MECHANICAL SYMBOLS LIST

AC-1) (TXF-1)	EQUIPMENT SYMBOL	<u>MECHA</u>	NICAL ABBREVIATIONS
		AFF	ABOVE FINISHED FLOOR
•	POINT OF NEW CONNECTION TO EXISTING	AL	ACOUSTIC LINING
	AIR DEVICES	BOD	BOTTOM OF DUCT
	AIR DEVICES	BOE	BOTTOM OF EQUIPMENT
\bowtie	CEILING DIFFUSER SUPPLY	CDS	CEILING DIFFUSER SUPPLY
		CDR	CEILING DIFFUSER RETURN
	CEILING DIFFUSER RETURN	CFM	CUBIC FEET OF AIR PER MINUTE
ΠI	JCT ACCESSORIES -	COP	COEFFICIENT OF PERFORMANCE
	T ACCESSONIES	CP	CONDENSATE PUMP
┌ ^┺╻, ↑ .		CD	CONDENSATE DRAIN PIPE
	VOLUME DAMPER W/ ACCESS DOOR	DN	DOWN
TVT AD T		EER	ENERGY EFFICIENCY RATIO
CONT	ROLS AND SENSORS	EF	EXHAUST FAN
<u></u>	TUEDIOCTAT	FC	FLEXIBLE CONNECTION
<u> </u>	THERMOSTAT	IEER	INTEGRATED ENERGY
	DUCTWORK	ILLK	EFFICIENCY RATIO
	AIR DUCT W / 1.5" ACQUISTICAL LINING	VD	VOLUME DAMPER
	AIR DUCT W/ 1.5" ACOUSTICAL LINING	AHU	AIR HANDLING UNIT
<u> </u>	FLEXIBLE DUCT	V.I.F.	VERIFY IN FEILD
FC FC	FLEXIBLE CONNECTION	S.A.E.	SAME AS EXISTING
24X12	RECTANGULAR DUCT (WIDTH X DEPTH)	CU	CONDENSER UNIT
ø12	ROUND DUCT (DIAMETER)		
<u></u>	ROUND DUCT CROSS SECTION		
	SUPPLY AIR RECTANGULAR DUCT CROSS SECTION		

	MECHANICAL DRAWING LIST
M-001	MECHANICAL GENERAL NOTES, SYMBOLS LIST & ABBREVIATIONS
M-002	MECHANICAL SPECIFICATIONS
M-100	MECHANICAL FLOOR PLAN & PARTIAL ROOF PLAN
M-500	MECHANICAL DETAILS
M-600	MECHANICAL SCHEDULES
M-700	T-24 REPORT (WALK-IN-COOLER)

RETURN AIR RECTANGULAR DUCT

CROSS SECTION



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. 2022 CALIFORNIA BUILDING CODE
- 3. 2022 CALIFORNIA MECHANICAL CODE
- C. 2022 CALIFORNIA PLUMBING CODE
- D. 2022 CALIFORNIA FIRE CODE
- E. 2022 CALIFORNIA ELECTRICAL CODE
- F. 2022 CALIFORNIA ENERGY CODE.

CALIFORNIA BUILDING DEPARTMENT NOTES

ALL WORK SHALL COMPLY WITH APPLICABLE SECTIONS OF THE CALIFORNIA BUILDING CODE 2022, AND ALL AMENDMENTS AND RULES AND REGULATIONS OF THE DEPARTMENT OF BUILDINGS TO DATE.

- ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.
- 2. VENTILATION FOR ALL AREA SHALL COMPLY WITH CALIFORNIA ENERGY CODE 2022, SECTION 120.1—REQUIREMENTS FOR VENTILATION AND INDOOR AIR QUALITY.
- 3. MINIMUM TEMPERATURE TO BE MAINTAINED IN OCCUPIED SPACES DURING HEATING SEASON: 68 DEG. FAHRENHEIT.
- 4. 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.
- 5. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE—RATED WALL AND SMOKE WALL CONSTRUCTION AND LOCATION.
- 6. 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 EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
- 7. TESTS OF MECHANICAL SYSTEMS SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE CALIFORNIA MECHANICAL CODE 2022:
- A. VENTILATION SYSTEM BALANCING CALIFORNIA MECHANICAL CODE 2022 402
- 8. THE FOLLOWING WORK ITEMS, COMPONENTS, MATERIALS, CAPACITIES, ETC. SHALL COMPLY WITH THE REFERENCED CODE OR STANDARD:
- A. STANDARDS OF HEATING CALIFORNIA BUILDING CODE 2022 1203
- MECHANICAL CODE 2022 603 C. AIR INTAKES, EXHAUSTS AND RELIEF — CALIFORNIA

B. DUCT CONSTRUCTION AND INSTALLATION— CALIFORNIA

- MECHANICAL CODE 2022 -502.

 D. AIR FILTERS CALIFORNIA MECHANICAL CODE 2022 401

 (FILTERS SHALL BE A MINIMUM OF MERV 13 AS REQUIRED
- 9. PORTIONS OF SUPPLY—AIR AND RETURN—AIR DUCTS CONVEYING HEATED OR COOLED AIR LOCATED IN ONE OR MORE OF THE FOLLOWING SPACES SHELL BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R—8:

BY CENC 120.1(C))

- 1.OUTDOOR; OR
 2.IN A SPACE BETWEEN THE ROOF AND AN INSULATED CEILING;
 OR
 3.IN A SPACE DIRECTLY UNDER A ROOF WITH FIXED VENTS OR
 OPENING TO THE OUTSIDE OR UNCONDITIONED SPACE; OR
 4.IN AN UNCONDITIONED CRAWLSPACE; OR
 5.IN OTHER UNCONDITIONED SPACES.
- 10. ALL MECHANICAL EQUIPMENT SHALL BE TESTED BY A CALIFORNIA CERTIFIED ACCEPTANCE TEST TECHNICIAN.

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. DUCTWORK AND PIPING IS SHOWN DIAGRAMMATICALLY AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS. THE CONTRACTOR SHALL MAKE ALLOWANCE IN PRICING FOR ROUTING OF DUCTWORK AND PIPING TO AVOID OBSTRUCTIONS. EXACT LOCATIONS ARE SUBJECT TO APPROVAL OF ARCHITECT. COORDINATION WITH THE EXISTING SERVICES, INCLUDING THOSE OF OTHER TRADES IS REQUIRED.
- 8. 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.
- 9. 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.
- 10. 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).
- 11. WHERE PENETRATIONS THROUGH FIRE RATED WALLS ARE NOT FIRE PROOFED THIS CONTRACTOR SHALL BE RESPONSIBLE TO SEAL SAME TO MAINTAIN THE RATED INTEGRITY.
- 12. 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.
- 13. 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.
- 14. 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.
- 15. 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.
- 16. MATERIALS AND WORKMANSHIP, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
- 17. ALL EQUIPMENT SHALL BE PROVIDED WITH ONE YEAR WARRANTY PARTS AND LABOR AND FIVE YEARS ON COMPRESSORS. WARRANTY PERIOD BEGINS UPON PROJECT ACCEPTANCE
- 18. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS.
- 19. 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.
- 20. 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.

- 21. SUBMIT SHOP DRAWING OF ALL WORK WHICH MUST BE APPROVED BY THE ARCHITECT AND ENGINEER BEFORE WORK COMMENCES.
- 22. 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.
- 23. INSURANCE: IN ACCORDANCE WITH BUILDING REQUIREMENTS THE CONTRACTOR SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER.
- 24. 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.
- 25. 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.
- 26. WHERE A CONFLICT EXISTS BETWEEN THE DRAWINGS, THE SPECIFICATIONS OR ANY OTHER CONSTRUCTION DOCUMENT, THE ONE WITH THE MOST STRINGENT REQUIREMENT(S) SHALL

DEFINITION:

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

SCOPE OF WORK

- 1. 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.
- 2.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.
- 3.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.

LUKE'S LOBSTER

ISSUE FOR DESCRIPTION:

CONSTRUCTION DOCUMENT

ISSUE DATE:

05/24/2024

REVISIONS: NO. DESCRIPTION DATE CITY COMMENTS 06/11/24 CLIENT UPDATES 06/11/24 CITY COMMENTS 07/11/24 CITY COMMENTS 07/22/24 I CITY COMMENTS 07/29/24 CITY COMMENTS 08/13/24 **CLIENT UPDATES** 09/10/24

DRAWN BY:

MECHANICAL GENERAL NOTES, SYMBOL LIST & ABBREVIATIONS

SHEET NUMBER:

HVAC NOTES

SECTION 230593 — TESTING, ADJUSTING, AND BALANCING FOR HVAC

- 1.1 SUMMARY
- A. TESTING, ADJUSTING, AND BALANCING FOR THE FOLLOWING:
 - 1. AIR SYSTEMS: CONSTANT

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 SJECTION 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

SECTION 233713 — DIFFUSERS, REGISTERS, AND GRILLES

1.1 PRODUCTS

- A. DIFFUSERS, REGISTERS 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.
- b. HART & C
- d. **METALAIRE, INC.**
- e. NAILOR INDUSTRIES INC.
- f. RUSKIN
- 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 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:

UNCONDITIONED SPACES WITHIN BUILDING: R-8
WITHIN BUILDING ENVELOPE ASSEMBLY: R-8
OUTSIDE OF BUILDING: R-8

1.4 ITEMS NOT INSULATED:

- 1. FIBROUS-GLASS DUCTS.
- 2. METAL DUCTS WITH DUCT LINER OR SUFFICIENT THICKNESS TO COMPLY WITH ENERGY CODE ANDASHRAE/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.

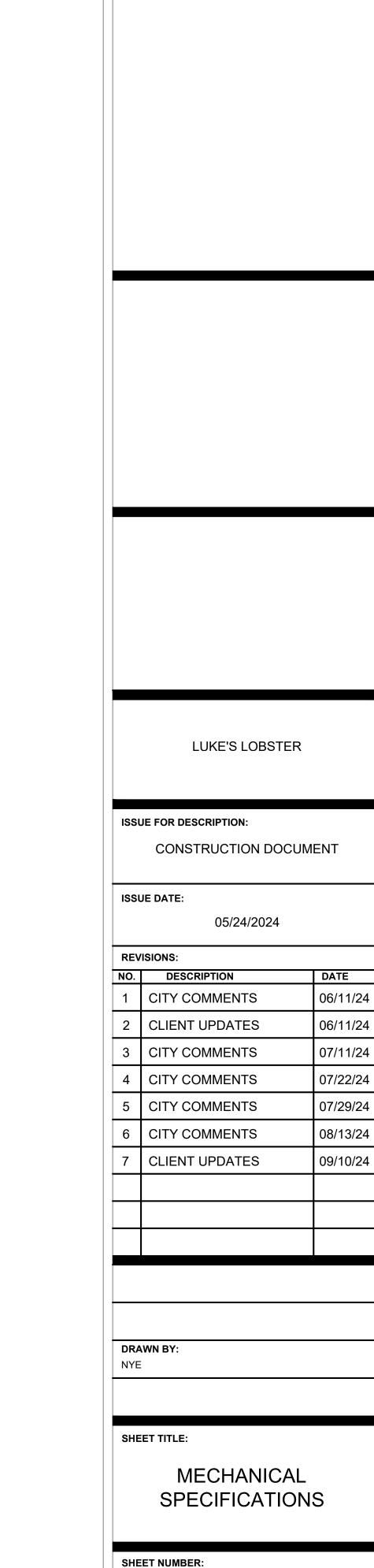
1.5 PRODUCTS

- 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



MECHANICAL GENERAL NOTES:

- A. ALL WORK SHALL COMPLY WITH ALL LOCAL CODE & STATE CODE & AUTHORITIES HAVING JURISDICTION.
- B. COORDINATE LOCATIONS AND SIZES OF ROOF OPENINGS WITH OWNER AND STRUCTURAL ENGINEERS.
- C. EQUIPMENT SIZES, DIMENSIONS AND REQUIRED CONNECTIONS SHALL BE VERIFIED WITH THE ACTUAL EQUIPMENT SELECTED VENDOR DRAWINGS BEFORE FABRICATION OF DUCTWORK, PIPING ETC.
- D. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS FOR ALL HVAC BASED ON ACTUAL EQUIPMENT SELECTED PRIOR TO INSTALLATION.
- ON ACTUAL EQUIPMENT SELECTED PRIOR TO INSTALLATION.

 E. CONTRACTOR SHALL COORDINATE EQUIPMENT WEIGHTS AND SUPPORTS BASED ON ACTUAL EQUIPMENT SELECTED.
- F. TEST AND BALANCE AIR SYSTEMS. PROVIDE REPORT TO G.C AND OWNER.
- G. PROVIDE MINIMUM R-8 INSULATION (INTERNAL FOR EXPOSED DUCTS AND EXTERNAL FOR CONCEALED DUCTS) FOR SUPPLY & RETURN AIR DUCTS. PROVIDE ACOUSTIC INSULATION ON MAIN SUPPLY AND RETURN DUCTS UP TO 10 FT. FROM HVAC UNIT. H. CONTRACTOR TO FIELD VERIFY EXISTING DUCTWORK, ASSOCIATED ACCESSORIES AND
- EXISTING HVAC EQUIPMENT. ALL EXISTING DUCTWORK, ASSOCIATED ACCESSORIES AND EXISTING HVAC EQUIPMENT TO BE REUSED.
- I. ALL ITEMS TO BE RE-USED OR RELOCATED SHALL BE CLEANED, REPAIRED, AND RESTORED TO LIKE NEW CONDITION PRIOR TO RE-USE.
- K. PROVIDE FIRE OR FIRE+SMOKE DAMPER WHEREVER DUCTS ARE CROSSING FIRE/SMOKE RATED WALLS/BARRIERS/SLABS. COORDINATE WITH ARCHITECTURAL DRAWING FOR FIRE RATING OF THE WALLS.
- L. PROVIDE NECESSARY PROTECTIVE DEVICES WHERE REQUIRED AND IN STRICT ACCORDANCE WITH OSHA AND ICRA REGULATIONS.

 M. KEEP ALL ADJOINING AREAS ADJACENT TO THE WORK AREAS CLEAN AND FREE OF
- M. KEEP ALL ADJOINING AREAS ADJACENT TO THE WORK AREAS CLEAN AND FREE OF DEBRIS.
- N. MATERIAL FROM EXISTING SYSTEM WHICH IS RENDERED USELESS SHALL BE REMOVED AND DISPOSED OF OFF SITE.

- MECHANICAL FLOOR PLAN KEY NOTES
- EXISTING AIR HANDLING UNIT TO REMAIN ALONG WITH REFRIGERANT PIPING AND ALL ACCESSORIES AND SUPPORTS. VERIFY THE EXACT LOCATION ON FIELD. CLEAN AND REFURBISH TO "LIKE NEW" CONDITION. REPAIR/REPLACE ANY ACCESSORIES AS REQUIRED TO PROVIDE A FULLY FUNCTIONING UNIT. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO BID AND START OF WORK. EXISTING HVAC UNITS THAT ARE ALLOWED TO BE REUSED, MUST BE FITTED /RETROFITTED WITH LANDLORD REQUIRED CONTROLS. CONTRACTOR TO VERIFY THE EXACT LOCATION & PLACEMENT OF EXISTING HVAC UNITS WITH EXISTING STRUCTURAL ITEMS & LANDLORD INSTALLED MECHANICAL & PIPING ITEMS & ADJUST DUCTWORK ACCORDINGLY AS NECESSARY.
- 2 EXISTING MOTORIZED DAMPERS ON OUTSIDE AIR DUCT REMAIN SAME & INTERLOCK WITH RESPECTIVE AHUS.
- EXISTING T-STAT CONTROL TO REMAIN AS IS. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION & WORKING CONDITION. REPLACE AS/IF REQUIRED.
- REUSE EXISTING REMOTE TEMP. SENSORS MOUNTED IN RETURN AIR DUCT. PROVIDE NEW IF EXISTING TEMP. SENSORS ARE DAMAGED OR NOT WORKING PROPERLY.
- REUSE, CLEAN AND FLUSH THE EXISTING CONDENSATE DRAIN FOR EXISTING AHU'S. IF FOUND DAMAGED, REPLACE WITH SIMILAR KIND.
- EXISTING OUTSIDE AIR INTAKE DUCT ALONG WITH ALL ASSOCIATED DAMPER, LOUVER AND SUPPORTS TO REMAIN. CONTRACTOR TO FIELD VERIFY OUTSIDE AIR DUCT CONNECTION TO AHU-1(E) & AHU-2(E).
- 2 EXISTING EXHAUST FAN TO REMAIN & TO BE REUSED ALONG WITH ACCESSORIES & EXISTING DUCTING. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION OF EXHAUST FAN. IF DAMAGED REPLACE WITH SIMILAR KIND.

MECHANICAL FLOOR PLAN KEY NOTES

- EXISTING DUCTWORK TO REMAIN. CONTRACTOR SHALL CLEAN AND REFURBISH TO "LIKE NEW" CONDITION. VERIFY EXACT LOCATION AND SIZE IN FIELD, BALANCE CFM'S. PROVIDE A VOLUME DAMPER OR COLLAR DAMPER IF THE EXISTING ONE IS DAMAGED, PATCH AND SEAL DUCTWORK AIRTIGHT. INSPECT, PATCH, REPAIR, AND/OR REPLACE INSULATION AS REQUIRED. CONTRACTOR TO VERIFY IN FIELD PRIOR TO BID.
- EXISTING SUPPLY AIR AND RETURN AIR DIFFUSERS/GRILLES TO REMAIN. CONTRACTOR SHALL CLEAN AND REFURBISH ALL THE EXISTING DIFFUSERS/GRILLES TO "LIKE NEW" CONDITION. REPLACE WITH SIMILAR KIND IF BEYOND REPAIR/CLEAN. PROVIDE VOLUME DAMPER OR COLLAR DAMPER, VERIFY IN FIELD PRIOR TO BID.
- EXISTING SUPPLY/RETURN DIFFUSERS TO REMAIN & TO BE RELOCATED AS SHOWN. VERIFY SIZE, LOCATION AND COORDINATE WITH ARCHITECTURAL SHEETS INCLUDING REFLECTED CEILING PLAN FOR RELOCATIONS. CLEAN AND REFURBISH TO "LIKE NEW" CONDITION EXTEND/MODIFY DUCTWORK AS REQUIRED AT RELOCATED DIFFUSERS. PROVIDE VOLUME DAMPER OR COLLAR DAMPER, VERIFY IN FIELD PRIOR TO BID. EXTEND EXISTING FLEX/METAL DUCTWORK AS/IF REQUIRED DUE TO RELOCATION OF THE DIFFUSERS.
- WALK-IN COOLER, CONDENSER UNIT TO BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS. COORDINATE EXACT LOCATION FIELD AND OTHER EQUIPMENT ON THE ROOF.
- PROVIDE EXTERIOR LOUVER WITH THE BAROMETRIC RELIEF DAMPER FOR THE RELIEF OF EXTRA AIR DUE TO POSITIVE PRESSURIZATION. CONFIRM THE FINAL INSTALLATION HEIGHT AND LOCATION WITH THE OWNER/ARCHITECT OUT OF THE THREE OPTIONS MENTIONED ON THE PLANS. DO NOT BLOCK THE LOUVER/BAROMETRIC DAMPER FROM EITHER SIDES (INTERIOR/EXTERIOR). INSTALL BELOW THE DROPPED CEILING/SOFFIT LEVEL

MECHANICAL ROOF PLAN KEY NOTES

- EXISTING CONDENSING UNIT TO REMAIN ALONG WITH REFRIGERANT PIPING AND ALL ACCESSORIES AND SUPPORTS. CONTRACTOR TO FIELD VERIFY WORKING CONDITION OF EXISTING CONDENSING UNIT. CLEAN AND REFURBISH TO "LIKE NEW" CONDITION. REPAIR/REPLACE ANY ACCESSORIES AS REQUIRED TO PROVIDE A FULLY FUNCTIONING UNIT. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO BID AND START OF WORK.
- CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION OF EXISTING CONDENSING UNIT ON THE ROOF.

