WINDOW TYPE IDENTIFICATION TOILET ACCESSORY IDENTIFICATION **ELEVATION** CONCRETE BRICK MASONRY IN FRT FIRE RETARDANT TREATED **ALTERNATE** GYPSUM PLASTER (TYPE) FUR CHN'L FURRING CHANNEL ANCHOR CONCRETE MASONRY IN PLAN FOOTING ACCESS PANE RADIUS R OR RAD (RUNNING BOND) **APPROX** GAUGE **APPROXIMATE** ROOF DRAIN GALV **GALVANIZED** ASPHALT ROUGH OPENING GEN CONTR GENERAL CONTRACTOR **AUTOMATIC** MASONRY IN PLAN RUBBER FLOORING (TYPE) GENERAL CONTRACTOR AVERAGE (STACK BOND) BASEMENT GYP BD-(1)BOTTOM OF GYPSUM WALL BOARD (TYPE) REINFORCE/REINFORCING/REINFORCED STONE MASONRY IN BOARD GYPSUM PLASTER (TYPE) REQUIRED BETWEEN **BITUMINOUS** HEAVY DUTY OR HARD RAKED JOINT IN SQUARE FOOT BUILDING HARDENER SQUARE INCH CTRL./EXP. JOINT HD WD-(1) BLOCKING (WOOD) HARD WOOD (TYPE) STAINLESS STEEL BENCH MARK SERVICE SINK BRICK MASONRY I BEARING HOLLOW METAL SECTION DETAIL BRK1 **BRACKET** SCHEDULE HORIZONTAL SEAL/HDNR SEALER/HARDENER CONCRETE BENT STEEL PLATE MASONRY IN SECTION CONSTRUCTION OR CONTRACTION JOINT HEATING/VENTILATING/AIR CONDITIONING SECTION DETAIL SHEET CAB CEM PL-(1) INSIDE DIAMETER CEMENT PLASTER (TYPE) SLAB ON GRADE STONE MASONRY IN CT PAV-(1 CERAMIC PAVER TILE (TYPE) INCLUDE/INCLUDING/INCLUDED SECTION DETAIL SPECIFICATION(S) CAST-IN-PLACE INSUL INSULATION/INSULATING/INSULATED SPACING SPK'R SPEAKER CLEAR STEEL IN SECTION KNOCK DOWN STANDARD CLEAN-OUT STD WT STANDARD WEIGHT CONCRETE MASONRY UNIT LAMINATE/LAMINATING/LAMINATED DISCONTINUOUS ROUGH WOOD STRUCTURE OR STRUCTURAL COMBINATION LEFT HAND BLOCKING IN SUSPEND(ED) COMP COMPRESSIBLE OR COMPACTED LOW POINT SYMMETRICAL CONC **CONCRETE** LIGHTWEIGHT **CONTINUOUS** CONC OPNO CONCRETE OPENING ROUGH WOOD TONGUE AND GROOVE COND CONDITION FRAMING/BLOCKING LONG LEG HORIZONTAL IN SECTION T/BEAM CONT **CONTINUOUS** LONG LEG VERTICAL TOP OF BEAM CONTR CONTRACT(OR) FINISHED WOOD IN CPT-(1 CARPET (TYPE) TOP OF CURB MASONRY OPENING

METAL THRESHOLD

MECHANICAL

MOUNT(ED)

METAL

NOMINAL

NUMBER

ON CENTER

MANUFACTURER

NOT IN CONTRACT

OUTSIDE DIAMETER

NOT TO SCALE

MARKERBOARD (LENGTH IN FEET)

MECHANICAL CONTRACTOR

MOP SERVICE BASIN (SINK)

OVERALL OR OUTSIDE AIR

OUTSIDE FACE OR OPPOSITE FACE

OPPOSITE OR OPPOSITE HAND

PRESSURE TREATED OR PAINT

POUNDS PER SQUARE FOOT

POUNDS PER SQUARE INCH

THE MATERIALS, ABBREVIATIONS, AND DRAFTING SYMBOLS LEGEND ARE EACH AN ALL INCLUSIVE MASTER LIST USED BY THIS FIRM. THE INCLUSION OF THESE LEGENDS INTO THESE DOCUMENTS DOES NOT IMPLY THAT ALL THE SYMBOLS OR MATERIALS INCLUDED IN THESE LEGENDS ARE INCORPORATED INTO THIS PROJECT. ABBREVIATIONS MAY APPEAR WITH PERIODS OR OTHER PUNCTUATION SEPARATING CHARACTERS ON THE DRAWINGS: THE MEANING REMAINS THE SAME.

