

⊗ KITCHEN EQUIPMENT NO. SEE KITCHEN EQUIPMENT SCHEDULE & PLUMBING FIXTURE SCHEDULE FOR EQUIPMENT DESCRIPTION & FURTHER INFO.

NOTE
 PLUMBING CONTRACTOR SHALL CLEAN OUT THE EXISTING SANITARY SEWER LINE WITHIN SPACE TO MAIN BUILDING SEWER LINE WHICH SHALL BE FIELD VERIFIED EITHER AT THE STREET OR IN THE PARKING LOT AND ALSO VERIFY ALL NEW WASTE LINES ARE CLEAR. LINES SHALL BE CLEARED OF ALL EXISTING DEBRIS AND SHALL BE GUARANTEED THAT A CLEAR FLOW SHALL EXIST WHEN OFA TAKES POSSESSION. AFTER WASTE LINES ARE INSTALLED, PRIOR TO GRAVEL AND CONCRETE POUR, PLUMBING CONTRACTOR SHALL MAINTAIN THAT WASTE LINE STUB-UPS ARE CAPPED TO ENSURE THAT GRAVEL AND CONCRETE DO NOT ENTER PIPING.

1 BELOW SLAB PLUMBING DEMOLITION PLAN
 SCALE: 1/4"=1'-0"

SHEET NOTES

- 1 VERIFY IF EXISTING SLAB IS A POST TENSION TYPE. CONTRACTOR IS REQUIRED TO PERFORM GROUND PENETRATING RADAR (GPR) TEST ON THE FLOOR PRIOR TO CUTTING FLOOR FOR KITCHEN DRAIN RELOCATIONS.
- 2 LOCATIONS OF WASTE LINES, VENTS, CW LINES & OTHER UNDER AND ABOVE GROUND ITEMS AS SHOWN ON THESE PLANS ARE APPROXIMATE AND THEIR ACTUAL LOCATION MAY VARY SIGNIFICANTLY. FIELD VERIFY ALL EXISTING CONDITIONS, INCLUDING LOCATION, FALL, DIRECTION OF FLOW AND CONNECTING INVERTS, PRIOR TO COMMENCING WORK. NOTIFY CHICK-FIL-A CONSTRUCTION REPRESENTATIVE IF EXISTING MAJOR DISCREPANCIES IN ROUTING OF SERVICE LINES ARE DISCOVERED IN FIELD.
- 3 IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE DURING BID PHASE, WITH EXISTING DRAWINGS PROVIDED BY THE OWNER, IN ORDER TO DETERMINE THE TRUE AS-BUILT CONDITIONS OF THE POTABLE WATER, SANITARY WASTE-VENT AND OTHER PIPING SYSTEMS.
- 4 GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING, STORING, AND RELOCATING EXISTING PLUMBING EQUIPMENT. PLUMBING CONTRACTOR TO COORDINATE DISCONNECTING OF EXISTING EQUIPMENT WITH GENERAL CONTRACTOR PRIOR TO COMMENCING WORK.
- 5 ALL LINES THAT ARE TO BE ABANDONED IN PLACE SHALL BE DEMOLISHED MIN. 6" BELOW SLAB, IN WALL OR ABOVE CEILING AND PLUGGED WATER/AIR TIGHT. ALL AFFECTED ADJACENT SURFACES SHALL BE REPAIRED AND REFINISHED TO MATCH SURROUNDING AREA.
- 6 VERIFY ALL FIXTURES THAT ARE TO BE REUSED ARE IN GOOD USABLE CONDITION, REPLACE FIXTURE IF DEFICIENCIES ARE FOUND
- 7 EXCEPT AS NOTED ON PLAN OR DETAILS, ALL NEW OR RELOCATED FLOOR DRAINS SHALL BE INSTALLED CENTERED IN 3 FT. DIAM. 1" DEEP SLAB DEPRESSION.
- 8 CONTRACTOR IS RESPONSIBLE FOR REPAIRING AND LEVELING OF FLOOR DEPRESSIONS IN AREAS WHERE EXISTING FLOOR DRAINS, CLEANOUTS &/OR OTHER FLOOR ITEMS ARE BEING DEMOLISHED, ABANDONED OR RELOCATED.

KEY NOTES

- 1 EXISTING FLOOR FIXTURE TO REMAIN. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING FIXTURE IS CLEAR AND USABLE AND TRAP PRIMER (IF EXISTING) IS WORKING PROPERLY. IF DEFICIENCIES FOUND IN FIELD, REPLACE PRIMER &/OR WATER SUPPLY LINE OR REPLACE FIXTURE AS NECESSARY.
- 2 DEMOLISH EXISTING VENT IN WALL AND CAP OFF ABOVE CEILING AND BELOW SLAB. VENT BELOW SLAB SHALL BE CAPPED OFF JUST ABOVE TAKE-OFF FROM WASTE LINE.
- 3 EXISTING VENT TO REMAIN IN WALL.
- 4 DEMOLISH EXISTING FLOOR FIXTURE OR ABOVE SLAB FIXTURE, IF NECESSARY, PREPARE LINES FOR CONNECTION OF NEW FIXTURE OR EXTENSION. REFER TO P.I.I. COORDINATE WORK WITH G.C. IF FLOOR DRAIN IS DEMOLISHED, IF EXISTING, CAP WATER LINE FROM TRAP PRIMER.
- 5 EXISTING GREASE TRAP TO REMAIN.
- 6 DEMOLISH EXISTING RESTROOM FIXTURE. CAP WASTE CONNECTION BELOW SLAB, WHERE APPLICABLE, CAP EXISTING VENT/CW/HW CONNECTIONS BACK TO RESPECTIVE MAINS FOR FUTURE CONNECTION.
- 7 EXISTING WATER LINES IN WALL AND BELOW SLAB ARE TO REMAIN.
- 8 CAP AND ABANDON BELOW SLAB WATER LINE.

PRIOR TO CONSTRUCTION, PLUMBING CONTRACTOR SHALL COORDINATE EXISTING LOCATIONS OF EXISTING WATER LINES (BUILDING SUPPLY, DUMPSTER PAD, FIRE SPRINKLER, ETC.) IF DEEMED NECESSARY, REROUTE NEW LINES, SIZED SAME AS EXISTING FROM BUILDING IN ORDER TO AVOID ANY CONFLICT WITH NEW BUILDING ADDITION. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PIPING & TRENCHING REQUIRED.

SITE PIPING DEMO NOTES

- CAREFULLY EXAMINE & VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ANY DEMOLITION WORK. FIELD VERIFY ALL SERVICE LINES LOCATIONS, DIAMETERS, ROUTING, INVERTS ETC.
- REFER TO SITE PLAN FOR EXACT LOCATION OF EXISTING GREASE INTERCEPTOR AND ALL SITE PIPING.

PIPING LEGEND	
EXISTING GREASE WASTE (EGW)	EGW
EXISTING SANITARY SEWER (ESS)	ESS
EXISTING FILTERED WATER UNDER GROUND (EFW)	EFW
EXISTING COLD WATER UNDER GROUND (ECW)	ECW
EXISTING TEMPERED WATER UNDER GROUND (ETW)	ETW
EXISTING HOT WATER UNDER GROUND (EHW)	EHW
EXISTING LINE/FIXTURE TO BE DEMOLISHED	#####
EXISTING WATER LINE(S) IN WALL TO BE DEMOD	∞



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FSR#02167

BUILDING TYPE / SIZE: SR 806
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REVISION SCHEDULE		
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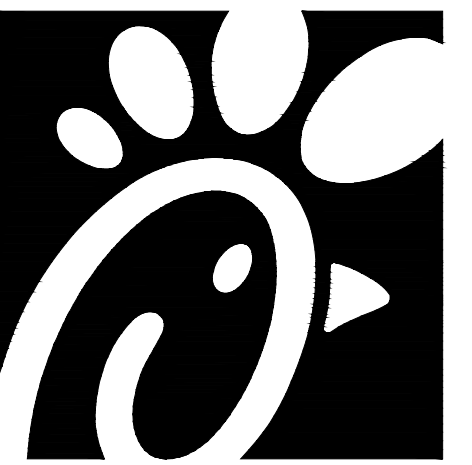
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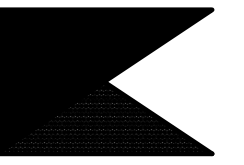
SHEET
 BELOW SLAB
 DEMO PLAN
 SHEET NUMBER

P0.1

CONSTRUCTION



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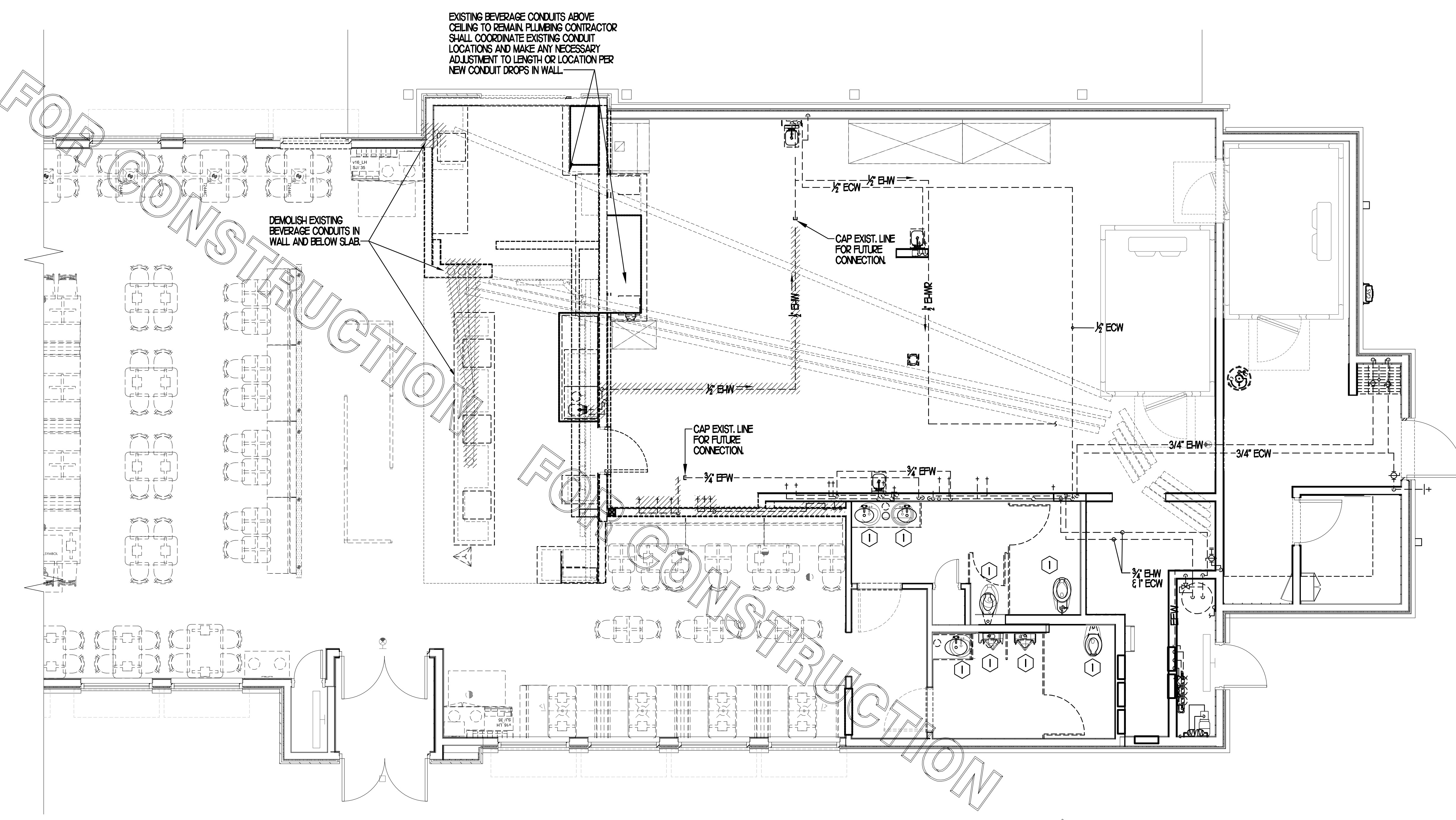
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SHEET ABOVE SLAB DEMO PLAN
SHEET NUMBER

P0.2



I ABOVE SLAB PLUMBING DEMOLITION PLAN
SCALE: 1/4"=1'-0"

SITE PIPING DEMO NOTES

- CAREFULLY EXAMINE & VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ANY DEMOLITION WORK. FIELD VERIFY ALL SERVICE LINES LOCATIONS, DIAMETERS, ROUTING, INVERTS ETC.
- REFER TO SITE PLAN FOR EXACT LOCATION OF EXISTING GREASE INTERCEPTOR AND ALL SITE PIPING.

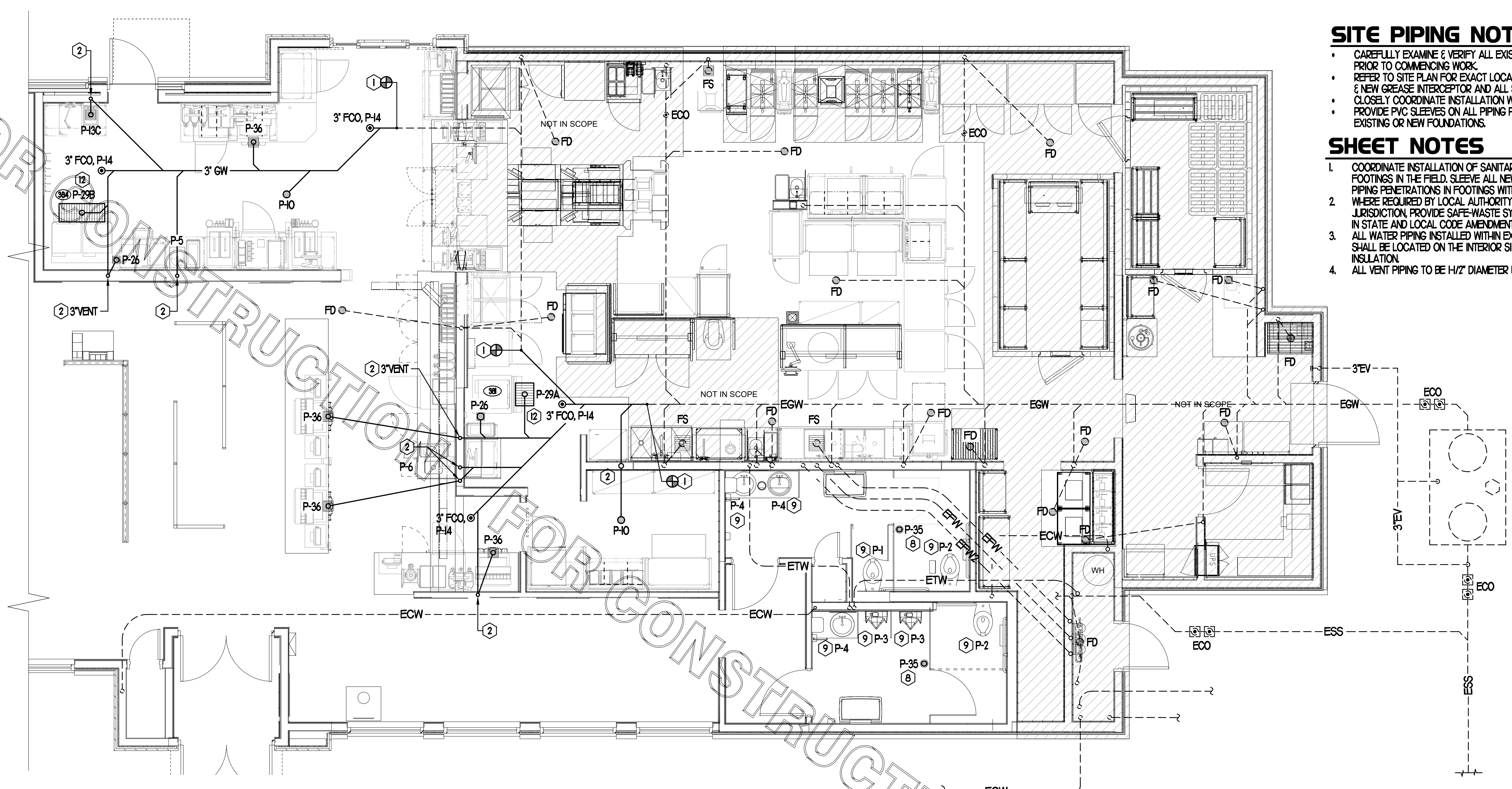
PIPING LEGEND

EXISTING GREASE WASTE (EGW)	---	EGW
EXISTING SANITARY SEWER (ESS)	---	ESS
EXISTING FIRE PROTECTION LINE (F)	---	4F
EXISTING COLD WATER UNDER GROUND (ECW)	---	ECW
EXISTING TEMPERED WATER UNDER GROUND (ETW)	---	ETW
EXISTING HOT WATER UNDER GROUND (E-W)	---	E-W
EXISTING LINE/FIXTURE TO BE DEMOLISHED	////	
EXISTING WATER LINE(S) IN WALL TO BE DEMOD	oo	

KEY NOTES

- DEMOLISH EXISTING RESTROOM FIXTURE. CAP CW/TW CONNECTIONS BACK TO RESPECTIVE MAINS FOR FUTURE CONNECTION.

CONSTRUCTION



SITE PIPING NOTES

- CAREFULLY EXAMINE & VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK.
- REFER TO SITE PLAN FOR EXACT LOCATION OF EXISTING & NEW GREASE INTERCEPTOR AND ALL SITE PIPING.
- CLOSELY COORDINATE INSTALLATION W/ EARTH WORK.
- PROVIDE PVC SLEEVES ON ALL PIPING PENETRATING EXISTING OR NEW FOUNDATIONS.

SHEET NOTES

- COORDINATE INSTALLATION OF SANITARY PIPING WITH FOOTINGS IN THE FIELD. SLEEVE ALL NEW AND EXISTING PIPING PENETRATIONS IN FOOTINGS WITH PVC.
- WHERE REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION, PROVIDE SAFE-WASTE SYSTEM AS OUTLINED IN STATE AND LOCAL CODE AMENDMENTS.
- ALL WATER PIPING INSTALLED WITHIN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF THE INSULATION.
- ALL VENT PIPING TO BE 1/2" DIAMETER UNO.

1 BELOW SLAB PLUMBING PLAN
SCALE: 1/4"=1'-0"

PIPING LEGEND (This Sheet)

EXISTING FLOOR DRAIN	FD
EXISTING FLOOR SINK	FS
EXISTING GREASE WASTE (EGW)	---EGW---
NEW GREASE WASTE (EGW)	---GW---
EXISTING SANITARY SEWER (ESS)	---ESS---
EXISTING COLD WATER UNDER GROUND (ECW)	---ECW---
EXISTING HOT WATER UNDER GROUND (EHW)	---EHW---
EXISTING TEMPERED WATER UNDER GROUND (ETW)	---ETW---
NEW WATER UNDER GROUND (CW, HW, TW OR FW/FW2)	---CW---
POINT OF CONNECTION	○
FLOOR DRAIN	□
FLOOR SINK	○
FLOOR/EXTERIOR CLEANOUT	⊙

FLOOR FIXTURE ELEVATIONS

IMPORTANT: INSTALL THE FLOOR FIXTURE SUCH THAT THE TOP-OF-RIM ELEVATION IS AS FOLLOWS:

FIXTURE	TYPE	RIM ELEVATION
P-10	FLOOR DRAIN	1/2" BFF
P-36	INDIRECT WASTE RECEIVER	1/2" BFF
P-37	FLOOR DRAIN	1/2" BFF

NOTE: THE RIM ELEVATIONS SHOWN HERE SHOULD MATCH THE DEPRESSED SLAB. CONFIRM WITH ARCHITECTURAL PLANS. SEE ARCHITECTURAL PLANS FOR FLOOR SLOPE AT SLAB DEPRESSION FOR FIXTURES INSTALLED BELOW FINISHED FLOOR ELEVATION. FLOOR FIXTURES NOT LISTED HERE SHALL BE INSTALLED FLAT AND FLUSH WITH FINISHED FLOOR ELEVATION.

PLUMBING CONTRACTOR SHALL VERIFY LOCATION, INVERT ELEVATION AND FLOW DIRECTION OF EXISTING LINES PRIOR TO ANY WORK. COORDINATE WITH ALL OTHER UTILITIES LOCATED BELOW GROUND PRIOR TO ANY EARTHWORK.

PLUMBING CONTRACTOR SHALL ROUTE ALL NEW VENT LINES SHOWN AND NOTED UP IN WALL AND TO ABOVE CEILING AND MAKE CONNECTION TO NEAREST VENT HEADER THE SAME SIZE OR LARGER.

KEY NOTES

- CONNECT NEW WASTE/VENT LINE TO EXISTING AS SHOWN. VERIFY FALL, FLOW DIRECTION AND CONNECTING INVERTS. PROVIDE VENT CONNECTION TO EXISTING SYSTEM WHERE APPLICABLE.
- ROUTE NEW VENT LINE UP IN WALL TO ABOVE CEILING. MAKE CONNECTION TO EXISTING VENT HEADER OF SAME SIZE OR LARGER. WHERE DRAIN IS LOCATED IN NEW ADDITION, ROUTE VENT LINE UP IN WALL AND ABOVE CEILING INTO EXISTING BUILDING AND MAKE NECESSARY CONNECTION.
- WHERE NEW BUILDING ADDITION INTERFERES WITH EXISTING REFUSE PAD WATER LINE, PLUMBING CONTRACTOR SHALL ROUTE NEW 3/4" CW BELOW GRADE AS REQUIRED TO YARD HYDRANT. THERE SHALL BE NO JOINTS BELOW SLAB.
- INSTALL FLOOR DRAIN P-35 AT MOP SINK DEPRESSION WITH TOP OF STRAINER 0'-7" BFF.
- PROVIDE AND INSTALL NEW WASTE PIPING BELOW KITCHEN SINK. PROVIDE 1/2" SCHED 40 PVC INDIRECT WASTE DRAIN FROM EACH SINK BASIN TO FLOOR SINK, NO P-TRAPS REQUIRED.
- OWNER PROVIDED, PLUMBER INSTALLED STOP/BFF PANEL. SEE K-SHEET ELEVATIONS FOR EXACT LOCATION. ROUTE 1" DIA SCHED 40 PVC BFF DRAIN TIGHT TO WALL AND THROUGH AT 12" ABOVE GRATE AT MOP SINK DRAIN.
- ROUTE DRAIN LINE FULL SIZE TO FLOOR SINK LOCATED BELOW POT SINK AND TERMINATE WITH CODE APPROVED AIR GAP.
- PROVIDE WITH TRAP SEAL PROTECTOR, P-26A.
- INSTALL NEW RESTROOM PLUMBING FIXTURE. MAKE CONNECTION TO EXISTING WASTE LINE LOCATED BELOW SLAB WITHIN WALL. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL PIPE REQUIRED.
- PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING MANHOLE COVERS WITH NEW SIDEWALK. COORDINATE ALL SITE WORK WITH GENERAL CONTRACTOR AND CIVIL ENGINEER DOCUMENTS.
- NEW 3" DIAMETER VENT PIPING UNDER GROUND AND RISER IN WALL. INSTALL WALL CLEANOUT W/ CLEANOUT PLUG CHARLOTTE PIPE NO. 445-X ON RISER AT 3'-0" ABOVE GRADE TO CENTER OF PLUG. INSTALL J.R. SMITH 4760-12X12" ACCESS DOOR.
- TRANSITION OUTLET OF DRAIN FROM 4" DIA. TO 3" DIA. DRAIN LINE AND TRAP.



