

MECHANICAL LEGEND	
	SUPPLY AIR DIFFUSER
	RETURN AIR DIFFUSER
	EXHAUST AIR DIFFUSER
	DIRECTIONAL AIR FLOW
	MANUAL VOLUME DAMPER
	SUPPLY/OUTSIDE AIR DUCT UP & DOWN
	RETURN AIR DUCT UP & DOWN
	EXHAUST AIR DUCT UP & DOWN
	DEMOLISH
	EXISTING
	CONNECT TO EXISTING
	THERMOSTAT
	TEMPERATURE SENSOR
	NOTE
	EQUIPMENT DESIGNATOR
	GATE VALVE/SHUT-OFF VALVE SEE SPECS
	CHECK VALVE
	BALANCING VALVE
	FLOW CONTROL/LIMITING VALVE
	THERMOMETER
	DIRECTION OF FLOW
	PUMP
	STRAINER W/ DRAIN VALVE
	PRESSURE GAUGE
	PETE'S PLUG
	DOUBLE CHECK ASSEMBLY
	PRESSURE REDUCING VALVE
	UNION
	2-WAY CONTROL VALVE
	3-WAY CONTROL VALVE
	TRIPLE DUTY VALVE
	CAP
	MOTORIZED DAMPER
	BALL/SHUT-OFF VALVE(SEE SPECS)
	FIRE DAMPER
	FIRE / SMOKE DAMPER
	SMOKE DAMPER
	FAN MOTOR
	ABOVE FINISH FLOOR
	AIR HANDLING UNIT
	BOTTOM OF DUCT
	BRAKE HORSEPOWER
	BOTTOM OF GRILLE
	BRITISH THERMAL UNITS
	CUBIC FEET PER MINUTE
	CONNECTION
	CONTINUATION
	DOMESTIC COLD WATER
	DRY BULB
	DIAMETER
	DISTRIBUTION
	EXHAUST AIR
	ENTERING DRY BULB TEMPERATURE
	ENTERING WET BULB TEMPERATURE
	ENTERING WATER TEMPERATURE
	FINISH FLOOR
	FIXTURE
	FLAT ON BOTTOM
	FEET PER MINUTE
	FEET PER SECOND
	FEET / FOOT
	GAUGE
	GREASE EXHAUST AIR DUCT
	GALLONS PER MINUTE
	HEIGHT
	HORSEPOWER
	INSIDE DIAMETER
	INCHES
	LENGTH
	POUNDS
	LEAVING DRY BULB
	LEAVING WET BULB
	LEAVING WATER TEMPERATURE
	MAKE UP AIR
	MAXIMUM
	MOTORIZED DAMPER
	MINIMUM
	MANUAL VOLUME DAMPER
	NOISE CRITERIA
	NORMALLY CLOSED
	NOT IN MECHANICAL
	NUMBER
	NORMALLY OPEN
	OUTSIDE AIR
	PERSON
	POUNDS PER SQUARE INCH
	PRESSURE / TEMPERATURE
	RETURN AIR
	RECTANGULAR REQUIRED
	SUPPLY AIR
	STATIC PRESSURE
	SQUARE
	TEMPERATURE
	TYPICAL
	VARIABLE AIR VOLUME
	WIDTH
	WET BULB
	WATER PRESSURE DROP
	DIAMETER
	(E) EXISTING
	(D) DEMOLISH
	NEW WORK
	(G) NATURAL GAS
	(CD) CONDENSATE DRAIN
	(RF) TWO OR THREE REFRIGERANT LINES
	(HWS) HEATING WATER SUPPLY
	(HWR) HEATING WATER RETURN
	(CHWS) CHILLED WATER SUPPLY
	(CHWR) CHILLED WATER RETURN
	EQUIPMENT MAINTENANCE CLEARANCE AND ACCESS

3.2 DUCTWORK INSULATION

A. Ductwork: Insulate the following:

- All supply and return ductwork in systems routed in unconditioned spaces or exposed to the outside conditions.
- All outside air intake ducts.
- All ductwork required to be insulated by code.
- The last 5' of duct work connected to a lower or exhaust termination.

B. Insulation Thickness: Select board and blanket insulation of thickness required to provide the following installed R-value.

- All heating or cooling system supply and return ducts located on the exterior of the insulated building envelope, including ventilated attics, and all outside air intake ducts, R-8.
- All heating and cooling system supply and return ducts located in unconditioned spaces within the building insulation envelope, R-5.
- All heating and cooling system supply ducts located in conditioned spaces and where exposed in unfinished spaces or concealed from view in finished spaces, R-3.5. Exposed ductwork in finished spaces shall not be externally insulated.
- Ducts located within or below concrete slabs on grade, R-4.

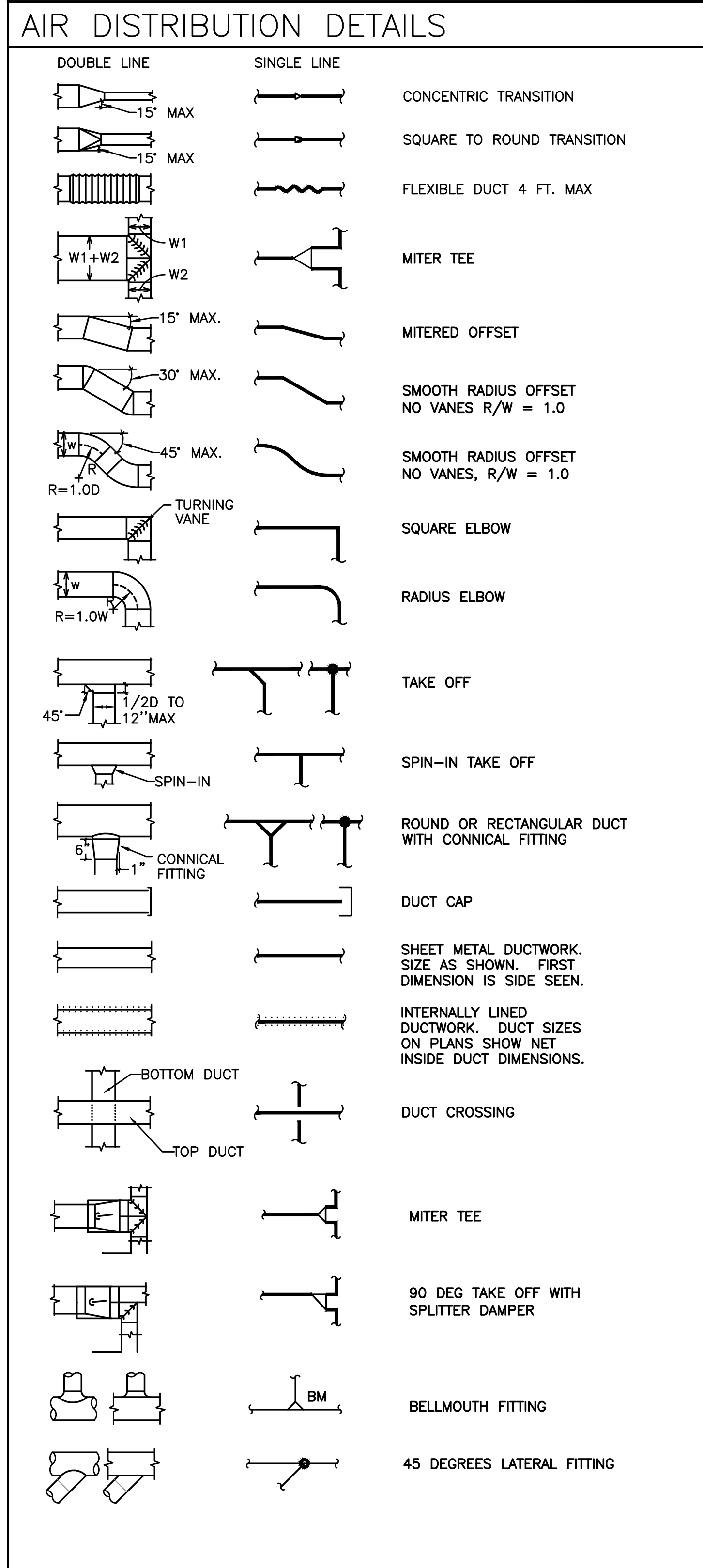
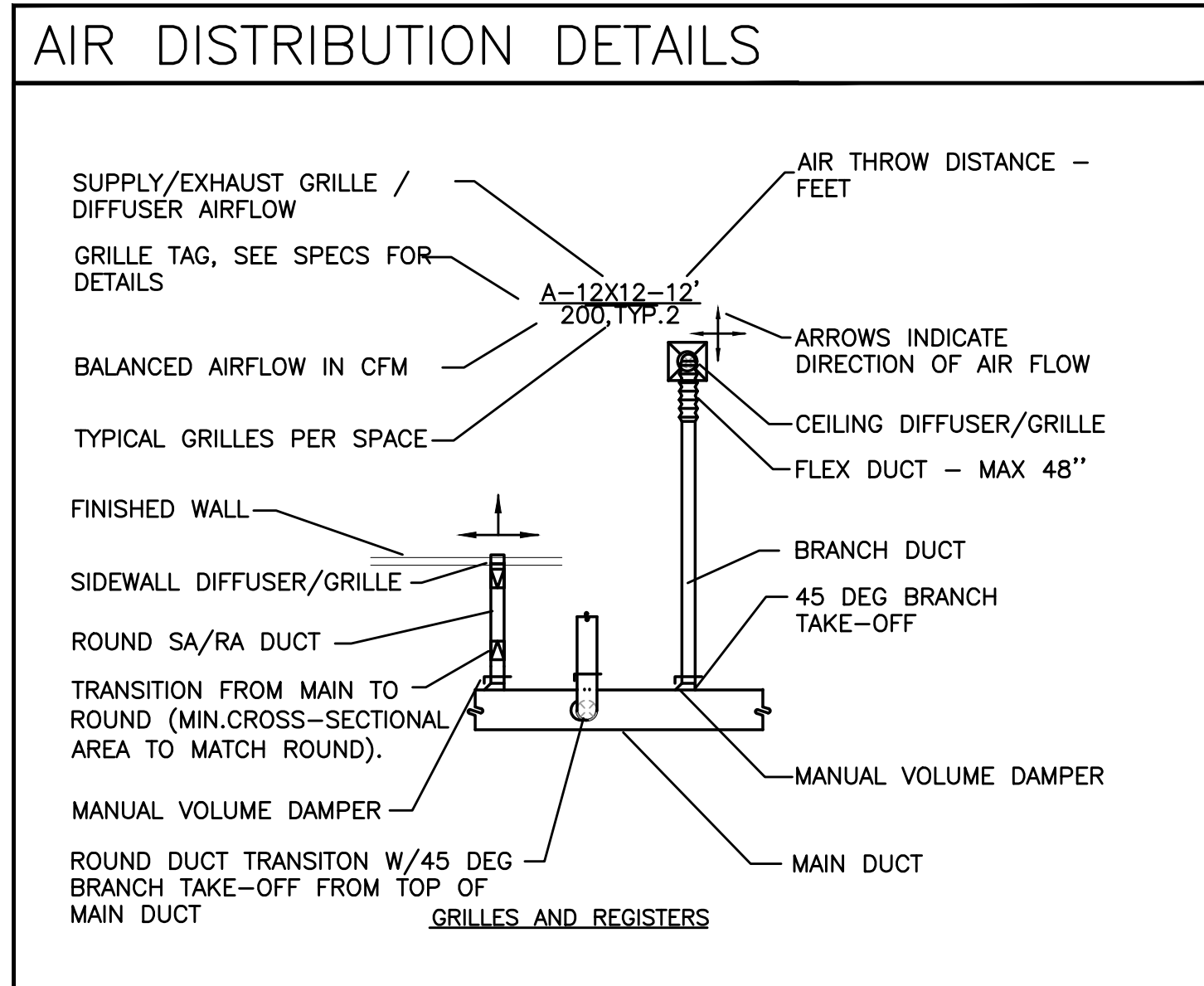
C. Fittings: Install with wire, straps, and duct adhesive as required. To prevent sagging on all rectangular or square ducts over 24" wide, install Grommets or equal welding pins on the bottom. Maximum spacing 18" on center in both directions.

