

DEMOLITION NOTES

1. CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO:
 - a. PIPE SIZES AND ROUTING.
 - b. EQUIPMENT CONNECTIONS AND LOCATIONS.
 - c. CONTROLS.
2. PROVIDE NECESSARY MODIFICATIONS TO NEW AND EXISTING SYSTEMS TO FACILITATE THE INSTALLATION AND INTERFACED OF NEW AND EXISTING SYSTEMS.
3. EXISTING SYSTEMS AND INFORMATION SHOWN ON THESE PLANS WERE DEVELOPED USING LIMITED EXISTING BUILDING DRAWINGS AND NON-DESTRUCTIVE SITE OBSERVATIONS. CONTRACTOR SHALL FIELD VERIFY AT SITE ALL EXISTING SYSTEMS AND CONDITIONS PRIOR TO BID. THE CONTRACTOR SHALL MAKE ADJUSTMENTS AS NEEDED TO SUIT ACTUAL EXISTING SITE CONDITIONS AS REQUIRED TO ENSURE A COMPLETE, OPERABLE, AND WARRANTABLE INSTALLATION OF THE SCOPE OF WORK OF THIS PROJECT.
4. REMOVE ALL PORTIONS OF PIPING SYSTEMS BEING REMOVED OR ABANDONED. TERMINATE EXISTING SYSTEMS ABOVE THE FLOOR SLABS IN A MANNER THAT WILL NOT CONFLICT WITH NEW WORK. CLOSELY COORDINATE NEW WORK WITH EXISTING SYSTEMS. PROVIDE OFFSETS IN EXISTING AND NEW SYSTEMS AS REQUIRED TO AVOID CONFLICTS.
5. COORDINATE AND SCHEDULE ALL CONNECTIONS TO EXISTING SYSTEMS AND SYSTEM SHUT-DOWNS WITH MAINTENANCE PERSONNEL.
6. MAINTAIN EXISTING BUILDING SYSTEMS WITH PHASED DEMOLITION AND INSTALLATION OF NEW WORK, PROVIDING TEMPORARY SERVICES AS REQUIRED.
7. USE EXISTING PIPING SYSTEM VALVES WHERE POSSIBLE TO ISOLATE SYSTEMS AND TO CAP EXISTING PIPES. REMOVE VALVES IN FLOOR SLABS IN A MANNER WHEN EXISTING VALVES WILL NOT BE USED.
8. EXISTING EQUIPMENT BEING REMOVED AND DESIGNATED TO REMAIN THE PROPERTY OF THE OWNER SHALL BE DELIVERED UPON REMOVAL TO LOCATION DESIGNATED BY OWNER. ALL OTHER SYSTEM COMPONENTS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
9. REMOVE AND RELOCATE SMALL CONDUIT, CABLE, PIPE AND DUCT, PIPE AND CEILING HANGERS ETC. AS NECESSARY TO ACHIEVE A COMPLETE INSTALLED MECHANICAL SYSTEM AS SHOWN ON DRAWINGS.
10. PATCH ALL WALLS, FLOORS, ROOFS AND CEILINGS TO MATCH EXISTING OR NEW (IF APPLIED) FOR ALL OPENINGS CREATED BY DEMOLITION OF EQUIPMENT AND HVAC SERVICE PENETRATIONS.
11. REPLACE AND PATCH TO MATCH EXISTING ALL EXISTING PIPE AND DUCT INSULATION THAT IS TO REMAIN EXISTING AND IS DAMAGED OR REMOVED DURING CONSTRUCTION.
12. REFER TO ELECTRICAL PLANS FOR EXTENT OF DEMOLITION WORK RELATING TO WIRING FOR SUPPORT OF HVAC EQUIPMENT TO BE REMOVED.

