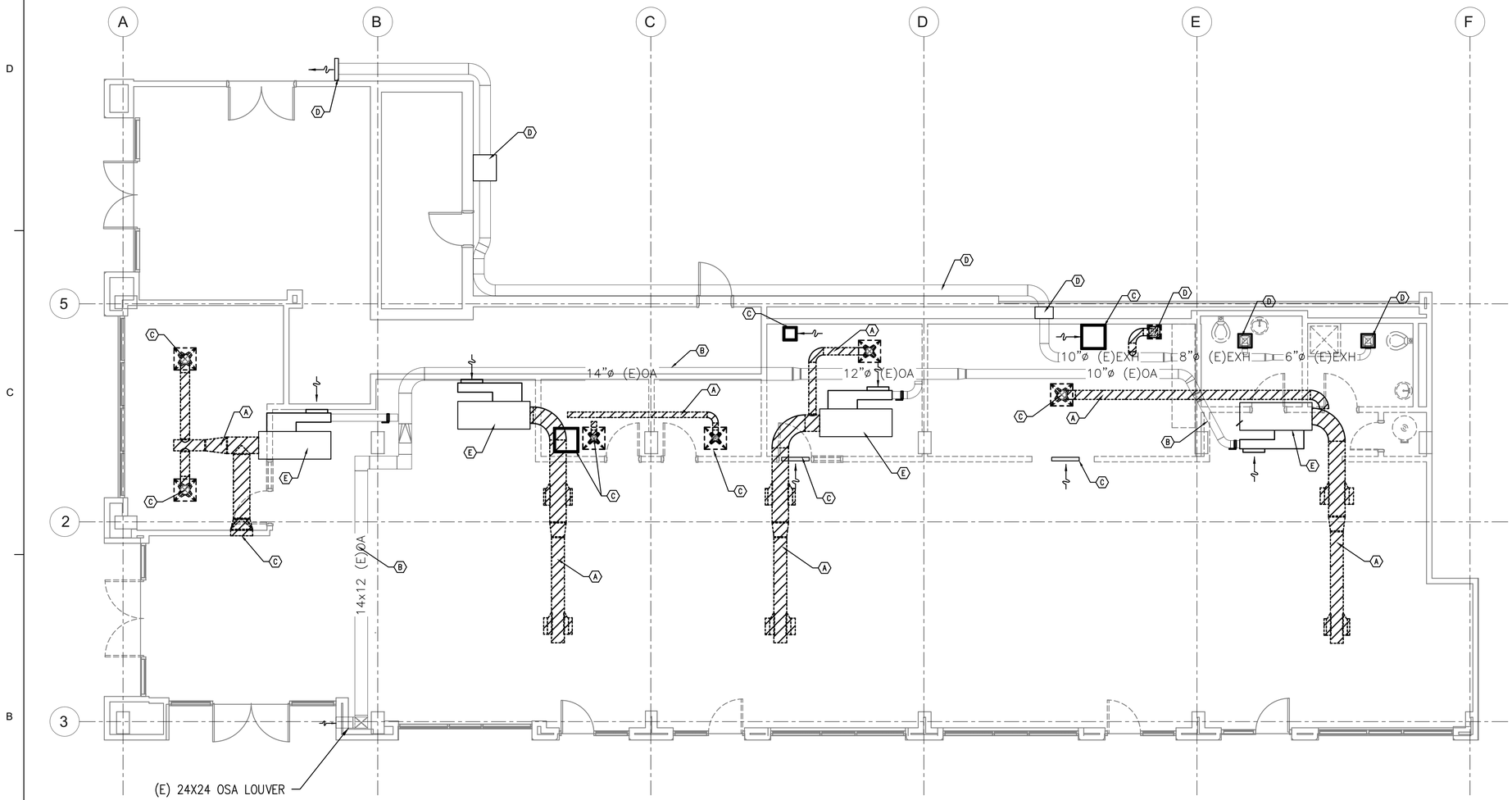


1 M1.0 MECH DEMO PLAN
SCALE: 3/16" = 1'-0"

KEY NOTES:

(A) — DEMO (E) SUPPLY AIR DUCTWORK FROM ALL WATER SOURCE HEAT PUMPS.

