1. DUCTWORK SHALL BE FABRICATED AND SUPPORTED IN ACCORDANCE WITH SMACNA PUBLICATIONS. FIELD VERIFY LOCATIONS AND MEANS OF SUPPORTING DUCT. COORDINATE WITH EXISTING CONDITIONS.
2. CONSTRUCT DUCTS OF GALVANIZED STEEL SHEET, LOCK-FORMING.
3. SEAL DUCTS TO A RATING OF CLASS "A" AS DEFINED BY SMACNA, BY APPLYING MASTIC-TYPE OR GASKET-TYPE SEALER.
4. SUPPLY DUCTWORK SHALL BE INSULATED WITH 1-1/2 INCHES OF FLEXIBLE GLASS FIBER INSULATION (K= 0.24 AT 75 DEG F) EQUAL TO CERTAINTEED. VAPOR BARRIER JACKET SHALL BE CONSTRUCTED OF A WHITE KRAFT PAPER WITH GLASS FIBER YARN, BONDED TO ALUMINIZED FILM.
5. SEAL AND INSULATE EXISTING DUCT MAINS AS REQUIRED WHERE EXISTING DUCT BRANCHES ARE REMOVED.
6. DUCTLESS SPLIT AC UNITS.
   A. FULL CHARGE OF R-22 FOR REFRIGERANT TUBING SHALL BE PROVIDED IN EVAPORATOR UNIT. REFRIGERANT TUBING LENGTH SHALL BE REVISED AS REQUIRED (COORDINATE WITH DRAWINGS). A HOLDING CHARGE SHALL BE PROVIDED IN THE EVAPORATOR.
   B. UNIT SHALL BE PROVIDED WITH PRE-CHARGED AND PRE-INSULATED LINE SETS WITH QUICK CONNECT/DISCONNECT FITTINGS.
   C. INSTALL UNITS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. HOT WATER PIPING SHALL BE CONSTRUCTED OF BLACK STEEL (ASTM A53), SCHEDULE 40 FOR ALL SIZES. REFRIGERATION TUBING SHALL BE REFRIGERATION GRADE, TYPE "L" COPPER, HARD-DRAWN, DEHYDRATED, NITROGEN CHARGED AND SEALED COPPER TUBING.
8. PROVIDE NEW PIPE HANGERS WITH SHIELDS/INSERTS AS REQUIRED TO ACCOMMODATE PIPING INSULATION.
9. HOT WATER PIPING SHALL BE INSULATED WITH GLASS FIBER INSULATION (K= 0.24 AT 75 DEG F) EQUAL TO CERTAINTEED. INSULATION THICKNESS SHALL BE 1-1/2 INCHES. A VAPOR BARRIER JACKET SHALL BE CONSTRUCTED OF A WHITE KRAFT PAPER WITH GLASS FIBER YARN, BONDED TO ALUMINIZED FILM.
10. REFRIGERANT PIPING SHALL BE INSULATED WITH 3/4" THICK FLEXIBLE UNICELLULAR INSULATION EQUAL TO ARMSTRONG AP ARMAFLEX. SEAL ALL JOINTS. FOR PIPING OUTDOORS, INSULATION SHALL BE PROTECTED BY A 24 GAUGE PVC PIPE INSULATION COVERING, WITH ADHESIVE JOINING OF SEAMS AND JOINTS.
11. PROVIDE NEW OPENINGS IN WALLS, PARTITIONS, AND FLOORS OF ANY TYPE CONSTRUCTION AS REQUIRED. FIELD COORDINATE EXACT LOCATIONS OF NEW OPENINGS.
12. PROVIDE PIPE SLEEVES THRU PARTITIONS AND WALLS. CAULK SLEEVES FULL. CLOSE OFF SPACE BETWEEN PIPE AND CONSTRUCTION WITH NON-COMBUSTIBLE INSULATION AND CAULK.
13. MECHANICAL CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE WORK OF ALL OTHER TRADES.
14. ALL DUCTWORK AND MECHANICAL EQUIPMENT SHOWN DIAGRAMMATICALLY. DETERMINE EXACT LOCATIONS IN FIELD.
15. THE MECHANICAL CONTRACTOR SHALL NOT FABRICATE OR INSTALL ANY DUCTWORK OR PIPING UNTIL HAVE COORDINATED WITH OTHER TRADES TO INSURE THAT THE DUCTWORK OR PIPING WILL FIT IN THE FIELD WITHOUT CONFLICTS. UNLESS INDICATED ON THE DRAWINGS AND IN THE LOCATIONS SHOWN ON THE DRAWINGS.
16. THE CONTRACTOR SHALL VISIT THE BUILDING SITE PRIOR TO BIDDING TO VERIFY EXISTING CONDITIONS AND DIMENSIONS AND TO TAKE MEASUREMENTS AS NECESSARY SO THAT HE MAY PROPERLY COMPLETE ALL WORK ASSOCIATED WITH THE DESIGN INTENT OF THESE DOCUMENTS.
17. PROVIDE AIR AND WATER BALANCING FOR NEW DUCTWORK AND NEW EQUIPMENT. PROVIDE AIR BALANCING FOR EXISTING EQUIPMENT AS NOTED.
18. PROVIDE SHOP DRAWINGS FOR APPROVAL ON DUCTLESS SPLIT AC UNIT, VCV BOX, PIPING, PIPING INSULATION, AND GRILLES.
19. HVAC WORK SHALL BE SCHEDULED IN ACCORDANCE WITH THE CONSTRUCTION PHASING SCHEDULE. REFER TO ARCHITECTURAL DRAWINGS FOR PHASING REQUIREMENTS.

