

### AIR HANDLING UNIT

| TAG  | MFR | MODEL      | CFM TOTAL | CFM OSA |        | COOLING |                  |                        |              | HEATING       |                         |     |          | ELECTRICAL             |              |               |               | SUPPLY FAN |       |           |          | RETURN FAN |       |           |          | FILTERS | APPROX WEIGHT (LBS) | NOTES  |        |
|------|-----|------------|-----------|---------|--------|---------|------------------|------------------------|--------------|---------------|-------------------------|-----|----------|------------------------|--------------|---------------|---------------|------------|-------|-----------|----------|------------|-------|-----------|----------|---------|---------------------|--------|--------|
|      |     |            |           | MIN     | MAX    | GPM     | MINIMUM ROWS/FPI | COOLING CAPACITY (MBH) | EAT/LAT (°F) | WATER PD (FT) | MAX FACE VELOCITY (FPM) | GPM | ROWS/FPI | HEATING CAPACITY (MBH) | EWT/LWT (°F) | WATER PD (FT) | VOLT-PHASE-HZ | MODEL      | CFM   | ESP (IWC) | MOTOR HP | MODEL      | CFM   | ESP (IWC) | MOTOR HP |         |                     |        | 4" PRE |
| AH-2 | UMP | CAH-IDE-27 | 13,350    | 3000    | 13,350 | 62.6    | 8/8              | 380                    | 74/61        | 45/55         | 7                       | 496 | 44.7     | 1/8                    | 132          | 180/160       | 2.6           | 460-3-60   | PF-36 | 13,350    | 2.0      | 15         | PF-36 | 12,820    | 0.8      | 5       | 65%                 | 13,100 | 1 2 3  |

① WITH ABB VARIABLE FREQUENCY DRIVE AND DISCONNECT, ECONOMIZER ② DUCT DETECTOR (FURNISHED BY ELECT) FOR CMC 608 SHUTOFF IN THE EVENT OF SMOKE ③ PROVIDE ONE SET OF SPARE FILTERS.

### TERMINAL BOXES

| TAG | MFR     | MODEL SERIES | GPM | ROWS | HEATING                |          |          |               | CFM  |     | NOTES |
|-----|---------|--------------|-----|------|------------------------|----------|----------|---------------|------|-----|-------|
|     |         |              |     |      | HEATING CAPACITY (MBH) | EAT (°F) | LWT (°F) | WATER PD (FT) | MAX  | MIN |       |
| AV1 | KRUEGER | LMSH-12      | 1.0 | 1    | 19                     | 55       | 180/160  | 0.25          | 1920 | 640 | ①     |
| AV2 |         | LMSH-7       | N/A | -    | -                      | -        | -        | 600           | 200  |     |       |
| AV3 |         | LMSH-7       | 0.5 | 1    | 7                      | 55       | 180/160  | 0.2           | 540  | 180 |       |
| AV4 |         | LMSH-14      | N/A | -    | -                      | -        | -        | 2200          | 730  |     |       |
| AV5 |         | LMSH-14      | N/A | -    | -                      | -        | -        | 2430          | 810  |     |       |
| AV6 |         | LMSH-10      | N/A | -    | -                      | -        | -        | 1280          | 426  |     |       |
| AV7 |         | LMSH-8       | N/A | -    | -                      | -        | -        | 780           | 260  |     |       |
| AV8 |         | LMSH-12      | N/A | -    | -                      | -        | -        | 1920          | 640  |     |       |
| AV9 |         | LMSH-12      | N/A | -    | -                      | -        | -        | 1680          | 560  |     |       |

① AIRFLOW MONITORING STATION, PROVIDE 24 VAC.

### CHILLERS

| TAG | MFR   | MODEL    | ARI COOLING (TONS) | GPM | WATER PD (FT) | EWT (°F) | LWT (°F) | SEER | ELECTRICAL |            |           | APPROX. WEIGHT (LBS) | NOTES |
|-----|-------|----------|--------------------|-----|---------------|----------|----------|------|------------|------------|-----------|----------------------|-------|
|     |       |          |                    |     |               |          |          |      | VOLT-PH-HZ | COMP (RLA) | FAN (FLA) |                      |       |
| CH2 | TRANE | CGAF C40 | 40                 | 92  | 14            | 55       | 45       | 11.4 | 480-3-60   | 17.2 (4)   | 1.8 (4)   | 3950                 |       |

### PUMPS

| TAG | MFR           | MODEL        | RPM  | GPM | PRSS DROP (FT HEAD) | ELECTRICAL |    | MOTOR | NOTES                |
|-----|---------------|--------------|------|-----|---------------------|------------|----|-------|----------------------|
|     |               |              |      |     |                     | VOLT-PH-HZ | HP |       |                      |
| P6  | BELL & GOSSET | 60 2x2x5-1/4 | 1750 | 92  | 20                  | 120-1-60   | 1  | TEFC  | PRIMARY CHILLER PUMP |