MINIMUM OR MINUTE(S)

MAX

MB (16)

MECH CONTR

MECH

NOM

NTS

OC

OD

OPNG

CERAMIC TILE (TYPE)

CABINET UNIT HEATER

CABINET UNIT VENTILATOR

COUNTER

CENTER(S)

DIMENSION

DOOR OPENING

EXPANSION JOINT

ELECTRIC/ELECTRICAL

ELECTRICAL CONTRACTOR

ELEVATOR OR ELEVATION

ELECTRIC WATER COOLER

ELEVATION

EMBEDMENT

EMERGENCY

EACH WAY

EPOXY

EQUAL

DOWN

DOOR

DETAIL

DOWELS

EACH

DRAWINGS

COUNTER SINK

CTR SK

DWGS

DWL'S

ELEC

ELEV

EMBED

EMER

EW

ELEC CONTR



PROJECT BUILDING 'A' TESTING CENTER

> MODIFICATIONS JOLIET JUNIOR COLLEGE 1215 HOUBOLT ROAD **JOLIET, IL 60431**

JOLIET JUNIOR COLLEGE **OWNER** 1215 HOUBOLT ROAD

JOLIET, IL 60431

ARCHITECT/ **ENGINEER**

A12.24

--\-A7.19 /

(26)

100'-0"

204

203.2

203.1X

7.531

SECTION DETAIL

RIGID BOARD

INSULATION

RIGID BOARD

BATT INSULATION

GYPSUM BOARD

ACOUSTICAL

BITUMINOUS

in Section

AGGREGATE

SECTION

UNDISTURBED

EARTH BACKFILL

(ASPHALT) PAVING

BALLAST, FILL OR BACKFILL IN

CONCRETE

CEILING PANEL

INSULATION

(ROOFING)

TOP OF FOUNDATION

TACKBOARD (LENGTH IN FEET)

(WINDOW) UNIT DIMENSION

UNLESS NOTED OTHERWISE

TOP OF STEEL

TOP OF WALL

TOP OF MASONRY

VINYL BASE COVED

VERTICAL

WITHOUT

WINDOW

WATER PROOF

WEIGHT

WIDE OR WIDTH

VCT

VERT

VEN PL (1)

VINYL BASE STRAIGHT

VINYL COMPOSITION TILE

VENEER PLASTER (TYPE)

WALL CORNER GUARD

WELDED WIRE FABRIC

WALL SERVICE BASIN

G

DETAIL NUMBER-

DRAWING NUMBER —

DETAIL NUMBER-

DRAWING NUMBER —

DETAIL NUMBER -DRAWING NUMBER -

DETAIL NUMBER -

COLUMN NO

ELEVATION

NUMBER

DOOR NO. NEW

DOOR NO. EXISTING

NOMINAL THICKNESS -

KEYNOTE

IDENTIFICATION

CONSTRUCTION TYPE SPECIAL CONDITION

reference line no

DRAWING NUMBER — A6.05/

KLUBER ARCHITECTS + ENGINEERS **41 W BENTON STREET AURORA, ILLINOIS 60506** TEL (630) 406-1213 FAX (630) 406-9472 www.kluberinc.com

BID DOCUMENTS

APPLICABLE CODES

2018 INTERNATIONAL BUILDING CODE 2018 INTERNATIONAL MECHANICAL CODE 2018 INTERNATIONAL FUEL AND GAS CODE 2018 INTERNATIONAL EXISTING BUILDING CODE 2018 INTERNATIONAL FIRE CODE 2020 NATIONAL ELECTRICAL CODE LOCAL AMENDMENTS TO THE ABOVE CODES

2014 ILLINOIS PLUMBING CODE 2018 ILLINOIS ENERGY CONSERVATION CODE (2018 INTERNATIONAL ENERGY CONSERVATION CODE W/STATE AMENDMENTS 2018 ILLINOIS ACCESSIBILITY CODE

INDEX OF DRAWINGS

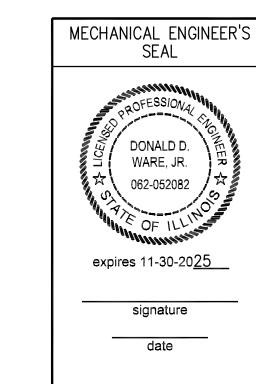
G100 COVER SHEET, GENERAL NOTES, SYMBOLS, &