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SHEET BELOW SLAB PLUMBING PLAN
SHEET NUMBER

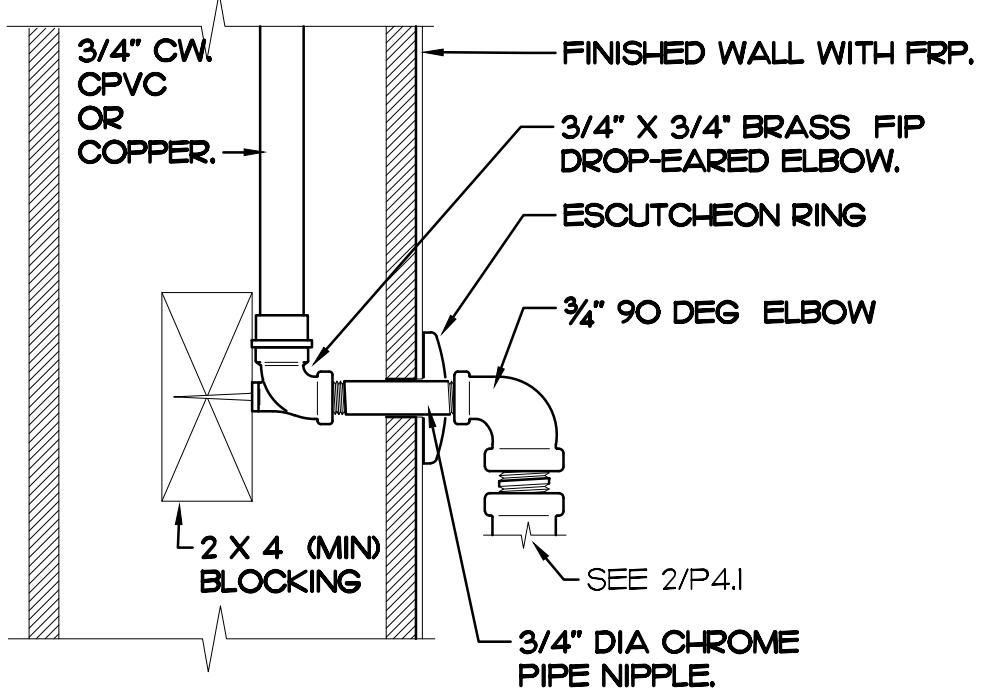
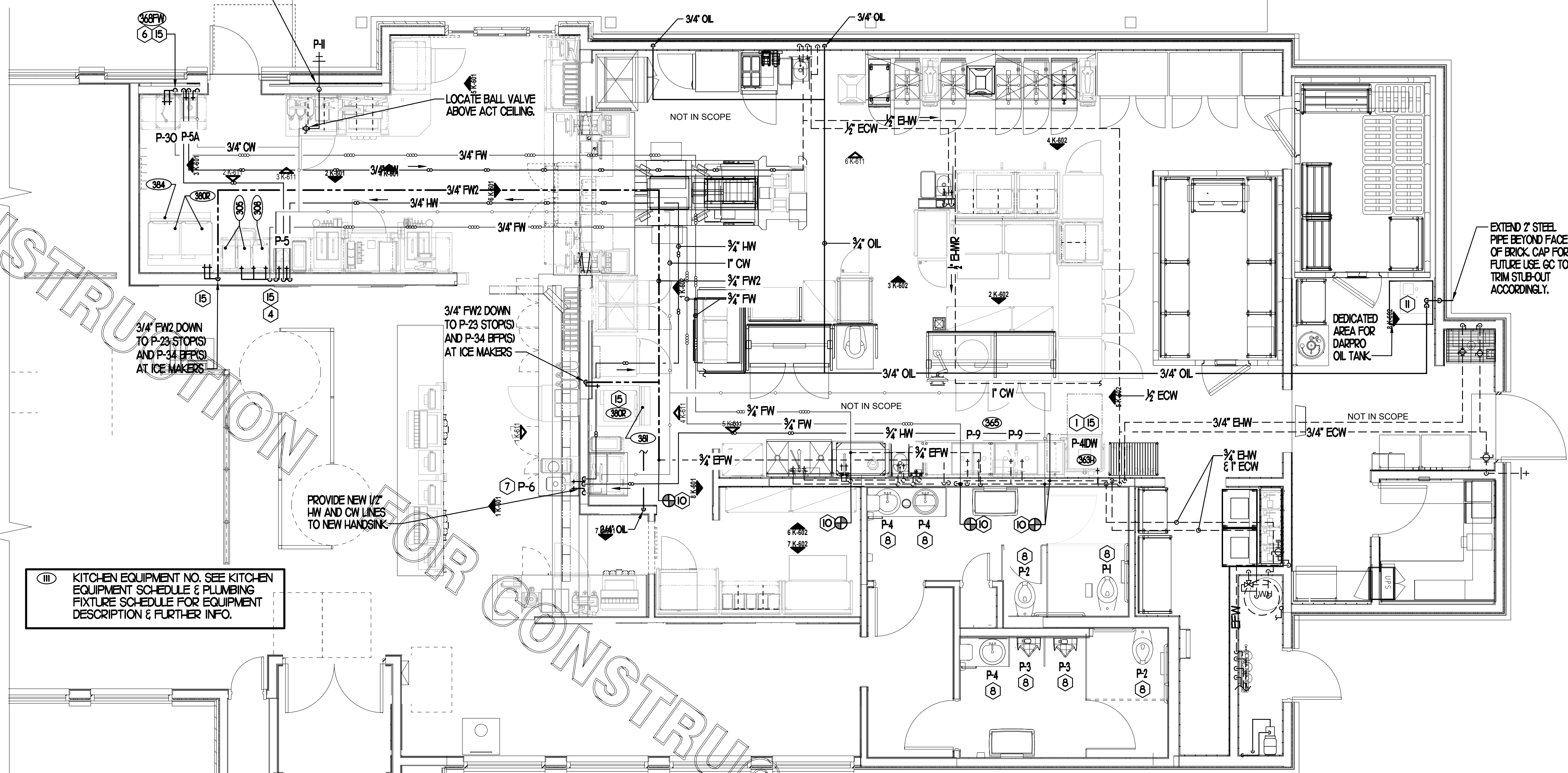
PIPING LEGEND

EXISTING COLD WATER (ECW)	--- ECW ---
EXISTING HOT WATER (EHW)	--- EHW ---
EXISTING FILTERED WATER (EFW)	--- EFW ---
EXISTING PREFILTERED WATER (EPW)	--- EPW ---
POINT OF CONNECTION	⊕
NEW COLD WATER	— CW —
NEW HOT WATER	— HW —
NEW TEMPERED WATER	— TW —
NEW FILTERED WATER	— FW —
NEW FW2 TO COFFEE/TEA BREWERS	— FW2 —
BEVERAGE CONDUIT	— BC —

SHEET NOTES

- COORDINATE VENT TERMINAL LOCATIONS WITH FRESH AIR HOODS ON ROOFTOP EQUIPMENT SO AS TO MAINTAIN MINIMUM 15'-0" CLEARANCE.
- HOLD ALL PIPING ABOVE THE CEILING TIGHT TO STRUCTURE. DUCT LOCATIONS TAKE PRIORITY. SEE DRAWING M11 FOR DUCT LAYOUT. COORDINATE CONFLICTS WITH GC.
- SEE K-SHEET ELEVATIONS FOR KITCHEN EQUIPMENT WATER PIPING ROUGH-IN LOCATIONS.
- VERIFY WALL TYPE AND WALL THICKNESS AT EXTERIOR HOSE BIBBS PRIOR TO ORDERING EQUIPMENT.
- 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.
- UNLESS NOTED OTHERWISE, WATER PIPING SHALL BE COPPER OR CPVC AS LISTED IN SPECIFICATIONS. SEE SPECIFICATIONS.

P-11 MOUNTED 24" AFG. ORDER HYDRANT. EXTEND SUPPLY TUBE AND OPERATING ROD ASSEMBLY INTO INTERIOR WALL. INSTALL PIPE DROP AND VALVE ON INTERIOR SIDE OF WALL INSULATION.

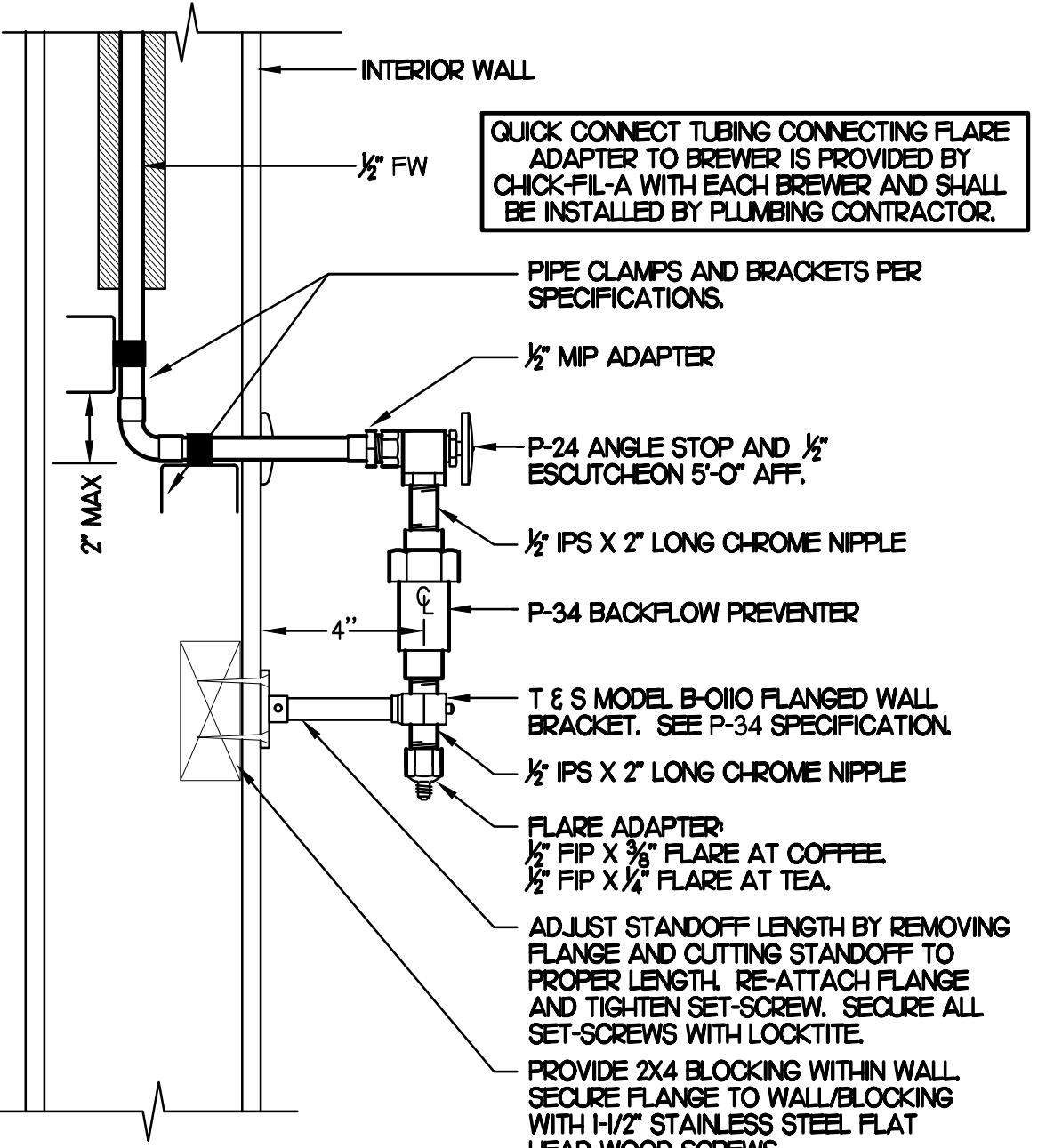


2A SECTION AT PIPING WITHIN WALL

SCALE: NONE

1 ABOVE SLAB PLUMBING PLAN

1/4"=1'-0"



6 COFFEE & TEA BREWER STOP & BFP

NO SCALE

KEY NOTES

- 3/4" CW DOWN TO DISHWASHER. SEE K-SHEETS FOR ELEVATION AND ROUGH-IN HEIGHT. SEE SHEET P-303 FOR WATER PIPE INSTALLATION.
- OWNER PROVIDED. PLUMBER INSTALLED STOP/BFP PANEL. SEE K-SHEET ELEVATIONS FOR EXACT LOCATION. PROVIDE EXPOSED 3/2" BALL VALVE (P-25) AT CONNECTION TO PANEL. ROUTE 1" PVC FROM FACTORY PANEL DRAIN CONNECTION TO P-12 FUNNEL DRAIN LOCATED BELOW BEVERAGE RACK.
- FW & FW2 LINES FROM WATER FILTRATION SYSTEM. REFER TO DETAIL ON P22:
 - 3/4" FW TO CARBONATOR.
 - 3/4" FW TO JUICE STATION.
 - 3/4" FW TO COFFEE & TEA MAKERS.
 - 3/4" FW2 TO ICE MACHINES.
- 1/2" FW TO P-24 & P-34 AT TWO (2) TEA BREWERS AND ONE COFFEE MAKER. SEE DETAIL THIS SHEET.
- TURN 3/4" CONDENSATE PIPING OUT OF COOLER/FREEZER AND EXTEND OUTLET TO P-12 FUNNEL DRAIN. SECURE PIPING TO COOLER WALL WITH RUBBER INSULATED PIPE CLAMPS TO PREVENT GALVANIC CORROSION. SEAL ALL PENETRATIONS IN WALLS WITH PERMAGLUM CORD. TERMINATE ABOVE FUNNEL WITH ELBOW AND AIR GAP. PROVIDE 2" DEEP TRAP WITH OPEN TEE OUTLET.
- 3/4" FW DROP TO TWO-HANDLE FAUCET P-30. MOUNT FAUCET ON WALL. SEE K-SHEETS FOR EXACT LOCATION. PIPE 1/2" FW TO EACH FAUCET INLET WITH 6" SPREAD. PROVIDE BALL VALVE ABOVE CEILING.
- PROVIDE 1/2" HW & CW CONNECTIONS TO FIXTURE.
- INSTALL NEW FIXTURE IN RESTROOM. CONNECT TO EXISTING CW @ OR TW, VENT & SANITARY SEWER SERVICES WITH NEW PIPING REQUIRED. SEE SHEET FIXTURE CONNECTION SCHEDULE ON SHEET P22.
- INSTALL SHOCK ABSORBER (P-25) AT TOP OF WATER LINE DROP DOWN TO FIXTURE.
- MAKE CONNECTION TO EXISTING WATER LINE ABOVE CEILING/WITHIN WALL.
- TURN 3/4" AND 2" SCHEDULE 40 STEEL PIPE DOWN THROUGH CEILING FOR FUTURE DARPRO OIL TANK AND CAP ACCORDINGLY. PROVIDE CHROMED ESCUTCHEONS AT CEILING PENETRATIONS. 1" OIL LINE TO BE CAPPED 2" BELOW CEILING. PROVIDE 3/4" DIA. LEX. SCHEDULE 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.

FOR PRECISE LOCATION OF COLD WATER DISHWASHER CONNECTION ROUGH-IN. SEE KITCHEN ELEVATIONS.

3/4" ELBOW, SEE 2A/P41 FOR PIPING CONNECTION WITHIN WALL.

3/4" BALL VALVE
3/4" DIA X 2" LONG PIPE NIPPLE

3/4" COUPLING FOR MAIN CW CONNECTION TO FACTORY PROVIDED DISHWASHER HOSE. HOSE AND FIP-TO-HOSE-THREAD FITTING PROVIDED AND INSTALLED BY FACTORY DISHWASHER INSTALLATION CREW.

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.

2 DISHWASHER WATER SUPPLY VALVE ASSEMBLY

SCALE: NONE

BRANCH TAKE-OFF FITTINGS AND VALVE WITHIN DASHED AREA SHALL BE REQUIRED AND PROVIDED ONLY FOR CHAMPION DISHWASHERS. REFER TO K-SHEETS PROJECT-BY-PROJECT. FOR DISHWASHER BRAND TO BE PROVIDED AT EACH SITE ADAPT.

3/4" X 1/2" TEE
1/2" 90 DEG ELL
1/2" BALL VALVE SHUT-OFF FOR DRAIN WATER TEMPERING OPTION.

SPLIT-RING PIPE BRACKET. SECURE ALL-THREAD BRACKET-BASE TO WALL WITH 1-3/4" MINIMUM STAINLESS STEEL FLAT-HEAD PHILLIP SCREWS EMBEDDED IN WALL BLOCKING.

COORDINATE WALL BLOCKING LOCATION WITH GENERAL CONTRACTOR.

GENERAL CONTRACTOR TO PROVIDE AND INSTALL WALL BLOCKING.

ICE MAKER INSTALLER SHALL BE RESPONSIBLE FOR INSULATING THE ICE MAKER/BIN DRAIN LINES WITH ARMACELL A.P. ARMALEX 1/2" WALL THICKNESS.

1/2" FW2 WITH P-23 STOP AND P-34 BFP. SEE DETAIL 6/P21.

CLEAR POLY-TUBE DRAIN LINE. EXTENDED FROM ICE MAKER DRAIN OUTLET INTO OPEN TOP OF NEAREST DRAIN RISER MANFOLD. POLY-TUBE DRAIN LINE PROVIDED AND INSTALLED BY ICE MAKER INSTALLER. TYPICAL OF TWO.

WALL-MOUNTED 1/2" DIA. SCHED 40 ICE MAKER DRAIN MANIFOLD INSTALLED BY PLUMBING CONTRACTOR. SURFACE MOUNT ON FRP WALL BEHIND ICE BIN BY PLUMBING CONTRACTOR. PIPE CLIP SUPPORT FOR 1-7/8" OD PIPING. SECURE TO WALL WITH "TEKS" BRAND 1 X 8 LATH SCREWS WITH DRILL-POINT TIP.

PLUMBING CONTRACTOR SHALL NOTE THAT ICE MAKE DETAIL IS TYPICAL FOR BOTH DUAL ICE MAKER AND SINGLE ICE MAKER INSTALLATIONS.

TUBING DOWNSTREAM OF BFP PROVIDED AND INSTALLED BY ICE MAKER INSTALLER. ICE MAKER INSTALLER TO CONNECT TUBING TO ICE MAKER AND BFP'S AND PROVIDE ADAPTER FITTINGS NEEDED TO DO SO.

VERTICAL DROP AT FUNNEL DRAIN WITH DOUBLE EIGHT-THEND OFFSET AROUND BASE TILE. PROVIDE 2" AIR GAP.

INDIRECT WASTE TO FUNNEL DRAIN WITH AIR GAP.

3 ICE MACHINE PIPING

SCALE: NONE



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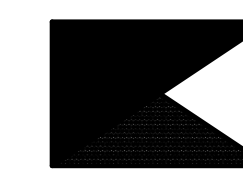
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SHEET ABOVE SLAB PLUMBING PLAN
SHEET NUMBER



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2-18-23

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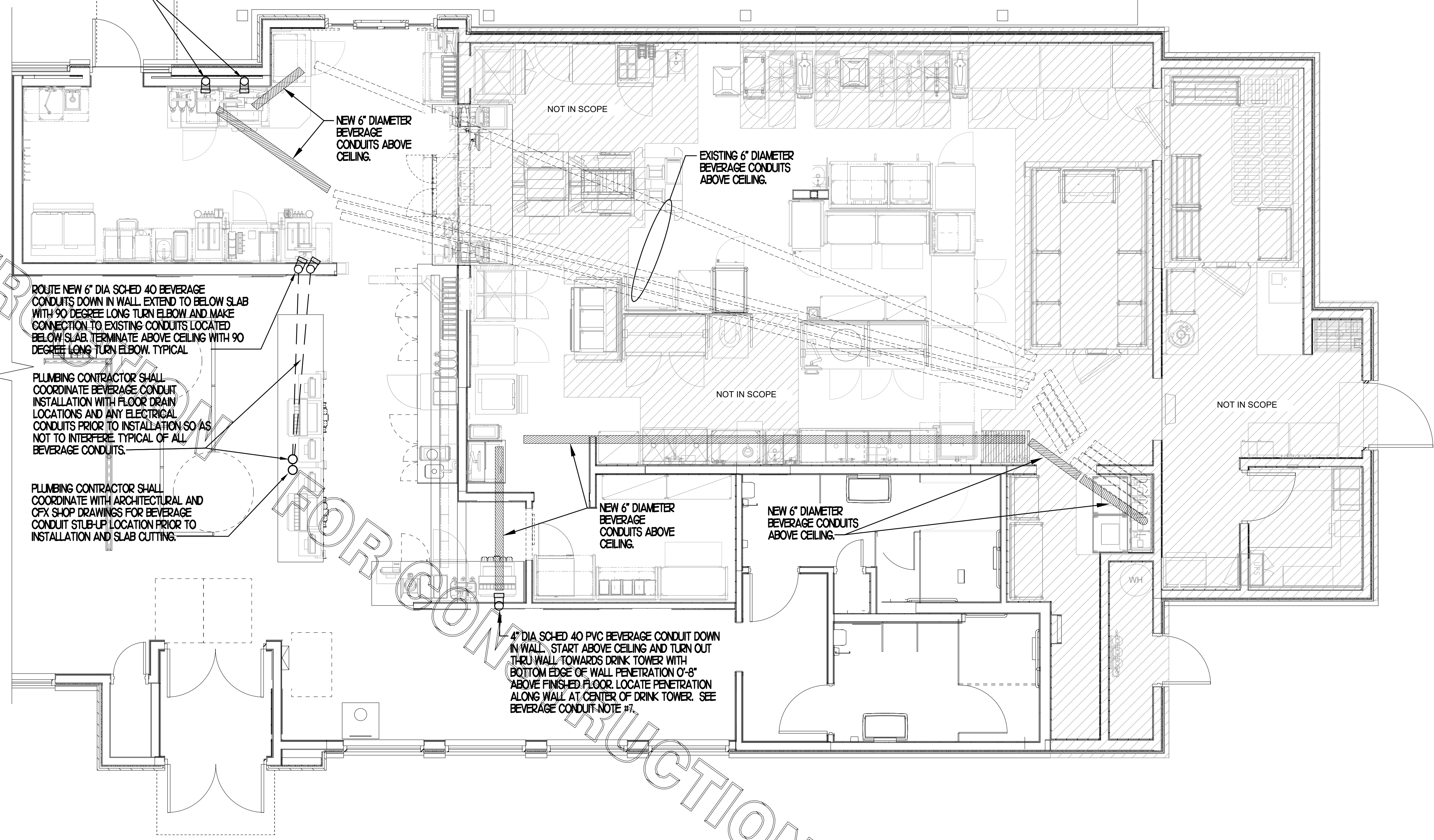
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SHEET BEVERAGE CONDUIT PLAN
SHEET NUMBER

P2.2

4" DIA SCHED 40 PVC BEVERAGE CONDUIT DOWN IN WALL. START ABOVE CEILING AND TURN OUT THRU WALL TOWARDS DRIVE-THRU DRINK TOWER WITH BOTTOM EDGE OF WALL PENETRATION 0'-8" ABOVE FINISHED FLOOR. LOCATE PENETRATION ALONG WALL AT CENTER OF DRINK TOWER. SEE BEVERAGE CONDUIT NOTE #7.



ROUTE NEW 6" DIA SCHED 40 BEVERAGE CONDUITS DOWN IN WALL. EXTEND TO BELOW SLAB WITH 90 DEGREE LONG TURN ELBOW AND MAKE CONNECTION TO EXISTING CONDUITS LOCATED BELOW SLAB. TERMINATE ABOVE CEILING WITH 90 DEGREE LONG TURN ELBOW. TYPICAL.

PLUMBING CONTRACTOR SHALL COORDINATE BEVERAGE CONDUIT INSTALLATION WITH FLOOR DRAIN LOCATIONS AND ANY ELECTRICAL CONDUITS PRIOR TO INSTALLATION SO AS NOT TO INTERFERE. TYPICAL OF ALL BEVERAGE CONDUITS.

PLUMBING CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL AND CFX SHOP DRAWINGS FOR BEVERAGE CONDUIT STUB-UP LOCATION PRIOR TO INSTALLATION AND SLAB CUTTING.

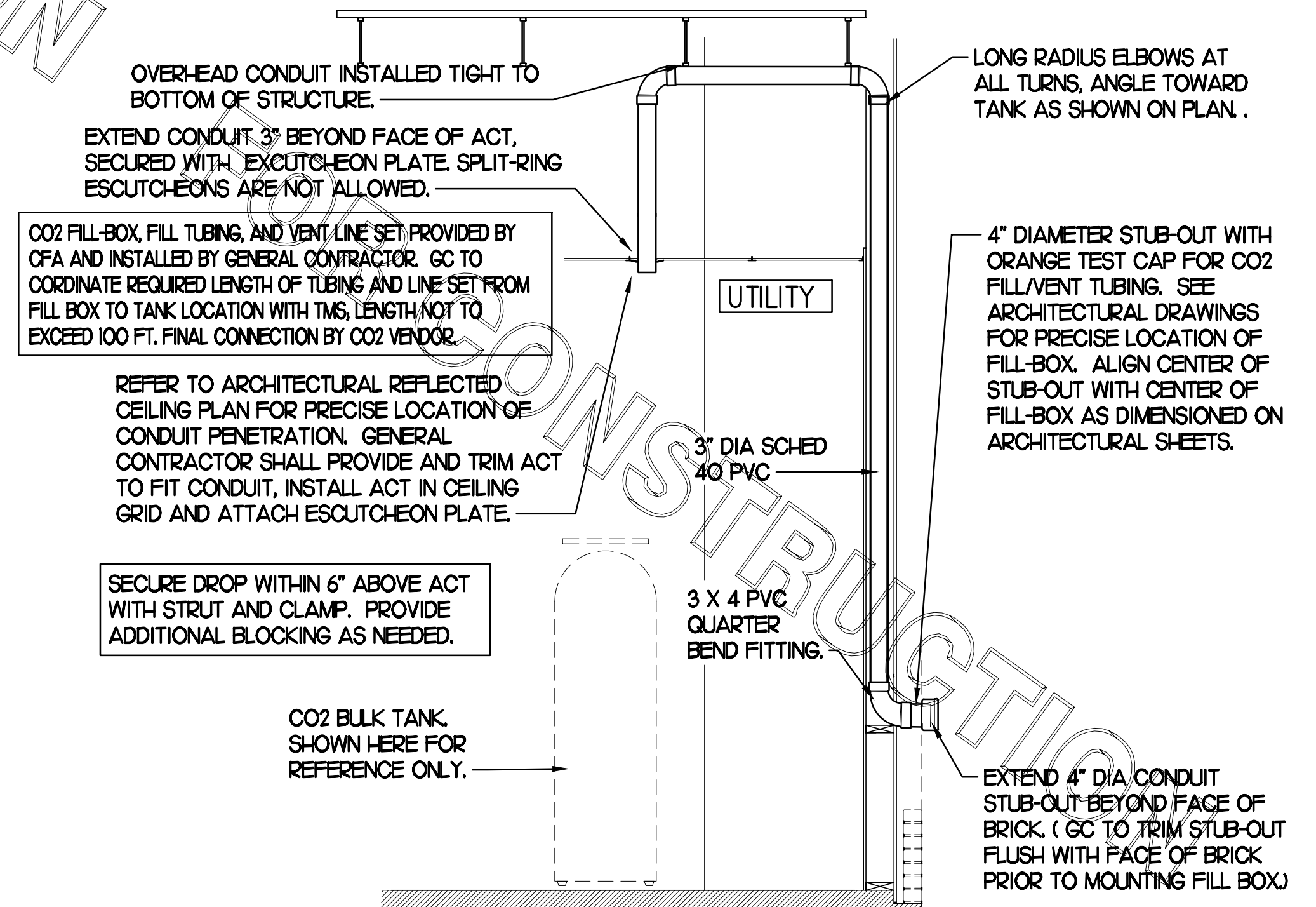
1 BEVERAGE CONDUIT PIPING PLAN
1/4" = 1'-0"

PRIOR TO DEMOLITION OF ANY EXISTING CONDUITS, PLUMBING CONTRACTOR SHALL COORDINATE WITH BEVERAGE PROVIDER IF EXISTING CONDUITS ARE ADEQUATE. ALL EXISTING CONDITIONS SHALL BE VERIFIED PRIOR TO BID.

