

AREA NOT IN CONTRACT

ON THIS SHEET MAY OR MAY NOT BE USED IN THE CONTAINED

REFERENCE DRAWINGS.

PLUMBING GENERAL NOTES

- 1 ALL PLUMBING SYSTEMS SHALL BE INSTALLED AS PER SPECIFICATIONS AND GOVERNING CODES
- 2 ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRIC RELATIONSHIPS OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING OR COMPONENT. CONTRACTOR SHALL NOT SCALE DRAWINGS. INFORMATION AND COMPONENTS SHOWN ON RISER DIAGRAMS OR DETAILS, BUT NOT SHOWN ON PLANS, AND VICE-VERSA, SHALL BE PROVIDED AS IF EXPRESSLY REQUIRED BY BOTH. THE CONTRACTOR SHALL SUBMIT A REQUEST FOR INFORMATION (RFI) IF INFORMATION CONFLICTS. DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY CONTRACT DOCUMENTS. REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND OTHER DRAWINGS FOR COMPLETE INFORMATION.
- 3 BY NECESSITY, THESE DRAWINGS REFLECT A SYSTEM DESIGNED AROUND SPECIFIC REFERENCE PRODUCTS, THE SELECTION OF WHICH HAS IMPACTED THE DESIGNS OF OTHER TRADES (HVAC, ELECTRICAL, STRUCTURAL, ETC.). IF ALTERNATE MANUFACTURERS, FUEL SOURCES, SIZES, OR MODEL NUMBERS ARE SUBMITTED OR BID, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO COORDINATE ALL DIFFERENCES PRIOR TO BID. NO EXTRAS WILL BE ALLOWED FOR CHANGES REQUIRED TO OTHER TRADES IF ALTERNATE EQUIPMENT IS BID OR INSTALLED AT THE CONTRACTORS OPTION.
- 4 EXCEPT WHERE MODIFIED BY SPECIFIC NOTATION TO THE CONTRARY, IT SHALL BE UNDERSTOOD THAT THE INDICATION AND/OR DESCRIPTION OF ANY ITEM, IN THE DRAWINGS OR SPECIFICATIONS OR BOTH, CARRIES WITH IT THE INSTRUCTION TO FURNISH AND INSTALL THE ITEM, REGARDLESS OF WHETHER OR NOT THIS INSTRUCTION IS EXPLICITLY STATED AS PART OF THE INDICATION OR DESCRIPTION.
- 5 CONTRACTOR SHALL PAY ALL UTILITY FEES & CHARGES AS PART OF BASE BID IN THE CONTRACT.
- 6 THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH THAT OF OTHER TRADES; i.e., ARCHITECTURAL, HVAC. ELECTRICAL. STRUCTURAL, FIRE PROTECTION AND CIVIL PRIOR TO CONSTRUCTION.
- 7 THE CONTRACTOR SHALL COORDINATE UTILITY LOCATIONS, SIZES AND INVERT ELEVATIONS PRIOR TO CONSTRUCTION; i.e., SANITARY SEWER, FIRE PROTECTION, DOMESTIC WATER. ALL SERVICES SHALL TERMINATE 5 FEET OUTSIDE THE BUILDING, EXCEPT WHERE SHOWN OTHERWISE. SEE SITE UTILITY DRAWINGS FOR CONTINUATION OF ALL SERVICE LINES.
- 8 PROVIDE ISOLATION VALVES AT EACH FIXTURE GROUP OR BATTERY OF FIXTURES IN THE DOMESTIC CW, HW, HWR AND GAS PIPING. VALVES SHALL BE EASILY ACCESSIBLE. WHERE HARD CEILINGS ARE LOCATED, VALVES SHALL BE ACCESSED THROUGH ACCESS PANELS. ACCESS PANELS SHALL BE COORDINATED WITH ARCHITECT PRIOR TO CONSTRUCTION.
