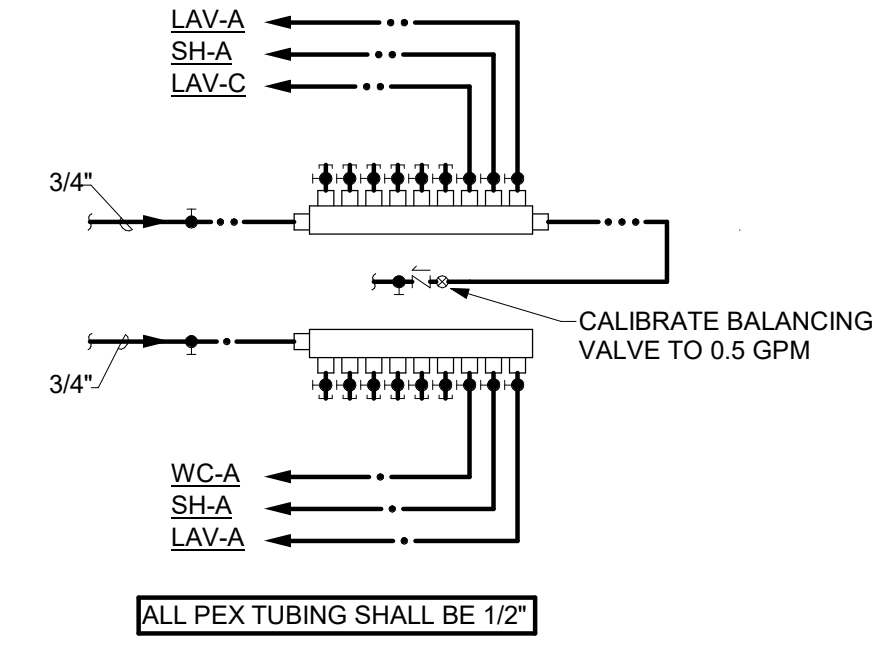
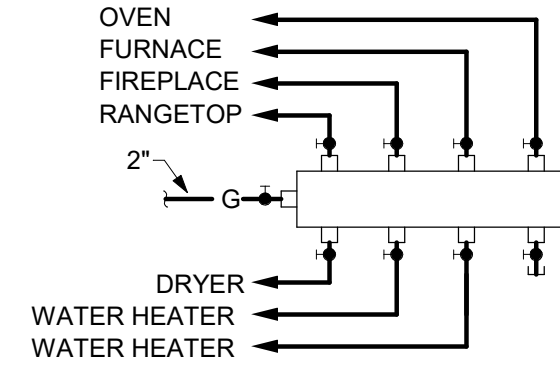


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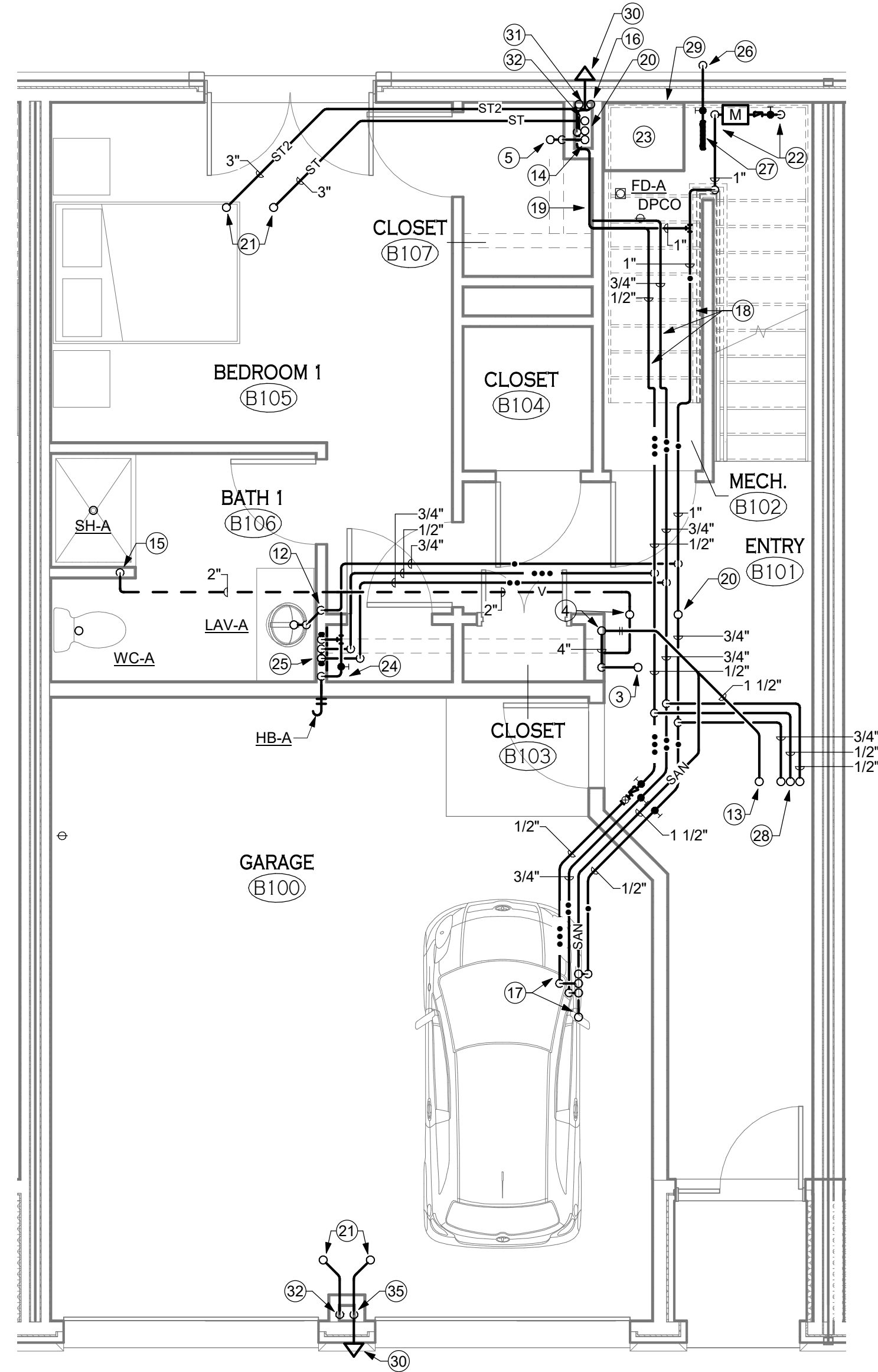
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**4** FIRST FLOOR PEX MANIFOLD SCHEMATIC  
P-100 1/8" = 1'-0"