LUKE'S LOBSTER

ISSUE FOR DESCRIPTION:

CONSTRUCTION DOCUMENT

ISSUE DATE:

REVISIONS:

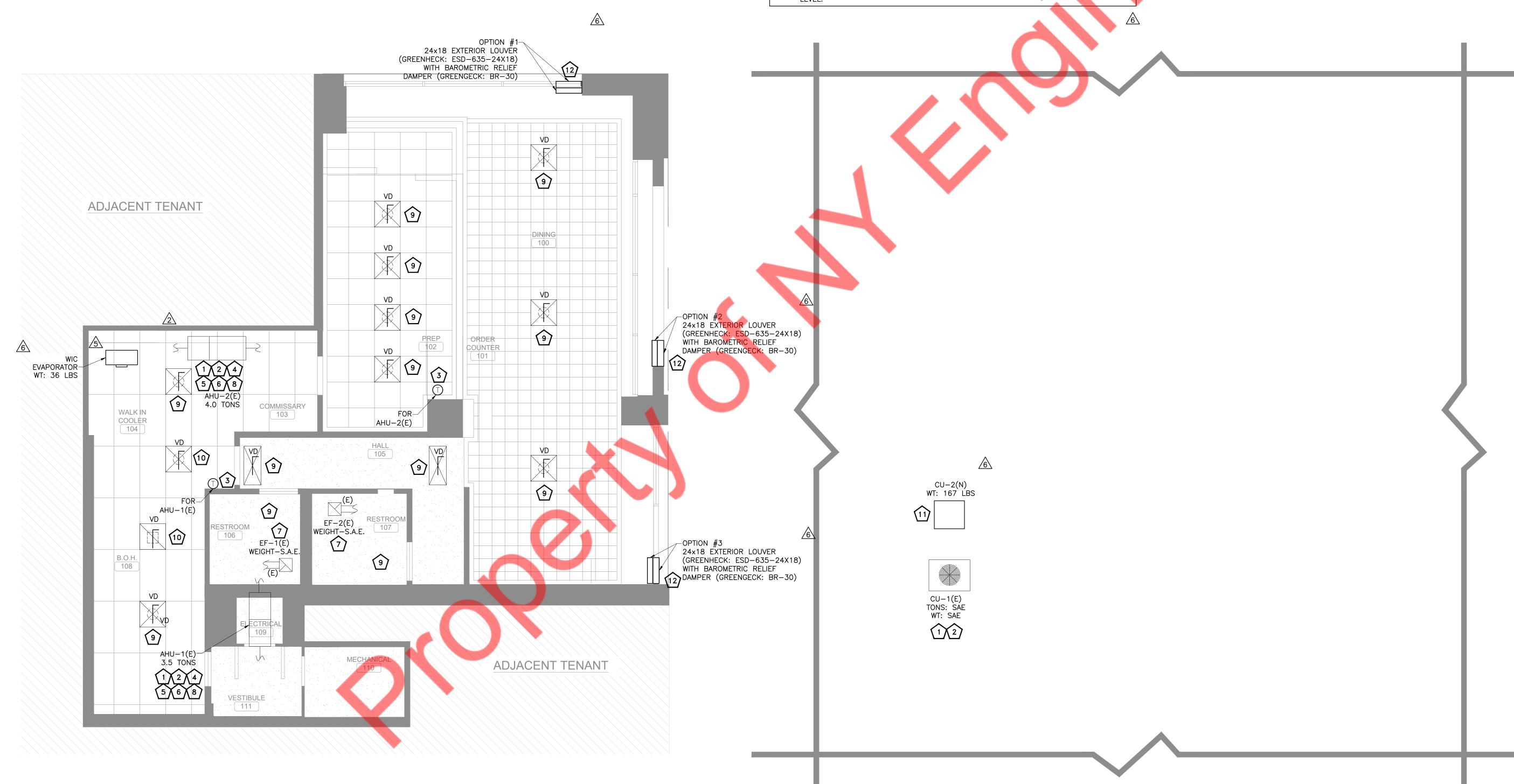
05/24/2024

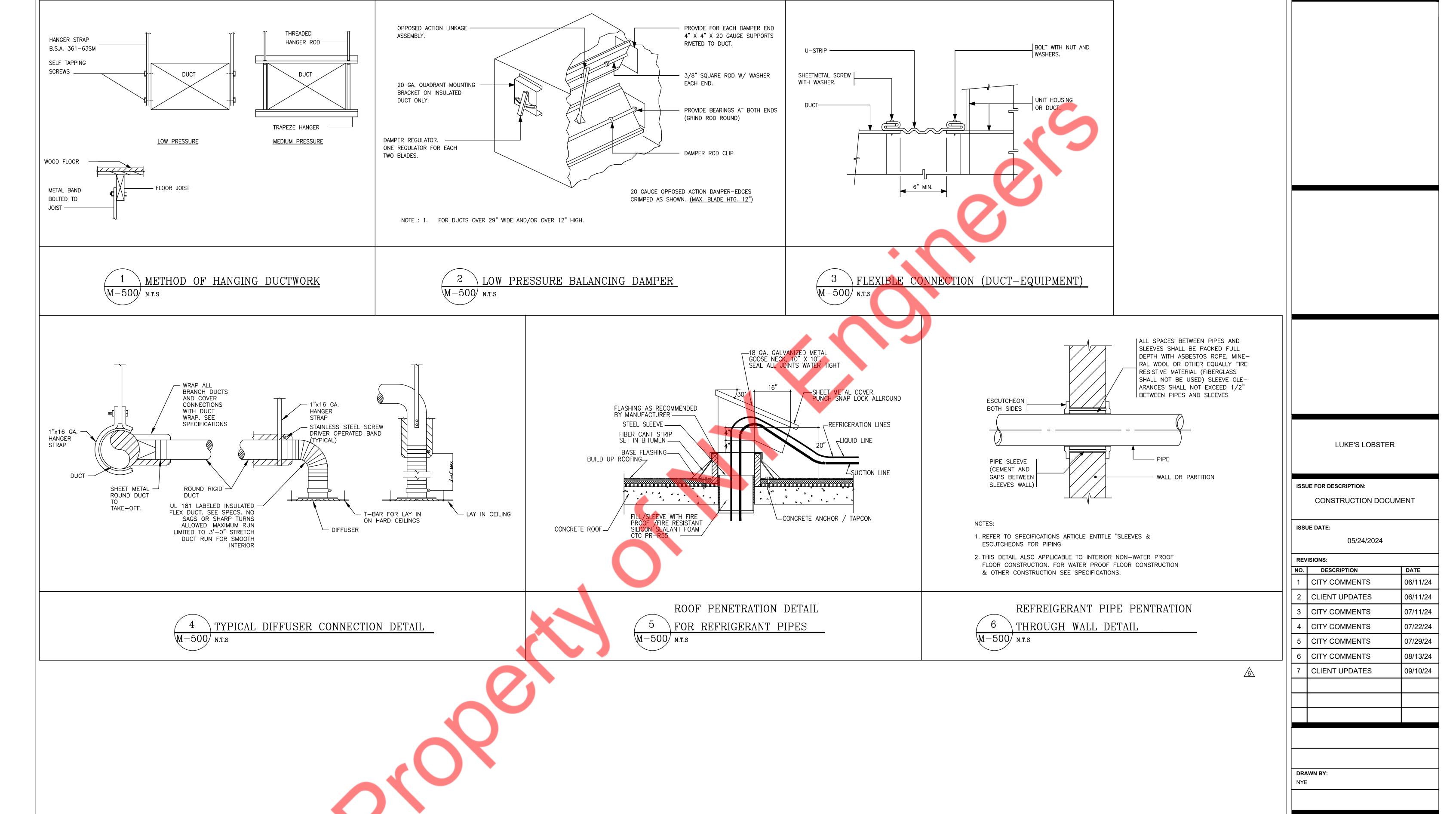
NO.	DESCRIPTION	DATE
1	CITY COMMENTS	06/11/24
2	CLIENT UPDATES	06/11/24
3	CITY COMMENTS	07/11/24
4	CITY COMMENTS	07/22/24
5	CITY COMMENTS	07/29/24
6	CITY COMMENTS	08/13/24
7	CLIENT UPDATES	09/10/24

DRAWN BY:

MECHANICAL
FLOOR PLAN &
PARTIAL ROOF
PLAN

SHEET NUMBER:





SHEET TITLE:

MECHANICAL DETAILS

SHEET NUMBER:

				EXISTI	NG AIR HA	NDLING U	NIT (INDOOF	R) SCHEDULE								
						coo	LING DATA		E	LECTRICAL	DATA					
UNITID	MANUFACTURER	MODEL	TONS	OUTSIDE EXTERNAL STATIC	TOTAL	SENSIBLE	AMBIENT TEMP.	ENTERING TEMP.	VOLTS	PHASE	MCA(A)	MOCP(A)	EER	IEER	OPERATING WEIGHT (LBS)	REMARK
				AIR CFM PRESSURE (IN. W.G.)	МВН	МВН	DB (°F)	DB / WB(°F)								
AHU-1(E)	NORTEK GLOBAL HVAC (V.I.F.)	B6BMM042K-B (V.I.F.)	3.5 (V.I.F)	5 200 43 S.A.E.	S.A.E.	S.A.E.	S.A.E.	S.A.E.	208/230 (V.I.F.)	1 (V.I.F.)	SAE	30 (V.I.F.)	S.A.E.	S.A.E.	S.A.E	EXISTING
AHU-2(E)	GOODMAN (V.I.F.)	A48-00 (V.I.F.)	4.0 (V.I.F)		S.A.E.	S.A.E.	S.A.E.	S.A.E.	208/240 (V.I.F.)	1 (V.I.F.)	SAE	20 (V.I.F.)	S.A.E.	S.A.E.	S.A.E	EXISTING
NOTES FOR	EXISTING AHUs:															
1. S.A.E :- SA	AME AS EXISTING. V.I.F:- VERIFY	IN FIELD														
2. EXISTING	AHUS WITH ALL ACCESSORIES T	TO REMAIN SAME AND TO	D BE REUSED).												
3. CONTRAC	CTOR TO CONFIRM IF EXISTING	AHUs IS WORKING AT IT	S 100% RAT	ED CAPACITY.												
4. CONTRAC	CTOR TO FIELD VERIFY EXACT LO	CATION AND CONFIGURA	ATION OF A	HUs ON SITE.												
5. IF REQUI	RED PROVIDE NEW THERMOSTA	AT AND TEMPERATURE SE	NSOR COMF	PATIBLE WITH EXSITING AHUS. COC	ORDINATE F	INAL LOCATIO	ON OF T-SENS	OR WITH ARCHI	TECT/OWNER.							
6. CONTRAC	CTOR TO REBALANCE OUTSIDE A	IR & RETURN AIR DAMPE	RS ON EXIST	TING AHUS TO MATCH VALUES MEN	ITIONED IN	ABOVE TABLE										
7. REPLACE	ALL FILTERS. PROVIED MINIMUN	M MERV-13 FILTERS.			·						·		·	·		

<u>6</u>

					(OUTDOOR HEA	AT PUMP CONDENS	ING UNITS	5								MAKE: S.A.E.
LINUTTAC	LOCATION	INDOOD UNITE CEDVED	CAD TD	COOLING	HEATING	COMPRESSOR	UNIT DIMENSIONS	WEIGHT		ELECTRICAL		SOUND LEVEL	FED	CEED	COP	LICDE	MODELNO
UNIT TAG	LOCATION	INDOOR UNITS SERVED	CAP.TR	МВН	МВН	TYPE	IN.(HXWXD)	(LBS)	(V/Hz/Ph)	MCA	МОСР	(Dba)	EER	SEER	COP	HSPF	MODEL NO.
CU-1 (E)	SEE PLAN	AHU-1 (E) & AHU-2 (E)	SAE	SAE	SAE	SAE	SAE	SAE	SAE	SAE	SAE	SAE	SAE	SAE	SAE	SAE	SAE
NOTES:								•	•		•						
1. S.A.E: SAM	E AS EXISTING	. V.I.F. : VERIFY IN FIELD															
2. EXISTING (CU WITH ALL A	CCESSORIES TO REMAIN S	SAME AND	TO BE REUSE	D.												
3. CONTRACT	OR TO CONFI	RM IF EXISTING CU IS WC	RKING AT	ITS 100% RA	TED CAPACI	TY.											
4 CONTRACT	OR TO FIFID \	FRIEY EXACT LOCATION A	AND CONFL	GURATION C	E CU ON SI	TF											

			EXISTI	NG ME	CHANICAL	FAN SCHE	DULE			
	FLOW RATE		STATIC PRESSURE ELECTRIC DATA			MAXIMUM	WEIGHT	BASIS OF DESIGN		
TAG	QUANTITY	FLOW RATE	EXTERNAL	SPEED WATTS (W) V/PH/HZ		LOUDNESS	WEIGHT	BASIS OF DESIGN		
		CFM	IN W.G.	RPM	VVAITS (VV)	V/PH/HZ	DBA	LBS	MANUFACTURER	MODEL
EF-1 (E)	1	70 (V.I.F.)	S.A.E.	S.A.E.	V.I.F.	V.I.F.	S.A.E.	S.A.E.	S.A.E.	S.A.E.
EF-2 (E)	1	70 (V.I.F.)	S.A.E.	S.A.E.	V.I.F.	V.I.F.	S.A.E.	S.A.E.	S.A.E.	S.A.E.
NOTES:										
			/== · = · / · · · · = · = · = ·							

1. S.A.E :- SAME AS EXISTING, V.I.F:- VERIFY IN FIELD.

	VE	NTILATION CALC	JLATION AS PER C	CALIFORNIA EN	IERGY CODE 20	022-TABLE 120.1-A &	120.1-B	
ROOM NAME	AREA (SQ.FT.)	OCCUPANCY AS PER LAYOUT	TOTAL OUTDOOR AIR RATE	REQUIRED OA (CFM)	PROVIDED OA (CFM)	EXHAUST AIRFLOW RATE (CFM/SQ.FT OR	REQ EXHAUST AIRFLOW RATE	PROVIDED EXHAUST AIRFLOW RATE (CFM)
			CFM/SQ.FT			CFM/UNIT)	(CFM)	
DINING AREA	506	22	0.5	253		0	0	0
PREP AREA	248	4	0.15	37		0	0	0
COMMISSIONARY	140	3	0.15	21		0	0	0
HALL	98	0	0.15	15	<u>/</u> 5\	0	0	0
ВОН	152	1	0.15	23	400	0	0	0
CORRIDOR	38	0	0.15	6	400	0	0	0
ELECTRICAL ROOM	15	0	0.15	2		0	0	0
MECH ROOM	42	0	0.15	6		0	0	0
RR-1	50	0	0	0		70	70	70
RR-2	50	0		0	5	70	70	70
TOTAL	1339	30	-	363	400	-	140	140

AIR BALANCE											
UNIT	AREA SERVED	SUPPLY AIR	OUTSIDE	RETURN	EXHAUST						
ONIT	ANLA SLIVED	(CFM)	AIR (CFM)	AIR (CFM)	AIR (CFM)						
AHU-1(E)	SEE PLAN	1400 (V.I.F)	200	1200	0						
AHU-2(E)	SEE PLAN	1600 (V.I.F)	200	1400	0						
EF-1(E)	SEE PLAN	-	-	-	70 (V.I.F)						
EF-2(E)	SEE PLAN	-	-	-	70 (V.I.F)						
TOTAL:		3000	400	2600	140 (V.I.F)						
BUILDING PRESSURE: +260 8.67% POSITIVE											
NOTES:											

 CONTRACTOR TO ADJUST MOTORIZED DAMPER ON FRESH AIR TAP TO PROVIDE OUTSIDE AIR AS MENTIONED IN ABOVE TABLE.
 BAROMETRIC RELIEF DAMPER/LOUVER HAS BEEN PROVIDED ON THE PLANS FOR THE RELIEF OF EXTRA AIR. REFER TO SHEET M-100.

