CAL-GREEN NOTES

A. ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, OR SHEET METAL UNTIL THE FINAL STARTUP OF THE HVAC EQUIPMENT (CGGSC 5.504.3).

B. IF THE NEW HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MERV 8 RATING. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY (CGBSC 5.504.1.

C. THE HVAC, REFRIGERATION, AND FIRE SUPPRESSION EQUIPMENT SHALL NOT CONTAIN CFCS OR HALONS (CGBSC 5.508.1).

D. A FINAL REPORT FOR THE TESTING AND ADJUSTING OF ALL NEW SYSTEMS SHALL BE COMPLETED PRIOR TO FINAL APPROVAL BY THE FIELD INSPECTOR. THIS REPORT SHALL BE SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES (CGBSC 5.410.4.4).

E. AN OPERATION & SYSTEMS MANUAL SHALL BE PROVIDED TO THE OWNER OR REPRESENTATIVE AND TO THE FIELD INSPECTOR AT THE TIME OF FINAL INSPECTION (CGBSC 5.410.4.5

APPLICABLE CODES & STANDARDS

- 2019 CALIFORNIA BUILDING CODE WITH STATEWIDE AMENDMENTS
- 2019 CALIFORNIA MECHANICAL CODE WITH STATEWIDE AMENDMENTS
- 2019 CALIFORNIA PLUMBING CODE WITH STATEWIDE AMENDMENTS
- 2019 CALIFORNIA ENERGY CONSERVATION CODE
- 2019 CALIFORNIA GREEN BUILDING STANDARDS
- ICC/ANSI A117.1-09, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES, WITH STATEWIDE AMENDMENTS.
- NFPA 90

HVAC ABBREVIATIONS

AAV	AUTOMATIC AIR VENT
ABV	ABOVE
AP	ACCESS PANEL
AC	AIR CONDITIONING
AFF	ABOVE FINISHED FLOOR
APPROX	APPROXIMATELY
ARCH	ARCHITECTURAL
AS	AIR SEPARATOR
@	AT
&	AND
AUTO	AUTOMATIC
B	BOILER
BDD	BACKDRAFT DAMPER
BEL	BELOW
BRD	BAROMETRIC RELIEF DAMPER
BFF	BELOW FINISHED FLOOR
BFV	BUTTERFLY VALVE
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BOP	BOTTOM OF PIPE
BTUH	BRITISH THERMAL UNITS PER HOUR
CA	COMBUSTION AIR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHP	CHILLED WATER PUMP
COP	COEFFICIENT OF PERFORMANCE
CONC	CONCRETE
CONN	CONECTION
CONT	CONTINUATION
CPF	CHEMICAL POT FEEDER
CT	COOLING TOWER
CTF	COOLING TOWER FILTER
CWP	CONDENSER WATER PUMP
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
DB	DRY BULB (TEMPERATURE)
DDC	DIRECT DIGITAL CONTROL
DET	DETAIL
DIA	DIAMETER
DET	DETAIL
DN	DOWN
DTF	DUCT/DOWN THRU FLOOR
DTR	DUCT/DOWN THRU ROOF
DWG	DRAWING
(E)	EXISTING
EA	EACH / EXHAUST AIR
EAG	EXHAUST AIR GRILLE
EAR	EXHAUST AIR REGISTER
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EL	ELEVATION
ENT	ENTERING
EQUIP	EQUIPMENT
ET	EXPANSION TANK
°F	DEGREES FAHRENHEIT
FD	FIRE DAMPER
FIN	FINISHED
FLEX	FLEXIBLE
FLR	FLOOR
FPM	FEET PER MINUTE
FSD	FIRE SMOKE DAMPER
FS	FLOOR SINK
FT	FOOT / FEET
FV	FACE VELOCITY
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
HGT	HEIGHT
HORIZ	HORIZONTAL
HP	HORSEPOWER
HR	HOUR
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HZ	HERTZ
ID	INSIDE DIAMETER
IEER	INTEGRATED ENERGY EFFICIENCY RATIO
IN	INCH / INCHES
IN WG	INCHES WATER GAUGE
KW	KILOWATT
LB	POUND
LRA	LOCKED ROTOR AMPERES
LVG	LEAVING
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTD	MOUNTED
MTG	MOUNTING
MVD	MANUALLY OPERATED VOLUME DAMPER
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA / OSA	OUTSIDE AIR
PD	PRESSURE DROP
POC	POINT OF CONNECTION
POD	POINT OF DISCONNECT
POS	POSITIVE
PRESS	PRESSURE
PSI	POUNDS PER SQUARE INCH
RA	RETURN AIR
REF	REFERENCE
REL	RELIEF
RELA	RELIEF AIR
REQD/REQ'D	REQUIRED
RET	RETURN
RH	RIGHT HAND
RLA	RATED LOAD AMPERES
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SCBA	SELF CONTAINED BREATHING APPARATUS
SCHR	SECONDARY CHILLED WATER
SCHS	SECONDARY CHILLED WATER
SECT	SUPPLY SECTION
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SHT	SHEET
SMS	SHEET METAL SCREW
SOV	SHUT-OFF VALVE
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STRUCT	STRUCTURAL
SW	SWITCH
TEFC	TOTALLY ENCLOSED FAN COOLED
TEMP	TEMPERATURE
TOS	TOP OF STEEL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UTR	UP THROUGH ROOF
V	VENT
VFD	VARIABLE FREQUENCY DRIVE
VERT	VERTICAL
W/	WITH
WB	WET BULB (TEMPERATURE)
WT	WEIGHT
WMS	WIRE MESH SCREEN
1F	FIRST FLOOR
2F	SECOND FLOOR
3F	THIRD FLOOR (ETC)

HVAC NOTES

GENERAL NOTES

1. ALL NOTES, INSTRUCTIONS, DIRECTIVES AND REQUIREMENTS NOTED IN THESE DRAWINGS ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. IN THE ABSENCE OF A GENERAL CONTRACTOR ASSOCIATED WITH THE PROJECT, SAID NOTES, INSTRUCTIONS, DIRECTIVES AND REQUIREMENTS SHALL BECOME THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
2. ALL EQUIPMENT, DEVICES AND DUCTWORK SHOWING ON THESE DRAWINGS ARE NEW UNLESS SPECIFICALLY CALLED OUT AS EXISTING (E) TO REMAIN.
3. MECHANICAL EQUIPMENT AND INSTALLATIONS SHALL CONFORM WITH THE REQUIREMENTS OF THE CODES AS NOTED IN THE "APPLICABLE CODES" SECTION NOTED EITHER ON THESE DRAWINGS, ON THE ARCHITECTURAL DRAWINGS OR ON THE PROJECT COVER SHEET.
4. PRIOR TO SUBMITTING BID, PURCHASING MATERIALS OR STARTING WORK, FIELD VERIFY EXISTING CONDITIONS, DUCTWORK SIZES AND LOCATIONS, EQUIPMENT, ETC. SHOWN ON THE DRAWINGS OR AFFECTING THIS WORK AND REPORT DEVIATIONS TO THE ARCHITECT.
5. SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE ARCHITECT PRIOR TO ORDERING, PURCHASING, OR FABRICATING ANY MECHANICAL EQUIPMENT. SHOP DRAWINGS SHALL INCLUDE: EQUIPMENT SCHEDULED, SHOWN OR SPECIFIED ON THE DRAWINGS; DUCTWORK DRAWN TO 1/4" SCALE MINIMUM, REFRIGERANT PIPING AND CONTROL WIRING SCHEMATICS CERTIFIED BY THE AIR CONDITIONING EQUIPMENT MANUFACTURER. FAILURE TO SUBMIT REFRIGERANT PIPING DRAWINGS SHALL BE CAUSE FOR REJECTION OF THE ENTIRE SUBMITTAL. LONG LINE REFRIGERANT PIPING APPLICATIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S CURRENT SPLIT SYSTEM LONG-LINE APPLICATION GUIDELINE.
6. MECHANICAL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
7. MECHANICAL EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY OWNER.
8. HVAC COMPRESSORS SHALL HAVE EXTENDED 4-YEAR MANUFACTURER'S WARRANTY FOR A 5-YEAR TOTAL WARRANTY.
9. UNLESS OTHERWISE NOTED, EXISTING EQUIPMENT, DUCTWORK, DIFFUSERS, ETC. SHOWN AS BEING REMOVED AS PART OF THIS CONTRACT SHALL BECOME THE PROPERTY OF THE HVAC CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT SITE PRIOR TO PROJECT COMPLETION.
10. WORK SHALL BE COORDINATED AND PERFORMED WITH PRIOR APPROVAL FROM THE OWNER TO SUIT HIS OPERATING CONDITIONS.
    A. EXISTING WALL, FLOOR, OR CEILING SURFACES DISTURBED OR DAMAGED DURING THE COURSE OF THE HVAC WORK SHALL BE REPAIRED TO MATCH NEW AND/OR EXISTING CONDITIONS.
    B. ROOF PENETRATIONS/REPAIR TO BE CONTRACTED THRU LANDLORD APPROVED ROOFER TO MAINTAIN WARRANTY.
11. AFTER CONSTRUCTION, THE ENTIRE HVAC SYSTEM SHALL BE TESTED, ADJUSTED, AND BALANCED TO DELIVER THE AIR QUANTITIES SHOWN ON THE DRAWINGS. SUBMIT CERTIFIED (AABC , NEBB OR TABB) TEST AND BALANCE REPORT TO THE ARCHITECT FOR APPROVAL.
12. COORDINATE THE INSTALLATION OF MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC. TO FIT WITHIN THE SPACE ALLOWED BY THE ARCHITECTURAL AND STRUCTURAL CONDITIONS. CUTTING OR OTHERWISE ALTERING ANY STRUCTURAL MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER.
13. MECHANICAL EQUIPMENT SHALL BE LABELED WITH A SEMI-RIGID PLASTIC LAMINATE NAMEPLATE WITH 2" HIGH WHITE LETTERS ON A BLACK BACKGROUND SECURELY AFFIXED TO THE EQUIPMENT. THE NAMEPLATE SHALL SHOW THE EQUIPMENT TAG USED ON THESE DRAWINGS.
14. THE LOCATIONS, ARRANGEMENT AND EXTENT OF EQUIPMENT, DEVICES, CONDUIT AND OTHER APPURTENANCES RELATED TO THE INSTALLATION OF THE ELECTRICAL WORK SHOWN ON DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL NOT SCALE DRAWINGS, BUT SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS OF BUILDING COMPONENTS. SHOULD A CONFLICT EXIST BETWEEN THE ARCHITECTURAL AND ENGINEERING DRAWINGS REGARDING DIMENSIONS AND SCALE, NOTIFY THE ARCHITECT OF THE DISCREPANCY
15. MATERIALS, EQUIPMENT OR LABOR NOT INDICATED BUT WHICH CAN BE REASONABLY INFERRED TO BE NECESSARY FOR A COMPLETE INSTALLATION SHALL BE PROVIDED. DRAWINGS AND SPECIFICATIONS DO NOT UNDERTAKE TO INDICATE EVERY ITEM OF MATERIAL, EQUIPMENT OR LABOR REQUIRED TO PRODUCE A COMPLETE AND PROPERLY OPERATING INSTALLATION.
16. THE DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY DEPICT EXACT CONDITIONS. THE LOCATION OF EQUIPMENT, DUCTWORK, ETC. IS APPROXIMATE ONLY. THE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT TO BE SCALED, SCALES ARE SHOWN FOR REFERENCE AND APPROXIMATION ONLY. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONAL DATA OF BUILDING COMPONENTS.
17. PROVIDE AND INSTALL ROOM SENSORS. MOUNT AT 60" AFF.

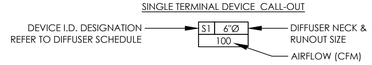
MECHANICAL/ELECTRICAL COORDINATION:

1. COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF MECHANICAL EQUIPMENT WITH ELECTRICAL DRAWINGS PRIOR TO ORDERING EQUIPMENT OR SUBMITTING SHOP DRAWINGS. FURNISH EQUIPMENT WIRED FOR THE VOLTAGES SHOWN THEREIN. SHOP DRAWING SUBMITTALS SHALL CLEARLY STATE THAT THE ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT HAS BEEN COORDINATED WITH THE ELECTRICAL CONTRACT DOCUMENTS AND THE ELECTRICAL CONTRACTOR.
2. MECHANICAL EQUIPMENT REQUIRING ELECTRICAL POWER SHALL BE INSTALLED WITH DISCONNECT SWITCHES AT EACH PIECE OF EQUIPMENT. COORDINATE SWITCH TYPE (FUSED OR NON-FUSED) WITH EQUIPMENT CHARACTERISTICS, MANUFACTURER'S RECOMMENDATIONS AND THE ELECTRICAL DRAWINGS.
3. REQUIRED CONTROL WIRING (INCLUDING POWER WIRING REQUIRED FOR CONTROL PANELS, DEVICES, ETC.) NOT SHOWN ON THE ELECTRICAL DRAWINGS SHALL BE INCLUDED AS PART OF THE MECHANICAL WORK. WIRING IN HVAC PLENUM SPACES SHALL BE INSTALLED ACCORDING TO CODE REQUIREMENTS.
4. UNLESS NOTED OTHERWISE, TRANSFORMERS, CONTROLS AND CONTROL WIRING REQUIRED FOR ALL MECHANICAL SYSTEMS SHALL BE FURNISHED WITH THE EQUIPMENT IT SERVES AND INSTALLED PER MANUFACTURER'S REQUIREMENTS AND SPECIFICATIONS. MOTOR STARTERS FOR HVAC EQUIPMENT SHALL BE FURNISHED WITH THE MOTOR OR APPARATUS WHICH IT OPERATES AND SIZED PER THE MANUFACTURER'S RECOMMENDATIONS. IF MOTOR STARTERS ARE NOT AVAILABLE WITH EQUIPMENT PURCHASED, STARTERS TO BE SIZED PER CURRENT EDITION OF NEC AND INSTALLED PER MANUFACTURER'S RECOMMENDATION.

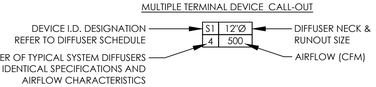
EQUIPMENT CALLOUTS

HVAC UNIT CALL-OUT

SINGLE TERMINAL DEVICE CALL-OUT



MULTIPLE TERMINAL DEVICE CALL-OUT



HVAC LEGEND

SYMBOL	DESCRIPTION
	EQUIPMENT TO REMAIN
	EQUIPMENT TO BE DEMOLISHED
	NEW EQUIPMENT
	PIPE, DUCT TO REMAIN
	PIPE, DUCT TO BE DEMOLISHED
	NEW PIPE, DUCT
	ACOUSTICAL LINING
	DUCT RISER OR DROP (SA)
	DUCT RISER OR DROP (RA)
	DUCT RISER OR DROP (EA)
	DUCT TRANSITION
	CEILING DIFFUSER,4 WAY THROW
	CEILING DIFFUSER,2 WAY THROW
	CEILING DIFFUSER, ROUND
	RETURN AIR GRILLE/REGISTER
	CEILING EXHAUST AIR GRILLE/REGISTER
	SIDE WALL SUPPLY REGISTER
	SIDE WALL RETURN REGISTER
	SIDE WALL EXHAUST REGISTER
T	ROOM THERMOSTAT
HS	HUMIDISTAT
BP	BY-PASS CONTROLLER
CO2	CO2 SENSOR
TS	TEMPERATURE SENSOR
HS	HUMIDITY SENSOR
SW	SWITCH
SD	DUCT SMOKE DETECTOR
DL	DOOR LOUVER
UC	UNDERCUT DOOR
FSD	AUTOMATIC FIRE/SMOKE DAMPER
MVD	MANUAL VOLUME DAMPER
AFD	AUTOMATIC FIRE DAMPER
M	MOTORIZED DAMPER
	BACKDRAFT DAMPER
RL	REFRIGERANT LIQUID LINE
RS	REFRIGERANT SUCTION LINE
CHS	CHILLED WATER SUPPLY PIPING
CHR	CHILLED WATER RETURN PIPING
CS	CONDENSER WATER SUPPLY PIPING
CR	CONDENSER WATER RETURN PIPING
HS	HEATING HOT WATER SUPPLY PIPING
HR	HEATING HOT WATER RETURN PIPING
CD	COOLING COIL CONDENSATE OR EQUIPMENT DRAIN PIPING
	POINT OF CONNECTION
	POINT OF DISCONNECTION

REGULATORY NOTES

FIRE RESISTIVE BUILDING MATERIALS

A. INSULATION MATERIALS INSTALLED IN BUILDINGS OF ANY TYPE OF CONSTRUCTION, SHALL HAVE A FLAME-SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 IN ACCORDANCE WITH APPLICABLE CODES LISTED ON THIS SHEET OR ON THE PROJECT COVER SHEET.

B. INSULATION, INSULATION JACKET, ADHESIVES, TAPES, ETC. SHALL BE APPLIED PER MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS.

SCOPE OF WORK

- PROVIDE HVAC SYSTEMS WITH FRESH AIR VENTILATION CAPABILITIES FOR 6-STORY RESIDENTIAL BUILDING.
- PROVIDE AND INSTALL ALL REQUIRED HVAC EQUIPMENT, ANCHORAGE AND ASSOCIATED MATERIALS. (5)

MODULAR PERMANENT SUPPORTIVE HOUSING PROJECT
2853 WEST BLVD.
LOS ANGELES, CA 90013

SCOPE OF REVIEW	REVIEWER:
LOCAL AUTHORITY HAVING JURISDICTION (LAHJ)	CITY OF LOS ANGELES DEPT. OF BUILDING & SAFETY (LADBS)
STATE OF CALIFORNIA HOUSING & COMMUNITY DEVELOPMENT (HCD) DESIGN APPROVAL AGENCY	NTA
LOCAL FIRE DEPARTMENT	CITY OF LOS ANGELES FIRE DEPARTMENT (LAFD)

SCOPE SECTION/DESCRIPTION	PLAN REVIEW			INSPECTION			APPLICABLE CODES
	HCD	LAHJ	LAFD	HCD	LAHJ	LAFD	
Plumbing							2019 CALIFORNIA MECHANICAL CODE
LEVEL 01: HVAC FOR COMMON AREAS AND RESTROOM EXHAUST		X			X		
LEVELS 02-06: HVAC SYSTEMS FOR LIVING SPACE AND RESTROOM EXHAUST FOR RESIDENTIAL UNITS		X			X		
LEVELS 02-06: RESIDENTIAL UNITS (MODULAR)	X			X			

NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER R. WEBB
M-33489
MECHANICAL
STATE OF CALIFORNIA

CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
1	PC RESUBMITTAL	05/18/22
2	PC RESUBMITTAL	10/28/22
3	HCD REVISION 1	12/16/22
4	PC RESUBMITTAL	02/02/23
5	HCD & PC RESUBMITTAL	06/06/23
6	HCD RESUBMITTAL	06/14/23
7	PC RESUBMITTAL	07/10/23
8	CLIENT REVISIONS	07/11/23
9	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
11	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

Plot Date: 10/12/2023 9:20:29 AM

SHEET TITLE:

MECHANICAL GENERAL INFORMATION

SHEET NO:

M001

HVAC SPECIFICATIONS

0.00 GENERAL PROVISIONS

0.01 DEFINITIONS: THE TERMS LISTED BELOW ARE DEFINED AS FOLLOWS WHEN USED IN MECHANICAL AND PLUMBING WORK.

1. WORK: LABOR AND MATERIALS OF THE CONTRACTOR AND/OR SUBCONTRACTOR.
2. FURNISH: OBTAIN, COORDINATE, SUBMIT THE NECESSARY DRAWINGS, DELIVER TO THE JOBSITE IN NEW CONDITION AND GUARANTEE.
3. INSTALL: RECEIVE AT THE JOB-SITE, UNLOAD, STORE, SET IN PLACE, CONNECT, PLACE IN OPERATION AND GUARANTEE.
4. PROVIDE: FURNISH AND INSTALL.
5. CONNECT: BRING SERVICE TO THE EQUIPMENT AND MAKE FINAL ATTACHMENTS INCLUDING NECESSARY PIPE FITTINGS, DUCTWORK, TRANSITIONS, ETC.
6. CONCEALED: HIDDEN FROM SIGHT IN CHASES, FURRED SPACES, SHAFTS, ABOVE CEILING, EMBEDDED IN CONSTRUCTION, IN CRAWL SPACES OR BURIED.
7. EXPOSED: NOT INSTALLED UNDERGROUND NOR CONCEALED AS DEFINED ABOVE.

0.02 PERFORMANCE: THE CONTRACTOR SHALL PERFORM ALL WORK SPECIFIED, INDICATED AND REQUIRED UNLESS OTHERWISE NOTED, INCLUDING FINAL CONNECTIONS, IN A WORKMANLIKE MANNER USING WORKERS SKILLED AND EXPERIENCED IN THE TRADE.

0.03 SITE EXAMINATION: EXAMINE SITE BEFORE BIDDING. CLAIM NO EXTRAS RESULTING FROM LACK OF KNOWLEDGE OF SITE CONDITIONS. IF SITE CONDITIONS REQUIRE MODIFICATION OF THE SYSTEMS INDICATED IN THESE DOCUMENTS, SO ADVISE ENGINEER, AND IF ACCEPTED BY ENGINEER, INCLUDE COST OF SUCH MODIFICATIONS IN BID.

0.04 JOBSITE CONDITIONS: ACCEPT SOLE AND COMPLETE RESPONSIBILITY FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK.

0.05 FULL FUNCTION: PROVIDE ALL MINOR ITEMS NECESSARY FOR A COMPLETE AND FULLY FUNCTIONAL INSTALLATION.

0.06 ADMINISTRATION: PROVIDE EVIDENCE OF LICENSING, BONDING, AND INSURANCE, AND PERFORM OTHER ADMINISTRATIVE FUNCTIONS, AS REQUIRED.

