

MECHANICAL GENERAL NOTES

- SCOPE OF WORK: THESE DRAWINGS AND SPECIFICATIONS DESCRIBE THE SCOPE OF WORK REQUIRED FOR PROJECT MECHANICAL HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS. CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL REQUIRED FOR COMPLETE, FULLY FUNCTIONING MECHANICAL SYSTEMS COMPLYING WITH THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.
- CONTRACTOR: THE WORD "CONTRACTOR" AS USED HEREIN SHALL MEAN THE HVAC INSTALLER UNLESS OTHERWISE QUALIFIED.
- DRAWINGS: DRAWINGS ARE DIAGRAMMATIC AND MAY NOT COMPLETELY DESCRIBE EVERY DETAIL OF THE INSTALLATION. HOWEVER, CONTRACTOR IS RESPONSIBLE FOR FURNISHING COMPLETE SYSTEMS INCLUDING ALL REQUIRED EQUIPMENT AND ACCESSORIES TO OBTAIN FULLY FUNCTIONING HVAC SYSTEMS.
- CODE COMPLIANCE: COMPLY WITH THE LATEST EDITIONS OF THE FOLLOWING STANDARDS AND CODES, INsofar AS THEY APPLY:
 - NORTH CAROLINA STATE BUILDING CODE, LATEST EDITION AND REVISIONS
 - LOCAL JURISDICTION REQUIREMENTSINCLUDE ALL WORK TO COMPLY WITH CODES WHETHER INDICATED ON DRAWINGS OR NOT. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS AND CODES PRIOR TO BEGINNING WORK.
- PERMITS AND INSPECTIONS: OBTAIN ALL PERMITS, LICENSES, INSPECTIONS, ETC., REQUIRED FOR THE WORK AND PAY FOR SAME. FURNISH A FINAL CERTIFICATE OF INSPECTION AND APPROVAL FROM THE AUTHORITY HAVING JURISDICTION PRIOR TO ACCEPTANCE OF THE WORK.
- MANUFACTURER'S RECOMMENDATIONS: INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- WORKMANSHIP: UTILIZE SKILLED MECHANICS TO OBTAIN A HIGH QUALITY PROFESSIONAL FINISH INSTALLATION WHEN COMPLETED. WORK OF UNACCEPTABLE QUALITY SHALL BE REMOVED AND REWORKED AT NO ADDITIONAL COST. ENGINEER SHALL BE THE JUDGE OF WORKMANSHIP AND THEIR OPINION WILL BE FINAL. IN ADDITION, ANY EXISTING CONSTRUCTION DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER BY THE CONTRACTOR AT NO ADDITIONAL COST.
- SUPERVISION: PROVIDE SKILLED SUPERINTENDENTS TO SUPERVISE THE WORK FROM THE BEGINNING TO COMPLETION AND FINAL INSPECTION.
- PROGRESS OF WORK: PERFORM WORK IN ACCORDANCE WITH SCHEDULE AND REQUIREMENTS OF THE OWNER. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR DELAY THE OVERALL PROJECT SCHEDULE.
- COORDINATION: COORDINATE MECHANICAL WORK WITH THE WORK OF OTHER TRADES. LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE UNLESS SPECIFICALLY DIMENSIONED. LAYOUT MECHANICAL WORK SO AS NOT TO INTERFERE WITH THE WORK OF OTHER TRADES. VERIFY ACTUAL BUILDING STRUCTURE PRIOR TO DUCT FABRICATION AND ADJUST ARRANGEMENT AS REQUIRED. INCLUDE ALL OFFSETS IN DUCTS, FITTINGS, PIPING, ETC. AS REQUIRED TO PROPERLY INSTALL EQUIPMENT.
- EQUIPMENT LOCATIONS: DETERMINE EXACT EQUIPMENT AND MATERIALS LOCATIONS TO PROVIDE BEST ARRANGEMENT AND TO FACILITATE PROPER MAINTENANCE AND SERVICING OF EQUIPMENT.
- LISTING AND LABELING: ALL EQUIPMENT SHALL BE LABELED OR LISTED BY UL OR OTHER APPROVED TESTING AGENCY WHERE REQUIRED.
- STORAGE SPACE: CONSULT WITH THE OWNER REGARDING JOB SITE STORAGE FOR MECHANICAL MATERIALS TO BE INSTALLED UNDER THIS PROJECT. STORAGE SPACE MUST BE SECURED AND CONTRACTOR'S REPRESENTATIVE MUST BE ON JOB BEFORE ANY MATERIAL MAY BE RECEIVED.