**3** NATURAL GAS DISTRIBUTION SCHEMATIC  
P-100 1/8" = 1'-0"



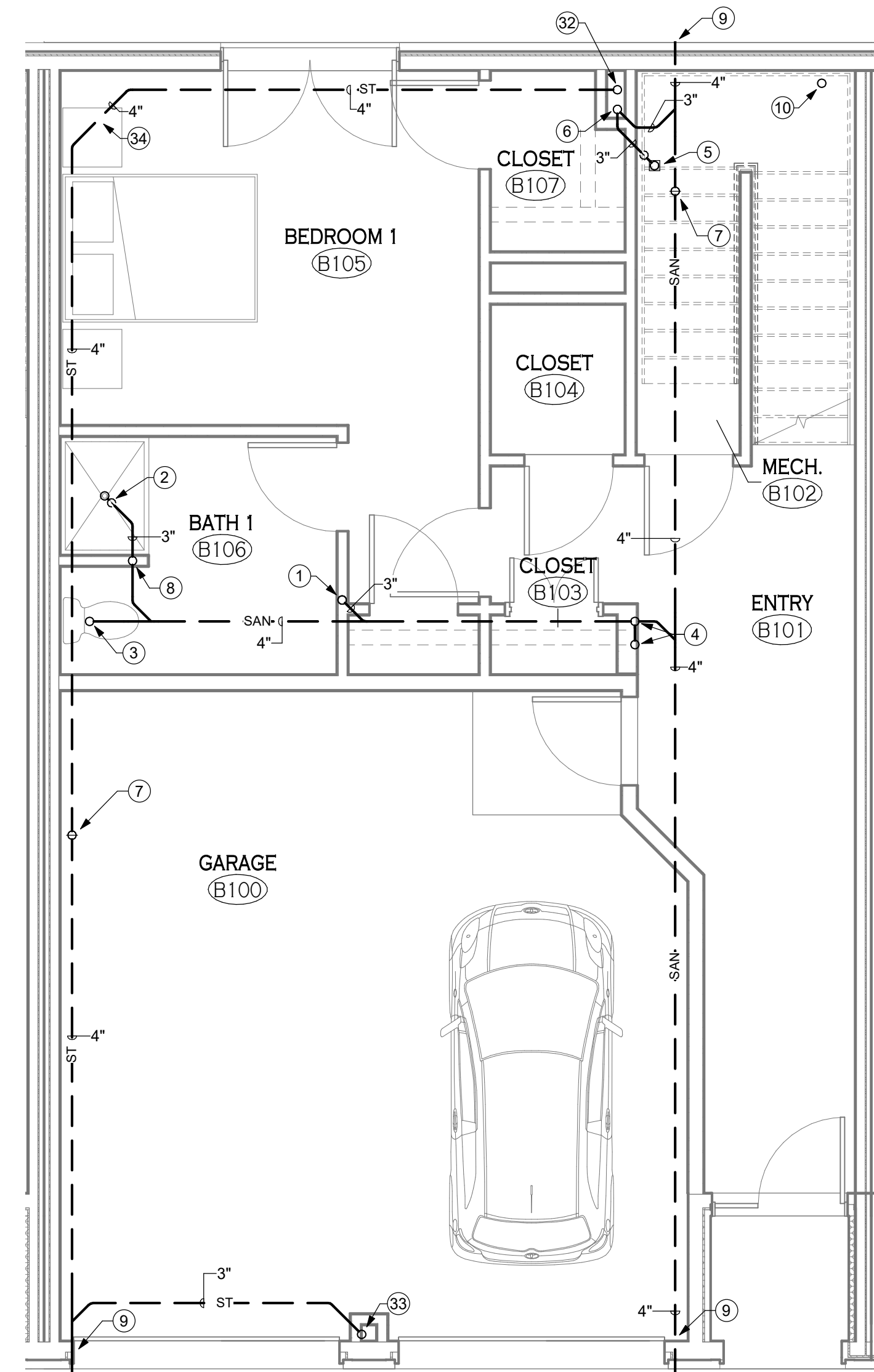
**2** 4 UNIT - LEVEL 1 - PLUMBING  
P-100 1/4" = 1'-0" SOME UNITS ARE OPPOSITE HAND

**P-100 DRAWING NOTES**

- 1 3" SANITARY FROM LAVATORY ABOVE.
- 2 3" SANITARY P-TRAP FROM SHOWER DRAIN ABOVE.
- 3 4" SANITARY FROM WATER CLOSET.
- 4 4" SANITARY STACK AND 3" VENT STACK UP.
- 5 3" SANITARY P-TRAP FROM FLOOR DRAIN ABOVE.
- 6 3" SANITARY STACK FROM ABOVE.
- 7 4" FROM DECK PLATE CLEANOUT.
- 8 1 1/2" VENT UP.
- 9 SEE SITE PLAN FOR CONTINUATION.
- 10 1" WATER SERVICE UP. SEE DETAIL 4/P-501.
- 12 1 1/2" SANITARY FROM LAVATORY TO 3" BELOW SLAB; 1 1/2" VENT UP.
- 13 1 1/2" SANITARY FROM LAVATORY ABOVE.
- 14 3" SANITARY STACK DOWN; 3" VENT STACK UP.
- 15 1 1/2" VENT FROM BELOW.
- 16 1/2" HW DOWN; 1/2" HWR UP.
- 17 1 1/2" SANITARY; 1 1/2" VENT AND 1/2" HWR FROM KITCHEN SINK; 1/2" CW AND 1/2" HW UP. SEE DETAIL 2/P-101.
- 18 SLOPE PIPING AS REQUIRED TO FOLLOW SLOPE OF STAIRS. COORDINATE WITH DIVISION 23.
- 19 1" CW AND 1/2" HWR UP; 3/4" HW DOWN FROM WATER HEATERS ABOVE. RUN PIPING ALONG WALL AT A LOW ELEVATION TO COORDINATE WITH DIVISION 23.
- 20 1" CW UP TO LEVEL ABOVE.