								<u>/5\</u>
		WALK-	IN COO	LER U	INIT SCHEDUI	LE (EVAP	ORATOR)	
	APPLICATION	ELECTF	RICAL DA	ΤΑ	REFRIGERANT	WEIGHT	DACI	C OF DECICN
TAG	CAPACITY	V/PH/HZ	NO. OF	НР	TYPE	WEIGHT (LBS)	BASI	S OF DESIGN
	(MBH)	V/11/11/2	FANS	111	1111	(LD3)	MANUFACTURER	MODEL
EVAPORATOR	6.1	115/1/60	1	1/20	R448A	36	BOHN	BEL0055AS6AMAB0405
NOTES:								
1. CONTRACTO	R TO FIELD VE	RIFY EXACT	LOCATIO	N ANI	O CONFIGURATI	ION ON SI	TE.	
2. CONTRACTO	OR TO INSTALL (UNIT PER M	ANUFAC [*]	TURER	'S SPECIFICATION	ONS.		
3 PROVIDE AL	LASSOCIATED	ACCESSORI	FS			•		

		WALK	-IN C	OOLER	UNIT SCHED	ULE (CON	IDENSER)			
	APPLICATION	ELECTRIC	AL DA	ГА	2550,0504,05			0.5.05.000		
TAG CAPACITY MCA MOPD REFRIGERANT WEIGHT BASIS OF DESIGN										
	(MBH)	V/PH/HZ	(A)	(A)	TYPE	(LBS)	MANUFACTURER	MODEL		
CU-2 (N)	7.02	208-230/1/60	15	15	R448A	170	BOHN	BCH0005MBACZA0000		
NOTES:			1							
1. CONTR	ACTOR TO FIEL	D VERIFY EXACT	LOCA	TION A	ND CONFIGURA	ATION ON	SITE.			
2. CONTR	ACTOR TO INST	TALL UNIT PER M	1ANUF	ACTUR	R'S SPECIFICAT	TIONS.	_			

LUKE'S LOBSTER

ISSUE FOR DESCRIPTION:

CONSTRUCTION DOCUMENT

ISSUE DATE:

05/24/2024

REV	ISIONS:	
NO.	DESCRIPTION	DATE
1	CITY COMMENTS	06/11/24
2	CLIENT UPDATES	06/11/24
3	CITY COMMENTS	07/11/24
4	CITY COMMENTS	07/22/24
5	CITY COMMENTS	07/29/24
6	CITY COMMENTS	08/13/24
7	CLIENT UPDATES	09/10/24

DRAWN BY

SHEET TITL

MECHANICAL SCHEDULES

SHEET NUMBER:

	ELECTRICAL	SYMBO	LS LIST		
	LIGHTING	S _ī	THERMAL OVERLOAD SWITCH AT ME PER MOTOR RATING.	OTOR. PROVIDE	THERMAL ELEMENTS AS
	LIGHTING FIXTURE AND OUTLET BOX. HALF SHADED FIXTURE OR "EM" INDICATES FIXTURES WITH INTEGRAL BATTERY PACK FOR EMERGENCY SERVICE, U.O.N.	S _M	MANUAL MOTOR SWITCH	JOTATION	
	LUMINAIRE TYPE : INDICATE BY LIPPERCASE LETTER SEE LIGHTING EXTURE	$\langle \times \rangle$	KEYED NOTE REFERENCE		V
	SCHEDULE. — CIRCUIT NUMBER : INDICATED BY NUMBER				
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	SWITCHING INDICATED BY LOWER CASE LETTERS.	+24"	INDICATES MOUNTING HEIGHT, CENTE	R LINE TO FINI	ISHED FLOOR.
⊕ EM —	DENOTES LUMINAIRE ON EMERGENCY CIRCUIT.	(1) (E/2-1)	DETAIL REFERENCE: DETAIL NUMBER TOP; DRAWING NUMBER INDICATED C		1
●NL —	DENOTES FIXTURES DESIGNATED AS NIGHTLIGHT, WIRED TO 24 HOURS UNSWITCHED CIRCUIT.		POWER	DISTRIBU	JTION
$\overset{\otimes}{\Rightarrow}\overset{\overrightarrow{\bullet}}{\Rightarrow}\overset{\overrightarrow{\bullet}}{\Rightarrow}$	CEILING/WALL MOUNTED SELF POWERED EXIT LIGHT FIXTURE WITH DIRECTIONALARROWS AS INDICATED. SHADED AREA DENOTES FACE(S). ISOLITE ELITE SERIES LED EXIT SIGN		MAJOR ELECTRICAL COMPONENT OR AMPERAGE AS NOTED.	DEVICE. VOLTA	GE AND
	SWITCHES AND CONTROLS		DISTRIBUTION PANELBOARD, 120/20	8V-SURFACE O	PR FLUSH
\$ _a	20A SPST TOGGLE SWITCH U.O.N. "a" DENOTES LIGHTING FIXTURE/SWITCHED RECEPTACLE CONTROLLED.		ELECTRICAL AE	BBREVIAT	ΓIONS
\$3 \$a		A	AMPERES	EA	EACH
	20A 3-WAY TOGGLE SWITCH U.O.N. "a" DENOTES LIGHTING FIXTURE CONTROLLED	A/C, AC	AIR CONDITIONING UNIT	EM	EMERGENCY
OS) _A	CEILING OCCUPANCY SENSOR, NUMBER INDICATES TYPE; SEE OCCUPANCY SENSOR SCHEDULE. 'A' LETTER REFERES TO WIRING DIAGRAM.	AF	AMPERE FRAME/AMP FUSE	EMT	ELECTRICAL METALLIC TUBING
	WIRING SYSTEMS	AFF	ABOVE FINISHED FLOOR	EQUIP	EQUIPMENT
	POWER OR LIGHTING CIRCUITRY HOMERUN WITH PANELBOARD DESIGNATION,	AS	AMP SWITCH	ER	EXISTING TO BE RELOCATED
3 5 UP-	NUMBER WHERE USED INDICATES CIRCUIT NUMBER. IT SHALL CONSISTS OF	AIC	AMPS INTERRUPTING CAPACITY	FA	FIRE ALARM
	2#12 ø, 2#12 N. & 2#12 G. IN 3/4"C, UNLESS OTHERWISE NOTED. POWER OR LIGHTING CIRCUITRY HOMERUN WITH PANELBOARD DESIGNATION,	AT AT	AMP TRIP	E	EXISTING
3 5 7 JP-	NUMBER WHERE USED INDICATES CIRCUIT NUMBER. IT SHALL CONSISTS OF $3\#12\ \phi$, $3\#12\ N$. & $3\#12\ G$. IN $3/4\ C$, UNLESS OTHERWISE NOTED.	ATS	AUTOMATIC TRANSFER SWITCH	FL	FLOOR
		AWG	AMERICAN WIRE GAUGE	G	GROUND
<u>-</u>	CONDUIT AND WIRE TO BUILDING GROUND.	С	CONDUIT	GFI	GROUND FAULT INTERRUPTER
	UNDERGROUND	C/B,CB	CIRCUIT BREAKER	HP	HORSEPOWER
		CKT	CIRCUIT	HWH	HOW WATER HEATER
	EXISTING	CLG	CEILING	HZ	HERTZ
	NEW	COMM	COMMUNICATION CURRENT TRANSFORMER	IC PP	INTERRUPTING CAPACITY POWER PANEL
	POWER AND TELECOMMUNICATION	CU	COPPER	PWR	POWER PAINEL POWER
	JUNCTION BOX WITH BLANK COVER PLATE, FLUSH IN FLOOR.	DIA	DIAMETER	R	REMOVE
P _A	SIMPLEX RECEPTACLE, +18" AFF OR AS NOTED.	DISC	DISCONNECT	RE	RELOCATED EXISTING
.0	SUFFIXE DENOTES FOLLOWING: A— NEMA 5—15R	DN	DOWN	REC	RECEPTACLE
	B- NEMA 6-15R C- NEMA 14-30R D- NEMA 14-50R	DP	DISTRIBUTION PANEL	RGS	RIGID GALVANIZED STEEL
	DUPLEX GFI RECEPTACLE	DWG	DRAWING	RR	REMOVE & RELOCATE
Ψ _{GFI} Φ	DUPLEX CONVENIENCE RECEPTACLE, +18" AFF OR AS NOTED.	JB	JUNCTION BOX	SECT	SECTION
•	DEDICATED DUPLEX CONVENIENCE RECEPTACLE, +18" AFF OR AS NOTED.	KCMIL	ONE THOUSAND CIRCULAR MILS	SPDT	SINGLE POLE DOUBLE THROW
П		— KV	KILOVOLT	SPST	SINGLE POLE SINGLE THROW
lacksquare	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.	KVA	KILOVOLT-AMPERES	SPEC	SPECIFICATION
•	QUAD RECEPTACLE	KW	KILOWATTS	SW	SWITCH
₩ ▽	DATA OUTLET	LTG	LIGHTING	SWBD	SWITCHBOARD
V		MAX	MAXIMUM	SYM	SYMMETRICAL
	MOTORS AND CONTROLS	MC MCB	MOTOR CONTROLLER	SYS	SYSTEMS
M S _M	AC INDOOR UNIT MOTOR AS NOTED WITH LIQUID TIGHT FLEXIBLE CONNECTION WITH JUNCTION BOX AND MOTOR SWITCH.	MCB MLO	MAIN CIRCUIT BREAKER MAIN LUGS ONLY	TELE TEMP	TELEPHONE TEMPERATURE
		MTD	MOUNTED	TXF	TOILET EXHAUST FAN
WP	SWITCH WITH WEATHER PROOF.	MTS	MANUAL TRANSFER SWITCH	TYP	TYPICAL
	NON FUSED DISCONNECT SWITCH AMPERAGE, AND NUMBER OF POLES AS NOTED.	N	NEUTRAL NEUTRAL	UON	UNLESS OTHERWISE NOTED
	30A/240V NON FUSED DISCONNECT SWITCH	NIC	NOT IN CONTRACT	V	VOLT/VOLTAGE
	60A/240V NON FUSED DISCONNECT SWITCH	NTS	NOT TO SCALE	VA	VOLT AMPERE
	100A/240V NON FUSED DISCONNECT SWITCH	PNL	PANEL	WP	WEATHER PROOF
	200A/240V NON FUSED DISCONNECT SWITCH	W	WATT	Ø	PHASE
			ELECTRICAL I	DRAWING	::
	COMBINATION MAGNETIC STARTER AND DISCONNECT SWITCH, FURNISHED BY HVAC/CONTRACTOR, INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR.	E-001	ELECTRICAL SYMBOLS AND GENERA		
$\frac{400}{350}$	FUSED DISCONNECT SWITCH AND FUSE AMPERAGE AS INDICATED. TOP	E-001	ELECTRICAL SPECIFICATIONS SHEET		
	NUMBER DENOTS SWITCH SIZE AND BOTTOM NUMBER DENOTES FUSE.	E-003	ELECTRICAL SPECIFICATIONS SHEET		
M)/M)	DUPLEX PUMP. NUMBER INDICATES HP RATING OF PUMP.	E-100	ELECTRICAL LIGHTING PLAN		
		—	ELECTRICAL POWER & ROOF PLAN	S	
1.5 kW	ELECTRICAL HEATER, NUMBER DENOTES HEATER RATING	E-200	ELECTRICAL FOWER & ROOF FLAN		

GENERAL NOTES

- 1. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE CURRENT VERSION OF THE NEC, 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 CANCEALED IN FINISHED AREAS, AND ALL COVERS TO PULL & JUNCTION BOXES SHALL BE READILY ACCESSIBLE.
- 14. SUPPORT PANEL, JUNCTION AND PULLBOXES 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 GASKETED FOR A COMPLETE RAINTIGHT 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
- 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.
- DEVICES, AND FOR FINAL CEILING AND WALL HEIGHTS AND LAYOUTS.

25. REFER TO ARCHITECTURAL PLANS FOR FINAL LOCATIONS OF ALL ELECTRICAL

- 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 PANELBOARD. PROVIDE WIRE AND CONDUIT TO INTERCONNECT EQUIPMENT AND DEVICES WITH SAME CIRCUIT NUMBERS AND RUN TO PANELBOARD.

ELECTRICAL SPECIFICATIONS

1. GENERAL:

- A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION,"
 AIA DOCUMENT A201, 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 THEIR 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, MAINTANANCE 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 OR 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

LUKE'S LOBSTER	

CONSTRUCTION DOCUMENT

ISSUE	FOR	DESCR	IPTION:

ISSUE DATE:

	06/03/2024	
REV	ISIONS:	
NO.	DESCRIPTION	DA

1	CITY COMMENTS	06/11/24
2	CLIENT UPDATES	06/11/24
3	CITY COMMENTS	07/11/24
7	CLIENT UPDATES	09/10/24

RAWN BY:		

SHEET TITLE:

NYE

ELECTRICAL LEGENDS

AND GENERAL NOTES

SHEET NUMBER:

E-001

ELECTRICAL SPECIFICATIONS (CONT.)

HEREIN DESCRIBED. EXTEND SYSTEMS TO NEW CONSTRUCTION AS SOON AS PHYSICALLY POSSIBLE. MAINTAIN SYSTEM DURING WORKING HOURS. PROVIDE ALL REQUIRED MAINTENANCE, INCLUDING LAMPS AND

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) HEIGHTS OF OUTLETS:

- REFER TO ARCHITECTURAL AND/OR INTERIOR DESIGNER'S PLANS FOR DEVICE HEIGHTS IN NON BOH SPACES.
- 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.
- MOTOR CONTROLLERS: 5 FT-
- 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.
 c. REFER TO ARCHITECTURAL AND/OR INTERIOR DESIGNER'S PLANS FOR DEVICE HEIGHTS IN NON BOH SPACES
- D. PRODUCT DELIVERY, STORAGE AND HANDLING
- 4) MOVING OF EQUIPMENT: WHERE NECESSARY, SHIP IN CARTED SECTIONS OF SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES.
- 5) 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 LAMACOID 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. SUBMIT ELECTRICAL POWER SYSTEM STUDIES INCLUDING SUPPORTING DATA AND RECOMMENDATIONS FOR THE FOLLOWING:

 1) SHORT CIRCUIT CURRENT AND PROTECTIVE DEVICE COMBINATION.

 2) ARC FLASH HAZARD ANALYSIS..
 EQUIPMENT SHOP DRAWINGS SHALL MOT BE SUBMITTED UNTIL THESE STUDIES HAVE BEEN COMPLETED.
- G. 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.
- H. 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.
- I. FINAL LOCATIONS AND MOUNTING ORIENTATIONS OF ALL SWITCHES, RECEPTACLES AND LIGHT FIXTURES SHALL BE VERIFIED WITH ARCHITECT.
- J. ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.

3. SCOPE OF WORK:

- G. SCOPE OF WORK SHALL CONSIST OF PROVIDING LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETE AND SAFE INSTALLATION IN CONFORMING WITH THE 2008 NATIONAL ELECTRICAL CODE (NEC) NYC AMENDMENTS, AND ALL OTHER APPLICABLE INDUSTRY, NATIONAL AND LOCAL CODES AND AUTHORITIES HAVING JURISDICTION, AS INDICATED ON DRAWINGS AND HEREIN SPECIFIED.
- H. 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.
- 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.
- J. 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.
- K. CONTRACTOR SHALL PERFORM ALL CONTROLLED INSPECTIONS IN ACCORDANCE WITH THE NYC BUILDING CODE. SECURE ALL REQUIRED PERMITS AND APPROVALS AND TRANSMIT SAME TO OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES.
- 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
- ,
- 4) APPROVAL STAMP OF PRIME CONTRACTOR

C. SUBMISSIONS:

3) ITEM IDENTIFICATION

- 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) DISTRIBUTION EQUIPMENT INCLUDING SWITCHBOARDS, TRANSFORMERS, PANELBOARDS AND LOAD CENTERS.
- 5) RACEWAYS
- 6) WIRE AND CABLE
- 7) LIGHTING CONTROL DEVICES
- 8) INSERTION RECEPTACLES
- 9) MOMENTARY CONTACT SWITCHES
- 10) TIME SWITCHES
- 11) LIGHTING FIXTURES, BALLASTS AND LAMPS.
- 12) FIRE ALARM EQUIPMENT AND DEVICES.
- 13) MOTOR STARTERS.
- SUBMIT ELECTRICAL POWER SYSTEM STUDIES INCLUDING SUPPORTING DATA AND RECOMMENDATIONS FOR THE FOLLOWING:
- 1) SHORT CIRCUIT CURRENT AND PROTECTIVE DEVICE COORDINATION
- 2) ARC FLASH HAZARD ANALYSIS.
- EQUIPMENT SHOP DRAWINGS SHALL NOT BE SUBMITTED UNTIL THESE
 3) STUDIES HAS BEEN COMPLETED.
- 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.
- AS-BUILT DRAWINGS AND EQUIPMENT OPERATIONAL INSTRUCTIONS
 - 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.
- 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.
- 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.
- 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. OVERCURRENT AND SHORT CIRCUIT PROTECTION WITHIN FUSIBLE SWITCHES SHALL BE CLASS L CURRENT LIMITING TIME DELAY FUSES FOR SWITCHES RATED 800A AND LARGER AND CLASS RK-1 CURRENT LIMITING TIME DELAY FUSES FOR SWITCHES RATED 600A AND SMALLER. MANUFACTURER SHALL BE BUSSMAN.
- B. INDIVIDUAL MOTOR STARTERS SHALL INCLUDE TWO SETSOF NORMALLY OPEN CONTACTS, ONE SET OF NORMALLY CLOSED CONTACTS, THREE OVERLOAD RELAYS, INDIVIDUALLY FUSED CONTROL TRANSFORMER, HAND OFF AUTO SELECTOR SWITCH FOR AUTOMATIC START AND PILOT LIGHT(S) AS REQUIRED. COMBINATION STARTER DISCONNECTS SHALL INCLUDE FUSIBLE SWITCHES. CONTACTORS SHALL BE NEMA TYPE WITH REPLACEABLE COIL AND CONTACT TIPS. MANUFACTURER SHALL BE EATON, SIEMENS OR SQUARE D.
- 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. DISTRIBUTION PANELBOARDS SHALL BE FULLY RATED WITH COPPER PHASE, NEUTRAL, AND GROUND BUS, BRACED AT 65000 AIC FOR 480/277 VOLT SYSTEM AND 42000 AIC FOR 208Y/120 VOLT SYSTEM, OR MORE TO BE GREATER THAN THE AVAILABLE SHORT CIRCUIT CURRENT. ISOLATED GROUND BUS SHALL BE AS REQUIRED. MANUFACTURERS SHALL BE EATON, SIEMENS OR SQUARE D.
- B. BRANCH PANELBOARDS SHALL BE FULLY RATED WITH COPPER PHASE, NEUTRAL AND GROUND BUS, BRACED AT 14000 AIC FOR 480/277 VOLT SYSTEM AND 10000 AIC FOR 208Y/120 VOLT SYSTEM, OR MORE TO BE GREATER THAN THE AVAILABLE SHORT CIRCUIT CURRENT. NEUTRAL BUS SHALL BE RATED AT 200 PERCENT WITHIN PANELS SERVING NON—LINEAR LOADS. ISOLATED GROUND BUS SHALL BE AS REQUIRED. MANUFACTURER SHALL BE EATON, SIEMENS, OR SQUARE D.
- . 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. 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 MECHANCIALLY 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 1/4" HIGH WHITE LETTERING.
- I. DISTRIBUTION AND SUB-DISTRIBUTION PANELBOARDS SHALL BE A MINIMUM OF 30" WIDE AND 10" DEEP.
- POWER PANELBOARDS SHALL BE SIMILAR TO GENERAL ELECTRIC TYPE "OMR", 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).

