

9/17/2024 10:01:02 PM  
AutoDesk Docs/US\_D3754500\_FED\_Aerojet Rocketdyne/D37545N0\_CINDN\_OSD\_Mixer-Bldg-1\_MECH.rvt  
M-001

1	2	3	4	5					
GENERAL NOTES		ABBREVIATIONS		HVAC DESIGN CRITERIA					
D	A. REFER TO SPECIFICATIONS FOR MATERIALS AND METHODS FOR CONSTRUCTION.	AAV AC A/C ACC ACFM ADJ AFF AHU ALT ALUM AMF AP AR ARCH ARS AS ASCP ASD ASR ASHRAE	AUTOMATIC AIR VENT AIR COMPRESSOR AIR CONDITIONING AIR COOLED CHILLER ACTUAL CUBIC FEET PER MINUTE ADJUSTABLE ABOVE FINISHED FLOOR AIR HANDLING UNIT ALTERNATE ALUMINUM ABOVE MEZZANINE FLOOR ACCESS PANEL AIR ROTATION UNIT ARCHITECT(URAL) ABOVE ROOF STRUCTURE AIR SEPARATOR BREATHING AIR SYSTEM CONTROL PANEL ADJUSTABLE SPEED DRIVE AUTOMATIC SPRINKLER RISER AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS	EXT F FCU FD FD FF FH FLA FLEX FLTR FPI FPB FPM FPS FPT FS FSD FT FV GAL G.C. GFS GLYR GLYS GPM GPH GR GUH GV H/HT H2 HB HC HD HEPA HG HOA HP HPC HPU HPV HR HTG HVAC	EXTERNAL FAHRENHEIT FAN COIL UNIT FLOOR DRAIN FIRE DAMPER FINAL FILTER FILTER HOUSING FULL LOAD AMPS FLEXIBLE FILTER FINS PER INCH FAN-POWERED BOX FEET PER MINUTE FEET PER SECOND FEMALE PIPE THREAD FLOW SWITCH COMBINATION FIRE/SMOKE DAMPER FEET FILTER VACUUM GALLONS GENERAL CONTRACTOR GLYCOL FEED SYSTEM GLYCOL RETURN GLYCOL SUPPLY GALLONS PER MINUTE GALLONS PER HOUR GRILLE GAS UNIT HEATER GAS VENT HEIGHT HYDROGEN HOSE BIBB HEATING COIL HEAD HIGH EFFICIENCY PARTICULATE AIR FILTER HUMIDIFIER STEAM DISPERSION GRID HAND/OFF/AUTO HORSEPOWER HIGH PRESSURE CONDENSATE HYDRAULIC POWER UNIT HIGH POINT VENT HOUR HEATING HEATING, VENTILATING, AND AIR CONDITIONING HIGH-VOLUME LOW-SPEED FAN HEATING WATER PUMP HEATING WATER RETURN HEATING WATER SUPPLY HEAT EXCHANGER HERTZ INTAKE INSIDE DIAMETER INVERT ELEVATION INTEGRATED ENERGY EFFICIENCY RATIO INTAKE HOOD INCHE(S) INCREASE COMBUSTION AIR INTAKE VENT KILOWATT KILOVOLT AMPERE LENGTH LEAVING AIR TEMPERATURE POUND(S) LEAVING DRY BULB TEMPERATURE LEAVING FLUID TEMPERATURE LOCKED ROTOR AMPS LOUVER LEAVING LEAVING WET BULB TEMPERATURE LEAVING WATER TEMPERATURE MAKEUP AIR UNIT MAXIMUM THOUSAND BTU/HOUR MECHANICAL CONTRACTOR MINIMUM CIRCUIT AMPS MOTORIZED DAMPER MECHANICAL DEHUMIDIFICATION UNIT MECHANICAL MANUFACTURER MINIMUM MISCELLANEOUS MAXIMUM OVER CURRENT PROTECTION NOT APPLICABLE NORMALLY CLOSED NOISE CRITERIA NATURAL GAS NOT IN CONTRACT NORMALLY OPEN NUMBER NITROGEN OXIDE NOMINAL PIPE THREAD NET POSITIVE SUCTION HEAD NET POSITIVE SUCTION HEAD AVAILABLE NET POSITIVE SUCTION HEAD REQUIRED NOT TO SCALE OZONE OUTSIDE AIR OUTSIDE AIR TEMPERATURE OPPOSED BLADE DAMPER	OC OD ODP OSHA  OZ P PH PC P.C. PD PDT PF PFB PH PHC PHWP PI P&ID PLBG POC POD PPM PROP PRV PSI PSIA PSIG PT PVC R RA R/A RAT RCP RD RE RED REV REG RH RHC RL RLA RPM RS RSD RTD RTU SA SAT SCCR SCFM  SD SEER SENS SF S.F. SFB SMACNA  SMD SOO SP SPEC SQ SQ FT/SF SQ IN SS SSAU SSCU STD STL STR SV T TEFC TEMP TEV TG TOD TOP TOT TR TSP TTD TYP UG V VAV VD VF VFD VOL W. W W/ W/OUT WB WCC WG	ON CENTER OUTSIDE DIAMETER OPEN DRIP PROOF OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION OUNCE PUMP CONDENSATE PUMPED PLUMBING CONTRACTOR PRESSURE DROP PRESSURE DIFFERENTIAL TRANSMITTER PREFILTER PARALLEL FAN BOX PHASE PREHEAT COIL PROCESS HOT WATER PUMP PRESSURE INDICATOR PIPING & INSTRUMENTATION DIAGRAM PLUMBING POINT OF CONNECTION POINT OF DEMOLITION PARTS PER MILLION PROPELLER PRESSURE REDUCING