

Date:	9-29-21	10081	3-28-2022	PLAN REVIEW
Proj. No.:	10081	MOA	4-18-2022	PLAN REVIEW #2
Drawn By:	MOA	MRD	6-7-2022	PLAN REVIEW #3
Chkd By:	MRD	MRD	6-24-2022	PLAN REVIEW #5
Acad File:				

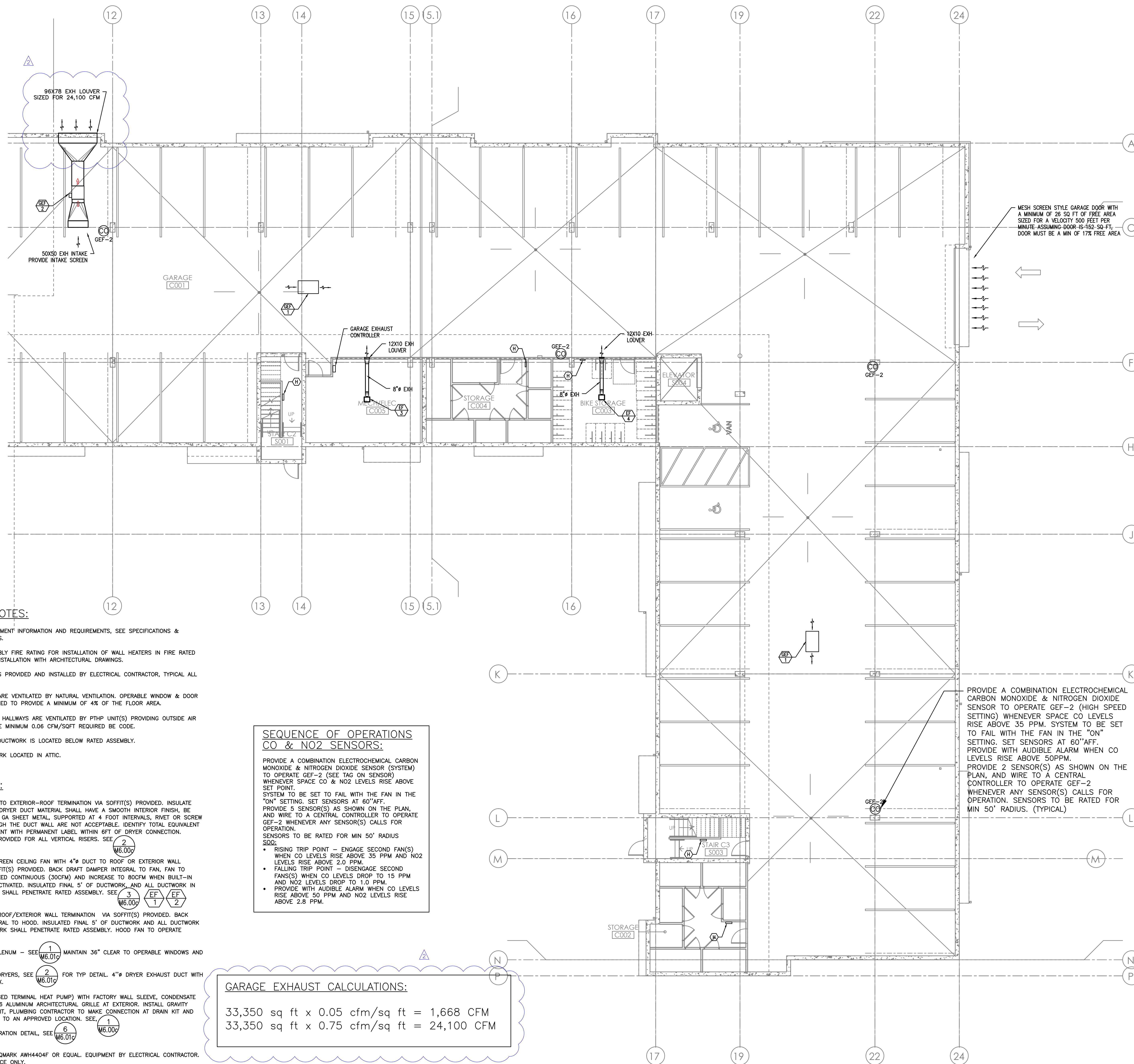
COMMONS ON THE TUALATIN
 6845 SW NYBERG LANE
 BUILDING C
BASEMENT MECHANICAL PLAN - SOUTH
 TUALATIN OREGON 97225

PERMIT SET
 11/22/21
JACOBS

MFI INC.

Consulting Engineers
 2007 S.E. Ash St.
 Portland, OR 97214
 PRR: (503) 234-0548
 FAX: (503) 234-0677
 WWW.MFI-ENG.COM

SHEET
M2.00c



GENERAL NOTES:

- FOR ADDITIONAL EQUIPMENT INFORMATION AND REQUIREMENTS, SEE SPECIFICATIONS & EQUIPMENT SUBMITTALS.
- MAINTAIN WALL ASSEMBLY FIRE RATING FOR INSTALLATION OF WALL HEATERS IN FIRE RATED WALLS. COORDINATE INSTALLATION WITH ARCHITECTURAL DRAWINGS.
- ALL ELECTRIC HEATERS PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR, TYPICAL ALL UNITS.
- ALL DWELLING UNITS ARE VENTILATED BY NATURAL VENTILATION. OPERABLE WINDOW & DOOR AREAS HAVE BEEN SIZED TO PROVIDE A MINIMUM OF 4% OF THE FLOOR AREA.
- COMMON SPACES AND HALLWAYS ARE VENTILATED BY PTHP UNIT(S) PROVIDING OUTSIDE AIR THAT MEETS THE CODE MINIMUM 0.06 CFM/SQFT REQUIRED BY CODE.
- ALL EQUIPMENT AND DUCTWORK IS LOCATED BELOW RATED ASSEMBLY.
- INSULATE ALL DUCTWORK LOCATED IN ATTIC.

KEY NOTES:

- 4" DRYER EXHAUST TO EXTERIOR—ROOF TERMINATION VIA SOFFIT(S) PROVIDED. INSULATE DUCTWORK IN ATTIC. DRYER DUCT MATERIAL SHALL HAVE A SMOOTH INTERIOR FINISH, BE CONSTRUCTED OF 26 GA SHEET METAL, SUPPORTED AT 4 FOOT INTERVALS, RIVET OR SCREW PENETRATIONS THROUGH THE DUCT WALL ARE NOT ACCEPTABLE. IDENTIFY TOTAL EQUIVALENT LENGTH OF DRYER VENT WITH PERMANENT LABEL WITHIN 6FT OF DRYER CONNECTION. CLEAN-OUT TO BE PROVIDED FOR ALL VERTICAL RISERS. SEE 2 (M6.00c)
- PANASONIC WHISPERGREEN CEILING FAN WITH 4" DUCT TO ROOF OR EXTERIOR WALL TERMINATION VIA SOFFIT(S) PROVIDED. BACK DRAFT DAMPER INTEGRAL TO FAN, FAN TO OPERATE AT LOW SPEED CONTINUOUS (30CFM) AND INCREASE TO 80CFM WHEN BUILT-IN MOTION SENSOR IS ACTIVATED. INSULATE FINAL 5' OF DUCTWORK AND ALL DUCTWORK IN ATTIC. NO DUCTWORK SHALL PENETRATE RATED ASSEMBLY. SEE 3 (M6.00c), EF 1, EF 2
- 6" HOOD DUCT TO ROOF/EXTERIOR WALL TERMINATION VIA SOFFIT(S) PROVIDED. BACK DRAFT DAMPER INTEGRAL TO HOOD. INSULATE FINAL 5' OF DUCTWORK AND ALL DUCTWORK IN ATTIC. NO DUCTWORK SHALL PENETRATE RATED ASSEMBLY. HOOD FAN TO OPERATE INTERMITTENTLY.
- EXTERIOR EXHAUST PLENUM — SEE 1 (M6.01c) MAINTAIN 36" CLEAR TO OPERABLE WINDOWS AND DOORS.
- LINT TRAPS ON ALL DRYERS, SEE 2 (M6.01c) FOR TYP DETAIL. 4" DRYER EXHAUST DUCT WITH RECESSED DRYER BOX.
- AMANA PTHP (PACKAGED TERMINAL HEAT PUMP) WITH FACTORY WALL SLEEVE, CONDENSATE DRAIN KIT, AND 42X16 ALUMINUM ARCHITECTURAL GRILLE AT EXTERIOR. INSTALL GRAVITY CONDENSATE DRAIN KIT, PLUMBING CONTRACTOR TO MAKE CONNECTION AT DRAIN KIT AND CONTINUE DRAIN LINE TO AN APPROVED LOCATION. SEE 6 (M6.00c), 1 (M6.01c)
- VERTICAL FIRE PENETRATION DETAIL, SEE 6 (M6.01c), 1 (M6.00c)
- 1.5KW WALL HEATER QMARK AWH4404F OR EQUAL. EQUIPMENT BY ELECTRICAL CONTRACTOR. SHOWN FOR REFERENCE ONLY.
- REFRIGERANT LINES FROM SPLIT HEAT PUMP CONDENSERS ON ROOF TO FAN COILS IN BASEMENT AND LEVEL 1.

**SEQUENCE OF OPERATIONS
 CO & NO2 SENSORS:**

PROVIDE A COMBINATION ELECTROCHEMICAL CARBON MONOXIDE & NITROGEN DIOXIDE SENSOR (SYSTEM) TO OPERATE GEF-2 (SEE TAG ON SENSOR) WHENEVER SPACE CO & NO2 LEVELS RISE ABOVE SET POINT. SYSTEM TO BE SET TO FAIL WITH THE FAN IN THE "ON" SETTING. SET SENSORS AT 60" AFF. PROVIDE 5 SENSOR(S) AS SHOWN ON THE PLAN, AND WIRE TO A CENTRAL CONTROLLER TO OPERATE GEF-2 WHENEVER ANY SENSOR(S) CALLS FOR OPERATION. SENSORS TO BE RATED FOR MIN 50' RADIUS S00c.

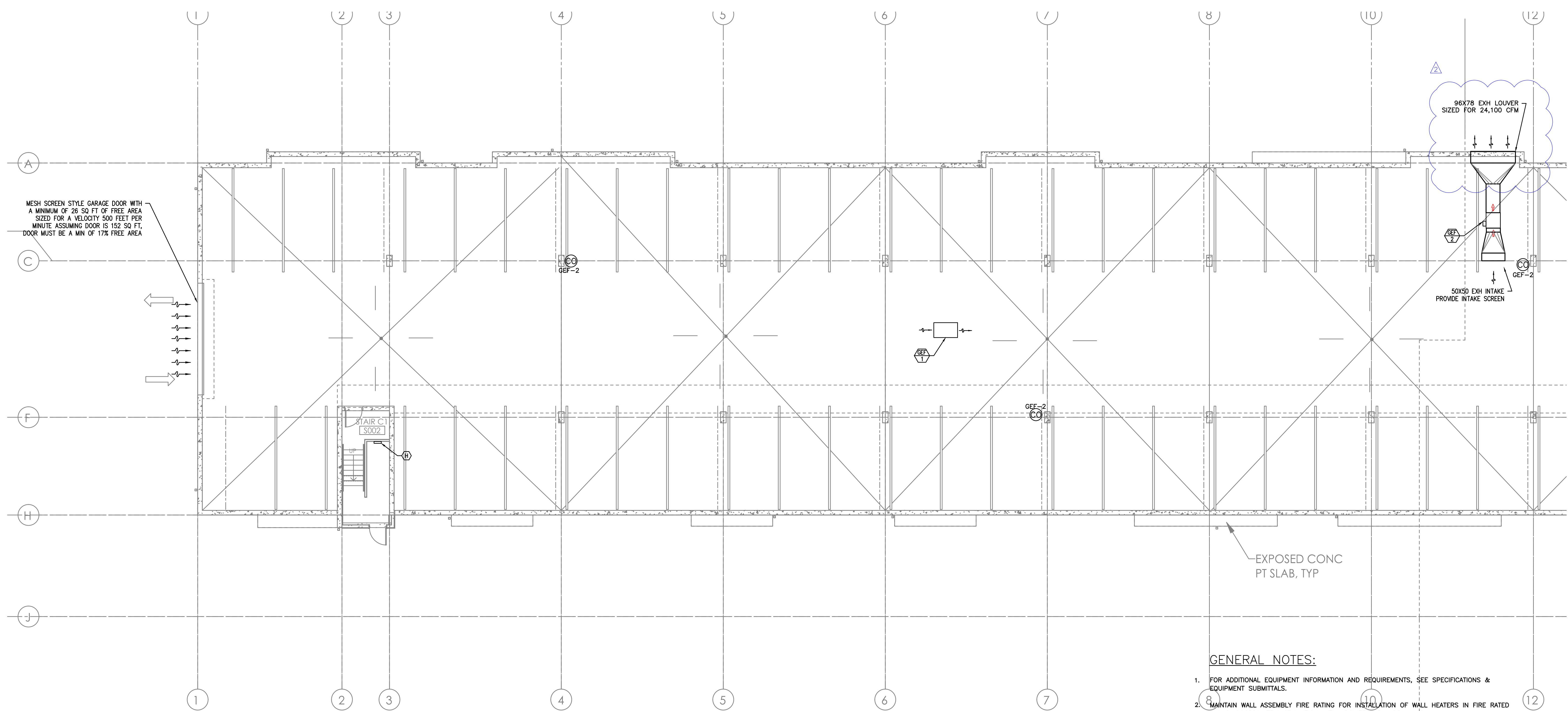
- RISING TRIP POINT — ENGAGE SECOND FAN(S) WHEN CO LEVELS RISE ABOVE 35 PPM AND NO2 LEVELS RISE ABOVE 2.0 PPM.
- FALLING TRIP POINT — DISENGAGE SECOND FAN(S) WHEN CO LEVELS DROP TO 15 PPM AND NO2 LEVELS DROP TO 1.0 PPM.
- PROVIDE WITH AUDIBLE ALARM WHEN CO LEVELS RISE ABOVE 50 PPM AND NO2 LEVELS RISE ABOVE 2.8 PPM.

