Z:\~Project Directories\10500 - 10599\10535 - Paramount Commons - Cincinnati OH\~Construction Documents\10535-M100-MECHANICAL-FIRST-FLOOR-PLAN.dwg-EBS, Plot Date/Time: Feb 22, 2024-6:07pm - By: c.griffin
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PLOTTED: Thursday, February 22, 2024 6:07:33 PM

## MECHANICAL SCOPE OF WORK (PLAN REVIEW ONLY)

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## CODES & STANDARDS REFERENCED

- 2017 OHIO MECHANICAL CODE
- 2017 OHIO BUILDING CODE
- ASHRAE 90.1-2010 GOLD

## HVAC DESIGN CONDITIONS

| COOLING | HEATING |
|---|---|
| OUTDOOR: 93 DB / 75 WB | OUTDOOR: 0 DB |
| INDOOR: 72 | INDOOR: 70 |

## KEYED SHEET NOTES

1. INSTALL CEILING RADIATION DAMPER. PROVIDE BUTTERFLY DAMPER IN DIFFUSER AND FACE DAMPERS FOR CEILING REGISTERS.
2. ROUTE 3/4" CONDENSATE DRAIN LINE TO FLOOR DRAIN IN MECHANICAL CLOSET. SLOPE PIPE A MINIMUM OF 1/8 " PER FOOT AWAY FROM UNIT. COORDINATE FLOOR DRAIN LOCATION WITH PLUMBING CONTRACTOR.
3. ROUTE EXHAUST DUCT IN FLOOR JOIST AND OVER TO EXTERIOR WALL. SEE ARCHITECT BEFORE PENETRATION FOR EXACT LOCATION AND COLOR COORDINATION. ALL EXHAUST SHALL MEET THE FOLLOWING REQUIREMENTS.
   - 3.1. 3' FROM PROPERTY LINE.
   - 3.2. 3' FROM OPERABLE OPENINGS INTO BUILDING.
   - 3.3. 10' FROM MECHANICAL AIR INTAKE
4. ROUTE LINE SET AND CONTROL WIRING FROM INDOOR AIR HANDLER TO OUTDOOR UNIT. ALL PIPING SHALL BE CONCEALED IN FINISHED AREA PROVIDE EZ PULL LINE SET. SIZE PER MANUFACTURES RECOMMENDATIONS. PROVIDE SEAL TIGHT FOR CONTROL WIRING TO HP. CONTROL WIRING NOT TO BE EXPOSED TO ELEMENTS.
5. ROUTE KITCHEN EXHAUST DUCT IN SOFFIT BELOW RATED CEILING TO EXTERIOR WALL. SEE ARCHITECT BEFORE PENETRATION FOR EXACT LOCATION AND COLOR COORDINATION. ALL EXHAUST SHALL MEET THE FOLLOWING REQUIREMENTS.
   - 5.1. 3' FROM PROPERTY LINE.
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7. RUN LINESETS AND CONTROL WIRING IN WALL CAVITY UP TO CURB ON ROOF. STUB LINESETS OUT OF WALL/FLOOR/CURB FOR FUTURE ADD.
8. INSTALL DRYER BOX EQUIVALENT TO DUNDAS JOFINE DRB4XZW.
9. INSTALL RETURN GRILLE ABOVE MECHANICAL CLOSET DOOR. PROVIDE SLEEVE THROUGH WALL TO MOUNT RETURN GRILLE.
10. INSTALL RETURN GRILLE HIGH ON SIDE WALL. COORDINATE FINAL LOCATION WITH OWNER/ARCHITECT.
11. EXHAUST FAN TO BE CONTROLLED BY SWITCH ON WALL.
12. PROVIDE 1HR FIRE DAMPER IN RATED WALL.
13. PROVIDE 16"X16" WELDED GREASE DUCT FOR EXHAUST AND 20"X18" MAKE UP AIR DUCT IN SHAFT FOR FUTURE RESTAURANT. FOLLOW 2017 OHIO MECHANICAL CODE SECTION 506 COMMERCIAL KITCHEN HOOD VENTILATION SYSTEM DUCTS AND EXHAUST EQUIPMENT. EXHAUST DUCT TO BE FIRE WRAPPED AND OUTSIDE AIR DUCT TO BE EXTERNALLY INSULATED.
14. PROVIDE 18"X16" SUPPLY AND 18"X16" RETURN DUCT IN SHAFT FOR FUTURE ROOF TOP UNIT. INSULATE BOTH SUPPLY AND RETURN IN SHAFT. ROUTE DUCT UP SHAFT AND INTO ATTIC. CAP DUCT ONCE IN ATTIC. FUTURE TENANT WILL CONNECT TO DUCT IN ATTIC ONCE FITOUT STARTS. EXTEND SUPPLY AND RETURN THROUGH SHAFT IN TENANT SPACE FOR FUTURE CONNECTION.
15. PROVIDE 24V MOTORIZED DAMPER. TIE MOTORIZED DAMPER IN WITH AIR HANDLER. HANDLER TO SEND 24V WHEN UNIT IS OPERATING.
16. PROVIDE THY CURBS FOR HEAT PUMPS. HEAT PUMPS CAN BE COMBINED ON A SET OF THY CURBS CLOSE TO REFRIGERANT CURB TO REDUCE AMOUNT OF CURBS AND FLASHING ON ROOF. COORDINATE WITH GENERAL CONTRACTOR.

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D. INSTALL ALL EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. MAINTAIN ALL CODE RECOMMENDED CLEARANCES FOR ACCESS AND MAINTENANCE.

E. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS, AND FINAL CEILING DIFFUSER LOCATIONS.

F. MAINTAIN ALL CODE REQUIRED SERVICE CLEARANCES. FOLLOW CLEARANCE TO COMBUSTIBLE DISTANCE PER MANUFACTURER'S INSTRUCTIONS.

G. PROVIDE BACK DRAFT DAMPERS FOR ALL EXHAUST AND OUTSIDE AIR SYSTEMS AND EITHER LOUVER, BRICK VENT, OR CAPS AT ALL EXTERIOR BUILDING PENETRATIONS. COORDINATE COLOR AND LOCATION WITH OWNER/ARCHTECT PRIOR TO INSTALLATION.

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J. ROUTE ALL AIR CONDITIONER CONDENSATE TO FLOOR DRAIN IN MECHANICAL CLOSET. PROVIDE MINIMUM SLOPE OF 1/8 " PER FOOT. SIZE CONDENSATE PER SECTION 307.2.2 OF THE OHIO MECHANICAL CODE.

K. MOUNT THERMOSTATS 60" ABOVE FINISHED FLOOR. MOUNT THERMOSTATS IN ADA UNITS 40" ABOVE FINISHED FLOOR.

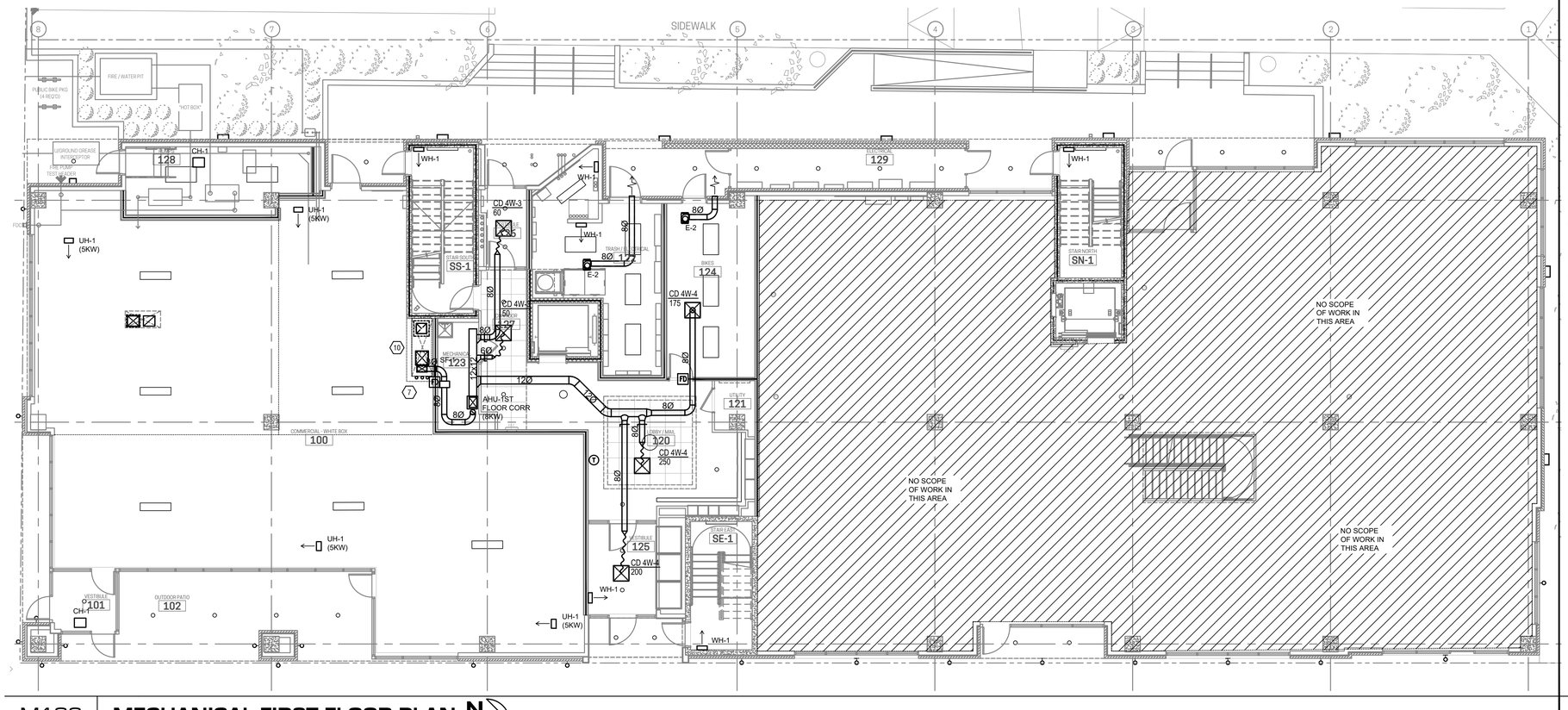
H. PROVIDE AN APPROVED THROUGH PENETRATION FIRESTOP FOR ALL PIPING INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479. FIRESTOP SHALL HAVE A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCHES OF WATER AND SHALL HAVE AN F RATING OF NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL OR FLOOR PENETRATED.

I. ANY EQUIPMENT THAT IS SUBSTITUTED SHALL FIT IN THE SPACE PROVIDED WITH ADEQUATE ROOM FOR SERVICING, INCLUDING SUBSTITUTE EQUIPMENT NAMED IN THE SPECIFICATIONS. SUBMIT A 1/4" SCALE DRAWING OF ALL EQUIPMENT SUBSTITUTED FOR APPROVAL PRIOR TO INSTALLATION, INCLUDING, BUT NOT LIMITED TO, STRUCTURAL AND ARCHITECTURAL IMPACT, CLEARANCE REQUIREMENTS AND UTILITY REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO COORDINATE ALL NEW ELECTRICAL AND PLUMBING REQUIREMENTS WITH THE ELECTRICAL AND PLUMBING CONTRACTORS.

J. MATERIALS WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED AND LABLED AS HAVING A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.

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   - J.A. EXHAUST DUCTS SHALL HAVE A SMOOTH INTERIOR FINISH AND BE CONSTRUCTED OF METAL A MINIMUM OF 28 GAGE.
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   - J.G. PROVIDE DRYER WALL BOX EQUAL TO DUNDAS JAFINE MODEL DRB4XZW NEAR DRYER. CAP EXHAUST DUCT AT DRYER WALL BOX FOR FUTURE CONNECTION BY XXX.
   - J.H. PROVIDE A PERMANENT LABEL OR TAG (EQUAL TO DRYERPLACARD) INDICATING ACTUAL EQUIVALENT LENGTH OF EXHAUST DUCT. LENGTH SHALL INCLUDE 5' FOR 90 . LABEL/TAG MUST BE WITHIN 6' OF DRYER EXHAUST CONNECTION. DRYER EXHAUST DUCT FITTING EQUIVALENT LENGTH SHALL BE 2'-6" FOR A RADIUS MITERED 45-DEGREE ELBOW AND 5 FEET FOR A RADIUS MITERED 90-DEGREE ELBOW.
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K. INDOOR TEMPERATURES SHALL BE CONTROLLED THROUGH THERMOSTAT.




M100 **MECHANICAL FIRST FLOOR PLAN** N

1/8"=1'-0"

# PARAMOUNT WORKS

NWC KEMPER LANE & E. McMILLAN ST
**2505 KEMPER LN**
**CINCINNATI, OH 45206**
WALNUT HILLS NEIGHBORHOOD

| No. | Issuances / Revisions / Submissions | Date |
|---|---|---|
| | PRICING/PERMIT ISSUANCE | 02.26.2024 |

PR-10535

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Shared Success Through Collaboration and Efficiency
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Newport, KY 41071 (859) 261-0585
MEP Consulting Services, Inc. in OH
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STATE OF OHIO
SCOTT SEVERT STILKEY
E-77755
REGISTERED PROFESSIONAL ENGINEER

Drawing Title
MECHANICAL FIRST FLOOR PLAN

Document No.
M100

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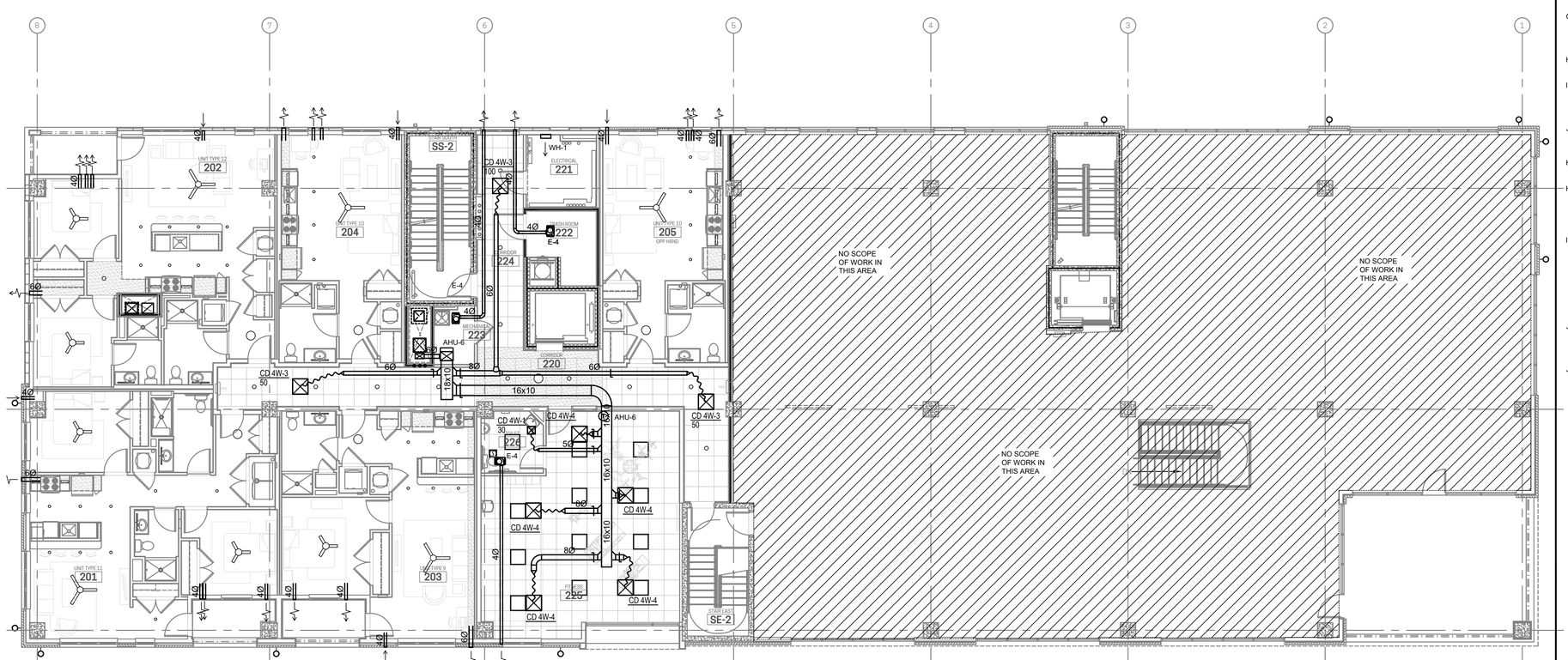
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M101 **MECHANICAL SECOND FLOOR PLAN** N

1/8"=1'-0"

# PARAMOUNT WORKS

NWC KEMPER LANE & E. McMILLAN ST
**2505 KEMPER LN**
**CINCINNATI, OH 45206**
WALNUT HILLS NEIGHBORHOOD

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PR-10535

ENGINEERED BUILDING SYSTEMS INC.
Shared Success Through Collaboration and Efficiency
515 Monmouth Street, Suite 201
Newport, KY 41071 (859) 261-0585
MEP Consulting Services, Inc. in OH
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STATE OF OHIO · SCOTT SEVERT STILKEY · E-77755 · REGISTERED PROFESSIONAL ENGINEER

Drawing Title
MECHANICAL SECOND FLOOR PLAN

Document No.
M101

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- ASHRAE 90.1-2010 GOLD

## HVAC DESIGN CONDITIONS

| COOLING | HEATING |
|---|---|
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| INDOOR: 72 | INDOOR: 70 |

## KEYED SHEET NOTES

1. INSTALL CEILING RADIATION DAMPER. PROVIDE BUTTERFLY DAMPER IN DIFFUSER AND FACE DAMPERS FOR CEILING REGISTERS.
2. ROUTE 3/4" CONDENSATE DRAIN LINE TO FLOOR DRAIN IN MECHANICAL CLOSET. SLOPE PIPE A MINIMUM OF 1/8 " PER FOOT AWAY FROM UNIT. COORDINATE FLOOR DRAIN LOCATION WITH PLUMBING CONTRACTOR.
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   - 3.1. 3' FROM PROPERTY LINE.
   - 3.2. 3' FROM OPERABLE OPENINGS INTO BUILDING.
   - 3.3. 10' FROM MECHANICAL AIR INTAKE
4. ROUTE LINE SET AND CONTROL WIRING FROM INDOOR AIR HANDLER TO OUTDOOR UNIT. ALL PIPING SHALL BE CONCEALED IN FINISHED AREA. PROVIDE EZ PULL LINE SET. SIZE PER MANUFACTURES RECOMMENDATIONS. PROVIDE SEAL TIGHT FOR CONTROL WIRING TO HP. CONTROL WIRING NOT TO BE EXPOSED TO ELEMENTS.
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E. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS, AND FINAL CEILING DIFFUSER LOCATIONS.

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K. MOUNT THERMOSTATS 60" ABOVE FINISHED FLOOR. MOUNT THERMOSTATS IN ADA UNITS 40" ABOVE FINISHED FLOOR.

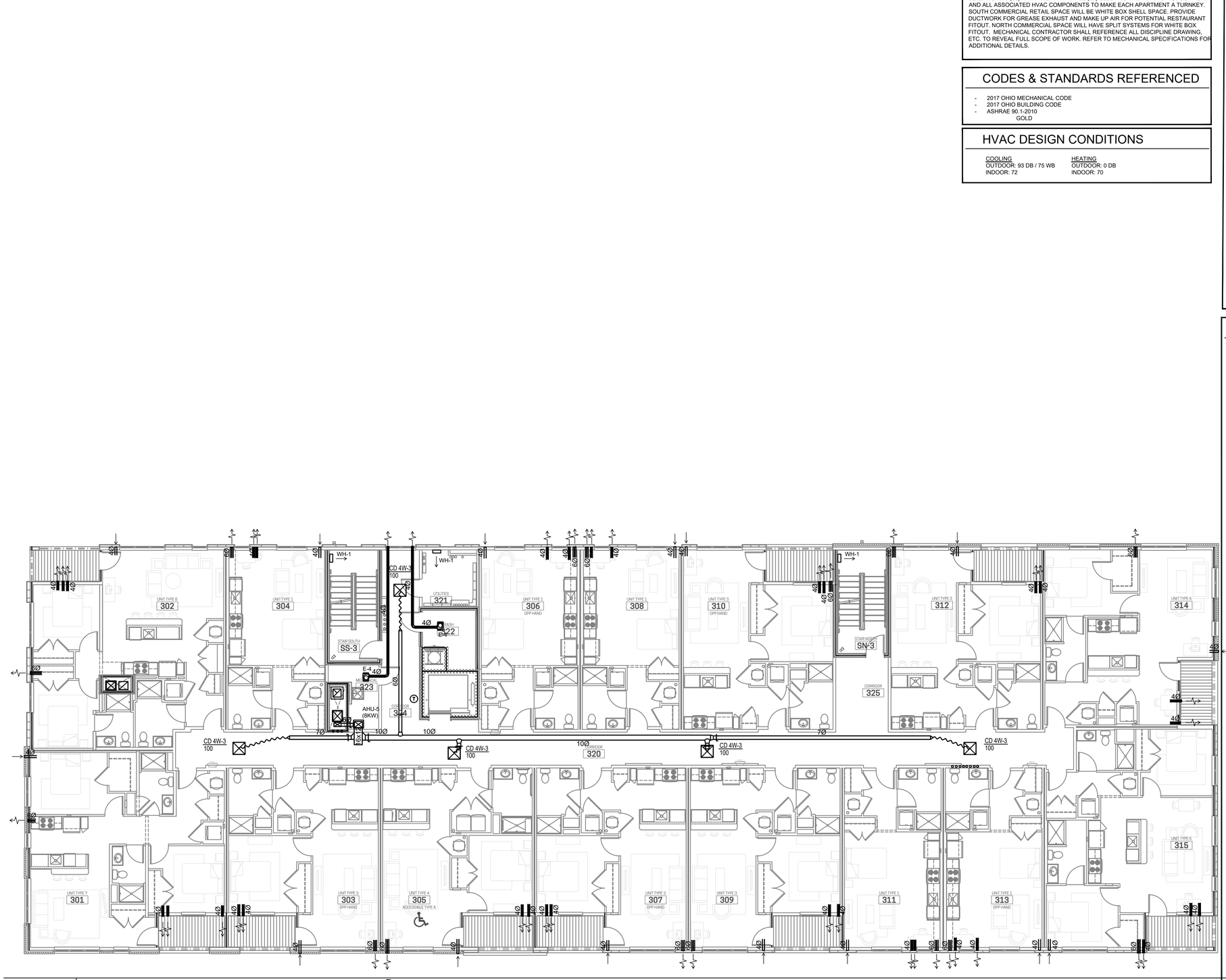
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M102 **MECHANICAL THIRD FLOOR PLAN**