**P-100 DRAWING NOTES**

- 21 3" PRIMARY AND SECONDARY STORM PIPING FROM ROOF DRAINS INSTALLED UNDER PAVERS ABOVE. REFER TO ARCHITECTURAL PLANS FOR MORE INFORMATION.
- 22 1" WATER SERVICE. SEE DETAIL 4/P-501. SEE SITE UTILITY PLAN C-400 FOR LOCATION.
- 23 FURNACE AND ASSOCIATED EQUIPMENT. SEE DIVISION 26.
- 24 3/4" CW DOWN TO HOSE BIBS.
- 25 3/4" CW, 3/4" HW DOWN TO AND 1/2" HWR UP FROM PEX MANIFOLD IN WALL SERVING BATHROOM FIXTURES. PROVIDE 18"x18" ACCESS PANEL. SEE DETAIL 6/P-501 AND DETAIL 4 ON THIS SHEET.
- 26 2" GAS SERVICE FOR THIS UNIT. REFER TO SITE PLAN C-400 FOR LOCATION.
- 27 GAS CSST MANIFOLD - EXTEND INDIVIDUAL CSST BRANCH FROM MANIFOLD TO EACH GAS - FIRED APPLIANCE. REFER TO DETAIL 3 ON THIS SHEET FOR PIPING SCHEMATIC.
- 28 3/4" CW, 1/2" HW UP; 1/2" HWR FROM ABOVE.
- 29 PROVIDE 1 1/4" GAS CONNECTION TO FURNACE (100 CFH) PROVIDED BY DIVISION 23. SEE DETAIL 5/P-501.
- 30 TERMINATE SECONDARY STORM PIPING 1' 6" ABOVE GRADE WITH DOWNSPOUT NOZZLE.
- 31 3" SECONDARY STORM PIPING DOWN. DROP BELOW HWR AND HW RISERS.
- 32 3/4" PRIMARY STORM CONDUIT FROM ABOVE. REFER TO ARCHITECT FOR ROOF DRAIN.
- 33 3" PRIMARY STORM CONDUIT FROM ABOVE.
- 34 PROVIDE TWO(2) 1/8" BENDS AND 2' 0" LENGTH OF PIPING.
- 35 3" SECONDARY STORM PIPING DOWN.



