MECHANICAL SYMBOLS LIST

AC-1 / TXF-1	EQUIPMENT SYMBOL
XX / X	RISER SYMBOL
	POINT OF NEW CONNECTION TO EXISTING
AIR DEVICES	
	CEILING DIFFUSER SUPPLY
	CEILING DIFFUSER RETURN
	DOOR UNDERCUT
DUCT ACCESSORIES	
VD VD	VOLUME DAMPER W/ ACCESS DOOR
G	GRAVITY/ BACKDRAFT DAMPER
	FIRE DAMPER W/ ACCESS DOOR
M	MOTORIZED DAMPER W/ ACCESS DOOR
CONTROLS AND SENSORS	
T	THERMOSTAT
TS	TEMPERATURE SENSOR
S	DUCT SMOKE DETECTOR
H	HUMIDISTAT
DUCTWORK	
	AIR DUCT W/ 1.5" ACOUSTICAL LINING
	FLEXIBLE DUCT
FC FC	FLEXIBLE CONNECTION
24X12	RECTANGULAR DUCT (WIDTH X DEPTH)
	SUPPLY AIR RECTANGULAR DUCT CROSS SECTION
	RETURN AIR RECTANGULAR DUCT CROSS SECTION
ø12	ROUND DUCT (DIAMETER)
	ROUND DUCT CROSS SECTION

ABBREVIATIONS

AL	ACOUSTIC LINING
GD	GRAVITY/BACKDRAFT DAMPER
CDS	CEILING DIFFUSER SUPPLY
CDR	CEILING DIFFUSER RETURN
CFM	CUBIC FEET OF AIR PER MINUTE
CD	CONDENSATE DRAIN PIPE
FC	FLEXIBLE CONNECTION
IEER	INTEGRATED ENERGY EFFICIENCY RATIO
EER	ENERGY EFFICIENCY RATIO
SEER	SEASONAL ENERGY EFFICIENCY RATIO
RTU	ROOF TOP UNIT
EF	EXHAUST FAN
VD	VOLUME DAMPER
MUA	MAKEUP AIR
MAU	MAKEUP AIR UNIT
KSF	KITCHEN SUPPLY FAN
FD	FIRE DAMPER
OAI	OUTDOOR AIR INTAKE
ACCU	AIR COOLED CONDENSER UNIT
SA	SUPPLY AIR
SG	SUPPLY GRILLE
RA	RETURN AIR
KX	KITCHEN EXHAUST
KEF	KITCHEN EXHAUST FAN
TX	TOILET EXHAUST
TEF	TOILET EXHAUST FAN
MD	MOTORIZED DAMPER
(E)	EXISTING

FLORIDA BUILDING DEPARTMENT NOTES

ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF 2023 FLORIDA BUILDING CODE (FBC) AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE. THE LICENSED PROFESSIONAL ENGINEER, ARCHITECT OR OTHER PERSON HAVING NOT LESS THAN FIVE (5) YEARS EXPERIENCE SUPERVISING THE INSTALLATION OF SUCH MECHANICAL SYSTEMS AND CONDUCTING SUCH TESTS WILL FILE DOCUMENTATION AND REPORTS OF TESTS THAT THE SYSTEM COMPLIES WITH THE CONSTRUCTION DOCUMENTS AND APPLICABLE LAWS.

1. TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE 2023 FMC, 8TH EDITION:
   A. VENTILATION SYSTEM SERVING COMMERCIAL COOKING APPLIANCES – FMC 506
2. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
   A. DUCT CONSTRUCTION AND INSTALLATION– 2023 FMC 603
   B. AIR INTAKES, EXHAUSTS AND RELIEF – 2023 FMC 401.5
   C. GAS FIRED EQUIPMENT –2023 FLORIDA FUEL GAS CODE
3. MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON: 68 DEG. FAHRENHEIT.
4. VENTILATION FOR ALL AREA SHALL COMPLY WITH 2023 FMC, 8TH EDITION, CHAPTER 4.
5. A STATEMENT SHALL BE FILED BY THE OWNER OR TENANT IN POSSESSION THAT THE VENTILATION SYSTEM WILL BE KEPT IN CONTINUOUS OPERATION AT ALL TIMES DURING THE NORMAL OCCUPANCY OF THE STRUCTURE AS REQUIRED BY 2023 FMC 403.3.1.3 (SYSTEM OPERATION)
6. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE–RATED WALL AND SMOKE WALL CONSTRUCTION AND LOCATION.
7. THESE PLANS ARE APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
8. ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.
9. DUCT SMOKE DETECTOR SHALL MEET UL268A.
10. VENTILATION SYSTEMS SHALL BE BALANCED TO MAINTAIN THE MINIMUM VENTILATION AIRFLOW RATE AS SHOWN IN VENTILATION REQUIREMENT TABLE. THIS SYSTEM SHALL BE BALANCED BY APPROVED METHOD – FMC 2023 608.1. CONTRACTOR SHALL SUBMIT THE AIR BALANCE REPORT TO THE INSPECTOR.

CODE COMPLIANCE

ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE BUILDING DEPARTMENT OF CITY OF OCALA. NOTHING IN THESE DRAWINGS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS APPLICABLE TO THESE PROJECT:

a. 2023 FLORIDA BUILDING CODE, 8TH EDITION.
b. 2023 FLORIDA ENERGY CONSERVATION CODE, 8TH EDITION.
c. 2023 FLORIDA MECHANICAL CODE, 8TH EDITION.
d. 2023 FLORIDA PLUMBING CODE, 8TH EDITION.
e. 2020 FLORIDA ELECTRICAL CODE (NFPA 70).
f. 2023 FLORIDA FUEL GAS CODE, 8TH EDITION.

MECHANICAL DRAWING LIST

M001	MECHANICAL NOTES, SYMBOLS LIST & ABBREVIATIONS
M002	MECHANICAL SPECIFICATIONS (1 OF 2)
M003	MECHANICAL SPECIFICATIONS (2 OF 2)
M101	MECHANICAL FLOOR PLAN
M102	MECHANICAL ROOF PLAN
M201	MECHANICAL DETAILS
M301	MECHANICAL SCHEDULES

GENERAL NOTES

1. CONTRACTOR SHALL SURVEY THE AREA OF THIS WORK BEFORE SUBMITTING A BID AND SHALL BE RESPONSIBLE FOR NOTIFYING THE ARCHITECT OF ANY CONDITIONS WHICH WOULD PREVENT THE INSTALLATION OF THE WORK AS SHOWN ON DRAWINGS.
2. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR WHO SHALL INFORM THE OWNER, PRIOR TO SUBMITTING A PROPOSAL, OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE LAWS AND REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH VIOLATION SHALL BE CORRECTED BY THE CONTRACTOR.
3. BEFORE PROCEEDING WITH ANY WORK IN OCCUPIED OR USED AREAS, THE CONTRACTOR SHALL APPLY TO OWNER FOR PERMISSION TO ENTER SUCH AREAS. THE CONTRACTOR IS OBLIGED TO PERFORM HIS WORK ONLY AT THE TIMES DESIGNATED BY OWNER. THERE WILL BE NO ADDITIONAL COMPENSATION FOR THE WORK PERFORMED AFTER HOURS OR ON OFF–DAYS WITHOUT PRIOR WRITTEN APPROVAL.
4. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER. THE WORK SHALL BE PERFORMED SO AS TO CAUSE THE LEAST POSSIBLE INCONVENIENCE AND DISTURBANCE TO THE PRESENT OCCUPANTS.
5. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS. WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR SHALL INSTALL WORK IN OVERTIME AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.
6. CONTRACTOR SHALL ASCERTAIN THE APPROPRIATE METHOD FOR BRINGING THE UNITS INTO AND THROUGH THE BUILDING TO POSITION UNIT IN LOCATION SHOWN ON THE PLANS. WHERE NECESSARY, EQUIPMENT SHALL BE SHIPPED FROM MANUFACTURER IN SECTIONS OF SIZE SUITABLE FOR MOVING THROUGH RESTRICTIVE SPACES. COORDINATE WITH BUILDING OWNER APPROPRIATE TIMES OF DAY SUCH EQUIPMENT MAY BE MOVED THROUGH ALL AREAS.
7. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW SYSTEM.
8. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY ARCHITECT.
9. PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REGULAR OPERATION OF EXISTING FACILITIES. ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH BUILDING OWNER. INSTALL ISOLATION VALVES AT POINT OF CONNECTION TO THE EXISTING PIPING. PROVIDE TEMPORARY DUCT CAPS AND/OR CONNECTIONS TO MINIMIZE SHUTDOWN TIME.
10. SUPPORT ALL DUCTWORK AND PIPING FROM BUILDING STRUCTURE AND/OR FRAMING IN AN APPROVED MANNER. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OR SUPPORTS FOR EQUIPMENT, FURNISH ADDITIONAL FRAMING. INSERTS SHALL BE STEEL, SLOTTED TYPE AND FACTORY PAINTED. SINGLE ROD SHALL BE SIMILAR TO GRINNELL FIG. 281. MULTI–ROD SHALL BE SIMILAR TO FEE & MASON SERIES 9000 WITH END CAPS AND CLOSURE STRIPS. MAXIMUM LOADING INCLUDING PIPES, DUCTWORK CONTENTS AND COVERING SHALL NOT EXCEED 75% OF RATED INSERT CAPABILITY. WHEN SUPPORTING FROM BUILDING USE BEAM CLAMPS IN APPROVED MANNER.
11. PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF PIPES, DUCTS, LOUVERS, CONDUIT, AND EQUIPMENT. PROVIDE EQUIPMENT CURBS AND DUNNAGE STEEL AS REQUIRED.
12. SEAL OPENINGS AROUND DUCTS AND PIPING THROUGH PARTITIONS, WALLS AND FLOORS (NOT IN SHAFTS) WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL (FIBERGLASS INSULATION IS NOT ACCEPTABLE).
13. WHERE PENETRATIONS THROUGH FIRE RATED WALLS ARE NOT FIRE PROOFED THIS CONTRACTOR SHALL BE RESPONSIBLE TO SEAL SAME TO MAINTAIN THE RATED INTEGRITY.
14. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.
15. ACCESS DOORS ARE REQUIRED FOR ALL BUILDING SERVICE VALVES THAT RUN THROUGH THE SPACE, AND ACCESS DOOR SHALL HAVE THE EQUAL RATED CAPACITY (1HR, 2HR, ETC.) AS WALL. COORDINATE ALL LOCATIONS OF ACCESS DOORS WITH THE ARCHITECT.
16. REMOVABLE ACCESS TILE AND/OR ACCESS DOOR ARE REQUIRED IN HUNG CEILINGS, SHAFTS AND WALLS FOR ALL VOLUME AND FIRE DAMPERS, AUTOMATIC DAMPERS AND ALL OTHER MECHANICAL EQUIPMENT AND DEVICES. HVAC CONTRACTOR TO FURNISH ACCESS LOCATION REQUIREMENTS TO GENERAL CONTRACTOR. ACCESS TILE IDENTIFICATION: PROVIDE BUTTONS, TABS, AND MARKERS TO IDENTIFY LOCATION OF CONCEALED VALVES, DAMPERS AND EQUIPMENT.
17. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.
18. UNLESS OTHERWISE SPECIFICALLY SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.
19. MATERIALS AND WORKMANSHIP, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
20. ALL EQUIPMENT SHALL BE PROVIDED WITH ONE YEAR WARRANTY PARTS AND LABOR AND FIVE YEARS ON COMPRESSORS. WARRANTY PERIOD BEGINS UPON PROJECT ACCEPTANCE
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS WORK WITH ITS COMPLETION AND FINAL ACCEPTANCE AND SHALL REPLACE ANY OF THE SAME WHICH MAY BE DAMAGED, LOST, OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FAILURE OF ANY DUCTWORK SYSTEM OR EQUIPMENT TO FUNCTION PROPERLY UPON COMPLETION OF HIS WORK UPON SAID SYSTEM OR EQUIPMENT.
23. SUBMIT SHOP DRAWING OF ALL WORK WHICH MUST BE APPROVED BY THE ARCHITECT AND ENGINEER BEFORE WORK COMMENCES.
24. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
25. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC., WHICH AFFECT THIS WORK, AND THE ACCESS TO SUCH SPACES, HAS BEEN MADE AND THAT THE CONTRACTOR IS FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT THE EXECUTION OF THE WORK. LATER CLAIMS SHALL NOT BE MADE FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN DURING SUCH AN EXAMINATION. THE ON–SITE INSPECTION SHALL VERIFY EXISTING DUCTWORK, PIPING (SIZES, CLEARANCES, ETC) AND CONDITIONS.
26. INSURANCE: IN ACCORDANCE WITH BUILDING REQUIREMENTS THE CONTRACTOR SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.
27. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, BALANCED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATES OF INSPECTION AND APPROVAL.
28. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES. WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "A," "THE," AND "ALL" HAVE BEEN OMITTED FOR BREVITY.
29. WHERE A CONFLICT EXISTS BETWEEN THE DRAWINGS, THE SPECIFICATIONS OR ANY OTHER CONSTRUCTION DOCUMENT, THE ONE WITH THE MOST STRINGENT REQUIREMENT(S) SHALL APPLY.

DEFINITIONS:

1) "PROVIDE": TO SUPPLY, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.
2) "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.
3) "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES.

SCOPE OF WORK

1. EXISTING RTU'S TO REMAIN.
2. EXISTING KITCHEN HOOD TO REMAIN. DO MAINTENANCE IF REQUIRED.
3. EXISTING KITCHEN HOOD EXHAUST FANS TO REMAIN. REPAIR/ REFURBISH THE EQUIPMENT IF REQUIRED.
4. CONTRACTOR TO PROVIDE NEW DIFFUSERS/GRILLES.
5. EXISTING MOP SINK & TOILET EXHAUST FANS TO REMAIN. REPAIR/ REFURBISH THE EQUIPMENT IF REQUIRED.
6. PROVIDE NEW DUCTS, DIFFUSERS AND ASSOCIATED ACCESSORIES FOR RTU–1(E) AS PER MECHANICAL FLOOR PLAN.
7. THE WORK UNDER CONTRACT INCLUDES ALL LABOR, MATERIALS AND APPLIANCES NECESSARY FOR THE FURNISHING, INSTALLING AND TESTING, COMPLETE AND READY FOR SAFE OPERATION OF THE SYSTEMS AS DESCRIBED IN THE SPECIFICATIONS, FLOOR PLAN(S) DESIGN, DETAIL DRAWINGS, NOTES, RFI'S, ETC. FOR THIS PROJECT. WORK SHALL BE INSTALLED IN A NEAT, WORKMANLIKE MANNER.
8. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENT HAVING JURISDICTION, OBTAIN PERMITS OR LICENSES NECESSARY TO CARRY OUT THIS WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.
9. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OR ACTUAL USE OF EQUIPMENT OR OCCUPANCY OF SPACES, BY OWNER, INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER DATE IS EARLIER. THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDE THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED IN REPAIRING AND REPLACING WORK OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR.

GENERAL HVAC NOTES

GENERAL:

1. PROVIDE ALL MATERIAL AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
2. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK (HVAC, PLUMBING, AND FIRE PROTECTION) ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
3. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS AND SHALL HAVE THE APPROVAL OF THE ENGINEER BEFORE BEING INSTALLED. DO NOT SCALE DRAWINGS.
4. WHEN MECHANICAL WORK (HVAC, PLUMBING, SHEET METAL, FIRE PROTECTION, ETC.) IS SUBCONTRACTED, IT SHALL BE THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE SUBCONTRACTORS AND THE ASSOCIATED CONTRACTS. WHEN DISCREPANCIES ARISE PERTAINING TO WHICH CONTRACTOR PROVIDES A PARTICULAR ITEM OF THE MECHANICAL CONTRACT OR WHICH CONTRACTOR PROVIDES FINAL CONNECTIONS FOR A PARTICULAR ITEM OF THE MECHANICAL CONTRACT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE MECHANICAL CONTRACTOR, WHOSE DECISION SHALL BE FINAL.
5. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
6. INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
7. WHERE TWO OR MORE ITEMS OF THE SAME TYPE OF EQUIPMENT ARE REQUIRED, THE PRODUCT OF ONE MANUFACTURER SHALL BE USED.
8. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. COORDINATE AND PROVIDE ALL DUCT AND PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.
9. ALL CONTROL WIRE AND CONDUIT SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE AND ELECTRICAL DIVISION OF THE SPECIFICATION.
10. PROVIDE VIBRATION ISOLATION FOR ALL MECHANICAL EQUIPMENT TO PREVENT TRANSMISSION OF VIBRATION TO BUILDING STRUCTURE.
11. LOCATE ALL TEMPERATURE, AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH THE STRAIGHT SECTION OF PIPE OR DUCT UP– AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.
12. WHERE BEAMS ARE INDICATED TO BE PENETRATED WITH DUCTWORK OR PIPING, COORDINATE DUCTWORK AND PIPING LAYOUT WITH BEAM OPENING SIZE AND OPENING LOCATIONS. COORDINATION SHALL BE DONE PRIOR TO THE FABRICATION OF DUCTWORK, CUTTING OF PIPING, OR FABRICATION OF BEAMS.
13. ALL MISCELLANEOUS STEEL REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN THE DETAILS FOR DUCTWORK, AND EQUIPMENT (UNLESS OTHERWISE NOTED) SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.
14. PROVIDE ACCESS PANELS FOR INSTALLATION IN WALLS AND CEILINGS, WHERE REQUIRED, TO SERVICE DAMPERS, VALVES, SMOKE DETECTORS, AND OTHER CONCEALED MECHANICAL EQUIPMENT. ACCESS PANELS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR FOR INSTALLATION. ACCESS PANELS SHALL HAVE THE EQUAL RATED CAPACITY (1HR, 2HR, ETC.) AS WALL.
15. MECHANICAL EQUIPMENT, DUCTWORK, AND PIPING SHALL NOT BE SUPPORTED FROM A METAL DECK.
16. ALL EQUIPMENT, PIPING, DUCTWORK, ETC., SHALL BE SUPPORTED AS DETAILED, SPECIFIED AND REQUIRED TO PROVIDE A VIBRATION–FREE INSTALLATION.
17. ALL DUCTWORK, PIPING, AND EQUIPMENT SUPPORTED FROM STRUCTURAL STEEL SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. ALL ATTACHMENTS TO STEEL BAR JOISTS, TRUSSES, OR JOIST GIRDERS SHALL BE AT PANEL POINTS. PROVIDE BEAM CLAMPS MEETING MSS STANDARDS. WELDING TO STRUCTURAL MEMBERS SHALL NOT BE PERMITTED. THE USE OF C–CLAMPS SHALL NOT BE PERMITTED.
18. LOCATIONS AND SIZES OF ALL FLOOR, WALL, AND ROOF OPENINGS SHALL BE COORDINATED WITH ALL OTHER TRADES INVOLVED.
19. ALL OPENINGS IN FIRE WALLS DUE TO DUCTWORK, PIPING, CONDUIT, ETC., SHALL BE FIRE STOPPED WITH A PRODUCT SIMILAR TO 3M OR APPROVED EQUAL.
20. ALL CONDENSATE DRAIN LINES FROM EACH ROOF TOP UNIT SHALL BE PIPED FULL SIZE OF THE UNIT DRAIN OUTLET, WITH "P" TRAP, AND PIPED TO THE NEAREST DRAIN OR GUTTER OR DOWN SPOUT PROVIDED THAT DOWNSPOUT DOES NOT DISCHARGE ONTO PAVEMENT. SEE THE DETAILS SHOWN IN THE DRAWINGS OR THE CONTRACT SPECIFICATIONS FOR THE DEPTH OF THE AIR CONDITIONING CONDENSATE TRAP.
21. REFER TO TYPICAL DETAILS FOR DUCTWORK, PIPING, AND EQUIPMENT INSTALLATION.
22. ALL TESTS SHALL BE COMPLETED BEFORE ANY MECHANICAL EQUIPMENT OR PIPING INSULATION IS APPLIED.
23. TESTING, ADJUSTING, AND BALANCING AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB). TESTING, ADJUSTING, AND BALANCING SHALL BE PERFORMED IN ACCORDANCE WITH THE AABC STANDARDS.

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Bojangles

ISSUE BLOCK	
11-25-25	IFC SET

PROTOTYPE:	Plan 8
GUIDE SET VERSION:	GR 24.1
DOCUMENT DATE:	11-25-25
DRAWN BY:	NYE
CHECKED BY:	NYE
JOB NUMBER:	25-4320

MECHANICAL NOTES, SYMBOL LISTS AND ABBREVIATIONS

SHEET: M001

SPECIFICATIONS

SECTION 0001 – NOTICE TO BIDDERS

1.1 BIDDERS REPRESENTATIONS

A. THE BIDDER BY MAKING A BID REPRESENTS THAT:

THE BIDDER HAS READ AND UNDERSTANDS THE BIDDING DOCUMENTS, TO THE EXTENT THAT SUCH DOCUMENTATION RELATES TO THE WORK FOR WHICH THE BID IS SUBMITTED, AND FOR OTHER PORTIONS OF THE PROJECT, IF ANY, BEING BID CONCURRENTLY OR PRESENTLY UNDER CONSTRUCTION.

B. THE BID IS MADE IN COMPLIANCE WITH THE BIDDING DOCUMENTS.

C. THE SPECIFICATIONS AND DRAWINGS ARE INTENDED TO SERVE JOINTLY AS A BASIS FOR THE BIDDER TO SUBMIT A CONTRACT PRICE FOR THE MATERIAL AND LABOR.

D. SHOULD CONFLICTS OR DISCREPANCIES OCCUR WITHIN THE BIDDING DOCUMENTS, THE ITEM OR ITEMS IN DISPUTE THAT REPRESENT THE GREATER COST SHALL PREVAIL IN THE FINAL BID.

E. THE BID IS BASED UPON THE MATERIALS, EQUIPMENT AND SYSTEMS REQUIRED BY THE BIDDING DOCUMENTS WITHOUT EXCEPTION.

1.2 EXISTING CONDITIONS AND COORDINATION

A. THE BIDDER HAS VISITED THE SITE, BECOME FAMILIAR WITH LOCAL CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND HAS CORRELATED THE BIDDER'S PERSONAL OBSERVATIONS WITH THE REQUIREMENTS OF THE PROPOSED BIDDING DOCUMENTS.

B. THE BIDDER SHALL PROPOSE COORDINATION OF WORK SUCH THAT CONFLICTS WITH OTHER TRADES AND SPACE ALLOCATIONS ARE AVOIDED.

1.3 RESPONSIBILITIES

A. THE BIDDER UNDERSTANDS THAT ANY CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE TIMELY COMPLETION AND ACCEPTANCE OF THEIR WORK AND THAT ANY ITEMS DAMAGED, LOST OR STOLEN DURING TIME OF CONSTRUCTION SHALL BE REPAIRED OR REPLACED WITHOUT ANY ADDITIONAL COST TO THE OWNER.

B. THE BIDDER UNDERSTANDS THAT ANY PROPOSED WORK IN OCCUPIED TENANT SPACES SHALL BE PERFORMED DURING TIMES OF NON–TENANT OCCUPANCY OR AS SCHEDULED OR DIRECTED BY THE BUILDING MANAGER.

C. THE BIDDER UNDERSTANDS THAT ANY PROPOSED SHUT–DOWN OF EXISTING SYSTEMS DURING CONSTRUCTION SHALL BE PRE–ARRANGED WITH THE BUILDING MANAGER AND THAT SUCH SHUT–DOWNS ARE TO BE KEPT TO A MINIMUM.

END OF SECTION 0001

SECTION 0101 – QUALITY OF WORK

1.1 WORKMANSHIP

A. ALL WORK SHALL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE.

B. ALL DEFECTS WHICH DEVELOP OR ARE DISCOVERED WITHIN THIS PERIOD SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ARCHITECT OR BUILDING MANAGER AT NO ADDITIONAL COST TO THE OWNER.

C. UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL REMOVE FROM THE SITE, ALL TOOLS, DEMOLISHED APPLIANCES AND ANY SURPLUS MATERIAL.

1.2 CODE COMPLIANCE

A. ALL WORK SHALL MEET ALL STATE AND LOCAL CODES HAVING JURISDICTION.

END OF SECTION 0101

SECTION 0102 –REQUIRED DOCUMENTS

1.1 SHOP DRAWINGS

A. A SET OF PRINTS FOR ANY MECHANICAL WORK INCLUDING BUT NOT LIMITED TO, DUCTWORK AND PIPING LAYOUT SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER PRIOR TO CONSTRUCTION OR PURCHASE OF MATERIALS.

1.2 SUBMITTALS

A. EQUIPMENT SUBMITTALS OF ALL PROPOSED MECHANICAL AND ANCILLARY EQUIPMENT INCLUDING ALL ACCESSORIES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. ALL PERTINENT MODELS, SIZES, ACCESSORIES AND CHOICES SHALL BE CLEARLY CHECKED, PRINTED OR OTHERWISE INDICATED ON THE SUBMITTALS.

1.3 RECORD DRAWINGS

A. UPON COMPLETION OF THE WORK, A RECORD DRAWING SHALL BE SUBMITTED TO THE OWNER DEPICTING ALL SUBSEQUENT CHANGES, ADDITIONS AND OR CORRECTIONS TO THE CONTRACT DRAWINGS AND OR CONTRACT SCOPE MADE DURING CONSTRUCTION. THIS DRAWING SHALL REPRESENT A COMPLETE RECORD OF THE WORK INSTALLED.

1.4 EQUIPMENT OPERATING INSTRUCTIONS

A. ON COMPLETION AND ACCEPTANCE OF WORK, THIS CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS,EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

B. THESE INSTRUCTIONS SHALL BE TYPED ON 8–1/2 IN. X 11 IN. PAPER AND BOUND IN THREE–RING BINDERS WITH CLEAR ACETATE COVERS. THE CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE ELECTRONIC COPY TO THE ENGINEER.

C. THE INSTRUCTION BOOKLET SHALL BE ORGANIZED IN SECTIONS, WITH ONE SECTION PER SYSTEM. THE COVER OF THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND PHONE NUMBER OF THE PROJECT, ARCHITECT, ENGINEER, MECHANICAL CONTRACTOR AND SUBCONTRACTORS.

END OF SECTION 0102

SECTION 230593 – TESTING, ADJUSTING, AND BALANCING FOR HVAC

1.1 SUMMARY

A. TESTING, ADJUSTING, AND BALANCING FOR THE FOLLOWING:

1. AIR SYSTEMS: CONSTANT VOLUME.
2. EXISTING SYSTEMS.

1.2 QUALITY ASSURANCE

A. THE CONTRACTOR SHALL PROCURE THE SERVICES OF A TESTING, ADJUSTING AND BALANCING (TAB) SPECIALIST WHO SPECIALIZES IN HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS. THE TAB AGENT SHALL HAVE THE FOLLOWING QUALIFICATIONS: AABC, NEBB OR TABB CERTIFIED.

1.3 EXECUTION

A. THE TAB SPECIALIST SHALL PERFORM FLOW MEASUREMENTS OF ALL EXISTING AIR AND HYDRONIC SYSTEMS THAT ARE TO REMAIN OR TO BE INCORPORATED INTO NEW WORK PRIOR TO THE STARTING OF WORK IN THE PROJECT SCOPE. A REPORT OF THESE MEASUREMENTS, INDICATING ANY AND ALL DEFICIENCIES SHALL BE SUBMITTED FOR OWNER REVIEW.

B. THE TAB SPECIALIST SHALL PERFORM FLOW MEASUREMENTS OF ALL NEW AIR AND HYDRONIC SYSTEMS AS LISTED ABOVE IN THE PROJECT SCOPE. A REPORT OF THESE MEASUREMENTS, INDICATING ANY AND ALL DEFICIENCIES SHALL BE SUBMITTED FOR OWNER REVIEW.

C. THE REPORT SHALL INDICATE A SCHEMATIC DIAGRAM INDICATING LOCATIONS OF ALL EQUIPMENT TESTED AND MEASUREMENT LOCATIONS.

D. PRIOR TO FINAL INSPECTION OF THE WORK, THE TAB SPECIALIST SHALL BALANCE ALL SYSTEMS AS INDICATED ABOVE TO THE REQUIREMENTS OF THE DESIGN.

E. THE CONTRACTOR SHALL HAVE FURNISH AND INSTALL ALL ADDITIONAL BALANCING EQUIPMENT, PRESSURE TAPS, GAUGES AND OTHER EQUIPMENT AS REQUIRED FOR A PROPERLY BALANCED SYSTEM AT NO ADDITIONAL COST TO THE OWNER. SUCH ADDITIONAL EQUIPMENT SHALL ADHERE IN STRICT ACCORDANCE WITH THE RESPECTIVE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.

F. THE CONTRACTOR SHALL HAVE THE TESTING AND BALANCING SPECIALIST COORDINATE ALL WORK OF THIS S3ECTION WITH THE BUILDING MANAGER. BALANCING WORK SHALL NOT CONFLICT WITH OTHER WORK SO AS TO MAINTAIN COMPLETION WITHIN THE SPECIFIED TIME.

G. ALL INSTRUMENTS USED FOR TAB SHALL BE MAINTAINED IN GOOD WORKING CONDITION AND ACCURATELY CALIBRATED.

H. TOLERANCES: PLUS OR MINUS 5 PERCENT OF DESIGN VALUES.

I. INSPECTIONS: RANDOM CHECKS BY OWNER OR ARCHITECT TO VERIFY FINAL TESTING, ADJUSTING, AND BALANCING REPORT.

J. ADDITIONAL TESTS: RANDOM TESTS WITHIN 90 DAYS OF COMPLETING TAB TO VERIFY BALANCE CONDITIONS AND SEASONAL TESTS.

END OF SECTION 230593

THERMOSTATIC CONTROLS

C403.2.4.1 THERMOSTATIC CONTROLS
THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH ZONE SHALL BE CONTROLLED BY INDIVIDUAL THERMOSTATIC CONTROLS CAPABLE OF RESPONDING TO TEMPERATURE WITHIN THE ZONE. WHERE HUMIDIFICATION OR DEHUMIDIFICATION OR BOTH IS PROVIDED, NOT FEWER THAN ONE HUMIDITY CONTROL DEVICE SHALL BE PROVIDED FOR EACH HUMIDITY CONTROL SYSTEM.

C403.2.4.1.2 DEADBAND
WHERE USED TO CONTROL BOTH HEATING AND COOLING, ZONE THERMOSTATIC CONTROLS SHALL BE CONFIGURED TO PROVIDE A TEMPERATURE RANGE OR DEADBAND OF NOT LESS THAN 5°F (2.8°C) WITHIN WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS SHUT OFF OR REDUCED TO A MINIMUM.

C403.2.4.1.3 SETPOINT OVERLAP RESTRICTION
WHERE A ZONE HAS A SEPARATE HEATING AND A SEPARATE COOLING THERMOSTATIC CONTROL LOCATED WITHIN THE ZONE, A LIMIT SWITCH, MECHANICAL STOP OR DIRECT DIGITAL CONTROL SYSTEM WITH SOFTWARE PROGRAMMING SHALL BE CONFIGURED TO PREVENT THE HEATING SETPOINT FROM EXCEEDING THE COOLING SETPOINT AND TO MAINTAIN A DEADBAND IN ACCORDANCE WITH SECTION C403.4.1.2.

C403.2.4.2 OFF–HOUR CONTROLS
EACH ZONE SHALL BE PROVIDED WITH THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY EITHER AN AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROL SYSTEM.

C403.2.4.2.1 THERMOSTATIC SETBACK
THERMOSTATIC SETBACK CONTROLS SHALL BE CONFIGURED TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C).

C403.2.4.2.2 AUTOMATIC SETBACK AND SHUTDOWN
AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROLS SHALL BE CAPABLE OF STARTING AND STOPPING THE SYSTEM FOR SEVEN DIFFERENT DAILY SCHEDULES PER WEEK AND RETAINING THEIR PROGRAMMING AND TIME SETTING DURING A LOSS OF POWER FOR NOT FEWER THAN 10 HOURS. ADDITIONALLY, THE CONTROLS SHALL HAVE A MANUAL OVERRIDE THAT ALLOWS TEMPORARY OPERATION OF THE SYSTEM FOR UP TO 2 HOURS; A MANUALLY OPERATED TIMER CONFIGURED TO OPERATE THE SYSTEM FOR UP TO 2 HOURS; OR AN OCCUPANCY SENSOR.

C403.2.4.2.3 AUTOMATIC START AND STOP
AUTOMATIC START AND STOP CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM. THE AUTOMATIC START CONTROLS SHALL BE CONFIGURED TO AUTOMATICALLY ADJUST THE DAILY START TIME OF THE HVAC SYSTEM IN ORDER TO BRING EACH SPACE TO THE DESIRED OCCUPIED TEMPERATURE IMMEDIATELY PRIOR TO SCHEDULED OCCUPANCY. AUTOMATIC STOP CONTROLS SHALL BE PROVIDED FOR EACH HVAC SYSTEM WITH DIRECT DIGITAL CONTROL OF INDIVIDUAL ZONES. THE AUTOMATIC STOP CONTROLS SHALL BE CONFIGURED TO REDUCE THE HVAC SYSTEM'S HEATING TEMPERATURE SETPOINT AND INCREASE THE COOLING TEMPERATURE SETPOINT BY NOT LESS THAN 2°F (–16.6°C) BEFORE SCHEDULED UNOCCUPIED PERIODS BASED ON THE THERMAL LAG AND ACCEPTABLE DRIFT IN SPACE TEMPERATURE THAT IS WITHIN COMFORT LIMITS

SECTION 230713 – DUCT INSULATION

1.1 QUALITY ASSURANCE

SURFACE–BURNING CHARACTERISTICS: ALL INSULATION SHALL HAVE COMPOSITE (INSULATION JACKET OR FACING AND ADHESIVE USED TO ADHERE THE FACING OR JACKET TO THE INSULATION) A FLAME–SPREAD INDEX OF 25, AND SMOKE–DEVELOPED INDEX OF 50 FOR INSULATION INSTALLED INDOOR, 75, AND SMOKE–DEVELOPED INDEX OF 150 FOR INSULATION INSTALLED OUTDOORS; ACCORDING TO ASTME 84.

1.2 FIELD QUALITY CONTROL

A. FIELD INSPECTIONS: BY OWNER–ENGAGED AGENCY.

1.3 INDOOR DUCT AND PLENUM INSULATION SCHEDULE;

A. CONCEALED, RECTANGULAR, ROUND AND FLAT–OVAL, SUPPLY–RETURN, OUTDOOR–AND EXHAUST–AIR DUCT AND AIR PLENUM INSULATION:

B. FLEXIBLE ELASTOMERIC, MINERAL–FIBER BLANKET,

MINERAL–FIBER BOARD OR POLYOLEFIN WITH MINIMUM INSTALLED THERMAL RESISTANCE AS FOLLOWS:

	SUPPLY	RETURN
UNCONDITIONED SPACES WITHIN BUILDING:	R–4.2	R–4.2
WITHIN BUILDING ENVELOPE ASSEMBLY:	R–6	R–4.2
OUTSIDE OF BUILDING:	R–6	R–4.2

1.4 ITEMS NOT INSULATED:

1. FIBROUS–GLASS DUCTS.
2. METAL DUCTS WITH DUCT LINER OR SUFFICIENT THICKNESS TO COMPLY WITH ENERGY CODE AND ASHRAE/IESNA 90.1.
3. FACTORY–INSULATED FLEXIBLE DUCTS.
4. FACTORY–INSULATED PLENUMS AND CASINGS.
5. FLEXIBLE CONNECTORS.
6. VIBRATION–CONTROL DEVICES.
7. FACTORY–INSULATED ACCESS PANELS AND DOORS.
8. DUCTS THAT HAVE INTERNAL ACOUSTICAL LINING.

1.5 PRODUCTS

A. THE FOLLOWING INSULATION MANUFACTURERS WILL BE ACCEPTABLE:

1. JOHNS–MANVILLE
2. OWENS–CORNING

1.6 ACOUSTICAL TREATMENT

1. WHERE SHOWN ON THE DRAWINGS, LOW PRESSURE DUCTWORK SHALL BE LINED WITH 1.5" THICK R–6 AS MANUFACTURED BY DUCTMATE, 1–1/2 POUND MINIMUM DENSITY, NEOPRENE COATED, FLEXIBLE FIBERGLASS DUCT LINER. LINING SHALL COMPLY WITH NFPA 90A AND SHALL HAVE A FLAME SPREAD CLASSIFICATION OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING NOT MORE THAN 50. DUCT SIZES WHERE LINING IS INDICATED ON PLANS ARE MINIMUM INSIDE CLEAR DIMENSIONS REQUIRED,

END OF SECTION 230713

SECTION 233113 – METAL DUCTS

1.1 CONSTRUCTION

A. EACH DUCT SYSTEM SHALL BE CONSTRUCTED FOR THE SPECIFIC SMACNA DUCT PRESSURE CLASSIFICATIONS SHOWN ON THE CONTRACT DRAWINGS. WHERE NO PRESSURE CLASSES ARE SPECIFIED BY THE DESIGNER, THE SMACNA 2–1/2 INCH WG PRESSURE CLASS IS THE BASIS OF COMPLIANCE WITH THESE STANDARDS, REGARDLESS OF THE VELOCITY IN THE DUCT.

B. ALL DUCTWORK SHALL BE CONSTRUCTED TO SMACNA 2" WG DESIGN AND NOT LESS THAN THE FOLLOWING STANDARDS:

1. DUCTWORK SHALL BE TRANSVERSELY JOINTED BY CONNECTING SEAMS OF COMPANION ANGLES, FORMED FROM 1–1/2"X1–1/2"X1/8" GALVANIZED ANGLES, TACK–WELDED OR RIVETED TO THE DUCT. THE ANGLE FRAME SHALL BE CONTINUOUSLY FLANGED UP INTO UPRIGHT OF ANGLE AND EACH CORNER SHALL BE FILLED IN AND GROUND SMOOTH. JOINTS SHALL BE GASKETED WITH 1/8" THICK REINFORCED GASKET, OVERLAPPED AT CORNERS, GASKET SIMILAR TO 3M–1202 OR APPROVED EQUAL.
2. RECTANGULAR FITTINGS AND ALL TRANSITION PIECES FROM RECTANGULAR TO ROUND SHALL BE NO. 16 GAUGE ALL WELDED CONSTRUCTION.
3. HORIZONTAL DUCTS SHALL BE SUPPORTED ON NOT MORE THAN 6' CENTERS. VERTICAL RISERS SHALL BE SUPPORTED AT EACH FLOOR.
4. LONGITUDINAL SEAMS FOR RECTANGULAR DUCTWORK SHALL BE PITTSBURGH LOCK SEAMS WITH SEALING COMPOUND, EQUAL TO BENJAMIN FOSTER NO. 30–03 INSERTED INTO SEAM. ALL SEAMS SHALL BE BRUSHED WITH NO. 30–02 AND COVERED WITH APPROVED SEALING TAPE.
5. RECTANGULAR DUCTWORK 18 GAUGE AND HEAVIER, FILLER RODS SHALL BE IN ACCORDANCE WITH SPECIFICATIONS FOR IRON AND STEEL GAS WELDING RODS, ASTM 215; AWG A5.2.
6. ALL FITTINGS SUCH AS ELBOWS, TEES, ETC., SHALL BE NO. 20 GAUGE ZINC COATED STEEL. ELBOWS SHALL BE OF FIVE (5) PIECE WELDED AIRTIGHT CONSTRUCTION.

