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GENERAL

- THE CONTRACTOR SHALL PROVIDE THE WORK SHOWN ON THE DRAWINGS AND SPECIFIED FOR THEIR INDIVIDUAL SECTIONS OF WORK. THE WORD 'WORK' SHALL MEAN ALL LABOR, TRANSPORTATION, MATERIAL, EQUIPMENT, TOOLS, INSTALLATION, SUPERVISION, AND ANY OTHER INCIDENTAL ITEMS OR SERVICES OBVIOUSLY NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE COMPLETE SYSTEMS, WHICH SHALL BE PROVIDED WHETHER OR NOT SPECIFICALLY MENTIONED OR SHOWN.
- ALL GENERAL CONDITIONS, SPECIAL REQUIREMENTS OR GENERAL REQUIREMENTS OF THE GENERAL CONSTRUCTION SPECIFICATION ARE PART OF THIS SPECIFICATION AND HAVE THE SAME FORCE AND EFFECT AS IF PRINTED HERE IN FULL.
- THE WORD 'PROVIDE' SHALL MEAN FURNISH AND INSTALL, MAKE ALL FINAL CONNECTIONS, AND LEAVE IN AN APPROVED OPERATING CONDITION.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE APPLICABLE UNIFORM BUILDING, MECHANICAL, PLUMBING, AND ELECTRICAL CODES, AND FEDERAL, STATE, AND LOCAL REGULATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING: WORKMEN'S IDENTIFICATION AND SAFETY, FIRE PROTECTION, CONTRACTOR'S LIABILITY INSURANCE, SAFETY BARRICADES, WARNING SIGNS, AND TRASH REMOVAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING ALL FEES AND OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR THE WORK.
- THE CONTRACTOR SHALL CAREFULLY EXAMINE ALL DRAWINGS FOR THE BUILDING, AND FOR OTHER TRADES, AND SHALL COORDINATE THE WORK WITH ALL OTHER TRADES, INCLUDING, BUT NOT LIMITED TO, THE CONSTRUCTION DOCUMENTS SHOP DRAWINGS, ETC. FOR ALL GENERAL CONSTRUCTION, STRUCTURAL, MECHANICAL, AND ELECTRICAL AND SPECIALTY CONTRACTOR WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FITTING OF MATERIAL INTO THE BUILDING AS PLANNED, WITHOUT INTERFERENCE WITH OTHER WORK, AND SHALL MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH OTHER TRADES, TO PROVIDE ACCESS AND FOR THE PROPER EXECUTION OF THE WORK.
- DRAWINGS ARE DIAGRAMMATIC, SMALL SCALE, AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. CERTAIN COMPONENTS, APPURTENANCES, AND RELATED SPECIALTIES ARE NOT SHOWN, AND SHALL BE PROVIDED. IT IS THE INTENT OF THE DRAWING AND SPECIFICATIONS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION. DO NOT SCALE DRAWINGS. ARRANGEMENT OF EQUIPMENT AND ROUTING OF PIPES AND DUCTWORK, ETC. INDICATED ON DRAWINGS MAY REQUIRE MODIFICATION DUE TO UNFORESEEN CONDITIONS AND REQUIRED ON SITE REVISIONS DURING CONSTRUCTION. (SEE ALSO 'BIDDING')
- ALL WORK REQUIRED FOR IDENTICAL ITEMS SHOWN ON THE DRAWINGS SHALL BE PROVIDED ALTHOUGH EACH SPECIFIC IDENTICAL ITEM MAY NOT BE SHOWN IN DETAIL - OR CALLED OUT.
- THE CONTRACTOR SHALL PROVIDE (5) COPIES OF SUBMITTALS AT ONE TIME, BOUND IN A NEAT & ORDERLY MANNER. PARTIAL OR UNMARKED SUBMITTALS WILL NOT BE ACCEPTED. SUBMITTALS SHALL INCLUDE ALL EQUIPMENT, MATERIALS, AND DEVICES FOR REVIEW BY THE ENGINEER. WORK SHALL NOT START UNTIL ALL REVIEWS HAVE BEEN COMPLETED AND THE ITEMS TO BE PROVIDED ARE ACCEPTABLE. ALL MATERIALS AND EQUIPMENT SHALL BE COMMONLY USED ACCEPTABLE GRADES IN THE CONSTRUCTION INDUSTRY AND SHALL BEAR THE 'U.L.', ASME, AMCA, OR OTHER LABEL WHEN APPLICABLE.
- UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL SUPPLY THE ARCHITECT WITH COMPLETE SETS OF AS-BUILT DOCUMENTS ACCURATELY SHOWING THE MATERIALS AND EQUIPMENT AS INSTALLED.
- ALL MATERIALS AND WORKMANSHIP TO BE GUARANTEED FOR A MINIMUM OF ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER. REFRIGERATION COMPRESSORS SHALL BE GUARANTEED FOR A MINIMUM OF FIVE YEARS FROM DATE OF OWNER'S ACCEPTANCE. IN ADDITION, THE CONTRACTOR SHALL GUARANTEE THAT THE INSTALLATION, WHEN OPERATED IN ACCORDANCE WITH THE CONTRACTOR'S INSTRUCTIONS, WILL DEVELOP CAPACITY AND CHARACTERISTICS INDICATED OR SPECIFIED AND WILL FULFILL EACH AND EVERY REQUIREMENT OF THE DRAWINGS AND SPECIFICATIONS, AND SHOULD THE INSTALLATION IN ANY WAY FAIL TO DO SO, THE CONTRACTOR WILL, WITHOUT DELAY AND WITHOUT COST TO THE OWNER, PROVIDE WHATEVER ADDITIONAL EQUIPMENT, MATERIAL, AND LABOR IS NECESSARY TO CORRECT THE FAULT AND COMPLY WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.
- CONTRACTOR SHALL CHECK AND VERIFY ALL SIZES, DIMENSIONS, AND CONDITIONS BEFORE STARTING ANY WORK. ANY DEVIATIONS OR PROBLEMS SHALL BE TRANSMITTED TO THE ENGINEER FOR REVIEW.

