PLUMBING LEGEND

AFF	ABOVE FINISHED FLOOR
ARCH	ARCHITECTURAL
B.G.	BELOW GRADE
BTU	BRITISH THERMAL UNIT
CAP.	CAPACITY
C.I.	CAST IRON
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
F.F.	FINISH FLOOR
FT	FOOT / FEET
GPM	GALLONS PER MINUTE
G.V.	GATE VALVE
HP	HORSEPOWER
HR.	INVERT ELEVATION
LAV	LAVATORY
MAX.	MAXIMUM
MBH	THOUSANDS OF BTUs PER HOUR
MIN	MINIMUM
OS&Y	OUTSIDE STEM & YOKE
PRV	PRESSURE REDUCING VALVE
PSI, PSIG	POUNDS PER SQUARE INCH
P/T	PRESSURE / TEMPERATURE
REQ'D	REQUIRED
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RPM	REVOLUTIONS PER MINUTE
TYP	TYPICAL
UR	URINAL
VTR	VENT THROUGH ROOF
WC	WATER CLOSET

- (CW) COLD WATER
- (HW) HOT WATER
- (TW) TEMPERED HOT WATER (105')
- (W) BELOW GRADE WASTE
- (W) ABOVE GRADE WASTE
- V — V — (V) VENT
- OD — (RD) RAIN DRAIN
- FDC — (FDC) FIRE DEPARTMENT CONNECTION
- A — (A) COMPRESSED AIR
- P — (P) PROPANE
- F — (F) FIRE WATER

- X / XX — EQUIPMENT MARK NUMBER
- XXX — FIXTURE MARK
- (E) — EXISTING
- (#) — NOTE
- CONNECT TO EXISTING
- CAP
- TEE
- ELBOW
- CLEANOUT

- PRESSURE/TEMP RELIEF VALVE
- BUTTERFLY VALVE
- GAS PRESSURE REGULATING VALVE
- OR — TOP CONNECTION
- BOTTOM CONNECTION
- PIPE TURNED UP, PIPE TURNED DOWN
- GATE VALVE
- BALL VALVE
- BALANCING VALVE
- CHECK VALVE
- UNION
- DOUBLE CHECK ASSEMBLY
- POINT OF USE MIXING VALVE

SHEET LEGEND:

BLDG 8 PLUMBING CALCULATIONS

FIXTURE TYPE	NUMBER OF FIXTURES	WATE FIXTURE UNITS	TOTAL WSFU	TOTAL C FIXTURE UNITS	TOTAL H FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
CP							
BATHTUB or COMBO BATH/SHOWER	4	4	16	12	12	2	8
CLOTHES WASHER	17	4	68	51	51	3	51
KITCHEN SINK (DISHWASHER)	17	3	51	38.25	38.25	2	34
LAVATORY (SINGLE)	21	1	21	15.75	15.75	1	21
RECEPTOR (ELEVATOR WASTE)	1	0	0	0	0	100	100
WASH ALL	1	3	3	2.25	2.25	3	3
SHOWERS, (STALL)	17	2	34	25.5	25.5	2	34
WATER CLOSET (1.6 GPF TANK-PRIVATE)	21	2.5	52.5	52.5	0	3	63
HOSE BIBB (FIRST ONE)	1	2.5	2.5	2.5	0	---	
HOSE BIBB (EACH ADDITIONAL)	3	1	3	3	0	---	
TOTAL	103		251	202.75	144.75		314
GPM			74	66	54	WASTE SIZE	6"
SIZE			2-1/2"	2-1/2"	2"		
METER SIZE			1-1/2"				

1 BATH UNIT PLUMBING CALCULATIONS

FIXTURE TYPE	NUMBER OF FIXTURES	WATE FIXTURE UNITS	TOTAL WSFU	TOTAL C FIXTURE UNITS	TOTAL H FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
CLOTHES WASHER	1	4	4	3	3	3	3
KITCHEN SINK (DISHWASHER)	1	3	3	2.25	2.25	2	2
LAVATORY (SINGLE)	1	1	1	0.75	0.75	1	1
SHOWERS, (STALL)	1	2	2	1.5	1.5	2	2
WATER CLOSET (1.6 GPF TANK-PRIVATE)	1	2.5	2.5	2.5	0	3	3
TOTAL	5		12.5	10	7.5		11
GPM			9	8	7	WASTE SIZE	3"
SIZE			3/4"	3/4"	3/4"		

2 BATH UNIT PLUMBING CALCULATIONS

FIXTURE TYPE	NUMBER OF FIXTURES	WATE FIXTURE UNITS	TOTAL WSFU	TOTAL C FIXTURE UNITS	TOTAL H FIXTURE UNITS	DRAINAGE FIXTURE UNITS	TOTAL DFU
BATHTUB or COMBO BATH/SHOWER	1	4	4	3	3	2	2
CLOTHES WASHER	1	4	4	3	3	3	3
KITCHEN SINK (DISHWASHER)	1	3	3	2.25	2.25	2	2
LAVATORY (SINGLE)	2	1	2	1.5	1.5	1	2
SHOWERS, (STALL)	1	2	2	1.5	1.5	2	2
WATER CLOSET (1.6 GPF TANK-PRIVATE)	2	2.5	5	5	0	3	6
TOTAL	8		20	16.25	11.25		17
GPM			14	12	9	WASTE SIZE	3"
SIZE			1"	1"	3/4"		

PLUMBING CONNECTION SCHEDULE

MARK	FIXTURE	W	V	CW	HW	REMARKS
WC-1	WATER CLOSET	3"	2"	3/4"	–	FLOOR MOUNT, FLUSH TANK
LV-1	LAVATORY	1-1/2"	1-1/2"	1/2"	1/2"	COUNTER MOUNT (1)
TS-1	TUB/SHOWER	2"	1-1/2"	1/2"	1/2"	(2)
SH-2	SHOWER, STALL	2"	1-1/2"	1/2"	1/2"	(2)
KS-1	KITCHEN SINK	1-1/2"	1-1/2"	1/2"	1/2"	SINGLE BOWL W/DISHWASHER
DW-1	DISHWASHER	IW			1/2"	(4)
CW-1	CLOTHES WASHER	2"	1-1/2"	1/2"	1/2"	(3)
RC-1	REFRIGERATOR CONNECTION			1/2"		
HB-1	HOSE BIB			3/4"		
FD-1	FLOOR DRAIN	VL				JAY R SMITH, 3700 SERIES (5)
RD-1	ROOF DRAIN					JAY R SMITH, 1010/1020 (6)

V.L. – VENTED LINE

(1) PROVIDE WITH ASSE 1070 APPROVED POINT OF USE MIXING VALVE OR LAV FAUCET WITH APPROVED TEMPERATURE LIMIT STOP.

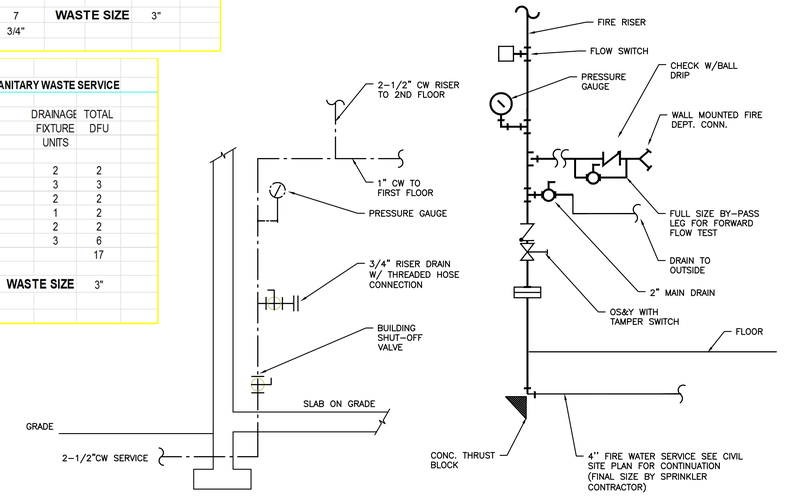
(2) PROVIDE WITH ASSE 1016 APPROVED TEMPERATURE AND PRESSURE SHOWER MIXING VALVE.

(3) PROVIDE ACCESSIBLE VALVE BOX (SINGLE THROW DUAL BALL VALVE) WITH STAND PIPE FITTING LOCATED TO THE SIDE OF THE WASHER.

(4) PROVIDE ALL PIPES, FITTINGS AND ACCESSORIES FOR A COMPLETE DISHWASHER INSTALLATION.

(5) PROVIDE TRAP PRIMER AND LINE SIZE CLEAN OUT,

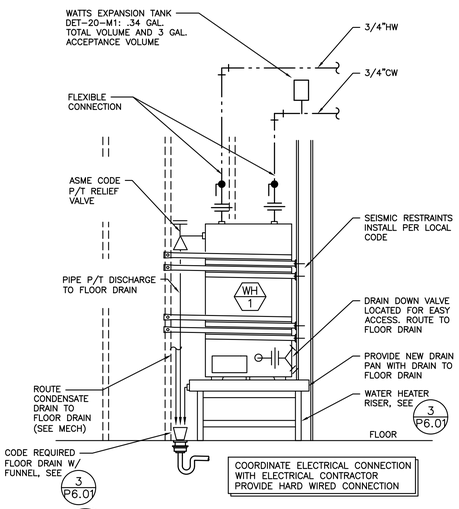
(6) PROVIDE CONNECTION FOR DOWNSPOUTS BY OTHERS..