B. MATERIALS

1) RACEWAYS:

- a. RIGID STEEL CONDUIT: FULL—WEIGHT PIPE, GALVANIZED, THREADED.
- b. ELECTROMETALLIC TUBING (EMT): THIN WALL PIPE, GALVANIZED, THREADLESS.
- c. FLEXIBLE STEEL CONDUIT: CONTINUOUS SINGLE STRIP,
- d. WIREWAYS: STEEL WITH GROUND CONTINUITY. FINISH SHALL BE BAKED ENAMEL. COVERS SHALL BE SCREW—ON.
- e. SURFACE METAL RACEWAY: SURFACE METAL RACEWAY INCLUDING POWER DEVICES, FITTINGS,, CONNECTORS, FEEDS, ELBOWS, COUPLINGS, BLANKS, TEES, WIRE CLIPS, DEVICE BRACKETS, DEVICE COVERS AND OTHER ASSOCIATED APPARATUS SHALL BE SIZED TO FACILITATE PULLING THE QUANTITY AND SIZE OF WIRES AND CABLES, AND INSTALLING THE DEVICES CONTAINED. RACEWAY SHALL BE OF CODE GAUGE GALVANIZED STEEL, SHALL INCLUDE MOUNTING KNOCK-OUTS, AND SHALL BE FINISHED AS DIRECTED BY THE ARCHITECT. MANUFACTURER SHALL BE WIREMOLD.

2) FITTINGS AND ACCESSORIES:

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

3) BOXES:

- a. 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. Manufacturer shall be Appleton, Raco or Steel
- b. 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 ADJUSTABLE CONCRETE TIGHT PRESSED STEEL WITH BRASS FLANGE AND COVERS. FLUSH FLOOR BOXES SHALL INCLUDE BRASS TRIM AND HINGED OUTLET OPENING COVERS. FIRE RATED POKE-THROUGH FLOOR FITTINGS SHALL BE UL LISTED AND APPROVED FOR THE FLOOR SLAB FIRE RATING. FLOOR MOUNTED SERVICE FITTING FOR SERVICE FITTINGS FOR CONNECTION TO UNDER-FLOOR ELECTRIFIED METAL DECK SHALL BE COMPATIBLE WITH THE DECK MANUFACTURER. ACCESS FLOOR MOUNTED FITTINGS FOR USE WITH RAISED FLOOR SHALL BE FLUSH TYPE WITH SPACE FOR EQUIPMENT CORD PLUG DEVICES AND SUITABLE FLIP TYPE COVER. MANUFACTURER SHALL BE HUBBELL, WIREMOLD, OR STEEL CITY
- C. 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.

LUKE'S LOBSTER

CONSTRUCTION DOCUMENT

06/03/2024

ISSUE FOR DESCRIPTION:

ISSUE DATE:

REV	REVISIONS:							
NO.	DESCRIPTION	DATE						
1	CITY COMMENTS	06/11/2						
2	CLIENT UPDATES	06/11/2						
3	CITY COMMENTS	07/11/2						
7	CLIENT UPDATES	09/10/2						

DRAWN BY: NYE

SHEET TITLE:

ELECTRICAL SPECIFICATIONS SHEET 1 OF 2

SHEET NUMBER:

E-002

ELECTRICAL SPECIFICATIONS (CONT.)

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.

D. 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 MANUFACTURED 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 NEC TABLE 300.19(A).

- E. 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.
- A. 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.
- B. FIRE SEALANTS: PROVIDE FOR RACEWAYS AND WIRE PASSING THROUGH FLOOR SLOTS, SLEEVES OR OPENINGS IN FIRE—PARTITIONS ROOMS.
- C. 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.

9. WIRE AND CABLE:

- A. PROVIDE WIRE AND CABLE COMPLETE WITH ACCESSORIES. SIZE REFERENCE SHALL BE AWG EXCEPT AS NOTED.
- 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. MANUFACTURER SHALL BE AMERICAN INSULATED WIRE CORP., CERRO, COLLYER, CAPITOL WIRE AND CABLE, OKONITE, SENETOR, SOUTH WIRE
- C. CONTROL AND ALARM CABLING, EXCEPT AS NOTED, SHALL BE
 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
 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. METAL—CLAD CABLE, NFPA 70 ARTICLE 330 TYPE MC:

 1) INTERLOCKED FLEXIBLE GALVANIZED STEEL ARMOR SHEATH,

 CONFORMING TO UL REQUIREMENTS FOR TYPE MC METAL CLAD

2) INSULATED COPPER CONDUCTORS, SUITABLE FOR 600 VOLTS, RATED 90°C, ONE OF THE TYPES LISTED IN NFPA 70 TABLE 310.13(A) OR OF A TYPE IDENTIFIED FOR USE IN TYPE MC CABLE.

3) INTERNAL FULL SIZE COPPER GROUND CONDUCTOR WITH GREEN

INSULATION.
4) ACCEPTABLE COMPANIES: AFC CABLE SYSTEMS INC., SOUTHWIRE, GENERAL CABLE.
5) CONNECTORS FOR MC CABLE: AFC FITTING INC.'S AFC SERIES,

ARLINGTON INDUSTRIES INC.'S SADDLE GRIP, OR THOMAS & BETTS CO.'S TITE-BITE WITH ANTI-SHORT BUSHINGS.

G. 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.

- H. 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
- I. 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.
- G. 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.
- F. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS.
- G. 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.

10. 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).
- D. INSERTION RECEPTACLES SHALL BE HOSPITAL GRADE DUPLEX CONVENIENCE 125 VOLTS, 2 POLE, 3 WIRE, U GROUND SLOT. GROUNDED, EXCEPT AS NOTED.

2) HEALTH CARE FACILITIES:

- a) DUPLEX, 20 AMP, 125 VOLTS, 2 POLE, 3 WIRE, U GROUND SLOT: SIMILAR TO HUBBELL NO. 8300 HOSPITAL GRADE.
- b) SINGLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE, U GROUND SLOT: SIMILAR TO HUBBELL NO. 8310 HOSPITAL GRADE.

3) GROUND FAULT INTERRUPTER RECEPTACLES:

- a. 20 AMP DUPLEX FEED—THROUGH TYPE. SIMILAR TO NO. GF8300.
- E. DEVICE PLATES: SEE ARCHITECT FOR TYPE. FOR RECEPTACLES WITH OTHER THAN 120 VOLT, INSCRIBED VOLTAGE AVAILABLE.
- F. COLORS: COORDINATE COLORS WITH ARCHITECT.
- G. MOUNTING ORIENTATION OF RECEPTACLES (HORIZONTAL OR VERTICAL): COORDINATE WITH ARCHITECT.

11. LIGHTING FIXTURES:

- A. FIXTURES TO BE AS SPECIFIED BY ARCHITECT U.O.N. 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.
- 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.
- 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. 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.

G. 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 FOR USE IN THE CITY. 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.

12. GROUNDING AND BONDING:

- A. PROVIDE GROUNDING SYSTEM IN ACCORDANCE WITH 2011 NATIONAL ELECTRICAL CODE WITH NYC AMENDMENTS, AND THESE SPECIFICATIONS. THE WIRING SYSTEM SHALL BE INSTALLED AS REQUIRED TO PROVIDE A CONTINUOUSLY GROUNDED SYSTEM.
- 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.

13. SMOKE ALARMS

- A. PROVIDE SOLID STATE, PHOTOELECTRIC TYPE, HARDWIRED SMOKE ALARM WITH SEALED IN 10 YEARS LITHIUM BATTERY BACKUP AND INTEGRAL TEMPORAL PATTER EVACUATION HORN. KIDDE MODEL 112010S 517 SERIES OR APPROVED EQUAL.
- B. THREE POSITION TEST FEATURE THAT SIMULATES ACTUAL SMOKE CONDITIONS. SHALL CONTAIN MAINTENANCE INDICATOR.
- C. PROVIDE WITH INTEGRAL 135 DEGREE F ISOLATED HEAT DETECTION OR INTEGRAL RELAY RATED 0.6A AT 125V AC., AS INDICATED ON THE PLANS AND DRAWINGS.
- D. DEVICE SHALL BE RATED TO OPERATE AT A RANGE OF 40°f TO 100°F.

 E. UL LISTED TO UL217 AND APPROVED FOR USE IN NEW YORK CITY.
- F. CARBON MONOXIDE DETECTOR; HARDWIRED WITH BATTERY BACKUP.
- G. COMBINATION SMOKE/CARBON MONOXIDE DETECTOR: HARDWIRED WITH BATTERY BACKUP. KIDDE MODEL 112010SCO OR APPROVED EQUAL.

14. INTERCOM CONDUIT SYSTEM:

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

KIDDE MODEL KN-COP-IC OR APPROVED EQUAL.

- B. EQUIPMENT SHALL CONFORM TO REQUIREMENTS OF INTERCOM
 - J-BOXES 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.

LUKE'S LOBSTER

ISSUE FOR DESCRIPTION:

CONSTRUCTION DOCUMENT

ISSUE DATE:

06/03/2024

REVISIONS:

NO.	DESCRIPTION	DATE
1	CITY COMMENTS	06/11/24
2	CLIENT UPDATES	06/11/24
3	CITY COMMENTS	07/11/24
7	CLIENT UPDATES	09/10/24

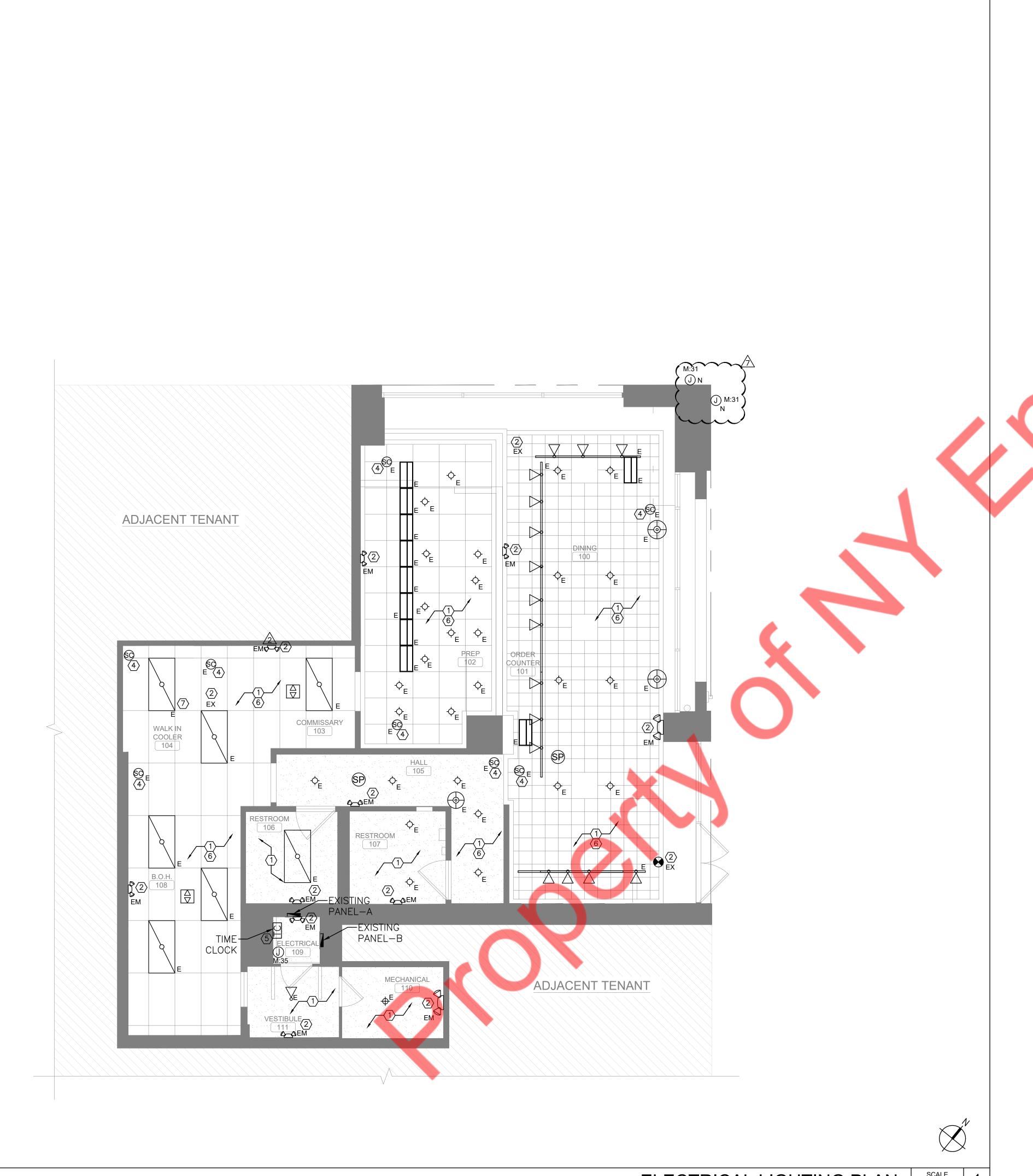
DRAWN BY: NYE

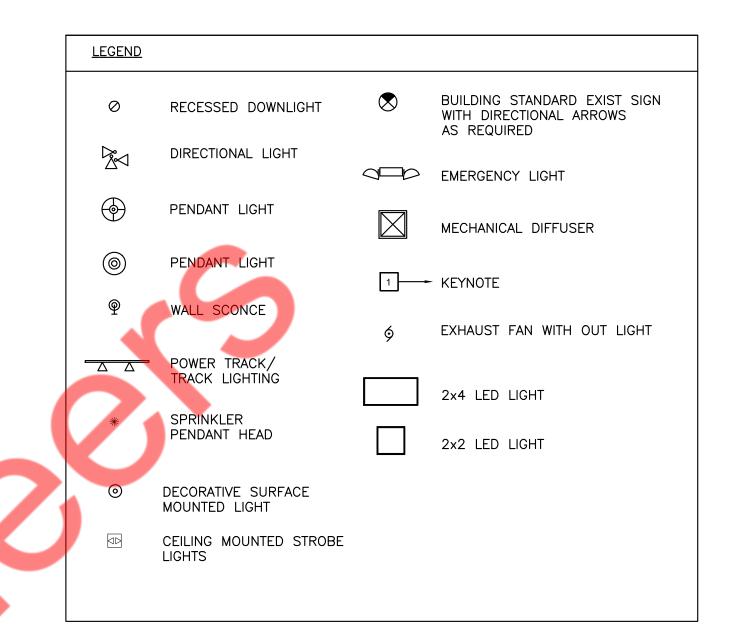
SHEET TITLE:

ELECTRICAL SPECIFICATIONS SHEET 2 OF 2

SHEET NUMBER:

E-003





LIGHTING KEYED NOTES: (#)

- 1. E.C. TO VERIFY OPERABLE CONDITIONS, EXISTING CONNECTIONS OF THE EXISTING LIGHT FIXTURES IN FIELD. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- 2. WIRE ALL EMERGENCY, EXIT AND NIGHT LIGHT AHEAD OF SWITCHING FOR CONTINUOUS OPERATIONS. CONNECT TO ADJACENT LIGHTING CIRCUIT.

3. NOT USED.

- 4. E.C. TO VERIFY OPERABLE CONDITIONS, EXISTING CONNECTIONS OF THE EXISTING SECURITY CAMERAS IN FIELD. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- 5. COORDINATE EXACT LOCATION OF TIME CLOCK WITH ARCHITECT/OWNER.
- 6. E.C. SHALL VERIFY IF THE OCCUPANCY/TIMER CONTROLS HAVE BEEN PROVIDED FOR THE EXISTING LIGHTING CONTROL. ELSE PROVIDE A CEILING-MOUNTED OCCUPANCY SENSOR AND A WALL-MOUNTED MANUAL SWITCH FOR THE LIGHTING CONTROL. COORDINATE THE EXACT LOCATION OF THE SWITCH FIELD.
- 7. ALL WALK IN COOLER LIGHTING FIXTURES AND RELATED LOCAL CONTROLS SHALL BE PROVIDED BY EQUIPMENT SUPPLIER. E.C. SHALL MAKE ALL FINAL CONNECTION TO FIXTURES AS REQUIRED TO ENSURE A COMPLETE OPERATION.

LIGHTING PLAN GENERAL NOTES:

- A. CONTRACTOR IS ADVISED THAT ADJUSTMENTS TO EMERGENCY AND EXIT LIGHT FIXTURE LOCATIONS/QUANTITIES MAY BE REQUIRED BY AHJ UPON FINAL INSPECTION.
- B. ALL NIGHT LIGHT, EMERGENCY AND EXIT LIGHT FIXTURES SHALL BE CONNECTED AHEAD OF SWITCHED LIGHTING CIRCUIT.
- C. UNLESS OTHERWISE NOTED, LIGHT SWITCHES SHALL BE GANGED TOGETHER UNDER A COMMON FACEPLATE.
- D. PROVIDE JUNCTION BOX FOR SECURITY CAMERAS. COORDINATE EXACT LOCATIONS OF SECURITY CAMERAS WITH FRANCHISEE.
- E. PROVIDE JUNCTION BOX OR CEILING OUTLET AS REQUIRED FOR SPEAKERS/AUDIO SYSTEM. COORDINATE POWER REQUIREMENT AND LOCATION WITH MANUFACTURER. TERMINATE SPEAKER WIRES AT VOLUME CONTROLS.

LUKE'S LOBSTER

ISSUE FOR DESCRIPTION:

CONSTRUCTION DOCUMENT

ISSUE DATE:

06/03/2024

REVISIONS:								
NO.	DESCRIPTION DATE							
1	CITY COMMENTS	06/11/24						
2	CLIENT UPDATES	06/11/24						
3	CITY COMMENTS	07/11/24						
7	CLIENT UPDATES	09/10/24						

RAWN BY:

SHEET TITLE:

ELECTRICAL LIGHTING PLAN

SHEET NUMBER:

E-100

ELECTRICAL LIGHTING PLAN

SCALE 1/4" = 1'-

POWER KEYED WORK NOTES: (#)

- 1. KEEP 3 FEET CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT PER CEC CODE REQUIREMENTS.
- 2. PROVIDE JUNCTION BOX FOR WALK-IN FREEZER/COOLER EQUIPMENT. COORDINATE WITH MANUFACTURER FOR EXACT LOCATIONS.
- 3. PROVIDE BOX ROUGH-IN FOR MANUAL ACTIVATION OF ANSUL FIRE SUPPRESSION SYSTEM AND HOOD CONTROL PANEL. TIE INTO BUILDING FIRE ALARM SYSTEM. CONFIRM LOCATION WITH LOCAL AHJ. PULL STATION SHALL PROVIDE BY FIRE ALARM CONTRACTOR CONFIRM LOCATION AND REQUIREMENT.
- 4. PROVIDE JUNCTION BOX FOR WALK-IN BOX DOOR HEATER AND MISCELLANEOUS LOADS. E.C SHALL COORDINATE WITH VENDOR FOR EXACT POWER REQUIREMENT.
- 5. EXISTING MECHANICAL EQUIPMENT SHALL REMAIN CONNECTED TO THE EXISTING CIRCUITS. E.C. TO VERIFY RATING, OPERABLE CONDITION, AND EXACT LOCATION IN FIELD. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- 6. PROVIDE JUNCTION BOX TO RCP. E.C SHALL COORDINATE WITH PLUMBING CONTRACTOR.