SPECIFICATIONS

NO SCALE | REF: NA | **C3**

1. CONTROLS SHALL BE BY HONEYWELL. NO SUBSTITUTIONS.
2. PROVIDE AUTOMATIC TEMPERATURE CONTROL (ATC) SYSTEM, UTILIZING BOTH DIGITAL AND ANALOG SIGNALS WITH ACTUATION DEVICES AND ELECTRO/ELECTRONIC CONTROLLERS AS INDICATED ON THE DRAWINGS THAT ARE REQUIRED TO MEET THE FUNCTIONAL INTENT.
3. PROVIDE ELECTRICAL CONTROL WIRING AND POWER WIRING TO ANY CONTROL DEVICE. WORK SHALL BE IN ACCORDANCE WITH THE PROJECT ELECTRICAL SPECIFICATIONS.
4. VCV-6
   A. OCCUPIED: THE VCV UNIT IS CONTROLLED WITHIN MAXIMUM AND MINIMUM SUPPLY AIR VOLUME SETTINGS. THE CONTROLLER MONITORS THE ROOM TEMPERATURE SENSOR AND AIR VELOCITY SENSOR AND MODULATES THE SUPPLY AIR DAMPER IN SEQUENCE WITH THE FULLY MODULATING REHEAT VALVE TO MAINTAIN THE ROOM TEMPERATURE AT 68°F (DEFAULT DEGREES LOWER TO MAINTAIN THE ROOM TEMPERATURE. THE SUPPLY AIR VOLUME REMAINS AT MINIMUM WHEN THE REHEAT VALVE IS MODULATED.
   B. UNOCCUPIED: THE VCV UNIT IS CONTROLLED USING THE UNOCCUPIED SPACE TEMPERATURE SET POINT (60F). WHEN THE SPACE SENSOR OVERRIDE BUTTON IS DEPRESSED, THE ROOM SHALL RESET TO OCCUPIED MODE FOR TWO HOURS (OWNER-ADJUSTABLE).

CONTROLS

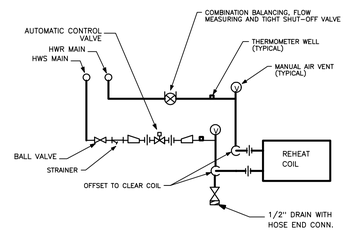
NO SCALE | REF: NA | **B3**

COMPUTER ROOM AIR CONDITIONING UNIT SCHEDULE

UNIT #	SERVICE	MANUFACTURER	MODEL	CFM	SEER	VOLTAGE	RUNNING AMPS	MAX FUSE SIZE (AMPS)	LOW AMBIENT	FAN SPEEDS	NOTES
AC-1	READING ROOMS	SANYO	24KMS12	360	10.0	208	22.0	30	TO 0 DEG F	3 + AUTOMATIC	PROVIDE INDOOR UNITS (2) WITH CONDENSATE PUMP

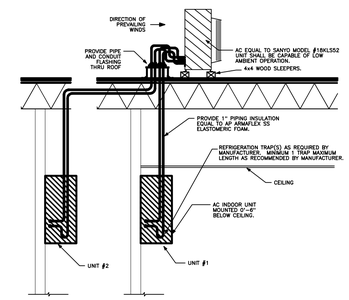
VCV BOX SCHEDULE

VAV BOX									REHEAT COIL				
UNIT NUMBER	MANUFACTURER	MODEL	SERVICE	PRIMARY VALVE: CFM MIN	PRIMARY VALVE: CFM MAX	AIR MAX PD	DUCT CONNECTIONS: INLET	DUCT CONNECTIONS: OUTLET (HxW)	CFM	AIR ENT	WATER ENT	AIR LEAVING	NOTES
S20 VCV-6	ENVIRO-TEC	SDR-SA	READING ROOM	200	400	0.5	6 DIA	12x12	200	55	180	90	

