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29756 Desert Willow Blvd  
Queen Creek, Arizona 85243  
ph. 480.882.9833  
fax. 480.445.9795  
www.aecdesigns.com  
email: brian@aecdesigns.com

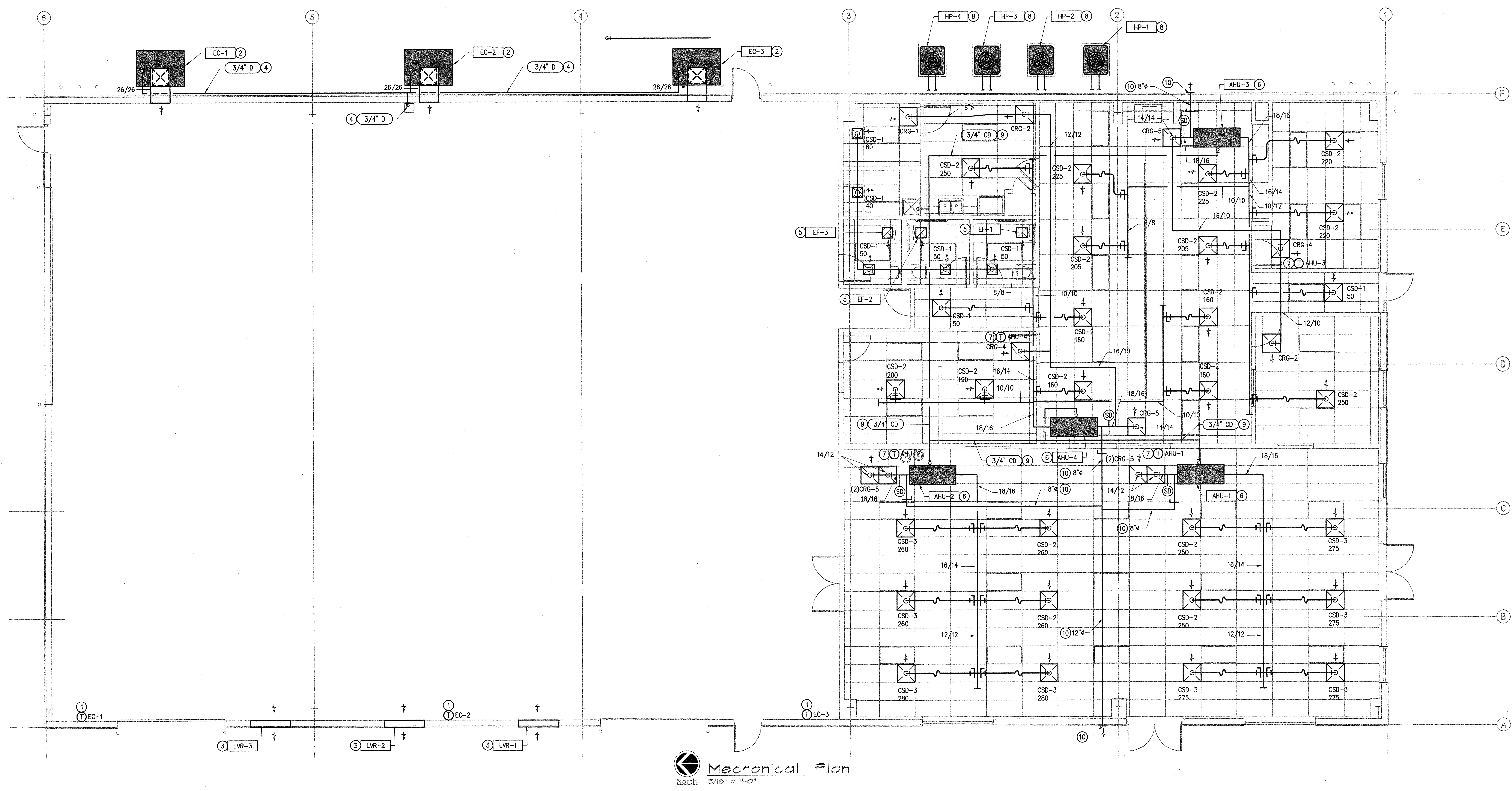
Architecture Plus L.L.C.  
GARDEN CITY BOOC CITY DENVER  
ARCHITECTURE