D. Installation: Applied with butt joints, all seams sealed with vapor seal mastic or taped with 2" wide vapor-proof, pressure-sensitive tape. Seal all penetrations with vapor barrier adhesive.

E. Internally Lined Ductwork: Where internally lined ductwork is indicated on the Drawings and/or specified, no exterior insulation is required. Select duct lining to provide the required R-value. Carefully lap the ends of the exterior insulation a minimum of 6" past the interior insulation unless otherwise shown. Seal the end of vapor barrier jacket to the duct with mastic where the vapor barrier is required.

E.1. Line Supply and Return ducts for 10' on intake and discharge of fan.

E.2. Line Supply ducts routed in vertical shafts directly below RTUs

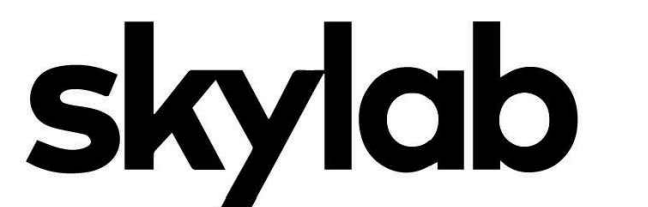


MECHANICAL GENERAL NOTES

- THE DRAWINGS ARE DIAGRAMMATIC. PROVIDE ALL MATERIAL (NEW AND UNDAMAGED) AND LABOR FOR A COMPLETE AND OPERABLE SYSTEM. VERIFY ALL BUILDING MEASUREMENTS DIMENSIONS AND EQUIPMENT LOCATIONS BEFORE PROCEEDING WITH ANY OF THE WORK.
- VERIFY ALL EXISTING CONDITIONS RELATIVE TO THE SCOPE OF WORK. REPORT DISCREPANCIES BACK TO THE ENGINEER.
- VERIFY INDICATED (E) DUCTWORK/PIPE SIZES PRIOR TO RECONNECTING NEW EQUIPMENT. EQUIPMENT SHALL NOT BE CONNECTED TO EXISTING DUCT/PIPE OF SMALLER DIAMETER THAN NEW DUCT/PIPE. REPORT DISCREPANCIES BACK TO ENGINEER.
- DO NOT FABRICATE EQUIPMENT SUPPORTS/BASES W/O CONFIRMING SPACE EXISTS AND THE BUILDING ATTACHMENT POINTS.
- REFER TO THE MECHANICAL SPECIFICATIONS FOR MATERIALS, EQUIPMENT, AND ADDITIONAL CONSTRUCTION INSTRUCTIONS NOT COVERED BY THESE PLANS.
- ALL INSTALLATIONS SHALL COMPLY WITH APPLICABLE FEDERAL AND STATE CODES INCLUDING, 2019 OREGON STRUCTURAL SPECIALTY CODE (OSSC) INCLUDING APPENDIX N FOR OREGON FIRE CODE REGULATIONS, 2021 OREGON PLUMBING SPECIALTY CODE (OPSC), 2019 OREGON MECHANICAL SPECIALTY CODE (OMSC), 2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE (OEESC)-BASED ON ASHRAE 90.1-2019, AND NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), WHERE TWO CODES DIFFER THE MORE STRICT OF THE TWO SHALL BE FOLLOWED.
- OBTAIN ALL NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE GOVERNING AUTHORITIES HAVING JURISDICTION. SUBMIT ALL CERTIFICATES PRIOR TO ACCEPTANCE.
- COORDINATE ALL MECHANICAL AND CONTROL WORK WITH GENERAL CONTRACTOR, CONTROL CONTRACTOR, ELECTRICAL AND ARCHITECTURAL.
- COORDINATE OTHER TRADES FOR PATCH/REPAIR OF WALLS WHERE EXISTING SENSORS ARE REMOVED OR MODIFIED.
- PATCH & REPAIR WALLS / FLOORS / CEILING WHERE OLD DUCTWORK/PIPES HAVE BEEN REMOVED TO MATCH EXISTING FINISHES.
- COORDINATE WITH OTHER CRAFTS AS REQUIRED TO COMPLETE WORK IN ACCORDANCE WITH CONSTRUCTION SCHEDULE.
- PROVIDE OWNER INSTRUCTION BY QUALIFIED PERSONNEL ON EQUIPMENT AND SYSTEMS AT OWNER'S REQUEST.
- ALL DUCTWORK SHALL BE GALVANIZED STEEL, UNLESS OTHERWISE INDICATED, CONFORMING TO LATEST SMACNA, ASHRAE, OMSC, NFPA, AND UL STANDARDS.
- MANUFACTURERS AND MODEL NUMBERS LISTED IN THE EQUIPMENT SCHEDULES ARE THE BASIS OF DESIGN.
- CUT WALLS FOR PROPER EQUIPMENT, DUCT OR PIPE INSTALLATION. FILL HOLES WHICH ARE CUT OVERSIZED FOR A TIGHT FIT AROUND OBJECTS PASSING THROUGH.
- PROVIDE UL LISTED FIRESTOP SYSTEM TO MAINTAIN THE CODE REQUIRED F AND T RATING OF THE CONSTRUCTION ASSEMBLY AT A DUCT/PIPE PENETRATION THROUGH A RATED BUILDING CONSTRUCTION.
- INSTALL LABELS ON ALL MECHANICAL EQUIPMENT. SEE SPECIFICATIONS FOR CRITERIA.
- CONTROLS AND WIRING SHALL MEET ALL ELECTRICAL REQUIREMENTS OF APPLICABLE ELECTRICAL SPECIFICATIONS AND REQUIREMENTS OF OWNER, BUILDING OFFICIALS AND EQUIPMENT SUPPLIERS OF EQUIPMENT INSTALLED ON PROJECT.
- ELECTRIC MOTORS SHALL HAVE BUILT-IN THERMAL OVERLOAD PROTECTION OR BE PROTECTED EXTERNALLY WITH SEPARATE THERMAL OVERLOAD DEVICES, WITH LOW-VOLTAGE RELEASE OR LOCK OUT AS REQUIRED.
- ALL NEW EQUIPMENT, PIPING, CONDUIT, AND DUCTWORK SHALL BE INSTALLED PER CURRENT SEISMIC CODE REQUIREMENTS.
- PROVIDE LOW LEAK AUTOMATIC DAMPERS ON OUTSIDE AIR, EXHAUST AIR AND RELIEF AIR CONTROL DAMPERS WHERE THESE ARE INDICATED.

MECHANICAL SHEET INDEX:

M0.01	MECHANICAL LEGEND AND SCHEDULES
M1.01	LEVEL 1 MECHANICAL PLAN
M1.02	LEVEL 2 MECHANICAL PLAN
M1.03	LEVEL 3 MECHANICAL PLAN
M1.04	LEVEL 4 MECHANICAL PLAN
M1.05	ROOF MECHANICAL PLAN
M6.00	MECHANICAL DETAILS



ARCHITECTURE INTERIOR DESIGN 413 SW 13TH AVE, STE 200 PORTLAND, OR 97205

SKYLABARCHITECTURE.COM OFFICE 503 525 9315

© 2020 Skylab Architecture. This document is an instrument of service and the property of the Architect and may not be duplicated, displayed, or reproduced without the written consent of Skylab Architecture.