JOB NO. 23-292-1513

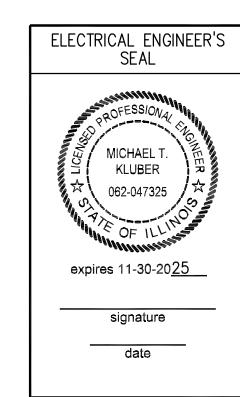
SEALS & CERTIFICATIONS

I HAVE PREPARED, OR CAUSED TO BE PREPARED UNDER MY DIRECT SUPERVISION, THE ATTACHED PLANS AND SPECIFICATIONS AND STATE THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND TO THE EXTENT OF MY CONTRACTUAL OBLIGATION, THEY ARE IN COMPLIANCE WITH IBC 2018 EDITION, THE ENVIRONMENTAL BARRIERS ACT AND THE ILLINOIS ACCESSIBILITY CODE.

KLUBER, INC. ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-001284



"G" SERIES, "ME" SERIES



"G" SERIES, "ME" SERIES

DRAWN CHECKED APPROVED SHEET TITLE

COVER SHEET, GENERAL NOTES, SYMBOLS AND **DRAWING INDEX**

SHEET NUMBER

KEYNOTES ARE TYPICALLY NOT DUPLICATED WITHIN A GIVEN DETAIL. AN UN-KEYNOTED ITEM IN A DETAIL IS THE SAME AS A KEYNOTED ITEM HAVING THE SAME APPEARANCE WITHIN THE SAME DETAIL.

	VAV TERMINAL UNIT SCHEDULE			
	MARK	VAV-1138		
	MODEL			
	AIR FLOW (CFM)	500		
	MIN AIR FLOW (CFM)	200		
	INLET SIZE (IN)			
	MIN HEATING AIR FLOW (CFM)	275		
Ι.	CAPACITY (MBH)	10.2		
	EAT / LAT (°F)	55 / 89.5		
-1⊢	WATER (GPM)	-		
ĕ	EWT / LWT (°F)	-		
REHE/	WPD (FT)	-		
"	ELEC (KW)	3.0		
	ELEC (MOP)	15		
	AREA SERVED	1138		
	REMARKS	1, 2		

MODEL BASED ON TITUS. 2. PROVIDE WITH SCR ELECTRIC HEAT CONTROL AND OUTLET ATTENUATOR.

HEAT PUMP SCHEDULE

MAF	MARK						
AIR FLOW (CFM)							
MOE	MODEL						
	ENT AIR TEMP (db/wb °F)	75.0 / 63.0					
	LVG AIR TEMP (db/wb °F)	56.3 / 53.1					
ل ل	ENT / LVG WATER TEMP (°F)	85 / 97					
Ž	WATER FLOW RATE (GPM)	25.5					
COOLING	WATER PRESS DROP (FT)	12.5					
Ü	NET SENSIBLE CAPACITY (MBH)	81.0					
	NET TOTAL CAPACITY (MBH)	113.5					
	HEAT OF REJECTION (MBH)	143.6					
	ENT AIR / LVG AIR (db °F)	70.0 / 93.1					
ل ا	ENT / LVG WATER TEMP (°F)	43 / 37					
	WATER FLOW RATE (GPM)	25.5					
HEATING	WATER PRESS DROP (FT)	12.5					
エ	NET CAPACITY (MBH)	100.1					
	HEAT OF ABSORPTION (MBH)	71.8					
SUP	SUPPLY FAN (HP)						
EXT	0.6						
ELE	460/3/60						
COOLING / HEATING EFFICIENCY RATIO (EER / COP) 14.							
REM	REMARKS						
1 [1 EVICTING TRANS WATER COURSE HEAT DUND						

EXISTING TRANE WATER SOURCE HEAT PUMP. GEOTHERMAL LOOP 25% ETHYLENE GLYCOL.

