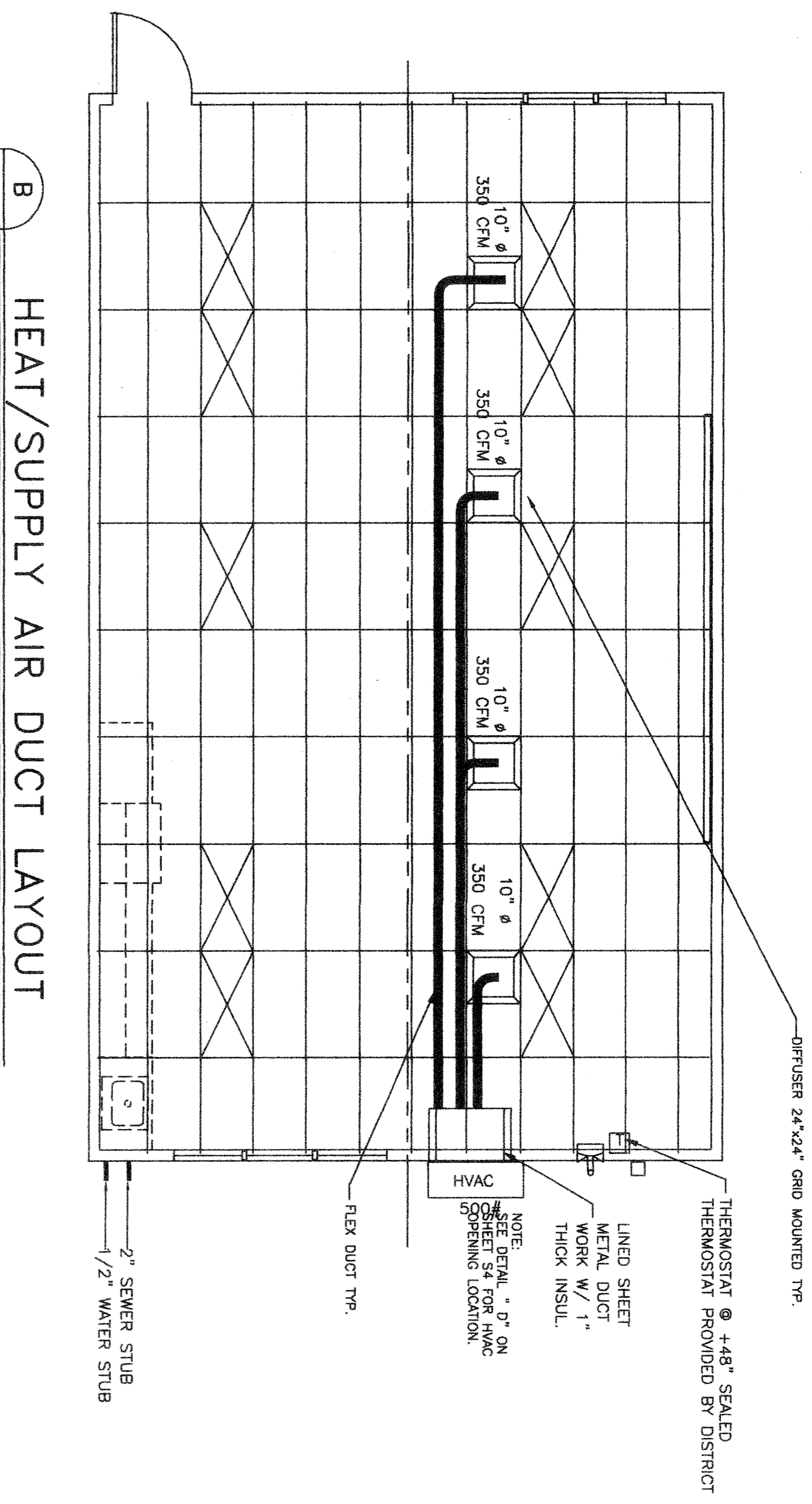


TITLE 24 ENERGY COMPLIANCE SUMMARY

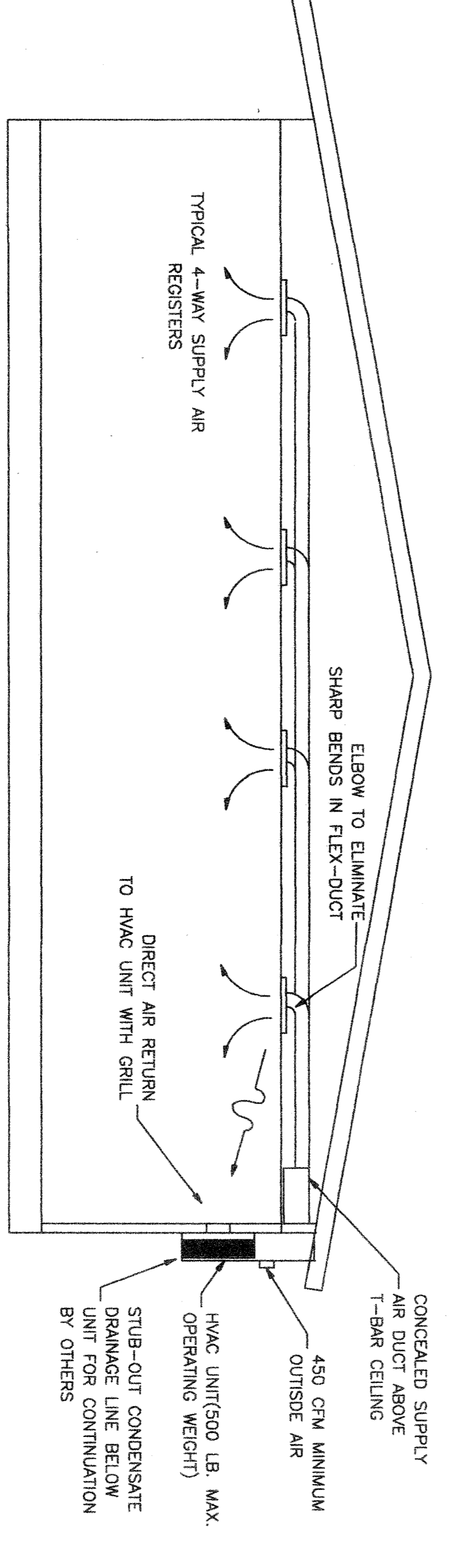
BUILDING DESCRIPTION: 24x40 RELOCATABLE BUILDING		MANUFACTURER: American Modular Systems	ZONES: 14, 15 & 16
Envelope Measures			
INSULATION		GLAZING	
Roof: R-19 (Bat)	Partes: Dual U-Factor: 0.65		
Wall: R-11 (Bat)	Frames: Metal SHGC: 0.34		
Floor: R-11 (Bat)	Tinting: Section 60		
Lighting Measures			
Code: Quantity: Description:	Lamp/Boldest:	Total Watts:	
1 8 (3) 4ft Fluorescent 18 Ballast	F278 / Electronic	724	
2 (3) 4ft Fluorescent 18 Ballast	F278 / Electronic	228	
*TYPICAL LIGHT FIXTURES PER 12' MODULAR SECTION - (Q) TYPE A & (U) TYPE B			
Controls for Credit: Occ. Sensor > 250 sq ft			
Mechanical Measures			
Modular: Type: Qty: OSA: Cooling Eff.: Heating Eff.:			
24x40 BARD WH431-A	1	710	10.0% SEER 7.0% HSPF
HP T-Stat: <input checked="" type="checkbox"/> Electric Heat (KW): 66 kw Duct Location: Conditioned Space			
Economizer: <input type="checkbox"/> Duct Insulation: R-4.2			

GENERAL NOTES
 HEATING VENTILATING AND AIR CONDITIONING (HVAC)
 1. Heat Pump: Single package wall mounted air to air electric heat pump unit shall be rated in accordance with ARI Standard 240-77.
 Reference Brands: BARD WH431A-XXXXXX 12 SEER