KITCHEN EQUIPMENT SCHEDULE

TAG	DESCRIPTION	FW	FW2	CW	HW	WASTE	ROUGH-IN
306	TEA BREWER	1/2"	X	X	X	X	P-24
308	COFFEE MAKER	1/2"	X	X	X	X	P-24
309	DISH-WASHER	X	X	3/4"	X	INDIRECT	SEE K-4J
310	POT SINK	X	X	(2) 1/2"	(2) 1/2"	INDIRECT	TWO #365P FAUCETS, P-9
311	KITCHEN WALL FAUCET	(2) 1/2"	X	X	X	X	P-30 48" AFF.
312	ICE MAKER	X	1/2"	X	X	INDIRECT	P-23, SEE DET3/P4J
313	ICE BIN	X	X	X	X	INDIRECT	P-26 DRAIN
314	ICE BIN	X	X	X	X	INDIRECT	P-26 DRAIN

NOTES: 1 REVIEW PLANS AND KITCHEN EQUIPMENT DRAWINGS IN ORDER TO DETERMINE WHICH EQUIPMENT IS NEW, EXISTING TO BE RELOCATED OR EXISTING TO REMAIN IN PLACE.



OVER-HEAD CONDUIT INSTALLED TIGHT TO BOTTOM OF STRUCTURE.

EXTEND CONDUIT 3" BEYOND FACE OF ACT, SECURED WITH ESCUTCHEON PLATE. SPLIT-RING ESCUTCHEONS ARE NOT ALLOWED.

CO2 FILL-BOX, FILL TUBING, AND VENT LINE SET PROVIDED BY CFA AND INSTALLED BY GENERAL CONTRACTOR. GC TO COORDINATE REQUIRED LENGTH OF TUBING AND LINE SET FROM FILL BOX TO TANK LOCATION WITH TMS, LENGTH NOT TO EXCEED 100 FT. FINAL CONNECTION BY CO2 VENDOR.

REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR PRECISE LOCATION OF CONDUIT PENETRATION. GENERAL CONTRACTOR SHALL PROVIDE AND TRIM ACT TO FIT CONDUIT, INSTALL ACT IN CEILING GRID AND ATTACH ESCUTCHEON PLATE.

SECURE DROP WITHIN 6" ABOVE ACT WITH STRUT AND CLAMP. PROVIDE ADDITIONAL BLOCKING AS NEEDED.

CO2 BULK TANK, SHOWN HERE FOR REFERENCE ONLY.

LONG RADIUS ELBOWS AT ALL TURNS, ANGLE TOWARD TANK AS SHOWN ON PLAN.

4" DIAMETER STUB-OUT WITH ORANGE TEST CAP FOR CO2 FILL/VENT TUBING. SEE ARCHITECTURAL DRAWINGS FOR PRECISE LOCATION OF FILL-BOX. ALIGN CENTER OF STUB-OUT WITH CENTER OF FILL-BOX AS DIMENSIONED ON ARCHITECTURAL SHEETS.

EXTEND 4" DIA CONDUIT STUB-OUT BEYOND FACE OF BRICK. (GC TO TRIM STUB-OUT FLUSH WITH FACE OF BRICK PRIOR TO MOUNTING FILL BOX.)

6 CO2 FILL/VENT CONDUIT AND FILL-BOX INSTALLATION
SCALE: NONE

BEVERAGE CONDUIT NOTES

- REUSE EXISTING BEVERAGE CONDUITS OR THEIR PORTIONS WHERE INDICATED ON DRAWINGS. ROUTE BEVERAGE SYSTEM PIPING OVER-HEAD FROM THE BEVERAGE RACK TO DRINK TOWERS IN 6" SCH 40 PVC CONDUITS. ALL CONDUITS 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.
- COORDINATE ROUTING OF ALL CONDUITS WITH HVAC DUCT IN KITCHEN. SEE SHEET MH FOR LOCATION OF AC UNITS AND DUCT ROUTING.
- TURN CONDUITS DOWN THROUGH THE CEILING AT THE BEVERAGE RACK AND PROVIDE CHROME ESCUTCHEONS AT CEILING PENETRATIONS. TERMINATE OPPOSITE END ABOVE CEILING OVER SERVING AREA OR TURN DOWN TO WALLS, AS PER PLANS.
- INSTALL CONTINUOUS CONDUIT FROM CO2 FILL-BOX LOCATION TO BULK CO2 TANK AS SHOWN ON PLANS AND DETAILS. COORDINATE 4" CONDUIT WALL STUB INSTALLATION CLOSELY WITH GENERAL CONTRACTOR AND BRICK MASON. PRIOR TO COVERING UP OF CONDUIT, VERIFY WITH GENERAL CONTRACTOR THE FULL LENGTH OF FILL/VENT TUBING MAY BE INSTALLED AND SUBSEQUENTLY REMOVED FROM CONDUIT. SEE PLAN AND DETAIL #6 THIS SHEET.
- ROUTE 2" DIA BULK CO2 CONDUIT ABOVE CEILING. PROVIDE CHROME ESCUTCHEON AT WALL WITH 45 DEGREE ELBOW TIGHT TO ESCUTCHEON AND DIRECTED DOWNWARD. TERMINATE INTERIOR END OF CONDUIT 1'-0" ABOVE KITCHEN CEILING WITH 90 DEGREE ELBOW DIRECTED TOWARD CARBONATORS. EXTEND 2" DIA CONDUIT FROM WITHIN 1'-0" OF ELBOW TOWARD CARBONATORS. TERMINATE OPPOSITE END ABOVE CEILING ABOVE CARBONATORS.
- AT CONDUIT DROP IN DRIVE-THRU, PROVIDE 1/8" BEND FITTING WITH SHORT PIPE STUB AT BASE OF DROP. CUT STUB AND FITTINGS FLUSH WITH FINISHED WALL.
- FOR BEVERAGE CONDUIT DROPS AT WALL WITH SHEATHING ABOVE THE CEILING, PROVIDE APPROPRIATE FITTING AT UPPER END OF CONDUIT DROP TO EXTEND CONDUIT THROUGH SHEATHING.

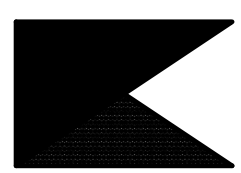
FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	FW	FW2	CW	HW	WASTE
P-1	WATER CLOSET - FLOOR MOUNT (1.6 GPF)	X	X	1"	X	4"
P-2	WATER CLOSET - ADA FLOOR MOUNT (1.6 GPF)	X	X	1"	X	4"
P-3	URINAL - ADA WALL HUNG (1.0 GPF)	X	X	3/4"	X	2"
P-4	LAVATORY - ADA COUNTER TOP (0.50 GPM)	X	X	1/2"	1/2"	H-1/4"
P-5	KITCHEN HAND SINK - WALL HUNG (1.0 GPM)	X	X	1/2"	1/2"	H-1/2"
P-5A	KITCHEN DUMP SINK - WALL HUNG (1.0 GPM)	X	X	1/2"	1/2"	H-1/2"
P-6	SINGLE COMP SINK - COUNTERTOP (1.0 GPM)	X	X	1/2"	1/2"	H-1/2"
P-9	POT SINK (0.65 GPM SPRAYER)	X	X	(2) 1/2"	(2) 1/2"	(4) H-1/2"
P-10	FLOOR DRAIN (ROUND TOP)	X	X	X	X	3"
P-11	WALL HYDRANT (NON FREEZE)	X	X	3/4"	X	X
P-12	FUNNEL DRAIN (3")	X	X	X	X	3"
P-13A	FLOOR SINK (3") 1/2" TOP	X	X	X	X	3"
P-13B	FLOOR SINK (3") 8" TOP	X	X	X	X	3"
P-13C	FLOOR SINK (3")	X	X	X	X	3"
P-14	CLEANOUT INSIDE BUILDING	X	X	X	X	SEE PLAN
P-23	UTILITY CONNECTION (ICE MAKER)	X	1/2"	X	X	X
P-24	UTILITY CONNECTION (COFFEE & TEA)	1/2"	X	X	X	X
P-25	SHOCK ABSORBER	1/2"	1/2" & 3/4"	1/2"	1/2"	X
P-26	FUNNEL DRAIN	X	X	X	X	3"
P-26A	TRAP SEAL PROTECTOR	X	X	X	X	3"
P-29A	ICE MACHINE TRENCH DRAIN (18"x14.5")	X	X	X	X	4"
P-29B	ICE MACHINE TRENCH DRAIN (36"x14.5")	X	X	X	X	4"
P-30	FILTERED WATER FAUCET	(2) 1/2"	X	X	X	X
P-33	TRAP PRIMER (MECHANICAL TYPE)	X	X	1/2"	X	X
P-34	DISPENSER BACKFLOW PREVENTER	1/2"	X	X	X	X
P-35	FLOOR DRAIN	X	X	X	X	3"
P-36	BEVERAGE TOWER INDIRECT RECEIVER	X	X	X	X	3"
P-37	FLOOR DRAIN (SQUARE TOP)	X	X	1/2"	X	3"
P-41DW	DISH-WASHER SUPPLY FAUCET	X	X	3/4"	X	X

NOTES: 1 REFER TO FOOD SERVICE DRAWINGS FOR KITCHEN EQUIPMENT INSTALLATION AND HOOK-UP RESPONSIBILITIES.



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12-18-23

CHICK-FIL-A
MECHANICSBURG FSU
6416 CARLISLE PIKE STE 3500
MECHANICSBURG, PA 17050-2957

FSR#02167

BUILDING TYPE / SIZE: SR 506
RELEASE: 23.04

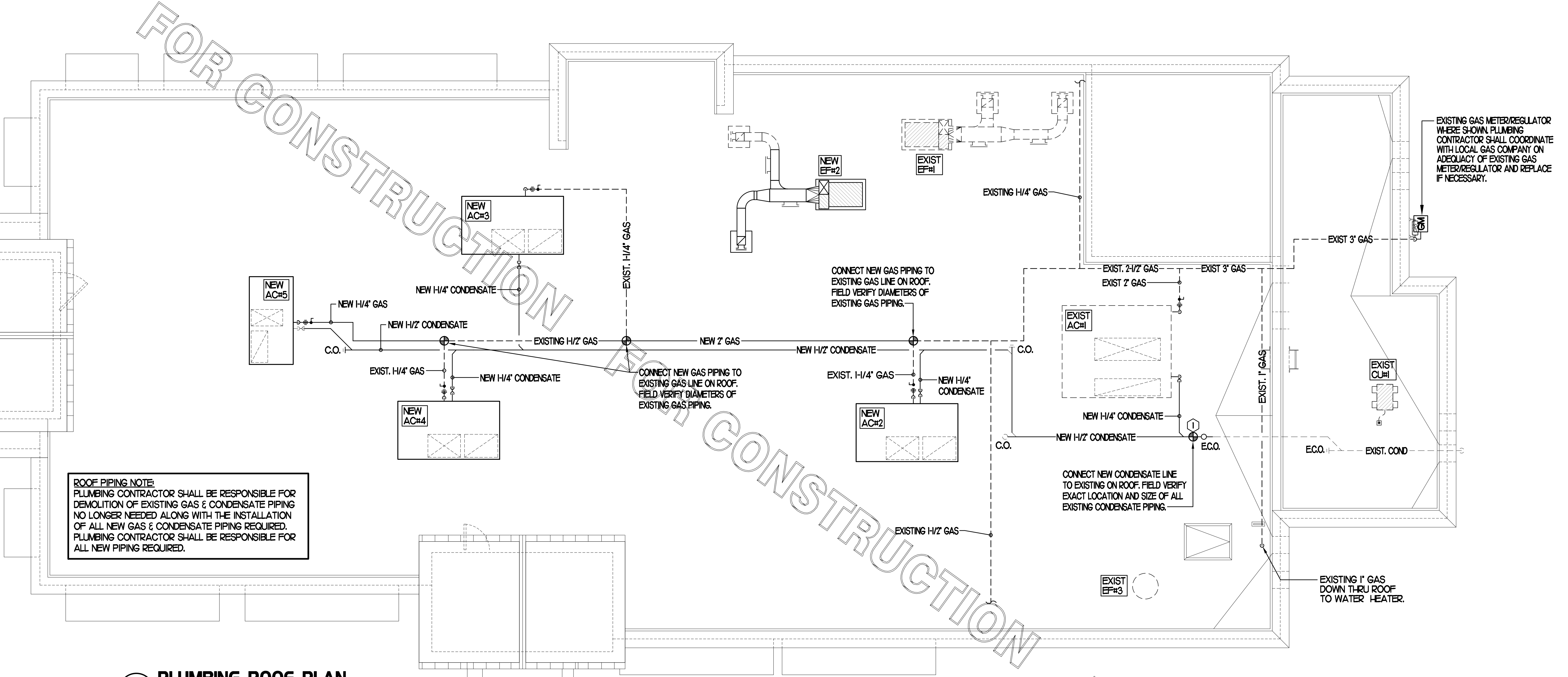
REVISION SCHEDULE
NO. DATE DESCRIPTION

CONSULTANT PROJECT # 23130.HF.R
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SHEET
ROOF PLAN
AND DETAILS
SHEET NUMBER

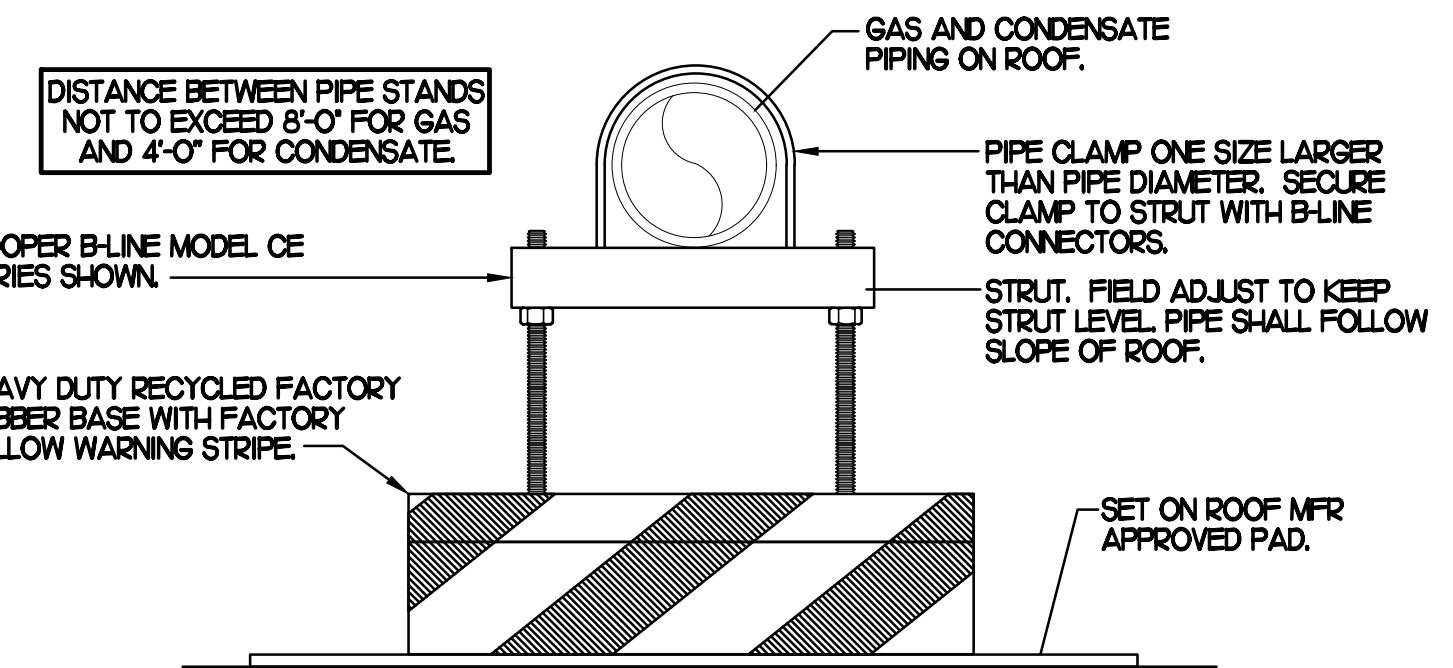
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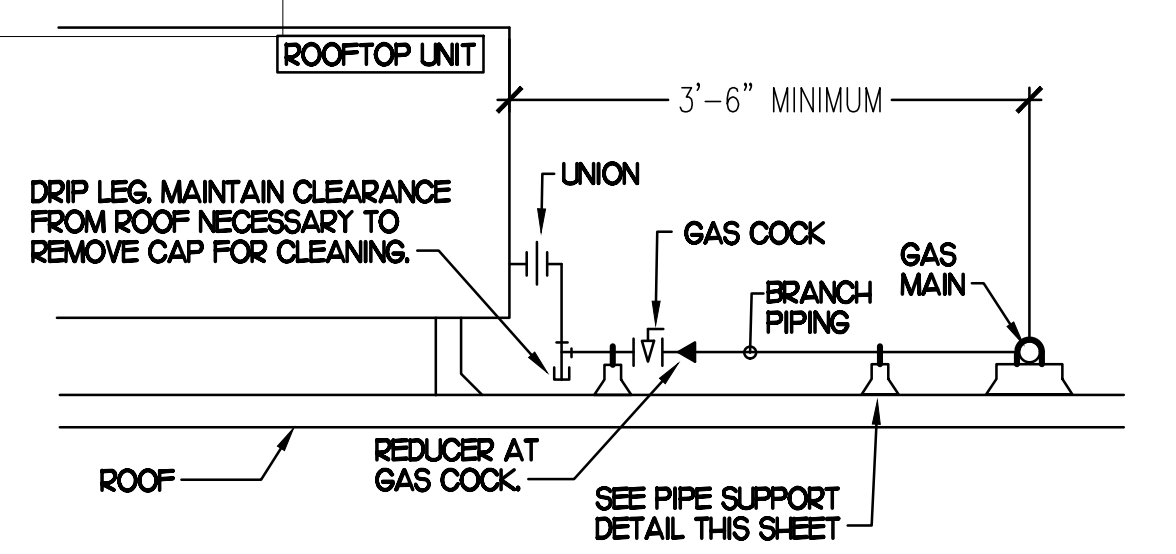
ROOF PIPING NOTE
PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION OF EXISTING GAS & CONDENSATE PIPING NO LONGER NEEDED ALONG WITH THE INSTALLATION OF ALL NEW GAS & CONDENSATE PIPING REQUIRED. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NEW PIPING REQUIRED.

1 PLUMBING ROOF PLAN
SCALE: 1/4"=1'-0"

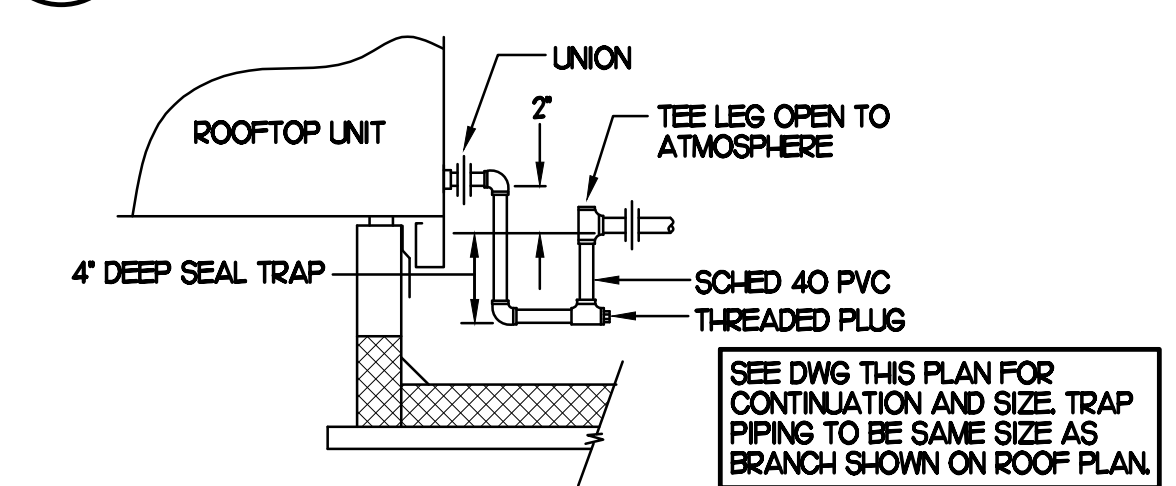
- NOTES**
- NON ADJUSTABLE MODEL CIO PIPE STAND TO BE USED FOR NON-ELEVATED PIPING INSTALLED FLAT ON ROOF DECK.
 - PROVIDE MODEL CE-8 OR CE-12 OR CE-16 AS NEEDED FOR ELEVATING CONDENSATE PIPING TO MAINTAIN PROPER SLOPE AND FOR GAS PIPING CROSSING OVER CONDENSATE PIPING.
 - ENSURE GAS AND CONDENSATE PIPING 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.



4 PIPING SUPPORT
NO SCALE



3 GAS PIPING AT RTU
NO SCALE



2 CONDENSATE DRAIN PIPING
NO SCALE

SHEET NOTES

- NEW GAS PIPING SHALL BE PAINTED WITH A ZINC BASED PRIMER WITH A COLOR TOP COAT SPECIFIED BY THE GC. WHERE COLOR TOP COAT IS NOT REQUIRED, TWO COATS OF ZINC BASE PRIMER SHALL BE USED. ALL FIELD JOINTS SHALL BE COATED WITH TWO COATS OF A ZINC BASED PRIMER. SLEEVE ALL WALL PENETRATIONS WITH SCHEDULE 40 PVC AND PROVIDE STAINLESS STEEL ESCUTCHEONS ON BOTH SIDES OF WALL PENETRATIONS.
- PIPING ON ROOF SHALL NOT BE INSTALLED NEARER THAN 1'-0" FROM INSIDE EDGE OF PARAPET UNLESS NOTED OTHERWISE.
- CONDENSATE PIPING ON ROOF SHALL BE SCHEDULE 40 PVC.
- ANY EXISTING PENETRATIONS OF ROOF BY EXISTING GAS, CONDENSATE, REFRIGERANT OR OTHER PIPING THAT ARE NOT BEING REUSED FOR NEW PIPING SHALL BE PATCHED AND REPAIRED (WATERTIGHT) TO MATCH SURROUNDING AREA.
- FIELD VERIFY ALL LOCATIONS, DIAMETERS, CLEARANCES AND ROUTING OF EXISTING LINES AND EQUIPMENT.

GAS CONNECTION SCHEDULE

EQUIPMENT	GAS LOAD
AC#1 (EXIST)	480,000 BTUS
AC#2 (NEW)	240,000 BTUS
AC#3 (NEW)	240,000 BTUS
AC#4 (NEW)	240,000 BTUS
AC#5 (NEW)	150,000 BTUS
WATER HEATER (EXIST)	80,000 BTUS
GIH #1-#4 (50,000 EA)	200,000 BTUS
TOTAL CONNECTED LOAD	1,630,000 BTUS

REMARKS: 1) EQUIVALENT TO 1,630 CFH
2) 7" W.C. DELIVERY PRESSURE
3) DEVELOPED LENGTH 145 FT. (METER TO AC#5) & 150 FEET (METER TO GIH).
4) VERIFY GAS LOAD OF EXISTING EQUIPMENT.

I. SECTION CIS100 - 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 SWEET 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 B3-A OR F68-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 SCHEDULE 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-2865.
- 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-2865 AND D-2849. 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-2865, D-3311 AND F-186. CEMENTS SHALL MEET ASTM D-2864 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 1/2" 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 100F 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 AP ARMAFLEX WITH MINIMUM 1/2" 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, 800-875-7788.
- 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. 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.
- B. 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 CHANEL.
- 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 SERVING 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 1/4" 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 QIRT 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: ZURN. ACCEPTABLE ALTERNATES: JAY R. SMITH, JONES STEPHENS CORP, WATTS, OR JOSAM.
- B. ALTERNATES TO ZURN (ZRN) FIXTURES: ONLY AS SHOWN ON PLANS. APPROVED JAY R. SMITH (JRS), WATTS (WTS), 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.