GARAGE EXHAUST CALCULATIONS:

33,350 sq ft x 0.05 cfm/sq ft = 1,668 CFM
 33,350 sq ft x 0.75 cfm/sq ft = 24,100 CFM



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1 LEVEL 0 MECHANICAL PLAN - NORTH
 SCALE: 1/8" = 1' - 0"

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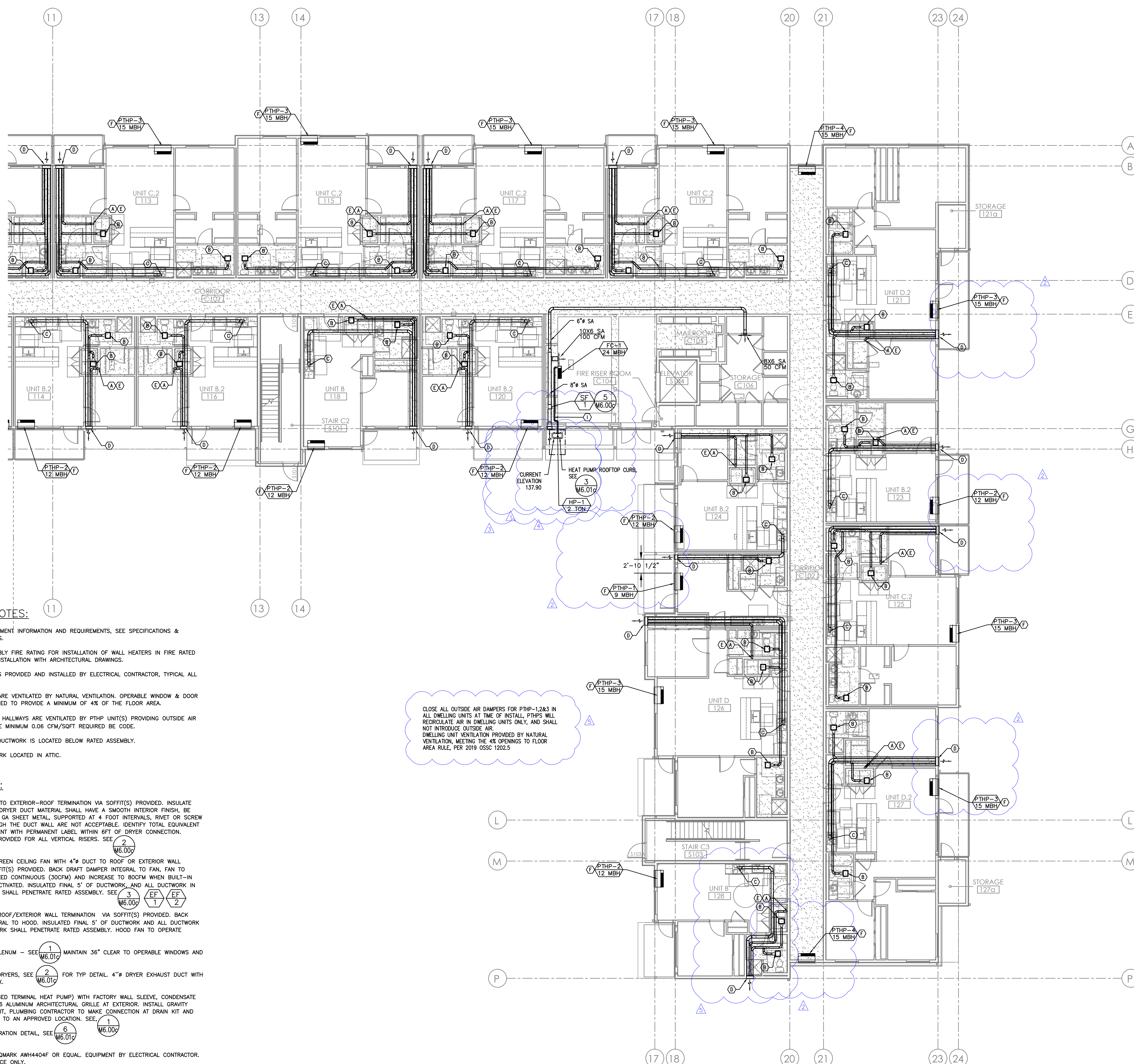
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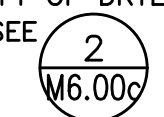
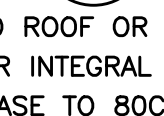
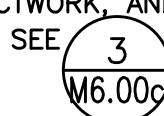



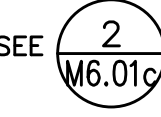
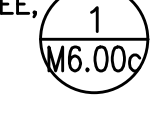
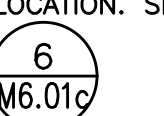
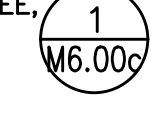
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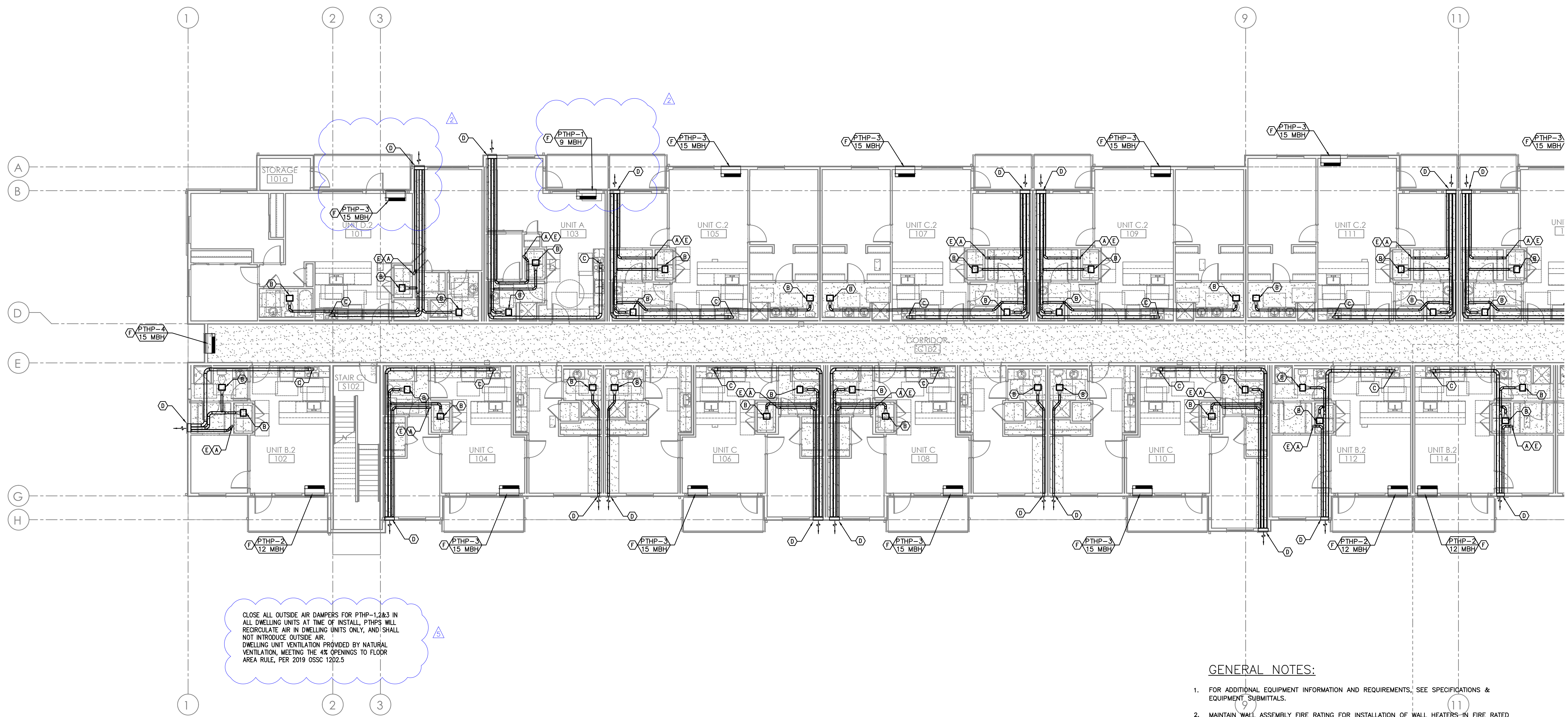
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CLOSE ALL OUTSIDE AIR DAMPERS FOR PTHP-1,2&3 IN ALL DWELLING UNITS AT TIME OF INSTALL. PTHPS WILL RECIRCULATE AIR IN DWELLING UNITS ONLY, AND SHALL NOT INTRODUCE OUTSIDE AIR. DWELLING UNIT VENTILATION PROVIDED BY NATURAL VENTILATION, MEETING THE 4% OPENINGS TO FLOOR AREA RULE, PER 2019 OSSC 1202.5

1 LEVEL 1 MECHANICAL PLAN - SOUTH
 M2.04c SCALE: 1/8" = 1' - 0"

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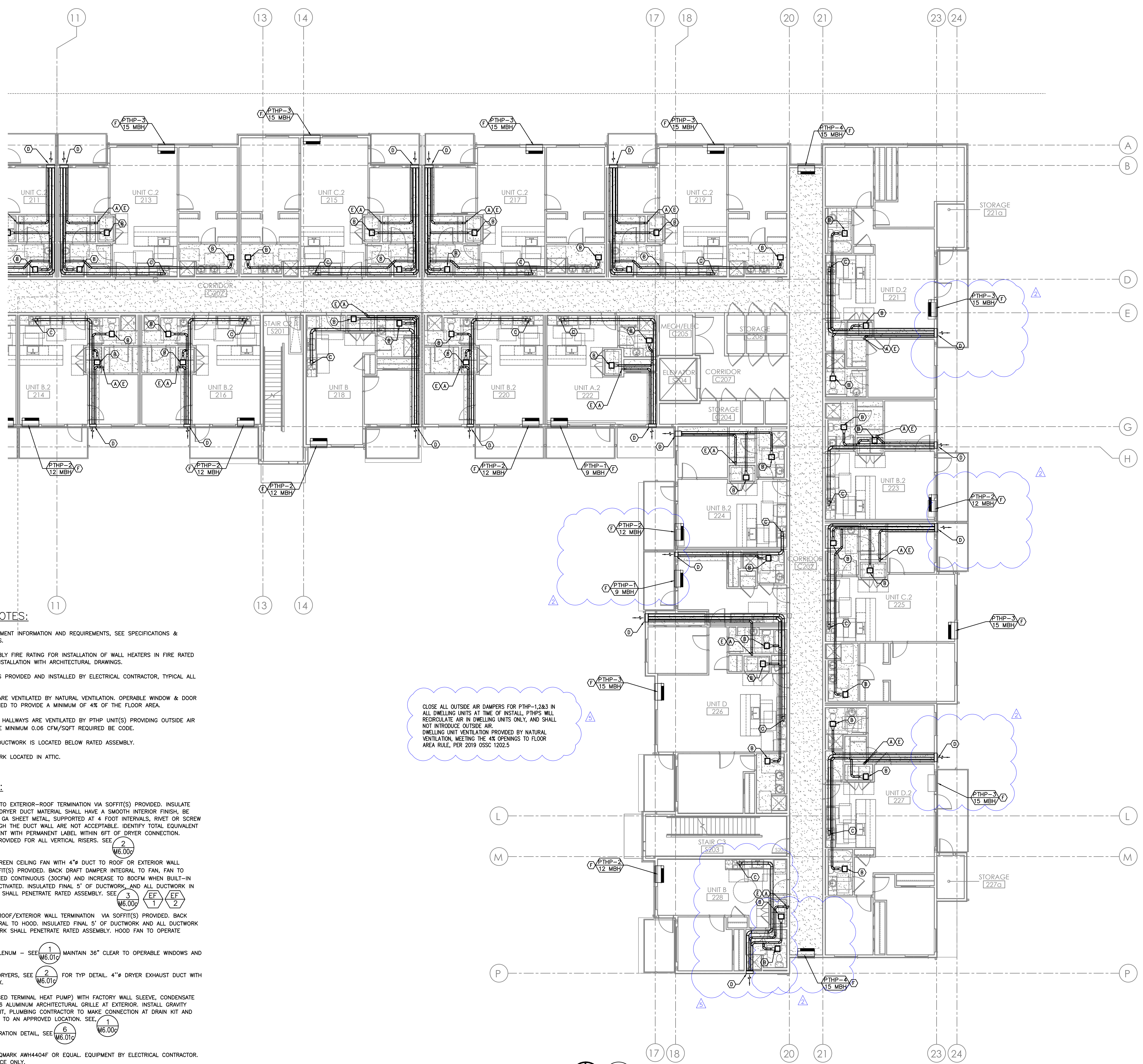
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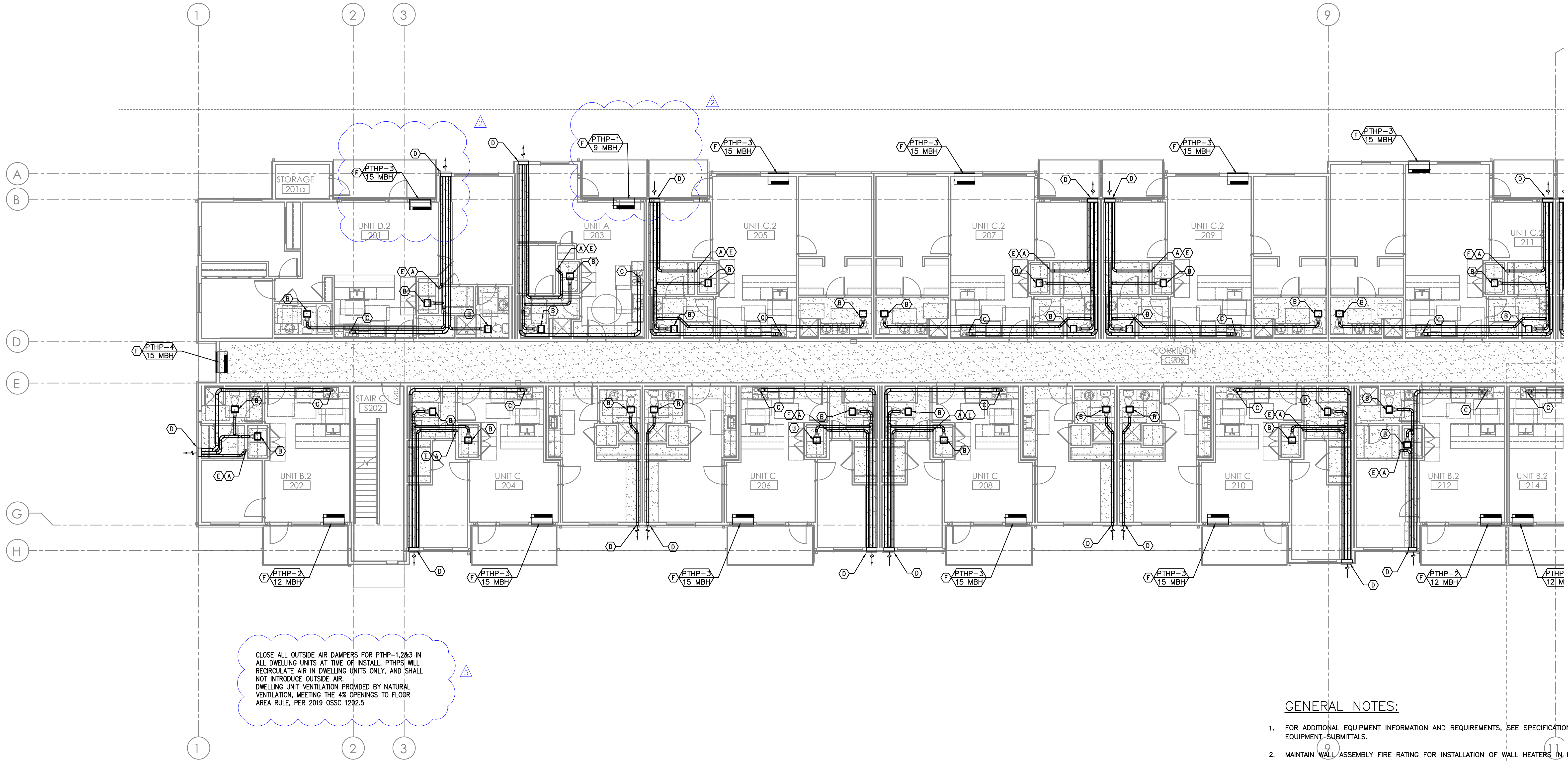
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- (E) - LINT TRAPS ON ALL DRYERS, SEE M6.01c FOR TYP DETAIL. 4" DRYER EXHAUST DUCT WITH RECESSED DRYER BOX.
- (F) - AMANA PTHP (PACKAGED TERMINAL HEAT PUMP) WITH FACTORY WALL SLEEVE, CONDENSATE DRAIN KIT, AND 42X16 ALUMINUM ARCHITECTURAL GRILLE AT EXTERIOR. INSTALL GRAVITY CONDENSATE DRAIN KIT, PLUMBING CONTRACTOR TO MAKE CONNECTION AT DRAIN KIT AND CONTINUE DRAIN LINE TO AN APPROVED LOCATION. SEE M6.00c
- (G) - VERTICAL FIRE PENETRATION DETAIL, SEE M6.01c M6.00c
- (H) - 1.5KW WALL HEATER QMARK AWH4404F OR EQUAL. EQUIPMENT BY ELECTRICAL CONTRACTOR. SHOWN FOR REFERENCE ONLY.
- (I) - REFRIGERANT LINES FROM SPLIT HEAT PUMP CONDENSERS ON ROOF TO FAN COILS IN BASEMENT AND LEVEL 1.

