

DUCTWORK LEGEND	
SYMBOL	DESCRIPTION
	DUCTWORK, DOUBLE LINE, INSIDE "FREE AREA" DIMENSIONS ARE SHOWN.
	DUCTWORK, DOUBLE LINE, INSIDE "FREE AREA" DIMENSIONS SHOWN Ø= ROUND & Ø = FLAT OVAL
	FLEXIBLE ROUND DUCT, MAX LENGTH = 5'-0"
	EXISTING DUCTWORK, AIR DEVICES, EQUIPMENT, ETC. TO REMAIN.
	EXISTING DUCTWORK, AIR DEVICES, EQUIPMENT, ETC. TO BE REMOVED.
	SUPPLY DUCTWORK SECTION INSIDE DIMENSIONS ARE SHOWN.
	RETURN OR EXHAUST DUCTWORK SECTION INSIDE DIMENSIONS ARE SHOWN.
	DUCTWORK RISE OR DROP.
	ELBOW TURNED UP WITH TURNING VANES.
	ELBOW TURNED DOWN WITH TURNING VANES.
	RADIUS TYPE ELBOW CENTERLINE RADIUS= 1.5 X WIDTH.
	SQUARE TYPE ELBOW WITH DOUBLE THICKNESS VANES REQUIRED IN ALL DUCTWORK ELBOWS UNLESS NOTED OTHERWISE.
	TERMINAL UNIT TAG. XXX = TERMINAL UNIT DESIGNATION, A'Ø = TERMINAL UNIT ROUND INLET SIZE.
	EQUIPMENT TAG. XX = EQUIPMENT TYPE (AC, AHU, EF, ETC.), YYY = EQUIPMENT DESIGNATION (1, 2, A, B, ETC.)
	ACCESS DOOR (AD) 12X12 UNLESS NOTED OTHERWISE.
	FIRE DAMPER (FD), FIRE DAMPER 3-HOUR RATED (FD(3HR)), FIRE DAMPER W/SMOKEWALL GRILLE (FD(THINLINE) (RUSKIN IB0203), COMBINATION SMOKE AND FIRE DAMPER (SFD), OR SMOKE DAMPER (SD). ALL FD, SFD AND SD SHALL HAVE A 12X12 ACCESS DOOR UNLESS NOTED OTHERWISE.
	CONICAL SPIN-IN.
	MANUAL VOLUME DAMPER (MD).
	MANUAL VOLUME DAMPER WITH CONCEALED DAMPER REGULATOR (CMD) (YOUNG'S REGULATOR-BEVEL GEAR TYPE)
	AUTOMATIC MOTOR OPERATED DAMPER (AD) ALL AD SHALL HAVE A 12X12 ACCESS DOOR UNLESS NOTED OTHERWISE.
	FLEXIBLE DUCTWORK CONNECTION.
	LOW PRESSURE RUNOUT WITH SQUARE-TO-ROUND TRANSITION AND CONICAL SPIN-IN.
	3/4" DOOR UNDERCUT- SEE ARCH.
	EQUAL AREA SPLITTER.
	CONNECT TO EXISTING VERIFY SIZE & LOCATION.