0.07 PERMITS: PROCURE AND PAY FOR ALL REQUIRED PERMITS AND SERVICE CHARGES.

0.08 COORDINATION: CONFORM TO GENERAL CONSTRUCTION CONTRACT DOCUMENTS EXCEPT AS MODIFIED HEREIN. REFER ALSO TO ARCHITECTURAL STRUCTURAL AND ELECTRICAL CONTRACT DOCUMENTS. COORDINATE ALL WORK WITH OTHER TRADES.

0.09 CUTTING AND PATCHING: CUT AND PATCH AS REQUIRED. CUT OR WELD STRUCTURAL MEMBERS ONLY WITH APPROVAL OF STRUCTURAL ENGINEER. PATCHING SUBJECT TO APPROVAL BY ARCHITECT.

0.10 EXISTING FLOORS: TRENCH OR CORE BORE EXISTING FLOORS PER LANDLORD REQUIREMENTS.

0.11 ROOF PENETRATIONS: COORDINATE WITH LANDLORD.

0.12 EQUIPMENT SUBSTITUTIONS: SUBSTITUTIONS TO SCHEDULED MECHANICAL EQUIPMENT SHALL BE REVIEWED FOR CAPACITY, PERFORMANCE AND FUNCTIONALITY ONLY. CONTRACTOR IS RESPONSIBLE FOR FITTING SUBSTITUTED EQUIPMENT INTO SPACE. CONTRACTOR TO SUBMIT EQUIPMENT SUBSTITUTIONS TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO ORDERING. REIMBURSE ELECTRICAL CONTRACTOR, AT NO CHARGE TO TENANT, FOR HIS COSTS INCURRED DUE TO SUBSTITUTION OF MECHANICAL EQUIPMENT HAVING ELECTRICAL REQUIREMENTS DIFFERING FROM THOSE INDICATED.

0.13 ADJUSTMENTS: MAKE MINOR ADJUSTMENTS TO WORK WHERE REQUESTED BY TENANT, WHEN SUCH ADJUSTMENTS ARE NECESSARY TO PROPER OPERATION AND WITHIN THE INTENT OF THE CONTRACT.

0.14 REFERENCE STANDARDS: COMPLY WITH APPLICABLE STANDARDS OF NFPA, ANSI, UL, ASHRAE, AND SMACNA, EXCEPT AS SUPERSEDED BY LOCAL AUTHORITY. CONFORM WITH CONTRACT DOCUMENTS WHERE THEY EXCEED CODE MINIMUM REQUIREMENTS.

0.15 LOCAL REQUIREMENTS: COMPLY WITH THE REQUIREMENTS OF APPLICABLE CODES, LANDLORD, OWNER, SERVING UTILITIES, AND THE LOCAL AUTHORITY HAVING JURISDICTION. SECURE APPROVAL OF INSTALLATION BY LANDLORD, OWNER, LOCAL AUTHORITY, AND OTHERS AS REQUIRED.

0.16 MATERIALS AND EQUIPMENT: PROVIDE NEW, UL LISTED, COMMERCIAL GRADE MATERIALS, DEVICES, EQUIPMENT, AND FIXTURES, SUITABLE FOR ENVIRONMENT. REUSE EXISTING ONLY WHEN COMPLIANT WITH THE CONTRACT DOCUMENTS, IN GOOD CONDITION, AND APPROVED BY THE ENGINEER. CLEAN AND PAINT ALL REUSED EQUIPMENT AND/OR DEVICES, AS APPLICABLE.

0.17 SHOP DRAWINGS: BEFORE ORDERING EQUIPMENT AND MATERIALS, SUBMIT NOT LESS THAN FIVE CERTIFIED COPIES OF ALL SHOP AND EQUIPMENT DRAWINGS FOR ENGINEER'S REVIEW, WHO WILL RETAIN TWO COPIES. ONLY FURNISH SYSTEMS AND EQUIPMENT IN COMPLIANCE WITH ACCEPTED SHOP DRAWINGS.

0.18 INSTALLATION: INSTALL ALL MATERIALS, EQUIPMENT AND SYSTEMS IN FULL ACCORD WITH MANUFACTURERS' INSTRUCTIONS.

0.19 LAYOUT: INSTALL ALL PIPING AND DUCTWORK TO PRESENT A NEAT AND ORDERLY APPEARANCE. RUN ALL LINES PARALLEL WITH BUILDING CONSTRUCTION. MAINTAIN HEADROOM AND EQUIPMENT CLEARANCE, AND GRADIENT WHERE REQUIRED. ALLOW FOR EXPANSION AND CONTRACTION.

0.20 ACCESS DOORS: PROVIDE ACCESS DOORS OR PANELS FOR ALL VALVES, CLEANOUTS, DAMPERS, CONTROLS, DEVICES, AND OTHER ITEMS REQUIRING INSPECTION OR MAINTENANCE. ACCESS PANELS SERVING HVAC COMPONENTS SHALL BE 12-INCHES BY 12-INCHES MINIMUM OR LARGER TO PROVIDE SUFFICIENT WORKING CLEARANCE FOR COMPONENT BEING ACCESSED.

0.21 COMMISSIONING: THOROUGHLY TEST AND DEMONSTRATE PROPER OPERATION OF ALL SYSTEMS AND EQUIPMENT FURNISHED OR INSTALLED UNDER THIS CONTRACT.

0.22 O & M MANUALS: FOUR COPIES OF OPERATION AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OWNER OR OPERATOR. THE MANUAL SHALL INCLUDE BASIC DATA RELATING TO THE OPERATION AND MAINTENANCE OF HVAC SYSTEMS AND EQUIPMENT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED. WHERE APPLICABLE, HVAC CONTROLS INFORMATION SUCH AS DIAGRAMS, SCHEMATICS, CONTROL SEQUENCE DESCRIPTIONS, AND MAINTENANCE AND CALIBRATION INFORMATION SHALL BE INCLUDED.

0.23 WARRANTY: UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIALS AND WORKMANSHIP FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE, EXCEPT WARRANT AIR CONDITIONING COMPRESSORS FOR FIVE YEARS AND GAS-FIRED HEAT EXCHANGERS FOR TEN YEARS. DURING WARRANTY PERIOD, REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT OR WORKMANSHIP WITHOUT COST TO TENANT.

0.24 EQUIPMENT IDENTIFICATION: IDENTIFY ALL APPLICABLE ROOFTOP EQUIPMENT WITH TENANT'S NAME AND SPACE NUMBER, USING 2" PAINTED CHARACTERS OR STAMPED METAL TAG.

0.25 DRAWINGS ARE DIAGRAMMATIC: VERIFY ALL DIMENSIONS AND LENGTHS, AND ADJUST EQUIPMENT, PIPE AND DUCT LOCATIONS TO AVOID CONFLICTS WITH OTHER CONSTRUCTION AND TRADES.

0.26 DOCUMENT PRIORITY: DRAWING INDICATIONS AND NOTATIONS SUPERSEDE THESE SPECIFICATIONS.

0.27 RATINGS: REFER TO DRAWINGS AND SCHEDULES FOR ADDITIONAL RATINGS AND REQUIREMENTS.

0.28 PROJECT REQUIREMENTS: REFER TO DRAWINGS FOR PARTICULAR PROJECT REQUIREMENTS, AS NOT ALL ITEMS INCLUDED IN THESE SPECIFICATIONS MAY BE REQUIRED FOR THIS PROJECT.

0.29 DOCUMENT ERRORS: NOTIFY THE ENGINEER OF ERRORS, DISCREPANCIES OR OMISSIONS BEFORE CONSTRUCTION OR FABRICATION OF AFFECTED WORK, OR, FAILING OF SUCH NOTICE, BE RESPONSIBLE FOR CORRECTING SAME WITHOUT COST TO THE OWNER, ARCHITECT OR ENGINEER.

1.00 PIPE AND FITTINGS

1.10 PIPE HANGERS AND SUPPORTS: PROPERLY SUPPORT ALL PIPING FROM JOISTS (TOP CHORD) OR OTHER STRUCTURAL MEMBERS. FOR PIPES UP TO 4" O.D., USE GRINNELL FIG. 260 CLEVIS HANGERS WITH 3/8" ROD, OR FIG. 195 BRACKETS.

1.20 INSULATION SHIELDS: PROVIDE 18 GAUGE X 12" LONG GALVANIZED INSULATION SHIELDS AT SUPPORT POINTS FOR INSULATED PIPES.

1.30 PIPE SUPPORT SPACING: SUPPORT PIPE NOT LESS THAN 6 FT. ON CENTER FOR COPPER PIPE UP TO 2" O.D., OR NOT LESS THAN 10 FT. ON CENTER FOR STEEL PIPE UP TO 4" O.D.

1.40 COPPER CONTACT: PROVIDE COPPER PLATED HANGERS AND SUPPORTS WHERE IN CONTACT WITH COPPER PIPE.

1.50 PIPE SLEEVES: SLEEVE ALL HORIZONTAL PIPING WHICH PENETRATES WALLS WITH STANDARD WEIGHT STEEL PIPE OF 1" GREATER DIAMETER THAN PIPE OR INSULATION O.D. CUT SLEEVE FLUSH WITH WALL FINISH BOTH SIDES.

1.60 SEALANT: SEAL PIPE SLEEVES WITH ROPE AND EXPANDO NON-SHRINK SEALANT. FIRE/SMOKE SEAL PENETRATIONS OF RATED CONSTRUCTION TO MAINTAIN RATING.

1.70 WALL PLATES: FIT UNCOVERED PIPE PASSING THROUGH WALLS WITH WALL PLATES, CRANE NO. 10 OR EQUAL.

1.80 PRIMARY CONDENSATE FROM ALL AIR CONDITIONING EQUIPMENT SHALL BE TRAPPED AND ROUTED AS NOTED ON THE PLANS. CONDENSATE PIPING SHALL BE SCHEDULE 40 PVC (EXCEPT INSULATED COPPER IN HVAC PLENUMS).

1.90 ALL PIPING ABOVE GRADE SHALL BE SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE. PIPING HUNG FROM JOISTS SHALL BE HUNG FROM THE TOP CHORDS OF THE JOISTS.

2.00 THERMAL AND ACOUSTIC INSULATION

2.10 VIBRATION ISOLATION: PROVIDE EFFECTIVE VIBRATION ISOLATION DEVICES, AND FLEXIBLE CONNECTIONS, FOR ALL MOVING MACHINERY. PROVIDE DEVICES IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE ASHRAE HANDBOOK, HVAC APPLICATIONS (LATEST EDITION), CHAPTER "NOISE AND VIBRATION CONTROL".

2.20 NOISE TRANSMISSION: INSTALL PIPING AND DUCTWORK FREE FROM CONTACT WITH STRUCTURE OR EQUIPMENT TO PREVENT NOISE TRANSMISSION.

2.30 INSULATION REQUIREMENTS: INSULATE SYSTEMS AS SPECIFIED ONLY AFTER THEY HAVE BEEN TESTED AND INSPECTED. CLEAN ALL SURFACES THOROUGHLY OF MOISTURE, FOREIGN MATERIAL, GREASE, AND RUST. INSTALL INSULATION CONTINUOUS THROUGH PENETRATIONS.

2.31 INSULATION HAZARDS: USE ONLY INSULATION ADHESIVES, SEALERS, AND COATINGS WITH FIRE HAZARD RATING NOT TO EXCEED 25/50/50 FLAME SPREAD, FUEL CONTRIBUTED, AND SMOKE DEVELOPED, IN ACCORDANCE WITH UL 723 AND ASTM E84.

2.33 INSULATED HVAC PIPING SYSTEMS: INSULATE REFRIGERANT SUCTION PIPING AND COOLING COIL CONDENSATE PIPING WITH 3/4-IN. THICK CLOSED CELL FOAM INSULATION, RUBATEX OR EQUAL.

2.34 ACOUSTICALLY LINED SUPPLY AND RETURN DUCT: UNLESS OTHERWISE INDICATED ON THE PLANS, LINE SUPPLY AND RETURN DUCTWORK WITHIN 10-FEET OF THE DISCHARGE OF FAN-POWERED VAV BOXES AND DISCHARGE AND INTAKE OF AIR HANDLING UNITS WITH 1" THICK GLASS FIBER ACOUSTICAL DUCT LINER BOARD, OWENS-CORNING QUIETR, OR ENGINEER-APPROVED EQUAL. INCREASE DUCT SIZE INDICATED ON PLANS 2" IN EACH DIMENSION TO ACCOMMODATE DUCT LINER. MATERIALS SHALL HAVE A MOLD-, HUMIDITY-, AND CORROSION-RESISTANT SURFACE THAT MEETS THE REQUIREMENTS OF UL 181.

2.35 EXTERNALLY INSULATED SUPPLY AND RETURN DUCT: INSULATE SHEET METAL DUCTWORK WITH 1 AND 1/2-INCH FIBERGLASS BLANKET DUCT WRAP WITH AN INTEGRAL VAPOR BARRIER FACING, OWENS-CORNING, OR EQUAL, THE INSULATION SHALL HAVE MINIMUM R = 6.0 HR-SQ.FT.-DEG. F/BTU-IN. THERMAL RESISTANCE. DO NOT INSULATE PORTIONS OF DUCTWORK WHICH ARE INTERNALLY LINED. DO NOT INSULATE SUPPLY AIR DUCTWORK IN CONDITIONED SPACES UNLESS OTHERWISE INDICATED ON THE DRAWINGS. IF DUCTWORK IN CONDITIONED SPACE MUST BE INSULATED, INSULATION SHALL BE INTERNAL AND NOT VISIBLE FROM THE OCCUPIED SPACE.

2.36 INSULATED EXHAUST AIR DUCT: EXTERNALLY INSULATE EXHAUST AIR DUCT WITH 1-1/2" THICK GLASS FIBER INSULATION WITH KRAFT FOIL VAPOR BARRIER, OWENS-CORNING, OR EQUAL.

2.40 INSULATED FLEXIBLE DUCT: FLEXIBLE DUCTWORK SHALL BE THERMAFLEX M-KE (U.L. 181 LISTED, CLASS 1 FLEXIBLE AIR DUCT). PROVIDE MINIMUM INSULATION VALUE OF R-6, R-8 WHEN LOCATED OUTSIDE THE THERMAL ENVELOPE OF THE BUILDING, OR GREATER WHERE REQUIRED BY APPLICABLE ENERGY CODE. AIR CONNECTORS ARE NOT ACCEPTABLE. FLEX DUCT DIAMETER SHALL MATCH DEVICE NECK DIAMETER. PROVIDE ROUND GALVANIZED STEEL DUCT RUNOUTS TO MAINTAIN A MAXIMUM FLEXIBLE DUCT LENGTH OF 5'-0". FLEXIBLE DUCTWORK SHALL BE INSTALLED AS STRAIGHT AS POSSIBLE AND SHALL BE ROUTED AND SUPPORTED WITHOUT FORMING CRIMPS OR OTHER AIR FLOW RESTRICTIONS. PROVIDE SQUARE TO ROUND ADAPTERS OR BOOTS TO CONNECT TO AIR DEVICE NECK WHEN REQUIRED.

2.50 INSULATED EXTERIOR DUCTWORK: RIGID DUCTWORK INSTALLED EXTERIOR TO THE BUILDING ENVELOPE SHALL BE INSULATED WITH ARMACELL ARMATUFF LAMINATED INSULATION (SHEETS OR ROLLS, AS APPLICABLE), OR SUBMIT DESIRED SUBSTITUTION TO ENGINEER OF RECORD FOR WRITTEN APPROVAL. INSULATION SHALL BE MINIMUN 2" ARMAFLEX FLEXIBLE ELASTOMERIC THERMAL INSULATION WITH WHITE 17.5 MIL LAMINATED COVERING. CONTRACTOR TO SPECIFY INCLUSION OR EXCLUSION OF PRESSURE-SENSITIVE ADHESIVE WHEN ORDERING PRODUCT.

8.00 DUCTWORK AND APPURTENANCES

8.10 SHEET METAL DUCTWORK:

8.20 ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEETMETAL IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE OR UL 181, DUCT CONSTRUCTION STANDARDS, LATEST EDITION. JOINTS AND SEAMS IN SHEETMETAL DUCTWORK SHALL BE SEALED WITH DUCT SEALER. DUCT WRAP INSULATION ON SUPPLY, RETURN AND OUTSIDE AIR DUCT SHALL BE JOHNS MANVILLE MICROLITE XG OR EQUAL UL LISTED FIBERGLASS BLANKET INSULATION WITH FOIL VAPOR BARRIER. ANY PUNCTURES OR TEARS IN THE FOIL JACKET SHALL BE PATCHED WITH FOIL TAPE TO MAINTAIN THE INTEGRITY OF THE VAPOR BARRIER. INSULATE SHEET METAL DUCTWORK IN THE THICKNESSES AND DENSITIES LISTED BELOW:

8.21 SHEET METAL SUPPLY AND OUTSIDE AIR DUCTWORK : 2" THICK, 1 LB/FT3 DENSITY, R-8 MINIMUM INSTALLED.

8.22 INDOOR EXPOSED SPIRAL SUPPLY AIR DUCT SHALL BE LINED WITH 1-1/2" THICK ROUND DUCT LINER (MINIMUM R-8), JOHNS MANVILLE SPIRACOUSTIC PLUS OR EQUAL.

8.23 LINE ALL SHEETMETAL DUCTWORK A MINIMUM OF 10'-0" DOWNSTREAM OF ALL AIR HANDLING UNITS. DUCT LINER SHALL BE 1-1/2" THICK (R-6 OR GREATER WHERE REQUIRED BY APPLICABLE ENERGY CODE), JOHNS MANVILLE PERMACOTE LINACOUSTIC R-300. THE LEADING EDGE OF THE DUCT LINER SHALL HAVE A SHEETMETAL NOSING.

8.25 ROUND, SPIRAL DUCTWORK LEFT EXPOSED AND VISIBLE WHICH IS TO BE PAINTED SHALL BE CONSTRUCTED OF "PAINT-GRIP" TYPE DUCT.

8.30 FIRE DAMPERS: AIR BALANCE, INC., LOUVERS & DAMPERS, RUSKIN, OR EQUAL. GALVANIZED STEEL CURTAIN TYPE WITH INTERLOCKING BLADES, STAINLESS STEEL CLOSURE SPRINGS AND LATCHES FOR HORIZONTAL OR VERTICAL INSTALLATION, BLADES OUT OF AIR STREAM, FUSIBLE LINKS RATED AT 160-165 DEGREES F, PER UL 33. FIRE DAMPERS SHALL BE UL-555 LISTED, MEETING OR EXCEEDING NFPA GUIDELINES. FIRE DAMPERS SHALL HAVE MAXIMUM STATIC PRESSURE DROP OF 0.05+IN. W.G. AT DESIGN DUCT VELOCITY. DAMPER SHALL HAVE CALIFORNIA STATE FIRE MARSHAL APPROVAL.

8.35 FIRE/SMOKE DAMPERS: AIR BALANCE, INC., LOUVERS & DAMPERS, RUSKIN, OR EQUAL. GALVANIZED STEEL CURTAIN TYPE WITH INTERLOCKING BLADES. STAINLESS STEEL CLOSURE SPRINGS AND LATCHES FOR HORIZONTAL OR VERTICAL INSTALLATION, FUSIBLE LINKS RATED AT 160-165° F. PER UL 33. FIRE/SMOKE DAMPERS SHALL BE UL-555/UL-555S LISTED, MEETING OR EXCEEDING NFPA GUIDELINES. FIRE/SMOKE DAMPERS SHALL HAVE MAXIMUM STATIC PRESSURE DROP 0.05 IN. W.G. AT DESIGN DUCT VELOCITY. REFER TO SECTION 9.14 FOR SMOKE DETECTOR SPECIFICATION.

8.40 AIR OUTLETS AND INLETS: PROVIDE TITUS, KRUEGER, PRICE OR ENGINEER-APPROVED EQUAL, AS SCHEDULED. DAMPER SHALL HAVE CALIFORNIA STATE FIRE MARSHAL APPROVAL ON PLANS. PROVIDE MISCELLANEOUS ITEMS AS NECESSARY FOR A COMPLETE AND PROPER INSTALLATION IN THE TYPES OF WALLS AND CEILINGS USED ON THE PROJECT. THIS SHALL INCLUDE SUCH ITEMS AS FASTENERS, PLASTER RINGS, SUPPORTS, ETC.

8.50 DUCT ACCESS PANELS: AIR BALANCE, INC., VENTFABRICS, RUSKIN, OR EQUAL. PROVIDE DUCT ACCESS PANELS AT EACH FIRE DAMPER SIZED TO PERMIT MAINTENANCE AND RESETTING OF THE DAMPER. PANELS SHALL BE CONSTRUCTED OF THE SAME OR GREATER GAUGE AS DUCTWORK SERVED. PROVIDE INSULATED DOORS FOR INSULATED DUCTWORK. PROVIDE FLUSH FRAMES FOR UNINSULATED DUCTWORK AND EXTENDED FRAMES FOR EXTERNALLY INSULATED DUCTWORK. PROVIDE REMOVABLE DOORS FOR SIZES UP THROUGH 18-IN. (LARGEST DIMENSION) AND HINGED, TWO-HANDLE TYPE LATCHES FOR LARGER DOORS.

8.60 ALL INTAKE OPENINGS AND RELIEF/EXHAUST OPENINGS LOCATED OUTSIDE OF BUILDING SHALL BE COVERED WITH 1/4" TO 1/2" WELDED WIRE BIRD SCREEN OF GALVANIZED STEEL. ALL INTAKES LOCATED IN OPEN CEILING AREAS WHICH ARE VISIBLE FROM BELOW SHALL BE COVERED WITH 1/4" WELDED WIRE SCREEN OF GALVANIZED STEEL AND THE INSIDE OF THE DUCTWORK AND/OR ACOUSTICAL LINING SHALL BE PAINTED FLAT BLACK FOR A MINIMUM DISTANCE OF 4' FROM THE OPENING OF THE DUCTWORK OR BELL MOUTH.