1 LEVEL 2 MECHANICAL PLAN - SOUTH
 M2.06c SCALE: 1/8" = 1' - 0"

Date:	9-29-21	Proj. No:	10081	PLAN REVIEW	PLAN REVIEW #1
Drawn By:	MOA	Drawn By:	MOA	PLAN REVIEW	PLAN REVIEW #2
CHKD By:	MRD	CHKD By:	MRD	PLAN REVIEW	PLAN REVIEW #3
Accd File:		Accd File:		PLAN REVIEW	PLAN REVIEW #5



CLOSE ALL OUTSIDE AIR DAMPERS FOR PTHP-1, 2 & 3 IN ALL DWELLING UNITS AT TIME OF INSTALL. PTHPS WILL RECIRCULATE AIR IN DWELLING UNITS ONLY, AND SHALL NOT INTRODUCE OUTSIDE AIR. DWELLING UNIT VENTILATION PROVIDED BY NATURAL VENTILATION, MEETING THE 4% OPENINGS TO FLOOR AREA RULE, PER 2019 OSSC 1202.5

1 LEVEL 2 MECHANICAL PLAN - NORTH
 M2.07c SCALE: 1/8" = 1' - 0"

GENERAL NOTES:

- FOR ADDITIONAL EQUIPMENT INFORMATION AND REQUIREMENTS, SEE SPECIFICATIONS & EQUIPMENT SUBMITTALS.
- MAINTAIN WALL ASSEMBLY FIRE RATING FOR INSTALLATION OF WALL HEATERS IN FIRE RATED WALLS. COORDINATE INSTALLATION WITH ARCHITECTURAL DRAWINGS.
- ALL ELECTRIC HEATERS PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR, TYPICAL ALL UNITS.
- ALL DWELLING UNITS ARE VENTILATED BY NATURAL VENTILATION. OPERABLE WINDOW & DOOR AREAS HAVE BEEN SIZED TO PROVIDE A MINIMUM OF 4% OF THE FLOOR AREA.
- COMMON SPACES AND HALLWAYS ARE VENTILATED BY PTHP UNIT(S) PROVIDING OUTSIDE AIR THAT MEETS THE CODE MINIMUM 0.06 CFM/SQFT REQUIRED BY CODE.
- ALL EQUIPMENT AND DUCTWORK IS LOCATED BELOW RATED ASSEMBLY.
- INSULATE ALL DUCTWORK LOCATED IN ATTIC.

KEY NOTES:

- (A) - 4" DRYER EXHAUST TO EXTERIOR-ROOF TERMINATION VIA SOFFIT(S) PROVIDED. INSULATE DUCTWORK IN ATTIC. DRYER DUCT MATERIAL SHALL HAVE A SMOOTH INTERIOR FINISH, BE CONSTRUCTED OF 26 GA SHEET METAL, SUPPORTED AT 4 FOOT INTERVALS, RIVET OR SCREW PENETRATIONS THROUGH THE DUCT WALL ARE NOT ACCEPTABLE. IDENTIFY TOTAL EQUIVALENT LENGTH OF DRYER VENT WITH PERMANENT LABEL WITHIN 6FT OF DRYER CONNECTION. SEE ² M6.00c
- (B) - PANASONIC WHISPERGREEN CEILING FAN WITH 4" DUCT TO ROOF OR EXTERIOR WALL TERMINATION VIA SOFFIT(S) PROVIDED. BACK DRAFT DAMPER INTEGRAL TO FAN. FAN TO OPERATE AT LOW SPEED CONTINUOUS (30CFM) AND INCREASE TO 80CFM WHEN BUILT-IN MOTION SENSOR IS ACTIVATED. INSULATED FINAL 5' OF DUCTWORK AND ALL DUCTWORK IN ATTIC. NO DUCTWORK SHALL PENETRATE RATED ASSEMBLY. SEE ³ M6.00c, ¹ EF, ² EF
- (C) - 6" HOOD DUCT TO ROOF/EXTERIOR WALL TERMINATION VIA SOFFIT(S) PROVIDED. BACK DRAFT DAMPER INTEGRAL TO HOOD. INSULATED FINAL 5' OF DUCTWORK AND ALL DUCTWORK IN ATTIC. NO DUCTWORK SHALL PENETRATE RATED ASSEMBLY. HOOD FAN TO OPERATE INTERMITTENTLY.
- (D) - EXTERIOR EXHAUST PLENUM - SEE ¹ M6.01c MAINTAIN 36" CLEAR TO OPERABLE WINDOWS AND DOORS.
- (E) - LINT TRAPS ON ALL DRYERS, SEE ² M6.01c FOR TYP DETAIL. 4" DRYER EXHAUST DUCT WITH RECESSED DRYER BOX.
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- (G) - VERTICAL FIRE PENETRATION DETAIL, SEE ⁶ M6.01c, ¹ M6.00c
- (H) - 1.5KW WALL HEATER QMARK AWH4404F OR EQUAL. EQUIPMENT BY ELECTRICAL CONTRACTOR. SHOWN FOR REFERENCE ONLY.
- (I) - REFRIGERANT LINES FROM SPLIT HEAT PUMP CONDENSERS ON ROOF TO FAN COILS IN BASEMENT AND LEVEL 1.

COMMONS ON THE TUALATIN
 6845 SW NYBERG LANE
 BUILDING C
LEVEL 2 MECHANICAL PLAN - NORTH
 TUALATIN OREGON 97225

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 Consulting Engineers
 2007 S.E. Ash St.
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Date:	9-29-21	Proj. No:	10081	PLAN REVIEW #1	3-28-2022
Drawn By:	MGA	PLAN REVIEW #2	4-18-2022		
CHKD BY:	MRD	PLAN REVIEW #3	6-7-2022		
Acad File:	MRD	PLAN REVIEW #5	6-24-2022		

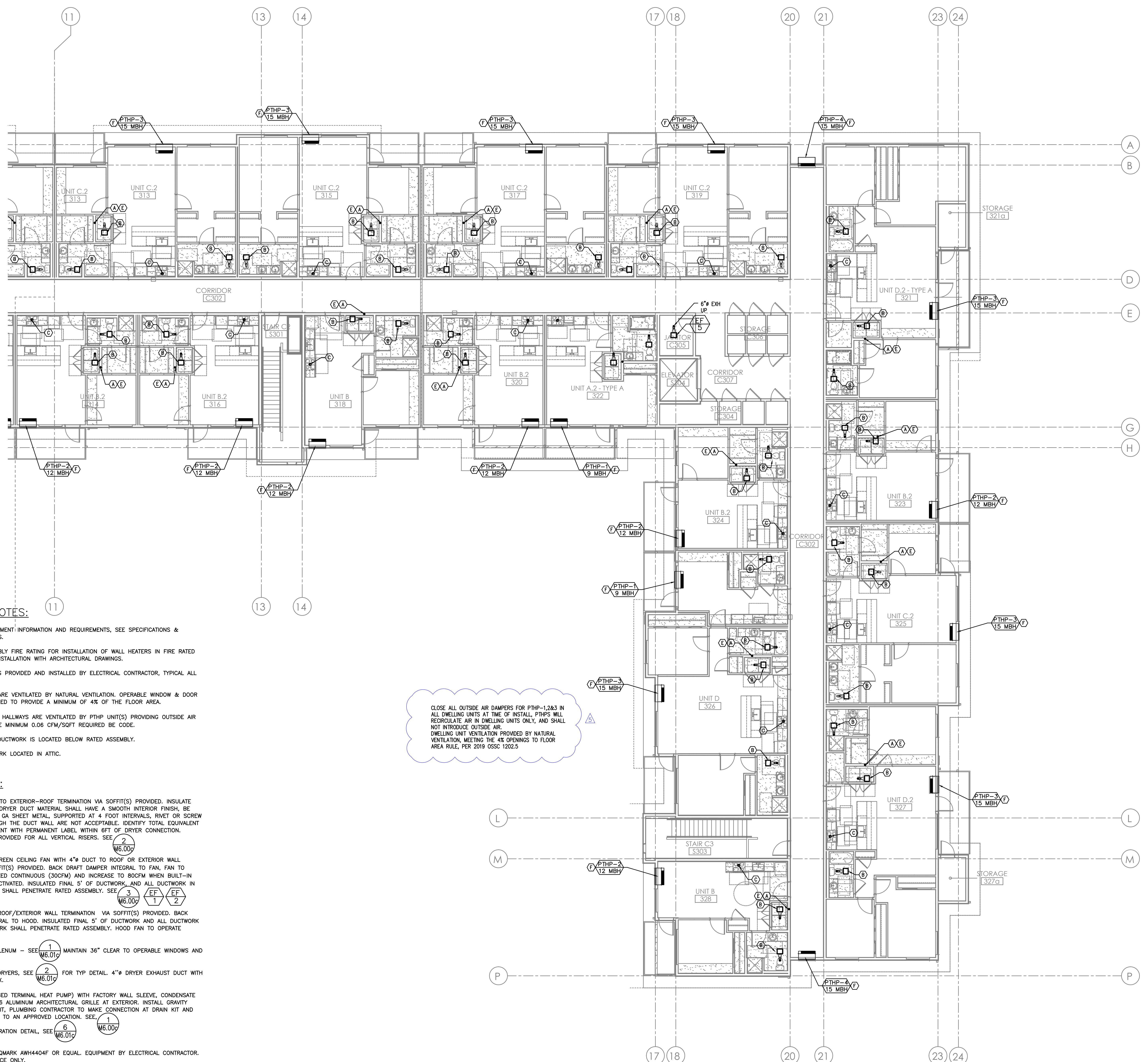
COMMONS ON THE TUALATIN
6845 SW NYBERG LANE
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LEVEL 3 MECHANICAL PLAN - SOUTH
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Consulting Engineers
 2007 S.E. Ash St.
 Portland, OR 97214
 P: (503) 234-0548
 F: (503) 234-0677
 WWW.MFA-ENG.COM

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GENERAL NOTES:

- FOR ADDITIONAL EQUIPMENT INFORMATION AND REQUIREMENTS, SEE SPECIFICATIONS & EQUIPMENT SUBMITTALS.
- MAINTAIN WALL ASSEMBLY FIRE RATING FOR INSTALLATION OF WALL HEATERS IN FIRE RATED WALLS. COORDINATE INSTALLATION WITH ARCHITECTURAL DRAWINGS.
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- INSULATE ALL DUCTWORK LOCATED IN ATTIC.