C. WHERE LATEST EDITION OF SMACNA DOES NOT CLEARLY STATE GAUGES AND/OR STIFFENERS TO BE USED OR, WHERE SMACNA STANDARDS REQUIRE INTERPRETATION, THE FOLLOWING MINIMUM METAL GAUGES AND BRACING SHALL BE USED:

USG	MAX. SIDE INCHES	TRANSVERSE JOINTS AND BRACING
22	UP TO 12	S SLIP, DRIVE SLIP, ONE INCH POCKET LOCK ON 8 FOOT CENTERS
22	13 TO 24	1"X1"X1/8" ANGLES ON 4 FOOT CENTERS
20	25 TO 35	1"X1"X1/8" ANGLES ON 2 FOOT CENTERS

D. PROVIDE TAPPING IN DUCTS FOR THERMOMETERS WHERE SPECIFIED. IN ADDITION, PROVIDE AN AIRTIGHT PLUGGED TAPPING LOCATED AS FOLLOWS:

1. UPSTREAM OF EACH REHEAT COIL AND VAV BOX.
2. DOWNSTREAM OF EACH REHEAT COIL AND VAV BOX.

E. FLAT OVAL OR ROUND DUCTWORK MAY BE PROVIDED IN LIEU RECTANGULAR DUCTWORK WITH THE REINFORCEMENT FOR FLAT SIDES SAME AS SPECIFIED FOR THE RECTANGULAR DUCTWORK, AND AS PER SMACNA FLAT OVAL DUCT CONSTRUCTION STANDARDS SHOWN IN FIG. 3–6 AND AS SHOWN IN FIG. 3–1 AND 3–2 FOR ROUND DUCTWORK.

F. ALL DUCTWORK SHALL BE SEALED TO CLASS "A" AND LEAK TESTED TO MEAT SMACNA CLASS 6 FOR RECTANGULAR AND CLASS 3 FOR ROUND DUCTS.

1.2 MATERIALS

A. SINGLE–WALL RECTANGULAR DUCTS AND FITTINGS.

B. SINGLE–WALL ROUND AND FLAT–OVAL DUCTS AND FITTINGS.

C. SHEET METAL MATERIALS:

1. GALVANIZED SHEET STEEL.
2. STAINLESS–STEEL SHEETS.
3. ALUMINUM SHEETS.
4. FACTORY–APPLIED ANTI–MICROBIAL COATING.

D. DUCT LINER:

1. FIBROUS GLASS, TYPE I, FLEXIBLE,
   a. WITH ANTI–MICROBIAL EROSION–RESISTANT COATING.
2. FLEXIBLE ELASTOMERIC.
3. NATURAL FIBER.

E. SEALANT MATERIALS:

1. TWO–PART TAPE SEALING SYSTEM.
2. WATER–BASED JOINT AND SEAM SEALANT.
3. SOLVENT–BASED JOINT AND SEAM SEALANT.
4. FLANGED JOINT SEALANT.
5. FLANGE GASKETS.
6. ROUND DUCT JOINT O–RING SEALS.

1.3 DUCT CLEANING

A. CLEAN EXISTING DUCT SYSTEM(S) BEFORE TESTING, ADJUSTING, AND BALANCING.

B. CLEAN THE FOLLOWING ITEMS:

1. AIR OUTLETS AND INLETS.
2. SUPPLY, RETURN, AND EXHAUST FANS.
3. AIR–HANDLING UNITS.
4. COILS AND RELATED COMPONENTS.
5. RETURN–AIR DUCTS, DAMPERS, ACTUATORS, AND TURNING VANES.
6. SUPPLY–AIR DUCTS, DAMPERS, ACTUATORS, AND TURNING VANES.
7. DEDICATED EXHAUST AND VENTILATION COMPONENTS AND MAKEUP AIR SYSTEMS.

1.4 DUCT SCHEDULE

A. ALL DUCTS SHALL BE GALVANIZED STEEL EXCEPT AS FOLLOWS:

8. MOIST ENVIRONMENT DUCT MATERIAL: ALUMINUM.

END OF SECTION 233113

SECTION 233713 – DIFFUSERS AND GRILLES

1.1 PRODUCTS

A. DIFFUSERS AND GRILLES SHALL BE FURNISHED AND INSTALLED FOR CAPACITIES AND IN LOCATIONS INDICATED ON DRAWINGS. ALL REGISTERS AND DIFFUSERS SHALL BE PRIME COATED STEEL OR EXTRUDED ALUMINUM FINISHED UNLESS OTHERWISE NOTED IN BAKED WHITE ENAMEL.

B. MANUFACTURERS: TITUS

1. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCT BY ONE OF THE FOLLOWING:
   a. CARNES.
   b. HART & COOLEY INC.
   c. KRUEGER.
   d. METALAIRE, INC.
   e. NAILOR INDUSTRIES INC.

C. ALL DIFFUSERS SHALL HAVE CONTROLLING/EQUALIZING GRID AND OPPOSED BLADE DAMPER UNLESS OTHERWISE NOTED.

D. ALL DUCTED RETURN REGISTERS SHALL HAVE AN OPPOSED BLADE DAMPER UNLESS OTHERWISE NOTED.

END OF SECTION 233713

SECTION 0102 –REQUIRED DOCUMENTS

1.1 SHOP DRAWINGS

A. A SET OF PRINTS FOR ANY MECHANICAL WORK INCLUDING BUT NOT LIMITED TO, DUCTWORK AND PIPING LAYOUT SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER PRIOR TO CONSTRUCTION OR PURCHASE OF MATERIALS.

1.2 SUBMITTALS

A. EQUIPMENT SUBMITTALS OF ALL PROPOSED MECHANICAL AND ANCILLARY EQUIPMENT INCLUDING ALL ACCESSORIES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. ALL PERTINENT MODELS, SIZES, ACCESSORIES AND CHOICES SHALL BE CLEARLY CHECKED, PRINTED OR OTHERWISE INDICATED ON THE SUBMITTALS.

1.3 RECORD DRAWINGS

A. UPON COMPLETION OF THE WORK, A RECORD DRAWING SHALL BE SUBMITTED TO THE OWNER DEPICTING ALL SUBSEQUENT CHANGES, ADDITIONS AND OR CORRECTIONS TO THE CONTRACT DRAWINGS AND OR CONTRACT SCOPE MADE DURING CONSTRUCTION. THIS DRAWING SHALL REPRESENT A COMPLETE RECORD OF THE WORK INSTALLED.

1.4 EQUIPMENT OPERATING INSTRUCTIONS

A. ON COMPLETION AND ACCEPTANCE OF WORK, THIS CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS,EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

B. THESE INSTRUCTIONS SHALL BE TYPED ON 8–1/2 IN. X 11 IN. PAPER AND BOUND IN THREE–RING BINDERS WITH CLEAR ACETATE COVERS. THE CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE ELECTRONIC COPY TO THE ENGINEER.

C. THE INSTRUCTION BOOKLET SHALL BE ORGANIZED IN SECTIONS, WITH ONE SECTION PER SYSTEM. THE COVER OF THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND PHONE NUMBER OF THE PROJECT, ARCHITECT, ENGINEER, MECHANICAL CONTRACTOR AND SUBCONTRACTORS.

END OF SECTION 0102

SECTION 078413–PENETRATION FIRE–STOPPING

1.1 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: AN FM GLOBAL–APPROVED FIRE–STOP CONTRACTOR OR A UL–QUALIFIED FIRE–STOP CONTRACTOR.

B. FIRE–TEST–RESPONSE CHARACTERISTICS: UL, INTERTEK ETL SEMKO OR FM GLOBAL

1.2 PENETRATION FIRESTOPPING

A. PENETRATIONS IN FIRE–RESISTANCE–RATED WALLS: F–RATINGS PER ASTM E 814 OR UL 1479.

B. PENETRATIONS IN HORIZONTAL ASSEMBLIES: F– AND T–RATINGS PER ASTM E 814 OR UL 1479:

C. PENETRATIONS IN SMOKE BARRIERS: L–RATINGS PER UL 1479.

D. W–RATINGS: PER UL 1479.

1.3 INSTALLATION

A. IDENTIFICATION: PREPRINTED METAL OR PLASTIC LABELS.

1.4 FIELD QUALITY CONTROL

A. INSPECTION OF INSTALLED FIRE–STOPPING: BY OWNER–ENGAGED AGENCY ACCORDING TO ASTM E 2174.

1.5 THROUGH–PENETRATION FIRESTOP SYSTEM SCHEDULE

WHERE UL–CLASSIFIED SYSTEMS ARE INDICATED, THEY REFER TO SYSTEM NUMBERS IN UL'S "FIRE RESISTANCE DIRECTORY" UNDER PRODUCT CATEGORY XHEZ.

FOR THE FOLLOWING SYSTEMS:
METALLIC AND NON–METALLIC PIPES, CONDUIT, OR TUBING, ELECTRICAL CABLES, CABLE TRAYS WITH ELECTRIC CABLES, MISCELLANEOUS ELECTRICAL PENETRANTS, INSULATED PIPES, GROUPINGS OF PENETRANTS, USE ON OR MORE THE FOLLOWING MATERIALS:

a. LATEX SEALANT
b. SILICONE SEALANT
c. INTUMESCENT PUTTY
d. MORTAR
h. SILICONE FOAM
i. PILLOWS/BAGS
j. INTUMESCENT WRAP STRIPS
k. INTUMESCENT COMPOSITE SHEET

1.6 MANUFACTURERS

1. HILTI CONSTRUCTION CHEMICAL, INC
2. TREMCO INC.
3. 3M FIRE PROTECTION PRODUCTS

END OF SECTION 078413

SECTION 230529 – HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT

1.1 PERFORMANCE REQUIREMENTS

A. DELEGATED DESIGN: DESIGN TRAPEZE PIPE HANGERS AND EQUIPMENT SUPPORTS, INCLUDING COMPREHENSIVE ENGINEERING ANALYSIS BY A QUALIFIED PROFESSIONAL ENGINEER, USING PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA INDICATED.

B. STRUCTURAL PERFORMANCE: HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT SHALL WITHSTAND THE EFFECTS OF GRAVITY LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED ACCORDING TO ASCE/SEI 7.

1. DESIGN SUPPORTS FOR MULTIPLE PIPES CAPABLE OF SUPPORTING COMBINED WEIGHT OF SUPPORTED SYSTEMS, SYSTEM CONTENTS, AND TEST WATER.

CONSULTANT:
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674, MIAMI, FL 33179
PH-914.257.3455
WWW.NY-ENGINEERS.COM

Bojangles

ISSUE BLOCK	
11-25-25	IFC SET

PROTOTYPE:	Plan 8
GUIDE SET VERSION:	GR 24.1
DOCUMENT DATE:	11-25-25
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CHECKED BY:	NYE
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MECHANICAL SPECIFICATIONS (1 OF 2)

SHEET: M002

2. DESIGN EQUIPMENT SUPPORTS CAPABLE OF SUPPORTING COMBINED OPERATING WEIGHT OF SUPPORTED EQUIPMENT AND CONNECTED SYSTEMS AND

3. DESIGN SEISMIC–RESTRAINT HANGERS AND SUPPORTS FOR PIPING AND EQUIPMENT AND OBTAIN APPROVAL FROM AUTHORITIES HAVING JURISDICTION.

1.2 SUBMITTALS

A. SHOP DRAWINGS: SIGNED AND SEALED BY A PROFESSIONAL ENGINEER

1.3 QUALITY ASSURANCE

A. AWS D1.1/D1.1M, "STRUCTURAL WELDING CODE – STEEL."

1.4 COMPONENTS

A. METAL PIPE HANGERS AND SUPPORTS: CARBON OR STAINLESS STEEL

B. TRAPEZE PIPE HANGERS: CARBON OR STAINLESS STEEL

C. FIBERGLASS PIPE HANGERS: –CLEVIS, CENTURY COMPOSITES, COOPER B–LINE

D. METAL FRAMING SYSTEMS: MFMA MANUFACTURER

E. FIBERGLASS STRUT SYSTEMS: COOPER B–LINE

F. THERMAL–HANGER SHIELD INSERTS:

G. FASTENER SYSTEMS: POWDER–ACTUATED FASTENERS OR MECHANICAL–EXPANSION ANCHORS

H. PIPE STANDS: COMPACT, LOW TYPE, SINGLE PIPE, HIGH TYPE, SINGLE PIPE, HIGH TYPE, MULTIPLE PIPES, CURB–MOUNTED TYPE

I. EQUIPMENT SUPPORTS.

END OF SECTION 230529

SECTION 230548 – VIBRATION CONTROLS FOR HVAC PIPING AND EQUIPMENT

PART 1 – GENERAL

1.1 COMPONENTS

A. VIBRATION ISOLATORS:

1. ISOLATOR PADS: NEOPRENE, RUBBER, HERMETICALLY AND/OR SEALED COMPRESSED FIBERGLASS

2. MOUNTS: DOUBLE–DEFLECTION TYPE.

3. RESTRAINED MOUNTS: ALL DIRECTIONAL MOUNTINGS WITH SEISMIC RESTRAINT; CAST–DUCTILE–IRON HOUSING.

4. SPRING ISOLATORS: FREESTANDING, LATERALLY STABLE, OPEN–SPRING TYPE.

5. RESTRAINED SPRING ISOLATORS: FREESTANDING, STEEL, OPEN–SPRING TYPE WITH SEISMIC RESTRAINT.

6. HOUSED SPRING MOUNTS: DUCTILE–IRON OR STEEL HOUSING, WITH INTEGRAL, VERTICALLY ADJUSTABLE SEISMIC SNUBBERS.

7. ELASTOMERIC HANGERS: DOUBLE–DEFLECTION TYPE.

8. SPRING HANGERS: COMBINATION COIL–SPRING AND ELASTOMERIC–INSERT HANGERS WITH SPRING AND INSERT IN COMPRESSION.

9. SPRING HANGERS WITH VERTICAL–LIMIT STOP: COMBINATION COIL–SPRING AND ELASTOMERIC–INSERT HANGERS WITH SPRING AND INSERT IN COMPRESSION AND WITH VERTICAL–LIMIT STOP.

10. PIPE RISER RESILIENT SUPPORT: ALL–DIRECTIONAL, ACOUSTICAL PIPE ANCHOR.

11. RESILIENT PIPE GUIDES.

B. AIR–MOUNTING SYSTEMS:

1. AIR MOUNTS: FREESTANDING, SINGLE OR MULTIPLE, COMPRESSED–AIR BELLOWS.

2. RESTRAINED AIR MOUNTS: HOUSED COMPRESSED–AIR BELLOWS.

C. RESTRAINED VIBRATION ISOLATION ROOF–CURB RAILS: FACTORY–ASSEMBLED, FULLY ENCLOSED, INSULATED, AIR– AND WATERTIGHT CURB RAIL; WITH SPRING ISOLATORS MOUNTED ON ELASTOMERIC ISOLATION PADS, AND SNUBBER BUSHINGS.

D. VIBRATION ISOLATION EQUIPMENT BASES:

1. STEEL BASE: FACTORY–FABRICATED, WELDED, STRUCTURAL–STEEL BASES AND RAILS.

2. INERTIA BASE: FACTORY–FABRICATED, WELDED, STRUCTURAL–STEEL BASES AND RAILS READY FOR FIELD–APPLIED, CAST–IN–PLACE CONCRETE

.

1.2 FIELD QUALITY CONTROL

A. TESTING: BY EITHER: OWNER–ENGAGED AGENCY, CONTRACTOR–ENGAGED AGENCY, OR CONTRACTOR.

PART–2 PRODUCTS

1.1 VIBRATION ISOLATORS & SEISMIC–RESTRAINT DEVICES

A. AVAILABLE MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

B. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:

1. ACE MOUNTINGS CO., INC.

2. AMBER/BOOTH COMPANY, INC.

3. CALIFORNIA DYNAMICS CORPORATION.

4. HILTI, INC.

5. ISOLATION TECHNOLOGY, INC.

6. KINETICS NOISE CONTROL.

7. LOOS & CO.; CABLEWARE DIVISION.

8. MASON INDUSTRIES.

9. TOLCO INCORPORATED; A BRAND OF NIBCO INC.

10. UNISTRUT; TYCO INTERNATIONAL, LTD.

END OF SECTION 230548

CONSULTANT:
NY ENGINEERS
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382 NE 191ST STREET, SUITE 49674, MIAMI, FL 33179
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ISSUE BLOCK

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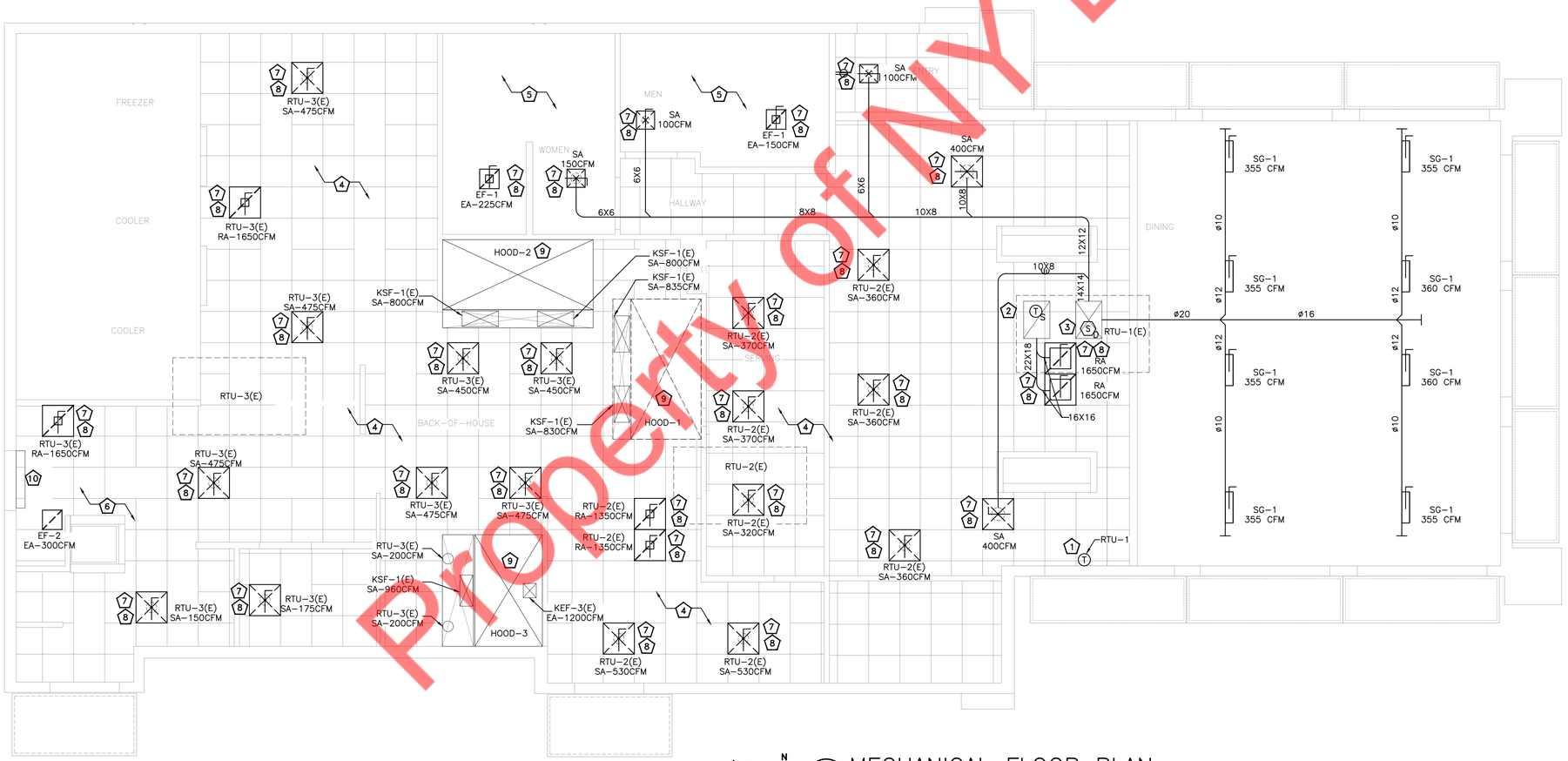
MECHANICAL SPECIFICATIONS (2 OF 2)

SHEET: M003



1 MECHANICAL FLOOR PLAN
1/4" = 1'-0"

TRUE N PLAN N

MECHANICAL GENERAL NOTES:

A. PENETRATIONS OF THE AIR BARRIER SHALL BE CAULKED, GASKETED OR OTHERWISE SEALED IN A MANNER COMPATIBLE WITH THE CONSTRUCTION MATERIALS AND LOCATION. SEALING SHALL ALLOW FOR EXPANSION, CONTRACTION AND MECHANICAL VIBRATION. JOINTS AND SEAMS ASSOCIATED WITH PENETRATIONS SHALL BE SEALED IN THE SAME MANNER OR TAPED. SEALING MATERIALS SHALL BE SECURELY INSTALLED AROUND THE PENETRATION SO AS NOT TO DISLODGE, LOOSEN OR OTHERWISE IMPAIR THE PENETRATIONS' ABILITY TO RESIST POSITIVE AND NEGATIVE PRESSURE FROM WIND, STACK EFFECT AND MECHANICAL VENTILATION.

B. ALL EQUIPMENT AND MATERIALS WILL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND ACCORDING TO THE BEST PRACTICE.

C. ALL DUCTWORK SHALL BE COORDINATED WITH OTHER TRADES.

D. CONTRACTOR SHALL BALANCE EACH DEVICE WITH THE CFM SHOWN ON PLAN.

E. PROVIDE FIRE OR FIRE+SMOKE DAMPER WHEREVER DUCTS ARE CROSSING FIRE/SMOKE RATED WALLS/BARRIERS. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR FIRE RATINGS OF THE WALLS.

F. CONTRACTOR TO FIELD VERIFY EXISTING DUCTWORK, ASSOCIATED ACCESSORIES AND EXISTING HVAC EQUIPMENT.

G. COORDINATE LOCATIONS AND SIZES OF ROOF OPENINGS WITH OWNER AND STRUCTURAL ENGINEERS.

H. EQUIPMENT SIZES, DIMENSIONS AND REQUIRED CONNECTIONS SHALL BE VERIFIED WITH THE ACTUAL EQUIPMENT SELECTED VENDOR DRAWINGS BEFORE FABRICATION OF DUCTWORK, PIPING ETC.

I. ALL DUCT SIZES SHOWN ON MECHANICAL FLOOR PLANS ARE CLEAR INSIDE DIMENSIONS. INTERNAL INSULATION THICKNESS OF DUCTS SHALL BE CONSIDERED SEPARATELY.

J. PROVIDE ACOUSTICAL LINING FOR THE FIRST 10 FT OF SUPPLY AND RETURN DUCTWORK.

MECHANICAL PLAN KEY NOTES:

1. REUSE & RELOCATE EXISTING THERMOSTAT FOR EXISTING RTU AS SHOWN ON PLAN. COORDINATE FINAL LOCATION WITH ARCHITECT/OWNER.
2. PROVIDE A NEW TEMPERATURE SENSOR IN THE RETURN AIR PLENUM IF THE EXISTING SENSOR IS NOT IN SATISFACTORY WORKING CONDITION.
3. CONTRACTOR TO PROVIDE A NEW DUCT SMOKE DETECTOR ON THE SUPPLY AIR SIDE OF THE RTU IF NOT ALREADY INSTALLED OR NOT IN SATISFACTORY WORKING CONDITION.
4. EXISTING SUPPLY AND RETURN AIR DUCTWORK OF EXISTING RTU-2(E)&3(E) TO REMAIN WITH ALL ITS SUPPORTS AND ACCESSORIES.
5. EXISTING TOILET EXHAUST DUCTWORK OF EXISTING EF-1(E) TO REMAIN WITH ALL ITS SUPPORTS AND ACCESSORIES.
6. EXISTING MOP SINK EXHAUST DUCTWORK OF EXISTING EF-2(E) TO REMAIN WITH ALL ITS SUPPORTS AND ACCESSORIES.
7. CONTRACTOR TO RE-BALANCE THE CFM OF EACH SUPPLY AND RETURN AIR DIFFUSERS AS SHOWN ON DRAWING.
8. CONTRACTOR TO PROVIDE NEW SUPPLY AND RETURN AIR DIFFUSERS WITH ALL ITS SUPPORTS AND ACCESSORIES.
9. EXITING KITCHEN HOOD TO REMAIN WITH ALL ITS SUPPORTS AND ACCESSORIES. REPAIR/REFURBISH IF REQUIRED.
10. EXITING AIR CURTAIN TO REMAIN WITH ALL ITS SUPPORTS AND ACCESSORIES. REPAIR/REFURBISH IF REQUIRED.

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Bojangles

ISSUE BLOCK	
11-25-25	IFC SET

PROTOTYPE:	Plan 8
GUIDE SET VERSION:	GR 24.1
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CHECKED BY:	NYE
JOB NUMBER:	25-4320

MECHANICAL FLOOR PLAN

SHEET: M101

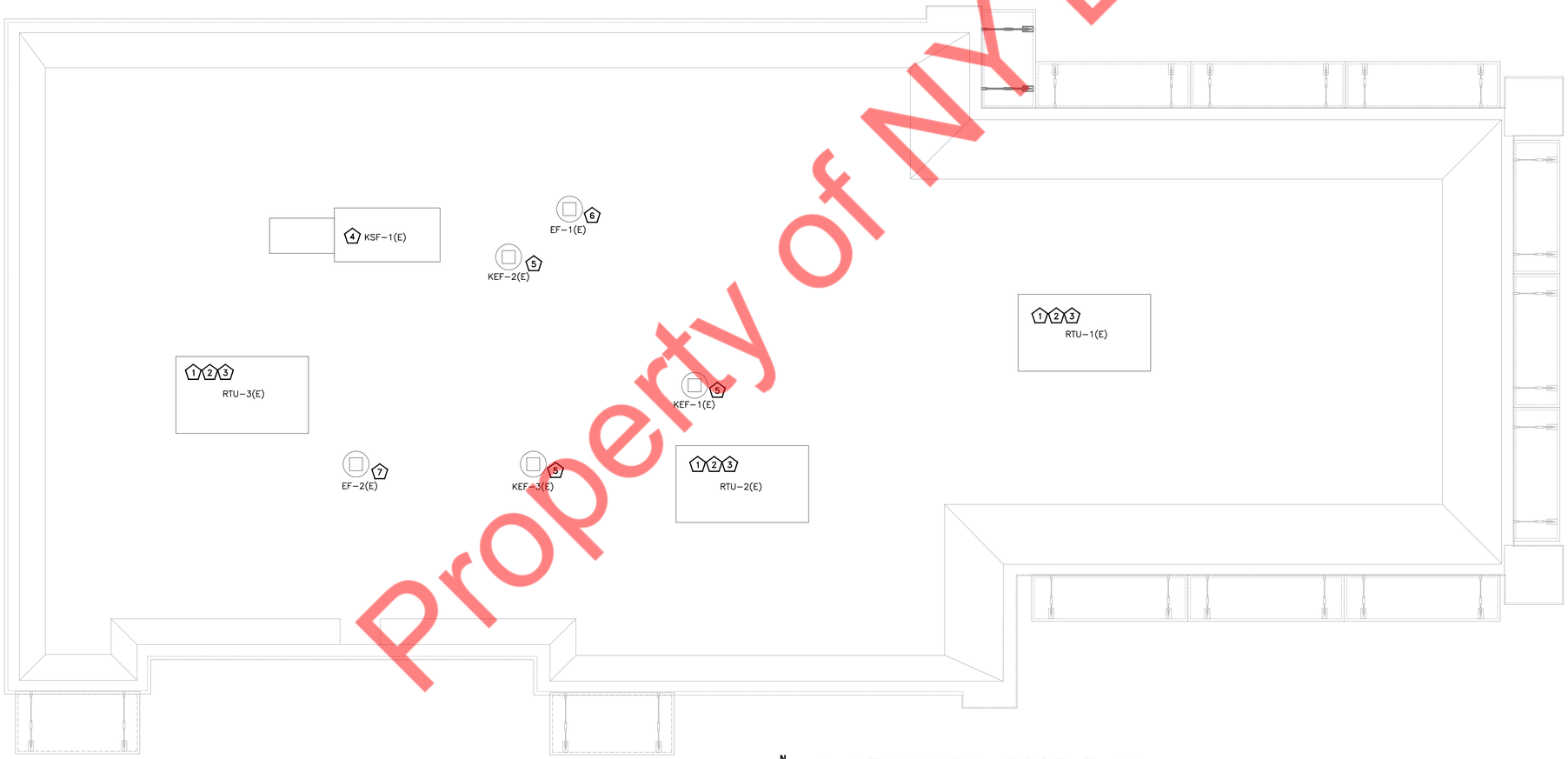
MECHANICAL GENERAL NOTES:

A. PROVIDE WEATHERPROOF COATING FOR ALL EXPOSED DUCT INSULATION ON ROOF.

B. CONTRACTOR TO VERIFY IN FIELD THAT ANY EXHAUST FROM ADJACENT TENANT IS TERMINATED 10 FEET AWAY FROM MECHANICAL OUTSIDE AIR INTAKE.

(#) MECHANICAL PLAN KEY NOTES:

1. EXISTING HVAC UNIT ON THE ROOF SERVING THE SPACE TO REMAIN WITH ALL ITS SUPPORTS AND ACCESSORIES AND TO BE REUSED.
2. CONTRACTOR TO RE-BALANCE OUTDOOR AIR INTAKE OF RTU'S AS MENTIONED IN ROOFTOP UNIT SCHEDULE ON SHEET M301.
3. CONTRACTOR TO RUN NEW CONDENSATE DRAIN FROM RTU TO NEAREST ROOF DRAIN OR DOWN SPOUT. COORDINATE IN FIELD.
4. EXISTING KITCHEN SUPPLY FAN KSF-1(E) TO REMAIN WITH ALL ITS SUPPORTS AND ACCESSORIES AND TO BE REUSED.
5. EXISTING KITCHEN HOOD EXHAUST FAN KEF-1,2&3(E) TO REMAIN WITH ALL ITS SUPPORTS AND ACCESSORIES AND TO BE REUSED.
6. EXISTING TOILET EXHAUST FAN EF-1(E) TO REMAIN WITH ALL ITS SUPPORTS AND ACCESSORIES AND TO BE REUSED.
7. EXISTING MOP SINK EXHAUST FAN EF-2(E) TO REMAIN WITH ALL ITS SUPPORTS AND ACCESSORIES AND TO BE REUSED.



N

TRUE PLAN

1 MECHANICAL ROOF PLAN

1/4" = 1'-0"

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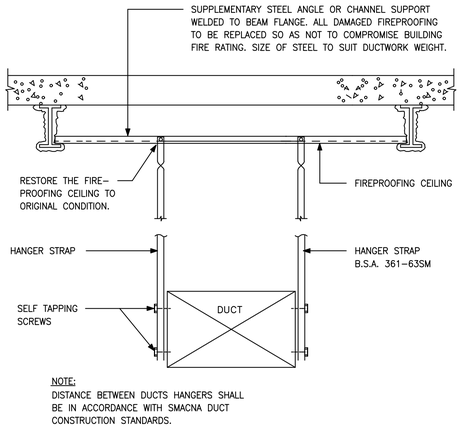
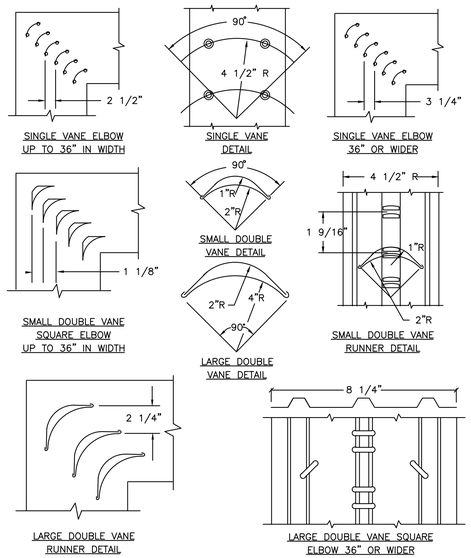
MECHANICAL ROOF PLAN

SHEET: M102

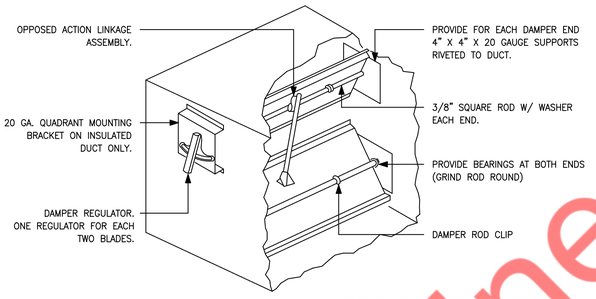


NOTE:
DISTANCE BETWEEN DUCTS HANGERS SHALL BE IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS.

1 M201 METHOD OF HANGING DUCTWORK
N.T.S

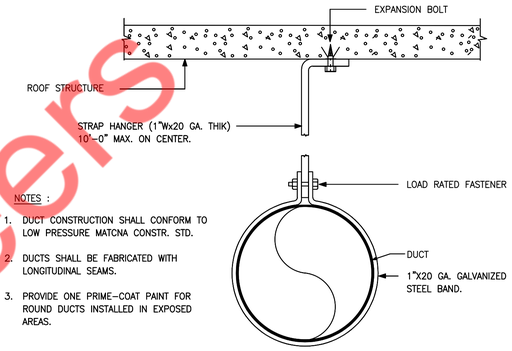


2 M201 LOW VELOCITY DUCTWORK ELBOWS
N.T.S



NOTE : 1. FOR DUCTS OVER 29" WIDE AND/OR OVER 12" HIGH.

3 M201 LOW PRESSURE BALANCING DAMPER
N.T.S



NOTES :
1. DUCT CONSTRUCTION SHALL CONFORM TO LOW PRESSURE MATCNA CONSTR. STD.
2. DUCTS SHALL BE FABRICATED WITH LONGITUDINAL SEAMS.
3. PROVIDE ONE PRIME-COAT PAINT FOR ROUND DUCTS INSTALLED IN EXPOSED AREAS.

4 M201 METHOD OF HANGING ROUND DUCTWORK
N.T.S

NOTES:
DUCTS TO BE ACOUSTICALLY LINED SHALL BE DESIGNATED BY THE SYMBOL IN FIG. "C" TO THE EXTENT OF LINING. THICKNESS SHALL BE AS SPECIFIED.
DUCTS LINED WITH ACOUSTICAL MATERIAL SHOULD BE FASTENED WITH CLIPS, ADHESIVE, OR PINS

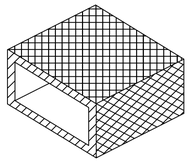


FIG. A

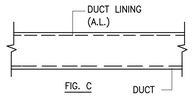


FIG. C

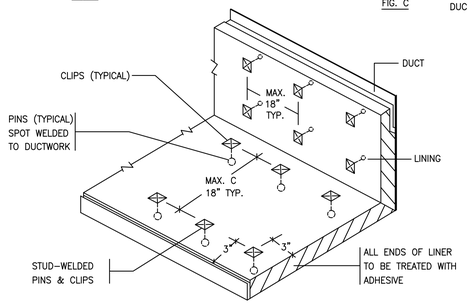
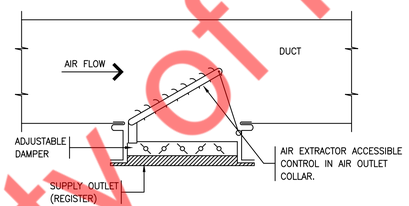
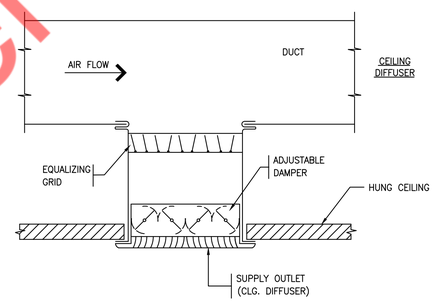


FIG. B

5 M201 ACOUSTICAL TREATMENT DUCT LINING
N.T.S



GRIDS AND DAMPERS MUST NOT DAMAGE LINERS.



NOTE :
GRILLE FLANGES MUST COVER DUCT FLANGES.