### AIR TERMINAL SCHEDULE

| TAG            | MFR     | MODEL       | NOTES   |
|----------------|---------|-------------|---------|
| SIZE 1/4 CFM   | KRUEGER | 55HR SERIES | ① ② ③ ④ |
| SIZE 1/2 CFM   |         | 5880 SERIES |         |
| SIZE 3/4 CFM   |         | EGCS SERIES |         |
| SIZE 1 CFM     |         | 5580 SERIES |         |
| SIZE 1 1/2 CFM |         | SHR SERIES  | ③ ⑤     |
| SIZE 2 CFM     |         | S80 SERIES  | ⑤       |
| SIZE 3 CFM     |         | 880 SERIES  | ⑤       |

① FRAME TYPES AND COLORS TO MATCH CEILING. COORDINATE WITH ARCHITECT. ② AIR PATTERN AS SHOWN ON PLANS. ③ STEEL CONSTRUCTION ④ PROVIDE OBD FOR EACH AIR TERMINAL EXCEPT TRANSFER GRILLES. ⑤ ALL ALUMINIUM CONSTRUCTION

### DUCT SILENCERS

| TAG | MAKE            | MODEL      | FACE DIMENSION |        | LENGTH | CFM   | VELOCITY (FPM) | PRESSURE DROP (IWC) | DYNAMIC INSERTION LOSS (DB) |     |     |     |    |    |    | NOTES |    |
|-----|-----------------|------------|----------------|--------|--------|-------|----------------|---------------------|-----------------------------|-----|-----|-----|----|----|----|-------|----|
|     |                 |            | WIDTH          | HEIGHT |        |       |                |                     | 63                          | 125 | 250 | 500 | 1K | 2K | 4K |       | 8K |
| SA1 | VIBRO ACOUSTICS | RD-MV-FB   | 66"            | 18"    | 120"   | 8,350 | -1,012         | 0.2                 | 13                          | 22  | 41  | 45  | 49 | 34 | 22 | 18    | ①  |
| SA2 | VIBRO ACOUSTICS | RD-MLV-F4  | 48"            | 18"    | 108"   | 5,000 | -833           | 0.2                 | 13                          | 22  | 36  | 47  | 54 | 40 | 22 | 16    | ②  |
| SA3 | VIBRO ACOUSTICS | RD-MV-FG   | 44"            | 14"    | 60"    | 5,260 | 1,230          | 0.19                | 7                           | 13  | 21  | 21  | 20 | 14 | 11 | 9     | ②  |
| SA4 | VIBRO ACOUSTICS | RED-MHV-FJ | 48"            | 16"    | 60"    | 6,410 | 1,202          | 0.21                | 10                          | 11  | 9   | 19  | 18 | 20 | 18 | 12    | ②  |
| SA5 | VIBRO ACOUSTICS | RD-LV-FC   | 18"            | 16"    | 60"    | 1,680 | 840            | 0.19                | 9                           | 15  | 25  | 27  | 33 | 23 | 17 | 14    |    |

① 10 GA HTL CASING ② 12 GA HTL CASING

### REPLACEMENT FANS

| TAG | MFR         | MODEL   | CFM   | TSP (IWC) | MOTOR BHP | MOTOR HP | ELECTRICAL VOLT-PHASE-HZ | NOTES |
|-----|-------------|---------|-------|-----------|-----------|----------|--------------------------|-------|
| RF1 | MECHANOVENT | DWDI-30 | 8,980 | 1.0       | 1.9       | 3        | 460-3-60                 | ①     |
| RF2 | MECHANOVENT | DWDI-30 | 9,650 | 0.6       | 1.4       | 3        | 460-3-60                 | ①     |

① TEST EXISTING FAN FOR STABILITY, VERIFY VOLTAGE, ARRANGEMENT AND FIT PRIOR TO ORDERING.