8.70 DUCTWORK SHALL BE SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE. DUCT SUPPORTS AND ATTACHMENT TO STRUCTURE SHALL BE PER SMACNA STANDARDS.

8.80 ROUND AND FLEXIBLE SUPPLY AIR DUCTWORK SHALL BE CONNECTED TO MAIN DUCTS WITH A SPIN-IN FITTING WITH SCOOP AND BALANCING DAMPER.

8.90 DUCTWORK DIMENSIONS SHOWN ON THE DRAWINGS ARE CLEAR INSIDE DIMENSIONS. ENLARGE DUCTWORK AS REQUIRED TO ACCOMMODATE INTERNAL DUCT LINER.

8.95 LOCATIONS OF GRILLES, REGISTERS, AND DIFFUSERS SHOWN ON THE DRAWINGS ARE APPROXIMATE. COORDINATE EXACT LOCATIONS WITH LIGHTS, CEILING GRID, ETC. AND ARCHITECTURAL REFLECTED CEILING PLAN.

8.96 FACTORY-MADE FLEXIBLE DUCTWORK AND CONNECTORS SHALL NOT BE USED IN LIEU OF RIGID ELBOWS OR FITTINGS.

9.00 SYSTEM CONTROL AND OPERATION

9.10 SPACE TEMPERATURE CONTROL: FURNISH AND INSTALL, UNLESS NOTED OTHERWISE, ALL THERMOSTATS, SENSORS, CONTROLLERS, RELAYS, CONTACTORS, DAMPERS, ACTUATORS, TUBING, CONTROL WIRING AND ALL OTHER ITEMS AND MATERIALS NECESSARY FOR A COMPLETE AND PROPERLY OPERATING TEMPERATURE CONTROL SYSTEM AS SPECIFIED ON THE PLANS. ALL THERMOSTATS AND OTHER CONTROL COMPONENTS SHALL BE HONEYWELL, OR ENGINEER-APPROVED EQUAL, UNLESS SPECIFIED OTHERWISE. ALL CONTROL WIRING SHALL BE INSTALLED IN CONDUIT.

9.11 THERMOSTAT: REFER TO "HVAC CONTROLS" ON PLANS. THERMOSTATS SHALL BE ADA COMPLIANT AND SHALL HAVE OCCUPANT CONTROLLED SMART THERMOSTAT (OCST) PER REFERENCE JOINT APPENDIX JA5 (IEC 120.2). MOUNT TOP OF THERMOSTATS 46" AFF UNLESS NOTED OTHERWISE. COORDINATE THERMOSTAT LOCATIONS WITH OTHER TRADES. PROVIDE LOCKOUT CONTROLS OR CLEAR LOCKING COVERS FOR ALL PUBLIC AREA THERMOSTATS.

9.12 CO2 SENSOR FOR DEMAND-CONTROL VENTILATION SEQUENCE: REFER TO "HVAC CONTROLS" ON PLANS.

9.13 DUCT SMOKE DETECTOR FOR AIR-MOVING EQUIPMENT: PROVIDE COMPATIBLE DUCT SMOKE DETECTORS IN SUPPLY DUCTS AS INDICATED (BOSCH MODEL D341/D342 - CSFM LISTING #: 3240-1615:0181 WITH D286 IONIZATION-TYPE SMOKE DETECTION HEAD, OR ENGINEER-APPROVED EQUAL). CONNECT TO DE-ENERGIZE FAN UPON SMOKE DETECTION. CONNECT TO REMOTE TEST STATION AND/OR FIRE ALARM SYSTEM, AS REQUIRED. ALL FANS SUPPLYING MORE THAN 2000 CFM OF AIR TO ANY SPACE SHALL BE INSTALLED WITH A SMOKE DETECTOR. DUCT SMOKE DETECTORS SHALL BE INSTALLED IN THE SUPPLY AIR PATH OF ANY AIR DISTRIBUTION SYSTEMS UTILIZING A COMMON SUPPLY AIR PLENUM WITH A COMBINED DESIGN CAPACITY GREATER THAN 2000 CFM. THE SMOKE DETECTOR SHALL BE WIRED TO STOP THE FAN UPON DETECTION OF SMOKE, AND SIGNAL THE BUILDING FIRE ALARM CONTROL PANEL.

9.14 DUCT SMOKE DETECTOR FOR SMOKE DAMPER / COMBINATION FIRE/SMOKE DAMPER ACTUATION: PROVIDE COMPATIBLE PHOTOELECTRIC TYPE DUCT SMOKE DETECTORS IN AIR DUCTS IMMEDIATELY UPSTREAM OF EACH DUCT-MOUNTED SMOKE OR COMBINATION FIRE/SMOKE DAMPER. REFER TO DRAWINGS FOR DAMPER LOCATIONS (RUSKIN MODEL DSDF-D4120, OR ENGINEER-APPROVED EQUAL). CONNECT TO CLOSE DAMPER UPON SMOKE DETECTION. REFER TO ELECTRICAL DRAWINGS FOR ACTUATOR POWER REQUIREMENTS. PROVIDE REMOTE RESET DEVICE RTS2-AOS.

9.20 SEQUENCE OF CONTROLS: REFER TO "HVAC CONTROLS" ON PLANS.

9.30 TESTING, ADJUSTING, BALANCING

9.31 AABC, NEBB, TABB OR NBC/NCI CERTIFIED TESTING AND BALANCING CONTRACTOR SHALL BE RESPONSIBLE FOR THE TESTING AND BALANCING OF EVERY HEATING, VENTILATING AND AIR CONDITIONING SYSTEM. THE PERSON OR AGENCY RESPONSIBLE FOR BALANCING OF THE SYSTEMS SHALL DOCUMENT IN WRITING THE AMOUNT OF OUTDOOR AIR BEING PROVIDED AND DISTRIBUTED FOR THE BUILDING OCCUPANTS AND ANY OTHER SPECIALTY VENTILATION. SEE PLANS FOR FURTHER REQUIREMENTS. TWO (2) COPIES OF A WRITTEN REPORT IN NEBB, AABC, OR TABB FORMAT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

9.32 AIR SYSTEMS SHALL BE BALANCED IN A MANNER TO MINIMIZE LOSSES FROM DAMPER THROTTLING BY FIRST ADJUSTING FAN SPEED THEN ADJUSTING DAMPERS TO MEET DESIGN FLOW CONDITIONS. DAMPER THROTTLING ALONE MAY BE USED FOR AIR SYSTEM BALANCING WITH FAN MOTORS OF 1 HP OR LESS, OR IF THROTTLING RESULTS IN NO GREATER THAN 1/3 HP FAN HORSEPOWER DRAW ABOVE THAT REQUIRED IF THE FAN SPEED WERE ADJUSTED.

9.33 HVAC CONTROL SYSTEMS SHALL BE TESTED TO ASSURE THAT CONTROL ELEMENTS ARE CALIBRATED, ADJUSTED, AND IN PROPER WORKING CONDITION.

9.34 IN SYSTEMS WHERE VAV BOXES ARE PART OF THE CENTRAL AIR SYSTEM AND SOME VAV BOXES SERVED BY THE SAME CENTRAL STATION AIR HANDLING UNIT / ROOFTOP UNIT AS SERVES THIS TENANT'S SPACE ARE LOCATED IN OTHER DEMISED SPACE(S), BALANCING CONTRACTOR SHALL ENSURE ALL VAV BOXES NOT IN THIS TENANT'S SPACE HAVE BEEN OPENED TO THEIR RELATIVE MAXIMUM POSITION BEFORE BALANCING OPERATION COMMENCES.

NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER R. WEBB
M-33489
MECHANICAL
CALIFORNIA

CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
1	PC RESUBMITTAL	05/18/22
2	PC RESUBMITTAL	10/28/22
3	HCD REVISION 1	12/16/22
4	PC RESUBMITTAL	02/02/23
5	HCD & PC RESUBMITTAL	06/06/23
6	HCD RESUBMITTAL	06/14/23
7	PC RESUBMITTAL	07/10/23
8	CLIENT REVISIONS	07/11/23
9	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
11	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

Plot Date: 10/12/2023 9:20:33 AM

SHEET TITLE:

HVAC SPECIFICATIONS

SHEET NO:

M002

SCHEDULES

PACKAGED HEAT PUMP SCHEDULE

UNIT NO.	MAKE	MODEL	AREA SERVING	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	REFRIGERANT	CFM	OSA CFM	WEIGHT (LBS.)	ELECTRICAL DATA: VOLTAGE	ELECTRICAL DATA: MCA	ELECTRICAL DATA: MOCP	MOTOR HP (WATTS)	EFFICIENCY RATINGS: EER	EFFICIENCY RATINGS: HSPF (COP)	ACCESSORIES
VHP-1	~~EPHOCA~~	~~HP82HGSN~~	~~RESIDENTIAL UNITS~~	~~10.5~~	~~11.5~~	~~R-410A~~	~~174 - 272~~	~~85~~	~~166~~	~~208/1/60~~	~~6.0~~	~~15~~	~~1.2~~	~~12.2~~	~~13.0~~	~~SEE BELOW~~
HPAC-1	GE	AZ65H12DAD	RESIDENTIAL UNITS	11.8	10.4	R-410A	449 - 300	20	91	208/1/60	15	15	(2430W)	11.5	(3.5)	SEE BELOW

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NOTES:
1. REFER TO MANUFACTURER'S GUIDELINES FOR CONTROLS AND SEQUENCE OF OPERATION.
2. INCLUDES FACTORY CLEANABLE MERV 13 FILTERS. 2
3. PROVIDE WITH FACTORY WALL MOUNTED THERMOSTAT CONTROLLER, TITLE-24 COMPLIANT.
4. PROVIDE WITH NON-FUSED DISCONNECT FOR UNITS THAT ARE HARDWIRED.
5. PROVIDE WITH SUNVENT CONNECTOR VENT "SVIN7" PLENUM BOX AND LOUVER ASSEMBLY (FOR HPAC-1 UNITS ONLY).

AIR COOLED OUTDOOR VRF HEAT PUMP SCHEDULE

UNIT NO.	CARRIER MODEL	AREA SERVING	ASSOCIATED INDOOR UNIT	COOLING CAPACITY (MBH)	REFRIGERANT	AMBIENT AIR: LOW	AMBIENT AIR: HIGH	INTEGRATED HEAT (MBH)	WEIGHT (LBS.)	ELECTRICAL DATA: VOLTAGE	ELECTRICAL DATA: MCA	ELECTRICAL DATA: MOCP	EFFICIENCY RATINGS: EER (SEER)	EFFICIENCY RATINGS: HSPF	ACCESSORIES
HP-1	38VMB036HDS3-1	1F COMMON AREA	VRF-1 / VRF-2	36.0	R-410A	23	115	40.0	220	230/1/60	36	40	(18.0)	9.2	SEE BELOW

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ACCESSORIES:
1. COMPRESSOR CYCLE DELAY PACKAGE.
2. AUTOMATIC RESET.
3. LOW AMBIENT CONTROL PACKAGE.
4. HEAD PRESSURE CONTROL PACKAGE.

INDOOR VRF FAN COIL UNIT SCHEDULE

BASIC UNIT: UNIT NO.	BASIC UNIT: MANUFACTURER	BASIC UNIT: MODEL	BASIC UNIT: AREA SERVING	BASIC UNIT: TON	BASIC UNIT: WEIGHT LBS.	SUPPLY FAN SECTION: CFM SUPPLY AIR	SUPPLY FAN SECTION: CFM OUTSIDE AIR	SUPPLY FAN SECTION: ESP IN. W.C.	ELECTRICAL: SYSTEM VOLTAGE	ELECTRICAL: WATTS	ELECTRICAL: MCA	ELECTRICAL: MOCP	PERFORMANCE: TOTAL COOLING CAPACITY	PERFORMANCE: SENSIBLE COOLING CAPACITY	PERFORMANCE: HEATING CAPACITY
VRF-1	CARRIER	40VMF009A--3	1F COMMON AREA	0.75	54	330 - 460	50	0.0	230/1/60	40	0.73	15	9.13	7.44	10.0
VRF-2	CARRIER	40VML018---3	1F COMMON AREA	1.5	48.5	353 - 530	50	0.2	230/1/60	56	0.95	15	18.25	11.6	21.0

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NOTES:
1. PROVIDE WITH FACTORY CLEANABLE MERV 13 FILTERS. 2
2. PROVIDE WITH FACTORY WALL MOUNTED THERMOSTAT CONTROLLER, TITLE-24 COMPLIANT.
3. PROVIDE WITH NON-FUSED DISCONNECT.
4. EXTEND REFRIGERANT PIPING TO ASSOCIATED OUTDOOR CONDENSING UNIT ON ROOF. SIZE AND INSULATE REFRIGERANT PIPING PER MANUFACTURER'S GUIDELINES.

EXHAUST FAN SCHEDULE

UNIT NO.	TYPE	MAKE / MODEL	AREA SERVING	DUCT SIZES	CFM	WATTS (HP)	ELECTRICAL DATA: VOLTS	ELECTRICAL DATA: PHASE	ELECTRICAL DATA: FLA	OPER. WEIGHT LBS.	REMARKS
EF-1	ROOF	GREENHECK / LD-70	ELEVATOR HOISTWAY	8"x8"	250 @ .25 S.P.	73.0	120	1	--	37 LBS.	PROVIDE WITH BACKDRAFT DAMPER. INTERLOCK EXHAUST FAN WITH TIME CLOCK TO ACTIVATE DURING OCCUPIED HOURS.
CEF-1	CEILING	GREENHECK / SP-A90-130-VG	BATHROOMS	6"Ø	110 @ .25 S.P.	12.7	115	1	.31	15 LBS.	PROVIDE WITH BACKDRAFT DAMPER. PROVIDE FAN SWITCH NEXT TO LIGHT SWITCH.
CEF-2	CEILING	GREENHECK / SP-A190	TRASH / RECYCLE	8"x6"	185 @ .25 S.P.	49.2	115	1	.32	17 LBS.	PROVIDE WITH BACKDRAFT DAMPER. PROVIDE FAN SWITCH NEXT TO LIGHT SWITCH.
CEF-3	CEILING	GREENHECK / CSP-A1050-VG	1F TRASH ROOM	12"Ø	500 @ .25 S.P.	125	115	1	4.75	49 LBS.	PROVIDE WITH BACKDRAFT DAMPER AND HANGING VIBRATION ISOLATOR KIT. EXHAUST FAN TO OPERATE CONTINUOUSLY.

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ROOF-MOUNTED SUPPLY FAN SCHEDULE

SYMBOL	TYPE	MAKE / MODEL	AREA SERVING	CFM	HP	ELECTRICAL DATA: AMPS	ELECTRICAL DATA: VOLTS	ELECTRICAL DATA: PHASE	OPER. WEIGHT LBS.	REMARKS
SF-1	BELT DRIVE	GREENHECK / SAF-112	CORRIDOR / TRASH ROOM	1,220 @ .25 S.P.	1/4	5.8	115	1	185 LBS.	PROVIDE WITH FACTORY ROOF CURB AND FILTER BOX. SUPPLY FAN TO OPERATE CONTINUOUSLY.

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PROVIDE MIN. MERV 13 FILTERS ON ALL SUPPLY AIR FANS. CONTRACTOR TO CONSTRUCT FILTER BOX CAPABLE OF HOUSING FILTERS IF NOT INCLUDED WITH EQUIPMENT SCHEDULED. 5

(HIGHWALL) COOLING ONLY FAN COIL UNIT SCHEDULE

UNIT NO.	SERVING	CARRIER MODEL	AIRFLOW (CFM)	TONS	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	REFRIGERANT: LIQUID (IN)	REFRIGERANT: SUCTION (IN)	ELECTRICAL DATA: MCA	ELECTRICAL DATA: FLA	ELECTRICAL DATA: VOLT	ELECTRICAL DATA: PH	ELECTRICAL DATA: HZ	WEIGHT (lbs)	NOTES
FC-1	ELEVATOR MACHINE ROOM - 1ST FLOOR	RAV-SP180KRT-UL	400 - 409	1.5	18.0	--	1/4	1/2	--	--	208	1	60	31	SEE BELOW

NOTES:
1. PROVIDE WITH FACTORY CLEANABLE MERV 13 FILTERS. 2
2. PROVIDE WITH FACTORY WALL MOUNTED THERMOSTAT CONTROLLER, TITLE-24 COMPLIANT.
3. PROVIDE WITH FACTORY CONDENSATE PUMP WITH SEPARATE PUMP IF REQURED, AND ASSOCIATED CONTROLS.
4. PROVIDE WITH NON-FUSED DISCONNECT.
5. ROUTE REFRIGERANT PIPING TO ASSOCIATED OUTDOOR CONDENSING UNIT ON ROOF, SIZED AND INSULATED PER MFG'S RECOMMENDATIONS.
6. POWERED BY OUTDOOR UNIT.

(OUTDOOR) COOLING ONLY CONDENSING UNIT SCHEDULE

UNIT NO.	SERVING	CARRIER MODEL	TONS	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	EER/SEER	COP	ELECTRICAL DATA: MCA	ELECTRICAL DATA: MOCP	ELECTRICAL DATA: VOLT	ELECTRICAL DATA: PH	ELECTRICAL DATA: HZ	WEIGHT (lbs)	NOTES
CU-1	ELEVATOR MACHINE ROOM - 1ST FLOOR	38MHRBC12AA3	1.5	18.0	--	10.0/19.5	--	17	30	208	1	60	98	SEE BELOW

NOTES:
1. CONDENSING UNIT SHALL BE LISTED IN TITLE 24 CALIFORNIA CERTIFIED APPLIANCE DATABASE.
2. PROVIDE ACCESSORY TUBING KITS/VALVES, COMPATIBLE TO FAN COIL UNIT.
3. PROVIDE WITH LOW AMBIENT KIT.
4. PROVIDE WITH 2" NEOPRENE PAD AND ROOF CURB.

CONTROLS

HVAC CONTROLS - VRF SPLIT SYSTEM

THERMOSTAT

CARRIER 40VM900003 DIGITAL THERMOSTAT, OR APPROVED EQUAL, 7-DAY PROGRAMMABLE MULTI-STAGE HEATING/COOLING AUTOMATIC CHANGEOVER THERMOSTAT TO CONTROL THE OPERATION OF EACH UNIT. MOUNT THERMOSTAT AT 4'-0" A.F.F.

SEQUENCE OF OPERATION

SPLIT SYSTEM HEAT PUMP:

COOLING CYCLE:
UPON A RISE IN SPACE TEMPERATURE ABOVE THE OCCUPIED COOLING SETPOINT OF THE THERMOSTAT, THE REFRIGERATION SYSTEM AND SUPPLY AIR FAN SHALL CYCLE AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AT THE THERMOSTAT SETPOINT.

HEATING CYCLE:
UPON A DROP IN SPACE TEMPERATURE BELOW THE OCCUPIED HEATING SETPOINT OF THE THERMOSTAT, THE REFRIGERATION SYSTEM AND SUPPLY FAN SHALL CYCLE AS REQUIRED TO MAINTAIN SPACE TEMPERATURE AT THE THERMOSTAT SETPOINT.

HVAC CONTROLS - HIGH WALL SPLIT SYSTEM

THERMOSTAT

EACH UNIT TO BE PROVIDED WITH FACTORY THERMOSTAT.

SEQUENCE OF OPERATION

PACKAGED HIGH WALL-MOUNTED FAN COIL UNIT, DX COOLING ONLY:

1. THE SPACE WILL BE DIRECTLY CONTROLLED BY ITS OWN DEDICATED WALL-MOUNTED CONTROLLER.
2. COOLING OPERATION: THE CONTROLLER COMPARES THE COOLING SETPOINT WITH THE SPACE TEMPERATURE AND DETERMINES A COOLING SIGNAL. THIS SIGNAL SHALL ACTIVATE THE LEAD AC UNIT TO MAINTAIN THE ROOM SETPOINT.
3. OPERATION: THE AC UNIT WILL OPERATE CONTINUOUSLY TO ENSURE THE ROOM MAINTAINS SETPOINT.
4. MONITORING - THE FOLLOWING CONDITIONS SHALL BE MONITORED: ROOM TEMPERATURE, ROOM SETPOINT, CURRENT MODE (COOLING/FAN), FAN STATU THRU CURRENT SWITCH.
5. ALARMS - THE FOLLOWING CONDITIONS SHALL TRIGGER A GENERAL ALARM AND AN EMAIL SHALL BE SENT TO THE SYSTEM OPERATOR:
   - 5.1. IF ROOM TEMPERATURE IS GREATER THAN 5° F ABOVE SETPOINT FOR 5 MINUTES.
   - 5.2. IF FAN IS COMMANDED ON AND FAN CURRENT SWITCH DETECTS FAN IS OFF.
   - 5.3. IF FAN IS COMMANDED OFF AND FAN CURRENT SWITCH DETECTS FAN IS ON.