MAXIMUM AC SIZE FOR THIS BUILDING WILL BE A 5-TON UNIT
 All units shall be 230/208 volt, 1 phase system. UI tested & approved or comparable and meet current energy standards.
 A.) The system shall maintain an automatically controlled indoor classroom temperature of 78 degrees F. When the outdoor dry bulb temperature varies between 100 degrees F. in the summer
 B.) The system must maintain the above temperature when the damper is adjusted to use approximately one third fresh air.
 Ductwork:
 A.) Construct all ductwork of galvanized sheet metal in accordance with C.M.C.'s Ashrae Guide Equipment volume and Smocon. Low Velocity Duct Construction manual latest editions. All ductwork shall be insulated with 1" thick fiberglass duct wrap with vapor barrier. Provide 1" duct attenuation at all ductwork within 2'-0" of HVAC unit.
 B.) Non-metallic ductwork option: In accessible concealed portions of duct system rigid 1" fiberglass or insulated flex-duct with vapor barrier may be substituted for sheet metal ductwork. All ductwork within 2' of the HVAC unit and all interface connections shall be metal. Ductwork and reinforcement shall be designed for 2" static pressure.
 Reference Brands: Owens-Corning fiberglass ductboard, 1" thick, and Micro-ore, TYPE 475.
 Non-metallic ductwork shall conform to NFPA 90-A and SMACNA Class 1 rating.
 Air duct insulation and linings shall comply with flame spread less than or equal to 25, smoke generation less than or equal to 50.
 Supply air diffusers shall be 675 CFM max. 12" round. 1" fiberglass or flexduct.
 Ductwork specifically designed to provide air thermal cooling systems. 24"x8"x1" Micro-Aire type #475 Owens-Corning, Knouf, Certainteed, or equal and 90-B: UL #131 test, class 1 rating with "SMACNA".



B HEAT/SUPPLY AIR DUCT LAYOUT
 SCALE: 1/4"=1'-0"



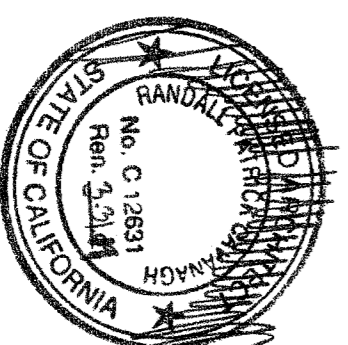
A HEAT/SUPPLY AIR DUCT CROSS SECTION
 SCALE: 1/4"=1'-0"

HVAC CFM CHART

MODEL NUMBER	DESCRIPTION	MAX. CFM
WH431-A	3 1/2 TON HEAT PUMP	1400
WH432-A	4 TON HEAT PUMP	1550
WH433-A	5 TON HEAT PUMP	1700

DUCT SUPPORT
 Flex duct to be supported with 1-1/2" wide x 26 ga. galv. strap @ max 6'-0" o.c. Attach to rafter W/2 #8 SMS @ each end.
 Supply air plenum to be supported with 1-1/2" wide x 26 ga. galv. straps min. 2 per plenum.
 Supply air box and diffusers to be supported with (2) 12 ga. hanger wires to box @ opposite corners.
 Supply air box and diffusers to be braced with (2) 12 ga. stock wires to box @ opposite corners. Attach supply air diffusers to ceiling grid to resist a lateral load equal to the weight of the diffuser and supply air box W/2 #8 SMS.

7. THESE DRAWINGS COMPLY WITH THE ENERGY CONSERVATION REQUIREMENTS OF TITLE 24 OF THE STATE OF CALIFORNIA



NOTE
 STUB OUT LOCATIONS FOR WATER, WASTE AND GAS ARE DIAGRAMMED ONLY. SEVERAL EXACT LOCATIONS MAY VARY +/- FEET. PLEASE CONTACT AMERICAN MODULAR SYSTEMS FOR EXACT LOCATIONS AT THE FACE OF THE BUILDING.

APR 03 11 28 8 5
 DATE: 3-28-2012
 FILE NO. _____
 IDENTIFICATION STAMP OF THE STATE ARCHITECT DW OR THE STATE ENGINEER _____
 AC: _____ FLS: _____ SS: _____

CUSTOMER: BAKERSFIELD CITY SCHOOL DISTRICT
MECHANICAL PLAN & NOTES

DATE: 04/21/08
 SCALE: NONE
 DRAWN BY: RS
 CHECKED BY: _____
 SERIAL NO. _____

NO.	DATE	DESCRIPTION

PROJECT NO. _____
 SHEET NO. M1

24 X 40 HP(ES)
 RELOCATABLE
 CLASSROOMS

