker A-10 to PIB must be run in separate conduit or MC cable from output wiring.
3. Branch circuit wiring must be run in dedicated conduits or MC cable not shared with other equipment.
4. All branch circuit receptacles must be Isolated Ground (IG) type and orange colored to identify critical circuit.
5. POWERVAR UPM Battery Backup is mounted on top of the PIB and connects with cable plugs and outlets.

POWERVAR LAPC with POWER INTERFACE BOX (PIB) and Panel POS Wiring Diagram

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

INTERPLAN
INTERPLAN LLC

ARCHITECTURE
ENGINEERING
PERMITTING

220 E. CENTRAL PKWY, STE 4000
ALTAMONTE SPRINGS, FL 32701
407.645.5008

SEAL:

STATE OF SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 34876 — TREVOR HINSON

CORPORATE SEAL:

STATE OF SOUTH CAROLINA — INTERPLAN, LLC — ORLANDO, FL 01060 — REGISTERED ARCHITECT

STATE OF SOUTH CAROLINA — INTERPLAN, LLC — No. C02393 — CERTIFICATE OF AUTHORIZATION

CHICK-FIL-A
CENTRE POINTE FSU
4926 CENTRE POINTE DR.
NORTH CHARLESTON, SC 29418

FSR#01936

BUILDING TYPE / SIZE: S06-C-R
RELEASE: 2023-004
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2022.0771
DATE 03/13/23
DRAWN BY RZ
CHECKED BY MI/SN

SHEET
SINGLE LINE DIAGRAM

SHEET NUMBER
E3.2

MARIBR - 02/13/2024 9:21:10 AM

SECTION C16100
ELECTRICAL GENERAL PROVISIONS

PART 1- GENERAL

1.01 WORK INCLUDED
A. Provide all materials, labor and equipment required to furnish and install a complete electrical system as indicated on drawings and as specified herein.

1.02 REGULATORY REQUIREMENTS
A. Equipment furnished shall be UL listed where such label is available. Installation shall conform to UL standards where applicable.

B. Electrical work shall be installed in accordance with drawings and specifications, NEC and NFPA codes in effect at project location, state and local electrical and building codes and special codes having jurisdiction over specific portions within complete installation.

C. all references shall be made to the florida buidling code FBCB (6th edition) ; FBCEC (6th edition) and NEC 2014

1.03 SUBMITTALS
A. Submit list of materials and equipment prior to manufacture, order or installation and within twenty days after award of contract for approval. Include each item of material and equipment whether or not shop drawings are also required. List shall include name of manufacturer, catalog number and other complete identification as well as dimensions and detailed data. Submittals shall included for the following:
1. Lighting Fixtures
2. Panelboards/Breakers
3. Wiring Devices and Device Plates
4. Enclosed Switches

B. Certified shop drawings and submittals shall bear stamp of approval of contractor as evidence that drawings have been checked. Drawings submitted without this stamp of approval will not be considered and will be returned for proper resubmission.

C. If submittals show variances or substitutions from requirements of contract, contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment. Otherwise contractor shall not be relieved of responsibility for executing work in accordance with contract even though such submittals have been approved.

1.04 SITE VISIT
A. Visit job site prior to bid date to determine actual conditions under which work shall be done, to familiarize oneself with project and to verify total scope of work required. Failure to do so shall not constitute a reason for an extra charge.

SECTION C16101
BASIC MATERIALS AND METHODS

PART 1 - GENERAL

1.01 COORDINATION
A. Obtain and review shop drawings, product data, and manufacturer's instructions for equipment furnished under other sections to determine connection locations and requirements.

B. Sequence rough-in of electrical connections to coordinate with installation and start-up of equipment furnished under other sections.

PART 2 - PRODUCTS

2.01 SUBSTITUTIONS
A. Where specifications list one or more manufacturers and do not include "or approved equal", furnish materials made by one of manufacturers listed. Where "or approved equal" is included, contractor may substitute equal products by another manufacturer subject to approval by engineer and owner.