1/8"=1'-0"

**PARAMOUNT WORKS**

NWC KEMPER LANE & E. McMILLAN ST
**2505 KEMPER LN**
**CINCINNATI, OH 45206**
WALNUT HILLS NEIGHBORHOOD

| No. | Issuances / Revisions / Submissions | Date |
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| | PRICING/PERMIT ISSUANCE | 02.23.2024 |

PR-10535

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Shared Success Through Collaboration and Efficiency
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Newport, KY 41071 (859) 261-0585
MEP Consulting Services, Inc. in OH
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STATE OF OHIO
SCOTT SEVERT STILKEY
E-77755
REGISTERED PROFESSIONAL ENGINEER

Drawing Title
MECHANICAL THIRD FLOOR PLAN

Document No.
M102

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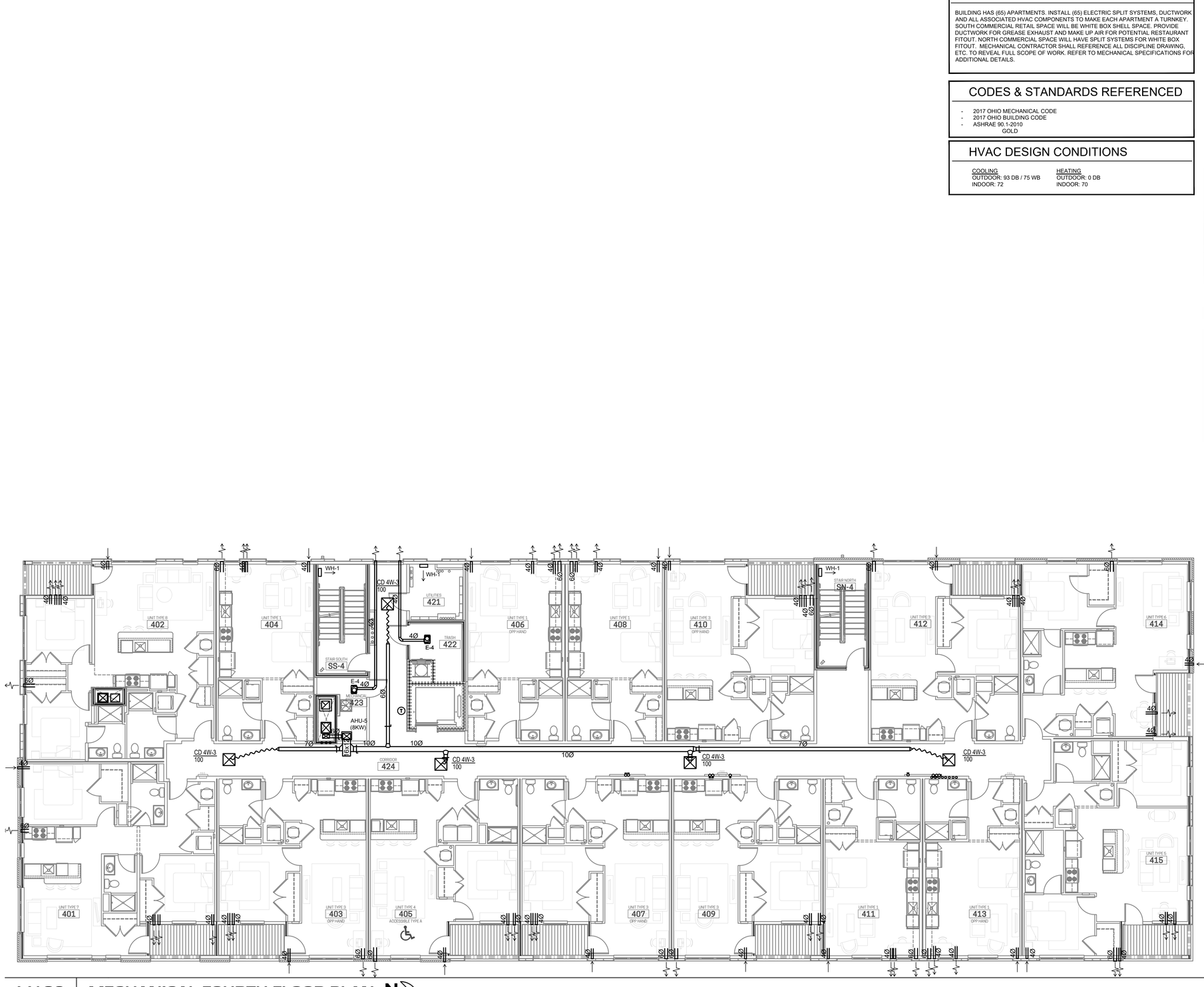
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# M103 MECHANICAL FOURTH FLOOR PLAN

1/8"=1'-0"

N

# PARAMOUNT WORKS

NWC KEMPER LANE & E. McMILLAN ST
**2505 KEMPER LN**
**CINCINNATI, OH 45206**
WALNUT HILLS NEIGHBORHOOD

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Shared Success Through Collaboration and Efficiency
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STATE OF OHIO
SCOTT SEVERT STILKEY
E-77755
REGISTERED PROFESSIONAL ENGINEER

Drawing Title
MECHANICAL FOURTH FLOOR PLAN

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M103

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4. ROUTE LINE SET AND CONTROL WIRING FROM INDOOR AIR HANDLER TO OUTDOOR UNIT. ALL PIPING SHALL BE CONCEALED IN FINISHED AREA. PROVIDE EZ PULL LINE SET. SIZE PER MANUFACTURES RECOMMENDATIONS. PROVIDE SEAL TIGHT FOR CONTROL WIRING TO HP. CONTROL WIRING NOT TO BE EXPOSED TO ELEMENTS.
5. ROUTE KITCHEN EXHAUST DUCT IN SOFFIT BELOW RATED CEILING TO EXTERIOR WALL. SEE ARCHITECT BEFORE PENETRATION FOR EXACT LOCATION AND COLOR COORDINATION. ALL EXHAUST SHALL MEET THE FOLLOWING REQUIREMENTS.
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12. PROVIDE 1HR FIRE DAMPER IN RATED WALL.
13. PROVIDE 16"X16" WELDED GREASE DUCT FOR EXHAUST AND 20"X18" MAKE UP AIR DUCT IN SHAFT FOR FUTURE RESTAURANT. FOLLOW 2017 OHIO MECHANICAL CODE SECTION 506 COMMERCIAL KITCHEN HOOD VENTILATION SYSTEM DUCTS AND EXHAUST EQUIPMENT. EXHAUST DUCT TO BE FIRE WRAPPED AND OUTSIDE AIR DUCT TO BE EXTERNALLY INSULATED.
14. PROVIDE 18"X16" SUPPLY AND 18"X16" RETURN DUCT IN SHAFT FOR FUTURE ROOF TOP UNIT. INSULATE BOTH SUPPLY AND RETURN IN SHAFT. ROUTE DUCT UP SHAFT AND INTO ATTIC. CAP DUCT ONCE IN ATTIC. FUTURE TENANT WILL CONNECT TO DUCT IN ATTIC ONCE FITOUT STARTS. EXTEND SUPPLY AND RETURN THROUGH SHAFT IN TENANT SPACE FOR FUTURE CONNECTION.
15. PROVIDE 24V MOTORIZED DAMPER. TIE MOTORIZED DAMPER IN WITH AIR HANDLER. HANDLER TO SEND 24V WHEN UNIT IS OPERATING.
16. PROVIDE THY CURBS FOR HEAT PUMPS. HEAT PUMPS CAN BE COMBINED ON A SET OF THY CURBS CLOSE TO REFRIGERANT CURB TO REDUCE AMOUNT OF CURBS AND FLASHING ON ROOF. COORDINATE WITH GENERAL CONTRACTOR.

## GENERAL NOTES

A. FOR FULL SCHEDULES, SPECIFICATIONS, AND COMPLETE LISTING SEE DETAIL SHEETS.

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C. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER CONNECTIONS TO ALL MECHANICAL EQUIPMENT.

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E. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS, AND FINAL CEILING DIFFUSER LOCATIONS.

F. MAINTAIN ALL CODE REQUIRED SERVICE CLEARANCES. FOLLOW CLEARANCE TO COMBUSTIBLE DISTANCE PER MANUFACTURER'S INSTRUCTIONS.

G. PROVIDE BACK DRAFT DAMPERS FOR ALL EXHAUST AND OUTSIDE AIR SYSTEMS AND EITHER LOUVER, BRICK VENT, OR CAPS AT ALL EXTERIOR BUILDING PENETRATIONS. COORDINATE COLOR AND LOCATION WITH OWNER/ARCHTECT PRIOR TO INSTALLATION.

H. PROVIDE OVERFLOW SWITCH FOR ALL UNITS IN APARTMENTS, WHICH WILL SHUTOFF THE UNIT ON HIGH WATER LEVEL.

I. IN DWELLING UNITS, ROUTE ALL SUPPLY ABOVE RATED CEILING. PROVIDE RADIATION DAMPERS FOR ALL SUPPLY DUCT PENETRATING RATED CEILING. COORDINATE ROUTING WITH ARCHITECTURAL DRAWINGS. KITCHEN EXHAUST DUCTS SHALL BE RUN BELOW THE RATED FLOOR/CEILING.

J. ROUTE ALL AIR CONDITIONER CONDENSATE TO FLOOR DRAIN IN MECHANICAL CLOSET. PROVIDE MINIMUM SLOPE OF 1/8 " PER FOOT. SIZE CONDENSATE PER SECTION 307.2.2 OF THE OHIO MECHANICAL CODE.

K. MOUNT THERMOSTATS 60" ABOVE FINISHED FLOOR. MOUNT THERMOSTATS IN ADA UNITS 40" ABOVE FINISHED FLOOR.

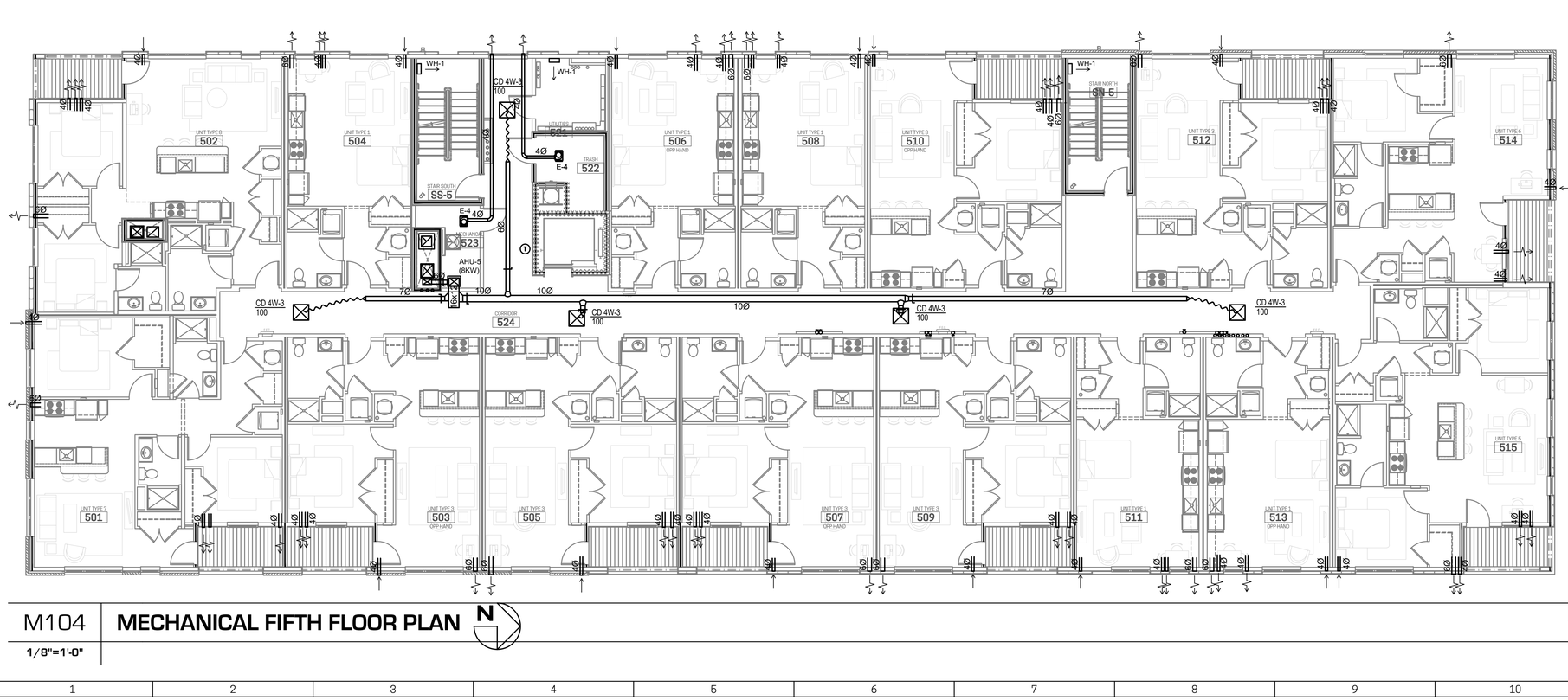
H. PROVIDE AN APPROVED THROUGH PENETRATION FIRESTOP FOR ALL PIPING INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479. FIRESTOP SHALL HAVE A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCHES OF WATER AND SHALL HAVE AN F RATING OF NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL OR FLOOR PENETRATED.

I. ANY EQUIPMENT THAT IS SUBSTITUTED SHALL FIT IN THE SPACE PROVIDED WITH ADEQUATE ROOM FOR SERVICING, INCLUDING SUBSTITUTE EQUIPMENT NAMED IN THE SPECIFICATIONS. SUBMIT A 1/4" SCALE DRAWING OF ALL EQUIPMENT SUBSTITUTED FOR APPROVAL PRIOR TO INSTALLATION, INCLUDING, BUT NOT LIMITED TO, STRUCTURAL AND ARCHITECTURAL IMPACT, CLEARANCE REQUIREMENTS AND UTILITY REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO COORDINATE ALL NEW ELECTRICAL AND PLUMBING REQUIREMENTS WITH THE ELECTRICAL AND PLUMBING CONTRACTORS.

J. MATERIALS WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED AND LABELED AS HAVING A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.

J. THE FOLLOWING GUIDELINES MUST BE FOLLOWED FOR THE DOMESTIC DRYER EXHAUST SYSTEMS.
- J.A. EXHAUST DUCTS SHALL HAVE A SMOOTH INTERIOR FINISH AND BE CONSTRUCTED OF METAL A MINIMUM OF 28 GAGE.
- J.B. DUCT SIZE SHALL BE 4 INCHES NOMINAL DIAMETER.
- J.C. DUCTS SHALL BE SUPPORTED AT 4-FOOT INTERVALS AND SECURED IN PLACE. THE INSERT END OF THE DUCT SHALL EXTEND INTO THE ADJOINING DUCT OR FITTING IN THE DIRECTION OF AIRFLOW.
- J.D. DUCTS SHALL NOT BE JOINED WITH SCREWS OF SIMILAR FASTENERS THAT PROTRUDE MORE THAN ¼ INCH INTO THE INSIDE OF THE DUCT.
- J.E. PROTECTIVE SHIELD PLATES SHALL BE PLACED WHERE NAILS OR SCREWS FROM FINISH OR OTHER WORK ARE LIKELY TO PENETRATE THE CLOTHES DRYER EXHAUST DUCT.SHIELD PLATES SHALL BE PLACED ON THE FINISHED FACE OF ALL FRAMING MEMBERS WHERE THERE IS LESS THAN 1-1/4 INCHES BETWEEN THE DUCT AND THE FINISHED FACE OF THE FRAMING MEMBER. SHIELD PLATES SHALL BE CONSTRUCTED OF STEEL, HAVE A THICKNESS OF 0.062 INCHES, AND EXTEND NOT LESS THAN 2 INCHES ABOVE SOLE PLATES AND BELOW TOP PLATES.
- J.F. TRANSITION DUCTS USED TO CONNECT THE DRYER TO THE EXHAUST DUCT SYSTEM SHALL BE A SINGLE LENGTH THAT IS LISTED AND LABELED IN ACCORDANCE WITH UL 2158A. TRANSITION DUCTS SHALL BE NOT GREATER THAN 8 FEET IN LENGTH AND SHALL NOT BE CONCEALED WITHIN CONSTRUCTION.
- J.G. PROVIDE DRYER WALL BOX EQUAL TO DUNDAS JAFINE MODEL DRB4XZW NEAR DRYER. CAP EXHAUST DUCT AT DRYER WALL BOX FOR FUTURE CONNECTION BY XXX.
- J.H. PROVIDE A PERMANENT LABEL OR TAG (EQUAL TO DRYERPLACARD) INDICATING ACTUAL EQUIVALENT LENGTH OF EXHAUST DUCT. LENGTH SHALL INCLUDE 5' FOR 90 . LABEL/TAG MUST BE WITHIN 6' OF DRYER EXHAUST CONNECTION. DRYER EXHAUST DUCT FITTING EQUIVALENT LENGTH SHALL BE 2'-6" FOR A RADIUS MITERED 45-DEGREE ELBOW AND 5 FEET FOR A RADIUS MITERED 90-DEGREE ELBOW.
- J.I. CAP EXHAUST DUCT FOR FUTURE CONNECTION BY TENANT?

K. INDOOR TEMPERATURES SHALL BE CONTROLLED THROUGH THERMOSTAT.




# M104 MECHANICAL FIFTH FLOOR PLAN

1/8"=1'-0"

N

**PARAMOUNT WORKS**

NWC KEMPER LANE & E. McMILLAN ST
**2505 KEMPER LN**
**CINCINNATI, OH 45206**
WALNUT HILLS NEIGHBORHOOD

| No. | Issuances / Revisions / Submissions | Date |
|---|---|---|
| | PRICING/PERMIT ISSUANCE | 02.23.2024 |

PR-10535

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Shared Success Through Collaboration and Efficiency
515 Monmouth Street, Suite 201
Newport, KY 41071 (859) 261-0585
MEP Consulting Services, Inc. in OH
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STATE OF OHIO
SCOTT SEVERT STILKEY
E-77755
REGISTERED PROFESSIONAL ENGINEER

Drawing Title
MECHANICAL FIFTH FLOOR PLAN

Document No.
M104

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PLOTTED: Thursday, February 22, 2024 5:43:29 PM

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BUILDING HAS (65) APARTMENTS. INSTALL (65) ELECTRIC SPLIT SYSTEMS, DUCTWORK AND ALL ASSOCIATED HVAC COMPONENTS TO MAKE EACH APARTMENT A TURNKEY. SOUTH COMMERCIAL RETAIL SPACE WILL BE WHITE BOX SHELL SPACE. PROVIDE DUCTWORK FOR GREASE EXHAUST AND MAKE UP AIR FOR POTENTIAL RESTAURANT FITOUT. NORTH COMMERCIAL SPACE WILL HAVE SPLIT SYSTEMS FOR WHITE BOX FITOUT. MECHANICAL CONTRACTOR SHALL REFERENCE ALL DISCIPLINE DRAWING, ETC. TO REVEAL FULL SCOPE OF WORK. REFER TO MECHANICAL SPECIFICATIONS FOR ADDITIONAL DETAILS.

## CODES & STANDARDS REFERENCED

- 2017 OHIO MECHANICAL CODE
- 2017 OHIO BUILDING CODE
- ASHRAE 90.1-2010 GOLD

## HVAC DESIGN CONDITIONS

| COOLING | HEATING |
|---|---|
| OUTDOOR: 93 DB / 75 WB | OUTDOOR: 0 DB |
| INDOOR: 72 | INDOOR: 70 |

## KEYED SHEET NOTES

1. INSTALL CEILING RADIATION DAMPER. PROVIDE BUTTERFLY DAMPER IN DIFFUSER AND FACE DAMPERS FOR CEILING REGISTERS.
2. ROUTE 3/4" CONDENSATE DRAIN LINE TO FLOOR DRAIN IN MECHANICAL CLOSET. SLOPE PIPE A MINIMUM OF 1/8 " PER FOOT AWAY FROM UNIT. COORDINATE FLOOR DRAIN LOCATION WITH PLUMBING CONTRACTOR.
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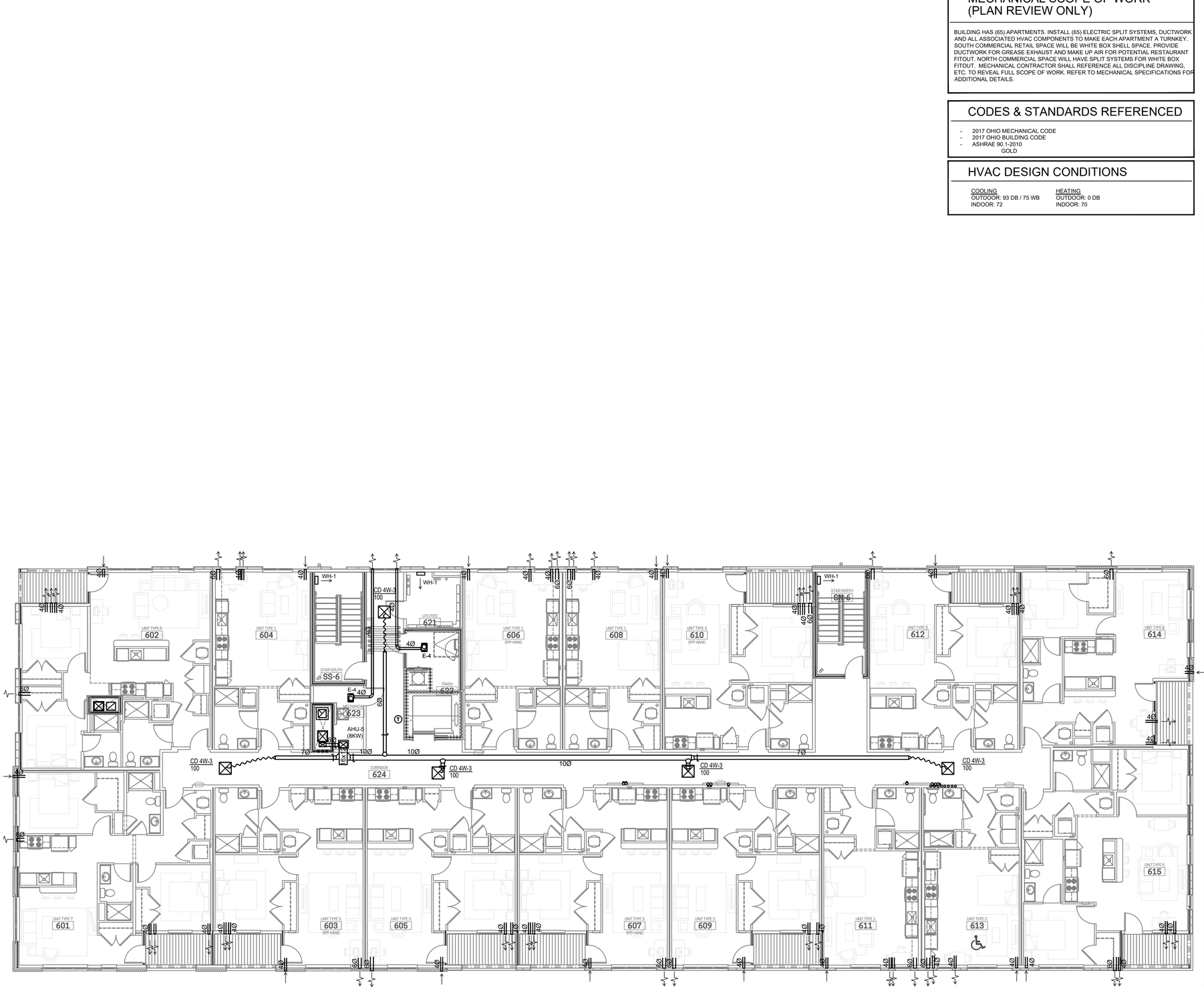
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K. INDOOR TEMPERATURES SHALL BE CONTROLLED THROUGH THERMOSTAT.




