

ABBREVIATIONS

AD	- ACCESS DOOR
AFF	- ABOVE FINISHED FLOOR
AHU	- AIR HANDLING UNIT
BDD	- BACKDRAFT DAMPER
BOD	- BOTTOM OF DUCT
CF	- CEILING FAN
CU	- CONDENSING UNIT
DG	- DOOR GRILLE
DAC	- DOOR AIR CURTAIN
E	- EXISTING
EA	- EXHAUST AIR
EAT	- ENTERING AIR TEMPERATURE
EE	- EXISTING EXHAUST
EF	- EXHAUST FAN
EG	- EXHAUST GRILLE
EMS	- ENERGY MANAGEMENT SYSTEM
ER	- EXISTING RETURN
ES	- EXISTING SUPPLY
EUH	- ELECTRIC UNIT HEATER
EAH	- ELECTRIC WALL HEATER
GALV	- GALVANIZED
GC	- GENERAL CONTRACTOR
H	- KITCHEN EXHAUST HOOD
IMC	- INTERNATIONAL MECHANICAL CODE
I/O	- INPUT OUTPUT CONTROL
LAT	- LEAVING AIR TEMPERATURE
LP	- LOUVERED PENTHOUSE
NFPA	- NATIONAL FIRE PROTECTION ASSOCIATION
MAU	- MAKEUP AIR UNIT
N	- NEW
NI	- NEGATIVE IONIZER
NMC	- NOT IN MECHANICAL CONTRACT
NTS	- NOT TO SCALE
OA	- OUTDOOR AIR
R	- RETURN GRILLE
RA	- RETURN AIR
RTC	- ROOF TOP CONTROL
RTU	- ROOF TOP UNIT
S	- SUPPLY DIFFUSER
SA	- SUPPLY AIR
SS	- STAINLESS STEEL
TG	- TRANSFER GRILLE
TOD	- TOP OF DUCT
VCD	- VOLUME CONTROL DAMPER
UH	- UNIT HEATER
VIF	- VERIFY IN FIELD

LEGEND

KEYED NOTE	ROUND REDUCING WYE BRANCH
THERMOSTAT	VOLUME CONTROL DAMPER
THERMOSTAT WITH LOCKING COVER	SQUARE TO ROUND CONNECTION
CPC EMS TEMPERATURE SENSOR	SUPPLY RECTANGULAR DUCT UP
CPC EMS HUMIDITY SENSOR	RETURN RECTANGULAR DUCT UP
CPC EMS DEW POINT SENSOR	SUPPLY RECTANGULAR DUCT DOWN
FAN ON/OFF SWITCH	RETURN RECTANGULAR DUCT DOWN
DUCT MOUNTED SMOKE DETECTOR	RECTANGULAR BULLHEAD TEE WITH TURNING VANES
DOOR AIR CURTAIN MICROSWITCH CONTROLLER	RECTANGULAR ELBOW WITH TURNING VANES
HOOD FIRE SUPPRESSION SYSTEM MANUAL PULL STATION	RECTANGULAR RADIUS ELBOW
AIR DEVICE (REFER TO SCHEDULE)	FLEXIBLE DUCT MAXIMUM 5'-0"
EQUIPMENT MARK NUMBER (REFER TO SCHEDULE)	CONDENSATE LINE
RETURN ROUND DUCT UP	1" DOOR UNDERCUT (FURNISHED WITH DOOR)
SUPPLY ROUND DUCT UP	BACKDRAFT DAMPER
SUPPLY ROUND DUCT DOWN	CONNECT NEW TO EXIST
RETURN ROUND DUCT DOWN	EXISTING TO REMOVE
ROUND ELBOW	EXISTING DUCT, FITTINGS AND EQUIPMENT TO REMAIN
ROUND LOSS TEE	
45° ROUND LATERAL	
ROUND REDUCING BULLHEAD TEE WITH VANES	
ROUND SPIRAL DOUBLE WALL DUCT	

ROOF TOP UNIT SCHEDULE

MARK	AREA SERVED	ELECTRICAL				SUPPLY FAN				COOLING CAPACITY (NOTE 2)			NATURAL GAS HEATING			REMARKS				
		VOLTS	PHASE	HERTZ	MCA	MOP	AIR (CFM)	E.S.P. (IN. WG.)	RPM	BHP	OUTDOOR AIR (CFM)	TOTAL (MBH)	SENSIBLE (MBH)	SEER (EER)	INPUT (MBH)		OUTPUT (MBH)	A/FUE	MANUFACTURER	MODEL
RTU-1	VESTIBULE	208	3	60	42.0	50	2,400	1.2	1142	1.03	0	87.34	63.31	14.5	120.0	96.0	0.80	TRANE	YHC092	1234567890101112131415161718
RTU-2	DELI/BAKERY	208	3	60	42.0	50	3,200	1.2	1295	1.18	0	97.36	76.06	14.7	120.0	96.0	0.80	TRANE	YHC102	1234567890101112131415161718
RTU-3	STOCKROOM	208	3	60	31.0	45	2,400	1.2	909	1.30	0	72.37	52.85	14.5	150.0	120.0	0.80	TRANE	YHC072	1234567890101112131415161718