6 M201 DIFFUSER AND REGISTER CONNECTIONS
N.T.S

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MECHANICAL DETAILS

SHEET: M201

EXISTING ROOF TOP UNIT SCHEDULE

UNIT ID	MANUFACTURER	MODEL	NOMINAL TONS	SUPPLY FAN DATA			HEATING		COOLING		ELECTRICAL DATA			EER	IEER	WEIGHT (LBS)
				TOTAL	OUTSIDE AIR	EXTERNAL STATIC PRESSURE	INPUT	OUTPUT	TOTAL	SENSIBLE	V/PH/HZ	MCA(A)	MOCP(A)			
				CFM	CFM	(IN. W.G.)	MBH	MBH	MBH	MBH						
RTU-1(E)	LENNOX	SAE	10 (VIF)	4000	700	SAE	180 (VIF)	144 (VIF)	SAE	SAE	208/3/60 (VIF)	51 (VIF)	60 (VIF)	SAE	SAE	SAE
RTU-2(E)	LENNOX	SAE	7.5 (VIF)	3200	500	SAE	180 (VIF)	144 (VIF)	SAE	SAE	208/3/60 (VIF)	42 (VIF)	50 (VIF)	SAE	SAE	SAE
RTU-3(E)	LENNOX	SAE	10 (VIF)	4000	700	SAE	180 (VIF)	144 (VIF)	SAE	SAE	208/3/60 (VIF)	51 (VIF)	60 (VIF)	SAE	SAE	SAE

NOTES:

1. EXISTIING RTU'S WITH ALL ACCESSORIES TO REMAIN SAME AND TO BE REUSED.
2. CONTRACTOR TO FIELD VERIFY IF RTU IS WORKING AT THEIR 100% RATED CAPACITY. INFORM TO DESIGN ENGINEER IF ANY DISCREPENCIES ARE FOUND IN PERFORMANCE PRIOR TO CONSTRUCTION.
3. IF REQUIRED, PROVIDE NEW THERMOSTAT AND TEMPERATURE SENSOR COMPATIBLE WITH EXISTING RTU. CO-ORDINATE FINAL LOCATION OF THERMOSTAT WITH ARCHITECT OR OWNER.
4. CONTRACTOR TO BALANCE THE OUTSIDE AIR DAMPER ON EXISTING RTU TO MATCH VALUE MENTIONED IN AIR BALANCE TABLE.
5. REPLACE FILTER, IF REQUIRED.
6. SAE - SAME AS EXISTING, VIF - VERIFY IN FIELD

EXISTING FAN SCHEDULE

UNIT ID	MANUFACTURER	MODEL	CFM	TYPE	DRIVE	FAN RPM	WEIGHT (LBS)	E.S.P. (IN. W.G.)	MOTOR			DIMENSIONS			SERVICE	INTERLOCKED WITH
									HP	VOLTS	PHASE	L	W	H		
EF-1 (E)	SAE	SAE	375	SAE	SAE	SAE	SAE	SAE	1/4 (VIF)	120 (VIF)	1 (VIF)	SAE	SAE	SAE	TOILET	SAE
EF-2 (E)	SAE	SAE	300	SAE	SAE	SAE	SAE	SAE	1/4 (VIF)	120 (VIF)	1 (VIF)	SAE	SAE	SAE	MOP SINK	SAE
KSF-1 (E)	SAE	SAE	4225	SAE	SAE	SAE	SAE	SAE	3 (VIF)	208 (VIF)	3 (VIF)	SAE	SAE	SAE	MAU- KITCHEN	SAE
KEF-1 (E)	SAE	SAE	2081	SAE	SAE	SAE	SAE	SAE	0.75 (VIF)	208 (VIF)	3 (VIF)	SAE	SAE	SAE	HOOD-1	SAE
KEF-2 (E)	SAE	SAE	2025	SAE	SAE	SAE	SAE	SAE	0.5 (VIF)	208 (VIF)	3 (VIF)	SAE	SAE	SAE	HOOD-2	SAE
KEF-3 (E)	SAE	SAE	1200	SAE	SAE	SAE	SAE	SAE	0.5 (VIF)	115 (VIF)	1 (VIF)	SAE	SAE	SAE	HOOD-3	SAE

NOTES / ACCESSORIES:

1. EXISTIING FANS WITH ALL ACCESSORIES TO REMAIN SAME AND TO BE REUSED.
2. SAE - SAME AS EXISTING, VIF - VERIFY IN FIELD

AIR TERMINAL SCHEDULE

BASIS OF DESIGN: TITUS

TAG	TYPE	DIMENSION(IN)	MODEL NO.	MAX NC dBA
SG-1	SUPPLY GRILLE	24X6	S300FL	20

NOTES FOR DIFFUSERS

1. COORDINATE COLOR/FINISH WITH ARCHITECT.
2. SUPPLY DIFFUSER NECK SIZE

15" DIA:536-750 CFM
14" DIA: 400-535 CFM
12" DIA: 276-400 CFM
10" DIA: 176-275 CFM
8" DIA: 101-175 CFM
6" DIA: 0-100 CFM

VENTILATION CALCULATION

ROOM NAME	AREA (SQ.FT.)	NUMBER OF PEOPLE/1000 SQ.FT	NUMBER OF PEOPLE AS PER FMC 2023	NUMBER OF CHAIR	FINAL PEOPLE NO.	MIN OUTSIDE AIR AS PER FMC 2023		REQ. OA (CFM)	Provided OA	EXHAUST AIRFLOW RATE (CFM/SQ.FT OR	TOTAL EXHAUST REQUIRED	PROVIDED EXHAUST (CFM)	REFERANCE
						CFM/PEOPLE	CFM/SQ.FT						
DINING	1372	70	97	42	42	7.5	0.18	562		0	0	0	DINING ROOMS
SERVING	165	20	4	0	4	7.5	0.12	50		0	0	0	KITCHEN
BACK OF HOUSE	1247	20	25	0	25	7.5	0.12	337		0.7	872.9	5606	KITCHEN
STORAGE	55	0	0	0	0	0	0.12	7	6125	0	0	0	STORAGE ROOMS
ENTRY	43	10	1	0	1	5	0.06	8		0	0	0	MAIN ENTRY LOBBY
RESTROOM MEN	110	0	0	0	0	0	0	0		70	140	150	TOILET ROOMS
RESTROOM WOMEN	143	0	0	0	0	0	0	0		70	140	225	TOILET ROOMS
TOTAL								**963**	-	-	**Total**	**5981**	

AIR BALANCE

UNIT	SUPPLY AIR (CFM)	OUTSIDE AIR (CFM)	RETURN AIR (CFM)	EXHAUST AIR(CFM)	PRESSURE
RTU-1 (E)	4000	700	3300	0	+700
RTU-2 (E)	3200	500	2700	0	+500
RTU-3 (E)	4000	700	3300	0	+700
EF-1 (E)	0	0	0	375	-375
EF-2 (E)	0	0	0	300	-300
KSF-1 (E)	0	4225	0	0	+4225
KEF-1 (E)	0	0	0	2081	-2081
KEF-2 (E)	0	0	0	2025	-2025
KEF-3 (E)	0	0	0	1200	-1200
TOTAL:	**11200**	**6125**	**9300**	**5981**	**144**
				BUILDING PRESSURE:	**POSITIVE**

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MECHANICAL SCHEDULES

SHEET:
M301

ELECTRICAL SYMBOLS LIST

SWITCHES AND CONTROLS

$\$_a$	20A SPST TOGGLE SWITCH U.O.N. "a" DENOTES LIGHTING FIXTURE CONTROLLED.
$\$_a^2$	20A 3–WAY TOGGLE SWITCH U.N.O. "a" DENOTES LIGHTING FIXTURE CONTROLLED
$\$_a^3$	20A 4–WAY TOGGLE SWITCH U.N.O. "a" DENOTES LIGHTING FIXTURE CONTROLLED
$\$_{OS}$	OCCUPANCY SENSOR SWITCH
PC	WALL MOUNTED PHOTOCELL MOUNTED IN NEMA 3R ENCLOSURE.
OS A	CEILING OCCUPANCY SENSOR, NUMBER INDICATES TYPE; SEE OCCUPANCY SENSOR SCHEDULE. 'A' LETTER REFERES TO WIRING DIAGRAM.
OS	WALL OCCUPANCY SENSOR, NUMBER INDICATES TYPE; SEE OCCUPANCY SENSOR SCHEDULE.
VS	WALL VACANCY SENSOR, NUMBER INDICATES TYPE; SEE OCCUPANCY SENSOR SCHEDULE.
VS	CEILING VACANCY SENSOR, NUMBER INDICATES TYPE; SEE OCCUPANCY SENSOR SCHEDULE.
DS	CEILING MOUNTED DAYLIGHT SENSOR.

WIRING SYSTEMS

3 UP–	POWER OR LIGHTING CIRCUITRY HOMERUN WITH PANELBOARD DESIGNATION, NUMBER WHERE USED INDICATES CIRCUIT NUMBER. IT SHALL CONSISTS OF 1#12 ø, 1#12 N. & 1#12 G. IN 3/4"C, UNLESS OTHERWISE NOTED.
3 5 UP–	POWER OR LIGHTING CIRCUITRY HOMERUN WITH PANELBOARD DESIGNATION, NUMBER WHERE USED INDICATES CIRCUIT NUMBER. IT SHALL CONSISTS OF 2#12 ø, 2#12 N. & 2#12 G. IN 3/4"C, UNLESS OTHERWISE NOTED.
3 5 7 UP–	POWER OR LIGHTING CIRCUITRY HOMERUN WITH PANELBOARD DESIGNATION, NUMBER WHERE USED INDICATES CIRCUIT NUMBER. IT SHALL CONSISTS OF 3#12 ø, 3#12 N. & 3#12 G. IN 3/4"C, UNLESS OTHERWISE NOTED.
———	UNDERGROUND
- - - - - -	EXISTING
———	NEW

ELECTRICAL DRAWING LIST

E001	ELECTRICAL SYMBOL LIST, ABBREVIATIONS & GENERAL NOTES
E002	ELECTRICAL SPECIFICATIONS (1 OF 2)
E003	ELECTRICAL SPECIFICATIONS (2 OF 2)
E101	ELECTRICAL LIGHTING PLAN
E102	ELECTRICAL POWER PLAN
E103	ELECTRICAL ROOF PLAN
E201	ELECTRICAL DETAILS
E202	ELECTRICAL DETAILS
E301	ELECTRICAL PANEL SCHEDULES & RISER DIAGRAM
E401	ELECTRICAL SITE PLAN

POWER AND TELECOMMUNICATION

J	JUNCTION BOX WITH BLANK COVER PLATE, FLUSH IN FLOOR.
J	JUNCTION BOX WITH BLANK COVER PLATE, WALL MOUNTE, +18" AFF OR AS NOTED.
J	JUNCTION BOX WITH BLANK COVER PLATE, CEILING MOUNTED.
	DUPLEX CONVENIENCE RECEPTACLE, +18" AFF OR AS NOTED.
	DUPLEX DEDICATED RECEPTACLE, +18" AFF OR AS NOTED.
CL	DUPLEX CONVENIENCE RECEPTACLE – 20A–1P, 125V, NEMA 5–20R MOUNTED FLUSH IN CELING.
GFI	DUPLEX CONVENIENCE RECEPTACLE, +18" AFF OR AS NOTED.
GFI	DUPLEX DEDICATED GFI RECEPTACLE, +18" AFF OR AS NOTED.
	TELEPHONE/DATA OUTLET, 4"SQUARE OUTLET BOX WITH SINGLE GANG COLLAR AND BLANK PLATE. PROVIDE 3/4" E.C., U.O.N., UP TO HUNG CEILING AND TERMINATE WITH 90° ELBOW, BUSHING AND DRAG WIRE.
	TELEPHONE OUTLET, WALL–MOUNTED +48" AFF UNO TEL / DATA OUTLET TO BE PROVIDED WITH 1" CONDUIT U.O.N. TO H.C. AND TERMINATED WITH 90 DEGREE REE ELBOW AND BUSHING. TEL / DATA OUTLET PLATE SHALL BE PROVIDED WITH 1 1/4"DIAMETER GROMMETED OPENING.
	DATA OUTLET – (1) PORT UNO, +18" AFF, UNO TEL / DATA OUTLET TO BE PROVIDED WITH 1" CONDUIT U.O.N. TO H.C. AND TERMINATED WITH 90 DEGREE ELBOW AND BUSHING. TEL / DATA OUTLET PLATE SHALL BE PROVIDED WITH 1 1/4" DIAMETER GROMMETED OPENING.
	CABLE TV OUTLET, WALL–MOUNTED AT 18" AFF UNO.

MOTORS AND CONTROLS

M	AC INDOOR UNIT MOTOR AS NOTED WITH LIQUID TIGHT FLEXIBLE CONNECTION WITH JUNCTION BOX AND MOTOR SWITCH.
A	30A NON FUSED DISCONNECT SWITCH
B	60A NON FUSED DISCONNECT SWITCH
C	100A NON FUSED DISCONNECT SWITCH
S M	MANUAL MOTOR SWITCH

ANNOTATION

+24"	INDICATES MOUNTING HEIGHT, CENTER LINE TO FINISHED FLOOR.
X	KEYED NOTE REFERENCE
1 / E01	DETAIL REFERENCE: DETAIL NUMBER INDICATED ON TOP; DRAWING NUMBER INDICATED ON BOTTOM

POWER DISTRIBUTION

	DISTRIBUTION PANELBOARD, 208Y/120V–SURFACE OR FLUSH MOUNTED.

CODE COMPLIANCE

ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE BUILDING DEPARTMENT OF CITY OF OCALA. NOTHING IN THESE DRAWINGS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS APPLICABLE TO THESE PROJECT:

a. 2023 FLORIDA BUILDING CODE, 8TH EDITION.
b. 2023 FLORIDA ENERGY CONSERVATION CODE, 8TH EDITION.
c. 2023 FLORIDA MECHANICAL CODE, 8TH EDITION.
d. 2023 FLORIDA PLUMBING CODE, 8TH EDITION.
e. 2020 FLORIDA ELECTRICAL CODE (NFPA 70).
f. 2023 FLORIDA FUEL GAS CODE, 8TH EDITION.

ELECTRICAL ABBREVIATIONS

A	AMPERES	EA	EACH
A/C, AC	AIR CONDITIONING UNIT	EC	EMPTY CONDUIT/ ELECTRICAL CONTRACTOR
AF	AMPERE FRAME/AMP FUSE	EF	EXHAUST FAN
AFF	ABOVE FINISHED FLOOR	EM	EMERGENCY
AS	AMP SWITCH	EMT	ELECTRICAL METALLIC TUBING
AIC	AMPS INTERRUPTING CAPACITY	EQUIP	EQUIPMENT
AT	AMP TRIP	ER	EXISTING TO BE RELOCATED
ATS	AUTOMATIC TRANSFER SWITCH	ETR	EXISTING TO REMAIN
AUTO	AUTOMATIC	EWF	ELECTRIFIED WORKSTATION FURNITURE
AWG	AMERICAN WIRE GAUGE	EWH	ELECTRIC WATER HEATER
C	CONDUIT	FA	FIRE ALARM
C/B,CB	CIRCUIT BREAKER	FBO	FURNISHED BY OTHERS, INSTALLED & WIRED BY EC
CKT	CIRCUIT	FDR	FEEDER
CLG	CEILING	FIBO	FURNISHED & INSTALLED BY OTHERS, WIRED BY EC
COMM	COMMUNICATION	FIXT	FIXTURE
CT	CURRENT TRANSFORMER	FL	FLOOR
CU	COPPER	FLUOR	FLUORESCENT
°C	DEGREE CELSIUS	G	GROUND
°F	DEGREE FAHRENHEIT	GFI	GROUND FAULT INTERRUPTER
DIA	DIAMETER	GP	GENERAL PURPOSE
DISC	DISCONNECT	HC	HUNG CEILING
DN	DOWN	HP	HORSEPOWER
DP	DISTRIBUTION PANEL	HWH	HOW WATER HEATER
DWH	DOMESTIC WATER HEATER	HZ	HERTZ
DWG	DRAWING	IC	INTERRUPTING CAPACITY
JB	JUNCTION BOX	PP	POWER PANEL
KCMIL	ONE THOUSAND CIRCULAR MILS	PVC	POLYVINYL CHLORIDE
KV	KILOVOLT	PWR	POWER
KVA	KILOVOLT–AMPERES	R	REMOVE
KW	KILOWATTS	RE	RELOCATED EXISTING
LP	LIGHTING PANEL	REC	RECEPTACLE
LTG	LIGHTING	RGS	RIGID GALVANIZED STEEL
MAX	MAXIMUM	RR	REMOVE & RELOCATE
MC	MOTOR CONTROLLER	SECT	SECTION
MCB	MAIN CIRCUIT BREAKER	SPDT	SINGLE POLE DOUBLE THROW
MER	MECHANICAL EQUIPMENT ROOM	SPST	SINGLE POLE SINGLE THROW
MIN	MINIMUM	SPEC	SPECIFICATION
MLO	MAIN LUGS ONLY	SW	SWITCH
MTD	MOUNTED	SWBD	SWITCHBOARD
MTS	MANUAL TRANSFER SWITCH	SYM	SYMMETRICAL
N	NEUTRAL	SYS	SYSTEMS
NE	NEW DEVICE TO REPLACE EXISTING	TELE	TELEPHONE
NIC	NOT IN CONTRACT	TEMP	TEMPERATURE
NL	NIGHT LIGHT	TXF	TOILET EXHAUST FAN
NTS	NOT TO SCALE	TYP	TYPICAL
OC	ON CENTER	UON	UNLESS OTHERWISE NOTED
P	POLES	V	VOLT/VOLTAGE
PB	PULLBOX	VA	VOLT AMPERE
PC	PERSONAL COMPUTER	VAV	VARIABLE AIR VOLUME
ø	PHASE	VFD	VARIABLE FREQUENCY DRIVE
PNL	PANEL	VP	VAPORPROOF
W	WATT	WP	WEATHER PROOF
W	WIRE	XFMR	TRANSFORMER
WH	WALL HEATER	ZRT	ZONE REGISTER TERMINALS
E	EXISTING	IG	ISOLATED GROUND

GENERAL NOTES (APPLY TO ALL "E" DRAWINGS)

1. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE 2020 FLORIDA ELECTRICAL CODE (NFPA 70) WITH AMENDMENTS, LOCAL JURISDICTION REQUIREMENTS, AND ALL GOVERNING LOCAL CODES, LAWS, AND REGULATIONS.
2. CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS THAT MAY AFFECT THE WORK. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED FOR FAILURE TO DO SO.
3. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, TEST REPORTS, AND CERTIFICATIONS FOR TEMPORARY AND FINAL CERTIFICATE OF OCCUPANCY.
4. FIRE STOP ALL PENETRATIONS OF FIRE RATED CONSTRUCTION IN A CODE APPROVED MANNER IN ORDER TO MAINTAIN FIRE RATING. ALL PENETRATIONS SHALL BE SLEEVED AND SEALED WATERTIGHT.
5. SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS (HOLLOW MASONRY), EXPANSION SHIELDS OR INSERTS (CONCRETE AND BRICK), MACHINE SCREWS (METAL), BEAM CLAMPS (FRAMEWORK), WOOD SCREWS (WOOD) OR PAN THRU STRAPS (METAL DECK). NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10 FT APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
6. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. RACEWAYS OVER 10 FT LONG IN WHICH WIRING IS NOT INSTALLED: FURNISH FISH WIRE.
7. VERIFY LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH. IN CENTERING OUTLETS AND LOCATING BOXES AND OUTLETS, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT, EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING, HUNG CEILINGS AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.
8. CONTRACTOR SHALL PROVIDE A WARRANTY ON ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE.
9. ALL UNUSED MATERIALS AND DEBRIS SHALL BE LEGALLY REMOVED AND DISPOSED OF AWAY FROM THE PREMISES ON A DAILY BASIS.
10. CONTRACTOR SHALL PATCH, PAINT, AND RESTORE EXISTING SURFACES DAMAGED DURING THE COURSE OF THIS CONSTRUCTION TO PRE–EXISTING CONDITIONS OR BETTER.
11. MINIMUM SIZE OF CONDUIT SHALL BE ¾", AND TYPE SHALL BE ELECTRICAL METALLIC TUBING (EMT), UNLESS OTHERWISE NOTED. PROVIDE NYLON DRAG LINE AND CONDUIT CAP FOR ALL EMPTY CONDUITS.
12. CONNECT CONDUIT TO MOTOR CONDUIT TERMINAL BOXES WITH FLEXIBLE CONDUIT (MINIMUM 18 IN. LENGTH AND 50% SLACK). DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.
13. PULL AND JUNCTION BOXES WHERE INDICATED ON THE DRAWINGS, SHALL BE CONSIDERED SHOWN AT THEIR APPROXIMATE LOCATION. THE CONTRACTOR SHALL LOCATE THEM AS FIELD CONDITIONS DICTATE. ADDITIONAL PULL AND JUNCTION BOXES NOT SHOWN ON DRAWINGS SHALL BE PROVIDED WHERE REQUIRED BY APPLICABLE CODE PROVISIONS OR WHERE CALLED FOR BY FIELD CONDITIONS. PULL AND JUNCTION BOXES SHALL BE SURFACE TYPE IN UNFINISHED AREAS AND INSTALLED CONCEALED IN FINISHED AREAS, AND ALL COVERS TO PULL & JUNCTION BOXES SHALL BE READILY ACCESSIBLE.
14. SUPPORT PANEL, JUNCTION AND PULL BOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
15. FOR EXACT LOCATION AND MOUNTING HEIGHT OF LIGHTING FIXTURES AND SWITCH/RECEPTACLE OUTLETS, REFER TO ARCHITECTURAL REFLECTED CEILING AND POWER PLANS.
16. ALL ELECTRICAL ACCESSORIES AND EQUIPMENT INSTALLED OUTSIDE OR EXPOSED TO WEATHER SHALL HAVE NEMA 3R ENCLOSURES AND SHALL BE TIGHTLY GASKET FOR A COMPLETE RAIN TIGHT INSTALLATION. ALL BUILDING EXTERIOR MOUNTED RECEPTACLES SHALL BE GFCI RATED AND MOUNTED IN WEATHERPROOF ENCLOSURE.
17. ALL ACCESS PANEL LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
18. ELECTRICAL CONTRACTOR SHALL COORDINATE THE LOCATION AND INSTALLATION OF NEW WORK WITH THE GENERAL CONTRACTOR AND OTHER ASSOCIATED TRADES IN A TIMELY MANNER. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL, DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
19. ALL CONDUITS AND EQUIPMENT TO BE CONCEAL ED IN FINISHED SPACES UNLESS OTHERWISE NOTED. CONDUITS SHALL BE ENCASED IN THE CONCRETE FLOOR SLAB.
20. ALL EQUIPMENT AND MATERIALS INSTALLED IN PLENUM CEILINGS SHALL BE APPROVED FOR THAT APPLICATION.
21. OUTLET BOXES AND JUNCTION BOXES ON OPPOSITE SIDES OF FIRE–RATED WALLS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES, UNLESS FIRE–RATED BOXES OR PUTTY PADS ARE UTILIZED.
22. COORDINATE ALL FLOOR PENETRATIONS WITH THE STRUCTURAL AND ARCHITECTURAL DRAWINGS. CONFIRM PENETRATION LOCATIONS WITH THE ENGINEER AND OWNER BEFORE INSTALLATION.
23. COORDINATE THE MOUNTING HEIGHT AND LOCATION OF RACEWAYS, COMMUNICATIONS OUTLETS, AND RECEPTACLES WITH THE ARCHITECTURAL CASEWORK DRAWINGS AND DETAILS. COORDINATE LOCATIONS OF LIGHT FIXTURES, SWITCHES, AND RELATED DEVICES WITH THE ARCHITECTURAL DRAWINGS AND DETAILS.
24. REFER TO ARCHITECTURAL PLANS FOR FINAL LOCATIONS OF ALL LUMINARIES AND SWITCHES, AND FOR ALL FINISHED CEILING HEIGHTS.
25. REFER TO ARCHITECTURAL PLANS FOR FINAL LOCATIONS OF ALL ELECTRICAL DEVICES, AND FOR FINAL CEILING AND WALL HEIGHTS AND LAYOUTS.
26. LIGHTING FIXTURES PROVIDED WITH EMERGENCY BATTERY PACKS AND INDICATED WITH SWITCH CONTROL SHALL BE WIRED WITH BATTERY CHARGING/SENSING CIRCUIT WIRED AHEAD OF SWITCH CONTROL.
27. NUMBER(S) SHOWN AT RECEPTACLES, JUNCTION BOXES AND EQUIPMENT INDICATES CIRCUIT NUMBERS IN PANEL BOARD. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANEL BOARD.

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Bojangles

ISSUE BLOCK	
11-25-25	IFC SET

PROTOTYPE:	Plan 8
GUIDE SET VERSION:	GR 24.1
DOCUMENT DATE:	11-25-25
DRAWN BY:	NYE
CHECKED BY:	NYE
JOB NUMBER:	25-4320

ELECTRICAL SYMBOL LIST, ABBREVIATIONS & GENERAL NOTES

SHEET: E001

ELECTRICAL SPECIFICATIONS

1. GENERAL:

A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT, LATEST EDITION, AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.

B. DRAWING ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONDUIT ROUTING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL ALLOW IN HIS PRICE FOR ROUTING OF CONDUIT TO AVOID OBSTRUCTIONS. COORDINATION WITH EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES, IS REQUIRED, MAINTAIN HEADROOM AND SPACE CONDITIONS.

C. BIDDERS, BEFORE SUBMITTING PROPOSALS, SHALL VISIT AND CAREFULLY EXAMINE THE AREA AFFECTED BY THIS WORK TO FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE, AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT, OR MATERIALS, REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH AN EXAMINATION BEEN MADE.

D. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR, MINOR DEVIATIONS FROM DRAWING MAY BE MADE TO ACCOMPLISH THIS, BUT CHANGES WHICH INVOLVE EXTRA COST SHALL NOT BE MADE WITHOUT APPROVAL.

E. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK MAY BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK. ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DETAILED ON THE DRAWINGS. THE CONTRACTOR SHALL SURVEY THE SITE AND INCLUDE ALL CHANGES AND CHARGES IN MAKING UP THE WORK PROPOSAL.

F. CONNECTIONS TO EXISTING WORK: INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE TO EXISTING FACILITIES. TEMPORARY SHUTDOWNS OF EXISTING SERVICES SHALL BE PERFORMED AT NO ADDITIONAL CHARGES. AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION OF EXISTING FACILITIES AND ONLY WITH WRITTEN CONSENT OF OWNER. ALARM AND EMERGENCY SYSTEMS SHALL NOT BE INTERRUPTED. MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AS REQUIRED WITH NECESSARY TEMPORARY CONNECTIONS BETWEEN NEW AND EXISTING WORK. CONNECT NEW WORK TO EXISTING WORK IN NEAT AND ACCEPTABLE MANNER. RESTORE EXISTING DISTURBED WORK TO ORIGINAL CONDITION, INCLUDING MAINTENANCE OF WIRING CONTINUITY AS REQUIRED.

G. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK.

H. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK. EXCESS MATERIALS WILL NOT BE PERMITTED TO ACCUMULATE EITHER ON THE INTERIOR OR THE EXTERIOR.

I. SEAL OPENINGS THROUGH PARTITIONS, WALLS AND FLOORS WITH MINERAL WOOL OR OTHER NONCOMBUSTIBLE MATERIAL, UNLESS OTHERWISE NOTED.

J. PROVIDE ALL NECESSARY FLASHING AND COUNTER FLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THE BUILDING AS REQUIRED BY THE INSTALLATION OR REMOVAL OF CONDUIT AND EQUIPMENT, PROVIDE EQUIPMENT CURBS AS REQUIRED.

K. ALL EXISTING MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR WITH THE EXCEPTION OF SPECIFIC EQUIPMENT ND APPARATUS REQUESTED BY THE BUILDING REPRESENTATIVE, ARCHITECT OR AS NOTED TO BE RELOCATED ON THE DRAWINGS. REMOVED EQUIPMENT SHALL BE PROPERLY DISPOSED OF BY THIS CONTRACTOR.

L. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS, WHEN SO DIRECTED, HOWEVER, THE CONTRACTOR SHALL INSTALL WORK DURING OVERTIME HOURS AND THE ADDITIONAL COST TO BE CHARGED THEREFORE SHALL BE ONLY THE "PREMIUM" PORTION OF THE WAGES PAID.

M. UNLESS OTHERWISE SPECIFICALLY NOTED OR SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS IN THE EXISTING BUILDING. THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL CONDITION.

N. ALL MATERIAL AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.

O. INSURANCE: PROVIDE IN ACCORDANCE WITH OWNER/BUILDING REQUIREMENTS AND SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.

P. THE FINAL ACCEPTANCE SHALL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT, TESTED THE VARIOUS SYSTEMS, DEMONSTRATED THAT IT FULFILLS THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS AND HAS FURNISHED ALL THE REQUIRED CERTIFICATED OF INSPECTION AND APPROVAL.

2. GENERAL PROVISIONS FOR ELECTRICAL WORK:

A. DEFINITIONS:

1) "PROVIDE": TO FURNISH, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.

2) "INSTALL": TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.

3) "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE. AND DELIVER COMPLETE WITH RELATED ACCESSORIES.

4) "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.

5) "WIRING": RACEWAY. FITTINGS, WIRE, BOXES, AND RELATED ITEMS.

6) "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS, IN TRENCHES, IN CRAWL SPACES, OR IN ENCLOSURES.

7) "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.

8) "SIMILAR" OR "EQUAL": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.

B. TEMPORARY LIGHT AND POWER: PROVIDE TEMPORARY LIGHT AND POWER SYSTEMS AT EARLIEST POSSIBLE DATE WITHIN THE CONSTRUCTION AREAS FOR THE REQUIREMENTS OF ALL TRADES AS HEREIN DESCRIBED. EXTEND SYSTEMS TO NEW CONSTRUCTION AS SOON AS PHYSICALLY POSSIBLE. MAINTAIN SYSTEM DURING WORKING OWNER. PROVIDE ALL REQUIRED MAINTENANCE, INCLUDING LAMPS AND SOCKETS.

C. QUALITY ASSURANCE

1) QUALITY OF MATERIALS: ALL EQUIPMENT SHALL BE NEW SPECIFICATION GRADE, FREE FROM DEFECTS AND LISTED BY APPROVED TESTING AGENCY AND BEARING THEIR LABEL MATERIALS AND EQUIPMENT OF SIMILAR APPLICATION SHALL BE OF SAME MANUFACTURER, EXCEPT AS NOTED.

2) GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED AS DEFINED IN PARAGRAPH 2.C.

3) CURRENT CHARACTERISTICS:

a. SERVICE: 120/208 VOLT, 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL.

b. DISTRIBUTION: 120/208 VOLT, 3 PHASE, 4 WIRE, 60 HERTZ WITH GROUNDED NEUTRAL.

4) HEIGHTS OF OUTLETS:

a. FROM FINISHED FLOOR TO CENTERLINE OF OUTLETS FOR:

– RECEPTACLES AND TELEPHONES: 1 FT–6 IN.

– WALL SWITCHES: 4 FT–0 IN.

– WALL FIXTURES: 7 FT–0 IN.

– MOTOR CONTROLLERS: 5 FT–0 IN.

– CLOCKS: 7 FT 6 IN

b. EXCEPTIONS: AT JUNCTION OF DIFFERENT WALL FINISH MATERIALS, ON MOLDING OR BREAK IN WALL SURFACE, IN VIOLATION OF CODE, OR AS NOTED OR DIRECTED.

D. PRODUCT DELIVERY, STORAGE AND HANDLING

1) MOVING OF EQUIPMENT: WHERE NECESSARY, SHIP IN CARTED SECTIONS OF SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES.

2) ACCESSIBILITY: FOR OPERATION, MAINTENANCE AND REPAIR, MINOR DEVIATIONS SHALL BE PERMITTED, CHANGES OF MAGNITUDE OR INVOLVING EXTRA COST ARE NOT PERMISSIBLE WITHOUT REVIEW. GROUP CONCEALED ELECTRICAL EQUIPMENT REQUIRING ACCESS WITH EQUIPMENT FREELY ACCESSIBLE THROUGH ACCESS DOORS.

E. MATERIALS

1) NAMEPLATES: PROVIDE BLACK LAMICOID SHEET WITH 3/4 IN. WHITE LETTERING, FASTENED WITH EPOXY CEMENT FOR EACH DISCONNECT SWITCH, CIRCUIT BREAKER, PANEL, CABINET, TRANSFORMER, ENCLOSURE, MOTOR CONTROLLER AND THE LIKE. NAMEPLATES SHALL DESCRIBE THE NAME AND NUMBER OF EACH COMPONENT.

2) CABLE TAGS: TAG EACH CONDUCTOR PASSING THROUGH SPLICE OR PULLBOX WITH A WHITE LINEN TAG, INDICATING POINT OF ORIGIN AND TERMINATION OF THE CIRCUIT.

3) INSERTS AND SUPPORTS:

a. INSERTS: STEEL, SLOTTED TYPE, FACTORY PAINTED.

– SINGLE ROD: SIMILAR TO GRINNELL FIG. 281.

– MULTI–ROD: SIMILAR TO FEE AND MASON SERIES 9000 WITH END CAPS AND CLOSURE STRIPS.

– CLIP FORM NAILS FLUSH WITH INSERTS.

– MAXIMUM LOADING 75 PERCENT OF RATING.

b. SUPPORTS FROM BUILDING CONSTRUCTION: INSERTS, BEAM CLAMPS, STEEL FISHPLATES (IN CONCRETE FILL ONLY), CANTILEVER BRACKETS OR OTHER MEANS. SUBMIT FOR REVIEW.

c. GROUPED LINES AND SERVICES: TRAPEZE HANGERS OF BOLTED ANGLES OR CHANNELS.

d. WHERE BUILDING CONSTRUCTION IS INADEQUATE: PROVIDE ADDITIONAL FRAMING. SUBMIT FOR REVIEW.

F. PAINT SHALL BE THE BEST GRADE FOR ITS PURPOSE. DELIVER IN ORIGINAL SEALED CONTAINERS AND APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COLORS SHALL BE AS SELECTED BY ARCHITECT OR ENGINEER. UTILIZE GALVANIZED IRON PRIMER ON PANEL AND PULL BOXES, AFTER FABRICATION. UTILIZE HOT DIPPED GALVANIZED OR DIPPED IN ZINC BASED PRIMER FOR: OUTLET BOXES, JUNCTION BOXES, CONDUIT HANGERS, RODS, INSERTS AND SUPPORTS. ZINC BASED PRIMER WITH FINISH TO MATCH SURROUNDINGS SHALL BE USED FOR MARRED SURFACES OF STEEL EQUIPMENT AND RACEWAYS. A FIELD–APPLIED ZINC BASED PRIME COAT SHALL BE UTILIZED FOR STEEL OR IRONWORK.

E. BRUSH AND CLEAN WORK PRIOR TO CONCEALING, PAINTING AND ACCEPTANCE. PAINTED EXPOSED WORK SOILED OR DAMAGED; CLEAN AND REPAIR TO MATCH ADJOINING WORK BEFORE FINAL ACCEPTANCE. REMOVE DEBRIS FROM INSIDE AND OUTSIDE OF MATERIAL AND EQUIPMENT.

F. FINAL LOCATIONS AND MOUNTING ORIENTATIONS OF ALL SWITCHES, RECEPTACLES AND LIGHT FIXTURES SHALL BE VERIFIED WITH ARCHITECT.

G. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.

3. SCOPE OF WORK:

A. SCOPE OF WORK SHALL CONSIST OF PROVIDING LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETE AND SAFE INSTALLATION IN CONFORMING WITH THE 2020 FLORIDA ELECTRICAL CODE (NFPA 70), AND ALL OTHER APPLICABLE INDUSTRY, NATIONAL AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED.

B. ALL DRAWINGS, PLANS, DETAILS, SPECIFICATIONS AND SPECIFICATION ADDENDA ARE MADE PART OF THIS CONTRACT AND SHALL APPLY TO ALL WORK UNDER THE CONTRACT UNLESS OTHERWISE AMENDED, MODIFIED, SUPPLIED OR SPECIFIED HEREIN.

C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED FOR ANY WORKMANSHIP AND EQUIPMENT IN WHICH DEFECTS DEVELOP WITHIN ONE YEAR FROM THE DATE OF FINAL CERTIFICATE FOR PAYMENT AND/OR FROM DATE OR ACTUAL USE OF EQUIPMENT OR OCCUPANCY OF SPACES BY OWNER INCLUDED UNDER THE VARIOUS PARTS OF THE WORK, WHICHEVER, DATE IS EARLIER, THIS WORK SHALL BE DONE AS DIRECTED BY THE OWNER. THIS GUARANTEE SHALL ALSO PROVIDED THAT WHERE DEFECTS OCCUR, THE CONTRACTOR WILL ASSUME RESPONSIBILITY OF OTHER TRADES AFFECTED BY DEFECTS, REPAIRS OR REPLACEMENTS IN EQUIPMENT SUPPLIED BY THE CONTRACTOR

D. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH ALL DEPARTMENTS HAVING JURISDICTION, WORK AND PAY ALL FEES THEREFORE. THE CONTRACTOR SHALL ARRANGE FOR INSPECTION AND TESTS OF ANY OR ALL PARTS OF THE WORK IF SO REQUIRED BY AUTHORITIES AND PAY ALL CHARGES FOR SAME. THE CONTRACTOR SHALL PAY ALL COSTS FOR, AND FURNISH TO THE OWNER BEFORE FINAL BILLING, ALL CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH ALL REGULATIONS WHERE THEY APPLY TO THIS WORK.

E. CONTRACTOR SHALL PERFORM ALL CONTROLLED INSPECTIONS IN ACCORDANCE WITH THE BUILDING CODE. SECURE ALL REQUIRED PERMITS AND APPROVALS AND TRANSMIT SAME TO OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES.

F. AREAS WITH NO ELECTRICAL WORK SHALL REMAIN AS IS. CONTRACTOR SHALL MAINTAIN CONTINUITY OF ALL ELECTRICAL SYSTEMS TO ALL AREAS NOT COVERED BY THIS RENOVATION AND SHALL PROVIDE 48 HOUR NOTICE TO LANDLORD OF ANY PLANNED POWER INTERRUPTIONS OR SIGNAL SYSTEM OUTAGES.

4. SHOP DRAWINGS

A. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT, CONTRACTOR SHALL PROVIDE COMPLETE SETS OF COORDINATED SHOP DRAWINGS OF ALL NEW AND EXISTING EQUIPMENT, INDICATING CAPACITY, DIMENSIONS AND SEQUENCE OF OPERATION FOR WRITTEN APPROVAL BY THE ARCHITECT AND ENGINEER.

B. INDICATE ON EACH SHOP DRAWINGS SUBMITTED:

1) PROJECT NAME AND LOCATION

2) NAME OF ARCHITECT AND ENGINEER

3) ITEM IDENTIFICATION

4) APPROVAL STAMP OF PRIME CONTRACTOR

C. SUBMISSIONS:

1) SUBMISSIONS 11 IN. X 17 IN. OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THEN THE CONTRACTOR SHALL SUBMIT ONE ORIGINAL AND TWO COPIES. OTHERWISE, HE SHALL SUBMIT THREE COPIES. THE ARCHITECT WILL FORWARD THE ORIGINAL AND ONE COPY (TWO COPIES WHEN NO ORIGINAL IS RECEIVED) TO THE ENGINEER. ALL CATALOG CUTS SHALL BE COMPLETE.

2) SUBMISSIONS LARGER THAN 11 IN. X 17 IN.: SUBMIT TWO PRINTS AND ONE PAPER SEPIA TO THE ARCHITECT. THE ARCHITECT WILL FORWARD ONE PRINT AND THE PAPER SEPIA TO THE ENGINEER.

D. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:

1) SAFETY/DISCONNECT SWITCHES

2) FUSES

3) CIRCUIT BREAKERS

4) PANEL BOARDS/LOAD CENTER (INCLUDING DIMENSIONS, SCHEDULES, AND CATALOG CUTS).

5) RACEWAYS

6) WIRE AND CABLE

7) WALL SWITCHES

8) INSERTION RECEPTACLES

9) MOMENTARY CONTACT SWITCHES

10) TIME SWITCHES

11) LIGHTING FIXTURES.

E. ASSIST AND PROVIDE ALL NECESSARY INFORMATION, DIAGRAMS, SKETCHES, ETC. TO THE HVAC CONTRACTOR, FOR THE PREPARATION OF COORDINATED SHOP DRAWINGS INDICATING ROUTING OF FEEDERS, CONTROL CONDUITS, RECESSED FIXTURES AND ADJACENT NEARBY PIPING AND DUCTWORK WHERE APPLICABLE, CERTIFIED BY ALL TRADES THAT COORDINATION HAS BEEN ESTABLISHED. SUBMIT FOUR(4) BOOKBOUND OPERATING AND SERVICE MANUALS WHICH SHALL INCLUDE COPIES OF ALL SHOP DRAWING. PROVIDE SHOP DRAWINGS FOR PANELS, FIXTURES, WIRING DEVICES, CONDUIT, CABLE, DISCONNECT SWITCH, RELAYS, CONTRACTORS, AND OTHER SYSTEMS AS DIRECTED BY THE ENGINEER.

5. AS–BUILT DRAWINGS AND EQUIPMENT OPERATIONAL INSTRUCTIONS

A. UPON COMPLETION AND ACCEPTANCE OF WORK, CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.

B. THESE INSTRUCTIONS SHALL BE TYPED ON 8–1/2 IN. X 11 IN. PAPER AND BOUND IN THREE RING BINDERS WITH CLEAR ACETATE COVERS. CONTRACTOR SHALL GIVE THREE COPIES OF THE INSTRUCTIONS TO THE OWNER AND ONE COPY TO THE ENGINEER.

C. THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PROJECT, ARCHITECT AND ENGINEER.

D. REPRODUCIBLE "AS–BUILT" DRAWINGS SHALL BE PROVIDED INDICATING THE AS INSTALLED CONDITIONS OF THE WORK. "AS–BUILT" DRAWINGS SHALL BE PROVIDED TO THE ARCHITECT AFTER COMPLETION OF THE INSTALLATION.

6. LOW–VOLTAGE DISTRIBUTION EQUIPMENT:

A. PROVIDE COMPLETE EQUIPMENT INCLUDING: SWITCHES, FUSES, CIRCUIT BREAKERS, PANELS AND TRANSFORMERS.

B. ALL EQUIPMENT SHALL CONFORM TO NEMA, ANSI AND IEEE STANDARDS.

C. DISCONNECT SWITCHES SHALL BE FUSED OR NONFUSED AS NOTED. VOLTAGE SHALL BE AS REQUIRED. SWITCHES SHALL BE HEAVY DUTY, EXCEPT AS NOTED, AND HORSEPOWER RATED FOR MOTOR LOADS. TOGGLE TYPE SWITCHES SHALL BE NONFUSED, LOAD BREAK, HAVING MAXIMUM RATINGS OF 20 AMP AT 600 VOLTS AND 30 AMP AT 240 VOLTS. TWO–POLE SWITCHES SHALL BE SIMILAR TO HART AND HEGEMAN NO. 6808F. THREE–POLE SWITCHES SHALL BE SIMILAR TO HART AND HEGEMAN NO. 7810F. KNIFE–BLADE TYPE SWITCHES SHALL BE LOAD BREAK, QUICK–MAKE– QUICK–BREAK, UL CLASS R UP TO 600 AMP. MAXIMUM RATING EXCEPT AS NOTED SHALL BE 800 AMP. ARC QUENCHERS SHALL BE PROVIDED. SWITCHES SHALL BE SIMILAR TO GENERAL ELECTRIC QMR. ALL SWITCH ENCLOSURES SHALL BE DEAD FRONT, NEMA TYPE 1, EXCEPT AS NOTED.