M105 **MECHANICAL SIXTH FLOOR PLAN** N

1/8"=1'-0"

# PARAMOUNT WORKS

NWC KEMPER LANE & E. McMILLAN ST
**2505 KEMPER LN**
**CINCINNATI, OH 45206**
WALNUT HILLS NEIGHBORHOOD

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PR-10535

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Shared Success Through Collaboration and Efficiency
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Newport, KY 41071 (859) 261-0585
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STATE OF OHIO
SCOTT SEVERT STILKEY
E-77795
REGISTERED PROFESSIONAL ENGINEER

Drawing Title
MECHANICAL SIXTH FLOOR PLAN

Document No.
M105

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## MECHANICAL SCOPE OF WORK (PLAN REVIEW ONLY)

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## HVAC DESIGN CONDITIONS

| COOLING | HEATING |
|---|---|
| OUTDOOR: 93 DB / 75 WB | OUTDOOR: 0 DB |
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## KEYED SHEET NOTES

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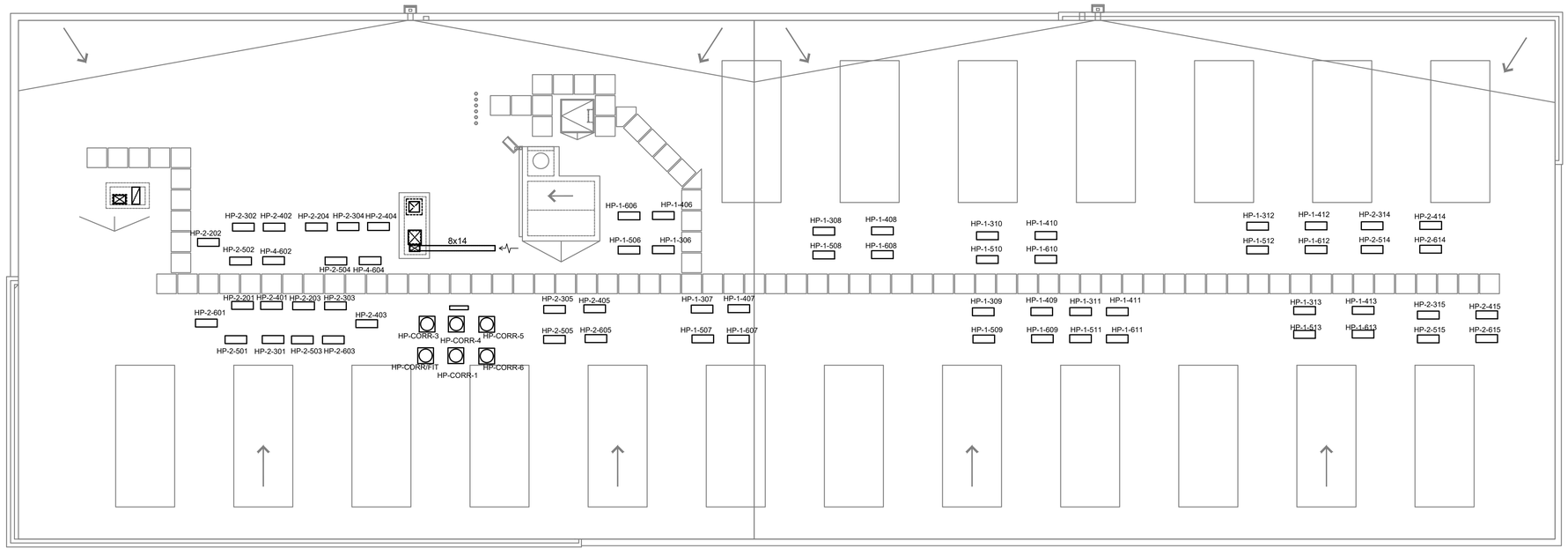
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   - J.I. CAP EXHAUST DUCT FOR FUTURE CONNECTION BY TENANT?

K. INDOOR TEMPERATURES SHALL BE CONTROLLED THROUGH THERMOSTAT.




M106 **MECHANICAL ROOF PLAN** N

1/8"=1'-0"

# PARAMOUNT WORKS

NWC KEMPER LANE & E. McMILLAN ST
**2505 KEMPER LN**
**CINCINNATI, OH 45206**
WALNUT HILLS NEIGHBORHOOD

COORDINATION CHANGES

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| | PRICING/PERMIT ISSUANCE | 02.23.2028 |

PR-10535

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Shared Success Through Collaboration and Efficiency
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MEP Consulting Services, Inc. in OH
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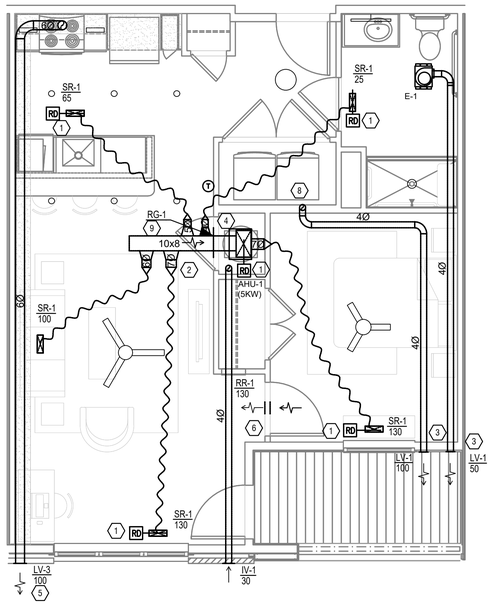
STATE OF OHIO
SCOTT SEVERT STILKEY
E-77755
REGISTERED PROFESSIONAL ENGINEER

Drawing Title
MECHANICAL ROOF PLAN

Document No.
M106

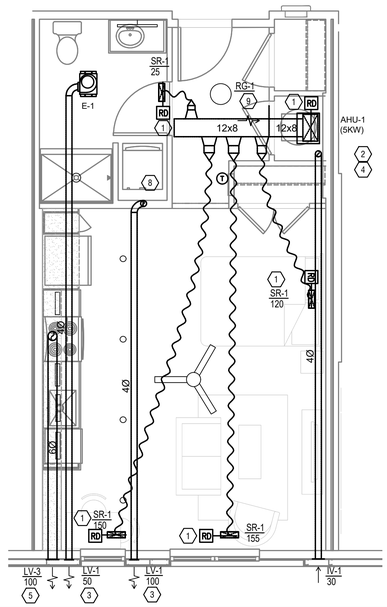
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Z:\~Project Directories\10500 - 10599\10535 - Paramount Commons - Cincinnati OH\~Construction Documents\10535-M200-MECHANICAL-ENLARGED-PLAN.dwg-EBS. Plot Date/Time: Feb 22, 2024--5:40pm - By: c.griffin
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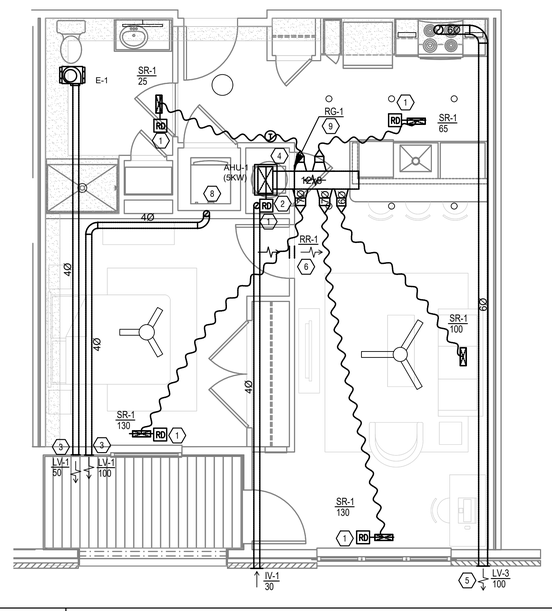

## M4 ENLARGED PLAN - UNIT TYPE 4

1/4"=1'-0"



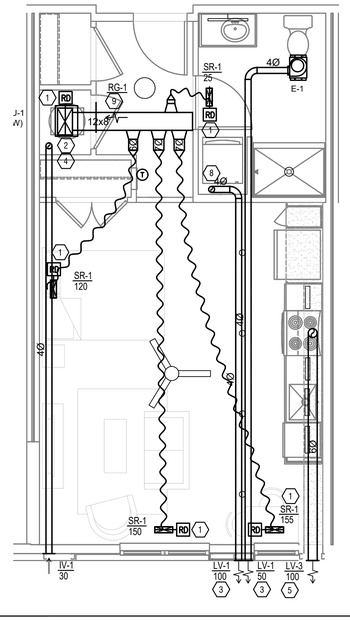

## M2 ENLARGED PLAN - UNIT TYPE 2

1/4"=1'-0"




## M3 ENLARGED PLAN - UNIT TYPE 3

1/4"=1'-0"




## M1 ENLARGED PLAN - UNIT TYPE 1

1/4"=1'-0"

## MECHANICAL SCOPE OF WORK (PLAN REVIEW ONLY)

BUILDING HAS (65) APARTMENTS. INSTALL (65) ELECTRIC SPLIT SYSTEMS, DUCTWORK AND ALL ASSOCIATED HVAC COMPONENTS TO MAKE EACH APARTMENT A TURNKEY. SOUTH COMMERCIAL RETAIL SPACE WILL BE WHITE BOX SHELL SPACE. PROVIDE DUCTWORK FOR GREASE EXHAUST AND MAKE UP AIR FOR POTENTIAL RESTAURANT FITOUT. NORTH COMMERCIAL SPACE WILL HAVE SPLIT SYSTEMS FOR WHITE BOX FITOUT. MECHANICAL CONTRACTOR SHALL REFERENCE ALL DISCIPLINE DRAWING, ETC. TO REVEAL FULL SCOPE OF WORK. REFER TO MECHANICAL SPECIFICATIONS FOR ADDITIONAL DETAILS.

## CODES & STANDARDS REFERENCED

- 2017 OHIO MECHANICAL CODE
- 2017 OHIO BUILDING CODE
- ASHRAE 90.1-2010 GOLD

## HVAC DESIGN CONDITIONS

| COOLING | HEATING |
|---|---|
| OUTDOOR: 93 DB / 75 WB | OUTDOOR: 0 DB |
| INDOOR: 72 | INDOOR: 70 |

## KEYED SHEET NOTES

1. INSTALL CEILING RADIATION DAMPER. PROVIDE BUTTERFLY DAMPER IN DIFFUSER AND FACE DAMPERS FOR CEILING REGISTERS.
2. ROUTE 3/4" CONDENSATE DRAIN LINE TO FLOOR DRAIN IN MECHANICAL CLOSET. SLOPE PIPE A MINIMUM OF 1/8 " PER FOOT AWAY FROM UNIT. COORDINATE FLOOR DRAIN LOCATION WITH PLUMBING CONTRACTOR.
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# PARAMOUNT WORKS

NWC KEMPER LANE & E. McMILLAN ST
**2505 KEMPER LN**
**CINCINNATI, OH 45206**
WALNUT HILLS NEIGHBORHOOD

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| | PRICING/PERMIT ISSUANCE | 02.23.2024 |

COORDINATION CHANGES

PR-10535

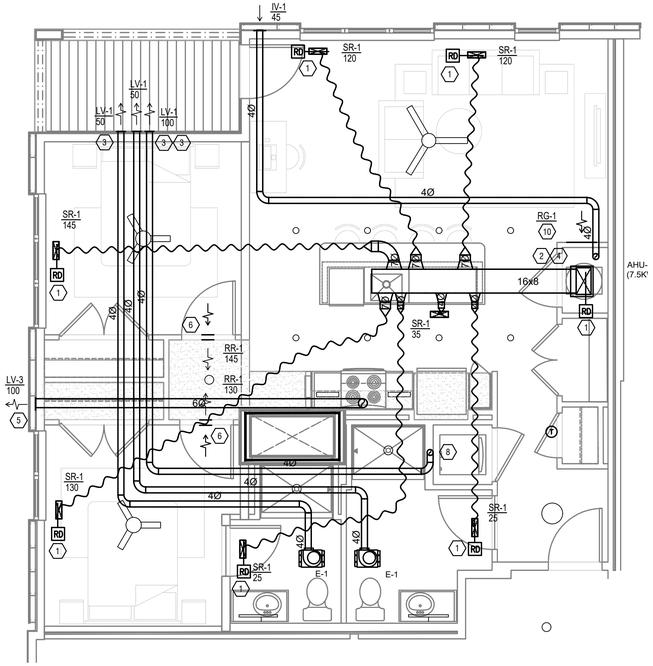
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Shared Success Through Collaboration and Efficiency
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STATE OF OHIO
SCOTT SEVERT STILKEY
E-77795
REGISTERED PROFESSIONAL ENGINEER

Drawing Title
MECHANICAL ENLARGED PLANS

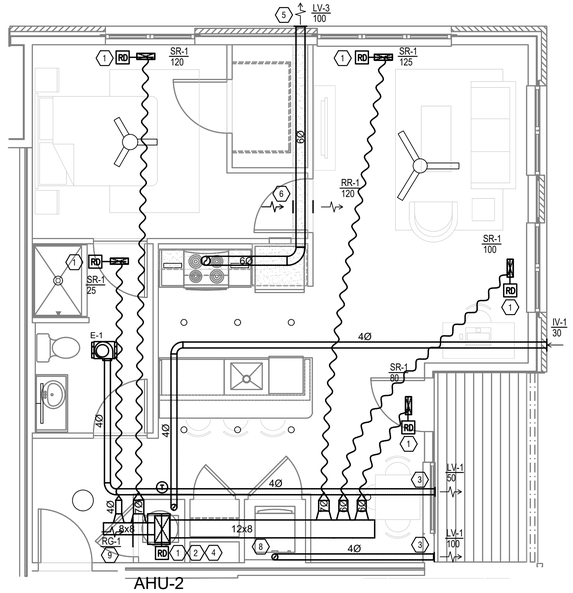
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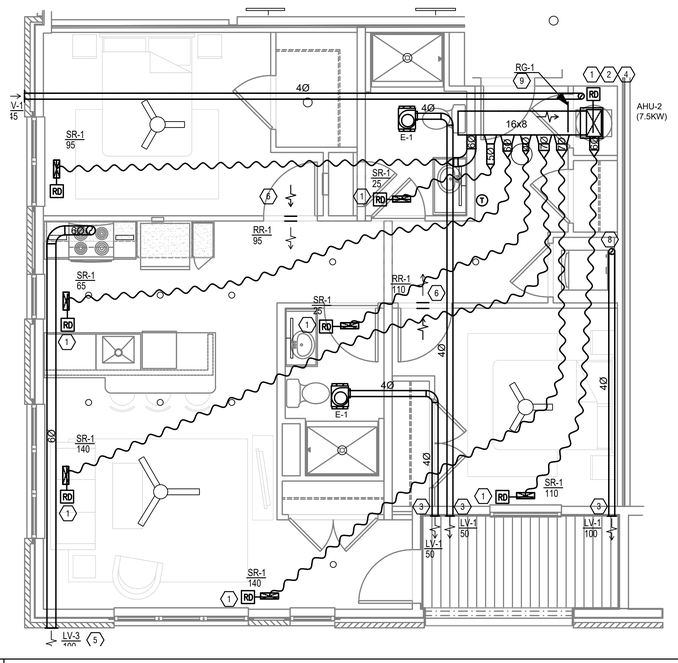

## M8 ENLARGED PLAN - UNIT TYPE 8

1/4"=1'-0"



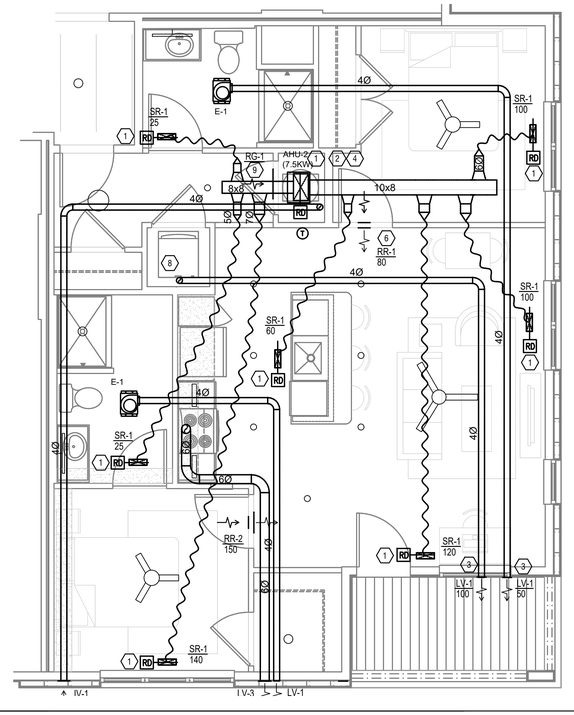

## M6 ENLARGED PLAN - UNIT TYPE 6

1/4"=1'-0"




## M7 ENLARGED PLAN - UNIT TYPE 7

1/4"=1'-0"




## M5 ENLARGED PLAN - UNIT TYPE 5

1/4"=1'-0"

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# PARAMOUNT WORKS

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WALNUT HILLS NEIGHBORHOOD

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COORDINATION CHANGES

PR-10535


ENGINEERED BUILDING SYSTEMS INC.
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STATE OF OHIO
SCOTT SEVERT STILKEY
E-77795
REGISTERED PROFESSIONAL ENGINEER

Drawing Title
MECHANICAL ENLARGED PLANS

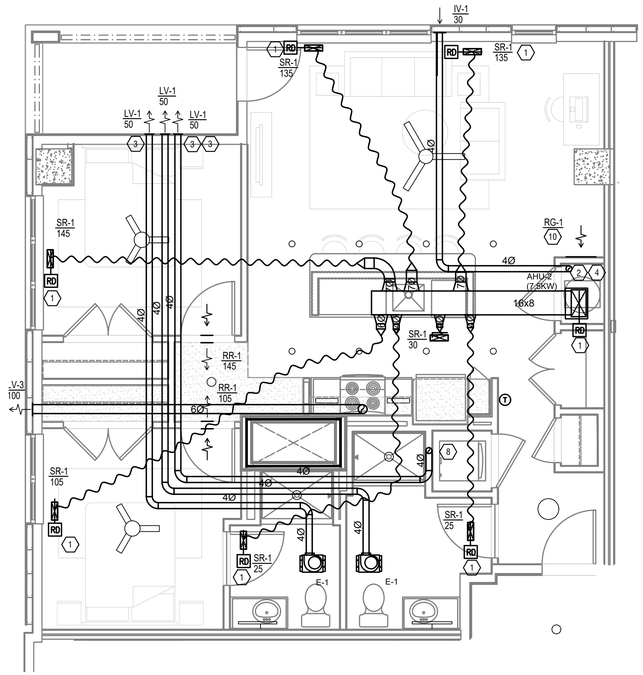
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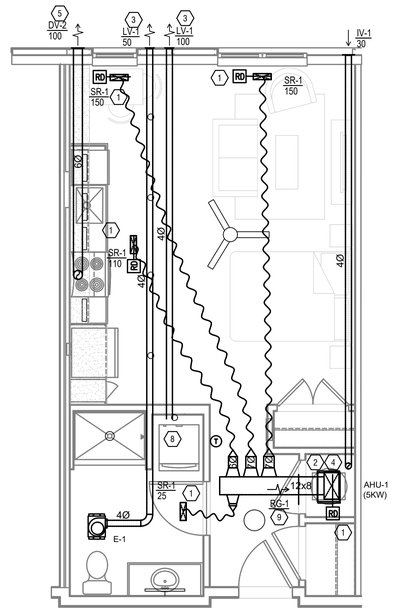
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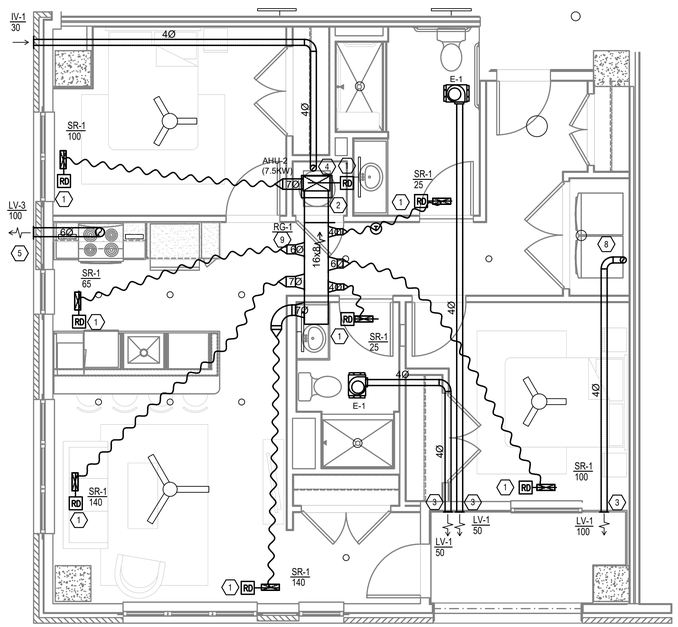