PART 3 - EXECUTION

3.01 INSTALLATION
A. Make electrical connections to utilization equipment in accordance with equipment manufacturer's instructions.

B. Drawings are diagramatic and shall not be scaled for exact sizes or locations, they are not intended to disclose absolute or unconditional knowledge of actual field conditions.

C. Protect work and materials from damage by weather, entrance of water and dirt. cap conduit during installation. Avoid damage to materials and equipment in place.

D. Satisfactorily repair or remove and replace damaged work with new materials. Deliver equipment and materials to job site in original, unopened, labeled containers. Store ferrous materials to prevent rusting. Store finished materials and equipment to prevent staining and discoloring.

E. Trenches shall be excavated 6" below elevation of bottom of conduit.

F. Failure to route conduit through building without interfering with other equipment and construction shall not constitute a reason for an extra charge. Equipment, conduit and fixtures shall fit into available spaces in building and shall not be introduced into building at such times and manner as to cause damage to structure. Equipment requiring service shall be readily accessible.

3.02 TESTING AND EQUIPMENT SERVICING
A. Make test to ensure that entire system is in proper operating condition, and that adjustments and apparatus setting of circuit breakers, fuses, control equipment and apparatus have been made. Correct defects discovered during tests.

3.03 REMOVAL OF DEBRIS
A. Remove surplus materials and debris caused by, or incidental to, electrical worK. Remove such debris at frequent intervals. Keep job clean during construction.

3.04 IDENTIFICATION OF EQUIPMENT
A. Identify electrical distribution equipment, disconnects, and contactors with black laminated plastic name-plates, attached with two screws, engraved with 1/4" high, white letters.

3.05 TEMPORARY LIGHTING AND POWER IN AREAS OF CONSTRUCTION
A. Provide, maintain and remove after construction is completed, temporary lighting adequate for workman safety and temporary power for all trades including any 3 phase power required.

B. Provide and maintain barricade lighting where required to adequately protect owner against liability for damage to public or personnel. All lamps used in barricade shall be 60 watt red, installed in weatherproof socket with wire guard. All wiring shall be approved for weatherproof installation.

3.06 GUARANTEE-WARRANTY
A. Guarantee work to be free from defects of materials and workmanship for a period of one year from date of final acceptance of building. Repair and replace defective work and other work damaged thereby which becomes defective during term of guarantee-warranty. Furnish owner with three written copies of guarantee-warranty.

SECTION C16120
RACEWAYS AND CONDUIT SYSTEMS

PART 1 - PRODUCTS

1.01 ACCEPTABLE MANUFACTURERS
A. Rigid IMC, and EMT conduit shall be hot-dipped, galvanized, or electro-galvanized steel by Allied, Republic, Triangle, Wheatland, or approved equal.

B. PVC conduit shall be Carlon, schedule 40, 90 degrees C. rated, unless otherwise noted.

C. MC cable shall be manufactured by AFC Cable Systems or approved equal. Type "AC-90" is not allowed. All MC Cables shall have a green equipment ground conductor and and isolated ground (green + yellow stripe) conductor for isolated ground circuits (POS System). fitting used for connecting MC cable to boxes , cabinets , or other equipment shall be listed and identified for such use .

D. Associated couplings, connectors and fittings shall be steel as manufactured by Raco or equivalent. Catalog numbers used below are those of Raco.

E. Erickson Couplings, Series 1502, shall be used where neither length of conduit can be rotated.

F. Insulated bushings shall be series 1402.

G. EMT box connectors shall be compression fittings.

H. Conduit, connectors, couplings and fittings shall be UL listed and labeled.

1.02 ELECTRICAL METALLIC TUBING (EMT)
A. Use Electrical Metallic Tubing (EMT) where drawings call for conduit to be:
1. Concealed in walls.
2. Installed above suspended ceilings.
3. Installed exposed, above 6 feet.