**1** 4 UNIT - FOUNDATION - PLUMBING  
P-100 1/4" = 1'-0" SOME UNITS ARE OPPOSITE HAND



PROFESSIONAL SEAL

REVISIONS:	Date
No. Description	

**PROJECT NAME:**  
New Construction:  
**The West End**  
240-260 Lakefront Blvd  
Buffalo Ny, 14202

Issued for Permit: 01.23.2019  
Drawn By: DMS2  
Checked By: RKS

**DRAWING NAME:**  
First Floor Plan - Plumbing

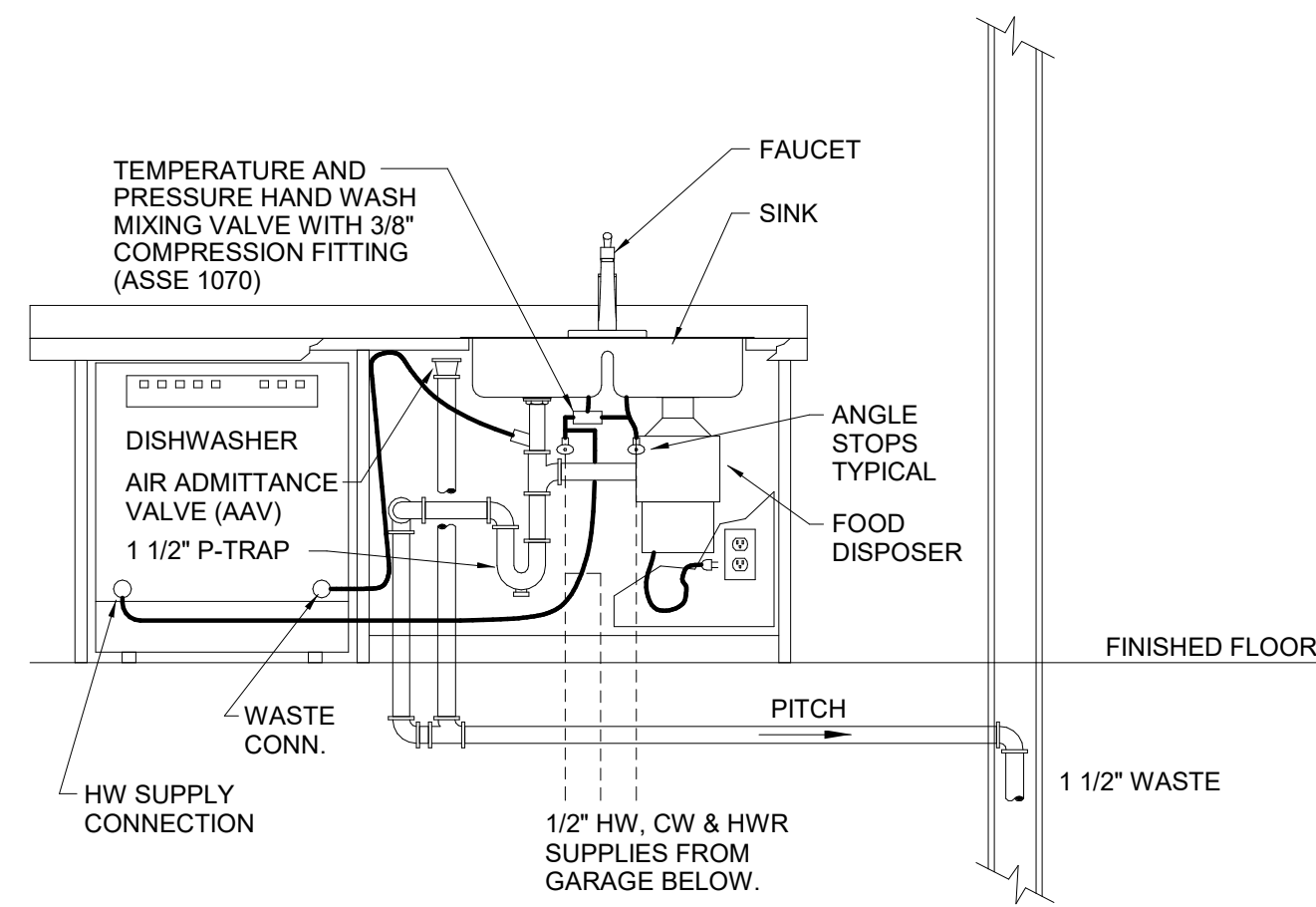
**DRAWING NO.:**  
**P-100**

Project No: 18.122

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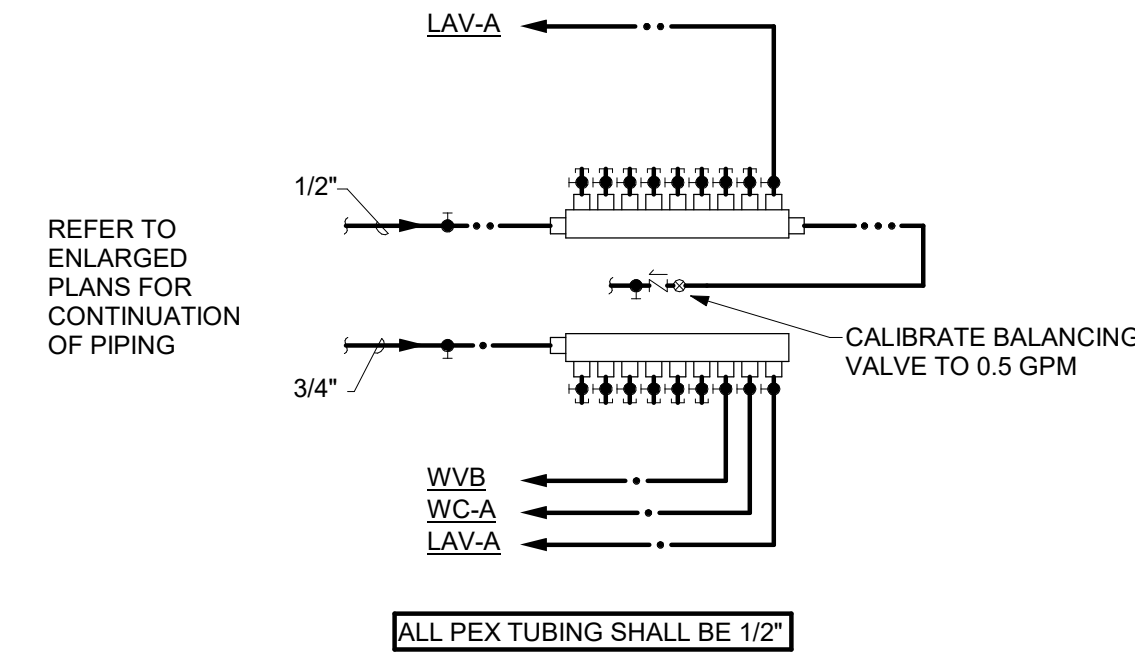
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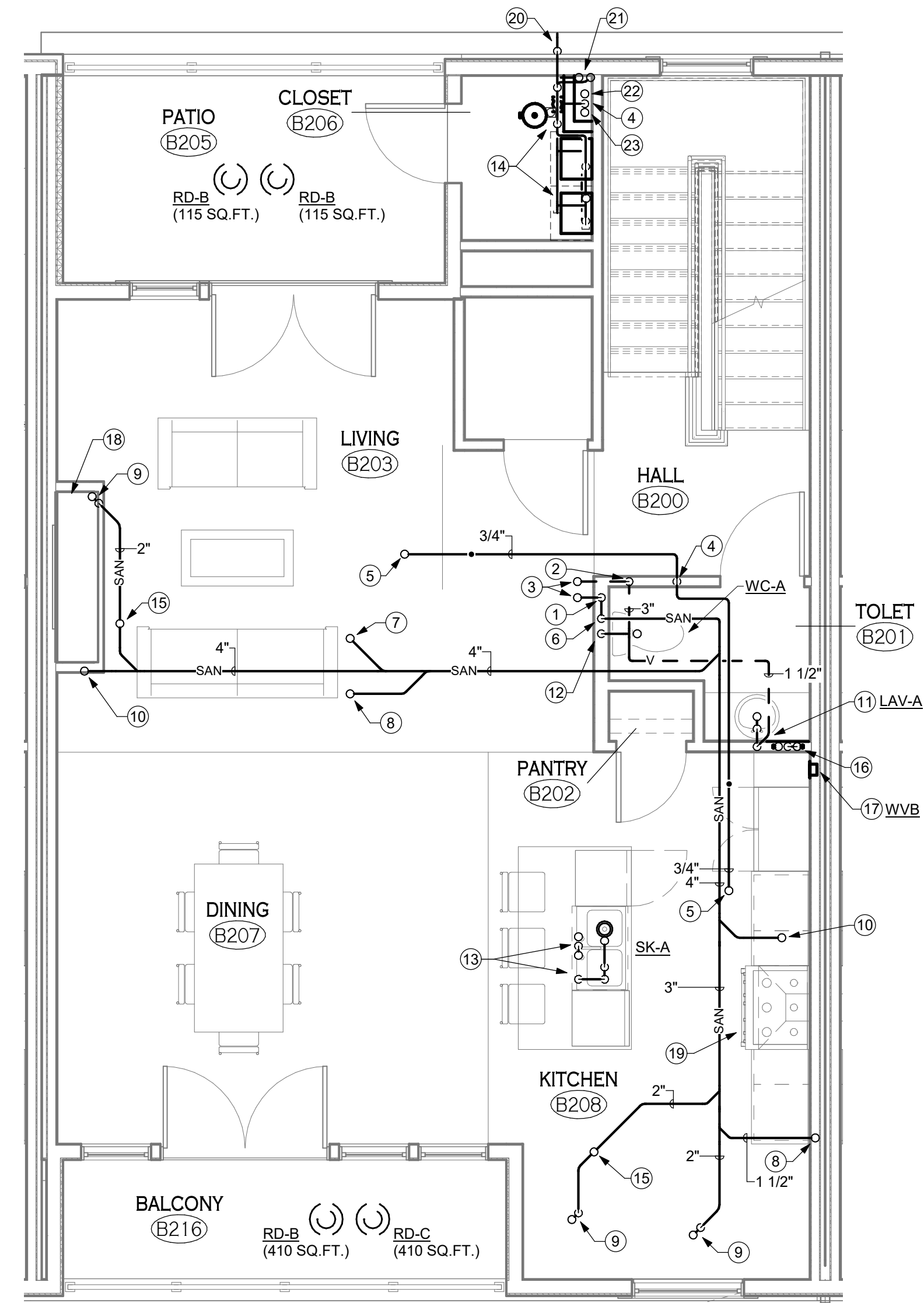


- DETAIL NOTES:**
- A. SEE SPECIFICATIONS FOR FIXTURES, EQUIPMENT AND ACCESSORIES. I.E. FAUCET SPRAY, SINK BOWL QUANTITY, DISPOSER, DISHWASHER...
  - B. DISHWASHER DRAIN HOSE - RUN HOSE UP & ATTACH TO UNDERSIDE OF COUNTER. CONNECT TO SINK TAILPIECE BEFORE TRAP AS SHOWN OR TO DISHWASHER INLET FITTING ON FOOD DISPOSER.
  - C. TWO BOWL SINKS SHALL BE INSTALLED USING END OUTLET CONTINUOUS WASTE PIPING AS SHOWN. DO NOT PROVIDE CENTER DRAIN OR BAFFLED WASTE PIPING.
  - D. MIXING VALVE SHALL BE ADJUSTED TO DELIVER TEMPERED WATER AT 105°F.
  - E. PROVIDE INSULATION ON SANITARY AND VENT PIPING IN CEILING ABOVE GARAGE.