- CLEANUP: REMOVE ALL DEBRIS GENERATED IN THE ACCOMPLISHMENT OF WORK UNDER THIS PROJECT. CLEAN, REPLACE OR REPAIR ALL SURFACES SOILED OR DAMAGED DURING THE COURSE OF THE WORK. REMOVE DEBRIS DAILY SO TO MAINTAIN SAFE WORKING CONDITIONS.
- ELECTRICAL WORK:
 - PERFORM ELECTRICAL WORK FOR MECHANICAL EQUIPMENT IN COMPLIANCE WITH PROJECT ELECTRICAL REQUIREMENTS. ELECTRICAL WORK FOR MECHANICAL EQUIPMENT NOT SPECIFICALLY INDICATED TO BE PROVIDED BY THE ELECTRICAL CONTRACTOR IN THE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AS PART OF HIS WORK.
 - ELECTRICAL DRAWINGS ARE BASED ON ELECTRICAL CHARACTERISTICS INDICATED IN DRAWING MECHANICAL EQUIPMENT SCHEDULES. ANY EQUIPMENT FURNISHED BY THE MECHANICAL CONTRACTOR WHICH DOES NOT MATCH THE ELECTRICAL CHARACTERISTICS INDICATED IN THE DRAWING SCHEDULES SHALL BE COORDINATED WITH THE ELECTRICAL CONTRACTOR. ANY ADDITIONAL COSTS FOR ELECTRICAL INSTALLATION REQUIRED FOR EQUIPMENT NOT MATCHING THE DRAWING SCHEDULES SHALL BE BORNE BY THE MECHANICAL CONTRACTOR.
 - LOW VOLTAGE CONTROL WIRING FOR MECHANICAL SYSTEMS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR.
- SUBMITTALS: SUBMIT FOUR (4) COPIES OF DESCRIPTIVE DATA FOR MECHANICAL EQUIPMENT AND MATERIALS INCLUDING GRILLES AND DAMPERS FOR APPROVAL BY THE ENGINEER. CLEARLY IDENTIFY ALL ITEMS.
- OPERATING AND MAINTENANCE MANUALS: SUBMIT TWO COPIES OF COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT, INCLUDING NECESSARY CUT SHEETS, CHARTS, WRITTEN INSTRUCTIONS, WIRING DIAGRAMS, FINAL AS-BUILT DRAWINGS WITH BALANCED AIRFLOWS INDICATED, ETC. BIND IN SUITABLE HARD BACK RING BINDERS, PROPERLY INDEXED, AND DELIVER TO THE OWNER PRIOR TO BUILDING OCCUPANCY. IN ADDITION, AFFIX A FOLDER WITH TYPICAL "OWNER'S INSTRUCTIONS" AND "MAINTENANCE INFORMATION" INSIDE THE MECHANICAL EQUIPMENT AS APPLICABLE. THE FOLDER SHALL ALSO INCLUDE A COMPLETE STARTUP LOG FOR THE EQUIPMENT.
- RECORD DRAWINGS: MAINTAIN ONE SET OF "RED-LINED" RECORD DRAWINGS ON SITE AT ALL TIMES AND PROVIDE DRAWINGS TO ENGINEER PRIOR TO FINAL INSPECTION.
- WARRANTY: WARRANTY THE MATERIALS AND WORKMANSHIP COVERED BY THESE DRAWINGS AND SPECIFICATIONS FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER. REPAIR AND/OR REPLACE ANY PARTS OF ANY SYSTEM THAT MAY PROVE TO BE DEFECTIVE AT NO ADDITIONAL COST TO THE OWNER WITHIN THE WARRANTY PERIOD. PROVIDE 5 YEAR WARRANTY FOR ALL AIR CONDITIONING COMPRESSORS. FURNISH WARRANTY CERTIFICATES FOR ALL MECHANICAL EQUIPMENT. WARRANTY TO COMMENCE UPON DATE OF ACCEPTANCE OF WORK BY OWNER.
- EXISTING BUILDINGS AND CONSTRUCTION:
 - WORK UNDER THIS CONTRACT IS TO BE PERFORMED IN AN EXISTING BUILDING. BUILDING LAYOUT INDICATED IS DEVELOPED FROM EXISTING RECORD DOCUMENTS AND LIMITED FIELD VERIFICATION FOR THE PURPOSES OF DESCRIBING THE WORK. VERIFY ALL EXISTING CONDITIONS AND ADJUST WORK AS REQUIRED TO SUIT ACTUAL FIELD CONDITIONS.
 - PERFORM ALL WORK IN ACCORDANCE WITH SAFETY REGULATIONS.
 - DO NOT CUT ANY STRUCTURAL MEMBERS WITHOUT EXPRESS WRITTEN INSTRUCTIONS FROM ENGINEER. PROVIDE CUTTING AND PATCHING FOR EXISTING FINISHES AS REQUIRED.
 - COORDINATE INSTALLATION OF NEW MECHANICAL SYSTEMS WITH EXISTING BUILDING SYSTEMS. ADJUST ARRANGEMENTS AS REQUIRED TO ACCOMMODATE INTERFERENCES.