SCHEDULES OF DIFFUSERS AND GRILLES

UNIT NO.	MANUFACTURER	MODEL	SIZE OF DIFFUSER	NOTES
S1, E1	DAYTON	20UA07	12" X 12"	4, 6
R1, T1	TITUS	50F	24" X 24"	1, 4, 5
R2	TITUS	350-RL	AS SHOWN	2, 4, 5
S2, T2	TITUS	300-FS	AS SHOWN	3, 4, 5
E2	DAYTON	20UA40	24" X 18"	4, 6
S3	TITUS	250	AS SHOWN	4, 5, 7
R3	TITUS	50F	12" X 12"	1, 4

2 5

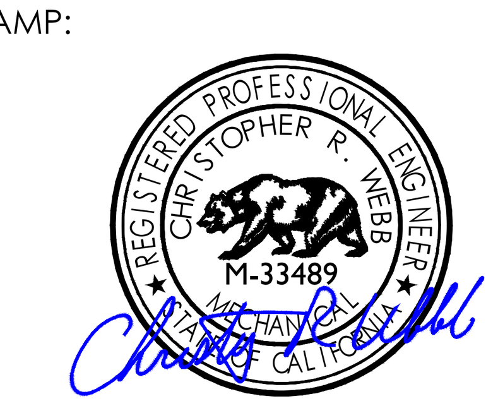
NOTES:
1. 1/2" X 1/2" X 1/2" EGGCRATE RETURN / RELIEF AIR GRILLE.
2. ANGLED RETURN GRILLE. CEILING-MOUNTED: AIM VANES TOWARD NEAREST WALL. WALL-MOUNTED: AIM VANES UPWARD.
3. DOUBLE-DEFLECTION SUPPLY REGISTER.
4. FURNISH ALL AIR DEVICES WITH APPROPRIATE FRAME FOR CEILING / WALL CONSTRUCTION TYPE.
5. IF WALL-MOUNTED, PAINT TO MATCH ADJACENT FINISH AND INSTALL W/ BLADES ANGLED UPWARD. IF CEILING MOUNTED, INSTALL W/ BLADES ANGLED TOWARDS NEAREST WALL.
6. STATIONARY INTAKE/EXHAUST LOUVER WITH BIRD SCREEN AND FLANGE KIT.
7. ADJUSTABLE 4 WAY DISCHARGE SUPPLY AIR CEILING DIFFUSER.

KITCHEN HOOD SCHEDULE

UNIT NO.	TYPE	MAKE / MODEL	DUCT SIZES	MAX CFM	LENGTH	REMARKS
KH-1	WALL MOUNTED	GE / JVX3240SJ	N/A	200	24"	REFER TO 10/M401 FOR MANUFACTURER CUTSHEETS.

NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:



CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
1	PC RESUBMITTAL	05/18/22
2	PC RESUBMITTAL	10/28/22
3	HCD REVISION 1	12/16/22
4	PC RESUBMITTAL	02/02/23
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6	HCD RESUBMITTAL	06/14/23
7	PC RESUBMITTAL	07/10/23
8	CLIENT REVISIONS	07/11/23
9	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
11	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

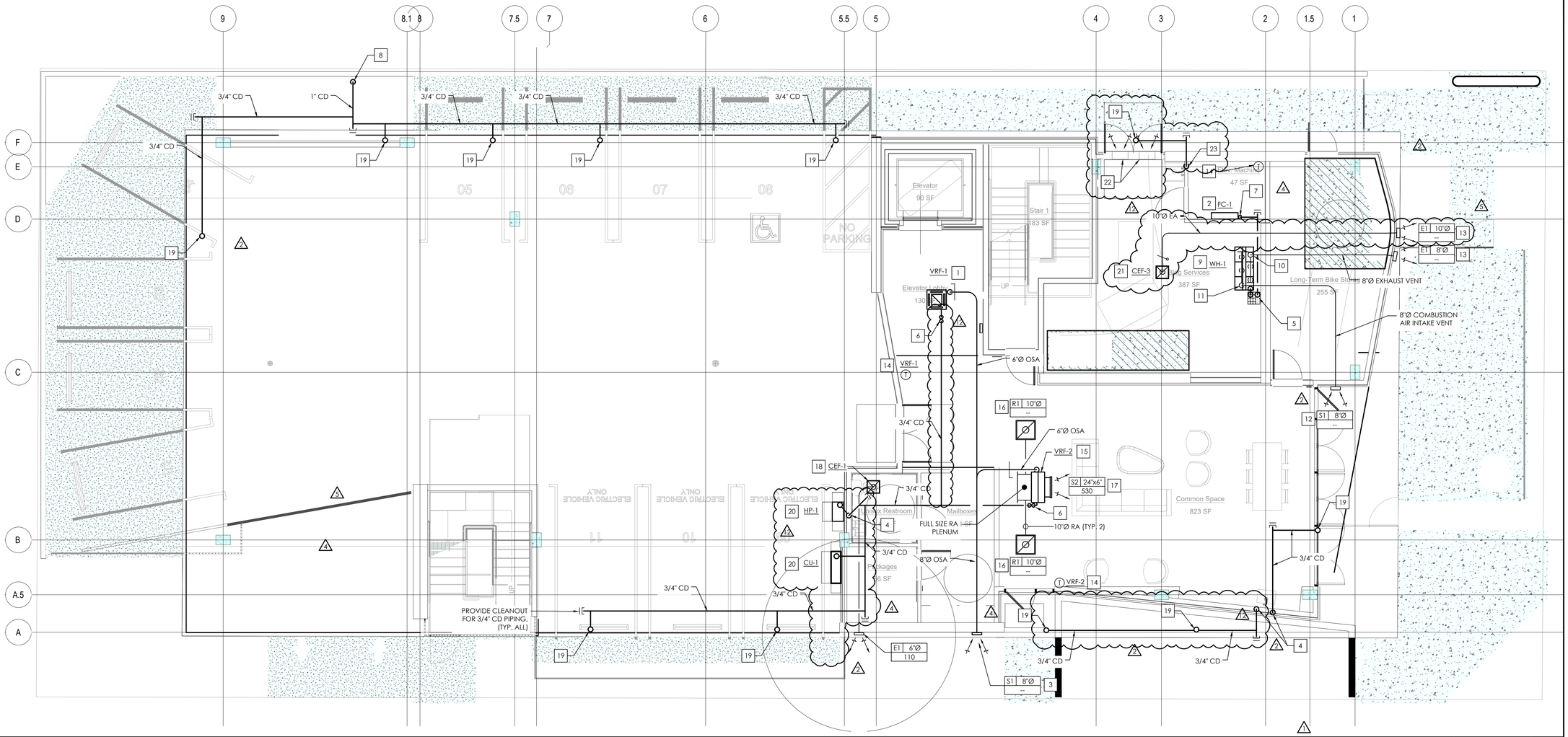
Plot Date: 10/12/2023 9:20:59 AM

SHEET TITLE:

SCHEDULES, SEQUENCES AND CONTROLS

SHEET NO:

M003



LEVEL 1 HVAC PLAN | SCALE 3/16" - 1'-0" | 1

PLAN NOTES

A. REFER TO SHEET M001 FOR GENERAL MECHANICAL INFORMATION AND M002 FOR HVAC SPECIFICATIONS.

B. REFER TO SHEET M003 FOR ALL SCHEDULES, SEQUENCES AND CONTROLS.

C. REFER TO SHEET M401 FOR DETAILS.

D. REFER TO SHEET M402 FOR OSA CALCULATIONS.

E. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION AND EQUIPMENT CLEARANCES.

F. ALL CONDENSATE DRAIN PIPING TO MAINTAIN MINIMUM SLOPE OF 1/8" PER FT.

G. PROVIDE ACCESS PANEL IN DUCT FOR INSPECTION / MAINTENANCE OF EACH FSD SHOWN ON PLANS.

KEY NOTES

[#] NUMBERS INDICATE NOTES SHOWN ON PLAN

1. CEILING MOUNTED VRF CASSETTE SERVING CONDITIONED SPACE, AS SHOWN.
2. INDOOR HIGHWALL FAN COIL UNIT FOR ELEVATOR MACHINE ROOM.
3. ROUTE 8"Ø OSA DUCT THRU EXTERIOR WALL TO INTAKE LOUVER.
4. ROUTE 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO TAILPIECE OF SINK.
5. ROUTE 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO FLOOR SINK WITH MIN. 2" AIR GAP.
6. 3/4" CONDENSATE DRAIN PIPING W/ NEGATIVE P-TRAP PUMPED UP FROM VRF CASSETTE'S INTEGRAL PUMP.
7. 3/4" CONDENSATE DRAIN PIPING W/ NEGATIVE P-TRAP FROM HIGH WALL FAN COIL UNIT.
8. ROUTE CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO PLANTER AREA WITH MIN. 2" AIR GAP.
9. CIRCULATING WATER HEATER. REFER TO PLUMBING DRAWINGS FOR SPECIFICATIONS.
10. 8"Ø COMMON EXHAUST VENT. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION.
11. 8"Ø COMMON COMBUSTION AIR INTAKE VENT. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION.
12. PROVIDE SIDEWALL INTAKE GRILLE FOR COMBUSTION AIR INTAKE VENT. PROVIDE WEATHERTIGHT SEALING PER MANUFACTURER'S GUIDELINES.
13. PROVIDE SIDEWALL EXHAUST GRILLE FOR EXHAUST AIR VENT. PROVIDE WEATHERTIGHT SEALING PER MANUFACTURER'S GUIDELINES.
14. PROGRAMMABLE THERMOSTAT WITH INSULATED BACKPLATE, VERIFY EXACT LOCATION WITH END USER.
15. CEILING MOUNTED VRF FAN COIL UNIT SERVING CONDITIONED SPACE, AS SHOWN.
16. RA DUCT DOWN TO LAY-IN CEILING GRILLE.
17. PROVIDE FULL SIZE SA DUCT TO SIDEWALL GRILLE FOR HORIZONTAL DISCHARGE.
18. CEILING-MOUNTED EXHAUST FAN. PROVIDE 6"Ø EA DUCT THRU EXTERIOR WALL TO EXHAUST LOUVER.
19. 3/4" CONDENSATE DRAIN PIPING DOWN FROM HVAC UNIT LOCATED IN LEVEL 2.
20. WALL-MOUNTED OUTDOOR CONDENSING UNIT/HEAT PUMP. PROVIDE 3/4" CONDENSATE DRAIN PIPING WITH NEGATIVE PRESSURE P-TRAP TO DISCHARGE INTO TAILPIECE OF LAVATORY. COORDINATE EXACT LOCATION W/ OWNER.
21. 10"Ø EA DUCT DOWN TO CEILING-SUSPENDED EXHAUST FAN.
22. PROVIDE LOUVERED DOOR(S) WITH A COMBINED MIN. FREE AREA OF 1.40 S.F. TO SERVE AS INTAKE FOR CEF-3.
23. 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO MOP SINK WITH MIN. 2" AIR GAP.

NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER R. WEBB M-33489 MECHANICAL STATE OF CALIFORNIA

CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

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8	CLIENT REVISIONS	07/11/23
9	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
11	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

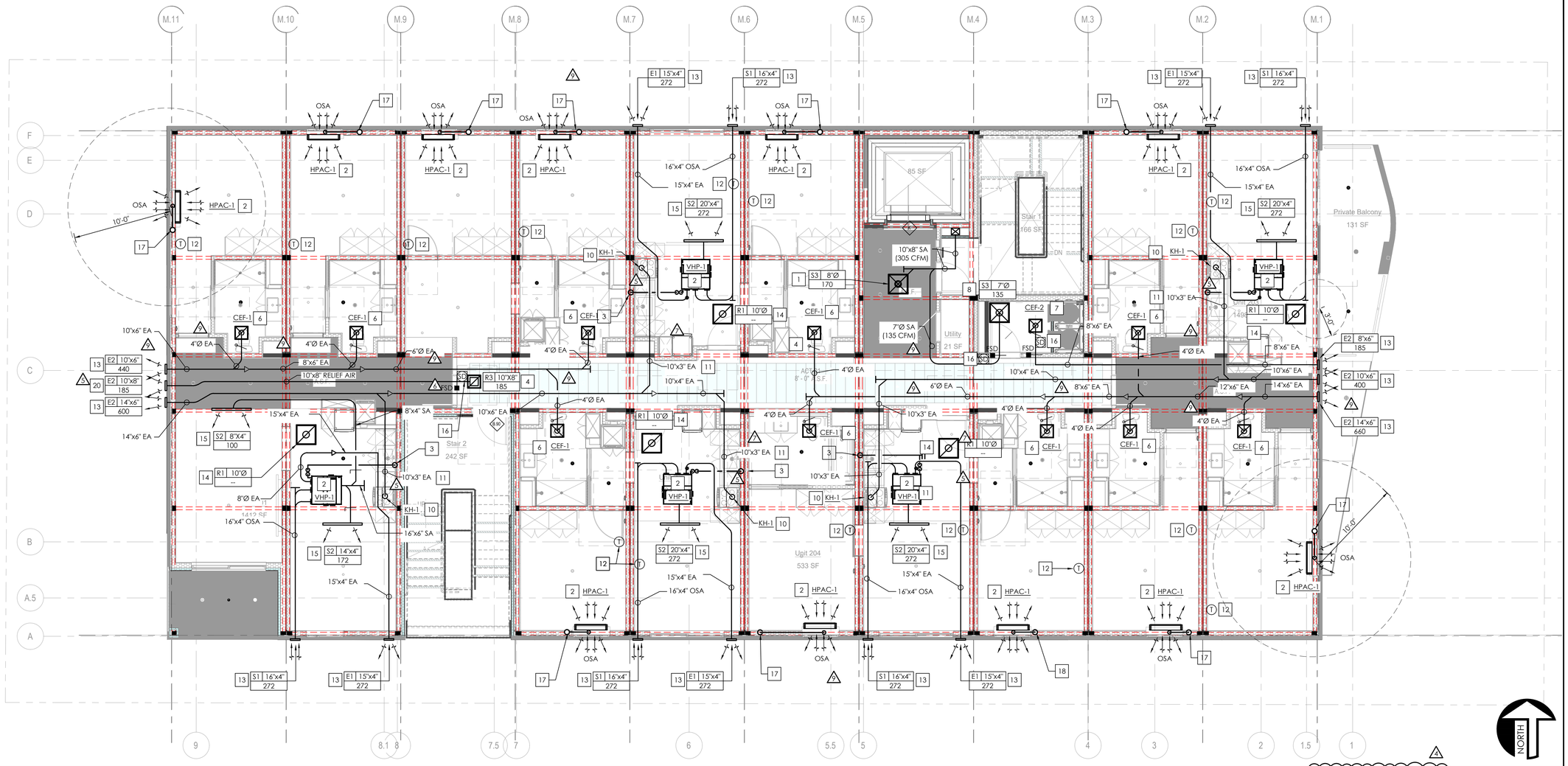
Plot Date: 10/12/2023 9:22:30 AM

SHEET TITLE:

LEVEL 1
HVAC PLAN

SHEET NO:

M101



LEVEL 2 HVAC PLAN — SCALE 3/16" - 1'-0" — 1

PLAN NOTES

A. REFER TO SHEET M001 FOR GENERAL MECHANICAL INFORMATION AND M002 FOR HVAC SPECIFICATIONS.

B. REFER TO SHEET M003 FOR ALL SCHEDULES, SEQUENCES AND CONTROLS.

C. REFER TO SHEET M401 FOR DETAILS.

D. REFER TO SHEET M402 FOR OSA CALCULATIONS.

E. REFER TO SHEET M101 FOR CONTINUATIONS BELOW AND SHEET M103 FOR CONTINUATIONS ABOVE.

F. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION AND EQUIPMENT CLEARANCES.

G. ALL CONDENSATE DRAIN PIPING TO MAINTAIN MINIMUM SLOPE OF 1/8" PER FT.

H. PROVIDE ACCESS PANEL IN DUCT FOR INSPECTION / MAINTENANCE OF EACH FSD SHOWN ON PLANS.

I. THE BUILDING SYSTEM IS DESIGNED FOR CONTINUOUS OPERATION OF SUPPLY/EXHAUST VENTILATION.

J. AIR LEAKAGE IN DWELLING UNITS SHALL BE LESS THAN OR EQUAL TO 0.3 CFM PER SQFT. OF DWELLING UNIT AT A DUCT STATIC PRESSURE OF 50 PASCALS (~0.2" W.C.).

KEY NOTES

NUMBERS INDICATE NOTES SHOWN ON PLAN

1. 8"Ø SA DUCT DOWN TO CEILING DIFFUSER FOR COMMON CORRIDOR VENTILATION.
2. INDOOR HEAT PUMP ABOVE CEILING TO SERVE CONDITIONED SPACE, AS SHOWN. UNIT TO BE PROVIDED AS A DEFERRED SUBMITTAL. COORDINATE ALL ASPECTS OF INSTALLATION IN FIELD DURING CONSTRUCTION.
3. ROUTE 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO TAILPIECE OF LAV.
4. RELIEF GRILLE SERVING CORRIDOR. PROVIDE 10"x"8 RELIEF AIR DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
5. PROVIDE CLEANOUT AT EACH CHANGE IN DIRECTION.
6. CEILING-MOUNTED BATHROOM EXHAUST FAN. PROVIDE 6"Ø EA DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
7. CEILING-MOUNTED TRASH ROOM EXHAUST FAN W/ FACTORY BACKDRAFT DAMPER.
8. 7"Ø SA DUCT DOWN TO CEILING DIFFUSER.
9. NOT USED.
10. KITCHEN HOOD WITH FACTORY BACKDRAFT DAMPER.
11. ROUTE 10"x3" EA DUCT FROM KITCHEN HOOD TO COMMON EXHAUST PLENUM. PROTECT PENETRATION THRU FIRE-RATED WALL W/ AN APPROVED FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER AND SHALL HAVE AN F RATING OF NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL.
12. ROOM T-STAT. COORDINATE FINAL LOCATION WITH OWNER.
13. ROUTE DUCT THRU EXTERIOR WALL TO INTAKE/EXHAUST/RELIEF LOUVER.
14. PROVIDE RA CEILING GRILLE FOR PLENUM RETURN.
15. PROVIDE FULL SIZE SA DUCT TO SIDEWALL GRILLE FOR HORIZONTAL DISCHARGE.
16. PROVIDE DUCT SMOKE DETECTOR UPSTREAM OF FIRE SMOKE DAMPER (POTTORFF MODEL FSD-341, OR OTHER UL 555/555S-RATED EQUAL) FOR 2 HR. FIRE-RATED WALL.
17. ROUTE 3/4" CONDENSATE DRAIN RISER DOWN TIGHT TO UNDERSIDE OF LEVEL 1 PODIUM.

NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER R. WEBB — M-33489 — MECHANICAL — STATE OF CALIFORNIA

CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

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LOS ANGELES, CA 90016

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7	PC RESUBMITTAL	07/10/23
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10	PC RESUBMITTAL (ELEC)	09/12/23
11	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

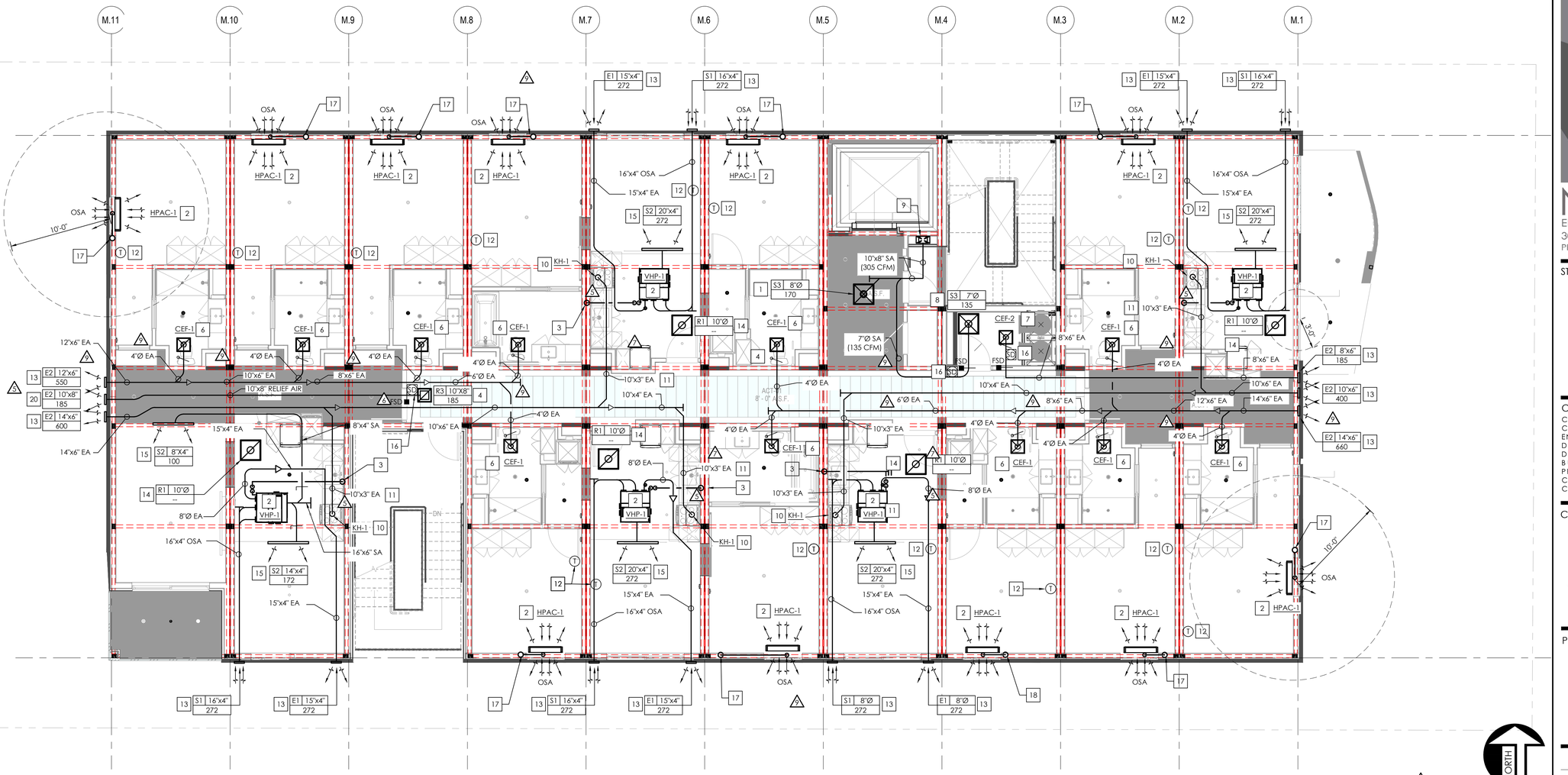
Plot Date: 10/12/2023 9:21:37 AM

SHEET TITLE:

LEVEL 2 HVAC PLAN

SHEET NO:

M102



LEVEL 3 - HVAC PLAN

SCALE 3/16" - 1'-0"

1

PLAN NOTES

A. REFER TO SHEET M001 FOR GENERAL MECHANICAL INFORMATION AND M002 FOR HVAC SPECIFICATIONS.

B. REFER TO SHEET M003 FOR ALL SCHEDULES, SEQUENCES AND CONTROLS.

C. REFER TO SHEET M401 FOR DETAILS.

D. REFER TO SHEET M402 FOR OSA CALCULATIONS.

E. REFER TO SHEET M101 FOR CONTINUATIONS BELOW AND SHEET M103 FOR CONTINUATIONS ABOVE.

F. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION AND EQUIPMENT CLEARANCES.