1.03 INTERMEDIATE METAL CONDUIT (IMC)
A. Use Intermediate Metal Conduit (IMC) where drawings call for conduit to be:
1. Installed for panelboard feeders.
2. Installed in wet locations (interior and exterior).
3. Installed exposed below 6 feet.

1.04 POLYVINYL CHLORIDE (PVC) RACEWAY
A. Use PVC raceway for:
1. Underground service entrance conduits for telephone and power.
2. Exterior branch circuits installed underground.
3. Interior branch circuit conduits installed in or under concrete slab on ground floor.

1.05 RIGID STEEL CONDUIT (RSC)
A. Use Rigid Steel Conduit for:
1. Install underground for power Service Entrance elbows penetrating floor slab.
2. Exposed to physical damage.

1.06 FLEXIBLE METAL CONDUIT
A. Provide flexible metal conduit for termination at equipment subject to motion and vibration.

B. Length shall not exceed 6 feet in accessible ceiling areas.

C. Shall not be concealed in walls.

D. Where exposed to continuous or intermittent moisture, conduit shall be UL Type EF liquidtight or type as indicated.

E. For connection to ceiling mounted lighting fixtures from outlet boxes.

1.07 MC (METAL-CLAD) CABLE
A. MC Cable may be used, concealed above ceiling and in walls, when allowed by local codes and article 330 of the national electrical code for the connection of the Point Of Sales (POS) system equipment only.

PART 2 - EXECUTION

2.01 INSTALLATION
A. Minimum size of conduits shall be 1/2 inch.

B. Run concealed conduits in direct line with long sweep bends or offsets. Run exposed conduits parallel to and at right angles to building lines. Group multiple conduit runs in banks.

C. Cap ends of conduits to prevent entrance of water and other foreign material during construction.

D. Provide No. 12 AWG copper pull wires or nylon cord in all empty conduits. Steel wire not acceptable as pull wire.

E. Where IMC enters a cabinet, junction box, or pull box conductors shall be protected by an insulated bushing. Locknuts shall be installed on conduit outside and inside enclosure.

F. In areas where enclosed and gasketed fixtures and weatherproof devices are specified, where Rigid Conduit enters a sheet metal enclosure, junction box and outlet box, and not terminated in a threaded hub, a steel, or malleable iron nylon insulated hub, complete with recessed sealing "O" ring or sealing locknut shall be used.

G. Provide seal-off fitting in all conduits entering a cold temperature area such as freezers and dry refrigerators.

H. In concrete slabs, block up conduit from forms and securely fasten in place. all conduits in slabs shall have a minimum of 4" inches concrete coverage above.

I. Failure to route conduit through building without interfering with other equipment, and construction shall not constitute a reason for an extra charge. Equipment, conduit, and fixtures shall fit into available spaces in building and shall not be introduced into building at such times and manner as to cause damage to structure or equipment. Equipment requiring servicing shall be readily accessible.

2.02 EMT (ELECTRICAL METALLIC TUBING) RACEWAY
A. Do not use Electrical Metallic Tubing in cinder concrete or cinder fill or where conduit system is in contact with dissimilar metals or in wet locations.

2.03 PVC RACEWAY
A. Use threaded fittings for all connectors and adapters.

B. Provide 1/4-inch nylon pull rope in all primary power and incoming telephone service entrance conduits.

C. PVC conduit shall convert to galvanized rigid metal per detail on drawings.

2.04 FLEXIBLE METAL CONDUIT
A. Where fittings for liquid tight flexible conduit are brought into an enclosure with a knock-out, a gasket assembly, consisting of one piece "O" ring, with Buna-N sealing material,, series 3400, shall be installed on outside of box. Fittings shall be made of either steel or malleable iron only, and shall have insulated throats or insulated bushings.

B. In dry locations, where final connections to motors and other equipment may be made with Flexible Metal Conduit, fittings shall be of steel or malleable iron only with insulated throats or insulated bushings, and shall be of wedge and screw type having an angular wedge fitting between convolutions of conduit.