7. FUSES:

A. CIRCUITS 0 TO 600 AMPERES SHALL BE PROTECTED BY FUSES SIMILAR TO CURRENT LIMITING BUSSMAN LOW–PEAK DUAL–ELEMENT TIME–DELAY LPN–RK (AMP)SP (250V) /LPS–RK (AMP)SP (600V) OR LPJ (AMP)SP (600V) (UL CLASS RK1 OR CLASS J), AND BE LISTED BY UL WITH AN INTERRUPTING RATING OF 300,000 AMPERES RMS SYMMETRICAL.

B. MOTOR CIRCUITS – ALL INDIVIDUAL MOTOR CIRCUITS WITH FULL LOAD AMPERE RATINGS (FLA) OF 480 AMPERES OR LESS SHALL BE PROTECTED BY FUSES SIMILAR TO CURRENT LIMITING BUSSMANN LOW–PEAK DUAL–ELEMENT TIME–DELAY LPN–RK (AMP)SP (250V) /LPS–RK (AMP)SP (600V) OR LPJ (AMP)SP (600V) (UL CLASS RK1 OR CLASS J), AND BE LISTED BY UL WITH AN INTERRUPTING RATING OF 300,000 AMPERES RMS SYMMETRICAL.

C. ALL FUSES SHALL BE PROVIDED BY SAME MANUFACTURER.

D. PROVIDE 1 SPACE MATCHING FUSE FOR EACH SET OF 3.

E. CIRCUIT BREAKERS: MOLDED CASE BREAKERS SHALL BE THERMAL–MAGNETIC, QUICK–MAKE–QUICK–BREAK, BOLT–ON TYPE, MANUALLY OPERATED WITH INSULATED TRIP–FREE HANDLE. MULTI–POLE TYPE BREAKERS SHALL CONTAIN INTERNAL TRIP BAR. TERMINALS SHALL BE SUITABLE FOR COPPER OR ALUMINUM CABLE. FURNISH AUXILIARY DEVICES WHERE REQUIRED FOR SHUNT–TRIPPING, OPEN A ND CLOSE MOTOR OPERATOR AND ALARM INDICATION. ENCLOSURES SHALL BE DEAD FRONT, NEMA TYPE 1) EXCEPT AS NOTED. FRAMES, IC AND INTERCHANGEABLE TRIPS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:
1) 120 VOLTS, 100–AMP FRAME: 10,000 AMPS, 1 POLE.
2) 120/240 VOLTS, 225–AMP FRAME: 22,000 AMPS MINIMUM

8. DISTRIBUTION PANELBOARDS, CIRCUIT BREAKER TYPE:

A. THREE PHASE, 4 OR 5 WIRE, COPPER BUS BARS, WITH 2, 3, OR 4 WIRE BRANCHES, AS NOTED. CAPACITY OF PANEL AND CIRCUITS, AS NOTED BELOW. PANELBOARD TO HAVE GROUND BUS SAME SIZE AS PHASE BUSES.

B. CABINETS: CODE GAUGE GALVANIZED SHEET STEEL PRIMED AND PAINTED WITH TRIM AND DOOR, TYPE AS NOTED, LAP AND RIVET CORNERS OR FORM AS APPROVED.

C. TRIM: ONE PIECE FULL FINISH PRIMED AND PAINTED SHEET STEEL. TRIM SHALL BE MOUNTED WITH A CONTINUOUS PIANO HINGE CONFIGURED IN SUCH A MANNER THAT IT SHALL BE POSSIBLE TO GAIN FULL ACCESS TO CIRCUIT BREAKERS AND WIRING GUTTERS WITHOUT REMOVING THE TRIM. PROVIDE A MULTI–PIN CYLINDER LOCK (YALE, CORBIN OR EQUAL) TO LATCH THE TRIM. KEYS SHALL BE MILLED.

D. HARDWARE: MULTI–PIN, CYLINDER LOCKS WITH MILLED KEYS. ALL PANELS SHALL BE KEYED ALIKE. DOOR OVER 48" HIGH SHALL BE EQUIPPED WITH A CHROME PLATED VAULT HANDLE, BUILT–IN LOCK AND 3–POINT CATCH FASTENING DOOR AT TOP, BOTTOM AND CENTER.

E. HINGES: CONCEALED, CONTINUOUS PIANO HINGE AS DESCRIBED ABOVE.

F. DIRECTORY HOLDER: MEAL FRAME WITH NONBREAKABLE TRANSPARENT COVER AND DIRECTORY CARD. ENTRIES TO BE TYPEWRITTEN BY ELECTRICAL CONTRACTOR. PROVIDE AN ENGRAVED LAMINATED NAMEPLATE ADJACENT TO EACH BRANCH BREAKER. MOUNT WITH SELF TAPPING MACHINE SCREWS.

G. FURNISH MULTI–CABLE LUGS WHERE REQUIRED. DOUBLE LUGGING NOT PERMITTED. SECURE LUGS TO BUS BY STUD BOLTS.

H. PANELBOARD CONSTRUCTION FOR BOLTED TYPE BREAKERS. MINIMUM SHORT CIRCUIT RATING 25,000 AMPERES, RMS SYMMETRICAL FOR ALL 120/208V APPLICATIONS. INDIVIDUAL CIRCUIT BREAKERS SHALL HAVE MINIMUM 100A FRAME, TRIPS SIZED AS SHOW ON THE PLANS.

I. MINIMUM GUTTER SPACES: PANELS WITH 225 AMPERE MAINS, 5–¾" MINIMUM, 400 AMPERES AND OVER, MINIMUM GUTTERS 8". FOR PANELS WITH THROUGH FEEDERS, INCREASE GUTTER WIDTH BY 2" MINIMUM AND PROVIDE A SHEET STEEL BARRIER BETWEEN THE PANEL GUTTER AND THE THROUGH FEEDER PORTION OF THE BACK BOX. BRANCH CIRCUIT BREAKERS SHALL BE MECHANICALLY INTERLOCKED WHEN SHOWN ON DRAWINGS.

J. DISTRIBUTION AND SUB–DISTRIBUTION PANELBOARDS SHALL BE A MINIMUM OF 30" WIDE AND 10" DEEP.

K. PANELBOARD SHALL HAVE MAIN CIRCUIT BREAKER OR MAIN LUGS AS INDICATED ON THE DRAWINGS. QUANTITY, POLES AND TRIP RATINGS OF BRANCH CIRCUIT BREAKERS TO BE AS INDICATED ON DRAWINGS.

L. PANELBOARD SHALL HAVE ENGRAVED WHITE CORE, BLACK LAMACOID NAMEPLATE SCREWED ONTO PANE TRIM WITH DESIGNATION LISTED (PANELBOARD NAME, VOLTAGE, RATING OR MAINS IN AMPS).

9. DISTRIBUTION PANELBOARDS, SWITCH AND FUSE:

A. THREE PHASE, 3 OR 4 WIRE WITH COPPER BUS BARS. ALL THROUGH BUS SHALL BE INSULATED.

B. NEMA CLASS 1 CONSTRUCTION TO ACCOMMODATE FUSIBLE, INDIVIDUALLY ENCLOSED SWITCHES, FRONT REMOVABLE, SWITCH AND DOOR INTERLOCKS. COVERS TO BE PAD–LOCKABLE.

C. PANELBOARD SHALL BE CONSTRUCTED OF CODE–GAUGE STEEL, GRAY FINISH OVER RUST INHIBITOR, FOR SURFACE MOUNTING. BOX AND PANEL FRAME SHALL BE FLANGED AND REINFORCED FOR RIGID SUPPORT OF INTERIOR AND ACCURATE ALIGNMENT OF INTERIOR WITH FRONT. TRIMS TO BE FASTENED TO BACK BOX WITH SCREWS.

D. ALL BRANCH SWITCHES SHALL HAVE INDIVIDUAL ENGRAVED LAMICOID NAMEPLATES (BLACK WITH WHITE CORE).

E. DISTRIBUTION PANELBOARD CONSTRUCTION MINIMUM SHORT CIRCUIT RATING 25,000 AMPERES, RMS SYMMETRICAL FOR ALL 120/208V APPLICATIONS. APPLICATIONS.

F. DISCONNECTS

1) DISCONNECT SWITCHES SHALL CONFORM TO NEMA AND UL STANDARDS, AND SHALL BE HORSEPOWER RATED.

2) SWITCHING MECHANISM SHALL BE QUICK–MAKE, QUICK–BREAK, SINGLE THROW WITH EXTERNAL OPERATING HANDLE MECHANICALLY INTERLOCKED WITH ENCLOSURE COVER TO PROVIDE ACCESS TO INTERIOR WHEN DISCONNECT IS IN OFF POSITION ONLY. PROVIDE MEANS TO LOCK OPERATING HANDLE IN THE OPEN AND CLOSED POSITION. DESIGNATE ON THE ENCLOSURE THE OPEN AND CLOSED POSITION OF THE OPERATING HANDLE.

3) SWITCHES SHALL BE OF THE DOUBLE STATIONARY CONTACT TYPE.

4) SWITCHES SHALL BE EQUIPPED WITH REJECTION TYPE FUSE HOLDERS, FUSIBLE AS SHOWN ON THE DRAWINGS; PROVIDE COMPLETE WITH FUSES AS SCHEDULED.

G. INSTALLATION

1) DISTRIBUTION PANELBOARD SHALL BE MOUNTED TO STRUCTURAL STEEL CHANNEL (KINDORF) WHICH SHALL BE BOLTED TO THE WALL USING EXPANSION ANCHORS FOR LARGE PANELS.

H. IDENTIFICATION

1) PROVIDE NAMEPLATE AT EACH SWITCH IDENTIFYING THE LOAD SERVED.

2) NAMEPLATES SHALL BE MOUNTED ON THE FRONT COVER SECURED WITH SELF–TAPPING SCREWS OR NUTS AND BOLTS. NAMEPLATES SHALL BE LAMINATED PHENOLIC, BLACK WITH A MINIMUM OF ¼" HIGH WHITE LETTERING.

I. DISTRIBUTION AND SUB–DISTRIBUTION PANELBOARDS SHALL BE A MINIMUM OF 30" WIDE AND 10" DEEP.

J. POWER PANELBOARDS SHALL BE SIMILAR TO GENERAL ELECTRIC TYPE "QMR", AS MANUFACTURED BY ATLAS SWITCH COMPANY, ELECTRIC SWITCHBOARD COMPANY OR APPROVED EQUAL.

K. PANELBOARD SHALL HAVE MAIN CIRCUIT BREAKER OR MAIN LUGS AS INDICATED ON THE DRAWINGS. QUANTITY, POLES AND TRIP RATINGS OF BRANCH CIRCUIT BREAKERS TO BE AS INDICATED ON DRAWINGS.

L. PANELBOARD SHALL HAVE ENGRAVED WHITE CORE, BLACK LAMACOID NAMEPLATE SCREWED ONTO PANE TRIM WITH DESIGNATION LISTED (PANELBOARD NAME, VOLTAGE, RATING OR MAINS IN AMPS).

M MATERIALS

1) RACEWAYS:

a. RIGID STEEL CONDUIT: FULL–WEIGHT PIPE, GALVANIZED, THREADED.

b. ELECTRO–METALIC TUBING (EMT): THIN WALL PIPE, GALVANIZED, THREAD LESS.

c. FLEXIBLE STEEL CONDUIT: CONTINUOUS SINGLE STRIP, GALVANIZED.

d. WIRE–WAYS: WIRE SHALL BE AS NOTED, MINIMUM NO. 16 GAUGE STEEL WITH GROUND CONTINUITY. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW–ON.

e. SURFACE METAL RACEWAY: SIZE AS NOTED. BASE 0.04 IN., COVER 0.25 IN. MATERIAL SHALL BE STEEL. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW–ON.

2) FITTINGS AND ACCESSORIES:

a. RIGID STEEL: NONSPLIT, THREADED, STEEL OR MALLEABLE IRON. ZINC DIE CAST NOT PERMITTED.

b. ELECTRO–METALLIC TUBING: COMPRESSION TYPE. GALVANIZED RIGID STEEL ELBOWS, 2 IN. OR LARGER.

c. FLEXIBLE METALLIC CONDUIT: ANGLE WEDGE TYPE WITH INSULATED THROAT.

d. BUSHINGS: METALLIC INSULATED TYPE.

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Bojangles

ISSUE BLOCK	
11-25-25	IFC SET

PROTOTYPE:	Plan 8
GUIDE SET VERSION:	GR 24.1
DOCUMENT DATE:	11-25-25
DRAWN BY:	NYE
CHECKED BY:	NYE
JOB NUMBER:	25-4320

ELECTRICAL SPECIFICATIONS (1 OF 2)

SHEET:
E002

ELECTRICAL SPECIFICATIONS (CONT.)

BOXES:

OUTLET BOXES: EXCEPT AS OTHERWISE REQUIRED BY CONSTRUCTION, DEVICES OR WIRING, BOXES SHALL BE STAMPED STEEL, 4 IN. SQUARE OR OCTAGON FOR FIXTURES. BOXES ABOVE CEILING SHALL BE 1-1/2 IN. DEEP. BOXES IN CEILING OR SLAB SHALL BE 3 IN. DEEP. BOXES IN WALL FOR FIXTURES SHALL BE 2-3/4 IN. DEEP. BOXES IN WALL FOR RECEPTACLES AND SWITCHES SHALL BE 1-1/2 IN. DEEP. FURNISH WITH RAISED COVERS AND FIXTURE STUDS WHERE REQUIRED. WITHOUT FIXTURE OR DEVICE: FURNISH BLANK COVER. OFFSET BACK-TO-BACK OUTLETS WITH MINIMUM 6 IN. SEPARATION.

JUNCTION AND PULL BOXES: GALVANIZED SHEET STEEL WITH SCREW-ON COVERS, EXCEPT AS NOTED. FURNISH WITH INSULATED SUPPORTS FOR CABLES. LOCATIONS SHALL BE AS NOTED OR REQUIRED AND ACCESSIBLE. PROVIDE BARRIERS IN NEW AND RENOVATED BOXES BETWEEN 120/208 VOLT AND 265/460 VOLT WIRING AND BETWEEN EMERGENCY AND NORMAL WIRING. FLOOR BOXES SHALL BE SUITABLE FOR CONDUIT AND DEVICES NOTED. RAISED OUTLETS SHALL BE HUBBELL #B2414 SERIES WITH ABOVE FLOOR FITTING. TELEPHONE: BUSHED HOLE. POWER: DUPLEX RECEPTACLE OR OTHER AS NOTED. INCREASE SIZE TO SUIT AS NECESSARY. FLUSH OUTLETS SHALL BE HUBBELL #B2414 SERIES WITH FLUSH FLOOR FITTING FOR TELEPHONE AND FLUSH DUAL FLAP COVER WITH DUPLEX RECEPTACLE FOR POWER AS NOTED. INCREASE SIZE TO SUIT AS NECESSARY.

N. PROVIDE RACEWAYS ONLY AS HEREIN SPECIFIED, EXCEPT AS NOTED. RACEWAYS SHALL BE RUN CONCEALED, EXCEPT AS NOTED.

PROVIDE RACEWAY SUPPORT UTILIZING CEILING TRAPEZE, STRAP HANGERS, OR WALL BRACKETS. PROVIDE U-BOLTS AT EACH FLOOR LEVEL OF RISER RACEWAYS AND CONNECTED TO ACCEPTABLE SUPPORTS. PROVIDE RISER CLAMPS AT EACH FLOOR LEVEL OF RISER RACEWAYS AND RESTING ON SLAB. FOR THROUGH-THE-FLOOR SYSTEMS, UTILIZE AN ASSEMBLY SIMILAR TO HUBBELL FIRE RATED POKE-THROUGH-FLOOR BOX SYSTEM. FOR ABOVE FLOOR FITTINGS TELEPHONE SHALL BE BUSHED HOLE AND POWER SHALL BE DUPLEX RECEPTACLE OR OTHER AS NOTED. PROVIDE SEPARATION BARRIER BETWEEN POWER AND TELEPHONE COMPARTMENTS. PROVIDE JUNCTION BOX ON UNDERSIDE OF FLOOR. PACK FITTING TO RESTORE FIRE RATING OF FLOOR.

SECURE ALL RACEWAYS TO SUPPORTS WITH PIPE STRAPS OR U-BOLTS. SPACING OF SUPPORTS SHALL BE A MINIMUM OF 10 FT ON CENTER FOR METALLIC RACEWAY AND AS REQUIRED FOR NONMETALLIC RACEWAY. SPACING SHALL BE 5 FT ON CENTER FOR WIREWAYS AND PER CODE AND AS NOTED FOR OTHERS. MOUNT SUPPORTS TO STRUCTURE MASONRY WITH TOGGLE BOLTS ON HOLLOW MASONRY, EXPANSION SHIELDS OR INSERTS IN CONCRETE AND BRICK, MACHINE SCREWS ON METAL, BEAM CLAMPS ON FRAMEWORK, WOOD SCREWS ON WOOD, AND PAN THROUGH STRAPS IN METAL DECK. NAILS, RAWL PLUGS OR WOOD PLUGS SHALL NOT BE PERMITTED. WHERE REQUIRED BY STRUCTURE, FURNISH THROUGH BOLTS AND FISHPLATES.

EXPOSED RACEWAYS SHALL BE RUN PARALLEL WITH OR AT RIGHT ANGLES TO WALLS. PROVIDE CLEARANCE WITH WATER, STEAM OR OTHER PIPING (MINIMUM 3 IN. SEPARATION FROM STEAM AND HOT WATER PIPES, EXCEPT 1 IN. FROM PIPE COVER AT CROSSINGS AND 18 IN. FOR PARALLEL RUNS). FOR HUNG CEILING OUTLETS, RUN IN HUNG CEILING AND CONNECT TO CEILING SUPPORT CHANNELS. IN MASONRY AND POURED CONCRETE, RUN VERTICALLY ONLY.

MAINTAIN GROUNDING CONTINUITY OF INTERRUPTED METALLIC RACEWAYS WITH GROUND CONDUCTOR, AND IN FLEXIBLE CONDUIT FOR FEEDERS AND MOTOR TERMINAL CONNECTIONS.

EMPTY RACEWAYS OVER 10 FT LONG: PROVIDE FISH OR PULL WIRE, GALVANIZED OR NYLON ROPE.

RIGID STEEL CONDUIT SHALL BE PERMITTED FOR FEEDERS AND BRANCH CIRCUITS. PAINT MALE THREADS OF FIELD-THREADED CONDUIT WITH GRAPHITE-BASE PIPE COMPOUND AND BUTT CONDUIT ENDS. TOUCH UP MARRED SURFACES AND FIELD-CUT THREADS, CRC-COLD GALVANIZED. EMT SHALL BE PERMITTED FOR BRANCH CIRCUITS ONLY, IN DRY LOCATIONS, DRY WALLS, HUNG CEILINGS, HOLLOW BLOCK WALLS AND FURRED SPACES. EMT SHALL NOT BE PERMITTED IN RAISED FLOORS. FLEXIBLE STEEL CONDUIT SHALL BE UTILIZED FOR SHORT CONNECTIONS WHERE RIGID CONDUIT IS IMPRACTICAL. FROM OUTLET BOX TO RECESSED LIGHTING FIXTURE: PROVIDE MINIMUM 4 FT AND MAXIMUM 6 FT LENGTHS. FOR FINAL CONNECTION TO MOTOR TERMINAL BOX, TRANSFORMER AND OTHER VIBRATING EQUIPMENT: PROVIDE WITH POLYVINYL SHEATHING AND GROUND CONDUCTOR. MINIMUM LENGTH: 18 IN. WITH SLACK. CONNECT GROUND CONDUCTOR TO ENCLOSURE OR RACEWAY AT EACH END. FOR EXPANSION JOINT CROSSINGS, CROSS AT RIGHT ANGLES AND ANCHOR ENDS.

CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREADS OF FIELD THREADED RACEWAYS WITH GRAPHITE BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING.

ALL COUPLINGS SHALL BE COMPRESSION TYPE. NO SET SCREW FITTINGS.

EXPANSION FITTINGS SHALL BE INSTALLED AT RIGHT ANGLES WITH CLIP JOINT CENTERED IN EXPANSION JOINT. PROVIDE A LENGTH OF RUN IN ACCORDANCE MANUFACTURER'S RECOMMENDATIONS. PRESET FITTINGS SHALL ALLOW FOR TEMPERATURE VARIATION.

RACEWAYS PASSING THROUGH FIRE-RATED CONSTRUCTION: SEAL OPENING WITH FIRE SEALANT.

O. PROVIDE CABLE SUPPORTS IN ACCORDANCE WITH NATIONAL ELECTRIC CODE ARTICLE 300.19. CABLE SUPPORTS SHALL UTILIZE A ONE-PIECE PLUG WITH POZI-GRIP WEDGING PLUG AS MANUFACTIURED BY OZ-GEDNEY. TYPE SF SHALL BE USED FOR ARMORED CABLE.

INSTALL CABLE SUPPORTS AT THE TOP OF A VERTICAL RISE AND PROVIDE INTERMEDIATE ADDITIONAL SUPPORTS AS REQUIRED TO LIMIT SUPPORTED CONDUCTOR LENGTHS TO NOT GREATER THAN THOSE SPECIFIED IN TABLE 300.19(A).

P. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. OUTLET BOXES SHALL BE SET SQUARE AND TRUE WITH BUILDING FINISH. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRON OR GROUT IN WITH MASONRY. VERIFY OUTLET LOCATIONS IN FINISHED SPACES WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISHES.

PROVIDE BARRIERS BETWEEN SWITCHES CONNECTED TO DIFFERENT PHASES FOR VOLTAGES EXCEEDING 150 VOLTS TO GROUND.

Q. PANEL, JUNCTION AND PULL BOXES SHALL BE LOCATED CLEAR OF OTHER TRADES. CONCEAL JUNCTION AND PULL BOXES IN FINISHED SPACES. WHERE NECESSARY, REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT. BOXES SHALL BE ACCESSIBLE. SUPPORT BOXES FROM BUILDING STRUCTURE, INDEPENDENT OF CONDUIT. PROVIDE FLOOR-TO-CEILING CHANNELS FOR MOUNTING ON DRYWALL AND LIGHTWEIGHT CONSTRUCTION. OUTLET BOXES FOR FIXTURES RECESSED IN HUNG CEILINGS SHALL BE ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURE. SECURE TO BLACK IRON SUPPORT. MOTOR TERMINAL BOXES: COORDINATE WITH MOTOR BRANCH CIRCUIT CONDUIT AND WIRING; ADD BOX VOLUME WHERE REQUIRED.

R. FIRE SEALANTS: PROVIDE FOR RACEWAYS AND WIRE PASSING THROUGH FLOOR SLOTS, SLEEVES OR OPENINGS IN FIRE-PARTITIONS ROOMS.

S. PERFORM CONTINUITY TESTS OF RESISTANCE OF FEEDER CONDUITS FROM SERVICE TO POINT OF FINAL DISTRIBUTION USING 1 CONDUCTOR RETURN. MAXIMUM RESISTANCE SHALL BE 25 OHMS.

10. WIRE AND CABLE:

A. PROVIDE WIRE AND CABLE COMPLETE WITH ACCESSORIES. SIZE REFERENCE SHALL BE AWG EXCEPT AS NOTED.

B. CONDUCTORS SHALL BE COPPER, ASTM STANDARD SOLID (NO. 10 AND SMALLER) OR STRANDED (NO. 8 AND LARGER). GENERAL USE CABLING SHALL BE NO. 12 MINIMUM. AT 120 VOLTS AND OVER 100 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM. AT 265 VOLTS AND OVER 200 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM.

C. CONTROL AND ALARM CABLING, EXCEPT AS NOTED, SHALL BE NO. 14 MINIMUM. AT 120 VOLTS AND OVER 200 FT CIRCUIT LENGTH PROVIDE NO. 12 MINIMUM. OTHER VOLTAGES AND PHASES: ADJUST CABLE SIZING AS REQUIRED TO MAINTAIN VOLTAGE DROP. INCREASE RACEWAY SIZES FOR LARGER WIRE AS REQUIRED.

D. INSULATION SHALL BE RUBBER AND THERMOPLASTIC MEETING ASTM AND IPCEA STANDARDS. TYPE THW OR THWN SHALL BE UTILIZED FOR FEEDERS AND BRANCH CIRCUITS EXCEPT AS NOTED. TYPE SFF-2 SHALL BE UTILIZED FOR BRANCH CIRCUITS LOCATED IN WIRING CHANNELS OF CONTINUOUS FLUORESCENT FIXTURES AND IN AMBIENT TEMPERATURES OVER 90 DEG C. FOR UNGROUNDED ISOLATED BRANCH CIRCUITS PROVIDE CROSS-LINKED POLYETHYLENE INSULATION (TYPE XHHW).

E. ARMORED CABLE (BX) SHALL BE UTILIZED FOR BRANCH CIRCUITS IN DRY HOLLOW LOCATIONS, HUNG CEILINGS, AND BLOCK WALLS. WHEN USED IN LIEU OF WIRING IN CONDUIT, STATE IN PROPOSAL THAT PRICE IS BASED UPON THE USE OF HOSPITAL GRADE 'BX'.

F. COLOR CODING SHALL BE AS FOLLOWS:

120/208 VOLT SYSTEM: :
BLACK FOR A PHASE
RED FOR B PHASE
BLUE FOR C PHASE

1)NEUTRAL WIRE SHALL UTILIZE WHITE OUTER COVERING THROUGHOUT. EQUIPMENT GROUND WIRE SHALL UTILIZE GREEN OUTER COVERING THROUGHOUT.

WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION TO OVERLAP CONDUCTORS WITH 6 IN. OF COLOR TAPING IN ACCESSIBLE LOCATIONS.

G. PROVIDE FLAMEPROOF LINEN OR FIBER TAGS IN ACCESSIBLE LOCATIONS. FOR FEEDERS INDICATE FEEDER NUMBER, SIZE, PHASE AND POINTS OF ORIGIN AND TERMINATIONS. FOR CONTROL AND ALARM WIRING INDICATE TYPE (CONTROL OR ALARM), SIZE OF WIRE, AND POINTS OF ORIGIN AND TERMINATIONS.

H. TERMINATIONS, SPLICES AND TAPS UNDER 600 VOLTS: COPPER CONDUCTORS NO. 10 AND SMALLER SHALL UTILIZE COMPRESSION-TYPE OF TWIST-ON SPRING-LOADED CONNECTORS AND CLEAR NYLON-INSULATED COVERING. COPPER CONDUCTORS NO. 8 AND LARGER SHALL UTILIZE MECHANICAL BOLTED PRESSURE OR HYDRAULIC COMPRESSION TYPE USING MANUFACTURER'S RECOMMENDED TOOLING. CABLE LUGS AND CONNECTORS SHALL UTILIZE COMPRESSION TYPE OF SAME METAL AS CONDUCTOR. PROVIDE TO MATCH CABLE, WITH MARKING INDICATING SIZE AND TYPE. COPPER LUG CONNECTIONS TO BUS BARS: USE ANTISEIZE COMPOUND ON TANG.

I. NOT MORE THAN 3 LIGHTING OR CONVENIENCE OUTLET CIRCUITS SHALL BE INSTALLED IN ONE CONDUIT UNLESS OTHERWISE INDICATED. PULL NO THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32 DEG F. PROVIDE SEPARATE RACEWAYS FOR CONDUCTORS OF 120/208 AND 265/460 VOLT SYSTEMS, EXCEPT 460 VOLT MOTOR BRANCH CIRCUIT WIRING AND RELATED 120 VOLT CONTROL WIRING. THERMOPLASTIC WIRES SHALL NOT BE INSTALLED IN COMPUTER AREA RAISED FLOORS.

J. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS.

K. PERFORM CONTINUITY AND INSULATION TESTS. MEGGER TEST 100 PERCENT OF FEEDERS, 10 PERCENT OF BRANCH CIRCUITS AND ALL MOTOR BRANCH CIRCUITS OVER 25 HP.

PERFORM TESTS PRIOR TO CONNECTING EQUIPMENT AND IN PRESENCE OF AUTHORIZED REPRESENTATIVES. SUBMIT WRITTEN REPORT OF RESULTS. CORRECT OR REPLACE CABLE TESTING BELOW MANUFACTURER'S STANDARDS.

11. WIRING DEVICES:

A. WIRING DEVICES SHALL BE SPECIFICATION GRADE UNLESS OTHERWISE SPECIFIED. ALL DEVICES SHALL BE FLUSH MOUNTED, UNLESS OTHERWISE NOTED. PROVIDE COMPLETE MATERIAL AND ACCESSORIES AS NOTED.

B. LOCAL WALL SWITCHES SHALL BE ROCKER TYPE, QUIET OPERATING, RATED 20 AMP, 120/277 VOLT, AC. SIMILAR TO LEVITON DECORA SERIES A5621 (SINGLE POLE), A5623 (3-WAY) AND A5624 (4-WAY).

C. STRAIGHT BLADE RECEPTACLES SHALL BE COMMERCIAL SPECIFICATION GRADE DUPLEX CONVENIENCE 125 VOLTS, 2 POLE, 3 WIRE, U GROUND SLOT, DECORA SERIES BY LEVITON. GROUNDED, EXCEPT AS NOTED.

1)SINGLE GANG, RECESSED, DUPLEX RECEPTACLE: TAMPER RESISTANT, 2-POLE, 3-WIRE GROUNDING, 15A, 125V, NEMA 5-20R; LEVITON 689 SERIES (COLOR AS SPECIFIED BY ARCHITECT).
2) USB CHARGER/ DUPLEX TAMPER-RESISTANT RECEPTACLE: TAMPER RESISTANT,

D. DEVICE PLATES: SEE ARCHITECT FOR TYPE. FOR RECEPTACLES WITH OTHER THAN 120 VOLT, INSCRIBED VOLTAGE AVAILABLE.

E. COLORS: COORDINATE COLORS WITH ARCHITECT.

F. MOUNTING ORIENTATION OF RECEPTACLES (HORIZONTAL OR VERTICAL): COORDINATE WITH ARCHITECT.

12. LIGHTING FIXTURES:

A. FIXTURES TO BE AS SPECIFIED BY ARCHITECT AND SHALL BE COMPLETELY FACTORY ASSEMBLED, WIRED AND EQUIPPED WITH ALL NECESSARY SOCKETS, BALLASTS, SUPPORTING HARDWARE AND ACCESSORIES. REFER TO DRAWINGS FOR INDIVIDUAL FIXTURE DESCRIPTIONS.

B. FIXTURE CATALOG NUMBERS USED TO ILLUSTRATE EQUIPMENT TYPE DO NOT NECESSARILY DENOTE REQUIRED MOUNTING EQUIPMENT OR ACCESSORIES. PROVIDE ACCESSORIES TO SUIT.

C. BALLAST: CLASS P, HIGH POWER FACTOR, LOWEST AVAILABLE NEMA RATED NOISE LEVEL, ET1 AND CBM APPROVED. ENERGY SAVING TYPE. TRIGGER START FOR 24-INCH LAMPS AND RAPID START FOR 48-INCH, TWO LAMP BALLASTS; NO THREE LAMP BALLASTS. BALLASTS SHALL BE ADVANCE MAGNETEK, UNIVERSAL OR EQUAL.

D. LED DRIVERS SHALL BE ELECTRONIC TYPE, LABELED AS COMPLIANT WITH RADIO FREQUENCY INTERFERENCE (RFI) REQUIREMENTS OF FCC TITLE 47, PART 15 AND COMPLY WITH NEMA SSL 1 "ELECTRONIC DRIVERS FOR LED DEVICES, ARRAYS OR SYSTEMS". LED DRIVERS SHALL HAVE A SOUND RATING OF "A", HAVE A MINIMUM EFFICIENCY OF 85% AND BE RATED FOR A THD OF LESS THAN 20% AT ALL INPUT VOLTAGES.

E. DIMMABLE LED DRIVERS SHALL BE CAPABLE OF DIMMING WITHOUT LED STROBING OR FLICKER ACROSS THEIR FULL DIMMING RANGE. PROVIDE TYPE OF LED DRIVER AS PER LIGHTING FIXTURE SCHEDULE, DIMMABLE LED DRIVERS SHALL BE 0-10V WHERE NOT INDICATED.

F. CONTINUOUS ROW, TWO LAMP STRIP FIXTURES SHALL BE STAGGERED TYPE.

G. FLUORESCENT LIGHTING FIXTURES, INCLUDING GENERAL CONSTRUCTION, LAMPS AND BALLASTS SHALL CONFORM TO THE ENERGY EFFICIENCY REQUIREMENTS OF CONSOLIDATED EDISON CO. AND QUALITY FOR A UTILITY REBATE TO OWNER UNDER CON EDISON'S ENLIGHTENED ENERGY LIGHTING REBATE PROGRAM. CONTRACTOR SHALL COORDINATE REBATE PROGRAM WITH CON EDISON AND ARRANGE FOR CON EDISON TO PERFORM A SURVEY TO INVENTORY ALL EXISTING FIXTURES PRIOR TO DEMOLITION.

H. EXIT SIGNS SHALL BE PRECISION DIE-CAST ALUMINUM HOUSING WITH LASER-FORMED ACRYLIC LEGEND. EXIT SIGNS SHALL COMPLY WITH UL 924 AND BE MEA APPROVED. AC POWERED WITH PREMIUM LONG-LIFE NICKEL CADMIUM BATTERY WITH STANDARD UL LISTED 3-HOUR RUN TIME. PROVIDE WITH INTEGRAL AUTOMATIC CHARGER IN A SELF CONTAINED POWER PACK. LED INDICATOR WITH PUSH TO TEST SWITCH.

13. TELEPHONE CONDUIT SYSTEM:

A. PROVIDE COMPLETE SYSTEM OF RACEWAYS AND ACCESSORIES, OUTLET BOXES, SLEEVES AND FISHWIRES.

B. EQUIPMENT SHALL CONFORM TO REQUIREMENTS OF TELEPHONE COMPANY.

C. OUTLETS SHALL BE:
WALL; 4 IN. SQUARE WITH BUSHED COVER PLATE.

D. PROVIDE FISHWIRES, IN RACEWAYS OVER 10 FT LONG.

E. CONDUIT SHALL BE 3/4 IN. MINIMUM. FURNISH EMPTY CONDUIT FROM OUTLET BOX TO BUSHED END THRU WALL 6" BELOW THE PLASTER CEILING.

F. ACE RACEWAYS IN ROOMS SHALL HUBBELL HBL500, HBL750 OR HBL2000 SERIES OR AS ACCEPTABLE.

14. GROUNDING AND BONDING:

A. PROVIDE GROUNDING SYSTEM IN ACCORDANCE WITH (2020 FLORIDA ELECTRICAL CODE), AND THESE SPECIFICATIONS. THE WIRING SYSTEM SHALL BE INSTALLED AS REQUIRED TO PROVIDE A CONTINUOUSLY GROUNDED SYSTEM. WHERE FLEXIBLE CONDUIT IS USED FOR PART OF A CONDUIT RUN, EXCEPT LIGHTING BRANCH CIRCUITS, AN INSULATED GROUNDING CONDUCTOR SHALL BE PROVIDED IN THE CONDUIT AND CONNECTED TO GROUNDING BUSHINGS AT EACH END OF THE RUN.

B. USE EXOTHERMIC WELDING PROCESS FOR INACCESSIBLE CONNECTIONS.

C. EXTEND EXISTING SYSTEM GROUND TO INCLUDE ALL THE ELECTRICAL EQUIPMENT IN THE SCOPE OF WORK.

D. WHERE FLEXIBLE METALLIC CONDUIT IS USED AN INTERNAL BONDING CONDUCTOR SHALL BE INSTALLED.

E. IN ADDITION, FURNISH A SEPARATE INSULATED GREEN EQUIPMENT GROUND CONDUCTOR WHERE INDICATED ON DRAWINGS AND FOR THE FOLLOWING BRANCH CIRCUITS:
1)CIRCUITS SERVING ANY WALL BOX DIMMER.

2)CIRCUITS SERVING ANY ISOLATED GROUND RECEPTACLES. TERMINATE GROUND DIRECTLY AT AN EQUIPMENT GROUNDING CONDUCTOR TERMINAL OF THE SOURCE AT THE SOURCE , OR AS OTHER WISE NOTED ON DRAWINGS.

3)CIRCUITS SERVING ANY DUPLEX OR SIMPLEX COMPUTER RECEPTACLES

4)ANY CIRCUIT SERVED VIA AN ISOLATION TRANSFORMER OR COMPUTER POWER DISTRIBUTION UNIT.

15. PANEL BOARDS:

A. PANELBOARDS SHALL BE OF THE DEAD FRONT TYPE MANUFACTURED IN CODE GAUGE AND SIZE BOXES FOR MOUNTING AS INDICATED ON PLANS COMPLETE WITH TRIM, DOORS AND LOCKS. ALL LOCKS SHALL BE KEYED ALIKE.

B. CIRCUIT BREAKERS SHALL BE OF THE BOLT-ON THERMAL MAGNETIC MOLDED CASE TYPE, AND SHALL HAVE THE TRIP RATINGS AND NUMBER OF POLES SHOWN IN SCHEDULES ON THE CONTRACT DRAWINGS. FOR BLANK (SPACE) COMPARTMENTS, PROVIDE FULL RATED BUS. MINIMUM GUTTER SPACES SHALL BE 5-3/4" SIDES, TOP AND BOTTOM, INCREASE FOR THROUGH FEEDERS. PROVIDE 25% COPPER GROUND BUS AND 100% COPPER NEUTRAL BUS AND INCREASE NEUTRAL BUS INDICATED.

C. LOCKING TABS SHALL BE PROVIDED ON ALL CIRCUIT BREAKERS SERVING EMERGENCY LIGHTING, FIRE ALARM SYSTEM, SECURITY SYSTEMS AND OTHER EMERGENCY OR CRITICAL EQUIPMENT AND AS NOTED ON THE CONTRACT DRAWINGS. A TOTAL OF 5 SPARE LOCKING TABS SHALL BE FURNISHED TO THE OWNER.

D. BUSES SHALL BE HARD DRAWN COPPER OF 98 PERCENT CONDUCTIVITY AND SHALL HAVE CROSS SECTIONAL AREAS LARGE ENOUGH TO LIMIT THE TEMPERATURE RISE, WHEN CARRYING FULL LOAD, TO 35 DEGREES C. ABOVE AN AMBIENT INSIDE THE ENCLOSURE OF 55 DEGREES C. AS DEFINED IN IEEE STANDARD RULES. MAIN BUS CAPACITY SHALL BE AS SHOWN ON THE CONTRACT DRAWINGS.

E. ENCLOSURES SHALL BE SURFACE OR FLUSH AS INDICATED. TRIMS SHALL BE SECURED TO PANEL WITH MACHINE SCREWS. COVERS SHALL BE HINGED DOOR-IN-DOOR CONSTRUCTION WITH CYLINDER LOCKS AND CATCHES. LOCKS MUST BE COMPATIBLE WITH BUILDING STANDARD KEY SYSTEM AND WHEN NONE EXISTS, THEY SHALL BE SIMILAR TO A YALE NO. 911 KEY.

F. DISTRIBUTION AND SUB-DISTRIBUTION PANELBOARD SHALL BE A MINIMUM OF 30" WIDE AND 10" DEEP.

G. ALL STANDARD PANELBOARDS SHALL BE A MINIMUM OF 20" WIDE AND 5 3/4" DEEP.

H. FURNISH ALL PANELBOARDS WITH FEED-THRU LUGS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

I. ALL NEW PANELBOARDS SHALL BE PROVIDED WITH AN ENGRAVED WHITE CORE LAMACOID NAMEPLATE, WITH 3/4 IN. WHITE LETTERING ON A BLACK BACKGROUND, WITH DESIGNATION LISTED (PANELBOARD NAME), FASTENED WITH EPOXY CEMENT OR OVAL HEAD CHROME PLATED MACHINE SCREWS.

