

| DIFFUSER, REGISTER & GRILLE SCHEDULE | | | | | | | | | | |
|--------------------------------------|--------------|------------|-----------------|---------|-----------|---------------|----------|--------|--------|---------|
| MARK | MANUFACTURER | MODEL TYPE | FRAME TYPE | PANEL | NECK SIZE | PATTERN | MATERIAL | FINISH | DAMPER | REMARKS |
| EG-1 | TITUS | PAR | SURFACE MOUNTED | 12"X12" | 10" | PERFORATED | ALUMINUM | WHITE | OBD | - |
| EG-2 | TITUS | PAR | SURFACE MOUNTED | 12"X12" | 6" | PERFORATED | ALUMINUM | WHITE | OBD | - |
| EG-3 | TITUS | DR-V | DUCT MOUNTED | 30"X12" | - | DRUM LOUVER | STEEL | WHITE | OBD | - |
| RG-1 | TITUS | PAR | LAY-IN | 24"X12" | 22"X10" | PERFORATED | STEEL | WHITE | - | - |
| RG-2 | TITUS | PAR | LAY-IN | 24"X24" | 22"X22" | PERFORATED | STEEL | WHITE | - | - |
| SD-1 | TITUS | OMNI | LAY-IN | 24"X24" | 6" | SQUARE PLAQUE | STEEL | WHITE | - | - |
| SD-2 | TITUS | OMNI | LAY-IN | 24"X24" | 8" | SQUARE PLAQUE | STEEL | WHITE | - | - |
| SD-3 | TITUS | OMNI | LAY-IN | 24"X24" | 10" | SQUARE PLAQUE | STEEL | WHITE | - | - |
| SD-4 | TITUS | OMNI | SURFACE MOUNTED | 12"X12" | 6" | SQUARE PLAQUE | STEEL | WHITE | OBD | - |
| SD-5 | TITUS | OMNI | SURFACE MOUNTED | 12"X12" | 8" | SQUARE PLAQUE | STEEL | WHITE | OBD | - |
| SD-6 | TITUS | OMNI | SURFACE MOUNTED | 12"X12" | 10" | SQUARE PLAQUE | STEEL | WHITE | OBD | - |

ENERGY RECOVERY VENTILATOR SCHEDULE

| MARK | MANUFACTURER | MODEL | ENERGY RECOVERY TYPE | FRESH AIR FAN DATA | | | | EXHAUST AIR FAN DATA | | | | ELECTRICAL DATA | | | | WEIGHT (LBS) |
|-------|--------------|----------|--------------------------------------|--------------------|--------------|-------------|---------|----------------------|-------------|---------|-------|-----------------|------|-----|--|--------------|
| | | | | FAN CFM | ESP (" W.G.) | MOTOR WATTS | FAN CFM | ESP (" W.G.) | MOTOR WATTS | VOLTAGE | PHASE | MCA | MCCP | | | |
| ERV-1 | RENEWAIRE | HE1.5X1N | STATIC PLATE, HEAT HUMIDITY TRANSFER | 870 | 1.5 | 480 | 870 | 1.5 | 480 | 120 V | 1 | 14.6 | 20 | 350 | | |

ENERGY RECOVERY VENTILATOR SCHEDULE (CONTINUED)

| MARK | SENSIBLE MBH | TOTAL MBH | SUMMER | | | | | | WINTER | | | | | | REMARKS | | | | | | |
|-------|--------------|-----------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|---------|------|------|------|------|------|-------------|
| | | | OUTSIDE AIR WB | OUTSIDE AIR DB | SUPPLY AIR WB | SUPPLY AIR DB | RETURN AIR WB | RETURN AIR DB | OUTSIDE AIR WB | OUTSIDE AIR DB | SUPPLY AIR WB | SUPPLY AIR DB | RETURN AIR WB | RETURN AIR DB | | | | | | | |
| ERV-1 | 11.07 | 18.62 | 92 F | 75 F | 81 F | 70 F | 75 F | 63 F | 67.7 | 46.5 | 44.3 | 53.44 | 0 F | 0 F | 47 F | 38 F | 70 F | 52 F | 67.7 | 67.6 | 1,2,3,4,5,6 |