SPECIFICATIONS HIGHLIGHTS

- PROVIDE BASE AND COUNTER FLASHING FOR ITEMS PENETRATING THE ROOF- COORDINATE WITH ARCHITECTURAL REQUIREMENTS.
- CONTRACTOR TO FURNISH AND INSTALL ALL STARTERS, WIRING, CONTROLS, DEVICES AND ALL CONDUIT, FOR A COMPLETE AND OPERABLE SYSTEM.
- ALL WORK SHOWN IS NEW, UNLESS NOTED AS EXISTING.
- MAINTAIN OCCUPANCY AND FIREWALL SEPARATION INTEGRITY AS REQUIRED. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF ALL OCCUPANCY/FIREWALL SEPARATIONS AND SPECIFIC DETAILS FOR CONSTRUCTION. PROVIDE ALL NECESSARY FIRE DAMPERS, ACCESS DOORS, AND CAULKING, ETC. FOR APPROVED INSTALLATION.

BIDDING

- SUBMISSION OF A BID PROPOSAL, DIRECTLY OR INDIRECTLY BY THE CONTRACTOR FOR THIS WORK, SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE AND UNDERSTANDS THE CONDITIONS THAT MAY AFFECT THE PERFORMANCE OF THE WORK. CONTRACTOR IS EXPECTED TO CONTACT ARCHITECT FOR ANY PARTICULAR PROBLEMS AND CLEAR UP ANY POSSIBLE MISUNDERSTANDING BEFORE BID IS SUBMITTED. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING OF THE CONTRACT DOCUMENTS AND THE WORK TO BE ACCOMPLISHED.
- BASE PROPOSAL ON MANUFACTURERS NAMED, UNLESS 'OR EQUAL' IS INDICATED.