M12 **ENLARGED PLAN - UNIT TYPE 12**

1/4"=1'-0"



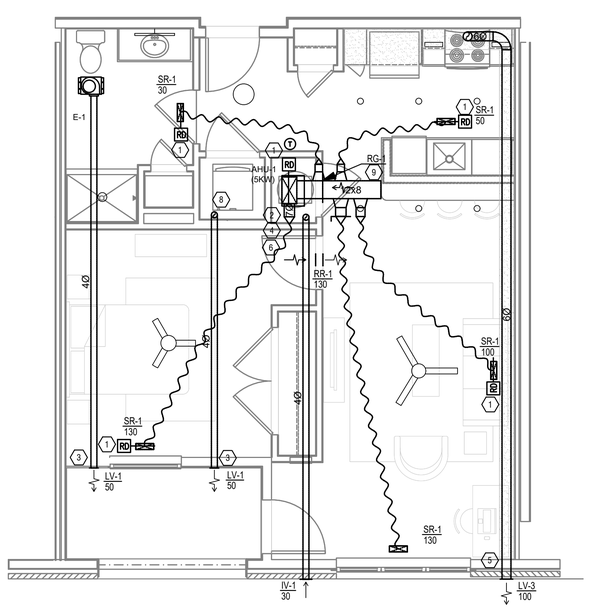

M10 **ENLARGED PLAN - UNIT TYPE 10**

1/4"=1'-0"




M11 **ENLARGED PLAN - UNIT TYPE 11**

1/4"=1'-0"




M9 **ENLARGED PLAN - UNIT TYPE 9**

1/4"=1'-0"

## KEYED SHEET NOTES

1. INSTALL CEILING RADIATION DAMPER. PROVIDE BUTTERFLY DAMPER IN DIFFUSER AND FACE DAMPERS FOR CEILING REGISTERS.
2. ROUTE 3/4" CONDENSATE DRAIN LINE TO FLOOR DRAIN IN MECHANICAL CLOSET. SLOPE PIPE A MINIMUM OF 1/8 " PER FOOT AWAY FROM UNIT. COORDINATE FLOOR DRAIN LOCATION WITH PLUMBING CONTRACTOR
3. ROUTE EXHAUST DUCT IN FLOOR JOIST AND OVER TO EXTERIOR WALL. SEE ARCHITECT BEFORE PENETRATION FOR EXACT LOCATION AND COLOR COORDINATION. ALL EXHAUST SHALL MEET THE FOLLOWING REQUIREMENTS.
   - 3.1. 3' FROM PROPERTY LINE.
   - 3.2. 3' FROM OPERABLE OPENINGS INTO BUILDING.
   - 3.3. 10' FROM MECHANICAL AIR INTAKE
4. ROUTE LINE SET AND CONTROL WIRING FROM INDOOR AIR HANDLER TO OUTDOOR UNIT. ALL PIPING SHALL BE CONCEALED IN FINISHED AREA. PROVIDE EZ PULL LINE SET. SIZE PER MANUFACTURES RECOMMENDATIONS. PROVIDE SEAL TIGHT FOR CONTROL WIRING TO HP. CONTROL WIRING NOT TO BE EXPOSED TO ELEMENTS.
5. ROUTE KITCHEN EXHAUST DUCT IN SOFFIT BELOW RATED CEILING TO EXTERIOR WALL. SEE ARCHITECT BEFORE PENETRATION FOR EXACT LOCATION AND COLOR COORDINATION. ALL EXHAUST SHALL MEET THE FOLLOWING REQUIREMENTS.
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   - 5.2. 3' FROM OPERABLE OPENINGS INTO BUILDING
   - 5.3. 10' FROM MECHANICAL AIR INTAKE.
6. UNDERCUT DOOR 1"
7. RUN LINESETS AND CONTROL WIRING IN WALL CAVITY UP TO CURB ON ROOF. STUB LINESETS OUT OF WALL/FLOOR/CURB FOR FUTURE ADD.
8. INSTALL DRYER BOX EQUIVALENT TO DUNDAS JOFINE DRB4XZW.
9. INSTALL RETURN GRILLE ABOVE MECHANICAL CLOSET DOOR. PROVIDE SLEEVE THROUGH WALL TO MOUNT RETURN GRILLE.
10. INSTALL RETURN GRILLE HIGH ON SIDE WALL. COORDINATE FINAL LOCATION WITH OWNER/ARCHITECT.
11. EXHAUST FAN TO BE CONTROLLED BY SWITCH ON WALL.
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WALNUT HILLS NEIGHBORHOOD

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COORDINATION CHANGES

PR-10535

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STATE OF OHIO
SCOTT SEVERT STILKEY
E-77795
REGISTERED PROFESSIONAL ENGINEER

Drawing Title
MECHANICAL ENLARGED PLANS

Document No.
M202

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ENGINEERED BUILDING SYSTEMS, INC.

## UNIT TYPICAL APARTMENT VENTILATION SCHEDULE

| | TYPICAL UNIT | OCCUPANCY CLASSIFICATION | NUMBER OF BEDROOMS | OCCUPANCY DENSITY (PEOPLE/ft2) | RATE Rp (CFM/person) | PEOPLE Pz | TOTAL Rp*Pz (CFM) | AREA (ft2) | BREATHING ZONE OUTDOOR AIRFLOW Vbz (CFM) | ZONE OUTDOOR AIRFLOW Voz (CFM) | TOTAL OUTDOOR AIRFLOW Vot (CFM)* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EQUIPMENT | UNIT TYPE 1 | PRIVATE DWELLING | 1 | * | 15 | 2 | 30 | 669 | 30 | 30 | 40 |
| | UNIT TYPE 2 | PRIVATE DWELLING | 1 | * | 15 | 2 | 30 | 472 | 30 | 30 | 40 |
| | UNIT TYPE 3 | PRIVATE DWELLING | 1 | * | 15 | 2 | 30 | 472 | 30 | 30 | 40 |
| | UNIT TYPE 4 | PRIVATE DWELLING | 1 | * | 15 | 2 | 30 | 472 | 30 | 30 | 40 |
| | UNIT TYPE 5 | PRIVATE DWELLING | 2 | * | 15 | 3 | 45 | 472 | 45 | 45 | 40 |
| | UNIT TYPE 6 | PRIVATE DWELLING | 1 | * | 15 | 2 | 30 | 472 | 30 | 30 | 40 |
| | UNIT TYPE 7 | PRIVATE DWELLING | 2 | * | 15 | 3 | 45 | 740 | 45 | 45 | 40 |
| | UNIT TYPE 8 | PRIVATE DWELLING | 2 | * | 15 | 3 | 45 | 947 | 45 | 45 | 40 |
| | UNIT TYPE 9 | PRIVATE DWELLING | 1 | * | 15 | 2 | 30 | 937 | 30 | 30 | 40 |
| | UNIT TYPE 10 | PRIVATE DWELLING | 1 | * | 15 | 2 | 30 | 901 | 30 | 30 | 40 |
| | UNIT TYPE 11 | PRIVATE DWELLING | 2 | * | 15 | 3 | 45 | 901 | 45 | 45 | 40 |
| | UNIT TYPE 12 | PRIVATE DWELLING | 2 | * | 15 | 3 | 45 | 559 | 45 | 45 | 40 |

UNIT VENTILATION CALCULATIONS ARE BASED ON "PRIVATE DWELLINGS, SINGLE AND MULTIPLE" OCCUPANCY CLASSIFICATION PER TABLE 403.3.1.1 OF THE 2017 OHIO MECHANICAL CODE.

EACH UNIT IS PROVIDED WITH VENTILATION AT A RATE OF 15 CFM/PERSON WHERE THE FIRST BEDROOM HAS 2 PEOPLE AND EACH ADDITIONAL BEDROOM HAS 1 PERSON.

## TEMPSTAR APARTMENT SPLIT SYSTEM SCHEDULE

| System | Outdoor Unit Tag | Model | Volts | Phase | MCA | MOCP | Outdoor Unit Weight | Indoor Unit Tag | Indoor Coil | Static | Air Flow CFM | Cool Cap Total | Cool Cap Sens | SEER | EER | Elect Heat Kw (240) | Elect Heat Kw (208) | Htg Cap 47 deg | Htg Cap 17 deg | HSPF | 208 MCA | 230 MCA | MOCP | Indoor Unit Weight | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Amps | Amps | lb | | | in wg. | cfm | Btuh | Btuh | | | kW | kW | Btuh | Btuh | | Amps | Amps | Amps | lb | |
| 1 Ton 5KW | HP-1 | DLCSRBH12AAK | 208/230 | 1 | 15 | 15 | 74 | AHU-1 (5KW) | FMA4X1800AL | 0.50 | 480 | 12600 | 11210 | 15.5 | 10.5 | 5 | 3.6 | 13,700 | 7,200 | 9.5 | 25 | 28.5 | 30 | 103 | 1-8 |
| 1.5 Ton 5KW | HP-2 | DLCSRBH18AAK | 208/230 | 1 | 16 | 25 | 101 | AHU-2 (7.5KW) | FMA4X1800AL | 0.50 | 600 | 18000 | 12690 | 17 | 11.8 | 5 | 3.6 | 19,200 | 15,000 | 11 | 34.9 | 40.1 | 50 | 103 | 1-12 |

1. EQUIPMENT SUPPORTS FOR ROOF INSTALLATION. COORDINATE EXACT TYPE WITH THE DEVELOPER.
2. VARIABLE SPEED (INVERTER) COMPRESSOR
3. LOW VOLTAGE CONTROLS
4. AUTO-RESTART FUNCTION
5. CONDENSER HIGH TEMP PROTECTION
6. MODES: COOL, HEAT, DRY, FAN, AUTO
7. QUIET OPERATION
8. PIPING ADAPTER KIT TO FACILITATE PIPING INSTALLATION WHEN MATCHED WITH FMA4 INDOOR UNIT

## DUCT INSULATION SCHEDULE

| AIR DISTRIBUTION TYPE | EQUIPMENT TAGS: CORRIDOR UNITS | AHU-1 | AHU-2 |
|---|---|---|---|
| SA | R-3.5 | R-3.5 | R-3.5 |
| RA | - | - | - |
| OA | R-3.5 | R-3.5 | R-3.5 |

DUCT INSULATION REQUIREMENTS ARE BASED ON TABLE 6.8.2B OF ASHRAE 90.1 2010 ENERGY CODE.

PROVIDE DUCTWORK OF SUFFICIENT THICKNESS TO MEET THE INSTALLED R-VALUE REQUIREMENTS LISTED ABOVE.

ITEMS NOT REQUIRED TO BE INSULATED: FIBROUS-GLASS DUCTS, DUCTS WITH LINER THAT MEETS ASHRAE 90.1, FACTORY-INSULATED FLEXIBLE DUCTS, FACTORY-INSULATED PLENUMS AND CASINGS, FLEX CONNECTORS, VIBRATION-CONTROL DEVICES, FACTORY-INSULATED ACCESS PANELS AND DOORS.

## FAN SCHEDULE

| TAG | TYPE | AREA SERVED | MANUFACTURER | MODEL | DRIVE | CFM | ESP | WATTS | AMPS (MCA) | AMPS (MOP) | RPM | VOLT/PHASE | MOUNTING | WEIGHT | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E-1 | EXHAUST | REFER TO DRAWINGS | PANASONIC | FV-05-11VKS1 | DIRECT | 40 - 80 | 0.15 | 17 | | | 1205 | 115/60/1 | CEILING | 12 | 1,2,4 |
| E-2 | EXHAUST | REFER TO DRAWINGS | GREENHECK | SP-A200 | DIRECT | 200 | 0.25 | 43 | 0.6 | 15 | 840 | 115/60/1 | CEILING | 24 | 3 |
| S-1 | SUPPLY | REFER TO DRAWINGS | GREENHECK | SQ-70-VG | DIRECT | 150 | 0.25 | - | 1.6 | 15 | 1,452 | 115/60/1 | CEILING | 24 | 3,4 |
| E-4 | EXHAUST | REFER TO DRAWINGS | GREENHECK | SP-B80 | DIRECT | 70 | 0.25 | 18 | | | 900 | 115/60/1 | CEILING | 9 | 3 |

1. FAN SHALL RUN CONTINUOUSLY AT LOW SPEED (40 CFM) AND SHALL RAMP UP TO HIGH SPEED (80 CFM) WHEN SWITCH IS TURNED ON. PROVIDE ALL RELEVANT ACCESSORIES.
2. INSTALL RADIATION DAMPER PC-RD05C5
3. FAN TO BE OPERATED ON A WALL SWITCH (PROVIDED BY ELECTRICAL CONTRACTOR).
4. PROVIDE VIBRATION ISOLATION PADS

## HEATER SCHEDULE

| TAG | AREA SERVED | MANUFACTURER | MODEL | DRIVE | CFM | BTU/HR | KW | RPM | AMPS FLA | VOLT/PHASE | MOUNTING | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CH-1 | MULTIPLE AREAS | BERKO | EFF4004 | DIRECT | - | 10,239 | 3 | - | 14.2 | 208/1 | CEILING | 1 |
| WH-1 | MULTIPLE AREAS | BERKO | FRA4024F | DIRECT | - | 10,230 | 3 | - | 14.5 | 208/1 | WALL | 1,2 |
| UH-1 | COMMERCIAL | BERKO | MUH0581-PRO | DIRECT | 350 | 17,060 | 5 | - | 24 | 208/1 | CEILING | 1,3 |

1. INTEGRAL THERMOSTAT
2. PROVIDE SURFACE MOUNT FOR CMU WALL
3. INSTALL HEATER FROM STRUCTURE ABOVE

## TEMPSTAR SPLIT SYSTEM SCHEDULE (CORRIDOR)

| Outdoor Unit Tag | Model | Volts | Phase | MCA 208 | MOCP | Outdoor Unit Weight | Indoor Unit Tag | Indoor Coil | ESP | Air Flow CFM | Cool Cap Total | Cool Cap Sens | SEER 2 | EER 2 | Htg Cap 47 deg | Htg Cap 17 deg | HSPF 2 | Elec Heat Model | Elec Heat KW | Elec Heat KW (208) | 208 MCA | 230 MCA | MOCP 208 | MOCP 230 | Indoor Unit Weight | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Amps | Amps | lb | | | in wg. | cfm | Btuh | Btuh | | | Btuh | Btuh | | | KW | KW | Amps | Amps | Amps | Amps | lb | |
| HP-CORR-X | N4H5S18AKAAA | 208/230 | 1 | 13.4 | 20 | 140 | AHU-CORR-X (8KW) | FJMA4X18 | 0.50 | 600 | 17200 | 13100 | 14.3 | 12 | 17400 | 10100 | 7.5 | EHC07CKB1 | 8 | 6 | 39.3 | 43 | 40 | 45 | 124 | 1-5 |
| HP-CORR/FIT | N4H5S30AKAAA | 208/230 | 1 | 18.2 | 30 | 176 | AHU-CORR/FIT (8KW) | FJMA4X30 | 0.50 | 1009 | 28400 | 21960 | 14.3 | 12 | 28600 | 17300 | 7.5 | EHC07BKB1 | 8 | 6 | 43.3 | 47 | 45 | 50 | 152 | 1-5 |
| HP-1ST FLOOR CORR. | N4H5S24AKAAA | 208/230 | 1 | 14.5 | 25 | 159 | AHU-1ST FLOOR CORR. (8KW) | FJMA4X24 | 0.50 | 876 | 23600 | 18690 | 15.2 | 12.5 | 23600 | 14400 | 7.5 | EHC07BKB1 | 8 | 6 | 43.3 | 47 | 45 | 50 | 135 | 1-5 |

1 Adjustable Support Feet
2 Hard Start Kit (Capacitor and Relay
3 Crankcase Heater for Scroll Compressor
4 Low Ambient Isolation Relay Kit
5 Low Ambient Pressure Switch

## DIFFUSER, GRILLE, AND REGISTER SCHEDULE

| CALLOUT | DESCRIPTION | FACE SIZE (IN) | INLET SIZE (IN) | MODEL | NOTES |
|---|---|---|---|---|---|
| BV-2 | ALUMINUM BRICK VENT (THREE BRICK), 4" STANDARD DEPTH, MESH ALUMINUM INSECT SCREEN STANDARD. | 8x7 1/2 | 8x7 1/2 | HART AND COOLEY/ BV808 | SATIN ANODIZED FINISH |
| CD 4W-1 | 4-WAY THREE CONE DIFFUSER | 12x12 | 6Ø | TITUS TMS | REMOVABLE CORE FROM FACE OF DIFFUSER. INSULATE BACK OF DIFFUSER. |
| CD 4W-3 | 4-WAY THREE CONE DIFFUSER | 24x24 | 6Ø | TITUS TMS | REMOVABLE CORE FROM FACE OF DIFFUSER. INSULATE BACK OF DIFFUSER. |
| CD 4W-4 | 4-WAY THREE CONE DIFFUSER | 24x24 | 8Ø | TITUS TMS | REMOVABLE CORE FROM FACE OF DIFFUSER. INSULATE BACK OF DIFFUSER. |
| CD 4W-5 | 4-WAY THREE CONE DIFFUSER | 24x24 | 10Ø | TITUS TMS | REMOVABLE CORE FROM FACE OF DIFFUSER. INSULATE BACK OF DIFFUSER. |
| IV-1 | ALUMINUM EXTERIOR RETURN GRILLE HVAC SIDEWALL-OUTSIDE AIR LOUVER WATERPROOF & RAIN BLOCK. | 8x8 | 8x8 | LAMINAIRE | PROVIDE BACK DRAFT DAMPER |
| LV-1 | DRYER WALL VENT, 26 GAUGE GALVANIZED/ POWDER COATED STEEL BODY, RUBBER BUMPERS AND INTRUSION PREVENTION MAGNETS. | 6x6 | 4Ø | DRYERWALLVENT/ DWV4 | COORDINATE COLOR WITH ARCHITECT/OWNER. PROVIDE BACK DRAFT DAMPER |
| LV-2 | EXTRUDED ALUMINUM STATIONARY LOUVER | 12x12 | 12x12 | RUSKIN ELF375DX | ALUMINUM BIRSCREEN |
| LV-3 | DRYER WALL VENT, 26 GAUGE GALVANIZED/ POWDER COATED STEEL BODY, RUBBER BUMPERS AND INTRUSION PREVENTION MAGNETS. | 8 1/2x8 1/2 | 6Ø | DRYERWALLVENT/ 6WVW | COORDINATE COLOR WITH ARCHITECT/OWNER. PROVIDE BACK DRAFT DAMPER |
| LV-4 | EXTRUDED ALUMINUM STATIONARY LOUVER. DUAL DRAINABLE BLADE. | 23x12 | 23x12 | POTTORFF EDD-445 | ALUMINUM BIRSCREEN. 4IN DEEP |
| LV-5 | EXTRUDED ALUMINUM STATIONARY LOUVER. DUAL DRAINABLE BLADE. | 12x12 | 12x12 | POTTORFF EDD-445 | ALUMINUM BIRSCREEN |
| LV-6 | EXTRUDED ALUMINUM STATIONARY LOUVER. DUAL DRAINABLE BLADE. | 18x12 | 18x12 | POTTORFF EDD-445 | ALUMINUM BIRSCREEN. 4IN DEEP |
| RG-1 | STEEL/ALUMINUM RETURN GRILLE WITH 1/2" FIN SPACING | 20x14 | 20x14 | HART AND COOLEY 672 | #26 WHITE FINISH. |
| RG-3 | EGGCRATE RETURN GRILLE | 24x24 | 22x22 | TITUS 50F | #26 WHITE FINISH. |
| RG-4 | EGGCRATE RETURN GRILLE | 12x24 | 10x22 | TITUS 50F | #26 WHITE FINISH. |
| RG-5 | STEEL RETURN GRILLE, 3/4" BLADE SPACING, 35 DEGREE DEFLECTION, BLADES PARALLEL TO LONG DIMENSION | 22x22 | 20x20 | TITUS 350RL | #26 WHITE FINISH. |
| RR-1 | STEEL/ALUMINUM RETURN GRILLE, 1/2" BLADE SPACING | 8x8 | 6x6 | HART AND COOLEY 672 | STEEL OPPOSED-BLADE DAMPER OPERABLE FROM THE FACE OF THE GRILLE. |
| RR-2 | STEEL RETURN GRILLE, 3/4" BLADE SPACING, 35 DEGREE DEFLECTION, BLADES PARALLEL TO LONG DIMENSION | 14x8 | 12x6 | TITUS 350RL | STEEL OPPOSED-BLADE DAMPER OPERABLE FROM THE FACE OF THE GRILLE. |
| SR-1 | ALUMINUM STRAIGHT BLADE, VERTICAL FIN REGISTER | 12x4 | 12x4 | HART AND COOLEY A618 | STEEL OPPOSED-BLADE DAMPER OPERABLE FROM THE FACE OF THE GRILLE. |

10535 PARAMOUNT COMMONS T.I FITOUT

NOTES FOR ALL AIR DEVICES:
1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR MOUNTING TYPE
2. DUCT RUN-OUT SAME SIZE AS NECK UNLESS NOTED OTHERWISE
3. PLASTER FRAME WHERE LOCATED IN GYPSUM CEILING
4. PAINT DUCTWORK THAT IS VISIBLE BEHIND AIR DEVICES MATTE BLACK
5. AIR DEVICES SHALL BE ALUMINUM IN HIGH MOISTURE AREAS. (RESTROOMS)
6. WHERE AIR DEVICES ARE LOCATED IN A FIRE RATED ASSEMBLY, PROVIDE CEILING RADIATION DAMPERS, FIRE DAMPER, FIRE RATED INSULATION, AS REQUIRED PER CODE.
7. PROVIDE SAMPLE AIR DEVICES STYLE AND COLOR, FOR OWNER'S REPRESENTATIVE APPROVAL, BEFORE ORDERING FINAL AIR DEVICES.
8. ADD INSULATION TO THE BACK OF ALL AIR DEVICES WHERE DUCTWORK ALSO REQUIRES INSULATION.