(B) — (E) OA DUCTWORK TO REMAIN.

(C) — DEMO (E) RETURN/SUPPLY GRILL.

(D) — ALL (E) EXHAUST DUCTWORK, FAN, GRILLES, LOUVER AND F/S DAMPER TO REMAIN.

(E) — (E) EQUIPMENT TO REMAIN.

CLIMATE architecture + landscape, LLC

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

General Contractor: T.B.D
Address:

Project:
OREGON NIKKEI LEGACY CENTER
Address: 411 NW FLANDERS ST PORTLAND, OR 97201

Architect:
climate
ARCHITECTURE + LANDSCAPE, LLC
Address: 3934 NE MLK JR BLVD, SUITE 205A PORTLAND, OREGON 97212 PH: 646.468.9871

professional seal:

11-26-19

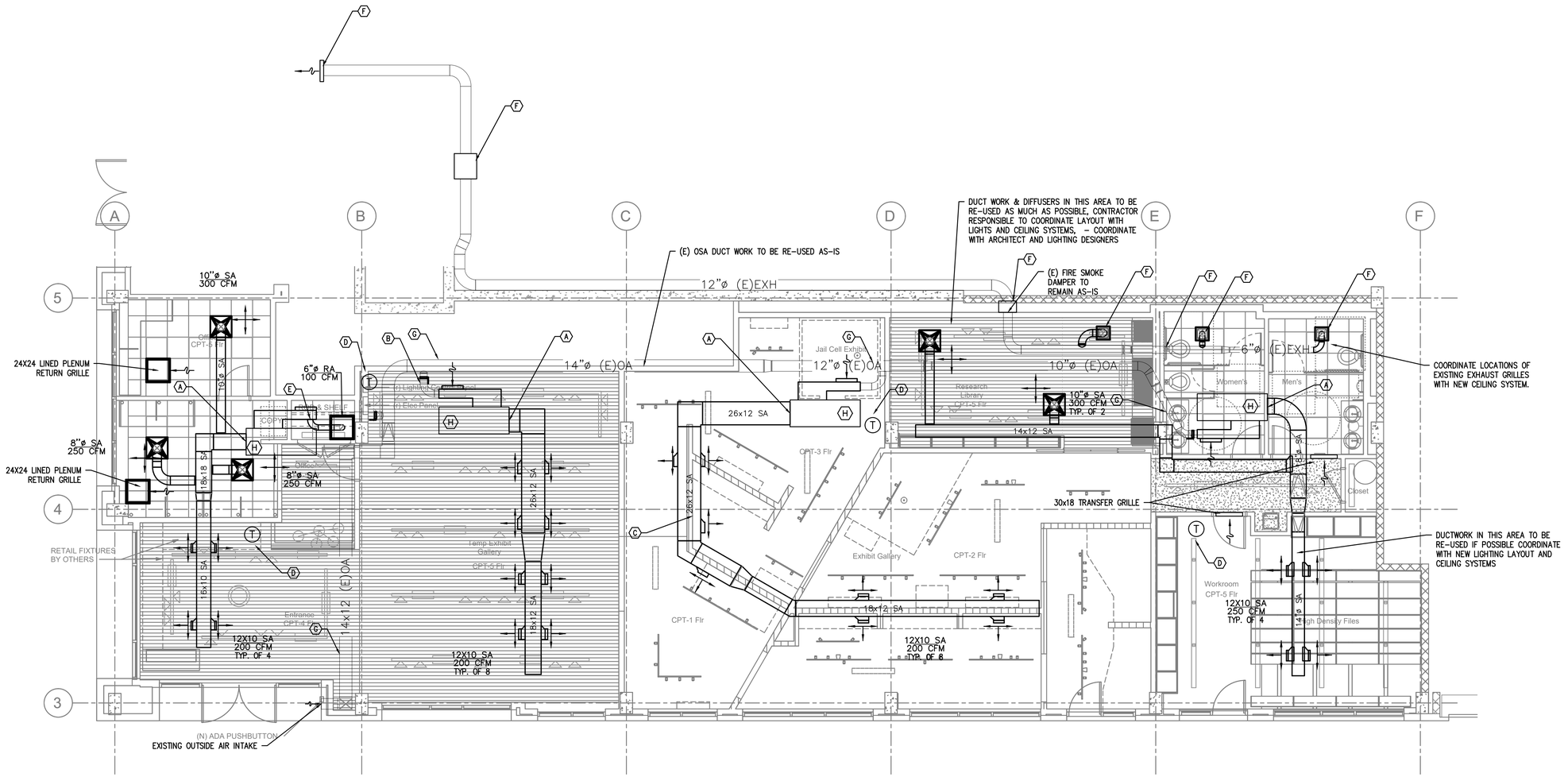
REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 11, 2000
MARK R. DENYER
EXPIRES: 31DEC19