G. ALL CONDENSATE DRAIN PIPING TO MAINTAIN MINIMUM SLOPE OF 1/8" PER FT.

H. PROVIDE ACCESS PANEL IN DUCT FOR INSPECTION / MAINTENANCE OF EACH FSD SHOWN ON PLANS.

I. THE BUILDING SYSTEM IS DESIGNED FOR CONTINUOUS OPERATION OF SUPPLY/EXHAUST VENTILATION.

J. AIR LEAKAGE IN DWELLING UNITS SHALL BE LESS THAN OR EQUAL TO 0.3 CFM PER SQFT. OF DWELLING UNIT AT A DUCT STATIC PRESSURE OF 50 PASCALS (−0.2" W.C.).

KEY NOTES

NUMBERS INDICATE NOTES SHOWN ON PLAN

1. 8"Ø SA DUCT DOWN TO CEILING DIFFUSER FOR COMMON CORRIDOR VENTILATION.
2. INDOOR HEAT PUMP ABOVE CEILING TO SERVE CONDITIONED SPACE, AS SHOWN. UNIT TO BE PROVIDED AS A DEFERRED SUBMITTAL. COORDINATE ALL ASPECTS OF INSTALLATION IN FIELD DURING CONSTRUCTION.
3. ROUTE 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO TAILPIECE OF LAV.
4. RELIEF GRILLE SERVING CORRIDOR. PROVIDE 10"x"8 RELIEF AIR DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
5. PROVIDE CLEANOUT AT EACH CHANGE IN DIRECTION.
6. CEILING-MOUNTED BATHROOM EXHAUST FAN. PROVIDE 6"Ø EA DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
7. CEILING-MOUNTED TRASH ROOM EXHAUST FAN W/ FACTORY BACKDRAFT DAMPER.
8. 7"Ø SA DUCT DOWN TO CEILING DIFFUSER.
9. PROVIDE 16"x8" SA DUCT TRANSITION TO 10"x8" SA AFTER BRANCH SERVING THIS FLOOR.
10. KITCHEN HOOD WITH FACTORY BACKDRAFT DAMPER.
11. ROUTE 10"x3" EA DUCT FROM KITCHEN HOOD TO COMMON EXHAUST PLENUM. PROTECT PENETRATION THRU FIRE-RATED WALL W/ AN APPROVED FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER AND SHALL HAVE AN F RATING OF NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL.
12. ROOM T-STAT. COORDINATE FINAL LOCATION WITH OWNER.
13. ROUTE DUCT THRU EXTERIOR WALL TO INTAKE/EXHAUST/RELIEF LOUVER.
14. PROVIDE RA CEILING GRILLE FOR PLENUM RETURN.
15. PROVIDE FULL SIZE SA DUCT TO SIDEWALL GRILLE FOR HORIZONTAL DISCHARGE.
16. PROVIDE DUCT SMOKE DETECTOR UPSTREAM OF FIRE SMOKE DAMPER (POTTORFF MODEL FSD-341, OR OTHER UL 555/555S-RATED EQUAL) FOR 2 HR. FIRE-RATED WALL.
17. ROUTE 3/4" CONDENSATE DRAIN RISER DOWN TIGHT TO UNDERSIDE OF LEVEL 1 PODIUM.

NATIONAL
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30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER R. WEBB M-33489 MECHANICAL CALIFORNIA

CLIENT:

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10	PC RESUBMITTAL (ELEC)	09/12/23
11	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

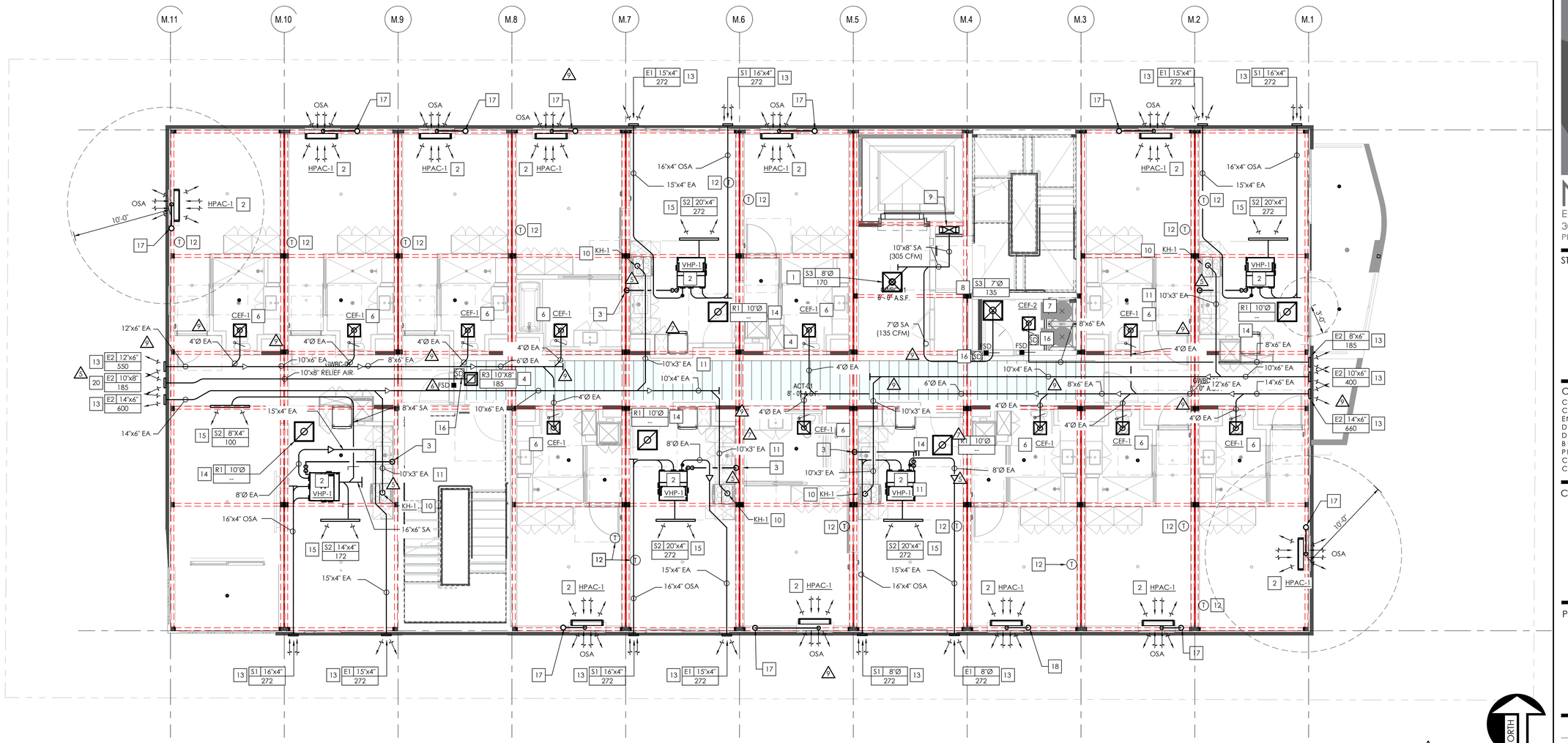
Plot Date: 10/12/2023 9:21:46 AM

SHEET TITLE:

LEVEL 3
HVAC PLAN 2

SHEET NO:

M103



LEVEL 4 - HVAC PLAN

SCALE 3/16" - 1'-0"

1

PLAN NOTES

A. REFER TO SHEET M001 FOR GENERAL MECHANICAL INFORMATION AND M002 FOR HVAC SPECIFICATIONS.

B. REFER TO SHEET M003 FOR ALL SCHEDULES, SEQUENCES AND CONTROLS.

C. REFER TO SHEET M401 FOR DETAILS.

D. REFER TO SHEET M402 FOR OSA CALCULATIONS.

E. REFER TO SHEET M101 FOR CONTINUATIONS BELOW AND SHEET M103 FOR CONTINUATIONS ABOVE.

F. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION AND EQUIPMENT CLEARANCES.

G. ALL CONDENSATE DRAIN PIPING TO MAINTAIN MINIMUM SLOPE OF 1/8" PER FT.

H. PROVIDE ACCESS PANEL IN DUCT FOR INSPECTION / MAINTENANCE OF EACH FSD SHOWN ON PLANS.

I. THE BUILDING SYSTEM IS DESIGNED FOR CONTINUOUS OPERATION OF SUPPLY/EXHAUST VENTILATION.

J. AIR LEAKAGE IN DWELLING UNITS SHALL BE LESS THAN OR EQUAL TO 0.3 CFM PER SQFT. OF DWELLING UNIT AT A DUCT STATIC PRESSURE OF 50 PASCALS (~0.2" W.C.).

KEY NOTES

NUMBERS INDICATE NOTES SHOWN ON PLAN

1. 8"Ø SA DUCT DOWN TO CEILING DIFFUSER FOR COMMON CORRIDOR VENTILATION.
2. INDOOR HEAT PUMP ABOVE CEILING TO SERVE CONDITIONED SPACE, AS SHOWN. UNIT TO BE PROVIDED AS A DEFERRED SUBMITTAL. COORDINATE ALL ASPECTS OF INSTALLATION IN FIELD DURING CONSTRUCTION.
3. ROUTE 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO TAILPIECE OF LAV.
4. RELIEF GRILLE SERVING CORRIOR. PROVIDE 10"X"8 RELIEF AIR DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
5. PROVIDE CLEANOUT AT EACH CHANGE IN DIRECTION.
6. CEILING-MOUNTED BATHROOM EXHAUST FAN. PROVIDE 6"Ø EA DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
7. CEILING-MOUNTED TRASH ROOM EXHAUST FAN W/ FACTORY BACKDRAFT DAMPER.
8. 7"Ø SA DUCT DOWN TO CEILING DIFFUSER.
9. PROVIDE 24"x8" SA DUCT TRANSITION TO 16"x8" SA AFTER BRANCH SERVING THIS FLOOR.
10. KITCHEN HOOD WITH FACTORY BACKDRAFT DAMPER.
11. ROUTE 10"x3" EA DUCT FROM KITCHEN HOOD TO COMMON EXHAUST PLENUM. PROTECT PENETRATION THRU FIRE-RATED WALL W/ AN APPROVED FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER AND SHALL HAVE AN F RATING OF NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL.
12. ROOM T-STAT. COORDINATE FINAL LOCATION WITH OWNER.
13. ROUTE DUCT THRU EXTERIOR WALL TO INTAKE/EXHAUST/RELIEF LOUVER.
14. PROVIDE RA CEILING GRILLE FOR PLENUM RETURN.
15. PROVIDE FULL SIZE SA DUCT TO SIDEWALL GRILLE FOR HORIZONTAL DISCHARGE.
16. PROVIDE DUCT SMOKE DETECTOR UPSTREAM OF FIRE SMOKE DAMPER (POTTORFF MODEL FSD-341, OR OTHER UL 555/555S-RATED EQUAL) FOR 2 HR. FIRE-RATED WALL.
17. ROUTE 3/4" CONDENSATE DRAIN RISER DOWN TIGHT TO UNDERSIDE OF LEVEL 1 PODIUM.

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ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER R. WEBB M-33489 MECHANICAL CALIFORNIA

CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
1	PC RESUBMITTAL	05/18/22
2	PC RESUBMITTAL	10/28/22
3	HCD REVISION 1	12/16/22
4	PC RESUBMITTAL	02/02/23
5	HCD & PC RESUBMITTAL	06/06/23
6	HCD RESUBMITTAL	06/14/23
7	PC RESUBMITTAL	07/10/23
8	CLIENT REVISIONS	07/11/23
9	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
11	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

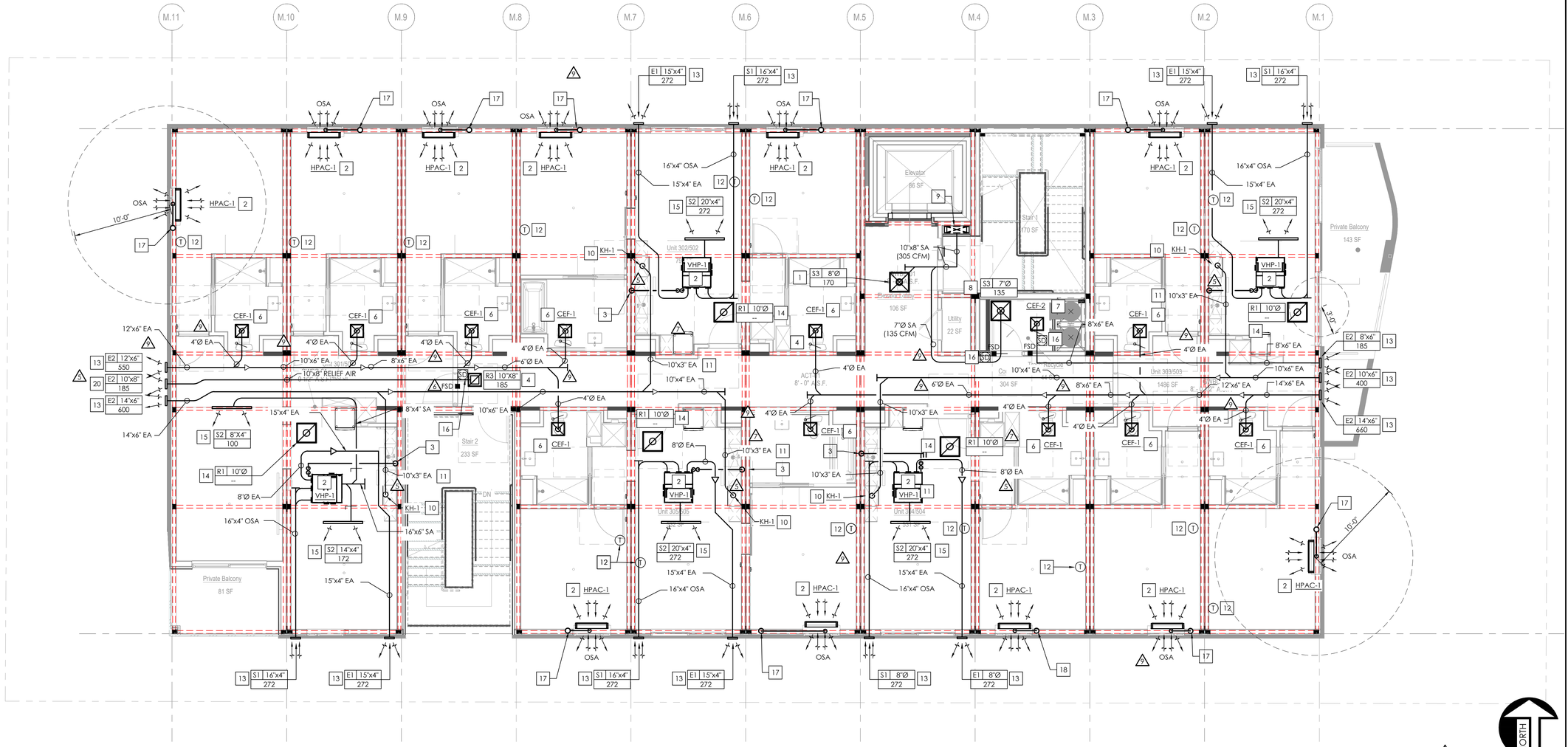
Plot Date: 10/12/2023 9:22:38 AM

SHEET TITLE:

LEVEL 4
HVAC PLAN

SHEET NO:

M104



NORTH

LEVEL 5 HVAC PLAN

SCALE 3/16" - 1'-0"

1

PLAN NOTES

A. REFER TO SHEET M001 FOR GENERAL MECHANICAL INFORMATION AND M002 FOR HVAC SPECIFICATIONS.

B. REFER TO SHEET M003 FOR ALL SCHEDULES, SEQUENCES AND CONTROLS.

C. REFER TO SHEET M401 FOR DETAILS.

D. REFER TO SHEET M402 FOR OSA CALCULATIONS.

E. REFER TO SHEET M101 FOR CONTINUATIONS BELOW AND SHEET M103 FOR CONTINUATIONS ABOVE.

F. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION AND EQUIPMENT CLEARANCES.

G. ALL CONDENSATE DRAIN PIPING TO MAINTAIN MINIMUM SLOPE OF 1/8" PER FT.

H. PROVIDE ACCESS PANEL IN DUCT FOR INSPECTION / MAINTENANCE OF EACH FSD SHOWN ON PLANS.

I. THE BUILDING SYSTEM IS DESIGNED FOR CONTINUOUS OPERATION OF SUPPLY/EXHAUST VENTILATION.

J. AIR LEAKAGE IN DWELLING UNITS SHALL BE LESS THAN OR EQUAL TO 0.3 CFM PER SQFT. OF DWELLING UNIT AT A DUCT STATIC PRESSURE OF 50 PASCALS (~0.2" W.C.).

KEY NOTES

[#] NUMBERS INDICATE NOTES SHOWN ON PLAN

1. 8"Ø SA DUCT DOWN TO CEILING DIFFUSER FOR COMMON CORRIDOR VENTILATION.
2. INDOOR HEAT PUMP ABOVE CEILING TO SERVE CONDITIONED SPACE, AS SHOWN. UNIT TO BE PROVIDED AS A DEFERRED SUBMITTAL. COORDINATE ALL ASPECTS OF INSTALLATION IN FIELD DURING CONSTRUCTION.
3. ROUTE 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO TAILPIECE OF LAV.
4. RELIEF GRILLE SERVING CORRIDOR. PROVIDE 10"x"8 RELIEF AIR DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
5. PROVIDE CLEANOUT AT EACH CHANGE IN DIRECTION.
6. CEILING-MOUNTED BATHROOM EXHAUST FAN. PROVIDE 6"Ø EA DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING. DUCT PENETRATION MEETS ALL OF THE EXCEPTIONS LISTED IN SECTION 717.5.4 OF THE LABC.
7. CEILING-MOUNTED TRASH ROOM EXHAUST FAN W/ FACTORY BACKDRAFT DAMPER.
8. 7"Ø SA DUCT DOWN TO CEILING DIFFUSER.
9. PROVIDE 30"x8" SA DUCT TRANSITION TO 24"x8" SA AFTER BRANCH SERVING THIS FLOOR.
10. KITCHEN HOOD WITH FACTORY BACKDRAFT DAMPER.
11. ROUTE 10"x3" EA DUCT FROM KITCHEN HOOD TO COMMON EXHAUST PLENUM. PROTECT PENETRATION THRU FIRE-RATED WALL W/ AN APPROVED FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER AND SHALL HAVE AN F RATING OF NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL.
12. ROOM T-STAT. COORDINATE FINAL LOCATION WITH OWNER.
13. ROUTE DUCT THRU EXTERIOR WALL TO INTAKE/EXHAUST/RELIEF LOUVER.
14. PROVIDE RA CEILING GRILLE FOR PLENUM RETURN.
15. PROVIDE FULL SIZE SA DUCT TO SIDEWALL GRILLE FOR HORIZONTAL DISCHARGE.
16. PROVIDE DUCT SMOKE DETECTOR UPSTREAM OF FIRE SMOKE DAMPER (POTTORFF MODEL FSD-341, OR OTHER UL 555/555S-RATED EQUAL) FOR 2 HR. FIRE-RATED WALL.
17. ROUTE 3/4" CONDENSATE DRAIN RISER DOWN TIGHT TO UNDERSIDE OF LEVEL 1 PODIUM.
18. 3/4" CONDENSATE DRAIN PIPING FROM HVAC UNIT ABOVE.

NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

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REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER R. WEBB M-33489 MECHANICAL CALIFORNIA

CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

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6	HCD RESUBMITTAL	06/14/23
7	PC RESUBMITTAL	07/10/23
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9	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
11	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

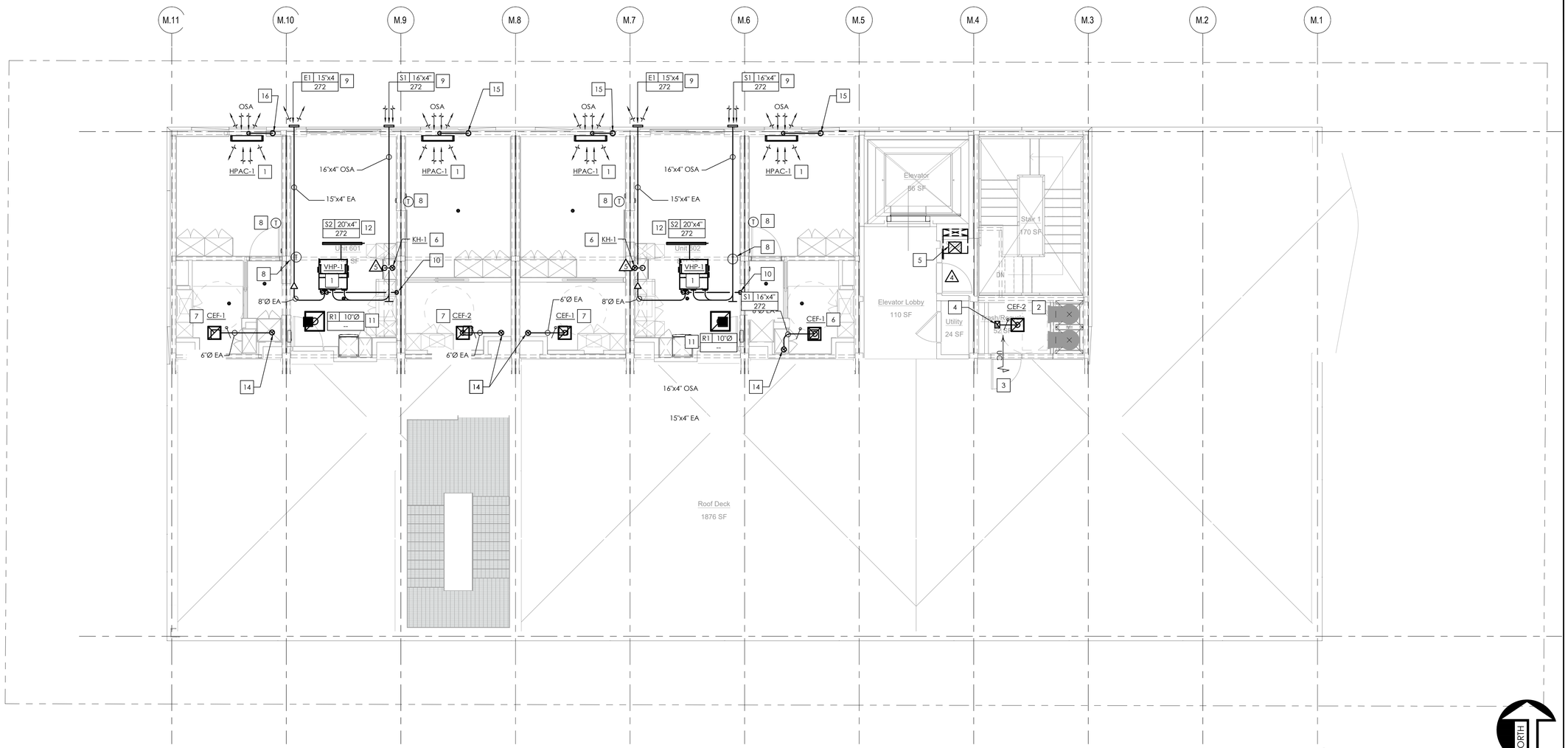
Plot Date: 10/12/2023 9:20:52 AM

SHEET TITLE:

LEVEL 5
HVAC PLAN

SHEET NO:

M105



LEVEL 6 HVAC PLAN — SCALE 3/16" - 1'-0" — 1

PLAN NOTES

A. REFER TO SHEET M001 FOR GENERAL MECHANICAL INFORMATION AND M002 FOR HVAC SPECIFICATIONS.

B. REFER TO SHEET M003 FOR ALL SCHEDULES, SEQUENCES AND CONTROLS.

C. REFER TO SHEET M401 FOR DETAILS.

D. REFER TO SHEET M402 FOR OSA CALCULATIONS.

E. REFER TO SHEET M101 FOR CONTINUATIONS BELOW AND SHEET M103 FOR CONTINUATIONS ABOVE.

F. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION AND EQUIPMENT CLEARANCES.

G. ALL CONDENSATE DRAIN PIPING TO MAINTAIN MINIMUM SLOPE OF 1/8" PER FT.

H. PROVIDE ACCESS PANEL IN DUCT FOR INSPECTION / MAINTENANCE OF EACH FSD SHOWN ON PLANS.

I. THE BUILDING SYSTEM IS DESIGNED FOR CONTINUOUS OPERATION OF SUPPLY/EXHAUST VENTILATION.

J. AIR LEAKAGE IN DWELLING UNITS SHALL BE LESS THAN OR EQUAL TO 0.3 CFM PER SQFT. OF DWELLING UNIT AT A DUCT STATIC PRESSURE OF 50 PASCALS (−0.2" W.C.).

KEY NOTES

[#] NUMBERS INDICATE NOTES SHOWN ON PLAN

1. INDOOR HEAT PUMP ABOVE CEILING TO SERVE CONDITIONED SPACE, AS SHOWN. UNIT TO BE PROVIDED AS A DEFERRED SUBMITTAL. COORDINATE ALL ASPECTS OF INSTALLATION IN FIELD DURING CONSTRUCTION.
2. CEILING-MOUNTED TRASH ROOM EXHAUST FAN W/ FACTORY BACKDRAFT DAMPER.
3. PROVIDE LOUVERED DOOR W/ MIN. FREE AREA OF 0.625 S.F.
4. 8"X6" EA DUCT THRU ROOF W/ FACTORY ROOF JACK.
5. PROVIDE DUCT TRANSITION DOWN FROM ROOF-MOUNTED SUPPLY FAN TO 30"x8" SA PLENUM. ROUTE 30"x8" SA DUCT DOWN THRU MECHANICAL CHASE.
6. KITCHEN RANGE HOOD W/ FACTORY BACKDRAFT DAMPER. PROVIDE 7" Ø EA DUCT THRU ROOF WITH FACTORY ROOF JACK. PROTECT PENETRATION THRU FIRE-RATED STRUCTURE W/ AN APPROVED FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER AND SHALL HAVE AN F RATING OF NOT LESS THAN 1 HOUR BUT NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE STRUCTURE PENETRATED.
7. CEILING MOUNTED BATHROOM EXHAUST FAN. PROVIDE 6"Ø EA DUCT (MIN. 26 GAUGE GALVANIZED STEEL) THRU FIRE-RATED WALL WITH MIN. 12" LONG BY 0.06" THICK STEEL SLEEVE, CENTERED IN EACH DUCT OPENING.
8. ROOM T-STAT. COORDINATE FINAL LOCATION WITH OWNER.
9. ROUTE DUCT THRU EXTERIOR WALL TO INTAKE/EXHAUST/RELIEF LOUVER.
10. ROUTE 3/4" CONDENSATE DRAIN PIPING DOWN TO DISCHARGE INTO TAILPIECE OF LAV.
11. PROVIDE RA CEILING GRILLE FOR PLENUM RETURN.
12. PROVIDE FULL SIZE SA DUCT TO SIDEWALL GRILLE FOR HORIZONTAL DISCHARGE.
13. PROVIDE DUCT SMOKE DETECTOR DOWNSTREAM OF FIRE SMOKE DAMPER (POTTORFF MODEL FSD-341, OR OTHER UL 555/555S-RATED EQUAL) FOR 2 HR. FIRE-RATED WALL.
14. 6"Ø EA DTR W/ ROOF CAP.
15. ROUTE 3/4" CONDENSATE DRAIN RISER DOWN TO SERVE LOWER LEVELS.
16. ROUTE 3/4" CONDENSATE DRAIN DOWN THRU FIN. FLOOR INTO LVL 5 CEILING SPACE.

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ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER R. WEBB — M-33489 — MECHANICAL — STATE OF CALIFORNIA

CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

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10	PC RESUBMITTAL (ELEC)	09/12/23
11	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

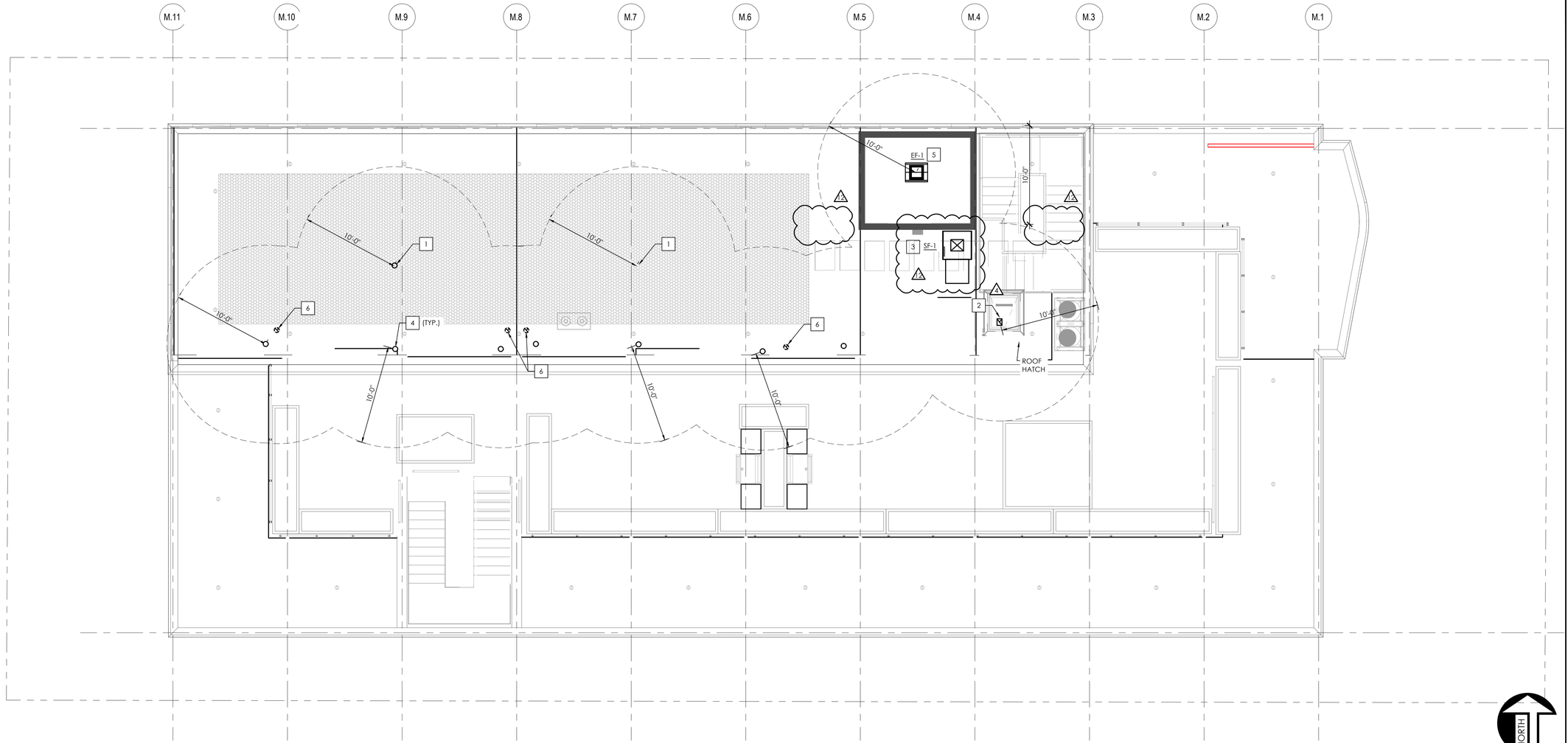
Plot Date: 10/12/2023 9:21:05 AM

SHEET TITLE:

LEVEL 6
HVAC PLAN

SHEET NO:

M106



△2 ROOF PLAN — SCALE 3/16" - 1'-0" — 1

PLAN NOTES

A. REFER TO SHEET M001 FOR GENERAL MECHANICAL INFORMATION AND M002 FOR HVAC SPECIFICATIONS.

B. REFER TO SHEET M003 FOR ALL SCHEDULES, SEQUENCES AND CONTROLS.

C. REFER TO SHEET M401 FOR DETAILS.

D. REFER TO SHEET M402 FOR OSA CALCULATIONS.

E. REFER TO SHEET M102 FOR CONTINUATIONS BELOW. △5

F. REFER TO MANUFACTURER'S GUIDELINES FOR PROPER INSTALLATION AND EQUIPMENT CLEARANCES.

G. ALL EXHAUST AIR AND PLUMBING VTR TO MAINTAIN 10' MINIMUM CLEARANCE FROM ANY OSA INTAKE.

△2

KEY NOTES

[#] NUMBERS INDICATE NOTES SHOWN ON PLAN

1. 7"Ø EA DTR W/ FACTORY ROOF JACK FROM KITCHEN HOOD.
2. 8"x6" EA DTR W/ FACTORY ROOF JACK FROM TRASH ROOM EXHAUST FAN.
3. ROOF-MOUNTED SUPPLY FAN WITH FACTORY ROOF CURB.
4. PLUMBING VENT THRU ROOF. REFER TO PLUMBING DRAWINGS FOR SIZE.
5. ROOF-MOUNTED EXHAUST FAN WITH FACTORY ROOF CURB SERVING ELEVATOR HOISTWAY.
6. 6"Ø EA DTR W/ ROOF CAP. △5

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ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER R. WEBB
M-33489
MECHANICAL
STATE OF CALIFORNIA

CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

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△4	PC RESUBMITTAL	02/02/23
△5	HCD & PC RESUBMITTAL	06/06/23
△6	HCD RESUBMITTAL	06/14/23
△7	PC RESUBMITTAL	07/10/23
△8	CLIENT REVISIONS	07/11/23
△9	CLIENT REVISIONS	08/04/23
△10	PC RESUBMITTAL (ELEC)	09/12/23
△11	PC RESUBMITTAL (ELEC)	10/05/23
△12	CLIENT REVISIONS	10/12/23

Plot Date: 10/12/2023 9:21:28 AM

SHEET TITLE:

ROOF PLAN

SHEET NO:

M201

JVX3240SJ

GE Appliances 24" Under the Cabinet Hood

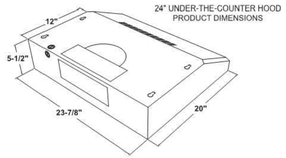
DIMENSIONS AND INSTALLATION INFORMATION (IN INCHES)

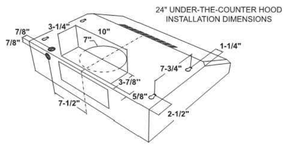
WB02X11537 replacement grease filter and JXCF53 replacement charcoal filter are available for additional cost. Call toll-free 800.626.2000.

Installation Information: Before installing, consult installation instructions packed with product, for current dimensional data.

Additional accessories:
JXDA22 optional damper

AMP RATING	
120V	2.5





Exhaust outlet connects to 3-1/4" x 10" rectangular duct. Vent top or rear. Includes rectangular damper.

GE APPLIANCES

For answers to your Monogram, GE Café™, GE Profile™ or GE Appliances product questions, visit our website at geappliances.com or call GE Answer Center® Service, 800.626.2000.

ENERGY STAR QUALIFIED · UL Listed by Underwriters Laboratories · AHAM VERIFIED

Specification Revised 6/20

JVX3240SJ

GE Appliances 24" Under the Cabinet Hood

FEATURES AND BENEFITS

Easy installation – 10 minutes or less by one person

Two-speed, 200-CFM venting system – Removes smoke, grease, odors and moisture

Front controls - Enjoy easy access and a subtle appearance

Cooktop lighting – Illuminate cooking space and surrounding surface

Convertible venting options - Select recirculating or external venting

Vertical and rear exhaust – Exhausts from the top or rear of the hood

Appearance (Partially enclosed bottom) – Enjoy easy access to hood interior

Dishwasher safe filter – Filters grease and is dishwasher-safe

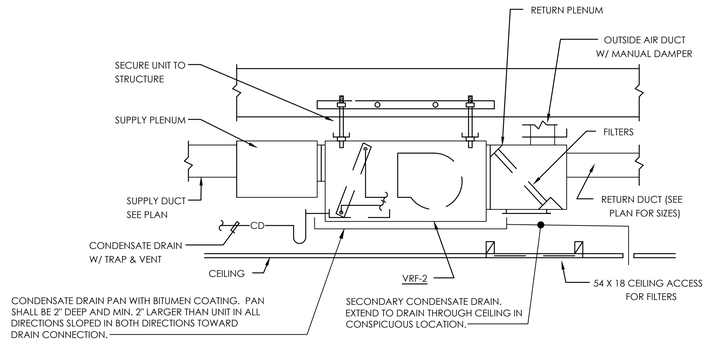
Model JVX3240SJSS – Stainles steel

CFM/SONES RATINGS	
Exhaust High Speed (HS)	200/6.5
Exhaust Low Speed (LS)	130/5.0

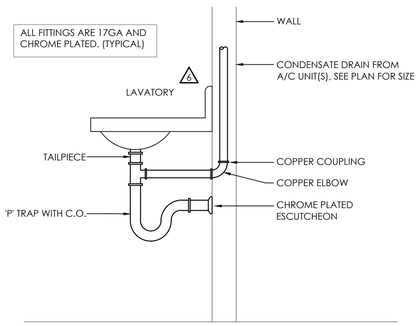
GE APPLIANCES

Specification Revised 6/20

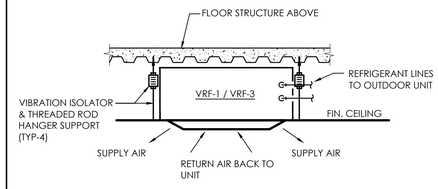
KITCHEN HOOD (KH-1) DETAIL — SCALE: NO SCALE — 10



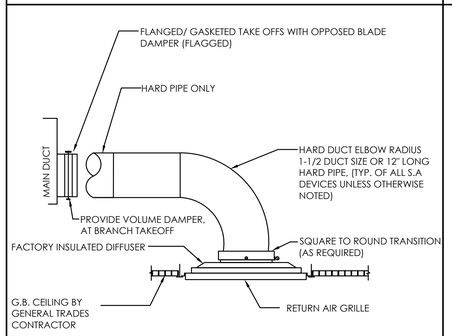
⚠2 INDOOR FAN COIL UNIT DETAIL — SCALE: N.T.S. — 4



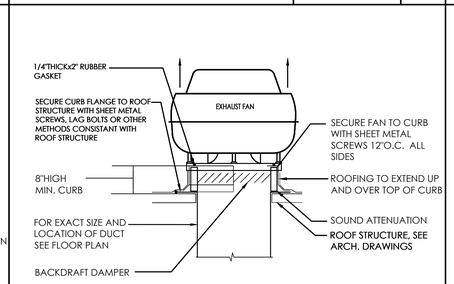
COND. DRAIN TO 'P' TRAP DETAIL — SCALE: NO SCALE — 7



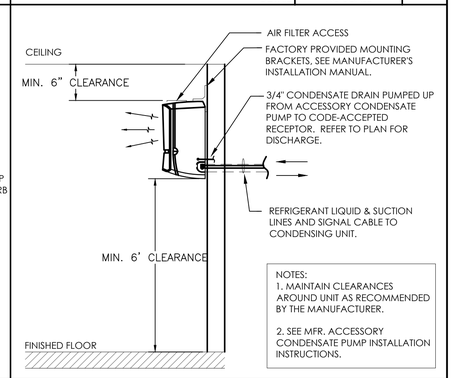
VRF SUSPENSION DETAIL — SCALE: NO SCALE — 3



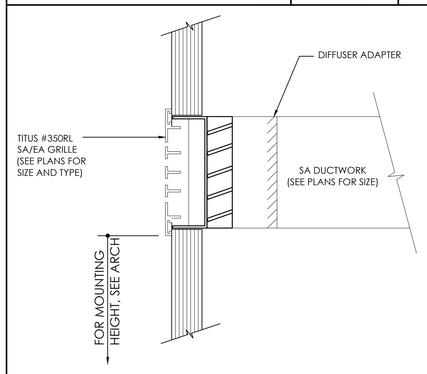
RETURN AIR GRILLE DETAIL — SCALE: NO SCALE — 9



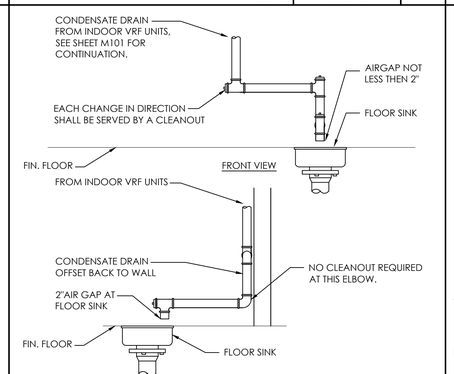
ROOF-MOUNTED EXHAUST FAN DETAIL — SCALE: NO SCALE — 6



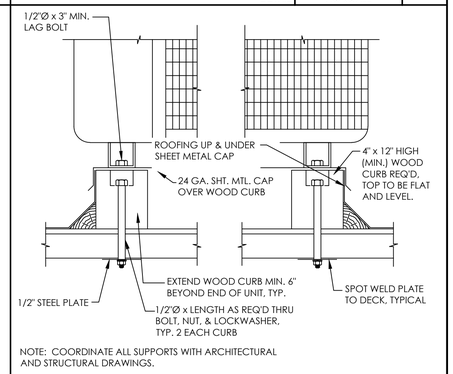
HIGHWALL FAN COIL UNIT DETAIL — SCALE: NO SCALE — 2



SIDEWALL GRILLE DETAIL — SCALE: NO SCALE — 8



CONDENSATE DRAIN DETAIL — SCALE: NO SCALE — 5



NOTE: COORDINATE ALL SUPPORTS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.