VALVE POUND PER SQUARE INCH POUND PER SQUARE INCH ABSOLUTE POUND PER SQUARE INCH GAUGE PRESSURE TRANSMITTER POLYVINYL CHLORIDE REGISTER/GRILLE RETURN AIR RELIEF AIR RETURN AIR TEMPERATURE REFLECTED CEILING PLAN RELIEF DAMPER REMOTE EVAPORATOR REDUCE(D) REVISE(D)/REVISION REGISTER RELATIVE HUMIDITY REHEAT COIL REFRIGERATED LIQUID LINE RUNNING LOAD AMPS ROTATIONS PER MINUTE REFRIGERATED SUCTION LINE REGISTER/GRILLE SMOKE DETECTOR REFRIGERANT DETECTOR ROOFTOP UNIT SUPPLY AIR SUPPLY AIR TEMPERATURE SHORT CIRCUIT CURRENT RATING STANDARD CUBIC FEET PER MINUTE AT SEA LEVEL CONDITIONS SMOKE DETECTOR SEASONAL ENERGY EFFICIENCY RATIO SENSIBLE SUPPLY FAN SAFETY FACTOR SERIES FAN BOX SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION SMOKE DAMPER SEQUENCE OF OPERATION STATIC PRESSURE SPECIFICATIONS SQUARE SQUARE FEET SQUARE INCHES STAINLESS STEEL SPLIT SYSTEM AIR UNIT SPLIT SYSTEM CONDENSING UNIT STANDARD STEEL STRAINER STEAM VENT TRANSFER REGISTER TOTALLY ENCLOSED FAN COOLED TEMPERATURE THERMAL EXPANSION VALVE TEMPERATURE GAUGE TOP OF DUCT TOP OF PIPE TOTAL TEMPERATURE RISE TOTAL STATIC PRESSURE TIGHT TO DECK TYPICAL UNDERGROUND VOLTS VARIABLE AIR VOLUME VOLUME DAMPER VACUUM FILTER VARIABLE FREQUENCY DRIVE VOLUME WIDTH WATTS WITH WITHOUT WET BULB WATER COOLED CHILLER WATER GAUGE	PROJECT: CAMDEN OSD AEROJET ROCKETDYNE  DESIGN CONDITIONS FROM ASHRAE FUNDAMENTALS 2021  WEATHER STATION - HARRELL FIELD, AR, USA STATION #: WMO 723425 ELEVATION: 132 FEET; LATITUDE: 33.617°N; LONGITUDE: 92.767°W ASHRAE CLIMATE ZONE 3A  SITE SPECIFIC CONDITIONS AS PROVIDED BY AR: WINTER: 5°F DRY BULB  SUMMER: 105°F DRY BULB 93°F WET BULB  INDOOR DESIGN CONDITIONS  PROCESS AREA WINTER: 70°F ± 2°F, >20% RH SUMMER: 70°F ± 2°F, <40 GOM TELECOM/IT ROOM WINTER: 68°F ± 2°F SUMMER: 73°F ± 2°F, 50% ±5 RH ULITITY ROOM: WINTER: 40°F SUMMER: +10°F AMBIENT TEMPERATURE  ENERGY CODE COMPLIANCE  THE HVAC LOADS WERE PERFORMED IN ACCORDANCE WITH ASHRAE FUNDAMENTALS. ENERGY CALCULATIONS WERE PERFORMED IN ACCORDANCE WITH 2014 ARKANSAS ENERGY CODE WHICH ADOPTS 2009 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) .  DRAWING/DETAIL REFERENCE KEY <div><div>REFER TO DRAWING/DETAIL NUMBER SHEET NUMBER ON WHICH DETAIL IS DRAWN</div><div>RE : 2 / M-201</div><div>2 M-201</div></div> PIPING LABELS —AR— ARGON —CHWS— CHILLED WATER SUPPLY —CHWR— CHILLED WATER RETURN —CON— STEAM CONDENSATE —CWS— CONDENSER WATER SUPPLY —CWR— CONDENSER WATER RETURN —HWS— HEATING WATER SUPPLY —HWR— HEATING WATER RETURN —HYDS— HYDRAULIC SUPPLY —HYDR— HYDRAULIC RETURN —CA— COMPRESSED AIR —CD— CONDENSATE DRAIN —D— DRAIN —GS— GLYCOL SUPPLY —GR— GLYCOL RETURN —MU— MAKE-UP WATER —N— NITROGEN —RL— REFRIGERANT LIQUID —RS— REFRIGERANT SUCTION —RFR— RADIANT FLOOR HEATING WATER RETURN —RFS— RADIANT FLOOR HEATING WATER SUPPLY —SMR— SNOW MELT HEATING WATER RETURN —SMS— SNOW MELT HEATING WATER SUPPLY —STM— STEAM ** AAA ** PIPE TO BE REMOVED, "AAA" DENOTES TYPE —AAA— EXISTING PIPE, "AAA" DENOTES TYPE — AAA — UNDERGROUND PIPE, "AAA" DENOTES TYPE	