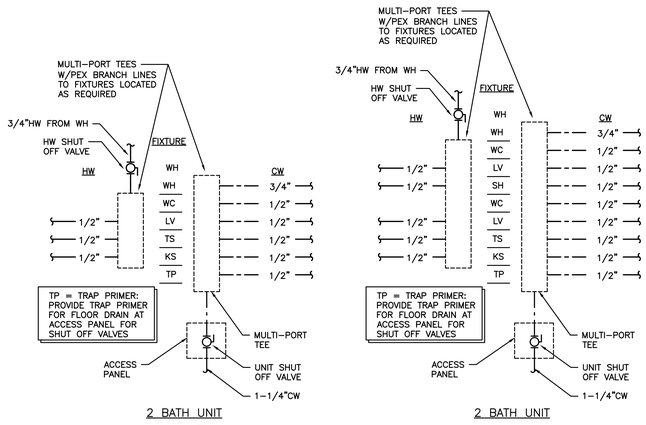
1 P0.01 COLD WATER RISER — SCALE: DIAGRAMATIC

2 P0.01 FIRE WATER RISER — SCALE: DETAIL

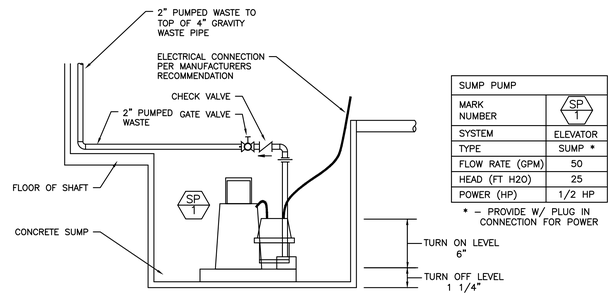
WATER HEATER	
MARK NUMBER	WH 1
TYPE	ELECTRIC
CAPACITY (GAL)	40
KW	4.5
ELEC REQ	4.5KW
RECOVERY CAP. (GPH)	21
DESIGN WEIGHT (LBS)	561
BASIS OF DESIGN – AO SMITH	ENT-50



4 P0.01 ELECTRIC WATER HEATER — SCALE: DIAGRAMATIC



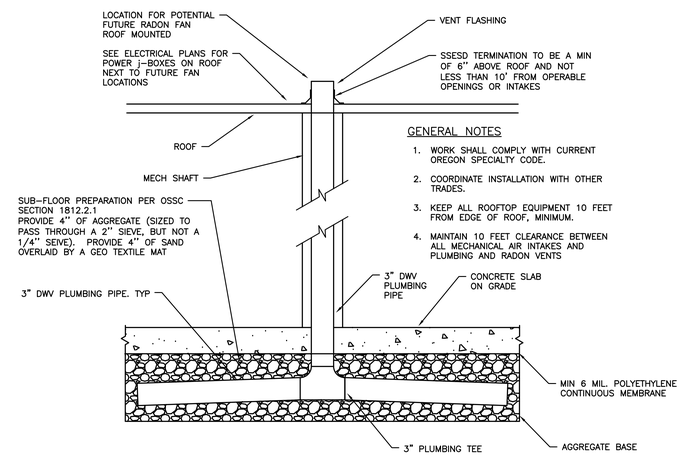
3 P0.01 UNIT DISTRIBUTION — SCALE: DIAGRAMATIC



SUMP PUMP	
MARK NUMBER	SP 1
SYSTEM	ELEVATOR
TYPE	SUMP *
FLOW RATE (GPM)	50
HEAD (FT H2O)	25
POWER (HP)	1/2 HP

* – PROVIDE W/ PLUG IN CONNECTION FOR POWER

5 P0.01 ELEVATOR SUMP PUMP — SCALE: DIAGRAMATIC



GENERAL NOTES

1. WORK SHALL COMPLY WITH CURRENT OREGON SPECIALTY CODE.
2. COORDINATE INSTALLATION WITH OTHER TRADES.
3. KEEP ALL ROOFTOP EQUIPMENT 10 FEET FROM EDGE OF ROOF, MINIMUM.
4. MAINTAIN 10 FEET CLEARANCE BETWEEN ALL MECHANICAL AIR INTAKES AND PLUMBING AND RADON VENTS

NOTE: PROVIDE ONE VENT PER 2000 SF OF CONTINUOUS BUILDING SUB-SLAB AREA.

6 P0.01 RADON VENTING — SCALE: DIAGRAMATIC

3-16-22

REGISTERED PROFESSIONAL ENGINEER — OREGON — JULY 15, 2005 — MARK R. DENYER — 54,607 — EXPIRES: 31DEC23

MEA INC. Consulting Engineers
2007 S.E. Ash St
Portland, OR 97214
PHN. (503) 234-0548
FAX: (503) 234-0577
WWW.MEA-ENG.COM
CONTACT: Mark Denyer

Leeb Architects L.L.C.
308 SW First Avenue
Suite 200
Portland, Or 97204
Phone: 503.228.3486
Fax: 503.228.2907
leebarc.com

Project Title: NORTHBOUND 30 COLLABORATIVE

NW 29TH AVE PORTLAND, OREGON 97210

Drawing Title: BUILDING 5 - LEGEND SCHEDULES AND DETAILS

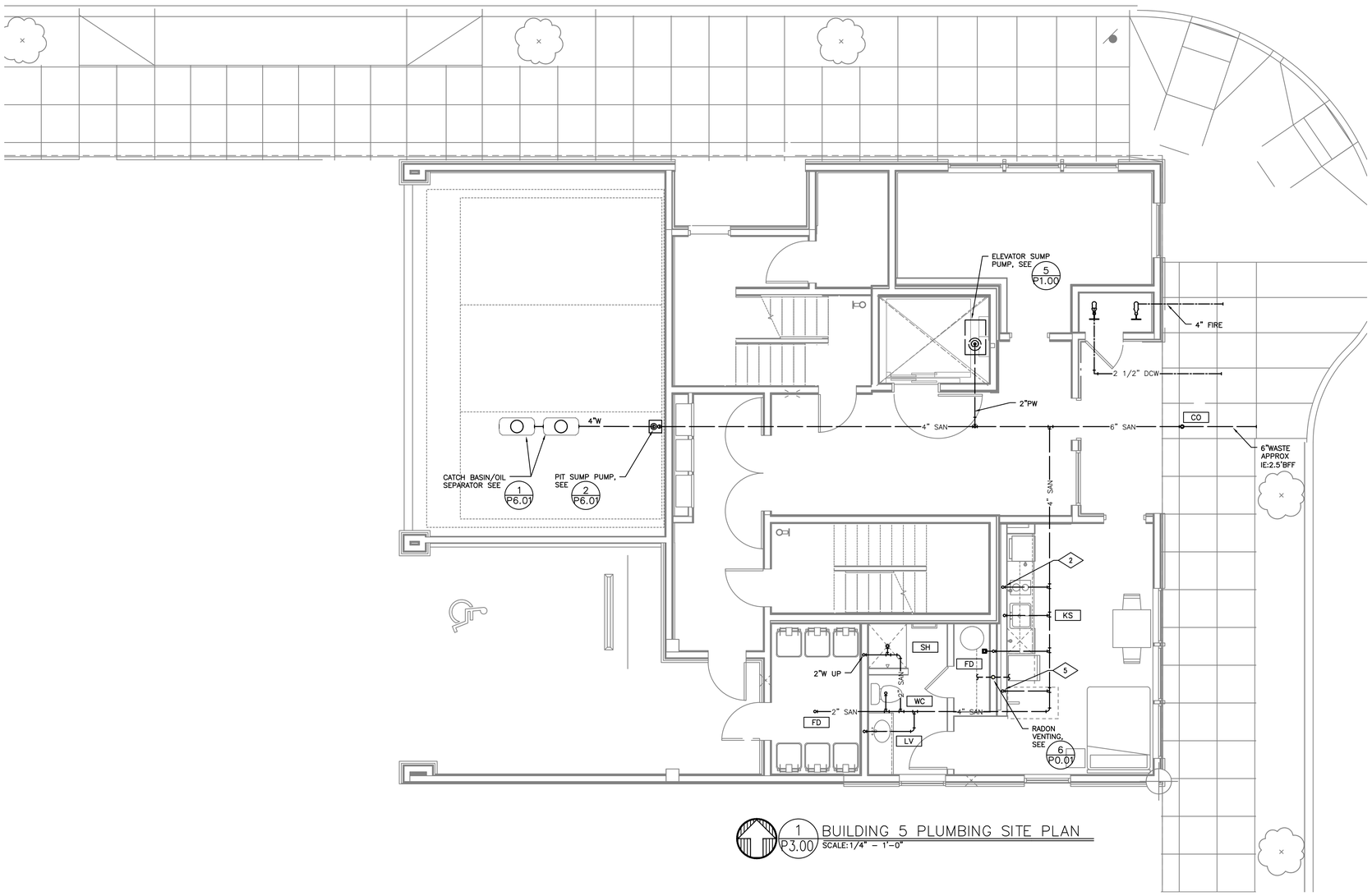
Revision:

Date: 06-01-22

Drawn by: MD

Project No.: A2112

P5-1.00



1 P3.00 BUILDING 5 PLUMBING SITE PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

DRAINAGE CONNECTIONS SHALL NOT BE MADE INTO A DRAINAGE PIPING SYSTEM WITHIN 8 FT OF ANY VERTICAL TO HORIZONTAL CHANGE OF DIRECTION OF A STACK CONTAINING A SUDS– PRODUCING FIXTURE.
EXCEPTION: STACKS RECEIVING THE DISCHARGE FROM LESS THEN 3 STORIES OF PLUMBING FIXTURES

HEAT TRACE (FREEZE PROTECTION) ALL PIPING SUBJECTED TO FREEZING CONDITIONS. ALL HEAT TRACED PIPE TO BE INSULATED.

HEAT TRACE WASTE TRAPS, INSULATE WASTE PIPING EXPOSED TO FREEZING CONDITIONS

ROUTE ALL HVAC UNIT CONDENSATE DRAINS TO AN APPROVED LOCATION (OPTIONS LISTED BELOW)

- ROUTE ALL CONDENSATES DOWN IN WALLS IN COMMON DRAIN SYSTEM AND ROUTE TO HUB DRAINS OR MOP SINKS – CONTRACTOR TO SIZE DRAIN SYSTEM BASED ON NUMBER OF CONNECTED UNITS.
- PROVIDE CONDENSATE PUMPS ON ALL UNITS THAT ARE NOT GRAVITY DRAINED.

ROUTE VENTS FROM FLOOR DRAINS/SINKS BELOW SLAB AND UP ON/IN A WALL TO VENT STACKS ABOVE. (ROUTE INDIVIDUAL VENTS UNTIL ABOVE FLOOD LINE OF FIXTURE).

RISER DETAILS:

SEE SHEET X P4.01 FOR RISER DIAGRAMS

<-> = RISER NUMBER

KEYED NOTES:

1 — SEE CIVIL FOR CONTINUATION

2 — SEE TYPICAL DOMESTIC SUPPLY RISER DIAGRAM 1/P0.01. PROVIDE ACCESS PANEL W/ UNIT SHUT–OFFS, TO BE LOCATED IN CLOSET OR BATHROOM CEILING.

3 — WET VENT BATHROOM FIXTURE GROUP.

4 — SEE UNIT DISTRIBUTION DETAIL 3/P0.01. PROVIDE ACCESS PANEL AS REQ'D.

5 — ROUTE RADON PIPING UP TO ABOVE ROOF. SEE RADON PIPING DETAIL 6/P0.01.

6 — ROUTE 3/4" CONDENSATE DRAINS TO FLOOR DRAINS IN WATER HEATER ROOMS. SEE MECHANICAL PLANS FOR EQUIPMENT LOCATIONS.

7 — ROUTE VENT UP AND CONNECT TO 2" VENT RISER AT 1ST FLOOR.

8 — PENETRATION THRU CLT TO BE 1/2" LARGER THAN PENETRATING PIPE. COORDINATE CLT PENETRATIONS WITH GENERAL CONTRACTOR PRIOR TO STARTING WORK.