- ### SYMBOLS
- RETURN DUCT DROP
  - SUPPLY DUCT DROP
  - EXHAUST DUCT DROP
  - SUPPLY DUCT RISER
  - RETURN DUCT RISER
  - EXHAUST DUCT RISER
  - CEILING DIFFUSER
  - RETURN REGISTER
  - EXHAUST REGISTER
  - SIDEWALL SUPPLY DIFFUSER (SWD)
  - SIDEWALL RETURN/EXHAUST DIFFUSER (SWR/SWE)
  - MANUAL VOLUME DAMPER WITH LOCKING CLAMP
  - DOOR LOUVER
  - DOOR UNDERCUT
  - SOUND LINED DUCT
  - FD FIRE DAMPER (FD)
  - SFD SMOKE & FIRE DAMPER (SFD)
  - DUCT DROP
  - PIPE/DUCT BREAK
  - MOTORIZED DAMPER OR DUCT SMOKE DETECTOR
  - WALL CLEAN OUT
  - WATER HAMMER ARRESTOR
  - PIPE DROP
  - PIPE RISER
  - POINT OF CONNECTION
  - POINT OF DISCONNECTION
  - WASTE
  - VENT
  - FLOOR SINK
  - PRESSURE & TEMPERATURE RELIEF VALVE
  - CHECK VALVE
  - BALL VALVE
  - BALL VALVE/MEMORY STOP
  - PRESSURE REDUCING VALVE
  - AUTOMATIC BALANCING VALVE
  - MANUAL SERVICE/BALANCING VALVE
  - BUTTERFLY VALVE
  - 2 WAY CONTROL VALVE
  - 3 WAY CONTROL VALVE
  - TRIPLE DUTY VALVE
  - UNION
  - STRAINER
  - SOV IN RISER
  - AUTOMATIC AIR VENT
  - PRESSURE GAGE
  - THERMOMETER
  - AQUASTAT
  - BY ELECTRICAL
  - BY MECHANICAL
  - BYPASS TIMER
  - RELAY
  - THERMOSTAT
  - LOW VOLTAGE
  - LINE VOLTAGE
  - MANUAL SWITCH
  - NO CONTACT
  - NC CONTACT
  - OVERLOAD CONTACT
  - MOTOR
  - MOTOR STARTER
  - TEMPERATURE SENSOR
  - FLOW SWITCH
  - DIFFERENTIAL PRESSURE SWITCH
  - TEST PORT
  - FLEXIBLE PIPE CONNECTOR
  - FIRE
  - COLD WATER
  - HOT WATER
  - HOT WATER RETURN
  - GAS

- ### ABBREVIATIONS
- COMPRESSED AIR
  - AIR CONDITIONER
  - ABOVE FINISHED FLOOR
  - AUTOMATIC FIRE SPRINKLER SYSTEM
  - AIR HANDLER
  - ACCESS PANEL
  - ARCHITECTURAL DRAWINGS
  - BACK DRAFT DAMPER
  - BRAKE HORSEPOWER
  - BIRD SCREEN
  - BRITISH THERMAL UNIT
  - COMBUSTION AIR
  - CEILING DIFFUSER
  - CUBIC FEET PER HOUR
  - CUBIC FEET PER MINUTE
  - CHILLED WATER SUPPLY
  - CHILLED WATER RETURN
  - CEILING
  - CLEANOUT
  - CONTINUATION
  - CLEAN OUT TO GRADE
  - COLD WATER DOMESTIC
  - CONDENSATE OR EQUIPMENT DRAIN
  - DRY BULB TEMPERATURE DEGREES F
  - DIAMETER
  - DOOR LOUVER
  - DOWN
  - DRY STANDPIPE
  - DUCT THROUGH ROOF
  - DRAWINGS
  - DIRECT EXPANSION
  - EXISTING
  - ENERGY EFFICIENCY RATING
  - EXHAUST FAN
  - EFFICIENCY
  - ELECTRICAL DRAWINGS
  - ELEVATION
  - EXHAUST REGISTER
  - EXTERNAL STATIC PRESSURE
  - ELECTRIC WATER HEATER
  - FUTURE
  - FAN COIL
  - FREE AREA
  - FLOOR CLEAN OUT
  - FIRE DAMPER
  - FINISHED FLOOR ELEVATION
  - FLOW LINE
  - FULL LOAD AMPS
  - FLOOR DRAIN
  - FLOOR
  - SOFTENED WATER
  - FEET PER MINUTE
  - FLOOR SINK
  - FEET
  - GAS LINE (FUEL GAS)
  - GAUGE
  - GALLONS
  - GALVANIZED
  - GENERAL CONTRACTOR
  - GALVANIZED IRON
  - GALLONS PER MINUTE
  - HUMIDITY
  - HOSE BIBB
  - HORSEPOWER
  - HEATING WATER RETURN
  - HEATING WATER SUPPLY
  - HEATING SEASONAL PERFORMANCE FACTOR
  - HOT WATER DOMESTIC
  - HOT WATER RETURN DOMESTIC
  - HERTZ
  - INDIRECT WASTE
  - INCHES WATER GAUGE
  - KILOWATT
  - LAVATORY
  - LAV LEAVING AIR TEMP
  - LAV RETURN WATER TEMP
  - THOUSAND BTU PER HOUR
  - MINIMUM CIRCUIT AMPACITY
  - MANUFACTURER
  - MANHOLE
  - MINIMUM
  - MINI MOUNTED
  - METAL
  - MANUAL VOLUME DAMPER
  - NEW
  - NOT APPLICABLE
  - NORMALLY CLOSED
  - NOT IN CONTRACT
  - NOT TO SCALE
  - OPPOSED BLADE DAMPER
  - OD OUTSIDE DIAMETER
  - OFD OVERFLOW DRAIN
  - OFL OVERFLOW RAINWATER LEADER
  - OSD OUTSIDE AIR
  - OSY OUTSIDE STEM & YOKE
  - OW OILY WASTE
  - P&T PRESSURE & TEMPERATURE RELIEF
  - PHASE
  - POST INDICATOR VALVE
  - PLACES
  - POINT OF CONNECTION
  - PARTS PER MILLION
  - PRESSURE
  - PRESSURE REDUCING VALVE
  - PSI POUNDS PER SQUARE INCH
  - REMOVE
  - ROOF DRAIN
  - REFRIGERATION
  - REQUIRED
  - REFRIGERANT HOT GAS LINE
  - REFRIGERANT LIQUID LINE
  - RATED LOAD AMPS
  - REVOLUTIONS PER MINUTE
  - REFRIGERANT SUCTION LINE
  - RAIN WATER LEADER
  - STORM DRAIN OR SMOKE DETECTOR
  - SEASONAL EFFICIENCY
  - SEASONAL ENERGY EFFICIENCY RATING
  - SQUARE FEET
  - SMOKE & FIRE DAMPER
  - FAN COIL
  - FREE AREA
  - FLOOR CLEAN OUT
  - FIRE DAMPER
  - FINISHED FLOOR ELEVATION
  - FLOW LINE
  - FULL LOAD AMPS
  - FLOOR DRAIN
  - FLOOR
  - SOFTENED WATER
  - SIDE WALL DIFFUSER
  - SIDE WALL EXHAUST
  - SIDE WALL RETURN
  - TRANSFER GRILLE
  - THERMOSTAT
  - TEMPERED WATER
  - TYPICAL
  - URINAL
  - UNDERCUT
  - UNIT HEATER
  - UNDERWRITERS' LABORATORIES, INC.
  - UNLESS NOTED OTHERWISE
  - UP THRU ROOF
  - V SANITARY VENT
  - VAC HOUSE VACUUM
  - VACUUM BREAKER
  - VANDAL RESISTANT
  - VENT THRU ROOF
  - SANITARY WASTE
  - WATER CLOSET
  - WALL CLEAN OUT
  - WALL FURNACE
  - WATER HEATER
  - WATER HAMMER ARRESTOR
  - WATER METER
  - WEIGHT