2. PLUMBING FIXTURES

- RESTROOM FIXTURES (C15405)
- P-1 WATER CLOSET: TOTO MODEL CT705LUNO1 BOWL WITH 128 GPF TETILA320CP ECO-POWER FLUSH VALVE AND SC534 SEAT. NO SUBSTITUTIONS. WHITE, FLOOR MOUNTED, FLUSH VALVE TYPE, VITREOUS CHINA, 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 CT705LUNO1 BOWL WITH 128 GPF TETILA320CP ECO-POWER FLUSH VALVE AND SC534 SEAT. NO SUBSTITUTIONS. H.C. ACCESSIBLE, WHITE, FLOOR MOUNTED, 17-1/2" HIGH FLUSH VALVE TYPE, VITREOUS CHINA, 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 UT445LUNO1 URINAL WITH TEJULIA20CP 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 T285E10CP ECO-POWER SENSOR HOT/COLD FAUCET WITH THERMOSTATICALLY CONTROLLED ASSE 1070 MIXING VALVE FAUCET, 0.029 GALLONS PER CYCLE, NO SUBSTITUTIONS. PROVIDE MCGUIRE LF75 SUPPLY WITH STOP. MCGUIRE 155-WO GRID DRAIN WITH OFFSET TAILPIECE. MCGUIRE 8372C POLISHED CHROME P-TRAP. P-TRAP SHALL BE PARALLEL WITH BACK WALL. PROVIDE A TRELECO INC. HANDI LAY-GUARD INSULATION KIT MODELS IOE2 AND IOE2Z. 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 (SINK BY TMS) FAUCET: TOTO MODEL #TELK5-C20ETOP - PROVIDED WITH TFP3094 NOZZLE. CONTRACTOR SHALL INSTALL WALL HUNG, STAINLESS STEEL SINK AND FAUCET SET AND MAKE FINAL CONNECTIONS. PROVIDE MCGUIRE LF75 SUPPLIES WITH STOPS AND A MCGUIRE 8912C POLISHED CHROME P-TRAP. ADJUST FAUCET OUTLET TEMPERATURE TO 110 DEGREES F (OR HIGHER AS REQUIRED BY LOCAL JURISDICTION).
- P-5A KITCHEN DUMP SINK ROUGH-IN (SINK BY TMS) FAUCET: TMS MODEL B-1146-CFA-VF05 - PROVIDED WITH TFP3094 NOZZLE. CONTRACTOR SHALL INSTALL WALL HUNG, STAINLESS STEEL SINK AND FAUCET SET AND MAKE FINAL CONNECTIONS. PROVIDE MCGUIRE LF75 SUPPLIES WITH STOPS. PROVIDE MCGUIRE 8912C POLISHED CHROME P-TRAP PROVIDED BY HJC.
- P-6 SERVING COUNTER DROP IN SINK ROUGH-IN (SINK BY CLAYTON FIXTURE) FAUCET: TOTO T24T510CP WITH 1.0 GPM AERATOR. CONTRACTOR SHALL INSTALL SINK AND FAUCET SET AND MAKE FINAL CONNECTIONS. PROVIDE A MCGUIRE 8912C POLISHED CHROME P-TRAP AND MCGUIRE LF75R20 SUPPLIES WITH STOPS WITH 20" CHROME PLATED 3/8" COPPER RISERS. 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 T65 BRASS MODEL B-2345 FAUCET WITH CERAMA SPRING CHECK VALVE CARTRIDGES, HOSE THREAD SPOUT OUTLET, TOP BRACE, ADJUSTABLE INLET SPREAD FROM 3" TO 8", INCLUDE T65 BRASS MODEL 43-072 HOSE THREAD X 3/4" FEMALE NPT CHROME ADAPTER. NO SUBSTITUTIONS. SEE ALSO P-16.
- P-8 VEGETABLE PREP SINK ROUGH-IN (SINK BY TMS) FAUCET: T65 B-0152-14-CR2CT WITH 0.65 GPM SPRAY HEAD. CONTRACTOR SHALL INSTALL SINK AND MAKE FINAL CONNECTIONS. PROVIDE MCGUIRE LF108 STOPS AND BRASSCRAFT 36" CHROME PLATED 1/2" OD COPPER RISERS MODEL 3-36AC. 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-3 SHEET ELEVATIONS FOR FAUCET LOCATIONS. PROVIDE 1/2" SCHEDULE 80 PVC PIPE AND FITTINGS. INDIRECT WASTE LINES FROM EACH SINK BASIN TO FLOOR SINK P-13B, NO P-TRAPS. HJC TO PROVIDE FISHER #2209 DRAINS WITH FLAT STRAINERS.
- P-9 FOUR COMPARTMENT POT SINK ROUGH-IN (SINK BY TMS) FAUCETS: T65 B-0152-14-CR2CT & B2299-OR WITH 0.65 GPM SPRAY HEAD. CONTRACTOR SHALL INSTALL SINK, ASSEMBLE & MOUNT TWO FAUCETS, AND MAKE FINAL CONNECTIONS. PROVIDE MCGUIRE LF108 STOPS AND BRASSCRAFT 36" CHROME PLATED 1/2" OD COPPER RISERS MODEL 3-36AC. ASSEMBLE AND MOUNT ONE TWO-HANDLE FAUCET WITH PRE-RINSE SPRAY ARM. 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-3 SHEET ELEVATIONS FOR FAUCET LOCATIONS. PROVIDE 1/2" SCHEDULE 80 PVC PIPE AND FITTINGS. INDIRECT WASTE LINES FROM EACH SINK BASIN TO FLOOR SINK P-13A, NO P-TRAPS. HJC TO PROVIDE FISHER #2209 DRAINS WITH FLAT STRAINERS.
- P-10 FLOOR DRAIN (3") ZURN E21-PV3-R8 BRONZE SPLUD WITH 6" DIAMETER NICKEL BRONZE STRAINER. ALT: JONES STEPHENS CORP D53-144.
- P-11 WALL HYDRANT (NON-FREEZE) WOODFORD MODEL 67C AUTOMATIC DRAINING WALL HYDRANT WITH DUAL CHECK BFP, ASSE 1052 APPROVED, WALL CLAMP, POLISHED BRASS FINISH, 'C' STYLE INLET. SEE WALL HYDRANT NOTES ON I/P-201 FOR WALL THICKNESS AT WALL HYDRANTS. ALT: (WTS) HY-42.
- P-12 FUNNEL DRAIN (3") ZURN MODEL ZN415-3N-LS-4 FLOOR DRAIN W/FUNNEL. INDIRECT WASTE RECEIVER WITH NICKEL BRONZE STRAINER AND FUNNEL. PROVIDE 6" SQUARE STRAINER WITH 4" ROUND FUNNEL AT WALK-IN COOLER. 4" ROUND FUNNEL. ZURN ZN828-4.
- P-13A FLOOR SINK (POT SINK) ZURN MODEL Z1901-3N-1-23-KC CAST IRON INDIRECT WASTE RECEIVER WITH 1/2" SQUARE BODY, FLASHING CLAMP, 8" DEEP, ALUMINUM SEDIMENT BUCKET, AND NO GRATE. NO SUBSTITUTIONS.
- P-13B FLOOR SINK (VEGETABLE SINK) ZURN MODEL Z1910-3N-1-23-KC CAST IRON INDIRECT WASTE RECEIVER WITH FLASHING CLAMP, 8" SQ. BODY, ALUMINUM SEDIMENT BUCKET, AND NO GRATE. NO SUBSTITUTIONS.
- P-13C FLOOR SINK (DUMP SINK) 3" WASTE CONNECTION ZURN MODEL Z1910-N-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 ZN400-XN-L-T-EP CLEANOUT WITH 6" SQUARE NICKEL BRONZE TOP AND TAPER THREAD BRONZE PLUG. SEE PLAN FOR SIZE, OX-PIPE DIAL.
- P-15 CLEANOUTS OUTSIDE BUILDING ZURN Z1474-NX EXTRA HEAVY DUTY CAST IRON CLEANOUT, 'CO.' CAST IN COVER, ABS PLUG, NEO-LOC OUTLET. (OX-PIPE DIA). ALT: ZURN Z1474-X-N.
- P-16 3-WAY DIVERTER VALVE ASSEMBLY: WATTS MODEL LFB 6780 ROUGH BRASS LEAD-FREE DIVERTER BALL VALVE WITH 3/4" FIP INLET AND OUTLETS AND QUARTER TURN LEVER HANDLE. PROVIDE WITH TWO (2) FORGED BRASS 3/4" MIP X 3/4" MALE GARDEN HOSE THREAD ADAPTERS PLUMBEST MODEL 620-03 OR EQUAL. PROVIDE WITH ONE ASSE IOI APPROVED CHROME PLATED VACUUM BREAKER (WOODFORD MODEL 34H-CH OR EQUAL) FOR INSTALLATION AT MOP SINK. SEE DETAIL ON P41. PROVIDE ALSO TWO 3/4" GLOBE CHROME PLATED BRASS NIPPLE AND 3/4" POLISHED CHROME 90 DEGREE ELBOW.
- P-17 VACUUM RELIEF VALVES WATTS MODEL #LFB36M, 3/4" CONNECTION.
- P-18 EXPANSION TANK: AO SMITH MODEL TW12-5, ACCEPTANCE 219 GALLONS AT 40 PSI PRECHARGE, 3/4" CONNECTION. ALTERNATE MODELS SIZED PER WATER HEATER MANUFACTURER RECOMMENDATIONS ARE ACCEPTABLE.
- P-19 WATER HEATER: BRADFORD-WHITE EF-60T-125E-3N STORAGE TYPE GAS FIRED 60 GALLON WATER HEATER, 125 MBH INPUT, 145 GPH RECOVERY AT 100F RISE, DIRECT VENT, BLOWER POWERED, CONDENSING TYPE WITH THREE-YEAR WARRANTY. CONTRACTOR TO PROVIDE DIELECTRIC HEAT TRAP NIPPLES AND CONCENTRIC VENT TERMINATION KIT. STATE INDUSTRIES SFL-100-199-NE, BHEM GLE80-190, AND BRADFORD WHITE EF-60T-199-3N MODELS ARE ACCEPTABLE SUBSTITUTES.

- P-20 THERMOMETER: PROVIDE TRECICE MODEL B83404 - 04 3" DIAL TYPE THERMOMETER WITH BOTTOM 1/2" NPT. CONNECTION, 4" STEM AND 0 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. LFL007MOT 1/2" DUAL CHECK MODULAR TYPE BACKFLOW PREVENTER MEETING ASSE IOIS AND AWWA C510-92. WHERE REQUIRED BY LOCAL AUTHORITY, USE THE RPZ TYPE. BFP S-HOWN BELOW. ALT: ZURN 112-350XL.
- REDUCED PRESSURE ZONE (RPZ) TYPE
WATTS NO. LFL009M 1/2" MODULAR TYPE WITH TEST PORTS AND INTERMEDIATE RELIEF VALVE MEETING ASSE IOIS AND AWWA 511-89. PROVIDE WATTS NO. 909-AG-C AIR GAP DEVICE. ALT: ZURN 112-97XL2XL.
- P-22 MOP SINK CHECK VALVES: T65 BRASS 1/2" MODEL B-CVM-2 BALL CHECK.
- P-23 UTILITY CONNECTION (ICE MAKERS): PROVIDE A MCGUIRE MODEL LF-H5T06SB LEAD-FREE CHROME WHEEL ANGLE STOP, 1/2" FIP INLET AND OUTLET. PROVIDE CHROME WALL ESCUTCHEON. INSTALL WITH BFP P-34. SEE DETAIL ON P41 FOR PIPING AT ICE MAKERS.
- P-24 UTILITY CONNECTION (COFFEE & TEA BREWERS): PROVIDE A MCGUIRE MODEL LF-H5T06SB LEAD-FREE CHROME WHEEL ANGLE STOP, 1/2" FIP INLET & 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. ALT: (WTS) SSA + SSB, LRS 5005 THRU 5050.
- P-26 FUNNEL DRAIN (3") ZURN ZN415-3N-LS-OF FLOOR DRAIN W/FUNNEL. INDIRECT WASTE RECEIVER WITH NICKEL BRONZE STRAINER AND FUNNEL. PROVIDE 6" ROUND STRAINER WITH 3.25"X2.5" OBLONG FUNNEL. ALT: (JRS) 3510L3-FZ2B.
- P-26A TRAP SEAL PROTECTOR PREVENT TRAP GUARD MODEL TG3H 3" TRAP SEAL INSERT FOR INTERIOR INSTALLATION AND REPLACEMENT ACCESS THROUGH STRAINER. PROVIDE AS NOTED ON P.II. PROVIDE PROSET MODEL TG39-ZURN WHEN USING ZURN FLOOR FIXTURES.
- P-27 WATER PRESSURE GAUGE: TRECICE MODEL 800B, 2-1/2" ROUND, BOTTOM OUTLET WITH 1/4" NPT. CONNECTION AND O TO 100 PSI RANGE.
- P-28 ISOLATION BALL VALVE (8-STOP WATER MANIFOLD PANEL) NIBCO MODEL 4660-T, 3/4", WITH IPS INLET AND OUTLET.
- P-29A ICE MACHINE TRENCH DRAIN ZURN/STAINLESS STEEL. DRAINS TR12-CFA-18 STAINLESS STEEL TRENCH DRAIN, 145" X 18", STAINLESS STEEL SEDIMENT CUP, AND STAINLESS STEEL SERRATED LADDER GRATE. NO SUBSTITUTIONS.
- P-29B ICE MACHINE TRENCH DRAIN ZURN/STAINLESS STEEL. DRAINS TR12-CFA-36 STAINLESS STEEL TRENCH DRAIN, 145" X 36", STAINLESS STEEL SEDIMENT CUP, AND STAINLESS STEEL SERRATED LADDER GRATE. NO SUBSTITUTIONS.
- P-30 FILTERED WATER FAUCET: FILTERED WATER FAUCETS: T65 B-0232-OR-063X (KITCHEN FAUCET) & T65 B-0699-OR (DRIVE-THRU FAUCET). 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 36" DEPTH OF BURY.
- P-32 DUMPSTER PAD DRAIN: J.R. SMITH FIGURE NO. 22800C3 3" FLOOR DRAIN WITH 7-1/2" HINGED CAST IRON SLOTTED GRATE AND SEDIMENT BUCKET. INSTALLED BY SITE CONTRACTOR. ALT: ZURN Z45C-3N-L-Y.
- P-33 TRAP PRIMER (MECHANICAL TYPE) DO NOT USE UNLESS REQUIRED BY LOCAL AUTHORITY. PRECISION PRODUCTS PR-500. PROVIDE DISTRIBUTION UNIT WHERE SERVING MULTIPLE DRAINS. PROVIDE SCHED80 STOP AT PRIMER INLET. ALT: (WTS) 300A-100-R.
- P-34 DISPENSER BACKFLOW PREVENTER WATTS MODEL #LFRU2-2 ASSE IO24 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. PROVIDE T65 BRASS MODEL B-0110 CHROME WALL BRACKET.
- P-35 FLOOR DRAIN (3") ZURN E21-PV3-R6 PVC BODY. BRONZE SPLUD WITH 6" DIAMETER NICKEL BRONZE STRAINER. ALT: JONES STEPHENS CORP D50-064.
- P-36 BEVERAGE TOWER INDIRECT RECEIVER (3") ZURN Z1901 CAST IRON INDIRECT WASTE RECEIVER, HALF GRATE, STAINLESS STEEL MESH LINER, AND ALUMINUM BUCKET.
- P-37 FLOOR DRAIN (3") ZURN E21-PV3-S6 PVC BODY. BRONZE SPLUD WITH 6" SQUARE NICKEL BRONZE STRAINER. ALT: JONES STEPHENS CORP D50-077.
- P-38 HOT WATER CIRCULATING PUMP: TACO MODEL 006-S07-FC. 1/2" UNION CONNECTIONS. INTEGRAL FLOW CHECK. ELECTRICIAN TO PROVIDE AND WIRE PLUG AND CORD, 1/40 HP, 3 GPM AT 7 FT TOTAL DYNAMIC HEAD. PROVIDE CONTROL WIRING AND HONEYWELL MODEL L50C010B 110 VAC AQUA-STAT, WITH ADJUSTABLE SETPOINT, MOUNTED DIRECTLY ON PIPE. SET SHUT-OFF TEMPERATURE AT 130 DEG F.
- P-39 2" PRESSURE REDUCING VALVE: WATTS NO. #LFR22-SB WITH BUILT-IN BYPASS FEATURE. SET NO FLOW CONDITION AT 70 PSI. ALT: ZURN SERIES 500XL15BR.
- P-40 WYE STRAINER WITH #100 MESH SCREEN 2" WATTS LF7775M3-2 BRONZE WYE STRAINER WITH THREADED CONNECTION AND TAPPED RETAINER CAP. PROVIDE #100 MESH SCREEN. PROVIDE WATTS 1/2" LFBD-IC BRASS BOILER CONNECTION TO WYE STRAINER RETAINER CAP OUTLET TAP.
- P-41 DISHWASHER SUPPLY VALVE: FULL-PORT LEAD-FREE STAINLESS STEEL BALL VALVE WITH SPLIT-RING BRACKET, CHROME FITTINGS, PIPE NIPPLES, AND ESCUTCHEON AS DETAILED ON P-41.
- P-42 EMERGENCY THERMOSTATIC MIXING VALVE (EMERGENCY EYEWASH) ACONOR MODEL S0660-R4 THERMOSTATIC TEMPERING VALVE. ANSI Z358.1 CERTIFIED FOR EMERGENCY FIXTURES. ASSE IO71 COMPLIANT. WITH DIAL THERMOMETER, INLET CHECK STOPS, ADJUSTABLE SETPOINT, ACCURATE WITHIN +/- 3 DEG F. INCLUDES INTEGRAL COLD WATER BYPASS WITH POSITIVE HOT WATER SHUT-OFF WHEN COLD WATER SUPPLY IS LOST. FACTORY SETPOINT OF 85 DEG F. MOUNTING BRACKET INCLUDED. FACTORY ASSEMBLED AND TESTED, ROUGH BRASS FINISH. NO SUBSTITUTIONS. CONTACT CHICK-FIL-A NATIONAL ACCOUNTS AT HAYNES, JONES, & CADBURY FOR PRICING AND DELIVERY.
- P-43 REHEMUALIZER SUPPLY VALVE: FULL-PORT LEAD-FREE STAINLESS STEEL BALL VALVE WITH SPLIT-RING BRACKET, CHROME FITTINGS, PIPE NIPPLES, AND ESCUTCHEON AS DETAILED ON P-41.

COORDINATION NOTE

CONTRACTOR SHALL THOROUGHLY REVIEW THE KITCHEN EQUIPMENT DRAWINGS TO ENSURE ALL ITEMS REGARDING THE PLUMBING SCOPE ARE FULLY UNDERSTOOD. MOST NOTABLY, ALL FAUCETS ARE REQUIRED TO BE PROVIDED (THROUGH HJC) & INSTALLED BY THE CONTRACTOR AS OUTLINED IN THE KITCHEN EQUIPMENT SCHEDULES.

NATIONAL ACCOUNTS

1. TOTO VALVES AND FIXTURES (NO SUBSTITUTIONS). HAINES, JONES, & CADBUR LLC. (HJC DISTRIBUTORS). PLEASE CONTACT HJC-CFA CUSTOMER SERVICE REPRESENTATIVE AT (800) 459-7099 OR VIA E-MAIL AT: CFH@HJCINC.COM FOR NATIONAL ACCOUNT PRICING AND DELIVERY FOR ALL ITEMS ON PLUMBING FIXTURE SCHEDULE.



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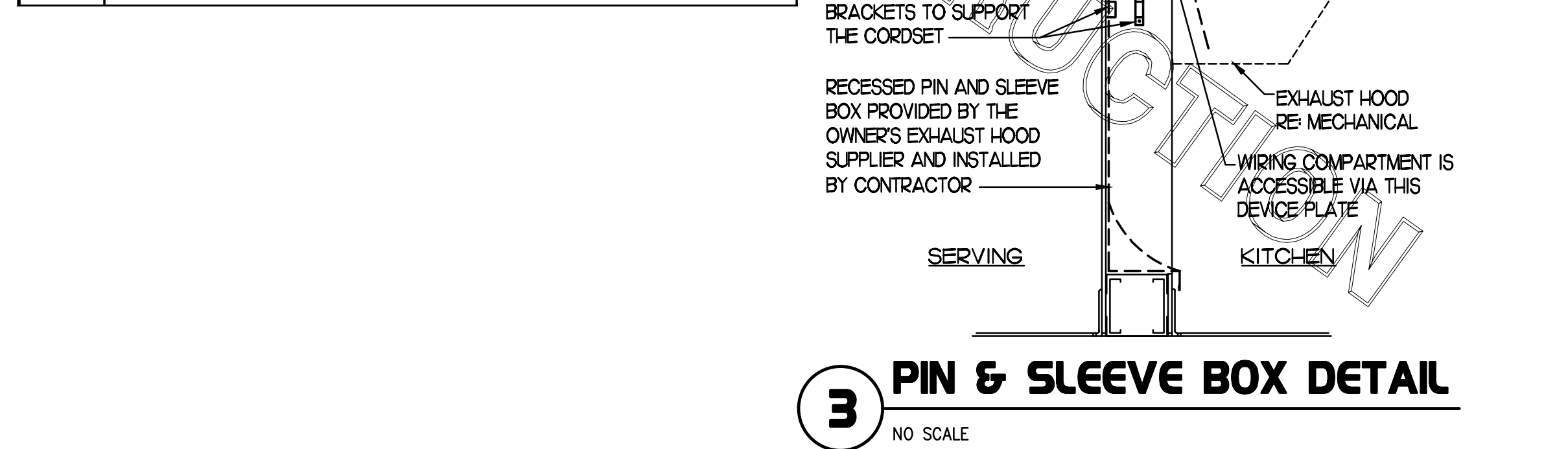
CHICK-FIL-A
MECHANICSBURG FSU
6416 CARLISLE PIKE STE 3500
MECHANICSBURG, PA 17050-2957

FSR#02167

BUILDING TYPE / SIZE:	SR 806	
RELEASE:	23.04	
REVISION SCHEDULE		
NO.	DATE	DESCRIPTION
1	xx/xx/xx	xxx
CONSULTANT PROJECT #		23130.HF.R
PRINTED FOR	CONSTRUCTION	
DATE	08/30/2023	
DRAWN BY	BF	
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SHEET PLUMBING SPECIFICATIONS		
SHEET NUMBER		