REQUIREMENT OF THE UNIT IN THE FIELD. PROVIDE CIRCUIT AND CONTROL AS REQUIRED.

- 7. (E.C. SHALL COORDINATE WITH THE PLUMBING CONTRACTOR FOR THE EXACT LOCATION AND ELECTRICAL CONNECTION
- 8. E.C SHALL COORDINATE WITH OWNER/ARCHITECT FOR EXACT LOCATION OF ELECTRIC METER AND PANEL IN THE FIELD.
- 9. E.C SHALL REUSE EXISTING RECEPTACLE AND RECONNECT TO NEW CIRCUIT AS SHOWN ON PLAN. E.C SHALL VERIFY THE OPERABLE CONDITION OF EXISTING RECEPTACLE PRIOR TO BID. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- 10. PROVIDE CEILING MOUNTED RECEPTACLE FOR SHOW WINDOW AS REQUIRED BY CODE. VERIFY WITH LOCAL ENERGY AGENCY. VERIFY EXACT LOCATION WITH ARCHITECT. RECEPTACLES SHALL BE CONTROLLED THROUGH LIGHTING CONTROL PANEL AND PHOTOCELL.
- 11. E.C. SHALL COORDINATE WITH THE ARCHITECT/UTILITY/OWNER FOR EXACT LOCATION OF THE CT CABINET, METER AND SERVICE DISCONNECT SWITCH IN THE FIELD. THE CT CABINET, METER AND SERVICE DISCONNECT SWITCH SHOULD BE NEMA-4X RATED.
- 12. EC SHALL PROVIDE GFI RECEPTACLE FOR ALL KITCHEN EQUIPMENT.
- 13. EC SHALL COORDINATE COORDINATE THE SCOPE OF WORK FOR THE WALK-IN BOX DISCONNECT (WIC) WITH THE OWNER PRIOR

- **ELECTRICAL POWER PLAN GENERAL NOTES:**
- A. ALL BRANCH CIRCUITS HOMERUNS ASSIGN INDICATED ON THIS PLAN SHALL BE CIRCUITED TO THERE RESPECTIVE PANELS, CIRCUIT NUMBER INDICATED, U.O.N.
- B. E.C. SHALL VERIFY ALL CONNECTION REQUIREMENT FOR ALL EQUIPMENT AND COORDINATE NEMA PLUG CONFIGURATION FOR EQUIPMENT.
- C. ALL RECEPTACLE IN KITCHEN AND WITHIN 6' OF A SINK SALL BE GFCI RATED.
- D. ALL EXTERIOR DISCONNECTS AND ELECTRICAL EQUIPMENT SHALL BE NEMA 3R RATING.
- E. E.C. PROVIDE GROUNDING IN ACCORDANCE WITH CEC 250. PROVIDE A #6 CU GROUND TO ANY NEW METAL GAS PIPING SYSTEM.
- F. REFER TO DWG. E001 FOR ELECTRICAL GENERAL NOTES, SYMBOL LIST & ABBREVIATIONS.
- G. REFER TO DWG. E002 FOR ADDITIONAL ELECTRICAL SPECIFICATIONS.
- H. FINAL CONNECTION TO ALL HARD WIRED EQUIPMENT SHALL BE MADE WITH LIQUID TIGHT FLEXIBLE CONDUIT.
- I. EC SHALL FURNISH AND INSTALL DISCONNECT SWITCHES, CONDUIT AND WIRE FOR EQUIPMENT. INSTALL UNDER SUPERVISION OF EQUIPMENT SUPPLIER.
- J. E.C SHALL VERIFY WHETHER TO KEEP THE EXISTING RECEPTACLES WHICH ARE NOT IN USE.
- K. E.C SHALL VERIFY THE OPERABLE CONDITION ON EXISTING RECEPTACLES. REMOVE/REPLACE AS REQUIRED. BASE BID ACCORDINGLY.
- L. CONTRACTOR TO VERIFY SCOPE OF WORK WITH OWNER. PRIOR TO BID.

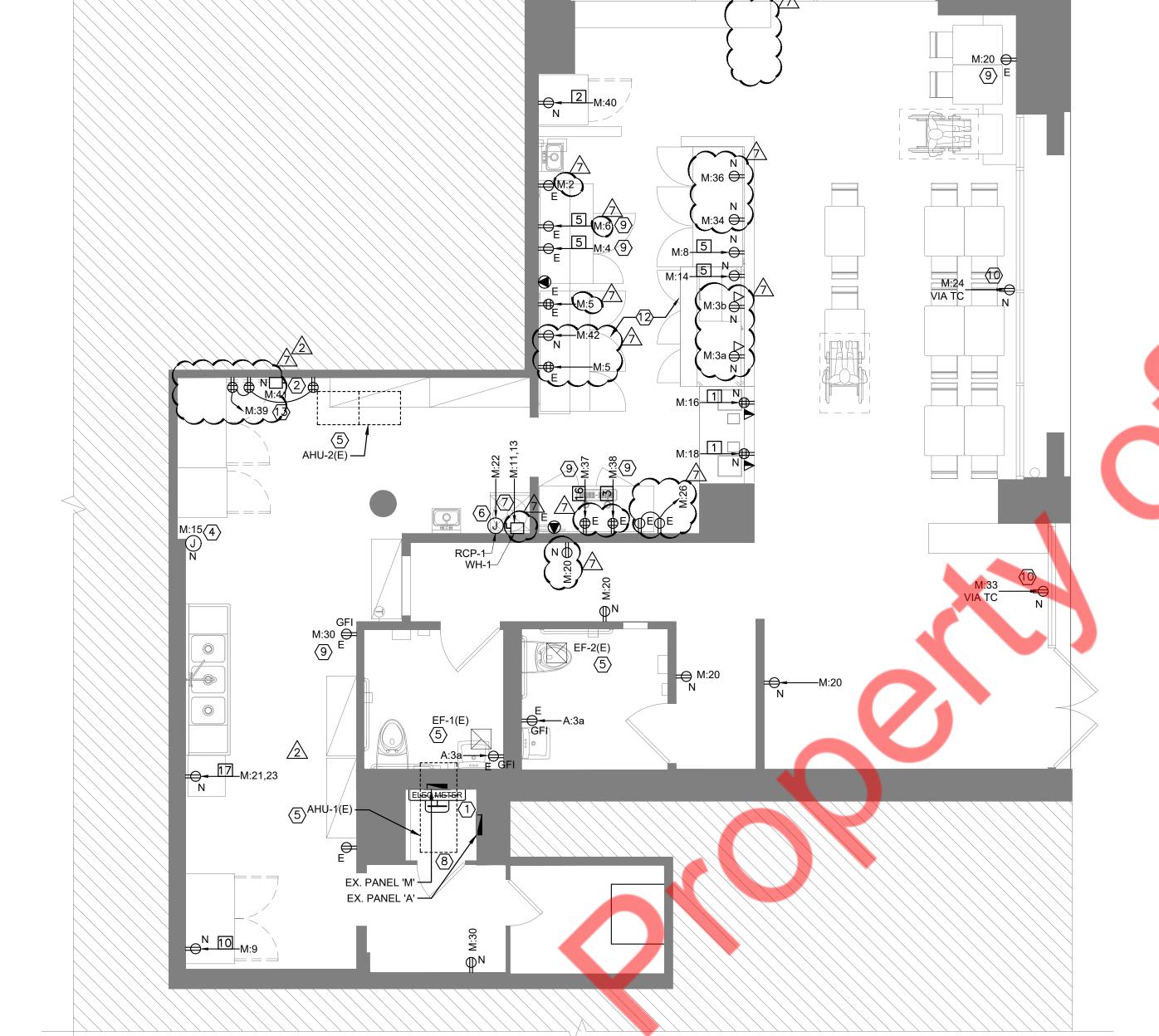
ELECTRICAL ROOF PLAN GENERAL NOTES:

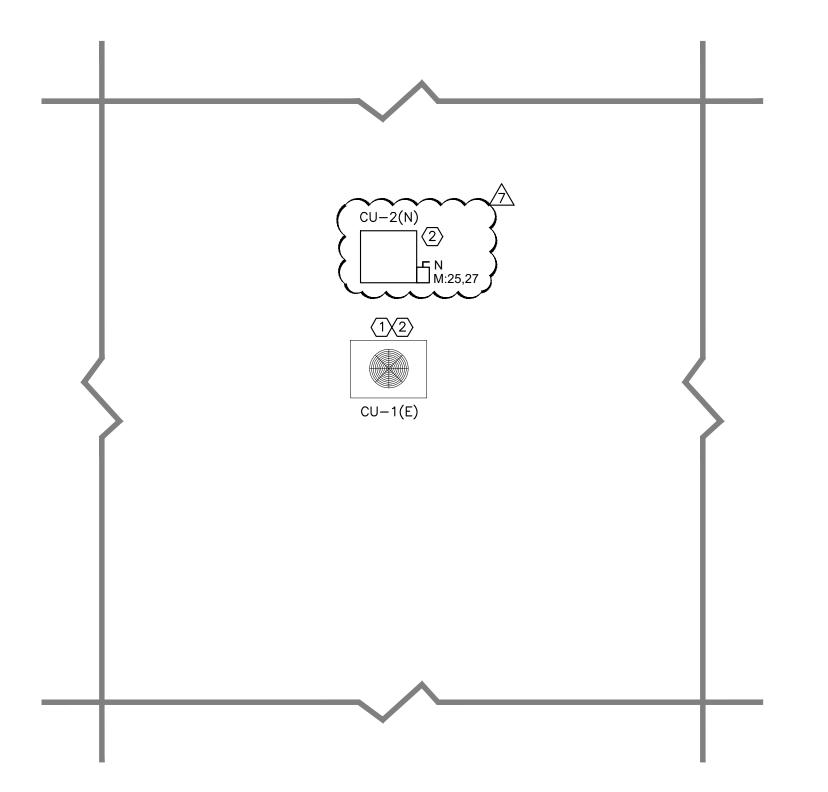
- A. ALL ROOF PENETRATION MUST BE PATCHED IN BY DIVERSIFIED ROOFING. THERE SHALL BE NO SURFACE MOUNTING OF THE ELECTRICAL UNITS ON ROOF.
- B. E.C. SHALL VERIFY EXISTING ELECTRICAL CONNECTIONS, WIRE SIZES AND OPERABLE CONDITION OF THE ALL ELECTRICAL DEVICES OF THE EXISTING MECHANICAL UNITS THAT SHALL REMAIN.

ROOF POWER KEYED NOTES: (#)

- 1. EXISTING MECHANICAL EQUIPMENT SHALL REMAIN CONNECTED TO THE EXISTING CIRCUITS. E.C. TO VERIFY RATING, OPERABLE CONDITION, AND EXACT LOCATION IN FIELD. REPLACE IF FOUND INOPERABLE. BASE BID ACCORDINGLY.
- 2. ELECTRICAL CONTRACTOR SHALL COORDINATE DISCONNECT AND FUSE REQUIREMENT FOR MECHANICAL UNIT WITH MECHANICAL CONTRACTOR AND EQUIPMENT MANUFACTURER PRIOR TO ROUGH—IN AND PROVIDE AS REQUIRED. COORDINATE LOCATION OF DISCONNECT WITH OWNER AND MECHANICAL CONTRACTOR PRIOR TO ROUGH—IN. LOCATE AS REQUIRED TO MAINTAIN NEC CLEARANCES.

	KITCHEN EQUIPM	/ENT	SCHEDULE
NO.	EQUIPMENT DESCRIPTION	QTY	MANUFACTURER
1	POS TERMINAL	2	POSIFLEX - JIVA XT-3215
2	1 DR. DRINK REFRIGERATOR	1	AVANTCO 178GDC23HCB
^3	60" WORK TOP REFRIGERATORS	1	BEVERAGE-AIR-WTR34Y
5	72" WORK TOP REFRIGERATOR	4	BEVERAGE-AIR-185WTR72AYH0
10	2 DR. REACH-IN FREEZER	1	AVANTCO-17CFD2RR
1 6	36" WORK TOP REFRIGERATORS	1	BEVERAGE AIR-185WTR36AFH0
17	DISHWASHER	1	NOBLE WAREWASHING







ELECTRICAL POWER PLAN

ELECTRICAL ROOF PLAN

SCALE 1/4" = 1'-0"

E-200

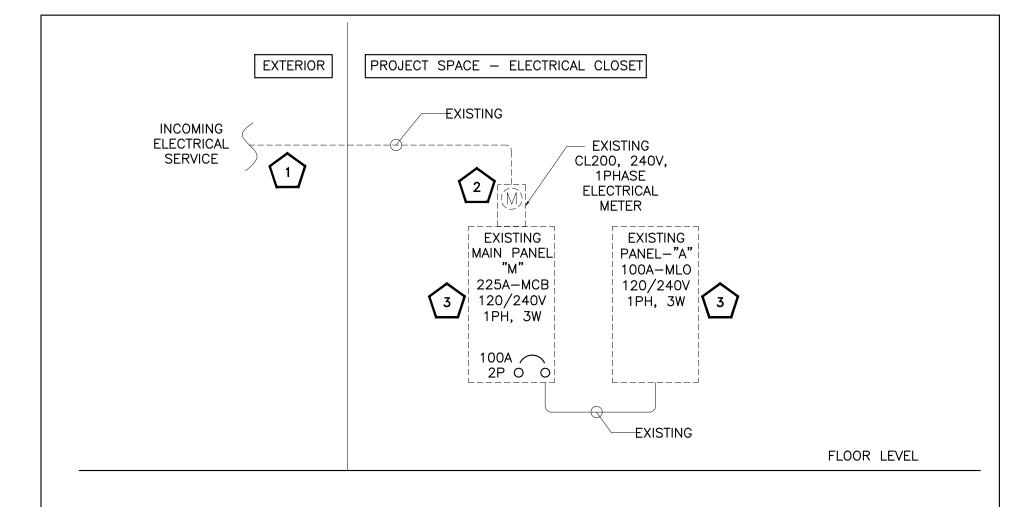
ISSUE FOR DESCRIPTION: CONSTRUCTION DOCUMENT

LUKE'S LOBSTER

ISSUE DATE: 06/03/2024

NO. DESCRIPTION DATE 06/11/24 CITY COMMENTS CLIENT UPDATES 06/11/24 CITY COMMENTS 07/11/24 CLIENT UPDATES 09/10/24

ELECTRICAL POWER & ROOF PLANS



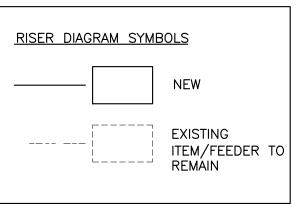
ELECTRICAL RISER DIAGRAM KEYED WORK NOTES: (#)



1. EXISTING ELECTRICAL SERVICE FEEDER TO REMAIN. E.C. TO VERIFY LOCATION, RATING AND OPERABLE CONDITION OF THE FEEDER IN FIELD. INFORM ENGINEER ON RECORD OF ANY DISCREPANCY.

2. EXISTING ELECTRICAL METER TO REMAIN. E.C. TO VERIFY LOCATION. RATING AND OPERABLE CONDITION OF METER IN FIELD. REPLACE IF FOUND INOPERABLE, COORDINATE WITH OWNER/UTILITY.

3. EXISTING PANELS TO REMAIN. E.C. TO VERIFY LOCATION, RATING AND OPERABLE CONDITION OF PANELS IN FIELD. REPLACE IF FOUND INOPERABLE, COORDINATE WITH OWNER/UTILITY.



ELECTRICAL RISER DIAGRAM GENERAL NOTES:

- A. E.C. SHALL VERIFY/COORDINATE THE FOLLOWING INFORMATION IN THE FIELD WITH THE UTILITY/LANDLORD/OWNER AND INFORM THE ENGINEER ON RECORD OF ANY DISCREPANCY.
- B. THE EXACT POWER DISTRIBUTION AND SCOPE OF WORK WITH THE LANDLORD/OWNER BEFORE BID.
- C. THE ELECTRICAL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE NEC, LOCAL CODES AND AHJ.
- D. ENSURE THE COMBINED VOLTAGE DROP OF THE FEEDER AND BRANCH CIRCUIT SHALL NOT EXCEED 5% PER CODE.
- E. PROVIDE GEC AND EGC AS PER 250.66 & 250.122 RESPECTIVELY, AS NEEDED. PROVIDE SEPARATE GROUND CONDUCTORS IN ALL CONDUITS.
- F. THE PART OF RISER MARKED AS EXISTING IS FOR REFERENCE PURPOSE ONLY. E.C. SHALL VERIFY THE RISER IN THE FIELD. INFORM THE ENGINEER ON RECORD OF ANY DISCREPANCY FOUND.
- G. SPARE AMPS AVAILABLE IN THE EXISTING ELECTRICAL SERVICE ARE MORE THAN THE NEWLY ADDED DEMAND AMPS.
- H. VERIFY THE LOCATION, RATING, AND OPERABLE CONDITION OF ALL THE EXISTING COMPONENTS BEING REUSED. REPLACE IF FOUND INOPERABLE (WITHIN THE SCOPE OF WORK). BASE BID ACCORDINGLY.
- I. PLEASE REFER POWER PLAN FOR THE LOCATION OF THE ELECTRICAL METER & PANELS INFORM THE ENGINEER ON RECORD OF ANY DISCREPANCY.
- J. ADDITION OR ALTERATION TO THE EXISTING SYSTEM SHALL NOT BE DONE WITHOUT THE WRITTEN CONSENT OF THE OWNER.

ELECTRICAL RISER DIAGRAM GENERAL NOTES:

A. PROVIDE GFCI PROTECTION FOR ALL EQUIPMENT/KITCHEN RECEPTACLES PER NEC 210.8 (B)(2). MUST BE READILY ACCESSIBLE OR PROVIDE GFI BREAKER.

- B. E.C. SHALL VERIFY CIRCUITING OF THE EXISTING DEVICES IN FIELD AND INFORM ENGINEER FOR ANY DISCREPANCIES.
- C. ELECTRICAL CONTRACTOR TO VERIFY THE EXACT PANEL SIZES AND INCOMING
- D. ELECTRICAL CONTRACTOR SHALL VERIFY EXACT CIRCUIT NUMBER & BREAKER SIZE OF EXISTING DEVICES IN FIELD.
- E. E.C. SHALL PROVIDE NEW CIRCUIT BREAKERS IN PLACE OF EXISTING CIRCUIT BREAKERS WHEREVER NECESSARY TO BE IN LINE WITH THE PANEL SCHEDULE.