MECHANICAL LEGEND

AHU#	AIR HANDLING UNIT NUMBER
ATUH	AIR TERMINAL UNIT NUMBER
BTUH	BRITISH THERMAL UNIT PER HOUR
CAV	CONSTANT AIR VOLUME
CFM	CUBIC FEET PER MINUTE
COP	COEFFICIENT OF PERFORMANCE FACTOR
DEG. F	DEGREES FAHRENHEIT
DHP#	DUCTLESS HEAT PUMP UNIT NUMBER
DIA	DIAMETER
DISCH	DISCHARGE
EAT	ENTERING AIR TEMPERATURE
ESP	EXTERNAL STATIC PRESSURE
ETUH	EXHAUST TERMINAL UNIT NUMBER
FLA	FULL LOAD AMPS
FPM	FEET PER MINUTE
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
IN	INCHES
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
MAX	MAXIMUM
MBH	1000 BRITISH THERMAL UNIT
MCA	MINIMUM CIRCUIT AMPACITY
MFR	MANUFACTURER
MIN	MINIMUM
MOCOP	MAXIMUM OVERCURRENT PROTECTION
NC	NOISE CRITERIA
OA	OUTSIDE AIR
RR	RETURN GRILLE NUMBER
RAD	RADIATED
RPM	ROTATIONS PER MINUTE
SF	SUPPLY DIFFUSER NUMBER
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SP	STATIC PRESSURE
VAV	VARIABLE AIR VOLUME
WG	WATER GAUGE
(X)	EXISTING
①	THERMOSTAT
■	EXTENT OF DEMOLITION
●	CONNECTION POINT - NEW TO EXISTING

SINGLE DUCT TERMINAL UNIT SCHEDULE (EXISTING)

DRAWING CODE	PRIMARY AIRFLOW		HEATING COIL		CAPACITY		EAT (°F)	LAT (°F)	EWT (°F)	FLOW (GPM)	WPD (FT. H2O)	NOISE CRITERIA		WEIGHT OPERATING (LBS)	AHU SERVED FROM	NOTES	ACCESSORIES
	MAX (CFM)	MIN (CFM)	(MBH)	(°F)	(°F)	(°F)						DISCH (NC)	RAD (NC)				
(X)ATU01	820		820	34.0	52.0	-	-	-	-	3.2	0.16	45	-	-	-	2	1
(X)ATU02	780	780		32.3	52.0	-	-	-	-	3.0	0.13	44	-	-	-	2	1
(X)ATU04	1,125	1,125		46.6	52.0	-	-	-	-	4.4	0.16	44	23	-	-	2	1

NOTES: 1. EXISTING EQUIPMENT.