PIPING LEGEND	
SYMBOL	DESCRIPTION
	REFRIGERANT LINE SET
	DRAIN LINE

AIR DEVICE SCHEDULE			
CEILING DIFFUSERS			
MARK	DESCRIPTION	BASIS OF DESIGN	REMARKS
	A= ROUND NECK SIZE CFM= AIRFLOW	ARCHITECTURAL SQUARE PLAQUE DIFFUSER TITUS MODEL OMNI (24"X24" FACE) LAY-IN - BORDER TYPE 3	1. INSULATED BACK PANEL
	A= ROUND NECK SIZE CFM= AIRFLOW	ARCHITECTURAL SQUARE PLAQUE DIFFUSER TITUS MODEL OMNI (12"X12" FACE) SURFACE MOUNT - BORDER TYPE 1	1. INSULATED BACK PANEL
	A= ROUND NECK SIZE CFM= AIRFLOW	ARCHITECTURAL ROUND PLAQUE DIFFUSER TITUS MODEL ROMI SURFACE MOUNT - BORDER TYPE 1	1. INSULATED BACK PANEL
SIDEWALL SUPPLY REGISTERS			
	AXB= NECK SIZE CFM= AIRFLOW	SIDEWALL SUPPLY REGISTER TITUS MODEL 300F	1. OPPOSED BLADE DAMPER 2. VERTICAL FRONT BLADES
	AXB= NECK SIZE CFM= AIRFLOW	SIDEWALL SPIRAL DUCT SUPPLY REGISTER TITUS MODEL S301	1. AIR SCOOP 2. FOAM GASKET
RETURN/EXHAUST GRILLES			
	R=RETURN E=EXHAUST T=TRANSFER AXB=NECK SIZE CFM=AIRFLOW	CUBE CORE CEILING GRILLE "EGGCRATE" (2"x2") TITUS-50F BORDER TYPE NO. 1- ALUM.	1. OPPOSED BLADE DAMPER 2. OBD NOT REQUIRED FOR TRANSFER GRILLES
	A= ROUND NECK SIZE CFM= AIRFLOW	ARCHITECTURAL ROUND PLAQUE RETURN DIFFUSER TITUS MODEL ROMI SURFACE MOUNT - BORDER TYPE 1	
WALL RETURN / EXHAUST GRILLES			
	R=RETURN E=EXHAUST T=TRANSFER AXB=NECK SIZE CFM=AIRFLOW	WALL RETURN GRILLE HORIZONTAL TITUS-352RL BORDER TYPE 1	1. 1/2" SPACING

GENERAL NOTES	
[1]	ALL MECHANICAL WORK SHALL COMPLY WITH THE 2021 ARKANSAS STATE BUILDING CODES AND 2009 IECC. REFER TO SPECIFICATIONS FOR MATERIALS AND METHODS.
[2]	CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, PAY ALL FEES, AND COMPLY WITH ALL NATIONAL, STATE AND MUNICIPAL LAWS, CODES AND ORDINANCES RELATING TO THE BUILDING AND PUBLIC SAFETY.
[3]	CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR REQUIRED FOR A COMPLETE WORKING AND COORDINATED SYSTEM.
[4]	COORDINATE THE EXACT LOCATION OF MECHANICAL, PLUMBING AND FIRE PROTECTION EQUIPMENT WITH THE LOCATIONS OF LIGHT FIXTURES, PIPING, CONDUIT, AND OTHER CONSTRUCTION, TO ALLOW FOR PROPER ACCESS TO SERVICE EQUIPMENT.
[5]	COORDINATE THE LOCATION OF THE DUCTWORK AND PIPING WITH OTHER TRADES PRIOR TO THE START OF CONSTRUCTION AND PROVIDE OFFSETS IN DUCTWORK AND PIPING AS REQUIRED.
[6]	IT IS THE INTENT OF THESE DOCUMENTS TO ALLOW ALL CEILING CONSTRUCTION AND HEIGHTS TO BE AS SHOWN ON THE ARCHITECTURAL DRAWINGS. COORDINATE THE LOCATION OF DUCTWORK AND PIPING AND PROVIDE OFFSETS IN DUCTWORK AND PIPING AS REQUIRED TO MEET THIS INTENT.
[7]	CONDUIT, PIPING, AND DUCTWORK SHALL BE INDEPENDENTLY SUPPORTED, AND EACH SUPPORT SHALL BE INDEPENDENT OF PARTITION AND CEILING SYSTEM SUPPORTS. WHERE INDEPENDENT SUPPORT IS NOT POSSIBLE AN ENGINEERED SUPPORT SYSTEM SHALL BE UTILIZED.
[8]	INSTALL ALL FLOOR MOUNTED EQUIPMENT ON PADS AS SPECIFIED.
[9]	ALL WORK SHALL BE SCHEDULED AND PERFORMED IN STRICT COORDINATION WITH ARCHITECTURAL PHASING PLANS, WITH CHURCH OPERATIONAL SCHEDULE AND CONSTRUCTION SCHEDULE.
[10]	PROTECT ALL EQUIPMENT AND WORK FROM DAMAGE DURING HANDLING AND INSTALLATION UNTIL COMPLETION OF CONSTRUCTION.
[11]	REMOVE ALL EXCESS MATERIAL AND DEBRIS AND THOROUGHLY CLEAN ALL EQUIPMENT UPON COMPLETION OF WORK. TOUCH UP WITH PAINT WHERE REQUIRED.