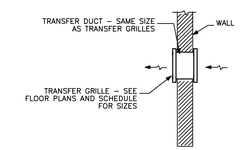


2-WAY VALVE ARRANGEMENT

HOT WATER REHEAT COIL PIPNG DIAGRAM



DUCTLESS SPLIT AC

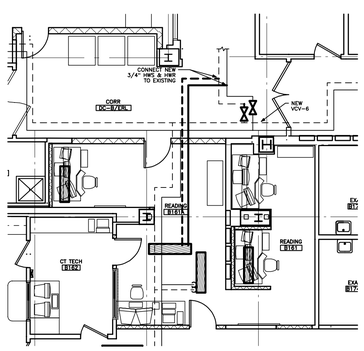


TRANSFER DUCT DETAIL

NO SCALE

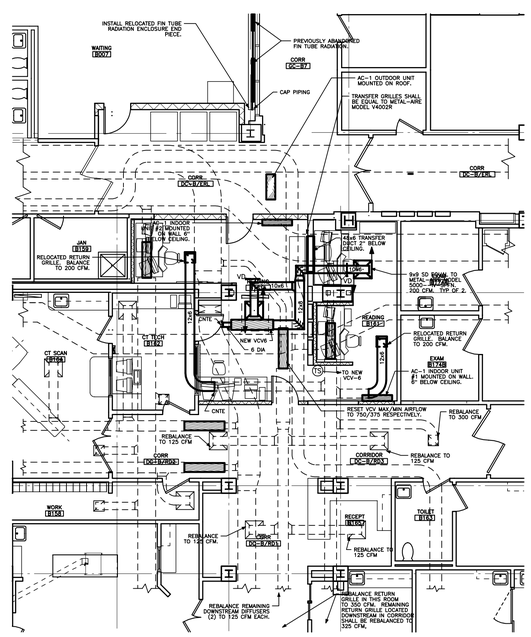
DETAILS & SCHEDULES

NO SCALE | REF: NA | **B1**



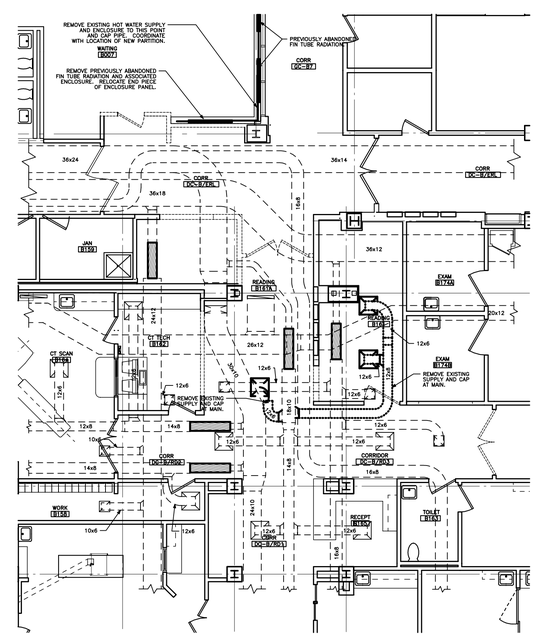
PIPING PART PLAN

1/8"=1'-0" | REF: NA | **A3**



FLOOR PLAN

1/8" = 1'-0" | 0 4' 8' 12' | REF: NA | **A2**



DEMOLITION FLOOR PLAN

1/8" = 1'-0" | 0 4' 8' 12' | REF: NA | **A1**

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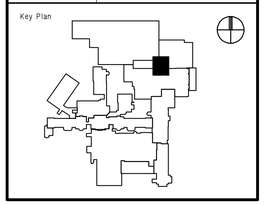
Project Title

MAINE MEDICAL CENTER ED READING RENOVATION

PORTLAND, MAINE

HA Project No. **00112**

Key Plan



Mark	Date	Description
–	07-22-02	ISSIED FOR PRICING
–	06-03-02	FINAL REVIEW
–	05-14-02	PROGRESS REVIEW

Issue Dates

Drawing Status

Drawing Title

HVAC

PA / PE: **CG** | Drawn By: **JSC**

Drawing Number

M10.1