PLANNING  
INTERIORS

403 E. FULTON G302762872  
GARDEN CITY, KANSAS 67846  
BRIAN GARDNER  
arplus@architectureplus.net

date  
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drawn by  
Brian

NATIONAL WATER WORKS  
NORTH PHOENIX BRANCH  
Parcel #209-03-104 A  
2140 W Williams Drive  
Phoenix, Arizona



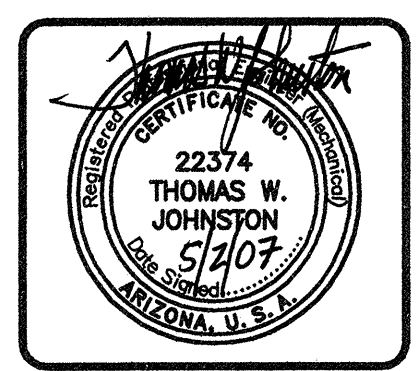
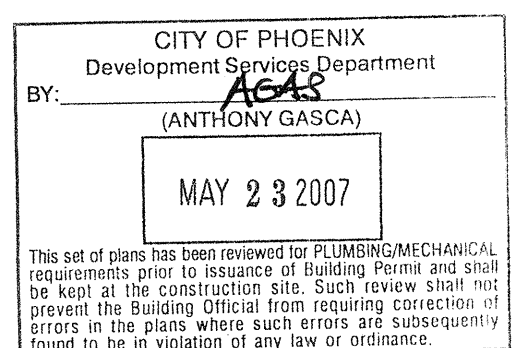
**Mechanical Plan**  
North 3/16" = 1'-0"

**GENERAL NOTES**

- LOCATE EXHAUST A MINIMUM OF 10- FEET FROM ANY OUTSIDE AIR INTAKE AND A MINIMUM OF 1- FOOT FROM ANY VERTICAL SURFACE.
- PROVIDE NEW DUCT, DUCT TRANSITIONS, DAMPERS, RETURN AND SUPPLY GRILLES AND CONDENSATE PIPING FOR NEW CONFIGURATION. SEE DETAIL B/MP2 FOR GRILLE INSTALLATION. PAINT THE INTERIOR OF THE DUCT BEHIND GRILLES FLAT BLACK. PROVIDE BALANCING DAMPER ON ALL SUPPLY GRILLES NEAR MAIN DUCT. BALANCE THE EQUIPMENT TO THE CFM SHOWN ON DRAWINGS. PROVIDE AIR BALANCE REPORT PER 2003 IMC SECTION 403.3.4. PROVIDE A COPY OF BALANCING REPORT TO MECHANICAL INSPECTOR FOR FINAL REVIEW. APPROVED BALANCING COMPANY UNIVERSAL AIR BALANCE. PHONE (480) 779-8275.
- PROVIDE AND INSTALL INTERNATIONAL MECHANICAL CODE GAUGE THICKNESS GALVANIZED SHEET METAL DUCT WITH R-5 INSULATION AND VAPOR BARRIER ACCORDING TO SMACNA REQUIREMENTS. ALL MATERIALS EXPOSED WITHIN DUCTS OR PLENUMS SHALL HAVE A FLAME-SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED RATING OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH THE TEST FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS, IBC STANDARDS.
- COORDINATE DUCT ROUTING WITH SURROUNDING CONDITIONS AND ROOF STRUCTURE.
- PROVIDE TURNING VANES IN ALL MAIN SQUARE DUCTS.
- SMOKE DETECTORS ASSOCIATED WITH SMOKE DAMPERS AND HVAC SHUTOFFS SHALL BE TESTED BY AN APPROVED TESTING AGENCY OR A QUALIFIED THIRD PARTY INSPECTOR. THE SPECIAL INSPECTOR/TESTING AGENCY SHALL BE AN INDEPENDENT THIRD PARTY INDIVIDUAL OR FIRM AND SHALL NOT BE THE INSTALLING CONTRACTOR. A PROFESSIONAL ENGINEER SHALL SUBMIT A FINAL SIGNED AND SEALED REPORT TO THE MECHANICAL INSPECTOR PRIOR TO CITY ISSUANCE OF FINAL INSPECTION APPROVAL OR OCCUPANCY APPROVAL, INCLUDING CONDITIONAL OCCUPANCY APPROVAL.
- ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS AND CONNECTIONS IN DUCTWORK SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), MASTIC-PLUS-EMBEDDED-FABRIC SYSTEMS OR TAPES. TAPES AND MASTICS USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A AND SHALL BE MARKED 181A-P FOR PRESSURE-SENSITIVE TAPE. TAPES AND MASTICS USED TO SEAL FLEXIBLE AIR DUCT AND FLEXIBLE CONNECTORS SHALL COMPLY WITH UL 181B AND SHALL BE MARKED 181B-FX FOR PRESSURE-SENSITIVE TAPE OR 181M FOR MASTIC. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. UNLISTED DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS.