ACCESSORIES: A. N/A

SINGLE DUCT EXHAUST TERMINAL UNIT SCHEDULE

DRAWING CODE	DESIGN BASIS MFR	MODEL	ALTERNATE APPROVED MFRS	TYPE	AIRFLOW				NOISE CRITERIA		OPERATING WEIGHT (LBS.)	NOTES	ACCESSORIES
					MAX (CFM)	MIN (CFM)	INLET DIA (IN)	MAX INLET SP (IN H2O)	DISCH (NC)	RAD (NC)			
ETU01	TRANE	VCCF10	TRIATEK, PRICE	VAV	1,020	455	10.0	0.75	16	17	27.0	1	A,B,D,E
ETU02	TRANE	VCCF08	TRIATEK, PRICE	VAV	565	0	8.0	0.75	17	15	20.0	1	A,B,D,E
ETU03	TRANE	VCCF10	TRIATEK, PRICE	VAV	780	780	10.0	0.75	15	15	27.0	1	A,B,D,E
ETU04	TRANE	VCCF10	TRIATEK, PRICE	VAV	955	0	10.0	0.75	16	16	27.0	1	A,B,D,E
ETU05	TRANE	VCCF12	TRIATEK, PRICE	VAV	1,325	0	12.0	0.75	15	17	34.0	1	A,B,D,E
ETU06	TRANE	VCCF06	TRIATEK, PRICE	VAV	360	0	6.0	0.75	21	15	19.0	1	A,B,C,D,E
NOTES: 1. REFER TO SPECIFICATION 23.36.00 - AIR TERMINAL UNITS FOR ADDITIONAL INFORMATION.													
ACCESSORIES: A. CASING REQUIREMENTS SHALL BE 1" DOUBLE WALL WITH R-3.8 INSULATION VALUE.													
B. COORDINATE ELECTRICAL REQUIREMENTS WITH CONTROLS CONTRACTOR.													
C. PROVIDE ON / OFF SWITCH LABELED "AUXILIARY EXHAUST" FOR SNORKEL EXHAUST.													
D. FAST ACTING ACTUATOR													
E. HORIZONTAL CONFIGURATION													

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	SERVICE	NECK SIZE (IN.)	BRANCH CONN. SIZE (IN.)	MODULE SIZE (IN.)	MATERIAL	FINISH	MOUNTING	NOTES	ACCESSORIES
S1	PRICE	ASPD	METALAIRE, TITUS	SQUARE PLAQUE CEILING DIFFUSER	SUPPLY	80	80	24 X 24	ALUMINUM	WHITE	T-BAR	1.2	A
S2	PRICE	ASPD	METALAIRE, TITUS	SQUARE PLAQUE CEILING DIFFUSER	SUPPLY	100	100	24 X 24	ALUMINUM	WHITE	T-BAR	1.2	A
R1	PRICE	630	METALAIRE, TITUS	FIXED FACE GRILLE	RETURN	20 X 20	-	24 X 24	ALUMINUM	WHITE	T-BAR	1	-

NOTES: 1. REFER TO SPECIFICATION SECTION 2337.13 - DIFFUSERS, REGISTERS, AND GRILLES FOR FURTHER INFORMATION.
2. DUCT BRANCH CONNECTION SIZE TO BE EQUAL TO THE NECK SIZE OF DIFFUSER UNLESS NOTED OTHERWISE ON PLANS.

ACCESSORIES: A. VOLUME DAMPER.

RECORD DRAWING

These Record Documents have been prepared based on information provided by others. The Engineer has not verified the accuracy and/or completeness of this information and shall not be the responsible for any errors or omissions which may be incorporated herein as a result.

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MECHANICAL
GENERAL NOTES, SCHEDULES
AND LEGEND