KITCHEN EQUIPMENT SCHEDULE - CHICK-FIL-A REMODEL STORE #2167											
VERIFY THE QUANTITY AND ROUGH-IN OF EACH EQUIPMENT ITEM WITH THE KITCHEN EQUIPMENT SCHEDULE											
SCHEDULE NOTES	EQUIP. NO.	EQUIPMENT DESCRIPTION	ELECTRICAL LOAD				NEMA CONFIG		COOPER/ARROW HART (UON) RECEPTACATOG NO.	WIRE/CONDUIT MARK NO.	COMMENTS AND REMARKS
			VOLTS	PH	WIRES	KW	AMPS	WALL			
	180	ORDER REGISTER (POS)	120	1	2		0.7	5-20R	N/A	IG5362N (ORANGE)	HG
	182	RECEIPT PRINTER	120	1	2		0.18	5-20R	5-20R	IG5362N (ORANGE)	HG
	182L	LABEL PRINTER	120	1	2		0.18	5-20R	5-20R	IG5362N (ORANGE)	HG
NOTE 5	183	ORDER MONITOR	120	1	2		0.125	5-20R	5-20R	IG5362N (ORANGE)	HG
NOTE 2 OR 5	184	IPAD	120	1	2	0.120		5-20R	5-20R	VGF20	I
NOTE 2	190	DRIVE-THRU VIDEO MONITOR	120	1	2		0.8	5-20R	N/A	CR20	I
NOTE 5	211B	FLY SYSTEM - KITCHEN AREA	120	1	2	0.078	0.650	5-15R	N/A	TR780W (DUPLEX)	I
	211C	FLY SYSTEM - DINING AREA	120	1	2	0.030	0.25	DIRECT	N/A	-	I
	269	ANSUL FIRE SYSTEM	120	1	2		VERIFY	DIRECT	N/A	-	I
	270	ANSUL FIRE SYSTEM	120	1	2		VERIFY	DIRECT	N/A	-	I
NOTE 2	300A	MILKSHAKE DISPENSER	120	1	2		4.0	5-20R	N/A	1877 (SIMPLEX)	I
	300X	DOUBLE BARREL ICE DREAM	208	3	3		15.0	15-20R	N/A	HUBBELL HBL8420	2
			208	3	3		19.0	15-30R	N/A	HUBBELL HBL8430A	8
NOTE 2	305	TEA BREWER	120	1	2	1.650	13.8	5-20R	N/A	VGF20	I
	306	COFFEE BREWER	120	1	3	4.000	19.2	L14-30R	N/A	AL1430R	8
NOTE 2	310	DOUBLE JUICE DISPENSER	120	1	2		8.5	5-20R	N/A	1877 (SIMPLEX)	I
	315W	DRINK TOWER	120	1	2		10.0	5-20R	N/A	CR20	I
NOTE 2	320	TURBO CARBONATOR	120	1	2		6.2	5-20R	N/A	CR20	I
	363H	HIGH-TEMP DISH-MACHINE	208	3	3		45.4	DIRECT	N/A	-	17
	380A	ICE BIN SANITATION SYSTEM	120	1	2	0.010		5-15R	N/A	-	-
	380	INTERIOR ICE MAKER	120	1	2	0.600	5.0	5-15R	N/A	817 (SIMPLEX) CR15 (DUPLEX)	I
	380C	ROOF MTD ICE CONDENSER	208	3	4	5.112	14.2	DIRECT	N/A	-	6
NOTE 2	400	REACH-IN FRY FREEZER	120	1	2		9.4	5-20R	L5-20R	VGF20 / AHL520R	I
NOTE 5	420	SINGLE LC REFRIGERATOR	120	1	2		4.7	5-20R	L5-20R	1877 (SIMPLEX) / AHL520R	I
NOTE 2	421	DOUBLE LC REFRIGERATOR	120	1	2		6.3	5-20R	L5-20R	1877 (SIMPLEX) / AHL520R	I
NOTE 5	422	REFRIGERATED EQUIPMENT STAND	120	1	2		6.7	5-15R	L5-15R	1877 (SIMPLEX) / CWL515C	I
NOTE 2	440CT	BREADING TABLE	120	1	2		1.0	L5-15R	L5-15R	CWL515R / CWL515C	I
NOTE 5	441	REFRIGERATED SALAD PREP	120	1	2		9.0	L5-15R	L5-15R	CWL515R / CWL515C	I
NOTE 2	442WCT	SINGLE UPRIGHT REFRIGERATOR	120	1	2		7.0	L5-15R	L5-15R	CWL515R / CWL515C	I
	444	DOUBLE DOOR THAWING CABINET	120	1	2		16.0	DIRECT	DIRECT	-	I
	444S	SINGLE DOOR THAWING CABINET	120	1	2		16.0	DIRECT	DIRECT	-	I
NOTE 2 OR 5	500A	VERTICAL CONTACT TOASTER	120	1	2	1.800	15.0	5-20R	L5-20R	VGF20 / AHL520R	I
	500B	RADIANT TOASTER	208	1	3	5.000	24.0	L6-30R	L6-30R	AHL530R / AHL530C	8
NOTE 5	503	EGG STATION	208	1	3	2.500	12.5	6-20R	L6-20R	1876 (SIMPLEX) / AHL620C	2
	505V	MULTI-COOK OVEN	208	3	3	7.920	22.0	L15-30R	L15-30R	AHL61530R / AHL61530C	9
NOTE 3	522	OPEN FRYER - ELECTRIC	208	3	3	22.000	61.0	NOTE 3	N/A	-	22
NOTE 2	565C	FOOD COOKER/WARMER	120	1	2	1.500	12.50	5-20R	L5-20R	VGF20 / AHL520R	I
NOTE 2	607	LEMON JUICER	120	1	2		1/4 HP	5-20R	N/A	VGF20	I
	669	OFFICE SAFE (SMART SAFE)	120	1	2			5-20R	N/A	CR20	I
NOTE 2	671	LED MENU BOARD	120	1	2		12.50	5-20R	N/A	CR20	I
	WIRING DEVICE PACKAGE, INCLUDING SWITCHES (EXCEPT HUBBELL BRAND DEVICES) SHALL BE PURCHASED AS A PART OF A NATIONAL ACCOUNTS PROGRAM THROUGH GEXPRO (FORMERLY GE SUPPLY). CONTACT BRIAN REECE AT 770-840-4162 (EMAIL: BRIAN.REECE@GEXPRO.COM)										
NOTE 1:	ALL SO CORD LENGTHS SHALL BE MEASURED FROM THE REAR OF THE EQUIPMENT TO THE END OF THE CORD.										
NOTE 2:	CONTRACTOR SHALL PROVIDE GROUND-FALL PROTECTION FOR ALL 120 VOLT 15 AMP AND 20 AMP RECEPTACLES IN THE KITCHEN / FOOD PREPARATION AREAS. GROUND-FALL PROTECTION SHALL BE PROVIDED AT THE RECEPTACLE AS A GFCI TYPE RECEPTACLE UNLESS NOTED OTHERWISE ON THE PLANS WHERE A GFCI TYPE BREAKER IS INDICATED.										
NOTE 3:	A RECESSED PIN & SLEEVE BOX IS PROVIDED WITH THE EXHAUST HOOD PACKAGE AND INSTALLED BY THE CONTRACTOR. THE P&S BOX INCLUDES THE 'SLEEVE' RECEPTACLES FOR THE OPEN FRYERS. THE OPEN FRYER SUPPLIER WILL PROVIDE PRE-WIRED CORDSET WITH A 'PIN' DEVICE INTEGRAL WITH THE OPEN FRYER TO PLUG INTO THE 'SLEEVE' RECEPTACLE.										
NOTE 4:	WIRE NUMBER INDICATED DOES NOT INCLUDE THE REQUIRED GREEN EQUIPMENT GROUND CONDUCTOR OR, WHEN APPLICABLE, THE STRIPED IG CONDUCTOR.										
NOTE 5:	PROVIDE GFCI TYPE BRANCH BREAKER FOR KITCHEN/FOOD PREPARATION AREA RECEPTACLES THAT ARE TWIST-LOCK, CLOCK STYLE, OR IG (ISOLATED GROUND) TYPE.										
NOTE 6:	REFER TO THE CONDUIT AND CONDUCTOR SCHEDULE FOR THE WIRE/CONDUIT MARK NUMBER AND THE MINIMUM WIRE AND CONDUIT SIZE FOR EACH EQUIPMENT ITEM.										
NOTE 7:	THE 'R' SUBSCRIPT ON EQUIPMENT NUMBERS ON THE KITCHEN SERIES DRAWINGS REFERS TO EXISTING EQUIPMENT THAT HAS BEEN RELOCATED. IN SEVERAL CASES THERE MAY BE ONE OR MORE NEW AND ONE OR MORE RELOCATED ITEMS, THEREFORE, IN ORDER TO AVOID CONFUSION, ALL EQUIPMENT IS LISTED AS 'NEW' AND THIS SUBSCRIPT IS NOT USED. FIELD VERIFY ELECTRICAL REQUIREMENTS - WHAT IS INDICATED IN THIS SCHEDULE IS BASED ON 'NEW BUILD' PROTOTYPICAL EQUIPMENT ITEMS.										

ELECTRICAL LEGEND					
SYMBOL	DESCRIPTION	MTG HT AFF TO CL	SYMBOL	DESCRIPTION	MTG HT AFF TO CL
LIGHTING FIXTURES					
□	SURFACE MTD FLUORESCENT LIGHTING FIXTURE		—	CONDUIT CONCEALED ABOVE CEILING OR IN WALL	
⊞	RECESSED FLUORESCENT LIGHTING FIXTURE		—	CIRCUIT HOMERUN TO PANELBOARD WITH MINIMUM 2#12, #12G, 3/4"C	
○	SURFACE MTD FLUORESCENT OR HID LIGHTING FIXTURE		—	CONDUIT TURNING UP	
○	RECESSED FLUORESCENT OR HID LIGHTING FIXTURE		—	CONDUIT TURNING DOWN	
⊙	WALL MOUNTED LIGHTING FIXTURE, SEE LIGHTING FIXTURE SCHEDULE (FLUORESCENT OR HID FIXTURE)	AS NOTED	—	CONDUIT CONCEALED IN OR BELOW SLAB (OUTSIDE - UNDERGROUND)	
⊙	WALL MOUNTED EXIT SIGN, SHADING INDICATES FACES, PROVIDE WITH CLEAR/ON DIRECTIONAL ARROWS WHERE INDICATED ON PLANS PROVIDED WITH BATTERY PACK	6" BELOW CEILING TO TOP	—	FLEXIBLE LIGHT FIXTURE WHIP, SIX FOOT MAXIMUM LENGTH	
⊙	CEILING MOUNTED EXIT SIGN, SHADING INDICATES FACES, PROVIDE WITH CLEAR/ON DIRECTIONAL ARROWS WHERE INDICATED ON PLANS PROVIDED WITH BATTERY PACK		—	METAL CLAD CABLE ASSEMBLY - ONLY WHERE INDICATED ON DWGS OR SPECS	
⊙	COMBO EXIT WITH TWO LAMP-HEADS, SEE LIGHTING FIXTURE SCHEDULE		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.		
⊙	WALL MOUNTED EMERGENCY BATTERY PACK LIGHTING FIXTURE	AS NOTED	MULTIPLE IPH CIRCUITS MAY OCCUPY THE SAME CONDUIT IN ACCORDANCE WITH THE NEC, MAXIMUM OF THREE AND OF DIFFERENT PHASES.		
⊙	CEILING MOUNTED EMERGENCY BATTERY PACK LIGHTING FIXTURE		LOW VOLTAGE AND CONTROL WIRING SHALL BE IN SEPARATE CONDUIT FROM POWER WIRING.		
—	FLUORESCENT STRIP LIGHTING FIXTURE		DISTRIBUTION EQUIPMENT		
—	WALLWASHER STYLE RECESSED DOWNLIGHT, AIM LIGHT TOWARD WALL		⊞	NON-FUSIBLE SAFETY SWITCH, SIZE AND TYPE AS NOTED ON PLANS (AMPS/POLES/ENCLOSURE) OR ON SCHEDULE, NEMA 1 ENCLOSURE UNLESS NOTED WP FOR NEMA 3R ENCLOSURE.	6'-6"
⊞	RECESSED LIGHTING FIXTURE WITH EMERGENCY BATTERY PACK		⊞	FUSIBLE SAFETY SWITCH, SIZE AND TYPE AS NOTED ON PLANS (AMPS/POLES/ENCLOSURE) OR ON SCHEDULE, NEMA 1 ENCLOSURE UNLESS NOTED WP FOR NEMA 3R.	6'-6"
⊞	PENDANT LIGHTING FIXTURE	AS NOTED	—	FLUSH MOUNTED LIGHTING PANELBOARD	6'-6"
—	RECESSED LIGHTING FIXTURE WITH EMERGENCY BATTERY PACK		—	SURFACE MOUNTED LIGHTING PANELBOARD	6'-6"
—	LIGHTING TRACK WITH TRACK HEADS		⊞	TRANSFORMER, PROVIDE SECONDARY GROUNDING PER NEC	6'-6"
WIRING DEVICES					
⊞	120 VOLT DUPLEX RECEPTACLE, 20 AMPS UON	18"	⊞	ENCLOSED CIRCUIT BREAKER, SIZE AND TYPE AS NOTED (AMPS/POLES/ENCLOSURE) NEMA 1 ENCLOSURE IF NOT NOTED, WP-NEMA 3R	6'-6"
⊞	120 VOLT DUPLEX AT SPECIAL MOUNTING HEIGHT, 20 AMPS UON	44" UON	⊞	FLUSH MOUNTED LIGHTING PANELBOARD	6'-6"
⊞	120 VOLT QUADRUPLEX RECEPTACLE, 20 AMPS UON	18" UON	⊞	SURFACE MOUNTED LIGHTING PANELBOARD	6'-6"
⊞	120 VOLT QUADRUPLEX AT SPECIAL MOUNTING HEIGHT, 20 AMPS UON	44"	⊞	TRANSFORMER, PROVIDE SECONDARY GROUNDING PER NEC	6'-6"
⊞	120 VOLT SIMPLEX RECEPTACLE, 20 AMPS UON	18" UON	⊞	ENCLOSED CIRCUIT BREAKER, SIZE AND TYPE AS NOTED (AMPS/POLES/ENCLOSURE) NEMA 1 ENCLOSURE IF NOT NOTED, WP-NEMA 3R	6'-6"
⊞	SINGLE SPECIAL PURPOSE RECEPTACLE WITH VOLTS, AMPS, AND PHASE AS NOTED, NEMA CONFIGURATION AS REQUIRED BY EQUIPMENT	18" UON	* 6'-6" DISTANCE IS TO TOP-MOST DISCONNECTING DEVICE OR HIGHEST POSITION OF OPERATING HANDLE OF DISCONNECTING DEVICE		
⊞	RECEPTACLE MOUNTED ON CORD DROP, 120 VOLT, 20 AMP, UON, OUTLET BOX FLUSH WITH CEILING		MISCELLANEOUS SYMBOLS		
⊞	15 AMP TWIST LOCK PLUG PROVIDED W/ EQUIP		⊞	GROUND	
⊞	PROVIDE 6 FT CORD AND PLUG		⊞	MOTOR	
⊞	PLUG AND CORD-SET PROVIDED W/ EQUIP		⊞	EXHAUST FAN MOTOR	
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	JUNCTION BOX	
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	CONDUIT AND WIRE 'MARK' NUMBER, REFER TO CONDUCTORS AND CONDUIT SCHEDULE FOR SIZE	
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	KITCHEN EQUIPMENT 'MARK' NUMBER, REFER TO KITCHEN EQUIPMENT SCHEDULE FOR REQUIREMENTS	
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	NOTE NUMBER	
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	HOOD EXTINGUISHING ANSUL PULL STATION	
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	SMOKE DETECTORS REMOTE STATUS INDICATOR W/ 1/2" CONDUIT STUB-UP	
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	PUSH-BUTTON	
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	BELL, TYPE AS NOTED ON PLANS	
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	PHOTO-ELECTRIC CELL	
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		TELEPHONE		
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	TELEPHONE OUTLET	18" UON
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	TELEPHONE OUTLET AT SPECIAL MOUNTING HEIGHT	60" UON
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		NOTE: EACH TELEPHONE OUTLET (FLOOR OR WALL MOUNTED) SHALL BE PROVIDED WITH A 3/4" EMPTY CONDUIT, WITH PULL WIRE, TO ACCESSIBLE CEILING SPACE.		
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		CCTV / SECURITY SYSTEM		
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	CLOSED CIRCUIT TELEVISION CAMERA	
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	SECURITY ALARM KEYPAD	
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	SECURITY ALARM HOLD-UP BUTTON	
⊞	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT		⊞	SECURITY SYSTEM KEY NOTE	



3 PIN & SLEEVE BOX DETAIL
NO SCALE



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CHICK-FIL-A
MECHANICSBURG FSU
6416 CARLISLE PIKE STE 3500
MECHANICSBURG, PA 17050-2957

FSR#02167
BUILDING TYPE / SIZE: SR 806
RELEASE: 23.04

REVISION SCHEDULE
NO. DATE DESCRIPTION

CONSULTANT PROJECT # 23130.HF.R
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SHEET SCHEDULES AND DETAILS
SHEET NUMBER

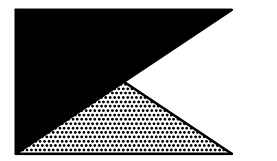
E1.1

CONSTRUCTION



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CHICK-FIL-A MECHANICSBURG FSU

6416 CARLISLE PIKE STE 3500
MECHANICSBURG, PA 17050-2957

FSR#02167

BUILDING TYPE / SIZE: SR 506
RELEASE: 23.04

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

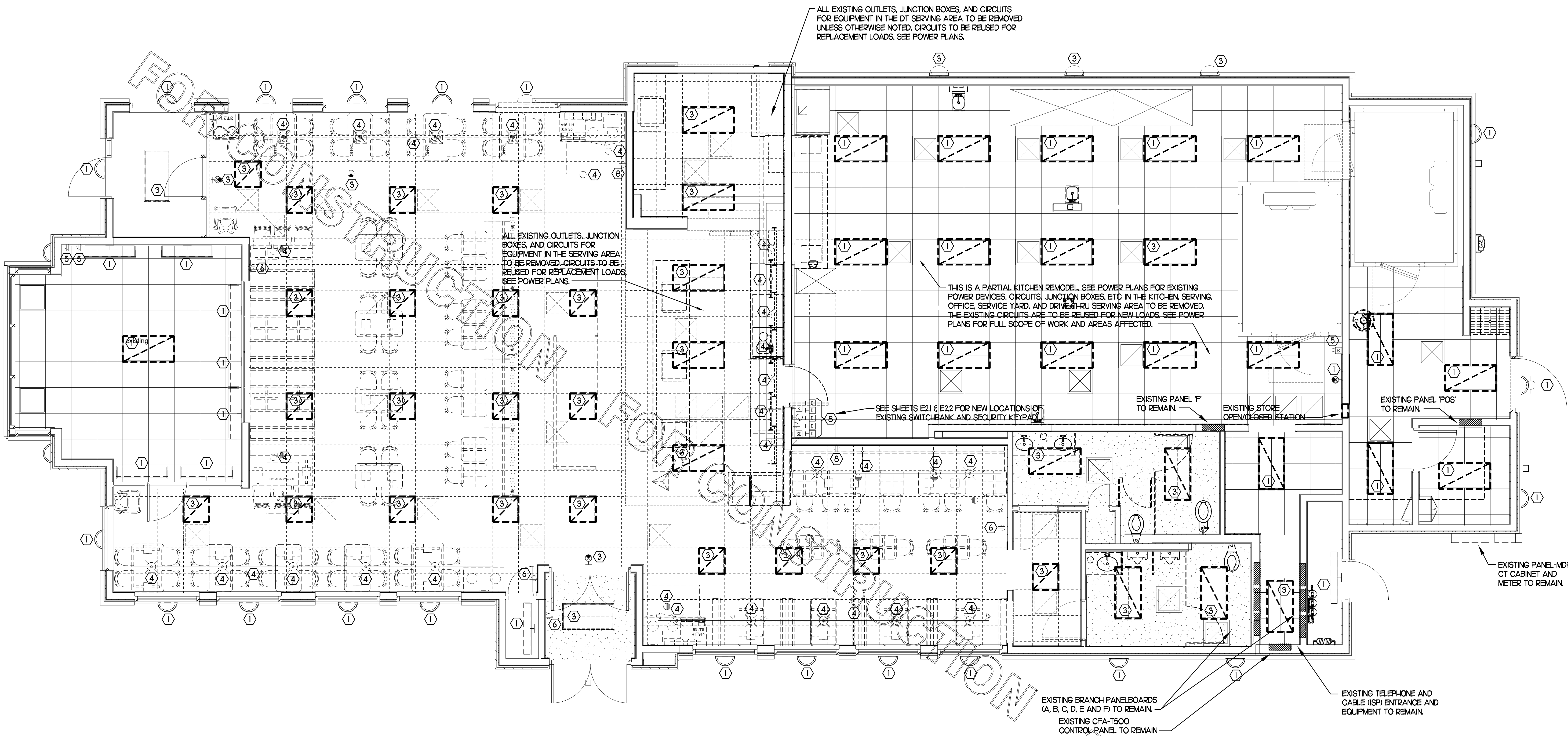
CONSULTANT PROJECT # 23130.HF.R
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SHEET ELECTRICAL DEMOLITION PLAN

SHEET NUMBER

E2.0



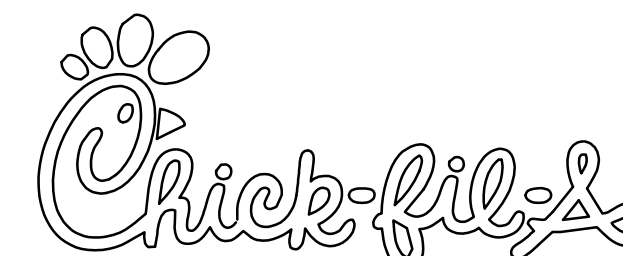
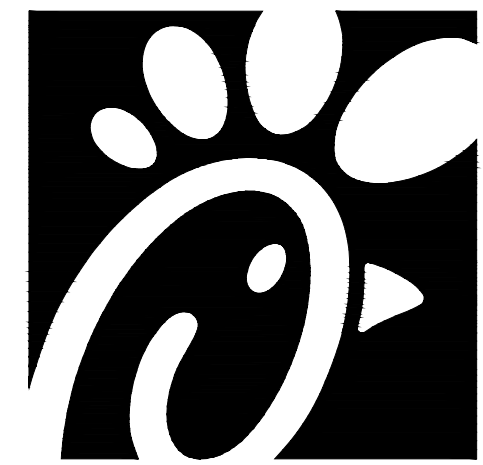
1 ELECTRICAL DEMOLITION PLAN

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

THE INFORMATION USED TO DEVELOP THE EXISTING CONDITIONS AS SHOWN ON THESE PLANS IS FROM PREVIOUS BUILDING DRAWINGS. WHAT WAS SHOWN ON PLAN AND WHAT WAS ACTUALLY INSTALLED MAY VARY. FIELD VERIFY ALL EXISTING CONDITIONS.

- ### 2 KEYNOTES (APPLY TO THIS SHEET ONLY)
- 1 EXISTING LIGHTING FIXTURE TO REMAIN. CLEAN AND RELAMP THE FIXTURE AND RECONNECT TO THE EXISTING BRANCH CIRCUIT.
 - 2 EXISTING LIGHTING FIXTURE TO BE RELOCATED. SEE LIGHTING PLAN FOR NEW LOCATION.
 - 3 EXISTING LIGHTING FIXTURE TO BE REMOVED AND REPLACED. SEE THE LIGHTING FLOOR PLAN.
 - 4 EXISTING LIGHTING FIXTURE TO BE REMOVED. EXISTING BRANCH CIRCUIT WIRING TO BE REUSED IF POSSIBLE AND FEASIBLE.
 - 5 EXISTING WIRING DEVICE/JUNCTION BOX TO REMAIN.
 - 6 EXISTING WIRING DEVICE TO BE REPLACED WITH TAMPER-RESISTANT USB CHARGING TYPE DEVICE.
 - 7 RELOCATE EXISTING ELECTRICAL ITEMS AS NECESSARY TO NEWLY FLURRED OUT WALL.
 - 8 EXISTING ELECTRICAL ITEMS TO BE REMOVED AND/OR RELOCATED. SEE THE POWER FLOOR PLAN FOR THE REUSE OF THE EXISTING CIRCUITS.

CONSTRUCTION



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12-18-23

CHICK-FIL-A
MECHANICSBURG FSU
6416 CARLISLE PIKE STE 3500
MECHANICSBURG, PA 17050-2957

FSR#02167

BUILDING TYPE / SIZE: SR 506
RELEASE: 23.04

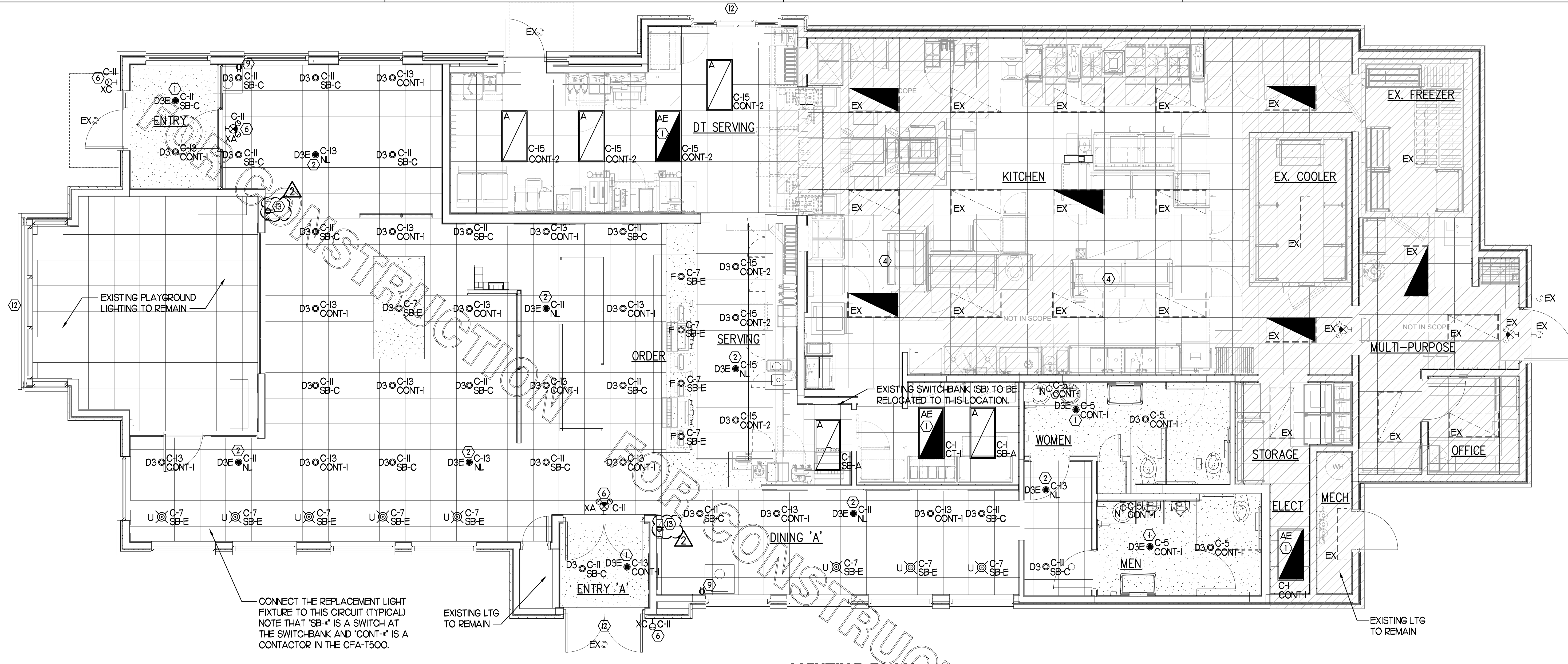
NO.	DATE	DESCRIPTION
2	12/18/23	CD Coordination

CONSULTANT PROJECT # 23130.HF.R
PRINTED FOR CONSTRUCTION
DATE 08/30/2023
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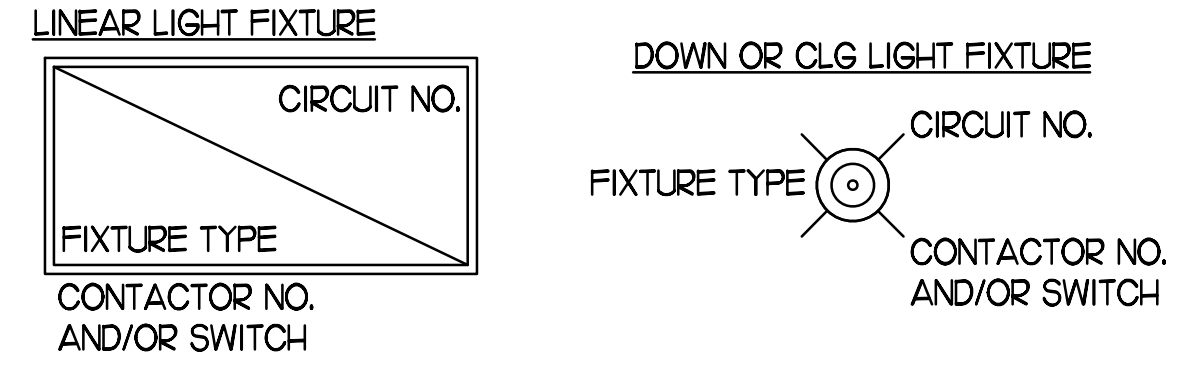
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SHEET LIGHTING PLAN