CU / HP MOUNTING DETAIL — SCALE: NO SCALE — 1

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30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

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REGISTERED PROFESSIONAL ENGINEER · CHRISTOPHER R. WEBB · M-33489 · MECHANICAL · STATE OF CALIFORNIA

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7	PC RESUBMITTAL	07/10/23
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Plot Date: 10/12/2023 9:21:24 AM

SHEET TITLE:

DETAILS

SHEET NO:

M401

OUTDOOR AIRFLOW RATE CALCULATIONS (COMMON CORRIDORS)

(COMPLIANT WITH 2019 CMC SECTION 403.0)

$V_{bz} = R_pP_z + R_aA_z$ ---------- **V_{bz} = 34 CFM**

(Breathing Zone CFM: Equation 403.2.1)

R_p = 5 CFM/Occupant

(People outdoor air rate: Table 402.1 - Pg 77)

P_z = 2 Occupants

(Zone Population)

R_a = 0.06 CFM/ft^2

(Area outdoor air rate: Table 402.1 - Pg 77 [ASHRAE 62.1:6.2.2.1])

A_z = 395 ft^2

(Net Occupiable Floor Area)

V_{bz} = 5 x 2 + 0.06 x 395

V_{bz} = 34

$V_{oz} = V_{bz}/E_z$ ---------- **V_{oz} = 34 CFM**

(Zone outdoor airflow: Equation 403.2.3)

E_z = 1

(Zone air distribution effectiv eness: Table 403.2.2 - Pg 79)

V_{oz} = 34 ÷ 1

$V_{ot} = V_{oz}$ = 34 CFM

(Single zone system outdoor airflow rate: Equation 4.3)

OUTDOOR AIRFLOW RATE CALCULATIONS (LVL. 1)

(COMPLIANT WITH 2019 CMC SECTION 403.0)

$V_{bz} = R_pP_z + R_aA_z$ ---------- **V_{bz} = 116 CFM**

(Breathing Zone CFM: Equation 403.2.1)

R_p = 5 CFM/Occupant

(People outdoor air rate: Table 402.1 - Pg 77)

P_z = 12 Occupants

(Zone Population)

R_a = 0.06 CFM/ft^2

(Area outdoor air rate: Table 402.1 - Pg 77 [ASHRAE 62.1:6.2.2.1])

A_z = 930 ft^2

(Net Occupiable Floor Area)

V_{bz} = 5 x 12 + 0.06 x 930

V_{bz} = 116

$V_{oz} = V_{bz}/E_z$ ---------- **V_{oz} = 116 CFM**

(Zone outdoor airflow: Equation 403.2.3)

E_z = 1

(Zone air distribution effectiv eness: Table 403.2.2 - Pg 79)

V_{oz} = 116 ÷ 1

$V_{ot} = V_{oz}$ = 116 CFM

(Single zone system outdoor airflow rate: Equation 4.3)

OUTDOOR AIRFLOW RATE CALCULATIONS (LVL. 2-5, UNIT #1)

(COMPLIANT WITH 2019 CMC SECTION 403.0)

$V_{bz} = R_pP_z + R_aA_z$ ---------- **V_{bz} = 104 CFM**

(Breathing Zone CFM: Equation 403.2.1)

R_p = 5 CFM/Occupant

(People outdoor air rate: Table 402.1 - Pg 77)

P_z = 4 Occupants

(Zone Population)

R_a = 0.06 CFM/ft^2

(Area outdoor air rate: Table 402.1 - Pg 77 [ASHRAE 62.1:6.2.2.1])

A_z = 1,395 ft^2

(Net Occupiable Floor Area)

V_{bz} = 5 x 4 + 0.06 x 1,395

V_{bz} = 104

$V_{oz} = V_{bz}/E_z$ ---------- **V_{oz} = 104 CFM**

(Zone outdoor airflow: Equation 403.2.3)

E_z = 1

(Zone air distribution effectiv eness: Table 403.2.2 - Pg 79)

V_{oz} = 104 ÷ 1

$V_{ot} = V_{oz}$ = 104 CFM

(Single zone system outdoor airflow rate: Equation 4.3)

OUTDOOR AIRFLOW RATE CALCULATIONS (LVL. 2-5, UNIT #2)

(COMPLIANT WITH 2019 CMC SECTION 403.0)

$V_{bz} = R_pP_z + R_aA_z$ ---------- **V_{bz} = 63 CFM**

(Breathing Zone CFM: Equation 403.2.1)

R_p = 5 CFM/Occupant

(People outdoor air rate: Table 402.1 - Pg 77)

P_z = 3 Occupants

(Zone Population)

R_a = 0.06 CFM/ft^2

(Area outdoor air rate: Table 402.1 - Pg 77 [ASHRAE 62.1:6.2.2.1])

A_z = 798 ft^2

(Net Occupiable Floor Area)

V_{bz} = 5 x 3 + 0.06 x 798

V_{bz} = 63

$V_{oz} = V_{bz}/E_z$ ---------- **V_{oz} = 63 CFM**

(Zone outdoor airflow: Equation 403.2.3)

E_z = 1

(Zone air distribution effectiv eness: Table 403.2.2 - Pg 79)

V_{oz} = 63 ÷ 1

$V_{ot} = V_{oz}$ = 63 CFM

(Single zone system outdoor airflow rate: Equation 4.3)

OUTDOOR AIRFLOW RATE CALCULATIONS (LVL. 2-5, UNIT #3)

(COMPLIANT WITH 2019 CMC SECTION 403.0)

$V_{bz} = R_pP_z + R_aA_z$ ---------- **V_{bz} = 69 CFM**

(Breathing Zone CFM: Equation 403.2.1)

R_p = 5 CFM/Occupant

(People outdoor air rate: Table 402.1 - Pg 77)

P_z = 3 Occupants

(Zone Population)

R_a = 0.06 CFM/ft^2

(Area outdoor air rate: Table 402.1 - Pg 77 [ASHRAE 62.1:6.2.2.1])

A_z = 903 ft^2

(Net Occupiable Floor Area)

V_{bz} = 5 x 3 + 0.06 x 903

V_{bz} = 69

$V_{oz} = V_{bz}/E_z$ ---------- **V_{oz} = 69 CFM**

(Zone outdoor airflow: Equation 403.2.3)

E_z = 1

(Zone air distribution effectiv eness: Table 403.2.2 - Pg 79)

V_{oz} = 69 ÷ 1

$V_{ot} = V_{oz}$ = 69 CFM

(Single zone system outdoor airflow rate: Equation 4.3)

OUTDOOR AIRFLOW RATE CALCULATIONS (LVL. 2-5, UNIT #4)

(COMPLIANT WITH 2019 CMC SECTION 403.0)

$V_{bz} = R_pP_z + R_aA_z$ ---------- **V_{bz} = 63 CFM**

(Breathing Zone CFM: Equation 403.2.1)

R_p = 5 CFM/Occupant

(People outdoor air rate: Table 402.1 - Pg 77)

P_z = 3 Occupants

(Zone Population)

R_a = 0.06 CFM/ft^2

(Area outdoor air rate: Table 402.1 - Pg 77 [ASHRAE 62.1:6.2.2.1])

A_z = 798 ft^2

(Net Occupiable Floor Area)

V_{bz} = 5 x 3 + 0.06 x 798

V_{bz} = 63

$V_{oz} = V_{bz}/E_z$ ---------- **V_{oz} = 63 CFM**

(Zone outdoor airflow: Equation 403.2.3)

E_z = 1

(Zone air distribution effectiv eness: Table 403.2.2 - Pg 79)

V_{oz} = 63 ÷ 1

$V_{ot} = V_{oz}$ = 63 CFM

(Single zone system outdoor airflow rate: Equation 4.3)

OUTDOOR AIRFLOW RATE CALCULATIONS (LVL. 2-5, UNIT #5)

(COMPLIANT WITH 2019 CMC SECTION 403.0)

$V_{bz} = R_pP_z + R_aA_z$ ---------- **V_{bz} = 63 CFM**

(Breathing Zone CFM: Equation 403.2.1)

R_p = 5 CFM/Occupant

(People outdoor air rate: Table 402.1 - Pg 77)

P_z = 3 Occupants

(Zone Population)

R_a = 0.06 CFM/ft^2

(Area outdoor air rate: Table 402.1 - Pg 77 [ASHRAE 62.1:6.2.2.1])

A_z = 801 ft^2

(Net Occupiable Floor Area)

V_{bz} = 5 x 3 + 0.06 x 801

V_{bz} = 63

$V_{oz} = V_{bz}/E_z$ ---------- **V_{oz} = 63 CFM**

(Zone outdoor airflow: Equation 403.2.3)

E_z = 1

(Zone air distribution effectiv eness: Table 403.2.2 - Pg 79)

V_{oz} = 63 ÷ 1

$V_{ot} = V_{oz}$ = 63 CFM

(Single zone system outdoor airflow rate: Equation 4.3)

OUTDOOR AIRFLOW RATE CALCULATIONS (LVL. 6, UNIT #1)

(COMPLIANT WITH 2019 CMC SECTION 403.0)

$V_{bz} = R_pP_z + R_aA_z$ ---------- **V_{bz} = 63 CFM**

(Breathing Zone CFM: Equation 403.2.1)

R_p = 5 CFM/Occupant

(People outdoor air rate: Table 402.1 - Pg 77)

P_z = 3 Occupants

(Zone Population)

R_a = 0.06 CFM/ft^2

(Area outdoor air rate: Table 402.1 - Pg 77 [ASHRAE 62.1:6.2.2.1])

A_z = 798 ft^2

(Net Occupiable Floor Area)

V_{bz} = 5 x 3 + 0.06 x 798

V_{bz} = 63

$V_{oz} = V_{bz}/E_z$ ---------- **V_{oz} = 63 CFM**

(Zone outdoor airflow: Equation 403.2.3)

E_z = 1

(Zone air distribution effectiv eness: Table 403.2.2 - Pg 79)

V_{oz} = 63 ÷ 1

$V_{ot} = V_{oz}$ = 63 CFM

(Single zone system outdoor airflow rate: Equation 4.3)

OUTDOOR AIRFLOW RATE CALCULATIONS (LVL. 6, UNIT #2)

(COMPLIANT WITH 2019 CMC SECTION 403.0)

$V_{bz} = R_pP_z + R_aA_z$ ---------- **V_{bz} = 63 CFM**

(Breathing Zone CFM: Equation 403.2.1)

R_p = 5 CFM/Occupant

(People outdoor air rate: Table 402.1 - Pg 77)

P_z = 3 Occupants

(Zone Population)

R_a = 0.06 CFM/ft^2

(Area outdoor air rate: Table 402.1 - Pg 77 [ASHRAE 62.1:6.2.2.1])

A_z = 799 ft^2

(Net Occupiable Floor Area)

V_{bz} = 5 x 3 + 0.06 x 799

V_{bz} = 63

$V_{oz} = V_{bz}/E_z$ ---------- **V_{oz} = 63 CFM**

(Zone outdoor airflow: Equation 403.2.3)

E_z = 1

(Zone air distribution effectiv eness: Table 403.2.2 - Pg 79)

V_{oz} = 63 ÷ 1

$V_{ot} = V_{oz}$ = 63 CFM

(Single zone system outdoor airflow rate: Equation 4.3)

NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

REGISTERED PROFESSIONAL ENGINEER CHRISTOPHER R. WEBB M-33489 MECHANICAL STATE OF CALIFORNIA

CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
1	PC RESUBMITTAL	05/18/22
2	PC RESUBMITTAL	10/28/22
3	HCD REVISION 1	12/16/22
4	PC RESUBMITTAL	02/02/23
5	HCD & PC RESUBMITTAL	06/06/23
6	HCD RESUBMITTAL	06/14/23
7	PC RESUBMITTAL	07/10/23
8	CLIENT REVISIONS	07/11/23
9	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
11	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

Plot Date: 10/12/2023 9:20:55 AM

SHEET TITLE:

DETAILS

SHEET NO:

M402

NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

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	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
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7	PC RESUBMITTAL	07/10/23
8	CLIENT REVISIONS	07/11/23
9	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
11	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

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SHEET TITLE:

TITLE 24
COMPLIANCE

SHEET NO:

M801

5

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E — 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:	JAIME-001	**Report Page:**	**(Page 1 of 20)**
Project Address:	2853 WEST BLVD	**Date Prepared:**	10/4/2021

A. GENERAL INFORMATION

01	Project Location (city)	LOS ANGELES	04	Total Conditioned Floor Area	3725
02	Climate Zone	8	05	Total Unconditioned Floor Area	309
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	6
☐ Office (B)		☐ Retail (M)	☒ Non-refrigerated Warehouse (S)		
☐ Hotel/ Motel Guest Rooms (R-1)		☐ School (E)	☐ Healthcare Facility (I)		
☐ High-Rise Residential (R-2/R-3)		☐ Relocatable Class Bldg (E)	☒ Other (write in)		See Table J

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, or §141.0(b)2 for alterations.

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

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20200601 — Report Generated: 2021-10-04 17:25:12

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name:	JAIME-001	**Report Page:**	**(Page 2 of 20)**
Project Address:	2853 WEST BLVD	**Date Prepared:**	10/4/2021

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 §110.1, §110.2, §140.4	AND	Pumps §140.4(k)	AND	Fans/ Economizers §140.4(c), §140.4(e)	AND	System Controls §110.2, §120.2, §140.4(f)	AND	Ventilation §120.1	AND	Terminal Box Controls §140.4(d)	AND	Distribution §120.3, §140.4(l)	AND	Cooling Towers §110.2(e)2	Compliance Results
(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	No	AND	Yes	AND	Yes	AND		AND	Yes	AND		COMPLIES
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.

E. ADDITIONAL REMARKS

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

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20200601 — Report Generated: 2021-10-04 17:25:12

NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER R. WEBB — M-33489 — CIVIL — STATE OF CALIFORNIA

CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

#	DESCRIPTION	DATE
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	UTILITY COORDINATION	04/08/22
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10	PC RESUBMITTAL (ELEC)	09/12/23
11	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

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SHEET TITLE:

TITLE 24 COMPLIANCE

SHEET NO:

M802

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-MCH-E**
Project Name:	JAIME-001	**Report Page:**	**(Page 3 of 20)**
Project Address:	2853 WEST BLVD	**Date Prepared:**	10/4/2021

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

This table is used to demonstrate compliance for mechanical equipment with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alterations.

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 / Title 20	Smallest Size Available[1] §140.4(a)	Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4 (a&b)						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
				Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
HP-1 / VRF-1 / VRF-2	Variable Refrigerant Flow	VRF heat pump, air cooled	NA: Load Controls	69.56	66	0	59.82	57	86.16	102.43
VHP-1 / HPAC-1	Unitary Heat Pumps	Air-cooled, pkg (1phase)	NA: Load Controls	154.03	11.5	0	173.83	10	-108.54	193.92
VHP-1 / HPAC-1	Unitary Heat Pumps	Air-cooled, pkg (1phase)	NA: Load Controls	154.03	11.5	0	173.82	10	-122.51	189.69
VHP-1 / HPAC-1	Unitary Heat Pumps	Air-cooled, pkg (1phase)	NA: Load Controls	154.03	11.5	0	173.81	10	-126.3	188.52
VHP-1 / HPAC-1	Unitary Heat Pumps	Air-cooled, pkg (1phase)	NA: Load Controls	154.03	11.5	0	173.87	10	-114.85	208.45

[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). Healthcare facilities are excepted.*

[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).*

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-MCH-E**
Project Name:	JAIME-001	**Report Page:**	**(Page 4 of 20)**
Project Address:	2853 WEST BLVD	**Date Prepared:**	10/4/2021

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Heating Mode				Cooling Mode		
		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
HP-1 / VRF-1 / VRF-2	<65,000	47 °Fdb/ 43 °Fwb OSA	HSPF	7.7	10	SEER	13.0	18.6
VHP-1 / HPAC-1	<65,000		HSPF	7.7	13	SEER	14.0	14
VHP-1 / HPAC-1	<65,000		HSPF	7.7	13	SEER	14.0	14
VHP-1 / HPAC-1	<65,000		HSPF	7.7	13	SEER	14.0	14
VHP-1 / HPAC-1	<65,000		HSPF	7.7	13	SEER	14.0	14

G. PUMPS

This section does not apply to this project.

H. FAN SYSTEMS & AIR ECONOMIZERS

This table is used to demonstrate compliance with prescriptive requirements found in §140.4(c), §140.4(e) and §140.4(m) 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:	HP-1 / VRF-1 / VRF-2	**Economizer:[1]**	NA: Special OA filtration	**Economizer Controls:**	Designed per §140.4(e) and (m)	**System Fan Type:**	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit[2]	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	
						Device	Design Airflow through Device (CFM)
Total System Design Supply Airflow (CFM):			0	Total System Design (B)HP:	0	**Maximum System Fan Power (B)HP:**	0

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-MCH-E**
Project Name:	JAIME-001	**Report Page:**	**(Page 5 of 20)**
Project Address:	2853 WEST BLVD	**Date Prepared:**	10/4/2021

H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	VHP-1 / HPAC-1	**Economizer:[1]**	NA: <=54 kBtu/h cooling	**Economizer Controls:**	Designed per §140.4(e) and (m)	**System Fan Type:**	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit[2]	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	
						Device	Design Airflow through Device (CFM)
SF	Supply	16	4352	BHP	1.2	NA	NA
RF	Return	16	0	BHP	1.2	NA	NA
Total System Design Supply Airflow (CFM):			4352	Total System Design (B)HP:	38.4	**Maximum System Fan Power (B)HP:**	0.26
System Name:	VHP-1 / HPAC-1	**Economizer:[1]**	NA: <=54 kBtu/h cooling	**Economizer Controls:**	Designed per §140.4(e) and (m)	**System Fan Type:**	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit[2]	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	
						Device	Design Airflow through Device (CFM)
SF	Supply	16	4352	BHP	1.2	NA	NA
RF	Return	16	0	BHP	1.2	NA	NA
Total System Design Supply Airflow (CFM):			4352	Total System Design (B)HP:	38.4	**Maximum System Fan Power (B)HP:**	0.26

STATE OF CALIFORNIA

Mechanical Systems

NRCC-MCH-E

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-MCH-E**
Project Name:	JAIME-001	**Report Page:**	**(Page 6 of 20)**
Project Address:	2853 WEST BLVD	**Date Prepared:**	10/4/2021

H. FAN SYSTEMS & AIR ECONOMIZERS

System Name:	VHP-1 / HPAC-1	**Economizer:[1]**	NA: <=54 kBtu/h cooling	**Economizer Controls:**	Designed per §140.4(e) and (m)	**System Fan Type:**	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit[2]	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	
						Device	Design Airflow through Device (CFM)
SF	Supply	16	4352	BHP	1.2	NA	NA
RF	Return	16	0	BHP	1.2	NA	NA
Total System Design Supply Airflow (CFM):			4352	Total System Design (B)HP:	38.4	**Maximum System Fan Power (B)HP:**	0.26
System Name:	VHP-1 / HPAC-1	**Economizer:[1]**	NA: <=54 kBtu/h cooling	**Economizer Controls:**	Designed per §140.4(e) and (m)	**System Fan Type:**	Constant Volume
01	02	03	04	05	06	07	08
Fan Name or Item Tag	Fan Function	Qty	Maximum Design Supply Airflow (CFM)	HP Unit[2]	Design HP	Fan Power Pressure Drop Adjustment - Table 140.4-B	
						Device	Design Airflow through Device (CFM)
SF	Supply	16	4352	BHP	1.2	NA	NA
RF	Return	16	0	BHP	1.2	NA	NA
Total System Design Supply Airflow (CFM):			4352	Total System Design (B)HP:	38.4	**Maximum System Fan Power (B)HP:**	0.26

[1] *FOOTNOTES: Computer room economizers must meet requirements of §140.9(a) and will be documented on the NRCC-PRC-E document.*

[2] *The unit used for HP must be consistent for all fans within a system.*

STATE OF CALIFORNIA

Mechanical Systems

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CERTIFICATE OF COMPLIANCE			**NRCC-MCH-E**
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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) or requirements in §141.0(b)2E for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft^2)	Thermostats §110.2(b) & (c)[1], §120.2(a)or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
HP-1 / VRF-1 / VRF-2	Multi-zone w/ DDC to zone	<= 25,000 ft^2	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
VHP-1 / HPAC-1	Single zone	<= 25,000 ft^2	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
VHP-1 / HPAC-1	Single zone	<= 25,000 ft^2	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
VHP-1 / HPAC-1	Single zone	<= 25,000 ft^2	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
VHP-1 / HPAC-1	Single zone	<= 25,000 ft^2	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided
VHP-1 / HPAC-1	Single zone	<= 25,000 ft^2	Setback	Auto Timer Switch	4 Hour Timer	EMCS	Included	Provided

[1] *FOOTNOTES: 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.*

*Notes: Controls with a * require a note in the space below explaining how compliance is achieved. EX: system 1: SA Temp Reset: Exempt because zones compliant with §140.4(d) ; EXCEPTION 1 to §140.4(f)

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J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)3B for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventialtion 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	☐	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☒	Check this box if the project included Nonresidential or Hotel/Motel spaces
	☐	Check this box if the project included new or altered high-rise residential dwelling units.
03	☐	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 Ventilation Systems

04		05		06		07
System Name	HP-1 / VRF-1 / VRF-2	System Design OA CFM Airflow[1]	819	System Design Transfer Air CFM	0	Air Filtration per §120.1(c) and §141.0(b)2 [2] Provided per §120.1(c) (NR and Hotel/Motel))

08	09	10	11	12	13	14	15	16	
Space Name ot item Tag	Mechanical Ventilation Required per §120.1(c)3 [3]					Exh. Vent per §120.1(c)4		DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 [6]	
	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		
LOBBY / COMMON AREAS	Lobbies	1103			551.5	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type
MECH / ELEC ROOMS	All others	348			0	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
CORRIDORS / LOBBY (2F)	Corridor	446			66.9	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type

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J. VENTILATION AND INDOOR AIR QUALITY

CORRIDORS / LOBBY (3F)	Corridor	446			66.9	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
CORRIDORS / LOBBY (4F)	Corridor	446			66.9	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
CORRIDORS / LOBBY (5F)	Corridor	446			66.9	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				819	18	Ventilation for this System Complies?		Yes