3-16-22

REGISTERED PROFESSIONAL ENGINEER
54,607
OREGON
JULY 11, 2006
MARK R. DENYER
EXPIRES: 31DEC23

MFIA INC. Consulting Engineers
2007 S.E. Ash St
Portland, OR 97214
PHN: (503) 234-0548
FAX: (503) 234-0577
WWW.MFIA-ENG.COM
CONTACT: Mark Denyer

Leeb Architects L.L.C. 308 SW First Avenue Suite 200 Portland, Or 97204 Phone: 503.228.3846 Fax: 503.228.2907 leebarc.com

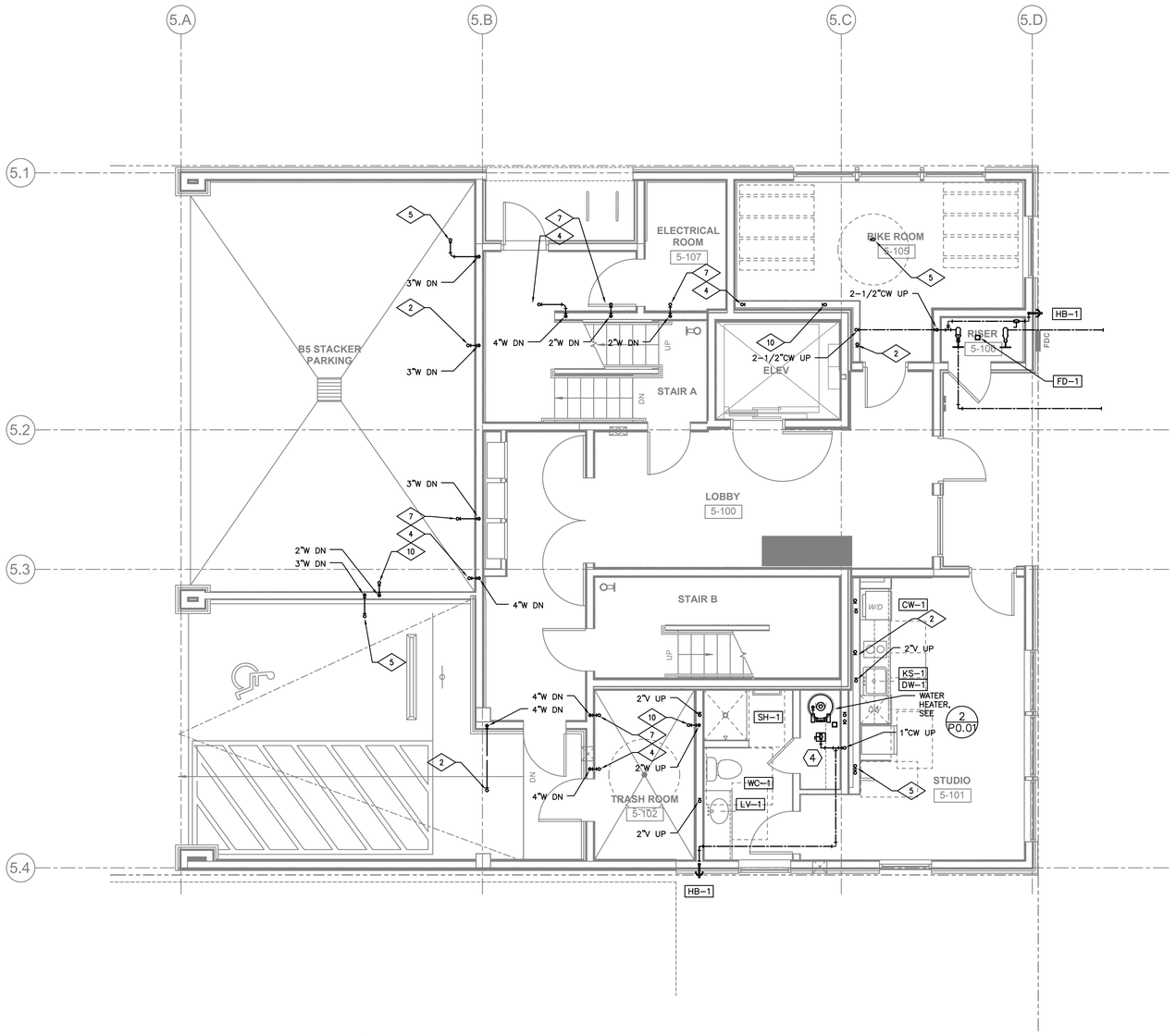
Project Title:
NORTHBOUND 30 COLLABORATIVE
NW 29TH AVE PORTLAND, OREGON 97210

Drawing Title:
BUILDING 5 - PLUMBING SITE PLAN

Revision:

Date: 06-01-22
Drawn by: MD
Project No.: A2112

P5-3.00



1 / P3.01 BLDG 5 LVL 1 PLUMBING PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

DRAINAGE CONNECTIONS SHALL NOT BE MADE INTO A DRAINAGE PIPING SYSTEM WITHIN 8 FT OF ANY VERTICAL TO HORIZONTAL CHANGE OF DIRECTION OF A STACK CONTAINING A SUDS– PRODUCING FIXTURE.
EXCEPTION: STACKS RECEIVING THE DISCHARGE FROM LESS THEN 3 STORIES OF PLUMBING FIXTURES

HEAT TRACE (FREEZE PROTECTION) ALL PIPING SUBJECTED TO FREEZING CONDITIONS. ALL HEAT TRACED PIPE TO BE INSULATED.

HEAT TRACE WASTE TRAPS, INSULATE WASTE PIPING EXPOSED TO FREEZING CONDITIONS

ROUTE ALL HVAC UNIT CONDENSATE DRAINS TO AN APPROVED LOCATION (OPTIONS LISTED BELOW)

- ROUTE ALL CONDENSATES DOWN IN WALLS IN COMMON DRAIN SYSTEM AND ROUTE TO HUB DRAINS OR MOP SINKS – CONTRACTOR TO SIZE DRAIN SYSTEM BASED ON NUMBER OF CONNECTED UNITS.
- PROVIDE CONDENSATE PUMPS ON ALL UNITS THAT ARE NOT GRAVITY DRAINED.

ROUTE VENTS FROM FLOOR DRAINS/SINKS BELOW SLAB AND UP ON/IN A WALL TO VENT STACKS ABOVE. (ROUTE INDIVIDUAL VENTS UNTIL ABOVE FLOOD LINE OF FIXTURE).

RISER DETAILS:

SEE SHEET X / P4.01 FOR RISER DIAGRAMS

<-> = RISER NUMBER

KEYED NOTES:

1. — SEE CIVIL FOR CONTINUATION
2. — SEE TYPICAL DOMESTIC SUPPLY RISER DIAGRAM 1/P0.01. PROVIDE ACCESS PANEL W/ UNIT SHUT–OFFS, TO BE LOCATED IN CLOSET OR BATHROOM CEILING.
3. — WET VENT BATHROOM FIXTURE GROUP.
4. — SEE UNIT DISTRIBUTION DETAIL 3/P0.01. PROVIDE ACCESS PANEL AS REQ'D.
5. — ROUTE RADON PIPING UP TO ABOVE ROOF. SEE RADON PIPING DETAIL 6/P0.01.
6. — ROUTE 3/4" CONDENSATE DRAINS TO FLOOR DRAINS IN WATER HEATER ROOMS. SEE MECHANICAL PLANS FOR EQUIPMENT LOCATIONS.
7. — ROUTE VENT UP AND CONNECT TO 2" VENT RISER AT 1ST FLOOR.
8. — PENETRATION THRU CLT TO BE 1/2" LARGER THAN PENETRATING PIPE. COORDINATE CLT PENETRATIONS WITH GENERAL CONTRACTOR PRIOR TO STARTING WORK.

3-16-22

REGISTERED PROFESSIONAL ENGINEER
54,607
OREGON
JULY 11, 2006
MARK R. DENYER
EXPIRES: 31DEC23

MFIA INC. Consulting Engineers
2007 S.E. Ash St
Portland, OR 97214
PHN. (503) 234-0548
FAX: (503) 234-0577
WWW.MFIA-ENG.COM
CONTACT: Mark Denyer

Leeb Architects L.L.C.
308 SW First Avenue
Suite 200
Portland, Or 97204
Phone: 503.228.3846
Fax: 503.228.2907
leebarc.com

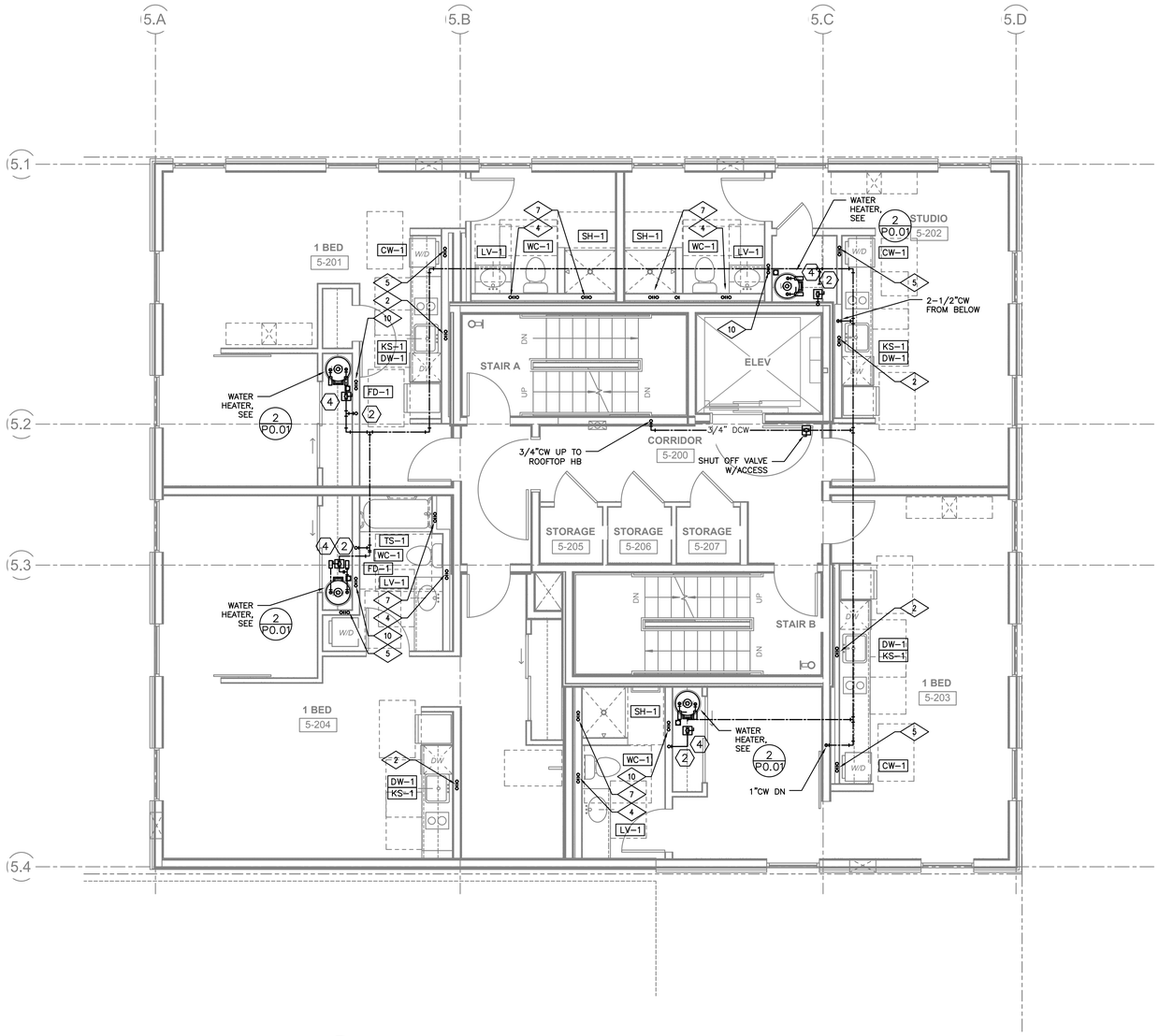
Project Title:
NORTHBOUND 30 COLLABORATIVE
NW 29TH AVE PORTLAND, OREGON 97210