20 Quimby RESIDENTIAL

ADDRESS 1520 NW 20th Avenue Portland, OR 97209

PROJECT # 20036

DATE August 12, 2022

ISSUANCE PERMIT SET

REVISIONS

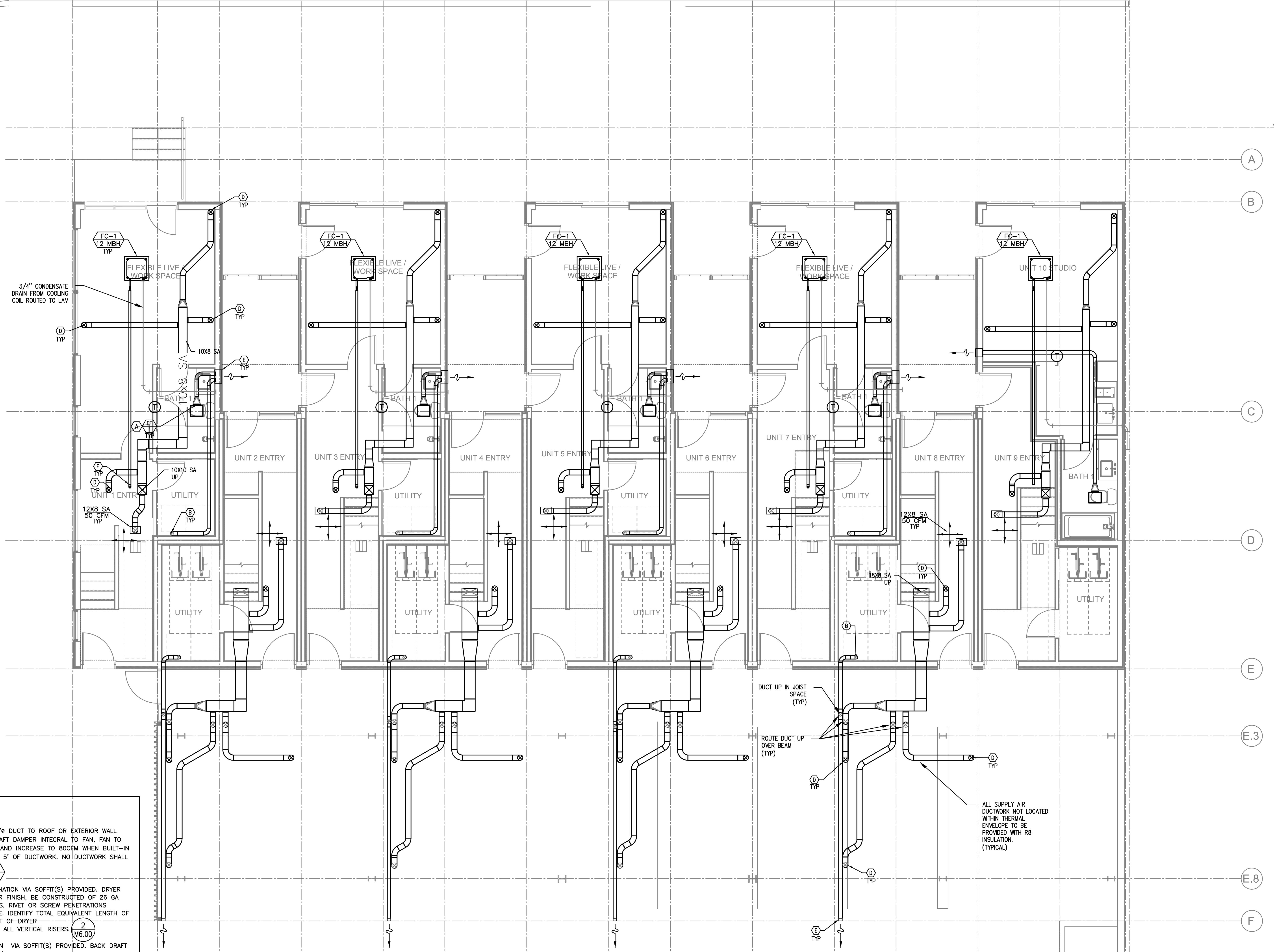


MEFA INC. Consulting Engineers 2007 S.E. Ash St. Portland, OR 97214 PHN: (503) 234-0548 FAX: (503) 234-0677 WWW.MEFA-ENG.COM CONTACT: MARK CENTER

SHEET MECHANICAL LEGEND & SCHEDULES

M0.01

S.PL 6 5.7 5.3 5 4.7 4.3 4 3.7 3.3 3 2.7 2.3 2 1.3 1 N.PL



KEY NOTES:

- (A) — 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 (1) (M6.00) (EF) (1)
- (B) — 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. (2) (M6.00)
- (C) — 7" HOOD DUCT TO 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 PER 2019 OMSC 505.3 HOOD DUCTS SHALL HAVE SMOOTH INNER WALLS AND SHALL BE AIR TIGHT AND BE EQUIPPED WITH A BACKDRAFT DAMPER.
- (D) — 8" SA TO FLOOR REGISTER ABOVE.
- (E) — EXTERIOR EXHAUST PLENUM — SEE (4) (M6.00) MAINTAIN 36" CLEAR TO OPERABLE WINDOWS AND DOORS.
- (F) — REFRIGERANT LINE SETS FROM CONDENSING UNITS ON ROOF, TO FAN COILS ON LEVEL 1. (5) (M6.00)

1 LEVEL 1 MECHANICAL PLAN
M1.01 SCALE: 1/4" = 1'-0"

skylab

ARCHITECTURE INTERIOR DESIGN 413 SW 13TH AVE, STE 200 PORTLAND, OR 97205

SKYLABARCHITECTURE.COM OFFICE 503 525 9315

© 2020 Skylab Architecture. This document is an instrument of service and the property of the Architect and may not be duplicated, displayed, or reproduced without the written consent of Skylab Architecture.

20 Quimby
RESIDENTIAL

ADDRESS
1520 NW 20th Avenue
Portland, OR 97209

PROJECT #
20036

DATE
August 12, 2022

ISSUANCE
PERMIT SET

REVISIONS

8-12-22

DATE

ISSUANCE

PERMIT SET

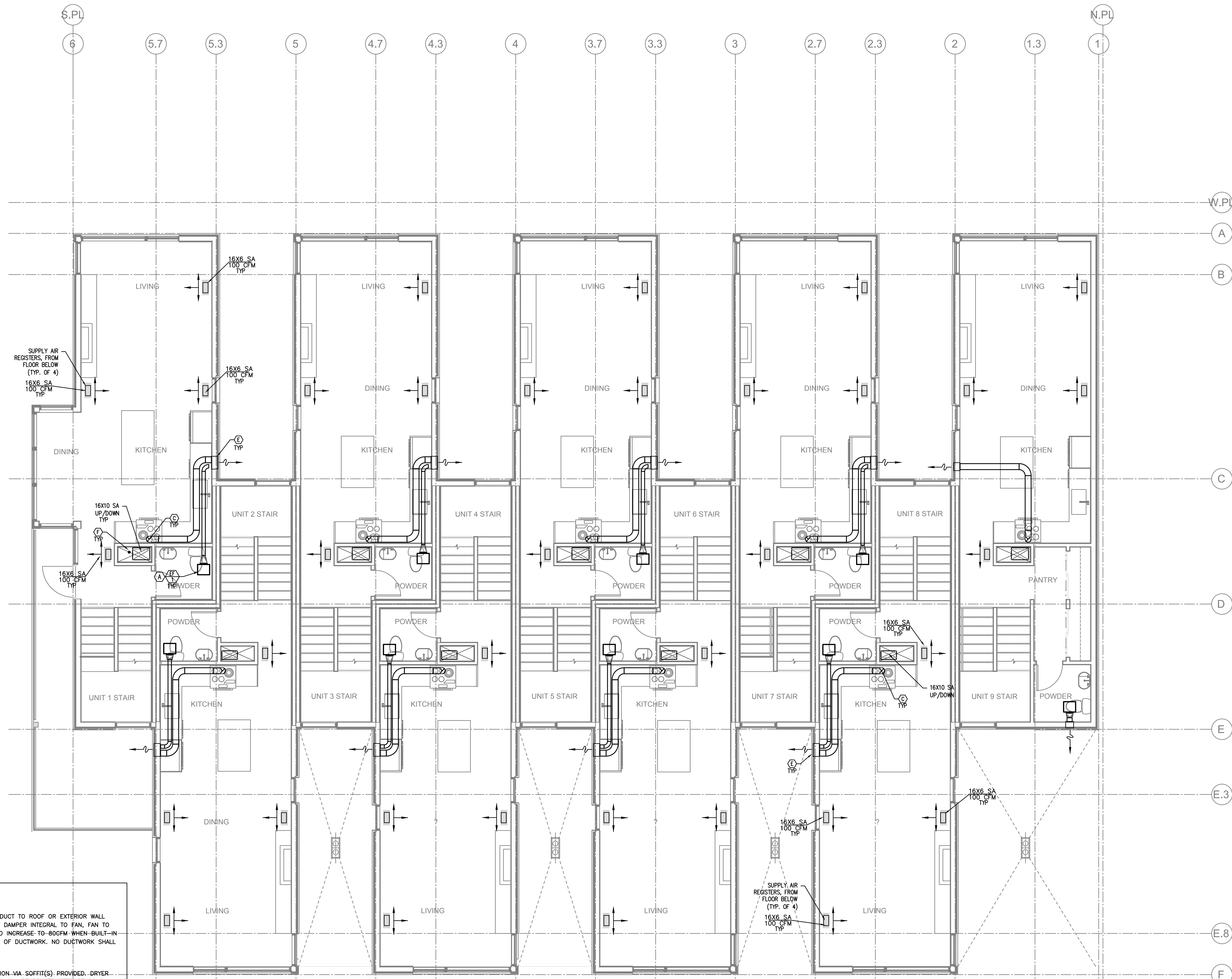
REVISIONS

EXPIRES: 31DEC23

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

SHEET
LEVEL 1 MECHANICAL
PLAN

M1.01



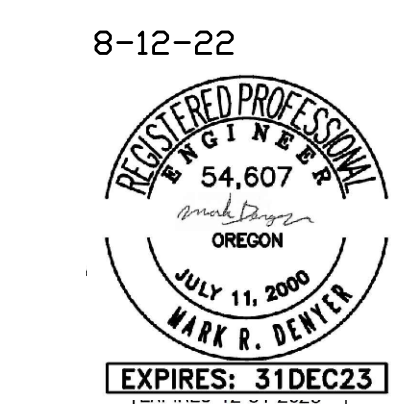
1 LEVEL 2 MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