	B. WHERE CODES HAVE BEEN ESTABLISHED BY OSHA, UNDERWRITERS LABORATORY, AMERICAN CODES, ANSI, ASME, ASA, ASHRAE, ASTM, ARI, NEC, NFPA, SMACNA, OR THE STATE FIRE INSURANCE REGULATORY BODY, FOLLOW THESE STANDARDS WHETHER OR NOT INDICATED ON THE DRAWINGS.	ATC AUTO AVG BACNET	AUTOMATIC TEMPERATURE CONTROL AUTOMATIC AVERAGE BUILDING AUTOMATION & CONTROL NETWORK BUILDING AUTOMATION SYSTEM BUTTERFLY VALVE BRAKE HORSEPOWER BUILDING BALANCING VALVE BOTTOM OF DUCT BOTTOM OF PIPE BUFFER TANK BRITISH THERMAL UNIT BTU'S PER HOUR BALL VALVE CELSIUS COMPRESSED AIR CHEMICAL BYPASS FEEDER COOLING COIL CENTERLINE CEILING COOLING CUBIC FEET PER MINUTE CHILLER CHILLER UNIT CHILLED WATER CHILLED WATER RETURN CHILLED WATER SUPPLY CONSTRUCTION MANAGER CARBON MONOXIDE CARBON DIOXIDE CONDENSING PUMP COOLING TOWER CONDENSING UNIT CUBIC FEET CUBIC INCHES CONTROL VALVE CONDENSING WATER SUPPLY CONDENSING WATER RETURN DRAIN FROM EQUIPMENT DRY BULB DECIBEL SOUND SCALE DRY COOLER DIRECT DIGITAL CONTROL DETAIL DIAMETER DIFFUSER DISCONNECT DOWN DRAWING DEHUMIDIFIER DIRECT EXPANSION EXHAUST AIR EACH EXHAUST AIR TEMPERATURE ENTERING AIR TEMPERATURE ELECTRIC POWERED BOILER ELECTRICAL CONTRACTOR ELECTRICALLY COMMUTATED MOTOR ENTERING DRY BULB TEMPERATURE ENERGY EFFICIENCY RATIO EXHAUST FAN ENTERING FLUID TEMPERATURE EXHAUST HOOD ELEVATION ELECTRIC(AL) ELEVATION ENTERING EQUAL/EQUIVALENT EQUIPMENT EXTERNAL STATIC PRESSURE EXHAUST EXPANSION TANK ELECTRIC UNIT HEATER COMBUSTION EXHAUST VENT ENTERING WET BULB TEMPERATURE ENTERING WATER TEMPERATURE EXISTING	GLYR GLYS GPM GPH GR GUH GV H/HT H2 HB HC HD HEPA HG HOA HP HPC HPU HPV HR HTG HVAC  HVLS HWP HWR HWS HX HZ ID IE IEER IH IN INC IV KW KVA L LAT LB LDB LFT LRA LV LVG LWB LWT MA MAX MBH M.C. MCA MD MDU MECH MFG(R) MIN MISC MOCP N/A N.C. NC NG NIC N.O. NO. NOX NPT NPSH NPSHA NPSHR NTS O3 OA OAT OBD	EXT F FCU FD FD FF FH FLA FLEX FLTR FPI FPB FPM FPS FPT FS FSD FT FV GAL G.C. GFS GLYR GLYS GPM GPH GR GUH GV H/HT H2 HB HC HD HEPA HG HOA HP HPC HPU HPV HR HTG HVAC  HVLS HWP HWR HWS HX HZ ID IE IEER IH IN INC IV KW KVA L LAT LB LDB LFT LRA LV LVG LWB LWT MA MAX MBH M.C. MCA MD MDU MECH MFG(R) MIN MISC MOCP N/A N.C. NC NG NIC N.O. NO. NOX NPT NPSH NPSHA NPSHR NTS O3 OA OAT OBD	ON CENTER OUTSIDE DIAMETER OPEN DRIP PROOF OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION OUNCE PUMP CONDENSATE PUMPED PLUMBING CONTRACTOR PRESSURE DROP PRESSURE DIFFERENTIAL TRANSMITTER PREFILTER PARALLEL FAN BOX PHASE PREHEAT COIL PROCESS HOT WATER PUMP PRESSURE INDICATOR PIPING & INSTRUMENTATION DIAGRAM PLUMBING POINT OF CONNECTION POINT OF DEMOLITION PARTS PER MILLION PROPELLER PRESSURE REDUCING VALVE POUND PER SQUARE INCH POUND PER SQUARE INCH ABSOLUTE POUND PER SQUARE INCH GAUGE PRESSURE TRANSMITTER POLYVINYL CHLORIDE REGISTER/GRILLE RETURN AIR RELIEF AIR RETURN AIR TEMPERATURE REFLECTED CEILING PLAN RELIEF DAMPER REMOTE EVAPORATOR REDUCE(D) REVISE(D)/REVISION REGISTER RELATIVE HUMIDITY REHEAT COIL REFRIGERATED LIQUID LINE RUNNING LOAD AMPS ROTATIONS PER MINUTE REFRIGERATED SUCTION LINE REGISTER/GRILLE SMOKE DETECTOR REFRIGERANT DETECTOR ROOFTOP UNIT SUPPLY AIR SUPPLY AIR TEMPERATURE SHORT CIRCUIT CURRENT RATING STANDARD CUBIC FEET PER MINUTE AT SEA LEVEL CONDITIONS SMOKE DETECTOR SEASONAL ENERGY EFFICIENCY RATIO SENSIBLE SUPPLY FAN SAFETY FACTOR SERIES FAN BOX SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION SMOKE DAMPER SEQUENCE OF OPERATION STATIC PRESSURE SPECIFICATIONS SQUARE SQUARE FEET SQUARE INCHES STAINLESS STEEL SPLIT SYSTEM AIR UNIT SPLIT SYSTEM CONDENSING UNIT STANDARD STEEL STRAINER STEAM VENT TRANSFER REGISTER TOTALLY ENCLOSED FAN COOLED TEMPERATURE THERMAL EXPANSION VALVE TEMPERATURE GAUGE TOP OF DUCT TOP OF PIPE TOTAL TEMPERATURE RISE