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE 2021 EDITION OF THE "INTERNATIONAL MECHANICAL CODE", THE 2014 EDITION OF THE "ARKANSAS ENERGY CODE", NFPA 90A, AND ALL CITY, STATE, AND LOCAL REQUIREMENTS.
2. CONTRACT DOCUMENTS INCLUDE BOTH PLANS AND THE PROJECT MANUAL/SPECIFICATIONS. REFER TO THE PROJECT MANUAL/SPECIFICATIONS FOR ALL REQUIREMENTS NOT INDICATED ON THE PLANS AND VICE-VERSA. WHERE CONFLICTS EXIST, THE MOST STRINGENT SHALL TAKE PRECEDENCE. THE CONTRACTOR SHALL STUDY THE PLANS
3. REFER TO ARCHITECTURAL PLANS FOR:
 - a. REFLECTED CEILING PLAN FOR EXACT LOCATION OF AIR DEVICES AND CEILING TYPES.
 - b. EXACT LOCATIONS AND MOUNTING HEIGHTS OF EXTERIOR LOUVERS
 - c. FIRE-RATED WALLS AND PARTITIONS. PROVIDE FIRE DAMPERS IN DUCT PENETRATIONS OF ALL FIRE RATED WALLS AND PARTITIONS AS NECESSARY TO MEET CITY AND STATE REQUIREMENTS.
 - d. ALL WALL AND ROOF PENETRATIONS AND EQUIPMENT MOUNTING DETAILS.
4. DUCTWORK SHALL BE CONSTRUCTED FROM GALVANIZED STEEL IN CONFORMANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS," LATEST EDITION
5. U.L LISTED FLEXIBLE DUCT RUN-OUTS MAY BE USED BUT SHALL NOT EXCEED 5'-0" IN LENGTH. ALL FLEXIBLE DUCT TO BE PROPERLY SUPPORTED WITH NO KINKS OR HARD BENDS
6. DUCT FITTINGS:
 - a. SUPPLY TAKE-OFFS TO CEILING SUPPLY DIFFUSERS TO BE CONICAL TAP OR 45° SIDE TAP.
 - b. ALL DUCT RUN-OUTS SHALL HAVE LOCKING QUADRANT VOLUME DAMPERS. PROVIDE STAND-OFF BRACKET TO ACCOMMODATE INSULATION THICKNESS. ALL 90° ROUND ELBOWS TO HAVE R1P-1.5 (UNLESS OTHERWISE NOTED).
 - c. ALL RECTANGULAR MITERED ELBOWS 45° OR GREATER SHALL HAVE TURNING VANES (UNLESS OTHERWISE NOTED).
 - d. PROVIDE HARD ELBOW WHEN TRANSITIONING FROM RIGID TO FLEXIBLE DUCT WHEN CONNECTING TO AIR DEVICES. REFER TO DETAIL.
7. DUCTWORK TO BE COORDINATED WITH STRUCTURAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION, COMPONENTS AND SYSTEMS. ALL DUCTWORK THAT HAS TO BE OFFSET DUE TO AN OBSTRUCTION SHALL BE OFFSET WITH 2-30" ELBOWS UNLESS OTHERWISE NOTED.
8. PROVIDE ACCESS PANELS IN CEILINGS OTHER THAN LAY-IN TYPE WHERE NECESSARY:
 - a. CLOSELY COORDINATE LOCATION AND SIZE OF ACCESS PANELS WITH INSTALLED EQUIPMENT TO ACHIEVE GREATEST ACCESSIBILITY FOR MAINTENANCE PURPOSES.
 - b. PROVIDE ACCESS PANEL AT BALANCING DAMPERS, FIRE DAMPERS, CONTROLS, VALVES, TRAPS, CLEAN OUTS, ETC.
 - c. PROVIDE ACCESS PANELS FOR GREASE DUCTS, AS REQUIRED BY NFPA 96, FOR CLEANING PURPOSES, AT CHANGES IN DIRECTION, ETC.
9. COMPLETELY INSULATE THE TOPS OF ALL CEILING DIFFUSERS.
10. CLOSELY COORDINATE LOCATIONS OF INSTALLED EQUIPMENT TO ACHIEVE THE GREATEST ACCESSIBILITY.