04		05		06		07
System Name	VHP-1 / HPAC-1	System Design OA CFM Airflow[1]	0	System Design Transfer Air CFM	0	Air Filtration per §120.1(c) and §141.0(b)2 [2] Provided per §120.1(c) (NR and Hotel/Motel))

08	09	10	11	12	13	14	15	16	
Space Name ot item Tag	Mechanical Ventilation Required per §120.1(c)3 [3]					Exh. Vent per §120.1(c)4		DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 [6]	
	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		
UNIT 1 (2F)	All others	1395			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type
UNIT 2 (2F)	All others	798			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type

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UNIT 3 (2F)	All others	903			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type
UNIT 4 (2F)	All others	798			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type
UNIT 5 (2F)	All others	801			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type
UTILITY ROOMS (2F)	All others	98			0	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				0	18	Ventilation for this System Complies?		Yes

04		05		06		07
System Name	VHP-1 / HPAC-1	System Design OA CFM Airflow[1]	0	System Design Transfer Air CFM	0	Air Filtration per §120.1(c) and §141.0(b)2 [2] Provided per §120.1(c) (NR and Hotel/Motel))

08	09	10	11	12	13	14	15	16	
Space Name ot item Tag	Mechanical Ventilation Required per §120.1(c)3 [3]					Exh. Vent per §120.1(c)4		DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 [6]	
	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		
UNIT 1 (3F)	All others	1395			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type

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J. VENTILATION AND INDOOR AIR QUALITY

UNIT 2 (3F)	All others	798			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type
UNIT 3 (3F)	All others	903			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type
UNIT 4 (3F)	All others	798			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type
UNIT 5 (3F)	All others	801			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type
UTILITY ROOMS (3F)	All others	98			0	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				0	18	Ventilation for this System Complies?		Yes

04		05		06		07
System Name	VHP-1 / HPAC-1	System Design OA CFM Airflow[1]	0	System Design Transfer Air CFM	0	Air Filtration per §120.1(c) and §141.0(b)2 [2] Provided per §120.1(c) (NR and Hotel/Motel))

08	09	10	11	12	13	14	15	16
Space Name ot item Tag	Mechanical Ventilation Required per §120.1(c)3 [3]					Exh. Vent per §120.1(c)4		DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 [6]
	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	

NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

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JAIME PARTNERS
OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
△1	PC RESUBMITTAL	05/18/22
△2	PC RESUBMITTAL	10/28/22
△3	HCD REVISION 1	12/16/22
△4	PC RESUBMITTAL	02/02/23
△5	HCD & PC RESUBMITTAL	06/06/23
△6	HCD RESUBMITTAL	06/14/23
△7	PC RESUBMITTAL	07/10/23
△8	CLIENT REVISIONS	07/11/23
△9	CLIENT REVISIONS	08/04/23
△10	PC RESUBMITTAL (ELEC)	09/12/23
△11	PC RESUBMITTAL (ELEC)	10/05/23
△12	CLIENT REVISIONS	10/12/23

Plot Date: 10/12/2023 9:22:17 AM

SHEET TITLE:

TITLE 24 COMPLIANCE

SHEET NO:

M803

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J. VENTILATION AND INDOOR AIR QUALITY

UNIT 1 (4F)	All others	1395			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type
UNIT 2 (4F)	All others	798			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type
UNIT 3 (4F)	All others	903			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type
UNIT 4 (4F)	All others	798			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type
UNIT 5 (4F)	All others	801			0	0	0	DCV	Provided per §120.1(d)4
								Occ Sensor	NA: Not required space type
UTILITY ROOMS (4F)	All others	98			0	0	0	DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				0	18	Ventilation for this System Complies?		Yes

04	05			06			07	
System Name	VHP-1 / HPAC-1	System Design OA CFM Airflow[1]		0	System Design Transfer Air CFM	0	Air Filtration per §120.1(c) and §141.0(b)2 [2]	Provided per §120.1(c) (NR and Hotel/Motel))
08	09	10	11	12	13	14	15	16

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J. VENTILATION AND INDOOR AIR QUALITY

Space Name ot item Tag	Mechanical Ventilation Required per §120.1(c)3 [3]				Exh. Vent per §120.1(c)4		DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 [4]	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM	
UNIT 1 (5F)	All others	1395			0	0	0	DCV: Provided per §120.1(d)4
								Occ Sensor: NA: Not required space type
UNIT 2 (5F)	All others	798			0	0	0	DCV: Provided per §120.1(d)4
								Occ Sensor: NA: Not required space type
UNIT 3 (5F)	All others	903			0	0	0	DCV: Provided per §120.1(d)4
								Occ Sensor: NA: Not required space type
UNIT 4 (5F)	All others	798			0	0	0	DCV: Provided per §120.1(d)4
								Occ Sensor: NA: Not required space type
UNIT 5 (5F)	All others	801			0	0	0	DCV: Provided per §120.1(d)4
								Occ Sensor: NA: Not required space type
UTILITY ROOMS (5F)	All others	98			0	0	0	DCV: NA: Not required per §120.1(d)3
								Occ Sensor: NA: Not required space type
17	Total System Required Min OA CFM				0	18	Ventilation for this System Complies?	Yes

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J. VENTILATION AND INDOOR AIR QUALITY

04	05			06			07	
System Name	VHP-1 / HPAC-1	System Design OA CFM Airflow[4]		0	System Design Transfer Air CFM	0	Air Filtration per §120.1(c) and §141.0(b)2 [2]	Provided per §120.1(c) (NR and Hotel/Motel))
08	09	10	11	12	13	14	15	16

Space Name ot item Tag	Mechanical Ventilation Required per §120.1(c)3 [3]				Exh. Vent per §120.1(c)4		DCV or Sensor Controls per §120.1(d)3, §120.1(d)5, and §120.1(e)3 [4]	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM	
UNIT 1 (6F)	All others	798			0	0	0	DCV: Provided per §120.1(d)4
								Occ Sensor: NA: Not required space type
UNIT 2 (6F)	All others	799			0	0	0	DCV: Provided per §120.1(d)4
								Occ Sensor: NA: Not required space type
UTILITY ROOMS (6F)	All others	98			0	0	0	DCV: NA: Not required per §120.1(d)3
								Occ Sensor: NA: Not required space type
17	Total System Required Min OA CFM				0	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.*

[5] *For lecture halls with fixed seating, the expected number of occupants shall be shall be determined in accordance with the California Building Code.*

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J. VENTILATION AND INDOOR AIR QUALITY

[1] *§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 requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Sealing

The answers to the questions below apply to the following duct systems:		VHP-1 / HPAC-1	Duct leakage testing triggered 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 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:		
		☐	Outdoors	
		☐	In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces	
		☐	In an unconditioned crawl space	
		☐	In other unconditioned spaces	
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16		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	Duct system shall be sealed in acordance with the California Mechanical Code		

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L. DISTRIBUTION (DUCTWORK and PIPING)

The answers to the questions below apply to the following duct systems:		VHP-1 / HPAC-1	Duct leakage testing triggered 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 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:		
		☐	Outdoors	
		☐	In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces	
		☐	In an unconditioned crawl space	
		☐	In other unconditioned spaces	
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16		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	Duct system shall be sealed in acordance with the California Mechanical Code		
The answers to the questions below apply to the following duct systems:		VHP-1 / HPAC-1	Duct leakage testing triggered 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 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:		
		☐	Outdoors	
		☐	In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces	
		☐	In an unconditioned crawl space	
		☐	In other unconditioned spaces	
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16		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	Duct system shall be sealed in acordance with the California Mechanical Code		

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L. DISTRIBUTION (DUCTWORK and PIPING)

The answers to the questions below apply to the following duct systems:		VHP-1 / HPAC-1	Duct leakage testing triggered 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 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:		
		☐	Outdoors	
		☐	In a space directly under a roof that has a U-factor greater than the u-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces	
		☐	In an unconditioned crawl space	
		☐	In other unconditioned spaces	
15		The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16		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	Duct system shall be sealed in acordance with the California Mechanical Code		

M. COOLING TOWERS

This section does not apply to this project.

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/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Yes	No	Form/Title	Field Inspector Pass	Field Inspector Fail
●	○	NRCI-MCH-01-E - Must be submitted for all buildings	☐	☐

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003 Schema Version: rev 20200601 — Report Generated: 2021-10-04 17:25:12

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name:	JAIME-001	Report Page: (Page 18 of 20)
Project Address:	2853 WEST BLVD	Date Prepared: 10/4/2021

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/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Yes	No	Form/Title	Systems To Be Field Verified	Field Inspector Pass	Field Inspector Fail
●	○	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.		☐	☐
●	○	NRCA-MCH-03-A - Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".		☐	☐
○	●	NRCA-MCH-04-A - Air Distribution Duct Leakage		☐	☐
○	●	NRCA-MCH-05-A - Air Economizer Controls		☐	☐
●	○	NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO_2) concentration setpoints.		☐	☐
○	●	NRCA-MCH-07-A Supply Fan Variable Flow Controls		☐	☐
○	●	NRCA-MCH-08-A Valve Leakage Test		☐	☐
○	●	NRCA-MCH-09-A Supply Water Temperature Reset Controls		☐	☐
○	●	NRCA-MCH-10-A Hydronic System Variable Flow Controls		☐	☐
●	○	NRCA-MCH-11-A Automatic Demand Shed Controls		☐	☐
○	●	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units		☐	☐
○	●	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance		☐	☐
○	●	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance NOTE: This form does not automatically move to "Yes". If Distributed Energy System DX AC Systems are included in teh scope permit applicant should move this form to "Yes".		☐	☐

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003 Schema Version: rev 20200601 — Report Generated: 2021-10-04 17:25:12

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name:	JAIME-001	Report Page: (Page 19 of 20)
Project Address:	2853 WEST BLVD	Date Prepared: 10/4/2021

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

○	●	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance NOTE: This form does not automatically move to "Yes". If Chilled water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External melt, Ice Harvester, Brine, Ice-Slurry, Eutecti Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".	☐	☐
●	○	NRCA-MCH-16-A Supply Air Temperature Reset Controls	☐	☐
○	●	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	☐	☐
●	○	NRCA-MCH-18-A Energy Management Control Systems	☐	☐
○	●	NRCA-MCH-19-A Occupancy Sensor Controls	☐	☐
○	●	NRCA-MCH-20 Multi-Family Ventilation	☐	☐
○	●	NRCA-MCH-21 Multi-Family Envelope Leakage	☐	☐

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

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 completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Provider's registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

Yes	No	Form/Title	Field Inspector Pass	Field Inspector Fail
○	●	NRCV-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
○	●	NRCV-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
○	●	NRCV-MCH-27 High-rise Residential *NOTE: Must be completed by a HERS Rater*	☐	☐
○	●	NRCV-MCH-32 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

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 Mandatory Measures Note Block	Yes	Plan sheet or construction document location: M-Sheets

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003 Schema Version: rev 20200601 — Report Generated: 2021-10-04 17:25:12

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name:	JAIME-001	Report Page: (Page 20 of 20)
Project Address:	2853 WEST BLVD	Date Prepared: 10/4/2021

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Christopher Webb	Documentation Author Signature: Christy R Webb
Company: National Engineering & Consulting, Inc.	Signature Date: 2021-10-04
Address: 30 Thomas	CEA/ HERS Certification Identification (If applicable): 8D43-D09A-BE1F-B7D9-5A73-54D5-D438-779B-B1AF-5D9D-2A75-0955-6C99-1F9B-3987-8809
City/State/Zip: Irvine, CA 92618	Phone: (949) 716-9990

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. 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)
3. 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.
4. 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.
5. 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: Christopher Webb	Responsible Designer Signature: Christy R Webb
Company: National Engineering & Consulting, Inc.	Date Signed: 2021-10-04
Address: 30 Thomas	License: M-33489
City/State/Zip: Irvine CA 92618	Phone: 949-716-9990

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003 Schema Version: rev 20200601 — Report Generated: 2021-10-04 17:25:12

NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER R. WEBB — M-33489 — MECHANICAL — STATE OF CALIFORNIA

CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
1	PC RESUBMITTAL	05/18/22
2	PC RESUBMITTAL	10/28/22
3	HCD REVISION 1	12/16/22
4	PC RESUBMITTAL	02/02/23
5	HCD & PC RESUBMITTAL	06/06/23
6	HCD RESUBMITTAL	06/14/23
7	PC RESUBMITTAL	07/10/23
8	CLIENT REVISIONS	07/11/23
9	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
11	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

Plot Date: 10/12/2023 9:21:15 AM

SHEET TITLE:

TITLE 24 COMPLIANCE

SHEET NO:

M804

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	JAIME-001	Report Page:	(Page 1 of 7)
Project Address:	2853 WEST BLVD	Date Prepared:	10/4/2021

This document is used to demonstrate compliance for nonresidential occupancies with requirements in §110.1, §110.3, §120.3, and §140.5, and with requirements in §141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in §110.1, §110.3, §120.3, §150.0 and §150.1(c)8, and with requirements §150.2 for additions.

A. GENERAL INFORMATION

01	Project Location (city)	LOS ANGELES	02	Climate Zone	8

03 Occupancy Types Within Project (select all that apply):

☒ Nonresidential	☐ High-Rise Residential	☐ Hotel/Motel
☐ State Building	☐ Healthcare Facility	☐ Other (Write In)

B. PROJECT SCOPE

This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in §140.5, §150.1(c)8, and §141.0(a), or §141.0(b)2N for additions or alterations. Solar water heating systems are documented on the NRCC-SRA compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document.

01	02	03		
My project consists of (check all that apply):	System Type[1,2]	System Components		
☒ New system (DHW system being installed for the first time in newly constructed building)	Individual System (serving nonresidential spaces)	☒ Equipment	☒ Distribution	☒ Controls
☐ System Alteration (equipment, distribution or controls)		☐ Equipment	☐ Distribution	☐ Controls

[1] *FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.*

[2] *Dwelling units refers to hotel/motel guest rooms and units in a high-rise residential occupancy.*

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20190401 — Report Generated: 2021-10-04 17:25:12

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	JAIME-001	Report Page:	(Page 2 of 7)
Project Address:	2853 WEST BLVD	Date Prepared:	10/4/2021

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. 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
Domestic Hot Water Equipment	Distribution Systems	Controls	Compliance Results
Table F	Table G	Table H	
Yes	Yes	Yes	COMPLIES

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

This table is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20190401 — Report Generated: 2021-10-04 17:25:12

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	JAIME-001	Report Page:	(Page 3 of 7)
Project Address:	2853 WEST BLVD	Date Prepared:	10/4/2021

F. DOMESTIC HOT WATER EQUIPMENT

This table is used to demonstrate compliance with mandatory equipment requirements in §110.1 and §110.3. For high-rise residential and hotel/motel occupancies, compliance with prescriptive requirements in §150.1(c)8 must also be demonstrated and with §150.2 for addition and alteration scopes.

Equipment Schedule: Individual Systems

01	02	03	04	05	06
Name or Item Tag	Equipment Type	Volume (gal)	Max GPM/ First Hour Rating (FHR)	Rated Uniform Energy Factor (UEF)	Minimum Required Uniform Energy Factor (UEF)[1]
A.O. SMITH PWH-1250NP	Residential-Duty Commercial Gas-Fired Storage (75,000-105,000 BTUH)	>75	GPM >= 4.0	0.82	-0.41

[1] *FOOTNOTE: Compliant equipment may be found in the Modernized Appliance Efficiency Database System (MAEDBS) on the Energy Commission website: https://cacertappliances.energy.ca.gov/Pages/Search/AdvancedSearch.aspx*

Water Heating Equipment All Occupancies

	Yes	No	Not Applicable	Requirement
18	☐	☐	☒	Unfired storage tank insulation shall have Internal + External >=R-16 OR External >=R-12. Label required per §110.3(c)3
19	☐	☐	☒	New state buildings 60% of energy for service water heating from site solar energy or recovered energy per §110.3(c)5
20	☐	☐	☒	Isolation valves for instantaneous water heater with input rating <6.8 kBTUH or 2 kW has been specified per §110.3(c)6

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

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STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	JAIME-001	Report Page:	(Page 4 of 7)
Project Address:	2853 WEST BLVD	Date Prepared:	10/4/2021

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in §120.3 and §140.5. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements §110.3(c), §120.3, §150.0, §150.1

Mandatory Pipe Insulation All Occupancies

12	☒	For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per §120.3 : • Recirculating system piping, including supply and return piping of the water heater • The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system • Pipes that are externally heated
13	☒	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per §120.3(b) and §150.0(j)3

TABLE 120.3-A PIPE INSULATION THICKNESS

Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft² per °F)	Insulation Mean Rating Temp (°F)	Nominal Pipe Diameter (in)		
			< 1	1 to < 1.5	1.5 to < 4
			Minimum Insulation Required		
105-140	0.22 - 0.28	100	1.0 in or R-7.7	1.5 in or R-12.5	1.5 in or R-11

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20190401 — Report Generated: 2021-10-04 17:25:12

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	JAIME-001	Report Page:	(Page 5 of 7)
Project Address:	2853 WEST BLVD	Date Prepared:	10/4/2021

H. DOMESTIC HOT WATER CONTROLS

This table is used to demonstrate compliance with control requirements in §110.3 for all occupancies. For high-rise residential and hotel/motel occupancies, compliance is also demonstrated with requirements in §150.1(c)8.

	Yes	No	Not Applicable	Requirement
01	☒	☐	☐	Construction documents require manufacturer certification that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per §110.3(a).
02	☒	☐	☐	Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per §110.3(c)1 unless covered by California Plumbing Code §13.0.
03	☐	☐	☒	Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless systems serves healthcare facility.
04	☐	☐	☒	For recirculation systems serving multiple dwelling units, design includes automatic pump controls per §150.1(c)8Bii, or §150.2 for additions or alterations.
05	☐	☐	☒	For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA4.4.9 per §150.1(c)8.
06	☐	☐	☒	For replacement single heat pump water heaters serving individual dwelling units in climate zone 1-15, design includes communication interface that meets demand responsive control requirements of §110.12(a) per §150.2(b)1Hiii.

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

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Yes	No	Form/Title	Field Inspector Pass	Field Inspector Fail
●	○	NRCI-PLB-01-E - Must be submitted for all buildings	☐	☐
○	●	NRCI-PLB-02-E - Must be submitted for high-rise residential and hotel/motel central hot water distribution systems to be recognized for compliance.	☐	☐
○	●	NRCI-PLB-03-E - Must be submitted for high-rise residential and hotel/motel single dwelling unit hot water distribution systems to be recognized for compliance.	☐	☐

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

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STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	JAIME-001	Report Page:	(Page 6 of 7)
Project Address:	2853 WEST BLVD	Date Prepared:	10/4/2021

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to service water heating requirements.

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

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Yes	No	Form/Title	Field Inspector Pass	Field Inspector Fail
○	●	NRCV-PLB-21-H High-rise Residential Central Hot Water Distribution HERS Verification	☐	☐
○	●	NRCV-PLB-22-H High-rise Residential Individual Dwelling Unit Hot Water Distribution HERS Verification	☐	☐

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20190401 — Report Generated: 2021-10-04 17:25:12

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-PLB-E
Project Name:	JAIME-001	Report Page:	(Page 7 of 7)
Project Address:	2853 WEST BLVD	Date Prepared:	10/4/2021

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Christopher Webb	Documentation Author Signature: Christy R Webb
Company: National Engineering & Consulting, Inc.	Signature Date: 2021-10-04
Address: 30 Thomas	CEA/ HERS Certification Identification (if applicable): 8D43-009A-BE1F-B7D9-5A73-54D5-D438-779B-B1AF-5D9D-2A75-0955-6C99-1F9B-3987-8809
City/State/Zip: Irvine, CA 92618	Phone: (949) 716-9990

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. 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)
3. 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.
4. 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.
5. 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: Christopher Webb	Responsible Designer Signature: Christy R Webb
Company: National Engineering & Consulting, Inc.	Date Signed: 2021-10-04
Address: 30 Thomas	License: M-33489
City/State/Zip: Irvine CA 92618	Phone: 949-716-9990

Registration Number: — Registration Date/Time: — Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance — Report Version: 2019.1.003, Schema Version: rev 20190401 — Report Generated: 2021-10-04 17:25:12

NATIONAL
ENGINEERING & CONSULTING, INC
30 THOMAS, IRVINE, CA 92618-2703
PHONE: (949) 716-9990 | FAX: (949) 716-9997

STAMP:

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER R. WEBB — M-33489 — MECHANICAL — STATE OF CALIFORNIA

CLIENT:

JAIME PARTNERS OF CALIFORNIA, INC.

1050 S. FLOWER STREET
LOS ANGELES, CA 90015

PROJECT:

2853 WEST BLVD

LOS ANGELES, CA 90016

C-JAIME-001

#	DESCRIPTION	DATE
	1ST SUBMITTAL	10/04/21
	UTILITY COORDINATION	04/08/22
1	PC RESUBMITTAL	05/18/22
2	PC RESUBMITTAL	10/28/22
3	HCD REVISION 1	12/16/22
4	PC RESUBMITTAL	02/02/23
5	HCD & PC RESUBMITTAL	06/06/23
6	HCD RESUBMITTAL	06/14/23
7	PC RESUBMITTAL	07/10/23
8	CLIENT REVISIONS	07/11/23
9	CLIENT REVISIONS	08/04/23
10	PC RESUBMITTAL (ELEC)	09/12/23
11	PC RESUBMITTAL (ELEC)	10/05/23
12	CLIENT REVISIONS	10/12/23

Plot Date: 10/12/2023 9:20:40 AM

SHEET TITLE:

TITLE 24 COMPLIANCE

SHEET NO:

M805