



CAN YOU SEE THE AIRPLANES? THE ADJACENT SAMPLES SHOW THREE DIFFERENT LEVELS OF SHADING. SETTINGS FOR VIEWING AND PRINTING DRAWING CONTENT ARE OPTIMIZED WHEN ALL THREE PLANES ARE VISIBLE. THIS GUIDANCE IS PROVIDED FOR REFERENCE ONLY.

DESIGN CONDITIONS - PORTLAND, OR:

| SPACE               | WINTER          |                                     | SUMMER                    |                                     |
|---------------------|-----------------|-------------------------------------|---------------------------|-------------------------------------|
|                     | TEMPERATURE     | HUMIDITY                            | TEMPERATURE               | HUMIDITY                            |
| OUTDOOR             | 25.9° F DB      | 11.0° F DP / 9.6 HR / 31.7 ° F MCDB | 91.7° F DB / 67.4° F MCWB | 63.2° F DP / 87.0 HR / 75.1° F MCDB |
| CONCOURSE CONNECTOR | 70° F ± 2° F DB | 60% RH MAX, NO MINIMUM              | 75° F ± 2° F DB           | 60% RH MAX, NO MINIMUM              |
| BAGGAGE CLAIM       | 70° F ± 2° F DB | 60% RH MAX, NO MINIMUM              | 75° F ± 2° F DB           | 60% RH MAX, NO MINIMUM              |
| IDF/MDF/SERVER      | 75° F ± 2° F DB | 60% RH MAX, NO MINIMUM              | 75° F ± 2° F DB           | 60% RH MAX, NO MINIMUM              |
| FP/PLUMBING         | 40° F ± 2° F DB | 60% RH MAX, NO MINIMUM              | -                         | -                                   |
| ELECTRICAL          | 70° F ± 2° F DB | 60% RH MAX, NO MINIMUM              | 75° F ± 2° F DB           | 60% RH MAX, NO MINIMUM              |
| MECHANICAL          | 70° F ± 2° F DB | 60% RH MAX, NO MINIMUM              | 75° F ± 2° F DB           | 60% RH MAX, NO MINIMUM              |

FAN SCHEDULE:

| TAG            | LOCATION   | SERVICE                                   |           |            |          |           | MOTOR |             |                 | DRIVE TYPE | VFD | APPROX. WEIGHT (LBS) | MANUFACTURER & MODEL | KEY NOTE(S) |
|----------------|------------|-------------------------------------------|-----------|------------|----------|-----------|-------|-------------|-----------------|------------|-----|----------------------|----------------------|-------------|
|                |            |                                           |           | DESIGN CFM | ESP (IN) | FAN (RPM) | HP    | VOLT/ PHASE | GENERATOR POWER |            |     |                      |                      |             |
| EF-T-T2TSE5-01 | ROOF       | SERVICE ANIMAL RELIEF AREA                | UPBLAST   | 600        | 0.6      | 1500      | 1/4   | 120/1       | NO              | DIRECT     | NO  | 110                  | GREENHECK CUE 120VG  | 1,2         |
| EF-D-303       | ROOF       | COUNCOURSE D WEST RESTROOMS               | DOWNBLAST | 2970       | 0.5      | 852       | 1     | 480/3       | NO              | DIRECT     | NO  | 120                  | GREENHECK G 180VG    | 1,2         |
| EF-CE-304      | ROOF       | CONCOURSE C FAMILY RESTROOM               | DOWNBLAST | 4090       | 1        | 1049      | 1.5   | 480/3       | NO              | DIRECT     | NO  | 155                  | GREENHECK G 200VG    | 1,2         |
| EF-D401        | ROOF       | CONCOURSE D RESTROOMS                     | DOWNBLAST | 2940       | 0.75     | 1278      | 2     | 460/3       | NO              | DIRECT     | NO  | 150                  | GREENHECK G 160VG    | 1,2         |
| (E) EF-T-5-01  | PENT. ROOF | GENERAL EXHAUST - SECTOR 42 / CANINE UNIT | -         | 6600       | 1.25     | 767       | 3     | 480/3       | NO              | -          | -   | 200                  | -                    | -           |

KEY NOTE(S):

1. PROVIDE FAN WITH EC MOTOR AND ELECTRICAL DISCONNECT.
2. CONFIGURE TO MATCH CURRENT CURB AND ROOF OPENING OR PROVIDE CURB ADAPTER.

