HVAC GENERAL NOTES:

1. ALL MECHANICAL EQUIPMENT AND INSTALLATIONS SHALL CONFORM WITH THE REQUIREMENTS OF THE 2021 INTERNATIONAL MECHANICAL CODE, THE 2021 INTERNATIONAL BUILDING CODE, THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE. STATE AMENDMENTS, NFPA 90A, 96, 101, UNDERWRITERS LABORATORIES AND ALL APPLICABLE LOCAL CODES AND ORDINANCES.

2. THE LOCATIONS, ARRANGEMENT AND EXTENT OF EQUIPMENT, DEVICES, CONDUIT, AND OTHER APPURTENANCES RELATED TO THE INSTALLATION OF MECHANICAL 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, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF THE DISCREPANCY.

3. THE CONSTRUCTION DOCUMENTS SHALL BE COMPRISED OF BOTH PLANS AND SPECIFICATIONS; THEREFORE, ALL HVAC WORK PERFORMED SHALL CONFORM TO THE REQUIREMENTS DESCRIBED IN BOTH. NEITHER SHALL TAKE PRECEDENCE OVER THE OTHER, BUT RATHER, THEY SHALL BE AN EXTENSION OF EACH OTHER. SHOULD A CONFLICT EXIST BETWEEN THE PLANS AND SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF THE DISCREPANCY.

4. 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.

5. ANY WALL, FLOOR, OR CEILING SURFACE THAT IS DISTURBED DURING THE COURSE OF THE HVAC WORK SHALL BE REPAIRED TO NEW CONDITION.

6. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH UNDERWRITER'S APPROVAL, MANUFACTURER'S RECOMMENDATIONS, GOOD ENGINEERING PRACTICE, AND ALL APPLICABLE CODE REQUIREMENTS.

7. ALL MECHANICAL EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE BY OWNER.

8. ALL HVAC COMPRESSORS SHALL HAVE EXTENDED 4 YEAR MANUFACTURER'S WARRANTY FOR A 5-YEAR TOTAL WARRANTY.

9. INSTALL GRADE MOUNTED OUTDOOR AIR CONDITIONING EQUIPMENT LEVEL ON 4" THICK REINFORCED CONCRETE PADS, EXTENDING 6" ON ALL SIDES BEYOND UNIT PERIMETER.

10. EQUIPMENT SHALL BE LOCATED AT LEAST 10'-0" FROM ALL ROOF EDGES OR OPEN SIDES OF A WALKING SURFACE WHERE SUCH OPEN SIDE IS MORE THAN 30" ABOVE THE ADJACENT SURFACE. WHERE EQUIPMENT IS WITHIN 10'-0" OF SUCH DROPOFFS, FALL PROTECTION GUARDS SHALL BE PROVIDED. GUARDS SHALL BE MINIMUM 42" TALL AND EXTEND AT LEAST 30" BEYOND EACH END OF THE EQUIPMENT. GUARD SHALL BE CONSTRUCTED SO AS TO PREVENT THE PASSAGE OF A 21" SPHERE AND SHALL COMPLY WITH LOADING REQUIREMENTS OF THE IBC.

11. AIR HANDLING AND FAN COIL UNITS LOCATED ABOVE THE LOWEST LEVEL FINISHED FLOOR SHALL BE INSTALLED WITH AN AUXILIARY CONDENSATE DRAIN PAN UNDER THE UNIT. PROVIDE AN ELECTRONIC WATER LEVEL DETECTOR WIRED TO SHUTDOWN THE UNIT UPON DETECTION IN SECONDARY DRAIN PAN. INSTALL MINIMUM 4' X 4' X 3/4" THICK PLYWOOD SERVICE PLATFORM ON SERVICE SIDE OF UNITS LOCATED IN ATTIC SPACES.

12. PANCAKE STYLE AIR HANDLERS LOCATED ABOVE TOILET AREAS SHALL BE INSTALLED IN A MINIMUM 14-INCH DEEP INSIDE CLEAR FURRDOWN RETURN AIR PLENUM, REFERENCE ARCHITECTURAL PLANS.

13. MOUNT TOP OF THERMOSTATS AND OTHER CONTROL DEVICES 46" AFF UNLESS NOTED OTHERWISE. PROVIDE CLEAR LOCKING COVER FOR ALL PUBLIC AREA THERMOSTATS. COORDINATE THERMOSTAT LOCATIONS WITH OTHER TRADES.

14. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL 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 ARCHITECT.

15. ALL PIPE AND DUCT PENETRATIONS OF FIRE AND/OR SMOKE-RATED ASSEMBLIES SHALL BE FIRE-STOPPED AS REQUIRED TO RESTORE THE ASSEMBLY TO ITS ORIGINAL INTEGRITY. FIRE BARRIER PRODUCTS SHALL BE AS MANUFACTURED BY TREMCO, HILTI, 3M OR APPROVED EQUAL.

16. PROVIDE ACCESS PANELS IN NON-ACCESSIBLE CEILINGS AND IN WALL STRUCTURE TO ALLOW ADEQUATE ROOM FOR MAINTENANCE OF EQUIPMENT AND BALANCING OF SYSTEMS. ACCESS PANELS IN CEILING AND WALLS SHALL BE PROVIDED WHERE SHOWN ON THE DRAWINGS OR NECESSARY TO ACCESS DAMPERS, VALVES, ETC. COORDINATE EXACT LOCATION OF ALL ACCESS PANELS WITH THE ARCHITECT DURING THE SHOP DRAWING PROCESS.

17. ALL 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. ON RESIDENTIAL PROJECTS, THE NAMEPLATE ON THE OUTDOOR EQUIPMENT SHALL INDICATE THE APARTMENT OR CONDOMINIUM UNIT NUMBER IT SERVES AS WELL AS THE EQUIPMENT ID TAG.

18. REFER TO ARCHITECTURAL PLANS FOR FLOOR AND CEILING ASSEMBLY UL RATINGS AND DETAILS.

19. WHERE PLANS CALL FOR UNDERCUT DOORS IN FIRE-RATED WALLS, UNDERCUT SHALL NOT EXCEED 3/4" PER NFPA-80.

20. SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE ARCHITECT PRIOR TO ORDERING, PURCHASING, OR FABRICATING ANY MECHANICAL EQUIPMENT. SHOP DRAWINGS SHALL INCLUDE: ALL EQUIPMENT SCHEDULED OR SPECIFIED ON THE DRAWINGS; DUCTWORK DRAWN THE SCALE SHOWN ON THE DRAWINGS, REFRIGERANT PIPING AND CONTROL WIRING SCHEMATICS CERTIFIED BY THE AIR CONDITIONING EQUIPMENT MANUFACTURER. LONG LINE REFRIGERANT PIPING APPLICATIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S CURRENT SPLIT SYSTEM LONG-LINE APPLICATION GUIDELINE.

MECHANICAL/ELECTRICAL COORDINATION:

21. CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH ELECTRICAL DRAWINGS PRIOR TO ORDERING EQUIPMENT OR SUBMITTING SHOP DRAWINGS, AND SHALL 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.

22. ALL 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.

23. ALL 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.

24. UNLESS NOTED OTHERWISE, TRANSFORMERS, CONTROLS AND CONTROL WIRING REQUIRED FOR ALL MECHANICAL SYSTEMS SHALL BE FURNISHED WITH THE EQUIPMENT IT SERVES AND INSTALLED BY THE MECHANICAL CONTRACTOR. MOTOR STARTERS FOR HVAC EQUIPMENT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

AIR DISTRIBUTION:

25. SUPPLY, RETURN, OUTSIDE, AND EXHAUST AIR DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEETMETAL IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS, LATEST EDITION. WHERE DUCTWORK PENETRATES A 1-HR FIRE-RATED ASSEMBLY, MINIMUM 26 GAGE GALVANIZED STEEL SHALL BE USED FOR THE ENTIRE LENGTH OF THE DUCT. ALL JOINTS AND SEAMS IN ALL SHEETMETAL DUCTWORK SHALL BE SEALED WITH DUCT SEALER.

26. ALL EXPOSED DUCTWORK TO HAVE MILL PHOSPHATIZED FINISH TO BE PAINTED BLACK BY OTHERS.

27. ALL 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.

28. FLEXIBLE DUCTWORK SHALL BE THERMAFLEX M-KE (U.L. 181 LISTED, CLASS 1 FLEXIBLE AIR DUCT) OR EQUAL. PROVIDE MINIMUM INSULATION VALUE OF R-6, R-8 WHEN LOCATED OUTSIDE THE THERMAL ENVELOPE OF THE BUILDING. 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 8'-0" (EXCEPT IN RESIDENTIAL APPLICATIONS LENGTH SHALL BE AS INDICATED). 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.

29. ROUND AND FLEXIBLE SUPPLY AIR DUCTWORK SHALL BE CONNECTED TO MAIN DUCTS WITH A SPIN-IN FITTING WITH SCOOP AND BALANCING DAMPER. IN RESIDENTIAL SPACES, TAB-TYPE FITTINGS ARE ACCEPTABLE, AND AIRFLOW SHALL BE BALANCED AT THE AIR DEVICES.

30. TAPE, BED AND SEAL AIR TIGHT ALL PENETRATIONS FROM RETURN AIR PLENUMS TO NON RETURN AIR PLENUMS THAT ARE REQUIRED DUE TO DUCTWORK, PIPING OR OTHER ITEMS.

31. EXHAUST AND OUTDOOR AIR INTAKE DUCTWORK SHALL BE FURNISHED WITH A BUILT-IN BACK-DRAFT DAMPER (GRAVITY TYPE UNLESS NOTED OTHERWISE ON PLANS) AND MESH INSECT SCREEN (EXCEPT DRYER VENTS).

32. DRYER VENT DUCTWORK SHALL BE 4-INCH ROUND AND BE 26 GAUGE GALVANIZED STEEL INSTALLED WITH LONGITUDINAL SEAMS FACING UP AND MALE CRIMPED END INSTALLED IN THE DIRECTION OF FLOW. ROUTE DRYER VENT TO THE EXTERIOR WALL/CEILING AS DIRECT AS POSSIBLE. DO NOT SECURE DUCTWORK WITH SHEET METAL SCREWS.

33. PORTIONS OF DUCTWORK AND PIPE INSULATION VISIBLE THROUGH AIR DISTRIBUTION DEVICES IN FINISHED AREAS SHALL BE PAINTED FLAT BLACK.

34. DUCTWORK DIMENSIONS SHOWN ON THE DRAWINGS ARE INSIDE CLEAR DIMENSIONS.

35. INSTALL FIRE DAMPERS IN ALL THROUGH PENETRATIONS IN FIRE-RATED WALLS, FLOOR AND CEILINGS. IN DYNAMIC SYSTEMS (SYSTEMS NOT DESIGNED TO STOP OPERATING DURING A FIRE EVENT), FIRE DAMPERS SHALL BE THE DYNAMIC TYPE WITH BLADES OUT OF THE AIRSTREAM WHERE POSSIBLE. FOR SYSTEMS DESIGNED TO STOP OPERATING DURING A FIRE EVENT, STATIC FIRE DAMPERS SHALL BE ALLOWED. REFER TO THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RATED ASSEMBLIES.

35.1. WHERE DUCTS PENETRATE FIRE-RATED WALLS AND HAVE DUCT OPENINGS SERVING SPACES ON BOTH SIDES OF THE RATED WALL, FIRE/SMOKE DAMPERS SHALL BE PROVIDED AT FIRE-RATED WALL PENETRATION.

36. INSTALL CEILING RADIATION DAMPERS AT DIFFUSERS MOUNTED IN FIRE-RATED CEILING ASSEMBLIES. WHERE DUCTWORK PENETRATES THE MEMBRANE OF A FIRE-RATED CEILING ASSEMBLY, INSTALL DUCT-DROP RATED CEILING RADIATION DAMPER. DAMPER SHALL BE DYNAMIC RATED OR SYSTEM SHALL BE DESIGNED TO STOP OPERATING DURING A FIRE EVENT. ALL DAMPERS SHALL BE U.L. 555C LABELED. ALL DAMPERS SHALL BE SPECIFICALLY LISTED (MAKE AND MODEL) AS APPROVED FOR USE IN THE UL LISTING OF THE FIRE-RESISTANCE-RATED CEILING ASSEMBLY PENETRATED.

37. INSTALL SMOKE DAMPERS IN ALL DUCT PENETRATIONS THROUGH SMOKE-RATED WALLS. WHERE DUCTS PENETRATE WALLS THAT CARRY BOTH FIRE AND SMOKE RATINGS, THE DAMPERS INSTALLED SHALL BE COMBINATION FIRE AND SMOKE DAMPERS. ALL DAMPERS SHALL BE U.L. 555 AND/OR 555S LABELED.

38. DUCT ACCESS DOORS: PROVIDE ACCESS DOORS IN DUCTWORK AT EACH FIRE, SMOKE, FIRE/SMOKE, OR DUCT-DROP RATED CEILING RADIATION DAMPER LOCATION.

39. LOCATIONS OF GRILLES, REGISTERS, & DIFFUSERS SHOWN ON THE DRAWINGS ARE APPROXIMATE. COORDINATE EXACT LOCATIONS WITH CEILING GRID, LIGHT FIXTURES, SPRINKLER HEADS, SPEAKERS, SMOKE ALARMS, ETC. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.

40. AFTER CONSTRUCTION, THE ENTIRE HVAC SYSTEM SHALL BE TESTED, ADJUSTED, AND BALANCED TO DELIVER THE AIR AND WATER QUANTITIES SHOWN ON THE DRAWINGS (NOT APPLICABLE TO DWELLING UNITS). SUBMIT CERTIFIED (AABC OR NEBB) TEST AND BALANCE REPORT TO THE ARCHITECT FOR APPROVAL. NOT APPLICABLE TO DWELLING UNITS.

PIPING:

41. REFRIGERANT PIPING SHALL BE TYPE L OR REFRIGERATION SERVICE COPPER TUBING WITH BRAZED JOINTS.

42. REFRIGERANT LINE SET ACCESS PORTS SHALL HAVE LOCKING CAPS.

43. CONDENSATE FROM ALL AIR CONDITIONING EQUIPMENT SHALL BE TRAPPED AND ROUTED TO THE NEAREST FLOOR DRAIN OR OTHER PLUMBING DRAIN AS SHOWN ON PLANS. CONDENSATE PIPING SHALL BE SCHEDULE 40 PVC (EXCEPT CPVC IN HVAC PLENUMS). CONDENSATE SHALL BE PUMPED AS REQUIRED.

44. 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.

INSULATION:

45. DUCT INSULATION:

45.1. DUCT WRAP SHALL BE UL LISTED FIBERGLASS BLANKET INSULATION WITH FOIL VAPOR BARRIER. PUNCTURES AND 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 AS LISTED BELOW:
45.1.1. SHEET METAL SUPPLY, RETURN, AND OUTSIDE AIR DUCTWORK: R-6 MINIMUM INSTALLED.
45.5.2. EXHAUST DUCTWORK ROUTED WITHIN THE BUILDING THERMAL ENVELOPE SHALL NOT BE INSULATED UNLESS NOTED OTHERWISE.
45.5.3. ALL SHEET METAL DUCT LOCATED OUTSIDE THE THERMAL ENVELOPE OF THE BUILDING: R-8 MINIMUM INSTALLED.

46. LINE ALL SHEETMETAL DUCTWORK A MINIMUM OF 10'-0" DOWNSTREAM OF ALL AIR HANDLING UNITS, FAN COIL UNITS AND TERMINAL UNITS. THE LEADING EDGE OF THE DUCT LINER SHALL HAVE A SHEETMETAL NOSING.

SEQUENCE OF OPERATION:

47. CONSTANT VOLUME DIRECT EXPANSION (DX) SYSTEM

47.6. HEATING/COOLING = SYSTEM SHALL BE CONTROLLED BY AN ON/OFF/AUTO THERMOSTAT (7-DAY PROGRAMMABLE UNLESS NOTED OTHERWISE). THE FAN SHALL OPERATE CONTINUOUSLY. WHEN THE SPACE TEMPERATURE DEVIATES OUTSIDE THE THERMOSTAT SETPOINT, HEATING OR COOLING SHALL ENGAGE UNTIL THE SPACE TEMPERATURE RETURNS TO THE SETPOINT.
47.6.1. IN DWELLING UNITS, FAN CYCLING IN 'AUTO' MODE SHALL BE ALLOWED.

SYSTEM COMMISSIONING:

51. PRIOR TO THE FINAL MECHANICAL AND PLUMBING INSPECTIONS, AN APPROVED AGENCY CONTRACTED BY THE OWNER SHALL COMMISSION ALL MECHANICAL SYSTEMS AS DESCRIBED BELOW. EXCEPTION: EQUIPMENT SERVING INDIVIDUAL DWELLING OR SLEEPING UNITS.

52. ALL AIR-MOVING SYSTEMS WITH A FAN MOTOR GREATER THAN 1 HP SHALL BE BE TESTING AND BALANCED. ALL SUPPLY AIR DUCTS SHALL HAVE A MANUAL VOLUME DAMPER. ALL DAMPERS SHALL FIRST BE ADJUSTED SO AS TO LIMIT THROTTLING LOSSES, THEN FAN POWER SHALL BE ADJUSTED TO ACHIEVE DESIGN AIRFLOWS SHOWN ON PLANS.

52.1. ALL SYSTEMS WITH FAN MOTORS OF 1 HP OR LESS WITH SUPPLY AIR DUCTS INDICATED ELSEWHERE IN THESE DOCUMENTS TO HAVE MANUAL VOLUME DAMPERS SHALL BE BALANCED TO DELIVER THE AIRFLOWS SHOWN ON PLANS, BUT ARE NOT REQUIRED TO BE INCLUDED IN THE PRELIMINARY OR FINAL COMMISSIONING REPORT GIVEN TO THE OWNER AND INSPECTOR.

53. ALL SYSTEMS WITH SUPPLY AIR ECONOMIZERS SHALL RECEIVE A FULL FUNCTION TESTING TO CONFIRM COMPLIANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND PERFORMANCE SETPOINTS DESCRIBED ON PLANS. TESTING SHALL INCLUDE ALL MODES AND SEQUENCE OF OPERATION, INCLUDING UNDER FULL-LOAD, PART-LOAD, AND THE FOLLOWING EMERGENCY CONDITIONS:

53.1. ALL MODES AS DESCRIBED IN THE SEQUENCE OF OPERATION.
53.2. REDUNDANT OR AUTOMATIC BACK-UP MODE.
53.3. PERFORMANCE OF ALARMS.
53.4. MODE OF OPERATION UPON A LOSS OF POWER AND RESTORATION OF POWER.

54. A "PRELIMINARY COMMISSIONING REPORT" DETAILING ALL TESTING ACTIVITIES, ITEMIZED LIST OF DEFICIENCIES, DEFERRED TESTS NOT PERFORMED DUE TO CLIMATIC CONDITIONS, AND CLIMATIC CONDITIONS AT THE TIME OF TESTING SHALL BE PROVIDED TO THE OWNER (OR OWNER'S AGENT) AND THE CODE OFFICIAL.

55.1. THE BUILDING OWNER (OR OWNER'S AGENT) MUST ISSUE A LETTER OF TRANSMITTAL TO THE CODE OFFICIAL ACKNOWLEDGING RECEIPT OF THE PRELIMINARY COMMISSIONING REPORT BEFORE THE BUILDING WILL BE CONSIDERED ELIGIBLE FOR FINAL INSPECTION.

56. CONTRACTOR SHALL PROVIDE THE BUILDING OWNER (OR OWNER'S AGENT) WITH AN OPERATIONS AND MAINTENANCE MANUAL INCLUDING THE FOLLOWING:

56.1. SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTION FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.
56.2. MANUFACTURER'S OPERATIONS MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, EXCEPT EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
56.3. NAME AND ADDRESS OF AT LEAST ONE SERVICE AGENCY.
56.4. HVAC AND SERVICE HOT WATER CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS AND CONTROL SEQUENCE DESCRIPTIONS. DESIRED OF FIELD-DETERMINED SET POINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR, FOR DIGITAL CONTROL SYSTEMS, IN SYSTEM PROGRAMMING INSTRUCTIONS.
56.5. A NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING RECOMMENDED SET POINTS.

57. A "FINAL COMMISSIONING REPORT" DETAILING ALL TESTING PROCEDURES AND RESULTS SHALL BE DELIVERED TO THE BUILDING OWNER (OR OWNER'S AGENT). THE FINAL REPORT SHALL INCLUDE ALL INFORMATION AS DESCRIBED ABOVE IN THE PRELIMINARY REPORT, EXCEPT THAT NO DEFERRED TESTS SHALL BE PERMITTED.