### Ventilation Schedule For PARAMOUNT COMMONS CORRIDORS (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) | Area Outdoor Air: Rate (cfm/ft2) | Area Outdoor Air: Total (cfm) | People Outdoor Air: Occupant Density | People Outdoor Air: Actual People | People Outdoor Air: Rate (cfm/per) | People Outdoor Air: Total (cfm) | Breathing Zone Outdoor Airflow (cfm) | Zone Air Distribution Effectiveness | Zone Airflow (cfm) | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Az | Ra | Ra*Az | per 1000 sf | Pz | Rp | Rp*Pz | Vbz=Rp*Pz+Ra*Az | Ez | Voz | | | |
| CORRIDOR 127 | Corridor | 200 | 0.06 | 12 | 0 | 0 | 0 | 0 | 12 | 0.8 | 15 | 50 | 30 | 0 |
| LOBBY/MAIL 120 | Main Entry Lobbies | 320 | 0.06 | 19.2 | 10 | 4 | 5 | 20 | 39.2 | 0.8 | 49 | 250 | 19.6 | 0 |
| Total | | 520 | | | | 4 | | | | | 64 | 300 | 49.6 | 0 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

### Ventilation Schedule For PARAMOUNT COMMONS 2ND FLOOR CORRIDORS (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) | Area Outdoor Air: Rate (cfm/ft2) | Area Outdoor Air: Total (cfm) | People Outdoor Air: Occupant Density | People Outdoor Air: Actual People | People Outdoor Air: Rate (cfm/per) | People Outdoor Air: Total (cfm) | Breathing Zone Outdoor Airflow (cfm) | Zone Air Distribution Effectiveness | Zone Airflow (cfm) | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Az | Ra | Ra*Az | per 1000 sf | Pz | Rp | Rp*Pz | Vbz=Rp*Pz+Ra*Az | Ez | Voz | | | |
| CORRIDOR 220 | Corridor | 620 | 0.06 | 37.2 | 0 | 0 | 0 | 0 | 37.2 | 0.8 | 47 | 525 | 9 | 0 |
| Total | | 620 | | | | 0 | | | | | 47 | 525 | 9 | 0 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

### Ventilation Schedule For PARAMOUNT COMMONS 3RD FLOOR CORRIDORS (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) | Area Outdoor Air: Rate (cfm/ft2) | Area Outdoor Air: Total (cfm) | People Outdoor Air: Occupant Density | People Outdoor Air: Actual People | People Outdoor Air: Rate (cfm/per) | People Outdoor Air: Total (cfm) | Breathing Zone Outdoor Airflow (cfm) | Zone Air Distribution Effectiveness | Zone Airflow (cfm) | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Az | Ra | Ra*Az | per 1000 sf | Pz | Rp | Rp*Pz | Vbz=Rp*Pz+Ra*Az | Ez | Voz | | | |
| CORRIDOR 320 | Corridor | 1170 | 0.06 | 70.2 | 0 | 0 | 0 | 0 | 70.2 | 0.8 | 88 | 525 | 16.8 | 0 |
| Total | | 1170 | | | | 0 | | | | | 88 | 525 | 16.8 | 0 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

### Ventilation Schedule For PARAMOUNT COMMONS 4TH FLOOR CORRIDORS (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) | Area Outdoor Air: Rate (cfm/ft2) | Area Outdoor Air: Total (cfm) | People Outdoor Air: Occupant Density | People Outdoor Air: Actual People | People Outdoor Air: Rate (cfm/per) | People Outdoor Air: Total (cfm) | Breathing Zone Outdoor Airflow (cfm) | Zone Air Distribution Effectiveness | Zone Airflow (cfm) | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Az | Ra | Ra*Az | per 1000 sf | Pz | Rp | Rp*Pz | Vbz=Rp*Pz+Ra*Az | Ez | Voz | | | |
| CORRIDOR 424 | Corridor | 1170 | 0.06 | 70.2 | 0 | 0 | 0 | 0 | 70.2 | 0.8 | 88 | 525 | 16.8 | 0 |
| Total | | 1170 | | | | 0 | | | | | 88 | 525 | 16.8 | 0 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

### Ventilation Schedule For PARAMOUNT COMMONS 5TH FLOOR CORRIDORS (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) | Area Outdoor Air: Rate (cfm/ft2) | Area Outdoor Air: Total (cfm) | People Outdoor Air: Occupant Density | People Outdoor Air: Actual People | People Outdoor Air: Rate (cfm/per) | People Outdoor Air: Total (cfm) | Breathing Zone Outdoor Airflow (cfm) | Zone Air Distribution Effectiveness | Zone Airflow (cfm) | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Az | Ra | Ra*Az | per 1000 sf | Pz | Rp | Rp*Pz | Vbz=Rp*Pz+Ra*Az | Ez | Voz | | | |
| CORRIDOR 524 | Corridor | 1170 | 0.06 | 70.2 | 0 | 0 | 0 | 0 | 70.2 | 0.8 | 88 | 525 | 16.8 | 0 |
| Total | | 1170 | | | | 0 | | | | | 88 | 525 | 16.8 | 0 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

### Ventilation Schedule For PARAMOUNT COMMONS 6TH FLOOR CORRIDORS (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) | Area Outdoor Air: Rate (cfm/ft2) | Area Outdoor Air: Total (cfm) | People Outdoor Air: Occupant Density | People Outdoor Air: Actual People | People Outdoor Air: Rate (cfm/per) | People Outdoor Air: Total (cfm) | Breathing Zone Outdoor Airflow (cfm) | Zone Air Distribution Effectiveness | Zone Airflow (cfm) | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Az | Ra | Ra*Az | per 1000 sf | Pz | Rp | Rp*Pz | Vbz=Rp*Pz+Ra*Az | Ez | Voz | | | |
| CORRIDOR 624 | Corridor | 1170 | 0.06 | 70.2 | 0 | 0 | 0 | 0 | 70.2 | 0.8 | 88 | 525 | 16.8 | 0 |
| Total | | 1170 | | | | 0 | | | | | 88 | 525 | 16.8 | 0 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

**PARAMOUNT WORKS**
NWC KEMPER LANE & E. McMILLAN ST
**2505 KEMPER LN**
**CINCINNATI, OH 45206**
WALNUT HILLS NEIGHBORHOOD

| No. | Issuances / Revisions / Submissions | Date |
|---|---|---|
| | PRICING/PERMIT ISSUANCE | 02.26.2024 |

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STATE OF OHIO
SCOTT SEVERT STILKEY
E-77795
REGISTERED PROFESSIONAL ENGINEER

Drawing Title
MECHANICAL DETAILS

Document No.
M300

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PLOTTED: Thursday, February 22, 2024 5:35:14 PM

**MECHANICAL SPECIFICATIONS**

1. General
   a. Refer to architectural drawings, general notes, instructions to bidders, general conditions, supplementary general conditions, base building specifications and drawings, shop drawing manuals and as-built plans, except as noted herein, which apply in all respects to this section. The contractor shall visit the site and familiarize himself with all existing conditions prior to bidding the work
2. Use of Drawings And Specifications
   a. EBS drawings and specifications are intended to convey design intent only. All means and methods sequences, techniques, and procedures of construction as well as any associated safety precautions and programs, and all incidental and temporary devices required to construct the project, and to provide a complete and fully operational mechanical system are the responsibility of the mechanical contractor.
3. Standards
   a. Equipment and materials shall conform with appropriate provisions of AGA, ARI, ASME, ASTM, CISPI, UL, NEMA, ANSI, SMACNA, ASHRAE, NFPA, NEC, as applicable to each individual unit or assembly. All equipment must bear UL label.
4. License / Experience
   a. Contractor must be licensed by the state to install HVAC systems/equipment. Contractor must also have a minimum of 5 years of experience and have installed at least (5) successful project installations of similar size and scope. References must be provided upon request.
5. Codes
   a. All work shall be performed in strict accordance with all applicable state and local codes and ordinances. The mechanical contractor shall satisfy code requirements at a minimum without any extra cost to the owner. In case of conflict between the drawings/specifications and the codes and ordinances, the highest standard shall apply.
6. Permits and Fees
   a. The mechanical contractor shall procure and pay for all permits, fees, taxes, and inspections necessary to complete the mechanical work. Furnish certificate of approval for work from inspection authority to owner before final acceptance for work. Certificate of final inspection and approval shall be submitted with the contractor's request for payment. No final payment will be approved without this certificate.
7. Site Examination
   a. The mechanical contractor shall thoroughly examine all areas of work where equipment, ductwork, and piping will be installed and shall report any condition that, in his opinion, prevents the proper installation of the mechanical work prior to bid. Contractor shall also examine the drawings and specifications of other branches of work, making reference to them for details of new or existing building conditions. No extras will be allowed for failure to include all required work in bid.
   b. All work shall be done at times convenient to the owner and only during normal working hours, unless specified otherwise.
   c. Mechanical contractor shall take their own measurements and be responsible for them.
   d. Access panels are not shown on drawings. During site examination, contractor shall identify all areas where access panels are required, and report to general contractor. Designation of who furnishes and who installs access panels must be coordinated with general contractor prior to starting work.
8. Contractor Coordination
   a. Coordination drawings showing system and component installation layout, routing, details, etc. Shall be produced by the mechanical contractor and under the supervision of the general contractor/construction manager, or appropriate party as applicable.
   b. All systems installed by each sub-contractor shall be coordinated with one another and approved by general contractor/construction manager, etc. prior to installation and/or fabrication.
   c. If questions concerning design intent arise during coordination, EBS can assist where appropriate.
   d. The architectural drawings shall take precedence over all other drawings. Do not scale distances off the mechanical drawings; use actual building dimensions.
9. Shop Drawings / Submittals
   a. Submit to the architect electronic copies of complete and certified shop drawings, descriptive data, performance data and ratings, diagrams and specifications on all specified equipment, including accessories, and materials for review. The make, model number, type, finish and accessories of all equipment and materials shall be reviewed and approved by the mechanical contractor and general contractor prior to submitting to the architect for their review and approval. Approval of shop drawings does not relieve the mechanical contractor/vendor from compliance with the requirements of the contract drawings, specifications and applicable codes.
   b. Shop drawings shall be required for the following:
      - HVAC equipment
      - Fans
      - Diffusers, registers, grilles, dampers, louvers, and all sheet metal accessories
      - Temperature controls
      - Sheet metal coordination drawings
      - Duct Sealants
   c. Air balance report Products installed by the mechanical contractor and provided by others must be submitted for review prior to purchasing. Products shall not be selected based on permit drawings without express permission - products shall be selected based on construction drawings.
10. Record Drawing
    a. The mechanical contractor shall be responsible for creating record drawings where required. Drawings shall be produced in Autocad 2004 format or later.
11. Testing
    a. All mechanical systems shall be tested for proper operation.
12. Fire Stopping
    a. Provide fire stopping at all penetrations through rated separations per local codes & regulations & per UL recommendations for assemblies encountered in project.
    b. The fire stopping material shall meet the integrity of the fire rated wall, floor, ceiling & roof being penetrated. Refer to architect's drawings for wall, floor, ceiling & roof fire ratings prior to bidding work.
    c. Refer to architect's drawings for wall, floor, ceiling, and roof fire ratings prior to bidding work.
13. Access Panels
    a. Provide ceiling and wall access panel quantities & locations to the general contractor prior to bidding. Access panels are required for all concealed appliances, controls devices, heat exchangers and HVAC system components that utilize energy. Where access panels are used, the access panel should be sized to allow accessibility for inspection, service, repair and replacement without disabling the function of a fire-resistance-rated assembly or removing permanent construction, other appliances, venting systems or any other piping or ducts not connected to the appliance being inspected, serviced, repaired or replaced. There shall be no extras for having to add access panels after bids are awarded.
14. Cutting and Patching
    a. Neatly do all cutting as required and patch all cut surfaces to match building construction. The contractor shall employ and pay a trade trained and qualified to perform the required patching work. All surfaces disturbed shall be restored with like materials to the satisfaction of the owner. All penetrations through roof shall be made by bonded roofer. Mechanical contractor shall pay all fees required.
15. Flashing & Counterflashing
    a. Roof flashing shall be furnished and installed by the roofing contractor. Roof counterflashing shall be furnished and installed by the mechanical contractor. Coordinate work with roofing contractor and pay all fees.
    b. Obtain approval from general contractor, construction manager, owner and/or roofing contractor prior to making any penetrations so that warranties are not compromised or voided.
16. Warranty
    a. The mechanical contractor shall unconditionally warrant all work to be free of defects in equipment, material and workmanship for a period of one (1) year from the date of final acceptance by owner. The mechanical contractor will repair or replace any defective work promptly and without charge to the owner.
    b. Restore any other existing work damaged in the course of repairing defective equipment, materials and workmanship.
17. Mechanical Work
    a. The mechanical contractor shall provide new hvac equipment, fans, ductwork, piping, air devices, controls as indicated on drawings and as specified. Startup and 1st year parts and labor warranty shall be included and manufacturer's extended warranties. Equipment and appliances shall be installed as required by the terms of their approval, in accordance with the conditions of the listing, the manufacturer's installation instructions, and the applicable code.
18. Owner's Instructions
    a. Provide two sets of complete operating and maintenance instructions with drawings, typewritten instructions and operating sequences and descriptive data sheets. Assemble each set in a hard-bound cover. Provide pdf files of all documentation.
19. Finale
    a. Put all equipment in service and demonstrate that all conditions of the contract have been fulfilled. Remove all tools, debris, etc. occasioned by work under this contract. Mechanical Contractor to provide a new set of filters in all HVAC units prior to turnover. Submit all warranties, test reports, operating and maintenance manuals for HVAC systems, log sheets and charts, and guarantees as previously specified. Provide all reports, forms, etc. required by inspectors to the satisfaction of the owner. Provide as-built record drawings (in Autocad 2007 or later) showing an accurate account of the final installed systems. Systems including but not limited to all equipment and associated controls, ductwork/piping, air devices, etc.
20. Sheetmetal Ductwork
    a. All sizes of ducts shown on the drawings are interior duct dimensions. All ductwork shall be rigid sheetmetal constructed from galvanized sheet steel in accordance with SMACNA low velocity duct construction standards. All exposed ductwork shall be round, spiral, or rectangular lock-seam type, as shown on HVAC drawings. Assemble and install ductwork in accordance with recognized industry practice for achieving air tight (5% leakage) and noiseless (no objectionable noise) systems, capable of performing each indicated service. Furnish all required dampers, transitions, offsets, connections to air devices, and other accessories necessary for a complete operating system. Flexible ductwork shall not exceed 8'-0" long.
    b. All 90-degree duct turns must be 1.5 radius elbows. If a 1.5 radius elbow will not fit, square elbows with turning vanes can be provided in lieu of radius but should be limited to only areas where there are space constraints.
    c. All takeoff/branch ductwork must utilize boot or conical tee fittings.
21. Adhesives and Sealants
    a. Seal all longitudinal and transverse duct joints with a UL 181A or 181B non-hardening, non-migrating mastic or liquid elastic sealant of a type recommended by the manufacturer for sealing joints and seams in sheet metal ductwork. Cover all field joints, joints around spin-in fittings and fastening screws with mastic. All sealants and gaskets shall have surface-burning characteristics with a maximum flame-spread index of 25 and a maximum smoke-developed index of 50 when tested according to UL 723.
    b. Exposed Ductwork: trim duct sealants flush with metal. Create a smooth and uniform exposed bead. Do not use two-part tape sealing system.
    c. For indoor applications, all adhesives, sealants, and sealant primers must meet the requirements of CA Section 01350.
    d. All duct boots sealed to drywall/finished floor (any interface with another material).
22. Duct Supports
    a. Furnish and install hot-dipped galvanized steel fasteners, hangers, anchors, rods, straps, trim, and angles for support of ductwork.
23. Flexible Connections
    a. Furnish and install neoprene flexible duct connections at the inlet and discharge of units and fans.
24. Duct Manual Volume Dampers
    a. Furnish and install opposed-blade, leak-proof volume control dampers where indicated on drawings and locations in supply, return and exhaust ducts where branches are taken from larger ducts or at each individual duct register in order to achieve system air balance quantities. Balancing devices must be provided in accordance with IMC 603.18. All manual volume dampers must be shown on coordination drawings when submitted for review.
25. Fire Dampers
    a. Furnish and install UL555 listed fire dampers as shown on the drawings and in accordance with NFPA and local and state codes. Refer to architectural drawings for all rated walls, floors, and roofs. Fire dampers shall be UL labeled and installed as shown on the drawings or as required by NFPA and codes. Dampers and sleeves shall meet construction requirements of NFPA 90A, 92A, and 92B. Dampers shall be AMCA licensed for air performance. Damper construction shall be a minimum 16-gauge steel frame for square or rectangular ducts and 14-gauge steel frame for round ducts. Damper blades shall be 16-gauge galvanized steel. Bearings and jamb seals shall be stainless steel. Each fire damper shall have a rating that meets the fire resistance requirement of the assembly rating and shall be supplied with a 165-degree F fusible link. Provide all necessary sleeves, angles, etc. Required to provide an installation in accordance with the damper manufacturer's installation instructions. Dampers shall be approved for vertical or horizontal mounting as required by the location shown and shall be labeled for use in dynamic systems.
26. Duct Access Doors
    A. Furnish and install conveniently located duct access doors of ample size and quantity for servicing the dampers.
27. Diffusers, Grilles and Registers
    A. Diffusers, grilles and registers shall be manufactured by titus, price, or engineered approved equal and shall be furnished and installed by the mechanical contractor. Diffusers shall be installed as indicated on the drawings and schedules. The mechanical contractor shall provide all miscellaneous items necessary for a complete and proper installation in the type of ceiling and walls used in this project.
28. Exhaust Fan
    A. Fan manufacturer shall be Panasonic, Cook, Greenheck, or engineered approved equal. Refer to drawings and schedules for unit location, technical data, and any applicable accessories.
29. Rooftop Unit
    A. Outdoor, rooftop mounted, electrically controlled, heating and cooling unit utilizing scroll compressors for cooling and natural gas for heating. Unit shall have standard manufacturer warranty on parts. Install per manufacturer's requirements. Refer to drawings and schedules for unit location, technical data, and accessories.
       - Rooftop manufacturer shall be Trane, ICP(Tempstar), Carrier, or equivalent.
30. Ducted Split Systems
    a. Split systems shall consist of high efficient air handling unit and associated heat pump. Equipment shall have manufacturer's standard warranty.
    b. Split system manufacturer shall be Tempstar, Carrier, Goodman, or engineered equal.
31. Condensate Drain Piping
    A. The mechanical contractor shall furnish and install condensate drains, p-traps with removable cleanout caps for air equipment per manufacturer's recommendations. The p-trap depth shall be at least the depth specified for the respective pressure drop of the unit. Condensate drain piping shall be schedule 40 CPVC pipe with solvent weld fittings. All condensate drain lines shall be configured to permit the clearing of blockages and performance of maintenance without requiring the drain line to be cut. For condensate pumps located in uninhabitable spaces (i.e. attics and crawl spaces), provide controls that will shut down the equipment if the condensate pump fails.
    B. All cooling equipment shall have a wet switch in the primary drain line, the overflow drain line, or in the equipment-supplied drain pan (located at a point higher than the primary drain line connection and below the overflow rim of the pan) that will shut down the unit when the condensate is clogged..
32. Piping Supports (Metal Pipe)
    A. Furnish and install hot-dipped galvanized steel fasteners, hangers, anchors, rods, straps, trim and angles for support of piping.
33. Piping Supports (Plastic Pipe)
    A. Furnish and install hangers for plastic piping per manufacturer's requirements.
34. Temperature Controls and Control Wiring
    A. The mechanical contractor shall provide all control wiring necessary for the complete and proper operating temperature control system. Programmable thermostats shall be provided with equipment packages unless otherwise noted. Where equipment is capable of dehumidification control, provide a thermostat capable of actively monitoring and controlling both temperature and humidity.
    B. Exposed wiring: All wiring exposed to the space shall be run in conduit. Coordinate requirements with architectural drawings.
    A. Testing, Balancing, and Adjusting The individual performing the air balancing shall be a certified test and balancer and a member of NEBB or AABC, using calibrated equipment. The certified air balance contractor shall accurately balance the systems to provide air quantities as indicated on the drawings and in the schedules/specifications, operate automatic control systems, and verify set points during balancing.
35. Sequence of Operation
    - Heaters
      - H-3,4: heater shall be controlled from the integral thermostat. When the temperature of the space drops below the thermostat setpoint, the heater fan shall run and the electric heating element shall engage to maintain temperature setpoint.
    - Exhaust Fans
      - E-1: exhaust fan shall continuously run at low speed (40CFM). The fan shall ramp up to 80(CFM)when the switch is turned on or when moisture is detected by the fans condensation sensor.
      - E-2: exhaust fan shall run on a wall switch (provided by the electrical contractor). The fan shall be set to run during occupied mode as determined by the architect/owner.
      - E-3/5: exhaust fan shall run on a wall switch (provided by the electrical contractor).
      - E-4: exhaust fan shall run on a reverse acting thermostat. When the temperature of the elevator shaft rises above 80° (adjustable). The fan shall run to extract heat from the elevator shaft. When the temperature lowers below the set point the fan shall turn off.
      - Rooftop units
      - RTU-1,2,3: unit shall be controlled from a thermostat in the space.
      - Heating mode - when the thermostat calls for heating the fan shall run and the gas fired heat exchanger shall fire to maintain temperature setpoint. When the setpoint is reached the heater shall shut off.
      - Cooling mode - when the thermostat calls for cooling the refrigeration system shall engage, the fan shall run, and the dx cooling coil shall cool the air to maintain temperature setpoint. When the setpoint is reached, the refrigeration system shall shut off.
      - Economizer mode - when the economizer is enabled (the outside air enthalpy is lower than the return air enthalpy), the economizer becomes the first stage of cooling. The economizer damper will modulate to maintain space temperature.
      - AHU/HP-X:
      - Heating mode - indoor air handler shall be controlled from a thermostat in the space. When the thermostat calls for heating the fan shall run and the heat pump in heating mode shall run to maintain temperature setpoint. If the heat pump cannot maintain temperature in the space, the electric heat kit shall energize until set point is reached. When the setpoint is reached the unit shall shut off.
      - Cooling mode - when the thermostat calls for cooling the heat pump unit shall run in cooling mode, the air handler fan shall run, and the dx cooling coil shall cool the air to maintain temperature setpoint.
      - Ventilation - Motor operated damper to be linked to air handler blower. When the air handler blower is in operating the MOD is to open to is desired position (adjustable) to allow ventilation air into the building.