J. THE CIRCUIT DIRECTORY SHALL BE TYPEWRITTEN AND PROVIDED INSIDE EACH PANEL DOOR TO INDICATE EQUIPMENT AND/OR AREA SERVED. DIRECTORY HOLDER SHALL BE METAL FRAME WITH CLEAR PLASTIC, TRANSPARENT COVER. THE TYPEWRITTEN LIST INDICATING CIRCUIT NUMBERS, OUTLETS SUPPLIED AND THEIR LOCATIONS SHALL BE PROVIDED.

K. TIE-BARS SHALL NOT BE USED TO CREATE MULTI-POLE CIRCUITS. MAXIMUM 42 CIRCUITS ALLOWED.

L. ONLY ONE WIRE SHALL BE INSTALLED UNDER EACH CIRCUIT BREAKER LUG.

M. SHORT CIRCUIT RATING OF PANELBOARDS SHALL NOT BE LESS THAN AS INDICATED ON THE CONTRACT DRAWINGS OR SPECIFIED HEREIN. WHERE NOT INDICATED OR SPECIFIED THE MINIMUM SHORT CIRCUIT RATING SHALL BE EQUAL TO THE INTERRUPTING CAPACITY OF THE LOWEST RATED CIRCUIT BREAKER IN THE PANELBOARD, BUT IN NO CASE LESS THAN 10,000 AMPERES R.M.S. SYMMETRICAL FOR 208Y/120 VOLT SYSTEM AND 14,000 AMPERES R.M.S. SYMMETRICAL FOR 480Y/277 VOLT SYSTEM. SERIES RATED PANELBOARDS SHALL BE USED TO ACHIEVE REQUIRED SHORT CIRCUIT RATINGS.

N. FOR ALL EXISTING PANELBOARDS, CONTRACTOR SHALL PROVIDE NEW CIRCUIT BREAKERS TO REPLACE EXISTING AS REQUIRED AS INDICATED ON DRAWINGS.

16. INTERCOM CONDUIT SYSTEM:

A. PROVIDE COMPLETE SYSTEM OF: RACEWAYS AND ACCESSORIES, OUTLET BOXES, SLEEVES AND FISHWIRES.

B. EQUIPMENT SHALL CONFORM TO REQUIREMENTS OF INTERCOM MANUFACTURER.

C. OUTLETS SHALL BE:
1)WALL: 4 IN. SQUARE WITH SINGLE GANG COVER PLATE.

D. PROVIDE FISHWIRES, IN RACEWAYS OVER 10 FT LONG.

E. CONDUIT SHALL BE 3/4 IN. MINIMUM. FURNISH EMPTY CONDUIT FROM EACH APARTMENT TO MAIN INTERCOM CONTROLLER AT ENTRANCE.

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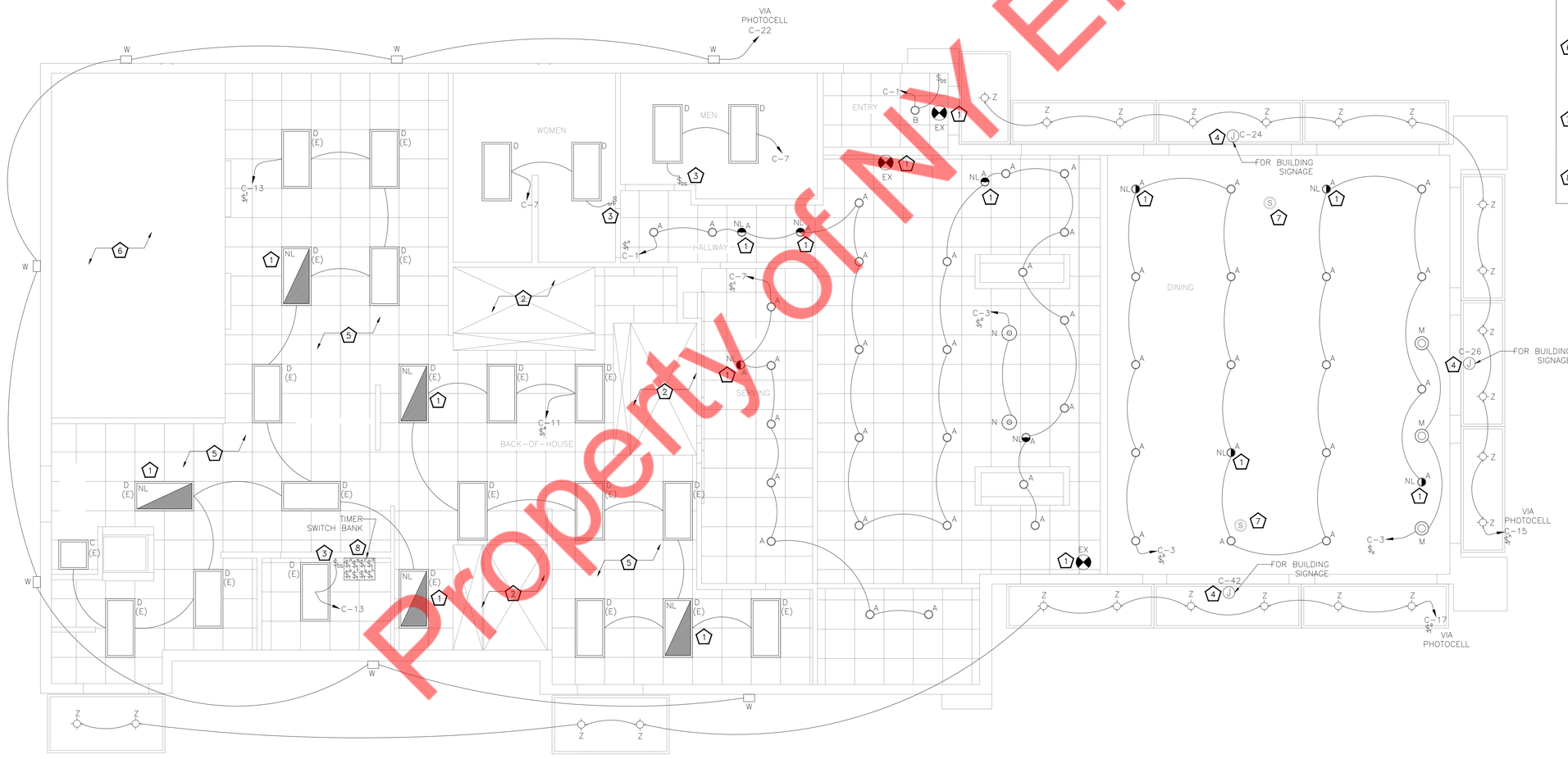
ELECTRICAL SPECIFICATIONS (2 OF 2)

SHEET:
E003

Fixture Type	Discription	Manufacturer	Model Number	Bulb Wattage
A	6" LED RETROFIT RECESSED DOWNLIGHT	LSI	PDL6K LED 09L 120 40 WH	12.4W
A(NL)	6" LED RETROFIT RECESSED DOWNLIGHT	LSI	PDL6K LED 09L 120 40 WH	12.4W
D	2' X 4' RECESSED TROFFER	LSI	LPEC24 LED 48L UNV DIM1 40 EM U	36.3W
D(NL)	2' X 4' RECESSED TROFFER	LSI	LPEC24 LED 48L UNV DIM1 40 EM U	36.3W
M	12" DECORATIVE PENDANT	SATCO/NUVO	NUBO 60-7097	100W
N	8" DECORATIVE PENDANT	PRIMO	LL P429 BN	60W
W	LARGE LED SLIM WALL PACK	LSI	WPSLL-LED-UNV-DIM-50-BZA	60W
Z	CANOPY DOWN LIGHTS	ETI	#53808103 / DLLP-4IN-650LM-9-5CP-SV-TD / 53808103-A	22.7W
EX	EXIT LIGHT	LSI-QLS	QLS-LPRX-R-U-WB-LD-II-R-RM-S PC	2.5W



ELECTRICAL LIGHTING PLAN

1/4" = 1'-0"

TRUE N PLAN N

GENERAL NOTES

A. REFER TO DWG. E-001 FOR ELECTRICAL GENERAL NOTES, SYMBOL LIST & ABBREVIATIONS. E-002 & E-003 FOR ELECTRICAL SPECIFICATIONS.

B. E.C. SHALL COORDINATE WITH ARCHITECT/LIGHTING CONSULTANT'S DRAWINGS FOR LIGHT FIXTURE DESCRIPTION, HEIGHTS AND LOCATION PRIOR TO ROUGH-IN.

C. E.C. TO COORDINATE WITH ARCHITECT/ LIGHTING SPECIALIST FOR EXACT LIGHTING CONTROL AND DIMMING REQUIREMENTS FOR ALL THE LIGHTING FIXTURES.

D. E.C. SHALL COORDINATE FINAL FIXTURE MAKE AND MODEL WITH ARCHITECT.

E. ALL EMERGENCY AND EXIST LIGHTS SHALL BE CONNECTED TO NEAREST LIGHTING CIRCUIT IN THE AREA AHEAD OF ALL LIGHTING CONTROL MEANS IN ORDER TO BE IN OPERATION AT ALL TIME.

F. E.C. SHALL PROVIDE ADDITIONAL LIGHTING CONTROLS AS PER AHJ REQUIREMENTS IF ANY TO COMPLETE THE PERMIT REQUIREMENTS.

LIGHTING KEY NOTES

1. WIRE ALL EMERGENCY AND EXIT FIXTURE, ALSO NIGHT LAMP AHEAD OF SWITCHING & CONTROL FOR CONTINUOUS OPERATIONS.
2. EXISTING HOOD LIGHTS AND CONTROLS SHALL REMAIN AND SHALL REMAIN CONNECTED TO EXISTING PANELS. E.C SHALL VERIFY THE OPERABLE CONDITION OF THE EXISTING ELECTRICAL FIXTURES IN FIELD. REPLACE IF FOUND IN OPERABLE. REPORT ENGINEER ON RECORD FOR ANY DISCREPANCY. BASE BID ACCORDINGLY
3. WALL MOUNTED OCCUPANCY SENSOR SWITCH.
4. EXISTING ELECTRICAL CONNECTION TO THE NEW BUILDING SIGNAGE SHALL REMAIN. E.C. SHALL FIELD VERIFY THE OPERABLE CONDITION OF THE ELECTRICAL CONNECTION AND EXACT LOCATION BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.
5. EXISTING LIGHTING FIXTURE DENOTED BY (E) SHALL REMAIN. E.C SHALL VERIFY THE EXACT LIGHTING CONTROLS PROVIDED, THEIR OPERATING CONDITION IN FIELD. E.C SHALL VERIFY THAT EXISTING LIGHTING CONTROLS ARE IN COMPLIANCE WITH ASHRAE 90.1 2019 CODE. PROVIDE NEW CONTROLS AS SHOWN IN PLAN IF REQUIRED. INFORM ENGINEER ON RECORD FOR ANY DISCREPANCIES/ISSUES BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.
6. EXISTING CONNECTION TO WALK-IN BOX COOLER & FREEZER LIGHTING ALONG WITH ITS CONTROLS TO REMAIN CONNECTED TO THE EXISTING ELECTRICAL PANEL. E.C SHALL VERIFY THE EXACT LOCATION AND CONDITION OF THE EXISTING CONTROLS IN THE FIELD. REPLACE AS IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
7. EXISTING SPEAKERS SHALL REMAIN AND REINSTALLED BY SECURITY SYSTEM PROVIDER. E.C SHALL COORDINATE WITH THE SECURITY SYSTEM PROVIDER FOR EXACT REQUIREMENTS OF THE SPEAKERS. BASE BID ACCORDINGLY.
8. E.C SHALL COORDINATE EXACT LOCATION OF TIMER SWITCH BANK WITH ARCHITECT/OWNER.

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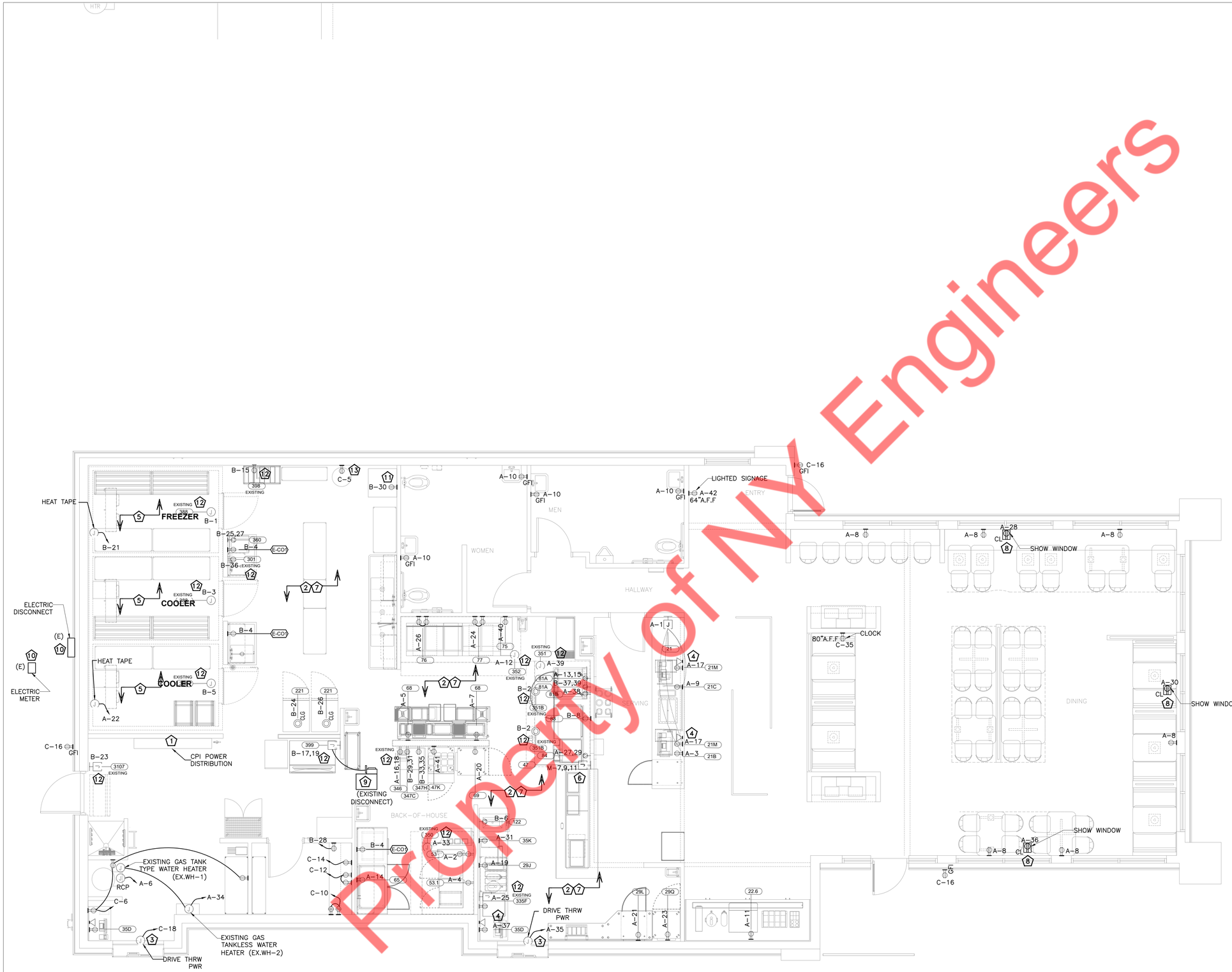
ELECTRICAL LIGHTING PLAN

SHEET: E101



GENERAL NOTES

A. PROVIDE GFCI PROTECTION FOR PERSONNEL FOR ALL SINGLE PHASE RECEPTACLES RATED 50AMP OR LESS & THREE PHASE RECEPTACLES RATED 100AMP OR LESS INSTALLED IN KITCHEN AREA PER NEC 210.8(B)2. GFI PROTECTION SHALL BE PROVIDED AT BREAKER WHERE RECEPTACLES ARE NOT READILY ACCESSIBLE PER NEC 210.8 DUE TO STATIONARY KITCHEN EQUIPMENT.

B. REFER TO "KITCHEN EQUIPMENT SCHEDULE" FOR DESCRIPTION AND POWER REQUIREMENTS OF EACH DEVICE IN KITCHEN. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF ALL JUNCTION BOXES, RECEPTACLES, ETC. WITH KITCHEN EQUIPMENT VENDOR PRIOR TO ROUGH-IN.

C. E.C. SHALL MAKE ALL FINAL CONNECTIONS TO KITCHEN EQUIPMENT, FURNISH AND INSTALL ALL JUNCTION BOXES, RECEPTACLES, COVER PLATES, PULL BOXES, CONDUIT AND WIRING AS REQUIRED. COORDINATE WITH FOOD SERVICE DRAWINGS AND MANUFACTURER'S INSTRUCTIONS FOR LOCATION OF ALL EQUIPMENT CONNECTION LOCATIONS AND REQUIREMENTS.

D. E.C. SHALL PULL ALL LOW VOLTAGE WIRING FOR POS SYSTEM, AND PHONE. COORDINATE WITH OWNER'S VENDOR.

E. FLEXIBLE CONDUIT INSTALLED IN KITCHEN FOR FINAL EQUIPMENT CONNECTION SHALL BE LIQUID TIGHT CONDUIT WITH NEOPRENE JACKET.

F. ENCLOSURES FOR ALL ELECTRICAL PANELS, CIRCUIT BREAKER ENCLOSURES, DISCONNECT SWITCHES, WALL SWITCHES, CONTRACTOR ENCLOSURES, PUSHBUTTONS, ETC WITHIN KITCHEN AREA SHALL BE FOOD GRADE, RECESSED MOUNTED, UNLESS OTHERWISE NOTED.

G. E.C. SHALL COORDINATE WITH THE OWNER/KITCHEN EQUIPMENT VENDOR FOR THE EXACT MOUNTING HEIGHT/LOCATIONS OF THE RECEPTACLES FOR THE KITCHEN EQUIPMENT PRIOR TO ROUGH-IN.

POWER KEY NOTES

1. EXISTING CPI POWER DISTRIBUTION CENTER, FOR MORE DETAILS SEE SHEET E301.

2. E.C TO COORDINATE WITH KITCHEN EQUIPMENT VENDOR/ MANUFACTURER FOR EXACT POWER REQUIREMENTS, EXACT MOUNTING HEIGHT, LOCATION BEFORE COMMENCING ANY WORK FOR ALL EXISTING AND NEW EQUIPMENT. BASE BID ACCORDINGLY.

3. E.C SHALL COORDINATE WITH THE DRIVE TROUGH VENDOR/OWNER FOR EXACT POWER REQUIREMENT & EXACT MOUNTING HEIGHT OF THE DRIVE TROUGH WINDOW. BASE BID ACCORDINGLY.

4. PROVIDE (2) CAT 6 HOME RUN TO EACH POS STATION AND ONE (1) 20 AMPS RECEPTACLE FOR POS. COORDINATE WITH OWNER PRIOR TO ROUGH-IN FOR EXACT HEIGHT.

5. EXISTING WALK-IN COOLER/FREEZER WITH ITS ELECTRICAL FIXTURES, BRANCH FEEDER AND CONNECTION SHALL REMAIN AS IT. E.C SHALL VERIFY EXACT OPERABLE CONDITION OF ELECTRICAL CONNECTION AND LOCATION OF THE EXISTING FIXTURE. PROVIDE NEW IF FOUND INOPERABLE. E.C SHALL COORDINATE WITH OWNER/EQUIPMENT VENDOR FOR ANY REQUIREMENT BASED ON SITE CONDITION BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.

6. POWER PROVISION FOR POWER LINE COUNTER LOAD CENTER PANEL. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER/ POWER LINE COUNTER VENDOR/ KITCHEN CONSULTANT FOR EXACT REQUIREMENT ON FIELD. BASE BID ACCORDINGLY.

7. EXISTING EQUIPMENT RECEPTACLES IN THIS AREA SHALL REMAIN AND SHALL REMAIN CONNECTED TO THE EXISTING PANEL AS SHOWN IN PANEL SCHEDULES. E.C SHALL VERIFY THE OPERABLE CONDITION OF THE EXISTING FEEDER AND FIXTURE IN FIELD. REPORT ENGINEER FOR ANY DISCREPANCY. REFER ARCHITECTURAL DRAWING FOR MORE INFO. BASE BID ACCORDINGLY.

8. PROVIDE SHOW WINDOW RECEPTACLE AS PER NEC 210.62. VERIFY EXACT LOCATION WITH ARCHITECT/OWNER.

9. EXISTING COND. UNIT ON ROOF SHALL REMAIN AND SHALL REMAIN CONNECTED TO EXISTING PANELS. E.C SHALL VERIFY THE OPERABLE CONDITION OF THE EXISTING ELECTRICAL FIXTURES IN FIELD. REPLACE IF FOUND IN OPERABLE. REPORT ENGINEER ON RECORD FOR ANY DISCREPANCY. BASE BID ACCORDINGLY.

10. EXISTING 800A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL METER, CT CABINET AND DISCONNECT SWITCH FOR THE PROJECT SPACE SHALL REMAIN. E.C. SHALL COORDINATE WITH BASE BUILDING/LANDLORD /OWNER FOR THE EXACT LOCATION OF THE EXISTING METER AND EXACT POWER DISTRIBUTION IN THE FIELD. E.C. SHALL VERIFY THE OPERABLE CONDITION OF EXISTING METER, CT CABINET AND DISCONNECT SWITCH, REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.

11. FOR CONNECTION TO MAHONEY OIL TANK. E.C SHALL COORDINATE EXACT LOCATION AND POWER REQUIREMENTS WITH ARCHITECT/OWNER.

12. EXISTING EQUIPMENT WITH ITS ELECTRICAL FIXTURE SHALL REMAIN AND REMAIN CONNECTED TO THE EXISTING ELECTRICAL PANEL. E.C SHALL VERIFY THE OPERABLE CONDITIONS OF THE EXISTING ELECTRICAL FIXTURE AND CONNECTION ON FIELD. PROVIDE NEW IF FOUND INOPERABLE. BASE BID ACCORDINGLY.

13. FOR CONNECTION TO CO2 TANK MONITOR. E.C SHALL COORDINATE EXACT LOCATION AND POWER REQUIREMENTS WITH ARCHITECT/OWNER.

TRUE N PLAN N

1 ELECTRICAL POWER PLAN

1/4" = 1'-0"

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ELECTRICAL POWER PLAN

SHEET: E102

GENERAL NOTES

A. ALL THE EXTERIOR ELECTRICAL EQUIPMENT SHALL BE NEMA-3R RATED.

B. COORDINATE WITH THE MECHANICAL CONTRACTOR FOR THE EXACT LOCATION, REQUIREMENTS OF THE MECHANICAL UNITS.

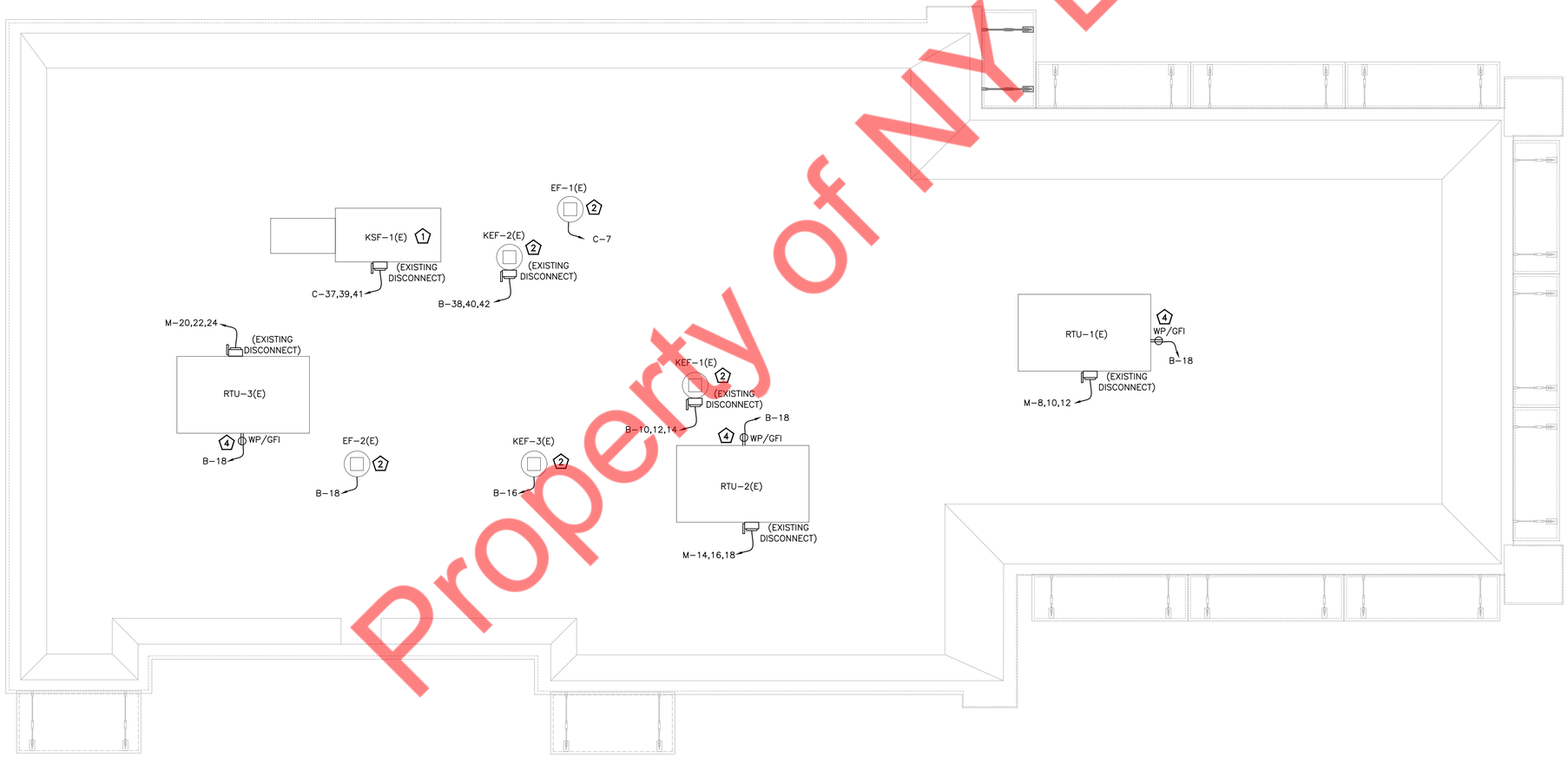
ROOF KEY NOTES

1. EXISTING MECHANICAL UNITS RTU-1, 2 & 3 WITH EXISTING DISCONNECT SHALL REMAIN AS IS AND SHALL REMAIN CONNECTED TO THE BREAKER IN THE EXISTING PANEL AS SHOWN IN PLANS AND PANEL SCHEDULE. E.C TO COORDINATE ON FIELD WITH MECHANICAL CONTRACTOR FOR THE EXACT BREAKER RATING. ADJUST/MODIFY BREAKER AND CIRCUITING ONLY IF REQUIRED PRIOR TO COMMENCING ANY WORK. INFORM ENGINEER ON RECORD FOR ANY DISCREPANCIES. BASE BID ACCORDINGLY.

2. EXISTING KEF-1, KEF-2, KSF-1 WITH EXISTING DISCONNECT SHALL REMAIN AS IS AND SHALL REMAIN CONNECTED TO THE BREAKER IN THE EXISTING PANEL AS SHOWN IN PLANS AND PANEL SCHEDULE. E.C TO COORDINATE ON FIELD WITH MECHANICAL CONTRACTOR FOR THE EXACT BREAKER RATING. ADJUST/MODIFY BREAKER AND CIRCUITING ONLY IF REQUIRED PRIOR TO COMMENCING ANY WORK. INFORM ENGINEER ON RECORD FOR ANY DISCREPANCIES. BASE BID ACCORDINGLY.

3. EXISTING KEF-3, EF-2, EF-1 WITH EXISTING CONNECTION SHALL REMAIN AS IS AND SHALL REMAIN CONNECTED TO THE BREAKER IN THE EXISTING PANEL AS SHOWN IN PLANS AND PANEL SCHEDULE. E.C TO COORDINATE ON FIELD WITH MECHANICAL CONTRACTOR FOR THE EXACT BREAKER RATING. ADJUST/MODIFY BREAKER AND CIRCUITING ONLY IF REQUIRED PRIOR TO COMMENCING ANY WORK. INFORM ENGINEER ON RECORD FOR ANY DISCREPANCIES. BASE BID ACCORDINGLY.

4. EXISTING SERVICE RECEPTACLE SHALL REMAIN AS IS AND SHALL BE CONNECTED TO THE EXISTING CIRCUIT BREAKER AS SHOWN IN THE PLAN AND PANEL SCHEDULE. E.C SHALL VERIFY THE OPERABLE CONDITION OF THE RECEPTACLE. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.



TRUE N PLAN

1 ELECTRICAL ROOF PLAN

1/4" = 1'-0"

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ELECTRICAL ROOF PLAN

SHEET: E103

MANUAL MODE OPERATION:

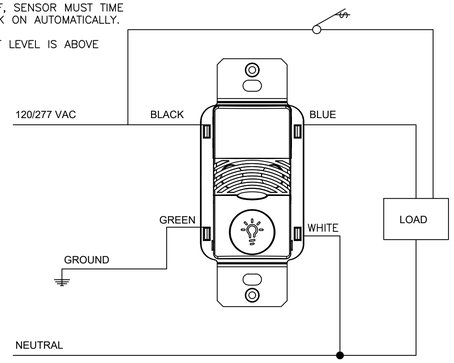
1. PUSHBUTTON PRESS IS REQUIRED TO TURN LOAD ON.
2. LOAD TURNS OFF WHEN SENSOR TIMES OUT OR BY PRESSING PUSH BUTTON.
3. IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, LOAD WILL NOT TURN ON.

AUTOMATIC MODE OPERATION:

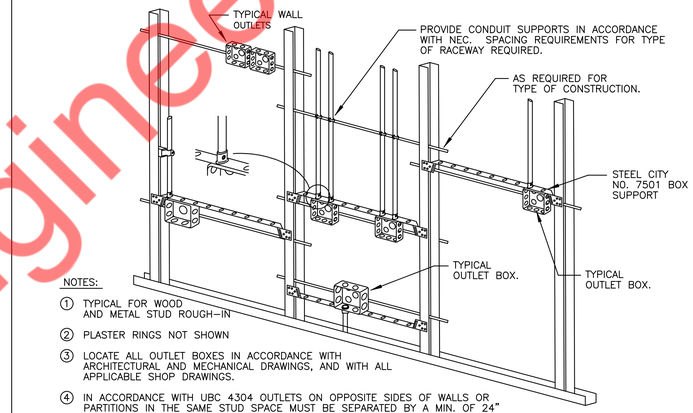
1. WHEN SENSOR ACTIVATES LOAD TURNS ON.
2. PUSHBUTTON CAN BE USED TO TURN LOAD ON OR OFF. IF PUSHBUTTON IS USED TO TURN LOAD OFF, SENSOR MUST TIME OUT FIRST, BEFORE LOAD CAN TURN BACK ON AUTOMATICALLY.
3. IF DAYLIGHT SENSOR IS ENABLED AND LIGHT LEVEL IS ABOVE SETPOINT, LOAD WILL NOT TURN ON.

SENSOR TYPES INCLUDE:

ONW-D-1001-MV-N



1 E201 OCCUPANCY/VACANCY-SINGLE LEVEL WIRING DIAGRAM-LOW VOLTAGE WALL SWITCH SENSOR(NEUTRAL CONNECTION)
N.T.S

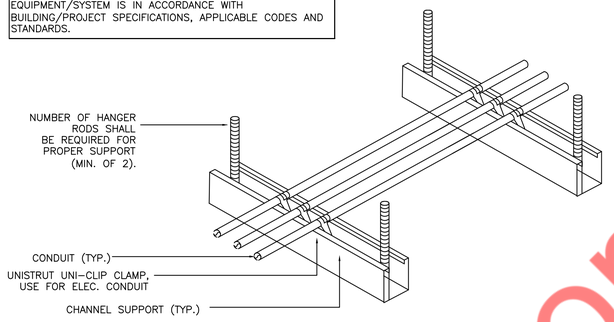


NOTES:

1. TYPICAL FOR WOOD AND METAL STUD ROUGH-IN
2. PLASTER RINGS NOT SHOWN
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS, AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH UBC 4304 OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPARATED BY A MIN. OF 24" HORIZONTAL DISTANCE.

2 E201 DETAIL TYPICAL ROUGH-IN REQUIREMENTS
N.T.S

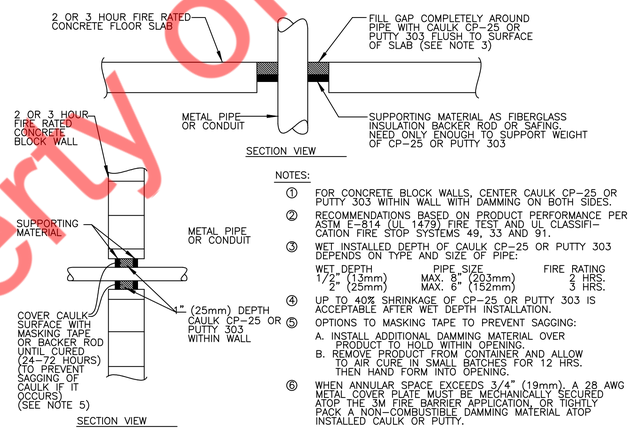
NOTE:
THIS INFORMATION MAY NOT CONTAIN ALL DETAILS REQUIRED FOR CONSTRUCTION. APPROPRIATE MODIFICATION MAY BE REQUIRED TO ENSURE SUITABILITY OF THESE DRAWINGS FOR THE SPECIFIC APPLICATION. IT IS THE USER'S RESPONSIBILITY TO ENSURE INSTALLATION OF THE EQUIPMENT/SYSTEM IS IN ACCORDANCE WITH BUILDING/PROJECT SPECIFICATIONS, APPLICABLE CODES AND STANDARDS.



NOTES:

1. ALL CONDUIT MAY BE COMBINED ON SAME SUPPORT CHANNEL WHERE PRACTICAL.
2. SUPPORT CHANNEL LENGTH SHALL NOT BE DETERMINED UNTIL ALL PIPING, CONDUIT, ETC. TO BE SUPPORTED IS COORDINATED.
3. SUPPORT CHANNEL SPACING SHALL BE NO MORE THAN 10'-0".
4. UNISTRUT AND CONDUIT INSTALLATION MAY BE REVERSED.

3 E201 CONDUIT SUPPORT DETAIL
N.T.S



NOTES:

1. FOR CONCRETE BLOCK WALLS, CENTER CAULK CP-25 OR PUTTY 303 WITHIN WALL WITH DAMMING ON BOTH SIDES.
2. RECOMMENDATIONS BASED ON PRODUCT PERFORMANCE PER ASTM E-814 (UL 1479) FIRE TEST AND UL CLASSIFICATION FIRE STOP SYSTEMS 49, 33 AND 91.
3. WET INSTALLED DEPTH OF CAULK CP-25 OR PUTTY 303 DEPENDS ON TYPE AND SIZE OF PIPE:

WET DEPTH	PIPE SIZE	FIRE RATING
1/2" (13mm)	MAX. 8" (203mm)	2 HRS.
1" (25mm)	MAX. 6" (152mm)	3 HRS.

4. UP TO 40% SHRINKAGE OF CP-25 OR PUTTY 303 IS ACCEPTABLE AFTER WET DEPTH INSTALLATION.
5. OPTIONS TO MASKING TAPE TO PREVENT SAGGING:
   A. INSTALL ADDITIONAL DAMMING MATERIAL OVER PRODUCT TO HOLD WITHIN OPENING.
   B. REMOVE PRODUCT FROM CONTAINER AND ALLOW TO AIR CURE IN SMALL BATCHES FOR 12 HRS. THEN HAND FORM INTO OPENING.
6. WHEN ANNULAR SPACE EXCEEDS 3/4" (19mm), A 28 AWG METAL COVER PLATE MUST BE MECHANICALLY SECURED ATOP THE 3M FIRE BARRIER APPLICATION, OR TIGHTLY PACK A NON-COMBUSTIBLE DAMMING MATERIAL ATOP INSTALLED CAULK OR PUTTY.