11. MAINTAIN 10'-0" MINIMUM CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND ALL EXHAUST FANS, FLUES, PLUMBING VENTS, ETC.
12. ALL ROOF MOUNTED HVAC EQUIPMENT, INCLUDING BUT NOT LIMITED TO EXHAUST FANS, CONDENSING UNITS, AND ROOF-TOP UNITS, SHALL BE A MINIMUM OF 10' FROM THE ROOF'S EDGE, OR PARAPET, UNLESS OTHERWISE NOTED ON PLANS. IN SUCH CASE, THE CONTRACTOR SHALL COORDINATE WITH ARCHITECT TO PROVIDE SAFETY HANDRAILS AROUND ROOF MOUNTED HVAC EQUIPMENT THAT IS LOCATED LESS THAN 10' FROM ROOF'S EDGE, OR PARAPET.
13. PROVIDE FLEXIBLE CONNECTIONS AT INLETS AND OUTLETS OF ALL AIR HANDLING UNITS, MAKE-UP AIR UNITS, FURNACES, AND/OR EXHAUST FANS.
14. PROVIDE 4" CONCRETE PADS UNDER ALL GROUND MOUNTED CONDENSING UNITS. EACH PAD TO EXTEND A MINIMUM OF 6" BEYOND OUTLINE OF UNIT ON ALL SIDES.
15. ROOF MOUNTED CONDENSING UNITS SHALL BE PLACED ON PATE OR APPROVE EQUAL EQUIPMENT SUPPORTS, MODEL ES-2 W/ INSULATION, FIBER CANT, AND METAL CAP, MINIMUM 1" HIGH ABOVE ROOF DECK. MAKE WEATHER TIGHT.
16. PROVIDE 6" CONCRETE PADS UNDER ALL GROUND MOUNTED AIR HANDLING UNITS AND CHILLERS. EACH PAD TO EXTEND A MINIMUM OF 6" BEYOND OUTLINE OF UNIT ON ALL SIDES.
17. ATTIC MOUNTED AND ABOVE CEILING MOUNTED EQUIPMENT SUBJECT TO WATER/CONDENSATE OVERFLOW SHALL BE SET IN DRAIN PANS WITH DRAINS TO THE OUTSIDE OR AN INTERIY SEWER SYSTEM.
18. CONDENSATE PIPING SHALL BE COMPRISED OF TYPE "M", DWV COPPER, OR SCHEDULE 40 PVC. PVC EXPOSED TO SUNLIGHT SHALL HAVE UV RESISTANT COATING.
19. PROVIDE APPROVED, NON-FLAMMABLE PIPE INSULATION ON ALL INSULATED PIPES AND PIPES OF PVC MATERIAL PASSING THRU AREAS OF BUILDING WITH RETURN AIR PLENUMS.
20. ALL EXTERIOR EXPOSED PIPING SUSCEPTIBLE TO FREEZING, SUCH AS CONDENSATE PIPING, SHALL BE INSULATED WITH 1" FIBERGLASS PIPING INSULATION WITH 0.020" ALUMINUM JACKET AND HEAT TRACED AT 5 WATTS/FOOT. SEAL JACKET WATER-TIGHT.
21. COORDINATE WORK CLOSELY WITH CONTROL CONTRACTOR. PROVIDE ALL NECESSARY DUCT, PIPE TAPS, TEES, WELLS, CONTROL DAMPERS, AIR MEASURING STATIONS, AND OTHER ACCESSORIES REQUIRED BY CONTROL SYSTEM.
22. SLEEVE AND SEAL ALL PIPE AND DUCT PENETRATIONS THROUGH FIRE RATED AND NON-RATED SLABS AND PARTITIONS.
23. CONTRACTOR SHALL COORDINATE AS REQUIRED TO ENSURE THE HEIGHT OF ALL ROOF CURBS ON MEMBRANE TYPE ROOF SYSTEMS EXTENDS MINIMUM 12" ABOVE THE FINISHED ROOF SURFACE ELEVATION OF THE ROOF.
24. ALL WALL MOUNTED, OCCUPANT-CONTROLLED HVAC DEVICES, E.G., THERMOSTATS, HUMIDISTAT, CO2 CONTROLLERS, CONTROL PANELS, ETC., SHALL BE MOUNTED 4'-0" ABOVE FINISHED FLOOR TO THE TOP OF THE CONTROL DEVICE, ALIGNED WITH ELECTRICAL SWITCHES. CONTROLS LOCATED IN PUBLIC AREAS SHALL HAVE CLEAR PLASTIC LOCKING COVERS.