- 9 PROVIDE STOP VALVES AT ALL PLUMBING FIXTURES ON BOTH HOT AND COLD WATER SUPPLY LINES. VALVES, ESCUTCHEONS, FITTINGS, ETC., SHALL BE CHROME PLATED AND INSTALLED TIGHT TO WALL. WHERE PIPING IS EXPOSED, CHROME PLATED PIPE SHALL BE USED.
- 10 ALL EXPOSED OR ACCESSIBLE P-TRAPS SHALL BE CHROME PLATED AND PROVIDED WITH BOTTOM CLEANOUT PLUGS.
- 11 SLOPE 2-1/2" AND SMALLER DRAIN WASTE AND VENT (DWV) LINES AT MIN, (2%) 1/4" FALL PER FT., 3" TO 6" DWV LINES AT MIN. (1%) 1/8" FALL PER FT. AND 8" AND LARGER DWV LINES AT MIN. (.5%) 1/16" FALL PER FT. SANITARY SEWER AND WATER SHALL BE A MINIMUM OF 10' APART OR THE DOMESTIC WATER SERVICE SHALL BE 12" ABOVE THE TOP OF THE SEWER LINE, AT ITS HIGHEST POINT, IF PLACED IN SAME TRENCH.
- 12 PROVIDE ALL FITTINGS, TRANSITIONS, COUPLINGS, ADAPTERS, UNIONS, AND OTHER ACCESSORIES NEEDED TO COMPLETE CONNECTIONS AND PROPER OPERATIONS OF PLUMBING FIXTURES AND PLUMBING EQUIPMENT.
- 13 REFER TO SPECIFICATIONS FOR ACCEPTABLE MANUFACTURERS OF PLUMBING FIXTURES AND EQUIPMENT, AND PROPER APPLICATIONS OF SAME.
- 14 PROVIDE CLEANOUTS IN ALL SEWERS, WHETHER SHOWN OR NOT, AT INTERVALS NOT TO EXCEED 50 FEET, AT EACH CHANGE OF DIRECTION GREATER THAN 45°, AND ALL VERTICAL STACKS AT A HEIGHT OF 30" ABOVE FINISH FLOOR AT THE BASE OF EACH STACK.
- 15 WHERE WATER PRESSURES EXCEED 80 PSI, PROVIDE WATER PRESSURE REDUCING VALVES (PRV) CONFORMING TO ASSE 1003 WITH STRAINER IN WATER SUPPLY LINES, SETTING AT 70 PSI. SEE CODE AND MANUFACTURER INFORMATION FOR ACCEPTABLE PRESSURE REQUIREMENTS.
- 16 ALL PIPING PENETRATIONS OF THE RATED CEILING AND WALL MUST BE MADE WITH METAL PIPE OR UL LISTED APPROVED DEVICES. FIRE STOP ALL PIPE PENETRATIONS THRU RATED WALLS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS, RATINGS AND FIRE STOPPING DETAILS.
- 17 DO NOT ROUTE ANY PIPING OVER ELEC. ROOMS, COMPUTER ROOMS, OR ELEC. PANELS.
- 19 ALL DOMESTIC WATER PIPING ROUTED IN AREAS SUBJECT TO FREEZING TEMPERATURES SHALL BE ROUTED BELOW INSULATION AND WITHIN THE HEATED ENVELOPE OF THE BUILDING. WHERE PIPING CAN NOT BE ROUTED BELOW INSULATION, PIPING SHALL HAVE 5 WATT/FT HEAT TRACING ATTACHED. SEE ARCHITECTURAL DRAWINGS FOR INSULATION PLACEMENT AND DETAILS. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR AND ENGINEER.
- 20 UNLESS OTHERWISE INDICATED, DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS. WHEN ROUTED IN EXTERIOR WALLS, CAREFULLY POSITION WATER PIPING ON THE HEATED SIDE (INTERIOR SIDE) OF THE WALL INSULATION.
- 21 MAINTAIN 10'-0" MINIMUM CLEARANCE BETWEEN FRESH AIR INTAKES, OPERABLE WINDOWS AND FLUES, PLUMBING VENTS AND GAS REGULATORS.