[12]	CONTRACTOR SHALL VISIT JOBSITE PRIOR TO THE START OF CONSTRUCTION AND VERIFY THE SIZE AND LOCATION OF ALL EXISTING ITEMS AND CONDITIONS.
[13]	ALL CONNECTION BETWEEN PIPES OF DISSIMILAR MATERIALS SHALL BE MADE WITH DELECTRIC UNIONS.
[14]	CONTRACTOR SHALL COORDINATE ALL WORK CLOSELY WITH EXISTING CONDITIONS AND WITH ALL OTHER TRADES. ALL CHANGES AND DEVIATIONS FROM DESIGN DOCUMENTS SHALL BE NOTED ON AS-BUILT DRAWINGS.
[15]	ALL EXISTING FACILITIES SHALL BE PROTECTED DURING CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE AND STORE ANY ITEMS WHICH ARE SUBJECT TO DAMAGE.
[16]	THE ARCHITECT SHALL HAVE FINAL APPROVAL OF ALL GRILLE, DIFFUSER AND THERMOSTAT LOCATIONS.
[17]	COORDINATE ALL AIR DEVICE LOCATIONS, FINISHES, AND MOUNTING FRAME STYLES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS AND THE LIGHTING PLANS.
[18]	COORDINATE ALL WALL MOUNTED DEVICE LOCATIONS WITH THE ARCHITECTURAL INTERIOR ELEVATIONS.
[19]	DEMOLITION OF EACH PHASE, WHERE REQUIRED, SHALL OCCUR AS A PART OF THE WORK FOR THAT PHASE. REMOVE ONLY THE WORK THAT SERVES THE AREA OF DEMOLITION.
[20]	PROVISIONS SHALL BE MADE BY THE CONTRACTOR TO PREVENT DISRUPTING ADJACENT AREAS OF THE PHASE IN WHICH THE WORK IS BEING PERFORMED.
[21]	PROVIDE ADDITIONAL TEMPORARY DUCTWORK AND PIPING, ETC. AS REQUIRED TO PROVIDE UNINTERRUPTED SERVICES TO AREAS OUTSIDE THE PHASE IN WHICH THE WORK IS BEING PERFORMED.
[22]	ALL NECESSARY SHUTDOWNS, OUT OF PHASE WORK SHALL OR WORK IN AREAS WHICH REMAIN OCCUPIED SHALL BE COORDINATED WITH THE OWNERS REPRESENTATIVE AND THE GENERAL CONTRACTOR.
[23]	INSTALL SPACE THERMOSTAT ADJACENT TO LATCH SIDE OF DOOR IN SPACE INDICATED. INDICATED LOCATIONS ARE APPROXIMATE. AVOID HEAT PRODUCING EQUIPMENT. INSTALL HUMIDISTATS IN SIMILAR FASHION.
[24]	PROVIDE 24 GA GALVANIZED STEEL DRAIN PAN UNDER ALL PIPING LOCATED IN ELECTRICAL, DATA AND TELECOMMUNICATION ROOMS.
[25]	NO PIPING OR DUCTWORK SHALL BE ROUTED DIRECTLY OVER ELECTRICAL PANELS.
[26]	NO PIPING, DUCTWORK, CONTROL WIRING, ETC. SHALL TOUCH ANY PART OF THE SPRINKLER PIPING.
[27]	COORDINATE LOCATION OF ALL DISCONNECTS, CONTROL PANELS AND ELECTRICAL CONNECTIONS FOR MECHANICAL AND PLUMBING EQUIPMENT TO MAINTAIN MINIMUM REQUIRED CLEARANCES OF 42" DEEP AND 30" WIDE IN FRONT OF EQUIPMENT.
[28]	ALL MECHANICAL SYSTEMS AND COMPONENTS, INCLUDING BUT NOT LIMITED TO, DUCTWORK, REFRIGERANT PIPING AND EQUIPMENT SHALL BE BRACED AS REQUIRED TO PREVENT RATTLING AND VIBRATION.
[29]	CONTRACTOR TO SUBMIT TO ARCHITECT FOR REVIEW PRODUCT DATA ON ALL EQUIPMENT AND MATERIALS TO BE FURNISHED. SUBMIT ELECTRONIC COPIES ON THE PROJECT SHARE FILE PLATFORM.
[30]	CONTRACTOR SHALL KEEP ACCURATE RECORDS OF INSTALLATIONS. AT THE END OF INSTALLATION, CONTRACTOR SHALL SUBMIT TWO SETS OF PRINTS MARKED WITH AS-BUILT CONDITIONS.
