

CITY OF CYPRESS, 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.

- 1. ALL HEATING AND COOLING LOADS CALCULATED PER ASHRAE/ACCA 183.
2. VENTILATION FOR ALL AREA SHALL COMPLY WITH TABLE 120.1 SUBCHAPTER 3 OF BUILDING ENERGY EFFICIENCY CODE-2022.
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. SMOKE DETECTION SYSTEMS SHALL BE INSTALLED AND SEQUENCED TO FOLLOW CONTROLS OPERATIONS WITH THE REQUIREMENTS OF SECTION 609 OF CALIFORNIA MECHANICAL CODE 2022 TO CLOSE DAMPERS AND AUTOMATICALLY STOP THE FAN.
6. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FIRE-RATED WALL AND SMOKE WALL CONSTRUCTION AND LOCATION.
7. THESE PLANS ARE APPROVED ONLY FOR THE WORK INDICATED ON THE APPLICATION SPECIFICATION SHEET. ALL OTHER MATTERS SHOWN ARE NOT TO BE RELIED UPON OR TO BE CONSIDERED AS EITHER BEING APPROVED OR IN ACCORDANCE WITH APPLICABLE CODES.
8. 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.
B. SMOKE CONTROL SYSTEMS - CALIFORNIA MECHANICAL CODE 2022 - 609.
9. CONTRACTOR SHALL BALANCE THE AIR AS SHOWN IN THE VENTILATION TABLE AS PER THE APPROVED METHOD AND PROVIDE A COPY OF AIR BALANCE REPORT TO THE INSPECTOR OF THE RESPECTIVE DEPARTMENT PRIOR FINAL INSPECTION.
10. 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.
B. DUCT CONSTRUCTION AND INSTALLATION- CALIFORNIA MECHANICAL CODE 2022 - 603.
C. AIR INTAKES, EXHAUSTS AND RELIEF - CALIFORNIA MECHANICAL CODE 2022 - 407.2.
D. AIR FILTERS - CALIFORNIA MECHANICAL CODE 2022 - 401.
E. MANUAL AND AUTOMATIC FIRE AND SMOKE CONTROLS FOR AIR DISTRIBUTION SYSTEMS - CALIFORNIA MECHANICAL CODE 2022 - 609.

THERMOSTATIC CONTROLS

- A. 120.2 (a) THERMOSTATIC CONTROLS FOR EACH ZONE. THE SUPPLY OF HEATING AND COOLING ENERGY TO EACH SPACE-CONDITIONING ZONE OR DWELLING UNIT SHALL BE CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL THAT RESPONDS TO TEMPERATURE WITHIN THE ZONE AND THAT MEETS THE APPLICABLE REQUIREMENTS OF SECTION 120.2(b). AN ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) MAY BE INSTALLED TO COMPLY WITH THE REQUIREMENTS OF ONE OR MORE THERMOSTATIC CONTROLS IF IT COMPLIES WITH ALL APPLICABLE REQUIREMENTS FOR EACH THERMOSTATIC CONTROL.
EXCEPTION TO SECTION 120.2(a): AN INDEPENDENT PERIMETER HEATING OR COOLING SYSTEM MAY SERVE MORE THAN ONE ZONE WITHOUT INDIVIDUAL THERMOSTATIC CONTROLS IF:
1.ALL ZONES ARE ALSO SERVED BY AN INTERIOR COOLING SYSTEM; AND
2.THE PERIMETER SYSTEM IS DESIGNED SOLELY TO OFFSET ENVELOPE HEAT LOSSES OR GAINS; AND
3.THE PERIMETER SYSTEM HAS AT LEAST ONE THERMOSTATIC CONTROL FOR EACH BUILDING ORIENTATION OF 50FEET OR MORE; AND
4.THE PERIMETER SYSTEM IS CONTROLLED BY AT LEAST ONE THERMOSTAT LOCATED IN ONE OF THE ZONES SERVED BY THE SYSTEM.
B. 120.2(d) HEAT PUMP CONTROLS. ALL HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS SHALL BE INSTALLED WITH CONTROLS THAT COMPLY WITH SECTION 110.2(b).
C. 120.2 (e) SHUT-OFF AND RESET CONTROLS FOR SPACE-CONDITIONING SYSTEMS. EACH SPACE-CONDITIONING SYSTEM SHALL BE INSTALLED WITH CONTROLS THAT COMPLY WITH THE FOLLOWING:
1. THE CONTROL SHALL BE CAPABLE OF AUTOMATICALLY SHUTTING OFF THE SYSTEM DURING PERIODS OF NON-USE AND SHALL HAVE:
a. AN AUTOMATIC TIME SWITCH CONTROL DEVICE COMPLYING WITH SECTION 110.9(c), WITH AN ACCESSIBLE MANUAL OVERRIDE THAT ALLOWS OPERATION OF THE SYSTEM FOR UP TO 4 HOURS; OR
b. AN OCCUPANCY SENSOR; OR
c. A 4-HOUR TIMER THAT CAN BE MANUALLY OPERATED.
EXCEPTION TO SECTION 120.2(e)1: MECHANICAL SYSTEMS SERVING RETAIL STORES AND ASSOCIATED MALLS, RESTAURANTS, GROCERY STORES, CHURCHES AND THEATERS EQUIPPED WITH 7-DAY PROGRAMMABLE TIMERS.
2. THE CONTROL SHALL AUTOMATICALLY RESTART AND TEMPORARILY OPERATE THE SYSTEM AS REQUIRED TO MAINTAIN:
a. A SETBACK HEATING THERMOSTAT SETPOINT IF THE SYSTEM PROVIDES MECHANICAL HEATING ;AND
EXCEPTION TO SECTION 120.2(e)2A: THERMOSTAT SETBACK CONTROLS ARE NOT REQUIRED IN NONRESIDENTIAL BUILDINGS IN AREAS WHERE THE WINTER MEDIAN OF EXTREMES OUTDOOR AIR TEMPERATURE DETERMINED IN ACCORDANCE WITH SECTION 140.4(b)3 IS GREATER THAN 32F.
b. A SETUP COOLING THERMOSTAT SETPOINT IF THE SYSTEM PROVIDES MECHANICAL COOLING.
EXCEPTION TO SECTION 120.2(e)2B: THERMOSTAT SETUP CONTROLS ARE NOT REQUIRED IN NON-RESIDENTIAL BUILDINGS IN AREAS WHERE THE WINTER DESIGN DRY BULB 0.5 PERCENT TEMPERATURE DETERMINED IN ACCORDANCE WITH SECTION 140.4(b)3 IS LESS THAN 100F.
D. 120.2 (f) DAMPERS FOR AIR SUPPLY AND EXHAUST EQUIPMENT. OUTDOOR AIR SUPPLY AND EXHAUST EQUIPMENT SHALL BE INSTALLED WITH DAMPERS THAT AUTOMATICALLY CLOSE UPON FAN SHUTDOWN.
EXCEPTION 1 TO SECTION 120.2(f): EQUIPMENT THAT SERVES AN AREA THAT MUST OPERATE CONTINUOUSLY.
EXCEPTION 2 TO SECTION 120.2(f): GRAVITY AND OTHER NON-ELECTRICAL EQUIPMENT THAT HAS READILY ACCESSIBLE MANUAL DAMPER CONTROLS.
EXCEPTION 3 TO SECTION 120.2(f): AT COMBUSTION AIR INTAKES AND SHAFT VENTS.
EXCEPTION 4 TO SECTION 120.2(f): WHERE PROHIBITED BY OTHER PROVISIONS OF LAW.

STANDARD HVAC ABBREVIATIONS

Table with 5 columns: Abbreviation, Full Name, Abbreviation, Full Name, Abbreviation, Full Name. Includes terms like AAV, ACCESS, AFF, AMP, APD, ARI, ASME, BAS, BD, BHP, BTU, BTUH, CD, CFH, CFM, CHWR, CHWS, CI, CLG, CO, CO2, COP, CV, CWR, CWS, DB, DC, DCC, DEG, DIA, DIW, DP, DX, EA, EAT, EER, EG, EMERG, ESP, EWT, EX, F&T, FA, FD, FLD, FPM, FPS, FT, FURN, GA, GAL, GPM, ARD, BPD, HD, HOA, HPR, HSTAT, HWR, HWS, HZ, I/O, IAQ, IN HG, IN WC, IN WG, IPLV, INST, KW, KWH, LAT, LBS/HR, LFP, LPR, LPS, LWT, MAX, MBH, MCA, MERV, MIN, MOD, MPR, MPS, MRI, MVD, NA, NC, NO, NTS, OA, OCP, PD, PPM, PRS, PRV, PSJ, PSIA, PSIG, RA, RAT, RH, RL, RLA, ERV, AHU, RO, RPM, RS, SA, SAT, SC, SCD, SD, SENS, SP, TAB, TDH, TDS, TSP, TSTAT, UL, VAV, VFD, WB, WG, WPD, WIRE, CU, REVERSE OSMOSIS, REVOLUTIONS PER MINUTE, REFRIGERANT SUCTION, SUPPLY AIR, SUPPLY AIR TEMPERATURE, SHADING COEFFICIENT, SMOKE CONTROL DAMPER, SMOKE DETECTOR, SENSIBLE HEAT, STATIC PRESSURE, TESTING, ADJUSTING, BALANCE, TOTAL DYNAMIC HEAD, TOTAL DISSOLVED SOLIDS, TOTAL STATIC PRESSURE, THERMOSTAT, UNDERWRITERS LABORATORY, VARIABLE AIR VOLUME, VARIABLE FREQUENCY DRIVE, WET-BULB (TEMPERATURE), WATER GAGE, WATER SIDE PRESSURE DROP, WIRED, CONDENSING UNIT.

INSULATION - GENERAL REQUIREMENTS
A. ALL INSULATION MATERIALS, INCLUDING JACKETS, FACING, ADHESIVE, COATINGS, AND ACCESSORIES ARE TO BE FIRE HAZARD RATED AND LISTED BY UNDERWRITERS LABORATORIES, INC. USING STEINER TUNNEL TEST METHOD FOR FIRE HAZARD CLASSIFICATION OF BUILDING MATERIALS, STANDARD UL 723 (ASTM E-84), (ASA A2.5-1963). FLAME SPREAD: MAXIMUM 25. FUEL CONTRIBUTED AND SMOKE DEVELOPED: MAXIMUM 50. FLAMEPROOFING TREATMENTS SUBJECT TO DETERIORATION FROM MOISTURE OR HUMIDITY ARE NOT ACCEPTABLE.
B. SUPPLY AND RETURN AIR DUCT AND PLENUMS SHALL BE INSULATED WITH NOT LESS THAN R-8 INSULATION WHERE LOCATED IN UNCONDITIONED SPACES AND WHERE LOCATED OUTSIDE THE BUILDING WITH NOT LESS THAN R-8 INSULATION.

MECHANICAL DRAWING LIST
M001 MECHANICAL GENERAL NOTES, SYMBOLS LIST & ABBREVIATIONS
M002 MECHANICAL SPECIFICATIONS
M101 MECHANICAL FLOOR PLAN
M102 MECHANICAL ROOF PLAN
M501 MECHANICAL DETAILS
M601 MECHANICAL SCHEDULES
M701 TITLE 24 (1 OF 3)
M702 TITLE 24 (2 OF 3)
M703 TITLE 24 (3 OF 3)

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. CALIFORNIA BUILDING CODE 2022 (VOL. 1 & 2)
b. CALIFORNIA MECHANICAL CODE 2022
c. CALIFORNIA PLUMBING CODE 2022
d. CALIFORNIA ENERGY CODE 2022
e. CALIFORNIA ELECTRICAL CODE 2022

MECHANICAL LEGEND

Table with 2 columns: SYMBOL, DESCRIPTION. Includes PLAN-VIEW LINE TYPES, PIPING LINE TYPES, and HVAC LEGEND with symbols for drawing key note, rectangular ductwork, round ductwork, balancing/volume damper, flex duct, thermostat, temperature sensor, new supply air diffuser, new return grille, new exhaust grille, duct smoke detector, supply duct up through roof, return/exhaust duct up through roof, fire damper, backdraft damper, duct mounted supply air grille (side through), duct mounted supply air grille (bottom through).

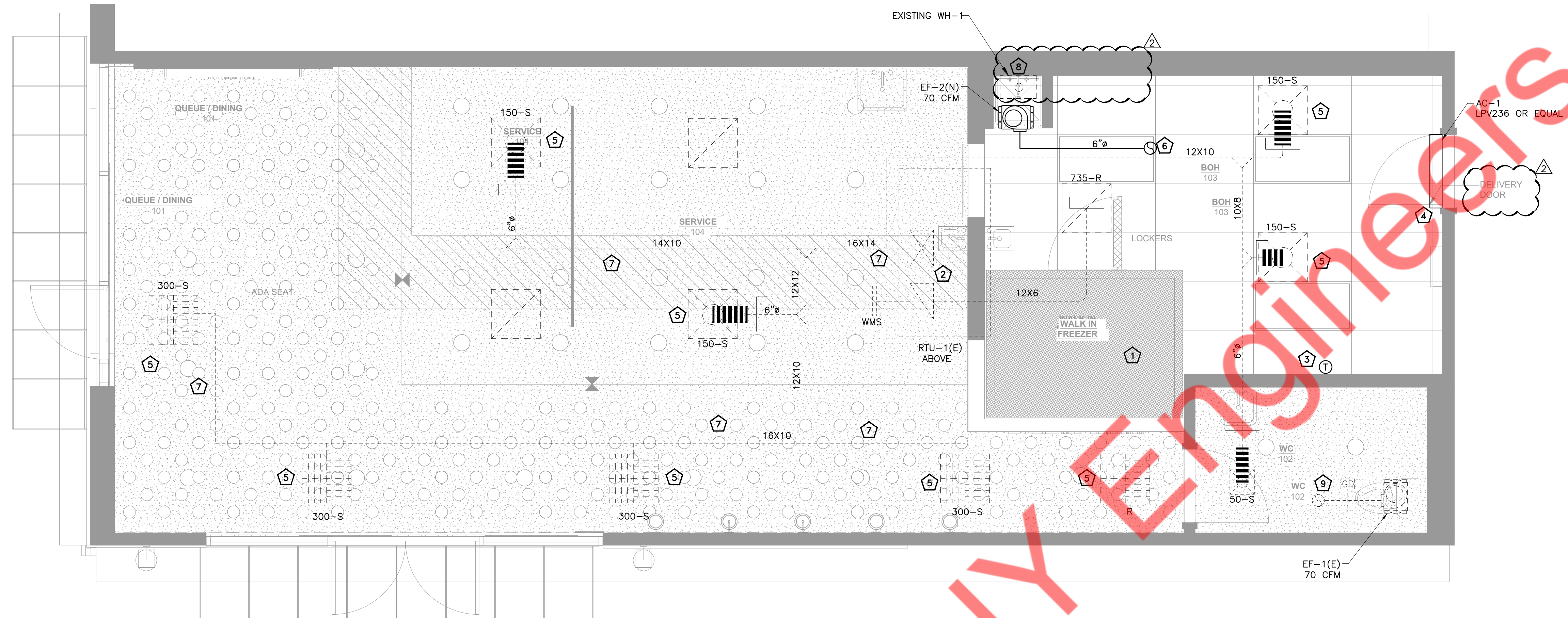


Table with 3 columns: No., Description, Date. Includes entries for PERMIT SET (05/17/2024), REVISED PERMIT SET (08/21/2024), REVISED PERMIT SET (09/16/2024).

MECHANICAL
GENERAL NOTES,
SYMBOLS, LIST &
ABBREVIATION

PERMIT SET
M001

Scale: As indicated



1 MECHANICAL FLOOR PLAN
SCALE: 3/8" = 1'-0"

LEGENDS:

	NEW MECHANICAL SYSTEM
	EXISTING MECHANICAL SYSTEM

- MECHANICAL FLOOR PLAN KEY NOTES:**
- 1 WALKIN FREEZER/COOLER CONDENSER AND EVAPORATOR UNIT SHALL BE PROVIDED BY OTHERS.
 - 2 APPROXIMATE LOCATION OF EXSISTING DUCTWORK DROPS FOR RTU. CONTRACTOR TO VERIFY EXACT SIZE AND LOCATION IN FIELD PRIOR TO BID AND START THE WORK.
 - 3 EXISTING THERMOSTAT AND TEMPERATURE SENSOR TO BE RE-USED. CONTRACTOR TO VERIFY IN FIELD, REPLACE IN KINDS IF DAMAGED. RELOCATE AS/IF REQUIRED. CONFIRM AND COORDINATE WITH OWNER/ARCHITECT.
 - 4 PROVIDE AIR CURTAIN. MOUNT UNIT ON WALL DIRECTLY ABOVE DOOR. COORDINATE THE REQUIREMENT AND THE FINAL LOCATION OF AIR CURTAIN WITH OWNER/ARCHITECT.
 - 5 EXISTING AIR TERMINALS TO BE REMAIN AND REUSED. CONTRACTOR SHALL CLEAN AND REFURBISH TO LIKE NEW CONDITION. VERIFY EXACT LOCATION AND SIZE IN FIELD. PROVIDE VOLUME CONTROL DAMPER ON EXISTING AIR TERMINAL IF VOLUME CONTROL DAMPER IS MISSING OR DAMAGED.
 - 6 6" MOP SINK EXHAUST DUCT UP THROUGH ROOF. TERMINATE ON ROOF WITH MUSHROOM CAP AIRRELIEF VENT WITH INSECT SCREEN.
 - 7 RE-USE THE EXISTING DUCTWORK WHEREVER POSSIBLE. CONTRACTOR SHALL CLEAN AND REFURBISH THE EXISTING DUCT TO "LIKE" NEW CONDITION. VERIFY THE EXACT LOCATION AND SIZE IN FIELD PRIOR TO BID. CONTRACTOR TO ENSURE MAIN DUCT INSULATED AND AIR TIGHT PER CODE. CONTRACTOR SHALL BALANCE CFM'S INDICATED ON THE PLAN TO ACHIEVE FULL PERFORMANCE AND FUNCTION OF THE EXISTING MECHANICAL SYSTEM.
 - 8 EXISTING WATER HEATER AND ITS VENT TO REMAIN. VERIFY THE EXACT LOCATION INFIELD AND REPAIR IT IF ANY DAMAGE IS FOUND.
 - 9 EXISTING TOILET EXHAUST FAN ALONG WITH ITS ACCESSORIES AND VENT TO REMAIN. THE CONTRACTOR TO VERIFY THE FAN'S WORKING CONDITION AND REPLACE IT IF NECESSARY.

- GENERAL FLOOR PLAN NOTES:**
1. ALL WORK SHALL COMPLY WITH ALL LOCAL AND STATE CODES AND AUTHORITIES HAVING JURISDICTION.
 2. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL REQUIRED PERMITS AND ARRANGE ALL REQUIRED INSPECTIONS.
 3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS AND TRADES.
 4. THESE DRAWINGS, AS PREPARED, ARE DIAGRAMMATIC BUT SHALL BE FOLLOWED AS CLOSELY AS CONSTRUCTION OF THE PROJECT AND THE WORK OF THE TRADES WILL PERMIT. EQUIPMENT LOCATIONS INDICATED ARE APPROXIMATE. COORDINATE EXACT LOCATIONS AND REQUIRED CLEARANCES WITH EQUIPMENT SUPPLIER AND ALL TRADES PRIOR TO INSTALLATION.
 5. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL THE EQUIPMENT INDICATED WITHIN THE MECHANICAL DRAWINGS UNLESS OTHERWISE NOTED. ALL EQUIPMENT SHALL BE UL LISTED. VERIFY LOCATION AND DIMENSIONS IN THE FIELD PRIOR TO FABRICATION AND / OR INSTALLATION.
 6. DUCT SIZES SHOWN ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS.
 7. ALL METAL DUCT AND AIR DISTRIBUTION DEVICES SHALL BE INSULATED WITH R-8, 75 DENSITY FOIL-BACKED INSULATION WITH FIRE AND SMOKE RATING 25-50.
 8. ALL DUCTWORK SHALL BE FABRICATED, INSTALLED, SEALED, AND INSULATED PER THE LATEST ISSUE OF SMACNA LOW-VELOCITY DUCT MANUAL.
 9. THE CONTRACTOR SHALL COORDINATE DIFFUSER LOCATIONS ON SITE WITH THE MOST RECENT REFLECTED CEILING PLAN.
 10. ALL WORK SHALL BE SUBJECT TO THE ACCEPTANCE AND APPROVAL OF THE ARCHITECT AND OWNER. THE ARCHITECT SHALL BE NOTIFIED OF ANY AND ALL DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS BEFORE PROCEEDING WITH THAT PORTION OF THE WORK. FAILURE OF PROPER NOTIFICATION DOES NOT RELIEVE THE CONTRACTOR. THE CONTRACTOR SHALL CORRECT ANY AND ALL WORK ARISING FROM SUCH FAILURE TO COORDINATE DISCREPANCIES TO THE SATISFACTION OF THE ARCHITECT WITHOUT ADDITIONAL COST TO THE OWNER.
 11. PROVIDE VOLUME DAMPER AT EACH SUPPLY, RETURN AND EXHAUST DUCTWORK BRANCH.
 12. PROVIDE CORD-OPERATED DAMPERS IN INACCESSIBLE CEILINGS.

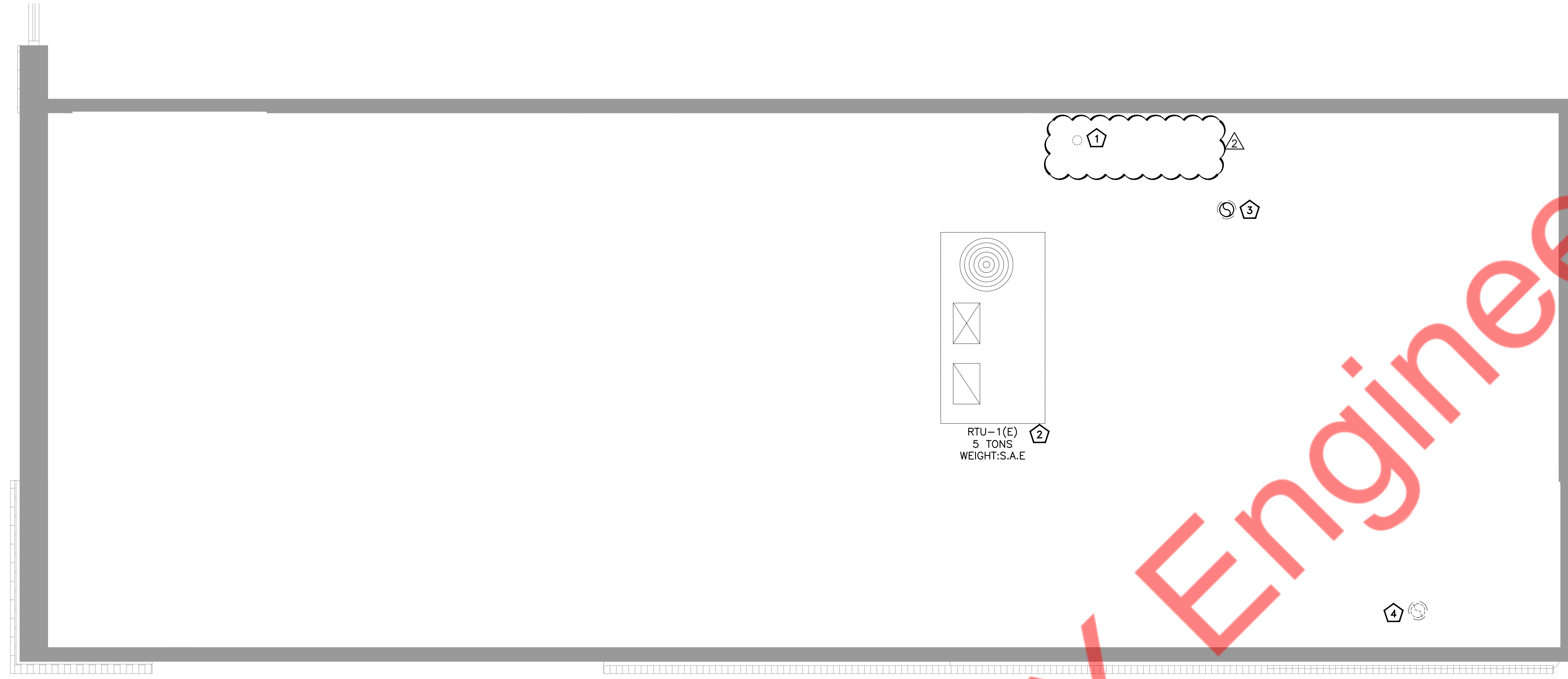


No.	Description	Date
	PERMIT SET	05/17/2024
1	REVISED PERMIT SET	08/21/2024
2	REVISED PERMIT SET	09/18/2024

MECHANICAL FLOOR PLAN

**PERMIT SET
M101**

Scale: As indicated



1 MECHANICAL ROOF PLAN
SCALE: 3/8" = 1'-0"

LEGENDS:

—————	NEW MECHANICAL SYSTEM
- - - - -	EXISTING MECHANICAL SYSTEM

MECHANICAL ROOF PLAN KEY NOTES:

①	EXISTING WATER HEATER VENT TO REMAIN. VERIFY EXACT LOCATION IN FIELD AND REPAIR IT IF ANY DAMAGE IS FOUND.
②	EXISTING MECHANICAL RTU TO REMAIN. CONTRACTOR MUST VERIFY MAKE & MODEL, TONNAGE, SIZE OF SYSTEM, AGE, CONDITION, AND LOCATION OF EXISTING HVAC SYSTEM. CONTRACTOR SHALL CLEAN AND REFURBISH TO "LIKE-NEW" CONDITION. REPAIR/REPLACE ANY ACCESSORIES AS REQUIRED TO PROVIDE A FULLY FUNCTIONING UNIT. VERIFY IN FIELD PRIOR TO BID. BALANCE UNIT CFM TO THE MAXIMUM PER MANUFACTURER'S RECOMMENDATION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO BID AND START OF WORK.
③	MOP SINK EXHAUST DUCT TERMINATE ON ROOF WITH MUSHROOM CAP AIR RELIEF VENT WITH INSECT SCREEN. EXHAUST SHALL TERMINATE 3 FEET FROM THE PROPERTY LINE, 3 FEET FROM THE EXTERIOR WALL AND ROOFS, 3 FEET FROM THE OPERABLE OPENING INTO THE BUILDING AND 10 FEET FROM THE OUTSIDE AIR INTAKE OPENINGS.
④	EXISTING TOILET EXHAUST TO REMAIN. VERIFY EXACT LOCATION IN FIELD AND REPAIR IT IF ANY DAMAGE IS FOUND.

MECHANICAL GENERAL NOTES:

1.	CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS FOR ALL HVAC BASED ON ACTUAL EQUIPMENT SELECTED PRIOR TO INSTALLATION.
2.	CONTRACTOR SHALL COORDINATE EQUIPMENT WEIGHTS AND SUPPORTS BASED ON ACTUAL EQUIPMENT SELECTED.
3.	ALL SOURCE OF MECHANICAL INTAKE SHALL MAINTAIN 10 LINEAR FEET SEPARATION BETWEEN ANY SOURCE OF EXHAUST. CONTRACTOR IS RESPONSIBLE TO ADJUST DUCT LENGTH AS NEEDED.

IMPORTANT NOTE:

PROVIDE COPY OF TEST AND BALANCE REPORT TO MECHANICAL INSPECTOR AT TIME OF HAVING FINAL INSPECTION.

