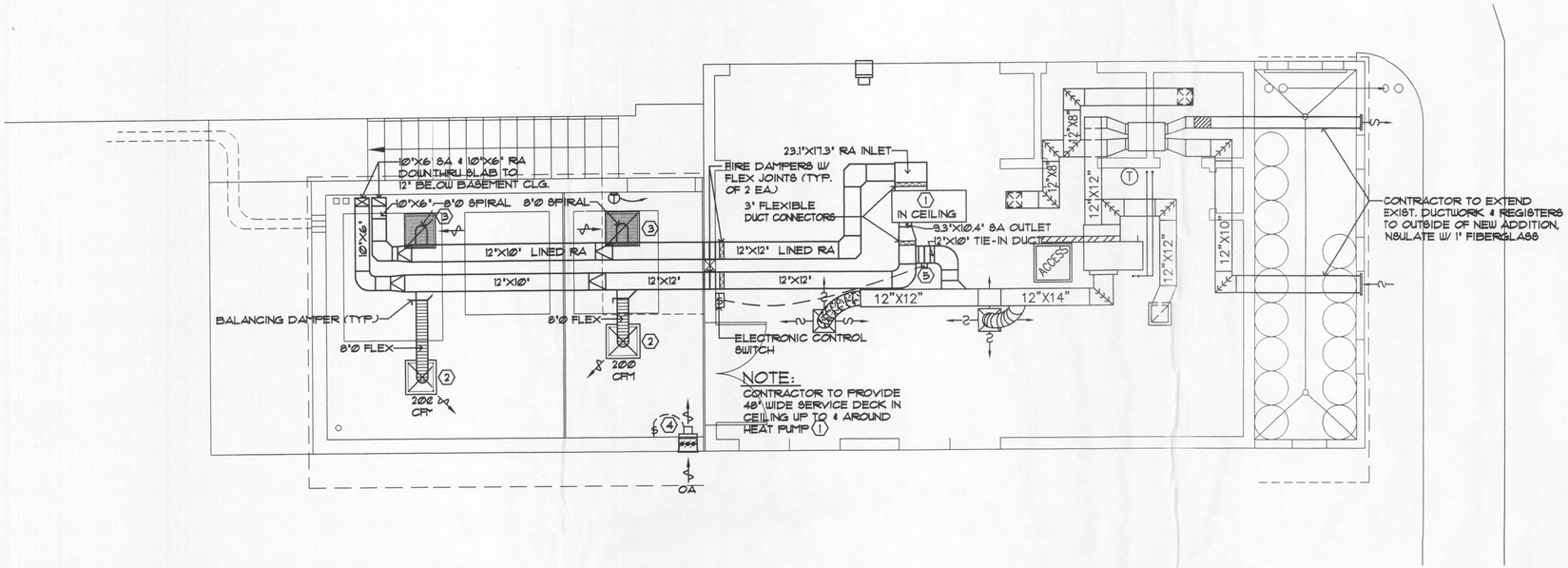
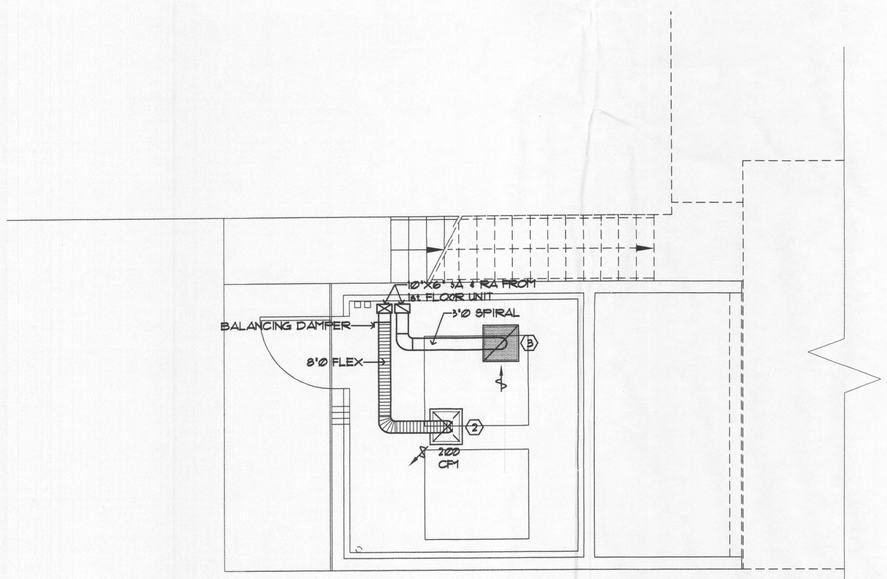