PRE-DEMOLITION AND RETRO COMMISSIONING SCOPE OF WORK:

|                    |                    |                                                                                                                                                                                                                                                                                                          |
|--------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GENERAL            |                    | SCOPE OF WORK APPLIES TO EXISTING HVAC SYSTEMS THAT ARE BEING ALTERED DURING THE COURSE OF THIS PROJECT. INTENT IS TO DOCUMENT EXISTING SYSTEM CAPACITIES, CONFIRM OPERATING CONDITIONS OF EXISTING TO REMAIN EQUIPMENT, AND VERIFY AIRFLOW REQUIREMENTS CAN BE MET THROUGH EXISTING PORTWORK.           |
| DOCUMENTATION      | PRE-DEMOLTION      | PROVIDE WRITTEN REPORT DOCUMENTING TESTING OF EXISTING SYSTEMS AND AIRFLOWS. PROVIDE AS SUBMITTAL FOR PORT REVIEW.                                                                                                                                                                                       |
|                    | PROJECT CLOSE-OUT  | PROVIDE FINAL REPORT INCLUDING FINDINGS, CORRECTIVE ACTIONS TAKEN, AND ANY CONTROL LOGIC MODIFICATIONS. PROVIDE AS SUBMITTAL AND INCLUDE IN CLOSEOUT DOCUMENTATION.                                                                                                                                      |
| INSPECTION/TESTING | EXISTING DUCTWORK  | VISUALLY INSPECT ALL DUCTWORK. VERIFY PROPER INSTALLATION. REPORT ANY ISSUES WITH EXISTING DUCTWORK INCLUDING BUT NOT LIMITED TO DAMAGE TO SHEET METAL, INSULATION, DAMPERS, CONNECTION POINTS, OR CONFLICTS WITH OTHER SYSTEMS. INCLUDE FINDINGS IN PRE-DEMOLITONAL SUBMITTAL FOR PORT REVIEW.          |
|                    | EXISTING EQUIPMENT | VISUALLY INSPECT ALL EXISTING EQUIPMENT. CONFIRM NAMEPLATE DATA, FLOWRATE, PRESSURE, MOTOR HP, MOTOR AMP READINGS, RPM, OPERATION BHP, VFD HZ, AND SHEAVE POSITION IF BELT DRIVEN FAN. INCLUDE FINDINGS IN PRE-DEMOLITONAL SUBMITTAL FOR PORT REVIEW.                                                    |
|                    |                    | VISUALLY INSPECT ALL CONTROL SYSTEM INPUT AND OUTPUT DEVICES. VERIFY PROPER INSTALLATION AND LOCATION OF ALL DEVICES. VERIFY POINT TO POINT COMMUNICATION TO/FROM EACH DEVICE. REPORT ANY ISSUES OR EQUIPMENT THAT NEEDS REPAIRS TO PORT. INCLUDE FINDINGS IN PRE-DEMOLITONAL SUBMITTAL FOR PORT REVIEW. |
|                    |                    | INSPECT DAMPER, ACTUATOR CALIBRATION, POSITION FEEDBACK, REHEAT VALVE FUNCTIONALITY, AND VISUALLY INSPECT EACH COILS. INCLUDE FINDINGS IN PRE-DEMOLITONAL SUBMITTAL FOR PORT REVIEW.                                                                                                                     |