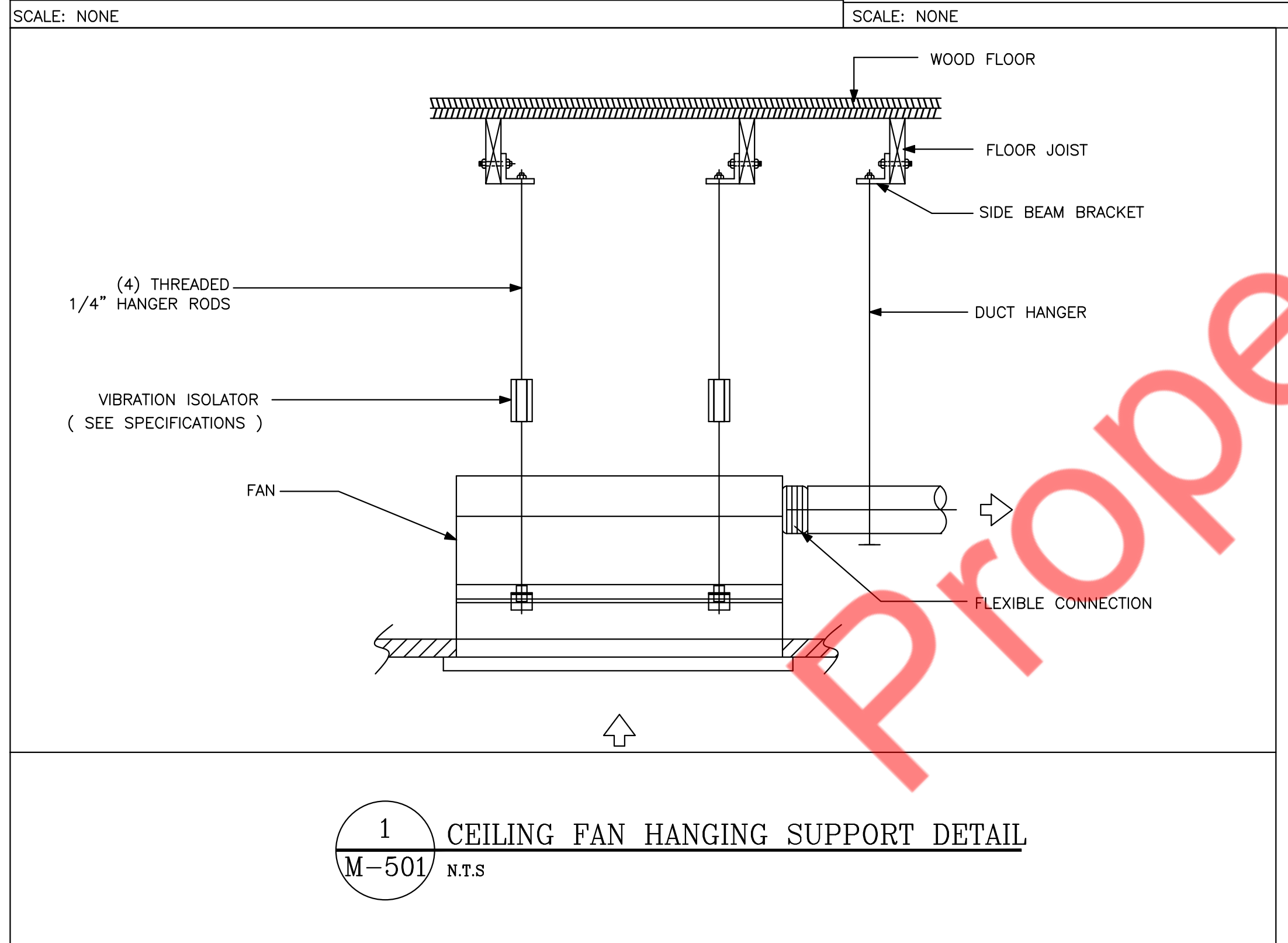
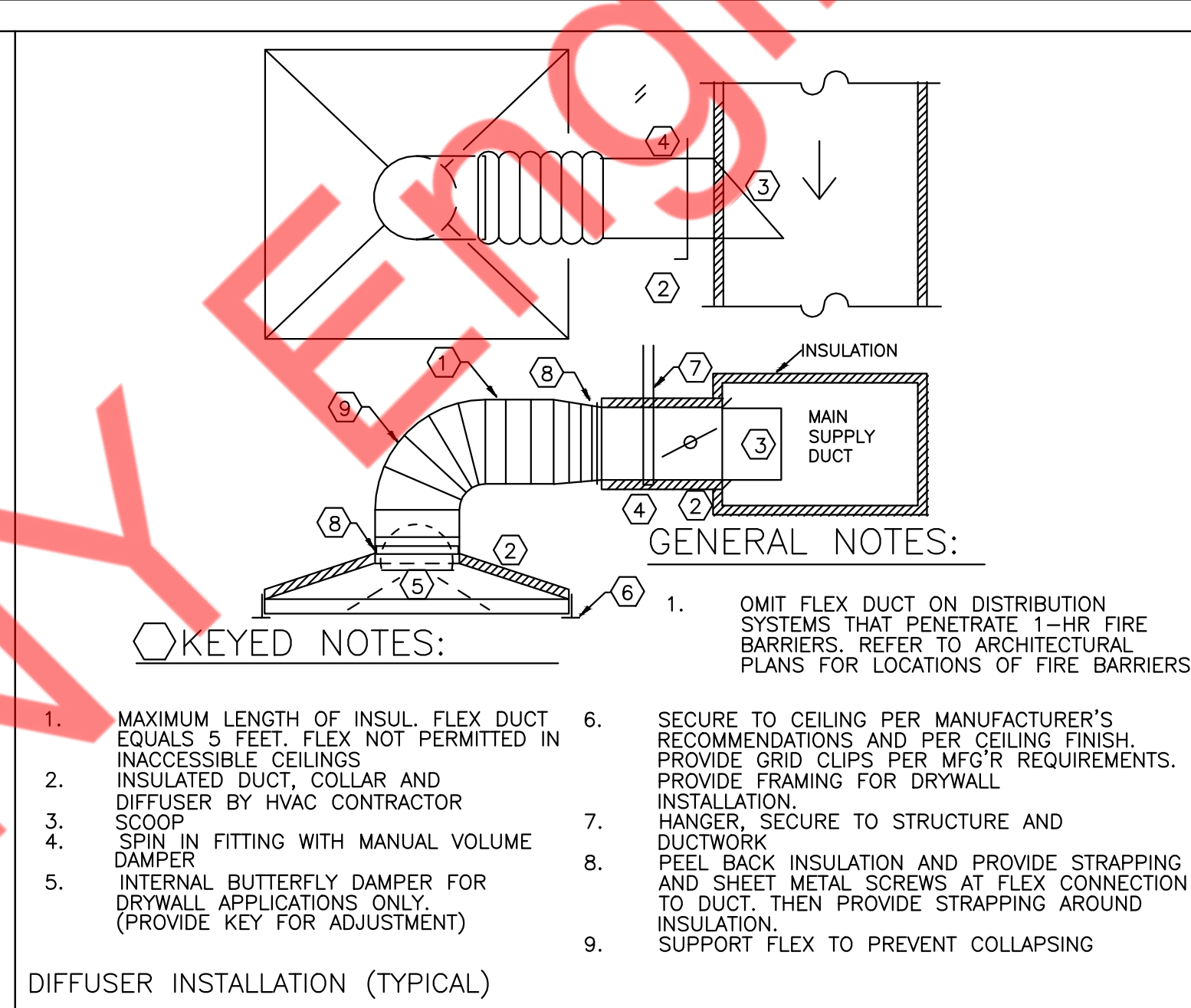
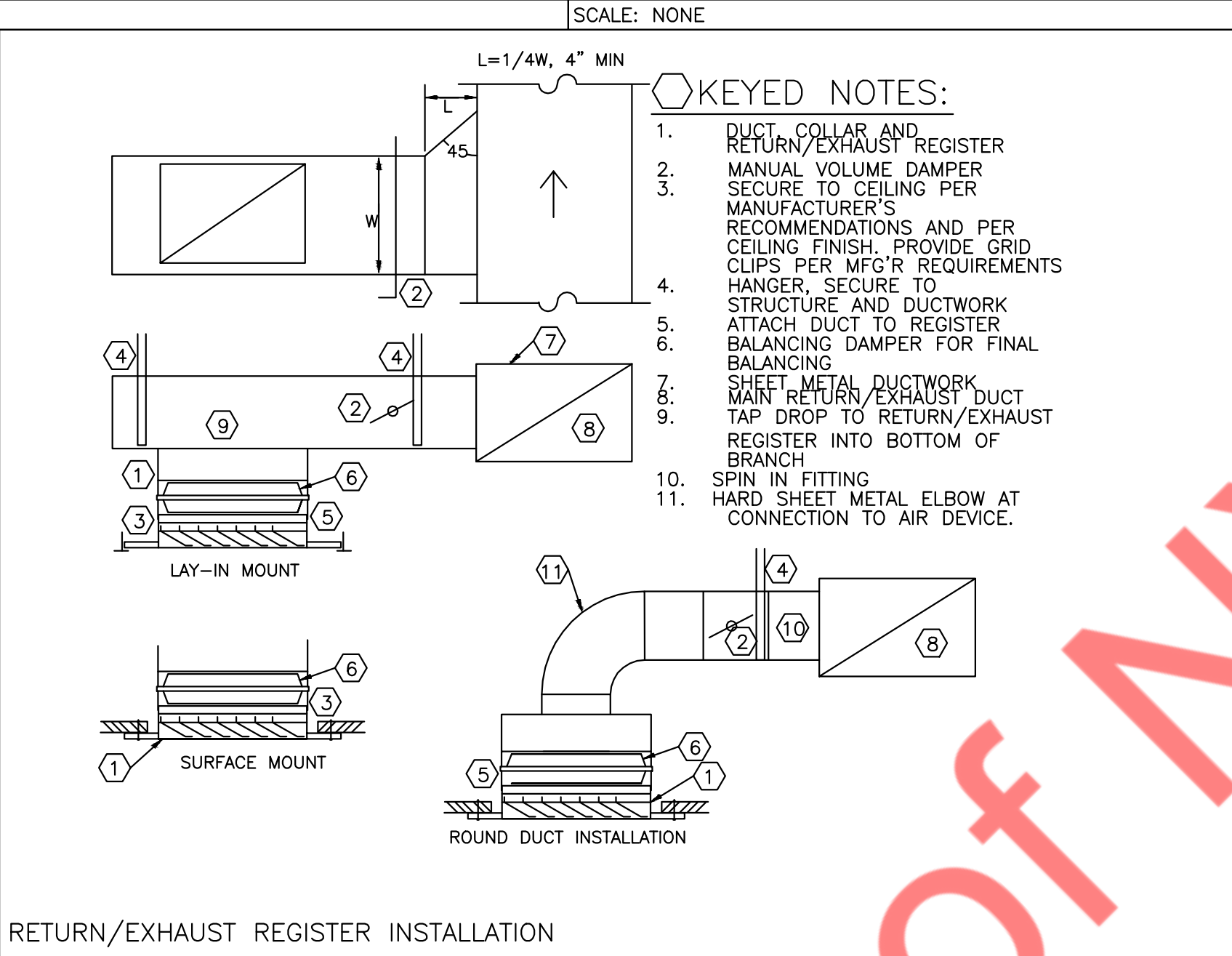
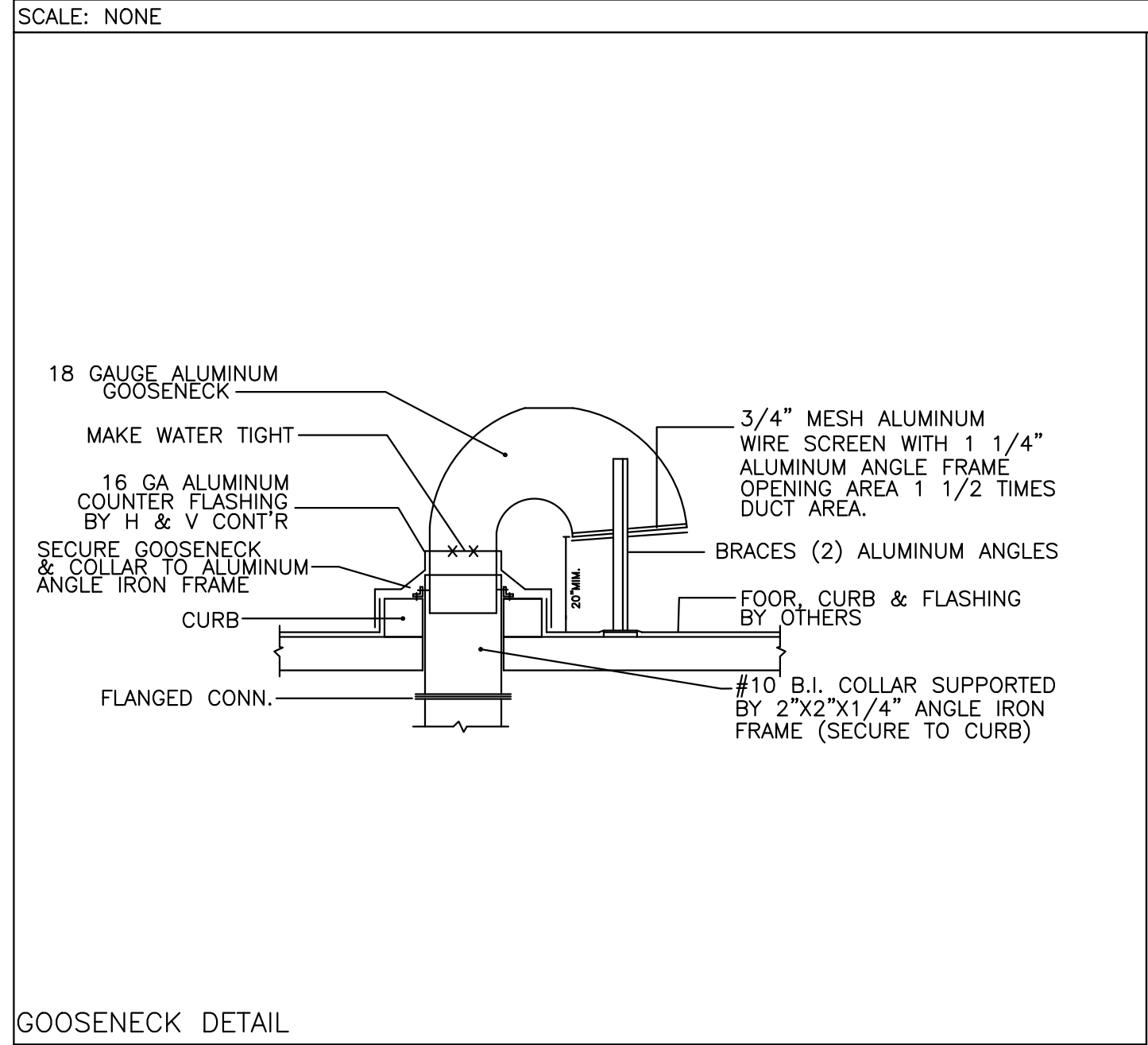
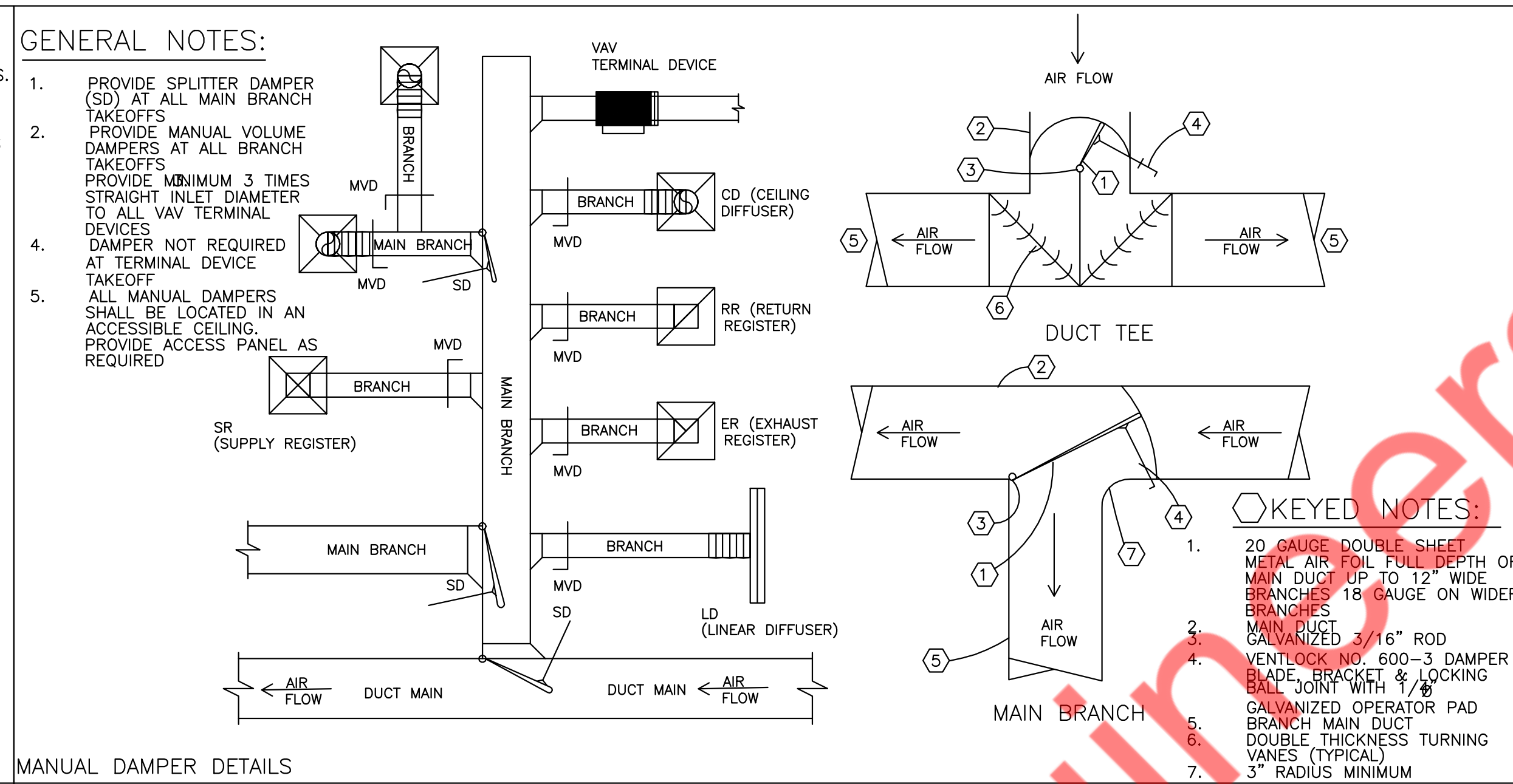
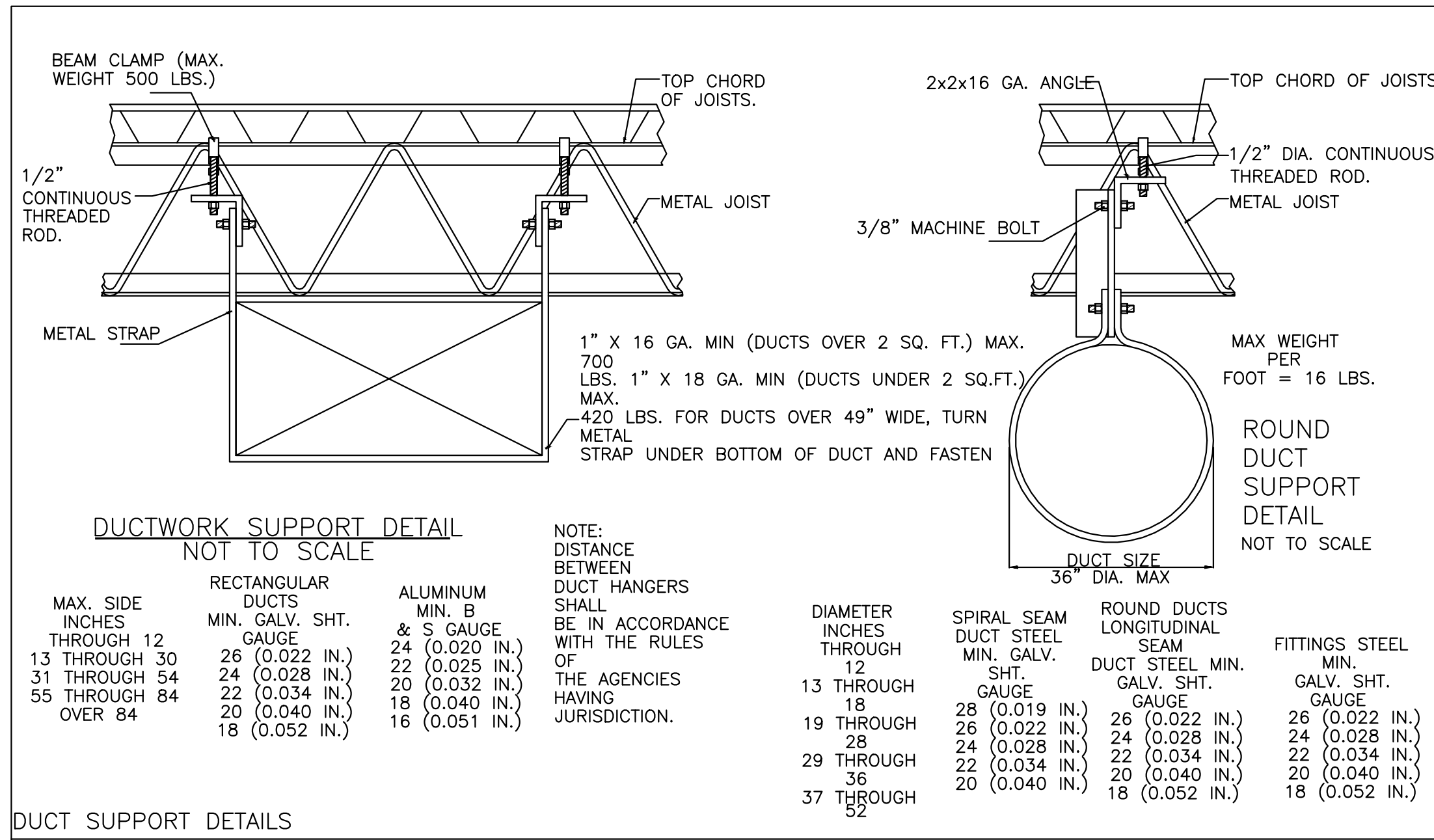


No.	Description	Date
	PERMIT SET	05/17/2024
①	REVISED PERMIT SET	08/21/2024
②	REVISED PERMIT SET	09/16/2024

MECHANICAL ROOF PLAN

**PERMIT SET
M102**

Scale: As indicated



1 CEILING FAN HANGING SUPPORT DETAIL
 M-501 N.T.S.

No.	Description	Date
	PERMIT SET	05/17/2024
1	REVISED PERMIT SET	08/21/2024
2	REVISED PERMIT SET	09/16/2024

MECHANICAL
 DETAILS

PERMIT SET
 M501

Scale: As indicated



HEAT PUMP ROOF TOP UNIT SCHEDULE (EXISTING)																				
UNIT ID	MANUFACTURER	MODEL	AREA SERVED	NOMINAL TONS	TOTAL COOLING MBH	SENSIBLE COOLING MBH	EER	SEER	HEATING MBH (OUT)	COP	SUPPLY AIR (CFM)	OUTDOOR AIR (CFM)	ESP IN. W.C.	ELECTRICAL					OPERATING WEIGHT (LBS)	REMARKS
														VOLTS	PHASE	HZ	MCA(A)	MOC(P)(A)		
RTU-1(E)	YORK	XP060C00N2CA4	SEE PLAN	5	S.A.E.	S.A.E.	S.A.E.	S.A.E.	S.A.E.	S.A.E.	1850 (V.I.F)	355	S.A.E.	208/230 (V.I.F)	3 (V.I.F)	60 (V.I.F)	27 (V.I.F)	35 (V.I.F)	S.A.E.	1-7

NOTES / ACCESSORIES -
1. S.A.E- SAME AS EXISTING, V.I.F (VERIFY IN FIELD)
2. EXISTING RTU WITH ALL ACCESSORIES TO REMAIN SAME AND TO BE REUSED.
3. CONTRACTOR TO CONFIRM IF EXISTING RTU IS WORKING AT ITS 100% RATED CAPACITY. REPAIR AS NEEDED.
4. CONTRACTOR TO FIELD VERIFY EXACT LOCATION AND CONFIGURATION OF RTU ON SITE.
5. CONTRACTOR TO REBALANCE OUTSIDE AIR & RETURN AIR DAMPERS ON EXISTING RTU TO MATCH VALUES MENTIONED IN ABOVE TABLE.
6. REPLACE WITH NEW FILTERS.
7. REMOTE SENSORS SHALL BE PROVIDED IN RETURN AIR DUCT AND WIRED BACK TO PROGRAMMABLE, 24 HOUR, 7 DAY, THERMOSTATS.

FAN SCHEDULE														
UNIT ID	MANUFACTURER	MODEL	CFM	TYPE	DRIVE	FAN RPM	WEIGHT (LBS)	E.S.P. (IN. W.G.)	FLA	VOLTS	PHASE	SERVICE	INTERLOCKED WITH	NOTES / ACCESSORIES
EF-1 (E)	GREENHECK	SAE	SAE	SAE	SAE	SAE	SAE	SAE	SAE	SAE	SAE	SAE	SAE	5
EF-2 (N)	GREENHECK	SP-B110ES	70	ROOF	DIRECT	650	18	0.5	0.27	115	1	MOP SINK	RTU-1(E)	1-4

NOTES / ACCESSORIES:
1. THERMAL OVERLOAD PROTECTION
2. VIBRATION ISOLATORS, CANVAS CONNECTION
3. GRAVITY BACKDRAFT DAMPER
4. AMCA SEAL & UL CERTIFIED
5. SAE - SAME AS EXISTING

VENTILATION CALCULATION AS PER CALIFORNIA ENERGY CODE 2022 - TABLE 120.1-A & B									
ROOM NO.	ROOM NAME	AREA (SQ.FT.)	OUTDOOR AIR FLOW RATE		REQUIRED OA (CFM)	PROVIDED OA (CFM)	EXHAUST AIRFLOW RATE (CFM/SQ.FT. OR CFM/FIXTURE)	REQUIRED EXHAUST AIR (CFM)	PROVIDED EXHAUST AIR (CFM)
			CFM/SQ.FT	CFM					
101	QUEUE / DINING	403	0.5	205	220	0	0	0	
104	SERVICE	293	0.25	75	85	0	0	0	
102	RESTROOM-1	56	0	0	0	0	70	70	
103	BOH	243	0.15	40	50	0	70	70	
TOTAL		995		320	355			140	

AIR CURTAIN SCHEDULE												
TAG	MANUFACTURER	MODEL	QTY	AIR FLOW	ELECTRIC DATA			MOTOR	MOTOR	AMPS	FINISH	NOTES
				CFM	VOLT	PHASE	HZ	QTY	HP			
AC-1	MARS	LPV236-1UD-OB	1	900	208-230	1	60	1	1/6	1.2	OBSIDISN BLACK	1,2,3,4

NOTES:-
1. PROVIDE DISCONNECT SWITCH.
2. PROVIDE MICRO-SWITCH.
3. PROVIDE WITH FILTER.
4. PROVIDE MOUNTING HARDWARE REQUIRED BY MANUFACTURER FOR COMPLETE INSTALLATION.

AIR BALANCE					
UNIT	AREA SERVED	SUPPLY AIR	OUTSIDE AIR	RETURN AIR	EXHAUST AIR
RTU-1(E)	SEE PLAN	1850 CFM	355 CFM	1495 CFM	-
EF-1(E)	SEE PLAN	-	-	-	70 CFM
EF-2(N)	SEE PLAN	-	-	-	70 CFM
TOTAL:		1850 CFM	355 CFM	1495 CFM	140 CFM
BUILDING PRESSURE:			215 CFM	POSITIVE

Property of NY Engineers

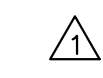


No.	Description	Date
	PERMIT SET	05/17/2024
1	REVISED PERMIT SET	08/21/2024
2	REVISED PERMIT SET	09/16/2024

MECHANICAL SCHEDULES

PERMIT SET M601

Scale: As indicated



STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)2 for alterations.

Project Name: RAINBOW CONE, CYPRESS Report Page: (Page 1 of 11)
Project Address: 9575 Valley View Street, Cypress, CA Date Prepared: 2024-08-05T04:40:30-04:00

A. GENERAL INFORMATION

01 Project Location (city)	CYPRESS	04 Total Conditioned Floor Area	1030
02 Climate Zone	8	05 Total Unconditioned Floor Area	0
03 Occupancy Types Within Project:		06 # of Stories (Habitable Above Grade)	1

• Restaurant

B. PROJECT SCOPE
This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01	02	03
Air System(s)	Wet System Components	Dry System Components
<input checked="" type="checkbox"/> Heating Air System	<input type="checkbox"/> Water Economizer	<input checked="" type="checkbox"/> Air Economizer
<input checked="" type="checkbox"/> Cooling Air System	<input type="checkbox"/> Pumps	<input type="checkbox"/> Electric Resistance Heat
Mechanical Controls	<input type="checkbox"/> System Piping	<input checked="" type="checkbox"/> Fan Systems
<input checked="" type="checkbox"/> Mechanical Controls (existing to remain, altered or new)	<input type="checkbox"/> Cooling Towers	<input checked="" type="checkbox"/> Ductwork (existing to remain, altered or new)
	<input type="checkbox"/> Chillers	<input checked="" type="checkbox"/> Ventilation
	<input type="checkbox"/> Boilers	<input type="checkbox"/> Zonal Systems/ Terminal Boxes

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STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)2 for alterations.

Project Name: RAINBOW CONE, CYPRESS Report Page: (Page 2 of 11)
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C. COMPLIANCE RESULTS
Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D, or the table indicated as not compliant for guidance.

01	02	03	04	05	06	07	08	09
System Summary	Pumps	Fans/Economizers	System Controls	Ventilation	Terminal Box Controls	Distribution	Cooling Towers	Compliance Results
110.1, 110.2, 140.4, 170.2(c)	140.4(k), 170.2(c)4l	140.4(c), 140.4(e), 170.2(c)	110.2, 120.2, 140.4(f), 170.2(c)	120.1, 160.2	140.4(i), 170.2(c)4B	120.3, 140.4(l), 160.2, 160.3	110.2(e)2	
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	(See Table M)	
Yes	AND	AND	Yes	AND	Yes	AND	AND	Yes
Mandatory Measures Compliance (See Table Q for Details)								COMPLIES

D. EXCEPTIONAL CONDITIONS
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Transfer air is being used in at least one zone to meet minimum ventilation requirements. See Table J for details. Transfer air must be designed per §120.11g for air classification and recirculation limitations and be documented within construction documents.

E. ADDITIONAL REMARKS
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
Space Conditioning System Information

01	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
RTU-1(E)	1	Single zone	Alteration		<input type="checkbox"/>

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F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)
Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters and DOAS systems)

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3a	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available ¹ 140.4(a) and 170.2(c)1	Equipment Sizing per Mechanical Schedule (kBtu/h) 140.4(a&b), 170.2(c)1 & 170.2(c)2			Load Calculations ^{3,4}		Total Sensible Cooling Load (kBtu/h)	Total Latent Cooling Load (kBtu/h)
RTU-1(E)	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	Heating Output ^{2,3}		Cooling Output ^{2,3}		Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)	Total Latent Cooling Load (kBtu/h)
				Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)			
RTU-1(E)	Unitary Heat Pumps (no elec. resistance)	Air-cooled, pkg (3 phase)	Yes	47	56.5	0	40.9	57.5	56.5	60.1

¹ FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per 140.4(a) and 170.2(c)1. Healthcare facilities are exempted.
² It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.
³ If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.
⁴ Authority Having Jurisdiction may ask for load calculations used for compliance per 140.4(b) and 170.2(c).

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
RTU-1(E)	<65,000		HSPF	8	8	SEER	14	14

G. PUMPS
This section does not apply to this project.

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H. FAN SYSTEMS & AIR ECONOMIZERS
This table is used to demonstrate compliance with prescriptive requirements found in 140.4(c), 140.4(e), 140.4(m), 170.2(c)3, and 170.2(c)4A for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name	RTU-1(E)	Quantity	1	Fan System Status	Alteration	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	1,850	Site Elevation	35	Economizer	Fixed Temperature
01	02	03	04	05	06	07	08	09	10	11					
Fan Name or Item Tag	Fan Type	Qty	Component	Airflow through Component (%)	Water Gauge (w.g)	Component Allowance	Fan Allowance (watt/cfm) ³	Design Electrical Input Power Method	Motor Nameplate Horsepower	Fan Electrical Input Power (kW)					
Evaporative Fan	Supply	1	Hydronic/DX cooling coil or heat pump coil	100		0.13	0.139	Manufacturer provided		0.5					
Supply Fan Base Allowance (watt/cfm)			Exhaust/Return/Relief/Transfer Fan Base Allowance(watt/cfm)				Fan System Allowance (kW) ³		Fan System Electrical Input Power (kW)	0.5					

¹ FOOTNOTES: Fans serving spaces with design background noise goals below NC35
² Low-turn-down single-zone VAV fan system must be capable of and configured to reduce airflow to 50 percent of design airflow and use no more than 30 percent of the design wattage at that airflow. No more than 10 percent of the design load served by the equipment shall have fixed loads.
³ Fan system allowance includes fan system base allowance.
⁴ Filter pressure loss can only be counted once per fan system.
⁵ Complex Fan System means a fan system that combines a single cabinet fan system with other supply fans, exhaust fans, or both.
⁶ Computer room economizers must meet requirements of 140.9(a) and will be documented on the NRCC-PRC-E document.