Drawing Title:
BUILDING 5 LEVEL 1 PLUMBING PLAN

Revision:

Date: 06-01-22
Drawn by: MD
Project No.: A2112

P5-3.01



1 P3.02 BLDG 5 LVL 2 PLUMBING PLAN
SCALE:1/4" = 1'-0"

GENERAL NOTES:

DRAINAGE CONNECTIONS SHALL NOT BE MADE INTO A DRAINAGE PIPING SYSTEM WITHIN 8 FT OF ANY VERTICAL TO HORIZONTAL CHANGE OF DIRECTION OF A STACK CONTAINING A SUDS– PRODUCING FIXTURE.
EXCEPTION: STACKS RECEIVING THE DISCHARGE FROM LESS THEN 3 STORIES OF PLUMBING FIXTURES

HEAT TRACE (FREEZE PROTECTION) ALL PIPING SUBJECTED TO FREEZING CONDITIONS. ALL HEAT TRACED PIPE TO BE INSULATED.

HEAT TRACE WASTE TRAPS, INSULATE WASTE PIPING EXPOSED TO FREEZING CONDITIONS

ROUTE ALL HVAC UNIT CONDENSATE DRAINS TO AN APPROVED LOCATION (OPTIONS LISTED BELOW)

- ROUTE ALL CONDENSATES DOWN IN WALLS IN COMMON DRAIN SYSTEM AND ROUTE TO HUB DRAINS OR MOP SINKS – CONTRACTOR TO SIZE DRAIN SYSTEM BASED ON NUMBER OF CONNECTED UNITS.
- PROVIDE CONDENSATE PUMPS ON ALL UNITS THAT ARE NOT GRAVITY DRAINED.

ROUTE VENTS FROM FLOOR DRAINS/SINKS BELOW SLAB AND UP ON/IN A WALL TO VENT STACKS ABOVE. (ROUTE INDIVIDUAL VENTS UNTIL ABOVE FLOOD LINE OF FIXTURE).

RISER DETAILS:

SEE SHEET X P4.01 FOR RISER DIAGRAMS

– = RISER NUMBER

KEYED NOTES:

1. — SEE CIVIL FOR CONTINUATION
2. — SEE TYPICAL DOMESTIC SUPPLY RISER DIAGRAM 1/P0.01. PROVIDE ACCESS PANEL W/ UNIT SHUT–OFFS, TO BE LOCATED IN CLOSET OR BATHROOM CEILING.
3. — WET VENT BATHROOM FIXTURE GROUP.
4. — SEE UNIT DISTRIBUTION DETAIL 3/P0.01. PROVIDE ACCESS PANEL AS REQ'D.
5. — ROUTE RADON PIPING UP TO ABOVE ROOF. SEE RADON PIPING DETAIL 6/P0.01.
6. — ROUTE 3/4" CONDENSATE DRAINS TO FLOOR DRAINS IN WATER HEATER ROOMS. SEE MECHANICAL PLANS FOR EQUIPMENT LOCATIONS.
7. — ROUTE VENT UP AND CONNECT TO 2" VENT RISER AT 1ST FLOOR.
8. — PENETRATION THRU CLT TO BE 1/2" LARGER THAN PENETRATING PIPE. COORDINATE CLT PENETRATIONS WITH GENERAL CONTRACTOR PRIOR TO STARTING WORK.

3-16-22

REGISTERED PROFESSIONAL ENGINEER
54,607
OREGON
JULY 15, 2005
MARK R. DENYER
EXPIRES: 31DEC23

MFA INC. Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PHN. (503) 234-0548
FAX: (503) 234-0577
WWW.MFA-ENG.COM
CONTACT: Mark Denyer

Leeb Architects L.L.C. 308 SW First Avenue Suite 200 Portland, Or 97204 Phone: 503.228.3846 Fax: 503.228.2907 leebarc.com

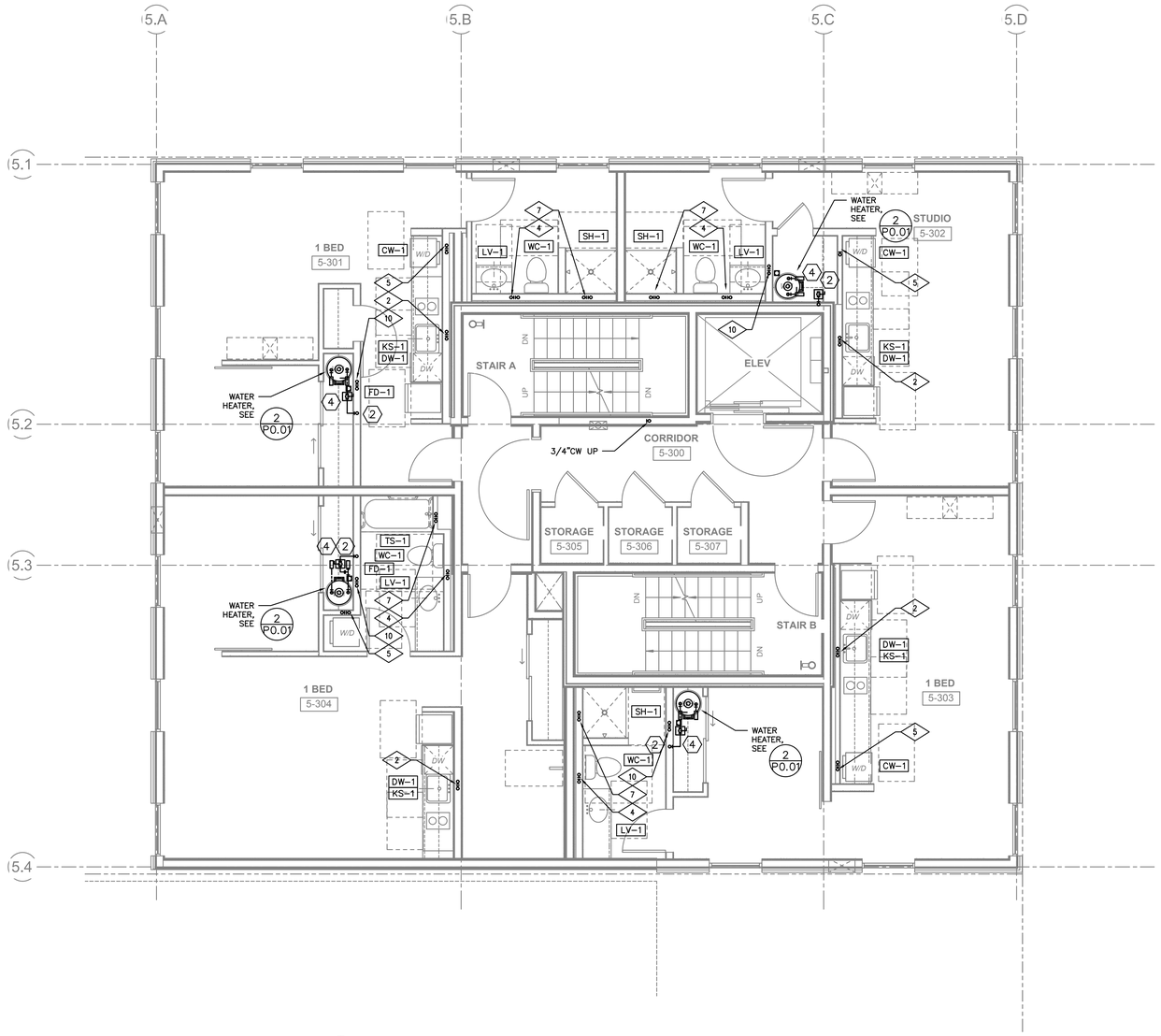
Project Title: NORTHBOUND 30 COLLABORATIVE
NW 29TH AVE PORTLAND, OREGON 97210

Drawing Title: BUILDING 5 LEVEL 2 PLUMBING PLAN

Revision:

Date: 06-01-22
Drawn by: MD
Project No.: A2112

P5-3.02



1 BLDG 5 LVL 3 PLUMBING PLAN
P3.03 SCALE: 1/4" = 1'-0"

GENERAL NOTES:

DRAINAGE CONNECTIONS SHALL NOT BE MADE INTO A DRAINAGE PIPING SYSTEM WITHIN 8 FT OF ANY VERTICAL TO HORIZONTAL CHANGE OF DIRECTION OF A STACK CONTAINING A SUDS– PRODUCING FIXTURE.
EXCEPTION: STACKS RECEIVING THE DISCHARGE FROM LESS THEN 3 STORIES OF PLUMBING FIXTURES

HEAT TRACE (FREEZE PROTECTION) ALL PIPING SUBJECTED TO FREEZING CONDITIONS. ALL HEAT TRACED PIPE TO BE INSULATED.

HEAT TRACE WASTE TRAPS, INSULATE WASTE PIPING EXPOSED TO FREEZING CONDITIONS

ROUTE ALL HVAC UNIT CONDENSATE DRAINS TO AN APPROVED LOCATION (OPTIONS LISTED BELOW)

- ROUTE ALL CONDENSATES DOWN IN WALLS IN COMMON DRAIN SYSTEM AND ROUTE TO HUB DRAINS OR MOP SINKS – CONTRACTOR TO SIZE DRAIN SYSTEM BASED ON NUMBER OF CONNECTED UNITS.
- PROVIDE CONDENSATE PUMPS ON ALL UNITS THAT ARE NOT GRAVITY DRAINED.

ROUTE VENTS FROM FLOOR DRAINS/SINKS BELOW SLAB AND UP ON/IN A WALL TO VENT STACKS ABOVE. (ROUTE INDIVIDUAL VENTS UNTIL ABOVE FLOOD LINE OF FIXTURE).