No.	Date	Issue
01	18012	
02		
03		
04		
05		

Sheet Name:
MECH - DEMO PLAN

Climate 2019

Date: 11/26/2019
Scale: 3/16" = 1'-0"
Climate Job No.: 1801-P
CAD File Name:
Sheet No.: M1.0



1 M2.0 MECH FLOOR PLAN
SCALE: 3/16" = 1'-0"

KEY NOTES:

- (A) — SUPPLY AIR DUCTWORK TO CONNECT TO (E) EQUIPMENT.
- (B) — CONNECT OA DUCTWORK TO (E) EQUIPMENT. INSTALL NEW BALANCING DAMPER.
- (C) — COORDINATE DUCTWORK AND DIFFUSER LOCATION WITH NEW LIGHTING.
- (D) — INSTALL NEW THERMOSTATS AT LOCATIONS INDICATED.
- (E) — 6"ø RA FROM CLOSET TO RETURN AIR PLENUM OF (E) WATER SOURCE HEAT PUMP.
- (F) — (E) EXHAUST FAN AND SYSTEM TO REMAIN AS-IS - SEE ELECT DRAWINGS FOR NEW TIME CLOCK.
- (G) — (E) OA DUCTWORK.
- (H) — EXISTING WATER SOURCE HEAT PUMP, RETURN AIR PLENUM, FILTERS AND OSA CONNECTION TO BE RE-USED AS-IS FOR NEW SPACE LAYOUT. COORDINATE CEILING AND ACCESS LOCATIONS WITH EXISTING EQUIPMENT HUNG FROMUNI-STRUT.

CLIMATE
architecture + landscape, LLC

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

General Contractor: T.B.D
Address:

Project: OREGON NIKKEI LEGACY CENTER
Address: 411 NW FLANDERS ST PORTLAND, OR 97201

Architect: climate ARCHITECTURE + LANDSCAPE, LLC
Address: 3934 NE MLK JR BLVD, SUITE 205A PORTLAND, OREGON 97212 PH: 646.486.4971

professional seal:
11-26-19
REGISTERED PROFESSIONAL ENGINEER
84607
OREGON
JULY 11, 2009
MARK R. DENYER
EXPIRES: 31DEC19

No.	Date	Issue
05		
04		
03		
02		
01	18012	No

Sheet Name: MECH FLOOR PLAN

© Climate 2019

Date: 11/26/2019
Scale: 3/16" = 1'-0"
Climate Job No.: 18012
Sheet No.: M2.0
CAD File Name:

MECHANICAL LEGEND

- SUPPLY AIR DIFFUSER
- RETURN AIR GRILLE
- EXHAUST AIR GRILLE
- PERFORATED RETURN AIR PANEL
- OR — DIRECTIONAL AIR FLOW
- MANUAL VOLUME DAMPER
- SUPPLY OR OUTSIDE AIR DUCT UP & DOWN
- RETURN AIR DUCT UP & DOWN
- EXHAUST AIR DUCT UP & DOWN
- SUPPLY OR OUTSIDE AIR DUCT UP & DOWN
- RETURN AIR DUCT UP & DOWN
- EXHAUST AIR DUCT UP & DOWN
- VAV TERMINAL UNIT
- VVT TERMINAL UNIT
- (E) EXISTING
- CONNECT TO EXISTING
- T AC-4 THERMOSTAT OR TEMP. SENSOR
- ? NOTE
- XX/? EQUIPMENT DESIGNATOR
- BALL VALVE
- GATE VALVE
- CHECK VALVE
- BALANCING VALVE
- THERMOMETER
- DIRECTION OF FLOW
- PUMP
- STRAINER
- PRESSURE GAUGE
- PETE'S PLUG
- DOUBLE CHECK ASSEMBLY
- PRESSURE REDUCING VALVE
- UNION
- 2-WAY CONTROL VALVE
- 3-WAY CONTROL VALVE
- CAP
- S SMOKE DETECTOR
- MOTORIZED DAMPER

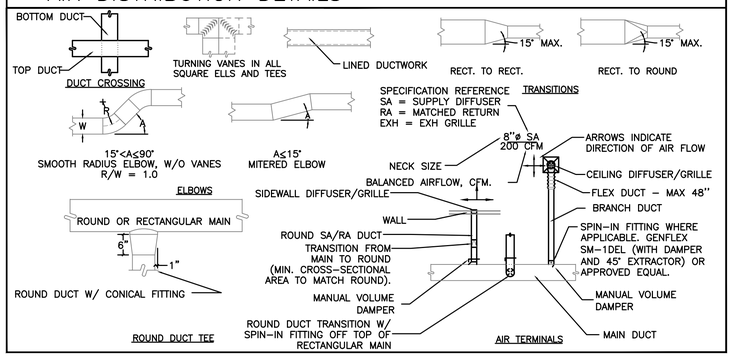
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
B.D.	BOTTOM OF DUCT
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNITS
CFM	CUBIC FEET PER MINUTE
CONN.	CONNECTION
CONT.	CONTINUATION
CW	DOMESTIC COLD WATER
DB	DRY BULB
DIA.	DIAMETER
DIST.	DISTRIBUTION
EA	EXHAUST AIR
EDB	ENTERING DRY BULB TEMPERATURE
EWB	ENTERING WET BULB TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
FF	FINISH FLOOR
FIXT.	FIXTURE
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT.	FEET / FOOT
GA.	GAUGE
GPM	GALLONS PER MINUTE
H	HEIGHT
HP	HORSEPOWER
I.D.	INSIDE DIAMETER
IN.	INCHES
L	LENGTH
LBS.	POUNDS
LDB	LEAVING DRY BULB
LWB	LEAVING WET BULB
LWT	LEAVING WATER TEMPERATURE
MAX.	MAXIMUM
MBH	THOUSANDS OF BTUs PER HOUR
MIN.	MINIMUM
NC	NOISE CRITERIA
N.C.	NORMALLY CLOSED
N.I.M.	NOT IN MECHANICAL
NO.	NUMBER
N.O.	NORMALLY OPEN
O.A.	OUTSIDE AIR
P	PERSON
PSI	POUNDS PER SQUARE INCH
P/T	PRESSURE / TEMPERATURE
R.A.	RETURN AIR
RECT.	RECTANGULAR
REQ'D	REQUIRED
S.A.	SUPPLY AIR
S.P.	STATIC PRESSURE
SQ.	SQUARE
TEMP.	TEMPERATURE
TYP.	TYPICAL
VAV	VARIABLE AIR VOLUME
W	WIDTH
WB	WET BULB
WPD	WATER PRESSURE DROP
ø	DIAMETER