H. EXHAUST AIR HEAT RECOVERY 140.4(q), 170.2(c)4O

01	02	03	04	05	06	07	08	09	10	11

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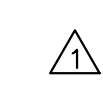


No.	Description	Date
	PERMIT SET	05/17/2024
1	REVISED PERMIT SET	08/21/2024
2	REVISED PERMIT SET	09/16/2024

TITLE 24
(1 OF 3)

PERMIT SET
M701

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STATE OF CALIFORNIA
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H. EXHAUST AIR HEAT RECOVERY 140.4(q), 170.2(c)4O

Fan System Name	Qty	Hours of Operation per Year	Design Supply Airflow Rate	Outdoor Airflow	% Outdoor Air at Full Design Airflow	Exemptions to Exhaust Air Heat Recovery Requirement per 140.4(q) & 170.2(c)4O	Exhaust Air Heat Recovery 140.4(q) & 170.2(c)4O	Type Of Heat Recovery Rating	Required Recovery Ratio	Energy Recovery Bypass
RTU-1(E)			1,850	355	0.19	NA: CZ 15 exempt from heating recovery ratio				

Fan Energy Index (FEI)

01		02		03	
Name or Item Tag		FEI Exception		FEI	
RTU-1(E)		Embedded Fan Regulated under 110.2 or 110.1			

I. SYSTEM CONTROLS
This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01	02	03	04	05	06	07	08	09	10
System Name	System Zoning	Conditioned Floor Area Being Served (ft ²)	Thermostats 110.2(b) & (c) ¹ , 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	Shut-Off Controls 120.2(e) & 160.3(a)2D	Isolation Zone Controls 120.2(g) & 160.3(a)2F	Demand Response 110.12 120.2(b) & 160.3(a)2B	Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	Window Interlocks per 140.4(n) & 170.2(c)4D	Direct Digital Control (DDC) per 120.2
RTU-1(E)	Single zone	<= 25,000 ft ²	Setback	Occ. Sensor	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: Alteration Project	NA: Single Zone

¹FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.

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J. VENTILATION AND INDOOR AIR QUALITY
This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1 120.2(e)3B 140.4(p) and 140.4(a) for all nonresidential and hotel/motel and d:24refnolink/160.2, 160.3(a)3D, 170.2(a)4N, 170.2(a)4O for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	<input type="checkbox"/>	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	<input checked="" type="checkbox"/>	Check this box if the project included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces
03	<input type="checkbox"/>	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)2.

Nonresidential and Hotel/ Motel Multifamily Common Use Ventilation Systems

04		05		06		07	
System Name		System Design OA CFM Airflow ¹		System Design Transfer Air CFM		Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21 ²	
RTU-1(E)		355		1850		NA: Not system type specified in footnote 2	
08	09	10	11	12	13	14	15
Space Name or Item Tag		Mechanical Ventilation Required per 120.1(c)3 ³ & 160.2(c)3		Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3 ⁵ 160.2(c)5D 160.2(c)5E 160.2(c)5D	
Occupancy Type ⁴		Conditioned Floor Area (ft ²)	# of Shower heads/ toilets	# of people ⁵	Required Min OA CFM	Required Min CFM	Provided per Design CFM
1 Kitchen (cooking)		626			93.9	438.2	1750
17 Total System Required Min OA CFM				93.9	18	Ventilation for this System Complies? Yes	

¹ FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system
² Air filtration requirements apply to the following three system types per 120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.
³ Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.
⁴ See Standards Tables 120.1-A and 120.1-B.

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J. VENTILATION AND INDOOR AIR QUALITY
⁵ For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.
⁶ 120.2(e)3 requires systems serving rooms that are required by 130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by 130.1(c).

K. TERMINAL BOX CONTROLS
This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)
This table is used to show compliance with mandatory pipe insulation req.

01	<input type="checkbox"/>	Insulation shall be protected from dai weather shall be installed with a cove outside the conditioned space shall h:
Duct Leakage Testing		
The answers to the questions below apply to the following duct systems:		

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L. DISTRIBUTION (DUCTWORK and PIPING)

NTS - DUCTWORK		Dwelling Units: Total duct leakage of duct system shall not exceed 15% or duct system to outside shall not exceed 10% per RA3.1.4 required for systems?	---
		Duct leakage testing per CMC Section 603.9.2 required for these systems?	No
11	No	The scope of the project includes only duct systems serving healthcare facilities	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.	
13	Yes	The space conditioning system serves less than 5,000 ft ² of conditioned floor area.	
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:	
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.	
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	
17	Yes	All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A	
18	Yes	All ductwork is an extension of an existing duct system	
19	No	Ductwork serving individual dwelling unit	
20	No	< 25 ft of new or replacement space conditioning ducts installed	
21	R-8	Duct Insulation R-value	
22	Yes	Ductwork Existing To Remain	
23	No	Duct System Connected To Altered Space Conditioning System	

M. COOLING TOWERS
This section does not apply to this project.

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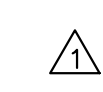


No.	Description	Date
	PERMIT SET	05/17/2024
1	REVISED PERMIT SET	08/21/2024
2	REVISED PERMIT SET	09/16/2024

TITLE 24
(2 OF 3)

PERMIT SET
M702

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CERTIFICATE OF COMPLIANCE NRCC-MCH-E
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N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-4>

Form/Title
NRCC-MCH-01-E - Must be submitted for all buildings

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-4>

Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	RTU-1(E)
NRCA-MCH-05-A - Air Economizer Controls	RTU-1(E)
NRCA-MCH-19-A Occupancy Sensor Controls	RTU-1(E)

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION
There are no NRCV forms required for this project.

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Q. MANDATORY MEASURES DOCUMENTATION LOCATION
This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01	02
Compliance with Mandatory Measures documented through MCH	Plan sheet or construction document location
Mandatory Measures Note Block	No
03	04
Mandatory Measure	Plan sheet or construction document location
Heating Equipment Efficiency per 110.1	REFER TO MECHANICAL SCHEDULES ON SHEET M601
Cooling Equipment Efficiency per 110.1	REFER TO MECHANICAL SCHEDULES ON SHEET M601
Furnace Standby Loss Control per 110.2(d)	N/A
Duct Insulation per 120.4	REFER TO #B UNDER INSULATION - GENERAL REQUIREMENTS ON SHEET M001
Heat Pump with Supplemental electric Resistance Heater Controls per 110.2(b)	REFER TO EQUIPMENT SCHEDULE ON SHEET M601
The air duct and plenum system is designed per 120.4(a)-(f)	REFER TO #B UNDER INSULATION - GENERAL REQUIREMENTS ON SHEET M001
Kitchen range hoods shall be rated for sound in accordance with Section 7.2 of ASHRAE 62.2	REFER TO HOOD DATA FROM SHEETS M502-M504

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CERTIFICATE OF COMPLIANCE NRCC-MCH-E
Project Name: RAINBOW CONE, CYPRESS Report Page: (Page 11 of 11)
Project Address: Date Prepared: 2024-08-05T04:40:30-04:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Company: NY Engineers	Signature Date: 08-05-2024
Address: 382 NE, 191ST STREET, SUITE 49874,	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: MIAMI / FL / 33179	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Responsible Designer Signature:
Company: NY Engineers	Date Signed: 08-05-2024
Address: 382 NE, 191ST STREET, SUITE 49874,	License: M33750
City/State/Zip: MIAMI / FL / 33179	Phone:

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	PERMIT SET	05/17/2024
1	REVISED PERMIT SET	08/21/2024
2	REVISED PERMIT SET	09/16/2024

TITLE 24
(3 OF 3)

PERMIT SET
M703

Scale: As Indicated

ELECTRICAL SYMBOLS LIST

GENERAL NOTES

LIGHTING	
	LIGHTING FIXTURE AND OUTLET BOX.
	LUMINAIRE TYPE : INDICATE BY LIPPERCASE LETTER SEE LIGHTING EXTURE SCHEDULE.
	CIRCUIT NUMBER : INDICATED BY NUMBER
	SWITCHING INDICATED BY LOWER CASE LETTERS.
	EMERGENCY WALL PACK LIGHT FIXTURE WITH 90 MINUTES BATTERY BACKUP
	EMERGENCY WALL PACK LIGHT FIXTURE AND EXIT SIGN WITH 90 MINUTES BATTERY BACKUP

SWITCHES AND CONTROLS	
	20A SPST TOGGLE SWITCH U.O.N. "a" DENOTES LIGHTING FIXTURE CONTROLLED.
	WALL OCCUPANCY SWITCH
	TIMER SWITCH
	SWITCH BANK WITH DIMMER.

WIRING SYSTEMS	
	POWER OR LIGHTING CIRCUITRY HOMERUN WITH PANELBOARD DESIGNATION, NUMBER WHERE USED INDICATES CIRCUIT NUMBER. IT SHALL CONSISTS OF 2#12 Ø, 2#12 N. & 2#12 G. IN 3/4"Ø, UNLESS OTHERWISE NOTED.
	POWER OR LIGHTING CIRCUITRY HOMERUN WITH PANELBOARD DESIGNATION, NUMBER WHERE USED INDICATES CIRCUIT NUMBER. IT SHALL CONSISTS OF 3#12 Ø, 3#12 N. & 3#12 G. IN 3/4"Ø, UNLESS OTHERWISE NOTED.
	CONDUIT AND WIRE TO BUILDING GROUND.
	EXISTING
	NEW

ELECTRICAL DRAWING LIST	
E001	ELECTRICAL SYMBOLS LIST, NOTES AND ABBREVIATIONS
E002	ELECTRICAL SPECIFICATIONS SHEET 1 OF 2
E003	ELECTRICAL SPECIFICATIONS SHEET 2 OF 2
E100	ELECTRICAL LIGHTING PLAN
E200	ELECTRICAL POWER PLAN
E201	ROOF POWER PLAN
E400	ELECTRICAL DETAILS
E500	ELECTRICAL RISER DIAGRAM & PANEL SCHEDULE

POWER AND TELECOMMUNICATION	
	JUNCTION BOX
	SPECIAL RECEPTACLE AS REQUIRED PER EQUIPMENT SPECIFICATION
	DUPLEX GFI RECEPTACLE
	DUPLEX CONVENIENCE RECEPTACLE, +18" AFF OR AS NOTED.
	DUPLEX CEILING MOUNTED RECEPTACLE
	DOUBLE DUPLEX RECEPTACLE - 20A-1P, 125V, NEMA 5-20R.
	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.
	DATA OUTLET
	JUNCTION BOX

MOTORS AND CONTROLS	
	AC INDOOR UNIT MOTOR AS NOTED WITH LIQUID TIGHT FLEXIBLE CONNECTION WITH JUNCTION BOX AND MOTOR SWITCH.
	NON FUSED DISCONNECT SWITCH AMPERAGE, AND NUMBER OF POLES AS NOTED.
	30A/240V NON FUSED DISCONNECT SWITCH
	60A/240V NON FUSED DISCONNECT SWITCH
	100A/240V NON FUSED DISCONNECT SWITCH
	200A/240V NON FUSED DISCONNECT SWITCH
	COMBINATION MAGNETIC STARTER AND DISCONNECT SWITCH, FURNISHED BY HVAC/CONTRACTOR, INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR.
	1.5 kW ELECTRICAL HEATER, NUMBER DENOTES HEATER RATING
	MANUAL MOTOR SWITCH
	LIGHTING CONTACTOR
	TIME CLOCK

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

POWER DISTRIBUTION	
	DISTRIBUTION PANELBOARD, 208V/120V-SURFACE OR FLUSH MOUNTED.

ELECTRICAL ABBREVIATIONS			
A	AMPERES	EA	EACH
A/C, AC	AIR CONDITIONING UNIT	EM	EMERGENCY
AF	AMPERE FRAME/AMP FUSE	EMT	ELECTRICAL METALLIC TUBING
AFF	ABOVE FINISHED FLOOR	EQUIP	EQUIPMENT
AS	AMP SWITCH	ER	EXISTING TO BE RELOCATED
AIC	AMPS INTERRUPTING CAPACITY	FA	FIRE ALARM
AT	AMP TRIP	E	EXISTING
ATS	AUTOMATIC TRANSFER SWITCH	FL	FLOOR
AUTO	AUTOMATIC	G	GROUND
AWG	AMERICAN WIRE GAUGE	GFI	GROUND FAULT INTERRUPTER
C	CONDUIT	GP	GENERAL PURPOSE
C/B,CB	CIRCUIT BREAKER	HP	HORSEPOWER
CKT	CIRCUIT	HWH	HOW WATER HEATER
CL	CURRENT LIMITER	HZ	HERTZ
CLG	CEILING	IC	INTERRUPTING CAPACITY
COMM	COMMUNICATION	PP	POWER PANEL
CT	CURRENT TRANSFORMER	PWR	POWER
CU	COPPER	R	REMOVE
DIA	DIAMETER	RE	RELOCATED EXISTING
DISC	DISCONNECT	REC	RECEPTACLE
DN	DOWN	RGS	RIGID GALVANIZED STEEL
DP	DISTRIBUTION PANEL	RR	REMOVE & RELOCATE
DWG	DRAWING	SECT	SECTION
IG	ISOLATED GROUNDING	SPDT	SINGLE POLE DOUBLE THROW
JB	JUNCTION BOX	SPST	SINGLE POLE SINGLE THROW
KCMIL	ONE THOUSAND CIRCULAR MILS	SPEC	SPECIFICATION
KV	KILOVOLT	SW	SWITCH
KVA	KILOVOLT-AMPERES	SWBD	SWITCHBOARD
KW	KILOWATTS	SYM	SYMMETRICAL
LTD	LIGHTING	SYS	SYSTEMS
MAX	MAXIMUM	TELE	TELEPHONE
MC	MOTOR CONTROLLER	TEMP	TEMPERATURE
MCB	MAIN CIRCUIT BREAKER	TXF	TOILET EXHAUST FAN
MLO	MAIN LUGS ONLY	TYP	TYPICAL
MTD	MOUNTED	UON	UNLESS OTHERWISE NOTED
MTS	MANUAL TRANSFER SWITCH	V	VOLT/VOLTAGE
N	NEUTRAL	VA	VOLT AMPERE
NIC	NOT IN CONTRACT	WP	WEATHER PROOF
NTS	NOT TO SCALE	Ø	PHASE
PNL	PANEL	DW	DISHWASHER
W	WATT		
REF	REFRIGERATOR		

- ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE CURRENT VERSION OF THE CALIFORNIA ELECTRICAL CODE 2022 AND CALIFORNIA ENERGY CODE 2022.
- 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.
- CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, TEST REPORTS, AND CERTIFICATIONS FOR TEMPORARY AND FINAL CERTIFICATE OF OCCUPANCY.
- 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 FIBERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS.
- LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. RACEWAYS OVER 10 FT LONG IN WHICH WIRING IS NOT INSTALLED: FURNISH FISH WIRE.
- 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.
- CONTRACTOR SHALL PROVIDE A WARRANTY ON ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE.
- ALL UNUSED MATERIALS AND DEBRIS SHALL BE LEGALLY REMOVED AND DISPOSED OF AWAY FROM THE PREMISES ON A DAILY BASIS.
- CONTRACTOR SHALL PATCH, PAINT, AND RESTORE EXISTING SURFACES DAMAGED DURING THE COURSE OF THIS CONSTRUCTION TO PRE-EXISTING CONDITIONS OR BETTER.
- MINIMUM SIZE OF CONDUIT SHALL BE 3/4", AND TYPE SHALL BE ELECTRICAL METALLIC TUBING (EMT), UNLESS OTHERWISE NOTED. PROVIDE NYLON DRAG LINE AND CONDUIT CAP FOR ALL EMPTY CONDUITS.
- 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.
- PULL AND JUNCTION BOXES WHERE INDICATED ON THE DRAWINGS, SHALL BE CONSIDERED SHOWN AT THEIR APPROXIMATE LOCATION. THE CONTRACTOR SHALL LOCATE THEM AS FIELD CONDITIONS DICTATE. ADDITIONAL PULL AND JUNCTION BOXES NOT SHOWN ON DRAWINGS SHALL BE PROVIDED WHERE REQUIRED BY APPLICABLE CODE PROVISIONS OR WHERE CALLED FOR BY FIELD CONDITIONS. PULL AND JUNCTION BOXES SHALL BE SURFACE TYPE IN UNFINISHED AREAS AND INSTALLED CONCEALED IN FINISHED AREAS, AND ALL COVERS TO PULL & JUNCTION BOXES SHALL BE READILY ACCESSIBLE.
- SUPPORT PANEL, JUNCTION AND PULLBOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.
- FOR EXACT LOCATION AND MOUNTING HEIGHT OF LIGHTING FIXTURES AND SWITCH/RECEPTACLE OUTLETS, REFER TO ARCHITECTURAL REFLECTED CEILING AND POWER PLANS.
- ALL ELECTRICAL ACCESSORIES AND EQUIPMENT INSTALLED OUTSIDE OR EXPOSED TO WEATHER SHALL HAVE NEMA 3R ENCLOSURES AND SHALL BE TIGHTLY GASKETED FOR A COMPLETE RAIN-TIGHT INSTALLATION. ALL BUILDING EXTERIOR MOUNTED RECEPTACLES SHALL BE GFCI RATED AND MOUNTED IN WEATHERPROOF ENCLOSURE.
- ALL ACCESS PANEL LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION.
- 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.
- ALL CONDUITS AND EQUIPMENT TO BE CONCEALED IN FINISHED SPACES UNLESS OTHERWISE NOTED. CONDUITS SHALL BE ENCASED IN THE CONCRETE FLOOR SLAB.
- ALL EQUIPMENT AND MATERIALS INSTALLED IN PLENUM CEILINGS SHALL BE APPROVED FOR THAT APPLICATION.
- 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.
- COORDINATE ALL FLOOR PENETRATIONS WITH THE STRUCTURAL AND ARCHITECTURAL DRAWINGS. CONFIRM PENETRATION LOCATIONS WITH THE ENGINEER AND OWNER BEFORE INSTALLATION.
- 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.
- REFER TO ARCHITECTURAL PLANS FOR FINAL LOCATIONS OF ALL LUMINARIES AND SWITCHES, AND FOR ALL FINISHED CEILING HEIGHTS.
- REFER TO ARCHITECTURAL PLANS FOR FINAL LOCATIONS OF ALL ELECTRICAL DEVICES, AND FOR FINAL CEILING AND WALL HEIGHTS AND LAYOUTS.
- 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.
- 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.



No.	Description	Date
	PERMIT SET	05/17/2024
	REVISED PERMIT SET	08/21/2024
	REVISED PERMIT SET	09/18/2024

ELECTRICAL SYMBOLS LIST, NOTES AND ABBREVIATIONS

PERMIT SET E001

Scale:

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...
C. BIDDER, BEFORE SUBMITTING PROPOSALS, SHALL VISIT AND CAREFULLY EXAMINE THE AREA AFFECTED BY THIS WORK...
D. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH ALL DEPARTMENTS HAVING JURISDICTION...
7. FUSES:
A. CIRCUITS 0 TO 600 AMPERES SHALL BE PROTECTED BY FUSES SIMILAR TO CURRENT LIMITING BUSSMAN LOW-PEAK DUAL-ELEMENT TIME-DELAY LPN-RK (AMP)SP (250V) /LPS-RK (AMP)SP (600V) OR LPJ (AMP)SP (600V) (UL CLASS RK1 OR CLASS J), AND BE LISTED BY UL WITH AN INTERRUPTING RATING OF 300,000 AMPERES RMS SYMMETRICAL.
B. MOTOR CIRCUITS - ALL INDIVIDUAL MOTOR CIRCUITS WITH FULL LOAD AMPERE RATINGS (FLA) OF 480 AMPERES OR LESS SHALL BE PROTECTED BY FUSES SIMILAR TO CURRENT LIMITING BUSSMANN LOW-PEAK DUAL-ELEMENT TIME-DELAY LPN-RK (AMP)SP (250V) /LPS-RK (AMP)SP (600V) OR LPJ (AMP)SP (600V) (UL CLASS RK1 OR CLASS J), AND BE LISTED BY UL WITH AN INTERRUPTING RATING OF 300,000 AMPERES RMS SYMMETRICAL.
C. ALL FUSES SHALL BE PROVIDED BY SAME MANUFACTURER.
D. PROVIDE 1 SPACE MATCHING FUSE FOR EACH SET OF 3.
E. CIRCUIT BREAKERS: MOLDED CASE BREAKERS SHALL BE THERMAL-MAGNETIC, QUICK-MAKE-QUICK-BREAK, BOLT-ON TYPE, MANUALLY OPERATED WITH INSULATED TRIP-FREE HANDLE...
8. RACEWAYS:
A. PROVIDE RACEWAYS COMPLETE WITH BOXES, FITTINGS AND ACCESSORIES...
B. MATERIALS:
1) RACEWAYS:
a. RIGID STEEL CONDUIT: FULL-WEIGHT PIPE, GALVANIZED, THREADED.
b. ELECTROMETALLIC TUBING (EMT): THIN WALL PIPE, GALVANIZED, THREADED.
c. FLEXIBLE STEEL CONDUIT: CONTINUOUS SINGLE STRIP, GALVANIZED.
d. WIREWAYS: WIRE SHALL BE AS NOTED, MINIMUM NO. 16 GAUGE STEEL WITH GROUND CONTINUITY...
2) FITTINGS AND ACCESSORIES:
a. RIGID STEEL: NONSPIT, 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.
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...
b. JUNCTION AND PULL BOXES: GALVANIZED SHEET STEEL WITH SCREW-ON COVERS, EXCEPT AS NOTED...
6. LOW-VOLTAGE DISTRIBUTION EQUIPMENT:
A. PROVIDE COMPLETE EQUIPMENT INCLUDING: SWITCHES, FUSES, CIRCUIT BREAKERS, PANELS AND TRANSFORMERS.
B. ALL EQUIPMENT SHALL CONFORM TO NEMA, ANSI AND IEEE STANDARDS.
C. DISCONNECT SWITCHES SHALL BE FUSED OR NONFUSED AS NOTED...
D. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH ALL DEPARTMENTS HAVING JURISDICTION...



Table with 3 columns: No., Description, Date. Rows include PERMIT SET, REVISED PERMIT SET (08/21/2024), REVISED PERMIT SET (09/18/2024).

ELECTRICAL SPECIFICATIONS SHEET 1 OF 2

PERMIT SET E002

Scale:

ELECTRICAL SPECIFICATIONS

- 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-FLOOR SYSTEMS, UTILIZE AN ASSEMBLY SIMILAR TO HUBBELL-FIRE RATED FULKE-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 NEC 386.56 AND AS NOTED FOR OTHERS. MOUNT SUPPORTS TO STRUCTURE MASONRY WITH TOGGLE BOLTS ON HOLLOW MASONRY; EXPANSION SHIELDS OR INSERTS IN CONCRETE AND BRICK, MACHINE SCREWS ON METAL, BEAM CLAMPS ON FRAMEWORK, WOOD SCREWS ON WOOD, AND PAN THROUGH STRAPS IN METAL DECK. NAILS, RAWL PLUGS OR WOOD PLUGS SHALL NOT BE PERMITTED. WHERE REQUIRED BY STRUCTURE, FURNISH THROUGH BOLTS AND FISHPLATES.

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

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

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

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

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

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

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

RACEWAYS PASSING THROUGH FIRE-RATED CONSTRUCTION: SEAL OPENING WITH FIRE SEALANT.
- D. PROVIDE CABLE SUPPORTS IN ACCORDANCE WITH 2020 NATIONAL ELECTRIC CODE ARTICLE 300.19. CABLE SUPPORTS SHALL UTILIZE A ONE-PIECE PLUG WITH POZI-GRIP WEDGING PLUG AS MANUFACTURED BY OZ-GEDNEY.

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 2020 NEC TABLE 300.19(A).

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.

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.
- E. FIRE SEALANTS: PROVIDE FOR RACEWAYS AND WIRE PASSING THROUGH FLOOR SLOTS, SLEEVES OR OPENINGS IN FIRE-PARTITIONS ROOMS.
- F. PERFORM CONTINUITY TESTS OF RESISTANCE OF FEEDER CONDUITS FROM SERVICE TO POINT OF FINAL DISTRIBUTION USING 1 CONDUCTOR RETURN. MAXIMUM RESISTANCE SHALL BE 25 OHMS.
- 10. WIRE AND CABLE:
 - A. PROVIDE WIRE AND CABLE COMPLETE WITH ACCESSORIES. SIZE REFERENCE SHALL BE AWG EXCEPT AS NOTED.
 - B. CONDUCTORS SHALL BE COPPER, ASTM STANDARD SOLID (NO. 10 AND SMALLER) OR STRANDED (NO. 8 AND LARGER). GENERAL USE CABLING SHALL BE NO. 12 MINIMUM. AT 120 VOLTS AND OVER 100 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM. AT 265 VOLTS AND OVER 200 FT CIRCUIT LENGTH PROVIDE NO. 10 MINIMUM.
 - C. CONTROL AND ALARM CABLING, EXCEPT AS NOTED, SHALL BE

- NO. 14 MINIMUM. AT 120 VOLTS AND OVER 200 FT CIRCUIT LENGTH PROVIDE NO. 12 MINIMUM. OTHER VOLTAGES AND PHASES: ADJUST CABLE SIZING AS REQUIRED TO MAINTAIN VOLTAGE DROP. INCREASE RACEWAY SIZES FOR LARGER WIRE AS REQUIRED.
- D. INSULATION SHALL BE RUBBER AND THERMOPLASTIC MEETING ASTM AND IPCEA STANDARDS. TYPE THW OR THWN SHALL BE UTILIZED FOR FEEDERS AND BRANCH CIRCUITS EXCEPT AS NOTED. TYPE SFF-2 SHALL BE UTILIZED FOR BRANCH CIRCUITS LOCATED IN WIRING CHANNELS OF CONTINUOUS FLUORESCENT FIXTURES AND IN AMBIENT TEMPERATURES OVER 90 DEG C. FOR UNGROUNDED ISOLATED BRANCH CIRCUITS PROVIDE CROSS-LINKED POLYETHYLENE INSULATION (TYPE XHHW).
- E. ARMORED CABLE (BX) SHALL BE UTILIZED FOR BRANCH CIRCUITS IN DRY HOLLOW LOCATIONS, HUNG CEILINGS, AND BLOCK WALLS, WHEN USED IN LIEU OF WIRING IN CONDUIT. STATE IN PROPOSAL THAT PRICE IS BASED UPON THE USE OF HOSPITAL GRADE 'BX'.
- F. COLOR CODING SHALL BE AS FOLLOWS:
 - 120/208 VOLT SYSTEM:
 - BLACK FOR A PHASE
 - RED FOR B PHASE
 - BLUE FOR C PHASE
 - 1) NEUTRAL WIRE SHALL UTILIZE WHITE OUTER COVERING THROUGHOUT. EQUIPMENT GROUND WIRE SHALL UTILIZE GREEN OUTER COVERING THROUGHOUT.
 - WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION TO OVERLAP CONDUCTORS WITH 6 IN. OF COLOR TAPING IN ACCESSIBLE LOCATIONS.
- G. PROVIDE FLAMEPROOF LINEN OR FIBER TAGS IN ACCESSIBLE LOCATIONS. FOR FEEDERS INDICATE FEEDER NUMBER, SIZE, PHASE AND POINTS OF ORIGIN AND TERMINATIONS. FOR CONTROL AND ALARM WIRING INDICATE TYPE (CONTROL OR ALARM), SIZE OF WIRE, AND POINTS OF ORIGIN AND TERMINATIONS.
- H. TERMINATIONS, SPLICES AND TAPS UNDER 600 VOLTS: COPPER CONDUCTORS NO. 10 AND SMALLER SHALL UTILIZE COMPRESSION-TYPE OF TWIST-ON SPRING-LOADED CONNECTORS AND CLEAR NYLON-INSULATED COVERING. COPPER CONDUCTORS NO. 8 AND LARGER SHALL UTILIZE MECHANICAL BOLTED PRESSURE OR HYDRAULIC COMPRESSION TYPE USING MANUFACTURER'S RECOMMENDED TOOLING. CABLE LUGS AND CONNECTORS SHALL UTILIZE COMPRESSION TYPE OF SAME METAL AS CONDUCTOR. PROVIDE TO MATCH CABLE, WITH MARKING INDICATING SIZE AND TYPE. COPPER LUG CONNECTIONS TO BUS BARS: USE ANTISEIZE COMPOUND ON TANG.
- I. NOT MORE THAN 3 LIGHTING OR CONVENIENCE OUTLET CIRCUITS SHALL BE INSTALLED IN ONE CONDUIT UNLESS OTHERWISE INDICATED. PULL NO THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32 DEG F. PROVIDE SEPARATE RACEWAYS FOR CONDUCTORS OF 120/208 AND 265/460 VOLT SYSTEMS, EXCEPT 460 VOLT MOTOR BRANCH CIRCUIT WIRING AND RELATED 120 VOLT CONTROL WIRING. THERMOPLASTIC WIRES SHALL NOT BE INSTALLED IN COMPUTER AREA RAISED FLOORS.
- J. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS.
- K. PERFORM CONTINUITY AND INSULATION TESTS. MEGGER TEST 100 PERCENT OF FEEDERS, 10 PERCENT OF BRANCH CIRCUITS AND ALL MOTOR BRANCH CIRCUITS OVER 25 HP.
 - PERFORM TESTS PRIOR TO CONNECTING EQUIPMENT AND IN PRESENCE OF AUTHORIZED REPRESENTATIVES. SUBMIT WRITTEN REPORT OF RESULTS. CORRECT OR REPLACE CABLE TESTING BELOW MANUFACTURER'S STANDARDS.
- 11. WIRING DEVICES:
 - A. WIRING DEVICES SHALL BE SPECIFICATION GRADE UNLESS OTHERWISE SPECIFIED. ALL DEVICES SHALL BE FLUSH MOUNTED, UNLESS OTHERWISE NOTED. PROVIDE COMPLETE MATERIAL AND ACCESSORIES AS NOTED.
 - B. LOCAL WALL SWITCHES SHALL BE ROCKER TYPE, QUIET OPERATING, RATED 20 AMP, 120/277 VOLT, AC. SIMILAR TO LEVITON DECORA SERIES A5621 (SINGLE POLE), A5623 (3-WAY) AND A5624 (4-WAY).
 - C. DEVICE PLATES: SEE ARCHITECT FOR TYPE. FOR RECEPTACLES WITH OTHER THAN 120 VOLT, INSCRIBED VOLTAGE AVAILABLE.
 - D. COLORS: COORDINATE COLORS WITH ARCHITECT.
 - E. MOUNTING ORIENTATION OF RECEPTACLES (HORIZONTAL OR VERTICAL): COORDINATE WITH ARCHITECT.
- 12. LIGHTING FIXTURES:
 - A. FIXTURES TO BE AS SPECIFIED BY ARCHITECT AND SHALL BE COMPLETELY FACTORY ASSEMBLED, WIRED AND EQUIPPED WITH ALL NECESSARY SOCKETS, BALLASTS, SUPPORTING HARDWARE AND ACCESSORIES. REFER TO DRAWINGS FOR INDIVIDUAL FIXTURE DESCRIPTIONS.
 - B. FIXTURE CATALOG NUMBERS USED TO ILLUSTRATE EQUIPMENT TYPE DO NOT NECESSARILY DENOTE REQUIRED MOUNTING EQUIPMENT OR ACCESSORIES. PROVIDE ACCESSORIES TO SUIT.
 - C. 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.
 - D. 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.
 - E. CONTINUOUS ROW, TWO LAMP STRIP FIXTURES SHALL BE STAGGERED TYPE.
 - F. 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 CHELSEA 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.