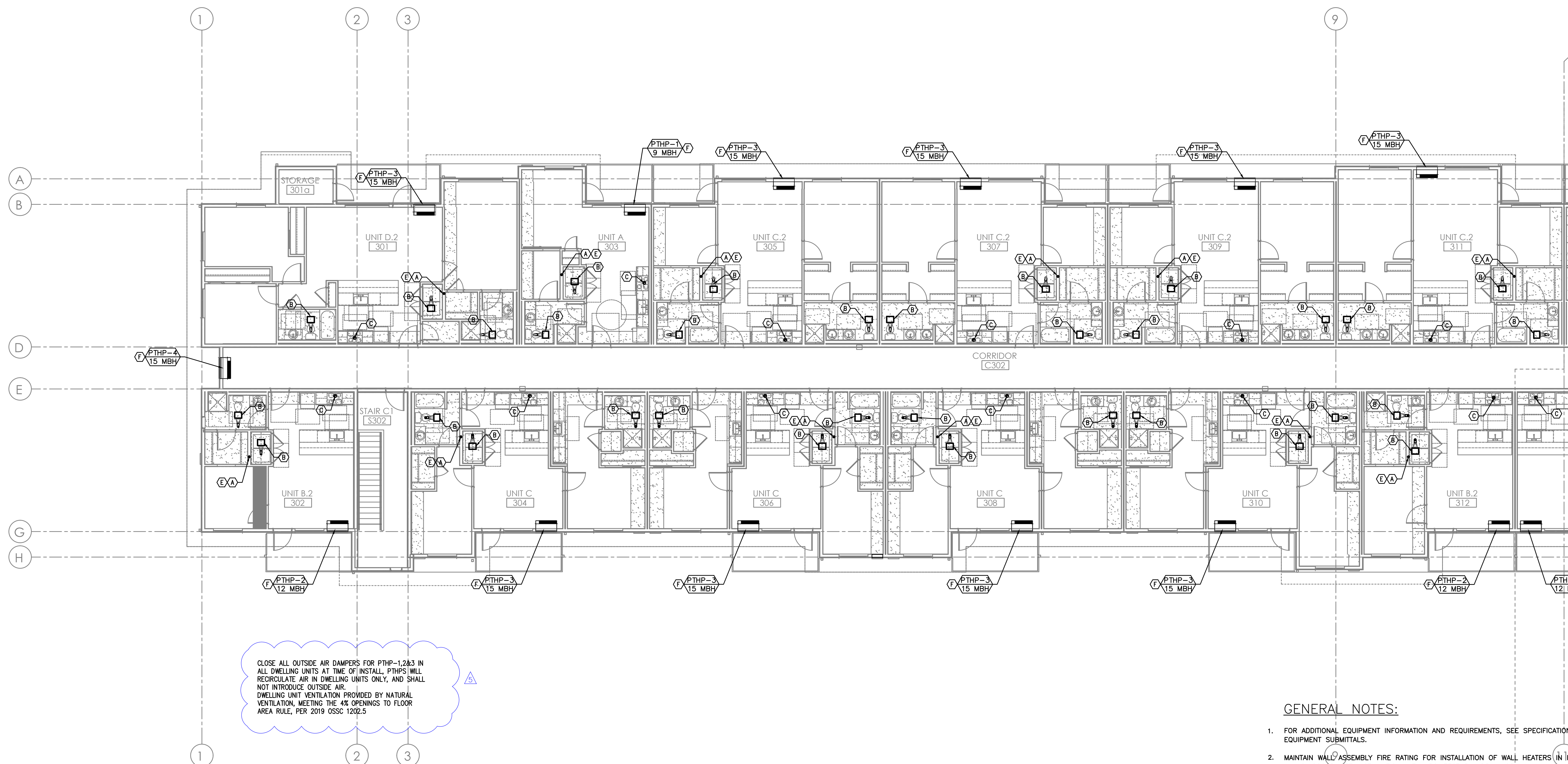
KEY NOTES:

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- (B) - PANASONIC WHISPERGREEN CEILING FAN WITH 4" DUCT TO ROOF OR EXTERIOR WALL TERMINATION VIA SOFFIT(S) PROVIDED. BACK DRAFT DAMPER INTEGRAL TO FAN, FAN TO OPERATE AT LOW SPEED CONTINUOUS (30CFM) AND INCREASE TO 80CFM WHEN BUILT-IN MOTION SENSOR IS ACTIVATED. INSULATED FINAL 5' OF DUCTWORK, AND ALL DUCTWORK IN ATTIC. NO DUCTWORK SHALL PENETRATE RATED ASSEMBLY. SEE M6.00c EF 1 EF 2
- (C) - 6" HOOD DUCT TO ROOF/EXTERIOR WALL TERMINATION VIA SOFFIT(S) PROVIDED. BACK DRAFT DAMPER INTEGRAL TO HOOD. INSULATED FINAL 5' OF DUCTWORK AND ALL DUCTWORK IN ATTIC. NO DUCTWORK SHALL PENETRATE RATED ASSEMBLY. HOOD FAN TO OPERATE INTERMITTENTLY.
- (D) - EXTERIOR EXHAUST PLENUM - SEE M6.01c MAINTAIN 36" CLEAR TO OPERABLE WINDOWS AND DOORS.
- (E) - LINT TRAPS ON ALL DRYERS, SEE M6.01c FOR TYP DETAIL. 4" DRYER EXHAUST DUCT WITH RECESSED DRYER BOX.
- (F) - AMANA PTHP (PACKAGED TERMINAL HEAT PUMP) WITH FACTORY WALL SLEEVE, CONDENSATE DRAIN KIT, AND 42X16 ALUMINUM ARCHITECTURAL GRILLE AT EXTERIOR. INSTALL GRAVITY CONDENSATE DRAIN KIT, PLUMBING CONTRACTOR TO MAKE CONNECTION AT DRAIN KIT AND CONTINUE DRAIN LINE TO AN APPROVED LOCATION. SEE M6.01c M6.00c
- (G) - VERTICAL FIRE PENETRATION DETAIL, SEE M6.01c M6.00c
- (H) - 1.5KW WALL HEATER QMARK AWH4404F OR EQUAL. EQUIPMENT BY ELECTRICAL CONTRACTOR. SHOWN FOR REFERENCE ONLY.
- (I) - REFRIGERANT LINES FROM SPLIT HEAT PUMP CONDENSERS ON ROOF TO FAN COILS IN BASEMENT AND LEVEL 1.

CLOSE ALL OUTSIDE AIR DAMPERS FOR PTHP-1,2&3 IN ALL DWELLING UNITS AT TIME OF INSTALL. PTHPS WILL RECIRCULATE AIR IN DWELLING UNITS ONLY, AND SHALL NOT INTRODUCE OUTSIDE AIR. DWELLING UNIT VENTILATION PROVIDED BY NATURAL VENTILATION, MEETING THE 4% OPENINGS TO FLOOR AREA RULE, PER 2019 OSSC 1202.5

1 LEVEL 3 MECHANICAL PLAN - SOUTH
 SCALE: 1/8" = 1' - 0"

Date:	9-29-21	10081	3-28-2022	PLAN REVIEW
Proj. No.:	10081	MOA	4-18-2022	PLAN REVIEW #2
Drawn By:	MRD	MRD	6-7-2022	PLAN REVIEW #2
Chkd By:	MRD	MRD	6-24-2022	PLAN REVIEW #5
Accd File:				



CLOSE ALL OUTSIDE AIR DAMPERS FOR PTHP-1,2&3 IN ALL DWELLING UNITS AT TIME OF INSTALL. PTHPS WILL RECIRCULATE AIR IN DWELLING UNITS ONLY, AND SHALL NOT INTRODUCE OUTSIDE AIR. DWELLING UNIT VENTILATION PROVIDED BY NATURAL VENTILATION MEETING THE 4% OPENINGS TO FLOOR AREA RULE, PER 2019 OSSC 1202.5

1 LEVEL 3 MECHANICAL PLAN - NORTH
 SCALE: 1/8" = 1' - 0"

GENERAL NOTES:

- FOR ADDITIONAL EQUIPMENT INFORMATION AND REQUIREMENTS, SEE SPECIFICATIONS & EQUIPMENT SUBMITTALS.
- MAINTAIN WALL ASSEMBLY FIRE RATING FOR INSTALLATION OF WALL HEATERS IN FIRE RATED WALLS. COORDINATE INSTALLATION WITH ARCHITECTURAL DRAWINGS.
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KEY NOTES:

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- (B) - PANASONIC WHISPERGREEN CEILING FAN WITH 4" DUCT TO ROOF OR EXTERIOR WALL TERMINATION VIA SOFFIT(S) PROVIDED. BACK DRAFT DAMPER INTEGRAL TO FAN. FAN TO OPERATE AT LOW SPEED CONTINUOUS (30CFM) AND INCREASE TO 80CFM WHEN BUILT-IN MOTION SENSOR IS ACTIVATED. INSULATED FINAL 5' OF DUCTWORK AND ALL DUCTWORK IN ATTIC. NO DUCTWORK SHALL PENETRATE RATED ASSEMBLY. SEE ³ M6.00c, ^{EF 1}, ^{EF 2}
- (C) - 6" HOOD DUCT TO ROOF/EXTERIOR WALL TERMINATION VIA SOFFIT(S) PROVIDED. BACK DRAFT DAMPER INTEGRAL TO HOOD. INSULATED FINAL 5' OF DUCTWORK AND ALL DUCTWORK IN ATTIC. NO DUCTWORK SHALL PENETRATE RATED ASSEMBLY. HOOD FAN TO OPERATE INTERMITTENTLY.
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- (G) - VERTICAL FIRE PENETRATION DETAIL, SEE ⁶ M6.01c, ¹ M6.00c
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COMMONS ON THE TUALATIN
 6845 SW NYBERG LANE
 BUILDING C
LEVEL 3 MECHANICAL PLAN - NORTH
 TUALATIN OREGON 97225

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MFA INC.

Consulting Engineers
 2007 S.E. Ash St.
 Portland, OR 97214
 PBR: (503) 234-0648
 FAX: (503) 234-0677
 WWW.MFA-ENG.COM

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Date:	9-29-21	Proj. No.:	10081	PLAN REVIEW #1:	3-28-2022
Drawn By:	MGA	PLAN REVIEW #2:	4-18-2022	PLAN REVIEW #3:	6-24-2022
CHKD By:	MRD	PLAN REVIEW #4:	6-7-2022	PLAN REVIEW #5:	
Accd File:	MRD				

COMMONS ON THE TUALATIN
6845 SW NYBERG LANE
BUILDING C

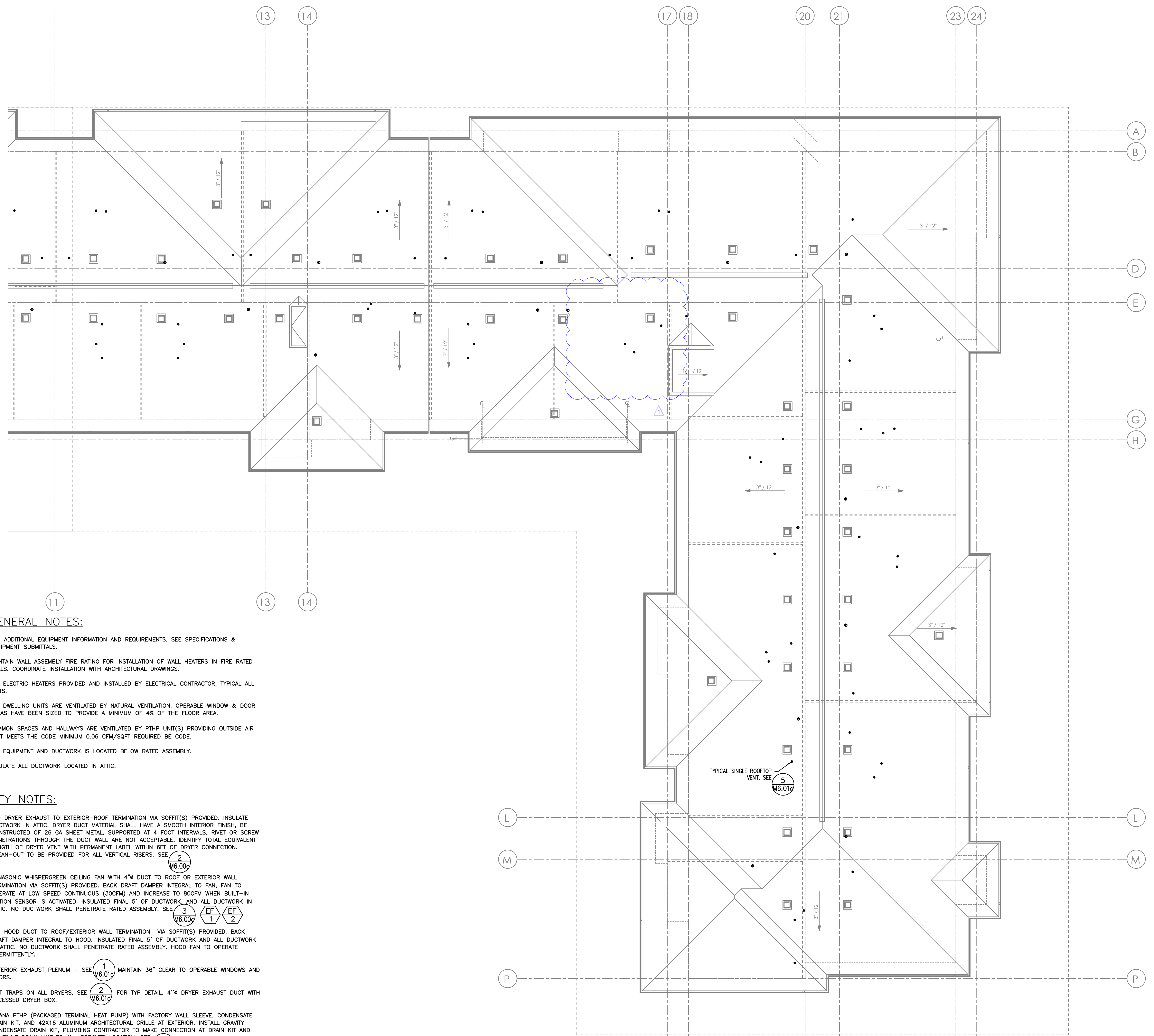
ROOF MECHANICAL PLAN - SOUTH
 TUALATIN OREGON 97225



Consulting Engineers
 2007 S.E. Ash St.
 Portland, OR 97214
 PBR: (503) 234-0548
 FAX: (503) 234-0677
 WWW.MFA-ENG.COM