TERMINAL UNIT SCHEDULE:

| TAG            | SECTOR | LOCATION   | SERVICE                            | SYSTEM         | INLET (IN) | PRIMARY AIR |             |         | HYDRONIC COIL |     |                       | MANUFACTURER & MODEL | KEY NOTE(S) |
|----------------|--------|------------|------------------------------------|----------------|------------|-------------|-------------|---------|---------------|-----|-----------------------|----------------------|-------------|
|                |        |            |                                    |                |            | MAX CFM     | HEATING CFM | MIN CFM | MBH           | GPM | BRANCH PIPE SIZE (IN) |                      |             |
| VVR-ED-53      | D02    | ENPLANNING | D2222-RESTROOM MEN                 | (E) AHU-D-306  | 10         | 840         | 420         | 420     | 8.4           | 0.9 | 3/4                   | TITUS DESV           | -           |
| VVR-T-131      | E05    | DEPLANNING | T11TE04-RESTROOM WOMEN - BAG CLAIM | (E) AHU-T-407  | 10         | 700         | 365         | 175     | 4.9           | 0.5 | 3/4                   | TITUS DESV           | -           |
| VVR-T-133      | E05    | DEPLANNING | T11TE06-RESTROOM MEN BAG CLAIM     | (E) AHU-T-407  | 10         | 700         | 365         | 175     | 4.7           | 0.5 | 3/4                   | TITUS DESV           | -           |
| (E) VV-CE-224  | C05    | ENPLANING  | C2038-ELEC                         | (E) AHU-CE-303 | -          | 500         | -           | -       | -             | -   | -                     | -                    | 1           |
| (E) VVR-CE-229 | C05    | ENPLANING  | C2039-FAMILY RESTROOM              | (E) AHU-CE-303 | -          | 985         | 560         | 240     | -             | -   | -                     | -                    | 1           |

NOTE(S):

1. PRIMARY AIR TEMPERATURE 55°F (SUMMER), 65°F (WINTER) UNLESS OTHERWISE NOTED.
2. HYDRONIC HEATING COIL CAPACITY BASED ON 140°F ENTERING WATER TEMPERATURE AND 120°F LEAVING WATER TEMPERATURE.

KEY NOTE(S):

1. RETRO COMMISSION EXISTING TERMINAL UNIT PRIOR TO COMMENCEMENT OF WORK. REFER TO PRE-DEMOLITION AND RETRO COMMISSIONING SCOPE OF WORK SCHEDULE.

KEY:

VV = VARIABLE AIR VOLUME TERMINAL UNIT  
VVR = VARIABLE AIR VOLUME TERMINAL UNIT WITH REHEAT COIL

DIFFUSERS AND GRILLES SCHEDULE:

| TAG | TYPE                                 | DESCRIPTION                                                                 | AIRFLOW RANGE                   |           | FACE SIZE  |               | MAX NC | THROW (FT) | MANUFACTURER & MODEL | KEY NOTE(S) |
|-----|--------------------------------------|-----------------------------------------------------------------------------|---------------------------------|-----------|------------|---------------|--------|------------|----------------------|-------------|
|     |                                      |                                                                             | MIN (CFM)                       | MAX (CFM) | T-BAR (IN) | HARD LID (IN) |        |            |                      |             |
| C-1 | CEILING SUPPLY DIFFUSER              | PERFORATED FACE, MODULAR CORE, ADJUSTABLE 4-WAY THROW                       | 0                               | 125       | 24x24      | 13x13         | 12     | 2-2-5      | TITUS PMC            | -           |
|     |                                      |                                                                             | 126                             | 220       | 24x24      | 15x15         | 17     | 2-3-6      |                      | -           |
|     |                                      |                                                                             | 221                             | 345       | 24x24      | 17x17         | 21     | 3-4-8      |                      | -           |
|     |                                      |                                                                             | 346                             | 500       | 24x24      | 19x19         | 24     | 3-5-9      |                      | -           |
|     |                                      |                                                                             | 501                             | 875       | 24x24      | 23x23         | 28     | 4-6-11     |                      | -           |
| C-2 | CEILING RETURN/ EXHAUST GRILLE       | PERFORATED FACE, STEEL, ROUND DUCT CONNECTION                               | 0                               | 340       | 24x24      | 12x12         | 17     | -          | TITUS PAR            | -           |
|     |                                      |                                                                             | 341                             | 780       | 24x24      | 17x17         | 22     | -          |                      | -           |
|     |                                      |                                                                             | 781                             | 1,125     | 24x24      | 20x20         | 24     | -          |                      | -           |
|     |                                      |                                                                             | 1,129                           | 1,670     | 24x24      | 24x24         | 26     | -          |                      | -           |
|     |                                      |                                                                             | 1,671                           | 3,500     | 24x48      | 24x48         | 25     | -          |                      | -           |
| C-3 | CEILING TRANSFER GRILLE              | PERFORATED FACE, STEEL, ROUND DUCT CONNECTION                               | 0                               | 600       | 24x24      | 24x24         | -      | -          | TITUS PAR            | -           |
| S-1 | CEILING SUPPLY SLOT DIFFUSER         | CONTINEOUS SLOT, INSULATED PLENUM, ADJUSTABLE HIGH THROW PATTERN CONTROLLER | 0                               | 50        | Lx6.75     | Lx6.75        | 13     | 9-14-20    | TITUS FL-30          | 1,2,3       |
| S-2 | CEILING RETURN/EXHAUST SLOT DIFFUSER | CONTINEOUS SLOT, INSULATED RETURN HOOD, LIGHT SHIELD                        | 0                               | 50        | Lx6.75     | Lx6.75        | 16     | -          | TITUS FL-30          | 1,2,3       |
| H-3 | SIDEWALL TRANSFER/EXHAUST GRILLE     | 45 DEGREES, SINGLE DEFLECTION, HORIZONTAL BLADES WITH 3/4 SPACING.          | REFER TO FLOOR PLANS FOR LENGTH |           |            |               |        |            | TITUS 23 RL          | -           |

NOTE(S):

1. NOISE CRITERIA (NC) BASED ON ROOM ABSORPTION OF 10 dB, MEASURED PER ANSI/ASHRAE STANDARD 70.
2. THROW VALUES GIVEN FOR TERMINAL VELOCITIES 150, 100, AND 50 FPM FOR ISOTHERMAL CONDITIONS.
3. ADJUST THROW DIRECTION AND QUANTITY PRIOR TO AIR BALANCING.
4. USE DIMENSIONS SHOWN IN DESCRIPTION UNLESS OTHERWISE NOTED ON THE DRAWINGS.
5. MODELS SHOWN THAT DEVIATE FROM PORT STANDARD HAVE BEEN SELECTED TO MATCH TCORE FINISHES.

KEY NOTE(S):

1. ONE 3-INCH SLOT.
2. AIRFLOW RANGE REPRESENTS CFM PER LINEAR FOOT OF SLOT DIFFUSER
3. REFER TO ARCHITECTURAL RCP FOR LENGTH OF SLOT DIFFUSER. PROVIDE PLENUM TO MATCH PERFORMANCE LISTED AND BLANK-OFF INACTIVE PORTIONS OF SLOT.



151 SW 1st Avenue #300  
Portland, OR 97204

503.226.2921  
pae-engineers.com

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DESIGN NUMBER

103101  
PROJECT NUMBER



EXPIRES: 06/30/2027

PORTLAND INTERNATIONAL AIRPORT

TERMINAL RESTROOM REHABILITATION 2026

EQUIPMENT SCHEDULE 1 - MECHANICAL

SUBMITTED BY  
BRIAN FRANCIS

DESIGNED BY  
M. GIOVAGNOLI

DRAWN BY  
S. CARTER

CHECKED BY  
M. BRUNE

DATE  
JULY 2026

SHEET NO.  
61

TYPE  
CD

DRAWING NO.  
PDX 2026-510

DISC. SHT. NO.  
M0.02