

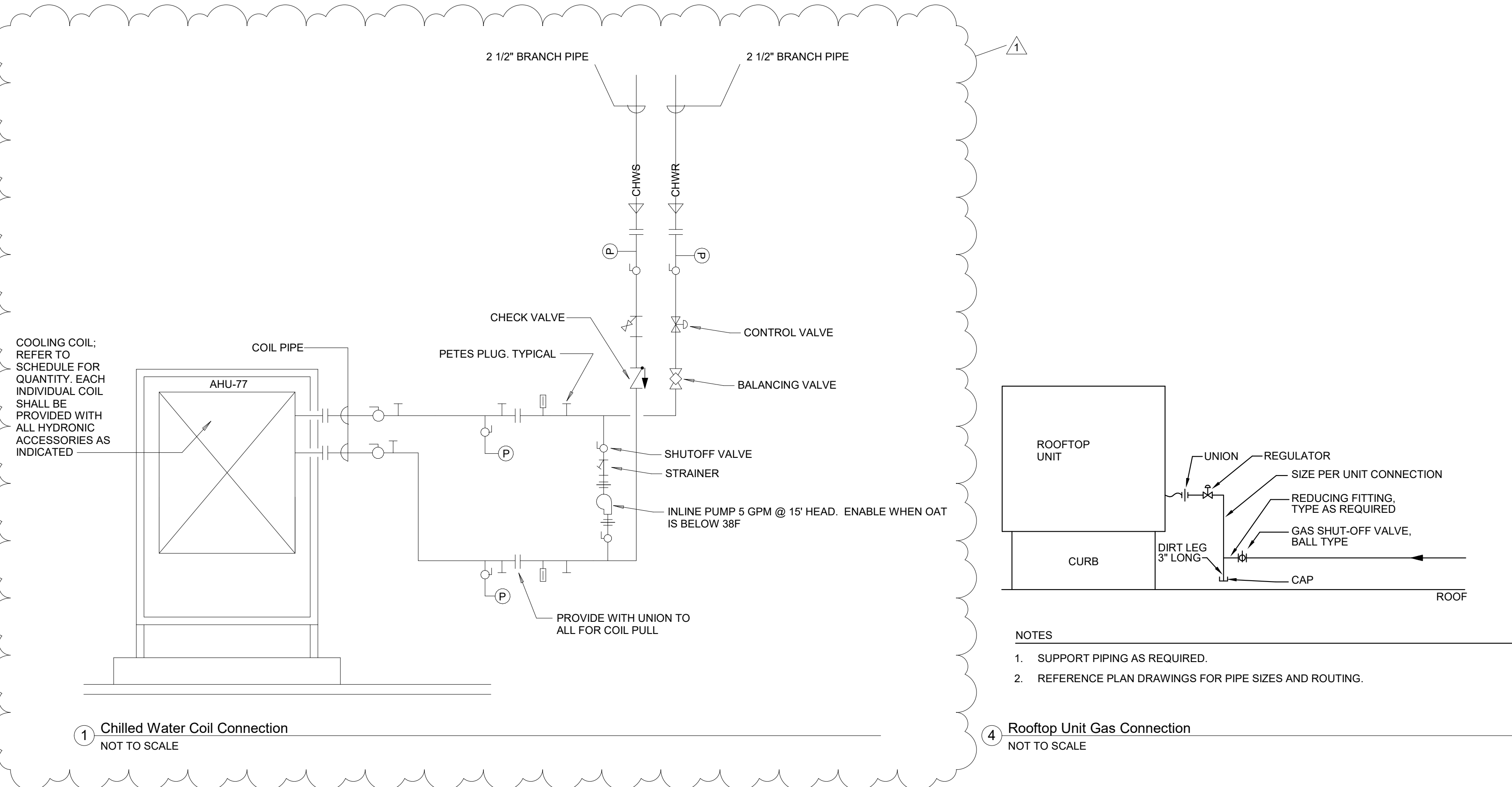
GENERAL NOTES

- A. THESE CONTRACT DOCUMENTS HAVE BEEN PREPARED IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS:
 - a. OHIO BUILDING CODE (2017)
 - b. OHIO MECHANICAL CODE (2017)
- B. CONTRACT DRAWINGS ARE DIAGRAMMATIC, INTENDED TO CONVEY SCOPE OF WORK, AND SHOW GENERAL ARRANGEMENT OF EQUIPMENT AND SERVICES. FIELD VERIFY DIMENSIONS AND EXISTING CONDITIONS PRIOR TO EXECUTION OF WORK. REFER TO DETAILS AND SCHEDULES FOR ADDITIONAL INFORMATION OR REQUIREMENTS.
- C. INSTALL DUCTWORK AND ACCESSORIES IN SUCH A MANNER FOR EASE OF BALANCING AND SERVICE. (FIELD VERIFY).
- D. FIELD COORDINATE FINAL LOCATION OF AIR DEVICES WITH WORK OF OTHER TRADES.
- E. EQUIPMENT SCHEDULES ARE PROVIDED FOR INFORMATION PURPOSES AND ARE SUPERSEDED BY SHOP DRAWINGS. REFER TO SHOP DRAWINGS FOR MANUFACTURER'S INSTALLATION AND OPERATION INSTRUCTIONS, AND PERFORMANCE CRITERIA.
- F. A SET OF CONSTRUCTION DRAWINGS SHALL BE MAINTAINED AT THE JOB SITE TO BE USED TO DOCUMENT DATA, INCLUDING BUT NOT LIMITED TO LOCATIONS AND EQUIPMENT SCHEDULES.
- G. TRENCHING, SAW CUTTING, CORING, FLASHING, OR STRUCTURAL WORK IS BY OTHERS. STRUCTURAL FRAMING AND SUPPORTS SHALL PROVIDE NECESSARY SUPPORT WITH A MINIMUM CLEARANCE OF 1/2 INCH IN ALL DIRECTIONS.
- H. ALL THERMOSTATS ARE TO BE ADJUSTED THROUGH THE BUILDING AUTOMATION SYSTEM. SEE CONTROLS SUBMITTALS FOR MOUNTING HEIGHTS.
- I. MAINTAIN 42 INCHES OF WORK SPACE CLEARANCE IN FRONT OF ALL SERVICE PANELS. WORK SPACE SHALL PERMIT HINGED SERVICE PANELS TO SWING OPEN AT LEAST 90 DEGREES.
- J. COVERINGS, LININGS, INSULATION, AND ADHESIVES INSTALLED UNDER THIS CONTRACT SHALL MEET FLAME SPREAD RATING OF 25 AND SMOKE DEVELOPED RATING OF 50 PER ASTM E84. THICKNESS OF INSULATION SHALL BE IN ACCORDANCE WITH THE 2017 OHIO BUILDING CODE - MECHANICAL, SECTION 604.