- KEY NOTES:**
- (A) — 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 (1) (M6.00) (EF) (1)
 - (B) — 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 (2) (M6.00)
 - (C) — 7" HOOD DUCT TO 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 PER 2019 OMSC 505.3 HOOD DUCTS SHALL HAVE SMOOTH INNER WALLS AND SHALL BE AIR TIGHT AND BE EQUIPPED WITH A BACKDRAFT DAMPER.
 - (D) — 8" SA TO FLOOR REGISTER ABOVE.
 - (E) — EXTERIOR EXHAUST PLENUM — SEE (4) (M6.00) MAINTAIN 36" CLEAR TO OPERABLE WINDOWS AND DOORS.
 - (F) — REFRIGERANT LINE SETS FROM CONDENSING UNITS ON ROOF, TO FAN COILS ON LEVEL 1. SEE (5) (M6.00)

skylab

ARCHITECTURE INTERIOR DESIGN 413 SW 13TH AVE, STE 200 PORTLAND, OR 97205
SKYLABARCHITECTURE.COM OFFICE 503 525 9315

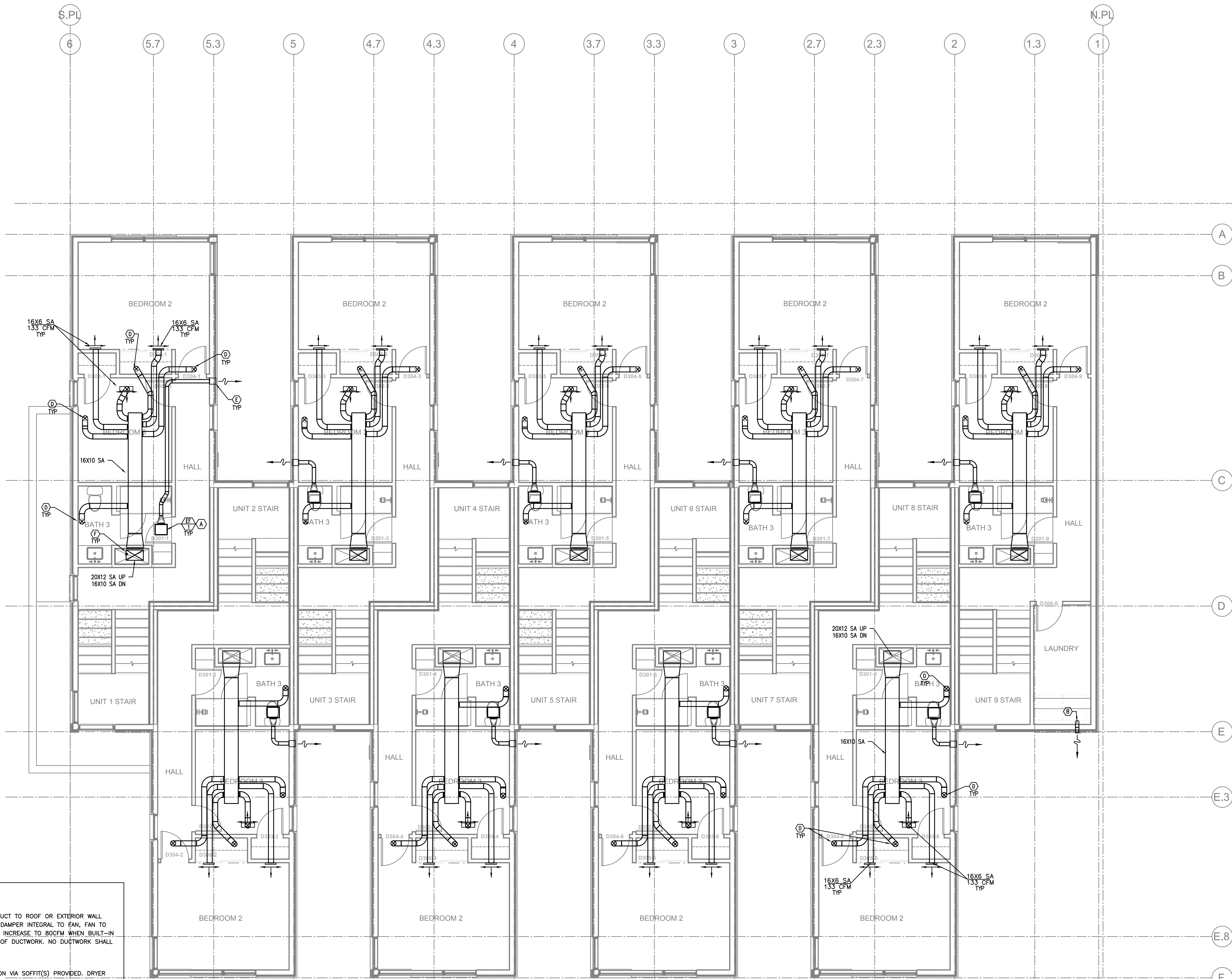
20 Quimby
RESIDENTIAL
ADDRESS
1520 NW 20th Avenue
Portland, OR 97209
PROJECT #
20036
DATE
August 12, 2022
ISSUANCE
PERMIT SET
REVISIONS



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

SHEET
LEVEL 2 MECHANICAL PLAN

M1.02



KEY NOTES:

- (A) — 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 (1) (M6.00) (EF) (1)
- (B) — 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 (2) (M6.00)
- (C) — 7" HOOD DUCT TO 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 PER 2019 OMSC 505.3 HOOD DUCTS SHALL HAVE SMOOTH INNER WALLS AND SHALL BE AIR TIGHT AND BE EQUIPPED WITH A BACKDRAFT DAMPER.
- (D) — 8" SA TO FLOOR REGISTER ABOVE.
- (E) — EXTERIOR EXHAUST PLENUM — SEE (4) (M6.00) MAINTAIN 36" CLEAR TO OPERABLE WINDOWS AND DOORS.
- (F) — REFRIGERANT LINE SETS FROM CONDENSING UNITS ON ROOF, TO FAN COILS ON LEVEL 1. SEE (5) (M6.00)

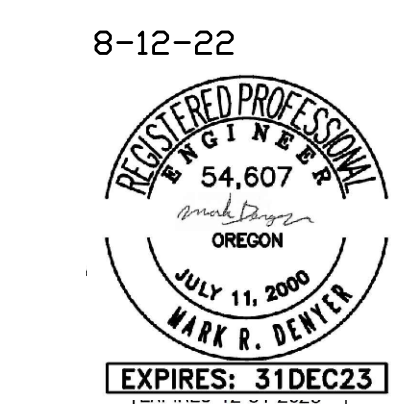
1 LEVEL 3 MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