- 13. GROUNDING AND BONDING:
 - A. PROVIDE GROUNDING SYSTEM IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE AND THESE SPECIFICATIONS. THE WIRING SYSTEM SHALL BE INSTALLED AS REQUIRED TO PROVIDE A CONTINUOUSLY GROUNDED SYSTEM. WHERE FLEXIBLE CONDUIT IS USED FOR PART OF A CONDUIT RUN, EXCEPT LIGHTING BRANCH CIRCUITS, AN INSULATED GROUNDING CONDUCTOR SHALL BE PROVIDED IN THE CONDUIT AND CONNECTED TO GROUNDING BUSHINGS AT EACH END OF THE RUN.
 - B. USE EXOTHERMIC WELDING PROCESS FOR INACCESSIBLE CONNECTIONS.
 - C. EXTEND EXISTING SYSTEM GROUND TO INCLUDE ALL THE ELECTRICAL EQUIPMENT IN THE SCOPE OF WORK.
 - D. WHERE FLEXIBLE METALLIC CONDUIT IS USED AN INTERNAL BONDING CONDUCTOR SHALL BE INSTALLED.
 - E. IN ADDITION, FURNISH A SEPARATE INSULATED GREEN EQUIPMENT GROUND CONDUCTOR WHERE INDICATED ON DRAWINGS AND FOR THE FOLLOWING BRANCH CIRCUITS:
 - 1) CIRCUITS SERVING ANY WALL BOX DIMMER.
 - 2) CIRCUITS SERVING ANY ISOLATED GROUND RECEPTACLES. TERMINATE GROUND DIRECTLY AT AN EQUIPMENT GROUNDING CONDUCTOR TERMINAL OF THE SOURCE AT THE SOURCE , OR AS OTHER WISE NOTED ON DRAWINGS.
 - 3) CIRCUITS SERVING ANY DUPLEX OR SIMPLEX COMPUTER RECEPTACLES
 - 4) ANY CIRCUIT SERVED VIA AN ISOLATION TRANSFORMER OR COMPUTER POWER DISTRIBUTION UNIT.



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ELECTRICAL SPECIFICATIONS SHEET 2 OF 2

PERMIT SET E003

Scale:

ELECTRICAL LIGHTING PLAN KEYED WORK NOTES

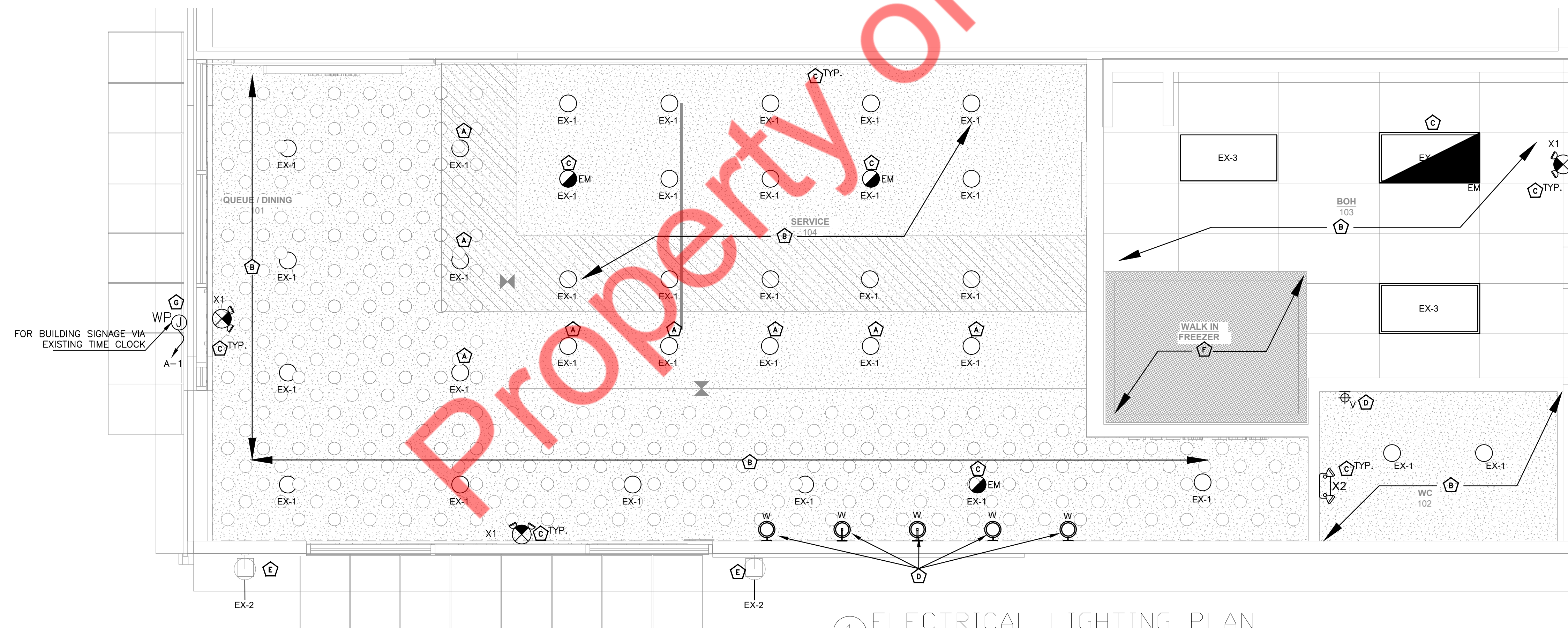
- A ELECTRICAL CONTRACTOR SHALL REMOVE THE EXISTING LIGHT FIXTURES IN THE EXISTING SOFFIT AND RE-INSTALL THE SAME LIGHT FIXTURES AS REQUIRED. ALL THE EXISTING CIRCUIT CONNECTIONS SHALL BE RE-USED. PROVIDE NEW CIRCUIT CONNECTIONS VIA EXISTING LIGHTING CONTROLS, IF EXISTING IS IN-OPERABLE. BASE BID ACCORDINGLY.
- B ALL THE EXISTING LIGHTING AND ITS CIRCUITS SHALL REMAIN CONNECTED VIA EXISTING LIGHTING CONTROLS IN THIS AREA. E.C SHALL VERIFY THE OPERABLE CONDITION, REPLACE WITH NEW IF EXISTING IS IN-OPERABLE. BASE BID ACCORDINGLY.
- C ALL THE EXISTING EXIT AND EM LIGHTING IN THE TENANT SPACE SHALL REMAIN AND REUSE. E.C SHALL VERIFY THE EXISTING CONDITIONS AND PROVIDE NEW EXIT AND EM LIGHT FIXTURES IF EXISTING LIGHT FIXTURES QUANTITY IS NOT SUFFICIENT AS PER THE NEW TENANT REQUIREMENT OR AS REQUIRED BY LOCAL AHJ.
- D NEW LIGHT FIXTURES SHALL BE CONNECTED VIA NEARBY EXISTING LIGHTING CIRCUIT AND EXISTING LIGHTING CONTROLS. BASE BID ACCORDINGLY.
- E ALL THE EXISTING EXTERIOR LIGHT FIXTURES SHALL REMAIN CONNECTED TO THE EXISTING EXTERIOR LIGHT CIRCUIT AND EXISTING EXTERIOR LIGHTING CONTROLS. E.C SHALL VERIFY THE OPERABLE CONDITION, REPLACE WITH NEW IF EXISTING IS IN-OPERABLE. BASE BID ACCORDINGLY.
- F ELECTRICAL CONTRACTOR SHALL PROVIDE POWER CONNECTIONS TO THE WALK-IN BOX LIGHT FIXTURES IN COORDINATION WITH WALKIN BOX MANUFACTURER. BASE BID ACCORDINGLY.
- G E.C TO COORDINATE THE BUILDING SIGNAGE CONNECTION REQUIREMENTS WITH SIGN VENDOR. BASE BID ACCORDINGLY.

ELECTRICAL LIGHTING PLAN GENERAL NOTES:

1. VERIFY ALL LUMINARIE COLORS, TRIMS, LENGTHS, ETC. WITH THE ARCHITECT PRIOR TO PLACING FINAL PURCHASE ORDERS. SUBMISSION PF SHOP DRAWINGS WILL BE INTERPRETED AS HAVING BEEN COORDINATED WITH THE ARCHITECTURAL DRAWINGS.
2. PROVIDE ALL LENGTHS, FEEDS, ACCESSORIES, CONNECTORS, WIRING, POWER SUPPLIES, DRIVERS ETC. FOR A COMPLETE INSTALLATION. THE E.C. SHALL VERIFY THE COMPLETE BILL OF MATERIAL WITH MANUFACTURER'S REPRESENTATIVE AND ENSURE ALL EQUIPMENT ARE INCLUDED IN BID PRICE. COORDINATE INSTALLATION WITH ARCHITECTURAL DETAILS.
3. VERIFY FINAL LUMINARIE LOCATIONS WITH OTHER CEILING MOUNTED EQUIPMENTS SUCH AS DIFFUSER WITH ARCHITECTURAL REFLECTED CEILING PLANS.
4. VERIFY EXACT MOUNTING HEIGHT AND LOCATIONS OF ALL WALL MOUNTED LUMINAIRE WITH ARCHITECTURAL PLANS AND ELEVATIONS PRIOR TO ROUGH-IN.
5. E.C SHALL VERIFY AND RE-USE THE EXISTING LIGHTING CONTROLS. REPLACE NEW WITH SAME TYPE, IF EXISTING IS IN-OPERABLE. BASE BID ACCORDINGLY.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	MODEL	WATTS	COMMENTS
EX-1	EXISTING	EXISTING	EXISTING	EXISTING	VERIFY AND REUSE EXISTING.
EX-2	EXISTING	EXISTING	EXISTING	EXISTING	VERIFY AND REUSE EXISTING.
EX-3	EXISTING	EXISTING	EXISTING	EXISTING	VERIFY AND REUSE EXISTING.
W	WALL SCONCE; GRAND MILLENNIAL, PINK DOME.	GLOBE ELECTRIC	SKU:65000048	60W	HOLLY 1-LIGHT BRASS PLUG-IN/HARDWIRE WALL SCONCE.
V	VANITY LIGHT IN BRASS	DUTTON I BROWN	SKU:60220(BRASS)	120W	SCEPTER SCONCE 10" IN BRASS
X1	EXISTING	EXISTING	EXISTING	EXISTING	VERIFY AND REUSE EXISTING.
X2	EXISTING	EXISTING	EXISTING	EXISTING	VERIFY AND REUSE EXISTING.



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



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ELECTRICAL LIGHTING PLAN

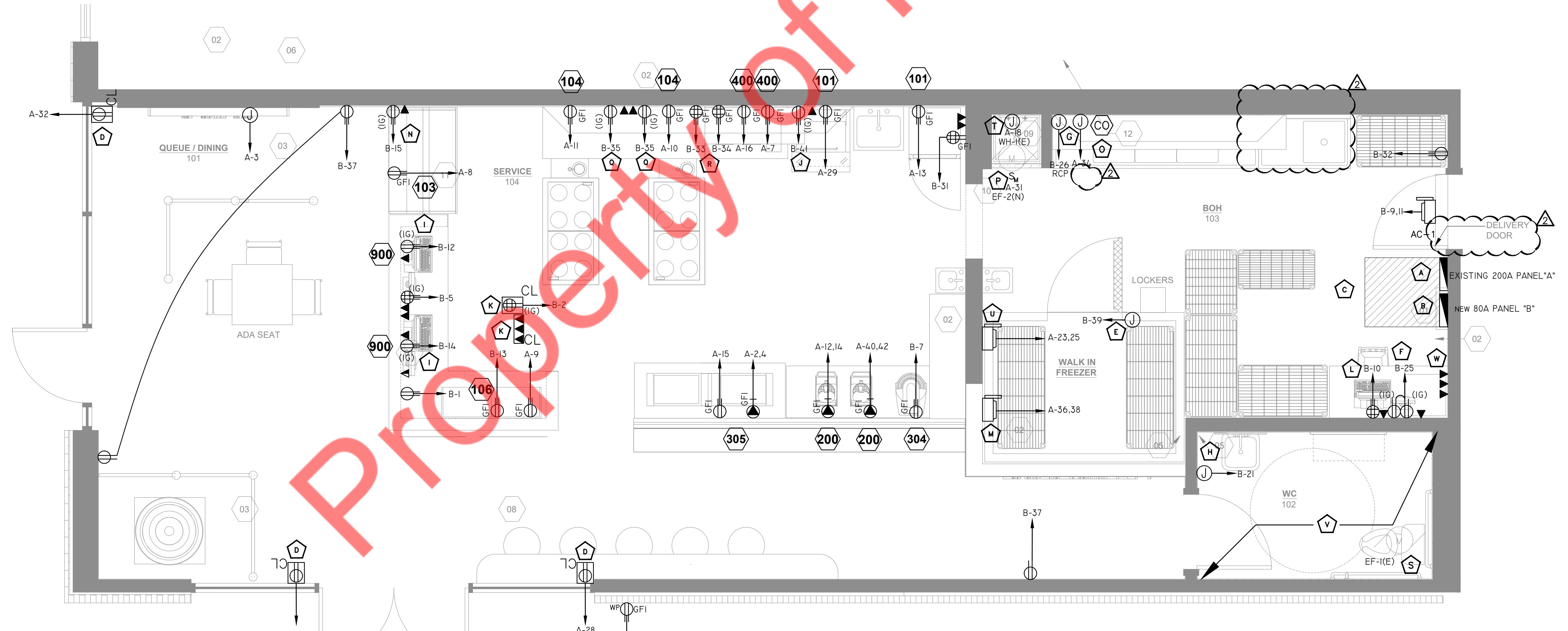
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- ELECTRICAL POWER PLAN KEYED WORK NOTES:**
- A. EXISTING 200A(MLO), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A". E.C. SHALL REPORT IF ANY DISCREPANCIES OBSERVED.
 - B. NEW 80A(MLO), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B". E.C. SHALL COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
 - C. E.C. SHALL VERIFY THAT THE PANEL AREA IS UNOBSTRUCTED AND SHALL HAVE CLEARANCE AS PER 110.26(A)&(B)
 - D. PROVIDE SHOW WINDOW RECEPTACLE AS PER NEC 210.62. VERIFY EXACT LOCATION WITH ARCHITECT/OWNER.
 - E. J-BOX FOR WALK-IN FREEZER HEATER.E.C. SHALL COORDINATE EXACT LOCATION AND ELECTRICAL REQUIREMENT WITH ELECTRICAL MANUFACTURER.
 - F. E.C. SHALL PROVIDE TWO CAT 6 CABLING FOR DESK. PROVIDE AN ADDITIONAL 6 FEET OF CABLING AT EITHER END OF CONNECTION. E.C. SHALL COORDINATE WITH IT DRAWINGS/SPECIALIST FOR EXACT LOCATION, POWER REQUIREMENTS AND MAKE PROVISIONS ACCORDINGLY. BASE BID ACCORDINGLY.
 - G. ELECTRICAL SUPPLY PROVISION FOR RECIRCULATION PUMP(RCP-1). E.C. SHALL COORDINATE WITH THE PLUMBING CONTRACTOR FOR THE EXACT POWER REQUIREMENTS PRIOR TO ROUGH-IN. BASE BID ACCORDINGLY.
 - H. E.C. SHALL COORDINATE EXACT POWER CONNECTION REQUIREMENT FOR PUSH BUTTON & AUTO DOOR OPENER WITH EQUIPMENT MANUFACTURER AND LOCATION WITH ARCHITECT/ OWNER. BASE BID ACCORDINGLY. REFER SHEET 3/E-400 FOR MORE INFORMATION.
 - I. E.C. SHALL PROVIDE DATA AND POWER REQUIREMENTS FOR SCREENS, POS AS REQUIRED IN COORDINATION WITH ARCHITECT/EQUIPMENT MANUFACTURER BASE BID ACCORDINGLY.
 - J. KDS FOR SHAKES/SUNDAES. E.C. SHALL PROVIDE DUPLEX RECEPTACLE AND DATA AT 65" AFF.
 - K. MENU MONITOR. E.C. SHALL PROVIDE THE CEILING MOUNTED QUAD RECEPTACLE & DATA LOCATED 3'-0" FROM BACK EDGE OF THE COUNTER.
 - L. PROVIDE QUAD AND DATA FOR IT RACK AT 18" FROM TOP OF THE CEILING. E.C. SHALL COORDINATE WITH OWNER BEFORE FINAL INSTALLATION.
 - M. 20/2P CIRCUIT FOR WALK-IN FREEZER EVAPORATOR. E.C. SHALL COORDINATE EXACT LOCATION AND ELECTRICAL REQUIREMENT WITH ELECTRICAL MANUFACTURER
 - N. MARKETING MONITOR. E.C. SHALL PROVIDE THE DUPLEX RECEPTACLE & DATA. VERIFY EXACT LOCATION WITH ARCHITECT/OWNER.
 - O. E.C. SHALL COORDINATE WITH EQUIPMENT MANUFACTURER AND PROVIDE RECEPTACLE/JUNCTION BOX FOR DETECTORS.
 - P. EXHAUST FANS FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR. E.C. SHALL COORDINATE FOR SWITCHING AND CONTROLS AND PROVIDE ALL NECESSARY WIRING REQUIRED.
 - Q. KDS FOR DIPPER WELLS. E.C. SHALL PROVIDE DUPLEX RECEPTACLE AND DATA OFF THE WALL AT 18".
 - R. E.C. SHALL PROVIDE QUAD OUTLETS AT 6" ABOVE THE TABLE FOR CARAMEL AND HOT FUDGE. VERIFY EXACT LOCATION WITH ARCHITECT/OWNER.
 - S. E.C. SHALL VERIFY AND RE-USE THE EXISTING ELECTRICAL CONNECTION AND ITS CONTROLS FOR EXISTING EXHAUST FAN. REPLACE WITH NEW CIRCUIT & CONTROLS IN COORDINATION WITH MECHANICAL CONTRACTOR, IF EXISTING IS IN-OPERABLE. BASE BID ACCORDINGLY.
 - T. E.C. SHALL VERIFY AND RE-USE THE EXISTING ELECTRICAL CONNECTION FOR EXISTING WATER HEATER(WH-1). REPLACE WITH NEW CIRCUIT IN COORDINATION WITH PLUMBING CONTRACTOR, IF EXISTING IS IN-OPERABLE. BASE BID ACCORDINGLY.
 - U. PROVIDE DISCONNECT ABOVE WALK-IN FREEZER BOX. E.C. TO COORDINATE EXACT LOCATION AND ELECTRICAL REQUIREMENTS OF WALK-IN-BOX CONDENSER UNITS WITH WALK-IN BOX MANUFACTURER. BASE BID ACCORDINGLY.
 - V. ALL THE ENTITIES IN THIS AREA SHALL REMAIN. E.C. SHALL VERIFY THE OPERABLE CONDITION OF EXISTING CIRCUITS, PROVIDE NEW IF IN-OPERABLE,
 - W. PROVIDE CONDUIT, RACEWAYS AND BACK BOXES FOR SPEAKER CONTROLS. E.C. SHALL COORDINATE THE EXACT LOCATION & REQUIREMENTS WITH A.V. VENDOR. BASE BID ACCORDINGLY.

- ELECTRICAL POWER PLAN GENERAL NOTES:**
- A. E.C. SHALL COORDINATE WITH OTHER TRADE CONTRACTORS FOR EXACT LOCATION AND POWER REQUIREMENT OF THE EQUIPMENT FROM OTHER TRADES. PROVIDE WIRING AND CONTROLS AS REQUIRED (IF NOT PROVIDED BY THEM), PRIOR TO BID. BASE BID ACCORDINGLY.
 - B. THE CLEAR WORKING SPACE SHALL BE PROVIDED FOR THE METERS, PANEL BOARDS, AND OTHER ELECTRICAL EQUIPMENT AS PER SECTION 110.26 OF NEC.
 - C. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE UTILITY/ARCHITECT/OWNER FOR EXACT LOCATION OF THE EXISTING SERVICE METER AND OTHER ELECTRICAL DEVICES. PRIOR TO BID. BASE BID ACCORDINGLY.
 - D. ALL THE CIRCUITS SUPPLYING KITCHEN EQUIPMENT AND SHOWN "GFI" ON POWER PLAN SHALL BE PROTECTED EITHER AT A PANEL WITH GFI RATED BREAKER OR RECEPTACLE WITH GFI AS PER NEC 210.8. IF GFI RECEPTACLES ARE USED, CONTRACTOR SHALL LOCATE THE GFI RECEPTACLES SUCH THAT THESE ARE READILY ACCESSIBLE PER CODE.
 - E. E.C. SHALL FOLLOW GROUNDING/BONDING AS PER NEC ARTICLE 250.
 - F. ALL THE RECEPTACLES SHALL BE RATED PER CIRCUIT. E.C. SHALL VERIFY AND MAKE FINAL CONNECTIONS ACCORDINGLY.
 - G. ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI PROTECTION FOR ALL THE FLOOR OUTLETS AS PER NEC ARTICLE 406.4(g).
 - H. ELECTRICAL CONTRACTOR SHALL PROVIDE TYPED PANEL DIRECTORY FOR ALL THE ELECTRICAL PANELS AS PER NEC 408.4(A).



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



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ELECTRICAL POWER PLAN

**PERMIT SET
E200**

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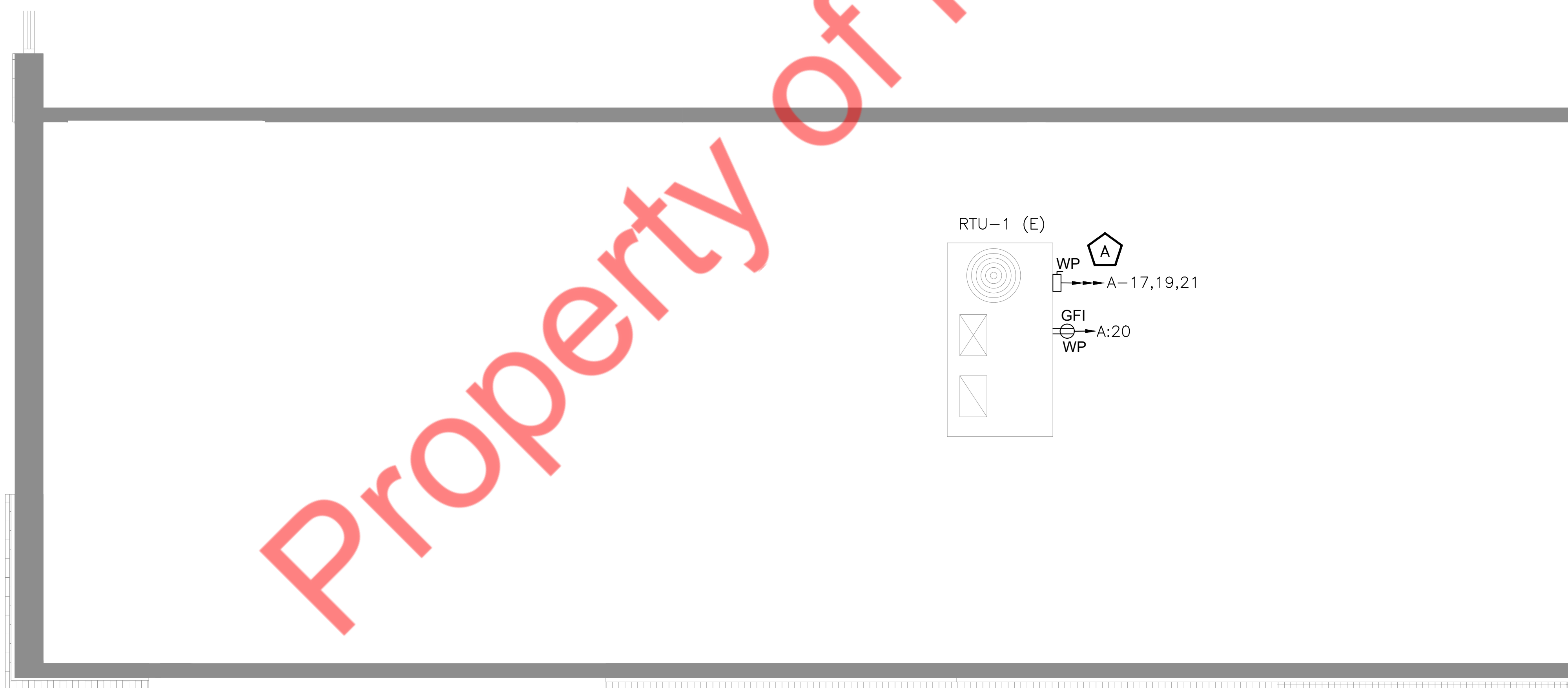


ELECTRICAL ROOF POWER KEY NOTES:

⚠ ELECTRICAL CONTRACTOR SHALL VERIFY AND RE-USE THE EXISTING ELECTRICAL SWITCH GEAR AND POWER CONNECTIONS FOR THE EXISTING RTUS. REPLACE WITH NEW, IF FOUND IN OPERABLE. BASE BID ACCORDINGLY.

ELECTRICAL ROOF POWER PLAN:

1. COORDINATE EXACT LOCATION OF HVAC EQUIPMENTS WITH MECHANICAL CONTRACTOR.
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 MANUFACTURER AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. LOCATE AS REQUIRED TO MAINTAIN NEC CLEARANCES.