TOTAL STATIC PRESSURE TIGHT TO DECK TYPICAL UNDERGROUND VOLTS VARIABLE AIR VOLUME VOLUME DAMPER VACUUM FILTER VARIABLE FREQUENCY DRIVE VOLUME WIDTH WATTS WITH WITHOUT WET BULB WATER COOLED CHILLER WATER GAUGE	PROJECT: CAMDEN OSD AEROJET ROCKETDYNE  DESIGN CONDITIONS FROM ASHRAE FUNDAMENTALS 2021  WEATHER STATION - HARRELL FIELD, AR, USA STATION #: WMO 723425 ELEVATION: 132 FEET; LATITUDE: 33.617°N; LONGITUDE: 92.767°W ASHRAE CLIMATE ZONE 3A  SITE SPECIFIC CONDITIONS AS PROVIDED BY AR: WINTER: 5°F DRY BULB  SUMMER: 105°F DRY BULB 93°F WET BULB  INDOOR DESIGN CONDITIONS  PROCESS AREA WINTER: 70°F ± 2°F, >20% RH SUMMER: 70°F ± 2°F, <40 GOM TELECOM/IT ROOM WINTER: 68°F ± 2°F SUMMER: 73°F ± 2°F, 50% ±5 RH ULITITY ROOM: WINTER: 40°F SUMMER: +10°F AMBIENT TEMPERATURE  ENERGY CODE COMPLIANCE  THE HVAC LOADS WERE PERFORMED IN ACCORDANCE WITH ASHRAE FUNDAMENTALS. ENERGY CALCULATIONS WERE PERFORMED IN ACCORDANCE WITH 2014 ARKANSAS ENERGY CODE WHICH ADOPTS 2009 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) .  DRAWING/DETAIL REFERENCE KEY <div><div>REFER TO DRAWING/DETAIL NUMBER SHEET NUMBER ON WHICH DETAIL IS DRAWN</div><div>RE : 2 / M-201</div><div>2 M-201</div></div> PIPING LABELS —AR— ARGON —CHWS— CHILLED WATER SUPPLY —CHWR— CHILLED WATER RETURN —CON— STEAM CONDENSATE —CWS— CONDENSER WATER SUPPLY —CWR— CONDENSER WATER RETURN —HWS— HEATING WATER SUPPLY —HWR— HEATING WATER RETURN —HYDS— HYDRAULIC SUPPLY —HYDR— HYDRAULIC RETURN —CA— COMPRESSED AIR —CD— CONDENSATE DRAIN —D— DRAIN —GS— GLYCOL SUPPLY —GR— GLYCOL RETURN —MU— MAKE-UP WATER —N— NITROGEN —RL— REFRIGERANT LIQUID —RS— REFRIGERANT SUCTION —RFR— RADIANT FLOOR HEATING WATER RETURN —RFS— RADIANT FLOOR HEATING WATER SUPPLY —SMR— SNOW MELT HEATING WATER RETURN —SMS— SNOW MELT HEATING WATER SUPPLY —STM— STEAM ** AAA ** PIPE TO BE REMOVED, "AAA" DENOTES TYPE —AAA— EXISTING PIPE, "AAA" DENOTES TYPE — AAA — UNDERGROUND PIPE, "AAA" DENOTES TYPE		
	C. PERFORM WORK IN ACCORDANCE WITH THE LATEST EDITIONS, REVISIONS, AMENDMENTS OR SUPPLEMENTS OF APPLICABLE STATUTES, ORDINANCES, CODES, OR REGULATIONS OF FEDERAL, STATE AND LOCAL AUTHORITIES HAVING JURISDICTION IN EFFECT ON THE DATE BIDS ARE RECEIVED.	AS ASCP ASD ASR ASHRAE	AIR SEPARATOR BREATHING AIR SYSTEM CONTROL PANEL ADJUSTABLE SPEED DRIVE AUTOMATIC SPRINKLER RISER AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS	EXT F FCU FD FD FF FH FLA FLEX FLTR FPI FPB FPM FPS FPT FS FSD FT FV GAL G.C. GFS GLYR GLYS GPM GPH GR GUH GV H/HT H2 HB HC HD HEPA HG HOA HP HPC HPU HPV HR HTG HVAC	ON CENTER OUTSIDE DIAMETER OPEN DRIP PROOF OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION OUNCE PUMP CONDENSATE PUMPED PLUMBING CONTRACTOR PRESSURE DROP PRESSURE DIFFERENTIAL TRANSMITTER PREFILTER PARALLEL FAN BOX PHASE PREHEAT COIL PROCESS HOT WATER PUMP PRESSURE INDICATOR PIPING & INSTRUMENTATION DIAGRAM PLUMBING POINT OF CONNECTION POINT OF DEMOLITION PARTS PER MILLION PROPELLER PRESSURE REDUCING VALVE POUND PER SQUARE INCH POUND PER SQUARE INCH ABSOLUTE POUND PER SQUARE INCH GAUGE PRESSURE TRANSMITTER POLYVINYL CHLORIDE REGISTER/GRILLE RETURN AIR RELIEF AIR RETURN AIR TEMPERATURE REFLECTED CEILING PLAN RELIEF DAMPER REMOTE EVAPORATOR REDUCE(D) REVISE(D)/REVISION REGISTER RELATIVE HUMIDITY REHEAT COIL REFRIGERATED LIQUID LINE RUNNING LOAD AMPS ROTATIONS PER MINUTE REFRIGERATED SUCTION LINE REGISTER/GRILLE SMOKE DETECTOR