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

	MARK	MODEL	SIZE	NECK	DAMPER	MATERIAL	REMARKS
	CD-1	OMNI	24/24	6"ø	OBD	ST	1
	CD-2	OMNI	24/24	8"ø	ORD	ST	1

1. MODEL BASED ON TITUS.

VAV BOX CONTROL SCHEMATIC

POINTS LIST

	VADIADIE AID VOLLIME DOV	HARDWARE				SOFTWARE				
	VARIABLE AIR VOLUME BOX	Al	AO	BI	В0	SCHED	TREND	ALARM	GRAPHIC	
	DISCHARGE AIR TEMPERATURE	Х					Х		Х	
	ZONE AIR TEMPERATURE	Х					Χ		Х	
	HEATING SETPOINT		Χ						Х	
_	COOLING SETPOINT		Χ						Х	
	ZONE TEMPERATURE ADJUSTMENT						Х		Х	
	DAMPER POSITION		Χ						Х	
	AIRFLOW CFM	Х					Х		Х	
	MINIMUM AIRFLOW SETPOINT		Χ						Х	
	MAXIMUM AIRFLOW SETPOINT		Χ						Х	
	ELECTRIC REHEAT CAPACITY			Χ				Х	Х	
	ZONE HIGH TEMPERATURE ALARM			Χ				X	Х	
	ZONE LOW TEMPERATURE ALARM			Χ				X	Х	
	LINOCCUPIED MODE OVERRIDE			Y					Υ	

SEQUENCE OF OPERATIONS

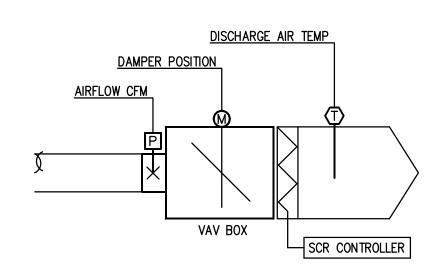
PRESSURE INDEPENDENT AIR TERMINAL SHALL MAINTAIN SPACE TEMPERATURE H'EAT/COOL SETPOINTS OF 72/75 DEGREES F (ADJ) AND UNOCCUPIED COOL/HEAT SETPOINTS OF 80/65 DEGREES F. ALL SETPOINTS SHALL BE

MODULATE TO THE MAXIMUM COOLING CFM POSITION. WHEN THE SPACE TEMPERATURE IS BELOW SETPOINT TH DAMPER SHALL MODULATE TO THE MINIMUM CFM POSITION. IF THE HEAT PUMP DISCHARGE TEMPERATURE IS ABOVE

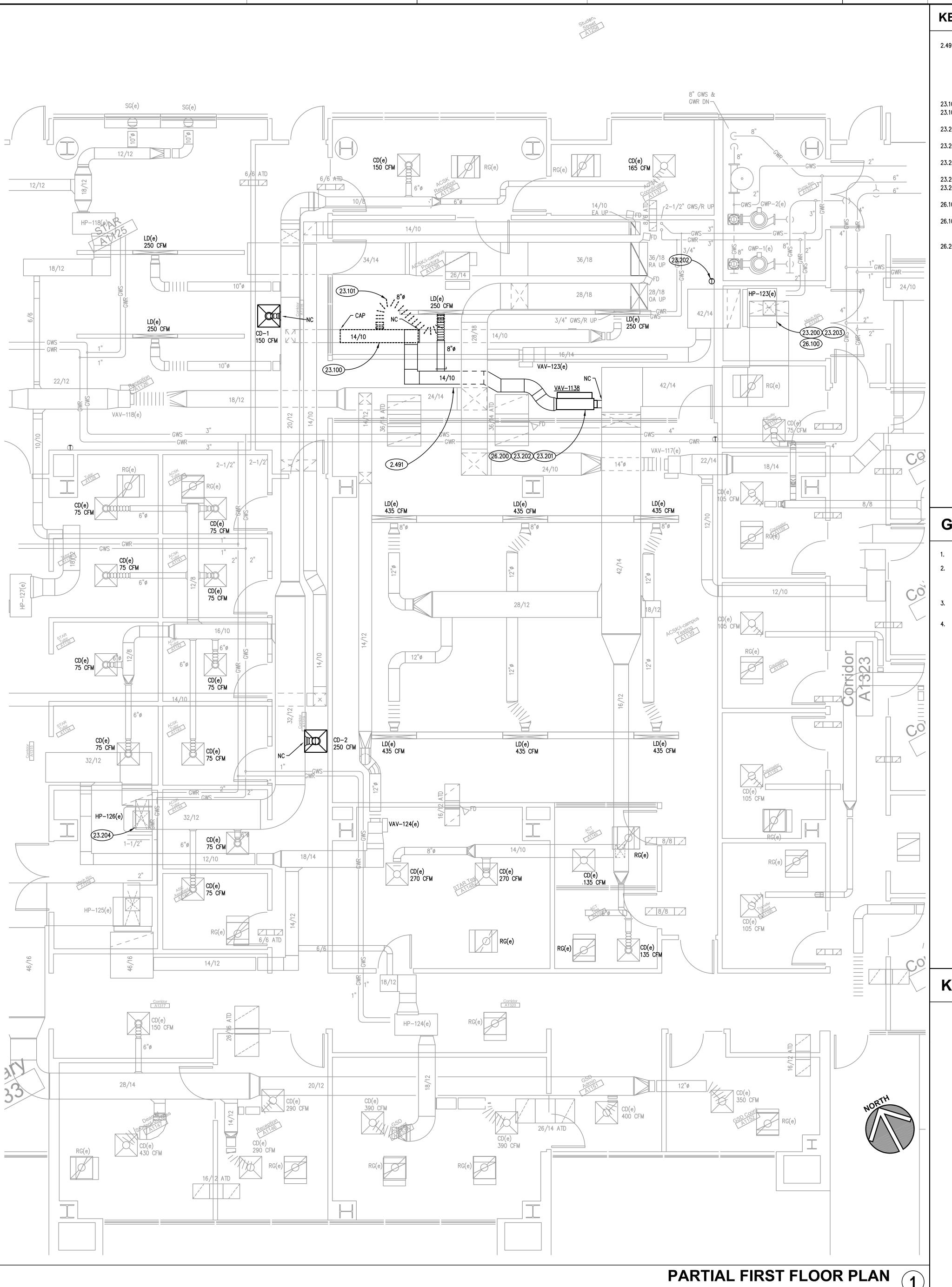
HEATING - WHEN THE TERMINAL UNIT DAMPER HAS REACHED THE MINIMUM CFM POSITION AND THE SPACE BE ENERGIZED AS REQUIRED TO MAINTAIN SPACE TEMPERATURE. AS THE SPACE TEMPERATURE INCREASES THE COIL SHALL BE DE-ENERGIZED IN A REVERSE SEQUENCE.