**PARAMOUNT WORKS**
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**2505 KEMPER LN**
**CINCINNATI, OH 45206**
WALNUT HILLS NEIGHBORHOOD

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PR-10535

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STATE OF OHIO
SCOTT SEVERT STILKEY
E-77755
REGISTERED PROFESSIONAL ENGINEER

Drawing Title
MECHANICAL SPECIFICATIONS

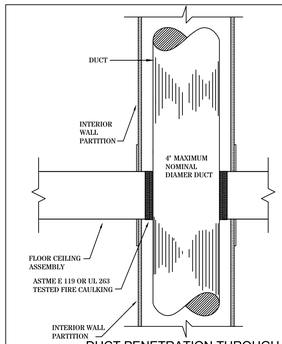
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Z:\~Project Directories\10500 – 10599\10535 – Paramount Commons – Cincinnati OH\~Construction Documents\10535-MX02 -MECHANICAL- DETAILS.dwg- EBS. Plot Date/Time: Feb 22, 2024-5:34pm – By: c.griffin
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## GENERAL NOTES

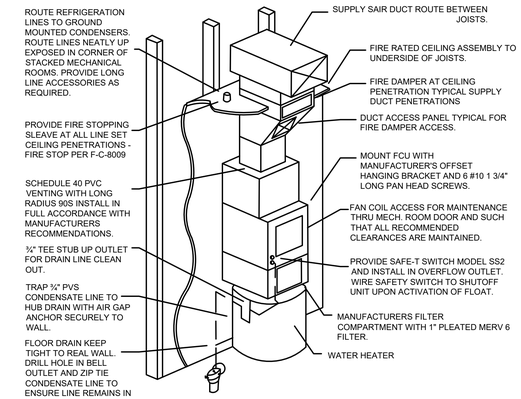
- 4" EXHAUST DUCT TO BE ROUTED DIRECTLY TO ROOF AS ALLOWED BY OBC 717.6.1. EXCEPTION: A DUCT IS PERMITTED TO PENETRATE THREE FLOORS OR LESS WITHOUT A FIRE DAMPER AT EACH FLOOR, PROVIDED SUCH DUCT MEETS ALL OF THE FOLLOWING REQUIREMENTS:
  - 1.1. THE DUCT SHALL BE CONTAINED AND LOCATED WITHIN THE CAVITY OF A WALL AND SHALL BE CONSTRUCTED OF STEEL HAVING A MINIMUM WALL THICKNESS OF 0.0187 INCHES (NO. 26 GAGE).
  - 1.2. THE DUCT SHALL OPEN INTO ONLY ONE DWELLING OR SLEEPING UNIT AND THE DUCT SYSTEM SHALL BE CONTINUOUS FROM THE UNIT TO THE EXTERIOR OF THE BUILDING.
  - 1.3. THE DUCT SHALL NOT EXCEED 4-INCH NOMINAL DIAMETER AND THE TOTAL AREA OF SUCH DUCTS SHALL NOT EXCEED 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF FLOOR AREA.
  - 1.4. THE ANNULAR SPACE AROUND THE DUCT IS PROTECTED WITH MATERIALS THAT PREVENT THE PASSAGE OF FLAME AND HOT GASES SUFFICIENT TO IGNITE COTTON WASTE WHERE SUBJECTED TO ASTM E 119 OR UL 263 TIME TEMPERATURE CONDITIONS UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER AT THE LOCATION OF THE PENETRATION FOR THE TIME PERIOD EQUIVALENT TO THE FIRE-RESISTANCE RATING OF THE CONSTRUCTION PENETRATED. GRILLE OPENINGS LOCATED IN A CEILING OF A FIRE-RESISTANCE-RATED FLOOR/CEILING OR ROOF/CEILING ASSEMBLY SHALL BE PROTECTED WITH A LISTED CEILING RADIATION DAMPER INSTALLED IN ACCORDANCE WITH SECTION 717.6.2.1. (NOT APPLICABLE)
  - 9.5.




DUCT PENETRATION THROUGH RATED FLOOR

SCALE: NTS

7

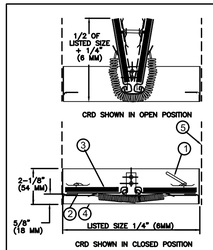



7 APARTMENT STACKED FAN COIL DETAIL

SCALE: NONE

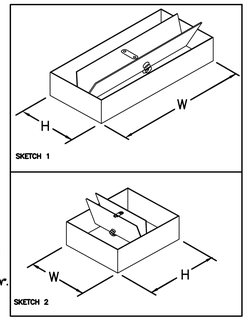
## CEILING RADIATION DAMPERS

Model 50 UL Classified 3 Hour Rating — type **CRD** "RECTANGULAR"




1. UL LISTED LINK (165°F STANDARD)
2. BLADES 22 (.853mm) GA. GALV. STEEL.
3. CERAMIC FIBER WITH FIBERGLASS COVER*
4. ROLL-FORMED FRAME 22 (.853 MM) GA. GALV. STEEL
5. STEEL DUCT DROP (BY OTHERS).

NOTES:
1. MAXIMUM SIZE 24" X 24" (600mm x 600mm). MINIMUM SIZE 4" X 4" (101mm X 101mm).
2. AVAILABLE IN STAINLESS STEEL
3. MANUFACTURED WITH BLADE OPENING AS PER SKETCH #1: WHEN "W" IS EQUAL TO OR GREATER THAN 6"
4. MANUFACTURED WITH BLADE OPENING AS PER SKETCH #2: WHEN "W" IS LESS THAN 6" AND "H" IS GREATER THAN "W".
5. *CERAMIC INSULATION IS NOT UL REQUIRED ON DAMPERS WITH AREAS LESS THAN 80 SQUARE INCHES AND IS OPTIONAL. DAMPERS ABOVE 80 SQUARE INCHES WILL BE PROVIDED WITH BLADE INSULATION.




CRD 50

LOOK FOR THESE LABELS

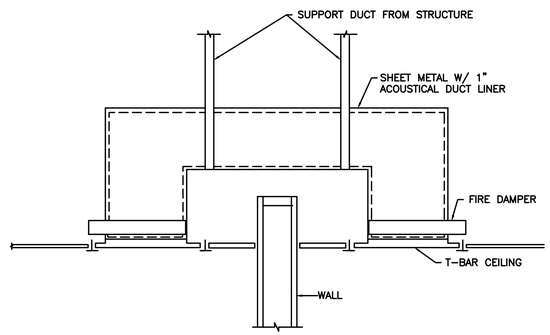
SHEET METAL WORKERS' INTERNATIONAL ASSOCIATION — SMACNA-USA — Intl. Ass. - 1888

FIRE DAMPER — Listing No. 3225-1417-101

CLASSIFIED — UL — UNDERWRITERS LABORATORIES (UL555C) CLASSIFIED CEILING RADIATION DAMPERS. FIRE RESISTENCE RATED 3 HOURS. FOR USE IN UL CLASSIFIED BUILDING MATERIALS RATED 3 HOURS OR LESS.

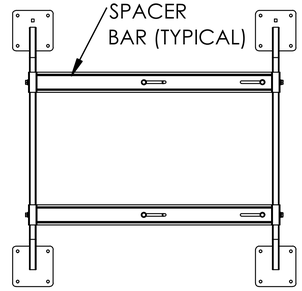
JOB NAME: _____
LOCATION: _____
ARCHITECT: _____
ENGINEER: _____
CONTRACTOR: _____

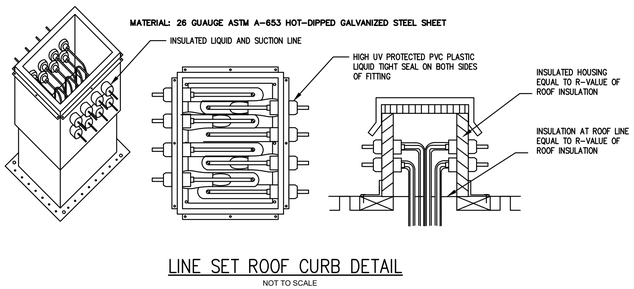
CLLOYD21-B




TYPICAL TRANSFER GRILLE DETAIL

NO SCALE




LINE SET ROOF CURB DETAIL

NOT TO SCALE

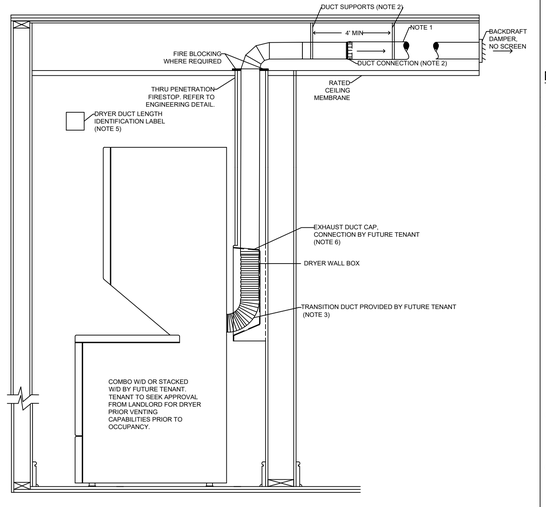



TABLE 504.8.4.1
DRYER EXHAUST DUCT FITTING EQUIVALENT LENGTH

| DRYER EXHAUST DUCT FITTING TYPE | EQUIVALENT LENGTH |
|---|---|
| 4" radius mitered 45-degree elbow | 2 feet 6 inches |
| 4" radius mitered 90-degree elbow | 2 feet 6 inches |
| 6" radius mitered 45-degree elbow | 2 feet 6 inches |
| 6" radius mitered 90-degree elbow | 2 feet 6 inches |
| 8" radius mitered 45-degree elbow | 2 feet 6 inches |
| 8" radius mitered 90-degree elbow | 2 feet 6 inches |
| 10" radius mitered 45-degree elbow | 2 feet 6 inches |
| 10" radius mitered 45-degree elbow | 2 feet 6 inches |

## NOTES (504.8 2017 OMC)

1. MATERIAL AND SIZE. DRYER DUCTS SHALL HAVE A SMOOTH INTERIOR FINISH, BE CONSTRUCTED OF OF METAL AT LEAST 0.016 IN. (28 GAGE) THICK AND BE 4-INCHES IN DIAMETER (SECTION 504.8.1).
2. DUCT INSTALLATION. SUPPORT EXHAUST DUCTS AT 4 FT. INTERVALS AND SECURE IN PLACE. SECURE WITH ALUMINUM FOIL DUCTWORK TAPE. IF USING SCREWS OR POP-RIVETS THEY MUST PROTRUDE NO MORE THAN 1/8 INCH INTO THE INSIDE OF THE DUCT (SECTION 504.8.2).
3. TRANSITION DUCTS. TRANSITION DUCT TO CONNECT THE DRYER TO THE EXHAUST DUCT SYSTEM MUST BE A SINGLE LENGTH LISTED/ LABELED PER UL2158. TRANSITION DUCT MUST BE NO MORE THAN 8 FT. LONG AND CANNOT BE CONCEALED WITHIN CONSTRUCTION. (SECTION 504.8.3).
4. DUCT LENGTH. THE MAXIMUM ALLOWABLE EXHAUST SHALL BE DETERMINED BY ONE OF THE METHODS IN SECTIONS 504.8.4.1 THROUGH 504.8.4.3.
   - 4.1. 504.8.4.1 SPECIFIED LENGTH: THE MAX LENGTH OF EXHAUST DUCT IS 35 FEET FROM CONNECTION TO TRANSITION DUCT FROM DRYER TO OUTLET. THE MAXIMUM LENGTH OF THE EXHAUST DUCT IS REDUCED FROM FITTINGS USED ACCORDING TO TABLE 504.8.4.1 ABOVE.
   - 4.2. 504.8.4.2 MANUFACTURER'S INSTRUCTIONS: THE MAX LENGTH OF THE EXHAUST DUCT WILL BE DETERMINED BY THE INSTALLATION INSTRUCTIONS WHICH ARE PROVIDED BY THE DRYER MANUFACTURER (IF APPLICABLE).
   - 4.3. 504.8.4.3 DRYER EXHAUST DUCT POWER VENTILATOR LENGTH: THE MAX LENGTH OF DRYER EXHAUST TO BE DETERMINED BY DRYER EXHAUST DUCT POWER VENTILATOR MANUFACTURER'S INSTALLATION INSTRUCTIONS (IF APPLICABLE).
5. LENGTH IDENTIFICATION. IF THE EXHAUST DUCT EXCEEDS 35 FT. THE EQUIVALENT LENGTH OF DUCT SHALL BE SHOWN ON A PERMANENT LABEL/TAG. LABEL/TAG TO BE PLACED WITHIN 6FT. OF EXHAUST DUCT CONNECTION. LABEL EQUAL TO *DRYER PLACARD* BRAND. (SECTION 504.8.5).
6. EXHAUST DUCT REQUIRED. WHERE THE EXHAUST DUCT SYSTEM IS INSTALLED FOR FUTURE USE, THE EXHAUST DUCT SHALL BE CAPPED AT FUTURE DRYER LOCATION. (SECTION 504.8.6).

CODE REFERENCED: *2017 OHIO MECHANICAL CODE*

DRYER EXHAUST DUCT DETAIL

**PARAMOUNT WORKS**
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**CINCINNATI, OH 45206**
WALNUT HILLS NEIGHBORHOOD

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PR-10535

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STATE OF OHIO — SCOTT SEVERT STILKEY — E-77795 — REGISTERED PROFESSIONAL ENGINEER

Drawing Title

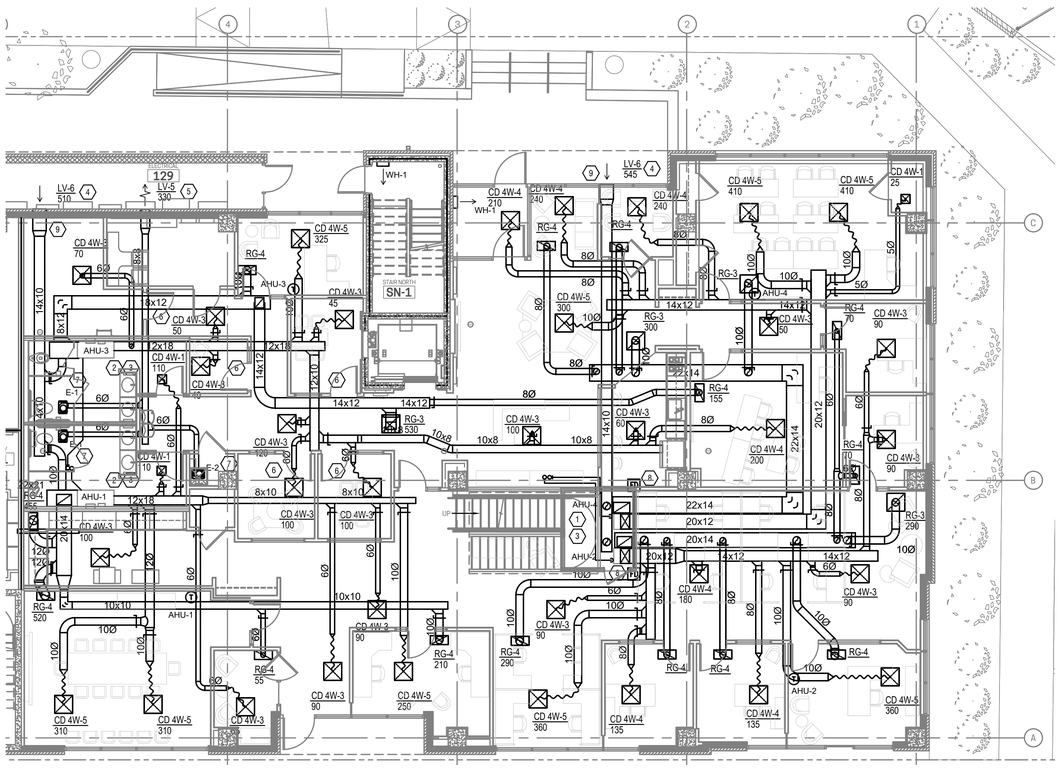
MECHANICAL DETAILS

Document No.

M302

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PLOTTED: Thursday, February 22, 2024 5:33:42 PM




# MECHANICAL SCOPE OF WORK (PLAN REVIEW ONLY) TENANT FITOUT

BUILDING HAS (65) APARTMENTS. INSTALL (65) ELECTRIC SPLIT SYSTEMS, DUCTWORK AND ALL ASSOCIATED HVAC COMPONENTS TO MAKE EACH APARTMENT A TURNKEY. SOUTH COMMERCIAL RETAIL SPACE WILL BE WHITE BOX SHELL SPACE. PROVIDE DUCTWORK FOR GREASE EXHAUST AND MAKE UP AIR FOR POTENTIAL RESTAURANT FITOUT. NORTH COMMERCIAL SPACE WILL HAVE SPLIT SYSTEMS FOR WHITE BOX FITOUT. MECHANICAL CONTRACTOR SHALL REFERENCE ALL DISCIPLINE DRAWING, ETC. TO REVEAL FULL SCOPE OF WORK. REFER TO MECHANICAL SPECIFICATIONS FOR ADDITIONAL DETAILS.

## CODES & STANDARDS REFERENCED

- 2017 OHIO MECHANICAL CODE
- 2017 OHIO BUILDING CODE
- ASHRAE 90.1-2010 GOLD

## HVAC DESIGN CONDITIONS

| COOLING | HEATING |
|---|---|
| OUTDOOR: 93 DB / 75 WB | OUTDOOR: 0 DB |
| INDOOR: 72 | INDOOR: 70 |

## KEYED SHEET NOTES T.I FITOUT

1. ROUTE 3/4" CONDENSATE DRAIN LINE TO FLOOR DRAIN IN MECHANICAL CLOSET. SLOPE PIPE A MINIMUM OF 1/8 " PER FOOT AWAY FROM UNIT. COORDINATE FLOOR DRAIN LOCATION WITH PLUMBING CONTRACTOR.
2. ROUTE 3/4" CONDENSATE DRAIN LINE TO LAVATORY TRAP IN MENS RESTROOM. SLOPE PIPE A MINIMUM OF 1/8" PER FOOT AWAY FROM UNIT.
3. ROUTE LINE SET AND CONTROL WIRING FROM INDOOR AIR HANDLER TO OUTDOOR UNIT ON ROOF. ALL PIPING SHALL BE CONCEALED IN FINISHED AREA. PROVIDE EZ PULL LINE SET. SIZE PER MANUFACTURES RECOMMENDATIONS. PROVIDE SEAL TIGHT FOR CONTROL WIRING TO HP. CONTROL WIRING NOT TO BE EXPOSED TO ELEMENTS.
4. ROUTE OUTSIDE AIR TO EXTERIOR WALL. ALL DUCT PENETRATION TO BE ON THE WEST AND NORTH WALL. EAST WALL IS PROHIBITED. SEE ARCHITECT BEFORE PENETRATION FOR EXACT LOCATION AND COLOR COORDINATION.
5. ROUTE EXHAUST DUCT TO LOUVER ON EXTERIOR WALL. ALL DUCT PENETRATION TO BE ON THE WEST AND NORTH WALL. EAST WALL IS PROHIBITED. SEE ARCHITECT BEFORE PENETRATION FOR EXACT LOCATION AND COLOR COORDINATION. ALL EXHAUST SHALL MEET THE FOLLOWING REQUIREMENTS.
   - 5.1. 3' FROM PROPERTY LINE.
   - 5.2. 3' FROM OPERABLE OPENINGS INTO BUILDING
   - 5.3. 10' FROM MECHANICAL AIR INTAKE.
6. UNDERCUT DOOR 1"
7. EXHAUST FAN TO BE CONTROLLED BY SWITCH ON WALL.
8. PROVIDE 2HR FIRE DAMPER IN RATED WALL..
9. PROVIDE TIMECLOCK/SCHEDULE WITH 24V MOTORIZED DAMPER. TIE MOTORIZED DAMPER IN WITH TIMECLOCK/SCHEDULE. TIMECLOCK TO SEND 24V WHEN IN OCCUPIED.
10. INSTALL RETURN GRILLE 12" BELOW CEILING. ROUTE RETURN DUCT FROM RETURN BOX UP TO RETURN GRILLE. ADD (2) ELBOWS AND LINED DUCTWORK FOR SOUND REDUCTION.
11. PROVIDE THY CURBS FOR HEAT PUMPS. HEAT PUMPS CAN BE COMBINED ON A SET OF THY CURBS CLOSE TO REFRIGERANT CURB TO REDUCE THE AMOUNT OF CURBS AND FLASHING ON ROOF. COORDINATE WITH GENERAL CONTRACTOR.

## GENERAL NOTES T.I FITOUT

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I. ROUTE ALL AIR CONDITIONER CONDENSATE TO FLOOR DRAIN IN MECHANICAL CLOSET. PROVIDE MINIMUM SLOPE OF 1/8 " PER FOOT. SIZE CONDENSATE PER SECTION 307.2.2 OF THE OHIO MECHANICAL CODE.