- 22 ALL SEWER & VENT PIPING SHALL BE RODDED AND CLEANED AT END OF CONSTRUCTION. ALL TRAPS SHALL BE CLEANED AND PRIMED AT END OF CONSTRUCTION.
- 23 ALL PIPE DROPS FROM CEILING PLENUM TO FLOOR SHALL BE MADE IN FURROUTS AT COLUMNS, IN WEB OF BEAMS AT COLUMNS OR IN WALLS. PIPING SHALL BE CONCEALED UNLESS APPROVED BY ARCHITECT.
- 24 PROVIDE WATER HAMMER ARRESTORS IN FIXTURE BRANCHES WHERE QUICK CLOSING VALVES ARE INSTALLED; i.e., FLUSH VALVES, ICE MAKERS, DISHWASHERS, ETC.
- 25 BELOW SLAB WATER PIPE TO BE TYPE K SOFT DRAWN COPPER WITHOUT FITTINGS OR JOINTS. SLEEVE IN ENTIRETY WITH ARMAFLEX OR APPROPRIATE POLYETHYLENE SLEEVE MATERIAL.
- 26 PROVIDE APPROVED BACKFLOW PREVENTION OR ANTI-SIPHON DEVICES AT ALL FIXTURES THAT COULD CONTAMINATE THE POTABLE WATER SYSTEM.
- 27 INSULATE ALL WATER PIPING ABOVE FINISH FLOOR. SEE SPECIFICATIONS FOR THICKNESS SCHEDULE.
- 28 INSULATE ALL EXPOSED HOT WATER & DRAIN PIPING FOR ACCESSIBLE FIXTURES PER ANSI A117.1 AND ADA REQUIREMENTS.
- 29 ALL EXPOSED MATERIALS WITHIN RETURN AIR PLENUMS (EXISTING AND NEW) SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 OR A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50, AS DETERMINED IN ACCORDANCE WITH ASTM E84 AND U.L. LISTINGS. IF ANY MATERIALS (EXISTING OR NEW) DO NOT MEET THESE STANDARDS, THE ITEMS SHALL BE ENCLOSED IN A GYPSUM-BOARD ENCLOSURE, BE REPLACED WITH PLENUM RATED MATERIALS (I.E. CAST IRON), OR BE WRAPPED WITH AN APPROVED FIRE RATING MATERIAL, SUCH AS 3M FYRE WRAP. PLASTIC PIPING (PVC, ABS, AND CPVC) IS NOT APPROVED TO BE INSTALLED WITHIN RETURN AIR PLENUMS. BY NECESSITY, WE HAVE NOTED AS MANY AREAS AS POSSIBLE ON THE PLANS WHERE THESE CONDITIONS OCCUR, BUT IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXISTING CONDITIONS (WHETHER SHOWN ON THE PLANS OR NOT) AND INCLUDE THE REPLACEMENT/WRAPPING OF THESE ITEMS IN THE BID PRICE (SEE NOTE 7 ABOVE). COORDINATE RETURN AIR PLENUM LOCATIONS AND ANY NOTED DISCREPANCIES FROM THE PLANS WITH MECHANICAL ENGINEER PRIOR TO BID.
- 30 FLOOR DRAINS IN MECHANICAL ROOMS ARE SHOWN FOR GENERAL LOCATION ONLY. FLOOR DRAINS SHALL BE ACCESSIBLE AND SHALL BE VERIFIED WITH EQUIPMENT LAYOUT FOR INTERFERENCES.
- 31 AN APPROVED TRAP SEAL DEVICE CONFORMING TO ASSE 1072 SHALL BE INSTALLED AT ALL FLOOR AND HUB DRAINS. ALL DRAINS SHALL HAVE DEEP SEAL TRAPS, 4" DEEP SEAL MINIMUM. INSTALL TRAP GUARD DEVICES PER MANUFACTURER'S INSTRUCTIONS.
- 32 DOMESTIC WATER SERVICE PIPING AND FITTINGS; E.G., CHECK VALVES, RPZA, SHUT-OFF VALVES, STRAINERS, PRESSURE REGULATORS, ETC. SHALL COMPLY WITH NSF 61 CRITERIA. ALL CAST IRON EQUIPMENT IS TO BE INTERNALLY EPOXY COATED.