- F. THE CONTRACTOR IS TO PROVIDE A CIRCUIT DIRECTORY FOR EACH PANEL
- PANEL SCHEDULE ABBREVIATIONS:

L=LIGHTING R=RECEPTACLE H=HVAC M=MOTOR

0=OTHER

(*) NEW BREAKER IN EXISTING PANEL

PANEL:	M	(EXISTING)									MOUNTING:	RECESSED	
									T				
240/120	VOLTS	PHASE	1		AIC RATING (in kA)	10kA		DEMAND LOAD	42.70		PANEL LOCATION:		
	MCB	WIRE	3		-	-		DEMAND CURRENT	177.93		FED FROM:	ELECTRICAL	. METER
NOTE:			Г					T	Г		T	T	
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD		LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHA A	SE (KVA) B	MINIMUM BRANCH CIRCUIT	LOAD (KVA	LOAD TYPE		TRIP AMPS	CKT NO.
1 (a/b)	20/20	SPARE / SPARE				0.18		2#12, #12G, 3/4"C	0.18	R	PREP AREA RECEPT.	√7\ ₂₀	2
3 (a/b)	20/20	PREP AREA RECEPT. / PREP AREA RECEPT.	R	0.36	2#12, #12G, 3/4"C	⟨ /̄}\	0.76	2#12, #12G, 3/4"C	0.40	E	5_WORK TOP REFRIGERATOR	20	4
5	20*	PREP AREA RECEPT.	R	0.72	2#12, #12G, 3/4"C	1.12		2#12, #12G, 3/4"C	0.40	E	5_WORK TOP REFRIGERATOR	20	6
7	20*	SPARE A A A A A A A)	0.40	2#12, #12G, 3/4"C	0.40	E	5_WORK TOP REFRIGERATOR	20	8
9	20	10_2DR. REACH-IN-FREEZER	Ē	1.12	2#12, #12G, 3/4"C	5.49		EXISTING FEEDER	4.37	0	SUB PANEL A	100/2P	10
11	50/2P	 WH-1(N)	0	6.15	2#8, #10G, 3/4"C		10.52	EXISTINGTEEDER	4.37	0	SOBT ANLEA	100/ 21	12
13	30/21	William (iv)	0	6.15	2110, 11100, 3/4 C	6.55		2#12, #12G, 3/4"C	0.40	E	5_WORK TOP REFRIGERATOR	20	14
15	20	WIB MISC. LOAD	E	0.80	2#12, #12G, 3/4"C		1.16	2#12, #12G, 3/4"C	0.36	E	1_POS TERMINAL	20	16
17	30/2P	SPARE				0.36		2#12, #12G, 3/4"C	0.36	E	1_POS TERMINAL	20	18
19	30, 21	ST ARE					0.90	2#12, #12G, 3/4"C	0.90	R	GENERAL RECEPTACLE	20/7	20
21	50/2P	DISHWASHER	0	3.19	2#8, #10G, 3/4"C △	3.69		2#12, #12G, 3/4"C	0.50	0	RCP-1(N)	20*	22
23	30, 21		2	319	2110, 11100, 5, 4 0 7		4.19	2#12, #12G, 3/4"C	100		SHOW WINDOW	20*	24
25/7	15/2P*)	CU-2 (N) - CONDENSER	0	1.80	2#12, #12G, 3/4"C	2.16		2#12, #12G, 3/4"C	0.36	E	PREP AREA DEDICATED RECEPT.	20*	26
27	> 13,21	CO Z (N) CONDENSEN	0	1.80	21112, 11120, 3, 1 0		1.80				SPARE	20*	28
29 (a/b)	/	SPARE / SPARE			<u> </u>	0.36		2#12, #12G, 3/4"C	0.36	E	GENERAL RECEPTACLE	20*	30
31	20*	WALL SCONCES LIGHTING SHOW WINDOW		0.10	2#12, #12G, 3/4"C 2#12, #12G, 3/4"C		0.10				SPARE	20*	32
33	(20*)	SHOW WINDOW	R	1.00	2#12, #12G, 3/4"C	1.18		2#12, #12G, 3/4"C	0.18	E	PREP AREA DEDICATED RECEPT.	20*	34
35	15	TIME CLOCK	L	1.00	2#12, #12G, 3/4"C		1.18	2#12, #12G, 3/4"C	0.18	E	PREP AREA DEDICATED RECEPT. 3_WORK TOP REFRIGERATOR	20*	36
37	20	16_WORK TOP REFRIGERATOR	₹~	0.24	2#12, #12G_3/4"C	0.74		2#12, #12G, 3/4"C	0.50	E	3_WORK TOP REFRIGERATOR	20	38
39	20*	WIC QUAD RECEPTACLES	R	1.08	2#12, #12G, 3/4"C \/7	7	1.28	2#12, #12G, 3/4"C	0.20	E	2_1DR. DRINK REFRIGERATOR	20	40
41	20*	EVA. COIL (COOLER)	E	0.50	2#12, #12G, 3/4"C	0.68	•	2#12, #12G, 3/4"C	0.18	R	PREP AREA RECEPT. 7	20	42
					33333	22.51	22.29						
	L	OAD CLASSIFICATION		CONNECT	ED LOAD (KVA)	DEMAN	FACTOR				PANEL TOTAL LOAD		
TOTAL LIGI	HTING	L			1.10	12	5%	1.38					
TOTAL REC	EPTACLE	R			5.42	10	0%	5.42			TOTAL CONNECTED LOAD	44.79	KVA
TOTAL HV	AC .	Н			0.00	10	0%	0.00			TOTAL DEMAND LOAD	42.70	KVA
TOTAL MO	TOR	M			0.00	10	0%	0.00			TOTAL CONNECTED CURRENT	186.64	AMP
TOTAL EQU	JIPMENTS	E			6.76	65	5%	4.39			TOTAL DEMAND CURRENT	177.93	AMP
TOTAL OTH	IER	0			31.51	10	0%	31.51					
						•			·			·	

PANEL:	Α	(EXISTING)									MOUNTING:	RECESSED	
240/120	VOLTS	PHASE	1		AIC RATING (in kA)	10kA		DEMAND LOAD	8.73		PANEL LOCATION:	ELECTRICAL	CLOSET
100A	MLO	WIRE	3		-	-		DEMAND CURRENT	36.38		FED FROM:	PANEL M	
NOTE:		4											
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	I O A D TVDE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHA	SE (KVA)	MINIMUM BRANCH CIRCUIT	IOVD (K//V)	I O A D TVDE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO
CKT NO.	TRIF AIVIF 3	DESCRIPTION OF EOAD	LOAD TIFE	LOAD (KVA)	WIINTWOW BRANCH CIRCOTT	Α	В	WINNIVION BRANCH CIRCOIT	LOAD (KVA)	LOADTIFE	DESCRIPTION OF LOAD	TRIF AIVIFS	CKT NO.
	20	BOHELVTRLTG	Λ L	0.50	2#12, #12G, 3/4"C	1.10		2#12, #12G, 3/4"C	0.60	L	STORE LIGHTS	20	2
3 (a/b)	20/20	REST RM LTG, RECEP. / SPARE FANS LIGHTS	<u>∕7\</u> E	0.70	2#12, #12G, 3/4"C		1.10	2#12, #12G, 3/4"C	0.40	L	STORE LIGHTS	20	4
\sum_{5}	20	FANS LIGHTS	L	0.50	2#12, #12G, 3/4"C	1.00		2#12, #12G, 3/4"C	0.50	R	MANAGER DESK	20 <	6
7	20	FRONT LTG WINDOW	L	0.30	2#12, #12G, 3/4"C		1.50	2#12, #12G, 3/4"C	1.20	L	NEON SIGN	20*/7	8 4
9	30/2P	AIR HANDLER	Н	1.10	2#10, #10G, 3/4"C	1.70		2#12, #12G, 3/4"C	0.60	Н	AIR HANDLER	20/2P	10
11	30/ ZF	AIR HANDLER	Н	1.10	2#10, #100, 3/4 C		1.70	2#12, #12G, 3/4 C	0.60	Н	AIR HANDLER	20/ 27	12
						3.80	4.30						
	LOAD	CLASSIFICATION		CONNECT	TED LOAD (KVA)	DEMAN	D FACTOR				PANEL TOTAL LOAD		
TOTAL LIGI	HTING	L			3.50	12	15%	4.38					
TOTAL REC	EPTACLE	R			0.50	10	00%	0.50			TOTAL CONNECTED LOAD	8.10	KVA
TOTAL HV	AC .	Н		3.40		10	00%	3.40			TOTAL DEMAND LOAD	8.73	KVA
TOTAL MO	TOR	M		0.00		10	00%	0.00			TOTAL CONNECTED CURRENT	33.75	AMP
TOTAL EQU	JIPMENTS	Е			0.70	65	5%	0.46	тот		TOTAL DEMAND CURRENT	36.38	AMP
TOTAL OTH	IER	0			0.00	10	00%	0.00					

LUKE'S	LOBSTER	

CONSTRUCTION DOCUMENT

ISSUE FOR DESCRIPTION:

ISSUE DATE:

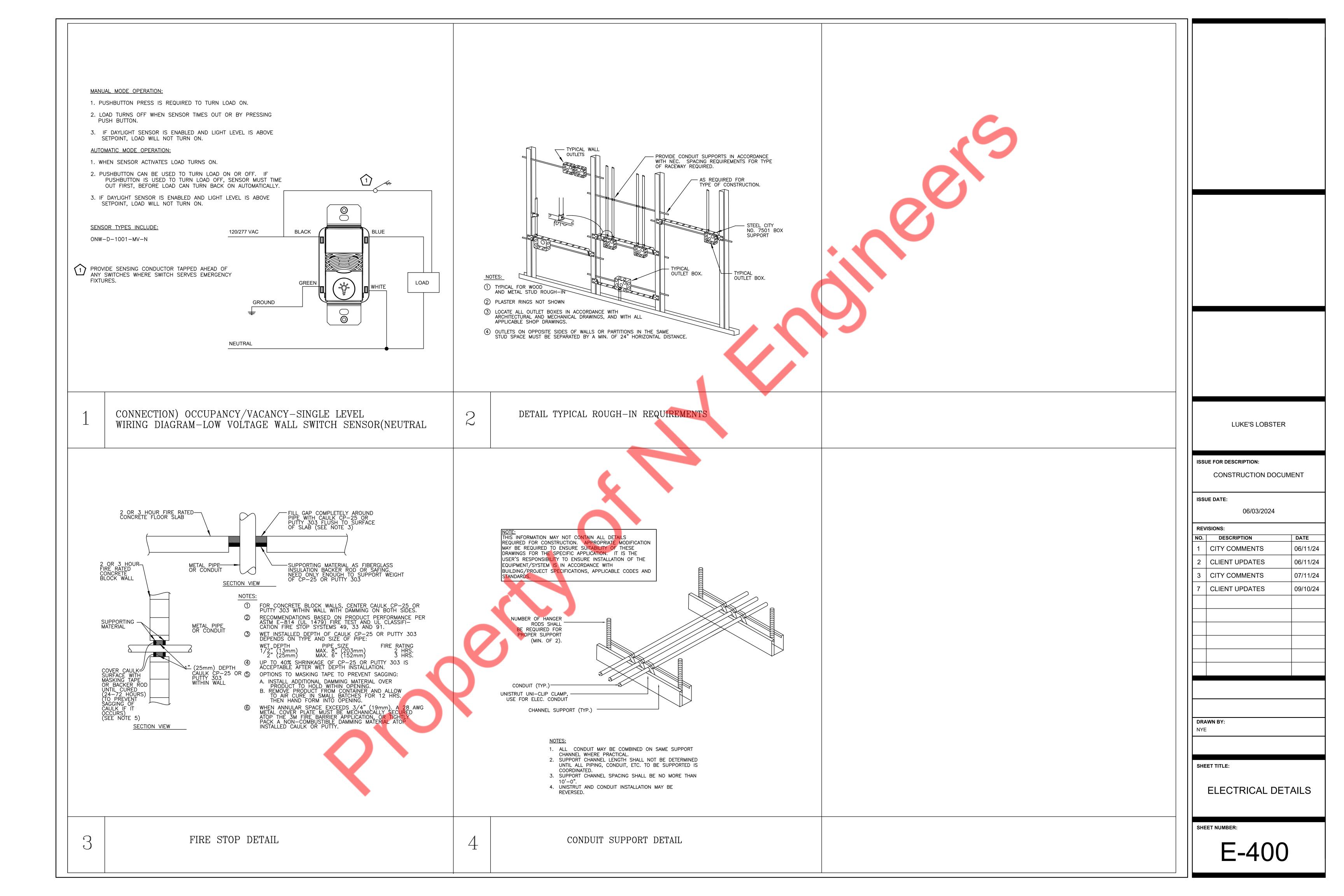
06/03/2024

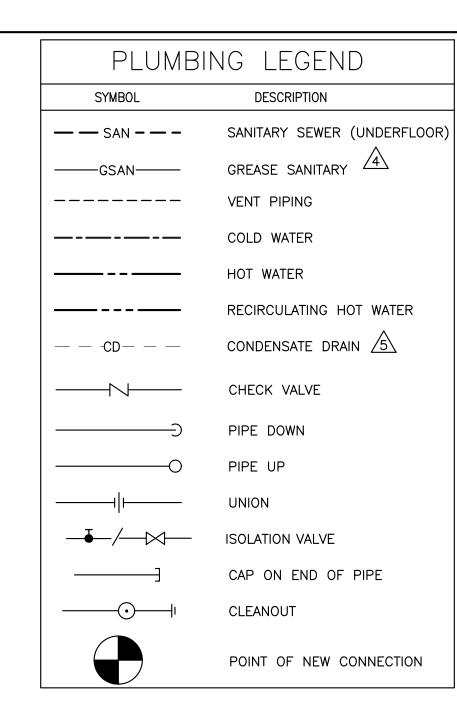
REV	ISIONS:	
NO.	DESCRIPTION	DATE
1	CITY COMMENTS	06/11/24
2	CLIENT UPDATES	06/11/24
3	CITY COMMENTS	07/11/24
7	CLIENT UPDATES	09/10/24

SHEET TITLE:

ELECTRICAL RISER DIAGRAM AND PANEL SCHEDULE

SHEET NUMBER:





PLUMBING ABBREVIATIONS

CO	CLEANOUT
CW	COLD WATER
HW	HOT WATER
HWR	HOT WATER RETURN
SAN	SANITARY
V	VENT
TYP.	TYPICAL
DN	DOWN
EX.	EXISTING
AFF	ABOVE FINISH FLOOR
SQ. FT.	SQUARE FEET
WH-1	WATER HEATER
RPZ/BFP	BACKFLOW PREVENTER
ET-1	EXPANSION TANK
RCP-1	RECIRCULATION PUMP
FFD	FUNNEL DRAIN 4

PLUMBING DRAWING LIST

P-001	PLUMBING SYMBOLS, ABBREVIATIONS & NOTES
P-100	PLUMBING SANITARY AND VENT PLAN
P-101	PLUMBING WATER PLAN
P-200	PLUMBING DETAILS
P-300	PLUMBING SCHEDULES AND RISERS
P-400	TITLE 24 (1 OF 2)
P-201	TITLE 24 (2 OF 2)

APPLICABLE CODES

- A. 2022 CALIFORNIA ENERGY CONSERVATION CODE B. 2022 CALIFORNIA MECHANICAL CODE. C. 2022 CALIFORNIA PLUMBING CODE. D. 2022 CALIFORNIA ELECTRICAL CODE.
- E. 2022 CALIFORNIA FUEL GAS CODE. F. 2022 CALIFORNIA BUILDING CODE.

BUILDING DEPARTMENT PLUMBING NOTES

- ALL PLUMBING SYSTEMS (SANITARY, WASTE, VENT, WATER, STORM) AND ASSOCIATED EQUIPMENT SHALL BE INSTALLED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF 2022 CALIFORNIA PLUMBING CODE.
- INSTALLATION OF UNDERGROUND PIPING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION PC 701
- PROTECTION OF PIPING AND PLUMBING SYSTEM COMPONENTS AS PER SECTION PC 312.
- TRENCHING, EXCAVATION AND BACKFILL AS PER SECTION PC
- 5. RODENT PROOFING AS PER PC 312.12
- MATERIALS USED IN PLUMBING SYSTEMS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION PC 312, PC 604, PC 701, PC 903,PC 1102.
- EQUIPMENT CONNECTIONS AND JOINING OF PIPING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTERS 4, 5, 6. 7 AND 9.
- 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. DRAINAGE PIPE CLEANOUTS AS PER SECTION PC 719.
- 10. VERTICAL AND HORIZONTAL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION PC 313
- 1. 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

- 12. THE SANITARY DRAINAGE SYSTEM SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 7 SECTION PC 701, 704, 705, 706, 707, 708,
- 13. 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
- 14. INSPECTION AND TESTING OF PLUMBING SYSTEMS SHALL BE IN ACCORDANCE WITH SECTION PC 107.

PLUMBING SPECIFICATIONS:

- 1. BASIC PLUMBING REQUIREMENTS, MATERIALS AND METHODS
- 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
- 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.

1.01 SCOPE

- 1.02 SUBMITTALS A. SUBMITTAL REQUIREMENTS SHALL BE COORDINATED WITH THE ARCHITECT AND AUTHORITIES HAVING JURISDICTION. UNLESS OTHERWISE DIRECTED, CONTRACTOR SHALL PROVIDE SUBMITTALS
- 1. PIPE AND FITTINGS

AS LISTED BELOW.

- VALVES HANGERS AND SUPPORTS
- 4. PLUMBING PIPING LAYOUT
- 5. TESTS 6. PLUMBING FIXTURES
- 7. WATER HEATERS & ACCESSORIES
- 8. MIXING VALVES 9. 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. 1.05 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.

1.06 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.
- 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.

1.07 PRODUCTS

- A. SANITARY AND VENT PIPING:
- 1. ABOVE GRADE PIPING SHALL BE HUBLESS CAST IRON PIPE WITH STAINLESS STEEL COUPLINGS AND ELASTOMERIC GASKETS WITH A MINIMUM 4 BANDS PER COUPLING.
- 2. SLOPE OF DRAINAGE SYSTEM SHALL BE 1/8" PER FOOT OF RUN FOR PIPE OVER 3" (I.D.) AND 1/4" PER FOOT OF RUN FOR PIPE 3" AND SMALLER (I.D.). VENT PIPING SHALL BE PITCHED TO DRAIN.
- 3. ALL CAST IRON SOIL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE (CISPI) AND BE LISTED BY NSF INTERNATIONAL.
- A.1 DOMESTIC WATER PIPING:
- 1. ABOVE GRADE WATER PIPING SHALL BE TYPE 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. THE ENTIRE DOMESTIC WATER DISTRIBUTION SYSTEM SHALL BE INSULATED INCLUDING ALL VALVES, FITTINGS, ETC.