**2** ISLAND SINK WITH FOOD DISPOSER DETAIL  
P-101 1/8" = 1'-0"



**3** SECOND FLOOR PEX MANIFOLD SCHEMATIC  
P-101 1/8" = 1'-0"



**1** 4 UNIT - LEVEL 2 - PLUMBING  
P-101 1/4" = 1'-0"

SOME UNITS ARE OPPOSITE HAND

**P-101 DRAWING NOTES**

- 1 4" SANITARY STACK FROM BELOW
- 2 3" VENT FROM BELOW
- 3 4" SANITARY STACK AND 3" VENT STACK UP.
- 4 1" CW FROM BELOW.
- 5 3/4" CW UP.
- 6 4" SANITARY DOWN WITHIN WALL; CONNECT TO 4" STACK.
- 7 2" SANITARY FROM LAUNDRY UTILITY BOX ABOVE. SEE DETAIL 2/P-102.
- 8 1 1/2" SANITARY FROM ABOVE SERVING TWO LAVATORIES.
- 9 2" SANITARY P-TRAP FROM SHOWER/BATHTUB ABOVE.
- 10 4" SANITARY FROM WATER CLOSET ABOVE.
- 11 1 1/2" SANITARY DOWN FROM LAVATORY; 1 1/2" VENT UP.
- 12 4" SANITARY DOWN WITHIN WALL; CONNECT TO 4" STACK.
- 13 1/2" CW, 3/4" HW UP, 1/2" HWR, 1 1/2" SANITARY AND 1 1/2" VENT DOWN FROM ISLAND SINK WITH FOOD DISPOSER. REFER TO DETAIL 2/P-101 FOR PIPING SCHEMATIC.
- 14 DUPLEX WATER HEATER ASSEMBLY WITH EXPANSION TANK AND HOT WATER RECIRCULATION PUMP. SEE DETAIL 1/P-501.
- 15 2" VENT UP.
- 16 3/4" CW, 1/2" HW UP; 1/2" HWR FROM ABOVE.
- 17 WATER VALVE BOX FOR REFRIGERATOR. SEE DETAIL 6/P-501.
- 18 PROVIDE 1/2" GAS CONNECTION TO FURNACE (46 CFH). SEE DETAIL 5/P-501.
- 19 PROVIDE 1/2" GAS CONNECTION TO RANGETOP (18 CFH) AND 1 1/4" GAS CONNECTION TO OVEN (142 CFH). SEE DETAIL 5/P-501.
- 20 4" WATER HEATER INTAKE AND EXHAUST STACKED. SEE DETAIL 1/P-501.
- 21 3/4" HW AND 3/4" HWR RISERS.
- 22 4" PRIMARY STORM CONDUIT FROM ABOVE. REFER TO ARCHITECT FOR ROOF DRAIN.
- 23 3" VENT STACK UP.



PROFESSIONAL SEAL

REVISIONS:	Date
No. Description	

**PROJECT NAME:**  
New Construction:  
**The West End**  
240-260 Lakefront Blvd  
Buffalo Ny, 14202

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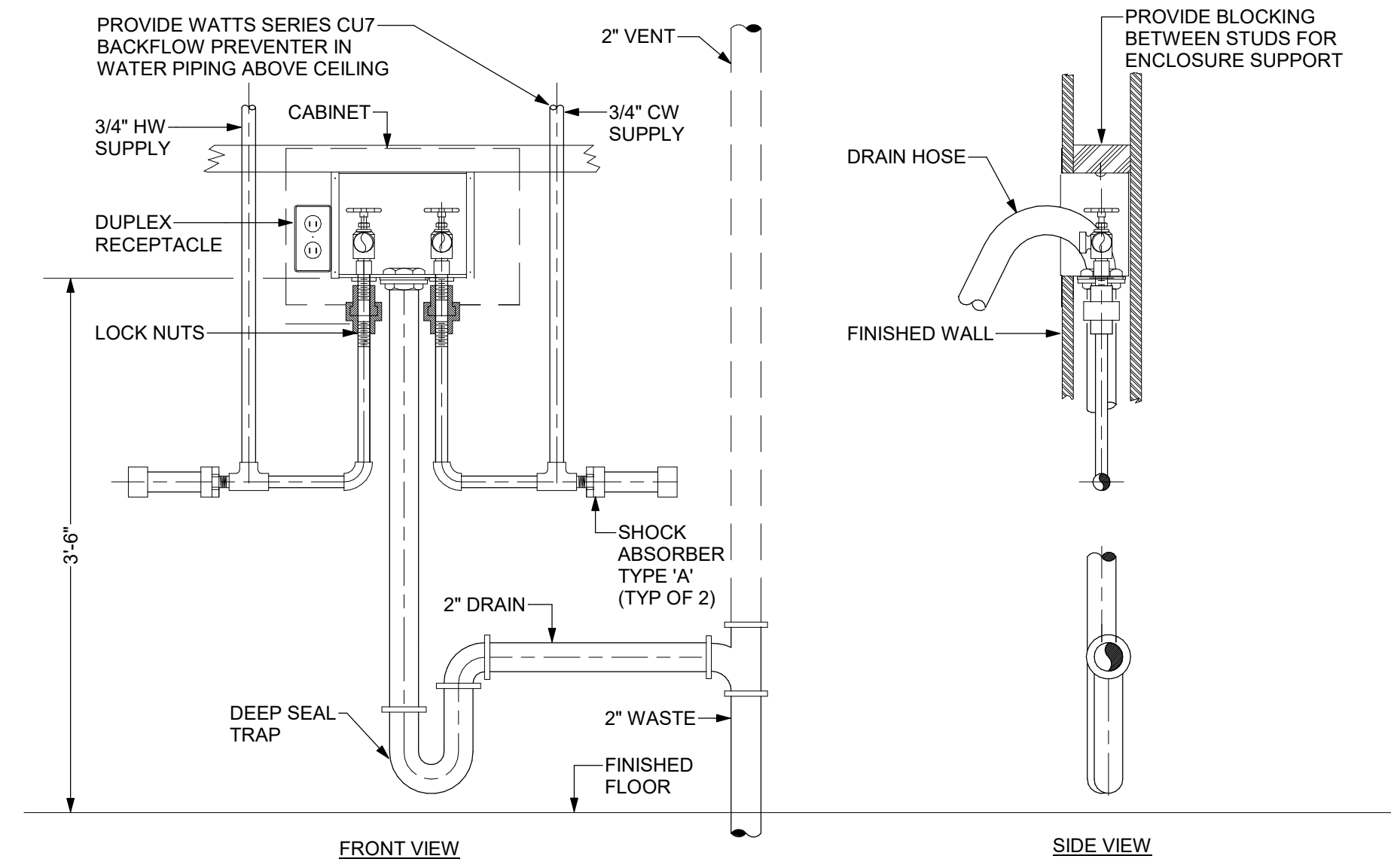
**DRAWING NAME:**  
Second Floor  
Plan - Plumbing