REFRIGERANT DETECTOR ROOFTOP UNIT SUPPLY AIR SUPPLY AIR TEMPERATURE SHORT CIRCUIT CURRENT RATING STANDARD CUBIC FEET PER MINUTE AT SEA LEVEL CONDITIONS SMOKE DETECTOR SEASONAL ENERGY EFFICIENCY RATIO SENSIBLE SUPPLY FAN SAFETY FACTOR SERIES FAN BOX SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION SMOKE DAMPER SEQUENCE OF OPERATION STATIC PRESSURE SPECIFICATIONS SQUARE SQUARE FEET SQUARE INCHES STAINLESS STEEL SPLIT SYSTEM AIR UNIT SPLIT SYSTEM CONDENSING UNIT STANDARD STEEL STRAINER STEAM VENT TRANSFER REGISTER TOTALLY ENCLOSED FAN COOLED TEMPERATURE THERMAL EXPANSION VALVE TEMPERATURE GAUGE TOP OF DUCT TOP OF PIPE TOTAL TEMPERATURE RISE TOTAL STATIC PRESSURE TIGHT TO DECK TYPICAL UNDERGROUND VOLTS VARIABLE AIR VOLUME VOLUME DAMPER VACUUM FILTER VARIABLE FREQUENCY DRIVE VOLUME WIDTH WATTS WITH WITHOUT WET BULB WATER COOLED CHILLER WATER GAUGE	PROJECT: CAMDEN OSD AEROJET ROCKETDYNE  DESIGN CONDITIONS FROM ASHRAE FUNDAMENTALS 2021  WEATHER STATION - HARRELL FIELD, AR, USA STATION #: WMO 723425 ELEVATION: 132 FEET; LATITUDE: 33.617°N; LONGITUDE: 92.767°W ASHRAE CLIMATE ZONE 3A  SITE SPECIFIC CONDITIONS AS PROVIDED BY AR: WINTER: 5°F DRY BULB  SUMMER: 105°F DRY BULB 93°F WET BULB  INDOOR DESIGN CONDITIONS  PROCESS AREA WINTER: 70°F ± 2°F, >20% RH SUMMER: 70°F ± 2°F, <40 GOM TELECOM/IT ROOM WINTER: 68°F ± 2°F SUMMER: 73°F ± 2°F, 50% ±5 RH ULITITY ROOM: WINTER: 40°F SUMMER: +10°F AMBIENT TEMPERATURE  ENERGY CODE COMPLIANCE  THE HVAC LOADS WERE PERFORMED IN ACCORDANCE WITH ASHRAE FUNDAMENTALS. ENERGY CALCULATIONS WERE PERFORMED IN ACCORDANCE WITH 2014 ARKANSAS ENERGY CODE WHICH ADOPTS 2009 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) .  DRAWING/DETAIL REFERENCE KEY <div><div>REFER TO DRAWING/DETAIL NUMBER SHEET NUMBER ON WHICH DETAIL IS DRAWN</div><div>RE : 2 / M-201</div><div>2 M-201</div></div> PIPING LABELS —AR— ARGON —CHWS— CHILLED WATER SUPPLY —CHWR— CHILLED WATER RETURN —CON— STEAM CONDENSATE —CWS— CONDENSER WATER SUPPLY —CWR— CONDENSER WATER RETURN —HWS— HEATING WATER SUPPLY —HWR— HEATING WATER RETURN —HYDS— HYDRAULIC SUPPLY —HYDR— HYDRAULIC RETURN —CA— COMPRESSED AIR —CD— CONDENSATE DRAIN —D— DRAIN —GS— GLYCOL SUPPLY —GR— GLYCOL RETURN —MU— MAKE-UP WATER —N— NITROGEN —RL— REFRIGERANT LIQUID —RS— REFRIGERANT SUCTION —RFR— RADIANT FLOOR HEATING WATER RETURN —RFS— RADIANT FLOOR HEATING WATER SUPPLY —SMR— SNOW MELT HEATING WATER RETURN —SMS— SNOW MELT HEATING WATER SUPPLY —STM— STEAM ** AAA ** PIPE TO BE REMOVED, "AAA" DENOTES TYPE —AAA— EXISTING PIPE, "AAA" DENOTES TYPE — AAA — UNDERGROUND PIPE, "AAA" DENOTES TYPE			
	D. THE CONTRACTOR SHALL EXECUTE ALL WORK HEREINAFTER SPECIFIED OR INDICATED ON ACCOMPANYING DRAWINGS. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT NECESSARY AND USUALLY FURNISHED IN CONNECTION WITH SUCH WORK AND SYSTEMS WHETHER OR NOT MENTIONED SPECIFICALLY HEREIN OR ON THE DRAWINGS.	