DEMOLITON / RENOVATION NOTES

- 1 IN THESE GENERAL NOTES, "PLUMBING" SHALL REFER TO, BUT NOT BE LIMITED TO SYSTEMS, COMPONENTS AND EQUIPMENT FOR [HOT WATER, COLD WATER, SEWER, SEWER VENTS, ISOLATION VALVES, BALANCING VALVE, REGULATORS, EQUIPMENT AND PIPING, ETC.]
- 2 CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO:* PIPE SYSTEMS, SIZES AND LOCATIONS.* VALVE LOCATIONS.* EQUIPMENT CONDITIONS, CONNECTIONS AND LOCATIONS.* BALANCING VALVES.* HAMMER ARRESTORS.
- 3 ALL EXISTING PLUMBING EQUIPMENT AND PIPING ADJACENT TO AND/OR IN AREAS OF DEMOLITION SHALL BE PROPERLY IDENTIFIED FOR LOCATION, SIZE, CONDITION AND SYSTEM(S) OPERATION. ALL SYSTEMS SHALL BE COMPARED TO THE PLUMBING DRAWINGS AND EXISTING RECORD DRAWINGS (EXISTING RECORD DRAWINGS SHALL BE REQUESTED FROM [OWNER OR GOVERNMENT]) AND DOCUMENT ALL VARIATIONS. AFTER THE EXISTING SYSTEMS ARE INVESTIGATED AND DOCUMENTED, THE CONTRACTOR SHALL CAP AND/OR REMOVE ALL PLUMBING EQUIPMENT AND PIPING BACK TO POINT OF DEMOLITION BOUNDARY AS NOTED ON PLANS. DEMOLITION BOUNDARY AND PHASING SHALL BE COORDINATED WITH ARCHITECT AND [OWNER OR GOVERNMENT] PRIOR TO CONSTRUCTION. ALL BRANCHES AND DROPS NOT REMOVED SHALL BE CAPPED AND PREPARED FOR FUTURE RECONNECTION WHEN NEW EQUIPMENT AND/OR FIXTURES ARE INSTALLED, AS REQUIRED.
- 4 COORDINATE AND SCHEDULE THE REMOVAL OF EXISTING PLUMBING AND SYSTEM SHUT-DOWNS WITH OWNER, ARCHITECT AND MAINTENANCE PERSONNEL PRIOR TO CONSTRUCTION.
- 5 MAINTAIN EXISTING PLUMBING WITH PHASED DEMOLITION AND INSTALLATION OF NEW WORK, PROVIDING TEMPORARY SERVICES AS REQUIRED.
- 6 EXISTING PLUMBING EQUIPMENT BEING REMOVED AND NOT RE-USED, SHALL REMAIN THE PROPERTY OF THE OWNER (AS APPROVED BY THE OWNER) AND SHALL BE DELIVERED UPON REMOVAL TO LOCATION DESIGNATED BY THE GOVERNMENT. ALL OTHER SYSTEM COMPONENTS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
- 7 UPON COMPLETION OF NEW ADDITION, NEW PLUMBING EQUIPMENT AND PIPING WILL BE INSTALLED AS SHOWN ON RENOVATED PLUMBING PLANS. RECONNECT ALL EXISTING BRANCHES AND EQUIPMENT TO NEW SYSTEM PIPING AS REQUIRED FOR OPERATION.
- 8 REPLACE AND/OR PATCH TO MATCH EXISTING, ANY COMPONENTS OF THE EXISTING PLUMBING SYSTEMS TO FACILITATE ITS INSTALLATION WITHIN THE NEW RENOVATED AREAS. SUCH ITEMS MAY INCLUDE, BUT NOT BE LIMITED TO, FITTINGS, SUPPORTS, NEW MOUNTING SYSTEMS, NEW ACCESS DOORS, ETC.
- 9 DAMAGED, OR INOPERABLE PLUMBING COMPONENTS INSPECTED PRIOR TO DEMOLITION AND DETERMINED NOT SUITABLE FOR REUSE, THAT WILL EFFECT THE INTEGRITY OF THE OPERATION OF THE PLUMBING SYSTEM, SHALL BE REPLACED WITH NEW OF LIKE, OR EQUAL QUALITY.
- 10 PATCH ALL WALLS, FLOORS, ROOFS AND CEILINGS TO MATCH EXISTING OR NEW (IF APPLIED) FOR ALL OPENINGS CREATED BY DEMOLITION WORK OF EQUIPMENT AND PLUMBING SYSTEM PENETRATIONS.
- 11 REFER TO HVAC PLANS FOR EXTENT OF WORK RELATING TO PLUMBING PIPING CONNECTING TO HVAC EQUIPMENT TO BE REMOVED OR RELOCATED.
- 12 THE ADJACENT SPACES WILL CONTINUE TO OPERATE DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH OWNER TO INSURE THAT PLUMBING CONSTRUCTION DOES NOT IMPACT HOURS OF OPERATION. SEE ARCHITECTURAL SHEET FOR ADDITIONAL NOTES AND INSTRUCTIONS.