SHEET NUMBER

E2.1



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

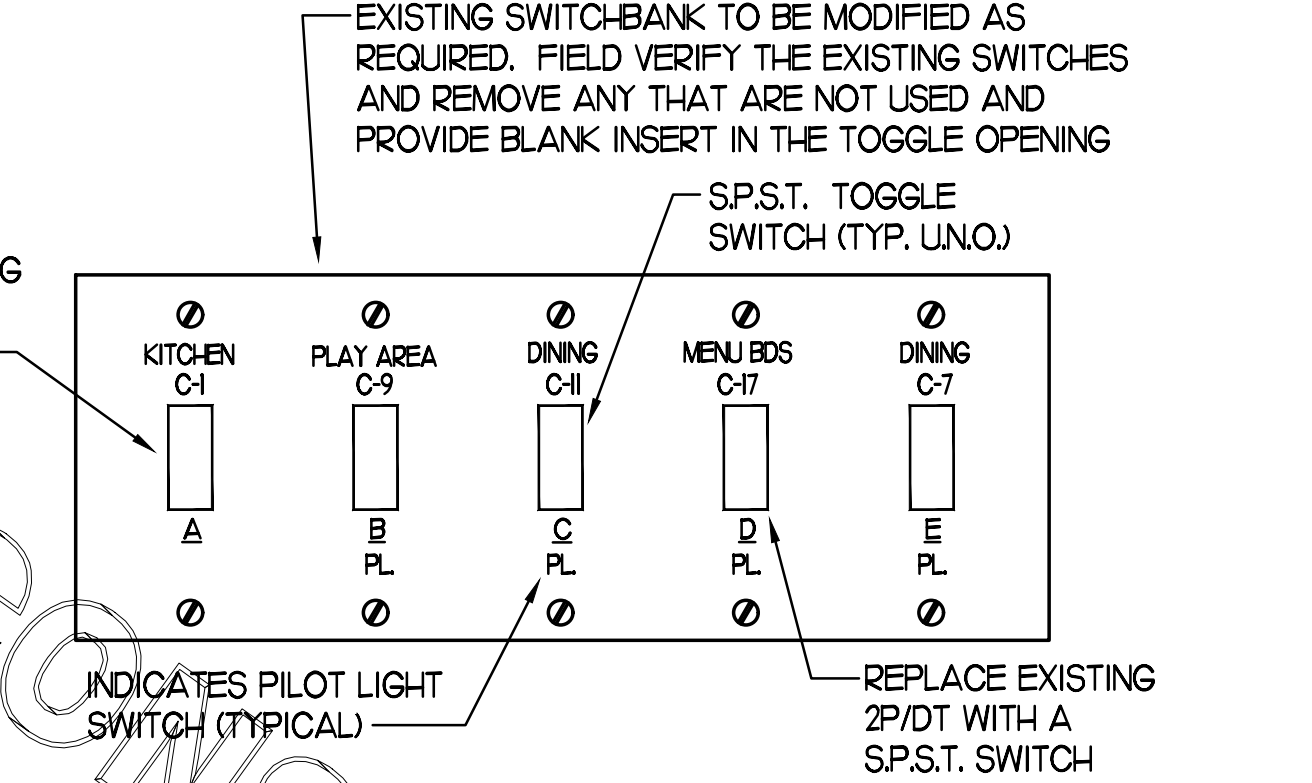


6 LIGHT FIXTURE NOMENCLATURE DETAIL
NO SCALE

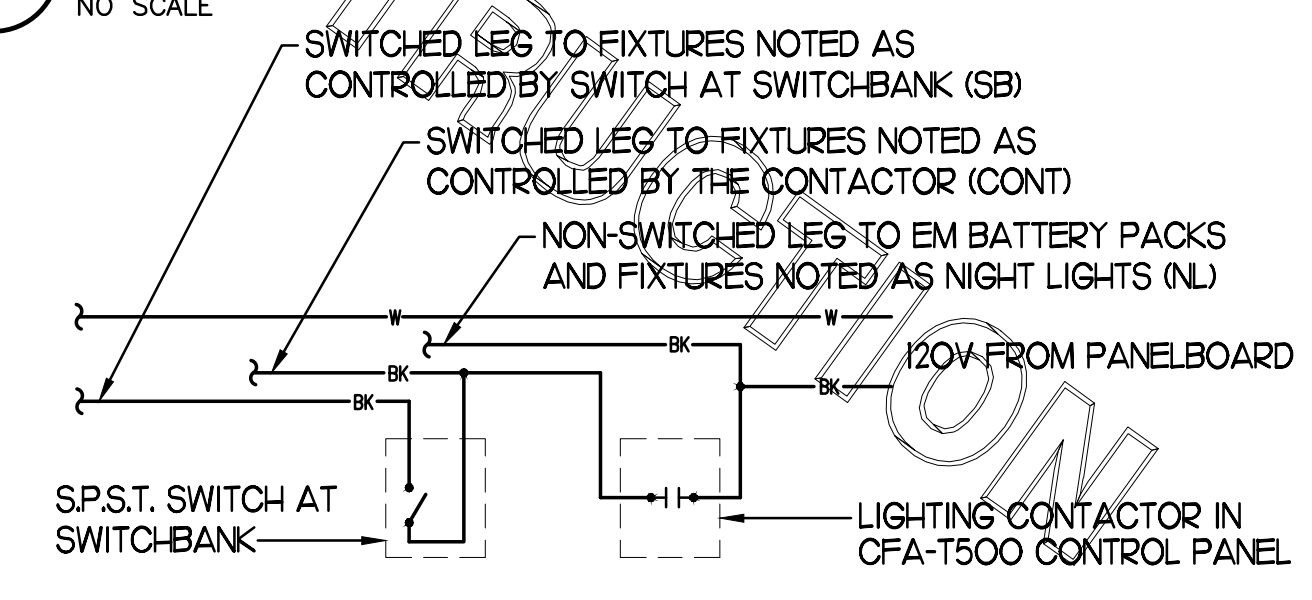
2 LIGHTING FIXTURE (LUMINAIRE) SCHEDULE - CHICK-FIL-A REMODEL STORE #2167

MARK	MANUFACTURER	CATALOG NUMBER	NO. LAMPS/TYPE	WATTS	VOLTS	MOUNTING	REMARKS
A	COOPER/METALLUX	24FP6440C	INTEGRAL WITH FIXTURE	59.4	120	RECESSED	KITCHEN AREA, 2'x4' LED PANEL TROFFER, 4000K COLOR TEMP
AE	COOPER/METALLUX	24FP6440C-EL14W	INTEGRAL WITH FIXTURE	59.4	120	RECESSED	SAME AS 'A' WITH EMERGENCY BATTERY PACK. SEE PLAN NOTES ABOUT LAMP SWITCHING
BI	METALLUX	2VT3-LD5-UNV-L84O-CDI-SSL-U	INTEGRAL WITH FIXTURE	32	120	SURFACE	MOUNT LIGHT TO BTM OF OVERHEAD WIRE SHELVEING WITH CORD & PLUG
D3	COOPER/HALO	HC6-20-DOIO-HM6-12-830-6I-ND-C	INTEGRAL WITH FIXTURE	21J	120	RECESSED	PUBLIC AREA, 6" DIAMETER LED DOWNLIGHT
D3E	COOPER/HALO	HC6-20-DOIO-EM14-HM6-12-830-6I-ND-C	INTEGRAL WITH FIXTURE	21J	120	RECESSED	SAME AS 'D3' WITH EMERGENCY BATTERY PACK
F	COOPER/HALO	SLD5L6095EMMR	INTEGRAL WITH FIXTURE	9	120	SURFACE	SURFACE-MOUNTED LED DOWNLIGHT, 600 LUMENS, 3000K COLOR TEMP
GI	COOPER/METALLUX	4SL5TP40A00D-UNV	INTEGRAL WITH FIXTURE	44	120	SURFACE	4760 LUMEN 4 FOOT LENSED LED STRIPLIGHT
N	MINKA	4531-267B	HLEDIA19/B27/D	11	120	WALL	LAVATORY WALL SCONCE SHADE POINTED DOWN W/ LED LAMP & CL ON LAVATORY
U	BESA LIGHTING	BES00298-060	FURNISHED	7.5	120	PENDANT	MONO-POINT PENDANT, RED FRIT GLASS, BRONZE CABLE & CANOPY, 6'-6" AFF
XA	COOPER/SURE-LITES	APCH7R	INTEGRAL WITH FIXTURE	4.11	120	WALL	EXIT SIGN WITH BATTERY PACK AND TWO INTEGRAL ADJUSTABLE LAMP-HEADS
XC	MJLE LTG	MAKO-LED-ACEM-NK-IH	INTEGRAL WITH FIXTURE	13	120	WALL	EXTERIOR WALL MOUNTED EMERGENCY LIGHTING UNIT, LOCATE NEAR EGRESS DOOR
OJ	SECURITY LTG	RWSC-72L-3K-LD-U-DB	FURNISHED	25	120	WALL	UP/DOWN LED EXTERIOR WALL SCONCE, SEE ELEVATIONS FOR MOUNTING HEIGHT

NOTES:
1. LUMINAIRES UTILIZING DOUBLE-ENDED LAMPS AND CONTAIN BALLASTS THAT CAN BE SERVICED IN PLACE SHALL HAVE A DISCONNECTING MEANS EITHER INTERNAL OR EXTERNAL TO EACH LUMINAIRE PER NEC 410.103(G).
2. THE LIGHTING FIXTURE PACKAGE IS AVAILABLE THROUGH A NATIONAL ACCOUNT PROGRAM REFER TO THE ELECTRICAL SPECIFICATIONS SHEET, SECTION 016500 FOR VENDOR INFORMATION.
3. THE ASTERISK (*) BESIDE THE FIXTURE MARK IN THE ABOVE SCHEDULE INDICATES THE FIXTURE IS A NON-PROTOTYPICAL LIGHT FIXTURE PER THE CFA NATIONAL P12 PROTOTYPE.



4 RELOCATED SWITCH BANK "SB" DETAIL
NO SCALE



5 TYPICAL LIGHTING CONTROL DETAIL
NO SCALE

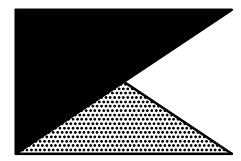
3 KEYNOTES (APPLY TO THIS SHEET ONLY)

- CONNECT FIXTURE SO THAT BATTERY PACK IS NOT SWITCHED WITH LIGHTS, BUT ALL LAMPS ARE SWITCHED.
- CONNECT FIXTURE SO THAT LAMP AND EMERGENCY BATTERY PACK ARE NOT SWITCHED. 'NL' ADJACENT TO FIXTURE INDICATES THAT FIXTURE SHALL BE ON 24 HOURS.
- NOT USED.
- PROVIDE A TYPE BI LIGHT FIXTURE. MOUNT TO THE UNDERSIDE OF THE WIRE SHELVEING. PROVIDE FLEX CONDUIT AND CONNECT 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.
- NOT USED.
- CONNECT FIXTURE TO CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS. THIS FIXTURE SHALL NOT BE SWITCHED.
- NOT USED.
- NOT USED.
- PROVIDE TAMPER-RESISTANT DUPLEX RECEPTACLE AT STANDARD HEIGHT FOR FUTURE COMPACTING TRASH CAN ON A DEDICATED 20 AMP CIRCUIT. USE CIRCUITS C-14 AND C-16.
- NOT USED.
- NOT USED.
- COORDINATE CONNECTION OF REPLACEMENT SIGNAGE TO EXISTING CKT.
- PROVIDE DUPLEX RECEPTACLE (SEE ELEVATIONS FOR MTG HT) IN AN ARLINGTON HDVFR2W DOUBLE-GANG RECESSED BOX FOR THE FLY SYSTEM ITEM #21C, CL OF BOX AT 7'-1" AND CONNECT OUTLET TO CIRCUIT B-31.
- NOT USED.

CONSTRUCTION



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CHICK-FIL-A
MECHANICSBURG FSU
6416 CARLISLE PIKE STE 3500
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FSR#02167

BUILDING TYPE / SIZE: SR 506
RELEASE: 23.04

NO.	DATE	DESCRIPTION
2	12/18/23	CD Coordination

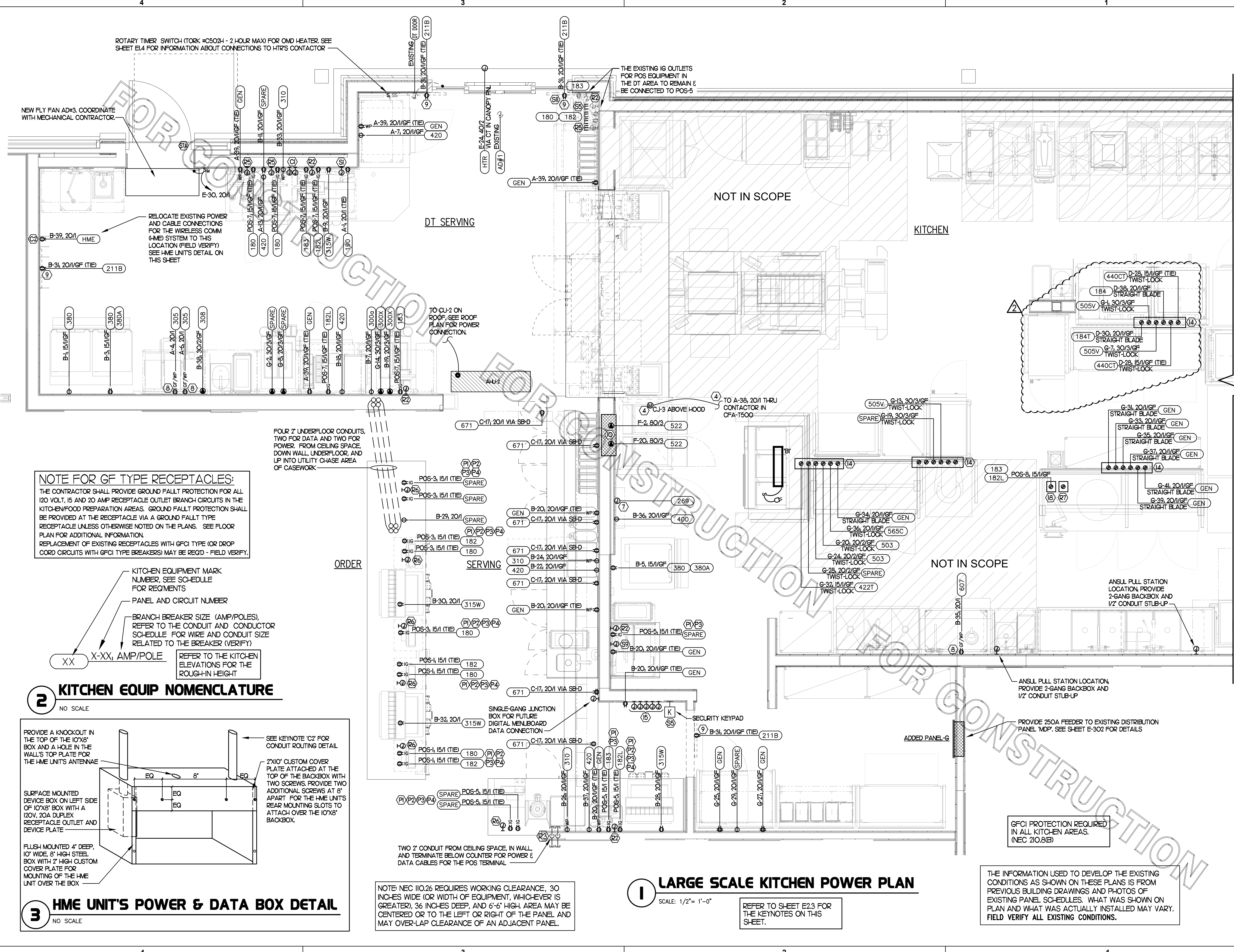
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SHEET
LARGE SCALE KITCHEN POWER

SHEET NUMBER

E2.2



ROTARY TIMER SWITCH (TORK #C5024 - 2 HOUR MAX) FOR OMD HEATER. SEE SHEET E14 FOR INFORMATION ABOUT CONNECTIONS TO HTR'S CONTACTOR

NEW FLY FAN AD#3. COORDINATE WITH MECHANICAL CONTRACTOR.

RELOCATE EXISTING POWER AND CABLE CONNECTIONS FOR THE WIRELESS COMM (HME) SYSTEM TO THIS LOCATION (FIELD VERIFY). SEE HME UNITS DETAIL ON THIS SHEET

THE EXISTING IG OUTLETS FOR POS EQUIPMENT IN THE DT AREA TO REMAIN & BE CONNECTED TO POS-5

NOT IN SCOPE

KITCHEN

DT SERVING

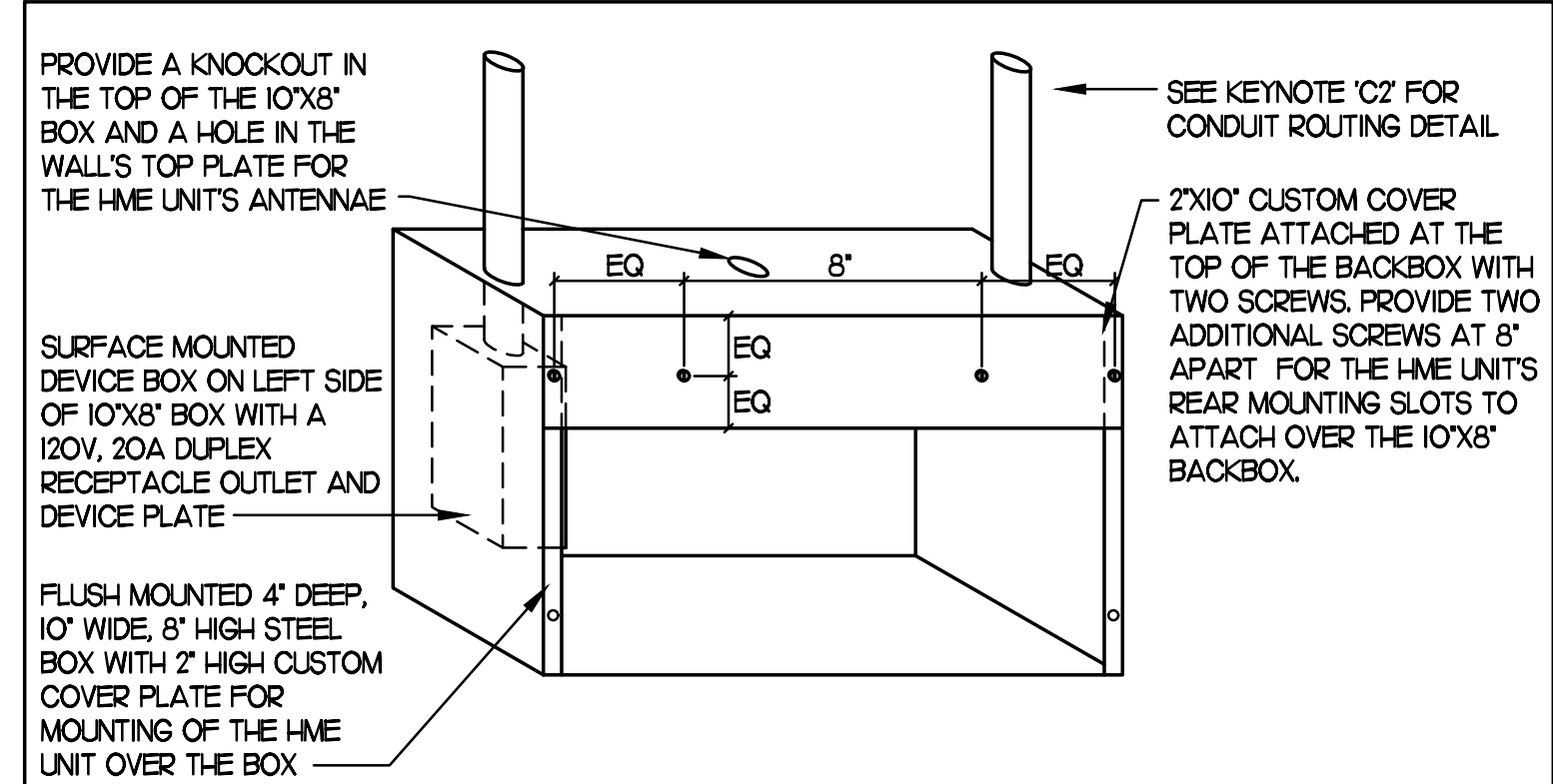
NOTE FOR GF TYPE RECEPTACLES:
THE CONTRACTOR SHALL PROVIDE GROUND FAULT PROTECTION FOR ALL 120 VOLT, 15 AND 20 AMP RECEPTACLE OUTLET BRANCH CIRCUITS IN THE KITCHEN/FOOD PREPARATION AREAS. GROUND FAULT PROTECTION SHALL BE PROVIDED AT THE RECEPTACLE VIA A GROUND FAULT TYPE RECEPTACLE UNLESS OTHERWISE NOTED ON THE PLANS. SEE FLOOR PLAN FOR ADDITIONAL INFORMATION.
REPLACEMENT OF EXISTING RECEPTACLES WITH GFCI TYPE (OR DROP CORD CIRCUITS WITH GFCI TYPE BREAKERS) MAY BE REQ'D - FIELD VERIFY.

FOUR 2" UNDERFLOOR CONDUITS, TWO FOR DATA AND TWO FOR POWER. FROM CEILING SPACE, DOWN WALL, UNDERFLOOR, AND UP INTO UTILITY CHASE AREA OF CASEWORK

2 KITCHEN EQUIP NOMENCLATURE
NO SCALE

KITCHEN EQUIPMENT MARK NUMBER, SEE SCHEDULE FOR REQUIREMENTS
PANEL AND CIRCUIT NUMBER
BRANCH BREAKER SIZE (AMP/POLES), REFER TO THE CONDUIT AND CONDUCTOR SCHEDULE FOR WIRE AND CONDUIT SIZE RELATED TO THE BREAKER (VERIFY)
REFER TO THE KITCHEN ELEVATIONS FOR THE ROUGH-IN HEIGHT

XX X-XX; AMP/POLE



3 HME UNIT'S POWER & DATA BOX DETAIL
NO SCALE

NOTE: NEC 110.26 REQUIRES WORKING CLEARANCE, 30 INCHES WIDE (OR WIDTH OF EQUIPMENT, WHICHEVER IS GREATER), 36 INCHES DEEP, AND 6'-6" HIGH AREA MAY BE CENTERED OR TO THE LEFT OR RIGHT OF THE PANEL, AND MAY OVER-LAP CLEARANCE OF AN ADJACENT PANEL.

1 LARGE SCALE KITCHEN POWER PLAN
SCALE: 1/2" = 1'-0"

REFER TO SHEET E23 FOR THE KEYNOTES ON THIS SHEET.

THE INFORMATION USED TO DEVELOP THE EXISTING CONDITIONS AS SHOWN ON THESE PLANS IS FROM PREVIOUS BUILDING DRAWINGS AND PHOTOS OF EXISTING PANEL SCHEDULES. WHAT WAS SHOWN ON PLAN AND WHAT WAS ACTUALLY INSTALLED MAY VARY. FIELD VERIFY ALL EXISTING CONDITIONS.

CONSTRUCTION

2 KEY NOTES - POWER:

- (1) NOT USED.
- (2) NOT USED.
- (3) NOT USED.
- (4) CONNECT AS REQUIRED TO CJ FAN VIA SPEED CONTROLLER, CONNECT HOMERUN VIA RELAY IN "T-500" CONTROL SECTION.
- (5) NOT USED.
- (6) NOT USED.
- (7) PROVIDE 3/4" IN 1/2" CONDUIT BETWEEN THE T-500 CONTROL PANEL AND THE ANSLU SYSTEM PANEL. SEE ANSLU SYSTEM WIRING DIAGRAM FOR ADDITIONAL INFORMATION.
- (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) PROVIDE DUPLEX RECEPTACLE (SEE ELEVATIONS FOR MTG HT) IN AN ARLINGTON #VFR2W 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.
- (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 #S2963 AND INSTALLED PER THE DETAILS ON SHEET E12.
- (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 #12360-1000. ASSEMBLY WILL CONSIST OF A FLUSH CEILING OUTLET BOX, TWIST-LOCK PENDANT RECEPTACLES, STRAIGHT BLADE PENDANT RECEPTACLES, CORDS, STRAIN RELIEF, AND TWISTLOCK PLUGS. CONTACT BRIDGIID DEFRANCESI EMAIL: BRIDGIID1985@GMAIL.COM (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 SHELVEING ABOVE AS NEEDED. PASS & SEYMOUR MODEL #FS075-U-GH5 OR EQUIVALENT.
- (15) PROVIDE FIVE 2-GANG DEEP BOXES (2" MIN) 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.
- (16) NOT USED.
- (17) PROVIDE GFCI PROTECTION FOR DISHWASHER #363H USING LITTELFUSE SHOCK BLOCK GFCI PRODUCT SB5060-021-0. COORDINATE MOUNTING OF THE DEVICE ABOVE PANELBOARD.
- (18) PROVIDE A DOUBLE-GANG BOX FLUSH MOUNTED IN THE CEILING WITH A BLANK PLATE WITH HOLE FOR A DROP CORD. PROVIDE THE #12 DROP CORD (WITH STRAIN RELIEF AT THE OUTLET BACK BOX) AND CONNECT THE CORD TO AN OUTLET BOX CONTAINING TWO 15 AMP 1G (ORANGE) RECEPTACLE OUTLETS. OUTLET BOX TO BE MOUNTED TO THE OVER-HEAD SHELVEING AT THE PRINTER AND MONITOR MOUNTING BRACKET.