RISER DETAILS:

SEE SHEET X/P4.01 FOR RISER DIAGRAMS

◇– = RISER NUMBER

KEYED NOTES:

1. — SEE CIVIL FOR CONTINUATION
2. — SEE TYPICAL DOMESTIC SUPPLY RISER DIAGRAM 1/P0.01. PROVIDE ACCESS PANEL W/ UNIT SHUT–OFFS, TO BE LOCATED IN CLOSET OR BATHROOM CEILING.
3. — WET VENT BATHROOM FIXTURE GROUP.
4. — SEE UNIT DISTRIBUTION DETAIL 3/P0.01. PROVIDE ACCESS PANEL AS REQ'D.
5. — ROUTE RADON PIPING UP TO ABOVE ROOF. SEE RADON PIPING DETAIL 6/P0.01.
6. — ROUTE 3/4" CONDENSATE DRAINS TO FLOOR DRAINS IN WATER HEATER ROOMS. SEE MECHANICAL PLANS FOR EQUIPMENT LOCATIONS.
7. — ROUTE VENT UP AND CONNECT TO 2" VENT RISER AT 1ST FLOOR.
8. — PENETRATION THRU CLT TO BE 1/2" LARGER THAN PENETRATING PIPE. COORDINATE CLT PENETRATIONS WITH GENERAL CONTRACTOR PRIOR TO STARTING WORK.

3-16-22

REGISTERED PROFESSIONAL ENGINEER
54,607
OREGON
JULY 11, 2005
MARK R. DENYER
EXPIRES: 31DEC23

MFA INC. Consulting Engineers
2007 S.E. Ash St
Portland, OR 97214
PHN. (503) 234-0548
FAX: (503) 234-0577
WWW.MFA-ENG.COM
CONTACT: Mark Denyer

Leeb Architects L.L.C. 308 SW First Avenue Suite 200 Portland, Or 97204 Phone: 503.228.3846 Fax: 503.228.2907 leebarc.com

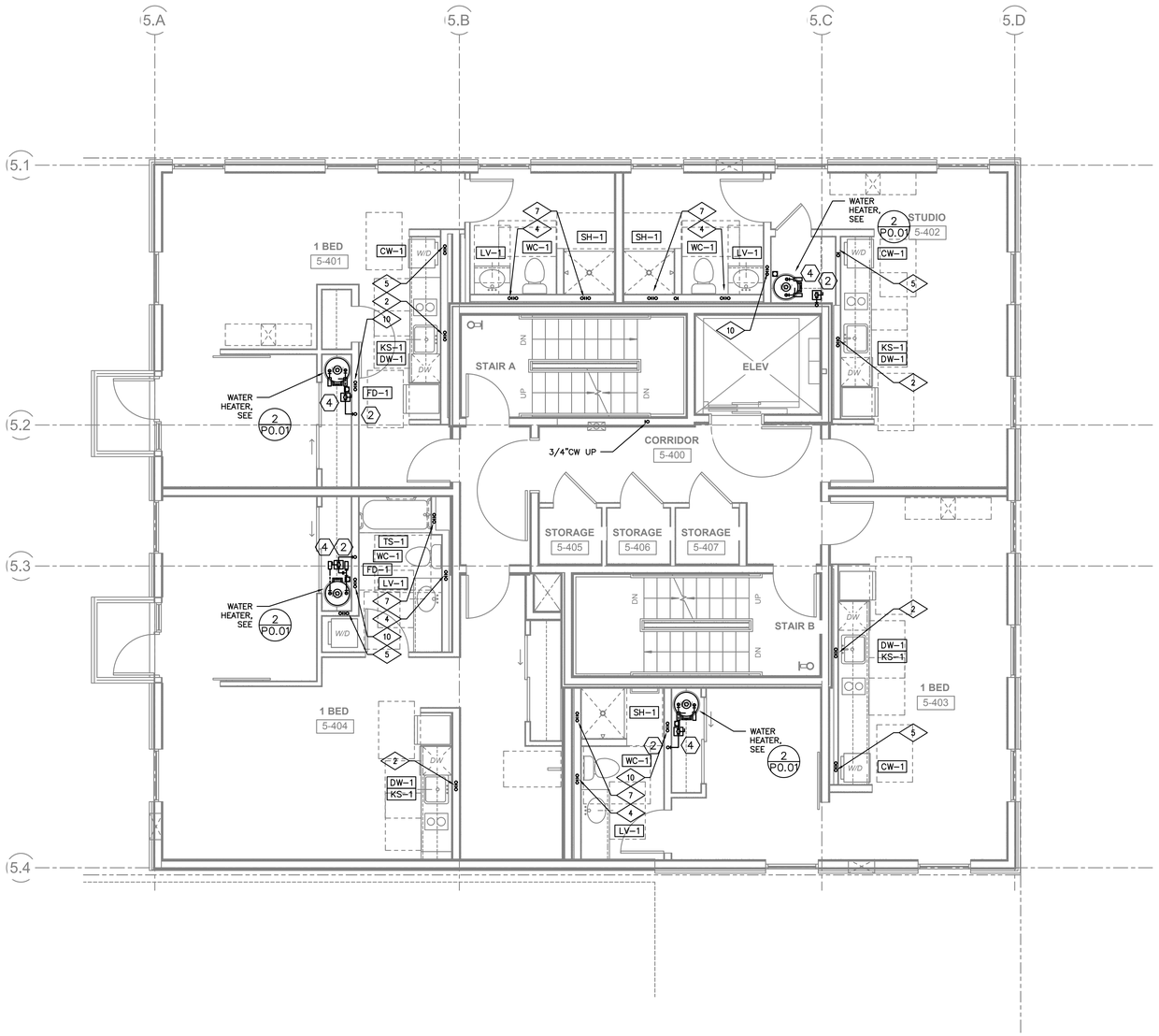
Project Title:
NORTHBOUND 30 COLLABORATIVE
NW 29TH AVE PORTLAND, OREGON 97210

Drawing Title:
BUILDING 5 LEVEL 3 PLUMBING PLAN

Revision:

Date: 06-01-22
Drawn by: MD
Project No: A2112

P5-3.03



1 P3.04 BLDG 5 LVL 4 PLUMBING PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

DRAINAGE CONNECTIONS SHALL NOT BE MADE INTO A DRAINAGE PIPING SYSTEM WITHIN 8 FT OF ANY VERTICAL TO HORIZONTAL CHANGE OF DIRECTION OF A STACK CONTAINING A SUDS– PRODUCING FIXTURE.
EXCEPTION: STACKS RECEIVING THE DISCHARGE FROM LESS THEN 3 STORIES OF PLUMBING FIXTURES

HEAT TRACE (FREEZE PROTECTION) ALL PIPING SUBJECTED TO FREEZING CONDITIONS. ALL HEAT TRACED PIPE TO BE INSULATED.

HEAT TRACE WASTE TRAPS, INSULATE WASTE PIPING EXPOSED TO FREEZING CONDITIONS

ROUTE ALL HVAC UNIT CONDENSATE DRAINS TO AN APPROVED LOCATION (OPTIONS LISTED BELOW)

- ROUTE ALL CONDENSATES DOWN IN WALLS IN COMMON DRAIN SYSTEM AND ROUTE TO HUB DRAINS OR MOP SINKS – CONTRACTOR TO SIZE DRAIN SYSTEM BASED ON NUMBER OF CONNECTED UNITS.
- PROVIDE CONDENSATE PUMPS ON ALL UNITS THAT ARE NOT GRAVITY DRAINED.

ROUTE VENTS FROM FLOOR DRAINS/SINKS BELOW SLAB AND UP ON/IN A WALL TO VENT STACKS ABOVE. (ROUTE INDIVIDUAL VENTS UNTIL ABOVE FLOOD LINE OF FIXTURE).

RISER DETAILS:

SEE SHEET X P4.01 FOR RISER DIAGRAMS

<- > = RISER NUMBER

KEYED NOTES:

1. — SEE CIVIL FOR CONTINUATION
2. — SEE TYPICAL DOMESTIC SUPPLY RISER DIAGRAM 1/P0.01. PROVIDE ACCESS PANEL W/ UNIT SHUT–OFFS, TO BE LOCATED IN CLOSET OR BATHROOM CEILING.
3. — WET VENT BATHROOM FIXTURE GROUP.
4. — SEE UNIT DISTRIBUTION DETAIL 3/P0.01. PROVIDE ACCESS PANEL AS REQ'D.
5. — ROUTE RADON PIPING UP TO ABOVE ROOF. SEE RADON PIPING DETAIL 6/P0.01.
6. — ROUTE 3/4" CONDENSATE DRAINS TO FLOOR DRAINS IN WATER HEATER ROOMS. SEE MECHANICAL PLANS FOR EQUIPMENT LOCATIONS.
7. — ROUTE VENT UP AND CONNECT TO 2" VENT RISER AT 1ST FLOOR.
8. — PENETRATION THRU CLT TO BE 1/2" LARGER THAN PENETRATING PIPE. COORDINATE CLT PENETRATIONS WITH GENERAL CONTRACTOR PRIOR TO STARTING WORK.

3-16-22

REGISTERED PROFESSIONAL ENGINEER
54,607
OREGON
JULY 11, 2006
MARK R. DENYER
EXPIRES: 31DEC23

MFIA INC. Consulting Engineers
2007 S.E. Ash St
Portland, OR 97214
PHN: (503) 234-0548
FAX: (503) 234-0577
WWW.MFIA-ENG.COM
CONTACT: Mark Denyer

Leeb Architects L.L.C. 308 SW First Avenue Suite 200 Portland, Or 97204 Phone: 503.228.3846 Fax: 503.228.2907 leebarc.com