EXECUTION

- THE CONTRACTOR SHALL PROVIDE ALL SLEEVES, OPENINGS, CUTTING, AND PATCHING NECESSARY FOR THE INSTALLATION OF THE WORK. CUTTING AND PATCHING SHALL BE DONE BY WORKMEN SKILLED IN THE TRADES REQUIRED AND PAID BY THE CONTRACTOR REQUIRING THE WORK COMPLETE.
- THE CONTRACTOR SHALL PROVIDE ALL RIGGING, HANDLING OF MATERIALS AND EQUIPMENT, AND THE NECESSARY PROTECTION FOR MATERIALS AND EQUIPMENT.
- TOOLS AND EQUIPMENT WILL BE STORED IN OWNER DESIGNATED AREAS ONLY.
- THE CONTRACTOR WILL PROTECT THE WORK AND MATERIAL AGAINST DIRT, THEFT, INJURY, OR DAMAGE UNTIL ACCEPTED BY OWNER. ALL WORK SHALL BE TURNED OVER TO OWNER CLEAN AND IN PERFECT CONDITION, READY FOR SATISFACTORY SERVICE.
- PIPES AND/OR CONDUITS PASSING THROUGH WALL, FLOORS, AND PARTITIONS SHALL BE PROVIDED WITH SLEEVES, EXCEPT AS PROHIBITED BY U.L. LISTING. SLEEVES PASSING THROUGH WATER PROOFING OR DAMP PROOFING SHALL BE WATER TIGHT. PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SHALL BE FIRE PROOFED WITH MATERIAL APPROVED AND AS DEFINED FOR THE RATING OF THE STRUCTURE AND U.L. LISTED.
- EACH CONTRACTOR SHALL PROVIDE ALL FOUNDATIONS, HANGERS, AND SUPPORTS FOR ALL EQUIPMENT SUPPLIED AND/OR INSTALLED UNDER THEIR WORK. ANY EQUIPMENT WITH MOVING PARTS SHALL BE PROVIDED WITH VIBRATION ISOLATION.
- ALL EQUIPMENT SHALL BE PROVIDED WITH FACTORY FINISH. ALL REQUIRED PAINTING WILL BE PERFORMED UNDER THE GENERAL CONSTRUCTION SECTION OF THE SPECIFICATIONS
- WHERE PIPES OR CONDUITS PASS THROUGH WALLS, FLOORS, OR CEILINGS IN FINISHED AREAS, THEY SHALL BE FURNISHED WITH CHROME PLATED ESCUTCHEON PLATES.
- AT THE CONCLUSION OF THE JOB, EACH PIECE OF EQUIPMENT, VALVE, SWITCH, STARTER, PANEL, PIPE LINE, CONDUIT, ETC., SHALL BE CLEARLY IDENTIFIED WHETHER EXPOSED OR CONCEALED, COVERED OR UNCOVERED, IN ACCORDANCE WITH OSHA AND ANSI REGULATIONS. IDENTIFY PIPES NEAR EACH VALVE WITH 'BRANDY'-PERMA CODE PIPE TAPE' OR T. & B. WESTLINE 'TEL-A-PIPE' INDICATING DIRECTION OF FLOW, SERVICE ZONE, AND SIZE. TAPE SHALL BE APPLIED TO PIPE, CONDUIT, OR COVERING. VALVES, CONTROLS, AND DAMPERS SHALL BE IDENTIFIED BY 2-INCH LACQUERED BRASS TAGS WITH STAMPED LETTERS FASTENED WITH 'S' HOOKS OR CHAINS. EQUIPMENT IS TO BE IDENTIFIED AS TO FUNCTION AND PURPOSE BY MEANS OF PERMANENTLY ATTACHED LAMINATED PHENOLIC NAMEPLATES WITH BEVELED EDGES AND WHITE LETTERS ON BLACK BACKGROUND.
- AT THE CONCLUSION OF THE WORK, ALL EQUIPMENT AND SYSTEMS SHALL BE CAREFULLY BALANCED, ADJUSTED, AND TESTED TO PROVIDE BALANCED, QUIET-OPERATING, STABLE AND SAFE SYSTEMS. DEMONSTRATE OPERATION OF ALL SYSTEMS TO THE OWNER'S DESIGNATED REPRESENTATIVE.