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 TWO RETROFIT STYLE DOUBLE-GANG RINGS (CARLON #SC200RR) WITH STAINLESS STEEL COVER PLATE AND HOLE IN PLATE FOR AUDIO, DETECTOR LOOP, AND DIGITAL MENUBOARD CABLES. EACH WITH A 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 SINGLE-GANG JUNCTION BOX ABOVE THE PASS THRU OPENING WITH A 1" EMPTY CONDUIT STUBBED UP INTO THE ACCESSIBLE CEILING SPACE FOR OWNER'S TV CABLES.
- (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.

8 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 GND. EACH ISIA HOMERUN SHALL BE DEDICATED TO A CIRCUIT BREAKER VIA DEDICATED CONDUCTORS WITHIN A CABLE ASSEMBLY. ALL MC CABLES SHALL BE RUN OVER-HEAD ABOVE THE CEILING AND BAKED 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 - 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 WITHOUT COVERPLATE. EXTEND 2" RIGID CONDUIT UP TO ABOVE ACCESSIBLE OFFICE CEILING AREA AND PROVIDE BUSHING ON CONDUIT END.
- (S3) PROVIDE A 4" W X 4" H X 3" D JUNCTION BOX WITHOUT COVERPLATE AND EXTEND A 2" CONDUIT DOWN AND BELOW GRADE TO EACH OF THE SITES POLE MOUNTED CAMERA LOCATIONS (SEE ELECTRICAL SITE PLAN FOR CONTINUATION) AND A 2" CONDUIT UP INTO THE ACCESSIBLE CEILING SPACE WITH A BUSHING ON THE CONDUIT END. PROVIDE A SINGLE-GANG JUNCTION BOX ADJACENT TO THE DOUBLE-GANG BOX WITH A 1.5" CONDUIT DOWN TO A SECOND SINGLE-GANG JUNCTION BOX AT THE CCTV MONITOR LOCATION.
- (S4) NOT USED.
- (S5) PROVIDE SINGLE GANG BOX WITHOUT 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.
- (S7) EXTEND 1/2" RIGID CONDUIT FROM TOP OF STRIKE-SIDE DOOR FRAME CHANNEL TO ABOVE ACCESSIBLE 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 WITHOUT 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 (S2).
- (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.

6 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) NOT USED.
- (M3) PROVIDE THREE SINGLE GANG EXTRA DEEP J-BOXES STACKED ABOVE EACH OTHER WITH 1/2" CONDUIT FROM EACH TO THE TOP BOX AND A 1" CONDUIT STUBBED UP INTO THE CEILING SPACE FOR MUSIC SYSTEM VOLUME CONTROLS.
- (M4) PROVIDE A SINGLE GANG EXTRA DEEP JUNCTION BOX AT 74" AFF WITH 1/2" CONDUIT STUBBED INTO THE CEILING SPACE FOR MUSIC SYSTEM VOLUME CONTROLS.

7 KEY NOTES - POS SYSTEM:

- (R1) PROVIDE A 'RETROFIT' DOUBLE-GANG RING (CARLON #SC200RR) FOR OWNER'S DEVICE PLATE WITH A 3" EMPTY CONDUIT AT THE OPENING STUBBED UP INTO 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 #SC100RR) FOR OWNER'S DEVICE PLATE WITH A 2" EMPTY CONDUIT AT THE OPENING STUBBED UP INTO 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. MOUNT BOX ADJACENT TO THE RECEPTACLE FOR EQUIPMENT 180. DO NOT MOUNT BOX BETWEEN EQUIPMENT 180 AND EQUIPMENT 182 RECEPTACLES.
- (R7) PROVIDE A SINGLE-GANG BOX FLUSH MOUNTED IN THE CEILING FOR THE POS DATA PLATE. (BY OTHERS) FOR THE SALAD PREP AREA POS MONITOR AND PRINTER.

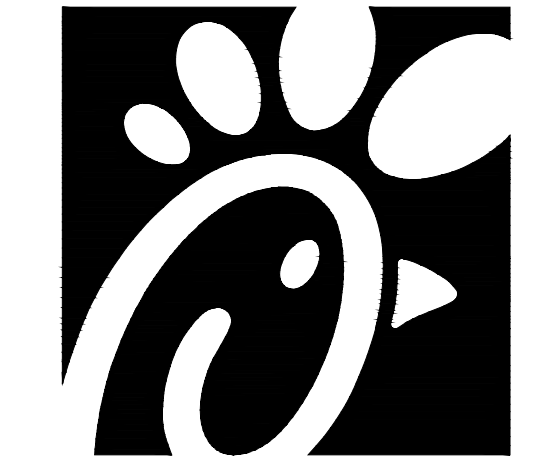
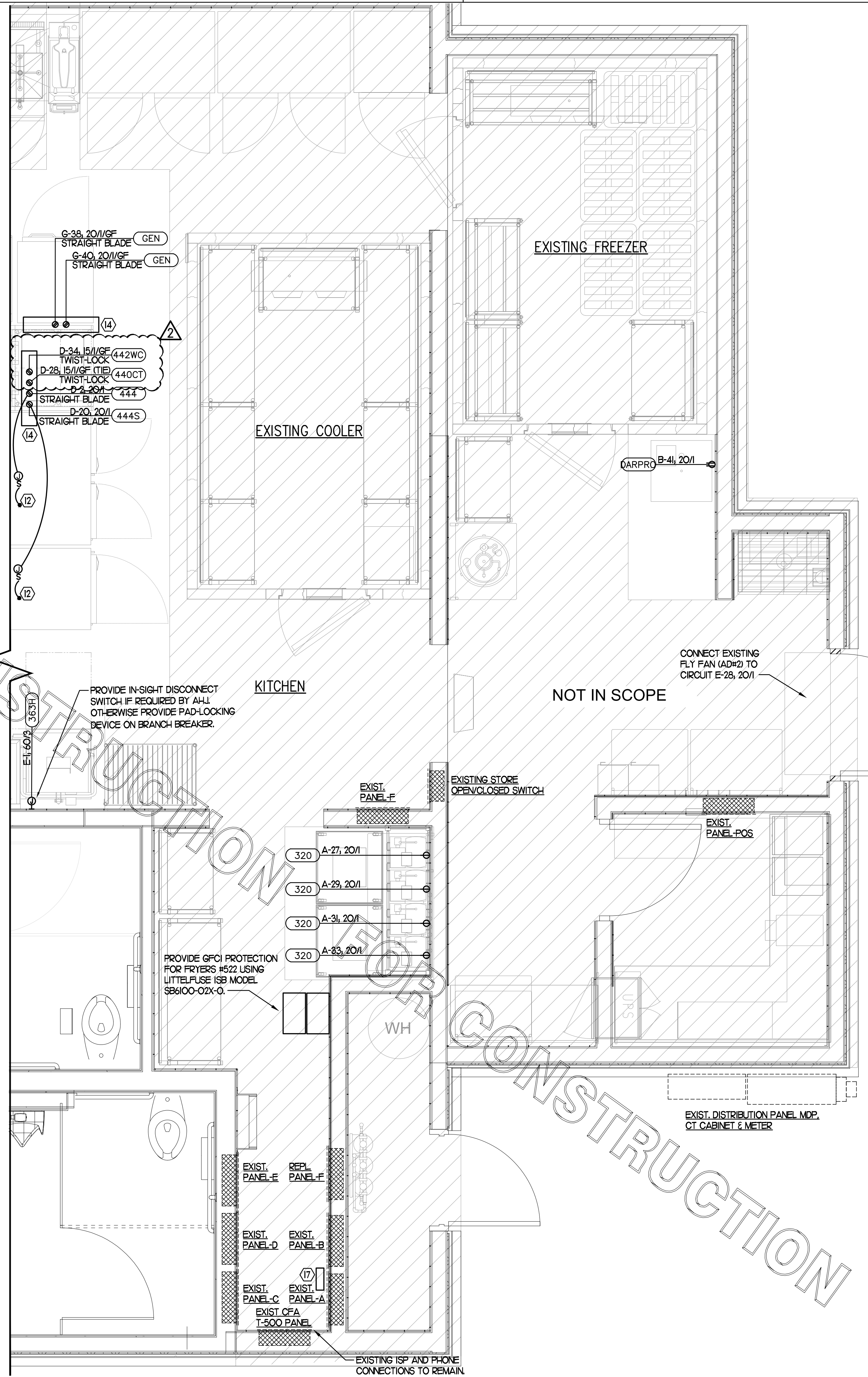
9 CO2 DETECTOR NOTES:

- (C1) CO2 CENTRAL CONTROL UNIT - PROVIDE SINGLE-GANG BACKBOX AT 60" AFF WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE.
- (C2) CO2 ANNUNCIATOR UNIT - PROVIDE SINGLE-GANG BACKBOX AT 60" AFF WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE.
- (C3) CO2 SENSOR UNIT - PROVIDE SINGLE-GANG BACKBOX AT 12" AFF WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE.
- (C4) 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.

THE INFORMATION USED TO DEVELOP THE EXISTING CONDITIONS AS SHOWN ON THESE PLANS IS FROM PREVIOUS BUILDING DRAWINGS AND PHOTOS OF EXISTING PANEL SCHEDULES. WHAT WAS SHOWN ON PLAN AND WHAT WAS ACTUALLY INSTALLED MAY VARY. FIELD VERIFY ALL EXISTING CONDITIONS.

1 LARGE SCALE ADDITION POWER PLAN

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



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FSR#02167

BUILDING TYPE / SIZE: SR 506
 RELEASE: 23.04

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION
2	12/18/23	CD Coordination

CONSULTANT PROJECT # 23130.HF.R
 PRINTED FOR CONSTRUCTION
 DATE 08/30/2023
 DRAWN BY LK

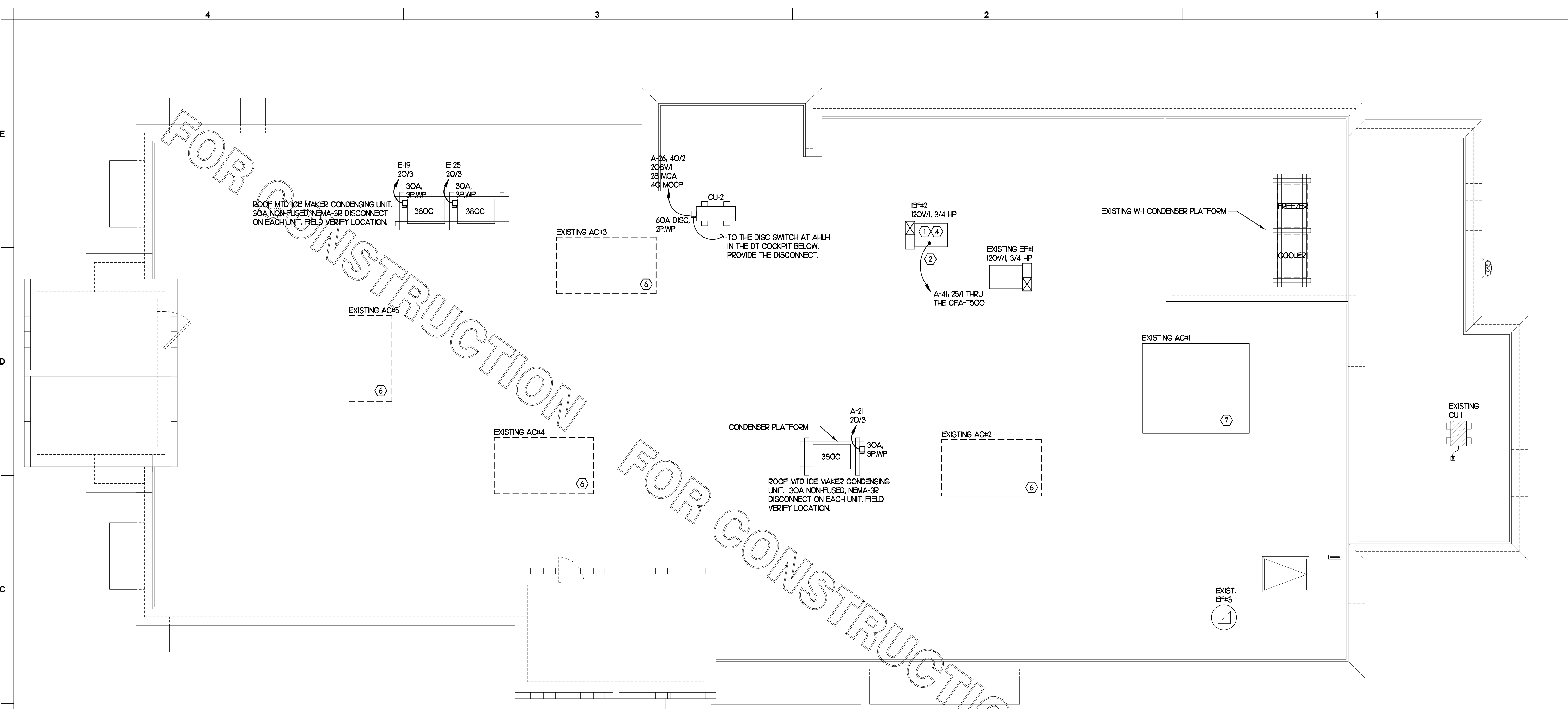
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SHEET LARGE SCALE POWER PLAN

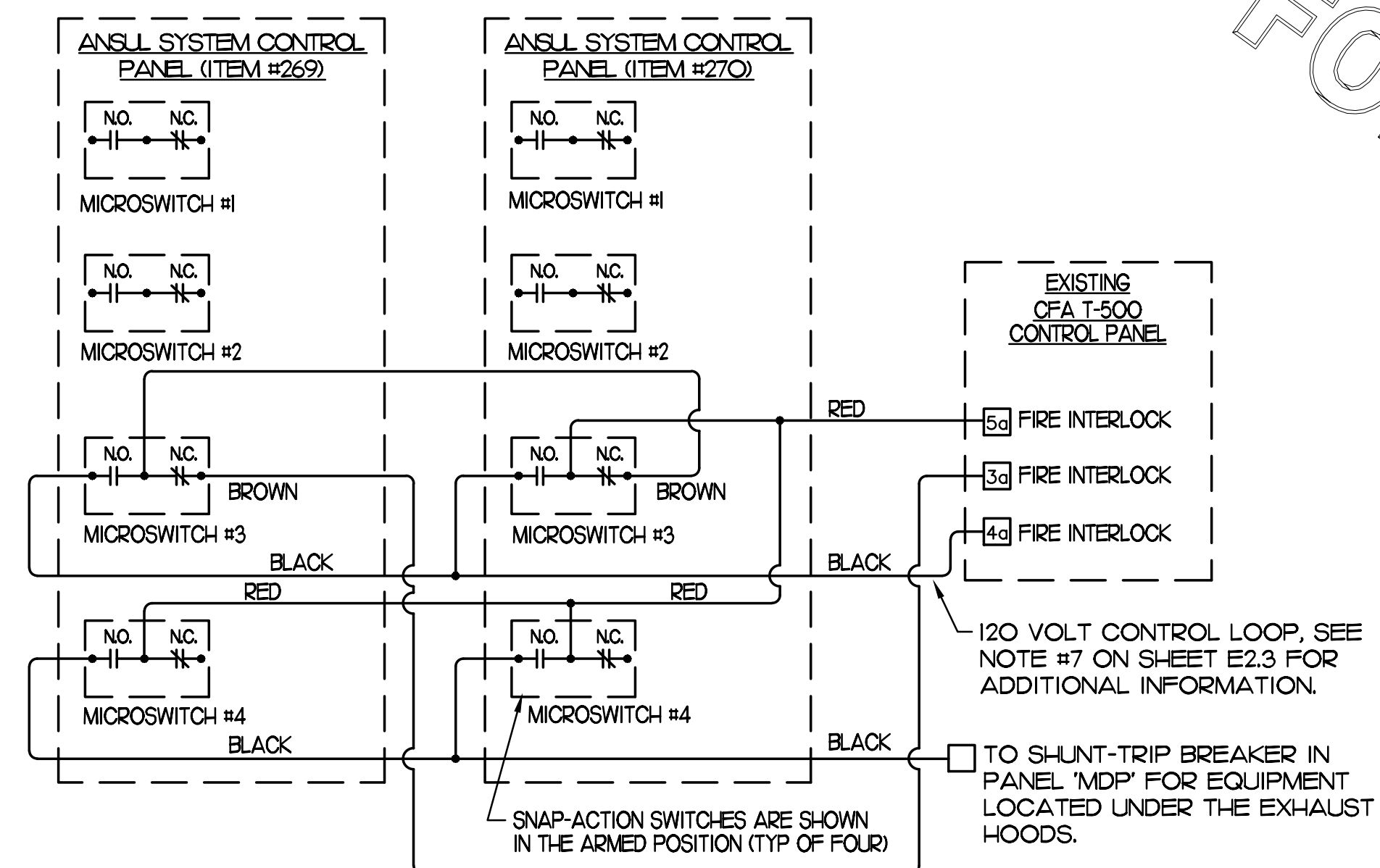
SHEET NUMBER

E2.3

CONSTRUCTION



1 ROOF POWER PLAN
SCALE: 1/4" = 1'-0"



3 ANSUL SYSTEM PANEL WIRING DIAGRAM
NOT TO SCALE

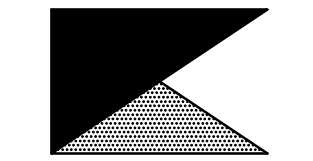
THE INFORMATION USED TO DEVELOP THE EXISTING CONDITIONS AS SHOWN ON THESE PLANS IS FROM PREVIOUS BUILDING DRAWINGS. WHAT WAS SHOWN ON PLAN AND WHAT WAS ACTUALLY INSTALLED MAY VARY. FIELD VERIFY ALL EXISTING CONDITIONS.

- 2 KEYNOTES (APPLY TO THIS SHEET ONLY)**
1. CONNECT EF#1, EF#2, AND EF#3 THRU THE CFA-500 CONTROL PANEL.
 2. 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 1/4" DIAMETER LOOP IN THE FLEXIBLE CONDUIT BETWEEN THE ROOF AND THE FAN ELECTRICAL CONNECTION.
 3. NOT USED
 4. EXHAUST FAN DISCONNECT IS FURNISHED WITH THE FAN AND SHALL BE CONNECTED BY THE CONTRACTOR.
 5. NOT USED
 6. CONVENIENCE OUTLET SUPPLIED WITH EXISTING UNIT. RECONNECT POWER THROUGH CIRCUIT B-25, VERIFY CIRCUIT NUMBER.
 7. CONVENIENCE OUTLET SUPPLIED WITH UNIT AND UNIT POWERED.
 8. NOT USED



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FSR#02167
BUILDING TYPE / SIZE: SR 506
RELEASE: 23.04

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 23130.HF.R
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SHEET ROOF POWER PLAN
SHEET NUMBER

CONSTRUCTION

E2.4

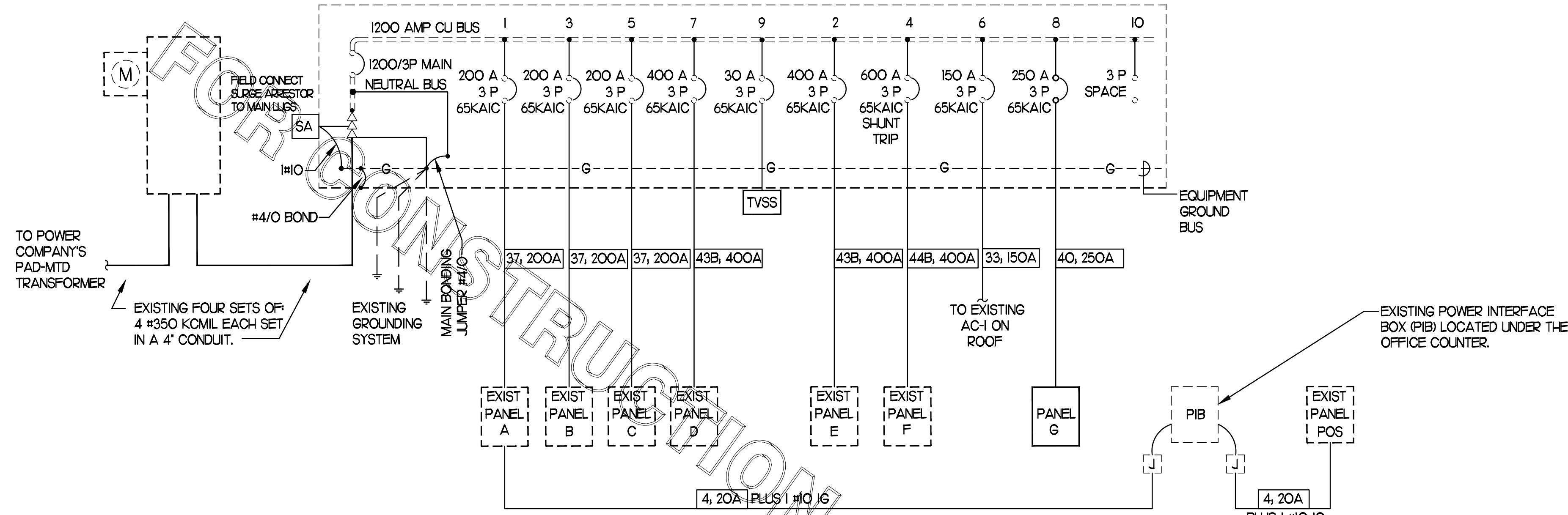
PANELBOARD SCHEDULE - EXISTING PANEL-A #2167												
PANELBOARD DESCRIPTION				BREAKER OPTIONS				LOADS				
PANELBOARD NAME: A				ARC-FAULT: AF				KVA PHASE A 14.46				
MANUFACTURER / TYPE: SQ-D / N00D				GROUND FAULT: GF				KVA PHASE B 14.471				
VOLTS: 208 Y / 120				HACR: HA				KVA PHASE C 12.635				
PHASE / WIRE: 3 / 4				HID LGT RATED: HD				AMPS PHASE A 120.5				
MAIN TYPE / CU BUS AMPS: MLO / 225				HIGH MAG LOAD: HM				AMPS PHASE B 120.59				
AC RATING: 65,000				ISOLATED GROUND: IG				AMPS PHASE C 105.29				
MOUNTING: FLUSH				LOCK-ON: LO				KVA CONNECTED 41.566				
NEMA RATING: 1				SHUNT TRIP: ST				KVA DIVERSIFIED 43.55				
QUANTITY OF SECTIONS: 1				SWITCH RATED: SW				AMPS DIVERSIFIED 115.38				
								AMPS OVERSEEN 107.8				
PHI	CR	LOAD	EQ	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD	CR	PHI
Notes	NO.	DESCRIPTION	NO	TYPE	KVA	%P/O	PH	CR	BKR	LOAD	LOAD	EQ
	1	TELEPHONE DT VIDEO	R	0.360	20/1	A	20/1	0.720	R	2	STRONG OUTLETS	2
	3	OFFICE OUTLETS	R	0.900	20/1	B	20/1	1.800	K	305	TEA BREWER	4
	5	OFFICE OUTLETS	R	0.720	20/1	C	20/1	1.440	K	305	TEA BREWER	6
	7	U.C. REFRIGERATOR	420	X	0.564	20/1/0	A	20/1	1.128	MS	EXIST WATER HEATER	8
	9	FIRE ALARM PANEL	MS	0.500	20/1/0	B	20/1/0	1.000	MS	UPS RECEPTACLE (POS)	10	
	11	GEN OUTLETS	R	0.720	20/1	C	20/1/0	1.440	MS	PLAY AREA OUTLET	12	
	13	U.C. REFRIGERATOR	420	X	0.564	20/1/0	A	25/1	1.128	M1	EXISTING EF-1	14
	15	AIR COMPRESSOR	MS	1.920	20/1	B	20/1/0	3.840	R	SECURITY SYSTEM	16	
	17	WALL HEATER (NORTH)	HT	0.750	20/2			1.500	X		18	
	19	HT	HT	0.750	20/2			1.500	X	449	WALK-IN COOLER	20
	21	REF ICE CONDENSER	380C	X	1.704	20/3	A	20/1	3.408	R	IPAD CHARGERS	22
	23	REF ICE CONDENSER	380C	X	1.704	20/3	C	20/1	3.408	R	IPAD CHARGERS	24
	25	REF ICE CONDENSER	380C	X	1.704	20/3	B	20/1	3.408	R	WALK-IN FREEZER	28
	27	CARBONATOR	K	0.744	20/1	B	35/3/1/0	2.221	X	410	WALK-IN FREEZER	30
	29	CARBONATOR	K	0.744	20/1	C	20/1	1.488	X		32	
	31	CARBONATOR	K	0.744	20/1	A	40/2	1.488	X		34	
	33	CARBONATOR	K	0.744	20/1	B	20/1	1.488	X		36	
	35	EXIST BOOSTER PUMP	M1	1.440	20/2	C	20/1	2.880	R		38	
	37	GEN OUTLETS	R	0.540	20/1	B	20/1	1.080	R		40	
	39	GEN OUTLETS	R	0.540	20/1	C	20/1	1.080	R		42	
	41	REPLACEMENT EF-2	M1	1.656	25/1	C	20/1	3.312	R		RECIRC. PUMP	42
*A/P/O INDICATES CIRCUIT BREAKER AMPACITY/NO. POLES/OPTIONS WITH OPTIONS AS NECESSARY												
PANELBOARD LOAD SUMMARY												
LOAD DESCRIPTION	TYPE	(KVA) X	DEMAND FACTOR	=	DIVERSIFIED KVA							
RECEPTACLES	R	5.940	PER(>10KVA@50%)		5.940							
MISCELLANEOUS	MS	5.500	1.25		6.875							
HVAC	HV	5.824	1		5.824							
HEAT	HT	2.000	1		2.000							
SINGLE PHASE MOTOR	M1	6.592	1.25		8.240							
KITCHEN EQUIPMENT	K	6.276	0.65		4.079							
KITCHEN REFRIG EQUIPMENT	X	16.294	0.65		10.591							
TOTAL		48.426			43.550							