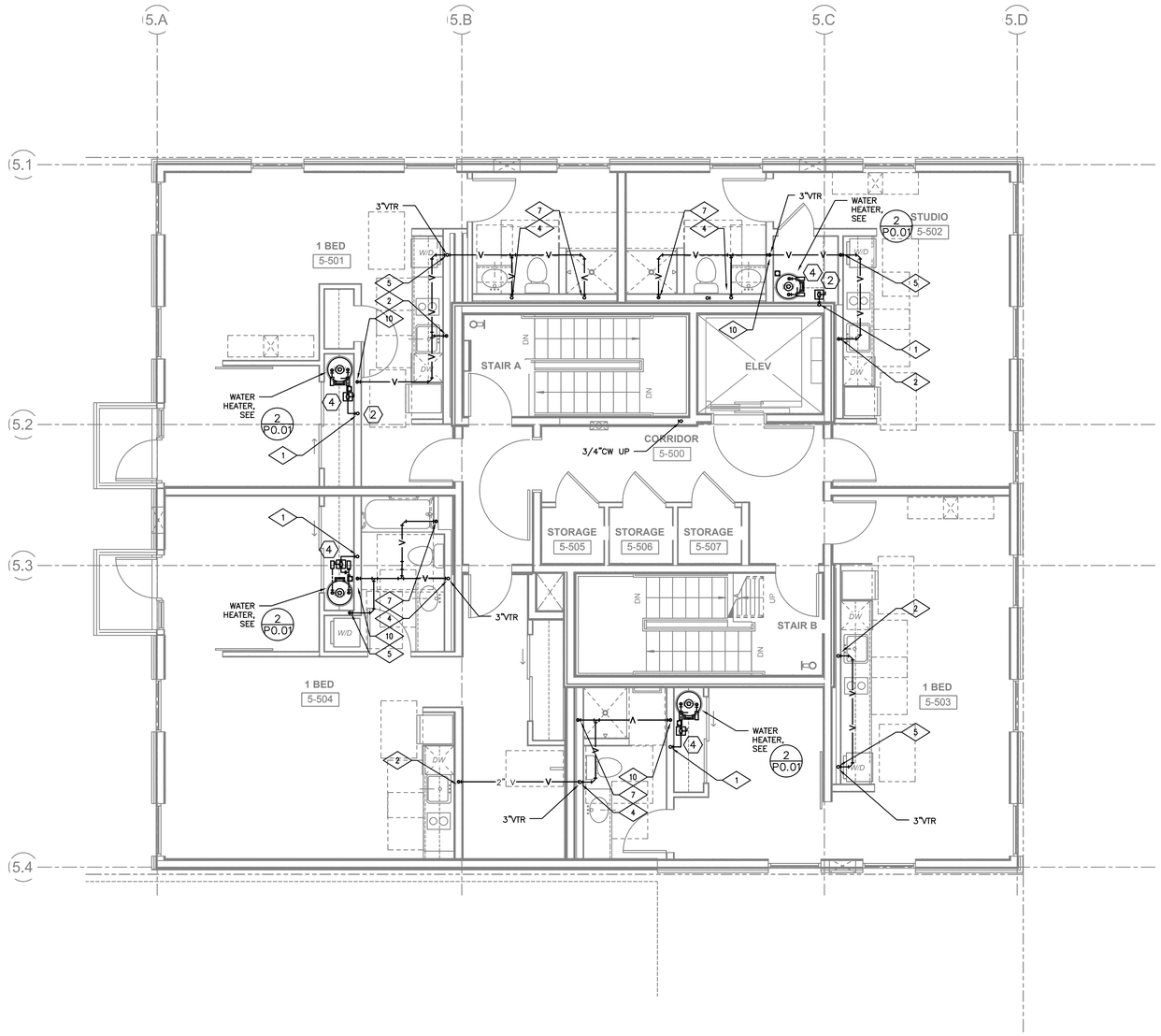
Project Title:
NORTHBOUND 30 COLLABORATIVE
NW 29TH AVE PORTLAND, OREGON 97210

Drawing Title:
BUILDING 5 LEVEL 4 PLUMBING PLAN

Revision:

Date: 06-01-22
Drawn by: MD
Project No.: A2112

P5-3.04



1 P3.05 BLDG 5 LVL 5 PLUMBING PLAN
SCALE: 1/4" = 1'-0"

KEYED NOTES:

1 — COMBINE VENT RISERS BELOW ROOF AND VENT THROUGH ROOF.

3-16-22

REGISTERED PROFESSIONAL ENGINEER
54,607
OREGON
JULY 11, 2005
MARK R. DENYER
EXPIRES: 31DEC23

MFA INC. Consulting Engineers
2007 S.E. Ash St
Portland, OR 97214
PHN. (503) 234-0548
FAX: (503) 234-0577
WWW.MFA-ENG.COM
CONTACT: Mark Denyer

Leeb Architects L.L.C. 308 SW First Avenue Suite 200 Portland, Or 97204 Phone: 503.228.3846 Fax: 503.228.2907 leebarc.com

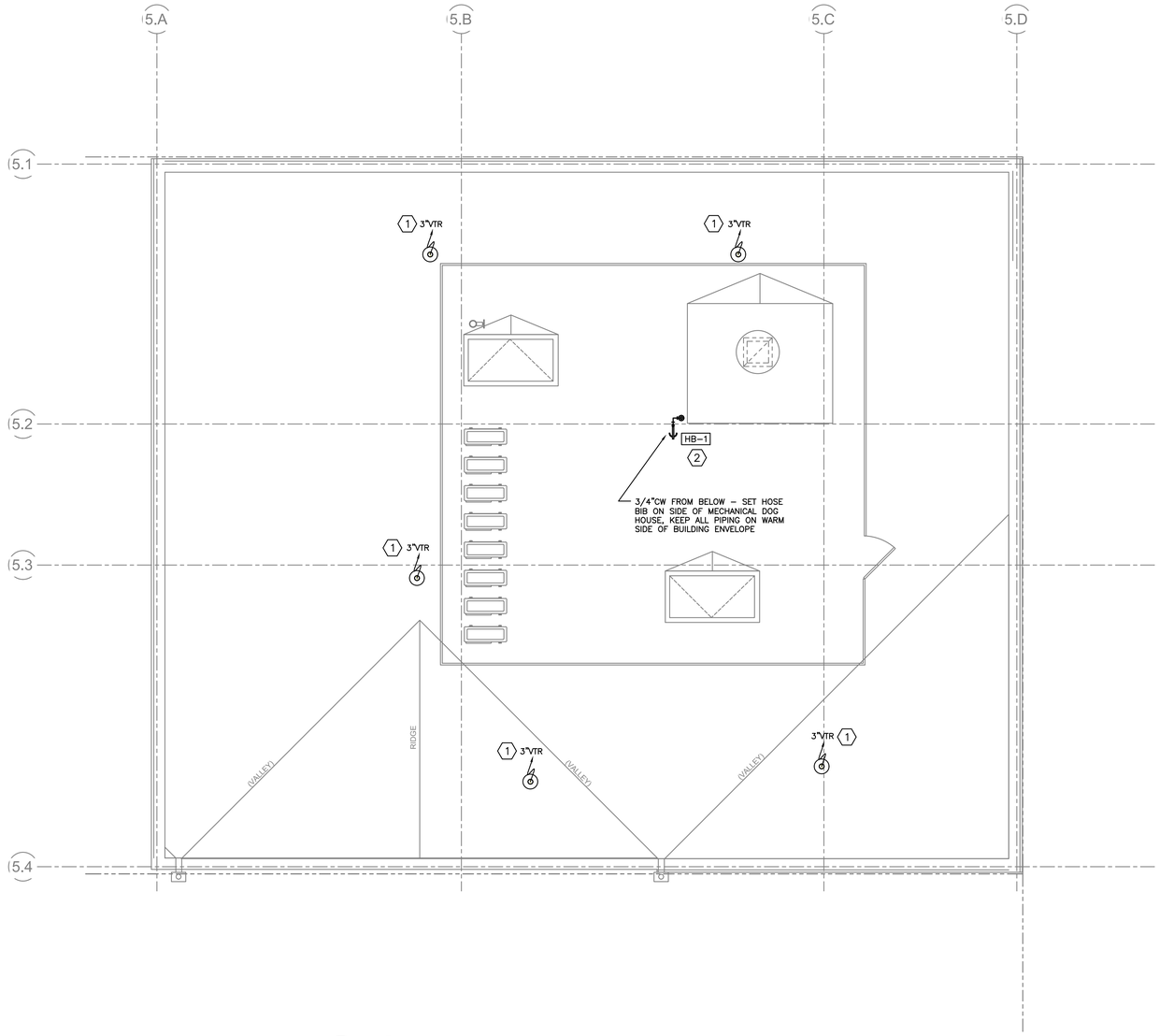
Project Title:
NORTHBOUND 30 COLLABORATIVE
NW 29TH AVE PORTLAND, OREGON 97210

Drawing Title:
BUILDING 5 LEVEL 5 PLUMBING PLAN

Revision:

Date: 06-01-22
Drawn by: MD
Project No.: A2112

P5-3.05



1 P3.06 BLDG 5 ROOF PLUMBING PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. WORK SHALL COMPLY WITH CURRENT OREGON SPECIALTY CODE.
2. COORDINATE INSTALLATION WITH OTHER TRADES.
3. KEEP ALL ROOFTOP EQUIPMENT 10 FEET FROM EDGE OF ROOF, MINIMUM.
4. MAINTAIN 10 FEET CLEARANCE BETWEEN ALL MECHANICAL AIR INTAKES AND PLUMBING AND RADON VENTS

KEYED NOTES:

(1) — OFFSET/COMBINE VENT RISERS BELOW ROOF. VENT THROUGH ROOF.

(2) — COORDINATE ROOF TOP HOSE BIB WITH MECHANICAL DOG HOUSE.

3-16-22

REGISTERED PROFESSIONAL ENGINEER
54,607
OREGON
JULY 11, 2006
MARK R. DENYER
EXPIRES: 31DEC23

MFIA INC. Consulting Engineers
2007 S.E. Ash St
Portland, OR 97214
PHN: (503) 234-0548
FAX: (503) 234-0577
WWW.MFIA-ENG.COM
CONTACT: Mark Denyer

Leeb Architects L.L.C. 308 SW First Avenue Suite 200 Portland, Or 97204 Phone: 503.228.3846 Fax: 503.228.2907 leebarc.com

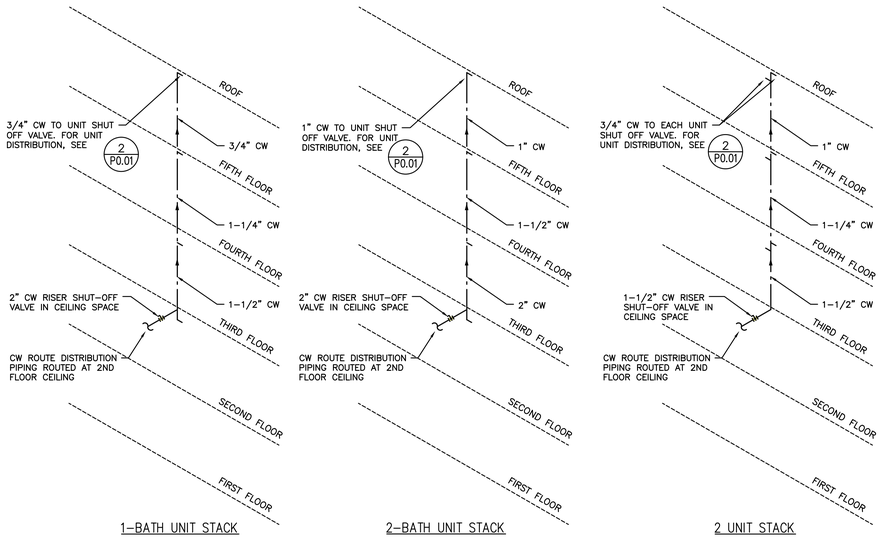
Project Title:
NORTHBOUND 30 COLLABORATIVE
NW 237H AVE PORTLAND, OREGON 97210

Drawing Title:
BUILDING 5 ROOF PLUMBING PLAN

Revision:

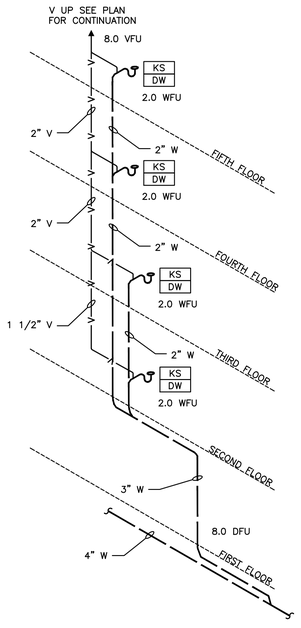
Date: 06-01-22
Drawn by: MD
Project No.: A2112