skylab

ARCHITECTURE INTERIOR DESIGN 413 SW 13TH AVE, STE 200 PORTLAND, OR 97205
SKYLABARCHITECTURE.COM OFFICE 503 525 9315

20 Quimby
RESIDENTIAL

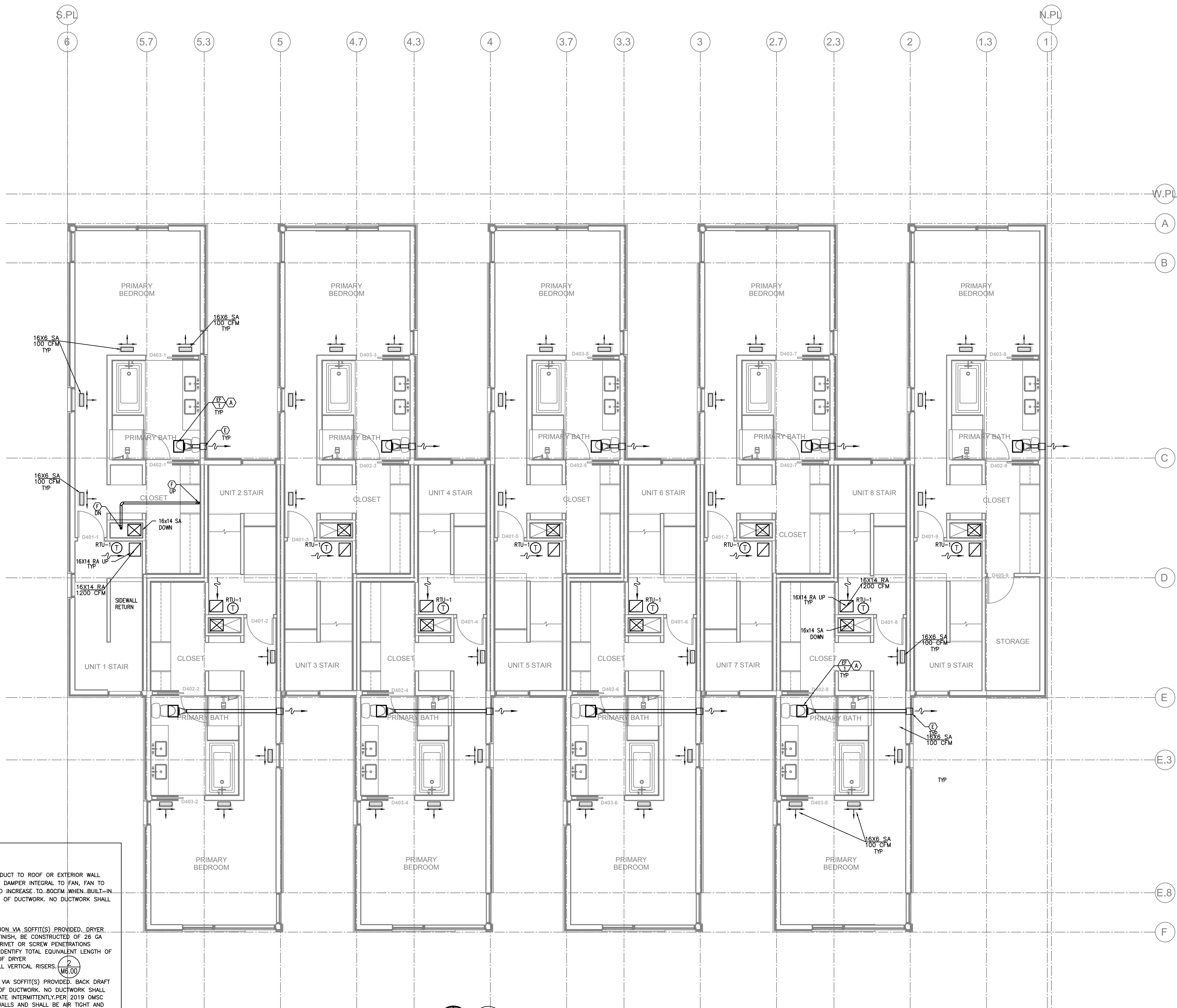
ADDRESS 1520 NW 20th Avenue Portland, OR 97209
PROJECT # 20036
DATE August 12, 2022
ISSUANCE PERMIT SET
REVISIONS



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

SHEET LEVEL 3 MECHANICAL PLAN

M1.03



1 LEVEL 4 MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

KEY NOTES:

- (A) — 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 (1) (M6.00) (EF) (1)
- (B) — 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. (2) (M6.00)
- (C) — 7" HOOD DUCT TO 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. PER 2019 OMSC 505.3 HOOD DUCTS SHALL HAVE SMOOTH INNER WALLS AND SHALL BE AIR TIGHT AND BE EQUIPPED WITH A BACKDRAFT DAMPER.
- (D) — 8" SA TO FLOOR REGISTER ABOVE.
- (E) — EXTERIOR EXHAUST PLENUM — SEE (4) (M6.00) MAINTAIN 36" CLEAR TO OPERABLE WINDOWS AND DOORS.
- (F) — REFRIGERANT LINE SETS FROM CONDENSING UNITS ON ROOF, TO FAN COILS ON LEVEL 1. (5) (M6.00)

skylab

ARCHITECTURE INTERIOR DESIGN 413 SW 13TH AVE, STE 200 PORTLAND, OR 97205

SKYLABARCHITECTURE.COM OFFICE 503 525 9315

© 2020 Skylab Architecture. This document is an instrument of service and the property of the Architect and may not be duplicated, displayed, or reproduced without the written consent of Skylab Architecture.

20 Quimby
RESIDENTIAL

ADDRESS
1520 NW 20th Avenue
Portland, OR 97209

PROJECT #
20036

DATE
August 12, 2022

ISSUANCE
PERMIT SET

REVISIONS

8-12-22



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

SHEET
LEVEL 4 MECHANICAL
PLAN

M1.04



KEY NOTES:

- (A) — 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 1 EF 1
- (B) — 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 2 M6.00
- (C) — 7" HOOD DUCT TO 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. PER 2019 OMSC 505.3 HOOD DUCTS SHALL HAVE SMOOTH INNER WALLS AND SHALL BE AIR TIGHT AND BE EQUIPPED WITH A BACKDRAFT DAMPER.
- (D) — 8" SA TO FLOOR REGISTER ABOVE.
- (E) — EXTERIOR EXHAUST PLENUM — SEE 4 M6.00 MAINTAIN 36" CLEAR TO OPERABLE WINDOWS AND DOORS.
- (F) — REFRIGERANT LINE SETS FROM CONDENSING UNITS ON ROOF, TO FAN COILS ON LEVEL 1. SEE 5 M6.00

1 **ROOF/DECK MECHANICAL PLAN**
 SCALE: 1/4" = 1'-0"

skylab

ARCHITECTURE INTERIOR DESIGN 413 SW 13TH AVE, STE 200 PORTLAND, OR 97205

SKYLABARCHITECTURE.COM OFFICE 503 525 9315

© 2020 Skylab Architecture. This document is an instrument of service and the property of the Architect and may not be duplicated, displayed, or reproduced without the written consent of Skylab Architecture.