PANELBOARD SCHEDULE - EXISTING PANEL-D #2167													
PANELBOARD DESCRIPTION				BREAKER OPTIONS				LOADS					
PANELBOARD NAME: D				ARC-FAULT: AF				KVA PHASE A 16.40					
MANUFACTURER / TYPE: SQ-D / N00D				GROUND FAULT: GF				KVA PHASE B 14.93					
VOLTS: 208 Y / 120				HACR: HA				KVA PHASE C 10.24					
PHASE / WIRE: 3 / 4				HID LGT RATED: HD				AMPS PHASE A 136.7					
MAIN TYPE / CU BUS AMPS: MLO / 400				HIGH MAG LOAD: HM				AMPS PHASE B 124.4					
AC RATING: 65,000				ISOLATED GROUND: IG				AMPS PHASE C 87.87					
MOUNTING: FLUSH				LOCK-ON: LO				KVA CONNECTED 41.87					
NEMA RATING: 1				SHUNT TRIP: ST				KVA DIVERSIFIED 28.22					
QUANTITY OF SECTIONS: 1				SWITCH RATED: SW				AMPS DIVERSIFIED 116.2					
								AMPS OVERSEEN 103.98					
PHI	CR	LOAD	EQ	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD	CR	PHI	
Notes	NO.	DESCRIPTION	NO	TYPE	KVA	%P/O	PH	CR	BKR	LOAD	LOAD	EQ	
	1	CENTERLINE HOT TABLE	120	K	1.500	60/3	B	30/1	2.880	X	580	THAWING CABINET	2
	3	CENTERLINE HOT TABLE	120	K	1.500	60/3	C	20/1/0	0.180	R	580	MULTI-USE HOLDING CAB	4
	5	CENTERLINE HOT TABLE	120	K	1.500	60/3	A	20/1/0	0.180	R	580	DROP CORD OUTLET	6
	7	CENTERLINE HOT TABLE	120	K	1.500	60/3	B	20/1/0	0.180	R	580	DROP CORD OUTLET	8
	9	CENTERLINE HOT TABLE	120	K	1.500	60/3	C	20/1/0	0.180	R	580	FLOOR MIXER	10
	11	CENTERLINE HOT TABLE	120	K	1.500	60/3	A	20/1/0	0.180	R	580	WORKTOP REFRIG	12
	13	CENTERLINE HOT TABLE	120	K	1.500	60/3	B	15/1/0	0.288	X	441	REFRIG SALAD PREP	14
	15	CENTERLINE HOT TABLE	120	K	1.500	60/3	C	20/1/0	0.180	R	441	WORKTOP REFRIG	16
	17	CENTERLINE HOT TABLE	120	K	1.500	60/3	A	20/1/0	0.180	R	441	DROP CORD OUTLET	18
	19	DROP CORD OUTLET	R	0.180	20/1/0	A	20/1	0.360	R	4445	THAWING CABINET	20	
	21	DROP CORD OUTLET	R	0.180	20/1/0	B	20/1/0	0.360	R		DROP CORD OUTLET	22	
	23	DROP CORD OUTLET	R	0.180	20/1/0	C	20/1/0	0.360	R		DROP CORD OUTLET	24	
	25	DROP CORD OUTLET	R	0.180	20/1/0	A	20/1/0	0.360	R		DROP CORD OUTLET	26	
	27	REFRIG WORK TABLE	419	X	0.564	20/1/0	B	15/1/0	0.360	X	4402	ICE BREAKING TABLES	28
	29	SPARE										30	
	31	DROP CORD OUTLET	R	0.180	20/1/0	A	20/1/0	0.360	R		SPARE	32	
	33	DROP CORD OUTLET	R	0.180	20/1/0	B	15/1/0	0.360	R		DROP CORD OUTLET	34	
	35	DROP CORD OUTLET	R	0.180	20/1/0	C	20/1/0	0.360	R	184	DROP CORD OUTLET	36	
	37	DROP CORD OUTLET	R	0.180	20/1/0	A	20/1/0	0.360	R		DROP CORD OUTLET	38	
	39	SPARE										40	
	41	SPARE										42	
*A/P/O INDICATES CIRCUIT BREAKER AMPACITY/NO. POLES/OPTIONS WITH OPTIONS AS NECESSARY													
PANELBOARD LOAD SUMMARY													
LOAD DESCRIPTION	TYPE	(KVA) X	DEMAND FACTOR	=	DIVERSIFIED KVA								
RECEPTACLES	R	2.880	PER(>10KVA@50%)		2.880								
SINGLE PHASE MOTOR	M1	0.000	1.25		0.000								
KITCHEN EQUIPMENT	K	30.780	0.65		19.994								
KITCHEN REFRIG EQUIPMENT	X	8.232	0.65		5.351								
TOTAL		41.872			28.225								

PANELBOARD SCHEDULE - EXISTING PANEL-E #2167													
PANELBOARD DESCRIPTION				BREAKER OPTIONS				LOADS					
PANELBOARD NAME: E				ARC-FAULT: AF				KVA PHASE A 40.476					
MANUFACTURER / TYPE: SQ-D / N00D				GROUND FAULT: GF				KVA PHASE B 38.436					
VOLTS: 208 Y / 120				HACR: HA				KVA PHASE C 39.876					
PHASE / WIRE: 3 / 4				HID LGT RATED: HD				AMPS PHASE A 337.3					
MAIN TYPE / CU BUS AMPS: MLO / 400				HIGH MAG LOAD: HM				AMPS PHASE B 320.3					
AC RATING: 65,000				ISOLATED GROUND: IG				AMPS PHASE C 332.3					
MOUNTING: FLUSH				LOCK-ON: LO				KVA CONNECTED 118.79					
NEMA RATING: 1				SHUNT TRIP: ST				KVA DIVERSIFIED 109.52					
QUANTITY OF SECTIONS: 1				SWITCH RATED: SW				AMPS DIVERSIFIED 329.72					
								AMPS OVERSEEN 303.98					
PHI	CR	LOAD	EQ	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD	LOAD	CR	PHI	
Notes	NO.	DESCRIPTION	NO	TYPE	KVA	%P/O	PH	CR	BKR	LOAD	LOAD	EQ	
	1	EXISTING AC-2	AC-2	5.880	60/3 (65K)		B	60/3 (65K)	5.760	HV	AC-2	EXISTING AC-2	2
	3	EXISTING AC-3	AC-3	5.880	60/3 (65K)		B	50/3 (65K)	5.760	HV	AC-4	EXISTING AC-4	4
	5	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	6
	7	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	8
	9	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	10
	11	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	12
	13	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	14
	15	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	16
	17	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	18
	19	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	20
	21	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	22
	23	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	24
	25	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	26
	27	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	28
	29	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	30
	31	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	32
	33	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	34
	35	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	36
	37	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	38
	39	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	40
	41	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	42
	43	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	44
	45	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	46
	47	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	48
	49	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	50
	51	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	52
	53	EXISTING AC-5	AC-5	4.200	45/3 (65K)		B	45/3 (65K)	4.080	HT	AD-1	EX. HEATED AIR DOOR	54</

EXISTING PANEL "MDP" - MAIN DISTRIBUTION PANEL

120/208V - 3PH, 4W.
1200A MAIN CIRCUIT BREAKER
65 KAIC/SERVICE ENTRANCE RATED



I SINGLE LINE DIAGRAM
NO SCALE

PANELBOARD SCHEDULE - PANEL-MDP #2167														
PANELBOARD DESCRIPTION					BREAKER OPTIONS					LOADS				
PANELBOARD NAME: MDP					ARC-FAULT: AF					KVA PHASE A 225.06				
MANUFACTURER / TYPE: SQ-D / I-LINE					GROUND FAULT: GF					KVA PHASE B 213.13				
VOLTS: 208 Y / 120					HOCR: HA					KVA PHASE C 212.17				
PHASE / WIRE: 3 / 4					HD LIT RATED: HD					AMPS PHASE A 1875.5				
MAIN TYPE / CU BUS AMPS: MCB / 1200 AMP					HIGH MAG LOAD: HM					AMPS PHASE B 1776.1				
AIC SERIES RATING: 65,000					ISOLATED GROUND: IG					AMPS PHASE C 1768.1				
MOUNTING: SURFACE					LOCK-ON: LO					KVA CONNECTED 650.36				
NEMA RATING: 3R					SHUNT TRIP: ST					KVA DIVERSIFIED 514.1				
QUANTITY OF SECTIONS: 1					SWITCH RATED: SW					AMPS CONNECTED 1805.2				
										AMPS DIVERSIFIED 1427				
Pnl Notes	CIR NO.	LOAD DESCRIPTION	EQ NO.	LOAD TYPE	LOAD KVA	CIR BKR *A/P/O	PH	CIR BKR *A/P/O	LOAD KVA	LOAD TYPE	EQ NO.	LOAD DESCRIPTION	CIR NO.	Pnl Notes
	1	PANEL 'A'			14.46	200/3	A	400/3	40.48			PANEL 'E'	2	
					14.47		B		38.44					
					12.64		C		39.88					
	3	PANEL 'B'			23.20	200/3	A	600/3/ST	79.60			PANEL 'F'	4	
					14.90		B		79.60					
					14.32		C		80.48					
	5	PANEL 'C'			13.16	200/3	A	150/3	16.08	HV		EXISTING A/C #1	6	
					13.83		B		16.08	HV				
					15.62		C		16.08	HV				
	7	PANEL 'D'			16.58	400/3	A	250/3	21.50			ADDED PANEL 'G'	8	
					14.93		B		20.88					
					10.54		C		22.62					
	9	TVSS				30/3	A	3 POLE				SPACE	10	
							B							
							C							

*A/P/O INDICATES CIRCUIT BREAKER AMPACITY/NO. POLES/OPTIONS WITH OPTIONS AS NECESSARY

PANELBOARD LOAD SUMMARY					
LOAD DESCRIPTION	TYPE	(KVA) X	DEMAND FACTOR	=	DIVERSIFIED KVA
LIGHTING	L	7.980	1.25		9.975
EXTERIOR LIGHTING & SIGNAGE	EL	33.062	1.25		41.328
RECEPTACLES	R	23.760	PER(>10KVA@50%)		16.880
MISCELLANEOUS	MS	7.770	1.25		9.713
HVAC	HV	124.864	1		124.864
HEAT	HT	20.204	1		20.204
SINGLE PHASE MOTOR	M1	9.012	1.25		11.265
KITCHEN EQUIPMENT	K	355.871	0.65		231.316
KITCHEN REFRIG EQUIPMENT	X	74.698	0.65		48.554
TOTAL		657.221		TOTAL	514.098

ELECTRICAL LOAD SUMMARY - STORE #2167

(NOT AN ELECTRICAL RESTAURANT)
THE FOLLOWING IS BASED ON NEC 220.88

LOAD DESCRIPTION	KVA
LIGHTING	7.98
EXTERIOR LITG AND SIGNAGE	33.06
RECEPTACLES	23.76
MISCELLANEOUS	7.77
AIR CONDITIONING	124.88
ELECTRIC HEAT	20.20
SINGLE PHASE MOTORS	9.01
KITCHEN EQUIPMENT	355.87
KITCHEN REFRIGERATION EQUIPMENT	74.70
TOTAL CONNECTED KVA	657.22
IF TOTAL IS 0-200 KVA, THEN TOTAL LOAD 100%	0.00
IF TOTAL IS 201-325 KVA, THEN LOAD OVER 200 AT 50% + 200	0.00
IF TOTAL LOAD IS 326-800 KVA, THEN LOAD OVER 325 AT 45% + 262.5	412.00
IF TOTAL LOAD IS OVER 800 KVA, THEN LOAD OVER 800 AT 20% + 476.3	0.00
DIVERSIFIED AMPS AT 208 VOLT	1144.44

CONDUIT AND CONDUCTORS SCHEDULE																
Mark No.	OCP Device Amp/Poles	Conductors		Conductors			Raceway Size (nominal inches)									
		Total Ampacity	60d C	75d C	Phase Qty	Neutral Size	Min Eq Grd Size	No. Sets	Phase, EMT	Neutral, IMC	Equip Grd, RIGID	With Isolated Ground, PVC	EMT	IMC	PVC	
1	20/1	20	-	-	2	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75
2	20/2	20	-	-	3	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75
3	20/3	20	-	-	4	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75
4	25/1	30	-	-	2	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75
5	25/2	30	-	-	3	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75
6	25/3	30	-	-	4	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75
7	30/1	30	-	-	2	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75
8	30/2	30	-	-	3	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75
9	30/3	30	-	-	4	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75
10	40/1	40	-	-	2	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75
11	40/2	40	-	-	3	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75
12	40/3	40	-	-	4	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	1.00
13	50/1	55	-	-	2	6	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75
14	50/2	55	-	-	3	6	THHN	1	10	One	0.75	0.75	0.75	0.75	1.00	1.00
15	50/3	55	-	-	4	6	THHN	1	10	One	1.00	1.00	1.00	1.00	1.00	1.00
16	60/1	70	-	-	2	4	THW	1	8	One	1.00	1.00	1.00	1.00	1.25	1.00
17	60/2	70	-	-	3	4	THW	1	8	One	1.25	1.00	1.25	1.25	1.25	1.25
18	60/3	70	-	-	4	4	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	1.25
19	70/1	70	-	-	2	4	THW	1	8	One	1.00	1.00	1.00	1.00	1.25	1.00
20	70/2	70	-	-	3	4	THW	1	8	One	1.25	1.00	1.25	1.25	1.25	1.25
21	70/3	70	-	-	4	4	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	1.25
22	80/2	85	-	-	3	3	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	1.25
23	80/3	85	-	-	4	3	THW	1	8	One	1.25	1.25	1.25	1.25	1.50	1.25
24	90/2	95	-	-	3	2	THW	1	8	One	1.25	1.25	1.25	1.25	1.50	1.25
25	90/3	95	-	-	4	2	THW	1	8	One	1.50	1.25	1.50	1.50	1.50	1.50
26	100/2	110	-	-	3	1	THW	1	6	One	1.50	1.50	1.50	1.50	2.00	2.00
27	100/3	110	-	-	4	1	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00
28	110/2	-	115	-	3	2	THW	1	6	One	1.25	1.25	1.25	1.25	1.50	1.25
29	110/3	-	115	-	4	2	THW	1	6	One	1.50	1.25	1.50	1.50	1.50	1.50
30	125/2	-	130	-	3	1	THW	1	6	One	1.50	1.50	1.50	1.50	2.00	2.00
31	125/3	-	130	-	4	1	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00
32	150/2	-	150	-	3	1/0	THW	1	6	One	2.00	1.50	2.00	2.00	2.00	2.00
33	150/3	-	150	-	4	1/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00
34	175/2	-	175	-	3	2/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00
35	175/3	-	175	-	4	2/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.50	2.50
36	200/2	-	200	-	3	3/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.50	2.50
37	200/3	-	200	-	4	3/0	THW	1	6	One	2.50	2.50	2.50	2.50	2.50	2.50
38	225/2	-	230	-	3	4/0	THW	1	4	One	2.50	2.00	2.50	2.50	2.50	2.50
39	225/3	-	230	-	4	4/0	THW	1	4	One	2.50	2.50	2.50	2.50	3.00	3.00
40	250/3	-	255	-	4	250	THW	1	4	One	2.50	3.00	3.00	3.00	3.00	3.00
41A	300/3	-	285	-	4	300	THW	1	4	One	3.00	3.00	3.00	3.00	3.00	3.00
41B	300/3	-	310	-	4	350	THW	1	4	One	3.00	3.00	3.00	3.00	3.00	3.00
42A	350/3	-	335	-	4	400	THW	1	4	One	3.00	3.50	3.50	3.50	3.50	3.50
42B	350/3	-	380	-	4	500	THW	1	4	One	3.50	3.50	3.50	3.50	3.50	3.50
43A	400/3	-	380	-	4	500	THW	1	3	One	3.50	3.50	3.50	3.50	3.50	3.50
43B	400/3	-	400	-	4	3/0	THW	2	3	Two	2.50	2.50	2.50	2.50	2.50	2.50
44A	600/3	-	570	-	4	300	THW	2	1	Two	3.00	3.00	3.00	3.00	3.00	3.00
44B	600/3	-	620	-	4	350	THW	2	1	Two	3.00	3.00	3.00	3.00	3.00	3.50
45A	800/3	-	760	-	4	500	THW	2	1/0	Two	3.50	3.50	3.50	3.50	3.50	3.50
45B	800/3	-	820	-	4	600	THW	2	1/0	Two	4.00	4.00	4.00	4.00	4.00	4.00
46	1000/3	-	1005	-	4	400	THW	3	2/0	Three	3.50	3.50	3.50	3.50	3.50	3.50
47	1200/3	-	1240	-	4	350	THW	4	3/0	Four	3.50	3.50	3.50	3.50	3.50	4.00
48	1600/3	-	1675	-	4	400	THW	5	4/0	Five	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 310.15(B)(16) 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.



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6416 CARLISLE PIKE STE 3500
MECHANICSBURG, PA 17050-2957

FSR#02167
BUILDING TYPE / SIZE: SR 806
RELEASE: 23.04

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

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. Obtain permits and certificates of approval from all authorities having jurisdiction over the installation and pay all fees required.
- 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 include 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 diagrammatic 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 an additional isolated ground (green + yellow stripe) conductor for isolated ground circuits (POS System). Fittings 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 or set-screw 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 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 shall be UL listed per standard 1569, color coded copper conductors (type THHN), the sheathing shall be constructed of interlocked

galvanized steel, and shall conform to the requirements of Article 330 of the National Electrical Code.

- B. MC Cable with an isolated grounding conductor shall be used, concealed above ceiling and in walls, for the connection of the Point Of Sales (POS) system equipment from the isolated ground receptacles to the panelboard serving the POS loads when allowed by local codes and Article 330 of the National Electrical Code.

- C. MC Cable may be used when allowed by local codes and Article 330 of the National Electrical Code for branch circuits (except the main homerun to the panelboard which shall be conduit with conductors) for the following:
 1. Lighting
 2. Dining area receptacles
 3. Fly Lights
 4. Building mounted signage
 5. Office area receptacles

- D. MC Cable shall not be used for branch circuits serving Kitchen Equipment Items and similar circuits in the Kitchen, the Drive-Thru area, and the Serving area's back counter.

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

F. 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.

2.05 MC CABLE

- A. MC Cable may be used for branch circuits as noted in Part 1 above and where the local code allows use of MC Cable. The installation shall conform to Article 330 of the National Electrical Code and shall be concealed in walls and above ceilings. (Exposed MC Cable will not be acceptable.)

- B. MC Cables shall be secured and supported by the building structure per the National Electrical Code and any local code requirements. MC Cable shall not lay on ceilings.

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 ferrolloy. 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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CHICK-FIL-A
MECHANICSBURG FSU
6416 CARLISLE PIKE STE 3500
MECHANICSBURG, PA 17050-2957

FSR#02167

BUILDING TYPE / SIZE: SR 506
RELEASE: 23.04

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

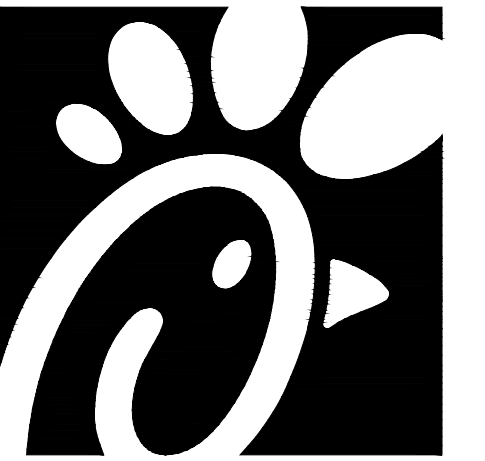
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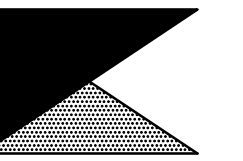
SHEET ELECTRICAL SPECIFICATIONS

SHEET NUMBER

E4.1



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CHICK-FIL-A
MECHANICSBURG FSU
6416 CARLISLE PIKE STE 3500
MECHANICSBURG, PA 17050-2957

FSR#02167
BUILDING TYPE / SIZE: SR S06
RELEASE: 23.04

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

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SHEET LIGHTING COMCHECK

SHEET NUMBER

E5.1

applicable mandatory requirements listed in the Inspection Checklist.

Name - Title _____ Signature _____ Date _____

Project Title: Chick-fil-A #2167 Report date: 09/18/23
Data filename: Z:\Shared\02 Prototypes\Chick-fil-A\2023\Remodels\23130.HF.R - Mechanicsburg, PA - 2167\ComCheck\CFA #2167 2018 IECC ComCheck.cck Page 2 of 9

COMcheck Software Version 4.1.5.1 Interior Lighting Compliance Certificate

Project Information
Energy Code: 2018 IECC
Project Title: Chick-fil-A #2167
Project Type: Alteration

Construction Site: 6416 Carlisle Pike Ste 3500 Mechanicsburg, PA 17050
Owner/Agent: Chick-fil-A 5200 Buffington Road Atlanta, GA 30349
Designer/Contractor: Kurzynske & Associates 2705 Lebanon Pike - Suite One Nashville, TN 37214 615-255-5203

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B X C)
1-Kitchen & DT Serving (Common Space Types:Food Preparation)	677	1.06	718
2-Restrooms (Common Space Types:Restrooms)	287	0.85	244
3-Dining Area (Common Space Types:Dining Area - Family Restaurant)	1418	0.71	1007
4-Electrical Room (Common Space Types:Electrical/Mechanical)	26	0.43	11
Total Allowed Watts =			1980

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Kitchen & DT Serving (Common Space Types:Food Preparation 677 sq.ft.)				
LED 2: DA/DSE: Downlight: Other:	1	7	59	416
LED 2: DA/DSE: Downlight: Other:	1	4	21	84
LED 2: F: Surface Light: Other:	1	4	9	36
Restrooms (Common Space Types:Restrooms 287 sq.ft.)				
LED 2: DA/DSE: Downlight: Other:	1	6	21	127
LED 2: N: Wall Sconce: Other:	1	2	11	22
Dining Area (Common Space Types:Dining Area - Family Restaurant 1418 sq.ft.)				
LED 2: DA/DSE: Downlight: Other:	1	40	21	844
LED 2: D: Pendant: Other:	1	8	8	60
Electrical Room (Common Space Types:Electrical/Mechanical 26 sq.ft.)				
LED: AA/E: LED Troffer: Other:	1	1	59	59
Total Proposed Watts =			1648	

Interior Lighting PASSES

Interior Lighting Compliance Statement
Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title _____ Signature _____ Date _____

Project Title: Chick-fil-A #2167 Report date: 09/18/23
Data filename: Z:\Shared\02 Prototypes\Chick-fil-A\2023\Remodels\23130.HF.R - Mechanicsburg, PA - 2167\ComCheck\CFA #2167 2018 IECC ComCheck.cck Page 1 of 9

COMcheck Software Version 4.1.5.1 Exterior Lighting Compliance Certificate

Project Information
Energy Code: 2018 IECC
Project Title: Chick-fil-A #2167
Project Type: Alteration
Exterior Lighting Zone: 2 (Neighborhood business district)

Construction Site: 6416 Carlisle Pike Ste 3500 Mechanicsburg, PA 17050
Owner/Agent: Chick-fil-A 5200 Buffington Road Atlanta, GA 30349
Designer/Contractor: Kurzynske & Associates 2705 Lebanon Pike - Suite One Nashville, TN 37214 615-255-5203

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Facade (Illuminated area of facade wall or surface)	2500 ft ²	0.07	No	188
Entry (Entry canopy)	14 ft ²	0.25	Yes	4
Total Tradable Watts (a) =			4	
Total Allowed Watts =			191	
Total Allowed Supplemental Watts (b) =			400	

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Facade (Illuminated area of facade wall or surface 2500 ft²): Non-tradable Wattage				
LED 1: OJ: Wall Sconce: LED Other Fixture Unit 25W:	2	22	25	550
Entry (Entry canopy 14 ft²): Tradable Wattage				
LED 2: DN light: by others: LED Other Fixture Unit 13W:	1	2	12	24
Total Tradable Proposed Watts =			24	

Exterior Lighting PASSES

Exterior Lighting Compliance Statement
Compliance Statement: The proposed exterior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title _____ Signature _____ Date _____

Project Title: Chick-fil-A #2167 Report date: 09/18/23
Data filename: Z:\Shared\02 Prototypes\Chick-fil-A\2023\Remodels\23130.HF.R - Mechanicsburg, PA - 2167\ComCheck\CFA #2167 2018 IECC ComCheck.cck Page 3 of 9

FOR CONSTRUCTION

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) or #CR20-B (Dining)
 - Tamper Resistant duplex: #TRCR20-B (Vestibules & Play Area)
 - Tamper Resistant USB Charger duplex: #TR7756-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 #WU-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 - Atlantic 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 - Midwest region, Northeast region, Southwest region, and West region. Contact at Villa Lighting: Dave Christianell at 800-325-0963, fax- 314-531-8720, email - dave.christianell@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 compatible 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 C16506
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. Names and addresses of at least one qualified service agency.
4. A complete narrative of how each system is intended to operate.



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FSR#02167

BUILDING TYPE / SIZE: SR 506
RELEASE: 23.04

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	23130.HF.R
PRINTED FOR	CONSTRUCTION
DATE	08/30/2023
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SHEET
ELECTRICAL
SPECIFICATIONS

SHEET NUMBER

E4.2

CONSTRUCTION