P5-3.06



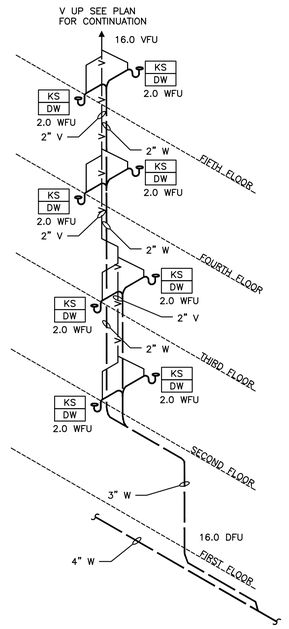
1-BATH UNIT STACK | 2-BATH UNIT STACK | 2 UNIT STACK

1 P4.01 TYPICAL DOMESTIC WATER RISER "1"
SCALE: DIAGRAMATIC



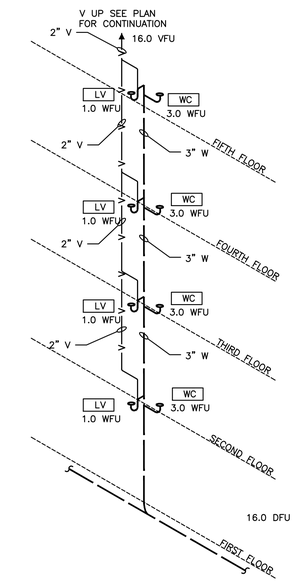
NOTE: DRAINAGE CONNECTIONS SHALL NOT BE MADE INTO A DRAINAGE PIPING SYSTEM WITHIN 8 FT OF ANY VERTICAL TO HORIZONTAL CHANGE OF DIRECTION OF A STACK CONTAINING A SUDS– PRODUCING FIXTURE.
EXCEPTION: STACKS RECEIVING THE DISCHARGE FROM LESS THEN 3 STORIES OF PLUMBING FIXTURES.

2 P4.01 RISER "2" TYPICAL
NO SCALE
KS/DW = 2.0DFU



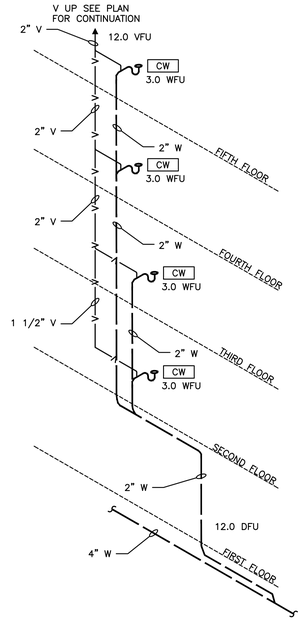
NOTE: DRAINAGE CONNECTIONS SHALL NOT BE MADE INTO A DRAINAGE PIPING SYSTEM WITHIN 8 FT OF ANY VERTICAL TO HORIZONTAL CHANGE OF DIRECTION OF A STACK CONTAINING A SUDS– PRODUCING FIXTURE.
EXCEPTION: STACKS RECEIVING THE DISCHARGE FROM LESS THEN 3 STORIES OF PLUMBING FIXTURES.

3 P4.01 RISER "3" TYPICAL
NO SCALE
KS/DW = 2.0DFU



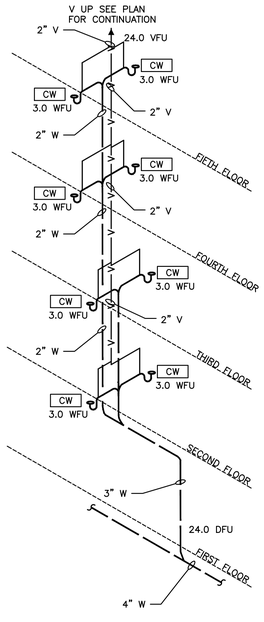
NOTE: DRAINAGE CONNECTIONS SHALL NOT BE MADE INTO A DRAINAGE PIPING SYSTEM WITHIN 8 FT OF ANY VERTICAL TO HORIZONTAL CHANGE OF DIRECTION OF A STACK CONTAINING A SUDS– PRODUCING FIXTURE.
EXCEPTION: STACKS RECEIVING THE DISCHARGE FROM LESS THEN 3 STORIES OF PLUMBING FIXTURES.

4 P4.01 RISER "4" TYPICAL
NO SCALE
WC/LV = 4.0DFU



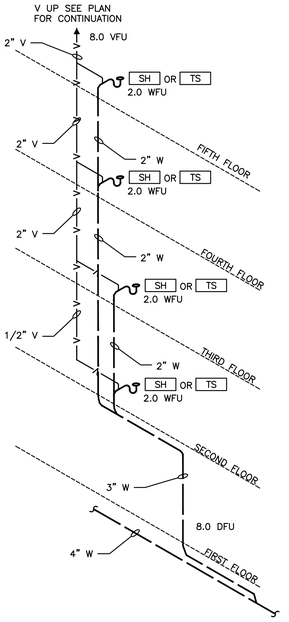
NOTE: DRAINAGE CONNECTIONS SHALL NOT BE MADE INTO A DRAINAGE PIPING SYSTEM WITHIN 8 FT OF ANY VERTICAL TO HORIZONTAL CHANGE OF DIRECTION OF A STACK CONTAINING A SUDS– PRODUCING FIXTURE.
EXCEPTION: STACKS RECEIVING THE DISCHARGE FROM LESS THEN 3 STORIES OF PLUMBING FIXTURES.

5 P4.01 RISER "5" TYPICAL
NO SCALE
CW = 3.0DFU



NOTE: DRAINAGE CONNECTIONS SHALL NOT BE MADE INTO A DRAINAGE PIPING SYSTEM WITHIN 8 FT OF ANY VERTICAL TO HORIZONTAL CHANGE OF DIRECTION OF A STACK CONTAINING A SUDS– PRODUCING FIXTURE.
EXCEPTION: STACKS RECEIVING THE DISCHARGE FROM LESS THEN 3 STORIES OF PLUMBING FIXTURES.

6 P4.01 RISER "6" TYPICAL
NO SCALE
CW = 3.0DFU



NOTE: DRAINAGE CONNECTIONS SHALL NOT BE MADE INTO A DRAINAGE PIPING SYSTEM WITHIN 8 FT OF ANY VERTICAL TO HORIZONTAL CHANGE OF DIRECTION OF A STACK CONTAINING A SUDS– PRODUCING FIXTURE.
EXCEPTION: STACKS RECEIVING THE DISCHARGE FROM LESS THEN 3 STORIES OF PLUMBING FIXTURES.

7 P4.01 RISER "7" TYPICAL
NO SCALE
SH OR TS = 2.0DFU

3-16-22
REGISTERED PROFESSIONAL ENGINEER
54,607
OREGON
JULY 15, 2005
MARK R. DENYER
EXPIRES: 31DEC23

MFIA INC. Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PHN. (503) 234-0548
FAX: (503) 234-0577
WWW.MFIA-ENG.COM
CONTACT: Mark Denyer

Leeb Architects L.L.C. 308 SW First Avenue Suite 200 Portland, Or 97204 Phone: 503.228.3846 Fax: 503.228.2907 leebarc.com

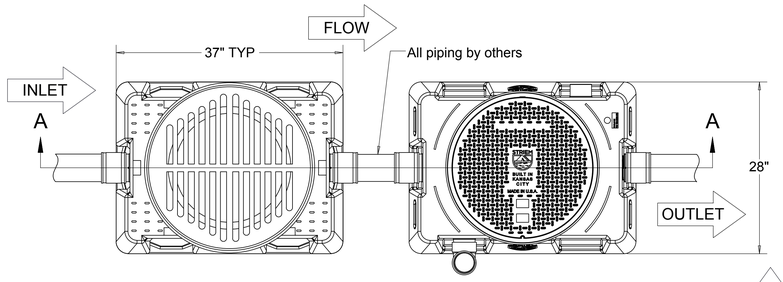
Project Title:
NORTHBOUND 30 COLLABORATIVE
NW 29TH AVE PORTLAND, OREGON 97210

Drawing Title:
BUILDING 5 PLUMBING RISER DIAGRAMS

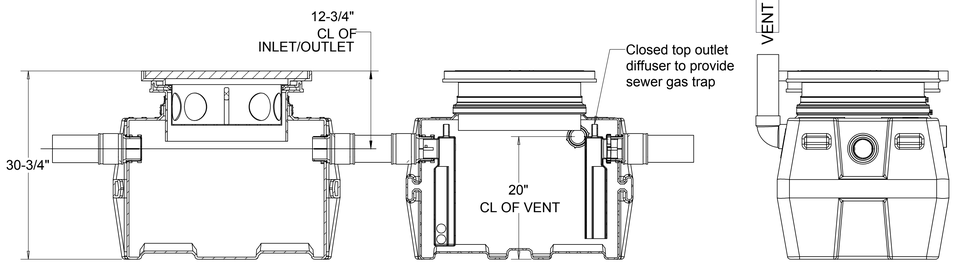
Revision:

Date: 06-01-22
Drawn by: MD
Project No.: A2112

P5-4.01



CB-50-G W/BCB-7 **OS-50**



CB-50-G W/BCB-7 **OS-50**

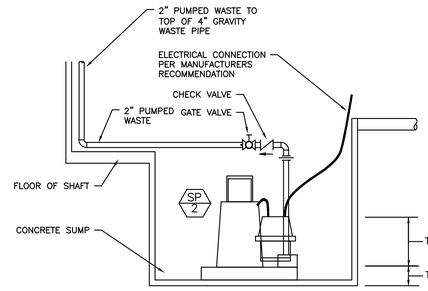
SECTION A-A

SYSTEM SPECIFICATIONS
1. Max flow rate: 50 GPM
2. Liquid capacity: 104 Gallons (13.9 cu ft)
3. Max oil capacity: 34.1 gallons
4. Unit weight w/std. covers: 178 lbs.
5. Sand/Solids capacity : 64.5 gallons
6. H20 rated, cast iron grate/cover.
7. Maximum operating temperature 140 F continuous.

OPTIONS:
- ☐ Teleglide field adjustable risers for extending covers to grade
- ☐ Male pipe thread connections
- ☐ High water anchor kit (set of 2 per tank)
- ☐ Highway rated bolted or pickable cast iron cover
- ☐ SLICK STICK™ Oil Level Monitoring System

NOTES
1. Factory installed Built-in Flow control within OS-50.
2. For gravity drainage applications only. Do not use for pressure applications.
3. 3/8" thick seamless high density polyethylene walls.
4. Unit supplied with built-in adapter(s) for up to 6" of adjustability. Additional riser(s) available for deeper burial depth.
5. Cover placement allows full access to tank for proper maintenance.
6. Narrow footprint allows clearance through doorways and down stairwells.
7. Engineered inlet and outlet diffusers are removable to inspect/clean piping.
8. For on the-floor or buried applications.