THE TERMINAL UNIT DAMPER AND REHEAT SHALL OPERATE AS DESCRIBED ABOVE WHEN THE ASSOCIATED AIR HANDLING UNIT IS ENERGIZED. THE UNIT SHALL OPERATE TO MAINTAIN THE UNOCCUPIED HEATING/COOLING SETPOINTS.

SPACE THERMOSTAT SHALL HAVE PLUS/MINUS 2° F TEMPERATURE SETPOINT ADJUSTMENT OF THE SETPOINT SET AT THE BAS AND TIMED UNOCCUPIED OVERRIDE BUTTON.



ZONE TEMP ZONE TEMP ADJUST UNOCCUPIED OVERRIDE



KEYNOTES

2.491 TEMPORARILY, CAREFULLY REMOVE EXISTING ACOUSTICAL CEILING TILES AND SUSPENSION GRID MEMBERS IN THIS ROOM AS REQUIRED TO PERMIT INSTALLATION OF VAV BOX AND ASSOCIATED DUCTWORK; PROTECT AND STORE TILES AND GRID MEMBERS DURING PERFORMANCE OF ABOVE-CEILING WORK; REINSTALL SALVAGED GRID MEMBERS AND ACOUSTICAL TILES AFTER COMPLETION OF ABOVE-CEILING WORK; PROVIDE NEW GRID MEMBERS AND CEILING TILES MATCHING EXISTING TO REPLACE ANY TILES AND GRID MEMBERS DAMAGED DURING REMOVAL, STORAGE OR REINSTALLATION OPERATIONS.

23.100 REMOVE SECTION OF DUCTWORK, CAP AND INSULATE TO MATCH EXISTING. 23.101 REMOVE FLEXIBLE DUCT BETWEEN SLOT DIFFUSER PLENUM AND DUCT BRANCH.

23.200 REMOVE DRIVE PACKAGE FROM EXISTING HEAT PUMP UNIT AND PROVIDE NEW TRANE DRIVE PACKAGE TO MEET REVISED PERFORMANCE REQUIREMENTS. 23.201 PROVIDE NEW VAV BOX, AND DUCTWORK. MODIFY EXISTING HANGERS THAT MAY RESTRICT NEW DUCTWORK

23.202 PROVIDE JCI CONTROLS FOR VAV BOX AND NEW THERMOSTAT. INTERFACE CONTROLS INTO CAMPUS BUILDING AUTOMATION SYSTEM. CONTRACT JCI, JIM PIERSON - 708-418-2268.