SEISMIC DESIGN CATEGORIES D, E, F

GENERAL NOTES

- A. PER THE 2018 INTERNATIONAL BUILDING CODE, MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT AND COMPONENTS, INCLUDING THEIR SUPPORTS AND ATTACHMENTS, SHALL BE DESIGNED FOR SEISMIC FORCES IN ACCORDANCE WITH CHAPTER 13 OF ASCE 7-16.
- B. EXTERIOR EQUIPMENT (INCLUDING ROOF CURBS, RAILS, SUPPORTS) EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH CHAPTERS 26 TO 29 OF ASCE 7-16.
- C. WIND LOADS FOR THE SEISMIC ANALYSIS OF WIND-SENSITIVE STRUCTURES REQUIRED. THE MORE DEMANDING FORCE MUST BE USED.
- D. REFERENCE THE STRUCTURAL DRAWINGS FOR SITE-SPECIFIC INFORMATION ON SEISMIC DESIGN CATEGORY, WIND SPEEDS, ETC.
- E. SEE EQUIPMENT SCHEDULES AND DETAILS FOR SPECIFIC COMPONENT IMPORTANCE FACTOR DESIGNATIONS.
- F. USE TABLE BELOW TO DETERMINE SEISMIC RESTRAINT REQUIREMENTS FOR EACH COMPONENT.
- G. FOR ALL COMPONENTS REQUIRING SEISMIC RESTRAINT, THE COMPONENT SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL.
- H. WHEN SEISMIC RESTRAINT IS REQUIRED, HOUSEKEEPING PADS NEEDED FOR THE INSTALLATION OF EQUIPMENT UNDER THIS CONTRACT MUST BE DESIGNED BY THE SEISMIC ENGINEER. DO NOT POUR ANY HOUSEKEEPING PADS PRIOR TO THE RECEIPT OF THE APPROVED SEISMIC SUBMITTAL.
- I. SEISMIC RESTRAINTS FOR DUCTWORK, PIPING, CONDUIT, CABLE TRAY AND BUS DUCT MUST BE SHOWN ON LAYOUT DRAWINGS SHOWING SPECIFIC RESTRAINT LOCATIONS ALONG WITH ACCOMPANYING DETAILS AND CALCULATIONS.

NOTES:

1. EQUIPMENT 20 LBS. OR LESS IS EXEMPT IF THE COMPONENT IS POSITIVELY ATTACHED TO THE STRUCTURE.
2. RESTRAINTS ARE NOT REQUIRED IF THE COMPONENT WEIGHS 400 LBS. OR LESS, IS MOUNTED WITH THE CENTER OF MASS AT 4 FT. OR LESS ABOVE A FLOOR, IS POSITIVELY ATTACHED TO THE STRUCTURE, AND HAS FLEXIBLE CONNECTIONS BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.
3. FLEXIBLE CONNECTIONS REQUIRED FOR PIPE AND CONDUIT CONNECTIONS ONLY.
4. SEE TABLE 1 FOR ROOF HANGER LENGTH EXEMPTION RULES
5. ALL DUCTWORK, REGARDLESS OF SIZE, DESIGNED TO CARRY TOXIC, HIGHLY TOXIC, OR EXCITING GASES OR USED FOR SMOKE CONTROL MUST BE RESTRAINED.
6. THE RESTRAINT OF PENDANT LAY-IN, CAN LIGHTS ADDRESSED IN ASTM C636 & E580.
7. COMPONENT CERTIFICATION MUST BE SUPPLIED BY THE EQUIPMENT MANUFACTURER AT TIME OF SUBMITTAL FOR REVIEW BY ENGINEER OF RECORD AND BUILDING OFFICIAL.