4 E201 FIRE STOP DETAIL
N.T.S

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DRAWN BY:	NYE
CHECKED BY:	NYE
JOB NUMBER:	25-4320

ELECTRICAL DETAILS

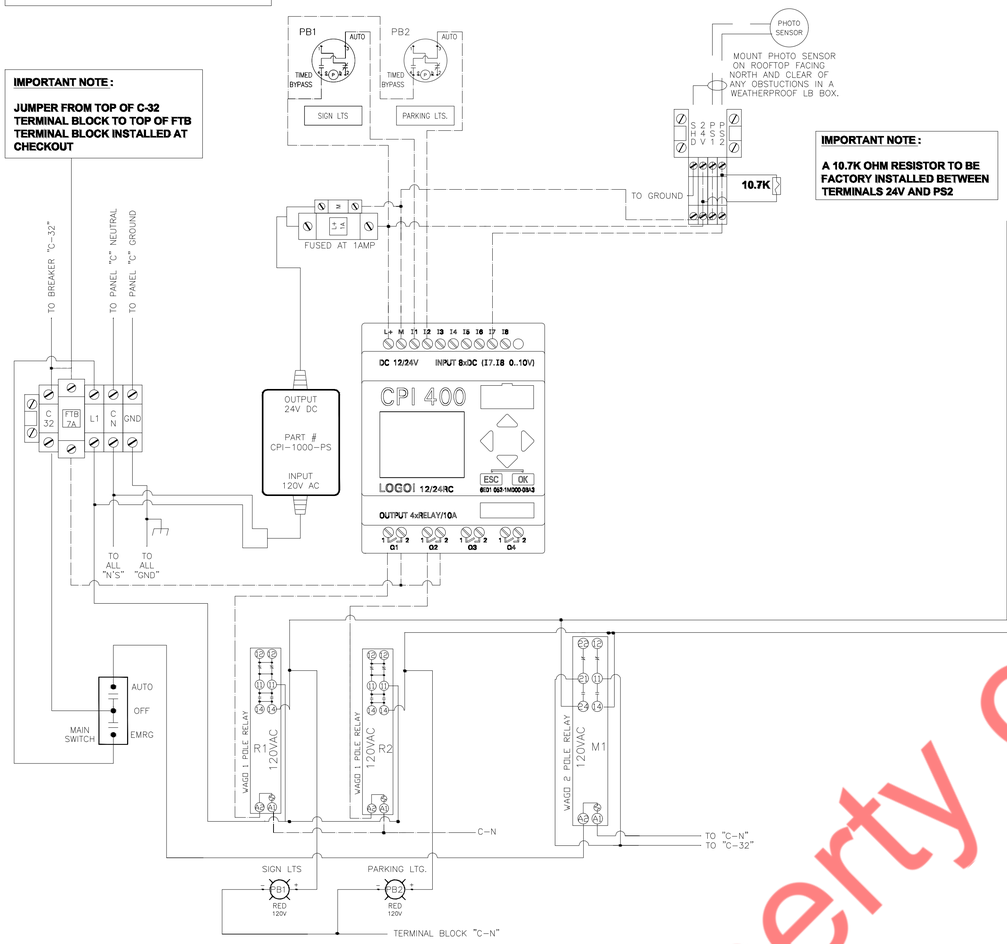
SHEET: E201

WIRE LEGEND:

DASHED	– – – – – –	**FIELD**
SOLID	———	**14AWG**
DASHED-DOT	– · – · – · –	**18AWG**

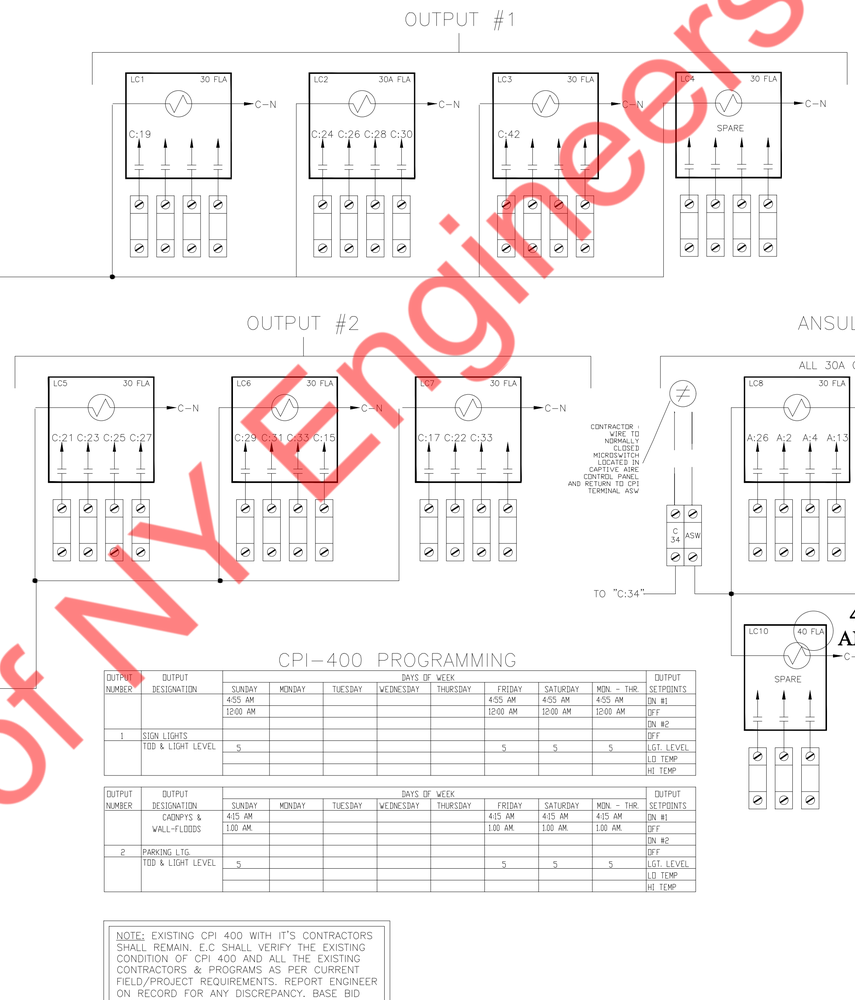
IMPORTANT NOTE:

JUMPER FROM TOP OF C-32 TERMINAL BLOCK TO TOP OF FTB TERMINAL BLOCK INSTALLED AT CHECKOUT



IMPORTANT NOTE:

A 10.7K OHM RESISTOR TO BE FACTORY INSTALLED BETWEEN TERMINALS 24V AND PS2



CPI-400 PROGRAMMING

OUTPUT NUMBER	OUTPUT DESIGNATION	DAYS OF WEEK								OUTPUT SETPOINTS
		SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	MON. – THR.	
		4:55 AM					4:55 AM	4:55 AM	4:55 AM	ON #1
		12:00 AM					12:00 AM	12:00 AM	12:00 AM	OFF
										ON #2
1	SIGN LIGHTS									OFF
	TOD & LIGHT LEVEL	5					5	5	5	LGT. LEVEL
										LO TEMP
										HI TEMP

OUTPUT NUMBER	OUTPUT DESIGNATION	DAYS OF WEEK								OUTPUT SETPOINTS
		SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	MON. – THR.	
	CANOPYS &	4:15 AM					4:15 AM	4:15 AM	4:15 AM	ON #1
	WALL-FLOODS	1:00 AM.					1:00 AM	1:00 AM	1:00 AM.	OFF
										ON #2
2	PARKING LTG.									OFF
	TOD & LIGHT LEVEL	5					5	5	5	LGT. LEVEL
										LO TEMP
										HI TEMP

NOTE: EXISTING CPI 400 WITH IT'S CONTRACTORS SHALL REMAIN. E.C SHALL VERIFY THE EXISTING CONDITION OF CPI 400 AND ALL THE EXISTING CONTRACTORS & PROGRAMS AS PER CURRENT FIELD/PROJECT REQUIREMENTS. REPORT ENGINEER ON RECORD FOR ANY DISCREPANCY. BASE BID ACCORDINGLY.

1 / E202 CONTROLS WIRING SCHEMATIC
N.T.S

CONSULTANT:
NY ENGINEERS
NEARBY ENGINEERS
382 NE 191ST STREET, SUITE 49674, MIAMI, FL 33179
PH-914.257.3455
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Bojangles

ISSUE BLOCK	
11-25-25	IFC SET

PROTOTYPE:	Plan 8
GUIDE SET VERSION:	GR 24.1
DOCUMENT DATE:	11-25-25
DRAWN BY:	NYE
CHECKED BY:	NYE
JOB NUMBER:	25-4320

ELECTRICAL DETAILS

SHEET: E202

PANEL: M (E) — MOUNTING: RECCESED

208Y/120 VOLTS, 3 PHASE, 4 WIRE — PANEL LOCATION: BOH AREA

MAIN CB: NA — MLO: — 800A — BUS: — EXISTING — MIN, — FED FROM: EXISTING DISCONNECT SWITCH

NOTE: L : LIGHTING, H : HVAC LOAD, M : MOTOR LOAD, R : RECEPTACLES, O : OTHER/MISC. (TYPICAL)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1			O	12.27		24.15				11.88	O			2
3	225/3P	PANEL A	O	12.27	EXISTING		24.15		EXISTING	11.88	O	PANEL B	225/3P	4
5			O	12.27				24.15		11.88	O			6
7			E	10.96		17.06				6.10	H			8
9	125/3P*	POWERLINE COUNTER(E47)	E	10.96	3#1, #6G, 1 1/4"C		17.06		EXISTING	6.10	H	RTU-1(E)	60/3P	10
11			E	10.96				17.06		6.10	H			12
13						5.00				5.00	H			14
15	-	EXISTING			EXISTING		5.00		EXISTING	5.00	H	RTU-2(E)	50/3P	16
17								5.00		5.00	H			18
19						6.10				6.10	H			20
21	-	EXISTING			EXISTING		6.10		EXISTING	6.10	H	RTU-3(E)	60/3P	22
23								6.10		6.10	H			24
25			O	11.13		11.13								26
27	225/3P	PANEL C	O	11.13	EXISTING		11.13					SPARE	35/3P	28
29			O	11.13				11.13						30
		TOTAL CONNECTED LOAD (KVA)				63.44	63.44	63.44						

LOAD CLASSIFICATION		CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)
TOTAL LIGHTING	L	0.00	125%	0.00
TOTAL RECEPTACLE	R	0.00	100%	0.00
TOTAL HVAC	H	51.60	100%	51.60
TOTAL MOTOR	M	0.00	100%	0.00
TOTAL KITCHEN/EQUIPMENTS	E	32.87	65%	21.37
TOTAL REFRIGERATION	C	0.00	100%	0.00
TOTAL OTHER/MISCILLANEOUS	O	105.8	100%	105.85

PANEL TOTAL LOAD	
TOTAL CONNECTED LOAD	190.32 KVA
TOTAL DEMAND LOAD	178.82 KVA
TOTAL CONNECTED CURRENT	528.91 AMP
TOTAL DEMAND CURRENT	496.93 AMP
SYSTEM VOLTAGE	120/208 Wye

PANEL: A (E) — MOUNTING: RECCESED

208Y/120 VOLTS, 3 PHASE, 4 WIRE — PANEL LOCATION: BOH AREA

MAIN CB: NA — MLO: — 225A — BUS: — EXISTING — MIN, — FED FROM: EXISTING PANEL M

NOTE: L : LIGHTING, H : HVAC LOAD, M : MOTOR LOAD, R : RECEPTACLES, O : OTHER/MISC. (TYPICAL)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20	FRONT COUNTER(21)	R	1.92	2#12, #12G, 3/4"C	2.52			2#12, #12G, 3/4"C	0.60	E	DOUBLE CONVECTION OVEN (53)	20	2
3	20	UNDER COUNTER REFRIGERATOR (21B)	R	0.26	2#12, #12G, 3/4"C		0.86		2#12, #12G, 3/4"C	0.60	R	SINGLE CONVECTION OVEN(53.1)	20	4
5	20*	BREADER / BLENDER / SIFTER(68)	E	0.24	2#12, #12G, 3/4"C			0.84	EXISTING	0.60	M	RECIRC PUMP	20	6
7	20*	BREADER / BLENDER / SIFTER(68)	E	0.24	2#12, #12G, 3/4"C	1.32			2#12, #12G, 3/4"C	1.08	R	DINING RECEP'S	20	8
9	20	LEMONADE DISPENSER (21C)	R	0.26	2#12, #12G, 3/4"C		0.98		2#12, #12G, 3/4"C	0.72	R	TOILET RECEP'S	20	10
11	20	SODA DISPENSER(22.6)	E	1.92	2#12, #12G, 3/4"C			2.42	EXISTING	0.50	R	EXHAUST HOOD (352)	20	12
13	40/2P*	INDUCTION RANGE(81A)	E	3.12	2#8, #10G, 3/4"C	3.42			2#12, #12G, 3/4"C	0.30	E	UNDERCOUNTER REFRIGERATOR(65)	20	14
15			E	3.12			4.82		EXISTING	1.70	E	KIT-CONV TOATSTER (346)	20/2P	16
17	20	POS SYSTEM (21M)	R	0.36	2#12, #12G, 3/4"C			2.06		1.70	E			18
19	20	LEMONADE DISPENSER (29J)	R	0.31	2#12, #12G, 3/4"C	0.86			2#12, #12G, 3/4"C	0.55	E	REFRIGERATOR/FREEZER DUAL TEMP(69)	20	20
21	20	UNDER COUNTER REFRIGERATOR (29L)	R	0.26	2#12, #12G, 3/4"C		0.76		EXISTING	0.50	E	HEAT TAPE (89A.1)	20	22
23	20	REACHIN REFRIGERATOR (29Q)	R	0.30	2#12, #12G, 3/4"C			0.97	2#12, #12G, 3/4"C	0.67	E	FRYER BATTERY(77)	20	24
25	20	SODA DISPENSOR (335F)	E	0.50	EXISTING	1.17			2#12, #12G, 3/4"C	0.67	E	FRYER BATTERY(76)	20*	26
27	40/2P*	EGG GRIDDLE(84)	E	3.40	2#8, #10G, 3/4"C		5.00		2#12, #12G, 3/4"C	1.60	R	SHOW WINDOW RECEP'S	20*	28
29			E	3.40				5.00	2#12, #12G, 3/4"C	1.60	R	SHOW WINDOW RECEP'S	20*	30
31	20	COFFEE BREWER(35K)	R	1.80	2#12, #12G, 3/4"C	2.30			EXISTING	0.50	R	PYLON RECEPTACLE	20	32
33	20	VENTILATION HOOD (350)	R	1.50	EXISTING		2.00		EXISTING	0.50	H	GAS WATTER HEATER	20	34
35	20	D/T WINDOW OPERATOR	R	0.50	EXISTING			2.10	2#12, #12G, 3/4"C	1.60	R	SHOW WINDOW RECEP'S	20	36
37	20	POS SYSTEM (35D)	R	0.36	2#12, #12G, 3/4"C	2.05			2#12, #12G, 3/4"C	1.69	R	HEATED CABINET, MOBILE(81B)	20*	38
39	20	EXHAUST HOOD (351)	R	1.50	EXISTING		2.80		EXISTING	1.30	R	TRANSITION STATION(75)	20*	40
41	20	MEGA TOP SANDWICH UNIT(47K)	E	0.46	2#12, #12G, 3/4"C			0.64	2#12, #12G, 3/4"C	0.18	R	LIGHTED SIGNAGE	20*	42
		TOTAL CONNECTED LOAD (KVA)				13.65	17.23	14.03						

PANEL: B (E) — MOUNTING: RECCESED

208Y/120 VOLTS, 3 PHASE, 4 WIRE — PANEL LOCATION: BOH AREA

MAIN CB: NA — MLO: — 225A — BUS: — EXISTING — MIN, — FED FROM: EXISTING PANEL M

NOTE: L : LIGHTING, H : HVAC LOAD, M : MOTOR LOAD, R : RECEPTACLES, O : OTHER/MISC. (TYPICAL)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20	WALKIN-CLR./FRZ. HT/LTS (38B)	C	1.50	EXISTING	2.00			EXISTING	0.50	R	TIMER(351B)	20	2
3	20	WALKIN-CLR./FRZ. HT/LTS (38B)	C	1.50	EXISTING		2.30		2#12, #12G, 3/4"C	0.80	R	REC-CONVENIENCE (C01)	20	4
5	20	WALKIN-CLR./FRZ. HT/LTS (38B)	C	1.50	EXISTING			2.92	2#12, #12G, 3/4"C	1.42	R	REFRIGERATOR, THAWING(122)	20	6
7	20*	SPEAKER/ORDER CONFIRMATION BOARD	R	0.50	2#12, #12G, 1"C	0.82			2#12, #12G, 3/4"C	0.32	R	REFRIGERATED CHEF BASE 60"(E83)	20	8
9	20/2P	SPARE					0.20			0.20	H			10
11								0.20	EXISTING	0.20	H	KEF-1(E)	20/3P	12
13	20	DRIVE THROUGH MENU BOARD	L	1.00	2#12, #12G, 2"C	1.20				0.20	H			14
15	20	SODA SYSTEM (39B)	E	0.80	EXISTING		1.80		EXISTING	1.00	H	EQ-KEF-3(350A)	20	16
17	20/2P	ICE MACHINE (39J)	E	1.40	EXISTING			1.90	EXISTING	0.50	H	REC-ROOF TOP/EF-2(351A)	20	18
19			E	1.40		1.90			EXISTING	0.50	R	LTS/REC-EXT. STOR. BLD.	20	20
21	20	HEAT TAPE (89A.1)	O	0.50	EXISTING		1.00		EXISTING	0.50	E	EQ-IRRIGATION CONTROLLER	20	22
23	20	FLY FAN (3107)	R	0.90	EXISTING			2.15	2#12, #12G, 3/4"C	1.25	E	SHAKE MACHINE(221)	20	24
25	50/2P*	HOT WATER DISPENSER(360)	E	4.10	2#8, #10G, 3/4"C	5.35			2#12, #12G, 3/4"C	1.25	E	SHAKE MACHINE(221)	20	26
27			E	4.10			5.20		EXISTING	1.10	R	EQ-P.A SYSTEM	20	28
29	20/2P	HOLDING CABINET, THERMOGLO(347C)	E	1.72	2#12, #12G, 3/4"C			3.52	2#12, #12G, 3/4"C	1.80	R	MAHONEY OIL TANK.	20	30
31			E	1.72		1.72						SPARE	20/2P	32
33	20/2P	BISCUIT HOLDING CABINET(347H)	E	1.72	2#12, #12G, 3/4"C		1.72							34
35			E	1.72				2.22	EXISTING	0.50	R	TEA TIMER(301)	20	36
37	40/2P*	INDUCTION RANGE(81A)	E	3.12	2#8, #10G, 3/4"C	3.32				0.20	H			38
39			E	3.12			3.32		EXISTING	0.20	H	KEF-2(E)	20/3P	40
41	20	FACP/ DUCT DETECTORS*	H	0.20	EXISTING			0.40		0.20	H			42
		TOTAL CONNECTED LOAD (KVA)				16.31	15.54	13.30						

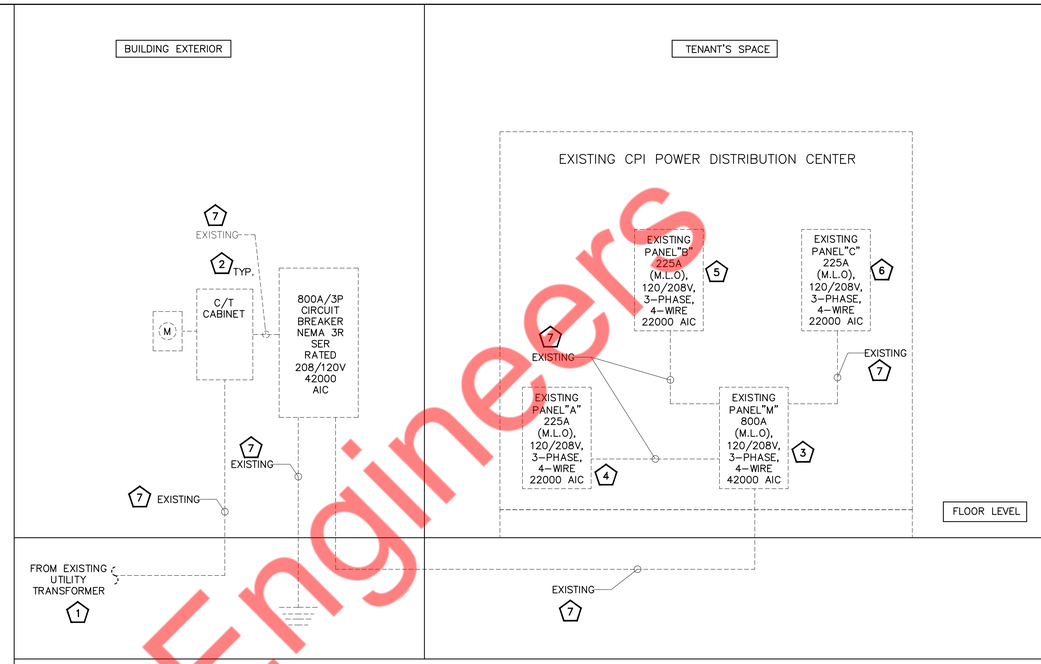
PANEL: C (E) — MOUNTING: RECCESED

208Y/120 VOLTS, 3 PHASE, 4 WIRE — PANEL LOCATION: BOH AREA

MAIN CB: NA — MLO: — 225A — BUS: — EXISTING — MIN, — FED FROM: EXISTING PANEL M

NOTE: L : LIGHTING, H : HVAC LOAD, M : MOTOR LOAD, R : RECEPTACLES, O : OTHER/MISC. (TYPICAL)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	C	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20	LTS-DINING RM	R	1.50	EXISTING	2.00			2#12, #12G, 1"C	0.50	O	PRESELLER BOARD	20	2
3	20	LTS-DINING RM	R	1.50	EXISTING		2.00		EXISTING	0.50	R	REC-FLY LIGHTS	20	4
5	20	CO2 MONITOR	R	0.18	2#12, #12G, 3/4"C			0.78	EXISTING	0.60	R	REC-KITCHEN	20	6
7	20	LTS/ FAN TOILETS	R	1.50	EXISTING	2.60			EXISTING	1.10	R	LTS-FRONT LINE MENU BRD	20	8
9	20	ENTRY SIGNAGE	O	0.50	2#12, #12G, 3/4"C		0.90		EXISTING	0.40	R	REC-OFFICE	20	10
11	20	LTS-KITCHEN	R	0.30	EXISTING			0.80	EXISTING	0.50	R	REC-OFFICE	20	12
13	20	LTS-KITCHEN	R	1.00	EXISTING	1.30			EXISTING	0.30	R	REC-OFFICE	20	14
15	20	LTS-EXTERIOR CANOPY	R	1.00	EXISTING		1.54		2#12, #12G, 3/4"C	0.54	R	REC-EXTERIOR AREA	20	16
17	20	LTS-D/T CAN, SIDE WALL	R	1.00	EXISTING			2.70	2#12, #12G, 3/4"C	1.70	R	D/T WINDOW OPERATOR	20	18
19	20	LTS-MENU BOARD	R	0.60	EXISTING	1.00			EXISTING	0.40	R	HT LAMP LTS (29K,L,M)	20	20
21	30/2P	SITE LTS	O	1.70	EXISTING		2.20		EXISTING	0.50	O	LTS-REAR/SIDE WALL	20	22
23			O	0.40				1.50	EXISTING	1.10	O	LTS-EXT SITE SIGNS	20	24
25	30/2P	SITE LTS	O	0.50	EXISTING	1.10			EXISTING	0.60	O	LTS-EXT SITE SIGNS	20	26
27			O	0.60			1.20		EXISTING	0.60	O	LTS-PYLON SIGNS	20	28
29	30/2P	SITE LTS	O	0.60	EXISTING			1.20	EXISTING	0.60	O	LTS-PYLON SIGNS	20	30
31			O	1.30		1.80			EXISTING	0.50	O	CPI LTG.	15	32
33	20	LTS-CANOPY FLOODS	R	1.50	EXISTING		2.00		EXISTING	0.50	R	ANSUL POWER (50C)	15	34
35	20	CLOCK	R	0.18	2#12, #12G, 3/4"C			0.58		0.40	R			36
37	20/3P	KSF-1(SUPPLY FAN) (350B)	R	0.40	EXISTING	1.60			EXISTING	1.20	R	SPARE	15/3P	38
39			R	1.50			2.70			1.20	R			40
41			R	1.20				2.40	EXISTING	1.20	O	LTS-EXT SITE SIGNS	20	42
43	20/3P	SPARE												44
45												SPARE	20/3P	46
47														48
49	20/3P	SPARE												50
51												SPARE	20/3P	52
53														54
		TOTAL CONNECTED LOAD (KVA)				11.40	12.54	9.96						



ELECTRICAL RISER DIAGRAM GENERAL NOTES:

A. RISER DIAGRAM SHOWN IS FOR REFERENCE PURPOSE ONLY. E.C. SHALL VERIFY EXACT POWER DISTRIBUTION IN FIELD.

B. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER/LANDLORD/BASE BUILDING FOR THE EXACT DETAILS/LIABILITIES TO UNDERSTAND THE SCOPE OF WORK.

C. COORDINATE WITH THE OWNER PRIOR TO COMMENCING ANY WORK/BIDDING.

ELECTRICAL RISER SYMBOLS

- NEW
- EXISTING ITEM/FEEDER TO REMAIN
- EXISTING ITEM/FEEDER TO BE DISCONNECTED & REMOVED

(#) ELECTRICAL RISER DIAGRAM KEYED NOTES:

1. EXISTING 800A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL INCOMING SERVICE FOR THE PROJECT SPACE SHALL REMAIN AS IS. E.C. SHALL COORDINATE WITH THE LANDLORD/OWNER FOR EXACT POWER DISTRIBUTION. REPORT TO ENGINEER ON RECORD FOR ANY DISCREPANCIES. BASE BID ACCORDINGLY.
2. EXISTING 800A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL METER, CT CABINET AND DISCONNECT SWITCH FOR THE PROJECT SPACE SHALL REMAIN AS IS. E.C. TO FIELD VERIFY THE OPERABLE CONDITION OF THE METER, CT CABINET AND DISCONNECT, REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY. BASE BID ACCORDINGLY.
3. EXISTING 800A(MLO), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "M" TO REMAIN. E.C. TO FIELD VERIFY THE EXACT SIZE & OPERABLE CONDITION OF THE PANEL, REPLACE IF INOPERABLE. REPORT ENGINEER ON RECORD FOR ANY DISCREPANCIES BASE BID ACCORDINGLY.
4. EXISTING 225A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A" TO REMAIN. E.C. TO FIELD VERIFY THE EXACT SIZE, LOCATION & OPERABLE CONDITION OF THE PANEL, REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.
5. EXISTING 225A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B" TO REMAIN. E.C. TO FIELD VERIFY THE EXACT SIZE, LOCATION & OPERABLE CONDITION OF THE PANEL, REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.
6. EXISTING 225A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "C" TO REMAIN. E.C. TO FIELD VERIFY THE EXACT SIZE, LOCATION & OPERABLE CONDITION OF THE PANEL, REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.
7. EXISTING FEEDER SHALL REMAIN AS IS. E.C SHALL FIELD VERIFY THE OPERABLE CONDITION OF THE EXISTING FEEDER AND REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.

PANEL BOARD SCHEDULE GENERAL NOTES

A. ALL CIRCUITING SHOWN IS FOR REFERENCE PURPOSE ONLY. E.C. SHALL VERIFY CIRCUITING OF THE EXISTING DEVICES IN FIELD AND INFORM ENGINEER FOR ANY DISCREPANCIES.

B. ELECTRICAL CONTRACTOR TO VERIFY THE EXACT PANEL SIZES AND INCOMING FEEDER SIZE.

PANEL SCHEDULE NOTE:

- BREAKERS PROVIDED WITH "*" ARE NEED TO REPLACE IN THE EXISTING PANELS.
- E.C SHALL VERIFY AND ADJUST THE BREAKERS, FEEDERS, CIRCUIT AS PER THE SITE REQUIREMENTS. ALSO VERIFY THE OPEREABLE CONDITIONS OF THE EXISTING BREAKERS AND REPLACE IF FOUND INOPERABLE.

CONSULTANT:
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382 NE 191ST STREET, SUITE 49674, MIAMI, FL 33179
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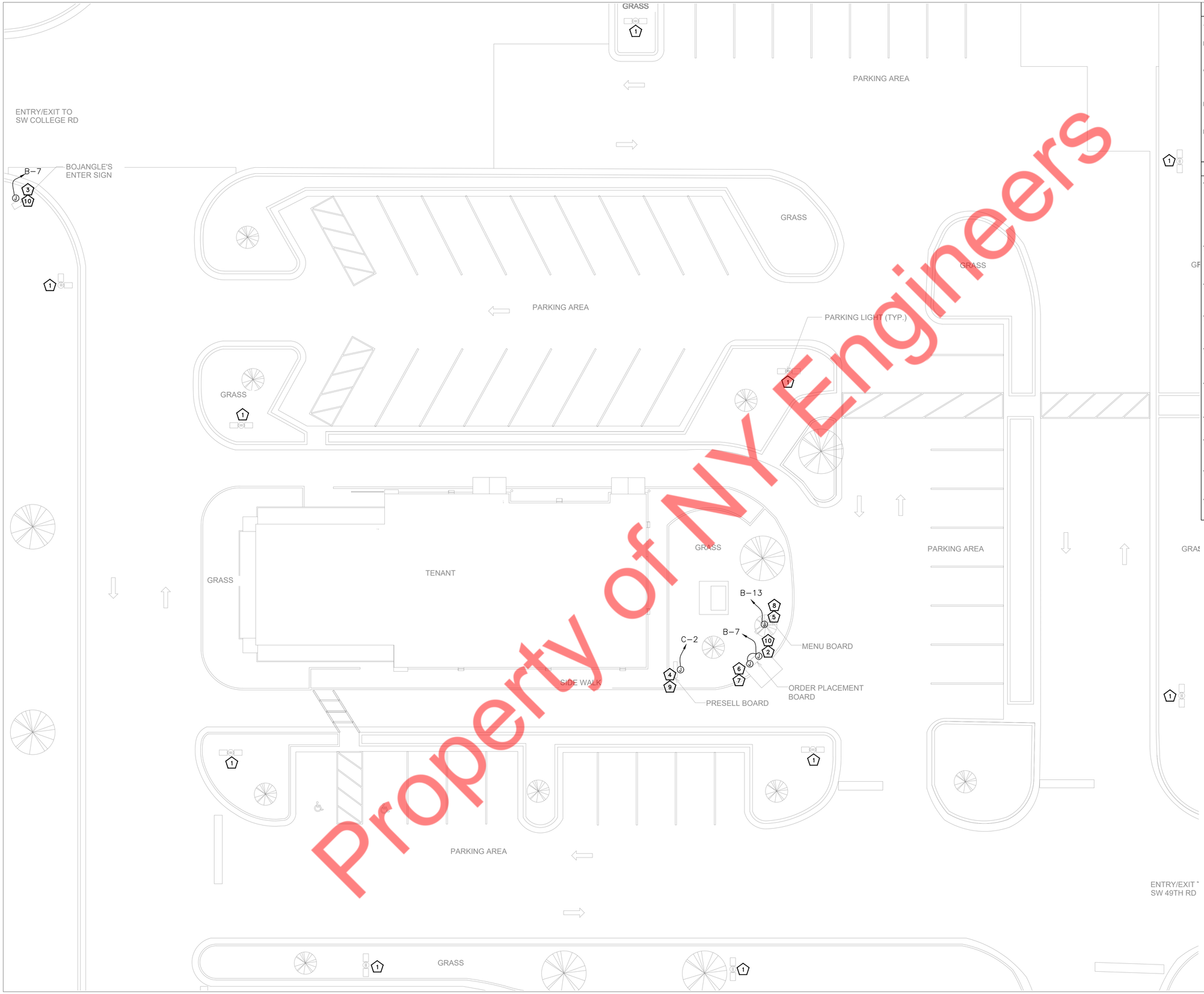
Bojangles

ISSUE BLOCK	
11-25-25	IFC SET

PROTOTYPE:	Plan 8
GUIDE SET VERSION:	GR 24.1
DOCUMENT DATE:	11-25-25
DRAWN BY:	NYE
CHECKED BY:	NYE
JOB NUMBER:	25-4320

ELECTRICAL PANEL SCHEDULE & RISER DIAGRAM

SHEET: E301



GENERAL NOTES

A. COORDINATE WITH THE LANDLORD/OWNER FOR EXACT CONDUIT ROUTING IN THE SITE PLAN.

B. SITE LIGHTING POLE LOCATIONS SHALL BE COORDINATED OR SITE ADAPTED PER SPECIFIC SITE CONDITION AND LAYOUT.

C. CONTRACTOR SHALL COORDINATE WITH SIGN VENDOR FOR EXACT POWER REQUIREMENT, AND ACCORDINGLY PROVIDE THE ELECTRICAL CONNECTIONS FOR ALL SIGNAGE IN FIELD.

D. ALL EXTERIOR LIGHTING SHALL BE CONTROLLED VIA PHOTOCELL/MANUAL TIME CLOCK AND SHALL BE COMPLIANCE WITH ENERGY CODE.

E. E.C SHALL CHECK FOR VOLTAGE DROP FOR THE LONG DISTANCE SIGNS AND REPORT ENGINEER FOR ANY VOLTAGE DROP ISSUE. BASE BID ACCORDINGLY.

SITE PLAN KEY NOTES

1. EXISTING SITE LIGHT SHALL REMAIN AS IT IS AND SHALL REMAIN CONNECTED TO EXISTING PANELS AS SHOWN IN THE PANEL SCHEDULE. E.C SHALL VERIFY THE OPERABLE CONDITIONS OF EXISTING LIGHT FIXTURES AND FEEDERS/ELECTRICAL CONNECTION ON FIELD. PROVIDE NEW IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
2. JUNCTION BOX FOR SPEAKER POST. CONTRACTOR SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION IN FIELD. BASE BID ACCORDINGLY.
3. JUNCTION BOX FOR DIRECTIONAL SIGNS. COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION OF DIRECTION SIGN IN FIELD. BASE BID ACCORDINGLY.
4. JUNCTION BOX FOR PRESELL BOARD. CONTRACTOR SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION IN FIELD. BASE BID ACCORDINGLY.
5. JUNCTION BOX FOR MENU BOARD. CONTRACTOR SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION IN FIELD. BASE BID ACCORDINGLY.
6. JUNCTION BOX FOR SPEAKER CANOPY LIGHTING. CONTRACTOR SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION IN FIELD. BASE BID ACCORDINGLY.
7. 1" C –2 #12 & 1 #12 GND. TO PANEL B FOR SPKR CANOPY LIGHTING.
8. 2" C–4 #12 GND. & 1 #12 GND & 1 #12 ISOLATED GND., TO PANEL B FOR ISOLATED GROUND POWER TO MENU BOARDS AND MEDIA PLAYERS.
9. 1" C – 2 #12 & 1 #12 GND. & 1 #12 ISOLATED GND.,TO PANEL C FOR ISOLATED GROUND POWER TO PRESELL BOARD.
10. 1" C – 2 #12 & 1 #12 GND. & 1 #12 ISOLATED GND., TO PANEL B FOR ISOLATED GROUND POWER TO EACH O.P.C. SHALL BE ON ITS OWN SEPARATE CIRCUIT.

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ISSUE BLOCK	
11-25-25	IFC SET

PROTOTYPE:	Plan 8
GUIDE SET VERSION:	GR 24.1
DOCUMENT DATE:	11-25-25
DRAWN BY:	NYE
CHECKED BY:	NYE
JOB NUMBER:	25-4320

ELECTRICAL SITE PLAN

SHEET:
E401

PLUMBING SYMBOLS LIST

- EX.SAN — UNGD. EX. SANITARY PIPING
- EX.GW — UNGD. EX. GREASE WASTE PIPING
- EXISTING VENT PIPING
- EXISTING COLD WATER PIPING
- EX.G — EXIST. GAS PIPING
- P-TRAP
- PIPE UP
- PIPE DROP
- FLOOR CLEAN OUT
- CHECK VALVE
- BACK FLOW PREVENTER
- SLEEVE
- BALANCING VALVE
- PRESSURE RELIEF VALVE
- POINT OF NEW CONNECTION
- GAS PLUG VALVE

PLUMBING ABBREVIATIONS

AFF	ABOVE FINISH FLOOR
CW	COLD WATER
DN	DOWN
E	EXISTING
ET	EXPANSION TANK
CO	CLEANOUT
EX.FD	EXISTING FLOOR DRAIN
HW	HOT WATER
HWR	HOT WATER RETURN
LAV	LAVATORY
RCP	HOT WATER RE-CIRCULATION PUMP
EX.SAN	EXISTING SANITARY
SQ. FT.	SQUARE FEET
TYP.	TYPICAL
V	VENT
VTR	VENT THRU ROOF
W	WASTE
WH	WATER HEATER
WC	WATER CLOSET
GI	GREASE INTERCEPTOR
EX.FS	EXISTING FLOOR SINK
EX.HD	EXISTING HUB DRAIN
EX.FPHB	EXISTING FIRE PROTECTION HOSE BIBB
G	GAS
EX.G	EXISTING GAS
FW	FILTERED WATER

BUILDING DEPARTMENT PLUMBING NOTES:

1. ALL PLUMBING SYSTEMS (SANITARY, WASTE, VENT & WATER DISTRIBUTION PIPING SYSTEMS) AND ASSOCIATED EQUIPMENT SHALL BE INSTALLED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF 2023 FLORIDA PLUMBING CODE, 8TH EDITION.
2. INSTALLATION OF UNDERGROUND SANITARY DRAINAGE AND VENT PIPING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION IN PC 702.2
3. PROTECTION OF PIPING AND PLUMBING SYSTEM COMPONENTS AS PER SECTION IN PC 305.
4. TRENCHING, EXCAVATION AND BACKFILL AS PER SECTION IN PC 306.
5. RODENT PROOFING AS PER IN PC 304.
6. MATERIALS USED IN PLUMBING SYSTEMS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION IN PC 303, PC 402, PC 605, PC 702, PC 802, PC 902 & PC 1004.
7. EQUIPMENT CONNECTIONS AND JOINING OF PIPING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTERS 4, 5, 6, 7 AND 9.
8. DEEP SEAL TRAPS FOR FLOOR DRAINS SHALL BE PROVIDED AS PER PC 1002, AND CLEAN-OUTS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION PC 708
9. BUILDING HOUSE TRAPS SHALL BE PROVIDED AS PER SECTION PC 1002.
10. DRAINAGE PIPE CLEANOUTS AS PER SECTION PC 708.
11. VERTICAL AND HORIZONTAL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION PC 308
12. WATER SUPPLY SYSTEMS SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 6 SECTION PC 601–603, 604, 606, 607, 608, 610
13. THE SANITARY DRAINAGE SYSTEM SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF PC CHAPTER 7 SECTIONS PC 701 THROUGH PC 712.
14. VENT PIPING FOR THE SANITARY DRAINAGE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 9 SECTIONS PC 901 THROUGH PC 912 THROUGH PC 917

PLUMBING DRAWING LIST

P001	PLUMBING SYMBOLS, ABBREVIATIONS, NOTES & SPECIFICATIONS
P002	PLUMBING SPECIFICATIONS
P101	PLUMBING SANITARY FLOOR PLAN
P102	PLUMBING WATER AND GAS PLAN
P201	PLUMBING DETAILS
P301	PLUMBING SCHEDULES

CODE COMPLIANCE

ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE INSPECTING AUTHORITY. NOTHING IN THESE DRAWINGS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHERS APPLICABLE TO THESE PROJECT:

a. 2023 FLORIDA BUILDING CODE – 8TH EDITION.

b. 2023 FLORIDA MECHANICAL CODE– 8TH EDITION.

c. 2023 FLORIDA PLUMBING CODE – 8TH EDITION.

d. 2020 FLORIDA ELECTRICAL CODE (NFPA 70).

e. 2023 FLORIDA ENERGY CONSERVATION CODE – 8TH EDITION.

f. 2023 FLORIDA FUEL GAS CODE – 8TH EDITION.

PLUMBING SPECIFICATIONS:

1. BASIC PLUMBING REQUIREMENTS, MATERIALS AND METHODS

1.01 SCOPE

A. PROVIDE ALL MATERIAL, TOOLS, SUPERVISION AND LABOR INCLUDING ALL MISCELLANEOUS AND INCIDENTAL ITEMS REQUIRED FOR COMPLETE AND OPERABLE PLUMBING INSTALLATIONS AS SHOWN OR DESCRIBED ON THE DRAWINGS AND IN THESE SPECIFICATIONS.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING AND NEW CONDITIONS AND MATERIALS WITHIN THE CONSTRUCTION AREA. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE OWNER'S SATISFACTION.

C. OBTAIN ALL PERMITS, PAY ALL PERMIT FEES AND SCHEDULE ALL REQUIRED INSPECTIONS. COPIES OF ALL PERMITS AND INSPECTION CERTIFICATES SHALL BE FORWARDED TO THE OWNER FOR RECORD.

D. THE GENERAL CONDITIONS OF THE CONTRACT AND ALL DIVISION 1 REQUIREMENTS APPLY TO THE WORK OF THIS SECTION.

E. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING BID TO DETERMINE CONDITIONS AND THE EXTENT OF THE WORK. BY COMMENCING WORK, THE CONTRACTOR ACKNOWLEDGES HIS CONFIRMATION OF ALL CONDITIONS AS ACCEPTABLE WITH REFERENCE TO HIS CONTRACT, SCOPE OF WORK AND BID PRICE SUCH THAT NO ADDITIONAL COMPENSATION SHALL BE FORTHCOMING FOR UNFORESEEN EXISTING CONDITIONS.

F. IN ALL AREAS SUBJECT TO FREEZING CONDITIONS, THE CONTRACTOR SHALL PROVIDE FREEZE PROTECTION FOR ALL DOMESTIC WATER PIPING INSTALLED UNDER HIS CONTRACT.

G. ALL ELECTRICAL REQUIREMENTS SHALL BE COORDINATED WITH THE CONTRACTOR FOR ELECTRICAL WORK. THIS CONTRACTOR IS RESPONSIBLE FOR ALL LOW VOLTAGE WIRING FOR EQUIPMENT INSTALLED UNDER HIS CONTRACT. THE CONTRACTOR FOR ELECTRICAL WORK IS RESPONSIBLE FOR LINE VOLTAGE POWER WIRING ONLY.

H. COLOR AND FINISH SELECTIONS FOR ALL MATERIALS, INCLUDING PAINTING OF PIPING, SHALL BE AS DIRECTED AND/OR APPROVED BY THE ARCHITECT.

I. MINOR DETAILS NOT SHOWN OR SPECIFIED, BUT NECESSARY FOR THE PROPER AND ACCEPTABLE CONSTRUCTION, INSTALLATION OR OPERATION OF ANY PART OF THE WORK AS DETERMINED BY THE ENGINEER SHALL BE INCLUDED AS IF SPECIFIED OR INDICATED ON THE DRAWINGS.

J. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIREMENTS FOR THE INSTALLATION, CONNECTION, EXTENSION OR MODIFICATION TO ALL UTILITY SERVICES WITH RESPECTIVE PROVIDERS INCLUDING PAYMENT OF ALL ASSOCIATED FEES.

K. THE CONTRACTOR IS RESPONSIBLE FOR ALL PAINTING ASSOCIATED WITH CUTTING AND PATCHING. ALL PAINTING IN AREAS WITH COMPLETE FINISH RENOVATIONS SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.

1.02 SUBMITTALS

A. SUBMITTAL REQUIREMENTS SHALL BE COORDINATED WITH THE ARCHITECT AND AUTHORITIES HAVING JURISDICTION. UNLESS OTHERWISE DIRECTED, CONTRACTOR SHALL PROVIDE SUBMITTALS AS LISTED BELOW.

1. PIPE AND FITTINGS
2. VALVES
3. HANGERS AND SUPPORTS
4. PLUMBING PIPING LAYOUT
5. TESTS
6. PLUMBING FIXTURES
7. FLOOR DRAINS
8. MIXING VALVES
9. BACKFLOW PREVENTER
10. ALL SCHEDULED PLUMBING EQUIPMENT

B. SUBMITTALS FROM SUPPLIERS OR MANUFACTURERS WHICH DO NOT BEAR THE STAMP OF THE SUBMITTING CONTRACTOR INDICATING THAT THE CONTRACTOR HAS REVIEWED THE SUBMITTAL FOR CONFORMANCE WITH THE PROJECT REQUIREMENTS WILL BE RETURNED REJECTED.

C. THE ENGINEER'S REVIEW OF SUBMITTALS IS A COURTESY WHICH DOES NOT RELIEVE THE CONTRACTOR FROM CONFORMING WITH THE CONSTRUCTION DOCUMENTS, REGARDLESS OF THE ACTION INDICATED BY THE SHOP DRAWINGS STAMP.

D. REVIEW OF SHOP DRAWINGS BY THE ENGINEER SHALL BE LIMITED TO THE INITIAL REVIEW, AND A SECOND REVIEW OF ANY REQUIRED RESUBMITTED DATA. IF THE ENGINEER IS REQUIRED TO REVIEW SHOP DRAWINGS FOR A THIRD (OR MORE) SUBMISSION OF THE SAME ITEM, THE CONTRACTOR SHALL BE LIABLE FOR COMPENSATING THE ENGINEER FOR THESE SUBSEQUENT REVIEWS AS PER THE ENGINEER'S CURRENT HOURLY RATE SCHEDULE.

E. SUBMIT PROOF OF APPROVAL AND/OR CONFIRMATION OF SATISFACTORY TEST RESULTS TO THE OWNER AND THE ARCHITECT.

F. SUBMIT TO THE OWNER'S MAINTENANCE PERSONNEL OPERATION AND MAINTENANCE DATA FOR ALL SYSTEM COMPONENTS, SERVICING REQUIREMENTS, INSPECTION DATA, REPLACEMENT PART NUMBERS AND AVAILABILITY AND CONTACT INFORMATION FOR SERVICE/SUPPLY COMPANY.

G. FOR ALL BELOW GRADE PIPING WHERE ACTUAL INSTALLATION DEVIATES FROM CONSTRUCTION DRAWINGS, THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS INDICATING BELOW GRADE PIPE LOCATIONS DIMENSIONED TO NEAREST COLUMN LINES.

H. RECORD AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE OWNER/TENANT AFTER COMPLETION OF THE WORK SHOWING ANY ALTERATIONS, ADDITIONS AND/OR DELETIONS TO THE SYSTEM(S) INSTALLED.

1.03 SUBSTITUTIONS

A. ALL EQUIPMENT SHALL BE PRODUCTS OF THE SPECIFIED MANUFACTURER OR MANUFACTURERS. ALL BIDS SHALL BE BASED ON THE SPECIFIED MANUFACTURER OR MANUFACTURER'S EQUIPMENT. FOR SUBSTITUTIONS OF OTHER MANUFACTURER'S EQUIPMENT TO BE CONSIDERED, THE SUBSTITUTION MUST BE INDICATED PRIOR TO BIDDING WITH THE REASON FOR THE PROPOSED SUBSTITUTION IDENTIFIED, AND THE PROPOSED CREDIT TO THE OWNER INDICATED. THE ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF ANY PROPOSED SUBSTITUTIONS.

B. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR COORDINATING THE WORK OF OTHER TRADES WHICH MAY BE AFFECTED BY SUBSTITUTIONS, INCLUDING ALL RELATED COSTS.

1.04 DEFINITIONS

A. FURNISH: TO PURCHASE, PROCURE, ACQUIRE AND DELIVER, COMPLETE WITH RELATED ACCESSORIES.

B. INSTALL: TO ERECT, MOUNT AND CONNECT, COMPLETE WITH RELATED ACCESSORIES.

C. PROVIDE: TO FURNISH AND INSTALL.

D. PLUMBING CONTRACTOR, THE CONTRACTOR, THIS CONTRACTOR: THE CONTRACTOR FOR PLUMBING WORK WHICH IS SPECIFIED HEREIN AND SHOWN ON THESE DRAWINGS.

E. REFER TO THE NATIONAL STANDARD PLUMBING CODE FOR ADDITIONAL DEFINITIONS.

1.05 DRAWINGS

A. THE DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO ILLUSTRATE THE GENERAL ARRANGEMENT AND ROUTING OF PIPING AND GENERAL LOCATIONS OF EQUIPMENT. PRECISE LOCATIONS OF EQUIPMENT, RISERS AND STACKS, AND ROUTING AND ELEVATION OF ALL PIPING SYSTEMS SHALL BE COORDINATED IN THE FIELD WITH THE ARCHITECT, ARCHITECTURAL DRAWINGS, THE WORK OF OTHER TRADES, EXISTING AND NEW BUILDING CONDITIONS AND/OR THE PREFERENCES OF THE OWNER/TENANT AS CONSTRUCTION PROCEEDS. ALL PIPING SHALL BE INSTALLED CONCEALED IN FINISHED SPACES, UNLESS NOTED OTHERWISE.

B. PROVIDE ALL NECESSARY INCIDENTAL MATERIALS AND ACCESSORIES REQUIRED TO MAKE THE WORK COMPLETE IN ALL RESPECTS, EVEN IF NOT PARTICULARLY SHOWN OR SPECIFIED.

C. REFER TO PLUMBING EQUIPMENT/FIXTURE SCHEDULE ON THE DRAWINGS FOR ALL FIXTURE AND EQUIPMENT SPECIFICATIONS.

D. REFER TO FIXTURE CONNECTION SIZE SCHEDULE FOR ALL FIXTURE ROUGHING SIZE REQUIREMENTS.

E. VERIFY ALL INDICATED CONDITIONS BEFORE STARTING WORK AND REPORT ANY DISCREPANCIES. THE DRAWINGS REFLECT CONDITIONS WHICH CAN BE REASONABLY INTERPRETED FROM THE EXISTING VISIBLE CONDITIONS OR FROM DRAWINGS AND INFORMATION FURNISHED BY THE OWNER.

F. LOCATE ALL FIXTURES AND EQUIPMENT AS PER THE FINAL ARCHITECTURAL DRAWINGS.

1.06 PRODUCTS

A. SANITARY AND VENT PIPING:

1. ABOVE GRADE SANITARY AND VENT PIPING SHALL BE POLYVINYL CHLORIDE (PVC) PLASTIC PIPE WITH A SOLID CELLULAR CORE OR COMPOSITE WALL. PIPE SHALL BE COMPLY WITH ASTM D2665, ASTM F891, ASTM F1488, CSA B181.2. PVC PIPE AND FITTINGS AS SPECIFIED UNDER SECTION 702.1 SHALL BE USED.
2. BELOW GROUND SANITARY AND VENT PIPING SHALL BE POLYVINYL CHLORIDE (PVC) PLASTIC PIPE.PIPE SHALL COMPLY WITH ASTM D 2665, ASTM F 891, CAS B181.2 AND FITTING WITH JOINTS MADE WITH PVC ASTM D 3034 AND FITTINGS AS SPECIFIED UNDER SECTION 702.4 SHALL BE USED.
3. SLOPE OF DRAINAGE SYSTEM SHALL BE 1/8" PER FOOT OF RUN FOR PIPE 3" TO 6" (I.D.) AND 1/4" PER FOOT OF RUN FOR PIPE 2–1/2" AND SMALLER (I.D.). VENT PIPING SHALL BE PITCHED TO DRAIN.
4. PVC OR OTHER COMBUSTIBLE PLASTIC PIPING SHALL NOT BE INSTALLED IN CEILING PLENUM SPACES.

B. DOMESTIC WATER PIPING:

1. ABOVE GRADE WATER PIPING SHALL BE TYPE 'L' HARD-DRAWN COPPER TUBE.
2. FITTINGS IN DOMESTIC WATER PIPING SHALL BE WROUGHT COPPER OR CAST BRASS.
3. JOINTS SHALL BE MADE WITH LEAD-FREE SOLDER.
4. IN LIEU OF COPPER, PEX PIPE (WITH CORRESPONDING FITTINGS & SUPPORTS) MAY BE USED AS AN ALTERNATIVE. REFER FLORIDA PLUMBING CODE 2023 SECTION 605 FOR PEX PIPE.
5. COMPLY WITH NSF 61 FOR MATERIALS FOR WATER-SERVICE PIPING AND SPECIALTIES FOR DOMESTIC WATER.
6. ALL DOMESTIC WATER PIPING ABOVE GRADE SHALL BE FIRE-RETARDANT, FACTORY-APPLIED JACKET. PROVIDE COLD WATER PIPING WITH FACTORY-APPLIED VAPOR BARRIER.
7. INSULATION REQUIREMENT SHOULD COMPLY SECTION C404.4 REFER WITH FLORIDA ENERGY CONSERVATION CODE 2023 TABLE C403.2.10.

MINIMUM PIPE INSULATION THICKNESS

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
	CONDUCTIVITY BTU IN./ (H·FT2·°F)	MEAN RATING TEMPERATURE, °F	<1	1 to < 1½	1½ to < 4	4 to < 8	≥8
141–200	0.25–0.29	125	1.5	1.5	2.0	2.0	2.0
105–140	0.21–0.28	100	1.0	1.0	1.5	1.5	1.5
40–60	0.21–0.27	75	0.5	0.5	1.0	1.0	1.0

8. WATER-HEATING EQUIPMENT AND HOT WATER STORAGE TANKS SHALL MEET THE MINIMUM PERFORMANCE REQUIREMENTS GIVEN IN THE FLORIDA ENERGY CONSERVATION CODE 2023, SECTION C404.2, TABLE C404.2. THE EFFICIENCY SHALL BE VERIFIED THROUGH DATA FURNISHED BY THE MANUFACTURER OF THE EQUIPMENT OR THROUGH CERTIFICATION UNDER AN APPROVED CERTIFICATION PROGRAM.
9. HW SYSTEM PIPING IS DESIGNED AS PER MAXIMUM ALLOWED PIPE LENGTH METHOD AS PER FLORIDA ENERGY CONSERVATION CODE 2023 C404.5.1, THE HW PIPE LENGTH FROM THE NEAREST SOURCE OF HEATED WATER TO THE TERMINATION OF THE FIXTURE SUPPLY PIPE SHALL BE AS PER FOLLOWING TABLE.

NOMINAL PIPE SIZE (INCHES)	MIXIMUM PIPING LENGTH (FEET)	
	PUBLIC LAV	OTHER FIXTURES
⅜"	3'	50'
½"	2'	43'
¾"	0.5'	21'
1"	0.5'	13'
1¼"	0.5'	8'
1½"	0.5'	6'
2" OR LARGER	0.5'	4'

10. AS PER FLORIDA ENERGY CONSERVATION CODE 2023 EDITION, C404.7 WATER DISTRIBUTION SYSTEM HAVING ONE OR MORE RECIRCULATION PUMPS THAT PUMP WATER FROM A HEATED-WATER SUPPLY PIPE BACK TO THE HEATED-WATER SOURCE THROUGH A COLD-WATER SUPPLY PIPE SHALL BE A DEMAND RECIRCULATION WATER SYSTEM. PUMPS SHALL HAVE CONTROLS THAT COMPLY WITH BOTH OF THE FOLLOWING:
    1. THE CONTROL SHALL START THE PUMP UPON RECEIVING A SIGNAL FROM THE ACTION OF A USER OF A FIXTURE, SENSING THE PRESENCE OF A USER OF A FIXTURE OR SENSING THE FLOW OF HOT OR TEMPERED WATER TO A FIXTURE.
    2. THE CONTROL SHALL LIMIT THE TEMPERATURE OF THE WATER ENTERING THE COLD-WATER PIPING TO 104°F(40°C).
11. AS PER FECC 2023, C404.6.1, HEATED-WATER CIRCULATION SYSTEMS SHALL BE PROVIDED WITH A CIRCULATION PUMP. THE SYSTEM RETURN PIPE SHALL BE A DEDICATED RETURN PIPE OR A COLD WATER SUPPLY PIPE. CONTROLS FOR CIRCULATING HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN THE OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE AND WHEN THERE IS NO DEMAND FOR HOT WATER.

C. MIXING VALVES

1. VALVE BODY SHALL BE MADE OF CAST BRASS. THE INTERNAL COMPONENTS SHALL BE MADE OF BRASS OR STAINLESS STEEL.
2. TYPES A, C & D VALVES: VALVE SHUTS OFF IN FULL COLD POSITION AND MUST PASS THROUGH COLD RANGE BEFORE DELIVERING WARM, AND/OR HOT WATER. TEMPERATURE LIMIT SET AT 105°F MAXIMUM DELIVERY TEMPERATURE. IF ONE SUPPLY SHOULD FAIL, THE OTHER WILL AUTOMATICALLY AND INSTANTLY SHUT DOWN. DELIVERY CAPACITY IS 5GPM @ 45 PSIG DIFFERENTIAL.
3. TYPES OF VALVES: TYPE A– THERMOSTATICALLY OPERATED BY MEANS OF BI–METALLIC STRIP, OR EXPANSION BELLOWS; TYPE B– SINGLE HANDLE MECHANICAL MIXER, OR INDIVIDUAL HOT AND COLD CONTROL VALVES; TYPE C– PRESSURE BALANCING SHOWER VALVE/PISTON OPERATED MIXING VALVE; TYPE D– BALANCED PRESSURE OPERATION, WITH INTEGRAL DIAL THERMOMETER INDICATING DELIVERED WATER TEMPERATURE.
4. EACH ELEMENT SHALL BE CONTROLLED BY AN INDIVIDUALLY MOUNTED THERMOSTAT AND HIGH TEMPERATURE CUT–OFF SWITCH. ALL INTERNAL CIRCUITS SHALL BE FUSED. THE OUTER JACKET SHALL BE OF BAKED ENAMEL FINISH AND SHALL BE PROVIDED WITH FULL SIZE CONTROL COMPARTMENT FOR PERFORMANCE OF SERVICE AND MAINTENANCE THROUGH HINGED FRONT PANEL AND SHALL ENCLOSE THE TANK WITH FOAM INSULATION. ELECTRICAL JUNCTION BOX WITH HEAVY DUTY TERMINAL BLOCK SHALL BE PROVIDED. THE DRAIN VALVE SHALL BE LOCATED IN THE FRONT FOR EASE OF SERVICING.

D. HANGERS AND SUPPORTS:

1. HANGERS SHALL BE STANDARD STEEL, MALLEABLE OR WROUGHT IRON, AS MANUFACTURED BY GRINNELL OR APPROVED EQUAL, SUITABLE FOR THE TYPE OF CONSTRUCTION. PIPING SHALL NOT BE HUNG FROM OTHER PIPE.
2. SECTIONS OF INDIVIDUAL PIPE RUNS SHALL BE SUPPORTED BY CLEVIS HANGERS.
3. ALL EQUIPMENT SHALL BE PROVIDED WITH APPROVED SUPPORTS.
4. PROVIDE SEISMIC RESTRAINTS IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND STANDARDS AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
5. UNLESS OTHERWISE INDICATED OR REQUIRED BY AUTHORITIES HAVING JURISDICTION, THE FOLLOWING SHALL BE PROVIDED WITH SEISMIC RESTRAINTS AS REQUIRED BY THE BOCA NATIONAL BUILDING CODE, SECTION 1610.6.4: ALL EQUIPMENT AND MACHINERY, ALL NEW PIPING 2–1/2" AND LARGER (1–1/4" AND LARGER INBOILER/MECHANICAL ROOMS) WITH HANGERS GREATER THAN 12" IN LENGTH FROM THE TOP OF PIPE TO THE STRUCTURE.
6. SUPPORTS SHALL BE PROVIDED IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE PIPING MANUFACTURER.

E. VALVES:

1. PROVIDE GATE VALVES, BUTTERFLY OR BALL VALVES FOR SHUT–OFF DUTY ON MAIN AND BRANCH SUPPLY LINES. FOR ALL PIPE RUNS 2" AND SMALLER, PROVIDE BALL FOR ALL PIPE RUNS LARGER THAN 2" AND SMALLER THAN 4", PROVIDE GATE VALVES. PIPING 4" AND LARGER, PROVIDE BUTTERFLY VALVES FOR SHUT–OFF DUTY.
2. ALL FIXTURES WITH THE EXCEPTION O FLUSHOMETER–EQUIPPED WATER CLOSETS AND URINALS SHALL HAVE STOP VALVES TO CONTROL SUPPLY TO THE FIXTURE. WHERE SUPPLIES ARE EXPOSED PROVIDE CHROME–PLATED STOPS WITH CHROME–PLATED ESCUTCHEONS ON PIPING PENETRATIONS.
3. ALL PLUMBING FIXTURES AND EQUIPMENT TO HAVE SHUT–OFF VALVES ON SUPPLY LINES.
4. ALL BRANCH LINES TO HAVE SHUT–OFF VALVES.
5. ALL VALVES SHALL BE ACCESSIBLE. PROVIDE ACCESS DOORS WHERE REQUIRED FOR VALVE ACCESS.
6. PROVIDE GLOBE VALVES FOR THROTTLING/BALANCING OF THE HOT WATER CIRCULATING SYSTEM.

F. SLEEVES AND ESCUTCHEONS:

1. SLEEVES THROUGH STRUCTURAL CONCRETE MEMBERS AND SLEEVES FOR WALLS BELOW GRADE AND FLOORS ON GRADE SHALL BE STANDARD WEIGHT GALVANIZED SCHEDULE 40 STEEL PIPE. SLEEVES THROUGH OTHER THAN STRUCTURAL COMPONENTS OF THE BUILDING SHALL BE 20 GAGE GALVANIZED SHEET METAL WITH LOCK SEAM JOINTS. USG THERMAFIBER SAFING INSULATION SHALL BE INSTALLED BETWEEN PIPE AND SLEEVE.
2. PIPE ESCUTCHEON PLATES SHALL BE INSTALLED WHERE EXPOSED PIPING PASSES THROUGH WALLS, CEILINGS, AND FLOORS AND SHALL BE MINIMUM 20 GAGE STEEL. PROVIDE CHROME PLATED ESCUTCHEON PLATES IN FINISHED AREAS.

G. DRAINAGE ACCESSORIES

1. GENERAL:
    a. INSTALL THE WORK OF THIS SECTION IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, UNLESS OTHERWISE SPECIFIED.
    b. SECURE EXTERNAL COMPONENTS IN PLACE WITH VANDAL RESISTANT FASTENERS OR DEVICES WHICH CANNOT BE REMOVED WITHOUT SPECIAL TOOLS.
2. DEVICES:
    a. CLEANOUT & CLEANOUT PLUG
    - THREADED PIPE FITTING OR CAST IRON FERRULE WITH GAS TIGHT CLEANOUT PLUG
    - PLUG SHOULD BE CAST BRASS OR BRONZE, WITH THREADED END, AND RAISED OR COUNTERSUNK HEAD.
    - LUBRICATE THREADS OF CLEANOUT PLUG WITH ANTI–SEIZE LUBRICANT BEFORE FINAL INSTALLATION.
    b. CLEANOUT WALL PLATE
    - IT SHOULD BE ROUND, STAINLESS STEEL OR POLISHED CHROME PLATED BRONZE COVER PLATE WITH STAINLESS STEEL VANDAL RESISTANT FASTENER TO SECURE TO CLEANOUT PLUG.
    c. CLEANOUT DECK PLATE
    - IT SHOULD BE STANDARD DUTY FLOOR CLEANOUT FITTING WITH COATED CAST IRON BODY; ROUND, POLISHED NICKEL BRONZE SCORIATED TOP SECURED TO CLEANOUT PLUG WITH STAINLESS STEEL VANDAL RESISTANT FASTENER; THREADED HEIGHT ADJUSTMENT, CAST IRON HEAD, GAS TIGHT CLEANOUT PLUG, AND CONNECTION TO MATCH PIPING OPTION SELECTED.

I. INSTALL PIPING TO CONSERVE BUILDING SPACE. DO NOT INTERFERE WITH USE OF BUILDING SPACE AND THE WORK OF OTHER TRADES. ALL PIPING RUN IN CEILING SHALL BE INSTALLED TIGHT TO THE STRUCTURE ABOVE.

J. VERIFY EXACT LOCATIONS OF ALL EXISTING UTILITIES. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS OR CONNECTED EQUIPMENT. PROVIDE PIPE ANCHORS, GUIDES AND EXPANSION JOINTS OR LOOPS IN ALL HOT WATER AND HOT WATER CIRCULATING MAIN SUPPLY PIPING AND SEGMENTS OF SUCH PIPE THAT EXCEED 30'–0" IN LENGTH.

K. IN ALL AREAS WITH FINISHED SURFACES, SYSTEM PIPING AND COMPONENTS SHALL BE CONCEALED ABOVE OR WITHIN FINISHED SURFACES.

L. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL. REMOVE PROTECTIVE COATINGS PRIOR TO INSTALLATION.

M. REDUCTIONS IN PIPE SIZES SHALL BE MADE WITH ONE–PIECE REDUCING FITTINGS. BUSHINGS ARE NOT ACCEPTABLE. USE FLANGED FITTINGS AT THE BASE OF RISERS.

N. VENT PENETRATIONS THROUGH THE ROOF SHALL BE FLASHED.

O. IF WATER PRESSURE EXCEEDS 80 PSI, A WATER PRESSURE REDUCING VALVE SHALL BE INSTALLED IN WATER PIPING AT CONNECTION TO MAIN.

P. PROVIDE DIELECTRIC FITTINGS BETWEEN DISSIMILAR METALS.

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Bojangles

ISSUE BLOCK	
11-25-25	IFC SET

PROTOTYPE:	Plan 8
GUIDE SET VERSION:	GR 24.1
DOCUMENT DATE:	11-25-25
DRAWN BY:	NYE
CHECKED BY:	NYE
JOB NUMBER:	25-4320

PLUMBING SYMBOLS, ABBREVIATIONS, NOTES & SPECIFICATIONS

SHEET:
P001

Q. IN ALL AREAS WITH FINISHED SURFACES, SYSTEM PIPING AND COMPONENTS SHALL BE CONCEALED ABOVE OR WITHIN FINISHED SURFACES.

R. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL. REMOVE PROTECTIVE COATINGS PRIOR TO INSTALLATION.

S. REDUCTIONS IN PIPE SIZES SHALL BE MADE WITH ONE–PIECE REDUCING FITTINGS. BUSHINGS ARE NOT ACCEPTABLE. USE FLANGED FITTINGS AT THE BASE OF RISERS.

T. VENT PENETRATIONS THROUGH THE ROOF SHALL BE FLASHED.

U. IF WATER PRESSURE EXCEEDS 80 PSI, A WATER PRESSURE REDUCING VALVE SHALL BE INSTALLED IN WATER PIPING AT CONNECTION TO MAIN.

V. PROVIDE DIELECTRIC FITTINGS BETWEEN DISSIMILAR METALS.

W. PIPE BACKFLOW PREVENTER DRAINS TO FLOOR DRAIN OR OTHER APPROVED INDIRECT WASTE SOURCE.

X. PROVIDE ACCESS DOORS/PANELS FOR SERVICE AND ACCESS TO ALL VALVES AND OTHER SYSTEM COMPONENTS ENCLOSED IN WALLS AND CEILINGS. ACCESS DOORS SHALL BE FURNISHED BY THIS CONTRACTOR, INSTALLED BY THE GENERAL CONTRACTOR.

Y. ALL FIXTURES REQUIRING VACUUM BREAKERS SHALL BE EQUIPPED WITH INTEGRAL VACUUM BREAKERS.

Z. ANY PENETRATIONS THROUGH FIRE RATED PARTITIONS, FLOORS, OR CEILINGS SHALL BE STEEL SLEEVED AND SEALED WITH 3M BRAND UL RATED FIRE BARRIER CAULK OR APPROVED EQUAL.

AA. WHEN THE WATER PIPING SYSTEM IS COMPLETE, THOROUGHLY FLUSH ALL DIRT, SEDIMENT, SOLDER, ETC., OUT OF THE SYSTEM, REMOVING ALL STRAINERS, VALVE STEM SEATS, ETC., REQUIRED TO ACCOMPLISH THE FLUSHING.

AB. AT ALL INDIRECT WASTE DRAINS, MAINTAIN AIR GAP AS REQUIRED BY CODE.

AC. ALL PIPING INSTALLED ON THE ROOF SHALL BE SUPPORTED BY "PILLOW BLOCK" PIPE STANDS AS MANUFACTURED BY MIRO INDUSTRIES, OR APPROVED EQUAL. WOOD PIPE SUPPORTS SHALL NOT BE ACCEPTABLE. PROVIDE TRAFFIC/WALK PADS BELOW ALL PIPE STANDS.

AD. INSTALL SLEEVES FOR ALL PIPES WHICH PASS THROUGH WALLS, FLOORS, AND CEILINGS. WHERE PIPES ARE TO BE INSULATED, THE SLEEVE SHALL BE LARGE ENOUGH TO ACCOMMODATE INSULATION. SLEEVES SHALL BE FLUSH WITH FINISHED SURFACES AT BOTH ENDS. ON FINISHED SURFACES IN EXPOSED AREAS PROVIDE ESCUTCHEONS COMPATIBLE WITH FINISH.

AE. PROVIDE WATER HAMMER ARRESTERS ON SUPPLY PIPING TO ALL FLUSHOMETER VALVES AND QUICK–CLOSING VALVES.

AF. UNLESS OTHERWISE INDICATED, TRAPS SEALS AT ALL FLOOR DRAINS SHALL BE MAINTAINED BY AN APPROVED TRAP PRIMING DEVICE.

AG. MAINTAIN ALL REQUIRED AND RECOMMENDED CLEARANCES FOR ALL PLUMBING SYSTEM COMPONENTS AND EQUIPMENT.

2.01 GENERAL

A. ALL WORK WHICH REQUIRES DISRUPTION OF THE ROOFING SHALL BE DONE BY A CONTRACTOR CERTIFIED BY THE ROOFING MANUFACTURER AS REQUIRED TO MAINTAIN ANY EXISTING ROOF WARRANTIES.

B. EXTERIOR INSTALLATIONS TO BE WEATHER PROOF IN ALL RESPECTS.

C. EXTERIOR MATERIALS AND EQUIPMENT SHALL BE PAINTED TO PREVENT CORROSION, COLOR PER ARCHITECT.

D. COORDINATE THE PLUMBING WORK WITH ALL OTHER AFFECTED WORK AND THE CONSTRUCTION SCHEDULE.

E. REAM PIPE AND TUBE ENDS. REMOVE BURRS. BEVEL PLAIN AND FERROUS END PIPE.

F. REMOVE SCALE AND FOREIGN MATERIAL, FROM INSIDE AND OUTSIDE, BEFORE ASSEMBLY.

G. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES AND UNIONS.

H. COORDINATION WITH THE WORK OF OTHER TRADES IS REQUIRED. PROVIDE OFFSETS IN PIPING SYSTEMS OR MINOR DEVIATIONS TO THE INDICATED PIPE ROUTING IN ORDER TO COORDINATE THE PLUMBING WORK WITH THE WORK OF ALL OTHER TRADES AND THE GENERAL BUILDING CONDITIONS.

I. NO DOMESTIC WATER PIPING SHALL BE INSTALLED IN UNHEATED SPACES.

J. PRIOR TO DISCONNECTING AND CONNECTING NEW WORK TO EXISTING SYSTEMS, THE PLUMBING CONTRACTOR SHALL NOTIFY THE PROPERTY MANAGER AND OFFER A PROPOSED SCHEDULE OF WORK. ELECTRICAL SERVICE BOARD(ESB) WILL AUTHORIZE CONNECTIONS AND COORDINATE NECESSARY SHUT DOWNS AND DRAIN DOWNS AS REQUIRED. SHUT DOWNS AND DRAIN DOWNS MAY BE PERFORMED BY THE PLUMBING CONTRACTOR ONLY AFTER RECEIVING ESB AUTHORIZATION, AND SHOULD BE PERFORMED UNDER SUPERVISION OF ESB PERSONNEL. THREE (3) DAYS ADVANCE NOTICE TO THE PROPERTY MANAGER IS REQUIRED.

K. THE PLUMBING CONTRACTOR IS ADVISED THAT DUE TO THE NATURE OF THE OPERATIONS AND TENANT REQUIREMENTS, CONNECTIONS TO EXISTING SYSTEMS MAY HAVE TO BE MADE AFTER REGULAR WORKING HOURS. THE PROPERTY MANAGER WILL ADVISE THE PLUMBING CONTRACTOR OF THE TIME CONSTRAINTS UPON RECEIPT AND APPROVAL OF THE PLUMBING CONTRACTOR'S REQUEST FOR SHUT DOWN AND CONNECTION TO EXISTING SYSTEMS.

L. WHEN CONNECTING TO EXISTING STACKS AND RISERS, PROVISION IS TO BE MADE FOR FUTURE CONNECTIONS BY PROVIDING CAPPED AND VALVED OUTLETS ON DOMESTIC WATER RISERS AND PLUGGED OUTLETS ON THE SANITARY AND VENT STACKS.

2.02 ABOVE GRADE

A. INSTALL PLUMBING PIPING IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT PIPING COMPLIES WITH REQUIREMENTS AND SERVES INTENDED PURPOSES.

B. ROUTE PIPING IN AN ORDERLY MANNER, PLUMB AND PARALLEL TO BUILDING STRUCTURE. MAINTAIN GRADIENT. SLOPE PIPING AND ARRANGE SYSTEMS TO DRAIN. IN DOMESTIC WATER SYSTEMS, PROVIDE DRAIN VALVES AT MAIN SHUT–OFF VALVES AND ALL LOW POINTS IN PIPING.

C. USE EXISTING CONNECTIONS AT MAINS WHERE AVAILABLE FOR NEW BRANCH PIPING. LOCATE ALL RISERS AND PIPING BEFORE CONSTRUCTION COMMENCES AND TAKE CARE NOT TO DAMAGE SAME. ANY DAMAGE OCCURRING TO THE EXISTING PIPING WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

2.03 INSULATION

COVER ALL HOT WATER AND HOT WATER RECIRCULATION PIPE WITH 1" THICK FOR PIPE SIZE UP TO 1¼" AND 1½" THICK FOR PIPE SIZE 1½" AND GREATER WITH MANVILLE MICRO–LOK AP–T PLUS FIBERGLASS INSULATION. COVER ALL COLD WATER PIPE WITH ½" THICK FOR PIPE SIZE UP TO 1¼" AND 1" THICK FOR PIPE SIZE 1½" AND GREATER WITH 1" MANVILLE MICRO–LOK AP–T PLUS FIBERGLASS INSULATION. FITTINGS AND VALVES SHALL BE INSULATED WITH MANVILLE ZESTON 2000 PVC INSULAT–ED FITTING COVERS. INSTALL ALL INSULATION AS PER MANUFACTURERS RECOMMENDATIONS. ALL INSULATION MATERIAL SHALL COMPLY WITH THE NEW YORK CITY BUILDING CODE REQUIREMENT OF A FLAME SPREAD RATING NOT TO EXCEED 25 AND A SMOKE DEVELOPED RATING NOT TO EXCEED 50. ALL PIPE INSULATION SHALL COMPLY WITH 2023 FLORIDA ENERGY CONSERVATION CODE.

3. TESTING

A. AT THE COMPLETION OF THE PLUMBING WORK, COMPLETELY TEST THE ENTIRE INSTALLATION OF ALL SYSTEMS FOR PROPER OPERATION AND COMPLIANCE WITH APPLICABLE CODES AND LOCAL REQUIREMENTS. CORRECT ALL DEFICIENCIES FOUND.

B. TESTING OF THE INSTALLED SYSTEMS SHALL BE MADE BY THE CONTRACTOR IN THE PRESENCE OF A REPRESENTATIVE OF THE OWNER.

C. THE CONTRACTOR SHALL NOT COVER UP OR PERMANENTLY CONCEAL PIPING, DEVICES OR ANY PORTION OF NEWLY CONSTRUCTED PLUMBING SYSTEM(S) UNTIL SUCH SYSTEM, OR PORTION OF THE SYSTEM, HAS BEEN TESTED IN THE PRESENCE OF A REPRESENTATIVE OF THE OWNER AND INSPECTED BY THE LOCAL INSPECTOR AND APPROVED IN WRITING, EXCEPT PIPING PASSING THROUGH FLOORS, WALLS, PARTITIONS, OR BEAMS, FOR DISTANCES EQUAL TO THE THICKNESS OF SUCH FLOOR, WALL, PARTITION OR BEAM.

D. THIS CONTRACTOR SHALL NOTIFY THE VARIOUS DEPARTMENTS, BUREAUS AND INDIVIDUALS AT LEAST TWO WEEKS IN ADVANCE OF THE TIME THAT THE TESTS ARE TO BE CONDUCTED.

E. ALL DEFECTIVE PARTS SHALL BE REPLACED OR CORRECTED BY THIS CONTRACTOR AND AN EXTRA TEST OR TESTS SHALL BE MADE UNTIL THE OPERATION IS SATISFACTORY. ALL ARRANGEMENTS AND EXPENSES NECESSARY TO CONDUCT ALL TESTS REQUIRED BY THESE SPECIFICATIONS AND THE VARIOUS AGENCIES HAVING JURISDICTION OVER THE WORK INSTALLED UNDER THIS CONTRACT SHALL BE MADE BY THIS CONTRACTOR. NO EXTRA COMPENSATION WILL BE ALLOWED FOR THESE TESTS, THE COST THEREOF BEING INCLUDED IN THE LUMP SUM BID FOR THIS CONTRACT.

F. WHERE ANY EVIDENCE OF STOPPAGE IS FOUND IN PIPING OR EQUIPMENT, THIS CONTRACTOR SHALL DISCONNECT, CLEAN, REPAIR AND RECONNECT ALL OBSTRUCTED PIPING OR EQUIPMENT AND SHALL ALSO PAY FOR ALL NECESSARY CUTTING AND REPAIRS TO ADJOINING WORK.

G. ALL PIPING AND EQUIPMENT SHALL BE THOROUGHLY CLEANED INSIDE AND OUT, OF DIRT, CUTTINGS, OILS AND OTHER FOREIGN SUBSTANCES AND SHALL BE LEFT CLEAN.

H. ALL REQUIRED TESTS SHALL BE WITNESSED BY LOCAL AUTHORITIES AND THE OWNER'S REPRESENTATIVE.

I. ALL EQUIPMENT WILL BE FACTORY TESTED.

J. CONTRACTOR SHALL IDENTIFY TO THE OWNER'S REPRESENTATIVE ANY LEAKS OR DAMAGE THAT OCCURS AS A RESULT OF SYSTEM TESTING. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO LIMIT ANY POTENTIAL DAMAGE. CORRECTIVE ACTION REQUIRED AS A RESULT OF TESTING SHALL BE PERFORMED IMMEDIATELY AND AT THE CONTRACTOR'S EXPENSE.

K. REPORT IN WRITING TO AUTHORITIES HAVING JURISDICTION, THE ARCHITECT AND THE OWNER THE RESULTS OF ALL TESTING.

L. TESTING REQUIREMENTS
   a. TEST ALL DOMESTIC WATER PIPING HYDROSTATICALLY TO 125 PSIG.
   b. HYDROSTATIC TEST PRESSURES SHALL REMAIN CONSTANT WITH NO VARIATION FOR 120 MINUTES.
   c. TESTS SHALL BE WITNESSED BY THE BUILDING ENGINEER.
   d. THE PLUMBING CONTRACTOR WILL BE HELD RESPONSIBLE FOR ALL DAMAGE DUE TO TEST FAILURES AND LEAKAGE IN THE TEST AREA AND ADJACENT TENANT OR ELECTRICAL SERVICE BOARD SPACES.

M. REFILL ENTIRE POTABLE HOT AND COLD WATER SUPPLY SYSTEM WITH CHLORINE SOLUTION (HTH OLIN CHEMICAL CORP.) AT A STRENGTH TO MEET STANDARDS OF THE DEPARTMENT OF HEALTH, AND FOR A PERIOD OF RETENTION AS STIPULATED.

N. THOROUGHLY FLUSH PIPING SYSTEM WITH FRESH WATER IMMEDIATELY PRIOR TO FINAL ACCEPTANCE.

4. WARRANTY

A. EQUIPMENT, MATERIALS AND WORKMANSHIP FURNISHED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR SHALL KEEP THE WORK IN GOOD REPAIR FOR ONE YEAR AFTER THE DATE OF FINAL APPROVAL. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, PROMPTLY CORRECT AND REPAIR ANY AND ALL BREAKS, FAILURES OR WEAR DUE TO FAULTY MATERIALS, WORKMANSHIP OR EQUIPMENT. ALL SETTLEMENTS OF SURFACES THAT MAY OCCUR WITHIN THAT PERIOD SHALL ALSO BE PROMPTLY REPAIRED.

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PLUMBING SPECIFICATIONS

SHEET:
P002

SANITARY GENERAL NOTES:

A. ALL SANITARY RECEPTACLE SUCH AS FLOOR DRAIN, FLOOR SINK,ETC. ARE EXISTING TO REMAIN. NO SANITARY RECEPTACLE IS ADDED OR REMOVED. ONLY CHANGES TO KITCHEN EQUIPMENT DRAINING TO THE RECEPTACLES.

B. CONTRACTOR SHALL FIELD VERIFY CONDITION, LOCATION, AND CONNECTIONS OF ALL EXISTING SANITARY AND VENT PIPING PRIOR TO START OF WORK. REPORT ANY DISCREPANCIES TO ENGINEER.

C. REUSE EXISTING GREASE WASTE AND VENT PIPING WHEREVER FEASIBLE. MODIFY OR EXTEND ONLY AS REQUIRED FOR NEW OR RELOCATED EQUIPMENT.

D. ALL SANITARY WORK SHALL COMPLY WITH THE 2023 FLORIDA PLUMBING CODE AND BE SUBJECT TO APPROVAL BY THE AUTHORITY HAVING JURISDICTION (AHJ).