[31]	PROVIDE TEST & BALANCE SERVICES FOR ALL NEW AND MODIFIED EXISTING HVAC SYSTEMS. ALL AIR FLOWS TO BE BALANCED WITHIN +/- 10% OF DESIGNATED VALUES. PROVIDE THREE COPIES OF FULL REPORT TO ENGINEER.
[32]	SEE CONTROLS DIAGRAMS FOR REQUIREMENTS FOR EACH HVAC SYSTEM. SUBMIT COMPLETE CONTROLS SUBMITTAL INCLUDING SYSTEM ARCHITECTURE, DEVICES AND POWER WIRING DIAGRAMS FOR APPROVAL PRIOR TO INSTALLING CONTROLS. INCLUDE ALL CONTROL AND INTERLOCK WIRING AND POWER WIRING FOR ALL REQUIRED CONTROL PANELS. INSTALL CONTROL WIRING IN CONDUIT IN ACCORDANCE WITH PROVISIONS OF ELECTRICAL WORK. PLENUM RATED CABLE MAY BE RUN ABOVE LIFT OUT CEILINGS ONLY. CABLE SHALL BE RUN IN PROFESSIONAL MANNER, TIED OFF TO STRUCTURE AND RUN ALONG AXIS OF BUILDING.

ROOFTOP PACKAGED AC UNIT SCHEDULE																				
MARK	SERVES	SUPPLY FAN			OUTSIDE AIR CFM	COOLING COIL				HEATING (NATURAL GAS)			ACCESSORIES	ELECTRICAL			MIN EER	NOMINAL TONS	WEIGHT LBS	BASIS OF DESIGN (TRANE)
		CFM	ESP IN WG	HP		SENS. MBH	TOTAL MBH	ENT FWB	ENT FDB	INPUT MBH	OUTPUT MBH	STAGES		V/PH	MCA	MOP				
RTU-1	2ND FLOOR ADMINISTRATION	4000	1.3	3.0	450	90	120	67.0	80.0	200	162	2	[1] [3] [4] [5] [6] [8] [9] [11] [12] [13]	460/3	31	40	11.0	10	1200	YSK-120
RTU-2	1ST FLOOR ADMINISTRATION	3400	1.7	3.0	470	76	102	67.0	80.0	150	121	2	[1] [3] [4] [5] [6] [8] [9] [11] [12] [13]	460/3	26	35	11.0	8.5	1150	YSK-102
RTU-3	2ND FLOOR CONFERENCE ROOM	1200	1.0	0.75	200	27	36	67.0	80.0	100	81	2	[1] [2] [4] [5] [6] [7] [8] [9] [10] [11] [12] [13]	460/3	12	15	12.0	3	800	YSK-036
RTU-4	2ND FLOOR INTERIOR CLASSROOMS	2000	1.2	1.0	300	45	60	67.0	80.0	100	81	2	[1] [2] [4] [5] [6] [8] [9] [11] [12] [13]	460/3	15	20	12.0	5	900	YSK-060
RTU-5	2ND FLOOR EXTERIOR CLASSROOMS	4000	1.2	3.0	1000	90	120	67.0	80.0	200	162	2	[1] [2] [4] [5] [6] [8] [9] [11] [12] [13]	460/3	31	40	11.0	10	1200	YSK-120
RTU-6	1ST FLOOR INTERIOR CLASSROOMS	2000	1.5	1.0	430	45	60	67.0	80.0	100	81	2	[1] [2] [4] [5] [6] [8] [9] [11] [12] [13]	460/3	15	20	12.0	5	900	YSK-060
RTU-7	1ST FLOOR EXTERIOR CLASSROOMS	3400	2.0	3.0	890	76	102	67.0	80.0	150	121	2	[1] [2] [4] [5] [6] [8] [9] [11] [12] [13]	460/3	26	35	11.0	8.5	1150	YSK-102
RTU-8	2ND FLOOR CHILDRENS WORSHIP	3400	1.0	3.0	800	76	102	67.0	80.0	150	121	2	[1] [2] [4] [5] [6] [7] [8] [9] [10] [11] [12] [13]	460/3	26	35	11.0	8.5	1150	YSK-102
RTU-9	PARTIAL LOBBY	6000	1.0	3.0	750	135	180	67.0	80.0	320	259	2	[1] [2] [4] [5] [6] [8] [9] [11] [12] [13]	460/3	40	50	10.8	15	2200	YSK-180
RTU-10	PARTIAL LOBBY	10000	1.5	4.6	1500	225	300	67.0	80.0	320	259	2	[1] [2] [4] [5] [6] [8] [9] [11] [12] [13]	460/3	60	80	9.8	25	2500	YSK-300