ADA REQUIREMENTS

WATER CLOSETS: THE HEIGHT OF WATER CLOSETS SHALL BE 17"-19" MEASURED FROM THE TOP OF THE TOILET SEAT. SEATS SHALL NOT BE SPRUNG OR RETURN TO A LIFTED POSITION. THE WATER CLOSET SHALL BE LOCATED 18" FROM THE SIDE WALL TO THE CENTER OF THE BOWL. HAND OPERATED FLUSH CONTROLS SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS NO MORE THAN 29" ABOVE FINISHED FLOOR. SEE ARCHITECTURAL SHEETS FOR GRAB BAR LOCATIONS.

URINALS: THE URINALS SHALL BE WALL HUNG WITH AN ELONGATED RIM AT A MAXIMUM OF 17" ABOVE FINISHED FLOOR. HAND OPERATED FLUSH CONTROLS SHALL BE MOUNTED NO MORE THAN 44" ABOVE FINISHED FLOOR.

LAVATORIES: LAVATORIES SHALL BE MOUNTED WITH THE RIM OR COUNTER SURFACE NO MORE THAN 34" ABOVE FINISHED FLOOR. PROVIDE A CLEARANCE OF AT LEAST 29" ABOVE FINISHED FLOOR TO THE BOTTOM OF THE APRON. KNEE SPACE SHALL BE 8" FROM THE BOTTOM EDGE OF APRON TO THE LEADING EDGE OF THE BOTTOM OF BOWL. THE BOTTOM OF THE BOWL SHALL BE A MINIMUM OF 27" ABOVE FINISHED FLOOR. ALL WATER AND DRAIN PIPING UNDER LAVATORIES SHALL BE INSULATED WITH FOAM INSERT, COVERED WITH A 1/8" VINYL OUTER SHELL. ANGLE STOPS SHALL HAVE A FLIP TOP ACCESS.

FAUCET CONTROLS: CONTROLS SHALL BE LEVER HANDLES OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 lbf.

SINKS: SINKS SHALL BE MOUNTED WITH THE RIM OR COUNTER SURFACE NO MORE THAN 34" ABOVE FINISHED FLOOR. PROVIDE A CLEARANCE OF AT LEAST 27" HIGH, 30" WIDE, AND 19" DEEP. SINKS SHALL BE A MAXIMUM OF 6-1/2" DEEP. ALL WATER AND DRAIN PIPING UNDER SINKS SHALL BE PROVIDED WITH INSULATING FOAM INSERT, COVERED WITH A 1/8" VINYL OUTER SHELL. ANGLE STOPS SHALL HAVE A FLIP TOP ACCESS.

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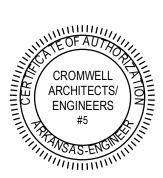
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CONSTRUCTION DOCUMENTS

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PLUMBING LEGEND AND NOTES

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