- K. FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE FIRE STOPPED WITH UL APPROVED MATERIALS MEETING THE TESTING REQUIREMENTS OF ASTM E814, OR IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION, FOR THE REQUIRED RATING OF THE STRUCTURE.
- L. ALL SHEETMETAL DUCTWORK, HANGERS, AND SUPPORTS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE 2017 OHIO BUILDING CODE - MECHANICAL SECTION 603 AND SMACNA "HVAC DUCT CONSTRUCTION STANDARDS".
- M. VENTILATION AIR SHALL BE PROVIDED TO THE FACILITY IN ACCORDANCE WITH THE REQUIREMENTS OF ASHRAE 62.1-2016.

| Unit # | Room Name | Room Area (sq ft) | Occupancy Classification | Toilet Units dry | Occupied Area (sq ft) | TBL 6-1 Occ Density (per 100 sq ft) | Pz Population | TBL 6-1 Rp per OA | TBL 6-1 Ra area OA | Vbz OA cfm | TBL 6-2 Ez air dist eff | Voz OA cfm | Exhaust cfm | Required Supply cfm | Calculated Supply cfm | Provided Supply cfm |
|---------------|------------------------|-------------------|--------------------------|------------------|-----------------------|-------------------------------------|---------------|-------------------|--------------------|------------|-------------------------|------------|--------------|---------------------|-----------------------|---------------------|
| 1 | 101 - OFFICE | 76 | Office space | | 76 | 7 | 2 | 5 | 0.06 | 15 | 0.8 | 19 | 0 | 45 | 50 | 100 |
| 1 | 102 - ENDRINE ROOM | 75 | General manufacturing | | 75 | 7 | 2 | 10 | 0.18 | 34 | 0.8 | 42 | 0 | 51 | 60 | 100 |
| 1 | 105 - SAVORY EXPANSION | 2665 | General manufacturing | | 2665 | 7 | 10 | 10 | 0.18 | 580 | 0.8 | 725 | 3200 | 1074 | 1600 | 3200 |
| Totals | | 2,816 | | | 2,816 | | 14 | | | 628 | | 786 | 3,200 | | | 3,400 |