NOTES						ACCESSORIES														
A. COOLING CAPACITY IS GROSS CAPACITY AT 95F AMBIENT						[1] ROOF CURB								[8] HOT GAS DEHUMIDIFICATION CONTROL WITH REMOTE WALL MOUNTED HUMIDITY SENSOR						
B. EER AT ARI 210/240 CONDITIONS						[2] DIRECT DRIVE FORWARD CURVE CENTRIFUGAL SUPPLY FAN								[9] THROUGH THE BASE GAS CONNECTION						
C. REFRIGERANT: R454B						[3] DIRECT DRIVE BC PLENUM SUPPLY FAN (ON 6-TON AND ABOVE UNITS PROVIDE 2-SPEED FAN CONTROL)								[10] CO2 DEMAND CONTROL VENTILATION						
						[4] DRY BULB ECONOMIZER WITH BAROMETRIC RELIEF DAMPER								[11] CONDENSATE OVERFLOW SWITCH						
						[5] 2" THICK PLEATED MERV-13 FILTERS								[12] HINGED ACCESS DOORS						
						[6] THROUGH THE BASE ELECTRICAL WITH DISCONNECT SWITCH								[13] FACTORY MOUNTED STANDALONE SYMBIO 700 CONTROLLER WITH SENSOR PACKAGE FOR SPECIFIED ACCESSORIES						
						[7] SINGLE ZONE VAV WITH SUPPLY FAN VFD														

GROUND MOUNTED PACKAGED AC UNIT SCHEDULE																			
MARK	TYPE	SERVES	OUTSIDE AIR CFM	SUPPLY FAN				COOLING COIL				HEATING (NATURAL GAS)			ACCESSORIES	ELECTRICAL V/PH / MCA / MOCP	MIN EER	NOMINAL TONS	BASIS OF DESIGN (TRANE)
				CFM	TYPE	ESP IN. WG	HP	SENS. MBH	TOTAL MBH	ENT FDB	ENT FWB	OUTPUT MBH	INPUT MBH	ENT AIR F					
GPU-1	[1]	MAIN AUDITORIUM	2450	9000	FC - BELT	1.5	10	238	343	79.2	67.3	284	350	55	[1] [2] [3] [4] [5] [6] [7]	460/3 / 83/ 100	11.0	27.5	YCH-330
GPU-2	[1]	MAIN AUDITORIUM	2450	9000	FC - BELT	1.5	10	228	343	79.2	67.3	284	350	55	[1] [2] [3] [4] [5] [6] [7]	460/3 / 83 / 100	11.0	27.5	YCH-330
GPU-3	[1]	WORSHIP PLATFORM	400	4060	DD PLENUM	1.5	3	97	137	75.5	64.1	122	150	55	[1] [2] [3] [4] [5] [7]	460/3 / 41/ 50	10.8	12.5	YSK-150
TYPE:								ACCESSORIES											
[1] SINGLE ZONE VAV, HIGH EFFICIENCY, SIDE DISCHARGE								[1] SUPPLY FAN VFD											
								[2] MODULATING HOT GAS REHEAT DEHUMIDIFICATION CONTROL WITH REMOTE WALL MOUNTED SENSOR											
								[3] DRY BULB ECONOMIZER											
								[4] LOW AMBIENT CONTROL TO 10F											
								[5] FILTERS: GPU-1&2 - 4" THICK MERV-14 FILTERS; GPU-3 - 2" THICK MERV-13											
								[6] DCV WITH REMOTE CO2 SENSOR											
								[7] MODULATING FRESH AIR TRACKING POWER EXHAUST FANS											
NOTES																			
A. COOLING CAPACITY IS GROSS CAPACITY AT 95°F AMBIENT																			
B. EER AT AHRI CONDITIONS IN ACCORDANCE WITH DOE TEST PROCEDURES																			
C. MINIMUM HEATING EFFICIENCY= 80%																			
D. REFRIGERANT: R454B																			