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GENERAL NOTES:

- FOR ADDITIONAL EQUIPMENT INFORMATION AND REQUIREMENTS, SEE SPECIFICATIONS & EQUIPMENT SUBMITTALS.
- MAINTAIN WALL ASSEMBLY FIRE RATING FOR INSTALLATION OF WALL HEATERS IN FIRE RATED WALLS. COORDINATE INSTALLATION WITH ARCHITECTURAL DRAWINGS.
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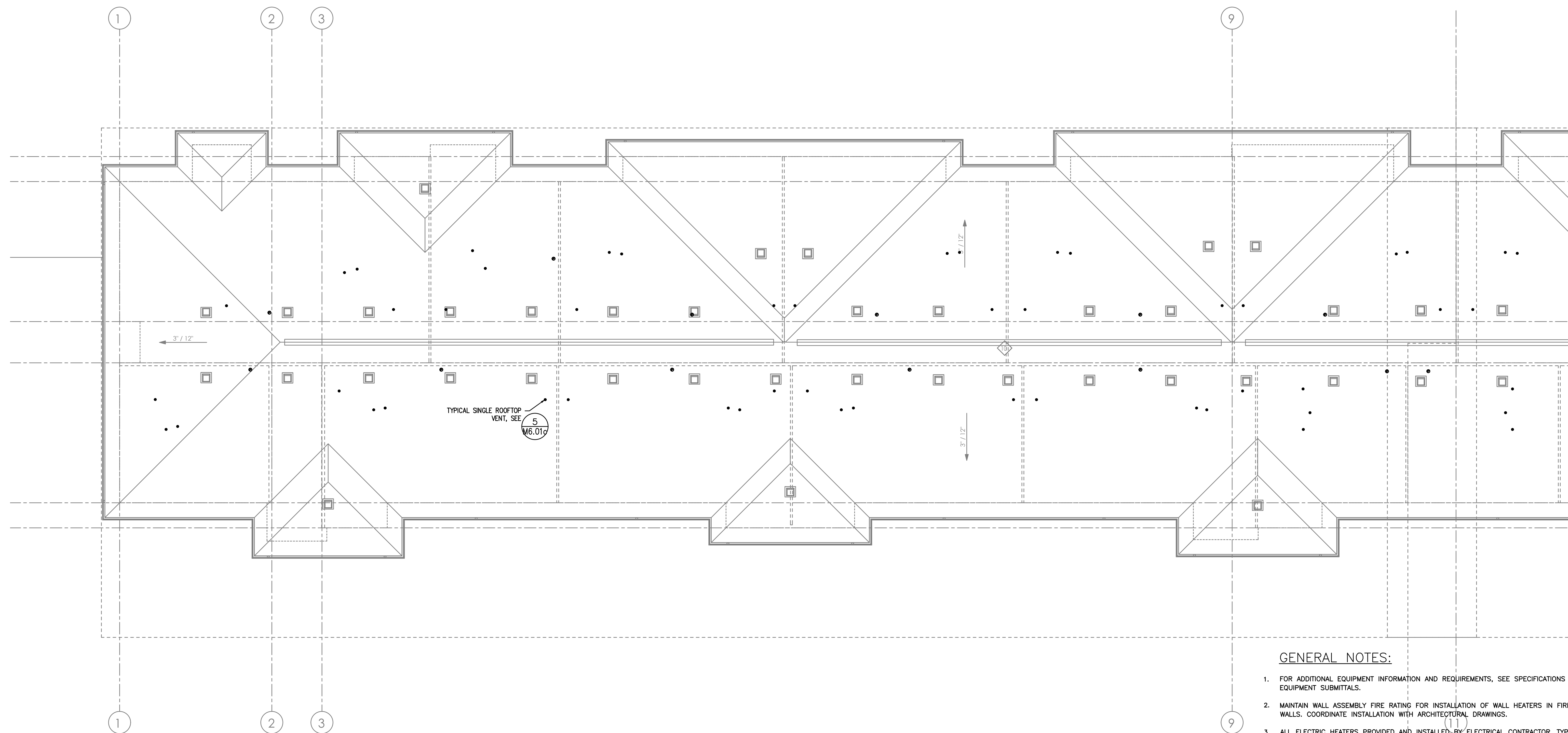
KEY NOTES:

- (A) — 4" DRYER EXHAUST TO EXTERIOR—ROOF TERMINATION VIA SOFFIT(S) PROVIDED. INSULATE DUCTWORK IN ATTIC. DRYER DUCT MATERIAL SHALL HAVE A SMOOTH INTERIOR FINISH, BE CONSTRUCTED OF 26 GA SHEET METAL, SUPPORTED AT 4 FOOT INTERVALS, RIVET OR SCREW PENETRATIONS THROUGH THE DUCT WALL ARE NOT ACCEPTABLE. IDENTIFY TOTAL EQUIVALENT LENGTH OF DRYER VENT WITH PERMANENT LABEL WITHIN 6FT OF DRYER CONNECTION. CLEAN-OUT TO BE PROVIDED FOR ALL VERTICAL RISERS. SEE
- (B) — PANASONIC WHISPERGREEN CEILING FAN WITH 4" DUCT TO ROOF OR EXTERIOR WALL TERMINATION VIA SOFFIT(S) PROVIDED. BACK DRAFT DAMPER INTEGRAL TO FAN, FAN TO OPERATE AT LOW SPEED CONTINUOUS (30CFM) AND INCREASE TO 80CFM WHEN BUILT-IN MOTION SENSOR IS ACTIVATED. INSULATE FINAL 5' OF DUCTWORK, AND ALL DUCTWORK IN ATTIC. NO DUCTWORK SHALL PENETRATE RATED ASSEMBLY. SEE
- (C) — 6" HOOD DUCT TO ROOF/EXTERIOR WALL TERMINATION VIA SOFFIT(S) PROVIDED. BACK DRAFT DAMPER INTEGRAL TO HOOD. INSULATE FINAL 5' OF DUCTWORK AND ALL DUCTWORK IN ATTIC. NO DUCTWORK SHALL PENETRATE RATED ASSEMBLY. HOOD FAN TO OPERATE INTERMITTENTLY. SEE
- (D) — EXTERIOR EXHAUST PLENUM — SEE MAINTAIN 36" CLEAR TO OPERABLE WINDOWS AND DOORS.
- (E) — LINT TRAPS ON ALL DRYERS, SEE FOR TYP DETAIL. 4" DRYER EXHAUST DUCT WITH RECESSED DRYER BOX.
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- (G) — VERTICAL FIRE PENETRATION DETAIL, SEE
- (H) — 1.5KW WALL HEATER QMARK AWH4404F OR EQUAL. EQUIPMENT BY ELECTRICAL CONTRACTOR. SHOWN FOR REFERENCE ONLY.
- (I) — REFRIGERANT LINES FROM SPLIT HEAT PUMP CONDENSERS ON ROOF TO FAN COILS IN BASEMENT AND LEVEL 1. SEE

1 ROOF MECHANICAL PLAN - SOUTH
 SCALE: 1/8" = 1' - 0"



Date:	9-29-21	10081	3-28-2022	PLAN REVIEW
Proj. No:	10081	MOA	4-18-2022	PLAN REVIEW #2
Drawn By:	MOA	MRD	6-7-2022	PLAN REVIEW #3
Chkd By:	MRD	MRD	6-24-2022	PLAN REVIEW #5
Acad File:				



1 ROOF MECHANICAL PLAN - NORTH
 M2.11c SCALE: 1/8" = 1' - 0"

GENERAL NOTES:

- FOR ADDITIONAL EQUIPMENT INFORMATION AND REQUIREMENTS, SEE SPECIFICATIONS & EQUIPMENT SUBMITTALS.
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- (B) - PANASONIC WHISPERGREEN CEILING FAN WITH 4" DUCT TO ROOF OR EXTERIOR WALL TERMINATION VIA SOFFIT(S) PROVIDED. BACK DRAFT DAMPER INTEGRAL TO FAN. FAN TO OPERATE AT LOW SPEED CONTINUOUS (30CFM) AND INCREASE TO 80CFM WHEN BUILT-IN MOTION SENSOR IS ACTIVATED. INSULATED FINAL 5' OF DUCTWORK AND ALL DUCTWORK IN ATTIC. NO DUCTWORK SHALL PENETRATE RATED ASSEMBLY. SEE 3 M6.00c, EF 1, EF 2
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COMMONS ON THE TUALATIN
 6845 SW NYBERG LANE
 BUILDING C
ROOF MECHANICAL PLAN - NORTH
 TUALATIN OREGON 97225

PERMIT SET
 11/22/21



Consulting Engineers
 2007 S.E. Ash St.
 Portland, OR 97214
 PH: (503) 234-0648
 FAX: (503) 234-0677
 WWW.MFA-ENG.COM

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M2.11c



Revision table with columns: DATE, DRAWN BY, CHECKED BY, PLAN REVIEW #1, PLAN REVIEW #2, PLAN REVIEW #3, PLAN REVIEW #4, PLAN REVIEW #5.

COMMONS ON THE TUALATIN
6845 SW NYBERG LANE
BUILDING C
MECHANICAL SCHEDULES
OREGON 97225
TUALATIN

PERMIT SET
11/22/21
JACOBS



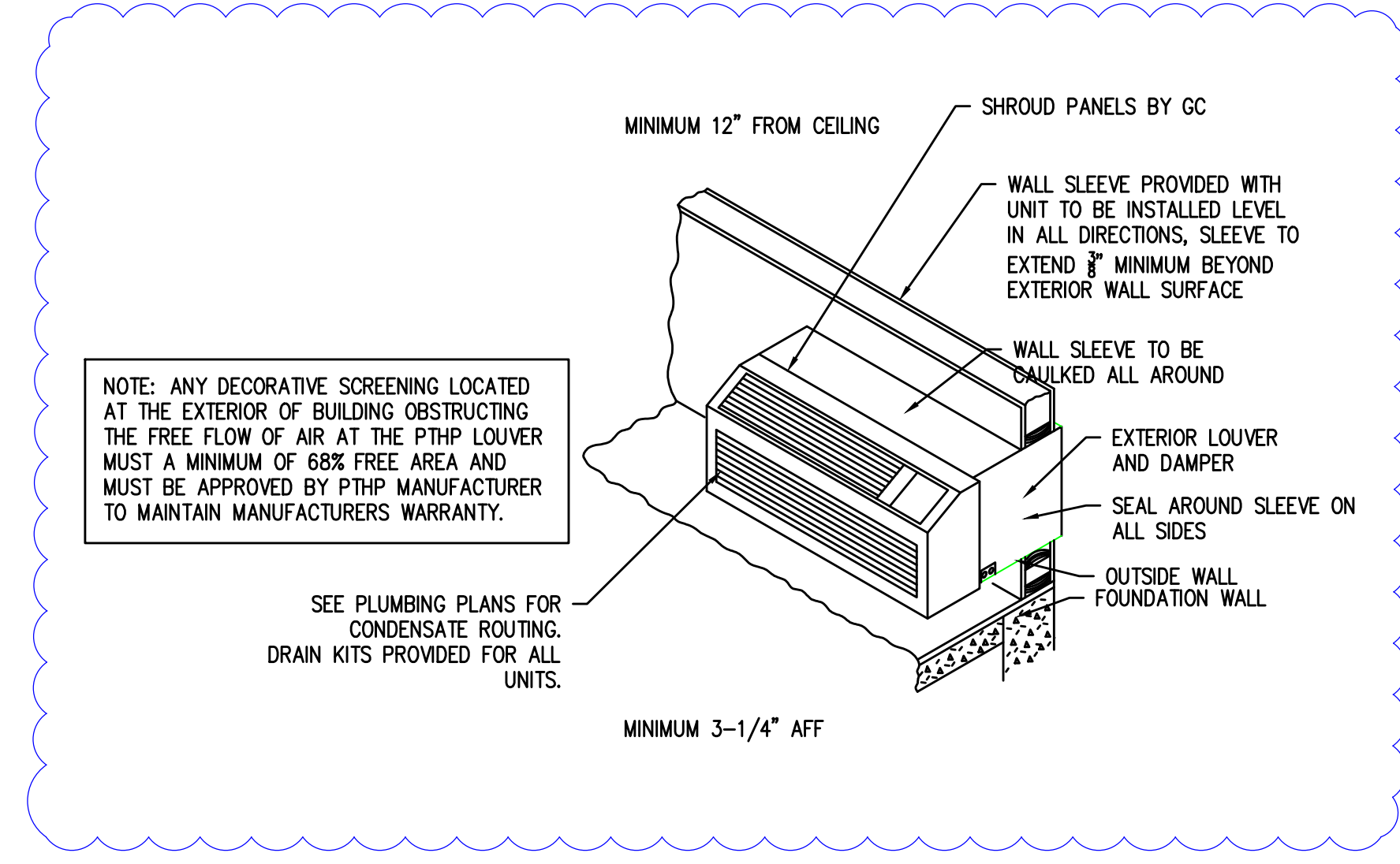
Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PH: (503) 234-0848
FAX: (503) 234-0877
WWW.MEAI-ENG.COM

MECHANICAL LEGEND

Legend defining symbols for air diffusers, grilles, dampers, pumps, fans, and various units. Includes abbreviations like AHU, B.D., BHP, BTU, CFM, etc.

PACKAGED TERMINAL HEAT PUMP

Table with columns for Mark Number, Type, and four PTHP models (1, 2, 3, 4). Rows include SYSTEM, NOMINAL COOLING CAPACITY, HEATING CAPACITY, etc.