J. MOUNT THERMOSTATS 60" ABOVE FINISHED FLOOR. MOUNT THERMOSTATS IN ADA UNITS 40" ABOVE FINISHED FLOOR.

K. INDOOR TEMPERATURES SHALL BE CONTROLLED THROUGH THERMOSTAT.

# PARAMOUNT WORKS

NWC KEMPER LANE & E. McMILLAN ST
**2505 KEMPER LN**
**CINCINNATI, OH 45206**
WALNUT HILLS NEIGHBORHOOD

| No. | Issuances / Revisions / Submissions | Date |
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| | PRICING/PERMIT ISSUANCE | 02.23.2024 |

COORDINATION CHANGES

PR-10535

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STATE OF OHIO
SCOTT SEVERT STILKEY
E-77795
REGISTERED PROFESSIONAL ENGINEER

Drawing Title
MECHANICAL TI OFFICE PLANS

Document No.
TI-M100

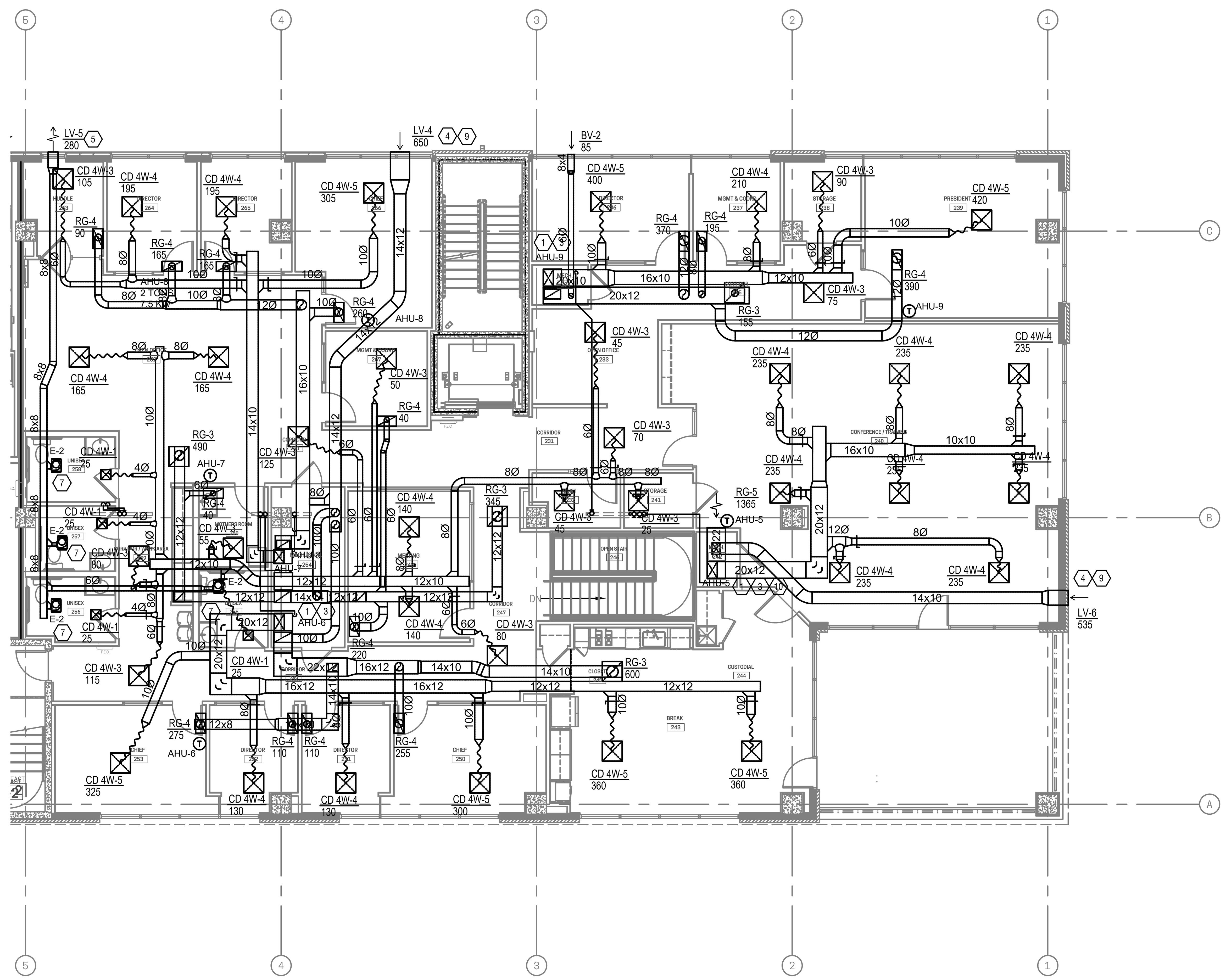
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M1
1/8"=1'-0"
**TI OFFICE FIRST FLOOR**

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# MECHANICAL SCOPE OF WORK (PLAN REVIEW ONLY) TENANT FITOUT

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# CODES & STANDARDS REFERENCED

- 2017 OHIO MECHANICAL CODE
- 2017 OHIO BUILDING CODE
- ASHRAE 90.1-2010
  GOLD

# HVAC DESIGN CONDITIONS

| COOLING | HEATING |
|---|---|
| OUTDOOR: 93 DB / 75 WB | OUTDOOR: 0 DB |
| INDOOR: 72 | INDOOR: 70 |

# ⟨#⟩ KEYED SHEET NOTES T.I FITOUT

1. ROUTE 3/4" CONDENSATE DRAIN LINE TO FLOOR DRAIN IN MECHANICAL CLOSET. SLOPE PIPE A MINIMUM OF 1/8 " PER FOOT AWAY FROM UNIT. COORDINATE FLOOR DRAIN LOCATION WITH PLUMBING CONTRACTOR.
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7. EXHAUST FAN TO BE CONTROLLED BY SWITCH ON WALL.
8. PROVIDE 2HR FIRE DAMPER IN RATED WALL..
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M2 — **TI OFFICE SECOND FLOOR**

1/8"=1'-0"

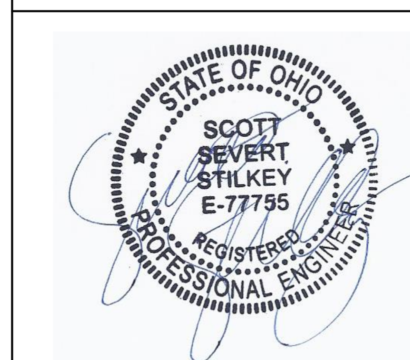
**PARAMOUNT WORKS**

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WALNUT HILLS NEIGHBORHOOD

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Drawing Title
MECHANICAL TI OFFICE PLANS

Document No.
TI-M101

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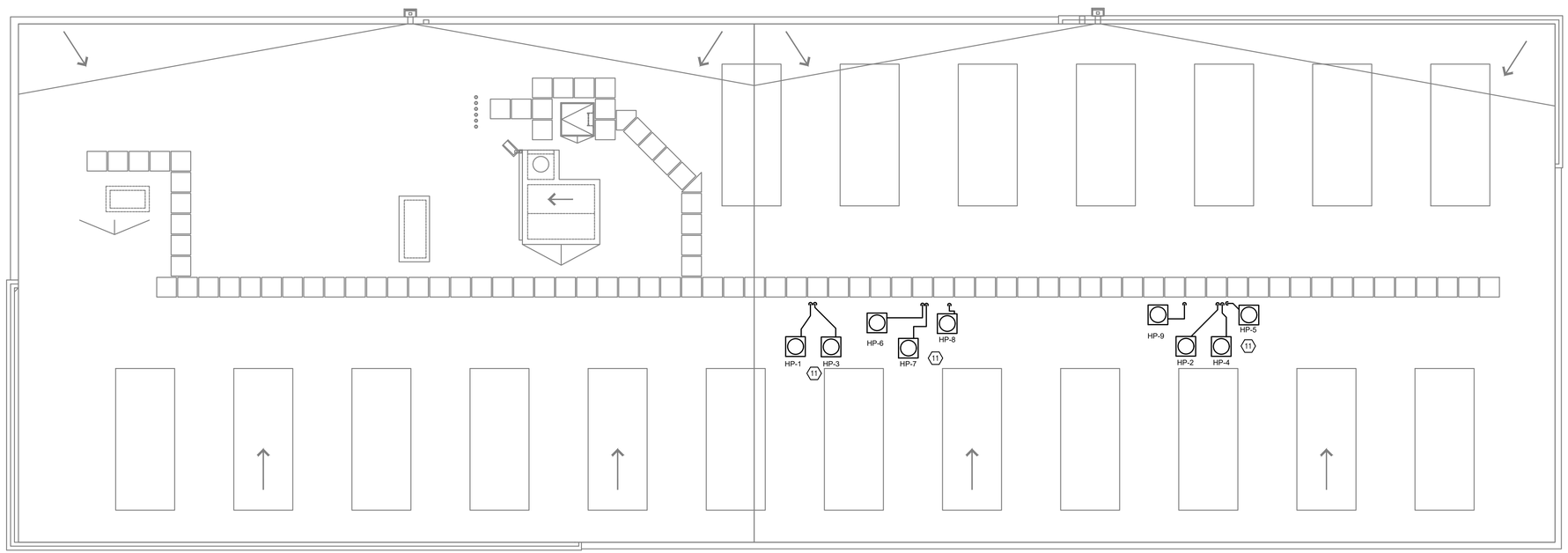
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M106 **MECHANICAL ROOF PLAN** N

1/8"=1'-0"

# PARAMOUNT WORKS

NWC KEMPER LANE & E. McMILLAN ST
**2505 KEMPER LN**
**CINCINNATI, OH 45206**
WALNUT HILLS NEIGHBORHOOD

COORDINATION CHANGES

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PR-10535

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STATE OF OHIO
SCOTT SEVERT STILKEY
E-77795
REGISTERED PROFESSIONAL ENGINEER

Drawing Title
MECHANICAL ROOF PLAN

Document No.
T.I-M106

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## T.I. 1ST AND 2ND FLOOR SPLIT SYSTEM SCHEDULE

| Outdoor Unit Tag | Model | Volts | Phase | MCA 208 | MOCP | Outdoor Unit Weight | Indoor Unit Tag | Indoor Coil | ESP | Air Flow CFM | Cool Cap Total | Cool Cap Sens | SEER 2 | EER 2 | Htg Cap 47 deg | Htg Cap 17 deg | HSPF 2 | Elec Heat Model | Elec Heat KW | Elec Heat KW (208) | 208 MCA | 230 MCA | MOCP 208 | MOCP 230 | Indoor Unit Weight | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Amps | Amps | lb | | | in wg. | cfm | Btuh | Btuh | | | Btuh | Btuh | | | KW | KW | Amps | Amps | Amps | Amps | lb | |
| HP-1 | N4H5S42AKAAA | 208/230 | 1 | 24.7 | 40 | 221 | AHU-1 (15KW) | FJMA4X42 | 0.50 | 1440 | 40000 | 31670 | 14.3 | 12 | 42000 | 26000 | 7.5 | EHC15BKB1 | 15 | 11.3 | 52.1,22.3 | 56.9,24.6 | 60,25 | 60,25 | 170 | |
| HP-2 | N4H5S48AKAAA | 208/230 | 1 | 32.8 | 50 | 228 | AHU-2 (20KW) | FJMA4X48 | 0.50 | 1760 | 46000 | 37850 | 14.3 | 12 | 46500 | 29000 | 7.5 | EHC20BKB1 | 20 | 15 | 52.1,44.5 | 56.9,49.3 | 60,45 | 60,50 | 186 | |
| HP-3 | N4H5S36AKAAA | 208/230 | 1 | 20.3 | 30 | 178 | AHU-3 (15KW) | FJMA4X36 | 0.50 | 1207 | 34200 | 26400 | 14.3 | 12 | 34000 | 20400 | 7.5 | EHC15BKB1 | 15 | 11.3 | 52.1,22.3 | 56.9,24.6 | 60,25 | 60,25 | 152 | |
| HP-4 | N4H5S60AKAAA | 208/230 | 1 | 33.2 | 50 | 260 | AHU-4 (20KW) | FJMA4X60 | 0.50 | 1967 | 57000 | 44280 | 14.3 | 12 | 5700 | 35800 | 7.5 | EHC20BKB1 | 20 | 15 | 52.1,44.5 | 56.9,49.3 | 60,45 | 60,50 | 214 | |
| HP-5 | N4H5S60AKAAA | 208/230 | 1 | 33.2 | 50 | 260 | AHU-5 (24KW) | FJMA4X60 | 0.50 | 1967 | 57000 | 44280 | 14.3 | 12 | 5700 | 35800 | 7.5 | EHC25BHCF1 | 24 | 16 | 116.9 | 127.9 | 125 | 150 | 214 | |
| HP-6 | N4H5S48AKAAA | 208/230 | 1 | 32.8 | 50 | 228 | AHU-6 (15KW) | FJMA4X48 | 0.50 | 1760 | 46000 | 37850 | 14.3 | 12 | 46500 | 29000 | 7.5 | EHC15BKB1 | 15 | 11.3 | 52.1,22.3 | 56.9,24.6 | 60,25 | 60,25 | 186 | |
| HP-7 | N4H5S42AKAAA | 208/230 | 1 | 24.7 | 40 | 221 | AHU-7 (15KW) | FJMA4X42 | 0.50 | 1440 | 40000 | 31670 | 14.3 | 12 | 42000 | 26000 | 7.5 | EHC15BKB1 | 15 | 11.3 | 52.1,22.3 | 56.9,24.6 | 60,25 | 60,25 | 170 | |
| HP-8 | N4H5S24AKAAA | 208/230 | 1 | 14.5 | 25 | 159 | AHU-8 (8KW) | FJMA4X24 | 0.50 | 876 | 23600 | 18690 | 15.2 | 12.5 | 23600 | 14400 | 7.5 | EHC07BKB1 | 8 | 6 | 43.3 | 47 | 45 | 50 | 135 | |
| HP-9 | N4H5S36AKAAA | 208/230 | 1 | 20.3 | 30 | 178 | AHU-9 (10KW) | FJMA4X36 | 0.50 | 1207 | 34200 | 26400 | 14.3 | 12 | 34000 | 20400 | 7.5 | EHC10BKB1 | 10 | 7.5 | 53.8 | 58.5 | 60 | 60 | 152 | |

1 Adjustable Support Feet
2 Hard Start Kit (Capacitor and Relay
3 Crankcase Heater for Scroll Compressor
4 Low Ambient Isolation Relay Kit
5 Low Ambient Pressure Switch

## TENANT FITOUT FAN SCHEDULE

| TAG | TYPE | AREA SERVED | MANUFACTURER | MODEL | DRIVE | CFM | ESP | WATTS | AMPS (MCA) | AMPS (MOP) | RPM | VOLT/PHASE | MOUNTING | WEIGHT | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E-1 | EXHAUST | REFER TO DRAWINGS | GREENHECK | SP-A200 | DIRECT | 140 | 0.25 | 43 | 0.6 | 15 | 840 | 115/60/1 | CEILING | 24 | 1 |
| E-2 | EXHAUST | REFER TO DRAWINGS | GREENHECK | SP-B80 | DIRECT | 70 | 0.25 | 18 | | | 900 | 115/60/1 | CEILING | 9 | 1 |

1. FAN TO BE OPERATED ON A WALL SWITCH (PROVIDED BY ELECTRICAL CONTRACTOR).

## Ventilation Schedule For PARAMOUNT COMMONS T.I TENANT FITOUT AHU-1 (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) Az | Rate (cfm/ft2) Ra | Total (cfm) Ra*Az | People Outdoor Air: Occupant Density per 1000 sf | Actual People Pz | Rate (cfm/per) Rp | Total (cfm) Rp*Pz | Breathing Zone Outdoor Airflow (cfm) Vbz=Rp*Pz+Ra*Az | Zone Air Distribution ffectivenes Ez | Zone Airflow (cfm) Voz | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CONFERENCE 151 | Conference/Meeting | 380 | 0.06 | 22.8 | 50 | 12 | 5 | 60 | 82.8 | 0.8 | 104 | 620 | 16.8 | 0 |
| CORRDIOR 154 | Corridor | 376 | 0.06 | 22.56 | 0 | 0 | 0 | 0 | 22.56 | 0.8 | 28 | 180 | 15.6 | 0 |
| HUDDLE 150 | Office Space | 67 | 0.06 | 4.02 | 5 | 2 | 5 | 10 | 14.02 | 0.8 | 18 | 65 | 27.7 | 0 |
| OPEN OFFICE 148 | Office Space | 155 | 0.06 | 9.3 | 5 | 2 | 5 | 10 | 19.3 | 0.8 | 24 | 250 | 9.6 | 0 |
| WORK COPY 152 | Office Space | 170 | 0.06 | 10.2 | 5 | 2 | 5 | 10 | 20.2 | 0.8 | 25 | 100 | 25 | 0 |
| MEN 161 | Toilet room - public | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8 | 0 | 110 | 0 | 140 |
| WOMEN 162 | Toilet room - public | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8 | 0 | 110 | 0 | 140 |
| Total | | 1428 | | | | 18 | | | | | 199 | 1435 | 94.7 | 280 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

## Ventilation Schedule For PARAMOUNT COMMONS T.I TENANT FITOUT AHU-2 (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) Az | Rate (cfm/ft2) Ra | Total (cfm) Ra*Az | People Outdoor Air: Occupant Density per 1000 sf | Actual People Pz | Rate (cfm/per) Rp | Total (cfm) Rp*Pz | Breathing Zone Outdoor Airflow (cfm) Vbz=Rp*Pz+Ra*Az | Zone Air Distribution ffectivenes Ez | Zone Airflow (cfm) Voz | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BEHAV. HEALTH 139 | Office Space | 100 | 0.06 | 6 | 5 | 12 | 5 | 60 | 66 | 0.8 | 83 | 90 | 92.2 | 0 |
| CHIEF 143 | Office Space | 162 | 0.06 | 9.72 | 5 | 0 | 5 | 0 | 9.72 | 0.8 | 12 | 360 | 3.3 | 0 |
| CORRIDOR OPEN OFFICE 142 | Corridor | 368 | 0.06 | 22.08 | 0 | 2 | 0 | 0 | 22.08 | 0.8 | 28 | 180 | 15.6 | 0 |
| DIRECTOR 144 | Office Space | 109 | 0.06 | 6.54 | 5 | 2 | 5 | 10 | 16.54 | 0.8 | 21 | 135 | 15.6 | 0 |
| DIRECTIOR 145 | Office Space | 109 | 0.06 | 6.54 | 5 | 2 | 5 | 10 | 16.54 | 0.8 | 21 | 135 | 15.6 | 0 |
| MGMT & COORD | Office Space | 86 | 0.06 | 5.16 | 5 | 0 | 5 | 0 | 5.16 | 0.8 | 6 | 90 | 6.7 | 140 |
| OPEN OFFICE142 | Office Space | 292 | 0.06 | 17.52 | 5 | 0 | 5 | 0 | 17.52 | 0.8 | 22 | 180 | 12.2 | 140 |
| OPEN OFFICE 147 | Office Space | 148 | 0.06 | 8.88 | 5 | 0 | 5 | 0 | 8.88 | 0.8 | 11 | 360 | 3.1 | 140 |
| Total | | 1374 | | | | 18 | | | | | 204 | 1530 | 164.3 | 420 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

## Ventilation Schedule For PARAMOUNT COMMONS T.I TENANT FITOUT AHU-3 (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) Az | Rate (cfm/ft2) Ra | Total (cfm) Ra*Az | People Outdoor Air: Occupant Density per 1000 sf | Actual People Pz | Rate (cfm/per) Rp | Total (cfm) Rp*Pz | Breathing Zone Outdoor Airflow (cfm) Vbz=Rp*Pz+Ra*Az | Zone Air Distribution ffectivenes Ez | Zone Airflow (cfm) Voz | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BREAK 133 | Office Space | 121 | 0.06 | 7.26 | 5 | 4 | 5 | 20 | 27.26 | 0.8 | 34 | 90 | 37.8 | 0 |
| COMPUTER LAB 140 | Office Space | 253 | 0.06 | 15.18 | 5 | 7 | 5 | 35 | 50.18 | 0.8 | 63 | 360 | 17.5 | 0 |
| CORRIDOR 156 | Corridor | 237 | 0.06 | 14.22 | 0 | 0 | 0 | 0 | 14.22 | 0.8 | 18 | 180 | 10 | 0 |
| CORRIDOR 164 | Corridor | 103 | 0.06 | 6.18 | 0 | 0 | 0 | 0 | 6.18 | 0.8 | 8 | 135 | 5.9 | 0 |
| DIRECTOR 165 | Office Space | 121 | 0.06 | 7.26 | 5 | 2 | 5 | 10 | 17.26 | 0.8 | 22 | 135 | 16.3 | 0 |
| HUDDLE 157 | Office Space | 83 | 0.06 | 4.98 | 5 | 4 | 5 | 20 | 24.98 | 0.8 | 31 | 90 | 34.4 | 140 |
| HUDDLE 158 | Office Space | 77 | 0.06 | 4.62 | 5 | 4 | 5 | 20 | 24.62 | 0.8 | 31 | 180 | 17.2 | 140 |
| HUDDLE 159 | Office Space | 80 | 0.06 | 4.8 | 5 | 4 | 5 | 20 | 24.8 | 0.8 | 31 | 180 | 17.2 | 140 |
| QUIET 163 | Office Space | 39 | 0.06 | 2.34 | 5 | 1 | 5 | 5 | 7.34 | 0.8 | 9 | 180 | 5 | 140 |
| RECEPTION 133 | Reception Areas | 178 | 0.06 | 10.68 | 30 | 1 | 5 | 5 | 15.68 | 0.8 | 20 | 180 | 11.1 | 140 |
| STORAGE 167 | Storage rooms | 140 | 0.12 | 16.8 | 0 | 0 | 0 | 0 | 16.8 | 0.8 | 21 | 360 | 5.8 | 140 |
| Total | | 1432 | | | | 27 | | | | | 288 | 2070 | 178.2 | 840 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

## Ventilation Schedule For PARAMOUNT COMMONS T.I TENANT FITOUT AHU-4 (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) Az | Rate (cfm/ft2) Ra | Total (cfm) Ra*Az | People Outdoor Air: Occupant Density per 1000 sf | Actual People Pz | Rate (cfm/per) Rp | Total (cfm) Rp*Pz | Breathing Zone Outdoor Airflow (cfm) Vbz=Rp*Pz+Ra*Az | Zone Air Distribution ffectivenes Ez | Zone Airflow (cfm) Voz | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CORRIDOR 138 | Corridor | 97 | 0.06 | 5.82 | 0 | 0 | 0 | 0 | 5.82 | 0.8 | 7 | 50 | 14 | 0 |
| LOBBY 132 | Main Entry Lobbies | 300 | 0.06 | 18 | 4 | 0 | 5 | 0 | 18 | 0.8 | 23 | 300 | 7.7 | 0 |
| MEMBER CLASSROOM 137 | Conference/Meeting | 400 | 0.06 | 24 | 14 | 2 | 5 | 10 | 34 | 0.8 | 43 | 820 | 5.2 | 0 |
| PHOENIX 136 | Office Space | 62 | 0.06 | 3.72 | 4 | 2 | 5 | 10 | 13.72 | 0.8 | 17 | 240 | 7.1 | 0 |
| SITTING 135 | Office Space | 61 | 0.06 | 3.66 | 4 | 2 | 5 | 10 | 13.66 | 0.8 | 17 | 240 | 7.1 | 0 |
| STORAGE 137 | Storage rooms | 22 | 0.12 | 2.64 | 0 | 0 | 0 | 0 | 2.64 | 0.8 | 3 | 25 | 12 | 140 |
| VESTIBULE 131 | Corridor | 64 | 0.06 | 3.84 | 0 | 0 | 0 | 0 | 3.84 | 0.8 | 5 | 210 | 2.4 | 140 |
| Total | | 1006 | | | | 6 | | | | | 115 | 1885 | 55.5 | 280 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