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⚠	REVISED PERMIT SET	09/18/2024

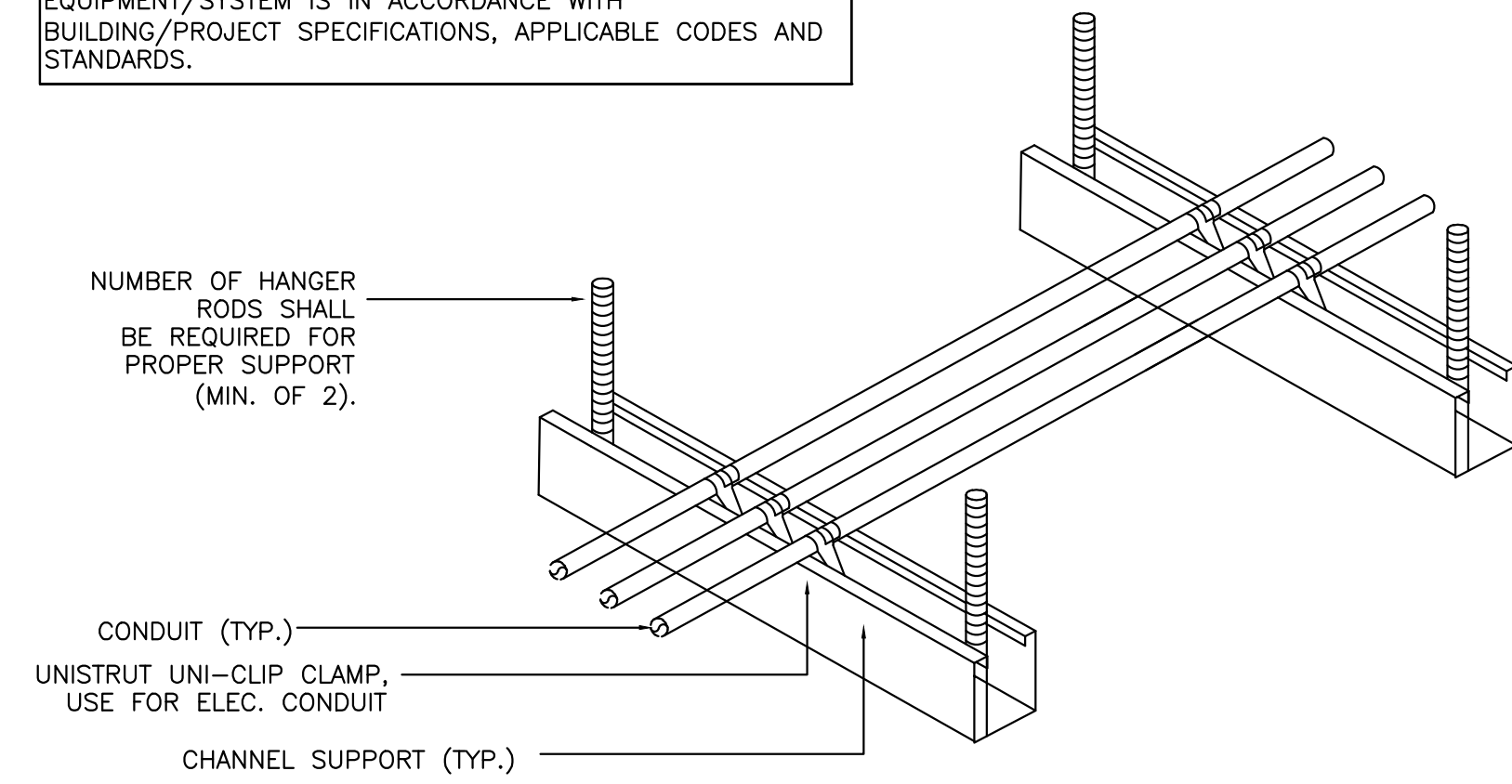
ELECTRICAL ROOF POWER PLAN

PERMIT SET
E201

Scale:

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

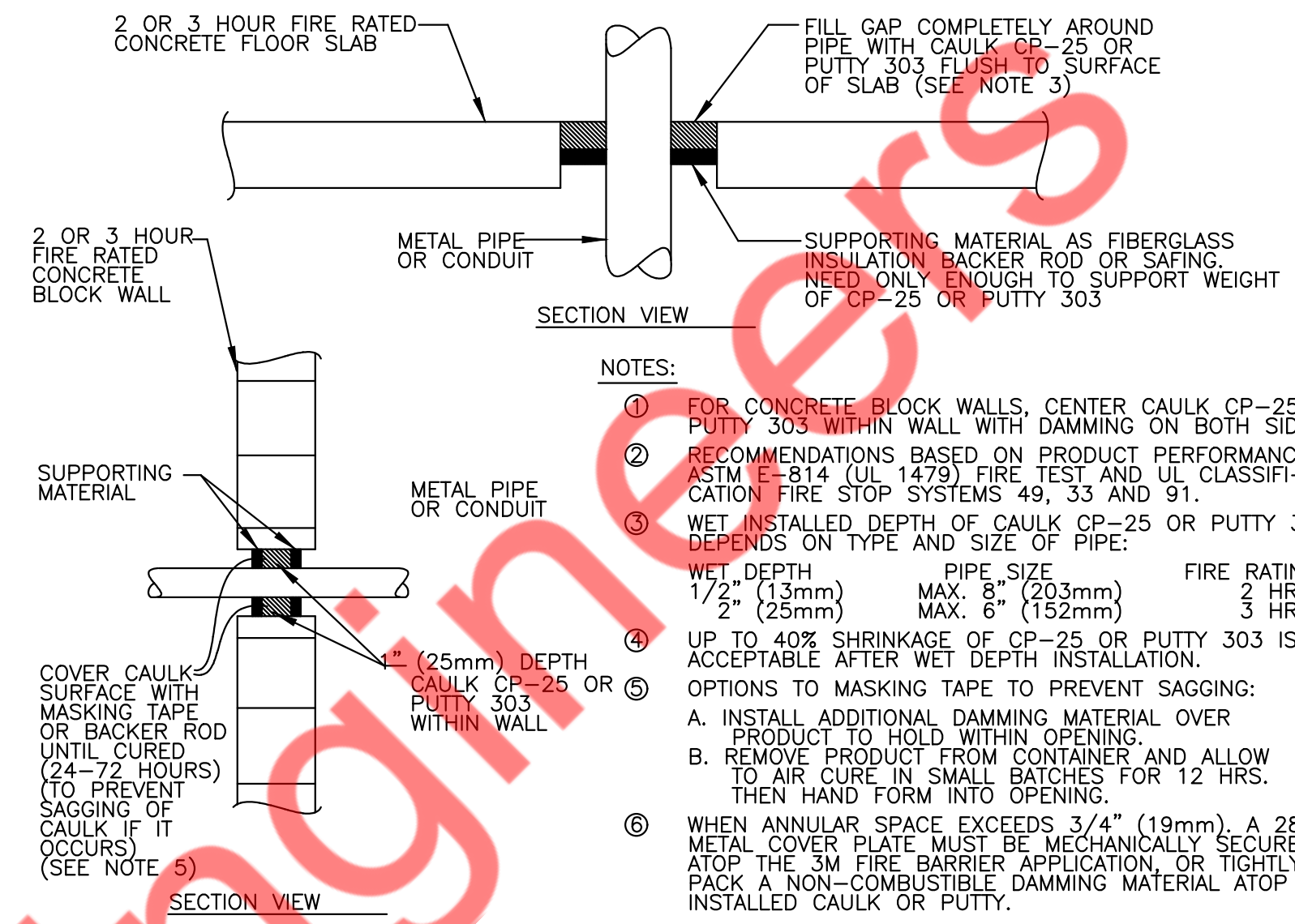
NOTE:
THIS INFORMATION MAY NOT CONTAIN ALL DETAILS REQUIRED FOR CONSTRUCTION. APPROPRIATE MODIFICATION MAY BE REQUIRED TO ENSURE SUITABILITY OF THESE DRAWINGS FOR THE SPECIFIC APPLICATION. IT IS THE USER'S RESPONSIBILITY TO ENSURE INSTALLATION OF THE EQUIPMENT/SYSTEM IS IN ACCORDANCE WITH BUILDING/PROJECT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



NOTES:

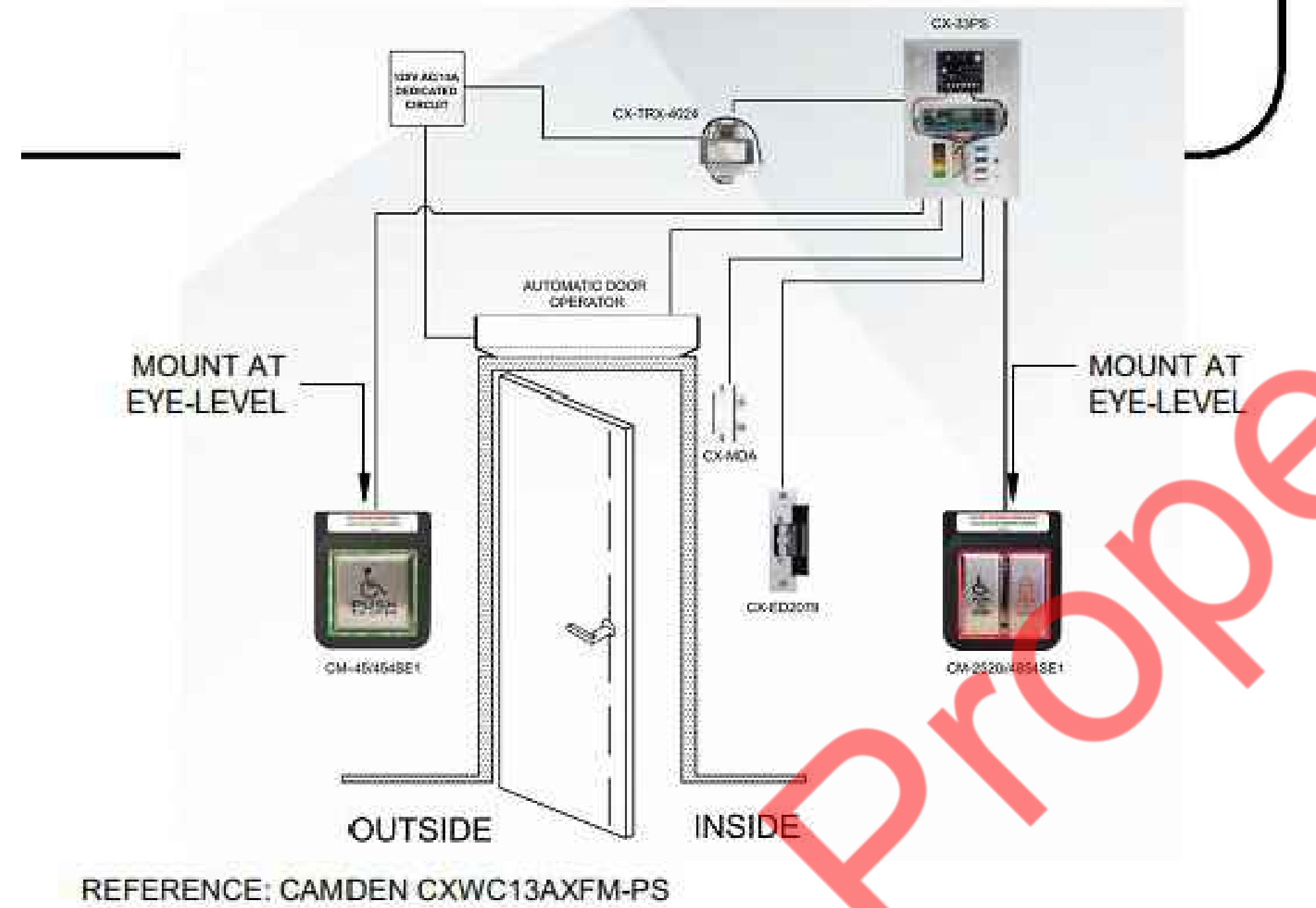
1. ALL CONDUIT MAY BE COMBINED ON SAME SUPPORT CHANNEL WHERE PRACTICAL.
2. SUPPORT CHANNEL LENGTH SHALL NOT BE DETERMINED UNTIL ALL PIPING, CONDUIT, ETC. TO BE SUPPORTED IS COORDINATED.
3. SUPPORT CHANNEL SPACING SHALL BE NO MORE THAN 10'-0".
4. UNISTRUT AND CONDUIT INSTALLATION MAY BE REVERSED.

2 CONDUIT SUPPORT DETAIL
E400 N.T.S



1 CONDUIT SUPPORT DETAIL
E400 N.T.S

PUSH BUTTON HARDWARE



3 PUSH BUTTON HARDWARE
E400 N.T.S



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ELECTRICAL
DETAILS

PERMIT SET
E400

Scale:

- S. 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.
- T. 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.
- U. AT ALL INDIRECT WASTE DRAINS, MAINTAIN AIR GAP AS REQUIRED BY CODE.
- V. ALL PIPING INSTALLED ON THE ROOF SHALL BE SUPPORTED BY "PILLOW BLOCK" PIPE STANDS AS MANUFACTURED BY MIRO INDUSTRIES, OR APPROVED EQUAL WOOD PIPE SUPPORTS SHALL NOT BE ACCEPTABLE. PROVIDE TRAFFIC/WALK PADS BELOW ALL PIPE STANDS.
- W. 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.
- X. PROVIDE WATER HAMMER ARRESTERS ON SUPPLY PIPING TO ALL FLUSHMETER VALVES AND QUICK-CLOSING VALVES.
- Y. UNLESS OTHERWISE INDICATED, TRAPS SEALS AT ALL FLOOR DRAINS SHALL BE MAINTAINED BY AN APPROVED TRAP PRIMING DEVICE.
- Z. MAINTAIN ALL REQUIRED AND RECOMMENDED CLEARANCES FOR ALL PLUMBING SYSTEM COMPONENTS AND EQUIPMENT.
- AA. MAINTAIN MINIMUM 10"-0" CLEARANCE BETWEEN ALL PLUMBING V.T.R.S AND ALL OUTDOOR AIR INTAKES. OFFSET VENT STACKS AND STACK VENTS IF AND AS REQUIRED BELOW SUPPORTS TO MAINTAIN SUCH CLEARANCE WHETHER OR NOT SUCH OFFSET IS INDICATED ON THE DRAWINGS. PROVIDE ALL REQUIRED SEISMIC SUPPORTS.

2. INSTALLATION

2.01 GENERAL

- A. ALL WORK WHICH REQUIRES DISRUPTION OF THE ROOFING SHALL BE DONE BY A CONTRACTOR CERTIFIED BY THE ROOFING MANUFACTURER AS REQUIRED TO MAINTAIN ANY EXISTING ROOF WARRANTIES.
- B. EXTERIOR INSTALLATIONS TO BE WEATHER PROOF IN ALL RESPECTS.
- C. EXTERIOR MATERIALS AND EQUIPMENT SHALL BE PAINTED TO PREVENT CORROSION, COLOR PER ARCHITECT.
- D. COORDINATE THE PLUMBING WORK WITH ALL OTHER AFFECTED WORK AND THE CONSTRUCTION SCHEDULE.
- E. REAM PIPE AND TUBE ENDS. REMOVE BURRS. BEVEL PLAIN AND FERROUS END PIPE.
- F. REMOVE SCALE AND FOREIGN MATERIAL, FROM INSIDE AND OUTSIDE, BEFORE ASSEMBLY.
- G. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES AND UNIONS.
- H. COORDINATION WITH THE WORK OF OTHER TRADES IS REQUIRED. PROVIDE OFFSETS IN PIPING SYSTEMS OR MINOR DEVIATIONS TO THE INDICATED PIPE ROUTING IN ORDER TO COORDINATE THE PLUMBING WORK WITH THE WORK OF ALL OTHER TRADES AND THE GENERAL BUILDING CONDITIONS.
- I. NO DOMESTIC WATER PIPING SHALL BE INSTALLED IN UNHEATED SPACES.
- J. PRIOR TO DISCONNECTING AND CONNECTING NEW WORK TO EXISTING SYSTEMS, THE PLUMBING CONTRACTOR SHALL NOTIFY THE PROPERTY MANAGER AND OFFER A PROPOSED SCHEDULE OF WORK. ESB WILL AUTHORIZE CONNECTIONS AND COORDINATE NECESSARY SHUT DOWNS AND DRAIN DOWNS AS REQUIRED. SHUT DOWNS AND DRAIN DOWNS MAY BE PERFORMED BY THE PLUMBING CONTRACTOR ONLY AFTER RECEIVING ESB AUTHORIZATION, AND SHOULD BE PERFORMED UNDER SUPERVISION OF ESB PERSONNEL. THREE (3) DAYS ADVANCE NOTICE TO THE PROPERTY MANAGER IS REQUIRED.
- K. THE PLUMBING CONTRACTOR IS ADVISED THAT DUE TO THE NATURE OF THE OPERATIONS AND TENANT REQUIREMENTS, CONNECTIONS TO EXISTING SYSTEMS MAY HAVE TO BE MADE AFTER REGULAR WORKING HOURS. THE PROPERTY MANAGER WILL ADVISE THE PLUMBING CONTRACTOR OF THE TIME CONSTRAINTS UPON RECEIPT AND APPROVAL OF THE PLUMBING CONTRACTOR'S REQUEST FOR SHUT DOWN AND CONNECTION TO EXISTING SYSTEMS.
- L. WHEN CONNECTING TO EXISTING STACKS AND RISERS, PROVISION IS TO BE MADE FOR FUTURE CONNECTIONS BY PROVIDING CAPPED AND VALVED OUTLETS ON DOMESTIC WATER RISERS AND PLUGGED OUTLETS ON THE SANITARY AND VENT STACKS.

2.02 ABOVE GRADE

- A. INSTALL PLUMBING PIPING IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT PIPING COMPLIES WITH REQUIREMENTS AND SERVES INTENDED PURPOSES.
- B. ROUTE PIPING IN AN ORDERLY MANNER, PLUMB AND PARALLEL TO BUILDING STRUCTURE. MAINTAIN GRADIENT. SLOPE PIPING AND ARRANGE SYSTEMS TO DRAIN. IN DOMESTIC WATER SYSTEMS, PROVIDE DRAIN VALVES AT MAIN SHUT-OFF VALVES AND ALL LOW POINTS IN PIPING.
- C. USE EXISTING CONNECTIONS AT MAINS WHERE AVAILABLE FOR NEW BRANCH PIPING. LOCATE ALL RISERS AND PIPING BEFORE CONSTRUCTION COMMENCES AND TAKE CARE NOT TO DAMAGE SAME. ANY DAMAGE OCCURRING TO THE EXISTING PIPING WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

2.03 INSULATION

COVER ALL HOT WATER AND HOT WATER RECIRCULATION PIPE WITH MINIMUM INSULATION THICKNESS OF NOT LESS THEN DIAMETER OF PIPE OR 1" THICK FOR PIPE SIZE UP TO 2" AND 2" THICK FOR PIPE SIZE OF 2" OR GREATER THAN 2". INSTALL ALL INSULATION AS PER MANUFACTURERS RECOMMENDATIONS. ALL PIPE INSULATION SHALL COMPLY WITH CALIFORNIA ENERGY CODE 2022 AND CALIFORNIA PLUMBING CODE 2022.

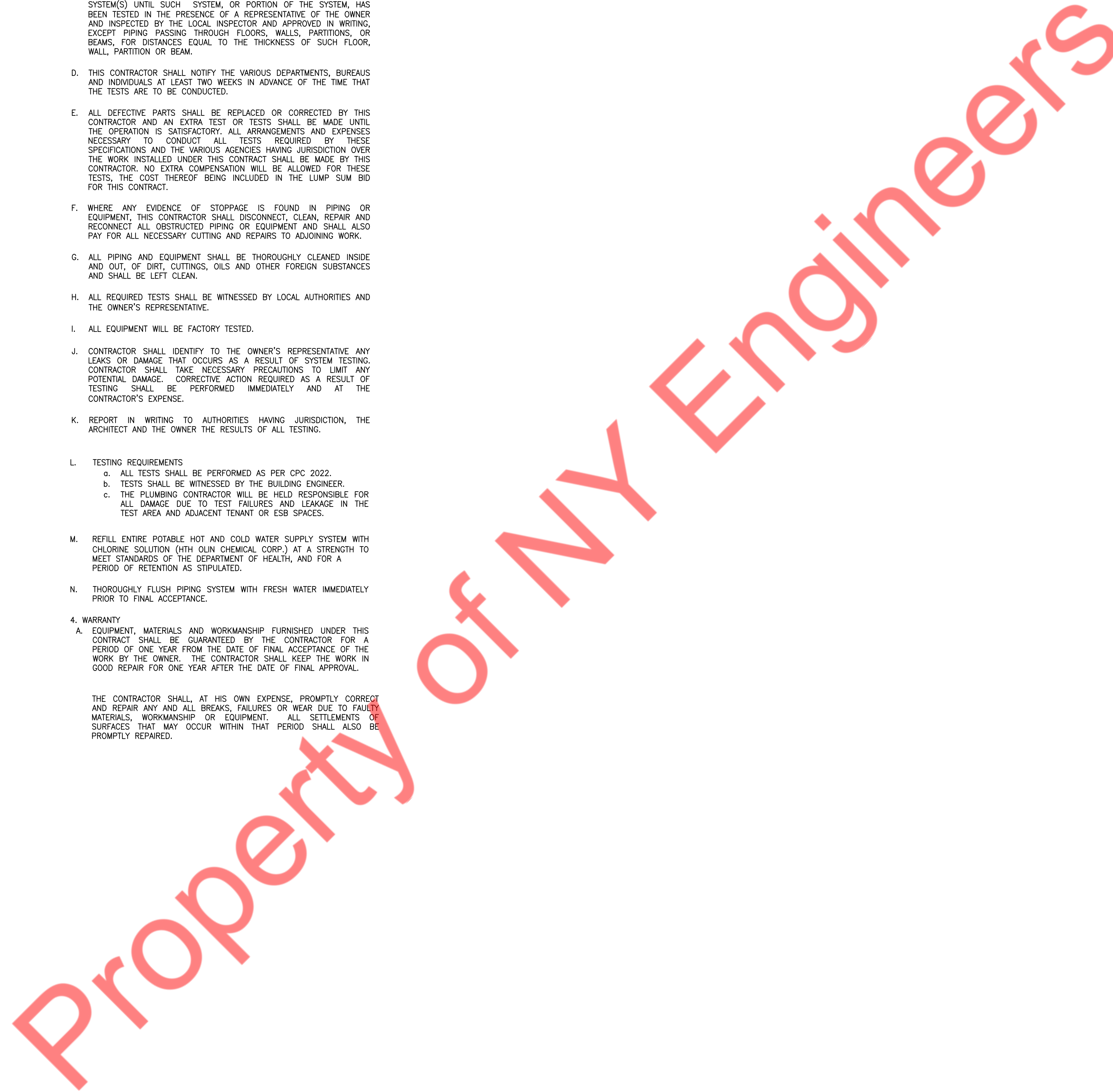
3. TESTING

- A. AT THE COMPLETION OF THE PLUMBING WORK, COMPLETELY TEST THE ENTIRE INSTALLATION OF ALL SYSTEMS FOR PROPER OPERATION AND COMPLIANCE WITH APPLICABLE CODES AND LOCAL REQUIREMENTS. CORRECT ALL DEFICIENCIES FOUND.
- B. TESTING OF THE INSTALLED SYSTEMS SHALL BE MADE BY THE CONTRACTOR IN THE PRESENCE OF A REPRESENTATIVE OF THE OWNER.
- C. THE CONTRACTOR SHALL NOT COVER UP OR PERMANENTLY CONCEAL PIPING, DEVICES OR ANY PORTION OF NEWLY CONSTRUCTED PLUMBING SYSTEM(S) UNTIL SUCH SYSTEM, OR PORTION OF THE SYSTEM, HAS BEEN TESTED IN THE PRESENCE OF A REPRESENTATIVE OF THE OWNER AND INSPECTED BY THE LOCAL INSPECTOR AND APPROVED IN WRITING, EXCEPT PIPING PASSING THROUGH FLOORS, WALLS, PARTITIONS, OR BEAMS, FOR DISTANCES EQUAL TO THE THICKNESS OF SUCH FLOOR, WALL, PARTITION OR BEAM.
- D. THIS CONTRACTOR SHALL NOTIFY THE VARIOUS DEPARTMENTS, BUREAUS AND INDIVIDUALS AT LEAST TWO WEEKS IN ADVANCE OF THE TIME THAT THE TESTS ARE TO BE CONDUCTED.
- E. ALL DEFECTIVE PARTS SHALL BE REPLACED OR CORRECTED BY THIS CONTRACTOR AND AN EXTRA TEST OR TESTS SHALL BE MADE UNTIL THE OPERATION IS SATISFACTORY. ALL ARRANGEMENTS AND EXPENSES NECESSARY TO CONDUCT ALL TESTS REQUIRED BY THESE SPECIFICATIONS AND THE VARIOUS AGENCIES HAVING JURISDICTION OVER THE WORK INSTALLED UNDER THIS CONTRACT SHALL BE MADE BY THIS CONTRACTOR. NO EXTRA COMPENSATION WILL BE ALLOWED FOR THESE TESTS, THE COST THEREOF BEING INCLUDED IN THE LUMP SUM BID FOR THIS CONTRACT.
- F. WHERE ANY EVIDENCE OF STOPPAGE IS FOUND IN PIPING OR EQUIPMENT, THIS CONTRACTOR SHALL DISCONNECT, CLEAN, REPAIR AND RECONNECT ALL OBSTRUCTED PIPING OR EQUIPMENT AND SHALL ALSO PAY FOR ALL NECESSARY CUTTING AND REPAIRS TO ADJOINING WORK.
- G. ALL PIPING AND EQUIPMENT SHALL BE THOROUGHLY CLEANED INSIDE AND OUT, OF DIRT, CUTTINGS, OILS AND OTHER FOREIGN SUBSTANCES AND SHALL BE LEFT CLEAN.
- H. ALL REQUIRED TESTS SHALL BE WITNESSED BY LOCAL AUTHORITIES AND THE OWNER'S REPRESENTATIVE.
- I. ALL EQUIPMENT WILL BE FACTORY TESTED.
- J. CONTRACTOR SHALL IDENTIFY TO THE OWNER'S REPRESENTATIVE ANY LEAKS OR DAMAGE THAT OCCURS AS A RESULT OF SYSTEM TESTING. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO LIMIT ANY POTENTIAL DAMAGE. CORRECTIVE ACTION REQUIRED AS A RESULT OF TESTING SHALL BE PERFORMED IMMEDIATELY AND AT THE CONTRACTOR'S EXPENSE.
- K. REPORT IN WRITING TO AUTHORITIES HAVING JURISDICTION, THE ARCHITECT AND THE OWNER THE RESULTS OF ALL TESTING.
- L. TESTING REQUIREMENTS
 - a. ALL TESTS SHALL BE PERFORMED AS PER CPC 2022.
 - b. TESTS SHALL BE WITNESSED BY THE BUILDING ENGINEER.
 - c. 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.
- M. REFILL ENTIRE POTABLE HOT AND COLD WATER SUPPLY SYSTEM WITH CHLORINE SOLUTION (HTH OLIN CHEMICAL CORP.) AT A STRENGTH TO MEET STANDARDS OF THE DEPARTMENT OF HEALTH, AND FOR A PERIOD OF RETENTION AS STIPULATED.
- N. THOROUGHLY FLUSH PIPING SYSTEM WITH FRESH WATER IMMEDIATELY PRIOR TO FINAL ACCEPTANCE.

4. WARRANTY

- A. EQUIPMENT, MATERIALS AND WORKMANSHIP FURNISHED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR SHALL KEEP THE WORK IN GOOD REPAIR FOR ONE YEAR AFTER THE DATE OF FINAL APPROVAL.

THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, PROMPTLY CORRECT AND REPAIR ANY AND ALL BREAKS, FAILURES OR WEAR DUE TO FAULTY MATERIALS, WORKMANSHIP OR EQUIPMENT. ALL SETTLEMENTS OF SURFACES THAT MAY OCCUR WITHIN THAT PERIOD SHALL ALSO BE PROMPTLY REPAIRED.

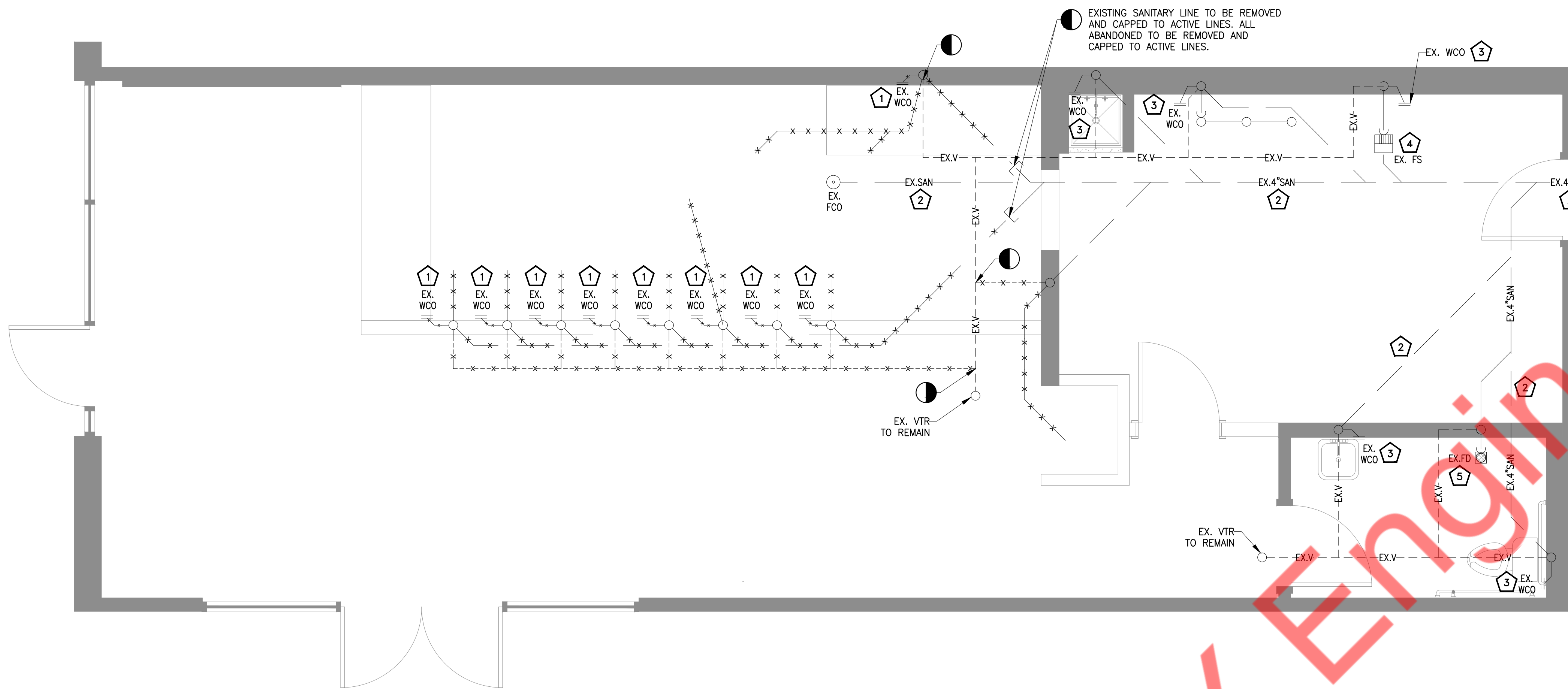


No.	Description	Date
	PERMIT SET	05/17/2024
1	REVISED PERMIT SET	08/21/2024
2	REVISED PERMIT SET	09/18/2024

PLUMBING SPECIFICATION (2 OF 2)

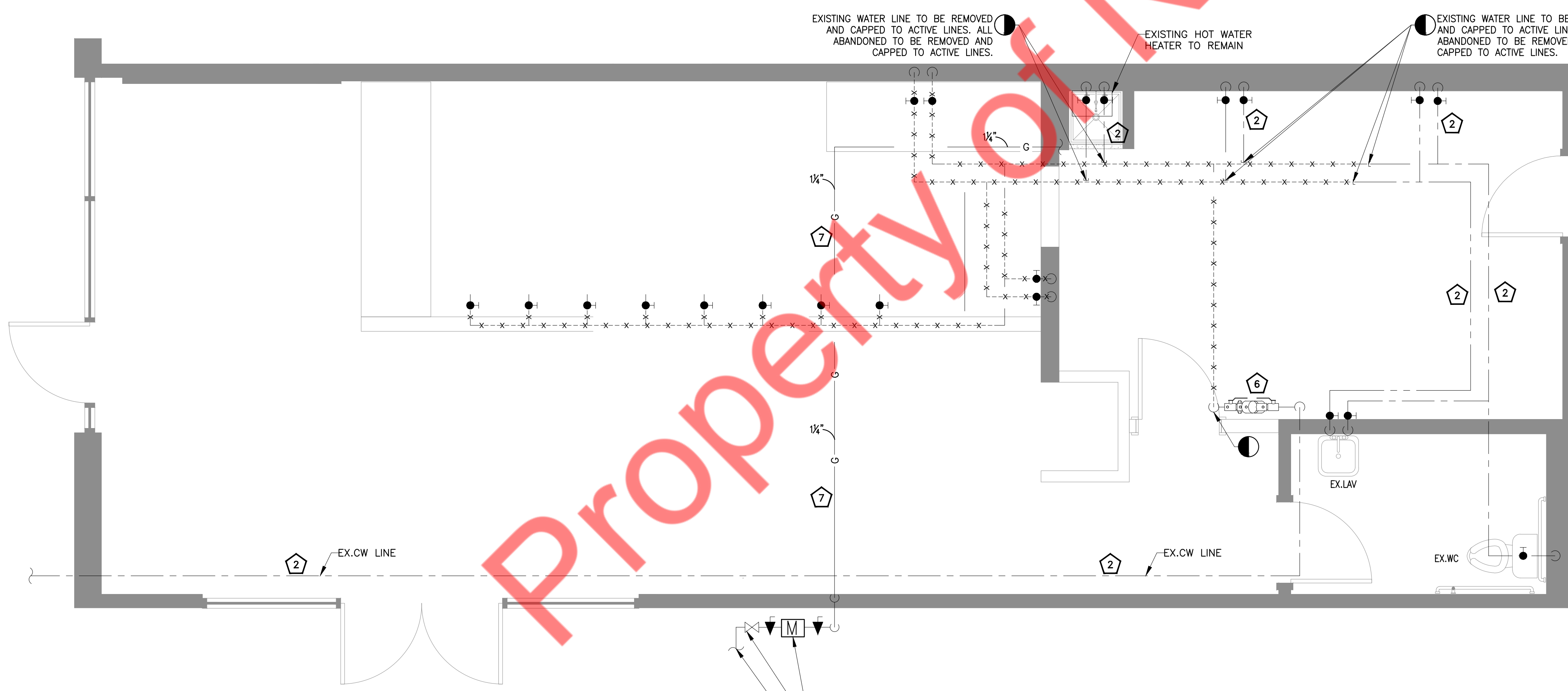
PERMIT SET P002

Scale: As Indicated



- WATER AND GAS PIPING KEYED NOTES:**
- 1 REMOVE EXISTING WALL CLEANOUTS AND RELATED PIPING. CUT AND CAP BACK TO ACTIVE LINES/RISERS. CONTRACTOR TO FIELD VERIFY EXACT LOCATION.
 - 2 EXISTING PLUMBING PIPING TO REMAIN. CONTRACTOR TO FIELD VERIFY EXACT ROUTING, SIZE AND INVERT PRIOR TO BID. CONTRACTOR TO CHECK CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
 - 3 EXISTING WALL CLEANOUTS AND RELATED PIPING TO REMAIN. CONTRACTOR TO CHECK CONDITION OF EXISTING PIPING, CLEANOUTS AND REPLACE IF REQUIRED.
 - 4 EXISTING FLOOR SINK AND RELATED PIPING TO REMAIN. CONTRACTOR TO CHECK CONDITION OF EXISTING PIPING AND UPGRADE IF REQUIRED.
 - 5 EXISTING FLOOR DRAIN AND RELATED PIPING TO REMAIN. CONTRACTOR TO CHECK CONDITION OF EXISTING PIPING AND UPGRADE IF REQUIRED.
 - 6 EXISTING BFP AND RELATED PIPING TO RELOCATE AS PER NEW PLAN. CONTRACTOR TO CHECK CONDITION OF EXISTING BFP, PIPING AND UPGRADE IF REQUIRED.
 - 7 EXISTING 1/2" GAS PIPE WITH EXISTING GAS METER & PRESSURE REGULATOR TO REMAIN IN GOOD CONDITION. CONTRACTOR TO FIELD VERIFY LOAD OF EXISTING GAS METER AND CONFIRM SIZE, PRESSURE, LOCATION AND CONDITION OF EXISTING GAS MAIN PIPING, REPLACE IF REQUIRED.