1 PTHP AT EXTERIOR WALL
NOT TO SCALE

ELECTRIC DUCT HEATER

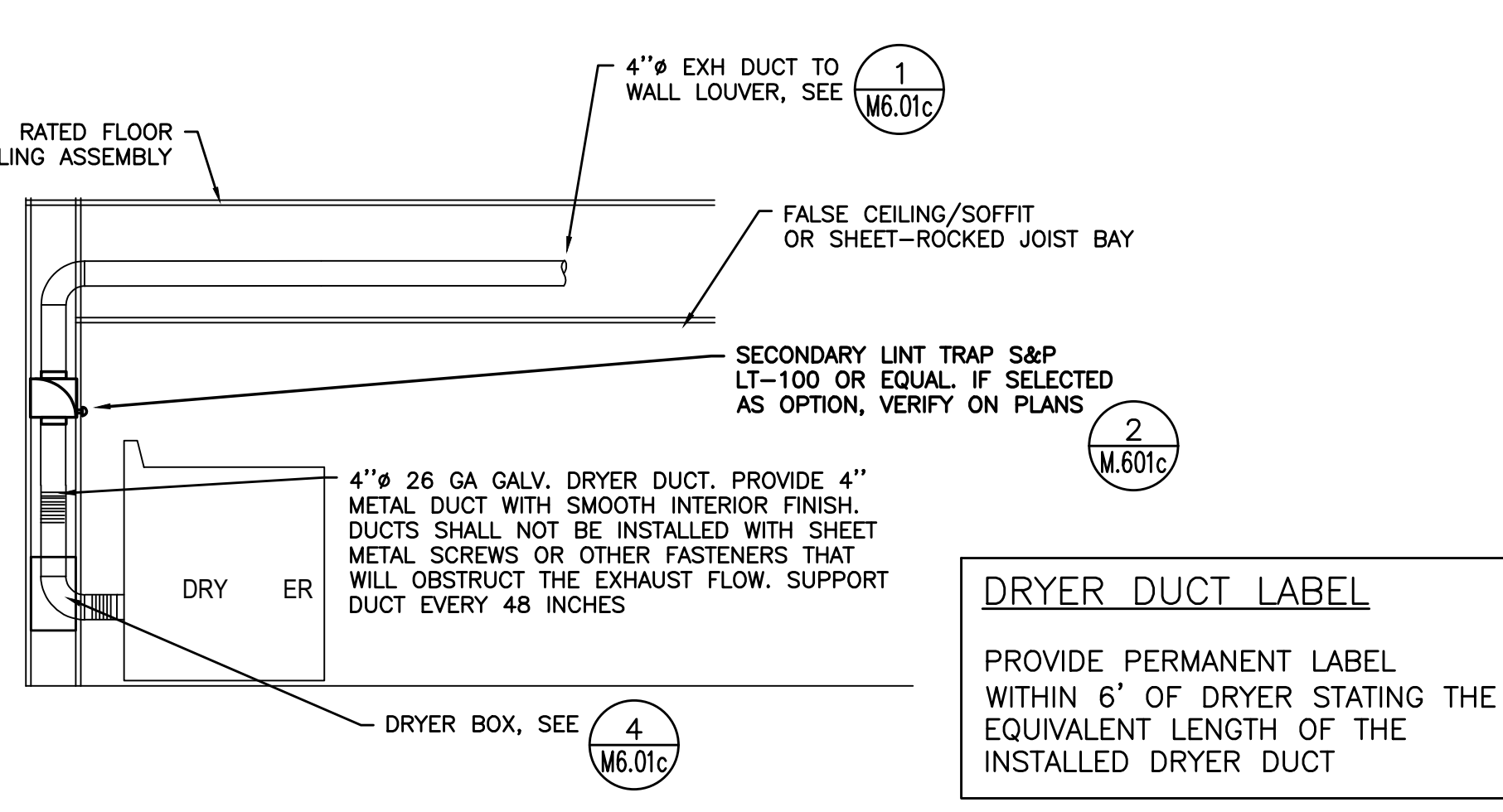
Table for Electric Duct Heater with columns for Mark Number, Size (KW), Duct Size, Steps, MCA, Power (Volts/Phase), and Basis of Design.

EXHAUST FANS

Table for Exhaust Fans with columns for Mark Number, Type, and five fan models (EF 1-5). Rows include SYSTEM, CFM, TOTAL SP., RPM, etc.

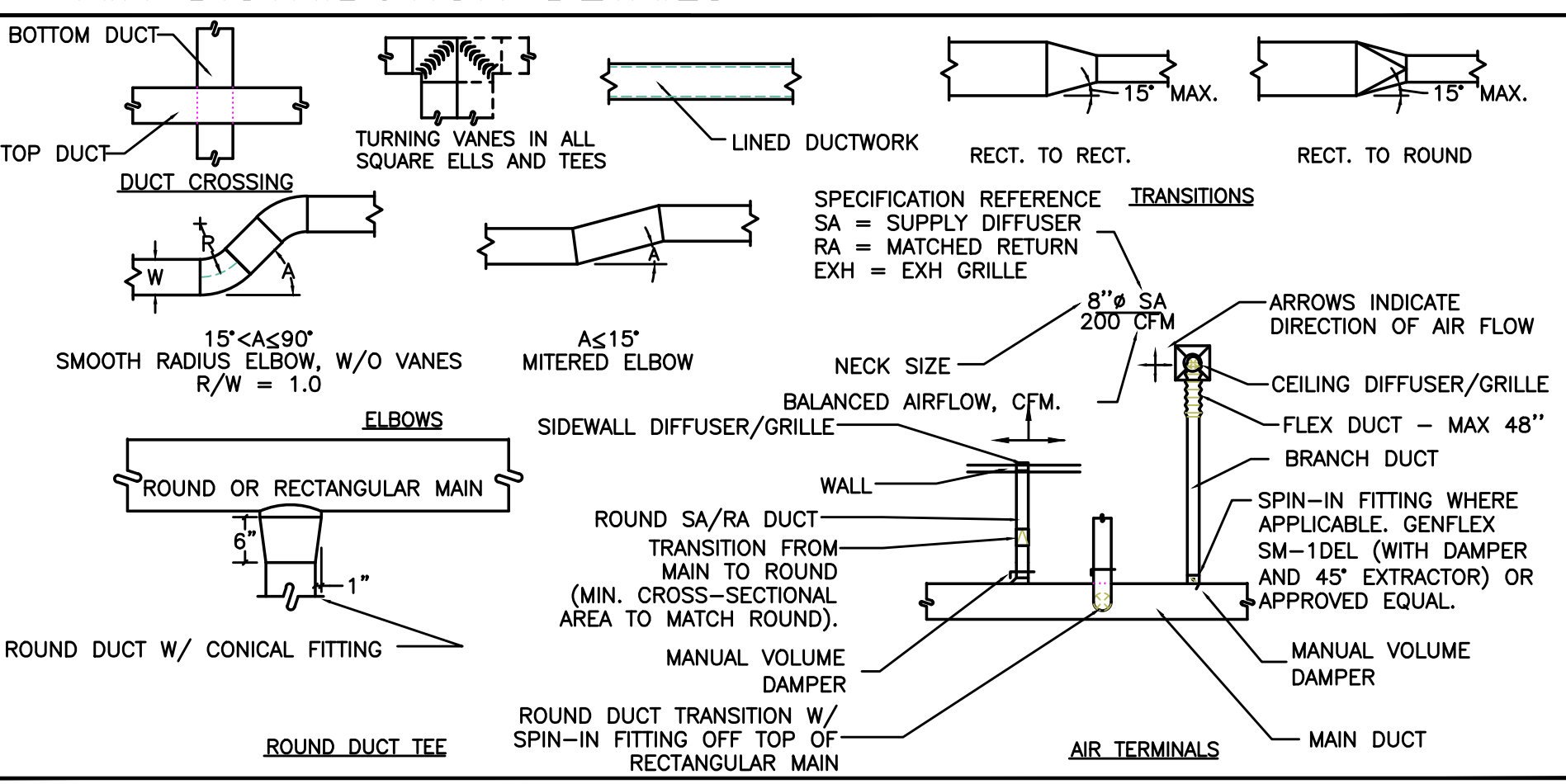
RESIDENTIAL VENTILATION SCHEDULE

Table for Residential Ventilation Schedule showing Air Requirements (cfm) for different dwelling unit areas and bedroom counts.



2 TYPICAL DRYER INSTALLATION
NOT TO SCALE

AIR DISTRIBUTION DETAILS



INDOOR UNITS - *

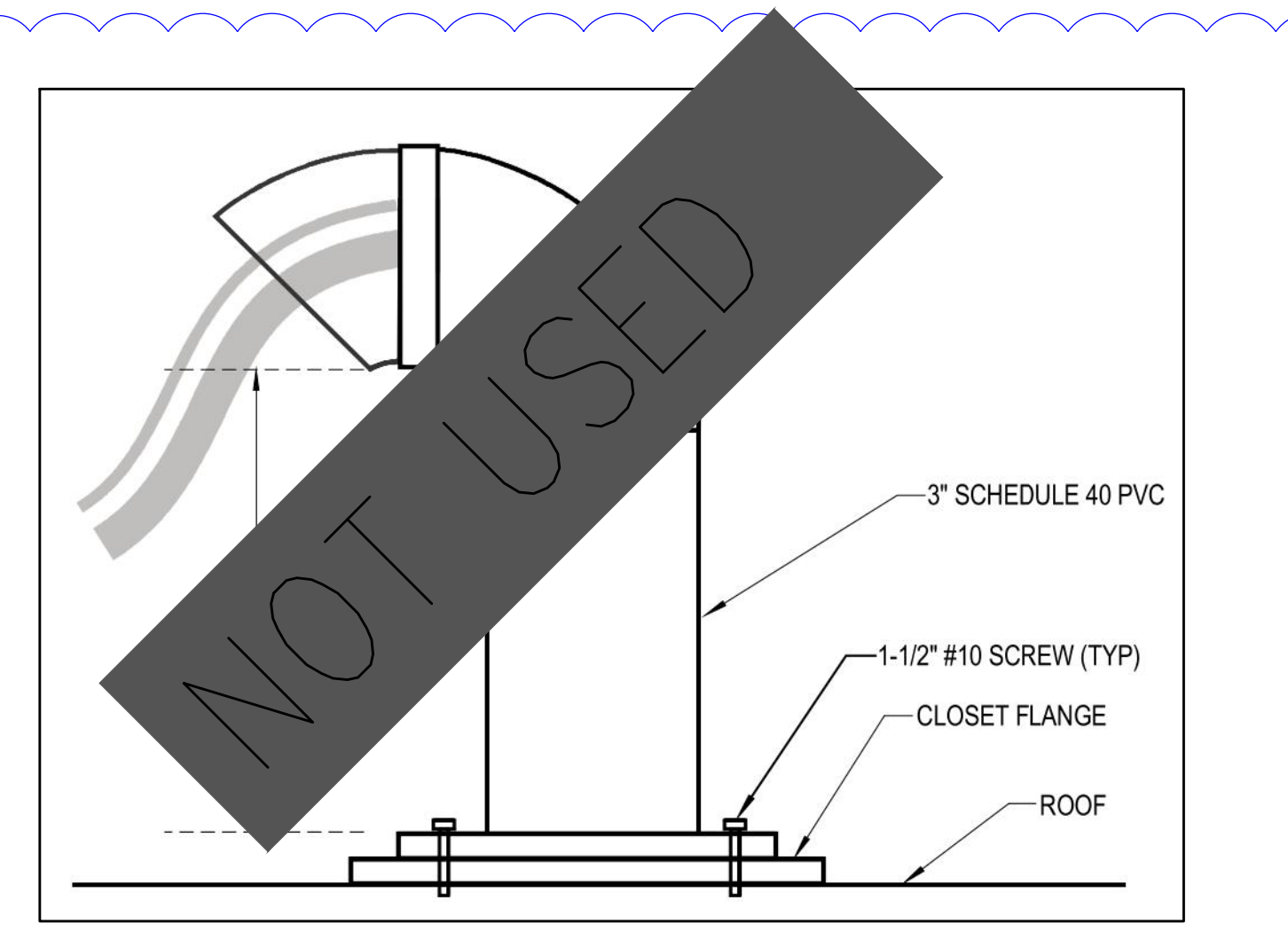
Table for Indoor Units (FC-1) showing SYSTEM, TYPE, EFFICIENCY, NOMINAL COOLING CAPACITY, etc.

OUTDOOR UNITS - SPLIT SYSTEM

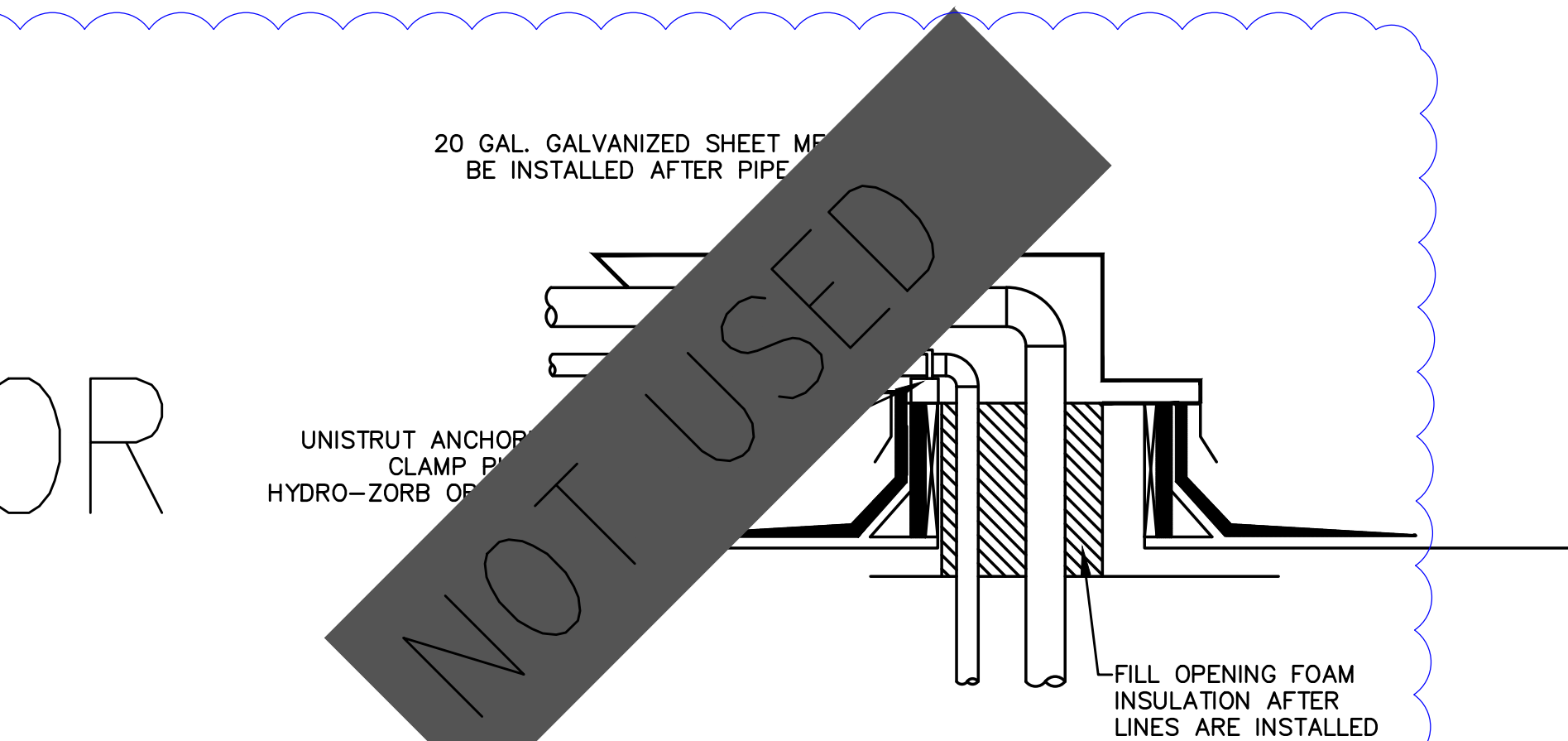
Table for Outdoor Units (HP-1) showing SYSTEM, TYPE, NOMINAL COOLING CAPACITY, etc.