MECHANICAL NOTATIONS

AC	AIR CONDITIONING	DWG	DRAWING	HVAC	HEATING / VENTING / AIR CONDITIONING	RG-#	RETURN AIR GRILLE
AFF	ABOVE FINISHED FLOOR	EC	ELECTRICAL CONTRACTOR	HWP	HOT WATER PUMP	REQ'D	REQUIRED
AFG	ABOVE FINISHED GRADE	EF-#	EXHAUST FAN	HWR	HOT WATER RETURN	RM	ROOM
AHU-#	AIR HANDLING UNIT	EFF	EFFICIENCY	HWS	HOT WATER SUPPLY	RPM	REVOLUTIONS PER MINUTE
ALT	ALTERNATIVE	EG-#	EXHAUST GRILLE	INSUL	INSULATION / INSULATE	S	SMOKE DAMPER
AMB	AMBIENT	EL	ELEVATION	KW	KILOWATTS	SA	SUPPLY AIR
APPROX	APPROXIMATE	ELEC	ELECTRIC(AL)	L	LENGTH / LONG	SD-#	SUPPLY AIR DIFFUSER
ARCH	ARCHITECT(URAL)	ELEV	ELEVATOR	LVR	LOUVER	SG-#	SUPPLY AIR GRILLE
AUTO	AUTOMATIC	EQUIP	EQUIPMENT	MAX	MAXIMUM	SP	STATIC PRESSURE
BHP	BRAKE HORSEPOWER	ETR	EXISTING TO REMAIN	MC	MECHANICAL CONTRACTOR	SPEC(S)	SPECIFICATION(S)
BLDG	BUILDING	EXH	EXHAUST	MECH	MECHANICAL	STD	STANDARD
CD-#	CEILING DIFFUSER	EXIST/EX	EXISTING	MFR	MANUFACTURER	TEMP	TEMPERATURE
CFM	CUBIC FEET PER MINUTE	EXT	EXTERIOR	MIN	MINIMUM	TYP	TYPICAL
CL	CENTERLINE	FC-#	FAN COIL UNIT	MISC	MISCELLANEOUS	UH-#	UNIT HEATER
CLG	CEILING	FD	FIRE DAMPER	NO / #	NUMBER	UNO	UNLESS NOTED OTHERWISE
COL	COLUMN	FPM	FEET PER MINUTE	NTS	NOT TO SCALE	V	VENT
COND	CONDENSATE	F/S	COMBINATION FIRE/SMOKE DAMPER	OA	OUTSIDE AIR	VAV	VARIABLE AIR VOLUME
CU-#	CONDENSING UNIT	FT	FEET	OC	ON CENTER	VD	VOLUME DAMPER
D	DEPTH / DEEP	GA	GAUGE	OD	OUTSIDE DIAMETER	VEL	VELOCITY
DB	DRY BULB TEMPERATURE	GALV	GALVANIZE(D)	PC	PLUMBING CONTRACTOR	VFD	VARIABLE FREQUENCY DRIVE
DCW	DOMESTIC COLD WATER	GAL	GALLON	PSI	POUNDS PER SQUARE INCH	VIF	VERIFY IN FIELD
DHW	DOMESTIC HOT WATER	GC	GENERAL CONTRACTOR	PVC	POLYVINYL CHLORIDE	VTR	VENT THROUGH ROOF
DIA / Ø	DIAMETER	GF-#	GAS FURNACE	R	RADIUS	W	WIDTH / WIDE
DIFF	DIFFUSER	GPM	GALLONS PER MINUTE	RA	RETURN AIR	W/	WITH
DWG	DRAWING	GWH-#	GAS WATER HEATER	RG-#	RETURN AIR GRILLE	W/O	WITHOUT
DIA / Ø	DIAMETER	H	HEIGHT / HIGH	R	RADIUS	WB	WET BULB TEMPERATURE
DIFF	DIFFUSER	HP	HORSE POWER	RA	RETURN AIR		

MECHANICAL SYMBOL LEGEND

NOTE: NOT ALL SYMBOLS MAY APPLY.

1	KEYED PLAN NOTE	X / XX.X	REFERENCE TAG
XX-##	EQUIPMENT DESIGNATION		
XX | Ø / CFM	AIR TERMINAL TAG		DIRECTION OF AIR FLOW
	POINT OF CONNECTION		CONTINUATION
H	HUMIDISTAT	T	THERMOSTAT
C	CO2 SENSOR	S	REMOTE SENSOR
	RECTANGULAR SUPPLY DUCT RISER		ROUND SUPPLY DUCT RISER
	RECTANGULAR RETURN DUCT RISER		ROUND RETURN DUCT RISER
	RECTANGULAR EXHAUST DUCT RISER		ROUND EXHAUST DUCT RISER
	90 DEGREE TURNING VANE		45 DEGREE TURNING VANE
	RECTANGULAR DUCT TAKEOFF		ROUND DUCT TAKEOFF
SD	DUCT WITH SMOKE DAMPER	FD	DUCT WITH FIRE DAMPER
F/S	DUCT WITH FIRE / SMOKE DAMPER		CEILING RADIATION DAMPER
M	MOTORIZED DAMPER		VOLUME DAMPER
	SUPPLY AIR DIFFUSER		RETURN AIR GRILLE / REGISTER
	EXHAUST AIR GRILLE / REGISTER		

DOUBLE LINE DUCTWORK

	NEW DUCTWORK		EXISTING DUCTWORK TO BE REMOVED
	RADIUS ELBOW		MITERED ELBOW WITH TURNING VANES
	90 DEGREE RETURN AIR ELBOW UP/DOWN		90 DEGREE SUPPLY AIR ELBOW UP/DOWN
	SIZE TRANSITION		90 DEGREE EXHAUST AIR ELBOW UP/DOWN
	SHAPE TRANSITION		ROUND DUCT TAKEOFF
	TEE WITH SQUARE ELBOWS, TURNING VANES, AND SPLITTER DAMPER		FLEXIBLE DUCT TAP
	RECTANGULAR DUCT BEVELED TAP		ROUND DUCT TAKEOFF WITH DAMPER

MECHANICAL LINETYPE LEGEND

- GENERAL NEW
- GENERAL DEMO
- GENERAL EXISTING
- CD — CD — CONDENSATE DRAIN

ALL OTHER LINETYPES DENOTED WITH:
(AB) = ABANDONED; (D) = DEMO; (EX) = EXISTING

MECHANICAL SHEET INDEX

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BAYSIDE MIXED-USE

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

MECHANICAL COVER SHEET

M001

1 GROUND LEVEL - MECHANICAL PLAN - AREA 1

1/8" = 1'-0"

GENERAL NOTES:

A. GARAGE IS TO BE CLASSIFIED AS AN OPEN PARKING GARAGE. REFERENCE ARCHITECTURAL.

PLAN NOTES:

1. MOUNT PLENUM HEATER IN DROPPED CEILING FOR FREEZE PROTECTION.
2. SUSPEND UNIT HEATER FORM STRUCTURE. MOUNT THERMOSTAT AT 5'-0" AFF.
3. MOUNT CEILING CASSETTE IN ACT CEILING. ROUTE CONDENSATE, SIZED PER MANUFACTURERS RECOMMENDATION, TO EXTERIOR. DAYLIGHT MINIMUM 12" ABOVE GRADE.
4. MOUNT SUPPLY FAN ABOVE CEILING. ROUTE DUCTWORK TO EXTERIOR. TERMINATE VIA WALL CAP.

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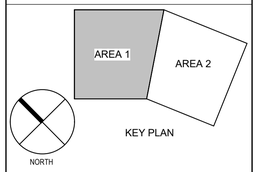

PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

GROUND LEVEL - MECHANICAL PLAN - AREA 1

M110.1

1 GROUND LEVEL - MECHANICAL PLAN - AREA 2

1/8" = 1'-0"

GENERAL NOTES:

A. GARAGE IS TO BE CLASSIFIED AS AN OPEN PARKING GARAGE. REFERENCE ARCHITECTURAL.

PLAN NOTES:

1. MOUNT PLENUM HEATER IN DROPPED CEILING FOR FREEZE PROTECTION.
2. SUSPEND UNIT HEATER FORM STRUCTURE. MOUNT THERMOSTAT AT 5'-0" AFF.
3. MOUNT EXHAUST FAN HIGH SIDEWALL. ROUTE DUCTWORK TO EXTERIOR WALL. TERMINATE VIA WALL CAP. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.

Bush ARCHITECTS

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W: WWW.BUSHARCHITECTS.DESIGN

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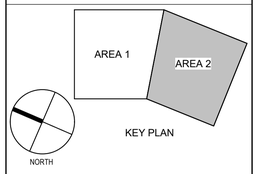


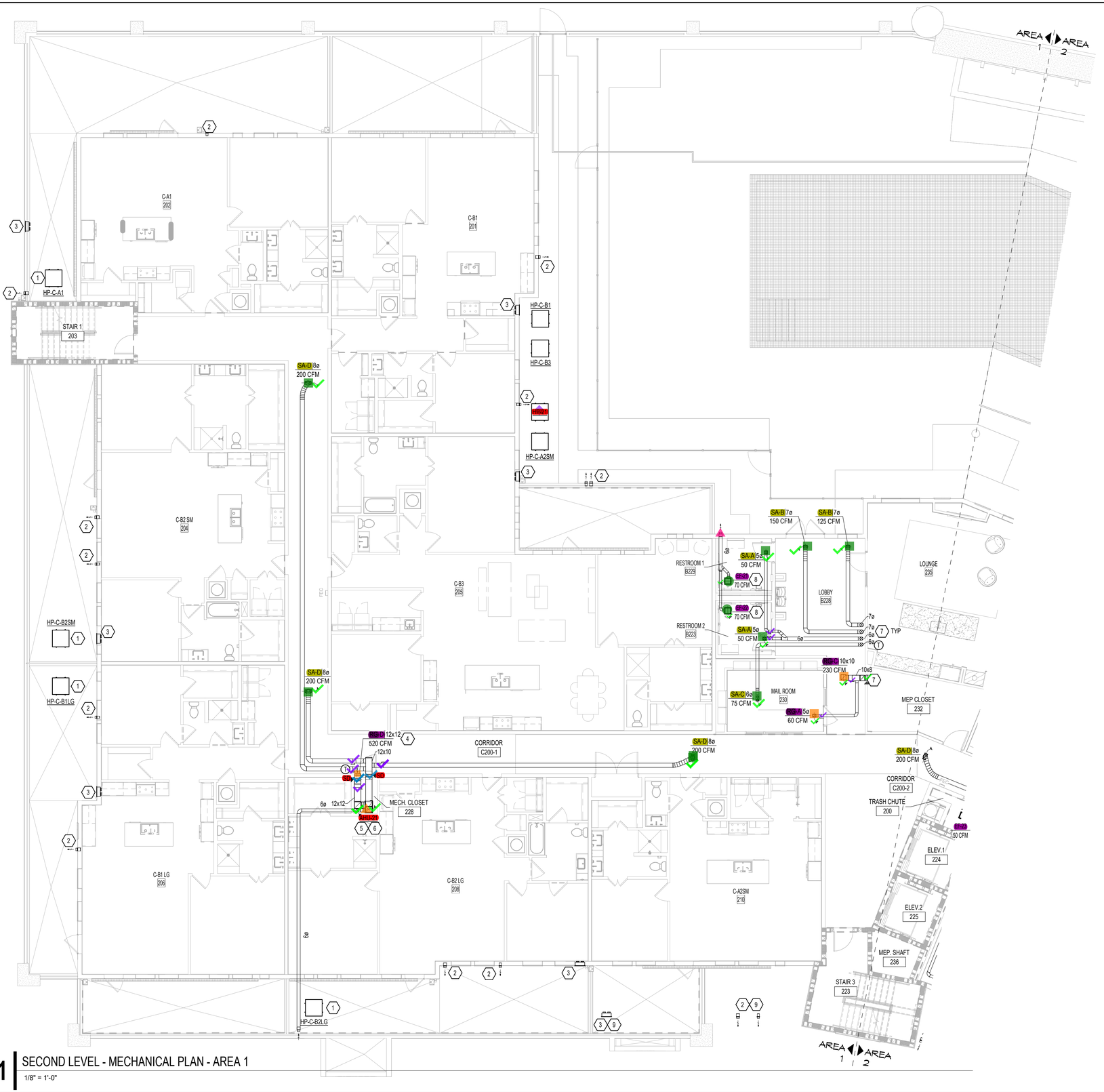
PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

GROUND LEVEL - MECHANICAL PLAN - AREA 2

M110.2



1 SECOND LEVEL - MECHANICAL PLAN - AREA 1

1/8" = 1'-0"

PLAN NOTES:

1. MOUNT OUTDOOR UNIT ON BALCONY. MAINTAIN MANUFACTURER REQUIRED CLEARANCES. COORDINATE EXACT LOCATION WITH ARCHITECT.
2. EXHAUST AIR DUCT TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
3. COMBINATION WALL BOX TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
4. MOUNT RETURN AIR TERMINAL HIGH SIDEWALL.
5. ROUTE CONDENSATE FROM UNIT TO FLOOR DRAIN IN MECHANICAL CLOSET.
6. ROUTE OUTSIDE AIR DUCT UP THROUGH CEILING MEMBRANE. PROVIDE [illegible] AT CEILING PENETRATION. ROUTE OVER ADJACENT RESIDENT UNITS TO EXTERIOR WALL AND TERMINATE VIA WALL CAP. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL EXHAUST.
7. DUCTWORK UP TO THIRD LEVEL. REFERENCE SHEET M112.1 FOR CONTINUATION.
8. MOUNT EXHAUST FAN IN CEILING. ROUTE DUCTWORK TO EXTERIOR WALL. TERMINATE VIA WALL CAP. MAINTAIN 10'-0" FROM ALL MECHANICAL INTAKES.
9. DUCT TERMINATIONS MOUNTED ON BALCONY ABOVE.

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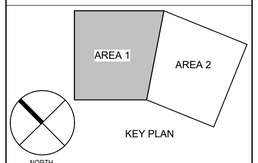

PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

SECOND LEVEL - MECHANICAL PLAN - AREA 1

M111.1

1 SECOND LEVEL - MECHANICAL PLAN - AREA 2

1/8" = 1'-0"

PLAN NOTES:

1. MOUNT OUTDOOR UNIT ON BALCONY. MAINTAIN MANUFACTURER REQUIRED CLEARANCES. COORDINATE EXACT LOCATION WITH ARCHITECT.
2. EXHAUST AIR DUCT TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
3. COMBINATION WALL BOX TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
4. MOUNT RETURN AIR TERMINAL HIGH SIDEWALL.
5. ROUTE CONDENSATE FROM UNIT TO FLOOR DRAIN IN MECHANICAL CLOSET.
6. ROUTE OUTSIDE AIR DUCT UP THROUGH CEILING MEMBRANE. PROVIDE [redacted] AT CEILING PENETRATION. ROUTE OVER ADJACENT RESIDENT UNITS TO EXTERIOR WALL AND TERMINATE VIA WALL CAP. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL EXHAUST.
7. MOUNT EXHAUST FAN IN CEILING. ROUTE DUCTWORK TO EXTERIOR WALL. TERMINATE VIA WALL CAP. MAINTAIN 10'-0" FROM ALL MECHANICAL INTAKES.
8. DUCT TERMINATIONS MOUNTED ON BALCONY ABOVE.

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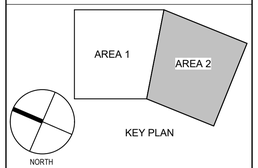

PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

SECOND LEVEL - MECHANICAL PLAN - AREA 2

M111.2

1 THIRD LEVEL - MECHANICAL PLAN - AREA 1

1/8" = 1'-0"

PLAN NOTES:

1. MOUNT OUTDOOR UNIT ON BALCONY. MAINTAIN MANUFACTURER REQUIRED CLEARANCES. COORDINATE EXACT LOCATION WITH ARCHITECT.
2. EXHAUST AIR DUCT TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
3. COMBINATION WALL BOX TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
4. MOUNT RETURN AIR TERMINAL HIGH SIDEWALL.
5. ROUTE CONDENSATE FROM UNIT TO FLOOR DRAIN IN MECHANICAL CLOSET.
6. ROUTE OUTSIDE AIR DUCT UP THROUGH CEILING MEMBRANE. PROVIDE [illegible] AT CEILING PENETRATION. ROUTE OVER ADJACENT RESIDENT UNITS TO EXTERIOR WALL AND TERMINATE VIA WALL CAP. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL EXHAUST.
7. REFERENCE SHEET M406 FOR AMENITY AREA PLAN.

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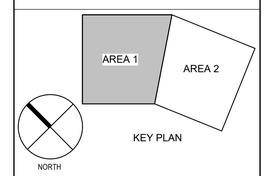

PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

THIRD LEVEL - MECHANICAL PLAN - AREA 1

M112.1

1 THIRD LEVEL - MECHANICAL PLAN - AREA 2

1/8" = 1'-0"

PLAN NOTES:

1. MOUNT OUTDOOR UNIT ON BALCONY. MAINTAIN MANUFACTURER REQUIRED CLEARANCES. COORDINATE EXACT LOCATION WITH ARCHITECT.
2. EXHAUST AIR DUCT TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
3. COMBINATION WALL BOX TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
4. MOUNT RETURN AIR TERMINAL HIGH SIDEWALL.
5. ROUTE CONDENSATE FROM UNIT TO FLOOR DRAIN IN MECHANICAL CLOSET.
6. ROUTE OUTSIDE AIR DUCT UP THROUGH CEILING MEMBRANE. PROVIDE [illegible] AT CEILING PENETRATION. ROUTE OVER ADJACENT RESIDENT UNITS TO EXTERIOR WALL AND TERMINATE VIA [illegible] MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL EXHAUST.
7. REFERENCE SHEET M406 FOR AMENITY AREA PLAN.
8. MOUNT EXHAUST FAN IN CEILING. ROUTE DUCTWORK TO EXTERIOR WALL. TERMINATE VIA [illegible] MAINTAIN 10'-0" FROM ALL MECHANICAL INTAKES.

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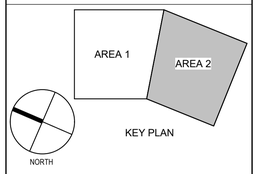

PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

THIRD LEVEL - MECHANICAL PLAN - AREA 2

M112.2

1 FOURTH LEVEL - MECHANICAL PLAN - AREA 1
1/8" = 1'-0"

PLAN NOTES:

1. MOUNT OUTDOOR UNIT ON BALCONY. MAINTAIN MANUFACTURER REQUIRED CLEARANCES. COORDINATE EXACT LOCATION WITH ARCHITECT.
2. EXHAUST AIR DUCT TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
3. COMBINATION WALL BOX TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
4. MOUNT RETURN AIR TERMINAL HIGH SIDEWALL.
5. ROUTE CONDENSATE FROM UNIT TO FLOOR DRAIN IN MECHANICAL CLOSET.
6. ROUTE OUTSIDE AIR DUCT UP THROUGH CEILING MEMBRANE. PROVIDE FIRE CAULK AT CEILING PENETRATION. ROUTE OVER ADJACENT RESIDENT UNITS TO EXTERIOR WALL AND TERMINATE VIA WALL CAP. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL EXHAUST.
7. MOUNT ERV IN RATED ASSEMBLY. REFER TO UNIT PLANS FOR EXACT LOCATION AND FURTHER INFORMATION. ROUTE EXHAUST AND OUTSIDE AIR DUCT UP THROUGH ROOF MEMBRANE AND TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE BETWEEN EXHAUST OUTLET AND OUTSIDE AIR INTAKE.
8. ROUTE 4"Ø DRYER EXHAUST FROM VENT BOX UP THROUGH WALL WITH FIRE CAULK AT TOP PLATE PENETRATION. ROUTE UP THROUGH ROOF MEMBRANE AND TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE FROM MECHANICAL INTAKES.
9. ROUTE 6"Ø EXHAUST DUCT FROM RANGE HOOD UP THROUGH ROOF MEMBRANE AND TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE FROM MECHANICAL INTAKES.

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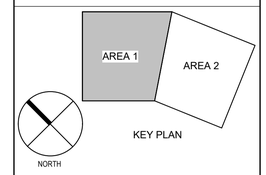

PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

FOURTH LEVEL - MECHANICAL PLAN - AREA 1

M113.1

1 FOURTH LEVEL - MECHANICAL PLAN - AREA 2

1/8" = 1'-0"

PLAN NOTES:

1. MOUNT OUTDOOR UNIT ON BALCONY. MAINTAIN MANUFACTURER REQUIRED CLEARANCES. COORDINATE EXACT LOCATION WITH ARCHITECT.
2. EXHAUST AIR DUCT TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
3. COMBINATION WALL BOX TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
4. MOUNT RETURN AIR TERMINAL HIGH SIDEWALL.
5. ROUTE CONDENSATE FROM UNIT TO FLOOR DRAIN IN MECHANICAL CLOSET.
6. ROUTE OUTSIDE AIR DUCT UP THROUGH CEILING MEMBRANE. PROVIDE FIRE CAULK AT CEILING PENETRATION. ROUTE OVER ADJACENT RESIDENT UNITS TO EXTERIOR WALL AND TERMINATE VIA WALL CAP. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL EXHAUST.
7. MOUNT EXHAUST FAN IN CEILING. ROUTE DUCTWORK TO EXTERIOR WALL. TERMINATE VIA WALL CAP. MAINTAIN 10'-0" FROM ALL MECHANICAL INTAKES.
8. MOUNT ERV IN RATED ASSEMBLY. REFER TO UNIT PLANS FOR EXACT LOCATION AND FURTHER INFORMATION. ROUTE EXHAUST AND OUTSIDE AIR DUCT UP THROUGH ROOF MEMBRANE AND TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE BETWEEN EXHAUST OUTLET AND OUTSIDE AIR INTAKE.
9. ROUTE 4"Ø DRYER EXHAUST FROM VENT BOX UP THROUGH WALL WITH FIRE CAULK AT TOP PLATE PENETRATION. ROUTE UP THROUGH ROOF MEMBRANE AND TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE FROM MECHANICAL INTAKES.
10. ROUTE 6"Ø EXHAUST DUCT FROM RANGE HOOD UP THROUGH ROOF MEMBRANE AND TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE FROM MECHANICAL INTAKES.

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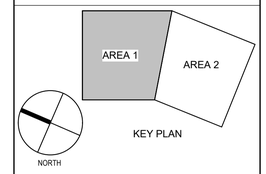

PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

FOURTH LEVEL - MECHANICAL PLAN - AREA 2

M113.2

PLAN NOTES:

1. MOUNT OUTDOOR UNIT ON BALCONY. MAINTAIN MANUFACTURER REQUIRED CLEARANCES. COORDINATE EXACT LOCATION WITH ARCHITECT.
2. EXHAUST AIR DUCT TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
3. COMBINATION WALL BOX TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
4. MOUNT RETURN AIR TERMINAL HIGH SIDEWALL.
5. ROUTE CONDENSATE FROM UNIT TO FLOOR DRAIN IN MECHANICAL CLOSET.
6. ROUTE OUTSIDE AIR DUCT UP THROUGH ROOF MEMBRANE. TERMINATE VIA ROOF CAP. PROVIDE [illegible] AT CEILING PENETRATION. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL EXHAUST.
7. MOUNT ERV IN RATED ASSEMBLY. REFER TO M400 SERIES FOR EXACT LOACTION AND FURTHER INFORMATION. ROUTE EXHAUST AND OUTSIDE AIR DUCT UP THROUGH ROOF MEMBRANE AND TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE BETWEEN EXHAUST OUTLET AND OUTSIDE AIR INTAKE.
8. ROUTE 4"Ø DRYER EXHAUST FROM VENT BOX UP THROUGH WALL WITH FIRE CAULK AT TOP PLATE PENETRATION. ROUTE UP THROUGH ROOF MEMBRANE AND TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE FROM MECHANICAL INTAKES.
9. ROUTE 6"Ø EXHAUST DUCT FROM RANGE HOOD UP THROUGH ROOF MEMBRANE AND TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE FROM MECHANICAL INTAKES.
10. EXHAUST DUCT UP THROUGH ROOF. TERMINATE VIA ROOF CAP. REFERENCE SHEET M113.1 FOR CONTINUATION. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.
11. OUTSIDE AIR DUCT UP THROUGH ROOF. TERMINATE VIA ROOF CAP. REFERENCE SHEET M113.1 FOR CONTINUATION. MAINTAIN 10'-0" FROM ALL MECHANICAL INTAKES.

1 FIFTH LEVEL - MECHANICAL PLAN - AREA 1
1/8" = 1'-0"

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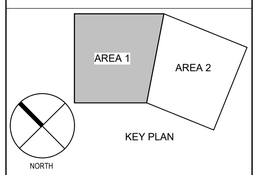

PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

FIFTH LEVEL - MECHANICAL PLAN - AREA 1

M114.1

1 FIFTH LEVEL - MECHANICAL PLAN - AREA 2

1/8" = 1'-0"

PLAN NOTES:

1. MOUNT OUTDOOR UNIT ON BALCONY. MAINTAIN MANUFACTURER REQUIRED CLEARANCES. COORDINATE EXACT LOCATION WITH ARCHITECT.
2. EXHAUST AIR DUCT TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
3. COMBINATION WALL BOX TO BE TERMINATED AT THIS LOCATION. REFER TO TYPICAL UNIT PLANS FOR MORE INFORMATION.
4. MOUNT RETURN AIR TERMINAL HIGH SIDEWALL.
5. ROUTE CONDENSATE FROM UNIT TO FLOOR DRAIN IN MECHANICAL CLOSET.
6. ROUTE OUTSIDE AIR DUCT UP THROUGH ROOF MEMBRANE. TERMINATE VIA ROOF CAP. PROVIDE SEAL AT CEILING PENETRATION. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL EXHAUST.
7. MOUNT EXHAUST FAN IN CEILING. ROUTE UP THROUGH ROOF MEMBRANE. TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" FROM ALL MECHANICAL INTAKES.
8. MOUNT ERV IN RATED ASSEMBLY. REFER TO M400 SERIES FOR EXACT LOACTION AND FURTHER INFORMATION. ROUTE EXHAUST AND OUTSIDE AIR DUCT UP THROUGH ROOF MEMBRANE AND TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE BETWEEN EXHAUST OUTLET AND OUTSIDE AIR INTAKE.
9. ROUTE 4"Ø DRYER EXHAUST FROM VENT BOX UP THROUGH WALL WITH FIRE CAULK AT TOP PLATE PENETRATION. ROUTE UP THROUGH ROOF MEMBRANE AND TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE FROM MECHANICAL INTAKES.
10. ROUTE 6"Ø EXHAUST DUCT FROM RANGE HOOD UP THROUGH ROOF MEMBRANE AND TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE FROM MECHANICAL INTAKES.
11. EXHAUST DUCT UP THROUGH ROOF. TERMINATE VIA ROOF CAP. REFERENCE SHEET M113.2 FOR CONTINUATION. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.
12. OUTSIDE AIR DUCT UP THROUGH ROOF. TERMINATE VIA ROOF CAP. REFERENCE SHEET M113.2 FOR CONTINUATION. MAINTAIN 10'-0" FROM ALL MECHANICAL INTAKES.
13. DUCTWORK DOWN FROM RTU ON ROOF ABOVE. ROUTE DUCTWORK CLEAR OF ELEVATOR GEAR.

Bush ARCHITECTS
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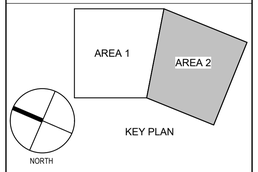


PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

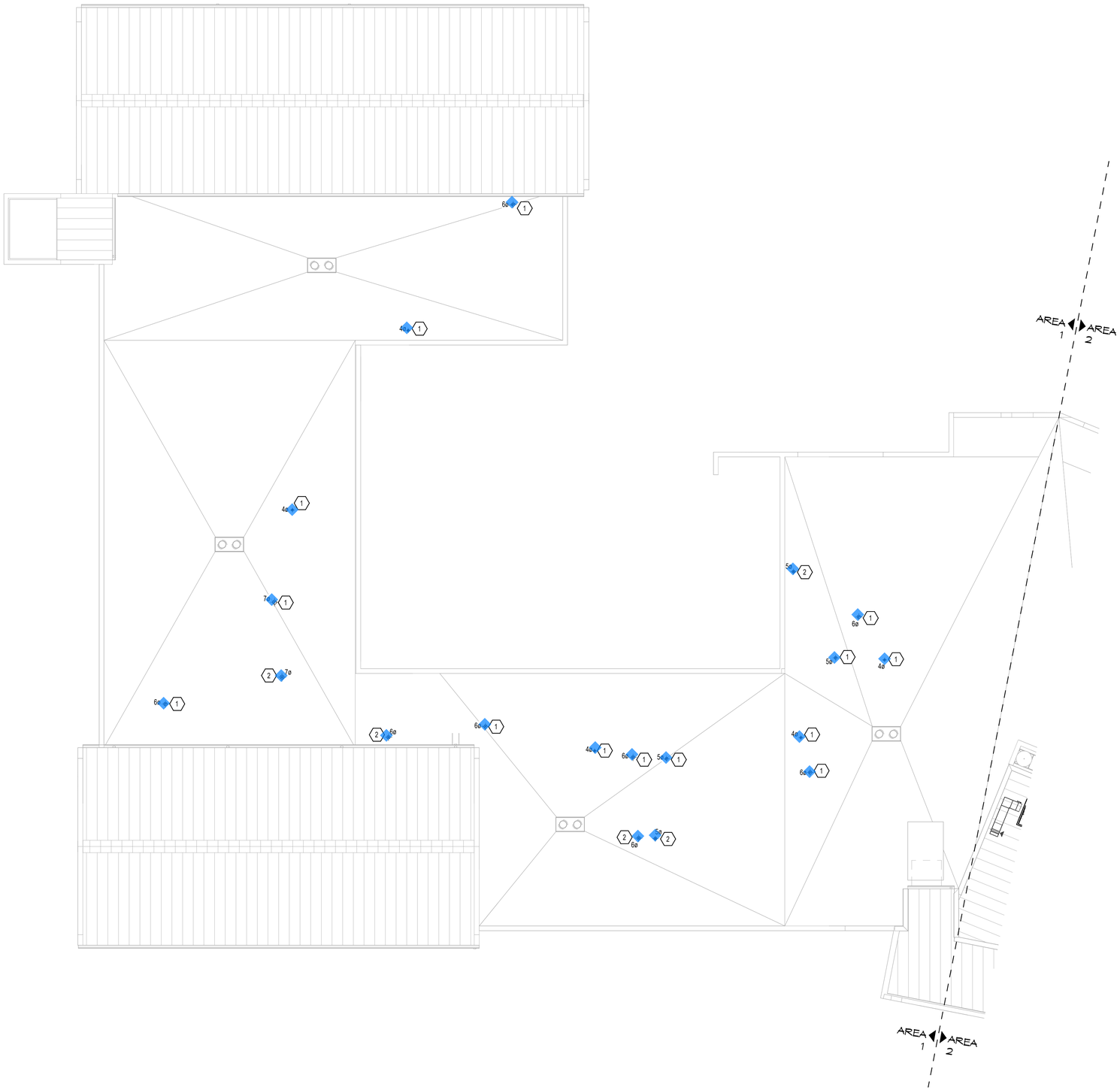
NO.	DESCRIPTION	DATE

FIFTH LEVEL - MECHANICAL PLAN - AREA 2

M114.2

PLAN NOTES:

1. EXHAUST DUCT UP THROUGH ROOF. TERMINATE VIA ROOF CAP. REFERENCE SHEET M114.1 FOR CONTINUATION. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.
2. OUTSIDE AIR DUCT UP THROUGH ROOF. TERMINATE VIA ROOF CAP. REFERENCE SHEET M114.1 FOR CONTINUATION. MAINTAIN 10'-0" FROM ALL MECHANICAL EXHAUSTS.



1 ROOF - MECHANICAL PLAN - AREA 1

1/8" = 1'-0"

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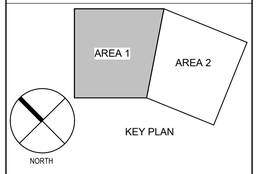


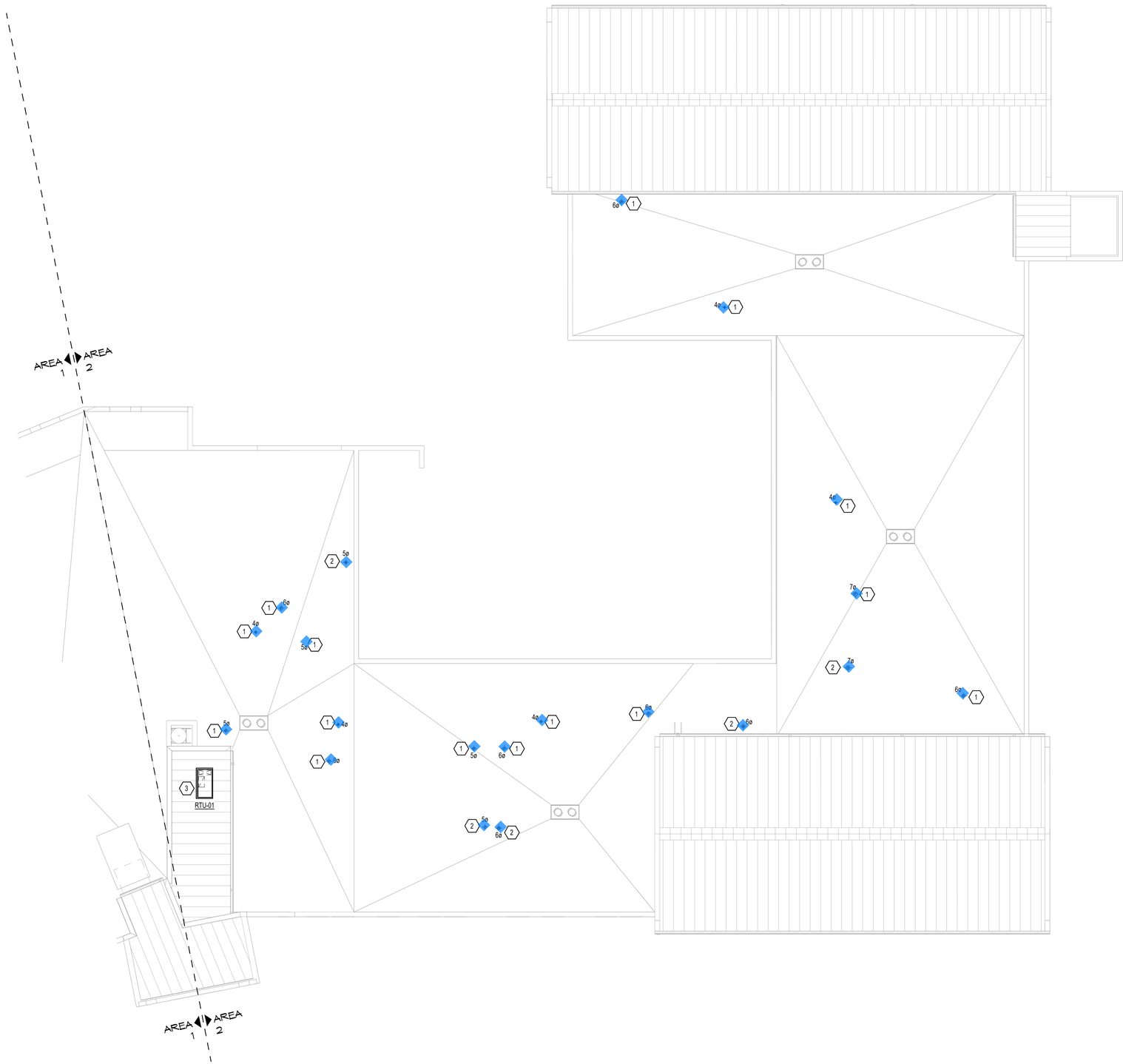
PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

MECHANICAL ROOF PLAN - AREA 1

M210.1



PLAN NOTES:

1. EXHAUST DUCT UP THROUGH ROOF. TERMINATE VIA ROOF CAP. REFERENCE SHEET M114.1 FOR CONTINUATION. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.
2. OUTSIDE AIR DUCT UP THROUGH ROOF. TERMINATE VIA ROOF CAP. REFERENCE SHEET M114.1 FOR CONTINUATION. MAINTAIN 10'-0" FROM ALL MECHANICAL EXHAUSTS.
3. MOUNT ROOFTOP UINT ABOVE ELEVATOR SHAFT. COORDINATE LOCATION WITH STRUCTURAL.

1 ROOF - MECHANICAL PLAN - AREA 2

1/8" = 1'-0"

Bush ARCHITECTS
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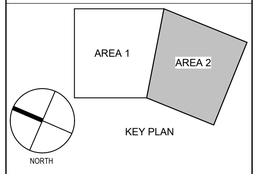


PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

MECHANICAL ROOF PLAN - AREA 2

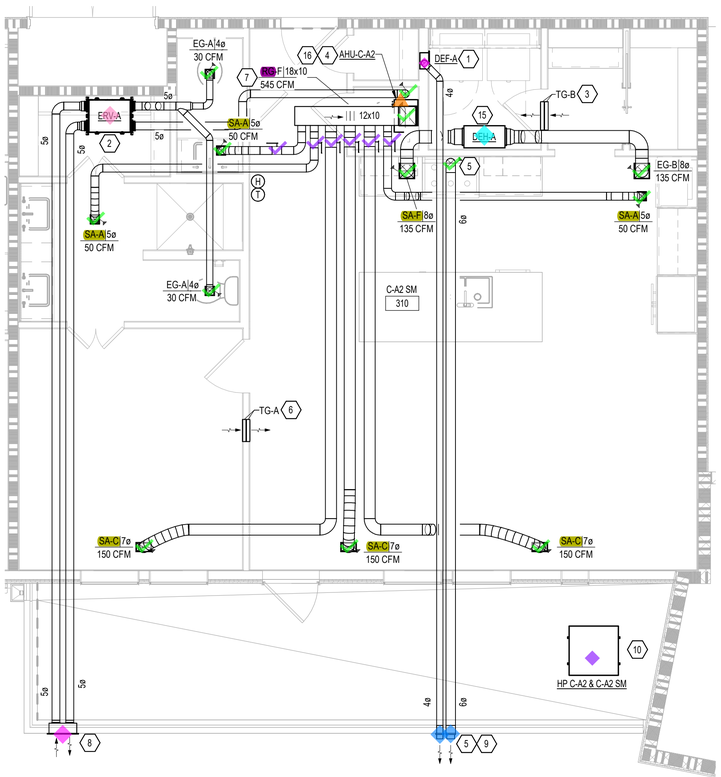
M210.2

DRYER VENT LENGTH

SERVING	LENGTH	# OF 90s	# OF 45s	TOTAL EQ. LENGTH
UNIT C-A1	26' - 1"	1	1	33' - 7"
UNIT C-A2 & C-A2SM	40' - 5"	1	1	47' - 11"
UNIT C-B1	27' - 5 1/2"	1	1	34' - 11 1/2"
UNIT C-B1LG	32' - 8 1/4"	3	0	47' - 8 1/4"
UNIT C-B2LG	36' - 1"	2	0	46' - 1"
UNIT C-B2SM	39' - 1 1/4"	2	0	49' - 1 1/4"
UNIT C-B3	64' - 1 1/4"	2	1	76' - 7 1/4"
UNIT C-P1	7' - 2 3/4"	0	0	7' - 2 3/4"
UNIT C-S1	42' - 3 3/4"	1	1	49' - 9 3/4"

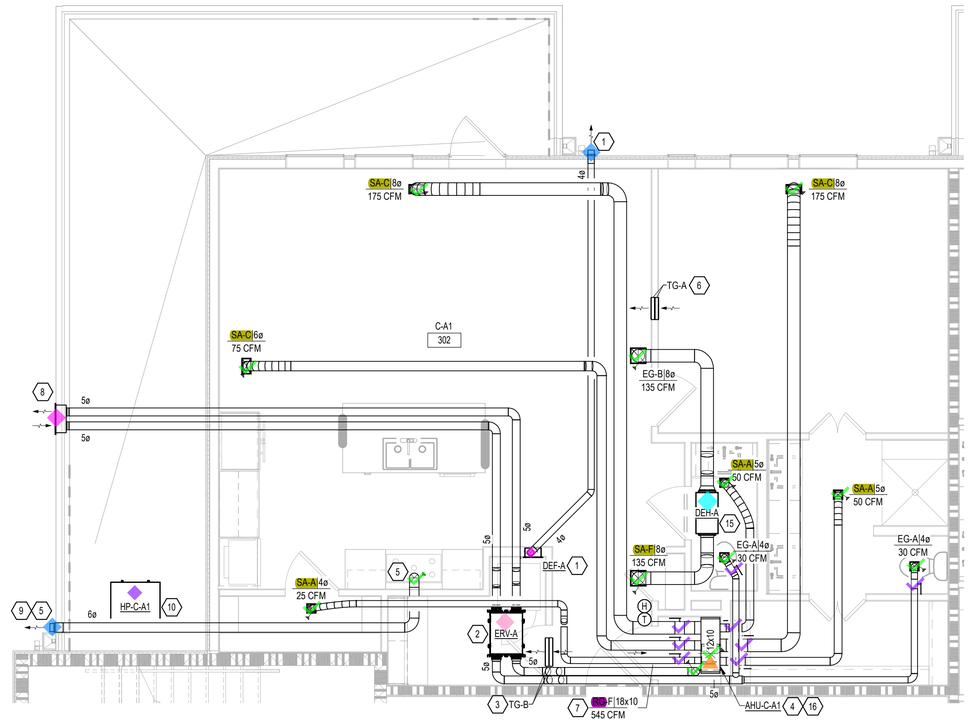
PLAN NOTES (ALL NOTES MAY NOT APPLY TO ALL PLANS):

1. ROUTE 4"Ø DRYER EXHAUST FROM VENT BOX UP TO DRYER EXHAUST FAN. MAINTAIN ACCESS TO DRYER EXHAUST FAN. ROUTE 4"Ø DRYER EXHAUST FROM DRYER EXHAUST FAN UP THROUGH CEILING WITH FIRE CAULK AT TOP PLATE PENETRATION. ON LOWER FLOORS, ROUTE THROUGH STRUCTURE TO EXTERIOR WALL CAP. REFERENCE UPPER FLOOR MECHANICAL PLAN FOR UNIT TERMINATIONS. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.
2. MOUNT ERV IN RATED ASSEMBLY. PROVIDE RATED ACCESS PANEL IN RATED MEMBRANE BELOW UNIT. COORDINATE FINAL LOCATION WITH ARCHITECTURAL DRAWINGS. ROUTE DUCTWORK, SIZED PER PLAN, FROM RESIDENT UNIT BATH EXHAUST GRILLES TO ERV. ROUTE OUTSIDE AIR DUCT, SIZED PER PLAN, FROM ERV TO RESIDENT UNIT AHU RETURN. PROVIDE BOOT AT MEMBRANE PENETRATIONS. ON LOWER FLOORS ROUTE EXHAUST AND OUTSIDE AIR DUCT TO MANUFACTURER PROVIDED DUAL WALL CAP TERMINATION. REFERENCE UPPER FLOOR MECHANICAL PLANS FOR UPPER FLOOR UNIT TERMINATIONS. BALANCE ERV TO VALUES SHOWN ON M602.
3. PROVIDE (2) 18X10 TRANSFER GRILLES (120 SQ. IN. MINIMUM FREE AREA) ONE ON CORRIDOR SIDE AND ONE FACING LAUNDRY ROOM ABOVE DOOR FOR DRYER MAKEUP.
4. ROUTE 3/4" CONDENSATE DRAIN LINE TO FLOOR DRAIN IN MECHANICAL CLOSET. PROVIDE CODE REQUIRED AIR GAP. REFER TO PLUMBING PLANS FOR EXACT LOCATION.
5. ROUTE 6" ROUND DUCT FROM VENT HOOD UP THROUGH CEILING. PROVIDE BOOT AT MEMBRANE PENETRATION. ON LOWER FLOORS, ROUTE THROUGH STRUCTURE TO EXTERIOR WALL CAP. REFERENCE UPPER FLOOR MECHANICAL PLAN FOR UNIT TERMINATIONS.
6. PROVIDE (2) 14X8 TRANSFER GRILLES, ONE HIGH SIDEWALL ON COMMON AREA SIDE AND ONE LOW WALL FACING BEDROOM FOR RETURN AIR PATH.
7. RETURN GRILLE TO BE MOUNTED HIGH SIDEWALL. MECHANICAL CLOSET TO BE USED AS RETURN AIR PLENUM. ENSURE ALL ITEMS IN MECHANICAL CLOSET ARE PLENUM RATED.
8. MOUNT COMBINATION WALL BOX IN SIDEWALL OF BALCONY ABOVE. ROUTE DUCTWORK THROUGH BALCONY STRUCTURE TO INTERIOR OF UNIT.
9. MOUNT WALL CAP ON SIDEWALL OF BALCONY ABOVE. ROUTE DUCTWORK THROUGH BALCONY STRUCTURE TO INTERIOR OF UNIT.
10. HEAT PUMP SHOWN FOR REFERENCE ONLY. REFER TO OVERALL AND ROOF PLANS FOR HEAT PUMP LOCATIONS.
11. PROVIDE (2) 14X8 TRANSFER GRILLES, MOUNTED ABOVE DOOR, ONE FACING COMMON AREA SIDE AND ONE FACING BEDROOM SIDE FOR RETURN AIR PATH.
12. MOUNT TANDEM WALL BOX ON EXTERIOR OF BUILDING. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.
13. RETURN GRILLE TO BE MOUNTED HIGH SIDED. ROUTE FULLY DUCTED RETURN THROUGH CLOSET TO MECHANICAL UNIT.
14. ROUTE 4"Ø DRYER EXHAUST DUCT UP THROUGH WALL TO ROOF. TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.
15. MOUNT DEHUMIDIFIER IN RATED ASSEMBLY. PROVIDE FIRE RATED ACCESS PANEL IN RATED MEMBRANE BELOW UNIT. COORDINATE FINAL LOCATION WITH ARCHITECTURAL DRAWINGS. ROUTE CONDENSATE DRAIN, SIZED PER MANUFACTURERS RECOMMENDATION, TO FLOOR DRAIN IN MECHANICAL CLOSET.
16. MOUNT AIR HANDLING UNIT ON WALL ABOVE WATER HEATER.
17. ROUTE CONDENSATE TO WALL BOX IN LAUNDRY ROOM.



2 TYPICAL UNIT C-A2 & C-A2 SM - MECHANICAL PLAN

1/4" = 1'-0"



1 TYPICAL UNIT C-A1 - MECHANICAL PLAN

1/4" = 1'-0"

Bush ARCHITECTS

A: 14951 N DALLAS EXPY, SUITE 850, DALLAS, TX 75254
E: CONTACT@BUSHARCHITECTS.DESIGN
T: 469 - 857 - 3151
W: WWW.BUSHARCHITECTS.DESIGN

BAYSIDE MIXED-USE

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

TYPICAL UNITS MECHANICAL PLANS

M401

DRYER VENT LENGTH

SERVING	LENGTH	# OF 90s	# OF 45s	TOTAL EQ. LENGTH
UNIT C-A1	26' - 1"	1	1	33' - 7"
UNIT C-A2 & C-A2SM	40' - 5"	1	1	47' - 11"
UNIT C-B1	27' - 5 1/2"	1	1	34' - 11 1/2"
UNIT C-B1LG	32' - 8 1/4"	3	0	47' - 8 1/4"
UNIT C-B2LG	36' - 1"	2	0	46' - 1"
UNIT C-B2SM	39' - 1 1/4"	2	0	49' - 1 1/4"
UNIT C-B3	64' - 1 1/4"	2	1	76' - 7 1/4"
UNIT C-P1	7' - 2 3/4"	0	0	7' - 2 3/4"
UNIT C-S1	42' - 3 3/4"	1	1	49' - 9 3/4"

PLAN NOTES (ALL NOTES MAY NOT APPLY TO ALL PLANS):

1. ROUTE 4"Ø DRYER EXHAUST FROM VENT BOX UP TO DRYER EXHAUST FAN. MAINTAIN ACCESS TO DRYER EXHAUST FAN. ROUTE 4"Ø DRYER EXHAUST FROM DRYER EXHAUST FAN UP THROUGH CEILING WITH FIRE CAULK AT TOP PLATE PENETRATION. ON LOWER FLOORS, ROUTE THROUGH STRUCTURE TO EXTERIOR WALL CAP. REFERENCE UPPER FLOOR MECHANICAL PLAN FOR UNIT TERMINATIONS. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.
2. MOUNT ERV IN RATED ASSEMBLY. PROVIDE RATED ACCESS PANEL IN RATED MEMBRANE BELOW UNIT. COORDINATE FINAL LOCATION WITH ARCHITECTURAL DRAWINGS. ROUTE DUCTWORK, SIZED PER PLAN, FROM RESIDENT UNIT BATH EXHAUST GRILLES TO ERV. ROUTE OUTSIDE AIR DUCT, SIZED PER PLAN, FROM ERV TO RESIDENT UNIT AHU RETURN. PROVIDE CAP AT MEMBRANE PENETRATIONS. ON LOWER FLOORS ROUTE EXHAUST AND OUTSIDE AIR DUCT TO MANUFACTURER PROVIDED DUAL WALL CAP TERMINATION. REFERENCE UPPER FLOOR MECHANICAL PLANS FOR UPPER FLOOR UNIT TERMINATIONS. BALANCE ERV TO VALUES SHOWN ON M602.
3. PROVIDE (2) 18X10 TRANSFER GRILLES (120 SQ. IN. MINIMUM FREE AREA) ONE ON CORRIDOR SIDE AND ONE FACING LAUNDRY ROOM ABOVE DOOR FOR DRYER MAKEUP.
4. ROUTE 3/4" CONDENSATE DRAIN LINE TO FLOOR DRAIN IN MECHANICAL CLOSET. PROVIDE CODE REQUIRED AIR GAP. REFER TO PLUMBING PLANS FOR EXACT LOCATION.
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6. PROVIDE (2) 14X8 TRANSFER GRILLES, ONE HIGH SIDEWALL ON COMMON AREA SIDE AND ONE LOW WALL FACING BEDROOM FOR RETURN AIR PATH.
7. RETURN GRILLE TO BE MOUNTED HIGH SIDEWALL. MECHANICAL CLOSET TO BE USED AS RETURN AIR PLENUM. ENSURE ALL ITEMS IN MECHANICAL CLOSET ARE PLENUM RATED.
8. MOUNT COMBINATION WALL BOX IN SIDEWALL OF BALCONY ABOVE. ROUTE DUCTWORK THROUGH BALCONY STRUCTURE TO INTERIOR OF UNIT.
9. MOUNT WALL CAP ON SIDEWALL OF BALCONY ABOVE. ROUTE DUCTWORK THROUGH BALCONY STRUCTURE TO INTERIOR OF UNIT.
10. HEAT PUMP SHOWN FOR REFERENCE ONLY. REFER TO OVERALL AND ROOF PLANS FOR HEAT PUMP LOCATIONS.
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14. ROUTE 4"Ø DRYER EXHAUST DUCT UP THROUGH WALL TO ROOF. TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.
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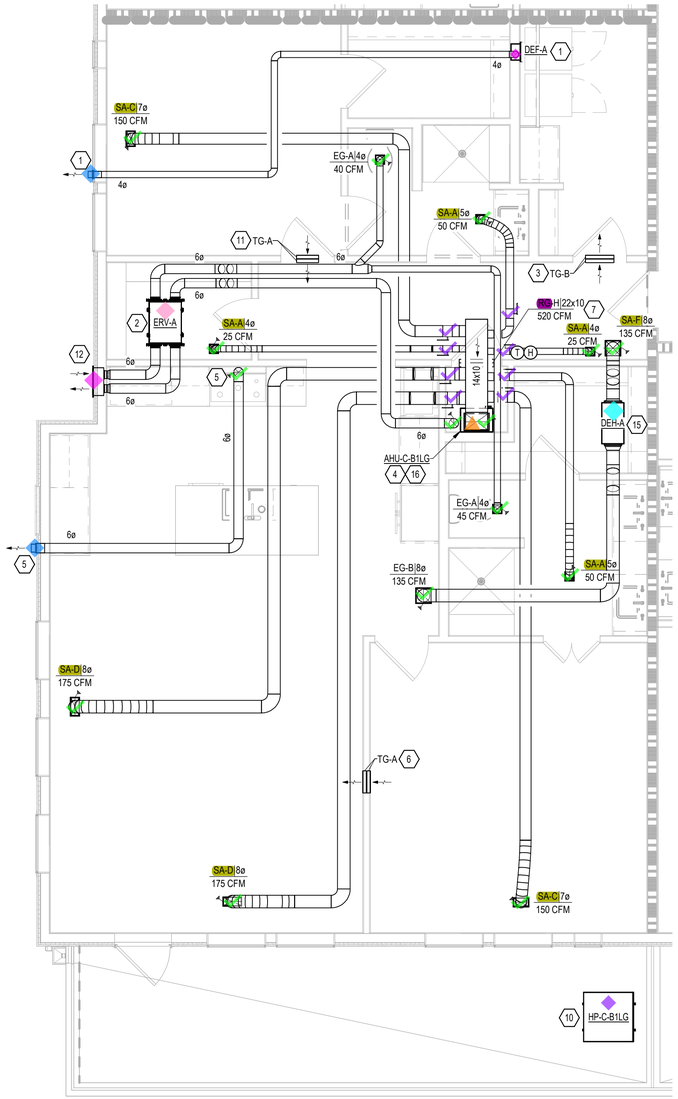
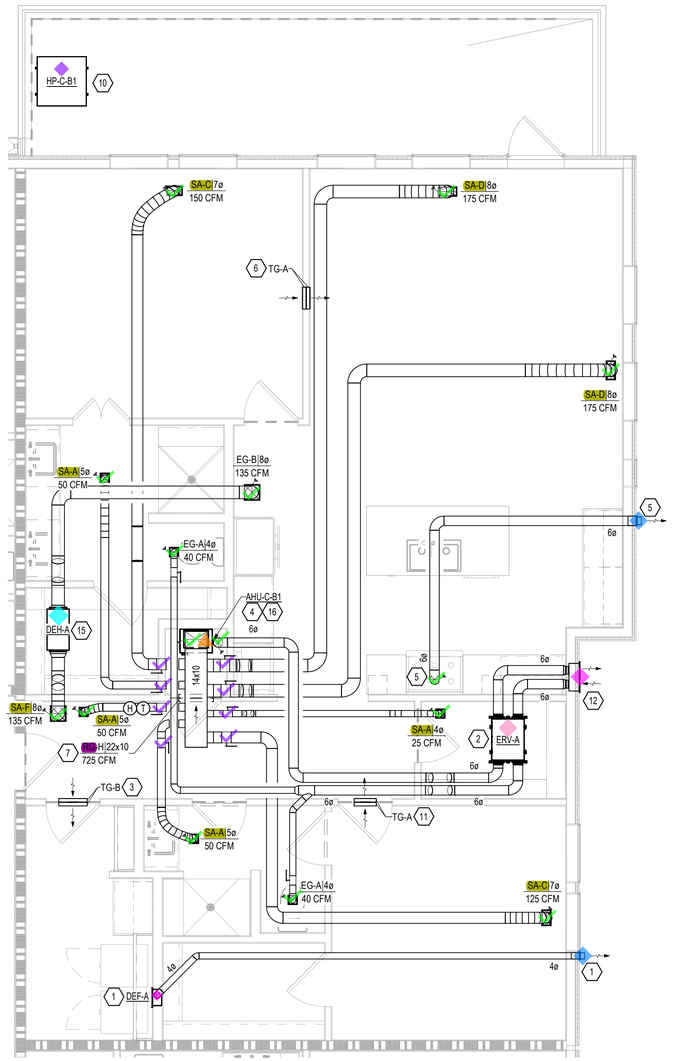
17. ROUTE CONDENSATE TO WALL BOX IN LAUNDRY ROOM.



2 TYPICAL UNIT C-B1LG - MECHANICAL PLAN

1/4" = 1'-0"



1 TYPICAL UNIT C-B1 -MECHANICAL PLAN

1/4" = 1'-0"

Bush ARCHITECTS

A: 14951 N DALLAS EXPY, SUITE 850, DALLAS, TX 75254
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T: 469 - 857 - 3151
W: WWW.BUSHARCHITECTS.DESIGN

BAYSIDE MIXED-USE

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

TYPICAL UNITS MECHANICAL PLANS

M402

DRYER VENT LENGTH

SERVING	LENGTH	# OF 90s	# OF 45s	TOTAL EQ. LENGTH
UNIT C-A1	26' - 1"	1	1	33' - 7"
UNIT C-A2 & C-A2SM	40' - 5"	1	1	47' - 11"
UNIT C-B1	27' - 5 1/2"	1	1	34' - 11 1/2"
UNIT C-B1LG	32' - 8 1/4"	3	0	47' - 8 1/4"
UNIT C-B2LG	36' - 1"	2	0	46' - 1"
UNIT C-B2SM	39' - 1 1/4"	2	0	49' - 1 1/4"
UNIT C-B3	64' - 1 1/4"	2	1	76' - 7 1/4"
UNIT C-P1	7' - 2 3/4"	0	0	7' - 2 3/4"
UNIT C-S1	42' - 3 3/4"	1	1	49' - 9 3/4"

PLAN NOTES (ALL NOTES MAY NOT APPLY TO ALL PLANS):

1. ROUTE 4"Ø DRYER EXHAUST FROM VENT BOX UP TO DRYER EXHAUST FAN. MAINTAIN ACCESS TO DRYER EXHAUST FAN. ROUTE 4"Ø DRYER EXHAUST FROM DRYER EXHAUST FAN UP THROUGH CEILING WITH FIRE CAULK AT TOP PLATE PENETRATION. ON LOWER FLOORS, ROUTE THROUGH STRUCTURE TO EXTERIOR WALL CAP. REFERENCE UPPER FLOOR MECHANICAL PLAN FOR UNIT TERMINATIONS. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.
2. MOUNT ERV IN RATED ASSEMBLY. PROVIDE RATED ACCESS PANEL IN RATED MEMBRANE BELOW UNIT. COORDINATE FINAL LOCATION WITH ARCHITECTURAL DRAWINGS. ROUTE DUCTWORK, SIZED PER PLAN, FROM RESIDENT UNIT BATH EXHAUST GRILLES TO ERV. ROUTE OUTSIDE AIR DUCT, SIZED PER PLAN, FROM ERV TO RESIDENT UNIT AHU RETURN. PROVIDE CURB AT MEMBRANE PENETRATIONS. ON LOWER FLOORS ROUTE EXHAUST AND OUTSIDE AIR DUCT TO MANUFACTURER PROVIDED DUAL WALL CAP TERMINATION. REFERENCE UPPER FLOOR MECHANICAL PLANS FOR UPPER FLOOR UNIT TERMINATIONS. BALANCE ERV TO VALUES SHOWN ON M602.
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9. MOUNT WALL CAP ON SIDEWALL OF BALCONY ABOVE. ROUTE DUCTWORK THROUGH BALCONY STRUCTURE TO INTERIOR OF UNIT.
10. HEAT PUMP SHOWN FOR REFERENCE ONLY. REFER TO OVERALL AND ROOF PLANS FOR HEAT PUMP LOCATIONS.
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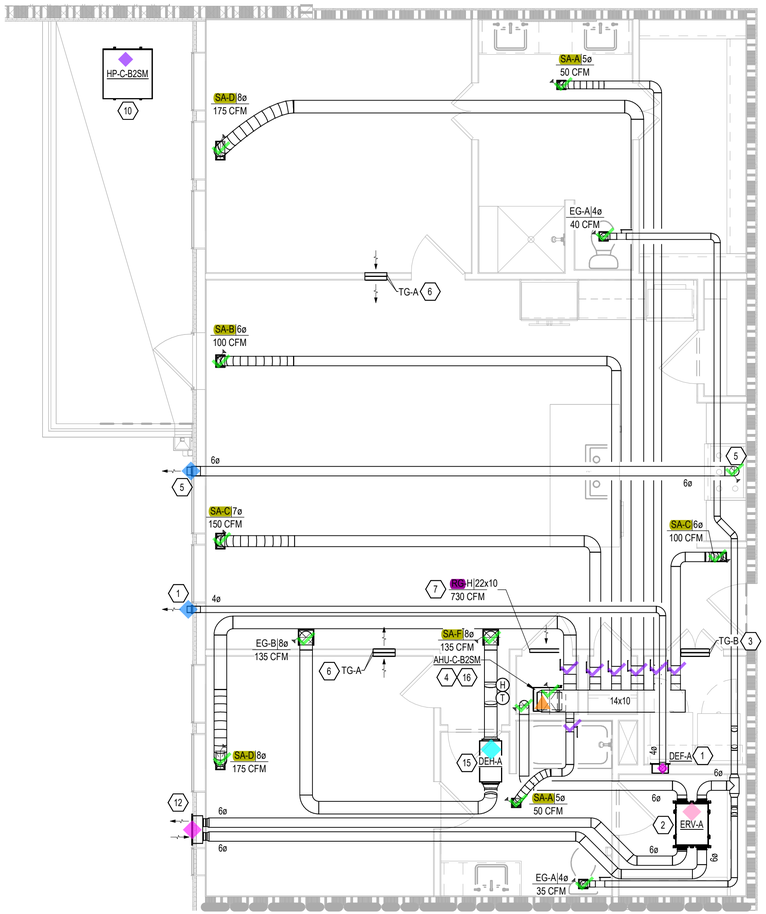
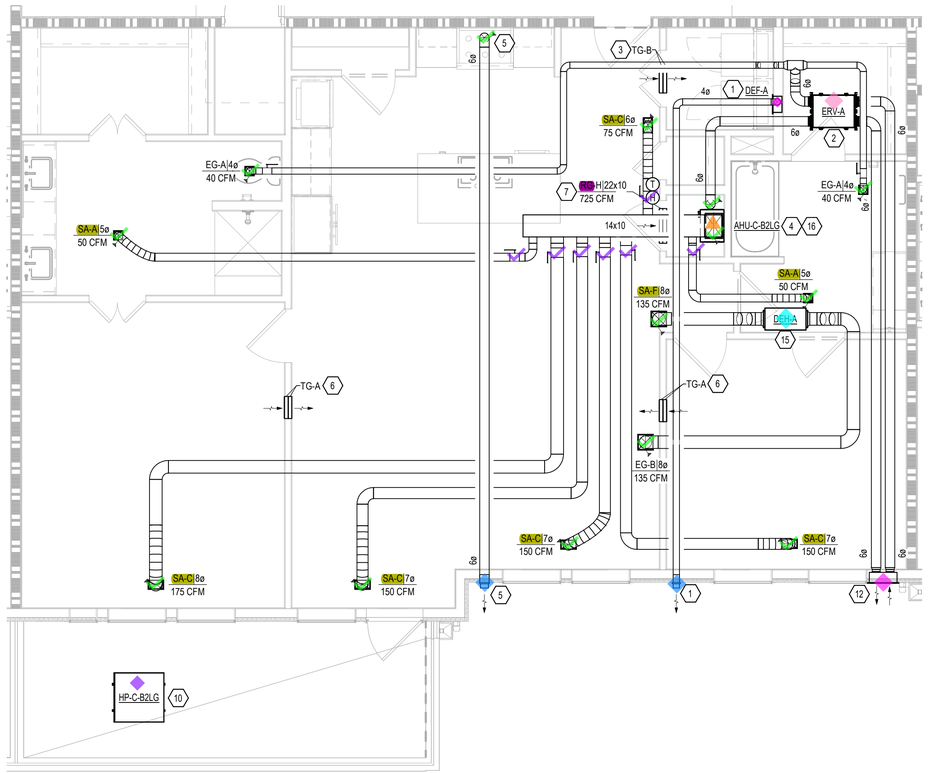


2 TYPICAL UNIT C-B2SM - MECHANICAL PLAN

1/4" = 1'-0"



1 TYPICAL UNIT C-B2LG - MECHANICAL PLAN

1/4" = 1'-0"

Bush ARCHITECTS
A: 14951 N DALLAS EXPY, SUITE 850, DALLAS, TX 75254
E: CONTACT@BUSHARCHITECTS.DESIGN
T: 469 - 857 - 3151
W: WWW.BUSHARCHITECTS.DESIGN

BAYSIDE MIXED-USE

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

TYPICAL UNITS MECHANICAL PLANS

M403

DRYER VENT LENGTH

SERVING	LENGTH	# OF 90s	# OF 45s	TOTAL EQ. LENGTH
UNIT C-A1	26' - 1"	1	1	33' - 7"
UNIT C-A2 & C-A2SM	40' - 5"	1	1	47' - 11"
UNIT C-B1	27' - 5 1/2"	1	1	34' - 11 1/2"
UNIT C-B1LG	32' - 8 1/4"	3	0	47' - 8 1/4"
UNIT C-B2LG	36' - 1"	2	0	46' - 1"
UNIT C-B2SM	39' - 1 1/4"	2	0	49' - 1 1/4"
UNIT C-B3	64' - 1 1/4"	2	1	76' - 7 1/4"
UNIT C-P1	7' - 2 3/4"	0	0	7' - 2 3/4"
UNIT C-S1	42' - 3 3/4"	1	1	49' - 9 3/4"

PLAN NOTES (ALL NOTES MAY NOT APPLY TO ALL PLANS):

1. ROUTE 4"Ø DRYER EXHAUST FROM VENT BOX UP TO DRYER EXHAUST FAN. MAINTAIN ACCESS TO DRYER EXHAUST FAN. ROUTE 4"Ø DRYER EXHAUST FROM DRYER EXHAUST FAN UP THROUGH CEILING WITH FIRE CAULK AT TOP PLATE PENETRATION. ON LOWER FLOORS, ROUTE THROUGH STRUCTURE TO EXTERIOR WALL CAP. REFERENCE UPPER FLOOR MECHANICAL PLAN FOR UNIT TERMINATIONS. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.
2. MOUNT ERV IN RATED ASSEMBLY. PROVIDE RATED ACCESS PANEL IN RATED MEMBRANE BELOW UNIT. COORDINATE FINAL LOCATION WITH ARCHITECTURAL DRAWINGS. ROUTE DUCTWORK, SIZED PER PLAN, FROM RESIDENT UNIT BATH EXHAUST GRILLES TO ERV. ROUTE OUTSIDE AIR DUCT, SIZED PER PLAN, FROM ERV TO RESIDENT UNIT AHU RETURN. PROVIDE CAP AT MEMBRANE PENETRATIONS. ON LOWER FLOORS ROUTE EXHAUST AND OUTSIDE AIR DUCT TO MANUFACTURER PROVIDED DUAL WALL CAP TERMINATION. REFERENCE UPPER FLOOR MECHANICAL PLANS FOR UPPER FLOOR UNIT TERMINATIONS. BALANCE ERV TO VALUES SHOWN ON M602.
3. PROVIDE (2) 18X10 TRANSFER GRILLES (120 SQ. IN. MINIMUM FREE AREA) ONE ON CORRIDOR SIDE AND ONE FACING LAUNDRY ROOM ABOVE DOOR FOR DRYER MAKEUP.
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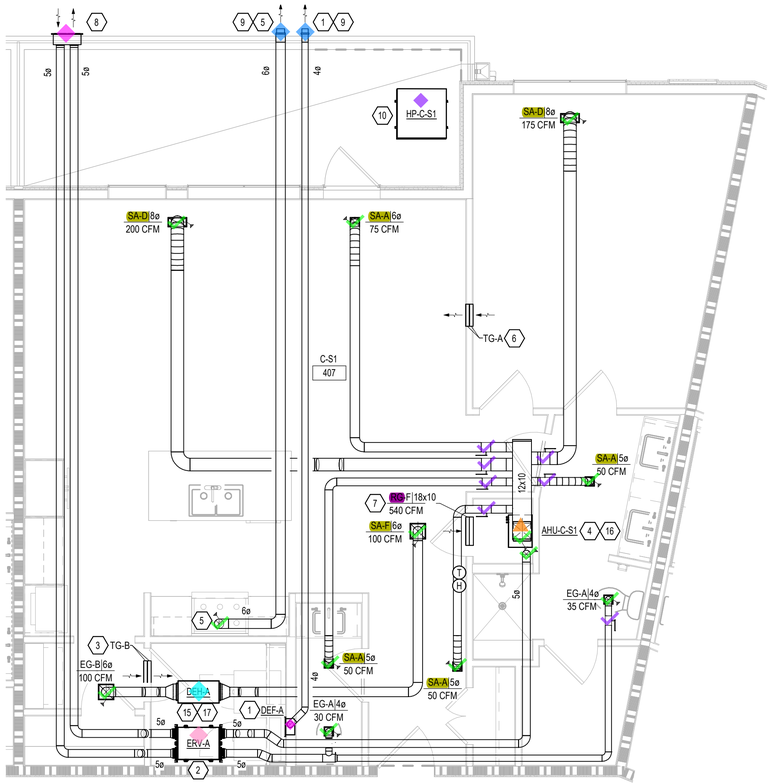
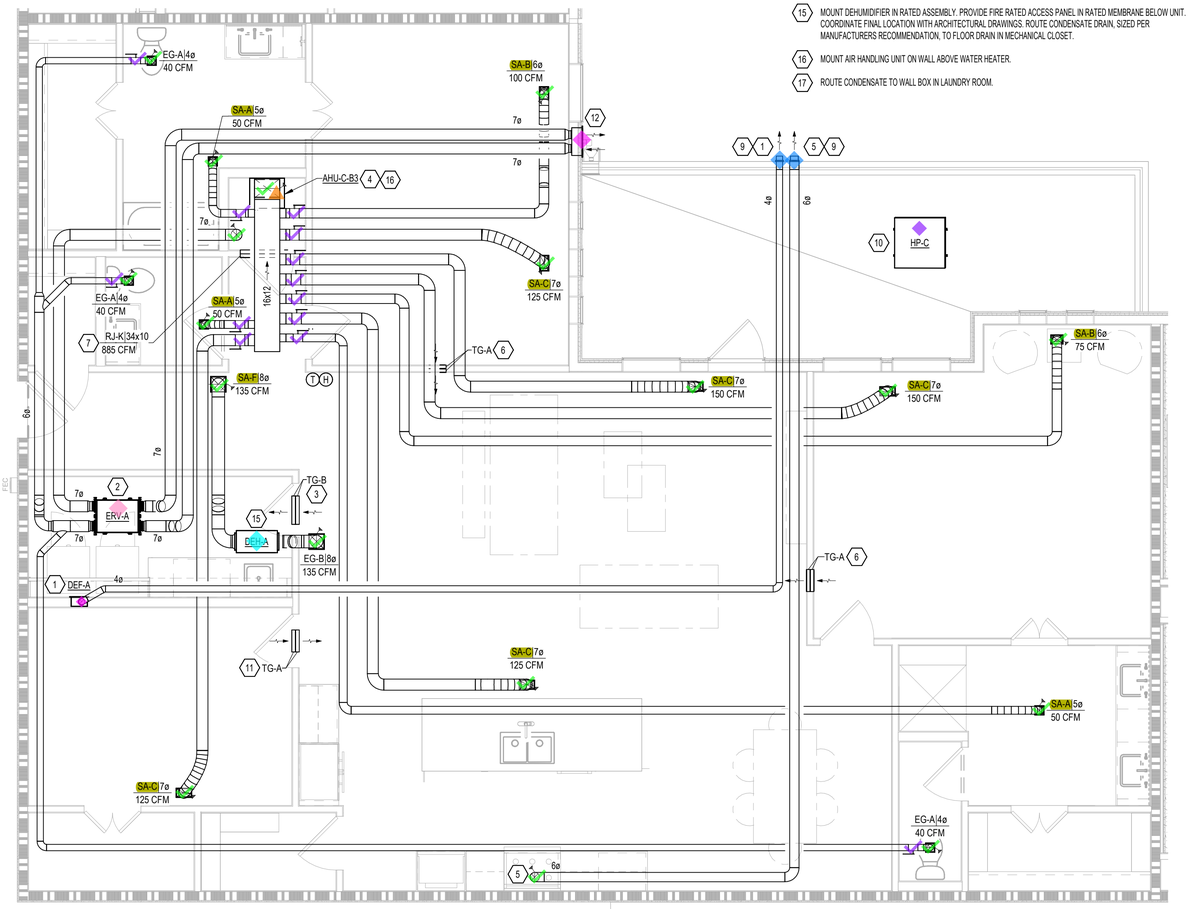


2 TYPICAL UNIT C-S1 - MECHANICAL PLAN
1/4" = 1'-0"



1 TYPICAL UNIT C-B3 - MECHANICAL PLAN
1/4" = 1'-0"

Bush ARCHITECTS
A: 14951 N DALLAS EXPY, SUITE 850, DALLAS, TX 75254
E: CONTACT@BUSHARCHITECTS.DESIGN
T: 469 - 857 - 3151
W: WWW.BUSHARCHITECTS.DESIGN

BAYSIDE MIXED-USE

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

TYPICAL UNITS MECHANICAL PLANS

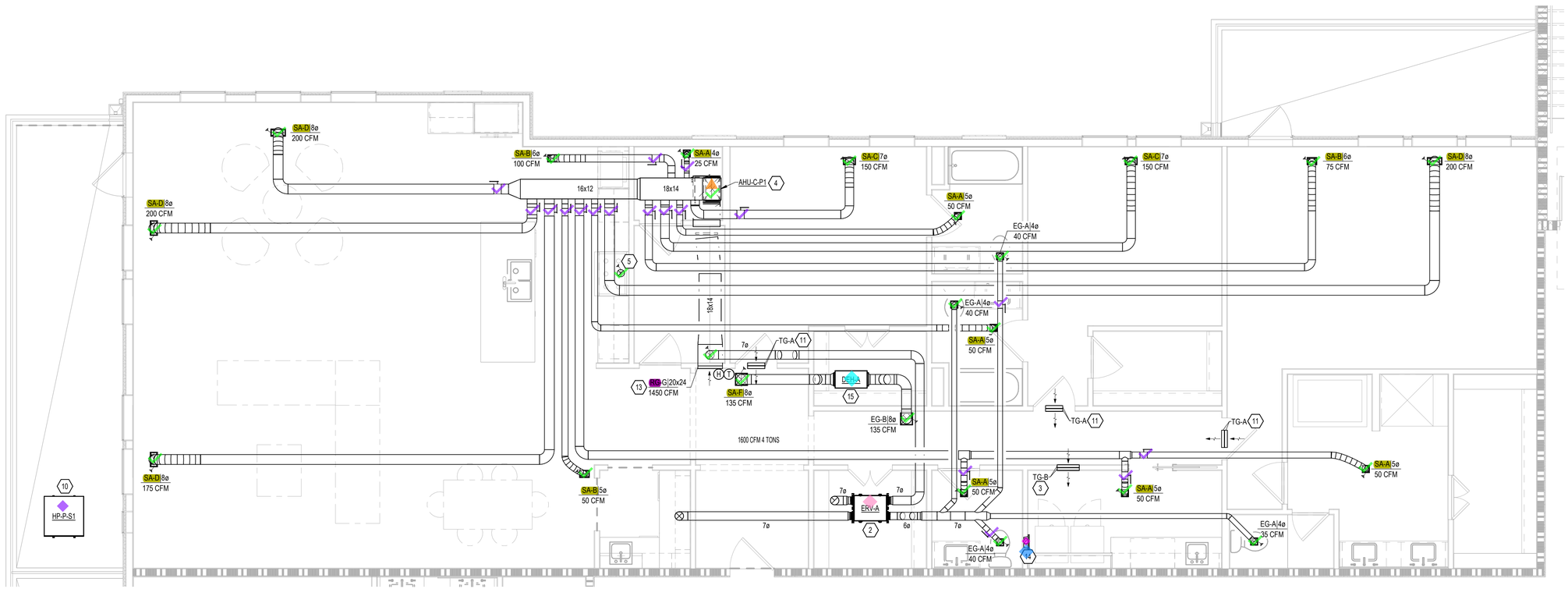
M404

DRYER VENT LENGTH

SERVING	LENGTH	# OF 90s	# OF 45s	TOTAL EQ. LENGTH
UNIT C-A1	26' - 1"	1	1	33' - 7"
UNIT C-A2 & C-A2SM	40' - 5"	1	1	47' - 11"
UNIT C-B1	27' - 5 1/2"	1	1	34' - 11 1/2"
UNIT C-B1LG	32' - 8 1/4"	3	0	47' - 8 1/4"
UNIT C-B2LG	36' - 1"	2	0	48' - 1"
UNIT C-B2SM	39' - 1 1/4"	2	0	49' - 1 1/4"
UNIT C-B3	64' - 1 1/4"	2	1	76' - 7 1/4"
UNIT C-P1	7' - 2 3/4"	0	0	7' - 2 3/4"
UNIT C-S1	42' - 3 3/4"	1	1	49' - 9 3/4"

PLAN NOTES (ALL NOTES MAY NOT APPLY TO ALL PLANS):

1. ROUTE 4"Ø DRYER EXHAUST FROM VENT BOX UP TO DRYER EXHAUST FAN. MAINTAIN ACCESS TO DRYER EXHAUST FAN. ROUTE 4"Ø DRYER EXHAUST FROM DRYER EXHAUST FAN UP THROUGH CEILING WITH FIRE CAULK AT TOP PLATE PENETRATION. ON LOWER FLOORS, ROUTE THROUGH STRUCTURE TO EXTERIOR WALL CAP. REFERENCE UPPER FLOOR MECHANICAL PLAN FOR UNIT TERMINATIONS. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.
2. MOUNT ERV IN RATED ASSEMBLY. PROVIDE RATED ACCESS PANEL IN RATED MEMBRANE BELOW UNIT. COORDINATE FINAL LOCATION WITH ARCHITECTURAL DRAWINGS. ROUTE DUCTWORK, SIZED PER PLAN, FROM RESIDENT UNIT BATH EXHAUST GRILLES TO ERV. ROUTE OUTSIDE AIR DUCT, SIZED PER PLAN, FROM ERV TO RESIDENT UNIT AHU RETURN. PROVIDE CURB AT MEMBRANE PENETRATIONS. ON LOWER FLOORS ROUTE EXHAUST AND OUTSIDE AIR DUCT TO MANUFACTURER PROVIDED DUAL WALL CAP TERMINATION. REFERENCE UPPER FLOOR MECHANICAL PLANS FOR UPPER FLOOR UNIT TERMINATIONS. BALANCE ERV TO VALUES SHOWN ON M602.
3. PROVIDE (2) 18X10 TRANSFER GRILLES (120 SQ. IN. MINIMUM FREE AREA) ONE ON CORRIDOR SIDE AND ONE FACING LAUNDRY ROOM ABOVE DOOR FOR DRYER MAKEUP.
4. ROUTE 3/4" CONDENSATE DRAIN LINE TO FLOOR DRAIN IN MECHANICAL CLOSET. PROVIDE CODE REQUIRED AIR GAP. REFER TO PLUMBING PLANS FOR EXACT LOCATION.
5. ROUTE 6" ROUND DUCT FROM VENT HOOD UP THROUGH CEILING. PROVIDE CURB AT MEMBRANE PENETRATION. ON LOWER FLOORS, ROUTE THROUGH STRUCTURE TO EXTERIOR WALL CAP. REFERENCE UPPER FLOOR MECHANICAL PLAN FOR UNIT TERMINATIONS.
6. PROVIDE (2) 14X8 TRANSFER GRILLES, ONE HIGH SIDEWALL ON COMMON AREA SIDE AND ONE LOW WALL FACING BEDROOM FOR RETURN AIR PATH.
7. RETURN GRILLE TO BE MOUNTED HIGH SIDEWALL. MECHANICAL CLOSET TO BE USED AS RETURN AIR PLENUM. ENSURE ALL ITEMS IN MECHANICAL CLOSET ARE PLENUM RATED.
8. MOUNT COMBINATION WALL BOX IN SIDEWALL OF BALCONY ABOVE. ROUTE DUCTWORK THROUGH BALCONY STRUCTURE TO INTERIOR OF UNIT.
9. MOUNT WALL CAP ON SIDEWALL OF BALCONY ABOVE. ROUTE DUCTWORK THROUGH BALCONY STRUCTURE TO INTERIOR OF UNIT.
10. HEAT PUMP SHOWN FOR REFERENCE ONLY. REFER TO OVERALL AND ROOF PLANS FOR HEAT PUMP LOCATIONS.
11. PROVIDE (2) 14X8 TRANSFER GRILLES, MOUNTED ABOVE DOOR, ONE FACING COMMON AREA SIDE AND ONE FACING BEDROOM SIDE FOR RETURN AIR PATH.
12. MOUNT TANDEM WALL BOX ON EXTERIOR OF BUILDING. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.
13. RETURN GRILLE TO BE MOUNTED HIGH SIDED. ROUTE FULLY DUCTED RETURN THROUGH CLOSET TO MECHANICAL UNIT.
14. ROUTE 4"Ø DRYER EXHAUST DUCT UP THROUGH WALL TO ROOF. TERMINATE VIA ROOF CAP. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL INTAKES.
15. MOUNT DEHUMIDIFIER IN RATED ASSEMBLY. PROVIDE FIRE RATED ACCESS PANEL IN RATED MEMBRANE BELOW UNIT. COORDINATE FINAL LOCATION WITH ARCHITECTURAL DRAWINGS. ROUTE CONDENSATE DRAIN, SIZED PER MANUFACTURERS RECOMMENDATION, TO FLOOR DRAIN IN MECHANICAL CLOSET.
16. MOUNT AIR HANDLING UNIT ON WALL ABOVE WATER HEATER.
17. ROUTE CONDENSATE TO WALL BOX IN LAUNDRY ROOM.



1 TYPICAL UNIT C-P1 - MECHANICAL PLAN

1/4" = 1'-0"

Bush ARCHITECTS

A: 14951 N DALLAS EXPY, SUITE 850, DALLAS, TX 75254
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T: 469 - 857 - 3151
W: WWW.BUSHARCHITECTS.DESIGN

BAYSIDE MIXED-USE

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PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

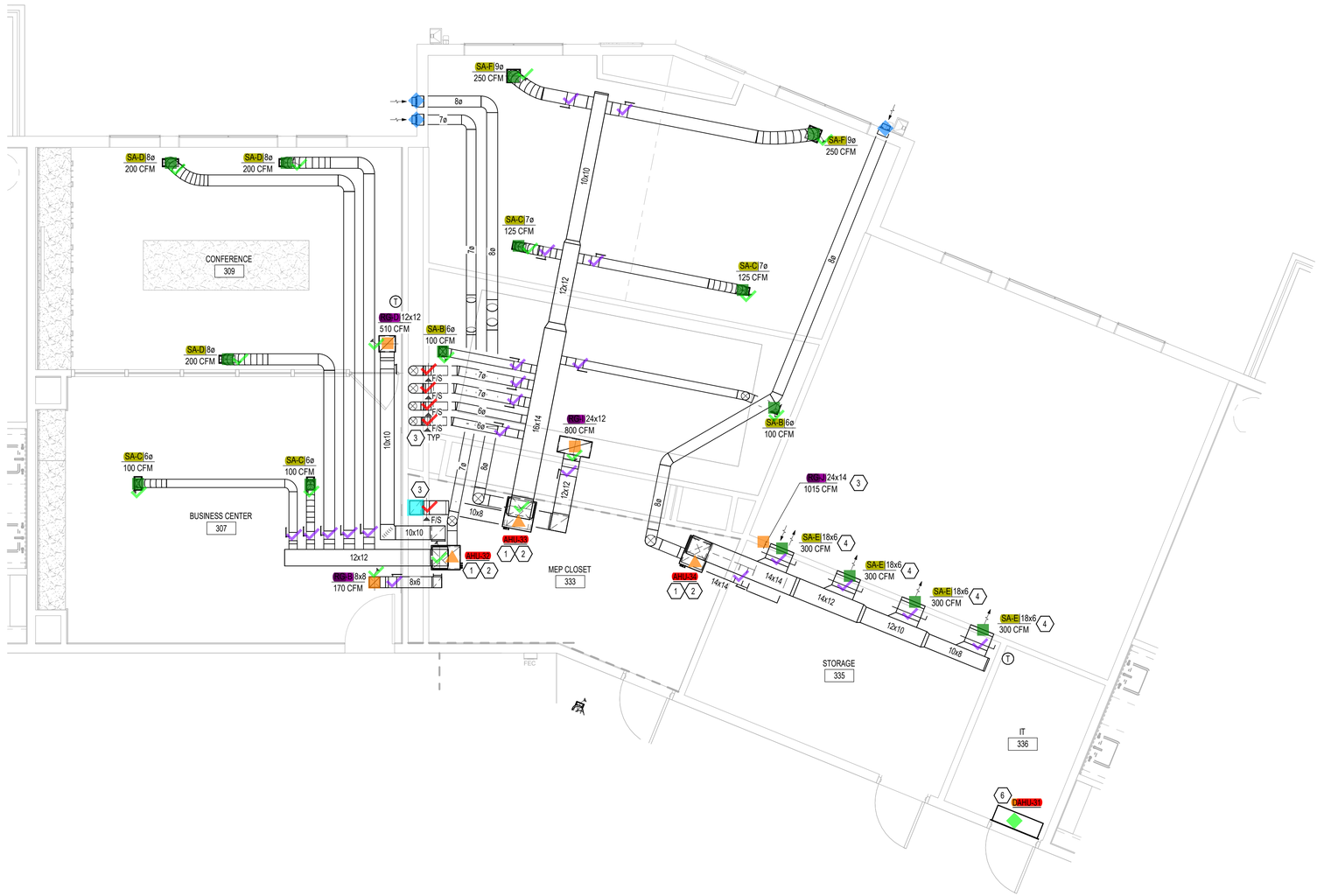
NO.	DESCRIPTION	DATE

TYPICAL UNITS MECHANICAL PLANS

M405

PLAN NOTES:

1. ROUTE CONDENSATE DRAIN TO FLOOR DRAIN IN MECHANICAL CLOSET. REFER TO PLUMBING PLANS FOR EXACT FLOOR DRAIN LOCATION.
2. ROUTE OUTSIDE AIR FROM MECHANICAL UNIT TO EXTERIOR WALL. TERMINATE VIA LOUVER. MAINTAIN 10'-0" CLEARANCE FROM ALL MECHANICAL EXHAUST.
3. MOUNT RETURN GRILLE LOW SIDEWALL.
4. MOUNT SUPPLY GRILLE HIGH SIDEWALL.
5. ROUTE CONDENSATE FROM UNIT TO FLOOR DRAIN IN MECHANICAL CLOSET.
6. MOUNT DUCTLESS SPLIT SYSTEM ABOVE DOOR. ROUTE CONDENSATE TO FLOOR DRAIN IN MECHANICAL ROOM. REFER TO PLUMBING PLANS FOR EXACT FLOOR DRAIN LOCATIONS.



1 THIRD LEVEL - ENLARGED MECHANICAL PLAN AMENITY AREA

1/4" = 1'-0"

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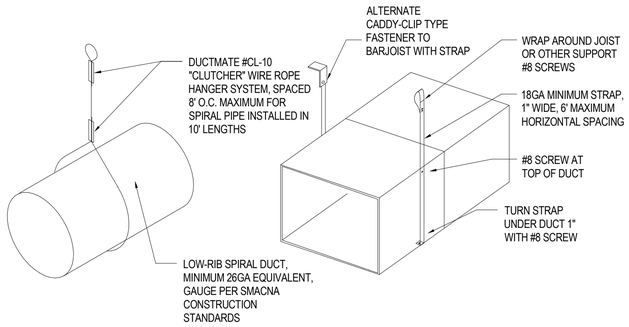
PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

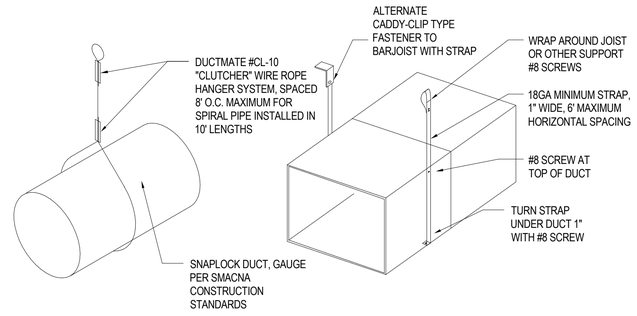
NO.	DESCRIPTION	DATE

THIRD LEVEL AMENITY ENLARGED MECHANICAL PLAN

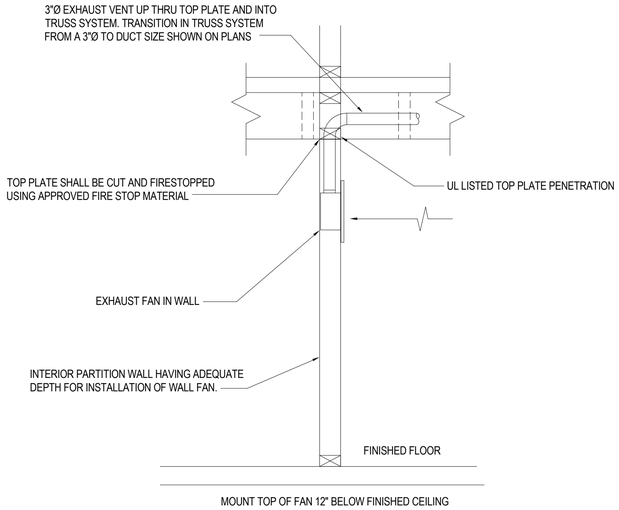
M406



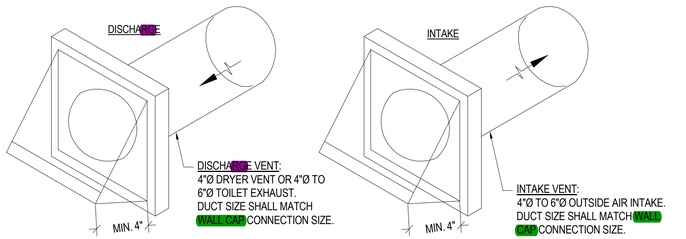
RIGID DUCT MOUNTING DETAIL | 8
NTS | M501



RESIDENTIAL RIGID DUCT MOUNTING DETAIL | 7
NTS | M501

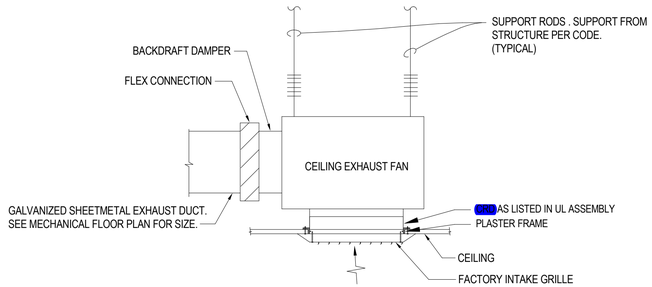


TYPICAL WALL MOUNTED FAN DETAIL | 4
NTS | M501

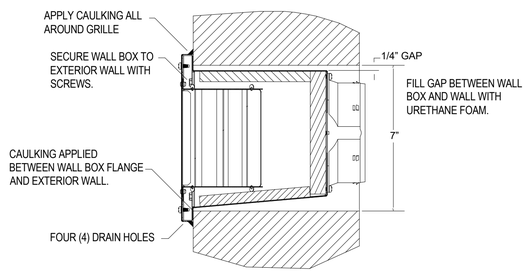


NOTES:
A. WALL CAP BY BROAN NUTONE, VENTCRAFT, OR APPROVED EQUAL.
B. PROVIDE DISCHARGE VENT CAP WITH INTEGRAL BACKDRAFT DAMPER.
C. BALANCE INTAKE VENT CAP WITH VOLUME DAMPER ON CONNECTED DUCTWORK.
D. PROVIDE CAP WITH PAINT GRIP COATING FOR FIELD PAINTING.
E. SEAL WALL PENETRATION WITH SEALANT AND FLEXIBLE FLASHING.

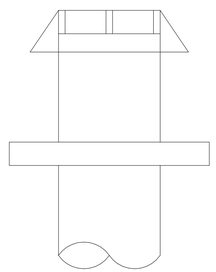
SIDEWALL VENT CAP DETAIL | 6
NTS | M501



CEILING EXHAUST FAN DETAIL | 5
NTS | M501

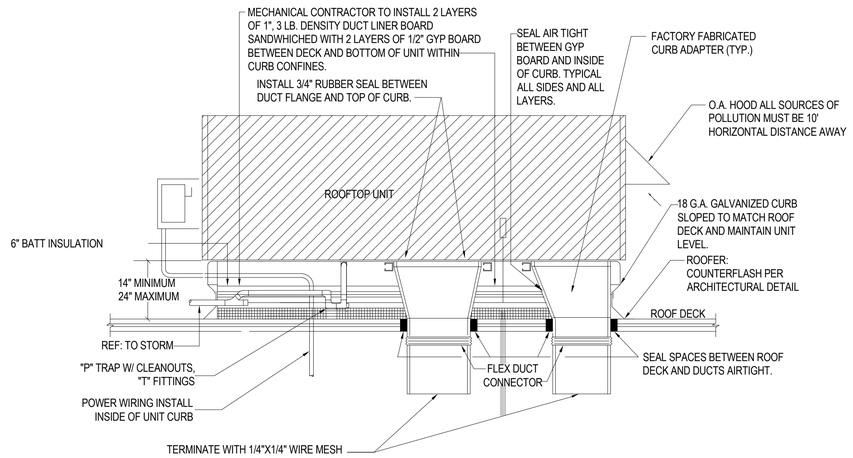


TANDEM WALL CAP TERMINATION | 3
NTS | M501



NOTES:
1. PROVIDE WITH INTEGRAL BACKDRAFT DAMPER.
2. BROAN 611 OR EQUAL FOR BATHROOM EXHAUST.
3. PROVIDE CAP WITH PAINT GRIP COATING FOR FIELD PAINTING.
4. SEAL ROOF PENETRATION WITH SEALANT AND FLEXIBLE FLASHING.
5. PROVIDE INSECT SCREEN AT TOILET EXHAUST CAPS.

FLAT ROOF - ROOF CAP | 2
NTS | M501



TYPICAL PACKAGED ROOFTOP UNIT DETAIL | 1
NTS | M501

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A: 14951 N DALLAS EXPY, SUITE 850, DALLAS, TX 75254
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BAYSIDE MIXED-USE

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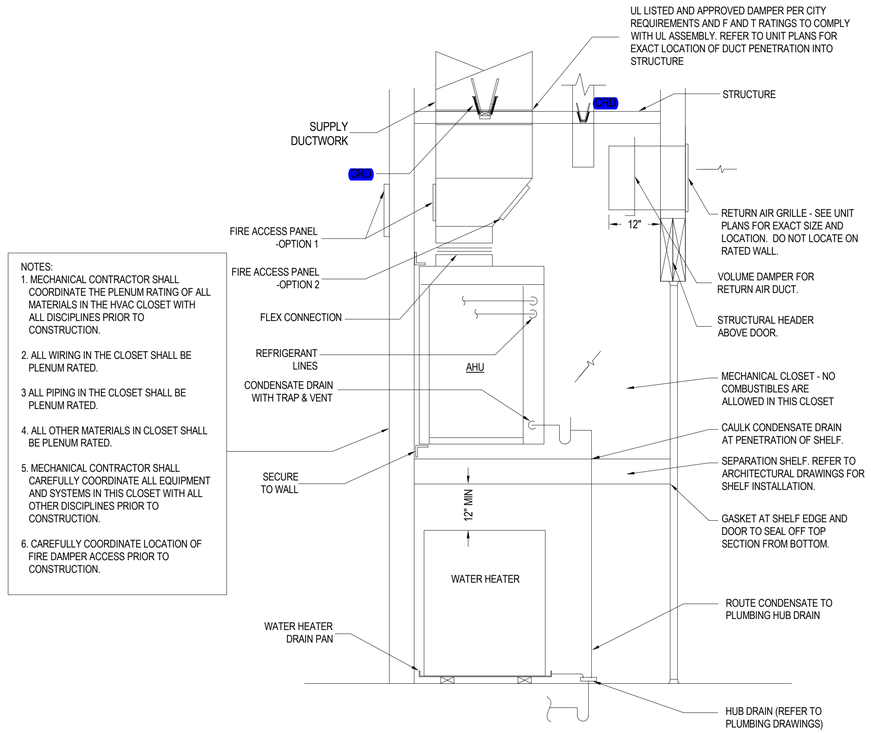
PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

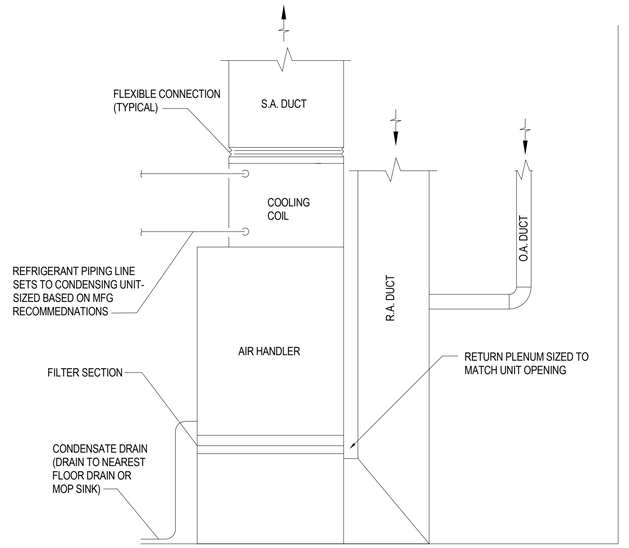
NO.	DESCRIPTION	DATE

MECHANICAL DETAILS

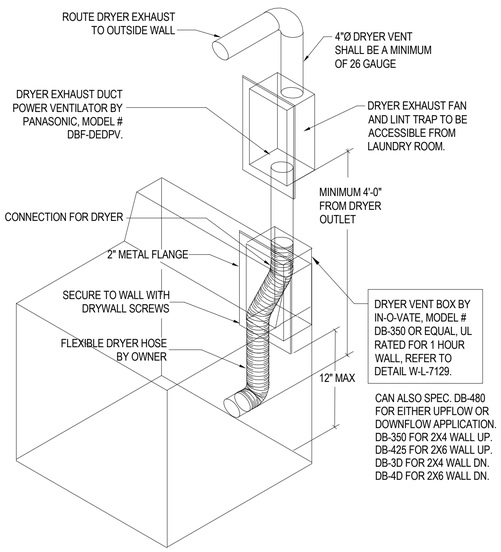
M501



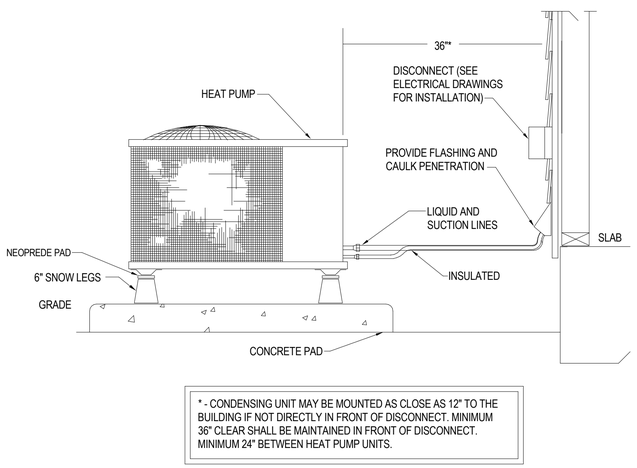
OVER DOOR RETURN AIR APARTMENT AIR HANDLER | 5
NTS | M502



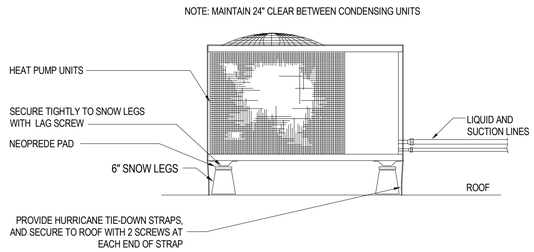
TYPICAL VERTICAL AIR HANDLER IN CLOSET DETAIL | 4
NTS | M502



DRYER VENT DROP BOX & BOOSTER FAN DETAIL | 3
NTS | M502



GRADE MOUNTED HEAT PUMP OUTDOOR UNIT | 2
NTS | M502



TYPICAL ROOF MOUNTED HEAT PUMP | 1
NTS | M502

Bush ARCHITECTS
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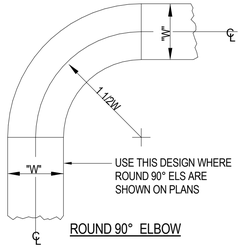
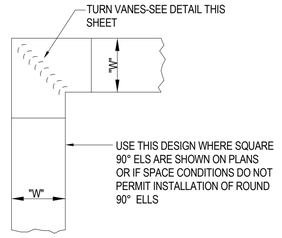
M502

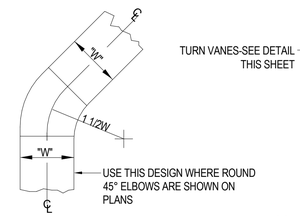


ROUND 90° ELBOW

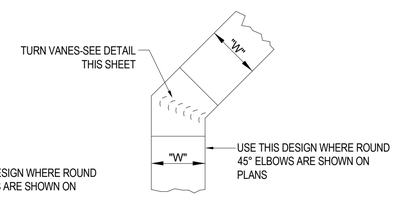


SQUARE 90° ELBOW

CONSTRUCTION OF 90° ELBOWS

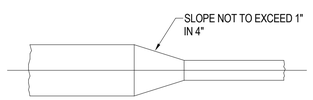


ROUND 45° ELBOW

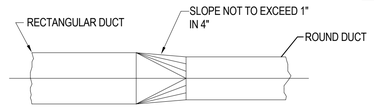


SQUARE 45° ELBOW

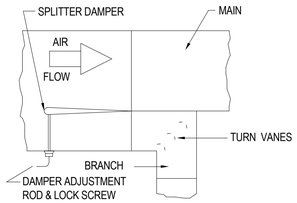
CONSTRUCTION OF 45° ELBOWS



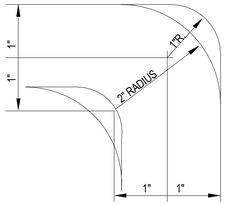
TYPICAL RECTANGULAR TRANSITION



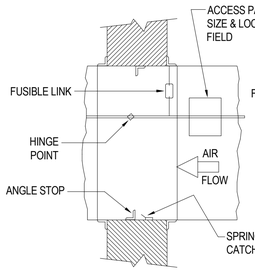
TYPICAL RECTANGULAR TO ROUND TRANSITION



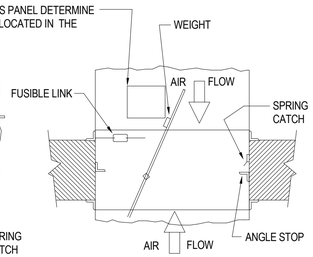
TYPICAL SPLITTER DAMPER



DETAIL OF TURN VANES

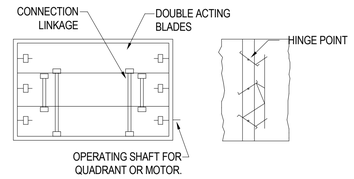


HORIZONTAL



VERTICAL

TYPICAL FIRE DAMPER



TYPICAL VOLUME DAMPER

TYPICAL DUCT DETAILS | 1

NTS | M503

Bush ARCHITECTS

A: 14951 N DALLAS EXPY, SUITE 850, DALLAS, TX 75254
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PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

MECHANICAL DETAILS

M503

DX SPLIT SYSTEM HEAT PUMPS

INDOOR UNIT TAG	OUTDOOR UNIT TAG	AREA SERVED	NOM. TONS	SUPPLY FAN DATA				COOLING DATA							PRIMARY HEATING DATA				AUXILIARY HEATING DATA					MANUFACTURER	INDOOR / OUTDOOR MODEL NUMBERS	ACCESSORIES	INDOOR UNIT WEIGHT (LBS.)	OUTDOOR UNIT WEIGHT (LBS.)	ELECTRICAL DATA							
																														INDOOR CIRCUIT #1				INDOOR CIRCUIT #2			
				SUPPLY AIR	OUTSIDE AIR	MOTOR ESP	MOTOR HP (BHP)	AMBIENT COOLING TEMPERATURE (F°)	TOTAL COOLING CAP.	SENS. COOLING CAP.	EAT DB (F°)	EAT WB (F°)	LAT DB (F°)	LAT WB (F°)	SEER2 (EER2)	AMBIENT HEATING TEMPERATURE (F°)	HEATING CAP.	EAT DB (F°)	LAT DB (F°)	AMBIENT AUX. HEATING TEMPERATURE (F°)	HEAT KIT INPUT (kW)	HEAT KIT OUTPUT (kW)	NO. OF STAGES	EAT DB (F°)	LAT DB (F°)	HEAT KIT MODEL NUMBER					VOLTS	Ø	MCA	MOCP	VOLTS	Ø	MCA	MOCP
AHU-01	HP-01	C200-1 CORRIDOR	1.5	600 CFM	80 CFM	0.50 in-wg	0.33	90	17889.0 Btu/h	13944.0 Btu/h	80	67	58	58	14.5 (12)	17	10300.0 Btu/h	61	77	5	5 kW	3.8 kW	1	60	79	EHC05CKN	TEMPSTAR	FHMA5X18L0AA / NSHS518AKAAA	1,2,3,4,5,6,7,8	124	169	208	1	25.9 A	30 A				
AHU-02	HP-02	C200-2 CORRIDOR	1.5	600 CFM	80 CFM	0.50 in-wg	0.33	90	17889.0 Btu/h	13944.0 Btu/h	80	67	58	58	14.5 (12)	17	10300.0 Btu/h	61	77	5	5 kW	3.8 kW	1	60	79	EHC05CKN	TEMPSTAR	FHMA5X18L0AA / NSHS518AKAAA	1,2,3,4,5,6,7,8	124	169	208	1	25.9 A	30 A				
AHU-03	HP-03	C300-1 CORRIDOR	1.5	600 CFM	80 CFM	0.50 in-wg	0.33	90	17889.0 Btu/h	13944.0 Btu/h	80	67	58	58	14.5 (12)	17	10300.0 Btu/h	61	77	5	5 kW	3.8 kW	1	60	79	EHC05CKN	TEMPSTAR	FHMA5X18L0AA / NSHS518AKAAA	1,2,3,4,5,6,7,8	124	169	208	1	25.9 A	30 A				
AHU-04	HP-04	BUSINESS CENTER, CONFERENCE ROOM	2	800 CFM	120 CFM	0.50 in-wg	0.33	90	23748.0 Btu/h	16882.0 Btu/h	80	67	60	59	15.2 (12)	17	14300.0 Btu/h	60	77	1.94 (7.5)	5	8 kW	6 kW	1	59	82	EHC07CKN	TEMPSTAR	FHMA3X24L0BA / NSHS524AKAAA	1,2,3,4,5,6,7,8	135	196	208	1	43.3 A	45 A				
AHU-05	HP-05	LOUNGE, RESTROOMS, LOBBY	3.5	1400 CFM	218 CFM	0.50 in-wg	0.5	90	42765.0 Btu/h	33057.0 Btu/h	80	67	59	58	14.5 (12)	17	25000.0 Btu/h	60	77	2 (7.5)	5	10 kW	7.5 kW	1	58	75	EHC10CKN	TEMPSTAR	FHMA5X42L0CA / NSHS542AKAAA	1,2,3,4,5,6,7,8	170	224	208	1	52.1 A	60 A	208	1	24.9 A	40 A
AHU-06	HP-06	FITNESS ROOM	3	1200 CFM	185 CFM	0.50 in-wg	0.5	90	36580.0 Btu/h	27547.0 Btu/h	80	67	59	58	14.5 (12)	17	21400.0 Btu/h	60	77	2.02 (7.5)	5	10 kW	7.5 kW	1	58	78	EHC10CKN	TEMPSTAR	FHMA5X36L0BA / NSHS536AKAAA	1,2,3,4,5,6,7,8	152	193	208	1	52.1 A	60 A	208	1	19.2 A	30 A
AHU-07	HP-07	C300-2 CORRIDOR	1.5	600 CFM	80 CFM	0.50 in-wg	0.33	90	17889.0 Btu/h	13944.0 Btu/h	80	67	58	58	14.5 (12)	17	10300.0 Btu/h	61	77	1.88 (7.5)	5	5 kW	3.8 kW	1	60	79	EHC05CKN	TEMPSTAR	FHMA5X18L0AA / NSHS518AKAAA	1,2,3,4,5,6,7,8	124	169	208	1	25.9 A	30 A	208	1	10.9 A	15 A
AHU-08	HP-08	C400-1 CORRIDOR	1.5	600 CFM	80 CFM	0.50 in-wg	0.33	90	17889.0 Btu/h	13944.0 Btu/h	80	67	58	58	14.5 (12)	17	10300.0 Btu/h	61	77	1.88 (7.5)	5	5 kW	3.8 kW	1	60	79	EHC05CKN	TEMPSTAR	FHMA5X18L0AA / NSHS518AKAAA	1,2,3,4,5,6,7,8	124	169	208	1	25.9 A	30 A	208	1	10.9 A	15 A
AHU-09	HP-09	C400-2 CORRIDOR	1.5	600 CFM	80 CFM	0.50 in-wg	0.33	90	17889.0 Btu/h	13944.0 Btu/h	80	67	58	58	14.5 (12)	17	10300.0 Btu/h	61	77	1.88 (7.5)	5	5 kW	3.8 kW	1	60	79	EHC05CKN	TEMPSTAR	FHMA5X18L0AA / NSHS518AKAAA	1,2,3,4,5,6,7,8	124	169	208	1	25.9 A	30 A	208	1	10.9 A	15 A
AHU-10	HP-10	C500-1 CORRIDOR	1.5	600 CFM	80 CFM	0.50 in-wg	0.33	90	17889.0 Btu/h	13944.0 Btu/h	80	67	58	58	14.5 (12)	17	10300.0 Btu/h	61	77	1.88 (7.5)	5	5 kW	3.8 kW	1	60	79	EHC05CKN	TEMPSTAR	FHMA5X18L0AA / NSHS518AKAAA	1,2,3,4,5,6,7,8	124	169	208	1	25.9 A	30 A	208	1	10.9 A	15 A
AHU-11	HP-11	C500-2 CORRIDOR	1.5	600 CFM	80 CFM	0.50 in-wg	0.33	90	17889.0 Btu/h	13944.0 Btu/h	80	67	58	58	14.5 (12)	17	10300.0 Btu/h	61	77	1.88 (7.5)	5	5 kW	3.8 kW	1	60	79	EHC05CKN	TEMPSTAR	FHMA5X18L0AA / NSHS518AKAAA	1,2,3,4,5,6,7,8	124	169	208	1	25.9 A	30 A	208	1	10.9 A	15 A
AHU-C-A1	HP-C-A1	UNIT C-A1	1.5	600 CFM	55 CFM	0.50 in-wg	0.33	90	18230.0 Btu/h	13983.0 Btu/h	80	67	58	58	15.2 (12)	17	10700.0 Btu/h	63	80	2.12 (7.8)	5	5 kW	3.8 kW	1	62	82	EHK20SB	TEMPSTAR	FMA5X1800AL / NSH518SAKAAA	1,2,3,4,5,6,7,8,9	88	169	208	1	25.0 A	30 A	208	1	10.9 A	15 A
AHU-C-A2	HP-C-A2	UNIT C-A2 & C-A2 SM	1.5	600 CFM	55 CFM	0.50 in-wg	0.33	90	18230.0 Btu/h	13983.0 Btu/h	80	67	58	58	15.2 (12)	17	10700.0 Btu/h	63	80	2.12 (7.8)	5	5 kW	3.8 kW	1	62	82	EHK20SB	TEMPSTAR	FMA5X1800AL / NSH518SAKAAA	1,2,3,4,5,6,7,8,9	88	169	208	1	25.0 A	30 A	208	1	10.9 A	15 A
AHU-C-B1	HP-C-B1	UNIT C-B2	2	800 CFM	75 CFM	0.50 in-wg	0.33	90	23136.0 Btu/h	17406.0 Btu/h	80	67	60	59	15.5 (12)	17	14900.0 Btu/h	63	81	2.16 (7.8)	5	8 kW	6 kW	1	62	86	EHK20BB	TEMPSTAR	FMA5X2400AL / NSH524S24AKAAA	1,2,3,4,5,6,7,8,9	88	196	208	1	36.3 A	50 A	208	1	13.5 A	20 A
AHU-C-B1LG	HP-C-B1LG	UNIT C-B1LG	2	800 CFM	80 CFM	0.50 in-wg	0.33	90	23136.0 Btu/h	17406.0 Btu/h	80	67	60	59	15.5 (12)	17	14900.0 Btu/h	63	80	2.16 (7.8)	5	8 kW	6 kW	1	62	85	EHK20BB	TEMPSTAR	FMA5X2400AL / NSH524S24AKAAA	1,2,3,4,5,6,7,8,9	88	196	208	1	36.3 A	50 A	208	1	13.5 A	20 A
AHU-C-B2LG	HP-C-B2LG	UNIT C-B2LG	2	800 CFM	75 CFM	0.50 in-wg	0.33	90	23136.0 Btu/h	17406.0 Btu/h	80	67	60	59	15.5 (12)	17	14900.0 Btu/h	63	81	2.16 (7.8)	5	8 kW	6 kW	1	62	86	EHK20BB	TEMPSTAR	FMA5X2400AL / NSH524S24AKAAA	1,2,3,4,5,6,7,8,9	88	196	208	1	36.3 A	50 A	208	1	13.5 A	20 A
AHU-C-B2SM	HP-C-B2SM	UNIT C-B2SM	2	800 CFM	70 CFM	0.50 in-wg	0.33	90	23136.0 Btu/h	17406.0 Btu/h	80	67	60	59	15.5 (12)	17	14900.0 Btu/h	64	81	2.16 (7.8)	5	8 kW	6 kW	1	62	86	EHK20BB	TEMPSTAR	FMA5X2400AL / NSH524S24AKAAA	1,2,3,4,5,6,7,8,9	88	196	208	1	36.3 A	50 A	208	1	13.5 A	20 A
AHU-C-B3	HP-C-B3	UNIT C-B3	2.5	1000 CFM	115 CFM	0.50 in-wg	0.5	90	30156.0 Btu/h	23430.0 Btu/h	80	67	59	58	15.2 (12.5)	17	17800.0 Btu/h	62	79	2.26 (8.1)	5	10 kW	7.5 kW	1	61	84	EHK210B	TEMPSTAR	FMA5X3000AL / NSHS530AKAAA	1,2,3,4,5,6,7,8,9	103	189	208	1	48.6 A	60 A	208	1	16.3 A	25 A
AHU-C-P1	HP-C-P1	UNIT C-P1	4	1600 CFM	150 CFM	0.50 in-wg	0.75	90	50503.0 Btu/h	39429.0 Btu/h	80	67	59	58	15 (12)	17	47500.0 Btu/h	63	91	2.14 (7.5)	5	15 kW	11.3 kW	1	62	84	EHC15BKB	TEMPSTAR	FHMA5X48L0CA / NSHS548AKAAA	1,2,3,4,5,6,7,8,9	186	253	208	1	52.1 A	60 A	208	1	29.4 A	50 A
AHU-C-S1	HP-C-S1	UNIT C-S1	1.5	600 CFM	60 CFM	0.50 in-wg	0.33	90	18230.0 Btu/h	13983.0 Btu/h	80	67	58	58	15.2 (12)	17	10700.0 Btu/h	63	80	2.12 (7.8)	5	5 kW	3.8 kW	1	62	81	EHK20SB	TEMPSTAR	FMA5X1800AL / NSH518SAKAAA	1,2,3,4,5,6,7,8,9	88	169	208	1	25.0 A	30 A				

NOTES:
A. ALL SYSTEMS SHALL USE R-454B REFRIGERANT.
B. ALL EQUIPMENT SHALL BE INSTALLED SO AS TO MAINTAIN ALL CODE AND MANUFACTURER REQUIRED CLEARANCES FOR SERVICE, ACCESS, AND OPERATION.
C. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
D. ADJUST BLOWER SPEED TAP IN FIELD AS NEEDED TO PROVIDE TOTAL CFM SHOWN IN SCHEDULE.

ACCESSORIES:
1. FACTORY- MOUNTED NON-FUSED DISCONNECT SWITCH.
2. 7-DAY PROGRAMMABLE THERMOSTAT WITH MANUAL OVER-RIDE, SETBACK, AND TIME DELAY RELAY.
3. MERV 6 FILTER IN INTEGRAL FILTER RACK.
4. FACTORY-MOUNTED THERMAL EXPANSION VALVE IF REQUIRED FOR SPECIFIED SEER RATING.
5. FACTORY-INSTALLED ELECTRIC HEAT KIT WITH THERMAL OVERLOADS.
6. PROVIDE SAFE-T-SWITCH FOR SECONDARY CONDENSATE.
7. LOCKABLE REFRIGERANT SERVICE PORT CAPS.
8. PROVIDE LONG LINE SET APPLICATIONS AS REQUIRED PER MANUFACTURER REQUIREMENTS. FIELD VERIFY LINE SET LENGTHS DURING INSTALLATION.
9. PROVIDE WALL MOUNTING BRACKET.

ELECTRIC HEATERS

DESIGNATION	SERVES	KW OUT	MANUFACTURER	MODEL NUMBER	CFM	ACCESSORIES	VOLT	Ø	AMPS	PES ACCESSORIES
EWH-01	303 - STAIR 1	3	QMARK	AWH4404F	100 CFM	1,2,3,4	208	1	14.4	1,3,6
EWH-02	323 - STAIR 3	3	QMARK	AWH4404F	100 CFM	1,2,3,4	208	1	14.4	1,3,6
EWH-03	322 - STAIR 2	3	QMARK	AWH4404F	100 CFM	1,2,3,4	208	1	14.4	1,3,6
EWH-04	503 - STAIR 1	3	QMARK	AWH4404F	100 CFM	1,2,3,4	208	1	14.4	1,3,6
EWH-05	523 - STAIR 3	3	QMARK	AWH4404F	100 CFM	1,2,3,4	208	1	14.4	1,3,6
EWH-06	522 - STAIR 2	3	QMARK	AWH4404F	100 CFM	1,2,3,4	208	1	14.4	1,3,6
EWH-G1	103 - STAIR 1	3	QMARK	AWH4404F	100 CFM	1,2,3,4	208	1	14.4	1,3,6
EWH-G2	104 - RISER ROOM	4.8	QMARK	AWH4508F	100 CFM	1,2,3,4	208	1	23.1	1,3,6
EWH-G3	102 - STAIR 3	3	QMARK	AWH4404F	100 CFM	1,2,3,4	208	1	14.4	1,3,6
EWH-G4	106 - STAIR 2	3	QMARK	AWH4404F	100 CFM	1,2,3,4	208	1	14.4	1,3,6
UH-G1	209 - FUTURE RETAIL	30	QMARK	MUH-30-8	1800 CFM	1,4,5,6	208	3	84	1,6
UH-G2	107 - FUTURE RETAIL	30	QMARK	MUH-30-8	1800 CFM	1,4,5,6	208	3	84	1,6
FH-01	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-02	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-03	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-04	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-05	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-06	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-07	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-08	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-09	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-10	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-11	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-12	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-13	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-14	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-15	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-16	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-17	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2
FH-18	FREEZE PROTECTION	5	QMARK	MSPH1598124	350 CFM	2,5	208	1	24.94	1,2

NOTES:
A. MOUNT WALL HEATERS AT 18" AFF UNLESS NOTED OTHERWISE ON PLANS.
B. MOUNT UNIT HEATERS AT 12" BFC UNLESS NOTED OTHERWISE ON PLANS.
C. MOUNT BASEBOARD HEATERS AT FLOOR LEVEL.

ACCESSORIES:
1. FACTORY NON-FUSED DISCONNECT
2. FACTORY INTERNAL THERMOSTAT
3. WALL SURFACE MOUNT FRAME
4. RECESS TRIM KIT
5. CEILING MOUNTING BRACKET
6. REMOTE THERMOSTAT

PACKAGED DX ROOFTOP UNITS - ELECTRIC HEATING

DESIGNATION	SERVES	NOM TONS	TOTAL CFM	O.A. CFM	FAN		COOLING @ AMBIENT (F)	TOTAL COOLING MBH	SENS. COOLING MBH	EAT DB/WB	LAT DB/WB	SEER2 (EER2)	HEATING @ AMBIENT (F)	KW RATING @ 230V	ACTUAL KW OUT	NO. OF STAGES	EAT DB (F)	LAT DB (F)	MANUFACTURER	MODEL NUMBER	HEAT KIT MODEL NUMBER	ACCESSORIES	ELECTRICAL			
					ESP (IN WG)	HP																	INDOOR			
																							VOLT	Ø	MCA	MOCP
RTU-01	ELEVATORS	2	800	0	0.5	1/2	95	23.1	17	80/67	59.6/57.6	13.4	5	7	5	1	68	89	CARRIER	50VL-K24---3	CPHEATER070B00	1,2,3,4,5,6	208	1	37.3	40

NOTES:
A. ALL SYSTEMS SHALL USE R-454B REFRIGERANT.
B. ALL EQUIPMENT SHALL BE INSTALLED SO AS TO MAINTAIN ALL CODE AND MANUFACTURER REQUIRED CLEARANCES FOR SERVICE, ACCESS, AND OPERATION.
C. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
D. ADJUST BLOWER SPEED TAP IN FIELD AS NEEDED TO PROVIDE TOTAL CFM SHOWN IN SCHEDULE.

ACCESSORIES:
1. FACTORY- MOUNTED NON-FUSED DISCONNECT SWITCH.
2. 7-DAY PROGRAMMABLE THERMOSTAT WITH MANUAL OVER-RIDE, SETBACK, AND TIME DELAY RELAY.
3. MERV 6 FILTER IN INTEGRAL FILTER RACK.
4. THRU-BASE ELECTRICAL CONNECTIONS.
5. 14" HIGH INSULATED ROOF CURB.
6. PROVIDE SAFE-T-SWITCH FOR SECONDARY CONDENSATE.

DUCTLESS DX SPLIT SYSTEM HEAT PUMPS

INDOOR UNIT TAG	OUTDOOR UNIT TAG	SERVES	TOTAL CFM	O.A. CFM	COOLING @ AMBIENT (F)	TOTAL COOLING MBH	SENS. COOLING MBH	EAT DB/WB	LAT DB/WB	SEER2 (EER2)	HEATING @ AMBIENT (F)	HEATING MBH	EAT DB (F)	LAT DB (F)	COP (HSPF2)	MANUFACTURER	MODEL NUMBER INDOOR / OUTDOOR	ACCESSORIES	ELECTRICAL			
																			OUTDOOR			
																			VOLT	Ø	MCA	MOCP
DAHU-01	[redacted]	336 - IT	375	0	90	18	13.1	80/67	56/54	20.2 (10.7)	47	19.0	68	115	3.4 (9.2)	MITSUBISHI	PKA-AL18NL / PUY-AK18NL	1,2,3,4,6	208	1	11	28
DAHU-G1	DAHPG1	100 - ELEVATOR LOBBY	460	30	95	12	8.6	80/67	56/54	26.9 (16.4)	47	14.0	67	95	4.94 (10.9)	MITSUBISHI	PLA-AE12NL / PLA-A12EA8	1,2,3,4,5	208	1	11	28

NOTES:
A. PROVIDE CONTROLS BY EQUIPMENT MANUFACTURER.
B. PROVIDE CONDENSATE PUMP FOR EACH EVAPORATOR UNIT AS REQUIRED.
C. PROVIDE FILTER BANK BY MANUFACTURER.
D. PROVIDE LOW VOLTAGE WIRING BETWEEN CONDENSING UNIT AND AIR HANDLER. REFER TO MFG INSTALLATION INSTRUCTIONS.
E. MECHANICAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL EQUIPMENT INCLUDING REFRIGERANT LINESET LAYOUT AND SIZING BY EQUIPMENT MANUFACTURER PRIOR TO PURCHASE.

DEHUMIDIFIER SCHEDULE

DESIG.	AREA SERVED	MANUFACTURER	MODEL NUMBER	REFRIGERANT	CAPACITY (PPD) 80°F 60% RH	AMPS	ELECTRICAL VOLT/PHASE	WEIGHT (lbs.)	NOTES
DEH-A	UNITS	CARRIER	DEHXXCDA-05PD	R-32	80	5.2	120/1	69	1

NOTES:
1.) PROVIDE CARRIER MODEL 76 WALL MOUNTED DEHUMIDIFIER CONTROL.

FANS

DESIGNATION	SERVES	CONTROL	CFM	ESP (IN WG)	DRIVE TYPE	MOTOR WATTS (HP)	MANUFACTURER	MODEL NUMBER	ACCESSORIES	VOLT	Ø
EF-01	B229 - RESTROOM	SWITCH	70 CFM	0.33	DIRECT	12	GREENHECK	SP-LP0511-1	1,2,3,4,5	120	1
EF-02	B223 - RESTROOM	SWITCH	70 CFM	0.33	DIRECT	12	GREENHECK	SP-LP0511-1	1,2,3,4,5	120	1
EF-03	200 - TRASH CHUTE	CONTINUOUS	50 CFM	0.5	DIRECT	12	GREENHECK	SP-LP0511-1	1,2,3,4,5	120	1
EF-04	327 - TRASH CHUTE	CONTINUOUS	50 CFM	0.5	DIRECT	12	GREENHECK	SP-LP0511-1	1,2,3,4,5	120	1
EF-05	427 - TRASH CHUTE	CONTINUOUS	50 CFM	0.5	DIRECT	12	GREENHECK	SP-LP0511-1	1,2,3,4,5	120	1
EF-06	527 - TRASH CHUTE	CONTINUOUS	50 CFM	0.5	DIRECT	12	GREENHECK	SP-LP0511-1	1,2,3,4,5	120	1
EF-07	111 - TRASH CHUTE	CONTINUOUS	50 CFM	0.5	DIRECT	12	GREENHECK	SP-LP0511-1	1,2,3,4,5,6	120	1
EF-G1	DAHUG1	CONTINUOUS	30 CFM	0.25	DIRECT	26	S&P	TD-100	1,2,3,4	120	1

NOTES:
A. ALL FANS TO HAVE OSHA GUARDS.
B. ALL EQUIPMENT SHALL BE INSTALLED SO AS TO MAINTAIN ALL CODE AND MANUFACTURER REQUIRED CLEARANCES FOR SERVICE, ACCESS, AND OPERATION.
C. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
D. CONTROL TYPE:
CONTINUOUS = ALWAYS ON.
SWITCH = DEDICATED ON / OFF WALL SWITCH LOCATED IN SPACE SERVED.