1 PLUMBING SANITARY DEMOLITION PLAN
SCALE: 3/8" = 1'-0"



- PLUMBING DEMOLITION NOTES:**
1. THE CONTRACTOR SHALL INCLUDE IN HIS PRICE ALL COSTS ASSOCIATED WITH REMOVALS AND RELOCATIONS OF PLUMBING WORK AS DESCRIBED ON THE DRAWINGS AND IN THE SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE ARCHITECT.
 2. THE CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL EXISTING PLUMBING WORK WHICH INTERFERES WITH THE NEW ARCHITECTURAL LAYOUTS. ALL SYSTEMS WHICH ARE NO LONGER REQUIRED TO FUNCTION SHALL BE REMOVED BACK TO ACTIVE LINES.
 3. THE CONTRACTOR SHALL PERFORM DEMOLITION AND REMOVAL WORK WITH MINIMUM INTERFERENCE WITH FUNCTIONING PLUMBING SYSTEMS. ALL AFFECTED SYSTEMS SHALL BE RECONNECTED AND RESTORED.
 4. DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR, OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS ORIGINAL CONDITION.
 5. THE CONTRACTOR SHALL REMOVE ALL PIPING SUPPORTS, ETC. FROM PARTITIONS THAT ARE TO BE REMOVED. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING PIPING THAT IS TO REMAIN, THE CONTRACTOR SHALL INSTALL AND PROVIDE BYPASS CONNECTIONS AS NECESSARY.
 6. ALL PIPING WHICH BECOMES EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.
 7. PORTIONS OF MAINS TO BE REMOVED OR ABANDONED AS A RESULT OF DEMOLITION WORK, BUT WHICH ARE REQUIRED TO REMAIN ACTIVE, SHALL BE CUT AT CONVENIENT LOCATIONS, REROUTED AND RECONNECTED.
 8. THE CONTRACTOR SHALL NOTIFY THE OWNER AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS.
 9. ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THE PLUMBING CONTRACTOR, AS DIRECTED BY THE OWNER.
 10. ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVERTIME, IF REQUIRED, TO ASSURE THAT SYSTEMS WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTIONS TO THE EXISTING SYSTEMS.
 11. THE SHUTDOWN OF EXISTING BUILDING PLUMBING SERVICES SHALL BE COORDINATED WITH THE OWNER. MAKE ARRANGEMENTS AT LEAST 5 BUSINESS DAYS PRIOR TO A SHUTDOWN.
 12. ALL PIPING TO BE REMOVED SHALL BE PROPERLY PLUGGED OR CAPPED SO THAT UPON COMPLETION OF ALL NEW WORK, ALL ABANDONED PIPING SHALL BE CONCEALED IN FINISHED AREAS.
 13. NO DEAD ENDS SHALL BE LEFT ON ANY PIPING UPON COMPLETION OF THE PROJECT.
 14. EXISTING EXPOSED PIPING NOT TO BE REUSED AND NOT SPECIFICALLY NOTED OR SHOWN ON DRAWINGS TO BE ABANDONED SHALL BE COMPLETELY REMOVED.
 15. THE EXISTING SYSTEMS SHALL BE LEFT IN PERFECT WORKING ORDER UPON COMPLETION OF ALL NEW WORK.
 16. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR OR HIS WORKMEN BE PERMITTED TO USE ANY PART OF THE BUILDING AS A SHOP, EXCEPT PARTS DESIGNATED BY THE OWNER FOR SUCH PURPOSE.

2 PLUMBING WATER SUPPLY DEMOLITION PLAN
SCALE: 3/8" = 1'-0"

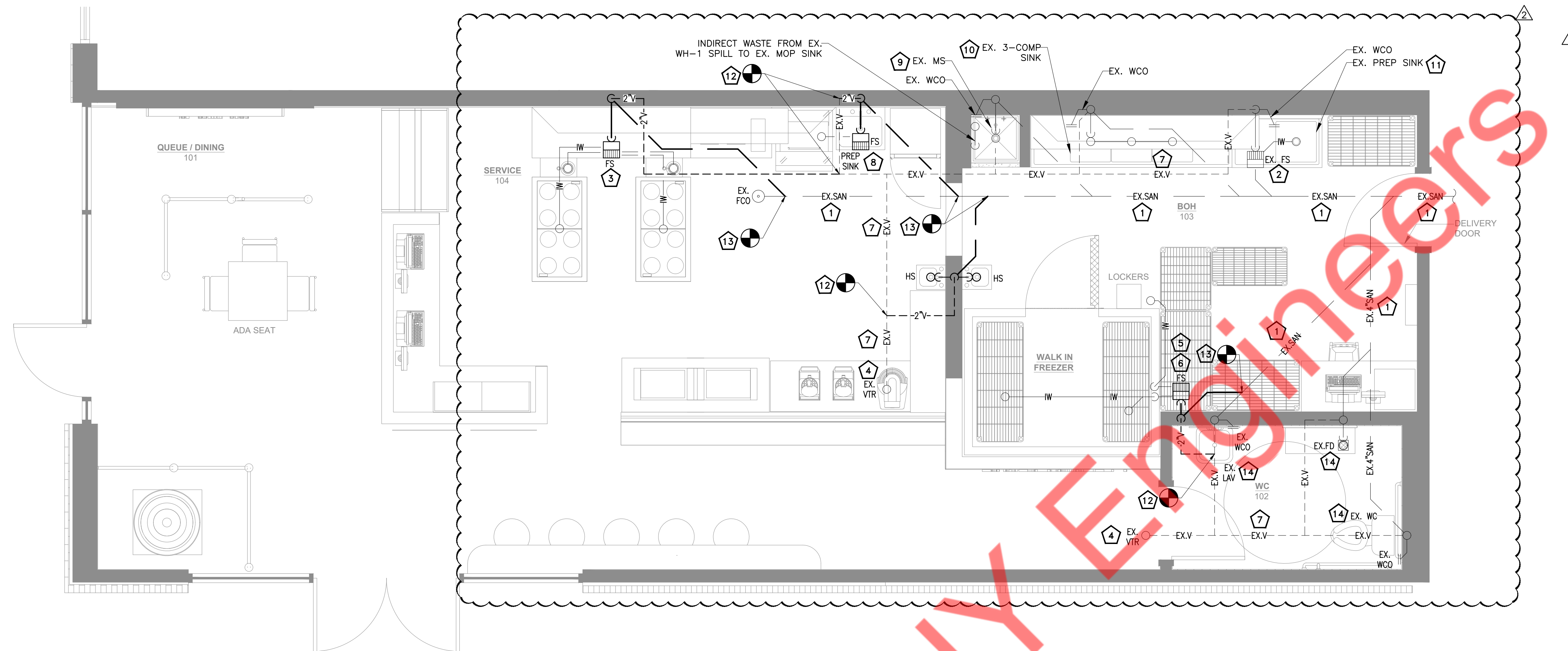


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PLUMBING DEMOLITION PLAN

PERMIT SET
P100

Scale: As Indicated



1 PLUMBING SANITARY PIPING PLAN
SCALE: 3/8" = 1'-0"

SANITARY KEYED NOTES:

- 1 EXISTING 4" SANITARY LINE TO REMAIN. CONTRACTOR TO FIELD VERIFY THE LOCATION, SIZE AND CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
- 2 EXISTING FLOOR SINK TO REMAIN. CONTRACTOR TO FIELD VERIFY THE LOCATION, SIZE AND CONDITION OF EXISTING FLOOR SINK AND UPGRADE IF REQUIRED.
- 3 ROUTE INDIRECT WASTE FROM DIPPER WELL, BUBBLER AND FLAT LID FREEZER TO FLOOR SINK WITH APPROVED AIR GAP
- 4 CONNECT EXISTING 3" VENT TO EXISTING VTR IN SPACE. CONTRACTOR TO FIELD VERIFY LOCATION, SIZE OF EXISTING VTR. VTR SHALL NOT BE LESS THAN 3", UPGRADE IF OTHERWISE.
- 5 CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF MECHANICAL EQUIPMENT AND ROUTE INDIRECT WASTE FROM WALK-IN FREEZER TO FLOOR SINK WITH APPROVED AIR GAP.
- 6 CONTRACTOR TO FIELD VERIFY THE EXISTING SECONDARY BFP IS AVAILABLE ON SITE AND IN OPERATIONAL CONDITION, IF NOT PROVIDE NEW BFP. ROUTE INDIRECT DRAIN FROM SECONDARY EXISTING BFP TO NEAREST FLOOR SINK WITH APPROVED AIR GAP.
- 7 EXISTING VENT LINE TO REMAIN. CONTRACTOR TO FIELD VERIFY THE LOCATION, SIZE AND CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
- 8 ROUTE INDIRECT WASTE FROM REFRIGERATOR AND PREPARATION SINK TO NEAREST FLOOR SINK WITH APPROVED AIR GAP.
- 9 EXISTING MOP SINK AND PLUMBING CONNECTION TO REMAINS IN GOOD CONDITION. CONTRACTOR TO FIELD VERIFY THE LOCATION, SIZE AND CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
- 10 EXISTING 3-COMP SINK AND PLUMBING CONNECTIONS TO REMAIN IN GOOD CONDITION. CONTRACTOR TO FIELD VERIFY THE LOCATION, SIZE AND CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
- 11 EXISTING PREP SINK AND PLUMBING CONNECTIONS TO REMAIN IN GOOD CONDITION. CONTRACTOR TO FIELD VERIFY THE LOCATION, SIZE AND CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
- 12 CONNECT NEW 2" VENT LINE TO EXISTING VENT LINE. CONTRACTOR TO FIELD VERIFY EXISTING VENT LINE LOCATION AND SIZE, RE-ROUTE AND UPSIZE IF REQUIRED.
- 13 CONNECT NEW 3" SANITARY LINE TO EXISTING SANITARY WASTE LINE. CONTRACTOR TO FIELD VERIFY EXISTING SANITARY SIZE, ROUTING AND INVERT PRIOR TO BID. RE-ROUTE SANITARY AS PER SITE CONDITION IF REQUIRED. BASE BID ACCORDINGLY.
- 14 EXISTING LAV, WC & FLOOR DRAIN IN RESTROOM AND PLUMBING CONNECTION TO REMAIN IN GOOD CONDITION. CONTRACTOR TO FIELD VERIFY THE LOCATION, SIZE AND CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.

SANITARY GENERAL NOTES:

1. UNLESS OTHERWISE NOTED, SLOPE OF DRAINAGE SYSTEM TO BE 1/8" PER FOOT OF RUN FOR PIPE 3" OR LARGER AND 1/4" PER FOOT FOR PIPE SMALLER THAN 3".
2. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
2. REFER RISER DIAGRAMS FOR ALL PIPE SIZES.
3. ALL MATERIAL INDICATED AND IMPLIED ON THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.
4. ALL CLEANOUTS TO BE ACCESSIBLE.
5. ANY ROOF PENETRATION SHALL BE PERFORMED BY LANDLORD'S ROOFERS AT LANDLORD OPTION. A BONDED ROOFER APPROVED IN ADVANCE BY LANDLORD.
6. PROVIDE TRAP PRIMER/ SEAL IN FLOOR DRAIN AS PER LOCAL JURISDICTION.
7. CONTRACTOR TO CO-ORDINATE WITH MECHANICAL CONTRACTOR FOR CONDENSATE DRAIN. EXTEND AND SPILL THE CONDENSATE DRAIN TO NEAREST FLOOR SINK WITH AIR GAP FITTING. REFER DETAILS ON SHEET P502 DETAIL #6 FOR PIPE SIZE & LOCATION.

HEALTH DEPARTMENT NOTES:

1. THE FLOOR SINK MUST BE EASILY ACCESSIBLE FROM THE WALKWAY WITHOUT HAVING TO CRAWL INTO TIGHT SPACES, UNDER EQUIPMENT, OR MOVE ANY EQUIPMENT TO REACH IT. THE FLOOR SINK CANNOT BE IN WALKWAYS OR IN ANY OTHER LOCATION THAT RENDERS IT A TRIPPING HAZARD.
2. THE TOTAL RUN OF THE DRAIN LINE FROM THE EQUIPMENT TO THE FLOOR SINK CANNOT EXCEED (15)-FEET WITH THE EXCEPTION OF WALK-IN UNITS, WHERE THE DRAIN LINE MAY EXCEED THE REQUIRED (15)-FEET WHEN ADEQUATE DRAIN SLOPE IS PROVIDED. ALL DRAIN LINES MUST HAVE A MINIMUM (1/4)-INCH PER FOOT SLOPE FOR ADEQUATE DRAINAGE, AND BE INSTALLED (1/2)-INCH AWAY FROM WALLS, AND NOT CROSS ANY AISLES, TRAFFIC AREAS, OR DOOR OPENINGS. ADDITIONALLY, ALL DRAIN LINES SHALL BE INSTALLED (6)-INCHES ABOVE THE FINISHED FLOOR. MOUNTING HARDWARE USED TO ELEVATE DRAIN LINES MUST BE EASILY CLEANABLE. UNI-STRUTS, FOR EXAMPLE, ARE NOT CONSIDERED EASILY CLEANABLE AND NOT ACCEPTED.
3. THE FLOOR SINK UNDER EQUIPMENT INSTALLED ON (6)-INCH LEGS OR CASTER WHEELS MUST BE IN-LINE WITH THE FRONT FACE OF THE EQUIPMENT. A FLOOR SINK INSTALLED AT THE ACCESSIBLE SIDE EDGE OF THE EQUIPMENT MAY ALSO BE ACCEPTED IF THE FLOOR SINK CONTINUES TO BE VISIBLE AND ACCESSIBLE FROM THE WALKWAY.
4. THE FLOOR SINK UNDER EQUIPMENT INSTALLED ON (4)-INCH CONCRETE CURB (E.G., STORAGE CABINET AND DISPLAY REFRIGERATORS) MUST BE HALF-EXPOSED. A PROPERLY COVED PROTECTIVE ENCLOSURE WILL BE REQUIRED AROUND THE BACKSIDE OF THE HALF-EXPOSED FLOOR SINK.
5. FLOOR SINKS MUST BE INSTALLED FLUSH WITH THE FLOOR.
6. ALL EQUIPMENT WITH ANY TYPE OF OUTLET DRAINS (CONDENSATE, CLEANING, DEFROSTING, ETC.) SHALL BE INDIRECTLY PLUMBED TO A FLOOR SINK USING RIGID PIPES. FLEXIBLE PIPES MAY BE USED BUT MUST BE CONNECTED TO A RIGID PIPE THAT TERMINATES AT THE FLOOR SINK. ANY EQUIPMENT THAT GENERATES WASTE WILL NOT BE ACCEPTED TO BE ROLLED INTO A FLOOR SINK FOR DRAINAGE. FLOOR DRAINS OR FUNNEL DRAINS CANNOT BE ACCEPTED IN- LIEU OF FLOOR SINKS.

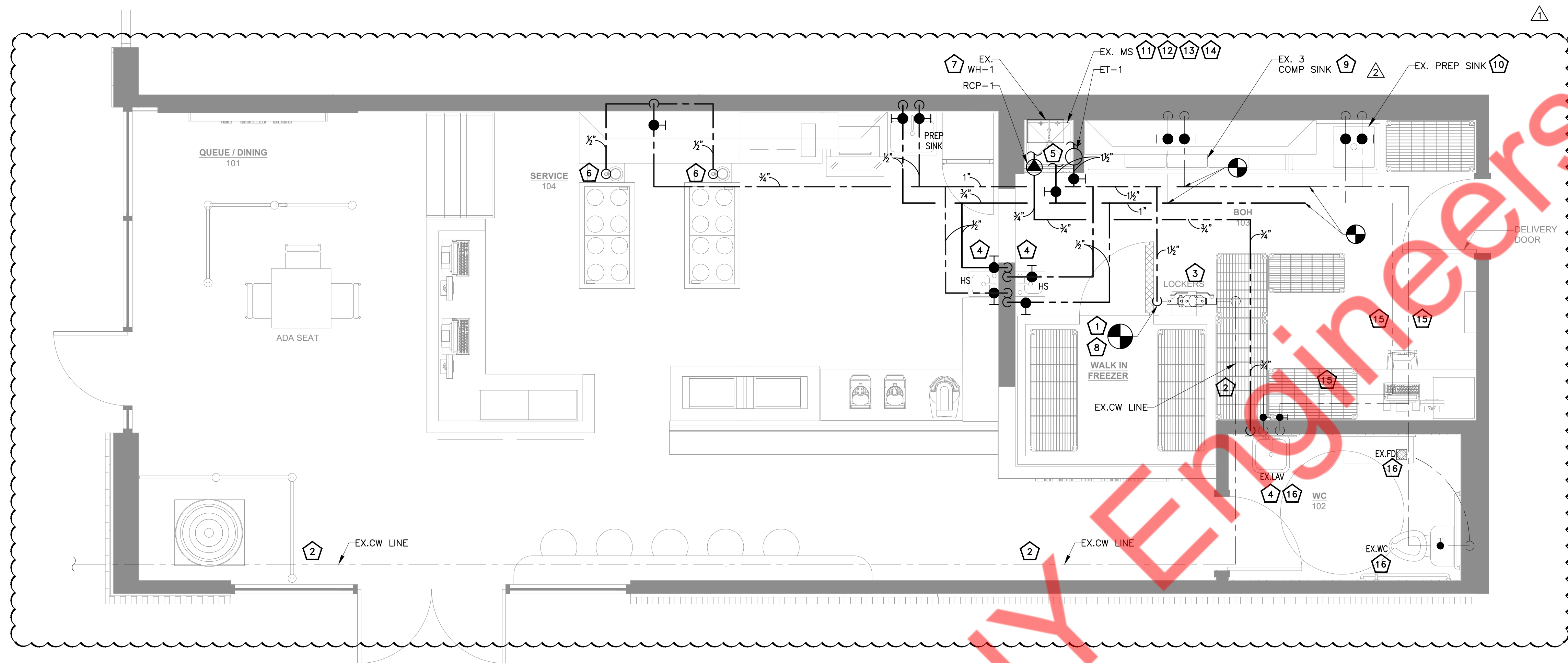


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**PLUMBING
SANITARY PIPING
PLAN**

**PERMIT SET
P101**

Scale: As Indicated



1 PLUMBING WATER SUPPLY AND GAS PIPING PLAN
SCALE: 3/8" = 1'-0"

GAS PIPING GENERAL NOTES:

1. PROVIDE SHUT-OFF VALVE AN ACCESSIBLE LOCATION. PROVIDE GAS PRESSURE REGULATOR FOR GAS EQUIPMENT IF REQUIRED.
2. CONTRACTOR SHALL VERIFY ACTUAL GAS PRESSURE AND LONGEST LENGTH OF RUN TO FARTHEST APPLIANCE PRIOR TO INSTALLATION AND NOTIFY ENGINEER IF CONDITION DIFFER THAN SHOWN ON THIS PLAN.

GAS PIPE SIZING PER CALIFORNIA PLUMBING CODE 2022, SECTION 1215.2, TABLE 1215.2(1)

INLET PRESSURE- LESS THAN 2 PSI
SPECIFIC GRAVITY- 0.6
PRESSURE DROP 0.5" WC

EQUIVALENT LENGTH OF PIPE =
55 + FITTINGS (+40%) = 77 FEET

GAS PIPE SIZING

TOTAL CFH	199 CFH
DEVELOPED LENGTH	80 FEET
SIZE	CFH
3/4"	117
1"	220
1 1/2"	452

WATER AND GAS PIPING KEYED NOTES:

1. CONNECT NEW 1/2" CW PIPING WITH EXISTING BFP AND TIE-INTO THE EXISTING WATER MAIN LINE. CONTRACTOR TO FIELD VERIFY ROUTING, LOCATION, CONDITION AND SIZE OF EXISTING CW LINE. UPGRADE IF REQUIRED.
2. EXISTING INCOMING WATER LINE TO REMAIN. CONTRACTOR TO FIELD VERIFY THE LOCATION, SIZE AND CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED. NO TAP-OFF TO BE TAKEN BEFORE EXISTING SECONDARY BFP.
3. CONTRACTOR TO FIELD VERIFY AVAILABILITY AND OPERATIONAL CONDITION OF EXISTING SECONDARY BFP. PROVIDE NEW IF EXISTING CANNOT BE REUSED. ROUTE INDIRECT DRAIN FROM SECONDARY BFP TO NEAREST FLOOR SINK WITH APPROVED AIR GAP.
4. PROVIDE ASSE 1070 OR SIMILAR THERMOSTATIC MIXING VALVE AT ALL HAND SINK AND LAVATORIES IF NOT ALREADY PROVIDED WITH THEM. SET AT 110°F MAXIMUM.
5. PROVIDE NEW RE-CIRCULATION PUMP (RCP-1), NEW THERMAL EXPANSION TANK (ET-1), HOT WATER RETURN PIPING, ASSOCIATED ACCESSORIES AND FITTINGS IF NOT ALREADY AVAILABLE. BID BASE ACCORDINGLY.
6. PROVIDE ASSE 1022 APPROVED BACKFLOW PREVENTER TO EQUIPMENT WATER PIPE FOR BACKFLOW PREVENTION. INSTALL BFP AT ACCESSIBLE LOCATION.
7. EXISTING WATER HEATER (EX. WH-1) WITH EXISTING ASSOCIATED ACCESSORIES AND FITTINGS TO REMAIN. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING WATER HEATER AND REPLACE IF REQUIRED. SPILL INDIRECT WASTE TO EXISTING MOP SINK WITH APPROVED AIR GAP.
8. CONTRACTOR SHALL VERIFY ACTUAL AVAILABLE WATER PRESSURE AT INCOMING WATER MAIN LINE. WATER PRESSURE SHOULD NOT BE LESS THAN 45 PSI AT THE REQUIRED FLOW. NOTIFY ENGINEER IF CONDITION DIFFERS.
9. EXISTING 3 COMP. SINK AND PLUMBING CONNECTION TO REMAIN IN GOOD CONDITION. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND CONNECT TO THE NEW WATER SUPPLY PIPE LINE HEADER. REPLACE EXISTING PIPING IF REQUIRED.
10. EXISTING PREP SINK AND PLUMBING CONNECTION TO REMAIN IN GOOD CONDITION. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND CONNECT TO THE NEW WATER SUPPLY PIPE LINE HEADER. REPLACE EXISTING PIPING IF REQUIRED.
11. EXISTING MOP SINK AND PLUMBING CONNECTION TO REMAIN IN GOOD CONDITION. CONTRACTOR TO FIELD VERIFY THE CONDITION OF EXISTING PIPING AND CONNECT TO THE NEW WATER SUPPLY PIPE LINE HEADER. REPLACE EXISTING PIPING IF REQUIRED.
12. PROVIDE ASSE 1070 OR SIMILAR THERMOSTATIC MIXING VALVE AT MOP SINK IF NOT ALREADY PROVIDED WITH THEM. SET AT 120°F MAXIMUM.
13. CONTRACTOR TO FIELD VERIFY AND PROVIDE ASSE 1055 APPROVED ATMOSPHERIC VACUUM BREAKER ON WATER LINE OF MOP SINK FAUCET IF NOT ALREADY PROVIDED. INSTALL BFP AS PER LOCAL CODE.
14. CONTRACTOR TO FIELD VERIFY AND PROVIDE ASSE 1055 APPROVED REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTOR ON WATER LINE TO CHEMICAL DISPENSER IF NOT ALREADY PROVIDED. INSTALL BFP AS PER LOCAL CODE AND PROVIDE ACCESS FOR MAINTENANCE.
15. EXISTING CW AND HW LINE TO REMAIN. CONTRACTOR TO FIELD VERIFY THE LOCATION, SIZE AND CONDITION OF EXISTING PIPING, REPLACE IF REQUIRED.
16. EXISTING LAV, WC & FLOOR DRAIN IN RESTROOM AND PLUMBING CONNECTION TO REMAIN IN GOOD CONDITION. CONTRACTOR TO FIELD VERIFY THE LOCATION, SIZE AND CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.

WATER PIPING GENERAL NOTES:

1. CW/HW PIPING TO BE PROVIDED WITH INSULATION AS PER CALIFORNIA ENERGY CODE 2022 (REFER SHEET P001)
2. PROVIDE BRANCH PRV IF PRESSURE EXCEEDS 80 PSI.
3. CONTRACTOR TO FIELD VERIFY FEASIBILITY OF SLAB PENETRATION AS PER STRUCTURAL REQUIREMENT.
4. PROVIDE ACCESS PANELS FOR WATER HAMMER ARRESTOR, CLEANOUTS & SHUT-OFF VALVES AS REQUIRED.
5. REFER RISER DIAGRAMS FOR ALL PIPE SIZES.
6. ANY ROOF PENETRATION SHALL BE PERFORMED BY LANDLORD'S ROOFERS AT LANDLORD OPTION, A BONDED ROOFER APPROVED IN ADVANCE BY LANDLORD.
7. PROVIDE TRAP PRIMER/ SEAL IN FLOOR DRAIN AS PER LOCAL JURISDICTION.
8. ALL MATERIAL INDICATED AND IMPLIED ON THESE DRAWINGS SHALL BE NEW UNLESS OTHERWISE NOTED.