1 / P6.01 OIL SEPARATOR DETAIL
SCALE: DETAIL



SUMP PUMP	
MARK NUMBER	SP 2
SYSTEM	PIT
TYPE	SUMP *
FLOW RATE (GPM)	50
HEAD (FT H2O)	25
POWER (HP)	1/2 HP

* – PROVIDE W/ PLUG IN CONNECTION FOR POWER

2 / P6.01 PIT SUMP PUMP
SCALE: DIAGRAMATIC

RD-1 ROOF DRAIN

Portland Water Bureau Development Services 1120 SW 5th Ave Portland, OR 97204

PORTLAND WATER BUREAU

Large Meter Sizing Worksheet (1.5" and larger) **W-4**

Email: devrev@portlandoregon.gov Phone: 503-823-7368, ext 4

Applicant/Contact Name _____

Site Address, Portland Maps Property ID (R#) Building #8

Building Permit/LU# /PW# _____

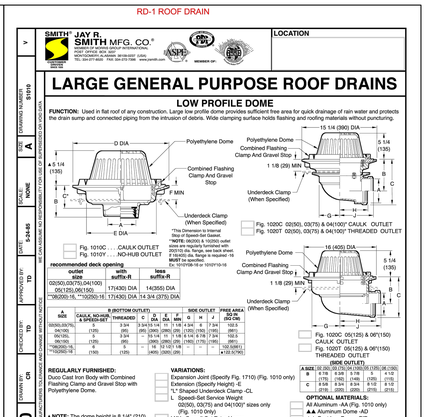
Important worksheet information

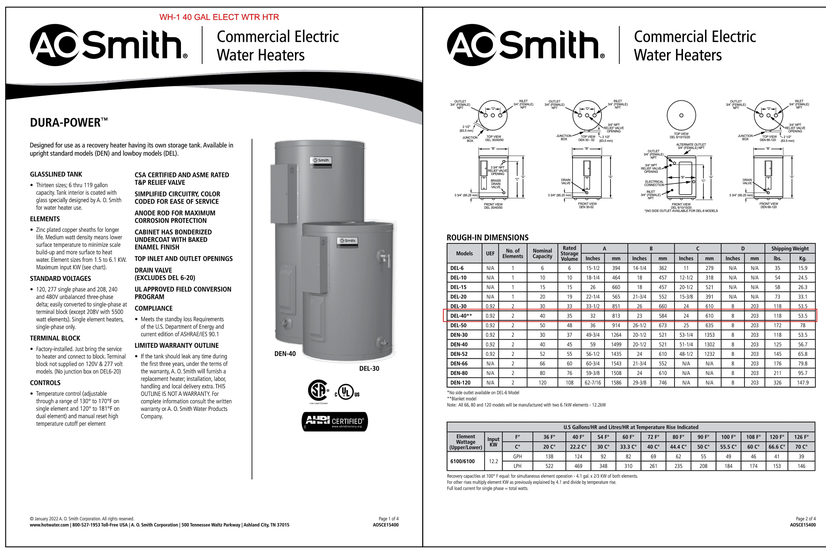
1. The meter sizing worksheet is an inventory of all plumbing fixtures served by one meter. All fixtures served by the meter need to be listed.
2. Fixture units for flushometers are approximate values. Values will be reviewed and may be adjusted by the Portland Water Bureau staff based on 2017 Oregon Plumbing Specialty Code Table 610.10

Fixture type	Number of existing fixtures	Number of proposed fixtures	Existing & Proposed Fixture Total	Fixture Unit Multiplier	Fixture Units
Bar Sink				X 2.0	
Clinic Sink				X 3.0	
Lavatory Sink		21	21	X 1.0	21
Kitchen Sink		17	17	X 1.5	25.5
Laundry Sink				X 1.5	
Mop/Service Sink		1	1	X 3.0	3
Drinking Fountain				X 0.5	
Dishwasher				X 1.5	
Clothes Washer		17	17	X 4.0	68
Bathtub or Tub/Shower		4	4	X 4.0	16
Shower		17	17	X 2.0	34
Toilet - Gravity		21	21	X 2.5	52.5
Toilet - Flushometer 1st one				X 40.0	
Toilet - Flushometer additional				X 25.0	
Urinal – 1st one				X 20.0	
Urinal – additional				X 15.0	
Hose Bib – 1st one		1	1	X 2.5	2.5
Hose Bibb – additional		3	3	X 1.0	3

Total Fixture Units: 225.5

Small meters	Total fixture units	Large meters	Total fixture units
5/8"	0 – 22	1.5"	89.5 – 286
¾"	22.5 – 37	2"	288.5 – 532
1"	37.5 – 89	3"	532.5 – 1300
		4"	1302.5 – 3600
		6"	3602.5 – 8200
		8"	8200.5 – 13,800





Models	UEF	No. of Elements	Nominal Capacity	Rated Storage Volume	A		B		C		D		Shipping Weight	
					Inches	mm	Inches	mm	Inches	mm	Inches	mm	lbs.	Kg.
DEL-6	N/A	1	6	6	15-1/2	394	14-1/4	362	11	279	N/A	N/A	35	15.9
DEL-10	N/A	1	10	10	18-1/4	464	18	457	12-1/2	318	N/A	N/A	54	24.5
DEL-15	N/A	1	15	15	26	660	18	457	20-1/2	521	N/A	N/A	58	26.3
DEL-20	N/A	1	20	19	22-1/4	565	21-3/4	552	15-3/8	391	N/A	N/A	73	33.1
DEL-30	0.92	2	30	33	33-1/2	851	26	660	24	610	8	203	118	53.5
DEL-40**	0.92	2	40	35	32	813	23	584	24	610	8	203	118	53.5
DEL-50	0.92	2	50	48	36	914	26-1/2	673	25	635	8	203	172	78
DEN-30	0.92	2	30	37	49-3/4	1264	20-1/2	521	53-1/4	1352	8	203	118	53.5
DEN-40	0.92	2	40	45	59	1499	20-1/2	521	51-1/4	1302	8	203	125	56.7
DEN-52	0.92	2	52	55	56-1/2	1435	24	610	48-1/2	1232	8	203	145	65.8
DEN-66	N/A	2	66	60	60-3/4	1543	21-3/4	552	N/A	N/A	8	203	176	79.8
DEN-80	N/A	2	80	76	59-3/8	1508	24	610	N/A	N/A	8	203	211	95.7
DEN-120	N/A	2	120	108	62-7/16	1586	29-3/8	746	N/A	N/A	8	203	326	147.9

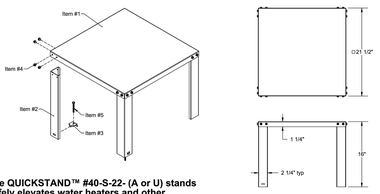
*No side outlet available on DEL-6 Model
**Starter model
Note: All 66, 80 and 120 models will be manufactured with two 6.1kW elements - 12.2kW

U.S Gallons/HR and Litres/HR at Temperature Rise Indicated												
Element Wattage (Upper/Lower)	Input KW	F°	36 F°	40 F°	54 F°	60 F°	72 F°	80 F°	90 F°	100 F°	108 F°	120 F°	126 F°
		C°	20 C°	22.2 C°	30 C°	33.3 C°	40 C°	44.4 C°	50 C°	55.5 C°	60 C°	66.6 C°	70 C°
6100/6100	12.2	GPH	138	134	92	82	69	62	55	49	46	41	39
		LPH	522	469	348	310	261	235	208	184	174	153	146

Recovery capacities at 100° F equal; for simultaneous element operation - 4.1 gal. x 2/3 KW of both elements.
For other rises multiply element KW as previously explained by 4.1 and divide by temperature rise.
Full load current for single phase = total watts.

Page 2 of 4
AOGS15400

PRODUCT SPECIFICATION DRAWING
QUICKSTAND™ 21-1/2" X 21-1/2" (Water Heater & Equipment Support)
#40-S-22-A (assembled) and #40-S-22-U (unassembled)



The QUICKSTAND™ #40-S-22- (A or U) stands safely elevates water heaters and other equipment above the floor (650 lbs rating).

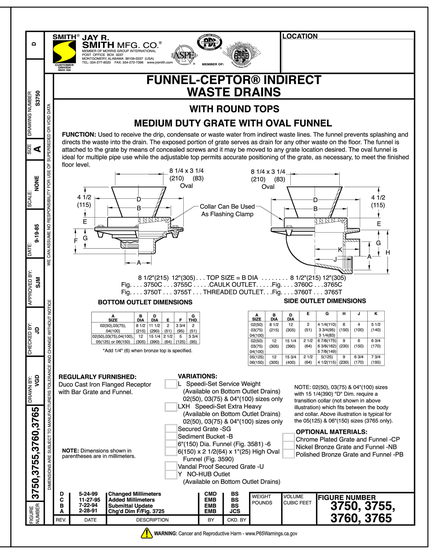
Product Information:
- Material:
  Item #1: Top, 16 gage CRS, galvanized
  Item #2: Leg, 16 gage CRS, galvanized, 4 places
  Item #3: Safety Clip, 14 gage CRS, galvanized, 2 places
  Item #4: Screw, Php, HexWasherHd. #14-14 x 1/2"L (serrated), 16 places
  Item #5: Lag Bolt, #1/4 X 2-1/2"L, self-drilling, 2 places
  (note: Items #3 and #5 included with product)
- Engineered and lab tested to meet Uniform Plumbing Code (UPC) and International Plumbing Code (IPC) requirements, including elevation of water heater's ignition source 18" above the floor
- Holds up to 650 pounds capacity (up to 52 U.S. gallon tanks)
- QUICKSTAND™ weight 15 pounds without packaging
- Available in asembled and unassembled configurations

SAFETY CLIP (2) ITEM #3
LAG BOLT (2) ITEM #5

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

HUBBARD ENTERPRISES
HOLDRITE®
"Connecting Roofscraft Methods into Engineered Solutions"

2560 PROGRESS STREET / VISTA, CA 92081 / 800-321-0316 OR 760-744-6944 / FAX: 760-744-0507 / WWW.HOLDRITE.COM
spec_40-S-22-16ga_RevC



3-16-22
REGISTERED PROFESSIONAL ENGINEER 54,607 OREGON JULY 15, 2005 MARK R. DENYER
EXPIRES: 31DEC23
MFA Consulting Engineers 2007 S.E. Ash St Portland, OR 97214 PHN. (503) 234-0548 FAX: (503) 234-0557 INC. WWW.MFIA-ENG.COM
CONTACT: Mark Denyer
Leeb Architects L.L.C. 308 SW First Avenue Suite 200 Portland, Or 97204 Phone: 503.228.3486 Fax: 503.228.2907 leebarc.com

Project Title: NORTHBOUND 30 COLLABORATIVE
NW 29TH AVE PORTLAND, OREGON 97210

Drawing Title: BUILDING 5 PLUMBING DETAILS
Date: 06-01-22
Drawn by: MD
Project No.: A2112
Revision:

P5-6.01

PERMIT SET, BUILDING 5 (06-01-2022)