- REMARKS:
- INDOOR MOUNTED UNIT. DOUBLE WALL CONSTRUCTION.
 - MOTORIZED DAMPERS IN BOTH SUPPLY AND EXHAUST AIR STREAMS. PROVIDE FACE & BYPASS DAMPERS AND DRY BULB ECONOMIZER CONTROL.
 - SINGLE POINT POWER CONNECTION. ELECTRICAL CONTRACTOR TO PROVIDE NON-FUSED KNIFE-BLADE DISCONNECT.
 - PROVIDE WITH FACTORY MOUNTED PREMIUM CONTROLS PACKAGE.
 - MERV-8 FILTERS FOR OA AND RA. PROVIDE WITH FILTER MONITORS.
 - EC MOTORS ON SUPPLY AND EXHAUST FANS WITH ADJUSTABLE SPEED.

EXHAUST FAN SCHEDULE

| MARK | MANUFACTURER | MODEL NO | AREA SERVED | FAN DATA | | | | ELECTRICAL | | | | DESIGN WEIGHT (LBS) | REMARKS |
|------|--------------|-------------|-----------------|----------|----------------------------------|------|--------|------------|---------|-------|-----|---------------------|---------|
| | | | | CFM | EXTERNAL STATIC PRESSURE ("W.C.) | RPM | DRIVE | HP | VOLTAGE | PHASE | | | |
| EF-1 | GREENHECK | SQ-20/M2-VG | VEHICLE STORAGE | 8400 | 1.2 | 1491 | DIRECT | 5 | 460 V | 3 | 256 | 1, 2, 3 | |
| EF-2 | GREENHECK | AER-20 | VEHICLE STORAGE | 480 | 0.25 | 726 | DIRECT | 1/4 | 115 V | 1 | 60 | 1, 3 | |

- REMARKS:
- ELECTRICAL CONTRACTOR TO PROVIDE LOCKABLE NON-FUSED DISCONNECT AND A HAND/OFF/AUTO SWITCH.
 - PROVIDE WITH ECM MOTOR AND MOTOR SPEED CONTROLLER.
 - PROVIDE WITH MOTORIZED BACKDRIFT DAMPER INTERLOCKED WITH FAN START/STOP.

LOUVER SCHEDULE

| MARK | MANUFACTURER | MODEL | AREA | INTERLOCK WITH FAN | SUPPLY/EXHAUST | LENGTH | HEIGHT | WIDTH | ACTUAL CFM | FREE AREA (FT^2) | Free Area % | VELOCITY (FT/MIN) | PRESSURE DROP | REMARKS |
|------|--------------|---------|-----------------|--------------------|----------------|---------|----------|-------|------------|------------------|-------------|-------------------|---------------|------------|
| L-1 | GREENHECK | ESD-635 | VEHICLE STORAGE | - | EXHAUST | 5' - 0" | 4' - 0" | 6" | 8400 | 11.6 | 59 | 725 | 0.07 | 2, 3 |
| L-2 | GREENHECK | ESD-635 | VEHICLE STORAGE | - | EXHAUST | 1' - 6" | 1' - 6" | 6" | 480 | 0.8 | 36 | 609 | 0.05 | 2, 3 |
| L-3 | GREENHECK | EC0-601 | VEHICLE STORAGE | EF-1 | INTAKE | 6' - 0" | 6' - 0" | 6" | 6000 | 5.3 | 45 | 550 | 0.074 | 1, 2, 3, 5 |
| L-4 | GREENHECK | ESD-635 | FIRE/WATER | - | EXHAUST | 1' - 8" | 1' - 10" | 6" | 150 | 0.2 | 21 | 744 | 0.074 | 2, 4 |
| L-5 | GREENHECK | ESD-635 | FIRE/WATER | - | INTAKE | 1' - 8" | 1' - 10" | 6" | 780 | 1.2 | 42 | 630 | 0.059 | 2, 4 |

- REMARKS:
- ELECTRICAL TO PROVIDE LOCKABLE DISCONNECT SWITCH AND HARDWIRE INTERLOCK WITH EXHAUST FAN AS INDICATED IN SCHEDULE.
 - LOUVER COLOR AND FINISH TO BE DETERMINED BY ARCH.
 - PROVIDE WITH BIRD SCREEN.
 - PROVIDE WITH INSECT SCREEN.
 - COMBINATION LOUVER-DAMPER. PROVIDE WITH LOW LEAKAGE DAMPERS WITH GASKETED SEALS AND 24V MOTORIZED ACTUATORS.