## Ventilation Schedule For PARAMOUNT COMMONS T.I TENANT FITOUT AHU-5 (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) Az | Rate (cfm/ft2) Ra | Total (cfm) Ra*Az | People Outdoor Air: Occupant Density per 1000 sf | Actual People Pz | Rate (cfm/per) Rp | Total (cfm) Rp*Pz | Breathing Zone Outdoor Airflow (cfm) Vbz=Rp*Pz+Ra*Az | Zone Air Distribution ffectivenes Ez | Zone Airflow (cfm) Voz | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CONFERENCE/TRAINING 240 | Conference/Meeting | 1060 | 0.06 | 63.6 | 50 | 73 | 5 | 365 | 428.6 | 0.8 | 536 | 1900 | 28.2 | 0 |
| Total | | 1060 | | | | 73 | | | | | 536 | 1900 | 28.2 | 0 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

## Ventilation Schedule For PARAMOUNT COMMONS T.I TENANT FITOUT AHU-6 (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) Az | Rate (cfm/ft2) Ra | Total (cfm) Ra*Az | People Outdoor Air: Occupant Density per 1000 sf | Actual People Pz | Rate (cfm/per) Rp | Total (cfm) Rp*Pz | Breathing Zone Outdoor Airflow (cfm) Vbz=Rp*Pz+Ra*Az | Zone Air Distribution ffectivenes Ez | Zone Airflow (cfm) Voz | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BREAK 243 | Office Space | 480 | 0.06 | 28.8 | 5 | 20 | 5 | 100 | 128.8 | 0.8 | 161 | 720 | 22.4 | 0 |
| CHIEF 250 | Office Space | 160 | 0.06 | 9.6 | 5 | 1 | 5 | 5 | 14.6 | 0.8 | 18 | 300 | 6 | 0 |
| CHIEF 253 | Office Space | 166 | 0.06 | 9.96 | 5 | 1 | 5 | 5 | 14.96 | 0.8 | 19 | 325 | 5.8 | 0 |
| DIRECTOR 251 | Office Space | 94 | 0.06 | 5.64 | 5 | 1 | 5 | 5 | 10.64 | 0.8 | 13 | 130 | 10 | 0 |
| DIRECTOR 252 | Office Space | 88 | 0.06 | 5.28 | 5 | 1 | 5 | 5 | 10.28 | 0.8 | 13 | 130 | 10 | 0 |
| Total | | 988 | | | | 24 | | | | | 224 | 1605 | 54.2 | 0 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

## Ventilation Schedule For PARAMOUNT COMMONS T.I TENANT FITOUT AHU-7 (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) Az | Rate (cfm/ft2) Ra | Total (cfm) Ra*Az | People Outdoor Air: Occupant Density per 1000 sf | Actual People Pz | Rate (cfm/per) Rp | Total (cfm) Rp*Pz | Breathing Zone Outdoor Airflow (cfm) Vbz=Rp*Pz+Ra*Az | Zone Air Distribution ffectivenes Ez | Zone Airflow (cfm) Voz | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CORRIDOR 231 | Corridor | 143 | 0.06 | 8.58 | 0 | 0 | 0 | 0 | 8.58 | 0.8 | 11 | 70 | 15.7 | 0 |
| CORRIDOR 247 | Corridor | 159 | 0.06 | 9.54 | 0 | 0 | 0 | 0 | 9.54 | 0.8 | 12 | 80 | 15 | 0 |
| CORRIDOR 249 | Corridor | 225 | 0.06 | 13.5 | 0 | 0 | 0 | 0 | 13.5 | 0.8 | 17 | 115 | 14.8 | 0 |
| CORRIDOR 260 | Corridor | 250 | 0.06 | 15 | 0 | 0 | 0 | 0 | 15 | 0.8 | 19 | 125 | 15.2 | 0 |
| CORRIDOR/WORK AREA 259 | Corridor | 159 | 0.06 | 9.54 | 0 | 0 | 0 | 0 | 9.54 | 0.8 | 12 | 80 | 15 | 0 |
| MEETING 248 | Office Space | 184 | 0.06 | 11.04 | 5 | 8 | 5 | 40 | 51.04 | 0.8 | 64 | 280 | 22.9 | 0 |
| MGMT&COORD 267 | Office Space | 97 | 0.06 | 5.82 | 5 | 1 | 5 | 5 | 10.82 | 0.8 | 14 | 50 | 28 | 0 |
| MOTHERS ROOM 260 | Office Space | 56 | 0.06 | 3.36 | 5 | 1 | 5 | 5 | 8.36 | 0.8 | 10 | 55 | 18.2 | 0 |
| OPEN OFFICE 238 | Office Space | 72 | 0.06 | 4.32 | 5 | 1 | 5 | 5 | 9.32 | 0.8 | 12 | 45 | 26.7 | 0 |
| OPEN OFFICE 262 | Office Space | 409 | 0.06 | 24.54 | 5 | 8 | 5 | 40 | 64.54 | 0.8 | 81 | 330 | 24.5 | 0 |
| QUIET 232 | Office Space | 44 | 0.06 | 2.64 | 5 | 1 | 5 | 5 | 7.64 | 0.8 | 10 | 45 | 22.2 | 0 |
| STORAGE 241 | Storage rooms | 38 | 0.12 | 4.56 | 0 | 0 | 0 | 0 | 4.56 | 0.8 | 6 | 25 | 24 | 0 |
| UNISEX 255 | Toilet room - public | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8 | 0 | 25 | 0 | 70 |
| UNISEX 256 | Toilet room - public | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8 | 0 | 25 | 0 | 70 |
| UNISEX 257 | Toilet room - public | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8 | 0 | 25 | 0 | 70 |
| UNISEX 258 | Toilet room - public | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8 | 0 | 25 | 0 | 70 |
| Total | | 2054 | | | | 20 | | | | | 268 | 1400 | 242.2 | 280 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

## Ventilation Schedule For PARAMOUNT COMMONS T.I TENANT FITOUT AHU-8 (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) Az | Rate (cfm/ft2) Ra | Total (cfm) Ra*Az | People Outdoor Air: Occupant Density per 1000 sf | Actual People Pz | Rate (cfm/per) Rp | Total (cfm) Rp*Pz | Breathing Zone Outdoor Airflow (cfm) Vbz=Rp*Pz+Ra*Az | Zone Air Distribution ffectivenes Ez | Zone Airflow (cfm) Voz | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHIEF 266 | Office Space | 210 | 0.06 | 12.6 | 5 | 2 | 5 | 10 | 22.6 | 0.8 | 28 | 305 | 9.2 | 0 |
| DIRECTOR 264 | Office Space | 100 | 0.06 | 6 | 5 | 1 | 5 | 5 | 11 | 0.8 | 14 | 195 | 7.2 | 0 |
| DIRECTOR 265 | Office Space | 94 | 0.06 | 5.64 | 5 | 1 | 5 | 5 | 10.64 | 0.8 | 13 | 195 | 6.7 | 0 |
| HUDDLE 263 | Office Space | 70 | 0.06 | 4.2 | 5 | 4 | 5 | 20 | 24.2 | 0.8 | 30 | 105 | 28.6 | 0 |
| Total | | 474 | | | | 8 | | | | | 85 | 800 | 51.7 | 0 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

## Ventilation Schedule For PARAMOUNT COMMONS T.I TENANT FITOUT AHU-9 (OMC 2017)

| Room # and Name | Occupancy Type | Area Outdoor Air: Area (ft2) Az | Rate (cfm/ft2) Ra | Total (cfm) Ra*Az | People Outdoor Air: Occupant Density per 1000 sf | Actual People Pz | Rate (cfm/per) Rp | Total (cfm) Rp*Pz | Breathing Zone Outdoor Airflow (cfm) Vbz=Rp*Pz+Ra*Az | Zone Air Distribution ffectivenes Ez | Zone Airflow (cfm) Voz | Supply Airflow (cfm) | OA/SA Ratio (%) | Exhaust Airflow (cfm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CORRIDOR 235 | Corridor | 163 | 0.06 | 9.78 | 0 | 0 | 0 | 0 | 9.78 | 0.8 | 12 | 75 | 16 | 0 |
| DIRECTOR 236 | Office Space | 162 | 0.06 | 9.72 | 5 | 1 | 5 | 5 | 14.72 | 0.8 | 18 | 400 | 4.5 | 0 |
| MGMT&COORD 237 | Office Space | 90 | 0.06 | 5.4 | 5 | 1 | 5 | 5 | 10.4 | 0.8 | 13 | 210 | 6.2 | 0 |
| PRESIDENT 239 | Office Space | 306 | 0.06 | 18.36 | 5 | 2 | 5 | 10 | 28.36 | 0.8 | 35 | 420 | 8.3 | 0 |
| STORAGE 238 | Storage rooms | 59 | 0.12 | 7.08 | 0 | 0 | 0 | 0 | 7.08 | 0.8 | 9 | 90 | 10 | 0 |
| Total | | 780 | | | | 4 | | | | | 87 | 1195 | 45 | 0 |

RESTROOMS EXHAUST 70 CFM PER FLUSHABLE FIXTURE.

## DIFFUSER, GRILLE, AND REGISTER SCHEDULE

| CALLOUT | DESCRIPTION | FACE SIZE (IN) | INLET SIZE (IN) | MODEL | NOTES |
|---|---|---|---|---|---|
| BV-2 | ALUMINUM BRICK VENT (THREE BRICK), 4" STANDARD DEPTH, MESH ALUMINUM INSECT SCREEN STANDARD. | 8x7 1/2 | 8x7 1/2 | HART AND COOLEY/ BV808 | SATIN ANODIZED FINISH |
| CD 4W-1 | 4-WAY THREE CONE DIFFUSER | 12x12 | 6Ø | TITUS TMS | REMOVABLE CORE FROM FACE OF DIFFUSER. INSULATE BACK OF DIFFUSER. |
| CD 4W-3 | 4-WAY THREE CONE DIFFUSER | 24x24 | 6Ø | TITUS TMS | REMOVABLE CORE FROM FACE OF DIFFUSER. INSULATE BACK OF DIFFUSER. |
| CD 4W-4 | 4-WAY THREE CONE DIFFUSER | 24x24 | 8Ø | TITUS TMS | REMOVABLE CORE FROM FACE OF DIFFUSER. INSULATE BACK OF DIFFUSER. |
| CD 4W-5 | 4-WAY THREE CONE DIFFUSER | 24x24 | 10Ø | TITUS TMS | REMOVABLE CORE FROM FACE OF DIFFUSER. INSULATE BACK OF DIFFUSER. |
| IV-1 | ALUMINUM EXTERIOR RETURN GRILLE HVAC SIDEWALL-OUTSIDE AIR LOUVER WATERPROOF & RAIN BLOCK. | 8x8 | 8x8 | LAMINAIRE | PROVIDE BACK DRAFT DAMPER |
| LV-1 | DRYER WALL VENT, 26 GAUGE GALVANIZED/ POWDER COATED STEEL BODY, RUBBER BUMPERS AND INTRUSION PREVENTION MAGNETS. | 6x6 | 4Ø | DRYERWALLVENT/ DWV4 | COORDINATE COLOR WITH ARCHITECT/OWNER. PROVIDE BACK DRAFT DAMPER |
| LV-2 | EXTRUDED ALUMINUM STATIONARY LOUVER | 12x12 | 12x12 | RUSKIN ELF375DX | ALUMINUM BIRSCREEN |
| LV-3 | DRYER WALL VENT, 26 GAUGE GALVANIZED/ POWDER COATED STEEL BODY, RUBBER BUMPERS AND INTRUSION PREVENTION MAGNETS. | 8 1/2x8 1/2 | 6Ø | DRYERWALLVENT/ 6WVW | COORDINATE COLOR WITH ARCHITECT/OWNER. PROVIDE BACK DRAFT DAMPER |
| LV-4 | EXTRUDED ALUMINUM STATIONARY LOUVER. DUAL DRAINABLE BLADE. | 23x12 | 23x12 | POTTORFF EDD-445 | ALUMINUM BIRSCREEN. 4IN DEEP |
| LV-5 | EXTRUDED ALUMINUM STATIONARY LOUVER. DUAL DRAINABLE BLADE. | 12x12 | 12x12 | POTTORFF EDD-445 | ALUMINUM BIRSCREEN |
| LV-6 | EXTRUDED ALUMINUM STATIONARY LOUVER. DUAL DRAINABLE BLADE. | 18x12 | 18x12 | POTTORFF EDD-445 | ALUMINUM BIRSCREEN. 4IN DEEP |
| RG-1 | STEEL/ALUMINUM RETURN GRILLE WITH 1/2" FIN SPACING | 20x14 | 20x14 | HART AND COOLEY 672 | #26 WHITE FINISH. |
| RG-3 | EGGCRATE RETURN GRILLE | 24x24 | 22x22 | TITUS 50F | #26 WHITE FINISH. |
| RG-4 | EGGCRATE RETURN GRILLE | 12x24 | 10x22 | TITUS 50F | #26 WHITE FINISH. |
| RG-5 | STEEL RETURN GRILLE, 3/4" BLADE SPACING, 35 DEGREE DEFLECTION, BLADES PARALLEL TO LONG DIMENSION | 22x22 | 20x20 | TITUS 350RL | #26 WHITE FINISH. |
| RR-1 | STEEL/ALUMINUM RETURN GRILLE, 1/2" BLADE SPACING | 8x8 | 6x6 | HART AND COOLEY 672 | STEEL OPPOSED-BLADE DAMPER OPERABLE FROM THE FACE OF THE GRILLE. |
| RR-2 | STEEL RETURN GRILLE, 3/4" BLADE SPACING, 35 DEGREE DEFLECTION, BLADES PARALLEL TO LONG DIMENSION | 14x8 | 12x6 | TITUS 350RL | STEEL OPPOSED-BLADE DAMPER OPERABLE FROM THE FACE OF THE GRILLE. |
| SR-1 | ALUMINUM STRAIGHT BLADE, VERTICAL FIN REGISTER | 12x4 | 12x4 | HART AND COOLEY A618 | STEEL OPPOSED-BLADE DAMPER OPERABLE FROM THE FACE OF THE GRILLE. |

10535 PARAMOUNT COMMONS T.I FITOUT

NOTES FOR ALL AIR DEVICES:
1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR MOUNTING TYPE
2. DUCT RUN-OUT SAME SIZE AS NECK UNLESS NOTED OTHERWISE
3. PLASTER FRAME WHERE LOCATED IN GYPSUM CEILING
4. PAINT DUCTWORK THAT IS VISIBLE BEHIND AIR DEVICES MATTE BLACK
5. AIR DEVICES SHALL BE ALUMINUM IN HIGH MOISTURE AREAS. (RESTROOMS)
6. WHERE AIR DEVICES ARE LOCATED IN A FIRE RATED ASSEMBLY, PROVIDE CEILING RADIATION DAMPERS, FIRE DAMPER, FIRE RATED INSULATION, AS REQUIRED PER CODE.
7. PROVIDE SAMPLE AIR DEVICES STYLE AND COLOR, FOR OWNER'S REPRESENTATIVE APPROVAL, BEFORE ORDERING FINAL AIR DEVICES.
8. ADD INSULATION TO THE BACK OF ALL AIR DEVICES WHERE DUCTWORK ALSO REQUIRES INSULATION.

## DUCT INSULATION SCHEDULE FOR T.I FITOUT

| AIR DISTRIBUTION TYPE | EQUIPMENT TAGS: AHU-1 | AHU-2 | AHU-3 | AHU-4 | AHU-5 | AHU-6 | AHU-7 | AHU-8 | AHU-9 |
|---|---|---|---|---|---|---|---|---|---|
| SA | R-3.5 | R-3.5 | R-3.5 | R-3.5 | R-3.5 | R-3.5 | R-3.5 | R-3.5 | R-3.5 |
| RA | - | - | - | - | - | - | - | - | - |
| OA | R-3.5 | R-3.5 | R-3.5 | R-3.5 | R-3.5 | R-3.5 | R-3.5 | R-3.5 | R-3.5 |

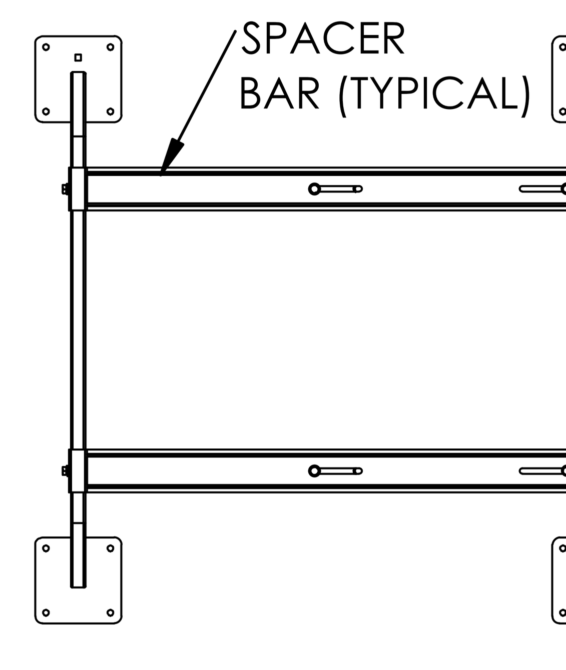
DUCT INSULATION REQUIREMENTS ARE BASED ON TABLE 6.8.2B OF ASHRAE 90.1 2010 ENERGY CODE.

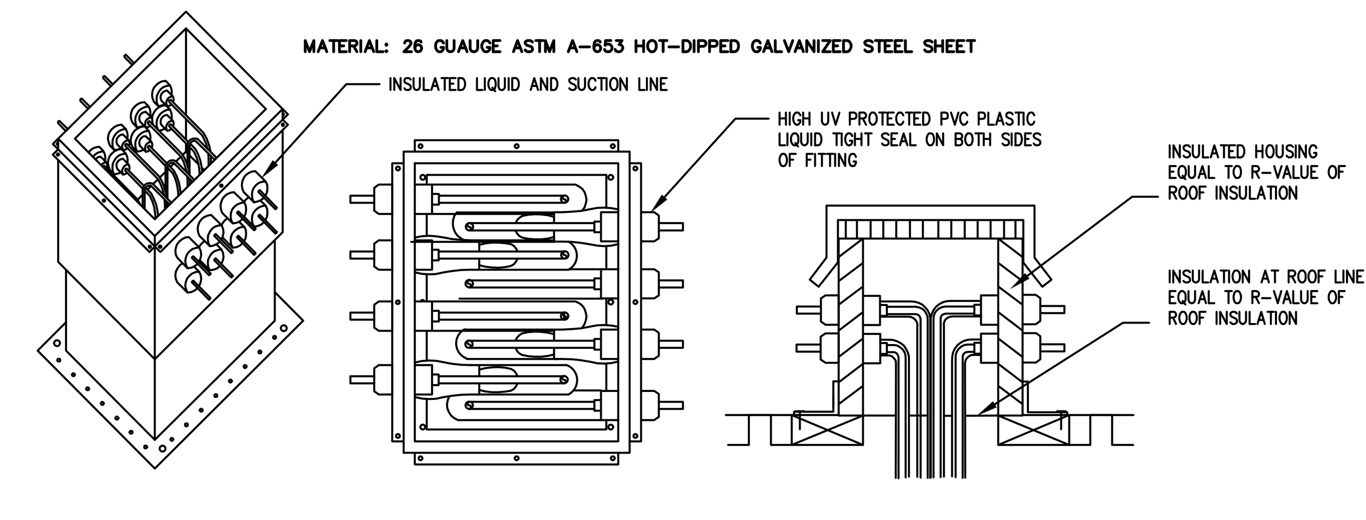
PROVIDE DUCTWORK OF SUFFICIENT THICKNESS TO MEET THE INSTALLED R-VALUE REQUIREMENTS LISTED ABOVE.

ITEMS NOT REQUIRED TO BE INSULATED: FIBROUS-GLASS DUCTS, DUCTS WITH LINER THAT MEETS ASHRAE 90.1, FACTORY-INSULATED FLEXIBLE DUCTS, FACTORY-INSULATED PLENUMS AND CASINGS, FLEX CONNECTORS, VIBRATION-CONTROL DEVICES, FACTORY-INSULATED ACCESS PANELS AND DOORS.

## BUILDING AIR BALANCE SUMMARY T.I FITOUT

| | AHU-1 | AHU-2 | AHU-3 | AHU-4 | AHU-5 | AHU-6 | AHU-7 | AHU-8 | AHU-9 | E-1 | E-2 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OUTSIDE AIR | 199 | 204 | 288 | 115 | 536 | 224 | 268 | 85 | 87 | | | 2006 |
| EXHAUST AIR | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 280 | 330 | 610 |
| | | | | | | | | | | | | 1396 POSITIVE |




LINE SET ROOF CURB DETAIL

NOT TO SCALE

**PARAMOUNT WORKS**

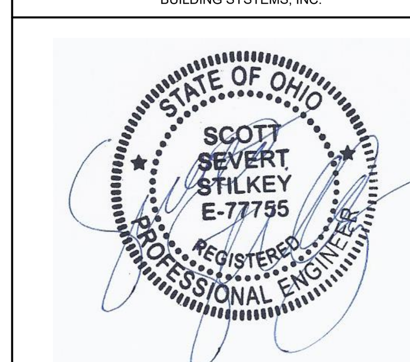
NWC KEMPER LANE & E. McMILLAN ST
**2505 KEMPER LN**
**CINCINNATI, OH 45206**
WALNUT HILLS NEIGHBORHOOD

| No. | Issuances / Revisions / Submissions | Date |
|---|---|---|
| | PRICING/PERMIT ISSUANCE | 02.23.2024 |

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Drawing Title

MECHANICAL DETAILS

Document No.

T.I-M300

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