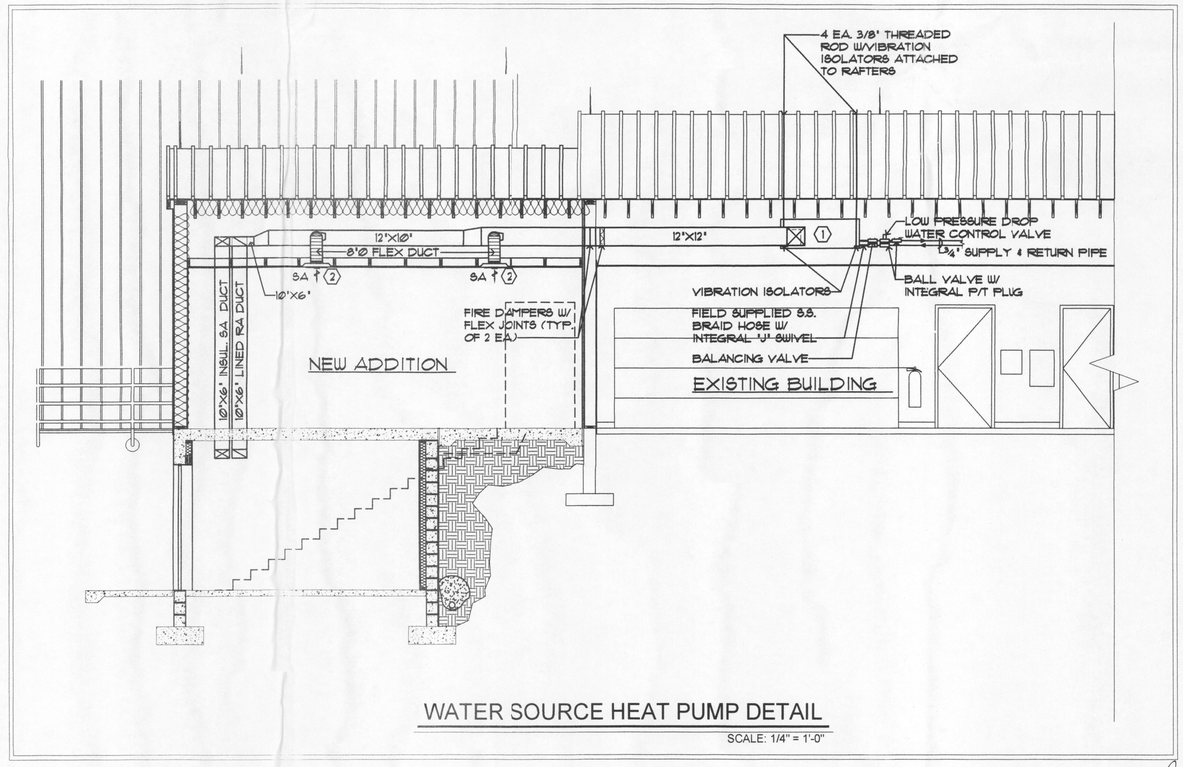