| Unit # | Unit Name | System Az Area (sq ft) | System Pz Population | System Vou OA cfm | System Voz cfm | Required Supply cfm | System Supply cfm | Maximum Zpz OA % | Xs OA % | Ev Vent Eff | System Vet OA cfm | System Provided OA cfm | System Exhaust cfm | System OA % |
|---------------|-----------|------------------------|----------------------|-------------------|----------------|---------------------|-------------------|------------------|---------|-------------|-------------------|------------------------|--------------------|-------------|
| 1 | AHU-77 | 2,816 | 14 | 628 | 786 | 1173 | 3,400 | 84% | 18% | 0.34 | 786 | 3,400 | 3,200 | 100% |
| Totals | | 2,816 | 14 | 628 | 786 | 1,173 | 3,400 | | | | 786 | 3,400 | 3,200 | |

| REFERENCES FOR VENTILATION TABLES AND FORMULAS ARE FROM STANDARD 62.1-2016 FOR THE VENTILATION RATE PROCEDURE | | | |
|---|--|-----------------------------------|---|
| Az = Zone floor area (sq ft) | Vbz = Breathing zone outdoor air flow | Vou = sum(Rp * Pz) + sum(Ra * Az) | Ev = Ventilation efficiency |
| Pz = Zone population - maximum occupancy (table 6-1) | Ez = Zone air distribution effectiveness (table 6-2) | Xs = Average outdoor air ratio | Vot = Vou / Ev |
| Rp = Outdoor air flow rate per person (table 6-1) | Voz = Vbz / Ez | Zpz = Voz / Vpz | Vot = Total outdoor air flow (calculated) |
| Ra = Outdoor air flow rate per unit area (table 6-1) | Voz = Zone outdoor air flow | Zpz = Zone outdoor air ratio | |
| Vbz = (Rp * Pz) + (Ra * Az) | Vpz = Total zone supply air flow | Ev = 1 + Xs - Vpz_max | |



- NOTES**
- SUPPORT PIPING AS REQUIRED.
 - REFERENCE PLAN DRAWINGS FOR PIPE SIZES AND ROUTING.

| HVAC Tag | P&ID Tag | Material Tag | Description | Insulation |
|----------|----------|--------------|-------------------------------------|-----------------------------------|
| CHWR | CFR | S3 | T304L STAINLESS STEEL PIPE SCH. 10S | 1-1/2" RUBATEX WITH A POLY JACKET |
| CHWS | CFS | S3 | T304L STAINLESS STEEL PIPE SCH. 10S | 1-1/2" RUBATEX WITH A POLY JACKET |
| NG | | | CARBON STEEL MEGAPRESS | N/A |

| DUCTWORK SUMMARY | | | | | | | | |
|------------------|--------|------------|----------------|------------|---------------------|------------------------------------|-----------|--|
| TYPE/APPLICATION | SERVES | DUCT TYPE | PRESSURE CLASS | SEAL CLASS | INTERNAL INSULATION | EXTERNAL INSULATION | FLEX DUCT | |
| CONCEALED SUPPLY | ALL | GALVANIZED | 2" WC | A | N/A | 1 1/2" FOIL BACKED FIBERGLASS WRAP | 5 FT MAX | |
| PROCESS EXHAUST | ALL | 304 SS | 4" WC | A | N/A | NONE | NO | |