HVAC

PRODUCTS

- ALL DUCTWORK TO BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE SMAGNA MANUAL ENTITLED 'HVAC DUCT CONSTRUCTION STANDARDS- METAL AND FLEXIBLE'. SUPPLY AND RETURN AIR DUCTWORK SHALL BE GALVANIZED METAL EXCEPT WHERE OTHERWISE INDICATED. ALL ELBOWS SHALL BE FULL INSIDE RADIUS THROAT, WHERE SQUARE ELBOWS ARE REQUIRED DUE TO CONSTRUCTION LIMITS, ELBOWS SHALL BE FITTED WITH DOUBLE- FACED TURNING VANES.
- PROVIDE OPPOSED BLADE BALANCING DAMPERS AT EACH SUPPLY AIR CONNECTING TO MAIN DUCTS AND WHEREVER NECESSARY TO FACILITATE AIR BALANCING OF THE DUCT SYSTEM.
- SEAL ALL DUCT PENETRATIONS THROUGH WALLS, FLOOR, AND ROOF. SEAL ALL TRANSVERSE DUCT SEAMS WITH APPROVED MASTIC. DUCT TAPES SHALL NOT BE ALLOWED FOR RIGID DUCTWORK.
- ALL DUCTWORK SIZES SHOWN ARE FREE AREA INSIDE DIMENSIONS. ALL ROUND SUPPLY AND RETURN DUCTWORK SHALL BE INSULATED WITH FOIL FACED, LOW DENSITY DUCT WRAP. WRAP SHALL BE 2' THICK WITH A REINFORCED FOIL KRAFT VAPOR BARRIER FACING MIN. R-6 INSTALLED. INSTALL PER MANUFACTURER'S INSTRUCTIONS. EXHAUST DUCTWORK SHALL BE UNINSULATED. DUCTWORK INTERIOR BEHIND DEVICES SHALL BE PAINTED FLAT BLACK.
- LINE ALL RECTANGULAR DUCTWORK WITH 1" THICK, 1 1/2 LB DENSITY DUCT LINER LINING SHALL BE APPLIED TO DUCTWORK WITH FIRE RESISTIVE ADHESIVES, FOSTER 85-10 OR EQUAL, AND COPPER OR CADMIUM PLATED MECHANICAL FASTENERS, GRAHAM, OMARK, OR EQUAL.
- FLEXIBLE DUCTWORK, WHERE INDICATED ON THE DRAWINGS, SHALL BE INSULATED WITH PLASTIC VAPOR BARRIER AT INTERIOR AND EXTERIOR. STEEL WIRE COIL REINFORCED. JOINTS SHALL BE BAND-CLAMPED AND TAPE SEALED TO MAINTAIN INTEGRITY OF VAPOR BARRIER. FLEXIBLE DUCT RUNS SHALL BE LIMITED TO 6' OF FLEX DUCT EACH RUNOUT. INSTALLATION SHALL BE SUPPORTED TO ELIMINATE SAGS. TURNS IN FLEXIBLE DUCT SHALL NOT EXCEED ONE EQUIVALENT FULL- RADIUS ELBOW PER 6' RUNOUT.
- BALANCE ALL EQUIPMENT, DIFFUSERS, AND GRILLES TO OBTAIN THE AIR QUANTITIES AS SHOWN ON PLANS. CONTRACTOR SHALL PROVIDE (5) FIVE BOUND COPIES OF A CERTIFIED TEST AND BALANCE REPORT WITH FORMS CONTAINING INFORMATION INDICATED IN SCHEDULES. SUBMIT REPORT TO ARCHITECT/ENGINEER FOR REVIEW PRIOR TO PROJECT CLOSEOUT.
- PROVIDE FLEXIBLE DUCT CONNECTORS ON INLET AND OUTLET OF ALL AIR MOVING EQUIPMENT, INCLUDING EXHAUST FANS AND FAN COIL UNITS.
- REFER TO DRAWING SCHEDULE(S) FOR EQUIPMENT REQUIREMENTS.

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THE ENGINEER ACCEPTS NO LIABILITY FOR RESPONSIBILITY FOR THESE DOCUMENTS UNLESS WE SIGNATURE AND SEAL THESE DOCUMENTS AS SHOWN.

DESIGNED PROJECTS

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A FACILITY IMPROVEMENT FOR:
FIRE STATION 2,7, & 9
LAS VEGAS, NEVADA

PROJECT NUMBER	DATE	REVISION DESCRIPTION	NUMBER	DATE
01633				
DRAWN BY: SJE	CHECKED BY: KSD			
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SCALE: NONE				
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