GARAGE EXHAUST FANS

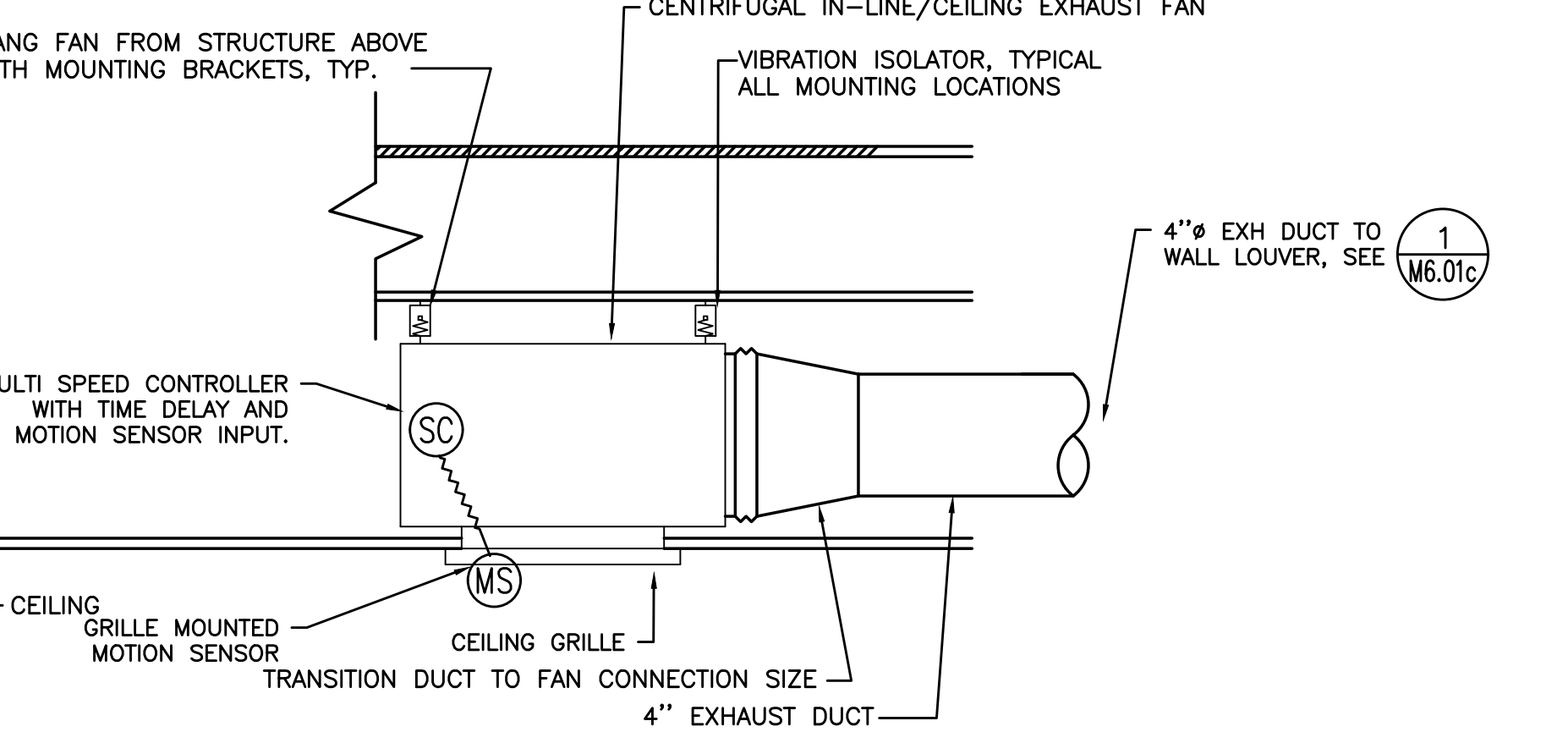
Table for Garage Exhaust Fans with columns for Mark Number, Type, and two fan models (GEF 1, 2). Rows include SYSTEM, CFM, TOTAL SP., etc.



4 REFRIGERANT ROOF PENETRATIONS
DETAIL



5 HOTPOD DETAIL
SCALE: DETAIL



3 RESTROOM EXHAUST FAN
SCALE: DETAIL



Date:	9-29-21	10081	MOA	MRD	MRD
Proj. No:	10081	MOA	MRD	MRD	MRD
Drawn By:	MOA	MRD	MRD	MRD	MRD
Checked By:	MOA	MRD	MRD	MRD	MRD
Design By:	MOA	MRD	MRD	MRD	MRD
Acc'd File:	MOA	MRD	MRD	MRD	MRD
PLAN REVIEW #1	3/28/2022	PLAN REVIEW #2	4/18/2022	PLAN REVIEW #3	6/24/2022
PLAN REVIEW #4		PLAN REVIEW #5			

COMMONS ON THE TUALATIN
6845 SW NYBERG LANE
BUILDING C
MECHANICAL DETAILS
 TUALATIN OREGON 97225

PERMIT SET
11/22/21



Consulting Engineers
 2007 S.E. Ash St.
 Portland, OR 97214
 PH: (503) 234-0548
 FAX: (503) 234-0677
 WWW.MFA-ENG.COM

SHEET

M6.02

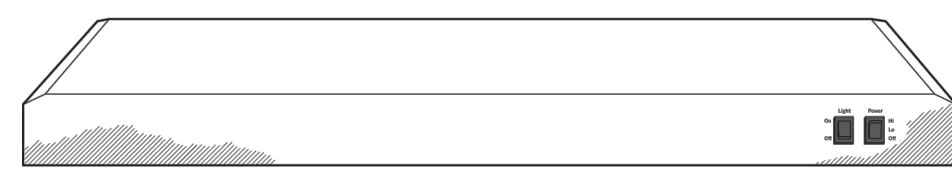
ADA HOOD

JVX3300EJ/SJ

GE Appliances 30" Under the Cabinet Hood

FEATURES AND BENEFITS

- Easy installation - 10 minutes or less by one person
- Two-speed, 200-CFM venting system - Removes smoke, grease, odors and moisture
- Front controls - Enjoy easy access and a subtle appearance
- Cooktop lighting - Illuminate cooking space and surrounding surface
- Convertible venting options - Select recirculating or external venting
- Vertical and rear exhaust - Exhausts from the top or rear of the hood
- Appearance (Partially enclosed bottom) - Enjoy easy access to hood interior
- Dishwasher safe filter - Filters grease and is dishwasher-safe
- Model JVX3300EJSS - Stainless steel
- Model JVX3300EJES - Slate



CFM/SONES RATINGS	
Exhaust High Speed (HS)	200/6.0
Exhaust Working Speed (WS)	100/1.5



Specification Revised 5/18

JVM3160RF/EF

GE® 1.6 cu. ft. Over-the-Range Microwave Oven

DIMENSIONS AND INSTALLATION INFORMATION (IN INCHES)

HOOD EXHAUST DUCT: Outside ventilation requires a HOOD EXHAUST DUCT. Read the following carefully.

EXHAUST CONNECTION: The hood exhaust has been designed to mate with a standard 3-1/4" x 10" rectangular duct. If a round duct is required, a rectangular-to-round transition adaptor must be used. Do not use less than a 6" diameter duct.

REAR EXHAUST: If a rear or horizontal exhaust is to be used, care should be taken to align exhaust with space between studs, or wall should be prepared at the time it is constructed by leaving enough space between the wall studs to accommodate exhaust.

MAXIMUM DUCT LENGTH: For satisfactory air movement, the total duct length of 3-1/4" x 10" rectangular or 6" diameter round duct should not exceed 140 equivalent feet.

ELBOWS, TRANSITIONS, WALL AND ROOF CAPS, etc., present additional resistance to airflow and are equivalent to a section of straight duct which is longer than their actual physical size. When calculating the total duct length, add the equivalent length of all transitions and adaptors plus the lengths of all straight duct sections. The chart below shows the approximate feet of equivalent length of some typical ducts.

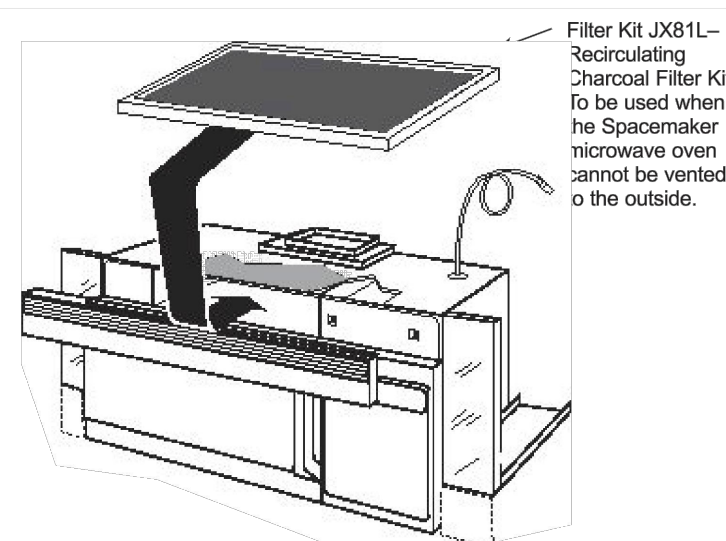
DUCT	EQUIVALENT FEET
A. Rectangular-to-round Transition Adaptor	5 ft.
B. Wall Cap	48 ft.
C. 90° Elbow	10 ft.
D. 45° Elbow	5 ft.
E. 90° Elbow	25 ft.
F. 45° Elbow	5 ft.
G. Roof Cap	24 ft.



For answers to your Microwave, GE Café® Series, GE Profile® Series or GE Appliances product questions, visit our website at geappliances.com or call GE Answer Center® Service, 800.626.2600.

Specification Revised 8/20

OPTIONAL ACCESSORIES (AVAILABLE AT ADDITIONAL COST)



Filter Kit JX87L-Recirculating Charcoal Filter Kit to be used when the SpaceMaker microwave oven cannot be vented to the outside.

ADA DRYER

GFD55ESSN/ESP

GE® 7.8 cu. ft. Capacity Front Load Electric Dryer

DRYER EXHAUSTING INFORMATION - METAL DUCT ONLY

For complete information, see installation instructions packed with your dryer.

DUCTING MATERIALS: For best performance, this dryer should be vented with 4" diameter all rigid metal exhaust duct. If rigid metal duct cannot be used, then UL-listed flexible metal (semi-rigid) ducting can be used (Kit WX08X10077). In special installations, it may be necessary to connect the dryer to the house vent using a flexible metal (foil-type) duct. A UL-listed flexible metal (foil-type) duct may be used ONLY in installations where rigid metal or flexible metal (semi-rigid) ducting cannot be used AND where a 4" diameter can be maintained throughout the entire length of the transition duct. Please see installation instruction packed with your dryer for complete instructions when using flexible metal (foil type) ducting.

EXHAUST LENGTH CALCULATION:

- Determine the number of 90° turns needed for your installation. If you exhaust to the side or bottom of dryer, add one turn.
- The maximum length of 4" rigid (aluminum or galvanized) duct which can be tolerated is shown in the table.

A turn of 45° or less may be ignored. Two 45° turns within the duct length should be treated as a 90° elbow.

A turn over 45° should be treated as a 90° elbow.

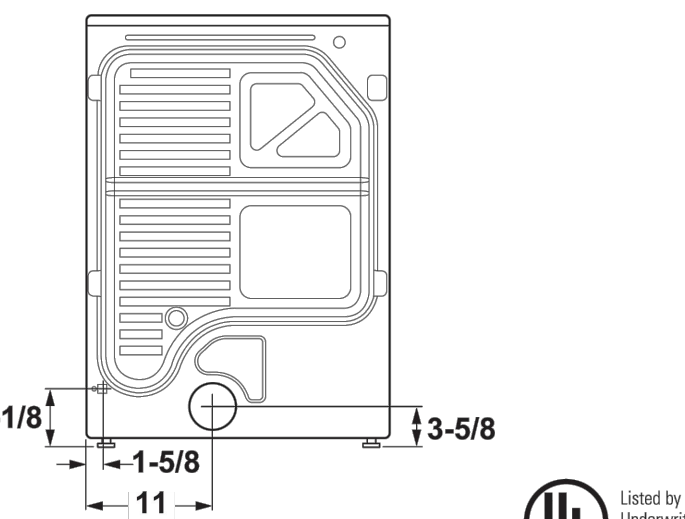
Dryers must be exhausted to the outside.