SECTION C16121
CONDUCTORS

PART 1 - PRODUCTS

1.01 CONDUCTORS
A. Provide 98% conductivity copper conductors with 600-volt insulation. For conductors No. 12 AWG and No. 10 AWG, provide solid type. For all conductors No. 8 AWG and larger, provide stranded type. All conductors shall have THHN/THWN insulation unless noted otherwise.

B. Conductors shall be manufactured by Triangle, American, Rome, Southwire or approved equal.

C. Provide No. 14 AWG type THHN fixture conductors, for conductors entering lighting fixtures.

D. Branch circuit conductors shall be minimum #12 AWG, copper.

PART 2 - EXECUTION

2.01 INSTALLATION
A. Install pull boxes in circuits or feeders over 100 feet long.

B. Make all splices or connections only at outlet, pull or junction boxes.

C. All conductors and connections shall test free of grounds, shorts, and opens prior to energizing circuit.

D. Provide No. 10 wire in lieu of No. 12 wire for any branch circuit in excess of 100 feet linear length to prevent excessive voltage drop.

E. Use Ideal wing nuts, Scotchlok Type Y, R, G, or B, or approved equivalent connectors for fixture connections at outlet boxes.

F. Make feeder taps and joints with OZ Type T, PT, PM or PTS, or approved equivalent clamp connectors as manufactured by Kupler, or with approved compression sleeves. Wrap connectors with No. 10 Electro-Seal or approved equivalent plastic filler and vinyl tape.

G. Leave a minimum of 8" slack wire in every outlet box.

H. Provide color coded wire and with a different color for each phase and neutral and ground as follows: Phase A, B, C: Black, Red and Blue respectively; Neutral: White; Isolated Ground: Green with Yellow Stripes. Approved color tape is acceptable for feeders using larger than #6 conductors.

I. All conductors shall be continuous from origin to panel or equipment termination without splices where possible. Where splices and taps are necessary or are required, they shall be made in splice boxes with suitable connectors.

J. Tighten all electrical connectors and terminals, including screws and bolts, in accordance with manufacturer's published torque tightening values. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL486A and UL486B.

SECTION C16122
OUTLET AND JUNCTION BOXES

PART 1 - GENERAL

1.01 PROJECT CONDITIONS
A. Verify field measurements are as shown on drawings.

B. Verify locations of floor boxes and outlets in work areas prior to rough-in.

PART 2 - PRODUCTS

2.01 OUTLET BOXES
A. Sheet metal outlet boxes: galvanized steel.

B. Cast boxes: type FS, cast feralloy. Provide gasketed cover by box manufacturer.

C. Manufacturers: National, Appleton, General Electric, RACO, OR Steel City.

D. Provide boxes for fixtures with fixture studs in center.

E. Outlet boxes for lighting, switches and receptacles in interior areas with exposed conduit shall be pressed steel and in exterior areas with exposed conduit shall be cast metal with threaded hubs, "FS" type. Use galvanized steel for concealed boxes. Boxes shall be 1-1/2" deep minimum.

2.02 PULL AND JUNCTION BOXES
A. Sheet metal boxes: galvanized steel.

B. Surface-mounted cast metal box: type 4; flat-flanged, surface-mounted junction box.
1. Material: galvanized cast iron.
2. Cover: furnish with ground flange, neoprene gasket, and stainless steel cover screws.

C. In-ground cast metal box: inside flanged, recessed cover box for flush mounting.
1. Material: galvanized cast iron.
2. Cover: nonskid cover with neoprene gasket and stainless steel cover screws.
3. Cover legend: electric.

D. Manufacturers: National, Appleton, General Electric, RACO, Oz-Gedney or Steel City.

PART 3 - EXECUTION

3.01 INSTALLATION
A. Install electrical boxes as shown on drawings, and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.