AS ASCP ASD ASR ASHRAE	AIR SEPARATOR BREATHING AIR SYSTEM CONTROL PANEL ADJUSTABLE SPEED DRIVE AUTOMATIC SPRINKLER RISER AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS	EXT F FCU FD FD FF FH FLA FLEX FLTR FPI FPB FPM FPS FPT FS FSD FT FV GAL G.C. GFS GLYR GLYS GPM GPH GR GUH GV H/HT H2 HB HC HD HEPA HG HOA HP HPC HPU HPV HR HTG HVAC	ON CENTER OUTSIDE DIAMETER OPEN DRIP PROOF OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION OUNCE PUMP CONDENSATE PUMPED PLUMBING CONTRACTOR PRESSURE DROP PRESSURE DIFFERENTIAL TRANSMITTER PREFILTER PARALLEL FAN BOX PHASE PREHEAT COIL PROCESS HOT WATER PUMP PRESSURE INDICATOR PIPING & INSTRUMENTATION DIAGRAM PLUMBING POINT OF CONNECTION POINT OF DEMOLITION PARTS PER MILLION PROPELLER PRESSURE REDUCING VALVE POUND PER SQUARE INCH POUND PER SQUARE INCH ABSOLUTE POUND PER SQUARE INCH GAUGE PRESSURE TRANSMITTER POLYVINYL CHLORIDE REGISTER/GRILLE RETURN AIR RELIEF AIR RETURN AIR TEMPERATURE REFLECTED CEILING PLAN RELIEF DAMPER REMOTE EVAPORATOR REDUCE(D) REVISE(D)/REVISION REGISTER RELATIVE HUMIDITY REHEAT COIL REFRIGERATED LIQUID LINE RUNNING LOAD AMPS ROTATIONS PER MINUTE REFRIGERATED SUCTION LINE REGISTER/GRILLE SMOKE DETECTOR REFRIGERANT DETECTOR ROOFTOP UNIT SUPPLY AIR SUPPLY AIR TEMPERATURE SHORT CIRCUIT CURRENT RATING STANDARD CUBIC FEET PER MINUTE AT SEA LEVEL CONDITIONS SMOKE DETECTOR SEASONAL ENERGY EFFICIENCY RATIO SENSIBLE SUPPLY FAN SAFETY FACTOR SERIES FAN BOX SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION SMOKE DAMPER SEQUENCE OF OPERATION STATIC PRESSURE SPECIFICATIONS SQUARE SQUARE FEET SQUARE INCHES STAINLESS STEEL SPLIT SYSTEM AIR UNIT SPLIT SYSTEM CONDENSING UNIT STANDARD STEEL STRAINER STEAM VENT TRANSFER REGISTER TOTALLY ENCLOSED FAN COOLED TEMPERATURE THERMAL EXPANSION VALVE TEMPERATURE GAUGE TOP OF DUCT TOP OF PIPE TOTAL TEMPERATURE RISE TOTAL STATIC PRESSURE TIGHT TO DECK TYPICAL UNDERGROUND VOLTS VARIABLE AIR VOLUME VOLUME DAMPER VACUUM FILTER VARIABLE FREQUENCY DRIVE VOLUME WIDTH WATTS WITH WITHOUT WET BULB WATER COOLED CHILLER WATER GAUGE	PROJECT: CAMDEN OSD AEROJET ROCKETDYNE  DESIGN CONDITIONS FROM ASHRAE FUNDAMENTALS 2021  WEATHER STATION - HARRELL FIELD, AR, USA STATION #: WMO 723425 ELEVATION: 132 FEET; LATITUDE: 33.617°N; LONGITUDE: 92.767°W ASHRAE CLIMATE ZONE 3A  SITE SPECIFIC CONDITIONS AS PROVIDED BY AR: WINTER: 5°F DRY BULB  SUMMER: 105°F DRY BULB 93°F WET BULB  INDOOR DESIGN CONDITIONS  PROCESS AREA WINTER: 70°F ± 2°F, >20% RH SUMMER: 70°F ± 2°F, <40 GOM TELECOM/IT ROOM WINTER: 68°F ± 2°F SUMMER: 73°F ± 2°F, 50% ±5 RH ULITITY ROOM: WINTER: 40°F SUMMER: +10°F AMBIENT TEMPERATURE  ENERGY CODE COMPLIANCE  THE HVAC LOADS WERE PERFORMED IN ACCORDANCE WITH ASHRAE FUNDAMENTALS. ENERGY CALCULATIONS WERE PERFORMED IN ACCORDANCE WITH 2014 ARKANSAS ENERGY CODE WHICH ADOPTS 2009 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) .  DRAWING/DETAIL REFERENCE KEY <div><div>REFER TO DRAWING/DETAIL NUMBER SHEET NUMBER ON WHICH DETAIL IS DRAWN</div><div>RE : 2 / M-201</div><div>2 M-201</div></div> PIPING LABELS —AR— ARGON —CHWS— CHILLED WATER SUPPLY —CHWR— CHILLED WATER RETURN —CON— STEAM CONDENSATE —CWS— CONDENSER WATER SUPPLY —CWR— CONDENSER WATER RETURN —HWS— HEATING WATER SUPPLY —HWR— HEATING WATER RETURN —HYDS— HYDRAULIC SUPPLY —HYDR— HYDRAULIC RETURN —CA— COMPRESSED AIR —CD— CONDENSATE DRAIN —D— DRAIN —GS— GLYCOL SUPPLY —GR— GLYCOL RETURN —MU— MAKE-UP WATER —N— NITROGEN —RL— REFRIGERANT LIQUID —RS— REFRIGERANT SUCTION —RFR— RADIANT FLOOR HEATING WATER RETURN —RFS— RADIANT FLOOR HEATING WATER SUPPLY —SMR— SNOW MELT HEATING WATER RETURN —SMS— SNOW MELT HEATING WATER SUPPLY —STM— STEAM ** AAA ** PIPE TO BE REMOVED, "AAA" DENOTES TYPE —AAA— EXISTING PIPE, "AAA" DENOTES TYPE — AAA — UNDERGROUND PIPE, "AAA" DENOTES TYPE			