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
- NSULATED WITH FIRE—RETARDENT, FACTORY APPLIED JACKET.PROVI<mark>DE</mark> COLD WATER PIPING WITH FACTORY-APPLIED VAPOR BARRIER.INSULATION REQUIREMENT SHOULD COMPLY WITH CALIFORNIA STATE NERGY CODE 2022, SECTION 150.0.
- PER CALIFORNIA STATE ENERGY CODE 2022, SERVICE WAER HEATING EQUIPMENT SHALL BE EQUIPED WITH AUTOMATIC TEMPERATURE CONTROLS CAPABLE OF ADJUSTING FROM THE LOWEST TO THE HIGHEST ACCEPTABLE TEMPERATURE SETTING FOR THE INTENDED USE AS PER TABLE 613.1 OF THE CALIFORNIA STATE PLUMBING CODE.
- 8. AS PER CALIFORNIA STATE ENERGY CODE 2022, SYSTEMS DESIGNED TO MAINTAIN USAGE TEMPERATURES IN HOT WATER PIPES, SUCH AS RECIRCULATING HOT WATER SYSTEM SHALL BE EQUIPED WITH AUTOMATIC TIME SWITCHES OR OTHER CONTROLS THAT CAN BE SET TO SWITCH OF THE USAGE TEMPERATURE MAINTAINANCE SYSTEM DURING EXTENDED PERIOD WHEN HOT WAER IS NOT REQUIRED
- 9. AS PER CALIFORNIA STATE ENERGY CODE 2022, SECTION 613.5, TEMPERATURE CONTROL VALVE SHALL BE PROVIDED TO AUTOMATICALLY REGULATE THE TEMPERATURE OF HOT WATER DELIVERED TO PLUMBING FIXTURE TO A RANGE OF 105°F (41°C) MINIMUM TO 120°F (49°C) MAXIMUM.
- 10. INSULATION REQUIREMENT SHOULD COMPLY WITH CALIFORNIA STATE ENERGY CODE 2022. REFER BELOW TABLE FOR MINIMUM PIPE INSULATION HICKNESS ACC. TO CALIFORNIA PLUMBING CODE 2022 SECTION 609.12, 2022 CALIFORNIA ENERGY CODE 2022 SECTION 120.3

	MINIMUM PIPE	INSULATION TH	HICKNESS			
FLUID OPERATING		CONDUCTIVITY	NOMINAL PIPE OR TUBE SIZE (INCHES)			
TEMPERATURE RANGE AND USAGE (°F)	CONDUCTIVITY BTU: IN./ (H: FT2: *F)	MEAN RATING TEMPERATURE, *F	<1	1 to < 1		
141-200	0.25-0.29	125	1.5	1.5		
105-140	0.22-0.28	100	1.0	1.5		
	<u> </u>		<u> </u>			

- 11. SEAL ALL JOINTS BETWEEN SEGMENTS OF INSULATION.
- 12. PROVIDE SHIELDS BETWEEN HANGERS AND INSULATION.

B. 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
- 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. SUPPORTS SHALL BE PROVIDED IN STRICT ACCORDANCE THE RECOMMENDATIONS OF THE PIPING MANUFACTURER.

C. 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 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.
- ALL VALVES SHALL BE ACCESSIBLE. PROVIDE ACCESS DOORS WHERE REQUIRED FOR VALVE ACCESS.
- PROVIDE GLOBE VALVES FOR THROTTLING/BALANCING OF THE WATER CIRCULATING SYSTEM.
- D. 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.
- E. 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.
- F. IN ALL AREAS WITH FINISHED SURFACES, SYSTEM PIPING AND COMPONENTS SHALL BE CONCEALED ABOVE OR WITHIN FINISHED SURFACES.
- G. REDUCTIONS IN PIPE SIZES SHALL BE MADE WITH ONE-PIECE REDUCING FITTINGS. BUSHINGS ARE NOT ACCEPTABLE. USE FLANGED FITTINGS AT THE BASE OF
- H. VENT PENETRATIONS THROUGH THE ROOF SHALL BE FLASHED.
- I. IF WATER PRESSURE EXCEEDS 80 PSI, A WATER PRESSURE REDUCING VALVE SHALL BE INSTALLED IN WATER PIPING AT CONNECTION TO MAIN.
- J. PROVIDE DIELECTRIC FITTINGS BETWEEN DISSIMILAR METALS.
- K. PIPE BACKFLOW PREVENTER DRAINS TO FLOOR DRAIN OR OTHER APPROVED INDIRECT WASTE SOURCE.
- L. 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.
- M. ALL FIXTURES REQUIRING VACUUM BREAKERS SHALL BE EQUIPPED WITH INTEGRAL VACUUM BREAKERS.
- N. 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.
- P. 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.
- Q. AT ALL INDIRECT WASTE DRAINS, MAINTAIN AIR GAP AS REQUIRED BY CODE.
- R. 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.

S. 2. INSTALLATION

2.01 GENERAL

- T. 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.
- U. EXTERIOR INSTALLATIONS TO BE WEATHER PROOF IN ALL RESPECTS.
- V. EXTERIOR MATERIALS AND EQUIPMENT SHALL BE PAINTED TO PREVENT CORROSION, COLOR PER ARCHITECT.
- W. COORDINATE THE PLUMBING WORK WITH ALL OTHER AFFECTED WORK AND THE CONSTRUCTION SCHEDULE.
- X. REAM PIPE AND TUBE ENDS. REMOVE BURRS. BEVEL PLAIN AND FERROUS END PIPE.
- Y. REMOVE SCALE AND FOREIGN MATERIAL, FROM INSIDE AND OUTSIDE, BEFORE ASSEMBLY.
- Z. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES AND UNIONS.
- AA. 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.
- AB. NO DOMESTIC WATER PIPING SHALL BE INSTALLED IN UNHEATED SPACES.
- AC. 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. 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. M. REFILL ENTIRE POTABLE HOT AND COLD WATER THREE (3) DAYS ADVANCE NOTICE TO THE PROPERTY MANAGER IS REQUIRED.
- AD. 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.
- AE. 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. TESTING

DEFICIENCIES FOUND.

- 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
- 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
- G. ALL PIPING AND EQUIPMENT SHALL 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

- J. ALL EQUIPMENT WILL BE FACTORY TESTED.
- 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.

.. TESTING REQUIREMENTS

REPRESENTATIVE.

- 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 ESB SPACES.
- 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.

A. FQUIPMENT. 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 C SURFACES THAT MAY OCCUR WITHIN THAT PERIOD

SHALL ALSO BE PROMPTLY REPAIRED.

LUKE'S LOBSTER

ISSUE FOR DESCRIPTION:

CONSTRUCTION DOCUMENT

ISSUE DATE:

05/24/2024 **REVISIONS:** NO. DESCRIPTION DATE CITY COMMENTS 06/11/24 2 | CLIENT UPDATES 06/11/24 3 | CITY COMMENTS 07/11/24 4 CITY COMMENTS 07/22/24 07/29/24 5 CITY COMMENTS 6 CITY COMMENTS 08/13/24

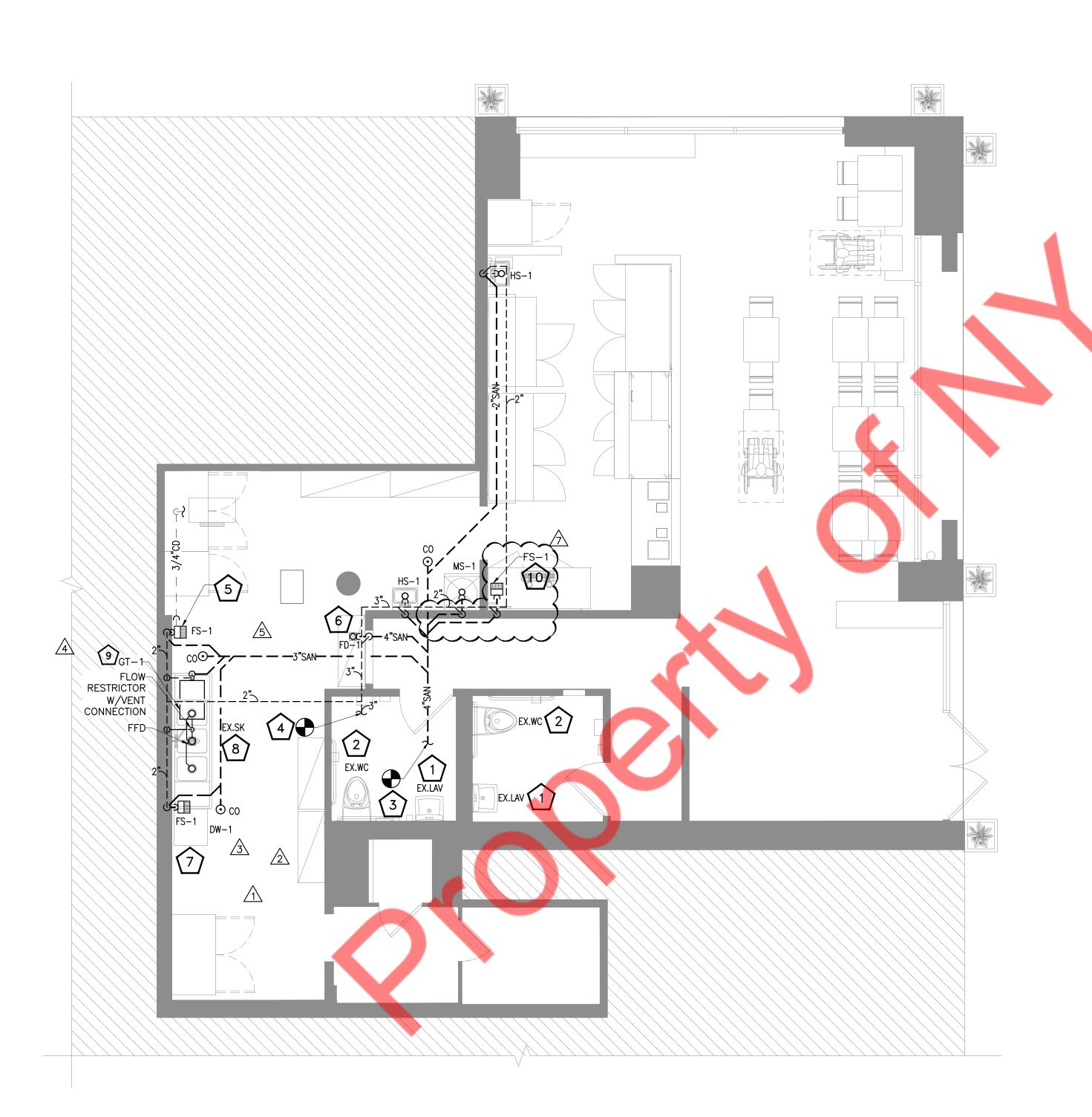
09/10/24

CLIENT UPDATES

DRAWN BY:

SHEET TITLE: PLUMBING SYMBOLS, **ABBREVIATIONS & NOTES**

SHEET NUMBER:





GENERAL NOTES:

- 1. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
- 2. REFER RISER DIAGRAMS FOR ALL PIPE SIZES.
- 3. ANY UNUSED EXISTING FLOOR SINK/DRAIN AND PIPING MUST BE COMPLETELY REMOVED OR CAPPED. DO NOT ABANDON IN PLACE.

SANITARY PIPING KEYED NOTES:

- EXISTING LAVATORY WITH EXISTING SANITARY, VENT WITH ASSOCIATED ACCESSORIES AND FITTINGS TO REMAIN. CONTRACTOR TO FIELD VERIFY EXISTING CONDITION OF PIPING AND FIXTURE, REPLACE IF REQUIRED.
- 2 EXISTING WATER CLOSET WITH EXISTING SANITARY, VENT WITH ASSOCIATED ACCESSORIES AND FITTINGS TO REMAIN. CONTRACTOR TO FIELD VERIFY EXISTING CONDITION OF PIPING AND FIXTURE, REPLACE IF REQUIRED.
- 3 CONNECT NEW 4" SANITARY WASTE PIPING TO EXISTING SANITARY LINE IN SPACE. CONTRACTOR TO FIELD VERIFY SIZE, ROUTING AND INVERT.
- NEW 3" VENT LINE CONNECT TO EXISTING VENT LINE IN SPACE. CONTRACTOR TO FIELD VERIFY EXISTING VENT LINE EXACT LOCATION AND SIZE.
- CONDENSATE DRAIN PIPE FROM WALK IN COOLER EVAPORATOR DISCHARGE TO ADJACENT FLOOR SINK WITH APPROVED AIR GAP.
- 6 INDIRECT DRAIN FROM BFP TO ADJACENT FLOOR DRAIN WITH APPROVED AIR GAP.
- 17 INDIRECT WASTE FROM DISHWASHER TO ADJACENT FLOOR SINK WITH APPROVED AIR GAP.
- EXISTING 3 COMPARTMENT SINK (EX.SK) TO REMAIN. CONTRACTOR TO FIELD VERIFY EXISTING CONDITION OF FIXTURE, REPLACE IF REQUIRED.
- NEW WATTS WD-25 GREASE TRAP WITH 25 GPM FLOW. INSTALL GREASE TRAP UNDER THREE COMPARTMENT SINK AND AS PER THE MANUFACTURER'S RECOMMENDATION. CONTRACTOR TO COORDINATE FINAL LOCATION AND SIZE OF GREASE INTERCEPTOR AS PER THE LOCAL HEALTH JURISDICTION AND BASE BID ACCORDINGLY.
- INDIRECT WASTE FROM BEER COOLER TO ADJACENT FLOOR SINK WITH APPROVED AIR GAP.

LUKE'S LOBSTER

ISSUE FOR DESCRIPTION:

CONSTRUCTION DOCUMENT

ISSUE DATE:

05/24/2024

REV	REVISIONS:											
NO.	DESCRIPTION	DATE										
1	CITY COMMENTS	06/11/24										
2	CLIENT UPDATES	06/11/24										
3	CITY COMMENTS	07/11/24										
4	CITY COMMENTS	07/22/24										
5	CITY COMMENTS	07/29/24										
6	CITY COMMENTS	08/13/24										
7	CLIENT UPDATES	09/10/24										

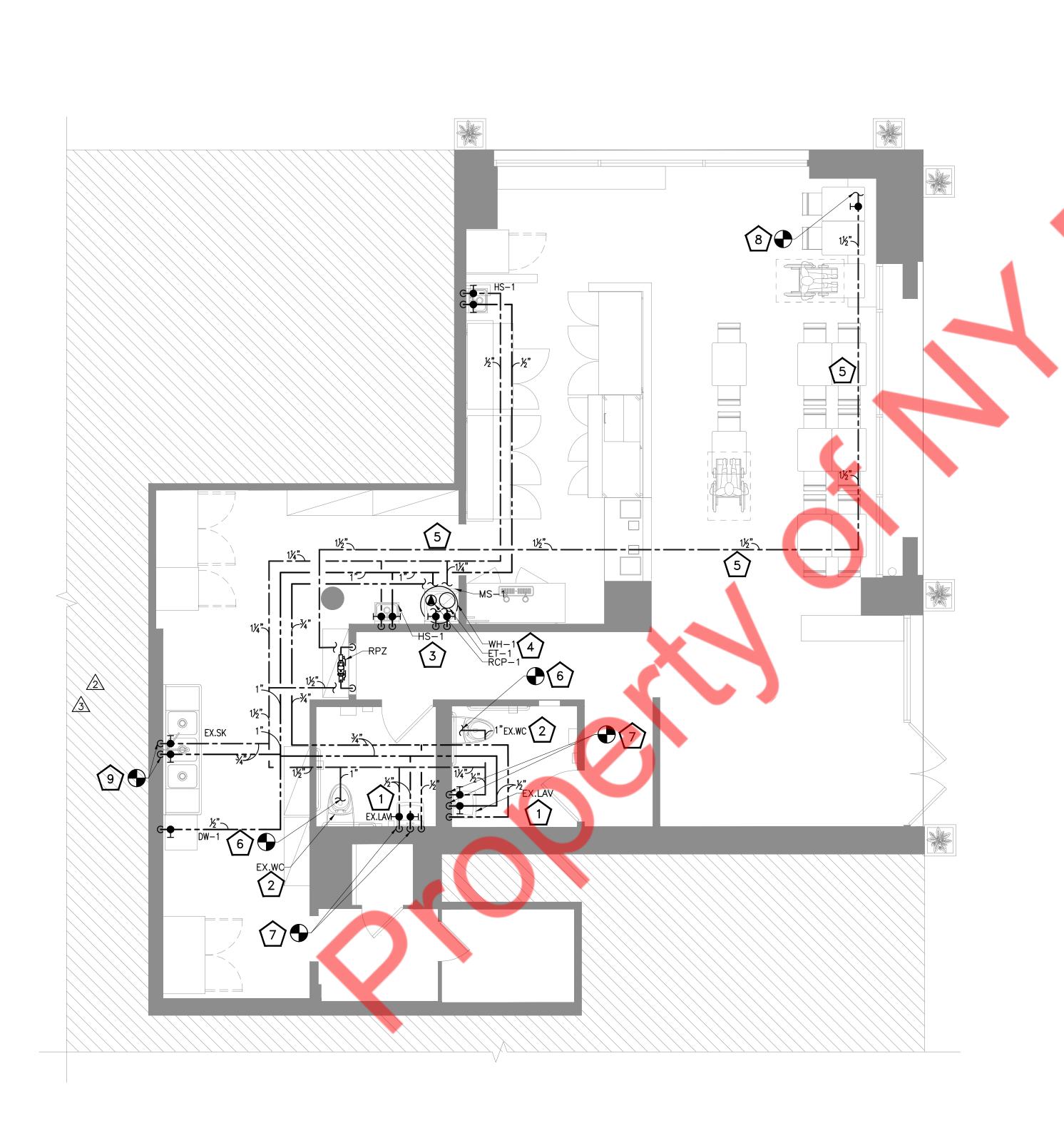
DRAWN B

SHEET TITLE:

PLUMBING SANITARY AND VENT PLAN

SHEET NUMBER:

P-100



GENERAL NOTES:

- 1. CW/HW PIPING PROVIDED WITH INSULATION AS PER 2022 CALIFORNIA ENERGY CODE.
- 2. PROVIDE BRANCH PRV IF PRESSURE EXCEEDS 80 PSI.
- PROVIDE ACCESS PANELS FOR WATER HAMMER ARRESTOR, CLEANOUTS & SHUT-OFF VALVES AS REQUIRED.
- 4. REFER RISER DIAGRAMS FOR ALL PIPE SIZES.
- 5. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
- 6. CONTRACTOR TO FIELD VERIFY THAT THE BACKFLOW PREVENTION DEVICE SHALL BE ASSE 1013 OR SIMILAR APPROVED AS PER LOCAL JURISDICTION. AND, PROVIDE REQUIRED AIR GAP TO AFFORD BACKFLOW PREVENTION PROTECTION AS PER 2022 CPC SECTION 603.3.1.
- 7. FOOD PREP SINK IS NOT REQUIRED AS ALL FOOD IS PRE-PREPPED AND COOKED AND THEN ONLY TOAST THE BURN.