VRF INDOOR UNIT SCHEDULE

| MARK | SERVE BY RTU | SYSTEM TYPE | UNIT TYPE | AREA SERVED | NOMINAL COOLING TONNAGE | FAN CFM | FAN E.S.P. (" W.C.) | OA CFM | NOMINAL COOLING MBH | NOMINAL HEATING MBH | REFRIGERANT | FILTER | MCA | MCCP | ELECTRICAL VOLTAGE | PHASE | FREQUENCY | DESIGN WEIGHT (LBS) | MANUFACTURER | MODEL | REMARKS |
|---------|--------------|-------------------|------------------------|---------------|-------------------------|---------|---------------------|--------|---------------------|---------------------|-------------|---------------------|------|------|--------------------|-------|-----------|---------------------|------------------|----------------|-------------|
| ACU-101 | ACCU-1 | VRF HEAT RECOVERY | CEILING CONCEALED | OFFICE 112 | 1.5 | 670 | 1 | 40 | 18 | 20 | R-410A | MERV-8 | 1.63 | 15 | 208 V | 1 | 60 | 98 | TRANE/MITSUBISHI | TPEFY018MH142A | 1,2,3,4,5,6 |
| ACU-102 | ACCU-1 | VRF HEAT RECOVERY | CEILING CONCEALED | MEN'S LOCKER | 1.5 | 670 | 1 | 50 | 18 | 20 | R-410A | MERV-8 | 1.63 | 15 | 208 V | 1 | 60 | 98 | TRANE/MITSUBISHI | TPEFY018MH142A | 1,2,3,4,5,6 |
| ACU-103 | ACCU-1 | VRF HEAT RECOVERY | CEILING CONCEALED | TRAINING ROOM | 3 | 1320 | 1 | 565 | 36 | 40 | R-410A | MERV-8 | 4.16 | 15 | 208 V | 1 | 60 | 153 | TRANE/MITSUBISHI | TPEFY036MH142A | 1,2,3,4,5,6 |
| ACU-104 | ACCU-1 | VRF HEAT RECOVERY | CEILING CONCEALED | OFFICE 105 | 0.75 | 300 | 0.6 | 30 | 8 | 9 | R-410A | MERV-8 | 1.75 | 15 | 208 V | 1 | 60 | 47 | TRANE/MITSUBISHI | TPEFY008MH144A | 1,2,3,4,5,6 |
| ACU-105 | ACCU-1 | VRF HEAT RECOVERY | CEILING CONCEALED | OPEN OFFICE | 2 | 670 | 1 | 60 | 24 | 27 | R-410A | MERV-8 | 2.11 | 15 | 208 V | 1 | 60 | 100 | TRANE/MITSUBISHI | TPEFY024MH142A | 1,2,3,4,5,6 |
| ACU-106 | ACCU-1 | VRF HEAT RECOVERY | CEILING CONCEALED | OFFICE 104 | 1.5 | 670 | 1 | 35 | 18 | 20 | R-410A | MERV-8 | 1.63 | 15 | 208 V | 1 | 60 | 98 | TRANE/MITSUBISHI | TPEFY018MH142A | 1,2,3,4,5,6 |
| ACU-107 | ACCU-1 | VRF HEAT RECOVERY | 4-WAY CEILING CASSETTE | IT ROOM | 1.5 | 460 | - | - | 18 | 20 | R-410A | PP HONEYCOMB FABRIC | 0.5 | 15 | 208 V | 1 | 60 | 31.1 | TRANE/MITSUBISHI | TPLFY018FM140A | 1,2,3,4,5,6 |