	E. MATERIALS AND EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE NEW AND SHALL BEAR THE U.L. LABEL WHERE APPLICABLE UNLESS NOTED OTHERWISE.	ATC AUTO AVG BACNET	AUTOMATIC TEMPERATURE CONTROL AUTOMATIC AVERAGE BUILDING AUTOMATION & CONTROL NETWORK BUILDING AUTOMATION SYSTEM BUTTERFLY VALVE BRAKE HORSEPOWER BUILDING BALANCING VALVE BOTTOM OF DUCT BOTTOM OF PIPE BUFFER TANK BRITISH THERMAL UNIT BTU'S PER HOUR BALL VALVE CELSIUS COMPRESSED AIR CHEMICAL BYPASS FEEDER COOLING COIL CENTERLINE CEILING COOLING CUBIC FEET PER MINUTE CHILLER CHILLER UNIT CHILLED WATER CHILLED WATER RETURN CHILLED WATER SUPPLY CONSTRUCTION MANAGER CARBON MONOXIDE CARBON DIOXIDE CONDENSING PUMP COOLING TOWER CONDENSING UNIT CUBIC FEET CUBIC INCHES CONTROL VALVE CONDENSING WATER SUPPLY CONDENSING WATER RETURN DRAIN FROM EQUIPMENT DRY BULB DECIBEL SOUND SCALE DRY COOLER DIRECT DIGITAL CONTROL DETAIL DIAMETER DIFFUSER DISCONNECT DOWN DRAWING DEHUMIDIFIER DIRECT EXPANSION EXHAUST AIR EACH EXHAUST AIR TEMPERATURE ENTERING AIR TEMPERATURE ELECTRIC POWERED BOILER ELECTRICAL CONTRACTOR ELECTRICALLY COMMUTATED MOTOR ENTERING DRY BULB TEMPERATURE ENERGY EFFICIENCY RATIO EXHAUST FAN ENTERING FLUID TEMPERATURE EXHAUST HOOD ELEVATION ELECTRIC(AL) ELEVATION ENTERING EQUAL/EQUIVALENT EQUIPMENT EXTERNAL STATIC PRESSURE EXHAUST EXPANSION TANK ELECTRIC UNIT HEATER COMBUSTION EXHAUST VENT ENTERING WET BULB TEMPERATURE ENTERING WATER TEMPERATURE EXISTING	EXT F FCU FD FD FF FH FLA FLEX FLTR FPI FPB FPM FPS FPT FS FSD FT FV GAL G.C. GFS GLYR GLYS GPM GPH GR GUH GV H/HT H2 HB HC HD HEPA HG HOA HP HPC HPU HPV HR HTG HVAC	ON CENTER OUTSIDE DIAMETER OPEN DRIP PROOF OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION OUNCE PUMP CONDENSATE PUMPED PLUMBING CONTRACTOR PRESSURE DROP PRESSURE DIFFERENTIAL TRANSMITTER PREFILTER PARALLEL FAN BOX PHASE PREHEAT COIL PROCESS HOT WATER PUMP PRESSURE INDICATOR PIPING & INSTRUMENTATION DIAGRAM PLUMBING POINT OF CONNECTION POINT OF DEMOLITION PARTS PER MILLION PROPELLER PRESSURE REDUCING VALVE POUND PER SQUARE INCH POUND PER SQUARE INCH ABSOLUTE POUND PER SQUARE INCH GAUGE PRESSURE TRANSMITTER POLYVINYL CHLORIDE REGISTER/GRILLE RETURN AIR RELIEF AIR RETURN AIR TEMPERATURE REFLECTED CEILING PLAN RELIEF DAMPER REMOTE EVAPORATOR REDUCE(D) REVISE(D)/REVISION REGISTER RELATIVE HUMIDITY REHEAT COIL REFRIGERATED LIQUID LINE RUNNING LOAD AMPS ROTATIONS PER MINUTE REFRIGERATED SUCTION LINE REGISTER/GRILLE SMOKE DETECTOR REFRIGERANT DETECTOR ROOFTOP UNIT SUPPLY AIR SUPPLY AIR TEMPERATURE SHORT CIRCUIT CURRENT RATING STANDARD CUBIC FEET PER MINUTE AT SEA LEVEL CONDITIONS SMOKE DETECTOR SEASONAL ENERGY EFFICIENCY RATIO SENSIBLE SUPPLY FAN SAFETY FACTOR SERIES FAN BOX SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION SMOKE DAMPER SEQUENCE OF OPERATION STATIC PRESSURE SPECIFICATIONS SQUARE SQUARE FEET SQUARE INCHES STAINLESS STEEL SPLIT SYSTEM AIR UNIT SPLIT SYSTEM CONDENSING UNIT STANDARD STEEL STRAINER STEAM VENT TRANSFER REGISTER TOTALLY ENCLOSED FAN COOLED TEMPERATURE THERMAL EXPANSION VALVE TEMPERATURE GAUGE TOP OF DUCT TOP OF PIPE TOTAL TEMPERATURE RISE TOTAL STATIC PRESSURE TIGHT TO DECK TYPICAL UNDERGROUND VOLTS VARIABLE AIR VOLUME VOLUME DAMPER VACUUM FILTER VARIABLE FREQUENCY DRIVE VOLUME WIDTH WATTS WITH WITHOUT WET BULB WATER COOLED CHILLER WATER GAUGE	PROJECT: CAMDEN OSD AEROJET ROCKETDYNE  DESIGN CONDITIONS FROM ASHRAE FUNDAMENTALS 2021  WEATHER STATION - HARRELL FIELD, AR, USA STATION #: WMO 723425 ELEVATION: 132 FEET; LATITUDE: 33.617°N; LONGITUDE: 92.767°W ASHRAE CLIMATE ZONE 3A  SITE SPECIFIC CONDITIONS AS PROVIDED BY AR: WINTER: 5°F DRY BULB  SUMMER: 105°F DRY BULB 93°F WET BULB  INDOOR DESIGN CONDITIONS  PROCESS AREA WINTER: 70°F ± 2°F, >20% RH SUMMER: 70°F ± 2°F, <40 GOM TELECOM/IT ROOM WINTER: 68°F ± 2°F SUMMER: 73°F ± 2°F, 50% ±5 RH ULITITY ROOM: WINTER: 40°F SUMMER: +10°F AMBIENT TEMPERATURE  ENERGY CODE COMPLIANCE  THE HVAC LOADS WERE PERFORMED IN ACCORDANCE WITH ASHRAE FUNDAMENTALS. ENERGY CALCULATIONS WERE PERFORMED IN ACCORDANCE WITH 2014 ARKANSAS ENERGY CODE WHICH ADOPTS 2009 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) .  DRAWING/DETAIL REFERENCE KEY <div><div>REFER TO DRAWING/DETAIL NUMBER SHEET NUMBER ON WHICH DETAIL IS DRAWN</div><div>RE : 2 / M-201</div><div>2 M-201</div></div> PIPING LABELS —AR— ARGON —CHWS— CHILLED WATER SUPPLY —CHWR— CHILLED WATER RETURN —CON— STEAM CONDENSATE —CWS— CONDENSER WATER SUPPLY —CWR— CONDENSER WATER RETURN —HWS— HEATING WATER SUPPLY —HWR— HEATING WATER RETURN —HYDS— HYDRAULIC SUPPLY —HYDR— HYDRAULIC RETURN —CA— COMPRESSED AIR —CD— CONDENSATE DRAIN —D— DRAIN —GS— GLYCOL SUPPLY —GR— GLYCOL RETURN —MU— MAKE-UP WATER —N— NITROGEN —RL— REFRIGERANT LIQUID —RS— REFRIGERANT SUCTION —RFR— RADIANT FLOOR HEATING WATER RETURN —RFS— RADIANT FLOOR HEATING WATER SUPPLY —SMR— SNOW MELT HEATING WATER RETURN —SMS— SNOW MELT HEATING WATER SUPPLY —STM— STEAM ** AAA ** PIPE TO BE REMOVED, "AAA" DENOTES TYPE —AAA— EXISTING PIPE, "AAA" DENOTES TYPE — AAA — UNDERGROUND PIPE, "AAA" DENOTES TYPE			
	F. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FITTING HIS MATERIAL AND APPARATUS INTO THE BUILDING AND SHALL CAREFULLY LAY OUT HIS WORK AT THE SITE TO CONFORM TO THE STRUCTURAL CONDITIONS, TO AVOID ALL OBSTRUCTIONS, TO CONFORM TO THE DETAILS OF THE INSTALLATION AND THEREBY TO PROVIDE AN INTEGRATED SATISFACTORY OPERATING INSTALLATION.	ATC AUTO AVG BACNET	AUTOMATIC TEMPERATURE CONTROL AUTOMATIC AVERAGE BUILDING AUTOMATION & CONTROL NETWORK BUILDING AUTOMATION SYSTEM BUTTERFLY VALVE BRAKE HORSEPOWER BUILDING BALANCING VALVE BOTTOM OF DUCT BOTTOM OF PIPE BUFFER TANK BRITISH THERMAL UNIT BTU'S PER HOUR BALL VALVE CELSIUS COMPRESSED AIR CHEMICAL BYPASS FEEDER COOLING COIL CENTERLINE CEILING COOLING CUBIC FEET PER MINUTE CHILLER CHILLER UNIT CHILLED WATER CHILLED WATER RETURN CHILLED WATER SUPPLY CONSTRUCTION MANAGER CARBON MONOXIDE CARBON DIOXIDE CONDENSING PUMP COOLING TOWER CONDENSING UNIT CUBIC FEET CUBIC INCHES CONTROL VALVE CONDENSING WATER SUPPLY CONDENSING WATER RETURN DRAIN FROM EQUIPMENT DRY BULB DECIBEL SOUND SCALE DRY COOLER DIRECT DIGITAL CONTROL DETAIL DIAMETER DIFFUSER DISCONNECT DOWN DRAWING DEHUMIDIFIER DIRECT EXPANSION EXHAUST AIR EACH EXHAUST AIR TEMPERATURE ENTERING AIR TEMPERATURE ELECTRIC POWERED BOILER ELECTRICAL CONTRACTOR ELECTRICALLY COMMUTATED MOTOR ENTERING DRY BULB TEMPERATURE ENERGY EFFICIENCY RATIO EXHAUST FAN ENTERING FLUID TEMPERATURE EXHAUST HOOD ELEVATION ELECTRIC(AL) ELEVATION ENTERING EQUAL/EQUIVALENT EQUIPMENT EXTERNAL STATIC PRESSURE EXHAUST EXPANSION TANK ELECTRIC UNIT HEATER COMBUSTION EXHAUST VENT ENTERING WET BULB TEMPERATURE ENTERING WATER TEMPERATURE EXISTING	EXT F FCU FD FD FF FH FLA FLEX FLTR FPI FPB FPM FPS FPT FS FSD FT FV GAL G.C. GFS GLYR GLYS GPM GPH GR GUH GV H/HT H2 HB HC HD HEPA HG HOA HP HPC					