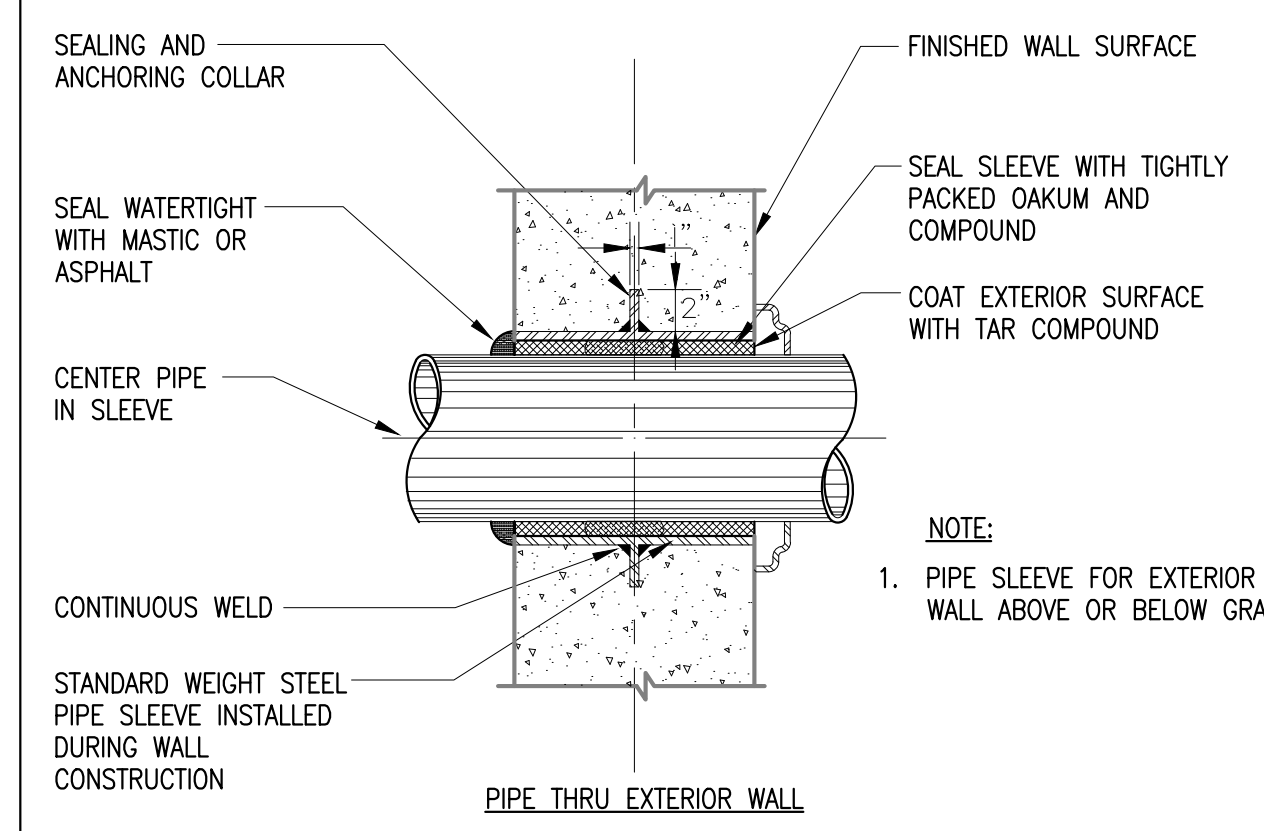


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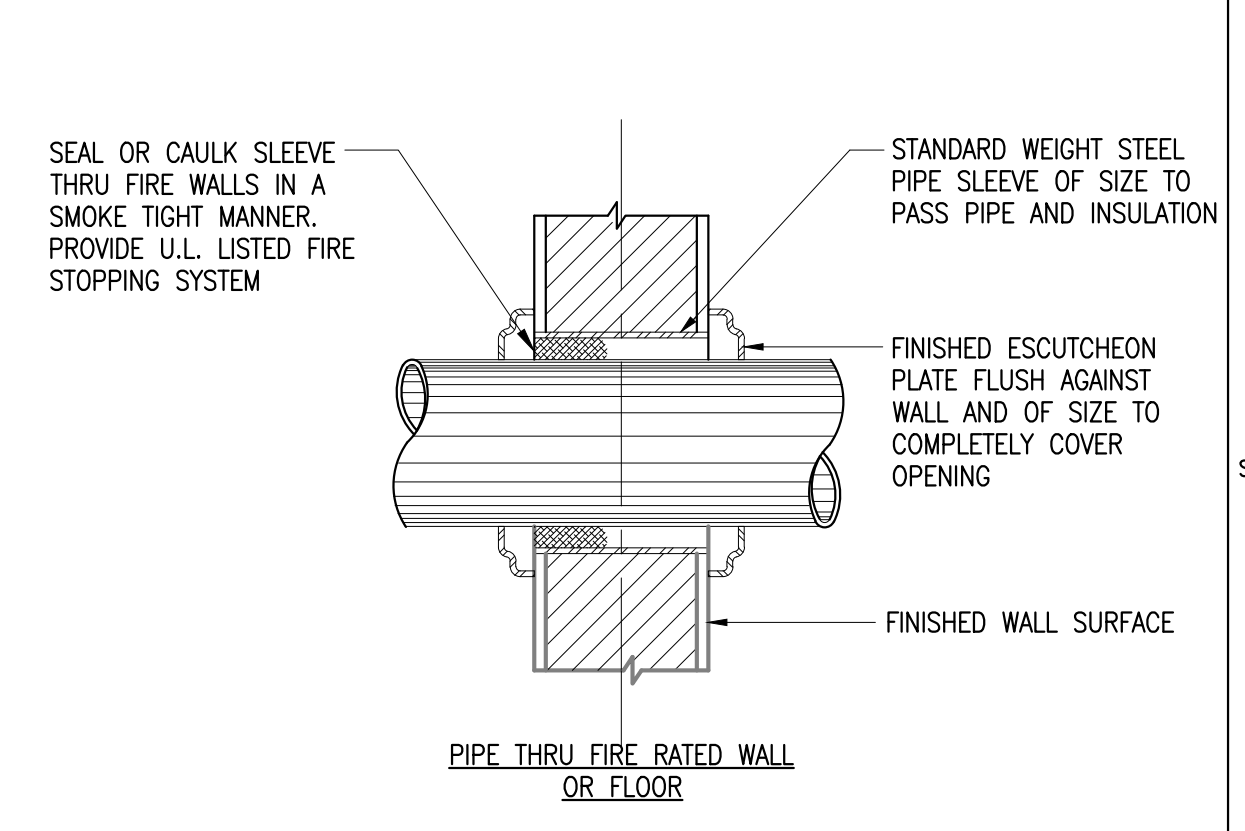
**PLUMBING
WATER SUPPLY
AND GAS PIPING
PLAN**

**PERMIT SET
P102**

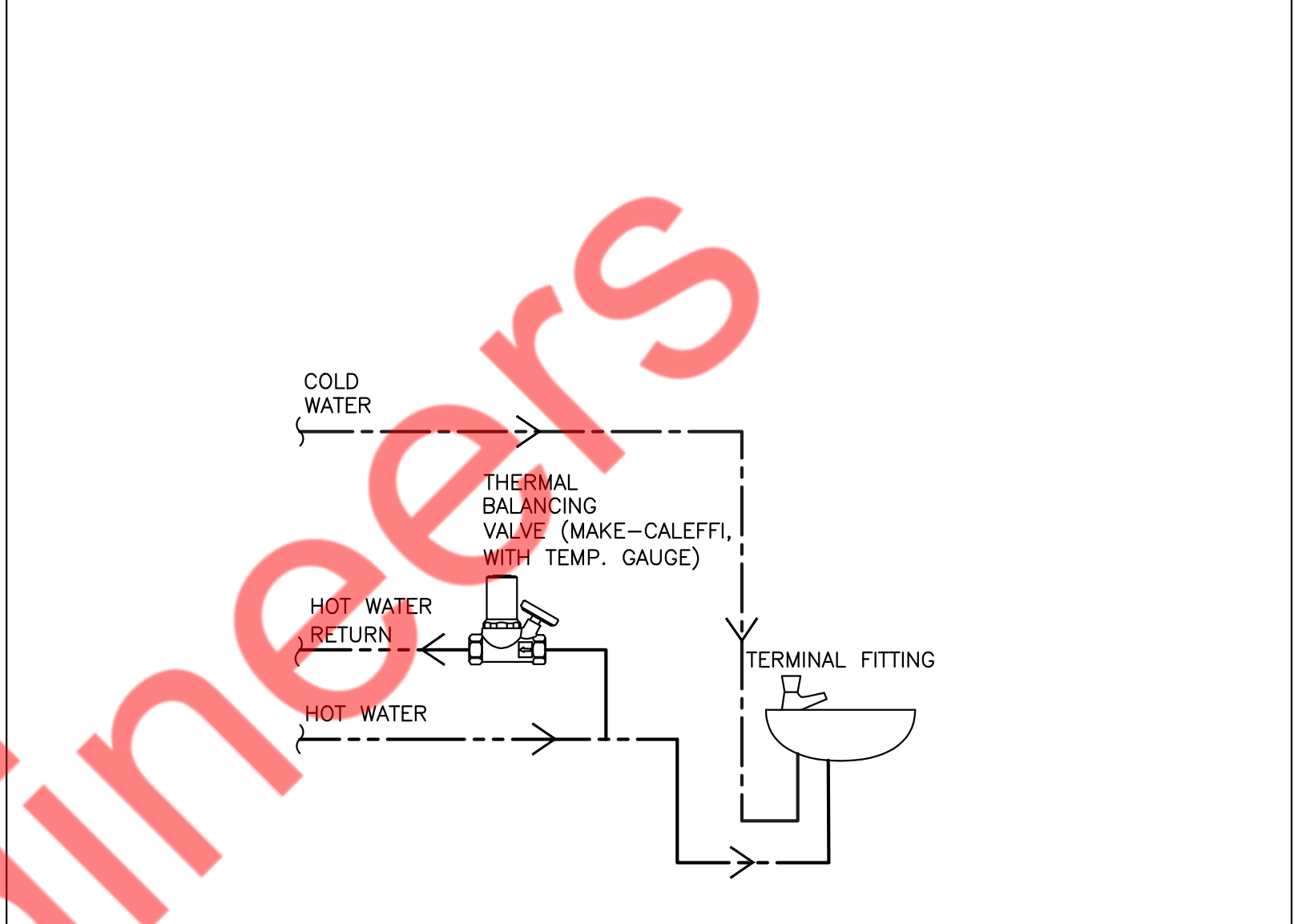
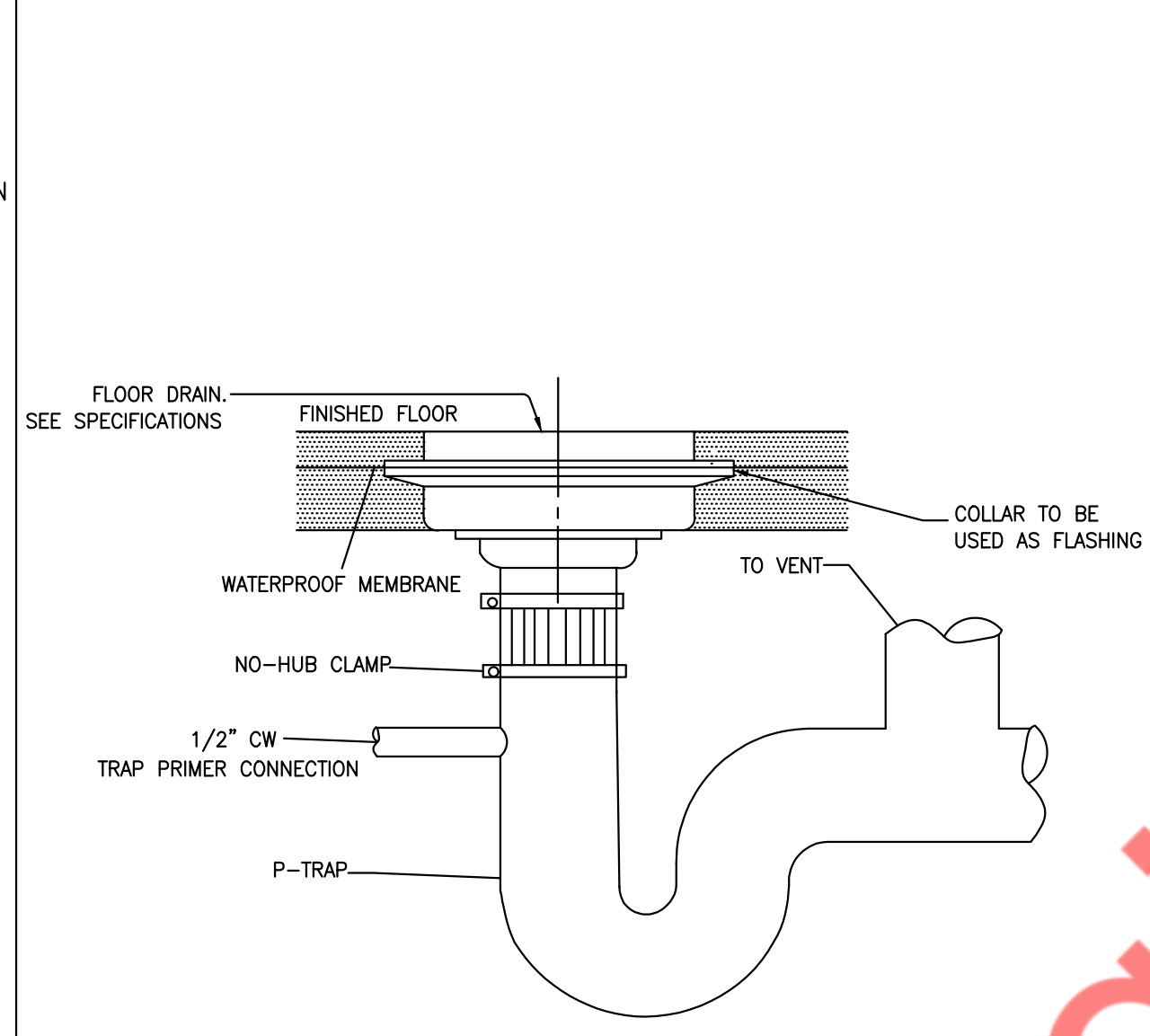
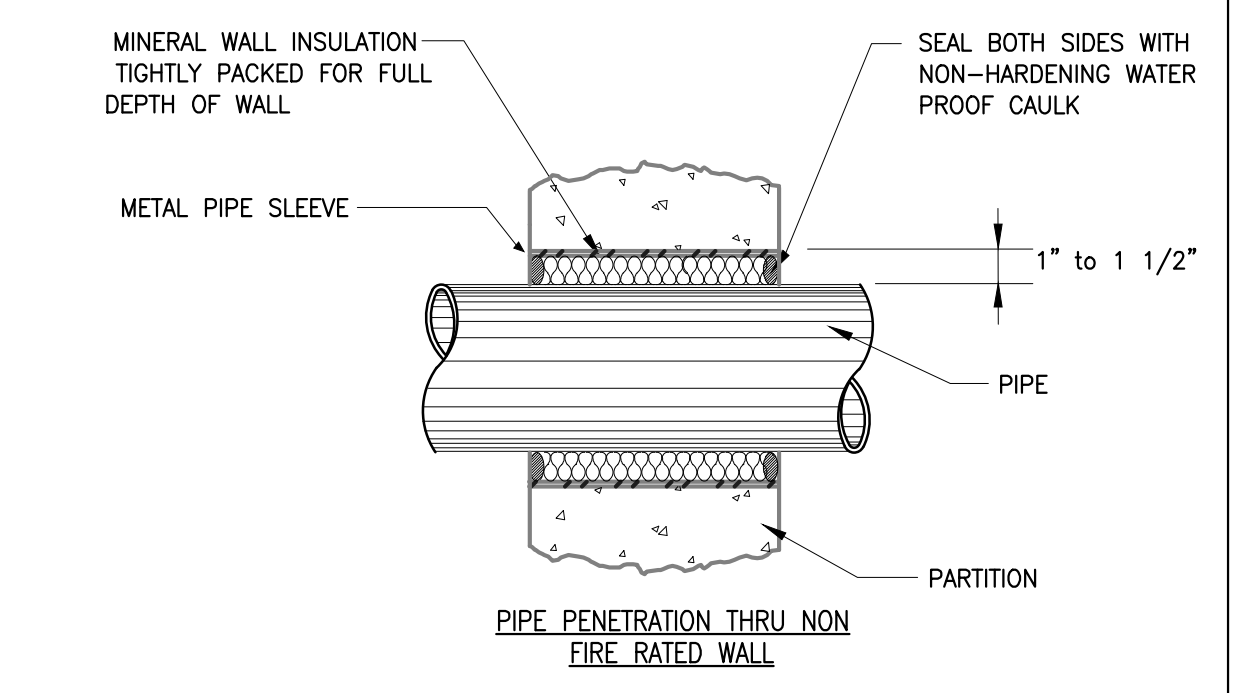
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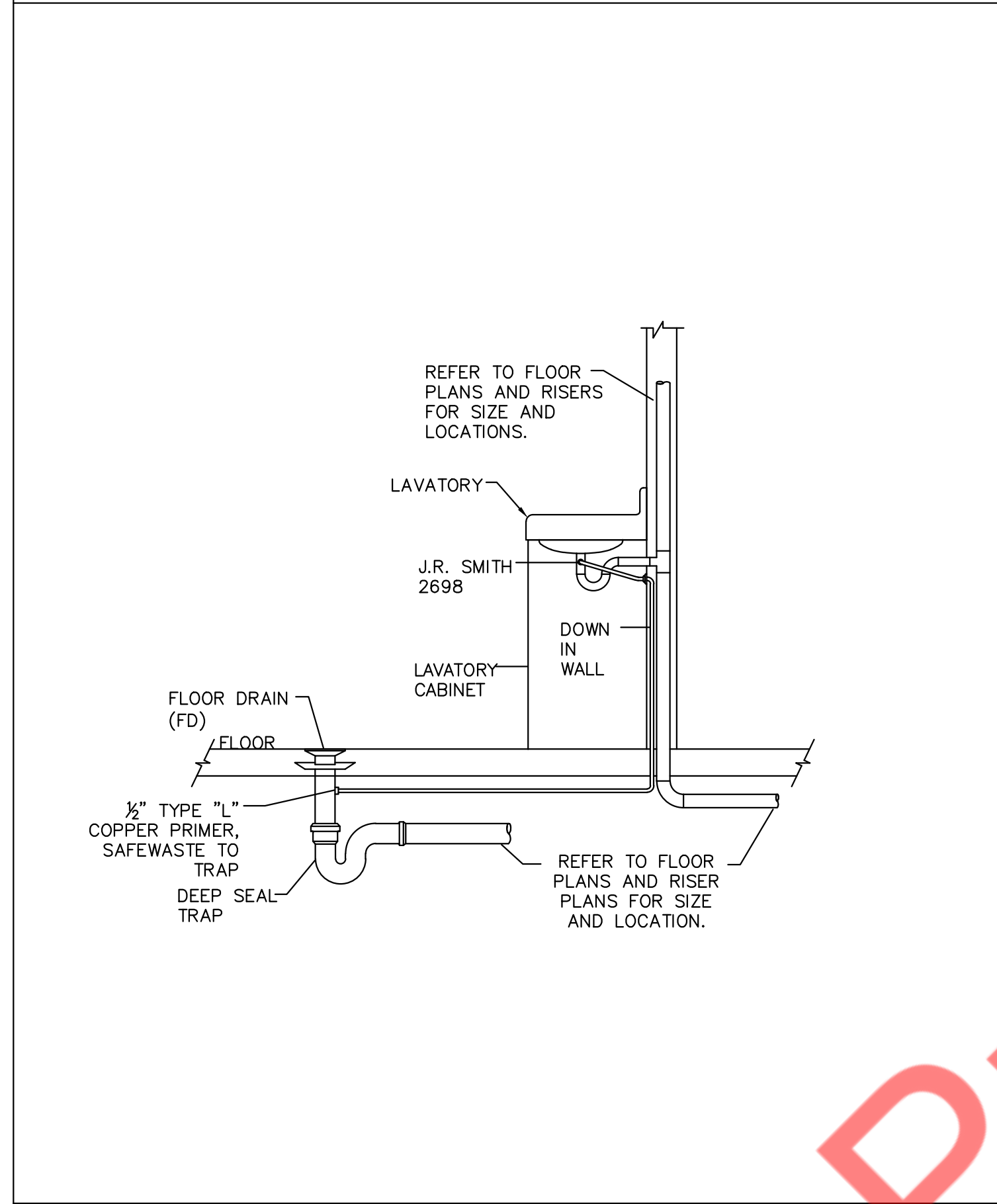
1 PIPE SLEEVE THRU WALL SECTION
P501 N.T.S



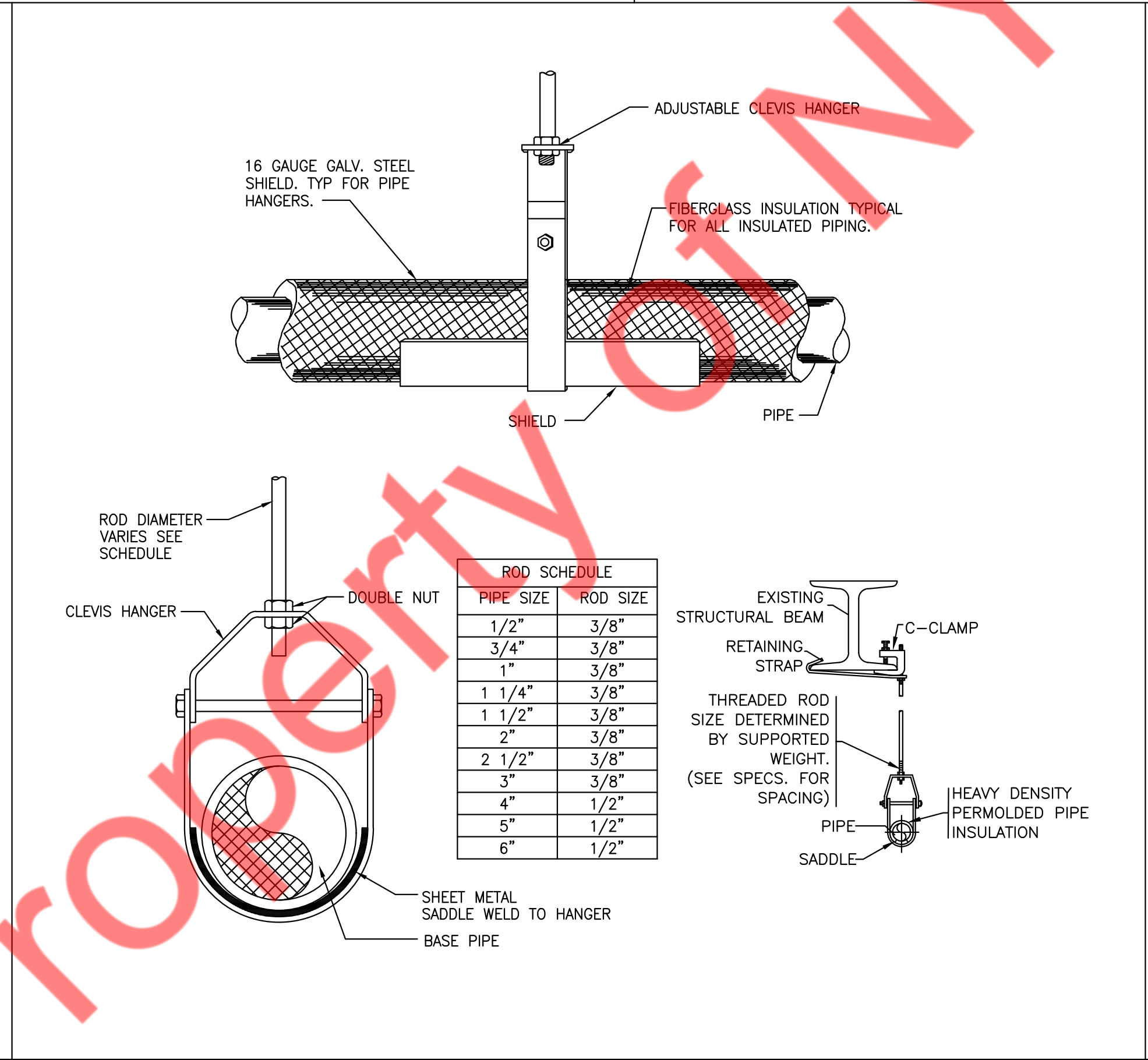
2 FLOOR DRAIN DETAILS
P501 N.T.S



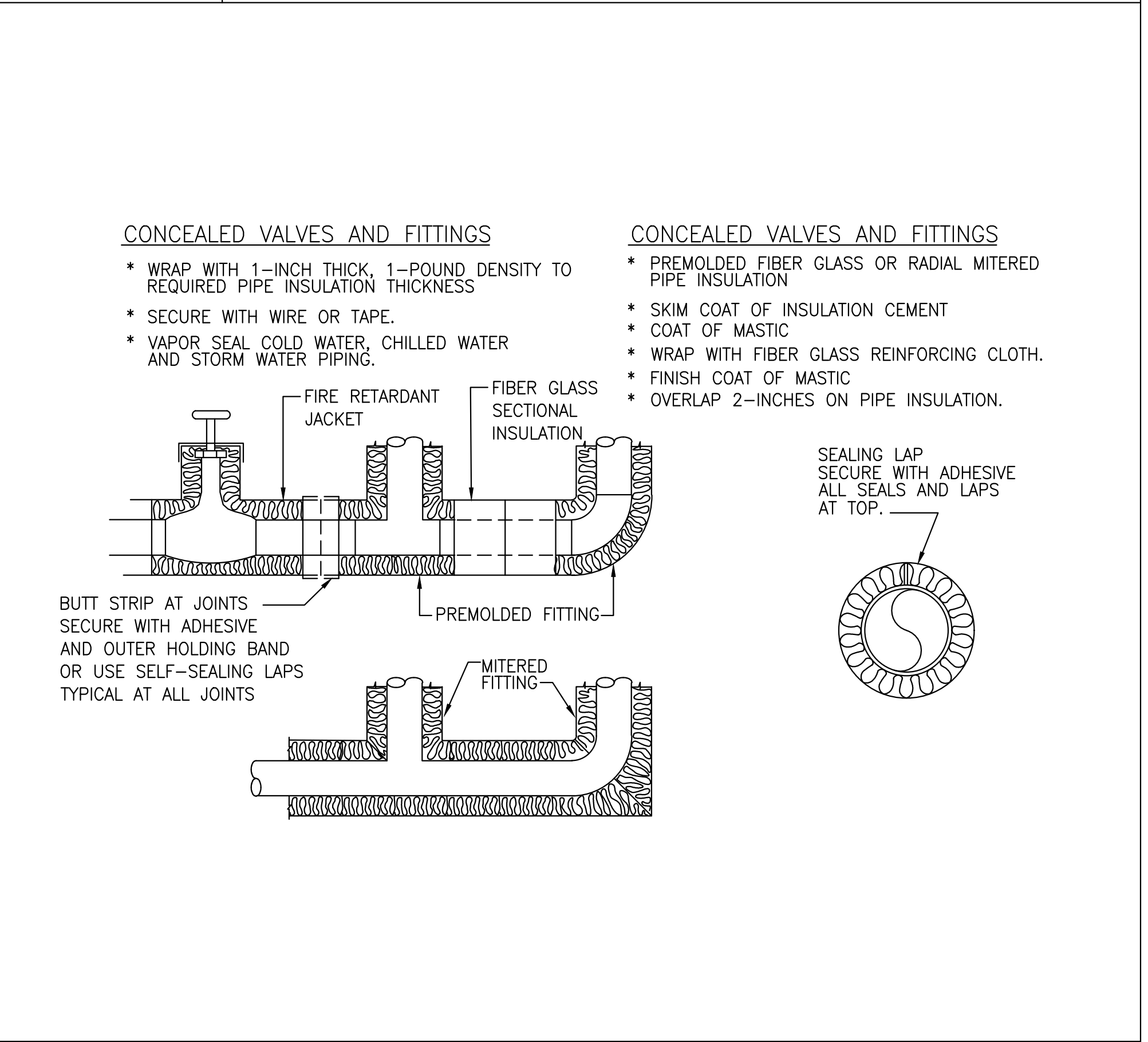
3 HOT WATER HEATER BALANCING VALVE PIPING DETAIL
P501 N.T.S



4 FLOOR DRAIN TRAP PRIMER DETAIL
P501 N.T.S



5 HANGER DETAIL
P501 N.T.S



6 INSULATION OF PIPING, VALVES AND FITTINGS FOR EXPOSED AND CONCEALED LOCATIONS
P501 N.T.S

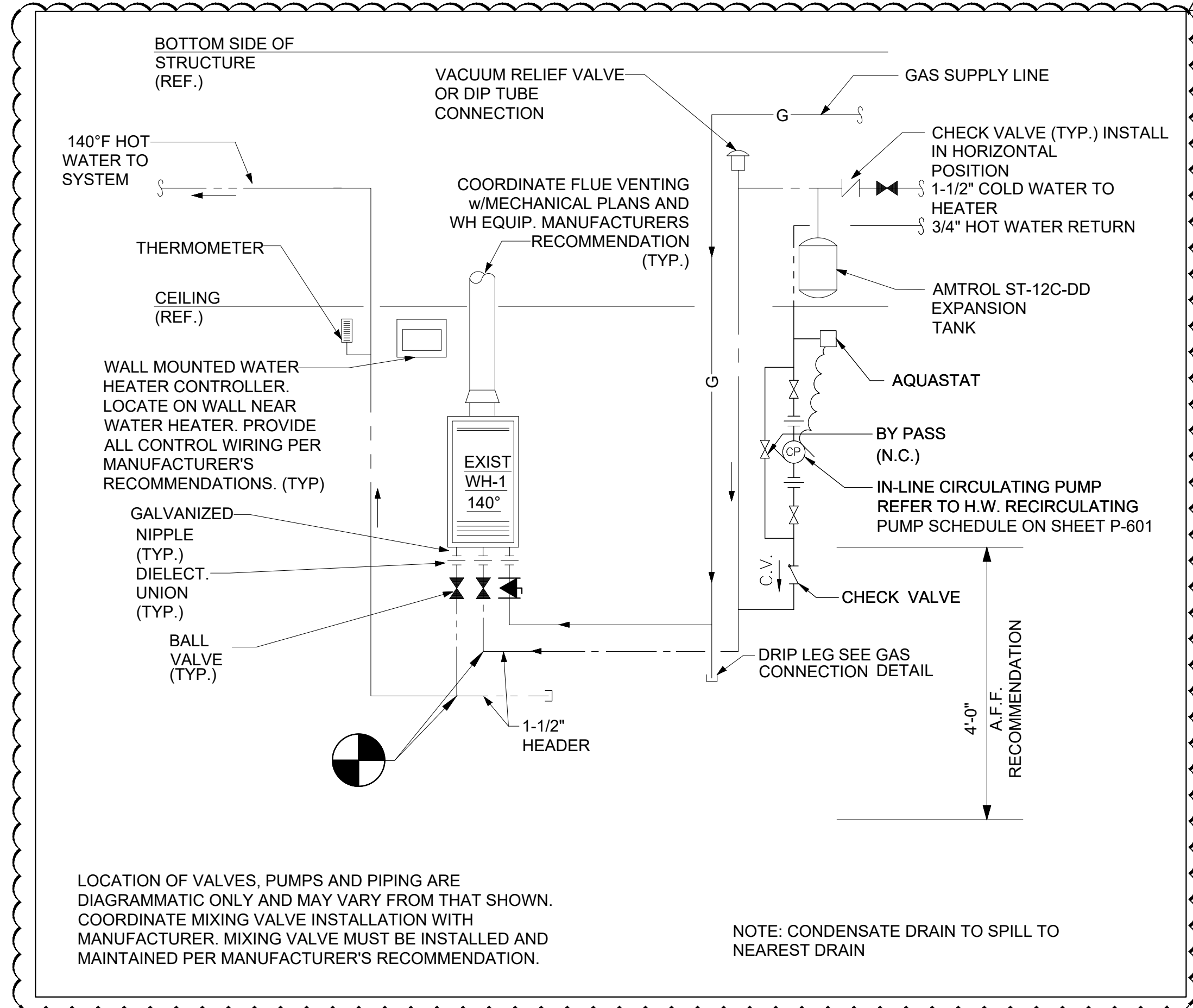


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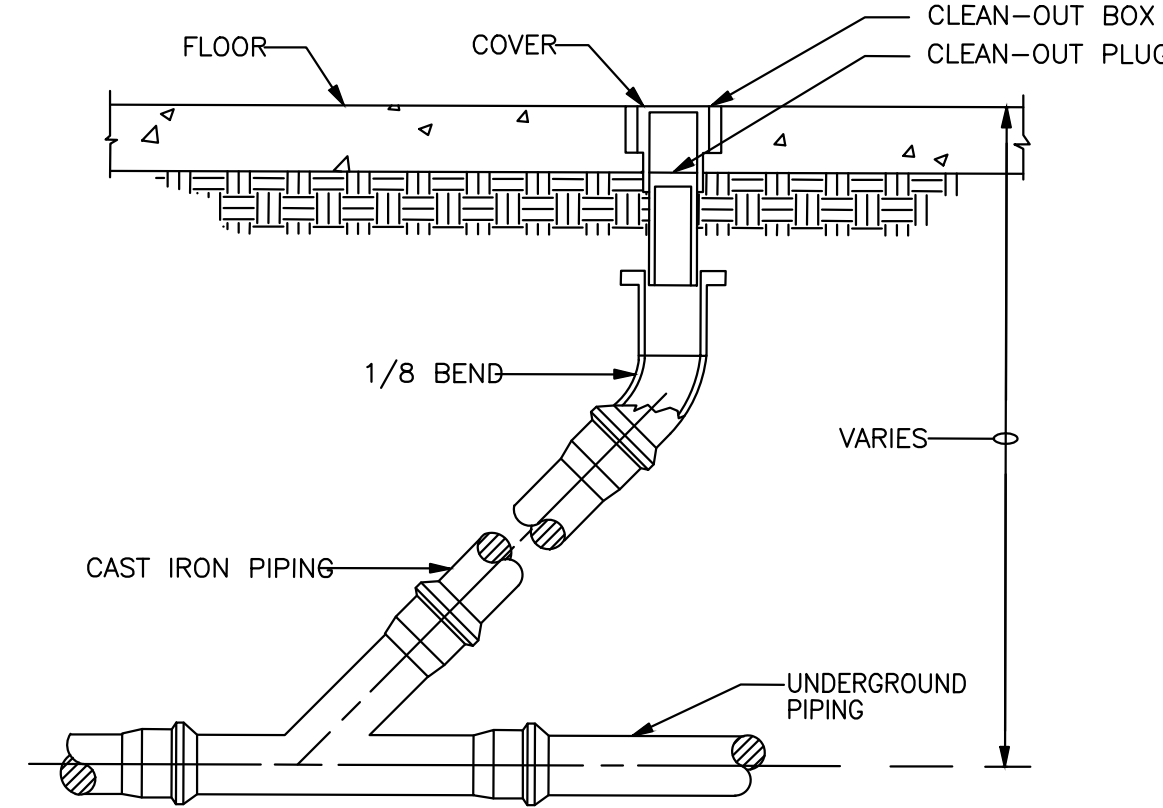
PLUMBING DETAILS (1 OF 2)