GREASE INTERCEPTOR SIZING CALCULATION

GREASE INTERCEPTOR CALCULATIONS Quote: FBX1FE13

Reference No. 92459 Project Name: BOJANGLES

Step 1: Flow rate to grease interceptor

Fixture flow rate: (cu in / 231) = gal x 0.75 / 2 min = 2 min flow rate

NAME	TYPE	DIMENSIONS	QTY	CU IN	FLOW RATE
3-COMPARTMENT SINK (TAG#356)	3 Compartment Sink	21" x 21" x 14" (3)	1	18,522	30.07 GPM
EXISTING FLOOR DRAIN (EX.FD)	Floor Drain	N/A	10	N/A	0 GPM
EXISTING FLOOR SINK (EX.FS)	Floor Sink	N/A	6	N/A	9 GPM
EXISTING HUB DRAIN (EX.HD)	Floor Drain	N/A	1	N/A	0 GPM
Hand Sink (TAG#348)	Hand Sink	10" x 14" x 5"	4	2,800	4.56 GPM
Mop SINK (EX.MS)	Mop Basin	24" x 24" x 10"	1	5,760	9.35 GPM
ONE COMPARTMENT SINK (TAG#358)	Bar Sink One Bowl	14" x 14" x 14"	2	5,488	8.9 GPM
Total					**61.87 GPM**

Step 2: Grease Production

Total square feet x 60% = Dining area

Dining area / 14 Sq ft per seat x 4 turns per seat per day x [Grease Production Value] x [Days between pump-out] = Grease output

Amount of square feet in facility: 3886

Grease production value: 0.035 lbs per serving (Fast Food - Full Prep: High / No flatware)

Days between pump-outs: 90 days

(3886 x .6) / 14 x 4 x 0.035 x 90 = 2098.44 lbs of FOG

NOTES:EXISTING GREASE INTERCEPTOR TO REMAIN AS IS. CONTRACTOR TO FIELD VERIFY CONDITION, CAPACITY, AND LOCATION OF EXISTING GREASE INTERCEPTOR. VERIFY COMPLIANCE WITH LOCAL AHJ AND HEALTH DEPARTMENT REQUIREMENTS.

SANITARY KEYED NOTES:

11 ROUTE NEW INDIRECT WASTE LINE FROM DROP IN ICE BIN (TAG#21) TO EXISTING FLOOR SINK. PROVIDE AIR GAP PER LOCAL CODE. EXISTING FLOOR SINK CONNECTION TO EXISTING GREASE WASTE LINE AND EXISTING VENT PIPE TO REMAIN AS IS.

12 EXISTING FLOOR SINK (EX. FS) AND ASSOCIATED GREASE WASTE AND VENT PIPING TO REMAIN AS IS.

13 EXISTING GREASE INTERCEPTOR TO REMAIN AS IS. CONTRACTOR TO FIELD VERIFY CONDITION, CAPACITY, AND LOCATION OF EXISTING GREASE INTERCEPTOR. VERIFY COMPLIANCE WITH LOCAL AHJ AND HEALTH DEPARTMENT REQUIREMENTS.

14 EXISTING WATER CLOSET (EX.WC) AND ITS ASSOCIATED SANITARY WASTE AND VENT PIPING REMAIN AS IS.

15 EXISTING LAVATORY (EX.LAV) AND ITS ASSOCIATED SANITARY WASTE AND VENT PIPING REMAIN AS IS.

16 EXISTING URINAL (EX.UR) AND ITS ASSOCIATED SANITARY WASTE AND VENT PIPING REMAIN AS IS.

17 EXISTING FLOOR DRAIN (EX.FD) AND ITS ASSOCIATED SANITARY WASTE AND VENT PIPING REMAIN AS IS.

SANITARY KEYED NOTES:

1 EXISTING INDIRECT WASTE LINE FROM SODA DISPENSER (TAG#398) DISCHARGING INTO EXISTING FLOOR DRAIN (EX.FD) TO REMAIN AS IS. EXISTING FLOOR DRAIN (EX.FD) CONNECTION TO GREASE WASTE LINE AND EXISTING VENT PIPE TO REMAIN AS IS.

2 EXISTING INDIRECT WASTE LINE FROM ONE COMPARTMENT SINK (TAG#358) DISCHARGING INTO EXISTING FLOOR SINK (EX.FS) TO REMAIN AS IS. EXISTING FLOOR SINK (EX.FS) CONNECTION TO GREASE WASTE LINE AND EXISTING VENT PIPE TO REMAIN AS IS. CONTRACTOR TO REPLACE LEVER WASTE FOR ONE COMPARTMENT SINK WITH NEW MODEL (TAG#58B)

3 EXISTING INDIRECT WASTE LINE FROM THREE COMPARTMENT SINK (TAG#356) DISCHARGING INTO EXISTING FLOOR SINK (EX.FS) TO REMAIN AS IS. EXISTING FLOOR SINK (EX.FS) CONNECTION TO GREASE WASTE LINE AND EXISTING VENT PIPE TO REMAIN AS IS.CONTRACTOR TO REPLACE LEVER WASTE FOR ONE COMPARTMENT SINK WITH NEW MODEL (TAG#58B)

4 EXISTING FLOOR DRAIN (EX. FD) AND ASSOCIATED GREASE WASTE AND VENT PIPING TO REMAIN AS IS.

5 EXISTING HAND SINK (TAG#348,348.1,348.2,348.3) AND ASSOCIATED GREASE WASTE AND VENT PIPING TO REMAIN AS IS.

6 EXISTING INDIRECT WASTE LINE FROM ICE MACHINE WITH ICE BIN (TAG#399) DISCHARGING INTO EXISTING FLOOR SINK (EX.FS) TO REMAIN AS IS. EXISTING FLOOR SINK (EX.FS) CONNECTION TO GREASE WASTE LINE AND EXISTING VENT PIPE TO REMAIN AS IS.

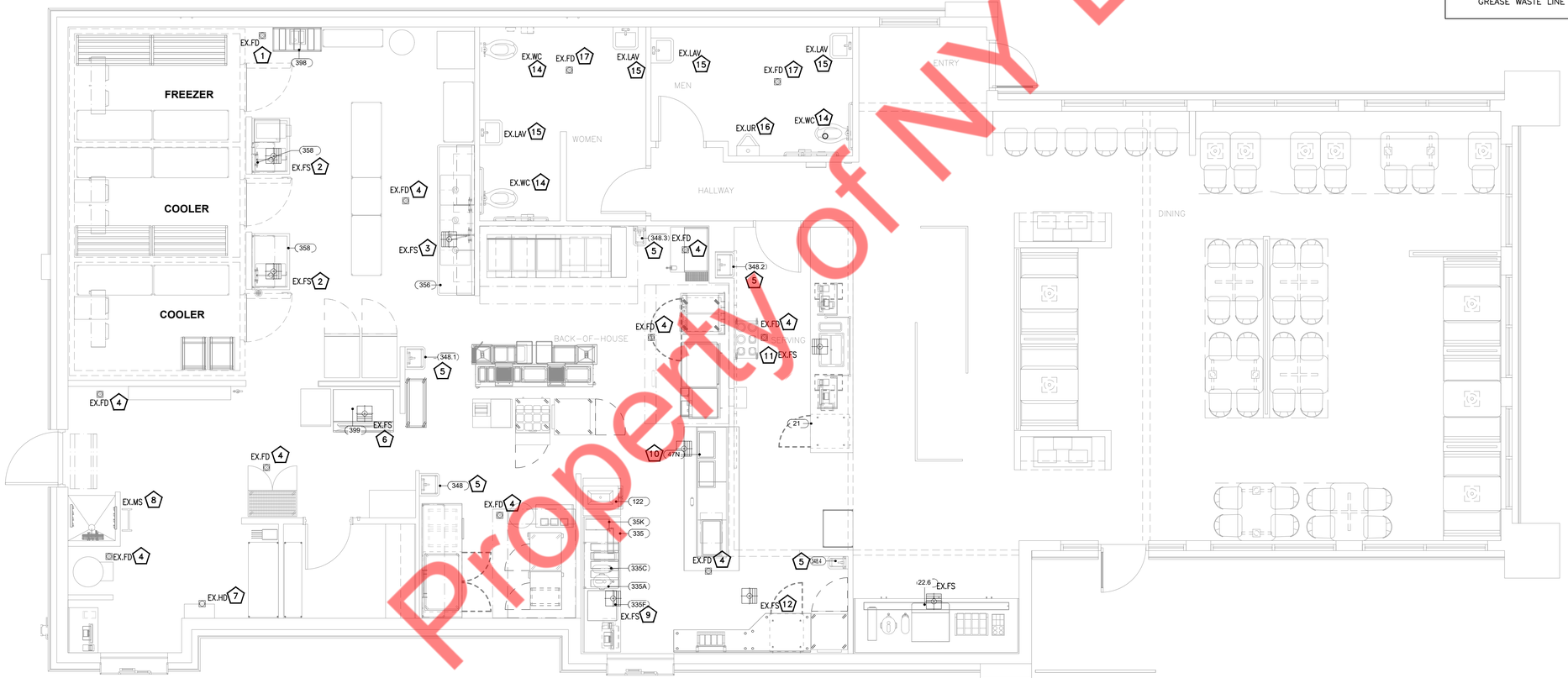
7 EXISTING HUB DRAIN (EX. HD) AND ASSOCIATED GREASE WASTE AND VENT PIPING TO REMAIN AS IS.

8 EXISTING MOP SINK (EX.MS) AND ASSOCIATED GREASE WASTE AND VENT PIPING TO REMAIN AS IS.

9 EXISTING INDIRECT WASTE LINES FROM ICE TEA DISPENSER (TAG#335A) AND ICE TEA DISPENSER (TAG#335C) DISCHARGING INTO EXISTING FLOOR SINK (EX. FS) TO REMAIN AS IS. PROVIDE NEW INDIRECT WASTE LINES FROM COFFEE BREWER (TAG#35K) AND SHAKE MACHINE (TAG#122) TO DISCHARGE INTO EXISTING FLOOR SINK (EX. FS). PROVIDE AIR GAP PER LOCAL CODES. DO NOT COMBINE THE INDIRECT DRAIN LINES. EXISTING FLOOR SINK CONNECTION TO GREASE WASTE LINE AND EXISTING VENT PIPE TO REMAIN AS IS.

10 ROUTE NEW INDIRECT WASTE LINE FROM HOT FOOD WELL (TAG#47N) TO EXISTING FLOOR SINK. PROVIDE AIR GAP PER LOCAL CODE. EXISTING FLOOR SINK CONNECTION TO EXISTING GREASE WASTE LINE AND EXISTING VENT PIPE TO REMAIN AS IS.

EXISTING GREASE INTERCEPTOR 13



TRUE NORTH PLAN

1 PLUMBING SANITARY FLOOR PLAN

1/4" = 1'-0"

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PLUMBING SANITARY FLOOR PLAN

SHEET: P101

WATER AND GAS GENERAL NOTES:

A. EXISTING PLUMBING FIXTURES, EQUIPMENT, AND ASSOCIATED WATER, DRAIN, AND GAS CONNECTIONS TO REMAIN AS IS, UNLESS OTHERWISE NOTED.

B. CONTRACTOR TO FIELD VERIFY CONDITION, LOCATION, AND CONNECTIONS OF ALL EXISTING EQUIPMENT PRIOR TO START OF WORK. REPORT ANY DISCREPANCIES TO ENGINEER.

C. REPLACE OR MODIFY CONNECTIONS ONLY WHERE INDICATED ON DRAWINGS OR REQUIRED FOR PROPER OPERATION OF EXISTING EQUIPMENT.

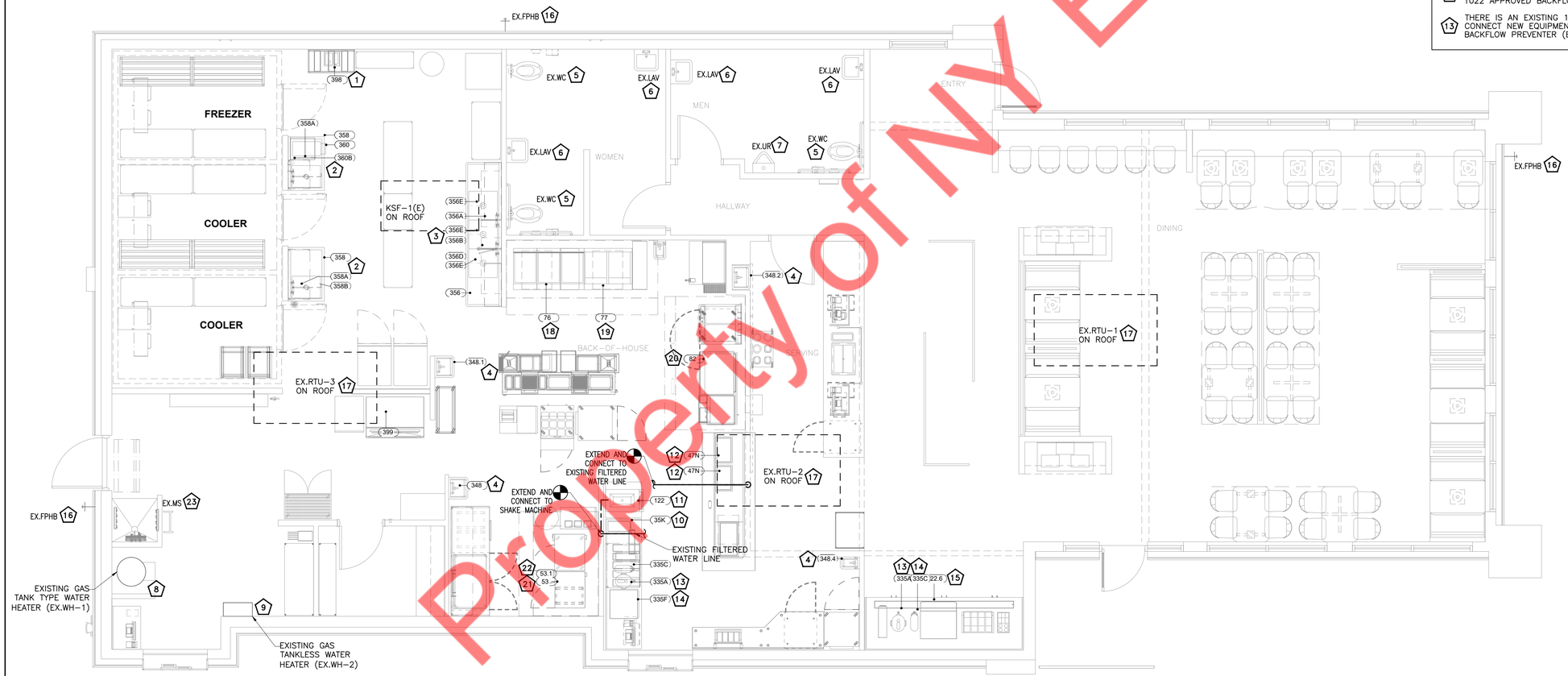
D. NO HOT WATER FIXTURE HAS BEEN ADDED OR REMOVED. HOT WATER DEMAND IS UNAFFECTED BY THE ALTERATION.

WATER AND GAS KEYED NOTES:

14. THERE IS AN EXISTING 1/2" FW CONNECTION NEXT TO ICE TEA DISPENSER (TAG#35C). CONNECT NEW EQUIPMENT TO OLD FILTER WATER CONNECTION. PROVIDE 1022 APPROVED BACKFLOW PREVENTER (BFP-2) ON THE WATER LINE BEFORE CONNECTING TO EQUIPMENT.
15. THERE IS AN EXISTING 1/2" FW CONNECTION NEXT TO SODA DISPENSER (TAG#22.6). CONNECT NEW EQUIPMENT TO OLD FILTER WATER CONNECTION. PROVIDE 1024 APPROVED BACKFLOW PREVENTER (BFP-1) ON THE WATER LINE BEFORE CONNECTING TO EQUIPMENT.
16. EXISTING HOSEBIBB (EX.FPHB) AND ASSOCIATED COLD WATER PIPING TO REMAIN AS IS.
17. EXISTING ROOFTOP UNIT (RTU) AND ASSOCIATED GAS PIPING TO REMAIN AS IS.
18. THERE IS AN EXISTING GAS CONNECTION BEHIND FRYER BATTERY (TAG#76). RECONNECT NEW EQUIPMENT TO OLD GAS CONNECTION.
19. THERE IS AN EXISTING GAS CONNECTION BEHIND FRYER BATTERY (TAG#77). RECONNECT NEW EQUIPMENT TO OLD GAS CONNECTION.
20. THERE IS AN EXISTING GAS CONNECTION BEHIND COUNTERTOP GRIDDLE (TAG#82). RECONNECT NEW EQUIPMENT TO OLD GAS CONNECTION.
21. THERE IS AN EXISTING GAS CONNECTION BEHIND DOUBLE CONVECTION OVEN (TAG#53). RECONNECT NEW EQUIPMENT TO OLD GAS CONNECTION.
22. THERE IS AN EXISTING GAS CONNECTION BEHIND SINGLE CONVECTION OVEN (TAG#53.1). RECONNECT NEW EQUIPMENT TO OLD GAS CONNECTION.
23. EXISTING MOP SINK (EX.MS) AND ASSOCIATED COLD AND HOT WATER TO REMAIN AS IS.

WATER AND GAS KEYED NOTES:

1. EXISTING WATER AND FILTERED WATER CONNECTIONS TO EQUIPMENT (TAG#398) SODA SYSTEM TO REMAIN AS IS.
2. CONTRACTOR TO REPLACE EXISTING FAUCETS FOR 1-COMP SINK WITH NEW FAUCET (TAG #56A). RECONNECT NEW FAUCET TO EXISTING HOW & COLD WATER CONNECTIONS. REFER TO PLUMBING FIXTURE SCHEDULE FOR FAUCET MAKE & MODEL.
3. CONTRACTOR TO REPLACE EXISTING FAUCETS FOR 3-COMP SINK WITH NEW FAUCET (TAG #56A). RECONNECT NEW FAUCET TO EXISTING HOW & COLD WATER CONNECTIONS. REFER TO PLUMBING FIXTURE SCHEDULE FOR FAUCET MAKE & MODEL.
4. EXISTING HAND SINK (TAG#348,348.1,348.2,348.3,348.4) AND ASSOCIATED HOT AND COLD WATER CONNECTIONS TO REMAIN AS IS.
5. EXISTING WATER CLOSET (EX.WC) AND ASSOCIATED COLD WATER CONNECTION TO REMAIN AS IS. CONTRACTOR TO FIELD VERIFY WHETHER WATER CLOSET HAS BEEN CHANGED FROM FLUSH VALVE TO FLUSH TANK. VERIFY WITH OWNER/ARCHITECT.
6. EXISTING LAVATORY (EX.LAV) AND ASSOCIATED COLD AND HOT WATER TO REMAIN AS IS.
7. EXISTING URINAL (EX.UR) AND ASSOCIATED COLD WATER PIPE REMAIN AS IS.
8. EXISTING WATER HEATER (EX. WH-1) AND ASSOCIATED COLD WATER, HOT WATER, HOT WATER RETURN PIPING, AND EXPANSION TANK AND RECIRCULATION PUMP TO REMAIN AS IS.
9. EXISTING WATER HEATER (EX. WH-2) AND ASSOCIATED COLD WATER, HOT WATER, HOT WATER RETURN PIPING, AND EXPANSION TANK AND RECIRCULATION PUMP TO REMAIN AS IS.
10. THERE IS AN EXISTING 1/2" FW CONNECTION NEXT TO COFFEE BREWER (TAG #35K). CONNECT NEW EQUIPMENT TO OLD FILTER WATER CONNECTION. PROVIDE 1022 APPROVED BACKFLOW PREVENTER (BFP-2) ON THE WATER LINE BEFORE CONNECTING TO EQUIPMENT.
11. PROVIDE 1/2" FILTERED WATER CONNECTION TO SHAKE MAKER (TAG#122) WITH ASSE 1022 APPROVED BACKFLOW PREVENTER (BFP-2).
12. PROVIDE 1/2" FILTERED WATER CONNECTION TO HOT FOOD WELL (TAG #47N) WITH ASSE 1022 APPROVED BACKFLOW PREVENTER (BFP-2).
13. THERE IS AN EXISTING 1/2" FW CONNECTION NEXT TO ICE TEA DISPENSER (TAG#335A). CONNECT NEW EQUIPMENT TO OLD FILTER WATER CONNECTION. PROVIDE 1022 APPROVED BACKFLOW PREVENTER (BFP-2) ON THE WATER LINE BEFORE CONNECTING TO EQUIPMENT.



N TRUE N PLAN

1 PLUMBING WATER AND GAS FLOOR PLAN

1/4" = 1'-0"

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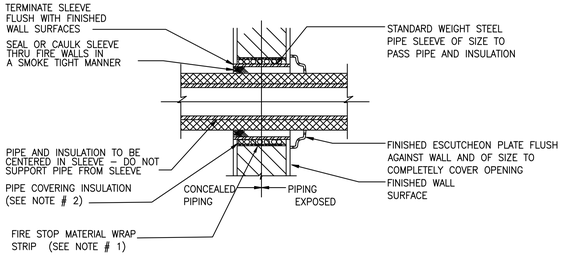
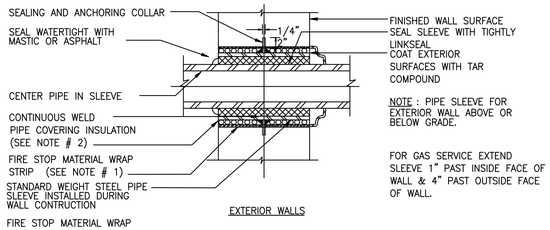
PLUMBING WATER AND GAS FLOOR PLAN

SHEET: P102



INTERIOR WALLS

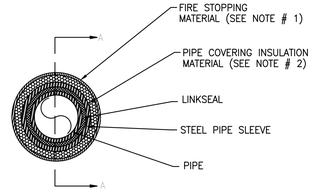


EXTERIOR WALLS

NOTE : PIPE SLEEVE FOR EXTERIOR WALL ABOVE OR BELOW GRADE.

FOR GAS SERVICE EXTEND SLEEVE 1" PAST INSIDE FACE OF WALL & 4" PAST OUTSIDE FACE OF WALL.

PIPE SLEEVE THRU WALL SECTION

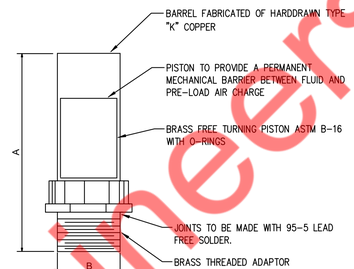


PIPE SLEEVE VIEW

NOTES:

1. FIRESTOP MATERIAL WRAP STRIP SHALL BE ¼" THICK INTUMESCENT ELASTOMERIC MATERIAL FACED ON ONE SIDE WITH ALUMINUM FOIL SUPPLIED IN 2 IN. WIDE STRIPS AND WRAP AROUND THE PIPE AS PER UL MATERIAL LISTED3M COMPANY FS–195+ OR FILL CAVITY WITH CAULK OR SEALANT MIN. ¼" DIA. CONTINUOUS BEAD APPLIED TO THE WRAP STRIP/WALL INTERFACE AND TO THE EXPOSED OF THE WRAP STRIP LAYER APPROX. 3/4" FROM WALL SURFACE. AS PER UL LISTED 3M COMPANY CP25WB+, IC 15WB+, FIRE DAM 150+CAULK.
2. PIPE COVERING INSULATION SHALL BE 2" THICK HOLLOW CYLINDRICAL HEAVY DENSITY GLASS FIBER UNITS JACKETED ON THE OUTSIDE WITH AN ALL SERVICE JACKETED, AS PER UL CLASSIFICATION AND MARKING WITH A FLAME SPREAD INDEX OF 25 OR LESS AND A SMOKE DEVELOPED INDEX OF 50 OR LESS MAY BE USED.

1 P201 — PIPE SLEEVE THRU WALL SECTION
N.T.S



PIPE SIZE	P.D.I. SYMBOL	FIXTURE UNIT RATINGS	A SIZE	B SIZE
1/2"	A	1 – 11	5"	1/2"
3/4"	B	12 – 32	5"	3/4"
1"	C	33 – 60	7"	1"
1–1/4"	D	61 – 113	7"	1–1/4"
1–1/2"	E	114 – 154	9"	1–1/2"
2"	F	155 – 330	9"	2"

NOTE: LOCATE ONE FOR EACH BANK OF FLUSHOMETER FIXTURES AT LAST FIXTURE PROVIDE A STAINLESS STEEL ACCESS DOOR FOR EACH SUFFICIENT IN SIZE TO ALLOW REPLACEMENT OF ARRESTOR AT A FUTURE DATE.

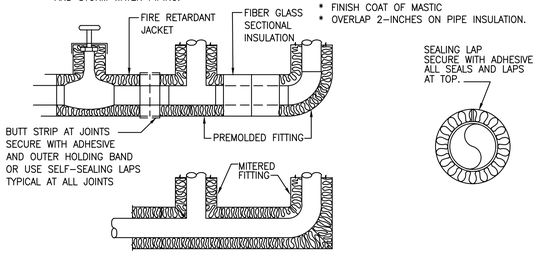
2 P201 — WATER HAMMER ARRESTOR DETAIL
N.T.S

CONCEALED VALVES AND FITTINGS

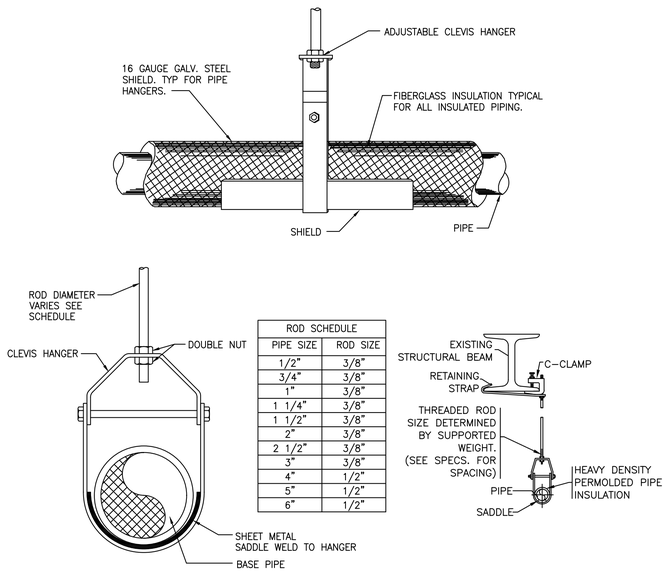
- WRAP WITH 1–INCH THICK, 1–POUND DENSITY TO REQUIRED PIPE INSULATION THICKNESS
- SECURE WITH WIRE OR TAPE.
- VAPOR SEAL COLD WATER, CHILLED WATER AND STORM WATER PIPING.

CONCEALED VALVES AND FITTINGS

- PREMOLDED FIBER GLASS OR RADIAL MITERED PIPE INSULATION
- SKIM COAT OF INSULATION CEMENT
- COAT OF MASTIC
- WRAP WITH FIBER GLASS REINFORCING CLOTH.
- FINISH COAT OF MASTIC
- OVERLAP 2–INCHES ON PIPE INSULATION.



3 P201 — INSULATION OF PIPING, VALVES AND FITTINGS FOR EXPOSED AND CONCEALED LOCATION
N.T.S



ROD SCHEDULE	
PIPE SIZE	ROD SIZE
1/2"	3/8"
3/4"	3/8"
1"	3/8"
1 1/4"	3/8"
1 1/2"	3/8"
2"	3/8"
2 1/2"	3/8"
3"	3/8"
4"	1/2"
5"	1/2"
6"	1/2"

4 P201 — HANGER DETAIL
N.T.S

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Bojangles

ISSUE BLOCK	
11-25-25	IFC SET

PROTOTYPE:	Plan 8
GUIDE SET VERSION:	GR 24.1
DOCUMENT DATE:	11-25-25
DRAWN BY:	NYE
CHECKED BY:	NYE
JOB NUMBER:	25-4320

PLUMBING DETAILS

SHEET: P201

EXISTING RESTROOM PLUMBING FIXTURE SCHEDULE											
TAG	QUANTITY OF FIXTURES	DESCRIPTION	MFG.	MODEL	ROUGH-IN SIZE						REMARKS
					CW	HW	FW	SAN	GW	VENT	
EX.FD	2	EXISTING FLOOR DRAIN PRIMER			–	–	–		E	E	
EX.WC	3	EXISTING WATER CLOSET			E	–	–	E	–	E	CONTRACTOR TO FIELD VERIFY WHETHER WATER CLOSET HAS BEEN CHANGED FROM FLUSH VALVE TO FLUSH TANK. VERIFY WITH OWNER/ARCHITECT.
EX.UR	1	EXISTING URINAL			E	–	–	E	–	E	
EX.LAV	4	EXISTING LAVATORY			E	E	–	E		E	
EX.MS	1	EXISTING MOP SINK			E	–	–	–	E	E	
EX.FPHB	3	EXISTING HOSE BIB			E	–	–		–		

EXISTING/RELOCATED KITCHEN EQUIPMENT FIXTURE SCHEDULE											
TAG	QUANTITY OF FIXTURES	DESCRIPTION	MFG.	MODEL	ROUGH-IN SIZE						REMARKS
					CW	HW	FW	SAN	GW	VENT	
322.5	1	ICE MAKER, CUBE STYLE			–	–	–	EX.FS	–	–	
335A	2	ICED TEA DISPENSER					1/2"		EX.FS		PROVIDE WITH ASSE 1022 APPROVED BACK FLOW PREVENTER.
335C	2	ICED TEA DISPENSER					1/2"		EX.FS		PROVIDE WITH ASSE 1022 APPROVED BACK FLOW PREVENTER.
335F	1	SODA DISPENSER					1/2"		EX.FS		PROVIDE WITH ASSE 1022 APPROVED BACK FLOW PREVENTER.
348	1	HAND SINK			1/2"	1/2"			1-1/2"	1-1/2"	
356	1	3-COMPARTMENT SINK			3/4"	3/4"			EX.FS		
358	2	ONE COMPARTMENT SINK			3/4"	3/4"			EX.FS		
360	1	HOT WATER DISPENSER					1/2"		EX.FS		PROVIDE WITH ASSE 1012 APPROVED BACK FLOW PREVENTER.
360B	1	WATER FILTER			3/4"						EXISTING WATER FILTER (TAG#360B) TO REMAIN. CONTRACTOR TO FIELD VERIFY CAPACITY AND CONDITION PRIOR TO REUSE.
398	1	SODA SYSTEM					1/2"		EX.FS		PROVIDE WITH ASSE 1022 APPROVED BACK FLOW PREVENTER.
399	1	ICE MACHINE WITH ICE BIN					1/2"		EX.FS		PROVIDE WITH ASSE 1012 APPROVED BACK FLOW PREVENTER.

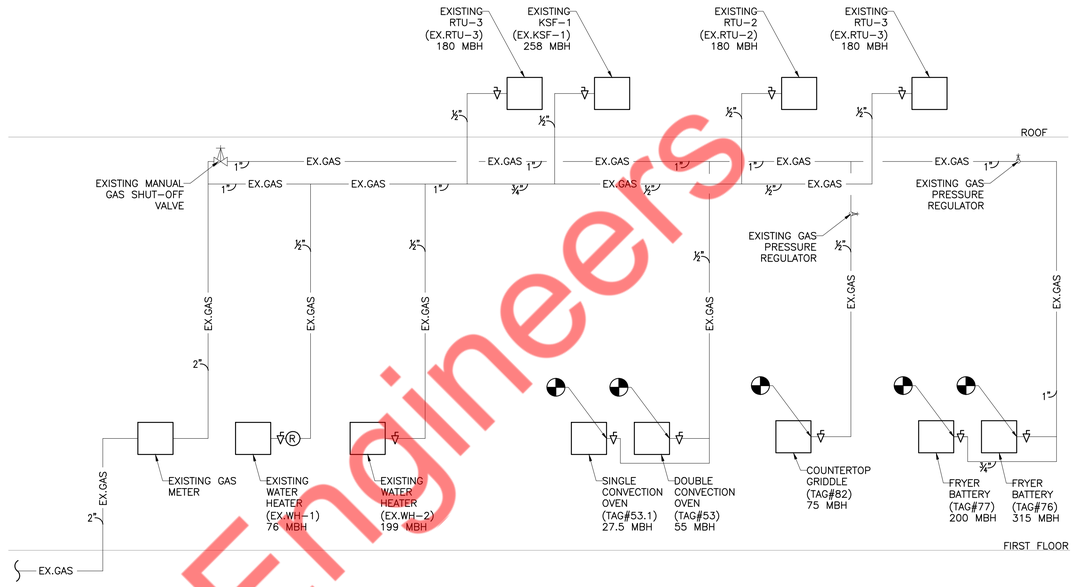
NEW KITCHEN EQUIPMENT FIXTURE SCHEDULE											
TAG	QUANTITY OF FIXTURES	DESCRIPTION	MFG.	MODEL	ROUGH-IN SIZE						REMARKS
					CW	HW	FW	SAN	GW	GAS	
21	1	DROP-IN ICE BIN	KROWNE	D2712	–	–	–	EX.FS	–	–	
22.6	1	SODA DISPENSER	BY VENDOR	–			(E)1/2"		EX.FS		PROVIDE WITH ASSE 1022 APPROVED BACK FLOW PREVENTER.
35K	1	COFFEE BREWER	BY VENDOR				1/2"		EX.FS		PROVIDE WITH ASSE 1022 APPROVED BACK FLOW PREVENTER.
47N	2	HOT FOOD WELL	MARSHALL AIR	CZ3K-1ACWN			1/2"				
53	1	DOUBLE CONVECTION OVEN	BLODGETT	DFG-50-DOUBLE						(2) 3/4"	GAS LOAD =55 CFH.
53.1	1	SINGLE CONVECTION OVEN	BLODGETT	DFG-50-SINGLE						3/4"	GAS LOAD =27.5 CFH.
56A	1	WALL MOUNT FAUCET	T&S BRASS	B-0231-CR	1/2"	1/2"					FOR EXISTING 3-COMP SINK (P.356)
56B	1	PRE-RINSE FAUCET ASSEMBLY	T&S BRASS	B-0113-C	1/2"	1/2"					FOR EXISTING 3-COMP SINK (P.356)
56D	1	ADD-ON FAUCET FOR PRE-RINSE	T&S BRASS	B-0156-CR	1/2"	1/2"					FOR EXISTING 3-COMP SINK (P.356)
56E	3	LEVER WASTE	T&S BRASS	B-3950				1-1/2"			FOR EXISTING 3-COMP SINK (P.356)
58A	2	WALL MOUNT FAUCET	T&S BRASS	B-0231-CR	1/2"	1/2"					FOR EXISTING 1-COMP SINK (P.358)
58B	2	LEVER WASTE	T&S BRASS	B-3950				1-1/2"			FOR EXISTING 1-COMP SINK (P.358)
76	1	FRYER BATTERY	PITCO	SSH75-3FD						(3) 3/4"	GAS CONNECTION. GAS LOAD =105 CFH.
77	1	FRYER BATTERY	PITCO	SSH60W-2FD						(2) 3/4"	GAS CONNECTION. GAS LOAD =100 CFH.
82	1	COUNTERTOP GRIDDLE	WELLS	WG-3036G						3/4"	GAS CONNECTION. GAS LOAD =75 CFH.
122	1	SHAKE MACHINE	TAYLOR	490K	–	–	1/2"	–	EX.FS	–	PROVIDE WITH ASSE 1022 APPROVED BACK FLOW PREVENTER.

EXISTING HOT WATER HEATER SCHEDULE (TANK TYPE)						
TAG No.	MAX. INPUT (MBH)	GALLONS	TYPE	GPH @ 80 DEG F	MANUFACTURER & MODEL NO.	REMARKS
EX.WH-1	76	50	GAS STORAGE TANK	87	AO SMITH BTX-80	-EXISTING WATER HEATER (EX. WH-1) TO REMAIN AS IS. CONTRACTOR SHALL FIELD VERIFY UNIT LOCATION, CONDITION, AND CAPACITY. VERIFY PROPER OPERATION AND REPORT ANY DEFICIENCIES TO ENGINEER PRIOR TO FINAL APPROVAL.

EXISTING HOT WATER HEATER SCHEDULE (TANK LESS)					
TAG No.	MAX. INPUT (MBH)	TYPE	GPM @ 80 DEG F	MANUFACTURER & MODEL NO.	REMARKS
EX.WH-2	199	GAS TANKLESS	4.7	RINNAI RUC98I	-EXISTING WATER HEATER (EX. WH-1) TO REMAIN AS IS. CONTRACTOR SHALL FIELD VERIFY UNIT LOCATION, CONDITION, AND CAPACITY. VERIFY PROPER OPERATION AND REPORT ANY DEFICIENCIES TO ENGINEER PRIOR TO FINAL APPROVAL.

BACKFLOW PREVENTER SCHEDULE			
TAG	LOCATION	MODEL	ASSE
BFP-1	ICE MAKER, ICE CUBE MAKER, HOT WATER DISPENSER WITH FILTER	WATTS LF9D DCV	1012
BFP-2	SODA DISPENSER, ICE & SODA DISPENSER, COFFEE MACHINE, SHAKE MAKER	WATTS SD-3 DCV	1022

NOTE:
1. VERIFY BACKFLOW VALVE REQUIREMENTS FOR APPROVAL FOR ALL EQUIPMENT WITH AUTHORITIES HAVING JURISDICTIONS PRIOR TO INSTALLATION.
2. ENSURE ISOLATION VALVE BEFORE AND AFTER BFP FOR MAINTENANCE.



1 GAS RISER DIAGRAM
N.T.S.

GAS LOAD SUMMARY		
EQUIPMENT	QUANTITY	MBH LOAD
DOUBLE CONVECTION OVEN (TAG#53)	1	55
SINGLE CONVECTION OVEN (TAG#53.1)	1	27.5
FRYER BATTERY OF 3 (TAG#76)	1	315
FRYER BATTERY OF 2 (TAG#77)	1	200
COUNTERTOP GRIDDLE (TAG#82)	1	75
EX.RTU-1	1	180
EX.RTU-2	1	180
EX.RTU-3	1	180
EX.KSF-1	1	258
EX.WH-1	1	76
EX.WH-2	1	199
TOTAL LOAD		1746

NOTE: BEFORE ALTERATION TOTAL GAS LOAD WAS 1904 MBH. REVISED TOTAL GAS LOAD IS 1746 MBH. CONTRACTOR TO VERIFY EXISTING GAS METER AND PIPING CAPACITY AND MAKE MODIFICATIONS AS REQUIRED.

GAS PIPE SIZING PER – INTERNATIONAL FUEL GAS CODE(IFGC 2023), TABLE 402.4(2).
GAS INLET PRESSURE– LESS THAN 2 PSI.
PRESSURE DROP– 0.5 IN. W.C.
SPECIFIC GRAVITY– 0.60
EQUIVALENT LENGTH OF PIPE = 175 FT

NATURAL GAS PIPING SYSTEM
PROVIDE A COMPLETE GAS PIPING SYSTEM TO SERVE GAS EQUIPMENT FURNISHED BY OTHERS, AS NOTED ON THE DRAWINGS. PROVIDE EITHER THREADED STEEL OR MALLEABLE IRON PIPE WITH MALLEABLE FITTINGS OR WELDED STEEL. PROVIDE ALL UNIONS, SHUT-OFF VALVES AND DIRT LEGS REQUIRED BY IPC 2023 AND GOVERNING LOCAL CODES AND AT EACH GAS APPLIANCE CONNECTION. PROVIDE ALL TESTS, METERS, INSPECTIONS, HANGERS AND EQUIPMENT CONNECTIONS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.

NOTES:

1. GAS PIPING TO BE SCHEDULE 40 STEEL PIPE W/125 CAST IRON SCREWD FITTINGS
2. GAS SYSTEM TO BE INSTALLED BY QUALIFIED LICENSED CONTRACTOR.
3. VERIFY ALL EQUIPMENT BTUS'S PRIOR TO INSTALLATION. ADJUST PIPE SIZE ACCORDING TO INTERNATIONAL FUEL GAS CODE 2018, TABLE 402.4(2).
4. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF EXISTING GAS METER LOCATION, PRESSURE AND CAPACITY. UPGRADE IF REQUIRED.
5. CONTRACTOR SHALL VERIFY ACTUAL GAS PRESSURE AND LONGEST LENGTH OF RUN FROM METER TO FARTHEST APPLIANCE PRIOR TO INSTALLATION AND NOTIFY ENGINEER IF CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLAN.

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PLUMBING SCHEDULES

SHEET: P301