- REMARKS:
- ELECTRICAL CONTRACTOR TO PROVIDE LOCKABLE NON-FUSED DISCONNECT SWITCH.
 - PROVIDE RETURN AIR FILTER BOX. PROVIDE WITH FILTER AS INDICATED IN SCHEDULE.
 - PROVIDE WITH INTEGRATED CONDENSATE PUMP WITH RESERVOIR AND SENSOR.
 - FIELD BALANCE FAN SPEED TO MEET CONNECTED SUPPLY AIR CFM.
 - PROVIDE WITH WALL MOUNTED WIRED PROGRAMMABLE THERMOSTAT.
 - PROVIDE ADDITIONAL ACCESSORIES AS REQUIRED BY THE MANUFACTURER. INSTALL PER MANUFACTURER'S REQUIREMENTS.

VRF OUTDOOR UNIT SCHEDULE

| MARK | SYSTEM TYPE | NOMINAL COOLING TONNAGE | NOMINAL COOLING MBH | NOMINAL HEATING MBH | REFRIGERANT | ERR | IEER/SEER | COP | MODULE 1 | | | | MODULE 2 | | | | Manufacturer | MODEL | REMARKS | | | | |
|--------|-------------------|-------------------------|---------------------|---------------------|-------------|-----|-----------|------|--------------------|--------------------|-----|------|----------------|--------------|-----------------|-----------------|--------------|-------|--------------|-----|------------------|-----------------|--------------|
| | | | | | | | | | NORMAL COOLING MBH | NORMAL HEATING MBH | MCA | MCCP | VOLT / PH / HZ | WEIGHT (LBS) | COOLING TONNAGE | HEATING TONNAGE | | | | MCA | MCCP | VOLT / PH / HZ | WEIGHT (LBS) |
| ACCU-1 | VRF HEAT RECOVERY | 12 | 144 | 160 | R-410A | 11 | 19.7 | 3.45 | 72 | 80 | 17 | 25 | 460 / 3 / 60 | 644 | 72 | 80 | 17 | 25 | 460 / 3 / 60 | 644 | TRANE/MITSUBISHI | TURYH1443BN40AN | 1,2,3,4,5 |

- REMARKS:
- ELECTRICAL CONTRACTOR TO PROVIDE LOCKABLE NON-FUSED DISCONNECT SWITCH.
 - SELECTED MODEL MUST ALLOW 80% OR GREATER DESIGN HEATING MBH AT +13 DEG F AMBIENT WITHOUT AUXILIARY HEATING. TRANE HYPER HEATING OR APPROVED EQUIVALENT.
 - PROVIDE LOW AMBIENT KIT AS REQUIRED BY THE MANUFACTURER INCLUDING WIND AND SNOW BAFFLES TO ENSURE HEATING PERFORMANCE.
 - PROVIDE WITH STANDARD PACKAGED DDC CONTROLLER WITH BACNET MSTP INTERFACE.
 - PROVIDE ADDITIONAL ACCESSORIES AS REQUIRED BY THE MANUFACTURER. INSTALL PER MANUFACTURER'S REQUIREMENTS.