PERMIT SET
P501

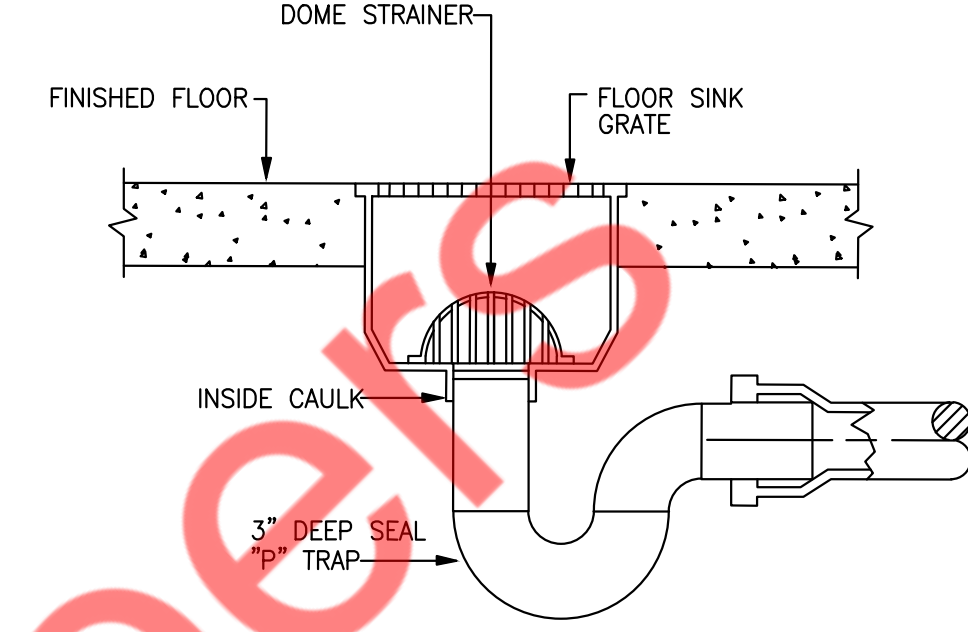
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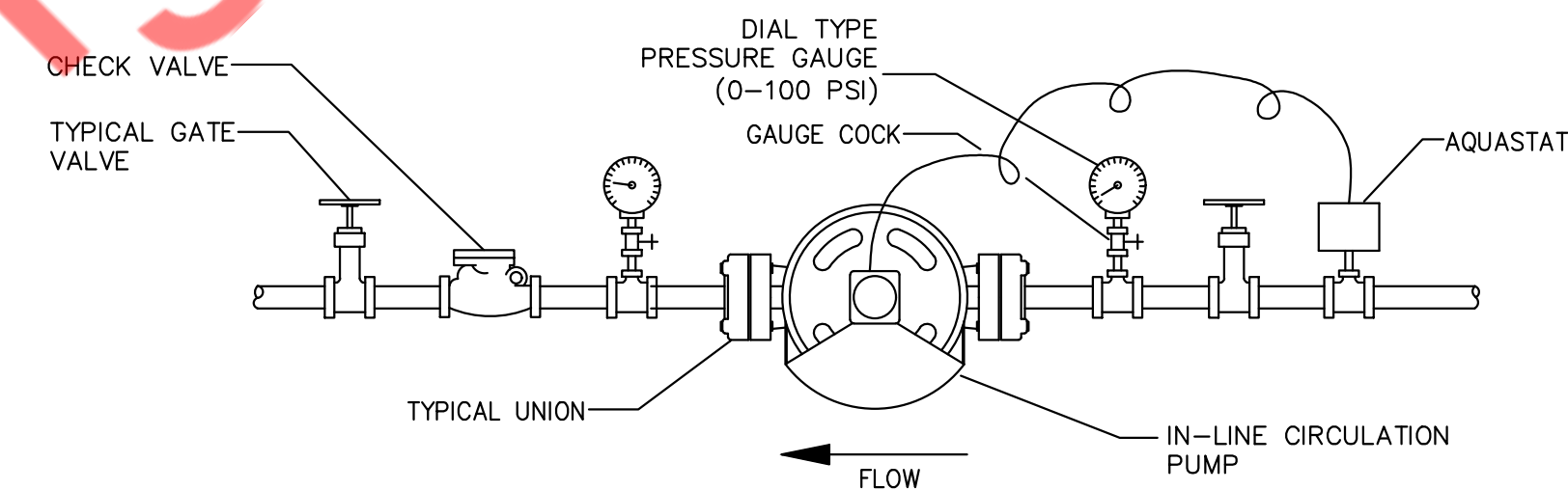
1 GAS FIRED HOT WATER HEATER DETAIL
P502 N.T.S



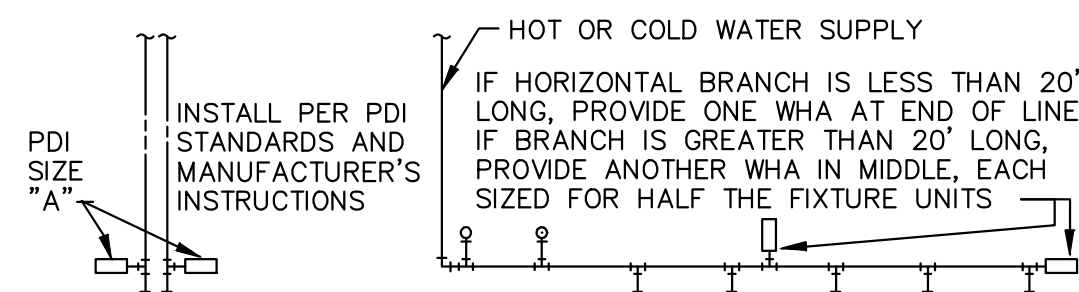
2 FLOOR CLEANOUT DETAIL
P502 N.T.S



3 FLOOR SINK DETAILS
P502 N.T.S



4 INLINE RECIRCULATING PUMP DETAIL
P502 N.T.S

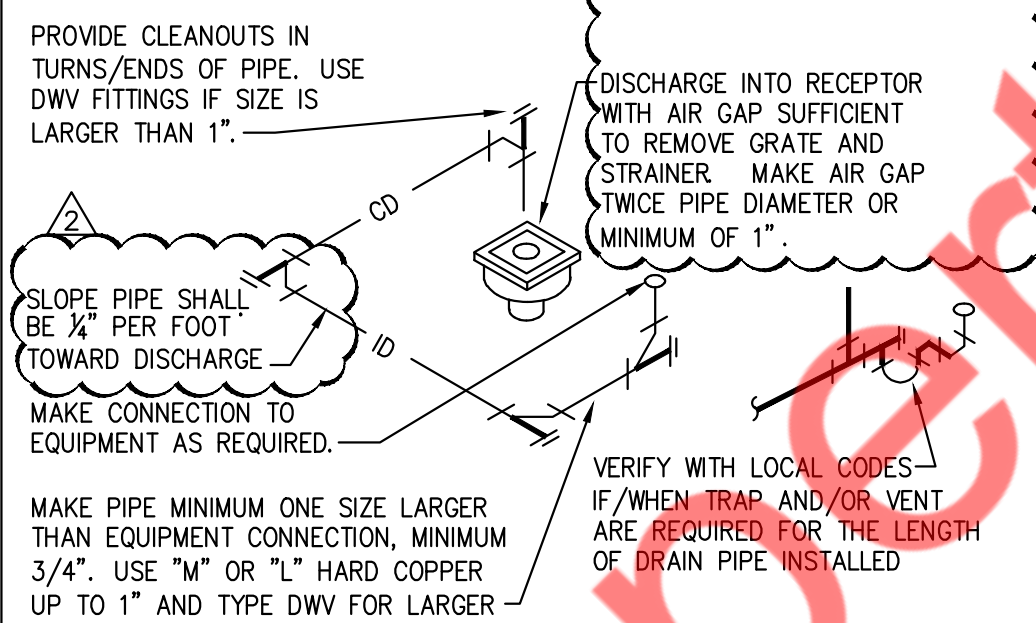


SINGLE FIXTURE			FIXTURE UNIT TABULATION			
PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD	FIXTURE	COLD	HOT	
A	1/2"	1-11	VALVE WATER CLOSET	10	--	
B	3/4"	12-32	TANK WATER CLOSET	5	--	
C	1"	33-60	URINAL	5	--	
D	1-1/4"	61-113	LAVATORY/SINK	1.5	1.5	
E	1-1/2"	114-154	JANITOR'S SINK	3	3	
F	2"	154-330	SHOWER/BATHTUB	2	2	

PC TO PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND O-RING CONSTRUCTION, HAVING PDI #WH-201, ASSE #1010 AND ANSI #A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS AS SHOWN ON THE DRAWINGS AND/OR PER THE TABLES SHOWN ABOVE.

5 WATER HAMMER ARRESTORS
P502 N.T.S

NOTE: INDIRECT DRAIN LINE MUST BE AT LEAST 6" ABOVE THE FLOOR AND 1/2" AWAY FROM WALLS AND NOT CROSS ANY AISLE, TRAFFIC AREA OR DOOR OPENING.



ROUTE PIPE INCONSPICUOUSLY AND UNOBTUSIVELY, SECURED BY MEANS OF CLAMPS OR BRACKETS TO THEIR OWN EQUIPMENT UNITS AND ROUTED TO THEIR SPECIFIC FLOOR SINKS. THERE SHALL NOT BE ANY LOOSE OR DANGLING WASTE LINES, NOR WASTE LINES LYING ON THE FLOOR. DO NOT INSULATE INDIRECT DRAIN PIPE WHEN INSTALLED EXPOSED IN FOOD SERVICE FACILITY. REFER TO LOCAL CODES FOR FURTHER INFORMATION.

6 INDIRECT/CONDENSATE DRAIN
P502 N.T.S



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1	REVISED PERMIT SET	08/21/2024
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PLUMBING
DETAILS (2 OF 2)

PERMIT SET
P502

Scale: As Indicated

FOOD SERVICE PLUMBING EQUIPMENT SCHEDULE									
TAG NO.	DESCRIPTION	WASTE		VENT	CW	HW		FW	NOTES
		DIRECT	INDIRECT			110 'F	140 'F		
102	PREP REFRIGERATOR	-	3/4"	-	-	-	-	-	1 UNIT
301	PREP SINK	-	1 1/2"	-	1/2"	1/2"	-	-	1 UNIT
600	EX. 3 COMPARTMENT SINK	-	-	-	-	-	-	-	1 UNIT, EXISTING UTILITY CONNECTION TO REMAIN
-	EX. PREP SINK	-	-	-	-	-	-	-	1 UNIT, EXISTING UTILITY CONNECTION TO REMAIN
800	HAND SINK	1 1/2"	-	1 1/2"	1/2"	1/2"	-	-	2 UNIT, PROVIDE THERMOSTATIC MIXING VALVE
801	PRE-RINSE FAUCET	-	-	-	3/4"	-	3/4"	-	1 UNIT
802	DIPPER WELL	-	3/4"	-	1/2"	-	-	-	2 UNIT
901	EX. MOP SINK	-	-	-	-	-	-	-	1 UNIT, EXISTING UTILITY CONNECTION TO REMAIN
EX. WH-1	EX. WATER HEATER	-	-	-	1 1/2"	-	1 1/2"	-	1 UNIT, REFER WATER HEATER SCHEDULE

PLUMBING EQUIPMENT NOTES:

- IT SHALL BE THE PLUMBING CONTRACTORS RESPONSIBILITY TO MAKE ALL FINAL CONNECTIONS FROM KITCHEN/BAR EQUIPMENT TO THE PLUMBING MAINS SHOWN ON THIS PLAN.
- THE PLUMBING CONNECTION SCHEDULE ON THIS PLAN RELATES REQUIRED CONNECTIONS TO INDIVIDUAL EQUIPMENT ONLY.
- PLUMBING CONTRACTOR SHALL REFER TO "KITCHEN EQUIPMENT COMPANY" CUT SHEETS FOR ALL ROUTING OF FINAL CONNECTION TO EQUIPMENT AND EXACT ROUGH-IN LOCATION.
- PLUMBING CONTRACTOR SHALL MOUNT ALL FLOOR SINKS FLUSH WITH FINISHED FLOOR ELEVATION AND A MINIMUM OF 16" OFF THE FINISH FACE OF THE WALL.
- INSTALL SECONDARY BFP ASSE 1055 IF CHEMICAL DISPENSER USED WITH MOP SINK.
- TMV- THERMOSTATIC MIXING VALVE AT ALL EQUIPMENTS AS PER CODE REQUIREMENT.

PLUMBING FIXTURE SCHEDULE							
SYMBOL	DESCRIPTION	C.W.	H.W.	SAN		VENT	SPECIFICATIONS
				DIRECT	INDIRECT		
EX.WC	EX. WATER CLOSET	1/2"	-	4"	-	2"	EXISTING UTILITY CONNECTION TO REMAIN.
EX.LAV	EX. LAVATORY	1/2"	1/2"	1 1/2"	-	1 1/2"	EXISTING UTILITY CONNECTION TO REMAIN.
FS	FLOOR SINK	-	-	-	3"	2"	SILOUX 861-4PN2 4 SCH40 HUB SQ MAX PVC SQ FLOOR SINK W/NB RING & HALF GRATE. INCLUDE SILOUX 863-U SQ MAX ALUMINUM REPL BOTTOM DOME STR.
EX.FD	EX. FLOOR DRAIN	-	-	-	3"	2"	EXISTING UTILITY CONNECTION TO REMAIN.

NOTES:

- PROVIDE SHUT OFF VALVES FOR ALL WATER LINES AT PLUMBING FIXTURES AND EQUIPMENT CONNECTIONS.
- MAXIMUM FLOW FROM A SINK OR LAV. FAUCET SHALL NOT EXCEED 2.2 GAL. OF WATER/MIN
- INSTALL TRAP PRIMER THAT SERVE THE RESTROOM & WATER HEATER.
- PROVIDE ELECTRONIC TRAP PRIMER FOR MECHANICAL/TRASH ROOM FLOOR DRAINS & FUNNEL DRAIN. PROVIDE FLOW CONTROL TRAP PRIMER FOR ALL OTHER ROOM FLOOR DRAINS.
- THE TOP OF ALL FLOOR DRAINS SHALL BE FLUSH WITH THE ADJACENT FINISHED FLOOR.
- ALL FLOOR DRAINS IN FINISHED AREAS AND ALL ROOF DRAINS SHALL BE LOCATED AS PER THE ARCHITECTURAL DRAWINGS.

PUMP SCHEDULE											
TAG	DESCRIPTION	TYPE	CAPACITY		ELECTRICAL DATA				SELECTION BASED ON		REMARKS/OPTIONS
			GPM	HEAD (ft.)	HP	V	PH	HZ	MANUFACTURER	MODEL NUMBER	
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 (ALL RCP UNITS)

- AQUA-STAT & NIGHT TIMER
- BALANCING VALVE & CHECK VALVE
- FLANGED PUMP
- MAINTENANCE BALL VALVES ON BOTH SIDES OF PUMP

NOTES:

- SET AQUA-STAT WITH SET POINT 10 DEGREES BELOW SYSTEM SUPPLY TEMP.
- INSTALL RECIRCULATION PUMP PER MANUFACTURERS REQUIREMENTS.

EXPANSION TANKS										
UNIT	NUMBER	MANUFACTURER & MODEL NUMBER	SERVICE	TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	PRESSURE RATING (PSI)	DIMENSIONS		SHIPPING WEIGHT (LBS)	NOTES
							DIAMETER (INCH)	HEIGHT (INCH)		
ET-1	1	AMTROL	ST-12C-DD	6.4	3.2	150	12	18	17	1,2

- GENERAL NOTES:**
- SET THE TANK PRESSURE TO EQUAL THE SYSTEM OPERATING PRESSURE. TANK MUST BE DRAINED BEFORE ADJUSTING SET PRESSURE.
 - INSTALL PER MANUFACTURER'S RECOMMENDATIONS ON INCOMING COLD WATER LINE.

GAS FIRED WATER HEATER SCHEDULE												
ID	DESCRIPTION	QUANTITY	MANUFACTURER	MODEL NO.	VOLT	PH	HEATING CAPACITY	FLOW RATE	DESCRIPTION	TRIM AND REMARKS	SUPPLIED BY	INSTALLED BY
EXIST. WH-1	EXISTING WATER HEATER	1	TAKAGI	T-H3-DV-N	120 V	1	199900 Btu/h	5.0 GPM @ 75°F	CONDENSING TANKLESS GAS WATER HEATER, 17.75" (W)x23.5"(H)x11.4"D. CLEARANCES: 3" SIDES, 9" TOP, 12" BOTTOM		PC	PC

NOTES:

WATER HEATER SIZED FOR 5.0 GPM @ 75°F RISE.

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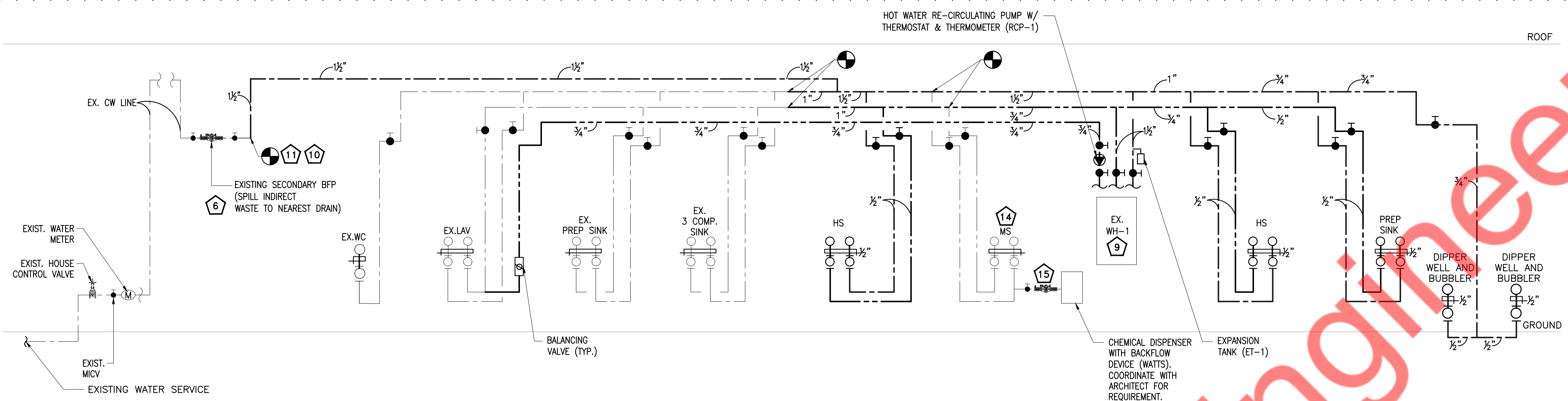


No.	Description	Date
	PERMIT SET	05/17/2024
1	REVISED PERMIT SET	08/21/2024
2	REVISED PERMIT SET	09/18/2024

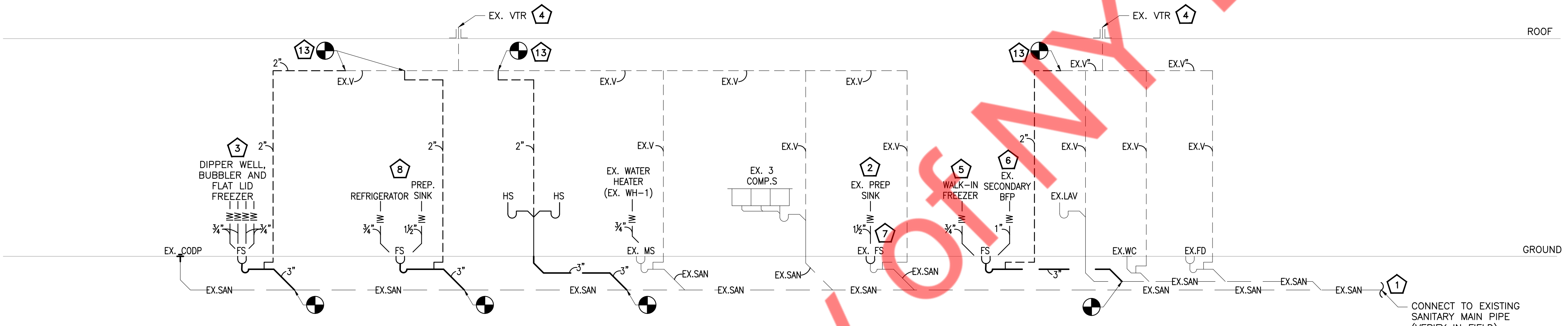
PLUMBING SCHEDULES

PERMIT SET P601

Scale: As Indicated



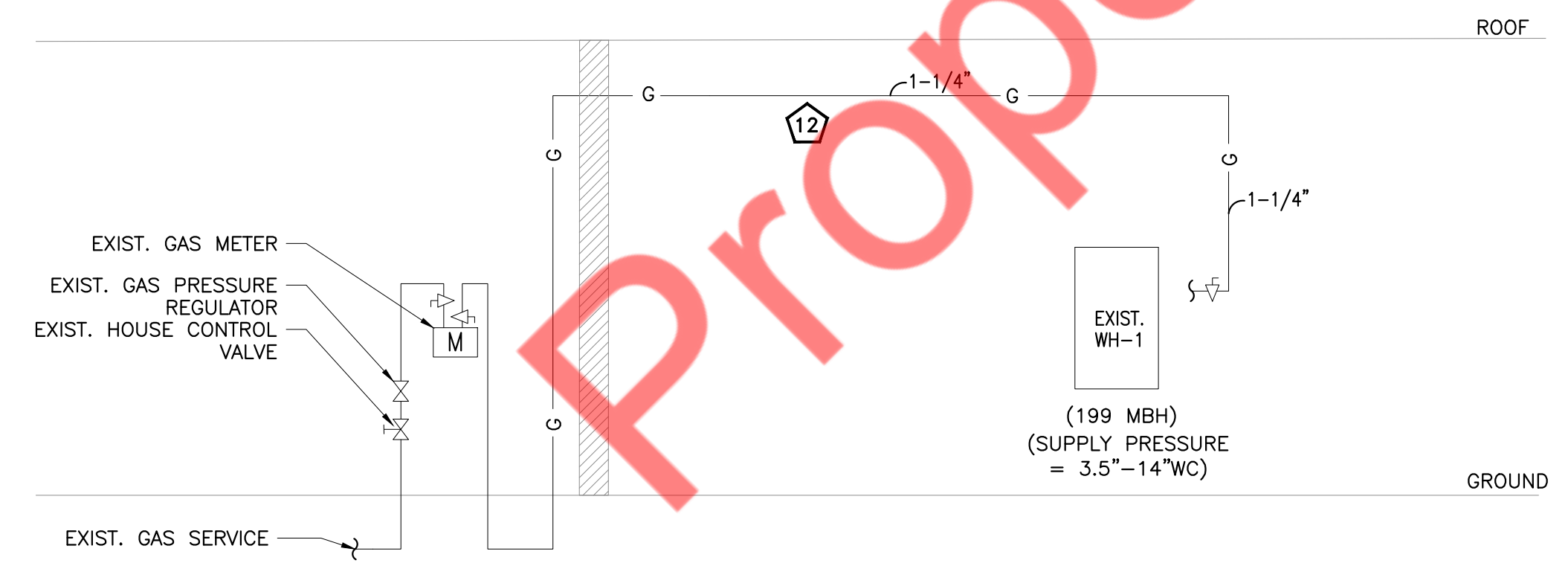
1 PLUMBING WATER SUPPLY RISER
SCALE: NTS



2 PLUMBING SANITARY RISER
SCALE: NTS

- KEYED NOTES:**
- 1 EXISTING 4" SANITARY LINE TO REMAIN. CONTRACTOR TO FIELD VERIFY THE LOCATION, SIZE AND CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
 - 2 EXISTING PREP SINK AND PLUMBING CONNECTIONS TO REMAIN IN GOOD CONDITION. CONTRACTOR TO FIELD VERIFY THE LOCATION, SIZE AND CONDITION OF EXISTING PIPING AND REPLACE IF REQUIRED.
 - 3 ROUTE INDIRECT WASTE FROM DIPPER WELL, BUBBLER AND FLAT LID FREEZER TO FLOOR SINK WITH APPROVED AIR GAP.
 - 4 CONNECT EXISTING 3" VENT TO EXISTING VTR IN SPACE. CONTRACTOR TO FIELD VERIFY LOCATION, SIZE OF EXISTING VTR. VTR SHALL NOT BE LESS THAN 3", UPGRADE IF OTHERWISE.
 - 5 CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF MECHANICAL EQUIPMENT AND ROUTE INDIRECT WASTE FROM WALK-IN FREEZER TO FLOOR SINK WITH APPROVED AIR GAP.
 - 6 CONTRACTOR TO FIELD VERIFY AVAILABILITY AND OPERATIONAL CONDITION OF EXISTING SECONDARY BFP. PROVIDE NEW IF EXISTING CANNOT BE REUSED. ROUTE INDIRECT DRAIN FROM SECONDARY BFP TO NEAREST FLOOR SINK WITH APPROVED AIR GAP.
 - 7 EXISTING FLOOR SINK TO REMAIN. CONTRACTOR TO FIELD VERIFY THE LOCATION, SIZE AND CONDITION OF EXISTING FLOOR SINK AND UPGRADE IF REQUIRED.
 - 8 ROUTE INDIRECT WASTE FROM REFRIGERATOR AND PREPARATION SINK TO NEAREST FLOOR SINK WITH APPROVED AIR GAP.
 - 9 PROVIDE NEW RE-CIRCULATION PUMP (RCP-1), NEW THERMAL EXPANSION TANK (ET-1), HOT WATER RETURN PIPING, ASSOCIATED ACCESSORIES AND FITTINGS IF NOT ALREADY AVAILABLE. BID BASE ACCORDINGLY.
 - 10 CONNECT NEW 1/2" CW PIPING WITH EXISTING BFP AND TIE-INTO THE EXISTING WATER MAIN LINE. CONTRACTOR TO FIELD VERIFY ROUTING, LOCATION, CONDITION AND SIZE OF EXISTING CW LINE. UPGRADE IF REQUIRED.
 - 11 CONTRACTOR SHALL VERIFY ACTUAL AVAILABLE WATER PRESSURE AT INCOMING WATER MAIN LINE. WATER PRESSURE SHOULD NOT BE LESS THAN 45 PSI AT THE REQUIRED FLOW. NOTIFY ENGINEER IF CONDITION DIFFERS.
 - 12 EXISTING 1/4" GAS PIPE WITH EXISTING GAS METER & PRESSURE REGULATOR TO REMAIN IN GOOD CONDITION. CONTRACTOR TO FIELD VERIFY LOAD OF EXISTING GAS METER AND CONFIRM SIZE, PRESSURE, LOCATION AND CONDITION OF EXISTING GAS MAIN PIPING, REPLACE IF REQUIRED.
 - 13 CONNECT NEW VENT LINE TO EXISTING VENT LINE. CONTRACTOR TO FIELD VERIFY EXISTING VENT LINE LOCATION AND SIZE, RE-ROUTE AND UPSIZE IF REQUIRED.
 - 14 CONTRACTOR TO FIELD VERIFY AND PROVIDE ASSE 1055 APPROVED ATMOSPHERIC VACUUM BREAKER ON WATER LINE OF MOP SINK FAUCET IF NOT ALREADY PROVIDED. INSTALL BFP AS PER LOCAL CODE.
 - 15 CONTRACTOR TO FIELD VERIFY AND PROVIDE ASSE 1055 APPROVED REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTOR ON WATER LINE TO CHEMICAL DISPENSER IF NOT ALREADY PROVIDED. INSTALL BFP AS PER LOCAL CODE AND PROVIDE ACCESS FOR MAINTENANCE.

- GAS PIPING GENERAL NOTES:**
1. PROVIDE SHUT-OFF VALVE AN ACCESSIBLE LOCATION. PROVIDE GAS PRESSURE REGULATOR FOR ALL GAS EQUIPMENT IF REQUIRED.
 2. CONTRACTOR SHALL VERIFY ACTUAL GAS PRESSURE AND LONGEST LENGTH OF RUN FROM METER TO FARTHEST APPLIANCE PRIOR TO INSTALLATION AND NOTIFY ENGINEER IF CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLAN.



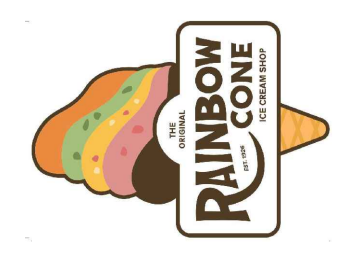
3 NATURAL GAS RISER
SCALE: NTS

GAS PIPE SIZING PER CALIFORNIA PLUMBING CODE 2022, SECTION 1215.2, TABLE 1215.2 (1)

GAS INLET PRESSURE- LESS THAN 2 PSI.
PRESSURE DROP- 0.5 IN. W.C.
SPECIFIC GRAVITY- 0.60

EQUIVALENT LENGTH OF PIPE =
55 + FITTINGS (+40%)=77 FEET.

GAS PIPE SIZING	
TOTAL CFH	199 CFH
DEVELOPED LENGTH	80 FEET
SIZE	CFH
3/4"	117
1"	220
1 1/4"	452



No.	Description	Date
1	PERMIT SET	05/17/2024
2	REVISED PERMIT SET	08/21/2024
3	REVISED PERMIT SET	09/18/2024

PLUMBING RISERS

PERMIT SET P602

Scale: As Indicated