WATER PIPING KEYED NOTES:

- EXISTING LAVATORY WITH EXISTING WATER PIPING WITH ASSOCIATED ACCESSORIES AND FITTINGS TO REMAIN. CONTRACTOR TO FIELD VERIFY EXISTING CONDITION OF PIPING AND FIXTURE, REPLACE IF REQUIRED.
- EXISTING WATER CLOSET WITH EXISTING WATER PIPING WITH ASSOCIATED ACCESSORIES AND FITTINGS TO REMAIN. CONTRACTOR TO FIELD VERIFY EXISTING CONDITION OF PIPING AND FIXTURE, REPLACE IF REQUIRED.
- PROVIDE A TEMPERING VALVE FOR HAND SINK. A LIMITING DEVICE CONFORMING TO ASSE 1070/ASME A112.1070/CSA B125.70. SET TEMPERATURE TO A MAXIMUM OF 120° F.
- ROUTE T&P RELIEF DRAIN TO MOP SINK WITH APPROVED AIR GAP.
- 5 NO TAP OFF TO BE TAKEN BEFORE BFP.
- CONNECT NEW 1" CW TO EXISTING CW LINE. CONTRACTOR TO FIELD VERIFY EXISTING WATER LINE SIZE, ROUTING AND LOCATION.
- CONNECT NEW ½" CW/HW TO EXISTING CW/HW LINE. CONTRACTOR TO FIELD VERIFY EXISTING WATER LINE SIZE, ROUTING AND LOCATION.
- CONNECT NEW 1-1/2" CW LINE TO EXISTING CW LINE IN SPACE. CONTRACTOR TO FIELD VERIFY EXISTING WATER METER, CW LINE CONDITION, LOCATION AND SIZE. UPGRADE IF REQUIRED. BASE BID ACCORDINGLY.
- CONNECT NEW 3/4" CW/HW TO EXISTING CW/HW LINE. CONTRACTOR TO FIELD VERIFY EXISTING WATER LINE SIZE, ROUTING AND LOCATION.

LUKE'S LOBSTER

ISSUE FOR DESCRIPTION:

CONSTRUCTION DOCUMENT

ISSUE DATE:

05/24/2024

REV	REVISIONS:											
NO.	DESCRIPTION	DATE										
1	CITY COMMENTS	06/11/24										
2	CLIENT UPDATES	06/11/24										
3	CITY COMMENTS	07/11/24										
4	CITY COMMENTS	07/22/24										
5	CITY COMMENTS	07/29/24										
6	CITY COMMENTS	08/13/24										
7	CLIENT UPDATES	09/10/24										

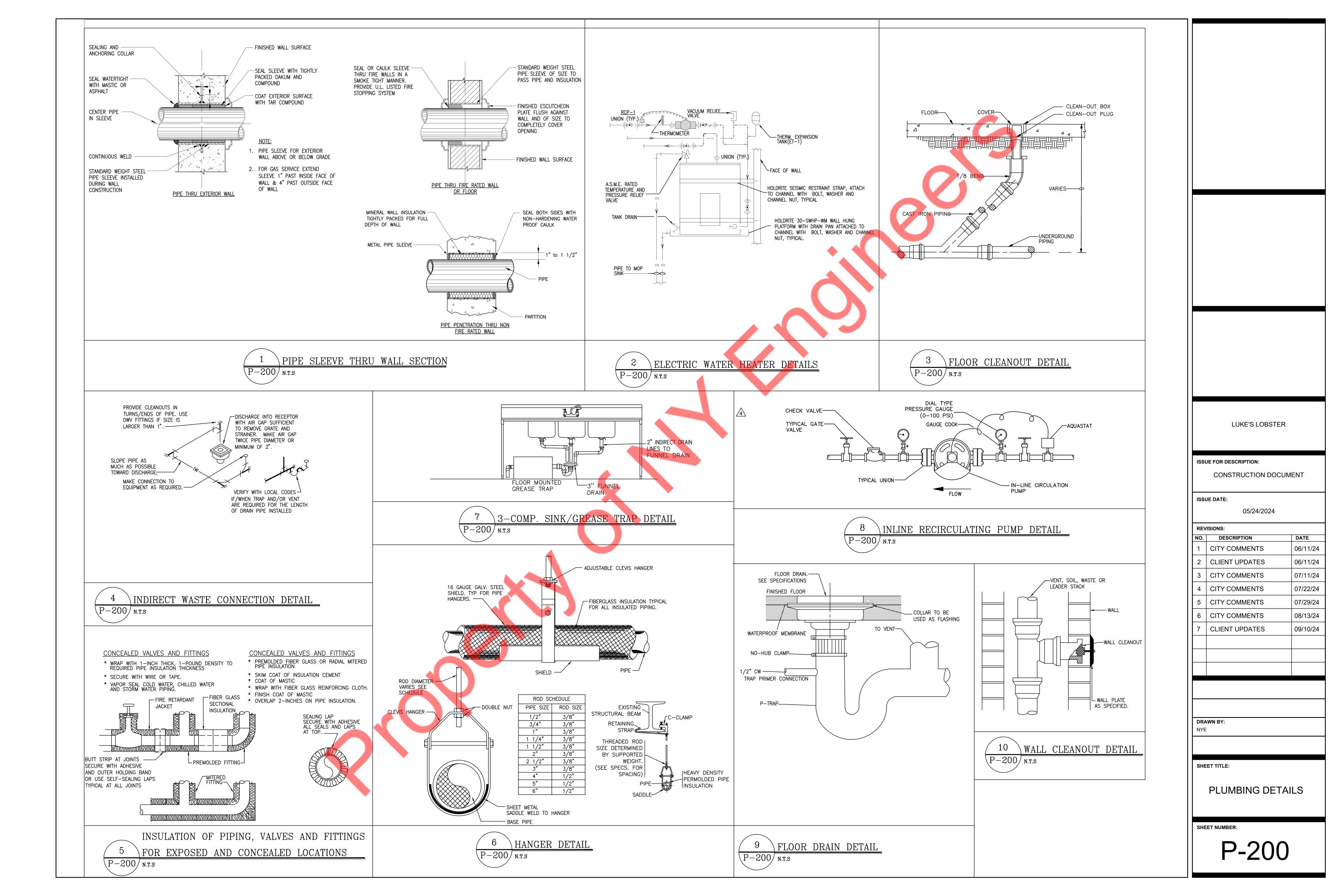
DRAWN B

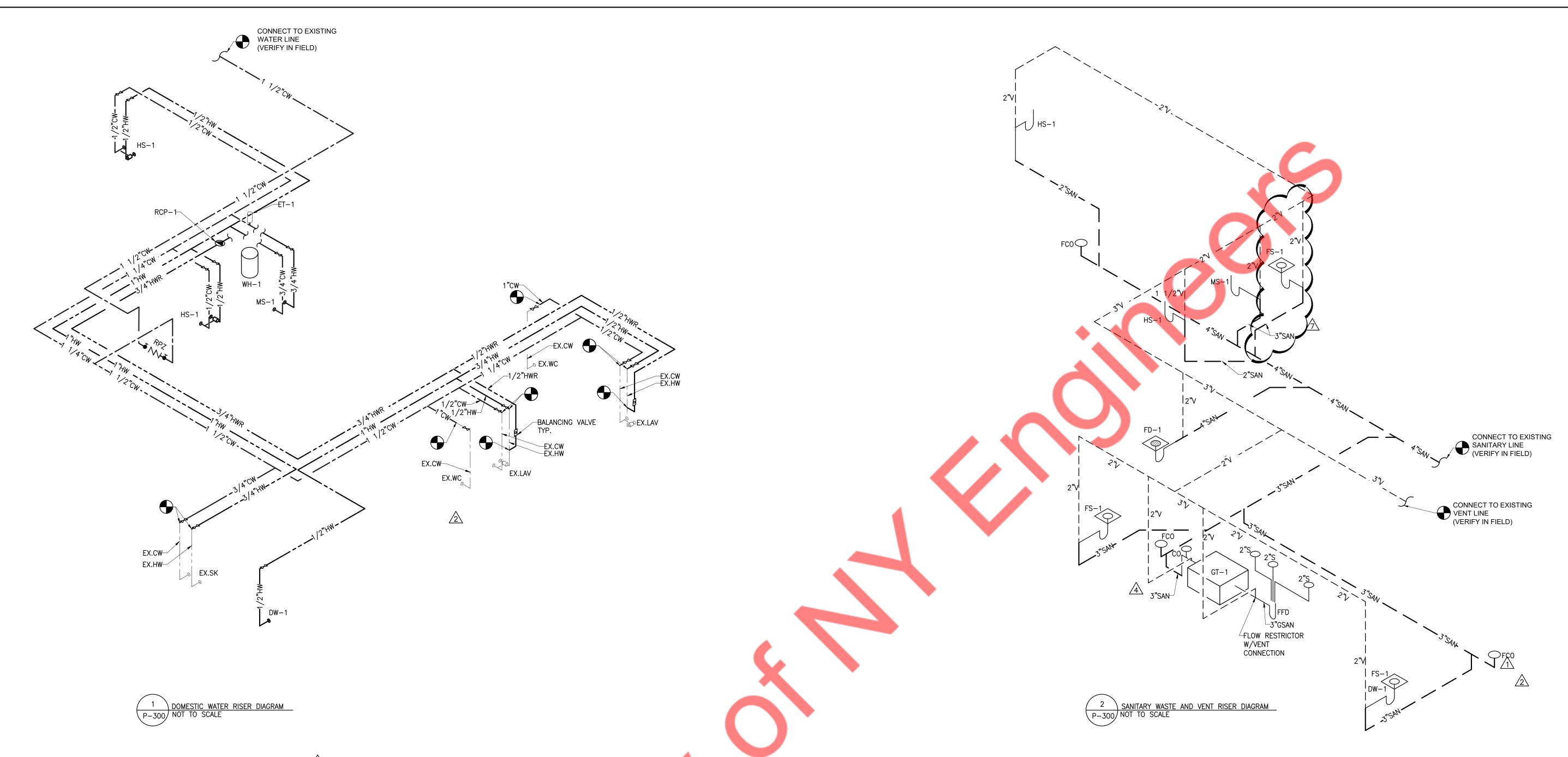
SHEET TITLE:

PLUMBING WATER PLAN

SHEET NUMBER:

P-101





WATER PR	ESSURE CALCULATION	
AVAILABLE PRESSURE	APPROXIMATE -	<u>50 PSI</u>
PRESSURE ACROSS METER	LOSS -	<u>4 PSI</u>
STATIC PRESSURE (ELEVATION) (12' X 0.43)	LOSS -	<u>5.16 PSI</u>
MINIMUM PRESSURE TO BE MAINTAINED	LOSS -	<u>15 PSI</u>
BACKFLOW PREVENTER (1 -1/2" RPZ)	LOSS -	<u>12 PSI</u>
TOTAL PRESSURE AVAILABLE		<u>13.84 PSI</u>
DISTANCE FROM METER TO LAST F	IXTURE	<u>135'</u>
TOTAL DEVELOPED LENGTH OF SYS	TEM (X 1.25)	<u>189'</u>
ALLOW. PRESSURE 13.84 X 100 100 100 100 100 100 100 100 100 1	100	<u>7.32 PSI</u>
AVERAGE PRESSURE DROP AVAIL FOR FRICTION	ABLE	6.52 PSI

	FIXTUR	E UNIT CAL	CULATION	
TAG	EQUIPMENT	OTY	WSFU	TOTAL
EX.WC	WATER CLOSET	2	8	16
EX.LAV	LAVATORY	2	1	2
HS-1	HAND SINK	1	2	2
MS-1	MOP SINK	1	3	3
DW-1	DISHWASHER	1	1.5	1.5
EX.SK	3-COMP SINK	1	1.5	1.5
			TER SUPPLY RE UNIT	26= 40GPM
WSFU VALU	JES AS PER CALIFOR	NIA PLUMBII	NG CODE 2022 CHA	RT A 103.1(2)

	VELOPED LENGTH OF	•	1.25)	<u>189'</u>				DIRECT	INDIRECT	VENT	WATER	WATER
ALLOW. P		<u>X 100</u> <u>9'</u>		7.32 PSI		EX.WC	WATER CLOSET	E		E	E	-
AVERAGE FOR FR	E PRESSURE DROP / ICTION	AVAILABLE		<u>6.52 PSI</u>		EX.LAV	LAVATORY	E)_	Ε	E	E
	FIXTUF	RE UNIT CAL	CULATION			MS-1	MOP SINK	3"	_	2"	3/4"	3/4"
TAG	EQUIPMENT	OTY	WSFU	TOTAL								
EX.WC	WATER CLOSET	2	8	16		HS-1	HAND SINK	1 1/2"	_	1 1/2"	1/2"	1/2"
EX.LAV	LAVATORY	2	1	2			DIGITAL COLUMN					
HS-1	HAND SINK	1	2	2		DW-1	DISHWASHER	_	1"	_	_	1/2"
MS-1	MOP SINK	1	3	3		EX.SK	3-COMP SINK	_	E	_	E	E
DW-1	DISHWASHER	1	1.5	1.5								
EX.SK	3-COMP SINK	1	1.5	1.5	2	FD-1	FLOOR DRAIN	4"	_	2"	_	-
	TOTAL WATER SUPPLY FIXTURE UNIT 26= 40GPM					FD-1	FLOOR SINK	3"	-	2"	-	_
WSFU VAL	UES AS PER CALIFO	RNIA PLUMBII	NG CODE 2022 CH	ART A 103.1(2)		NOTE:		<u> </u>		I		<u> </u>
	ORNIA PLUMBING CO D PIPE SIZE IS 1 1		HART A 105(1) FOR	R 40 GPM		CONTRACTOR TO COORDINATE WITH ARCHITECTURAL DRAWINGS FOR ALL						SPECIFICATION.

LEGEND

PLUMBING FIXTURE

PLUMBING FIXTURE SCHEDULE

CONNECTION SIZE - INCHES

				GR	EASE TRAF	SIZING CA	LCULATION					GREASE TRAP SCHEDULE									
CIVTLIDE	QUANTITY		DIMENSIONS			VOLUME	PE	ERCENTAGE	ACTUAL USAGE	FLOW RATE(GPM)	FLOW RATE(GPM)	ITEM	SERVICE	LOCATION		GREASE CAPACITY	MANUFACTURER				
FIXTURE	QOANTITI	QOANTITI	QOANIIII	QOANTITI	QOANTITI	LENGTH(IN)	WIDTH(IN)	DEPTH(IN)	CUBIC IN	CHES GALL	ONS	USAGE(%)	(GALLONS)	1 MIN.	2 MIN.				(GPM)	(LBS)	MODEL
3-COMP. SINK	1	20	16	14	1344	58	.2	0.75	43.6	43.6	21.8	GREASE TRAP	KITCHEN	ABOVE GROUND	25	50	WATTS				
									TOTAL GPM:	43.6	21.8	GT-1	WASTE	INTERIOR	20		MODEL WD-25				
											1	NOTE- CONTRACTOR TRAP AS PER SITE C		L REQUIRED ACCES	SORIES FOR SATIS	FACTORY WORKING	OF GREASE				

			El	_ECTRIC \	WATER	HEATER	SCHEDU	JLE						
UNIT	MANUFACTURER & MODEL NUMBER	MAXIMUM PRESSURE (PSI)		CAPACITY RECOVERY (GPH)	DEGREE RISE (*F)	SYSTEM OUTLET TEMP (°F)	ELEC NUMBER OF ELEMENTS	POWER (KW)		PH	HZ	DIMENSION HEIGHT (INCH)	DIAMETER (INCH)	SHIPPING WEIGHT (LBS)
WH-1	RHEEM ES50	150	50	99	50	140	3	12.3	240	1	60	43-5/8"	26- 1/4"	270

	EXPANSION TANKS SCHEDULE												
								DIMENSIO	ONS	0.11001110			
	UNIT	NUMBER	MANUFACTURER & MODEL NUMBER	SERVICE	TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	PRESSURE RATING (PSI)	DIAMETER (INCH)	HEIGHT (INCH)	SHIPPING WEIGHT (LBS)	NOTES		
F	ET-1	1	AMTROL	ST-5	2.0	0.9	150	8	13	5	1		

GENERAL NOTES:
1. SET THE TANK PRESSURE TO EQUAL THE SYSTEM OPERATING PRESSURE. TANK MUST BE DRAINED BEFORE ADJUSTING SET PRESSURE.

2. INSTALL PER MANUFACTURER'S RECOMMENDATIONS ON INCOMING COLD WATER LINE.

			RE(CIRCULATIO	N PU	MP S	CHED	ULE			
T. 0		TYPE	CAPACITY		ELECTRICAL DATA				SELECTION BASED ON		REMARKS/OPTIONS
TAG	DESCRIPTION		GPM	HEAD (ft.)	HP	٧	PH	HZ	MANUFACTURER	MODEL NUMBER	. INLIMIANNO/ OF HONO
RCP-1	HOT WATER RECIRC. PUMP	IN-LINE	2.0	9	1/12	120	1	60	BELL & GOSSETT	PL-30-B	NOTE 1,2
OPTIONS (ALLAQUA-SFLANGED	TAT & NIGHT TIMER . BAL	ANCING VALVE NTENANCE BALL			OF PU	MP					

LUKE'S LOBSTER

ISSUE FOR DESCRIPTION:

CONSTRUCTION DOCUMENT

ISSUE DATE:

MODEL WD-25

05/24/2024

NO.	DESCRIPTION	DATE
1	CITY COMMENTS	06/11/24
2	CLIENT UPDATES	06/11/24
3	CITY COMMENTS	07/11/24
4	CITY COMMENTS	07/22/24
5	CITY COMMENTS	07/29/24
6	CITY COMMENTS	08/13/24
7	CLIENT UPDATES	09/10/24

SHEET TITLE:

PLUMBING SCHEDULES AND **RISERS**

SHEET NUMBER: