

MECHANICAL GENERAL NOTES

OUTSIDE AIR CALCULATION										
AREA SERVED	AREA (SQFT)	PEOPLE / 1000 SQFT	# PEOPLE	CFM/ PERSON	PEOPLE O.A REQ'D (CFM)	CFM/ SQFT	SQFT OUTSIDE AIR (CFM)	TOTAL CFM CALCULATED	CFM SUPPLIED	
OFFICE	63	5	2	5	10	0.06	4	14		
RETAIL	1304	15	20	7.5	150	0.12	157	307		
ASSOCIATES	77	5	2	5	10	0.06	5	15		
COFFEE	143	20	3	7.5	23	0.12	18	41		
								RTU-1	377	545
STAGING	43	2	1	10	10	0.12	6	16		
WASHROOM	73	20	2	7.5	15	0.12	9	24		
BACKROOM	250	20	5	7.5	38	0.12	30	68		
FOOD SVC.	557	20	12	7.5	90	0.12	67	157		
								RTU-2	265	650
RETAIL	1185	15	18	7.5	135	0.12	143	278		
DELIVERY	116	2	1	10	10	0.12	14	24		
HALLWAY	48	-	-	-	-	0.06	3	3		
								RTU-3	305	305

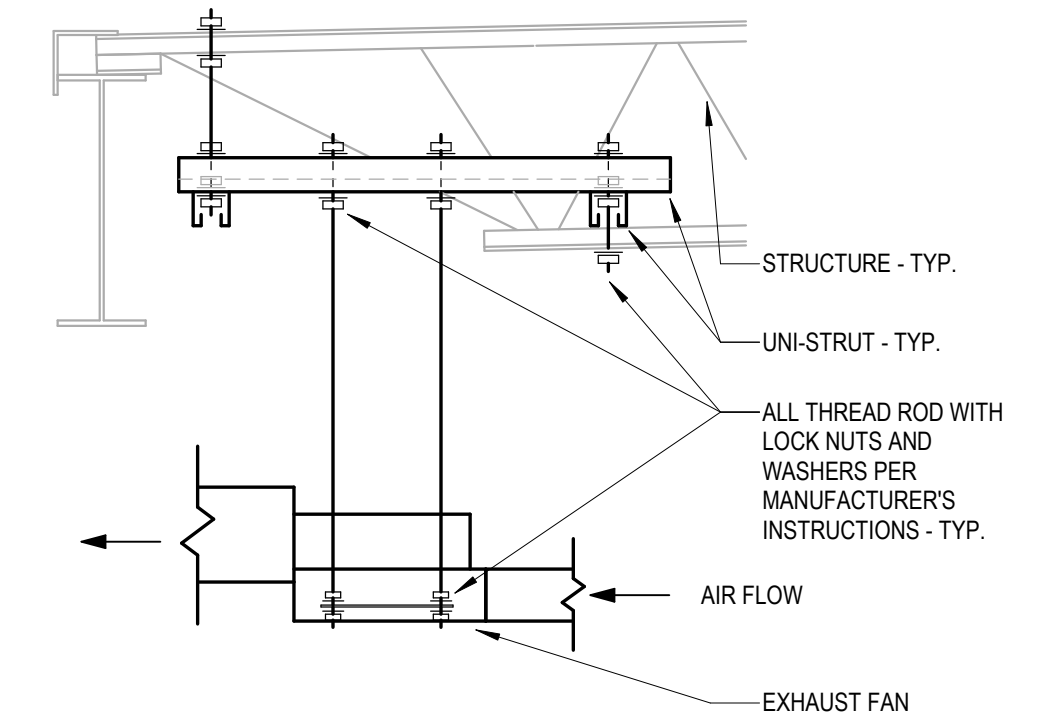
NOTES:
 1. OCCUPANCY LOAD VENTILATION RATES ARE BASED ON NET OCCUPIABLE SPACE IN ACCORDANCE WITH THE 2018 INTERNATIONAL MECHANICAL CODE, TABLE 403.3.1.1
 2. ANTICIPATED NUMBER OF PEOPLE IS BASED ON AN OCCUPANCY LOAD FACTOR (# PEOPLE/SF) VALUE (BASED ON THE 2018 INTERNATIONAL MECHANICAL CODE, TABLE 403.3.1.1)

AIR BALANCE SCHEDULE	
SYSTEM	CFM
RTU-1	+545
RTU-2	-650
RTU-3	+305
EF-1	-300
EF-2	-900
BUILDING POSITIVE PRESSURE	+300

- REFER TO WRITTEN BOOK SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- THE WORK TO BE DONE UNDER THESE SPECIFICATIONS AND THE DRAWINGS CONSISTS OF FURNISHING ALL EQUIPMENT, MATERIALS, LABOR AND SERVICES, AND PERFORMING ALL OPERATIONS TO COMPLETE THE MECHANICAL CONSTRUCTION WORK FOR THIS PROJECT. ANY WORK NOT SPECIFICALLY COVERED BY THESE SPECIFICATIONS OR INDICATED ON THE MECHANICAL/ELECTRICAL/PLUMBING PLANS, BUT NECESSARY TO COMPLETE OR PERFECT ANY PART OF THIS INSTALLATION IN A SUBSTANTIAL MANNER, SHALL BE PROVIDED WITHOUT EXTRA COST TO OWNER.
- THE TERM "FURNISH" SHALL MEAN TO OBTAIN AND SUPPLY TO THE JOB SITE. THE TERM "INSTALL" SHALL MEAN TO FIX IN POSITION AND CONNECT FOR USE. THE TERM "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL. THE TERM "MECHANICAL WORK" OR "WORK" SHALL MEAN ALL LABOR, MATERIAL, EQUIPMENT, SCAFFOLDING, RIGGING, TOOLS, SUPERVISION, SERVICES AND OTHER INCIDENTALS NECESSARY FOR COMPLETE AND OPERABLE INSTALLATION.
- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT, MATERIALS AND LABOR TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM AS INDICATED ON THE DESIGN DOCUMENTS.
- CONTRACTOR SHALL OBTAIN ALL PERMITS, INSPECTIONS AND APPROVALS PRIOR TO AND DURING CONSTRUCTION.
- ALL MATERIALS, EQUIPMENT AND INSTALLATIONS SHALL BE IN STRICT ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE - MECHANICAL, SMACNA, UL, STATE CODES, LOCAL CODES, MANUFACTURER'S RECOMMENDATIONS, AND ALL AUTHORITIES HAVING JURISDICTION.
- CONTRACTOR SHALL PROVIDE ALL ROOFING OPENINGS, FLASHINGS, AUXILIARY STEEL, THREADED RODS, VIBRATION ISOLATORS, TURNBUCKLES, ETC. TO SUPPORT HIS EQUIPMENT ON OR FROM THE STRUCTURE.
- CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES AND IN FIELD PRIOR TO INSTALLATION OF ANY WORK. REPORT ALL CONFLICTS IMMEDIATELY TO ARCHITECT AND ENGINEER.
- THE DRAWINGS INDICATE DIAGRAMMATICALLY THE EXTENT, GENERAL CHARACTER AND LOCATION OF THE WORK INCLUDED. OFFSETS OR CHANGES IN DUCT SHAPE TO AVOID STRUCTURAL OR OTHER INTERFERENCES, AND WORK INDICATED BUT HAVING MINOR DETAILS PREVIOUSLY OMITTED SHALL BE PROVIDED WITHOUT EXTRA COST.
- ANY CHANGES AND/OR MODIFICATIONS MUST BE REVIEWED AND APPROVED BY THE ENGINEER OR OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
- REMOVE ALL TRASH, DEBRIS AND DEMOLITION MATERIAL FROM PREMISES AT THE END OF EACH WORK DAY.
- SCHEDULE ALL WORK, CUTTING AND BUILDING SERVICE INTERRUPTIONS WITH BUILDING OWNER AND CONSTRUCTION MANAGER, PRIOR TO COMPLETING WORK.
- ALL DUCT DIMENSIONS ARE INSIDE CLEAR DIMENSIONS.
- THE MAXIMUM FLEXIBLE DUCT LENGTH PERMITTED IS 8'-0". THIS DUCTWORK SHALL BE INSTALLED WITHOUT KINKS OR 90° BENDS.
- ALL FLEXIBLE DUCTWORK SHALL BE FLEX-VENT TYPE KM INSULATED WITH POLYMER INNER FILM AND METALIZED OUTER JACKET, OR APPROVED EQUAL. SIZE SHALL BE SAME AS DIFFUSER NECK SIZE, UNLESS INDICATED OTHERWISE.
- FIELD ADJUST THE DIRECTION OF BLOW FOR ALL SUPPLY AIR DEVICES SO THAT THE DEVICES DO NOT BLOW DIRECTLY INTO SOFFITS, CURTAIN WALLS, REFRIGERATED CASES OR EXHAUST HOODS.
- ALL NEW AND EXISTING PIPES AND DUCTS SHALL HAVE UL FIRE RATED SLEEVES AND/OR FIRE RATED DAMPERS, WHEN PASSING THROUGH FIRE RATED CONSTRUCTION.
- COORDINATE LOCATION OF NEW DUCTWORK, AIR DEVICES AND EQUIPMENT WITH LIGHT FIXTURES, SPRINKLER PIPING AND HYDRONIC PIPING.
- CONTRACTOR SHALL VERIFY FIELD CONDITIONS AT THE SITE AND NOTIFY THE OWNER/ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING WORK.
- ALL WALL MOUNTED TEMPERATURE, HUMIDITY, AND CO2 SENSORS SHALL BE INSTALLED AT AN ELEVATION 5' ABOVE FINISHED FLOOR TO THE TOP UNLESS OTHERWISE NOTED ON DRAWINGS. COORDINATE FINAL LOCATIONS WITH EQUIPMENT, FURNITURE, TENANT AND ARCHITECT PRIOR TO INSTALLATION.
- ALL DUCTWORK SHALL BE GALVANIZED STEEL CONSTRUCTED AT 2" PRESSURE CLASS. ALL CONCEALED DUCTWORK BELOW TRUSSES SHALL BE INSULATED WITH 1-1/2" FIBERGLASS DUCT WRAP WITH WIRE SUPPORT BANDS ON 24" CENTERS. ALL CONCEALED DUCTWORK ABOVE THE TRUSSES SHALL BE INSULATED WITH 1-1/2" OF FIBERGLASS DUCT WRAP WITH WIRE SUPPORT BANDS ON 24" CENTERS. ALL INTERIOR EXPOSED DUCTWORK BELOW TRUSSES SHALL BE INSULATED WITH 1" RIGID FIBERGLASS DUCT BOARD WITH FOIL AND SCRIM FACING. ALL EXTERIOR EXPOSED DUCTWORK SHALL BE INSULATED WITH 4" RIGID FIBERGLASS BOARD WITH WEATHERPROOF MEMBRANE.
- VERIFY ALL EQUIPMENT VOLTAGES, WIRING REQUIREMENTS, AND REQUIRED BREAKER SIZES WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT.
- ALL ACCESS DOORS REQUIRED IN GENERAL CONSTRUCTION ARE TO BE PROVIDED AND INSTALLED BY THE GENERAL CONTRACTOR. IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO IDENTIFY SIZE, TYPE AND LOCATION OF SUCH DOORS FOR PROPER ACCESS TO ALL CONCEALED MECHANICAL EQUIPMENT, VALVES AND OTHER RELATED DEVICES. THE MECHANICAL CONTRACTOR SHALL IDENTIFY THESE REQUIREMENTS ON A COORDINATED SHOP DRAWING PRIOR TO SYSTEM FABRICATION AND INSTALLATION.
- AFTER THE HEATING AND AIR CONDITIONING SYSTEM INSTALLATIONS ARE COMPLETE, THE CONTRACTOR SHALL BALANCE THE SYSTEM AND PRESENT OWNER & ARCHITECT WITH A WRITTEN BALANCING REPORT BY A CERTIFIED INDEPENDENT TESTING LAB. DAMPER HANDLES SHALL BE FASTENED INTO DUCTWORK WITH SHEETMETAL SCREWS AFTER BALANCING TO ASSURE CORRECT BALANCED AIRFLOW.
- PROVIDE ELBOWS OR TEES WITH TURNING VANES FOR ALL CHANGES IN SUPPLY DUCT DIRECTION. PROVIDE BRANCHED DUCT DAMPERS WITH LOCKING QUADRANTS FOR ALL BRANCHES AND TAKE-OFFS. PROVIDE RAISED QUADRANTS FOR INSULATED DUCTWORK. ALL VOLUME DAMPER HANDLES ARE TO PROTRUDE NEATLY THROUGH DUCT INSULATION AND BE TAGGED SO THAT THEY ARE CLEARLY VISIBLE.
- PROVIDE FLEXIBLE CONNECTIONS AT ALL DUCT CONNECTIONS TO VIBRATING EQUIPMENT. THESE CONNECTIONS SHALL BE INSTALLED IN CLOSE PROXIMITY TO SUCH EQUIPMENT.
- THE MECHANICAL CONTRACTOR SHALL HAVE A QUALIFIED HVAC TECHNICIAN FROM THE UNIT MANUFACTURER PROVIDE AN EQUIPMENT OPERATION CHECK AFTER UNIT START-UP AND PRIOR TO CERTIFIED AIR BALANCING. THE CERTIFICATION, SIGNED BY THE TECHNICIAN, MUST BE INCLUDED IN THE GENERAL CONTRACTOR CLOSING DOCUMENTS FOR THE STORE.
- PROVIDE CONDENSATE DRAIN PIPING SIZED PER PLAN. PROVIDE TRAP FOR EACH ROOFTOP UNIT PER DETAIL ON PLANS. PIPE DRAIN TO GUTTER OR DOWNSPOUT PER PLAN.

HVAC LEGEND	
SYMBOL	DESCRIPTION
	NEW RECTANGULAR OR ROUND DUCT
	FLEXIBLE DUCT
	SUPPLY AIR DUCTWORK UP THROUGH PLAN
	RETURN AIR DUCTWORK UP THROUGH PLAN
	EXHAUST AIR DUCTWORK UP THROUGH PLAN
	90° ELBOW WITH TURNING VANES
	MANUAL AIR VOLUME CONTROL DAMPER
	4 WAY SUPPLY DIFFUSER
	3 WAY SUPPLY DIFFUSER
	2 WAY OPPOSED SUPPLY DIFFUSER
	2 WAY CORNER SUPPLY DIFFUSER
	RETURN AIR DEVICE
	EXHAUST AIR DEVICE
	VAV PLAQUE FACE DIFFUSER
	AIR CURTAIN
	LINEAR SLOT DIFFUSER WITH PLENUM
	TEMPERATURE SENSOR
	COMBINATION TEMPERATURE/HUMIDITY SENSOR
	CO2 SENSOR
	SWITCH
	TYPE MARK CFM
	MECHANICAL EQUIPMENT TAG
	CONDENSATE PIPING
	ROOF MOUNTED EXHAUST FAN
	INLINE EXHAUST FAN
	PACKAGED ROOFTOP AIR CONDITIONER

ABBREVIATIONS			
DB°F	DRY BULB DEGREES FAHRENHEIT	LD	LINEAR DIFFUSER
AC	AIR CURTAIN	L.P.	LOW PRESSURE
AC	AIR CURTAIN	MAX	MAXIMUM
A.F.F.	ABOVE FINISHED FLOOR	MCA	MINIMUM CIRCUIT AMPACITY
BAS	BUILDING AUTOMATION SYSTEM	MIN	MINIMUM
BTU	BRITISH THERMAL UNIT	MOCOP	MAXIMUM OVER CURRENT PROTECTION
CD	CEILING DIFFUSER	MPH	MILES PER HOUR
CFM	CUBIC FEET PER MINUTE	O.A.	OUTSIDE AIR
CO2	CARBON DIOXIDE	O.C.	ON CENTER
D	DIAMETER	PVC	POLYVINYL CHLORIDE
EER	ENERGY EFFICIENCY RATIO	REQ'D	REQUIRED
EF	EXHAUST FAN	RTU	PACKAGED ROOF TOP HVAC UNIT
FFH	FAN FORCED HEATER	SCH	SCHEDULE
G	GRILLE	SEER	SEASONAL ENERGY EFFICIENCY RATIO
G.C.	GENERAL CONTRACTOR	SF	SQUARE FOOT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TYP.	TYPICAL
HP	HORSEPOWER	V	VOLTS
IEER	INTEGRATED ENERGY EFFICIENCY RATIO	W	WITH
IN	INCHES WATER COLUMN	WB°F	WET BULB DEGREES FAHRENHEIT
LBS.	POUNDS		



1 INLINE FAN MOUNTING DETAIL
 M3.0 NOT TO SCALE

RTU-1, 2, & 3 TEST AND BALANCE NOTES

- TEST AND BALANCE CONTRACTOR TO OBTAIN INITIAL BALANCE OF COOLING CFM FOR RTU USING FAN SHEAVE ADJUSTMENT TO WITHIN +/- 5% SCHEDULED COOLING CFM. PRODIGY CONTROLLER SHALL BE USED FOR FINAL 5% TO OBTAIN COOLING CFM.
- SET MINIMUM OUTSIDE AIR DAMPER POSITION FOR COOLING AND VERIFY OUTSIDE AIR CFM PER RTU SCHEDULE.
- NOT USED
- NOT USED
- USING PRODIGY CONTROLLER, VERIFY HEATING CFM EQUALS COOLING CFM.
- ALL PRODIGY CONTROLLER SETTINGS OTHER THAN THOSE LISTED ABOVE SHALL REMAIN AS THEIR DEFAULT VALUE AS SET FROM THE FACTORY.
- VERIFY POSITIVE BUILDING PRESSURE.

HVAC AIR DEVICE SCHEDULE									
TYPE MARK	MANUFACTURER	MODEL	SERVICE	DESCRIPTION	MOUNTING TYPE	MATERIAL	NECK SIZE	FACE SIZE	NOTES
CD-1	PRICE	AMD	SUPPLY	LOUVERED FACE DIRECTIONAL DIFFUSER	LAY-IN	ALUMINUM	18"X18"	24"X24"	1.6
CD-2	PRICE	AMD	SUPPLY	LOUVERED FACE DIRECTIONAL DIFFUSER	SURFACE	ALUMINUM	12"X12"	NECK-5"	5.6
CD-3	PRICE	AMD	SUPPLY	LOUVERED FACE DIRECTIONAL DIFFUSER	SURFACE	ALUMINUM	6"X6"	NECK-5"	5.6
G-1	PRICE	630FF	RET/EXH/TRAN	LOUVERED FACE FILTER RETURN GRILLE	LAY-IN	ALUMINUM	20"X20"	NECK-3/3/4"	4
G-2	PRICE	630FF	RETURN/TRANSFER	LOUVERED FACE FILTER RETURN GRILLE	SURFACE	ALUMINUM	12"X12"	NECK-3/3/4"	4
G-3	PRICE	630FF	EXHAUST	LOUVERED FACE FILTER RETURN GRILLE	SURFACE	ALUMINUM	8"X8"	NECK-3/3/4"	4
G-4	PRICE	630 D	EXHAUST	LOUVERED FACE RETURN GRILLE	SURFACE/WALL	ALUMINUM	10"X10"	NECK-1/3/4"	-
LD-1	PRICE	TBD04	SUPPLY	48" INSULATED PLENUM W/ (4) 1" SLOTS	LAY-IN	ALUMINUM	SEE PLAN	N/A	2.3

NOTES:
 -NO SUBSTITUTIONS PERMITTED-
 1. FOR LAY-IN CEILINGS PROVIDE WITH 18"X18" FULL FACE APPEARANCE DIFFUSER NECK. PROVIDE WITH FACTORY SQUARE TO ROUND NECK ADAPTER MODEL "SR". ROUND NECK SIZE SHALL BE EQUAL TO FLEX SIZE SERVING DIFFUSER.
 2. PROVIDE WITH PLENUM INTERNALLY LINED WITH COATED FIBERBOARD. EXTERNALLY INSULATE PLENUM UPON INSTALLATION WITH DUCT WRAP INSULATION.
 3. PROVIDE WITH CENTER NOTCH OPTION (CN) AS REQUIRED WHEN USED IN 24" T-BAR CEILING.
 4. "GR" STYLE (1/4" TURN FASTENERS ONLY) - OMIT HINGE. FILTER TYPE RETURN GRILLES PROVIDED SOLELY FOR MAINTENANCE PURPOSES. OMIT FILTER UPON INSTALLATION.
 5. PROVIDE WITH TYPE 6 BEVELED SURFACE MOUNT FRAME AND FACTORY SQUARE TO ROUND NECK ADAPTER MODEL "SR".
 6. PROVIDE WITH BACKPAN INSULATION.

HVAC AIR CURTAIN SCHEDULE									
MARK	AREA SERVED	BASIS OF DESIGN			UNIT POWER		MOUNTING HEIGHT	NOTES	
		MANUFACTURER	MODEL	NOZZLE CFM	HP	VOLTAGE			PHASE
AC-1	WASHROOM	POWERED AIRE	BCE-1-42	2163	0.5	120 V	1	7'-2"	1-4
AC-2	DELIVERY ROOM	POWERED AIRE	BCE-1-48	2155	0.5	120 V	1	7'-2"	1-4

NOTES:
 -NO SUBSTITUTIONS PERMITTED-
 1. MOUNT INSIDE BUILDING ABOVE DOOR AT 7'-2" A.F.F. MOUNTING HEIGHT IS FROM BOTTOM OF AIR CURTAIN.
 2. PROVIDE ALL NECESSARY MOUNTING BRACKETS AND ACCESSORIES.
 3. PROVIDE WITH MODEL SM-300 COMMERCIAL MAGNETIC REED DOOR SWITCH.
 4. AIR CURTAIN CONTROLLED BY MAGNETIC REED DOOR SWITCH, FAN ON WHEN DOOR IS OPEN.

HVAC EXHAUST FAN SCHEDULE												
MARK	CFM	EXT. STATIC PRESSURE	FAN TYPE	DRIVE TYPE	SONES	HP	FAN RPM	VOLTAGE	PHASE	BASIS OF DESIGN		NOTES
										MANUFACTURER	MODEL	
EF-1	250	0.125 in-wg	DOWNBLAST	DIRECT	5.9	1/12	1550	120 V	1	PENNBARRY	DX10R	1.2
EF-2	900	0.250 in-wg	DOWNBLAST	DIRECT	14	1/4	1725	120 V	1	PENNBARRY	DX13Q	1.2
EF-3	60	0.125 in-wg	INLINE	DIRECT	4.1	39 WATTS	1550	120 V	1	PENNBARRY	Z3H	3

NOTES:
 -NO SUBSTITUTIONS PERMITTED-
 1. PROVIDE WITH FACTORY DISCONNECT, FACTORY WIRED SOLID STATE SPEED CONTROLLER, 18" HIGH ROOF CURB WITH DAMPER TRAY, BACKDRAFT DAMPER, AND BIRD SCREEN.
 2. WIRE FOR CONTINUOUS OPERATION.
 3. PROVIDE WITH FACTORY DISCONNECT & FACTORY WIRED SOLID STATE SPEED CONTROLLER. FAN SHALL BE WIRED TO EMERGENCY SHUTOFF SWITCH PROVIDED BY OTHERS. REFERENCE ARCHITECTURAL AND ELECTRICAL DRAWINGS.

HVAC ROOFTOP UNIT SCHEDULE																						
MARK	AREA SERVED	NOMINAL TONS	CFM	SUPPLY AIR FAN DATA			KW	ELECTRIC HEAT CONTROL STAGES	UNIT POWER		WEIGHT (LBS. RTU ONLY)	COOLING CAPACITY			EER (IEER)	BASIS OF DESIGN		NOTES				
				OUTSIDE AIR	E.S.P. (IN.)	HP			VOLTAGE	PHASE		MCA	MOCOP	TOTAL COOLING MBH		SENSIBLE COOLING MBH	EDB (°F)		EWB (°F)	AMBIENT (DB°/WB°F)	MANUFACTURER	MODEL
RTU-1	RETAIL	8.5	3400	335	0.5	3.75	15	1	208 V	3	52	60	1357	98.1	75.4	75.5	63.9	92/75	12.3 (15.7)	LENNOX ENLIGHT	LCT1024HE	1-20
RTU-2	FOOD SERVICE	10	4000	650	0.5	3.75	N/A	N/A	208 V	3	54	70	1396	117	91.1	75.2	62.5	92/75	12.2 (15.5)	LENNOX ENLIGHT	LCT1204HE	1-20
RTU-3	RETAIL	5	2000	305	0.5	1	15	1	208 V	3	52	60	844	59.2	43.4	80	67	92/75	17.1 (12.7)	LENNOX ENLIGHT	LCT0604HE	2-20

NOTES:
 1. PROVIDE CO2 SENSOR FOR INTERLINK WITH BUILDING AUTOMATION SYSTEM.
 2. PROVIDE LENNOX HUMIDITROL HOT GAS REHEAT OPTION.
 3. PROVIDE REMOTE WALL MOUNTED COMBINATION TEMPERATURE/HUMIDITY SENSOR MODEL 21W06
 4. REFER TO CONTROL SYSTEM NOTES FOR CONTROL COMPONENTS REQUIREMENTS.
 5. PROVIDE 5-MINUTE ANTI-SHORT CYCLE TIMER.
 6. PROVIDE THRU THE BASE ELECTRICAL AND SINGLE POINT CONNECTION.
 7. PROVIDE WITH FACTORY 2" THROW AWAY PLEATED MERV 8 FILTERS.
 8. PROVIDE WITH 18" ROOF CURB.
 9. PROVIDE FACTORY 15 AMP GFCI SERVICE OUTLET WITH WEATHERPROOF COVER. COORDINATE WITH ELECTRICAL CONTRACTOR TO PROVIDE FIELD WIRING TO RECTIFY PLEATE.
 10. PROVIDE WITH FACTORY INSTALLED DISCONNECT.
 11. PROVIDE WITH HIGH PERFORMANCE SINGLE ENTHALPY ECONOMIZER AND UNIT MOUNTED POWERED EXHAUST FAN.
 12. PROVIDE MANUFACTURER'S MOTOR AND DRIVE PACKAGE AS REQUIRED TO MEET SCHEDULED AIR CAPACITIES AND PRESSURE DROP.
 13. PROVIDE FACTORY APPLIED PHENOLIC COATING FOR CORROSION PROTECTION ON CONDENSER COILS WITHIN 5 MILES OF SALT WATER.
 14. PROVIDE BUILDING AUTOMATION SYSTEM (BAS) EQUIPMENT - REFER TO BAS SYSTEM MASTER SPEC FOR SYSTEM DETAILS AND EQUIPMENT PART NUMBERS.
 15. PROVIDE FACTORY INSTALLED BACNET BAS INTERFACE.
 16. PROVIDE LENNOX DIRTY FILTER SWITCH.
 17. PROVIDE LENNOX IMC CONTROL BOARD (STANDARD ON L-SERIES UNITS)
 18. TEMPERATURE SETPOINT: 74°F COOLING, 68°F HEATING HUMIDITY SETPOINT: 50% RELATIVE HUMIDITY.
 19. PROVIDE WITH FACTORY CONDENSATE PAN WATER LEVEL MONITORING DEVICE FOR COMPLIANCE WITH 2018 IMC, SECTION 307.2.3.
 20. PROVIDE WITH FACTORY INSTALLED SUPPLY AND RETURN SMOKE DETECTORS.

RTU-1, 2, & 3 SEQUENCE OF OPERATION

- SUPPLY AIR BLOWER SPEED
 UNIT HAS FOLLOWING SUPPLY AIR BLOWER SPEED SETTINGS THAT PERTAIN TO THIS INSTALLATION:
- COOLING AIR BLOWER SPEED
 - HEATING AIR BLOWER SPEED
- COOLING MODE
- Y1 DEMAND: COMPRESSOR 1 OPERATES AND SUPPLY AIR BLOWER OPERATES AT COOLING SPEED.
 - Y2 DEMAND: ALL COMPRESSORS OPERATE AND SUPPLY AIR BLOWER OPERATES AT COOLING SPEED.
- DEHUMIDIFICATION MODE
- IF THE UNIT RECEIVES A CALL FOR DEHUMIDIFICATION, ECONOMIZER FREE COOLING IS LOCKED OUT (ON UNITS EQUIPPED WITH ECONOMIZER), CALL FOR DEHUMIDIFICATION, NO Y1, Y2 DEMAND: 1ST STAGE COMPRESSOR OPERATES, SUPPLY AIR BLOWER OPERATES AT COOLING SPEED, AND THE REHEAT VALVE IS ENERGIZED.
 - Y1 DEMAND WITH A CALL FOR DEHUMIDIFICATION: ALL COMPRESSORS OPERATE, SUPPLY AIR BLOWER OPERATES AT COOLING SPEED AND THE REHEAT VALVE IS ENERGIZED.
 - Y2 DEMAND WITH A CALL FOR DEHUMIDIFICATION: ALL COMPRESSORS OPERATE, SUPPLY AIR BLOWER OPERATES AT COOLING SPEED AND THE REHEAT VALVE IS DE-ENERGIZED.
- MODULATING OUTDOOR AIR DAMPER
- THE MINIMUM DAMPER POSITION FOR "OCCUPIED HIGH BLOWER" IS ADJUSTED DURING UNIT SETUP TO PROVIDE MINIMUM FRESH AIR REQUIREMENTS PER RTU SCHEDULE.
 - WHEN SUPPLY AIR BLOWER IS OFF, THE OUTDOOR AIR DAMPER IS CLOSED.
 - WHEN UNIT IS IN OCCUPIED MODE AND SUPPLY AIR BLOWER IS OPERATING, THE OUTDOOR AIR DAMPER IS AT MINIMUM "HIGHER BLOWER" POSITION.