20 Quimby
RESIDENTIAL

ADDRESS
1520 NW 20th Avenue
Portland, OR 97209

PROJECT #
20036

DATE
August 12, 2022

ISSUANCE
PERMIT SET

REVISIONS

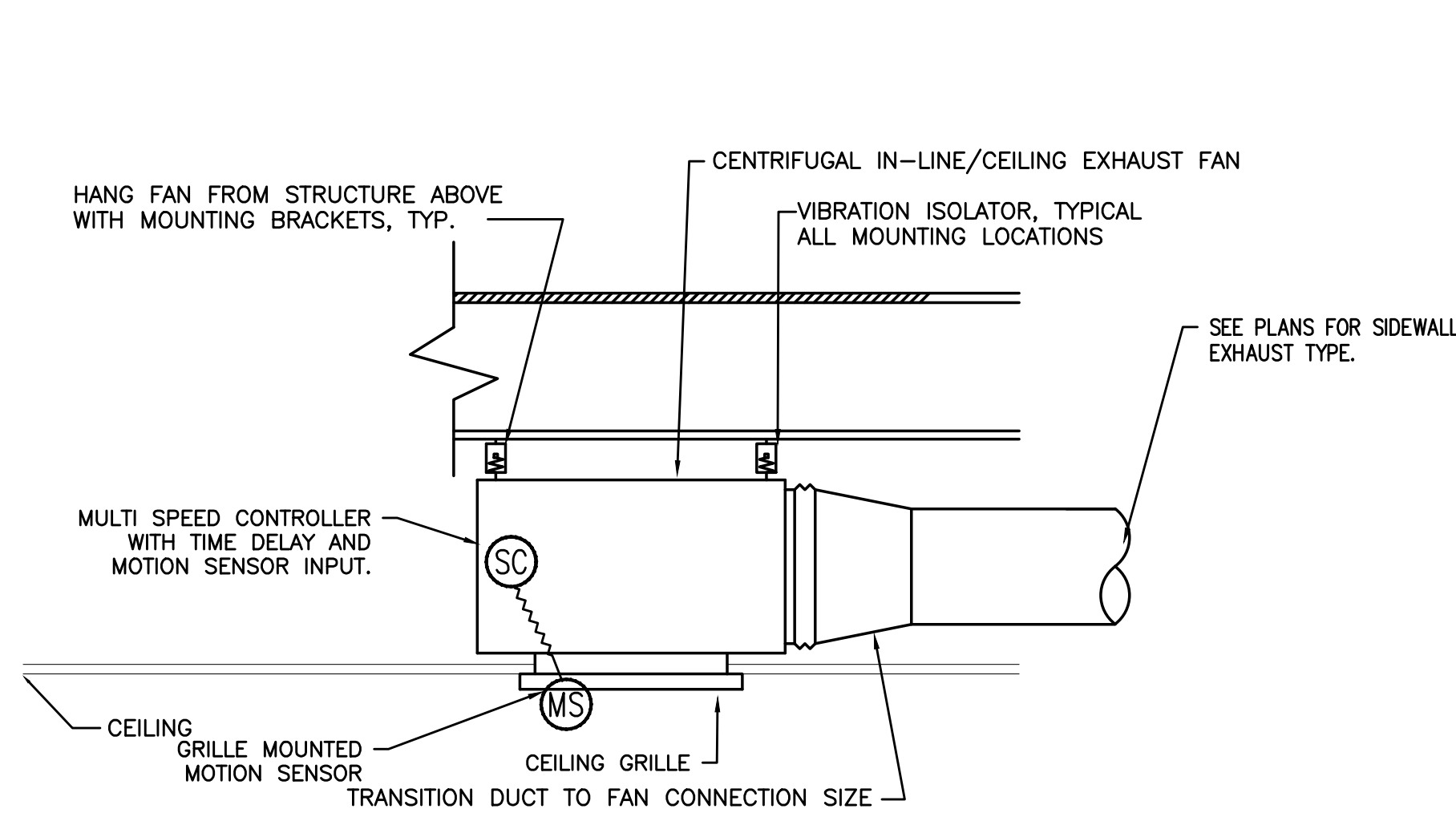
8-12-22



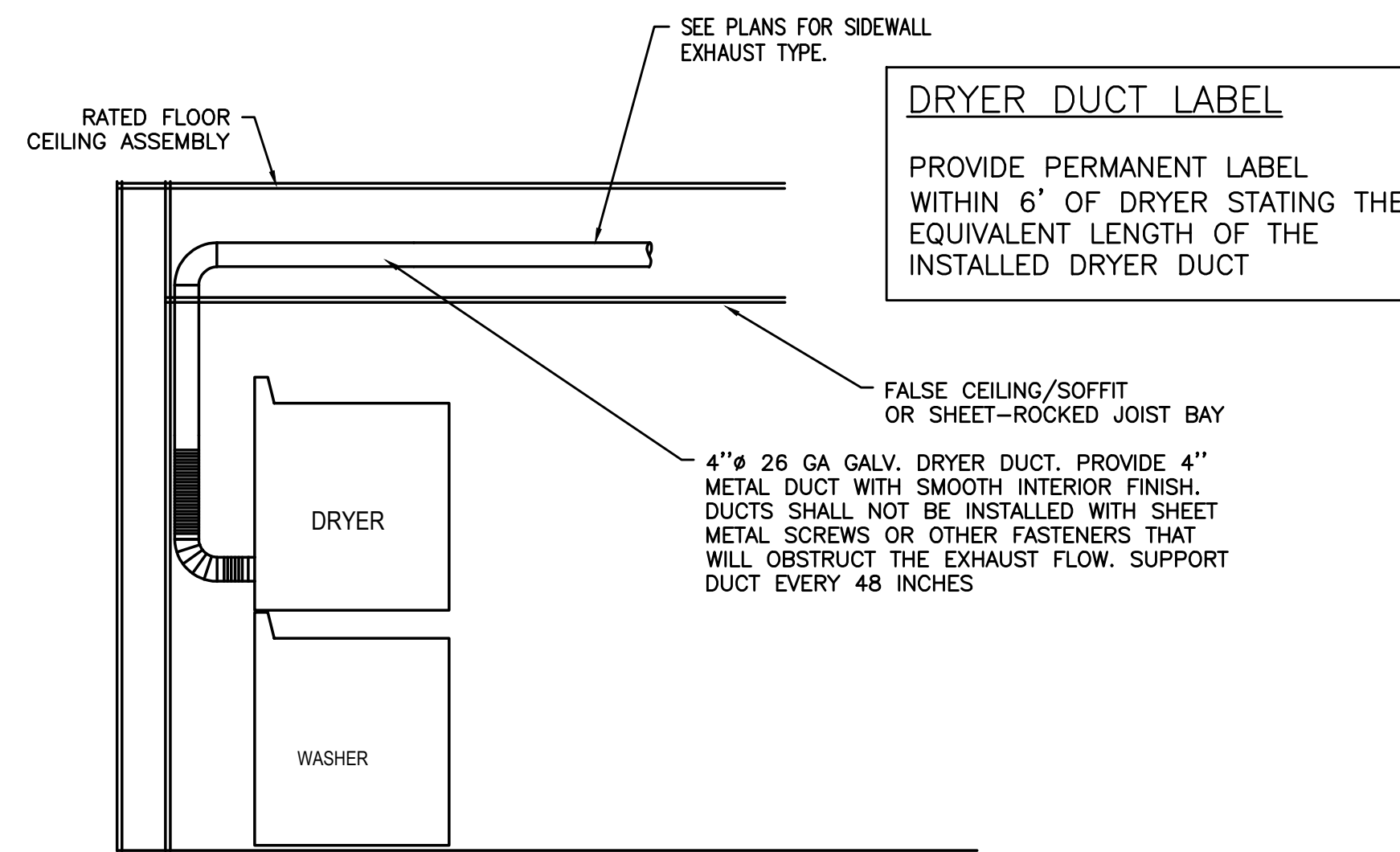
MEDIA INC.
Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PHN: (503) 234-0548
FAX: (503) 234-0677
WWW.MEDIA-ENG.COM
CONTACT: MARK DENVER

SHEET
ROOF MECHANICAL
PLAN

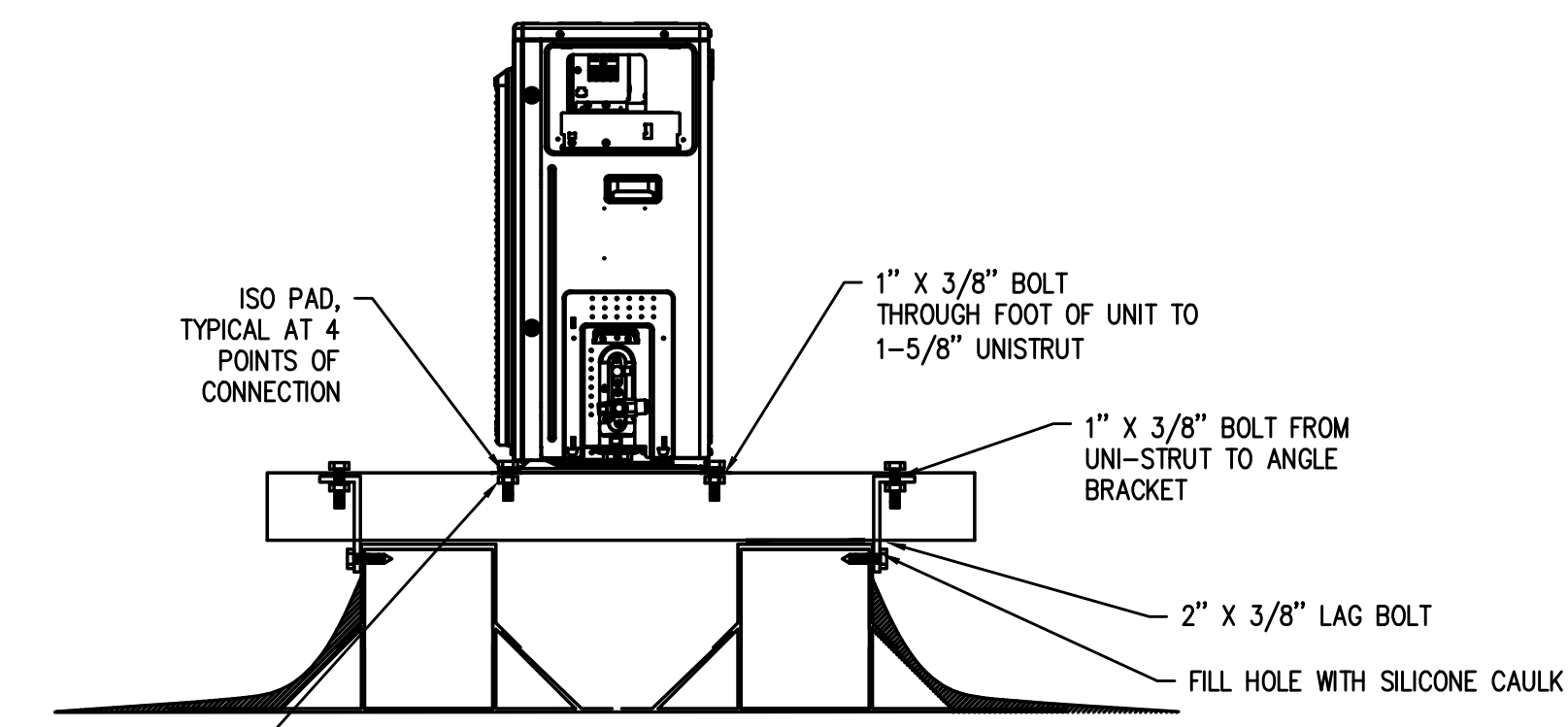
M1.05



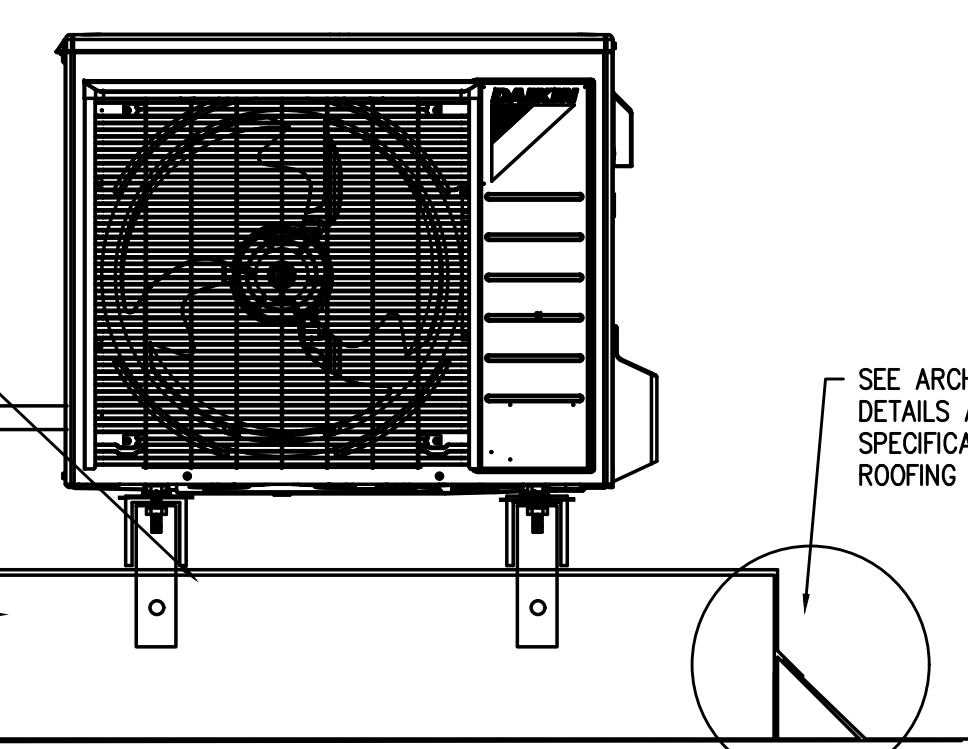
1 RESTROOM EXHAUST FAN
M6.00 SCALE: DETAIL