**DRAWING NO.:**  
**P-101**

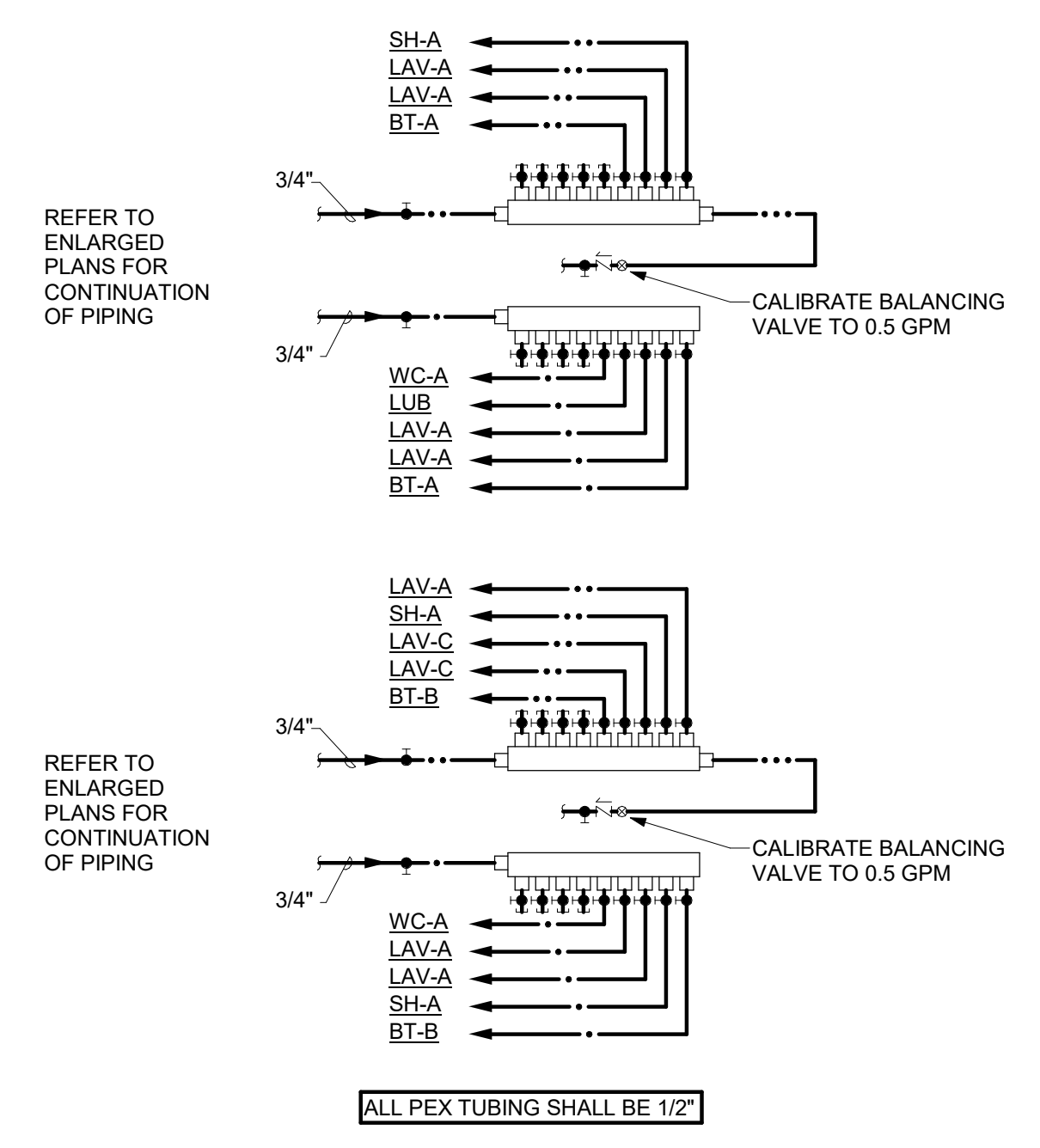
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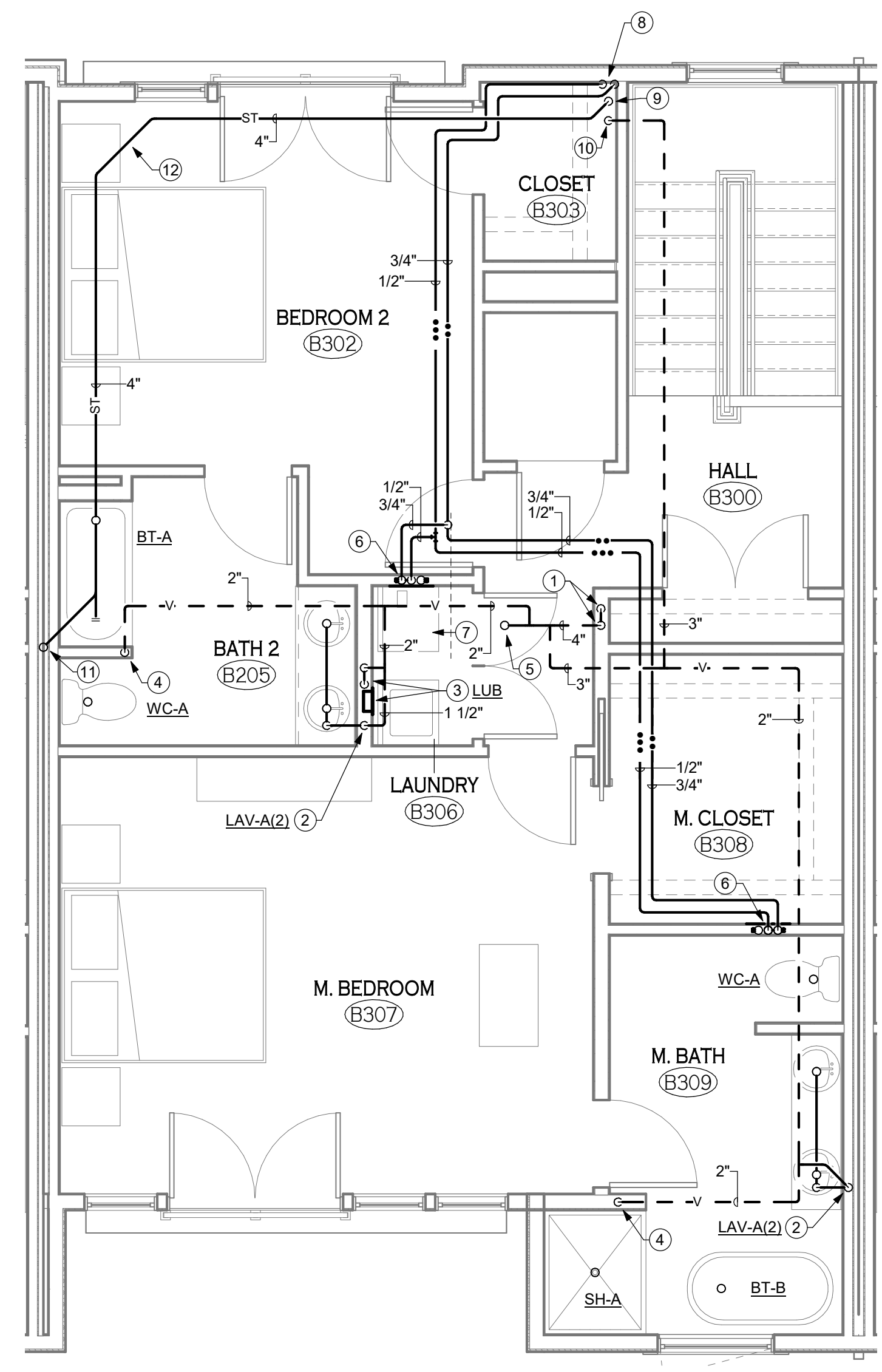
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**2** LAUNDRY UTILITY BOX DETAIL  
P-102 1/8" = 1'-0"