| AIR DEVICE SCHEDULE | | | | | | | | | |
|---------------------|------------------|-----------------|----------|------------|----------|---------------|------------------|----------|--------------|
| TAG | TYPE | FRAME SIZE (IN) | MOUNTING | PATTERN | MATERIAL | DAMPER TYPE | MANUFACTURER | MODEL | FINISH |
| S1 | SUPPLY DIFFUSER | 24"x24" | Lay-in | 4-Way | 304 SS | Opposed Blade | AJ Manufacturing | SFSD | By Architect |
| T1 | TRANSFER GRILLE | 12"x12" | Lay-in | 45° Blades | 304 SS | None | Titus | 350RL-SS | By Architect |
| E1 | EXHAUST REGISTER | 24"x24" | Lay-in | 45° Blades | 304 SS | Opposed Blade | Titus | 350RL-SS | By Architect |

| EXHAUST FAN SCHEDULE | | | | | | | | | | | | | | | | | |
|----------------------|-----|--------------|----------------|-----------------|---------|-------------|----------|-----------|---------------|----------|-------------|----------------|-------------|--------------|-------------|--------------|---------------|
| TAG | QTY | TYPE | NECK SIZE (IN) | FRAME SIZE (IN) | MAX CFM | ESP (IN WC) | MOTOR HP | MOTOR RPM | NOISE (SONES) | V/P/C | PATTERN | MATERIAL | DAMPER TYPE | MANUFACTURER | MODEL | WEIGHT (LBS) | REMARKS/NOTES |
| EF-1 | 1 | ROOF MOUNTED | 29x15 | 35x68 | 3200 | 0.732 | 1.5 | 1725 | 15.8 | 460/3/60 | CENTRIFUGAL | STEEL/ALUMINUM | BACKDRAFT | GREENHECK | FJI-18-BI-X | 559 | 1, 2, 3 |

Remarks/Notes:

- VFD Motor
- GPFFL-35.2 Roof Curb
- Curb Cap Inlet Box Mounted to Roof Curb

| AIR HANDLING UNIT SCHEDULE | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|------------------|---------------|-----------------------|-------------------|---------|-------------|-----------|---------|------------------|-------------|----------------|---------------------|----------------------|------------|-----|---------|--------------|-------|-------------|-------------|----------|
| TAG | AREA SERVED | AIRFLOW (CFM) | VENTILATION AIR (CFM) | FAN OPERATING BHP | FAN RPM | ESP (IN WG) | ENTER AIR | | EXIT AIR DB (°F) | COOLING | | HEATING INPUT (MBH) | HEATING OUTPUT (MBH) | ELECTRICAL | | | MANUFACTURER | MODEL | WEIGHT (LB) | ACCESSORIES | |
| | | | | | | | DB (°F) | WB (°F) | | TOTAL (MBH) | SENSIBLE (MBH) | | | VOLT/PHASE | FLA | MCA/WVA | | | | | MOCP/OPD |
| AHU-77 | SAVORY EXPANSION | 3400 | 3400 | 1.72 | 1938 | 1 | 94.0 | 75.0 | 45.6 | 365.4 | 211.8 | 400 | 324 | 460-3-60 | 7.1 | 7.9 | 15 | TRANE | OADG000A3 | 2408 | 1, 2, 3 |

ACCESSORIES:

- 14" Roof Curb
- Supply Duct Smoke Detector
- Programmable Thermostat

| SYMBOL LEGEND | |
|---------------|---------------------|
| | POINT OF CONNECTION |
| | THERMOSTAT |
| | PRESSURE SENSOR |
| | SMOKE DETECTOR |
| | FIRE DAMPER |
| | PLAN NOTE |

| DUCTWORK LEGEND | |
|-----------------|-----------------------------|
| | SUPPLY DUCTWORK |
| | EXHAUST DUCTWORK |
| | EXISTING TO REMAIN DUCTWORK |
| | DEMOLISHED DUCTWORK |

| MECHANICAL PIPING LEGEND | |
|--------------------------|---------------------------|
| | CHILLED WATER SUPPLY |
| | CHILLED WATER RETURN |
| | NATURAL GAS |
| | EXISTING TO REMAIN PIPING |

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| REV # | DATE | DESCRIPTION OF REVISION |
|-------|----------|-------------------------|
| 0 | 02/29/24 | PERMIT |
| 1 | 06/19/24 | ENGINEERING CHANGES |

PROJECT
 MANE SAVORY
 1000 Mane Way
 Lebanon, OH 45036

SHEET TITLE
 HVAC INFORMATION

DRAWN BY JMT
JOB # ---
FULL SHEET SIZE 30"X42"
M000