LENNOX SETUP PARAMETERS / MID-ATLANTIC STORES (R3)

UNIT ID CONFIGURATION (MECHANICAL CONTRACTOR TO DEFINE / AS APPLICABLE):

- BACNET CONFIGURATION: GO TO SETTINGS>GENERAL-CONFIGURATION ID1 POSITION 5 SET TO "B"
- NETWORK CONFIGURATION: GOT TO SETUP>NETWORK INTEGRATION SET TO BACNET
- CONTROL MODE: SET CONTROL MODE TO ROOM SENSOR: CO2, TEMP, & HUMIDITY (PER UNIT, AS NEEDED)
- ENTHALPY CONFIGURATION: CHANGE CONFIG ID1 POSITION 2 FROM D (DUAL ENTHALPY) TO S (SINGLE ENTHALPY)
- FRESH AIR COOLING: SETUP>TEST & BALANCE>DAMPER. SCROLL TO FRESH AIR COOLING SET TO "NO"
- FRESH AIR HEAT: SETUP>TEST & BALANCE>DAMPER. SCROLL TO FRESH AIR HEAT SET TO "NO"

INDIVIDUAL PARAMETER CONFIGURATIONS (MECHANICAL CONTRACTOR TO DEFINE / AS APPLICABLE):

- PARAMETER 105 DEHUMID MODE: 7 NO CONDITIONS
- PARAMETER 106 DEHUMID SETPOINT: 50. THIS IS A CENTERED SET POINT (+/-)
- PARAMETER 107 DEHUMID DEADBAND: 3 (DEFAULT) THIS IS THE ACTUAL +/- VALUE
- PARAMETER 117 CO2 DAMPER MAX OPEN %: 50
- PARAMETER 118 CO2 START OPEN PPM: 1200
- PARAMETER 119 CO2 FULL OPEN PPM: 1500
- PARAMETER 131 FREECOOL MAX DAMPER: 100%
- PARAMETER 137 OCC HEAT SET POINT: 68 (BACK UP)
- PARAMETER 139 OCC COOLING SET POINT: 72 (BACK UP)
- PARAMETER 154 OCC BLOWER MODE: ON-CONTINUOUS 1
- PARAMETER 155 FREE COOL LOCK OUT SET POINT: 29 (DISABLED)
- PARAMETER 159 FREE COOL SUPPLY SET POINT: 55 (DEFAULT)
- PARAMETER 160 ECON FREE COOL SET POINT: 55 (DEFAULT)
- PARAMETER 161 ECON FREE COOL OFFSET: 10 (DEFAULT)
- PARAMETER 162 ECON FREE COOL ENTHALPY SET POINT (SINGLE ENTHALPY): 19 MA (50% HUM + 60F)
- PARAMETER 163 ECON FREE COOL ENTHALPY OFFSET: 1 (DEFAULT)
- PARAMETER 164 ECONOMIZER PROFILE: 2 (DEFAULT)

CFM VALUES / MSAV FAN SPEEDS (AIR BALANCER TO DEFINE / IF APPLICABLE):

- HEAT CFM VALUE: PER THE HVAC SCHEDULE
- LOW COOL CFM VALUE: PER THE HVAC SCHEDULE
- LOW COOL CFM VALUE: MATCH THE HIGH COOL CFM VALUE
- VENTILATION CFM VALUE: MATCH THE HIGH COOL CFM VALUE

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CLIENT NAME
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PROJECT NAME
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SHEET TITLE
H