**3** THIRD FLOOR PEX MANIFOLD SCHEMATIC  
P-102 1/8" = 1'-0"



**1** 4 UNIT - LEVEL 3 - PLUMBING  
P-102 1/4" = 1'-0"

SOME UNITS ARE OPPOSITE HAND

**P-102 DRAWING NOTES**

- 1 CONNECT VENT STACK TO SANITARY STACK AT 4' 0" ABOVE FINISHED FLOOR AND EXTEND 4" VENT UP.
- 2 1 1/2" SANITARY PIPING DOWN; 1 1/2" VENT UP SERVING TWO LAVATORIES.
- 3 2" SANITARY P-TRAP FROM LAUNDRY UTILITY BOX DOWN; 2" VENT UP. SEE DETAIL 2 ON THIS SHEET.
- 4 1 1/2" VENT FROM BELOW.
- 5 4" VENT UP THROUGH ROOF.
- 6 3/4" CW, 3/4" HW DOWN TO AND 1/2" HWR UP FROM PEX MANIFOLD IN WALL SERVING BATHROOM FIXTURES. PROVIDE 18"x18" ACCESS PANEL. SEE DETAIL 6/P-501 AND DETAIL 3 ON THIS SHEET.
- 7 PROVIDE 1/2" GAS CONNECTION TO CLOTHES DRYER (20 CFH). SEE DETAIL 5/P-501.
- 8 3/4" HW AND 3/4" HWR RISERS.
- 9 4" PRIMARY STORM CONDUIT FROM ABOVE. REFER TO ARCHITECT FOR ROOF DRAIN.
- 10 3" VENT STACK UP.
- 11 4" PRIMARY STORM FROM ROOF DRAIN ABOVE. REFER TO ARCHITECT FOR ROOF DRAIN.
- 12 PROVIDE TWO(2) 1/8" BENDS AND 2' 0" LENGTH OF PIPING.



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REVISIONS:	No.	Description	Date

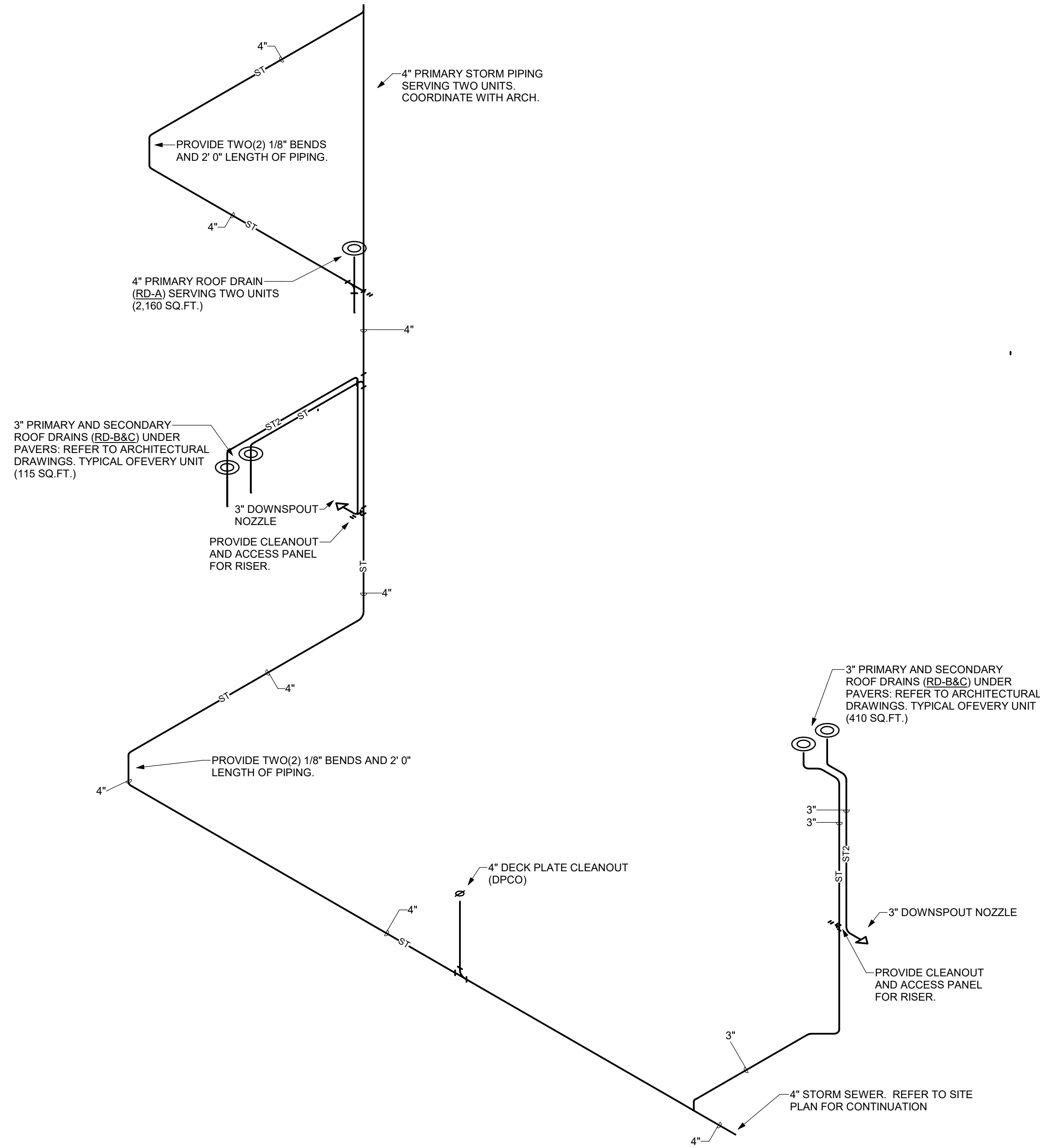
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New Construction:  
**The West End**  
240-260 Lakefront Blvd  
Buffalo Ny, 14202