- (E) EXISTING
- (D) DEMOLISH
- NEW WORK
- HWS — (HWS) HEATING WATER SUPPLY
- HWR — (HWR) HEATING WATER RETURN
- FIRE DAMPER
- FIRE / SMOKE DAMPER
- SMOKE DAMPER

SEISMIC BRACING

- LATERAL BRACING
- LONGITUDINAL BRACING
- LONGITUDINAL & LATERAL BRACING

AIR DISTRIBUTION DETAILS



VENTILATION AIR SCHEDULE - FC-1

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**		
OFFICE	127	5	1	5	0.06	13	0.8	16	300	0.05	0	0	1.04	16.30	FC-1
OFFICE	246	5	2	5	0.06	25	0.8	31	500	0.06	0	0	1.03	31.99	FC-1
LOBBY	220	15	7	7.5	0.12	79	0.8	99	800	0.12	0	0	0.97	101.93	FC-1
TOTAL	**593**		**10**			**116**		**145**	**1600**		**0**	**0**	**0.97**	**150**	
								Vou	**Vps**				**Ev**		
					CORRECTED TOTAL OUTDOOR AIR FLOW RATE					**150**	**CFM**	**Corrected OSA Fractio**		**Zs =**	**0.09**

VENTILATION AIR SCHEDULE - FC-2

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**		
EXHIBIT GALLERY	768	15	25	7.5	0.06	234	0.8	292	1600	0.18	0	0	1.00	291.98	FC-2
TOTAL	**768**		**25**			**234**		**292**	**1600**		**0**	**0**	**1.00**	**292**	
								Vou	**Vps**				**Ev**		
					CORRECTED TOTAL OUTDOOR AIR FLOW RATE					**292**	**CFM**	**Corrected OSA Fractio**		**Zs =**	**0.18**

VENTILATION AIR SCHEDULE - FC-3

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**		
EXHIBIT GALLERY	1446	20	36	7.5	0.06	357	0.8	446	1600	0.28	0	0	1.00	445.95	FC-3
TOTAL	**1446**		**36**			**357**		**446**	**1600**		**0**	**0**	**1.00**	**446**	
								Vou	**Vps**				**Ev**		
					CORRECTED TOTAL OUTDOOR AIR FLOW RATE					**446**	**CFM**	**Corrected OSA Fractio**		**Zs =**	**0.28**

VENTILATION AIR SCHEDULE - FC-4

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**		
KITCHEN / RESEARCH AREA	295	70	5	7.5	0.18	91	0.8	113	600	0.19	0	0	0.93	122.37	FC-4
COLLECTIONS WORKROOM	426	40	4	7.5	0.06	56	0.8	69	1000	0.07	0	0	1.04	75.05	FC-4
TOTAL	**721**		**9**			**146**		**183**	**1600**		**0**	**0**	**0.93**	**197**	
								Vou	**Vps**				**Ev**		
					CORRECTED TOTAL OUTDOOR AIR FLOW RATE					**197**	**CFM**	**Corrected OSA Fractio**		**Zs =**	**0.12**

CLIMATE architecture + landscape, LLC

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

General Contractor: T.B.D
Address:

Project: OREGON NIKKEI LEGACY CENTER
Address: 411 NW FLANDERS ST PORTLAND, OR 97201

Architect: climate ARCHITECTURE + LANDSCAPE, LLC
Address: 3934 NE MLK JR BLVD. SUITE 205A PORTLAND, OREGON 97212 PH: 646.468.4871

professional seal:

11-26-19

REGISTERED PROFESSIONAL ENGINEER — 64,607 — OREGON — JULY 11, 2000 — MARK R. DENYER

EXPIRES: 31DEC19

No.	Date	Issue
05		
04		
03		
02		
01	18012	No

Sheet Name: MECHANICAL SCHEDULES

Climate 2019

Date: 11/26/2019
Scale: 3/16" = 1'-0"
Climate Job No.: 18012
CAD File Name:

Sheet No.: M6.0