23.203 TEST AND BALANCE HP-123(e) AIR FLOW, WATER FLOW AND ALL ASSOCIATED AIR OUTLETS. 23.204 TEST AND BALANCE HP-126(e) AIR FLOW TO 1965 CFM AND ALL ASSOCIATED AIR OUTLETS.

26.100 DISCONNECT AND PROTECT EXISTING FLEXIBLE ELECTRICAL CONNECTION TO HEAT PUMP DRIVE TO BE REPLACED.

RECONNECT TO NEW DRIVE AS REQUIRED TO ENSURE A COMPLETE AND OPERATIONAL SYSTEM.

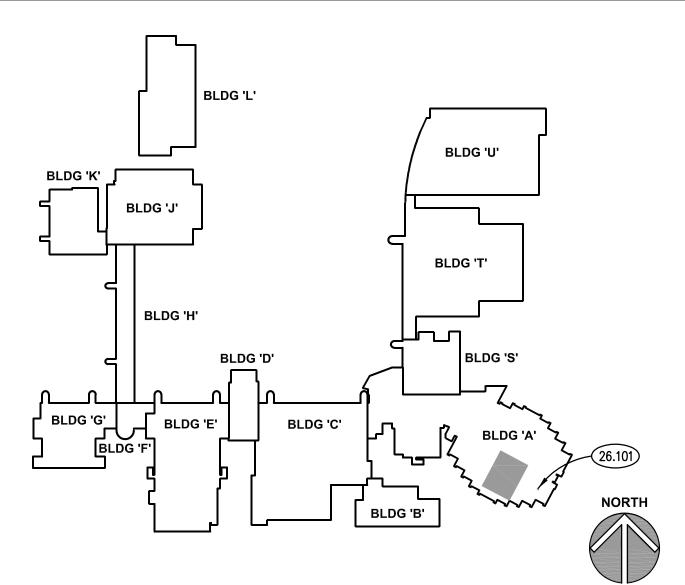
26.101 ROOM A1328, LOCATION OF PANELBOARD - 1PH4: SQUARE D NF SERIES E1 PANELBOARD. DEMOLISH EXISTING 30 AMPERE, 3 POLE BREAKER (CKT 4/6/8) FOR HP-123 AND PROVIDE 25 AMPERE, 3 POLE BREAKER IN ITS

PLACE. PROVIDE 15 AMPERE, 3 POLE BREAKER (CKT 25/27/29) FOR VAV ELECTRIC REHEAT. 26.200 PROVIDE ELECTRICAL CONNECTION TO VAV ELECTRIC HEAT. PROVIDE 30 AMPERE, 3 POLE HEAVY-DUTY DISCONNECT SWITCH. HOMERUN TO NEW BREAKER IN PANEL 1PH4-25/27/29, 3#12,#12G,3/4"C.

GENERAL NOTES

- REFER TO DRAWING G100 FOR PROJECT GENERAL NOTES.
- ALL PIPING, DUCTWORK AND RACEWAYS ARE SHOWN DIAGRAMMATICALLY AND DO NOT SHOW ALL REQUIRED FITTINGS, OFFSETS, DROPS AND RISES. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MATERIAL AND LABOR FOR A COMPLETE AND WORKING SYSTEM. COORDINATE WITH OTHER TRADES FOR SPACE AVAILABLE AND RELATIVE LOCATIONS OF EQUIPMENT, PIPING, DUCTWORK, ETC.
- EXISTING PIPING, DUCTWORK AND RACEWAYS INDICATED ON THESE PLANS SHALL BE FIELD VERIFIED FOR EXACT LOCATIONS, QUANTITY AND SIZES.
- ALL TAPES AND MASTICS USED TO SEAL DUCTWORK LISTED AND LABELED IN ACCORDANCE WITH UL 181A SHALL BE MARKED ACCORDINGLY. ALL TAPES AND MASTICS USED TO SEAL FLEXIBLE DUCTS AND AIR CONNECTORS SHALL COMPLY WITH UL 181B AND MARKED ACCORDINGLY.

KEY PLAN



DRAWN CHECKED **APPROVED**

SHEET TITLE

MECHANICAL & ELECTRICAL PARTIAL FLOOR PLAN

SHEET NUMBER

NOTE: SCALES DEPICTED ON THIS DRAWING ARE NOT CORRECT UNLESS PLOTTED SHEET SIZE IS 30 X 42 INCHES.