NOTES:

- UNITS SHALL BE PURCHASED BY HARRIS TEETER.
- GROSS COOLING CAPACITIES BASED ON 80°F DB/67°F WB E.A.T. AND 95°F DB O.A.T.
- DOWNFLOW CONFIGURATION.
- PROVIDE THROUGH THE BASE ELECTRICAL CONNECTION WITH FACTORY MOUNTED WEATHERPROOF ELECTRICAL DISCONNECT, ANTI-SHORT CYCLE TIMER, HIGH-LOW PRESSURE SWITCH, COIL GUARDS, THROWAWAY AIR FILTERS AND HINGED ACCESS DOORS.
- PROVIDE PHASE LOSS PROTECTION.
- PROVIDE MOTORIZED 0-50% OUTDOOR AIR DAMPER.
- PROVIDE 16" HIGH ROOF CURB, INCLUDING BURGLAR BARS. CURBS SHALL BE SLOPED TO MATCH ROOF PITCH. SEE ARCHITECTURAL DRAWINGS FOR ROOF SLOPE.
- REFRIGERANT R410A.
- PROVIDE SELF CONTAINED HOT GAS REHEAT COIL AND ASSOCIATED DEHUMIDIFICATION CONTROLS.
- PROVIDE WALL MOUNTED 7 DAY PROGRAMMABLE 2 STAGE COOL/ 2 STAGE HEAT THERMOSTAT WITH NIGHT SETBACK.
- PROVIDE LOW AMBIENT CONTROL TO ALLOW COOLING OPERATION TO OFF.
- PROVIDE FLEXIBLE DUCT CONNECTIONS AT INLET AND OUTLET DUCT CONNECTIONS.
- PROVIDE CONDENSATE PAN OVERFLOW SWITCH INTERLOCKED WITH UNIT CONTROLS TO SHUT OFF UNIT IF MOISTURE REACHES THE OVERFLOW LEVEL.
- UNIT TO BE INSTALLED ON EXISTING CURB. FIELD VERIFY EXISTING CURB DIMENSIONS AND PROVIDE ADAPTER CURB SIZED AS REQUIRED TO ALLOW THE NEW UNIT TO FIT ON THE EXISTING CURB AND CONNECT TO THE EXISTING DUCT.

AIR BALANCE SCHEDULE

UNIT NO.	SUPPLY AIR SYSTEMS			SERVING	UNIT NO.	EXHAUST SYSTEMS		
	SUPPLY CFM	RETURN CFM (MINIMUM)	OUTSIDE AIR CFM			FAN CFM	BLDG EXHAUST CFM	SERVING
AHU-1	13,000	7,000	6,000	MAIN SALES	RFP-1	3,600	3,600	DISP. HOOD (11"-6")
REPLACEMENT RTU-1	2,000	1,700	300	VESTIBULE	EF-1	750	750	BAKERY OVEN
REPLACEMENT RTU-2	3,220	2,820	400	DELI BAKERY	EF-2	600	600	PUBLIC RESTROOMS
RTU-3	2,400	2,050	350	STOCKROOM				
TOTAL OUTSIDE AIR			7,050					
TOTAL EXHAUST AIR						4,950		
PRESSURIZATION						2,100		

AIR DEVICE SCHEDULE

MARK	CFM	CONN. SIZE (NOTE 1)	N.C.	DAMPERS	MODEL NO.	BASED ON / REMARKS
ES	EXISTING SUPPLY DIFFUSER					
S1	1350	15x15	-	SSH/CAO	KRUEGER/DUCT MOUNTED	
S2	400	6x6	21		5880 KRUEGER/DUCT MOUNTED	
S3	150	6x6	24		5880 KRUEGER/DUCT MOUNTED	
ER	EXISTING RETURN GRILLE					
RT	NEW RETURN GRILLE TO MATCH EXISTING SIZE AND TYPE					
R2	1025	24x14	<25	-	S580	KRUEGER/SURFACE MOUNTED, HORIZ. BLADES, 3/4" BLADES, 35° DEFLECTION
EE	EXISTING EXHAUST GRILLE					

NOTES:

- ALL AIR DEVICES SHALL BE PURCHASED BY HVAC CONTRACTOR THROUGH McNAMARA & COMPANY.
- GENERAL CONTRACTOR TO FIELD PAINT TO MATCH WALL COLOR.

HVAC EQUIPMENT NOTES

GENERAL NOTE: REFER TO PROJECT SPECIFICATION MANUAL FOR LISTING OF ADDITIONAL MANUFACTURERS, ADDITIONAL FEATURES AND REQUIREMENTS. PROVIDE COMBINATION MAGNETIC STARTER/DISCONNECT WITH HAND/OFF/AUTO SELECTOR SWITCH FOR EACH MOTOR SPECIFIED TO OPERATE AT 200 VOLTS OR HIGHER. PROVIDE MANUAL STARTER/DISCONNECT WITH HAND/OFF/AUTO SELECTOR SWITCH FOR EACH MOTOR SPECIFIED TO OPERATE AT 120 VOLTS. ALL EQUIPMENT SUPPLIED WITH INTEGRAL STARTERS SHALL BE PROVIDED WITH DISCONNECTS.