CAUTION: For personal safety do not terminate exhaust into a chimney, under any enclosed house floor (crawl space), or into an attic, since the accumulated lint could create a fire hazard or moisture could cause damage. Never terminate the exhaust into a common duct or plenum with a kitchen exhaust, since the combination of lint and grease could create a fire hazard.

Exhaust ducts should be terminated in a dampened wall cap to prevent back drafts, bird nesting, etc. The wall cap must also be located at least 12" above the ground or any other obstruction with the opening pointed down.

FOR MORE INFORMATION ON VENTING KITS AND ACCESSORIES, PLEASE CALL 1-800-GE-CARES.

Domestic dryer models	Number of 90° turns	Best performance Maximum length of 4" dia. rigid metal duct Exhaust hood type	
		A 4" opening	B 2-1/2" opening
0	0	90 ft.	60 ft.
1	1	60 ft.	45 ft.
2	2	45 ft.	35 ft.
3	3	35 ft.	25 ft.
4	4	25 ft.	15 ft.



For answers to your Microwave, GE Café® Series, GE Profile® Series or GE Appliances product questions, visit our website at geappliances.com or call GE Answer Center® Service, 800.626.2600.

Specification Revised 11/19

GTX22EASK

GE Appliances Series 6.2 Cu. Ft. Capacity Aluminized Alloy Drum Electric Dryer

FOR COMPLETE INFORMATION, SEE INSTALLATION INSTRUCTIONS PACKED WITH YOUR DRYER.

DUCTING MATERIALS:

For best performance, this dryer should be vented with 4" diameter all rigid metal exhaust duct. If rigid metal duct cannot be used, then UL-listed flexible metal (semi-rigid) ducting can be used (Kit WX08X10077). In special installations, it may be necessary to connect the dryer to the house vent using a flexible metal (foil-type) duct. A UL-listed flexible metal (foil-type) duct may be used ONLY in installations where rigid metal or flexible metal (semi-rigid) ducting cannot be used AND where a 4" diameter can be maintained throughout the entire length of the transition duct. Please see installation instruction packed with your dryer for complete instructions when using flexible metal (foil type) ducting.

EXHAUST LENGTH CALCULATION:

- Determine the number of 90° turns needed for your installation. If you exhaust to the side or bottom of dryer, add one turn.
- The maximum length of 4" rigid (aluminum or galvanized) duct which can be tolerated is shown in the table. A turn of 45° or less may be ignored. Two 45° turns within the duct length should be treated as a 90° elbow. A turn over 45° should be treated as a 90° elbow.

Dryers must be exhausted to the outside.

CAUTION: For personal safety do not terminate exhaust into a chimney, under any enclosed house floor (crawl space), or into an attic, since the accumulated lint could create a fire hazard or moisture could cause damage. Never terminate the exhaust into a common duct or plenum with a kitchen exhaust, since the combination of lint and grease could create a fire hazard.

Exhaust ducts should be terminated in a dampened wall cap to prevent back drafts, bird nesting, etc. The wall cap must also be located at least 12" above the ground or any other obstruction with the opening pointed down.

FOR MORE INFORMATION ON VENTING KITS AND ACCESSORIES, PLEASE CALL 1-800-GE-CARES.



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Specification Revised 7/16

DRYER EXHAUSTING INFORMATION - USE METAL DUCT ONLY VERTICAL AND HORIZONTAL DUCTING

Domestic dryer models	Number of 90° turns	BEST PERFORMANCE Maximum length of 4" dia rigid metal duct Exhaust hood type		
		A 4" opening	B 2-1/2" opening	C 2-1/2" opening
0	0	100 ft.	90 ft.	90 ft.
1	1	100 ft.	75 ft.	75 ft.
2	2	85 ft.	65 ft.	65 ft.
3	3	70 ft.	55 ft.	55 ft.
4	4	60 ft.	45 ft.	45 ft.
5	5	55 ft.	35 ft.	35 ft.

For every extra 90° elbow, reduce the allowable vent system length by 10 ft.
 Two 45° elbows will be treated like one 90° elbow.
 For the side exhaust installations, add one 90° elbow to the chart.
 When calculating the total vent system length, you must add all the straight portions and elbows of the system (including the transition duct).

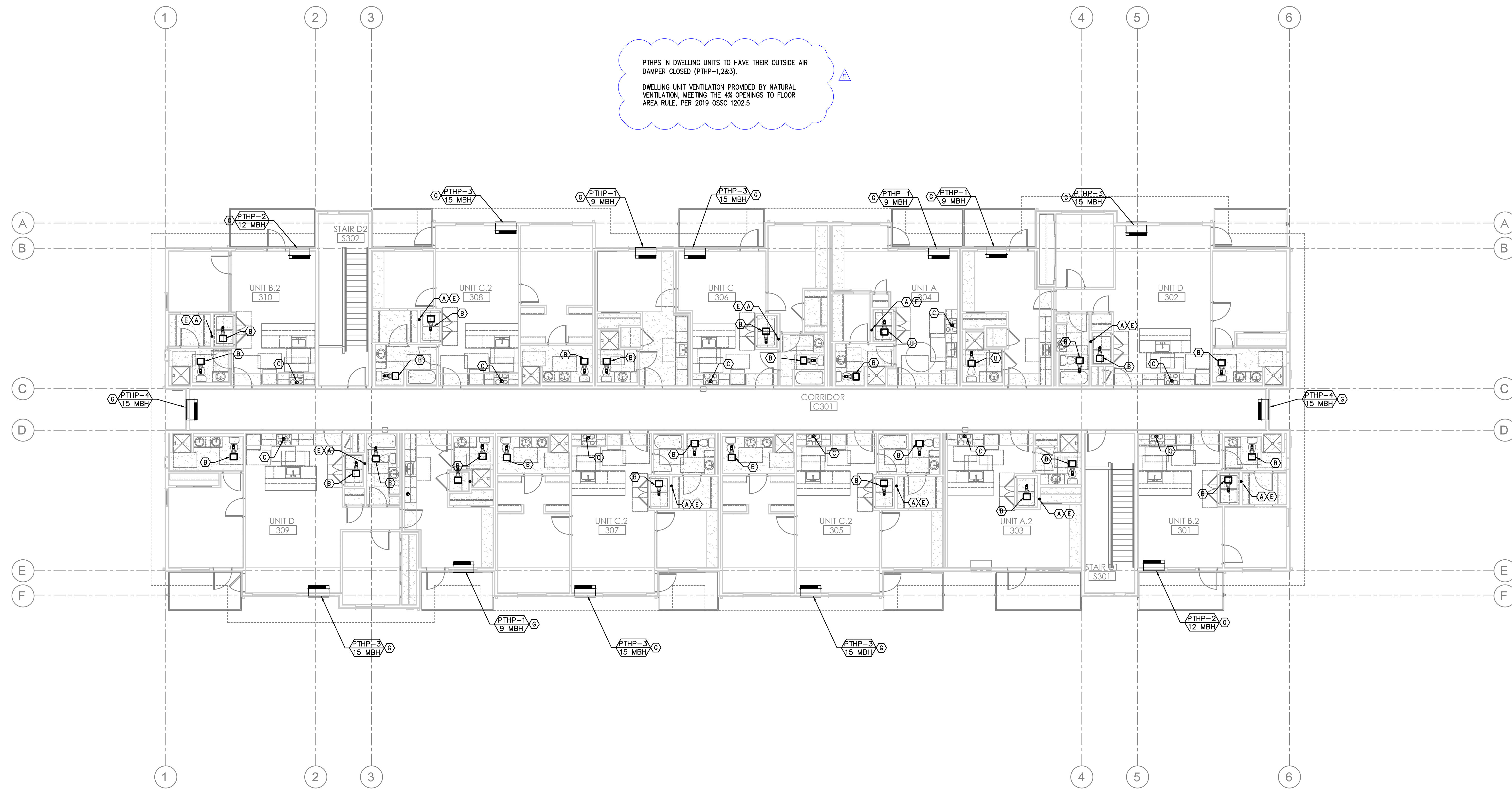


VENTILATION AIR SCHEDULE - CORRIDORS

ROOM NUMBER AND NAME	AREA (SQ. FT.)	OCCUPANT LOAD (#/1000 SQ. FT.)	NUMBER OF OCCUPANTS	OUTSIDE AIR REQUIREMENT (CFM/P)	OUTSIDE AIR REQUIREMENT (CFM/SQ. FT.)	OUTSIDE AIR REQUIRED (CFM)	ZONE OSA (CFM)	SUPPLY AIR (CFM)	PRIMARY OSA FRACTION	RETURN AIR (CFM)	EXHAUST AIR (CFM)	Zone Ventilation Efficiency	Corrected OSA CFM	AIR SYSTEMS	
		Az	Pz	Rp	Ra	Vbz	Ez	Voz	Vpz	Zp	Evz				
CORRIDORS	2995	0	0	0	0.06	180	0.8	225	1000	0.22	1000	0	0.91	246.79	PTH-4
STORAGE	300	0	0	0	0.12	36	0.8	45	1000	0.05	1000	0	1.09	49.44	SF-1
TOTAL	3295	0	0	0	0.18	216	0.8	270	2000	0.27	2000	0	0.91	296	
CORRECTED TOTAL OUTDOOR AIR FLOW RATE										296	CFM	Corrected OSA Fraction	Zs =	0.15	



Date:	9-29-21	PLAN REVIEW	
Proj. No:	10081	PLAN REVIEW #1	
Drawn By:	MOA	PLAN REVIEW #2	
Chkd By:	MRD	PLAN REVIEW #3	
Acad File:	MRD	PLAN REVIEW #4	
		PLAN REVIEW #5	



1 LEVEL 3 MECHANICAL PLAN
M2.03d SCALE: 1/8" = 1' - 0"

GENERAL NOTES:

- FOR ADDITIONAL EQUIPMENT INFORMATION AND REQUIREMENTS, SEE SPECIFICATIONS & EQUIPMENT SUBMITTALS.
- MAINTAIN WALL ASSEMBLY FIRE RATING FOR INSTALLATION OF WALL HEATERS IN FIRE RATED WALLS. COORDINATE INSTALLATION WITH ARCHITECTURAL DRAWINGS.
- ALL ELECTRIC HEATERS PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR, TYPICAL ALL UNITS.
- ALL DWELLING UNITS ARE VENTILATED BY NATURAL VENTILATION. OPERABLE WINDOW & DOOR AREAS HAVE BEEN SIZED TO PROVIDE A MINIMUM OF 4% OF THE FLOOR AREA.
- COMMON SPACES AND HALLWAYS ARE VENTILATED BY PTHP UNIT(S) PROVIDING OUTSIDE AIR THAT MEETS THE CODE MINIMUM 0.06 CFM/SQFT REQUIRED BY CODE.
- ALL EQUIPMENT AND DUCTWORK IS LOCATED BELOW RATED ASSEMBLY.

KEY NOTES:

- (A)** — 4" DRYER EXHAUST TO EXTERIOR—ROOF TERMINATION VIA SOFFIT(S) PROVIDED. DRYER DUCT MATERIAL SHALL HAVE A SMOOTH INTERIOR FINISH. BE CONSTRUCTED OF 26 GA SHEET METAL, SUPPORTED AT 4 FOOT INTERVALS, RIVET OR SCREW PENETRATIONS THROUGH THE DUCT WALL ARE NOT ACCEPTABLE. IDENTIFY TOTAL EQUIVALENT LENGTH OF DRYER VENT WITH PERMANENT LABEL WITHIN 6FT OF DRYER CONNECTION. CLEAN-OUT TO BE PROVIDED FOR ALL VERTICAL RISERS. SEE
- (B)** — PANASONIC WHISPERGREEN CEILING FAN WITH 4" DUCT TO ROOF OR EXTERIOR WALL. TERMINATION VIA SOFFIT(S) PROVIDED. BACK DRAFT DAMPER INTEGRAL TO FAN. FAN TO OPERATE AT LOW SPEED CONTINUOUS (30CFM) AND INCREASE TO 80CFM WHEN BUILT-IN MOTION SENSOR IS ACTIVATED. INSULATED FINAL 5' OF DUCTWORK. NO DUCTWORK SHALL PENETRATE RATED ASSEMBLY. SEE
- (C)** — 6" HOOD DUCT TO ROOF/EXTERIOR WALL TERMINATION VIA SOFFIT(S) PROVIDED. BACK DRAFT DAMPER INTEGRAL TO HOOD. INSULATED FINAL 5' OF DUCTWORK. NO DUCTWORK SHALL PENETRATE RATED ASSEMBLY. HOOD FAN TO OPERATE INTERMITTENTLY. SEE
- (D)** — EXTERIOR EXHAUST PLENUM — SEE MAINTAIN 36" CLEAR TO OPERABLE WINDOWS AND DOORS.
- (E)** — LINT TRAPS ON ALL DRYERS. SEE FOR TYP DETAIL. 4" DRYER EXHAUST DUCT WITH RECESSED DRYER BOX — LINT TRAPS ARE ACCEPTED ON THIS PROJECT.
- (F)** — XX KW WALL HEATER QMARK AWH4404F OR EQUAL. EQUIPMENT BY ELECTRICAL CONTRACTOR. SHOWN FOR REFERENCE ONLY.
- (G)** — AMANA PTHP (PACKAGED TERMINAL HEAT PUMP) WITH FACTORY WALL SLEEVE, CONDENSATE DRAIN KIT, AND 42X16 ALUMINUM ARCHITECTURAL GRILLE AT EXTERIOR. INSTALL GRAVITY CONDENSATE DRAIN KIT, PLUMBING CONTRACTOR TO MAKE CONNECTION AT DRAIN KIT AND CONTINUE DRAIN LINE TO AN APPROVED LOCATION. SEE
- (H)** — VERTICAL FIRE PENETRATION DETAIL. SEE

COMMONS ON THE TUALATIN
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LEVEL 3 MECHANICAL PLAN
TUALATIN OREGON 97225



Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PH: (503) 234-0548
FAX: (503) 234-0677
WWW.MFA-ENG.COM

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