ELECTRIC UNIT HEATER SCHEDULE

| MARK | MANUFACTURER | MODEL | TYPE | FAN CFM | THROW | TEMP RISE | MAXIMUM MOUNTING HEIGHT | ELECTRICAL DATA | | | | REMARKS |
|--------|--------------|----------|-------------------------|---------|-------|-----------|-------------------------|-----------------|-------|----|--------------|---------|
| | | | | | | | | VOLTAGE | PHASE | KW | WEIGHT (LBS) | |
| EUH-1 | QMARK | AWH4304F | WALL MOUNTED | 100 | - | - | - | 208 V | 3 | 3 | 25 | 1, 2 |
| EUH-2 | MODINE | HER 30 | HORIZONTAL AIR DELIVERY | 380 | 12 | 25 | 8 | 480 V | 3 | 3 | 34 | 1, 2 |
| EUH-3 | MODINE | HER 30 | HORIZONTAL AIR DELIVERY | 380 | 12 | 25 | 8 | 480 V | 3 | 3 | 34 | 1, 2 |
| EUH-4 | MODINE | HER250 | HORIZONTAL AIR DELIVERY | 1300 | 25 | 61 | 12 | 480 V | 3 | 25 | 98 | 1, 2 |
| EUH-5 | MODINE | HER250 | HORIZONTAL AIR DELIVERY | 1300 | 25 | 61 | 12 | 480 V | 3 | 25 | 98 | 1, 2 |
| EUH-6 | MODINE | HER250 | HORIZONTAL AIR DELIVERY | 1300 | 25 | 61 | 12 | 480 V | 3 | 25 | 98 | 1, 2 |
| EUH-7 | MODINE | HER250 | HORIZONTAL AIR DELIVERY | 1300 | 25 | 61 | 12 | 480 V | 3 | 25 | 98 | 1, 2 |
| EUH-8 | MODINE | HER250 | HORIZONTAL AIR DELIVERY | 1300 | 25 | 61 | 12 | 480 V | 3 | 25 | 98 | 1, 2 |
| EUH-9 | MODINE | HER250 | HORIZONTAL AIR DELIVERY | 1300 | 25 | 61 | 12 | 480 V | 3 | 25 | 98 | 1, 2 |
| EUH-10 | MODINE | HER250 | HORIZONTAL AIR DELIVERY | 1300 | 25 | 61 | 12 | 480 V | 3 | 25 | 98 | 1, 2 |
| EUH-11 | MODINE | HER250 | HORIZONTAL AIR DELIVERY | 1300 | 25 | 61 | 12 | 480 V | 3 | 25 | 98 | 1, 2 |

- REMARKS:
- ELECTRICAL TO PROVIDE LOCKABLE NON-FUSED KNIFE BLADE DISCONNECT
 - PROVIDE WITH WIRED REMOTE THERMOSTAT

VRF BRANCH CIRCUIT CONTROLLER

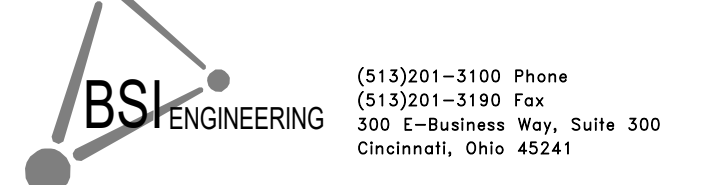
| MARK | SYSTEM TYPE | NUMBER OF BRANCHES | MAX CONNECTABLE CAPACITY (TONS) | REFRIGERANT | MCA | MCCP | VOLT / PH / HZ | WEIGHT (LBS) | MANUFACTURER | MODEL | REMARKS |
|-------|-------------------|--------------------|---------------------------------|-------------|-----|------|----------------|--------------|------------------|-----------------|---------|
| BCC-1 | VRF HEAT RECOVERY | 7 | 28 | R-410A | 1 | 20 | 208 / 1 / 60 | 133 | TRANE/MITSUBISHI | TCMBM0108JA11N4 | 1, 2 |

- REMARKS:
- ELECTRICAL CONTRACTOR TO PROVIDE LOCKABLE NON-FUSED DISCONNECT SWITCH.
 - PROVIDE ADDITIONAL ACCESSORIES AS REQUIRED BY THE MANUFACTURER. INSTALL PER MANUFACTURER'S REQUIREMENTS.

SEAL:



designing for the future building on the past



ISSUED FOR REVIEW ONLY
December 15, 2023
R.E. Warner & Assoc. Inc

NOT FOR CONSTRUCTION

| No. | Description | Date |
|-----|-------------|------------|
| A | 60% REVIEW | 11/16/2023 |
| B | 90% REVIEW | 12/15/2023 |

CITY OF BLUE ASH

SUMMIT PARK
MAINTENANCE FACILITY

HVAC SCHEDULES

| | |
|----------------|------------|
| Project Number | 29123 |
| Date | 12/15/2023 |
| Drawn By | MAH |
| Checked By | STL |

M601

Scale