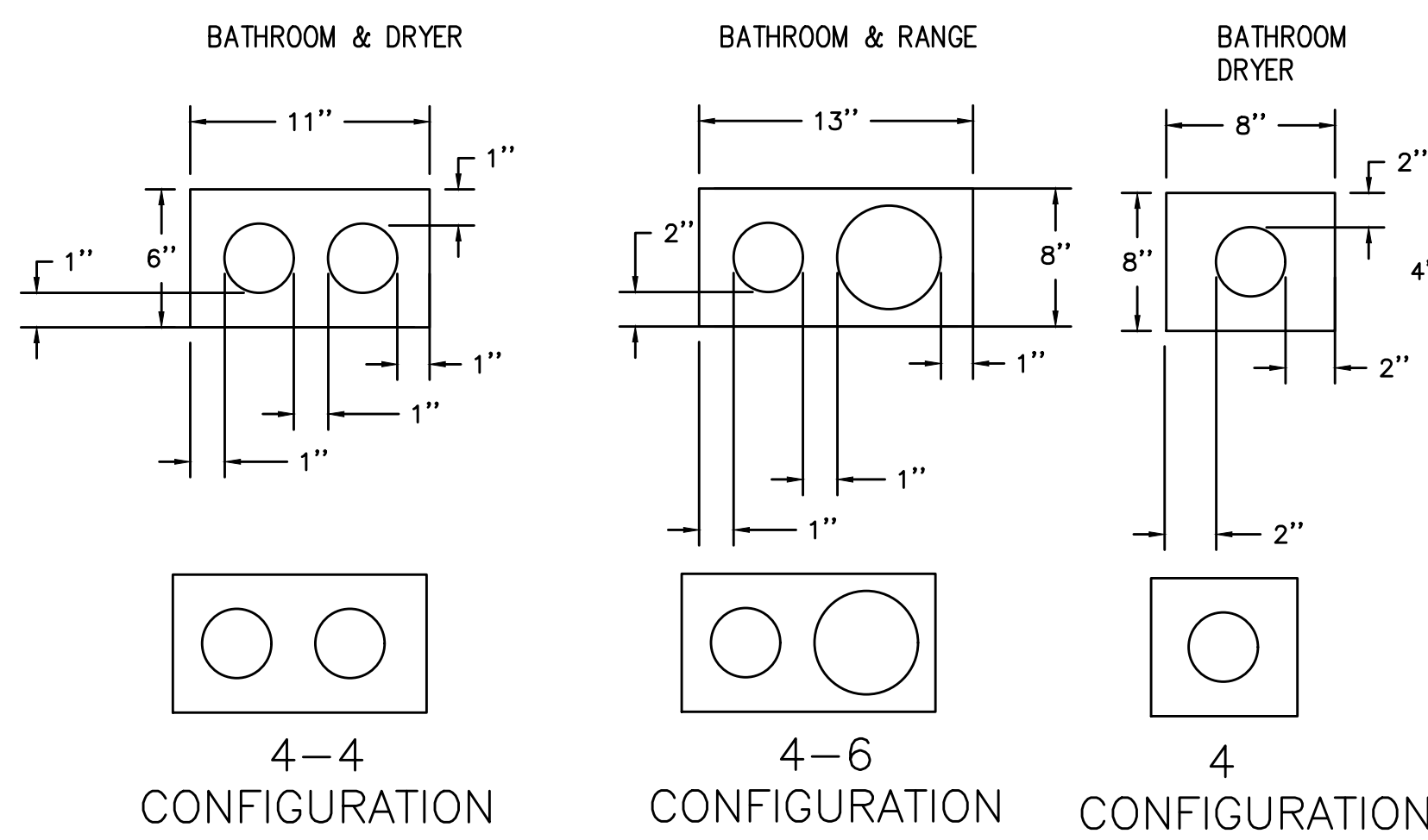
2 TYPICAL DRYER INSTALLATION
M6.00 NOT TO SCALE



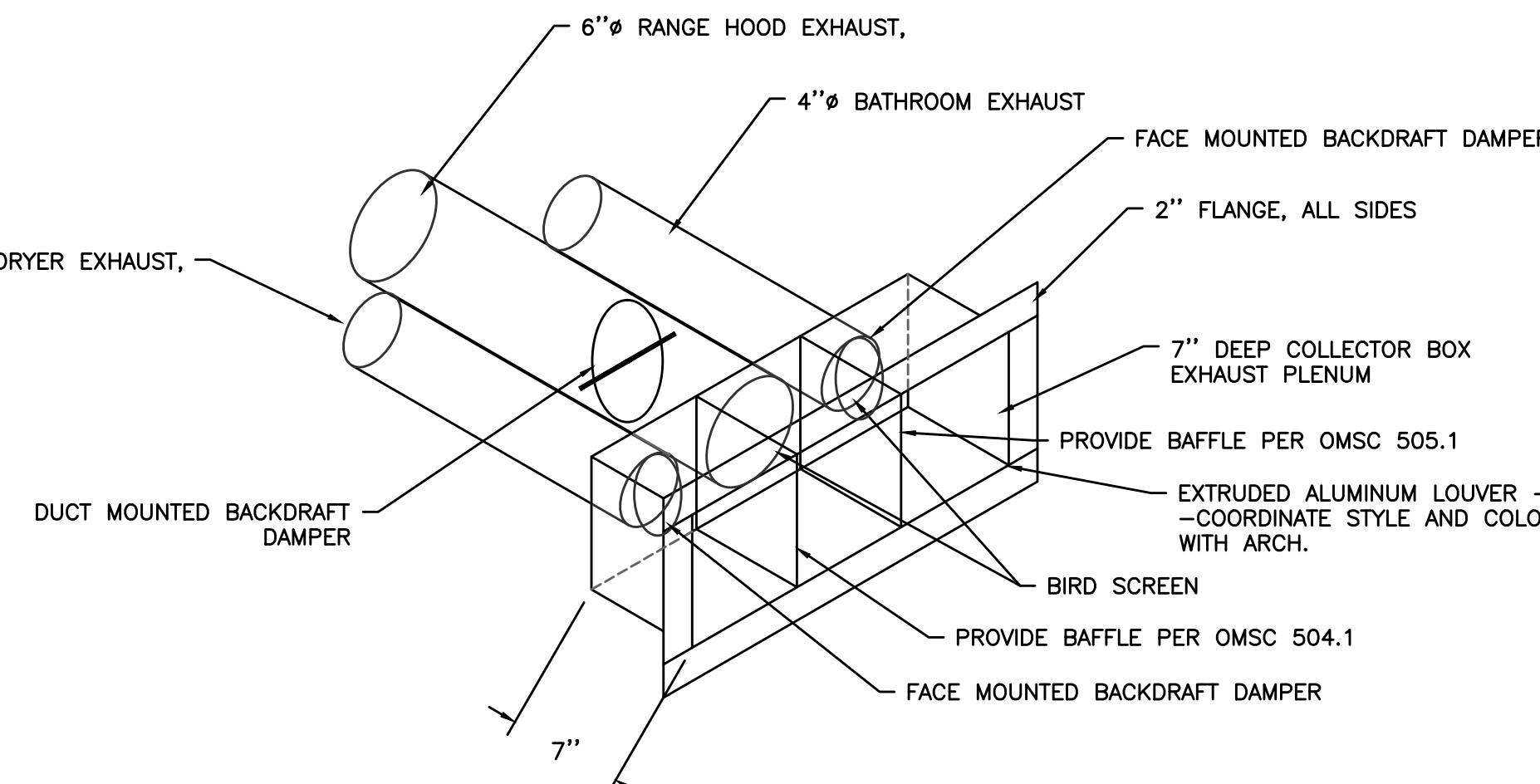
END VIEW



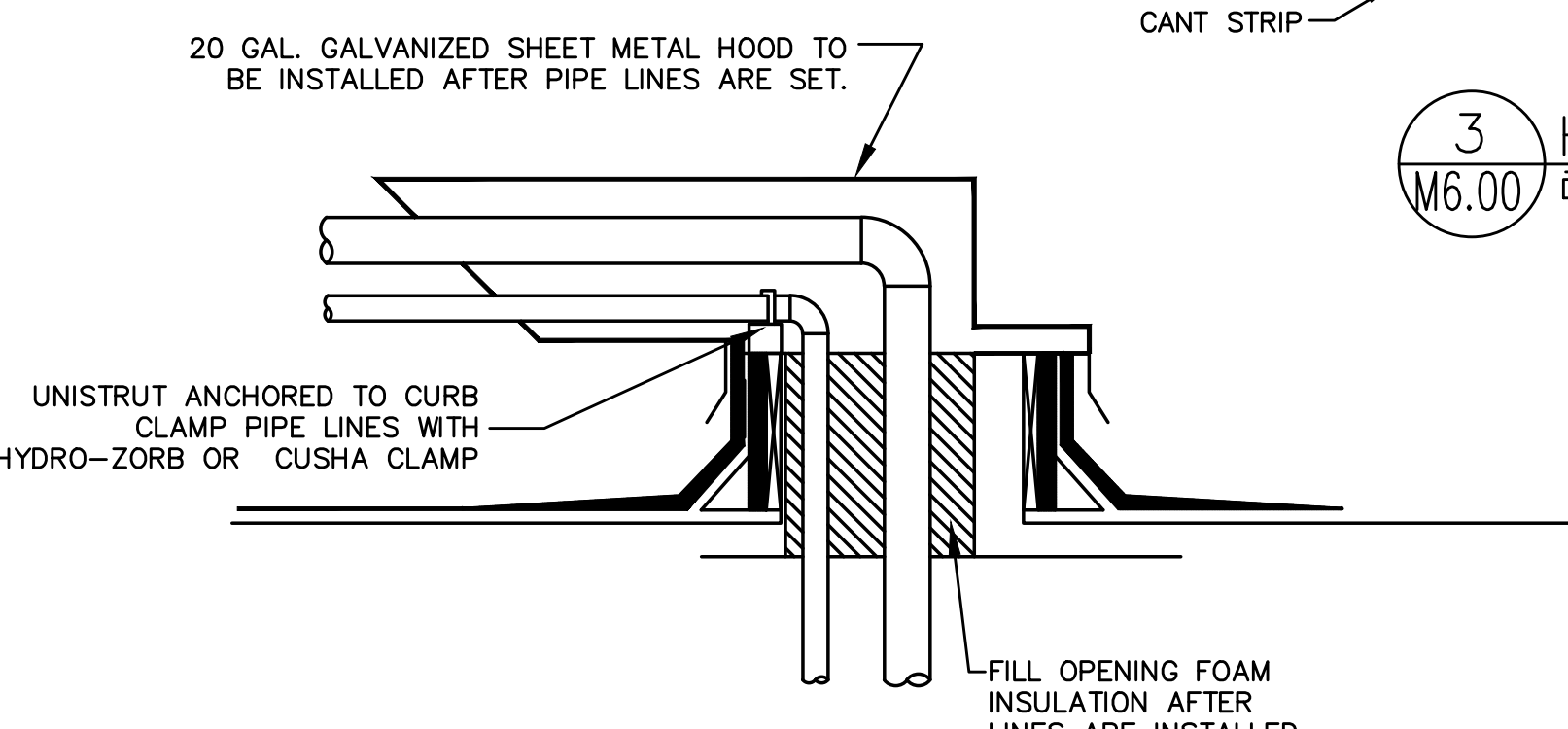
3 HEAT PUMP CURB
M6.00 DETAIL



4 SIDEWALL EXHAUST
M6.00 NOT TO SCALE



5 REFRIGERANT ROOF PENETRATIONS
M6.00 DETAIL



EXHAUST FANS	
MARK NUMBER	EF-1
TYPE	CEILING CABINET
SYSTEM	BATHROOM
CFM	30/80
TOTAL SP. (IN H2O)	0.20
RPM	1062/1146
TIP SPEED (FPM)	NA
MOTOR WATTS OR HP	5/11.7 W
CONTROLLED BY	**
INTERLOCK WITH	MOTION SENSOR
FAN SPEED CONTROLLER	YES
WHEEL TYPE	BI
BACK DRAFT DAMPER	YES
ISOLATION	RUBBER
DESIGN WEIGHT (LBS)	25
MAX. SONES	0.3/0.6
MAX. AMPS - ***	0.27
POWER (VOLTS/PHASE/HZ) - ***	120/1/60
BASIS OF DESIGN:	PANASONIC * FV-05-11VKS12

* - FAN TO INCLUDE 10 WATT DIMMABLE LED CHIP PANEL -COORDINATE SWITCHING WITH ELECTRICAL CONTRACTOR.
** - FAN TO RUN AT LOW SPEED CONTINUOUSLY, AND INCREASE TO HIGH SPEED UPON ACTIVATION OF THE MOTION SENSOR.
***- ELECTRICAL DATA LISTED FOR REFERENCE ONLY, COORDINATE WITH ELECTRICAL DESIGN BUILD CONTRACTOR FOR VOLTAGE AND PHASE REQUIREMENTS

ROOFTOP HVAC UNIT	
MARK NUMBER	RTU-1
SYSTEM	TOWNHOUSE
TYPE	C.V.
DISCHARGE	VERTICAL
TOTAL CFM	1200
ECONOMIZER	YES
MIN. OSA	100
MAX OSA (FULL OCCUPANCY)	NA
CO2 CONTROL	NA
EXTERNAL SP. (H2O)	0.75
TOTAL SP. (H2O)	---
RPM	1771
WHEEL TYPE/ SIZE	F.C. --- (DIRECT)
MOTOR HP.	1/2
POWER EXH. FAN/ACCESSORY	NONE
MIN FILTER SIZE	24X16X1 & 24X18X1
FILTER TYPE	2" - 30%
HP. HEATING (MBH @ 47F)	34,400
HEATING HSPF (47/17F)	8
SECONDARY HEAT +	5 KW
TOTAL CLG. (TONS)	3.0
SENSIBLE CLG. (MBH)	35.98
ENT. EVAP AIR TEMP (DB/WB.)	90/67
LVG. EVAP AIR TEMP (DB/WB.)	55/54
AMBIENT AIR (°F)	95
EER/IEER	14 SEER
REFRIGERANT	410A
REFRIGERANT CHARGE	XX
DESIGN WEIGHT (LBS.)	500
SMOKE DETECTOR (SUPPLY DUCT)	NO
SPRING ISOLATION ROOF CURB - *	NO
VOLTAGE/PHASE - ***	208/1
MCA/MOCP - ***	51.7/60 AMPS
BASIS OF DESIGN - CARRIER MODEL	50VT-36C

*** - ELECTRICAL DATA LISTED FOR REFERENCE ONLY, COORDINATE WITH ELECTRICAL DESIGN BUILD CONTRACTOR FOR VOLTAGE AND PHASE REQUIREMENTS, ELECTRICAL CONTRACTOR RESPONSIBLE FOR SIZING ALL CONDUCTORS & OVERCURRENT PROTECTION, VERIFY WITH EQUIPMENT SUBMITTALS FOR EQUIPMENT ELECTRICAL REQUIREMENTS

INDOOR UNITS - *	