### TITLE-24

**CERTIFICATE OF COMPLIANCE** Part 1 of 2 ENV-1  
Project: Skyline College Center for Advanced Learning  
Address: 3300 College Drive, San Bruno  
Inspector: [Signature]

**ENVELOPE MANDATORY MEASURES** ENV-MM  
DESCRIPTION: [Table with columns for Description, Designer, and Enforcement]

**CERTIFICATE OF COMPLIANCE** Part 1 of 2 MECH-1  
Project: Skyline College Center for Advanced Learning  
Address: 3300 College Drive, San Bruno  
Inspector: [Signature]

**MECHANICAL MANDATORY MEASURES** Part 2 of 2 MECH-MM  
DESCRIPTION: [Table with columns for Description, Designer, and Enforcement]

**MECHANICAL MANDATORY MEASURES** Part 1 of 2 MECH-MM  
DESCRIPTION: [Table with columns for Description, Designer, and Enforcement]

### SEISMIC NOTES

ALL PIPES, DUCTS, & CONDUITS SHALL BE SUPPORTED & BRACED PER PSA/DSPD PRE-APPROVAL #R-0010, THE SMACNA "GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS & PLUMBING SYSTEMS"

ALL MECHANICAL EQUIPMENT SHALL BE BRACED OR ANCHORED TO COMPLY W/ 1998 CBC T24 SECT. 1632A.

WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT & THE FIELD ENGINEER OF THE DIVISION OF STATE ARCHITECT.

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### RECORD DRAWINGS

N.V. Heathorn, Inc.  
As Deser Date 4-2-03

DATE: 04/21/03

STATE OF CALIFORNIA  
DIVISION OF STATE ARCHITECT  
OFFICE OF REGULATION SERVICES  
APPL 01-103735  
DATE: 04/21/03

DRAWN: J. SIERRA, E. MARKHAM  
CHECKED: AVR  
DATE: 03-21-2001  
JOB NO.: 98-03  
SHEET TITLE: ABBREVIATIONS, SYMBOLS, SCHEDULES, NOTES, AND TITLE-24  
SHEET: M 1.1

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STEVE DOWTY, A.I.A. PRINCIPAL IN CHARGE

GERALD SHUSTA PROJECT ARCHITECT

M.E.C. MECHANICAL ENGINEERING CONSULTANTS 821 W. Middletown St. Suite A Santa Barbara, CA 93101 Tel: (805) 957-4632

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