ACCESSORIES:
1. GRAVITY BACKDRAFT DAMPER.
2. GALVANIZED BIRDSCREEN.
3. PRE-WIRED NON-FUSED SERVICE DISCONNECT.
4. SPEED CONTROLLER.
5. CEILING RADIATION DAMPER.
6. WALL SLEEVE.

DRYER EXHAUST DUCT POWER VENTILATOR

DESIGNATION	SERVES	CFM	ESP (IN WG)	DRIVE TYPE	MOTOR WATTS (HP)	MANUFACTURER	MODEL NUMBER	VOLT	Ø
DEF-A	UNIT - DRYER VENT BOOSTERS	172 CFM	0.25	DIRECT	68	PANASONIC	DBF-DEDPV	120	1

NOTES:
A. ALL FANS TO HAVE OSHA GUARDS.
B. ALL EQUIPMENT SHALL BE INSTALLED SO AS TO MAINTAIN ALL CODE AND MANUFACTURER REQUIRED CLEARANCES FOR SERVICE, ACCESS, AND OPERATION.
C. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

Bush ARCHITECTS
A: 14951 N DALLAS EXPY, SUITE 850, DALLAS, TX 75254
E: CONTACT@BUSHARCHITECTS.DESIGN
T: 469 - 857 - 3151
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BAYSIDE MIXED-USE

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION

PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

MECHANICAL SCHEDULES

M601

GRILLES - REGISTERS - DIFFUSERS

DESIGNATION	DUTY	FRAME TYPE	MATERIAL	FINISH	FACE SIZE (IN)	MODEL NUMBER
EG-A	EXHAUST	CEILING/SIDEWALL	STEEL	WHITE	6X6	TITUS 350RL
EG-B	EXHAUST	CEILING/SIDEWALL	STEEL	WHITE	10X10	TITUS 350RL
RG-A	RETURN	CEILING/SIDEWALL	STEEL	WHITE	6X6	TITUS 350RL
RG-B	RETURN	CEILING/SIDEWALL	STEEL	WHITE	8X8	TITUS 350RL
RG-C	RETURN	CEILING/SIDEWALL	STEEL	WHITE	10X10	TITUS 350RL
RG-D	RETURN	CEILING/SIDEWALL	STEEL	WHITE	12X12	TITUS 350RL
RG-E	RETURN	CEILING/SIDEWALL	STEEL	WHITE	14X14	TITUS 350RL
RG-F	RETURN	CEILING/SIDEWALL	STEEL	WHITE	18X10	TITUS 350RL
RG-G	RETURN	CEILING/SIDEWALL	STEEL	WHITE	20X24	TITUS 350RL
RG-H	RETURN	CEILING/SIDEWALL	STEEL	WHITE	22x10	TITUS 350RL
RG-I	RETURN	CEILING/SIDEWALL	STEEL	WHITE	24X12	TITUS 350RL
RG-J	RETURN	CEILING/SIDEWALL	STEEL	WHITE	24X14	TITUS 350RL
RJ-K	RETURN	CEILING/SIDEWALL	STEEL	WHITE	34X10	TITUS 350RL
SR-A	SUPPLY	CEILING/SIDEWALL	STEEL	WHITE	6X6	TITUS 300RL
SR-B	SUPPLY	CEILING/SIDEWALL	STEEL	WHITE	8X8	TITUS 300RL
SR-C	SUPPLY	CEILING/SIDEWALL	STEEL	WHITE	10X6	TITUS 300RL
SR-D	SUPPLY	CEILING/SIDEWALL	STEEL	WHITE	12X6	TITUS 300RL
SR-E	SUPPLY	CEILING/SIDEWALL	STEEL	WHITE	18X6	TITUS 300RL
SR-F	SUPPLY	CEILING/SIDEWALL	STEEL	WHITE	10X10	TITUS 300RL
TG-A	TRANSFER	CEILING/SIDEWALL	STEEL	WHITE	14X8	TITUS 350RL
TG-B	TRANSFER	CEILING/SIDEWALL	STEEL	WHITE	18X10	TITUS 350RL

NOTES:
A. PROVIDE [illegible]N RATED ASSEMBLIES.

IMC TABLE 403.3 DAHU-G1

UNIT	ROOM NUMBER	AREA	SERVES	AREA / PERSON	NO. OF PEOPLE	OUTSIDE AIR / PERSON	OUTSIDE AIR / AREA	OA REQUIRED	SA PROVIDED	OA PROVIDED
DAHU-G1	100	251 SF	ELEV.LOBBY	100 SF	2.505807	5 CFM	0.06 CFM/SF	28	460 CFM	30
								28	460 CFM	30

NOTES:
A. DISTRIBUTION EFFECTIVENESS 1.0
B. SPACES COMMUNICATE

IMC TABLE 403.3 AHU-21

UNIT	ROOM NUMBER	AREA	SERVES	AREA / PERSON	NO. OF PEOPLE	OUTSIDE AIR / PERSON	OUTSIDE AIR / AREA	BALANCE OA %	OA REQUIRED	SA PROVIDED	OA PROVIDED
AHU-21	C200-1	1301 SF	CORRIDOR	0 SF	0	0 CFM	0.06 CFM/SF	13	78	600 CFM	80
									78	600 CFM	80

NOTES:
A. BALANCE UNIT OUTSIDE AIR TO 13%
B. DISTRIBUTION EFFECTIVENESS 1.0
C. SPACES COMMUNICATE

IMC TABLE 403.3 AHU-22

UNIT	ROOM NUMBER	AREA	SERVES	AREA / PERSON	NO. OF PEOPLE	OUTSIDE AIR / PERSON	OUTSIDE AIR / AREA	BALANCE OA %	OA REQUIRED	SA PROVIDED	OA PROVIDED
AHU-22	C200-2	1316 SF	CORRIDOR	0 SF	0	0 CFM	0.06 CFM/SF	13	79	600 CFM	80
									79	600 CFM	80

NOTES:
A. BALANCE UNIT OUTSIDE AIR TO 13%
B. DISTRIBUTION EFFECTIVENESS 1.0
C. SPACES COMMUNICATE

IMC TABLE 403.3 AHU-31

UNIT	ROOM NUMBER	AREA	SERVES	AREA / PERSON	NO. OF PEOPLE	OUTSIDE AIR / PERSON	OUTSIDE AIR / AREA	BALANCE OA %	OA REQUIRED	SA PROVIDED	OA PROVIDED
AHU-31	C300-1	1302 SF	CORRIDOR-1	0 SF	0	0 CFM	0.06 CFM/SF	13	78	600 CFM	80
									78	600 CFM	80

NOTES:
A. BALANCE UNIT OUTSIDE AIR TO 13%
B. DISTRIBUTION EFFECTIVENESS 1.0
C. SPACES COMMUNICATE

IMC TABLE 403.3 AHU-32

UNIT	ROOM NUMBER	AREA	SERVES	AREA / PERSON	NO. OF PEOPLE	OUTSIDE AIR / PERSON	OUTSIDE AIR / AREA	BALANCE OA %	OA REQUIRED	SA PROVIDED	OA PROVIDED
AHU-32	307	346 SF	BUSINESS CENTER	200 SF	2	5 CFM	0.06 CFM/SF	15	30	200 CFM	30
AHU-32	309	296 SF	CONFERENCE	37 SF	8	5 CFM	0.06 CFM/SF	15	58	600 CFM	90
									88	800 CFM	120

NOTES:
A. BALANCE UNIT OUTSIDE AIR TO 15%
B. DISTRIBUTION EFFECTIVENESS 1.0
C. SPACES COMMUNICATE

IMC TABLE 403.3 AHU-33

UNIT	ROOM NUMBER	AREA	SERVES	AREA / PERSON	NO. OF PEOPLE	OUTSIDE AIR / PERSON	OUTSIDE AIR / AREA	BALANCE OA %	OA REQUIRED	SA PROVIDED	OA PROVIDED
AHU-33	230	145 SF	MAIL ROOM	200 SF	1	5 CFM	0.06 CFM/SF	15.5	12	75 CFM	12
AHU-33	235	612 SF	LOUNGE	33 SF	18	5 CFM	0.06 CFM/SF	15.5	129	950 CFM	147
AHU-33	B223	68 SF	RESTROOM 2	0 SF	0	0 CFM	0.00 CFM/SF	15.5	0	50 CFM	8
AHU-33	B228	324 SF	LOBBY	100 SF	3	5 CFM	0.06 CFM/SF	15.5	36	275 CFM	43
AHU-33	B229	68 SF	RESTROOM 1	0 SF	0	0 CFM	0.00 CFM/SF	15.5	0	50 CFM	8
									177	1400 CFM	218

NOTES:
A. BALANCE UNIT OUTSIDE AIR TO 15.5%
B. DISTRIBUTION EFFECTIVENESS 1.0
C. SPACES COMMUNICATE

IMC TABLE 403.3 AHU-34

UNIT	ROOM NUMBER	AREA	SERVES	AREA / PERSON	NO. OF PEOPLE	OUTSIDE AIR / PERSON	OUTSIDE AIR / AREA	BALANCE OA %	OA REQUIRED	SA PROVIDED	OA PROVIDED
AHU-34	226	702 SF	FITNESS CENTER	100 SF	7	20 CFM	0.06 CFM/SF	15	182	1200 CFM	185
									182	1200 CFM	185

NOTES:
A. BALANCE UNIT OUTSIDE AIR TO 15%
B. DISTRIBUTION EFFECTIVENESS 1.0
C. SPACES COMMUNICATE

IMC TABLE 403.3 AHU-35

UNIT	ROOM NUMBER	AREA	SERVES	AREA / PERSON	NO. OF PEOPLE	OUTSIDE AIR / PERSON	OUTSIDE AIR / AREA	BALANCE OA %	OA REQUIRED	SA PROVIDED	OA PROVIDED
AHU-35	C300-2	1321 SF	CORRIDOR	0 SF	0	0 CFM	0.06 CFM/SF	13	79	600 CFM	80
									79	600 CFM	80

NOTES:
A. BALANCE UNIT OUTSIDE AIR TO 13%
B. DISTRIBUTION EFFECTIVENESS 1.0
C. SPACES COMMUNICATE

IMC TABLE 403.3 AHU-41

UNIT	ROOM NUMBER	AREA	SERVES	AREA / PERSON	NO. OF PEOPLE	OUTSIDE AIR / PERSON	OUTSIDE AIR / AREA	BALANCE OA %	OA REQUIRED	SA PROVIDED	OA PROVIDED
AHU-41	C400-2	1302 SF	CORRIDOR-2	0 SF	0	0 CFM	0.06 CFM/SF	13	78	600 CFM	80
									78	600 CFM	80

NOTES:
A. BALANCE UNIT OUTSIDE AIR TO 13%
B. DISTRIBUTION EFFECTIVENESS 1.0
C. SPACES COMMUNICATE

IMC TABLE 403.3 AHU-42

UNIT	ROOM NUMBER	AREA	SERVES	AREA / PERSON	NO. OF PEOPLE	OUTSIDE AIR / PERSON	OUTSIDE AIR / AREA	BALANCE OA %	OA REQUIRED	SA PROVIDED	OA PROVIDED
AHU-42	C400-1	1321 SF	CORRIDOR-1	0 SF	0	0 CFM	0.06 CFM/SF	13	79	600 CFM	80
									79	600 CFM	80

NOTES:
A. BALANCE UNIT OUTSIDE AIR TO 13%
B. DISTRIBUTION EFFECTIVENESS 1.0
C. SPACES COMMUNICATE

IMC TABLE 403.3 AHU-51

UNIT	ROOM NUMBER	AREA	SERVES	AREA / PERSON	NO. OF PEOPLE	OUTSIDE AIR / PERSON	OUTSIDE AIR / AREA	BALANCE OA %	OA REQUIRED	SA PROVIDED	OA PROVIDED
AHU-51	C500-1	1312 SF	CORRIDOR-1	0 SF	0	0 CFM	0.06 CFM/SF	13	79	600 CFM	80
									79	600 CFM	80

NOTES:
A. BALANCE UNIT OUTSIDE AIR TO 13%
B. DISTRIBUTION EFFECTIVENESS 1.0
C. SPACES COMMUNICATE

IMC TABLE 403.3 AHU-52

UNIT	ROOM NUMBER	AREA	SERVES	AREA / PERSON	NO. OF PEOPLE	OUTSIDE AIR / PERSON	OUTSIDE AIR / AREA	BALANCE OA %	OA REQUIRED	SA PROVIDED	OA PROVIDED
AHU-52	C500-2	1331 SF	CORRIDOR-2	0 SF	0	0 CFM	0.06 CFM/SF	13	80	600 CFM	80
									80	600 CFM	80

NOTES:
A. BALANCE UNIT OUTSIDE AIR TO 13%
B. DISTRIBUTION EFFECTIVENESS 1.0
C. SPACES COMMUNICATE

IMC TABLE 403.3 - TYPICAL UNITS

SERVED BY	AREA S.F.	AREA SERVED	CEILING HEIGHT	VOLUME OF AREA	CFM PER AC/H	# OF PEOPLE	CFM PER PERSON	OUTSIDE AIR PERCENTAGE	O.A. REQUIRED	S.A. PROVIDED	O.A. PROVIDED BY ERV	E.A PROVIDED BY ERV
AHU-C-A1	1040	UNIT C-A1	9	9360	0.35	2	15	9%	55	600	55	60
AHU-C-A2	1021	UNIT C-A2 & C-A2 SM	9	9189	0.35	2	15	9%	54	600	55	60
AHU-C-B1	1382	UNIT C-B1	9	12438	0.35	3	15	9%	73	800	75	80
AHU-C-B1LG	1450	UNIT C-B1LG	9	13050	0.35	3	15	10%	76	800	80	85
AHU-C-B2LG	1354	UNIT C-B2LG	9	12186	0.35	3	15	9%	71	800	75	80
AHU-C-B2SM	1318	UNIT C-B2SM	9	11862	0.35	3	15	9%	69	800	70	75
AHU-C-B3	2167	UNIT C-B3	9	19503	0.35	3	15	12%	114	1000	115	120
AHU-C-P1	2787	UNIT C-P1	9	25083	0.35	4	15	9%	146	1600	150	155
AHU-C-S1	1098	UNIT C-S1	9	9882	0.35	2	15	10%	58	600	60	65

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PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

MECHANICAL SCHEDULES

M602

COM*check* Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code:	2021 IECC
Project Title:	24214 BAYSIDE MIXED USE
Location:	Rowlett, Texas
Climate Zone:	2a
Project Type:	New Construction

Construction Site: Owner/Agent: Designer/Contractor:

Additional Efficiency Package(s)

Credits: 10.0 Required 0.0 Proposed

Mechanical Systems List

Quantity	System Type & Description
8	1.5 TON AHU (Single Zone): Split System Heat Pump Heating Mode: Capacity = 17 kBtu/h, Proposed Efficiency = 7.50 HSPF2, Required Efficiency = 7.50 HSPF2 Cooling Mode: Capacity = 18 kBtu/h, Proposed Efficiency = 14.50 SEER2, Required Efficiency = 14.30 SEER2 Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00 Fan System: 1.5 TON UNIT FAN -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: FAN 1 Supply, Constant Volume, 600 CFM, 0.3 motor nameplate hp, 0.00 fan energy index , fan exception: Single fan < 1 HP or < 0.89 kW
1	2 TON AHU (Single Zone): Split System Heat Pump Heating Mode: Capacity = 22 kBtu/h, Proposed Efficiency = 7.50 HSPF2, Required Efficiency = 7.50 HSPF2 Cooling Mode: Capacity = 23 kBtu/h, Proposed Efficiency = 15.20 SEER2, Required Efficiency = 14.30 SEER2 Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00 Fan System: 2 TON UNIT FAN -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: FAN 2 Supply, Constant Volume, 800 CFM, 0.3 motor nameplate hp, 0.00 fan energy index , fan exception: Single fan < 1 HP or < 0.89 kW
1	3 TON AHU (Single Zone): Split System Heat Pump Heating Mode: Capacity = 35 kBtu/h, Proposed Efficiency = 7.50 HSPF2, Required Efficiency = 7.50 HSPF2 Cooling Mode: Capacity = 36 kBtu/h, Proposed Efficiency = 14.50 SEER2, Required Efficiency = 14.30 SEER2 Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00 Fan System: 3 TON UNIT FAN -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: FAN 3 Supply, Constant Volume, 1200 CFM, 0.3 motor nameplate hp, 0.00 fan energy index , fan exception: Single fan < 1 HP or < 0.89 kW
1	3.5 TON AHU (Single Zone): Split System Heat Pump Heating Mode: Capacity = 39 kBtu/h, Proposed Efficiency = 7.50 HSPF2, Required Efficiency = 7.50 HSPF2

Quantity	System Type & Description
	Cooling Mode: Capacity = 41 kBtu/h, Proposed Efficiency = 14.50 SEER2, Required Efficiency = 14.30 SEER2 Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00 Fan System: 3.5 TON UNIT FAN -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: FAN 4 Supply, Constant Volume, 1400 CFM, 0.5 motor nameplate hp, 0.00 fan energy index , fan exception: Single fan < 1 HP or < 0.89 kW
1	RTU-01 (Single Zone w/ PerimeterSystem): Heating: 1 each - Unit Heater, Electric, Capacity = 7 kBtu/h No minimum efficiency requirement applies Cooling: 1 each - Single Package DX Unit, Capacity = 23 kBtu/h, Air-Cooled Condenser, Unknown Economizer Proposed Efficiency = 13.40 SEER2, Required Efficiency = 13.40 SEER2 Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00 Fan System: 2 ROOFTOP UNIT FAN -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: FAN 5 Supply, Constant Volume, 800 CFM, 0.5 motor nameplate hp, 0.00 fan energy index , fan exception: Single fan < 1 HP or < 0.89 kW
1	1.5 TON SPLIT (Single Zone): Split System Heat Pump Heating Mode: Capacity = 19 kBtu/h, Proposed Efficiency = 9.20 HSPF2, Required Efficiency = 7.50 HSPF2 Cooling Mode: Capacity = 18 kBtu/h, Proposed Efficiency = 20.20 SEER2, Required Efficiency = 14.30 SEER2 Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00 Fan System: 1.5 TON SPLIT -- Compliance (Motor nameplate HP and fan efficiency method) : Passes Fans: FAN 6 Supply, Constant Volume, 375 CFM, 0.3 motor nameplate hp, 0.00 fan energy index , fan exception: Single fan < 1 HP or < 0.89 kW

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2021 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

COM*check* Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2021 IECC

Requirements: 100.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR2][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical and service water heating systems and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks. Hot water system sized per manufacturer's sizing guide.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.6 [PR16][1]	Group R-2 dwelling units have separate electrical meters.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C406 [PR9][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

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DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

MECHANICAL COMCHECK

M801

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6][3]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41][3]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.12.3 [ME61][2]	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.8.4 [ME142][2]	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.8.6 [ME143][2]	Each DX cooling system > 65 kBtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.9 [ME144][2]	Large diameter fans where installed shall be tested and labeled in accordance with AMCA 230.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.13.1 [ME71][2]	Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.3 [ME55][2]	HVAC equipment efficiency verified.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Mechanical Systems list for values.*
C403.2.2 [ME59][1]	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4, Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.7.1 [ME59][1]	Demand control ventilation provided for spaces >500 ft2 and >15 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.2 [ME115][1]	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Garages with no mechanical cooling or heating that have a ratio of garage area to ventilation system motor nameplate hp greater than 1125 cfm/hp.
C403.7.6 [ME141][3]	HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.7.4 [ME57][1]	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.5 [ME116][3]	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.12.1 , C403.12.2 [ME60][2]	HVAC ducts and plenums insulated in accordance with C403.11.1 and constructed in accordance with C403.11.2, verification may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.4.1.4 [ME63][2]	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.3.3 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.2.1 [ME53][3]	Air outlets and zone terminal devices have means for air balancing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.11.3 , C403.11.3.1, C403.11.3.2 [ME123][3]	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.11.3.1 and refrigeration compressor systems that comply with C403.11.3.2..	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

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MECHANICAL COMCHECK

M802

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.7 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.8 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.9.1, C405.9.2 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.10 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.1.1 [EL30][2]	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C405.11, C405.11.1 [EL31][2]	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and > 25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.3 [FI8][3]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.1.1 [FI50][3]	HVAC systems and equipment design loads calculated in accordance with ANSI/ASHRAE/ACCA Standard 183 or by an approved equivalent computational procedure	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.1 [FI27][3]	HVAC systems and equipment capacity does not exceed calculated loads.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1 [FI47][3]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.1 [FI42][3]	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.2 [FI38][3]	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.3 [FI20][3]	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.2 [FI39][3]	Each zone equipped with setback controls using automatic time clock or programmable control system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.2.1, C403.4.2.2 [FI40][3]	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.2.3 [FI41][3]	Systems include optimum start controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.1.1 [FI57][3]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.1 [FI28][1]	Commissioning plan developed by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.1 [FI31][1]	HVAC equipment, systems and system-to-system relationships have been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.2 [FI10][1]	HVAC and service water heating control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.4 [FI29][1]	Preliminary commissioning report completed and certified by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5 [FI7][1]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.1 [FI43][1]	An air and/or hydronic system balancing report is provided for HVAC systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.2 [FI30][1]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

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PROJECT NUMBER: 24214

DRAWING ISSUANCE LOG

NO.	DESCRIPTION	DATE

MECHANICAL COMCHECK

M803