B. Install pull boxes and junction boxes above accessible ceilings.

C. Inaccessible ceiling areas: Install outlet and junction boxes no more than 6 inches from ceiling access panel or from removable recessed light fixture.

D. Use flush mounting outlet boxes in finished areas.

E. Use stamped steel bridges to fasten flush mounting outlet box between studs.

F. Install flush mounted box without damaging wall insulation or reducing its effectiveness.

G. Use adjustable steel channel fasteners for hung ceiling outlet box.

H. Do not fasten boxes to ceiling support wires.

I. Support boxes independently of conduit, except cast box that is connected to two Rigid Metal Conduits both supported within 12 inches of box.

J. Use gang box where more than one device is mounted together. Do not use sectional box.

K. Use gang box with plaster ring for single device outlets.

L. Use cast outlet box in exterior locations and wet locations.

3.02 OUTLET BOXES
A. Select boxes according to intended use and type of outlet. Ceiling outlet boxes shall be 4" octagon and 1-1/2" deep. Use 2-1/8" deep octagon boxes or 4" square boxes required. All ceiling outlet boxes shall have a fixture stud of no bolt self-locking type installed if required to hang the fixture specified at the outlet.

3.03 JUNCTION BOXES
A. Junction boxes shall be sized according to number of conductors in box or type of service to be provided. Minimum junction box size 4-11/16" square and 2-1/8" deep. Provide screw covers for junction boxes.

B. Use code gauge steel with screw covers for pull boxes with prime coat and provide with screw cover. Size pull boxes according to the NEC.

C. Provide pull box every 100 feet of conduit run or where excessive number of bends necessitates a box for ease of wire installation.

SECTION C16123
GROUNDING AND BONDING

PART 1 - PRODUCTS

1.01 ROD ELECTRODES
A. Material: copper-clad steel.

B. Diameter: 3/4 inch.

C. Length: 10 feet.

1.02 MECHANICAL CONNECTORS
A. Material: bronze.

1.03 GROUNDING CONDUCTOR (WIRE)
A. Material: stranded copper, sized to meet NFPA 70, Article 250 requirements.

PART 2 - EXECUTION

2.01 INSTALLATION
A. Install rod electrodes at locations indicated. Install additional rod electrodes as required to achieve resistance to ground of less than 25 ohms.

B. Provide grounding electrode conductor and connect to reinforcing steel in foundation footing.

C. Provide bonding to meet regulatory requirements.

D. Bond together each metallic raceway, pipe, duct and other metal objects.

E. Provide isolated grounding conductor for circuits supplying all isolated ground outlets. Insulation shall be green with yellow stripe. Size per NEC Table 250.66. This isolated grounding conductor shall run in addition to equipment grounding conductor and along with the branch circuit conductors.

2.02 GROUNDING
A. Ground electrical system in accordance with NEC Article 250 and local authorities having jurisdiction.

B. Install a #3/0 bare copper wire bond across the water meter attached to ground clamps on water line on each side of meter. Arrangements shall be made to do this work at the time the water meter is installed.

C. From the point of entrance of the water main into the building and on the meter side of the main inside water valve and union install a stranded copper cable #3/0 in 1-1/4" conduit to the main distribution panel. Connect the cable to the equipment ground bus.

D. Install a green equipment grounding conductor in each raceway, sized per NEC Table 250-122. Terminate on equipment ground bus within panelboard serving load.

E. Install #6 awg copper grounding conductor from ground bar in main telephone box to grounded neutral bus in main distribution panel.

F. All separate grounding electrode conductors shall be bonded together to limit potential differences between them and between their associated wiring systems. This includes the power system, telephone system, etc.

2.03 FIELD QUALITY CONTROL
A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.

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FSR#01936

BUILDING TYPE / SIZE: S06-C-R
RELEASE: 2023-004
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REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2022.0771
DATE 03/13/23
DRAWN BY RZ
CHECKED BY MI/SN

SHEET
ELECTRICAL SPECIFICATIONS

SHEET NUMBER
E4.1