UPPER FLOOR



LOWER FLOOR



WATER SOURCE HEAT PUMP DETAIL

SCALE: 1/4" = 1'-0"

MECHANICAL PLAN

SCALE: 1/4" = 1'-0"

GENERAL HVAC NOTES

1.) MATCH ALL DIFFUSERS AND GRILLES TO CEILING PLAN, AVOID LIGHTS, ETC.
2.) MAXIMUM RUN OF FLEX DUCT IS 12 FT.
3.) ALL RETURN AIR DUCT TO BE LINED W/1" FIBERBOARD BACK TO UNIT.
4.) INSULATE ALL SUPPLY AIR DUCT (IN UNCONDITIONED SPACE & ON ROOFTOP) WITH 1" FIBERGLASS AND VAPOR BARRIER.
5.) DUCTWORK TO MEET SMACNA REQUIREMENTS.
6.) ALL WORK TO MEET INTERNATIONAL MECHANICAL CODE - 2003 EDITION CONTRACTOR TO TEST ADJUST & BALANCE HVAC SYSTEMS.
7.) ALL DUCT INSTALLATION SHALL MEET N.M. ENERGY CODE 2003 EDITION.
8.) ALL SUPPLY & RETURN DUCT INSULATION SHALL MEET MINIMUM R 8 VALUES.
9.) SMOKE DETECTORS TO BE INSTALLED MIN. OF 3 FT. AWAY FROM ALL HVAC REGISTERS AND CEILING FANS.

MECHANICAL EQUIPMENT SCHEDULE

(1) HEAT PUMP: WATER SOURCE HEAT PUMP, HIGH EFFICIENCY, SCROLL COMPRESSOR, THERMOSTATIC EXPANSION VALVE (TXV), RIGHT RETURN LEFT DISCHARGE, HORIZONTAL CONFIGURATION, NOMINAL 1-1/2 TON ARI RATED, 16.7 EER, 3.6 COP, NOMINAL 600 CFM, 4.5 GPM, INSULATED CABINET INTERIOR, VIBRATION ISOLATORS, FAN MOTOR INSULATION & COMPRESSOR SPRINGS FOR SOUND ISOLATION, SHORT CYCLE TIME DELAY, 2" WIDE 95% PARTICULATE FILTERS, EMERGENCY 2 STAGE ELECTRIC HEAT OPTION, PROGRAMMABLE ELECTRONIC THERMOSTAT, 208/230 V 1 PHASE, CARRIER 50RHS018ZCC3, COMPRESSOR-RLA 7.1 LRA 38.0, FM-FLA 1.0, TOTAL FLA 8.1, POWER SUPPLY: MCA-9.8, FUSE OR HACR BKR-15, TRANE, YORK, OAE, UNIT WEIGHT = 193 lbf. NOTE: MODIFY HEAT PUMP TO FIT EXISTING TEMPERATURES, FOR OPERATION IN COLD TEMPERATURES.

(2) CEILING REGISTER: HIGH CAPACITY FOR EVAPORATIVE COOLING, NO CENTER CORE, SLIDE GATE FOR WINTER SHUTDOWN, WHITE FINISH, STEEL CONSTRUCTION, AIR MATE MODEL 1010, OAE

(3) GRILLE: RETURN AIR, SIZE 24"X24" OR AS SHOWN, ALUMINUM CONSTRUCTION, WHITE FINISH, PERFORATED, J&J AL-1230, TUTTLE & BAILEY, KRUEGER, OAE

(4) SIDE WALL PROPELLER FAN: VENTILATING SUPPLY AIR FAN, STEEL CONSTRUCTION, WALL MOUNT COLLAR, BACKDRAFT DAMPER W/DAMPER GUARD, 311 CFM, DIRECT DRIVE MOTOR, 1050 RPM, 1.5 SONES, SWITCHED SEPERATELY, GREENHECK MODEL S-8, OAE

(5) ZONE DAMPER: 12"X0" DAMPER W/ACTUATOR, OPOSED BLADE, NORMALLY CLOSED, 20 - 30 VAC, 2.5 VA, CLASS 2, JOHNSON CONTROLS ZOTDE-012X010, OAE

APACHE POINT OBSERVATORY SDSS BLDG EXPANSION

PREPARED FOR
ASTROPHYSICAL RESEARCH CONSORTIUM
SUNSPOT
NEW MEXICO

DATE	PHASE
4/28/07	PRELIMINARY
7/13/07	PERMIT

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