**KEY NOTES**

- PROVIDE MANUFACTURER'S RECOMMENDED EVAPORATIVE COOLER CONTROLLER. COORDINATE MOUNTING HEIGHT WITH OWNER. SEE EVAPORATIVE COOLER SCHEDULE AND DETAIL H/MP2.
- PROVIDE NEW UP-DISCHARGE EVAPORATIVE COOLER ON FACTORY CURB. ROUTE DUCTWORK UP FROM UNIT, THEN HORIZONTAL WHEN THE BOTTOM OF THE HORIZONTAL DUCT IS AT 16'-0" AFF. PROVIDE PROTECTIVE NON RESTRICTIVE GRILLE AT WALL. SEE EVAPORATIVE COOLER SCHEDULE AND DETAILS G/MP2 AND H/MP2.
- PROVIDE WALL LOUVER WITH BACKDRAFT DAMPER AND INSECT SCREEN FOR EVAPORATIVE COOLER RELIEF. SEE LOUVER SCHEDULE.
- ROUTE EVAPORATIVE COOLER DRAINS TO FLOOR SINK. SLOPE DRAIN AT 1/4" PER FOOT. TERMINATE INTO FLOOR SINK WITH A 90° ELBOW DOWN AND AN AIR GAP.
- PROVIDE CEILING MOUNTED EXHAUST FAN. ROUTE DISCHARGE TO ROOF. PROVIDE BACKDRAFT DAMPER AND ROOF CAP. TERMINATE A MINIMUM OF 10- FEET FROM ANY OUTSIDE AIR INTAKE. FAN TO OPERATE FROM REST ROOM LIGHT SWITCH. SEE SCHEDULE AND DETAIL A/MP2.
- PROVIDE SPLIT SYSTEM HEAT PUMP AIR HANDLER IN CEILING SPACE. FIELD MOUNT UNIT IN A MANNER THAT ALLOWS FOR EASY SERVICE ACCESS, COORDINATE DUCTWORK AND PIPING. PROVIDE DUCT DETECTOR IN RETURN DUCT. INSTALL PER 2003 IMC SECTION 606. PROVIDE AN AUDIBLE OR VISIBLE SIGNAL ON THE FACE OF THE RETURN GRILLE IN A MANNER THAT IS CLEARLY VISIBLE OR EASY TO BE HEARD AND IDENTIFY AS AIR DUCT DETECTOR TROUBLE. COORDINATE RESET LOCATIONS WITH OWNER. SEE SCHEDULE AND DETAIL E/MP2.
- PROVIDE PROGRAMMABLE AUTO-CHANGEOVER HEAT PUMP THERMOSTAT. COORDINATE WITH HEAT PUMP MANUFACTURER.
- PROVIDE SPLIT SYSTEM HEAT PUMP CONDENSER UNIT ON GRADE W/ 4-INCH HOUSEKEEPING PAD. SEE SCHEDULE AND DETAIL F/MP2. ROUTE REFRIGERANT LINES TO AIR HANDLER, SIZE PER MANUFACTURER. PROVIDE CONTINUOUS ARMAFLEX ON ALL LIQUID LINES. PROVIDE ALUMINUM JACKET ON OUTDOOR LIQUID LINES OVER TOP OF ARMAFLEX.
- ROUTE CONDENSATE AS SHOWN. TERMINATE INTO MOP SINK WITH 90° DOWN ELBOW WITH AIR GAP PER CODE.
- PROVIDE OUTSIDE AIR DUCTWORK. PROVIDE BALANCING DAMPER AT INDIVIDUAL BRANCHES TO UNITS. PROVIDE WALL LOUVER AND INSECT SCREEN. SEAL WALL PENETRATIONS WATER TIGHT.



**JOHNSTON ENGINEERING COMPANY**  
HEATING, VENTILATING, AIR CONDITIONING, PLUMBING  
9777 NORTH 91ST STREET, SUITE 100  
SCOTTSDALE, ARIZONA 85258  
PH (480) 443-8773 FAX (480) 443-4591  
E-mail: design@jehvac.com

job number  
0658  
title  
MECHANICAL PLAN

JEC PROJECT NO. 06095

sheet number  
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