MISCELLANEOUS

A. DUCTLESS AIR CONDITIONING UNIT (CAHU-1 & 2 AND COU-1 & 2)
 MITSUBISHI MODEL PKA-A12HA7/PUZ-A12NA7, WALL MOUNTED DUCTLESS SPLIT SYSTEM HEAT PUMP AIR CONDITIONER, COMPLETE WITH ROOF MOUNTED CONDENSING UNIT WITH FACTORY LOW AMBIENT CONTROLS AND WIRELESS REMOTE CONTROLLER INCLUDING ON-OFF SWITCH, FAN SPEED SWITCH, ROOM TEMPERATURE SETPOINT CONTROL AND MODE SELECTION SWITCH, AND WALL MOUNTING BRACKETS.
 FAN: 425 CFM BASED ON HIGH SPEED.
 COOLING: TOTAL - 12,000 BTU/HR, POWER CONSUMPTION - 1,000 WATTS
 HEATING: 14,000 BTU/HR, POWER CONSUMPTION - 950 WATTS
 INDOOR UNIT WEIGHT: 29.0 LBS
 INDOOR UNIT WALL MOUNTED.
 CONDENSING UNIT - LISTED COOLING CAPACITIES BASED ON COOLING AMBIENT AIR TEMPERATURE - 95°F, HEATING AMBIENT AIR TEMPERATURE - 47° UNIT SHALL BE SUITABLE FOR 0°F AMBIENT COOLING OPERATION.
 OUTDOOR UNIT WEIGHT: 93.0 LBS.
 ELECTRICAL DATA: 208V, 1P, 60H, MCA INDOOR = 1.0A, OUTDOOR = 11A, MOP - 28 AMP
 ENERGY EFFICIENCY: 20.8 SEER

FAN SCHEDULE

MARK	AREA SERVED	CFM	E.S.P. (N. W.G.)	DRIVE TYPE	FAN RPM	MOTOR			MANUFACTURER	MODEL	REMARKS	CONTROL METHOD
						POWER	VOLTS	PHASE				
EF-3	MACHINE ROOM	12,500	.25	BELT	649	1.5 HP	208	3	COOK	42 LEU	NOTES-1, 2 & 3	ENERGY MANAGEMENT SYSTEM
SF-1	MACHINE ROOM	12,500	.25	BELT	728	1.5 HP	208	3	COOK	36HXFMB8	NOTES-1, 2 & 3	ENERGY MANAGEMENT SYSTEM

NOTES:

- EF-3 & SF-1 SHALL BE PURCHASED BY HVAC CONTRACTOR THROUGH McNAMARA & COMPANY.
- PREWIRED DISCONNECT, BACKDRAFT DAMPER, BURGLAR BARS.
- FAN TO BE INSTALLED ON EXISTING CURB. FIELD VERIFY EXISTING CURB DIMENSIONS AND PROVIDE CURB ADAPTER/EXTENSION AS REQUIRED TO ALLOW NEW FAN TO FIT ON EXISTING CURB.

MACHINE ROOM VENTILATION REQUIREMENT SCHEDULE (PER 2018 INTERNATIONAL MECHANICAL CODE)

APPLICATION	LARGEST SYSTEMS/LBS REFRIGERANT	CFM REQUIRED = 100 X √LBS REFRIGERANT	EXHAUST/MAKEUP CFM SUPPLIED
MACHINE ROOM	RACK "A"/1,500 LBS	3,873	12,500

HVAC SYSTEMS AND EQUIPMENT

EXTERIOR DESIGN CONDITIONS:
 WINTER DRY BULB: 16° F
 SUMMER DRY BULB: 93° F
 SUMMER WET BULB: 76° F

INTERIOR DESIGN CONDITIONS:
 WINTER DRY BULB: 70° F
 SUMMER DRY BULB: 75° F
 RELATIVE HUMIDITY: 50%
 CLIMATE ZONE: 4A

TYPE OF UNIT: UNITARY AIR CONDITIONERS

MINIMUM COOLING EFFICIENCIES:
 COOLING CAPACITY < 65,000 BTUH
 COOLING EFFICIENCY: 13.9 SEER
 COOLING CAPACITY ≥ 65,000 BTUH < 135,000 BTUH
 COOLING EFFICIENCY: 11.0 EER
 COOLING CAPACITY ≥ 135,000 BTUH < 240,000 BTUH
 COOLING EFFICIENCY: 10.8 EER
 COOLING CAPACITY ≥ 240,000 BTUH < 760,000 BTUH
 COOLING EFFICIENCY: 9.8 EER
 COOLING CAPACITY > 760,000 BTUH
 COOLING EFFICIENCY: 9.5 EER

DESIGNER STATEMENT:
 TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN COMPLIES WITH THE HVAC SYSTEMS AND EQUIPMENT REQUIREMENTS OF THE NORTH CAROLINA STATE ENERGY CODE 2018 EDITION.

Order Plans

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 Title: **HVAC SCHEDULES, NOTES, LEGEND AND ABBREVIATIONS**

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