MARK NUMBER	FC-1
SYSTEM	LIVE/WORK SPACE
TYPE	CEILING CASSETTE
EFFICIENCY	SEE OUTDOOR UNIT
NOMINAL COOLING CAPACITY	12,000 BTUH
HEATING CAPACITY	12,000 BTUH
TOTAL SUPPLY CFM	400
OSA CFM	---
EXTERNAL SP. (H2O)	0.25
VOLTS/PHASE	208/1
MCA/MOP	FROM OUTDOOR UNIT
WEIGHT	40
BASIS OF DESIGN	CARRIER 40MBCQ12
OUTDOOR UNIT	HP-1

* - PROVIDE ALL UNITS THAT CANNOT BE DRAINED BY GRAVITY WITH CONDENSATE PUMP, ROUTE ALL CONDENSATE LINES HIDDEN WITHIN STRUCTURE TO AN APPROVED LOCATION PROVIDED BY THE PLUMBER.
** - ELECTRICAL DATA LISTED FOR REFERENCE ONLY, COORDINATE WITH ELECTRICAL DESIGN BUILD CONTRACTOR FOR VOLTAGE AND PHASE REQUIREMENTS, ELECTRICAL CONTRACTOR RESPONSIBLE FOR SIZING ALL CONDUCTORS & OVERCURRENT PROTECTION, VERIFY WITH EQUIPMENT SUBMITTALS FOR EQUIPMENT ELECTRICAL REQUIREMENTS

OUTDOOR UNITS - SPLIT SYSTEM HEAT PUMP	
MARK NUMBER	HP-1
SYSTEM	LIVE/WORK SPACE
TYPE	1-PORT HEAT PUMP
NORMAL COOLING CAPACITY	12,000 BTUH
NORMAL HEATING CAPACITY	12,000 BTUH
EFFICIENCY SEER/EER	21.5/13
EFFICIENCY HSPF/COP	10.0/3.36
REFRIGERANT	410 A
REFRIGERANT CHARGE	X LBS
MAX OPERATING TEMPS	122/-22
MAX PIPING LENGTH	98 FT
MAX PIPING HEIGHT	65 FT
VOLTS-PHASE - **	208/230-1 PHASE
MCA/MOP - **	18/25 AMPS
COMPRESSOR	VARIABLE SPEED
WEIGHT	120 LBS
BASIS OF DESIGN	CARRIER 38MAQB12R--3

** - ELECTRICAL DATA LISTED FOR REFERENCE ONLY, COORDINATE WITH ELECTRICAL DESIGN BUILD CONTRACTOR FOR VOLTAGE AND PHASE REQUIREMENTS, ELECTRICAL CONTRACTOR RESPONSIBLE FOR SIZING ALL CONDUCTORS & OVERCURRENT PROTECTION, VERIFY WITH EQUIPMENT SUBMITTALS FOR EQUIPMENT ELECTRICAL REQUIREMENTS

skylab

ARCHITECTURE INTERIOR DESIGN 413 SW 13TH AVE, STE 200 PORTLAND, OR 97205

SKYLABARCHITECTURE.COM OFFICE 503 525 9315

20 Quimby RESIDENTIAL

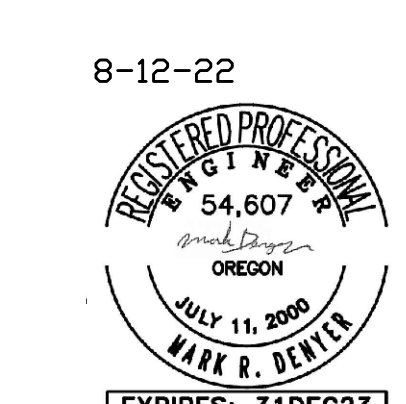
ADDRESS 1520 NW 20th Avenue Portland, OR 97209

PROJECT # 20036

DATE August 12, 2022

ISSUANCE PERMIT SET

REVISIONS



M Consulting Engineers 2007 S.E. Ash St. Portland, OR 97214 PHN: (503) 234-0548 FAX: (503) 234-0677 WWW.MFIA-ENG.COM CONTACT: MARK CENTER

SHEET MECHANICAL DETAILS

M6.00