Issued for Permit: 01.23.2019  
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Checked By: RKS

**DRAWING NAME:**  
Third Floor Plan  
- Plumbing

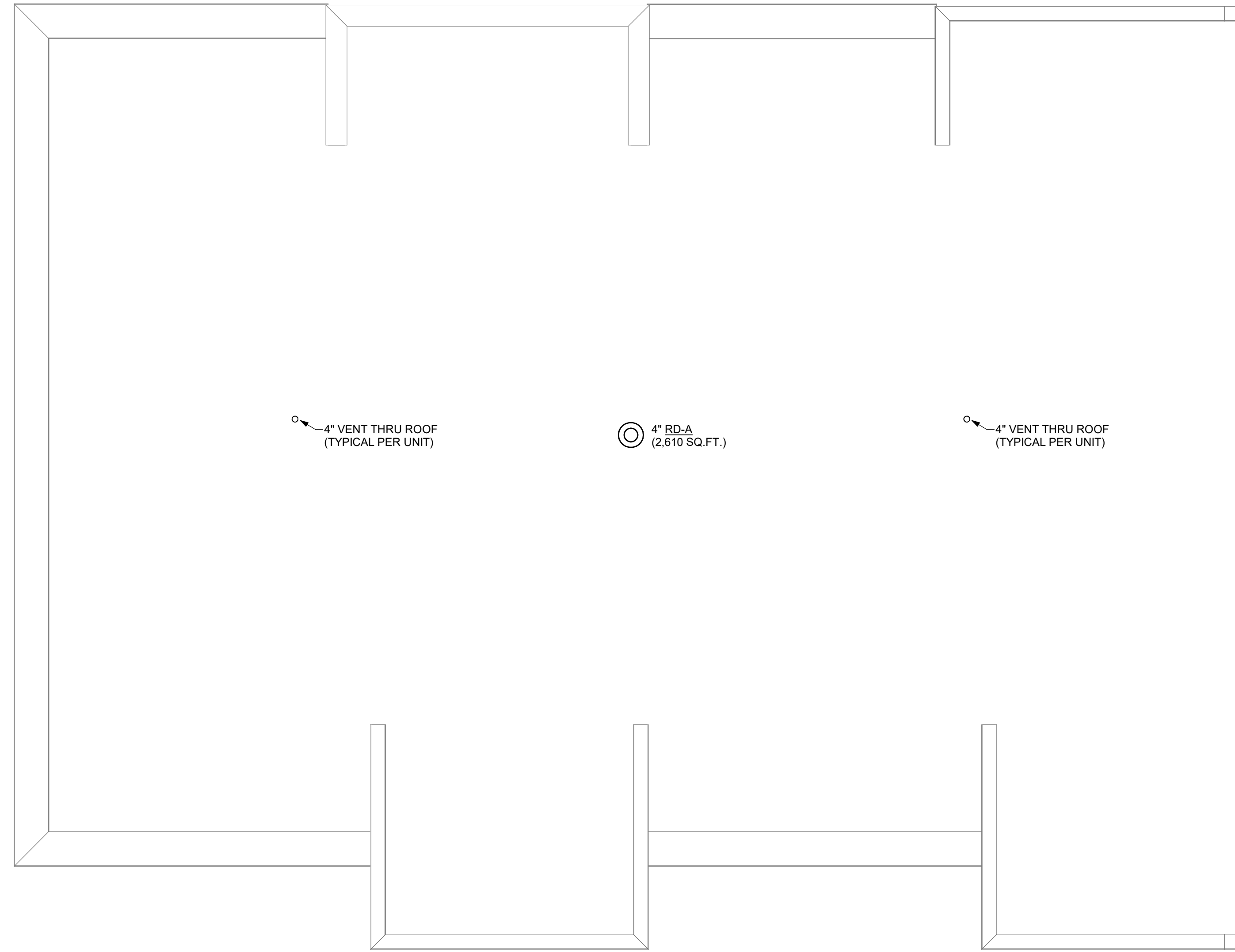
**DRAWING NO.:**  
**P-102**

Project No: 18.122



**2** STORM RISER DIAGRAM - PLUMBING  
P-103

SOME UNITS ARE OPPOSITE HAND



**1** 4 UNIT - ROOF PLAN - PLUMBING  
P-103 1/4" = 1'-0"

SOME UNITS ARE OPPOSITE HAND

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240-260 Lakefront Blvd  
Buffalo Ny, 14202

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**DRAWING NAME:**  
Roof Plan -  
Plumbing

**DRAWING NO.**  
**P-103**

Project No: 18.122

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Buffalo Ny, 14202

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DRAWING NAME:  
Details -  
Plumbing

DRAWING NO.

**P-501**

Project No: 18.122

PLUMBING SYMBOL LIST	
SYMBOL	DESCRIPTION
—	NEW PIPING LOCATED ABOVE FLOOR/SLAB
---	NEW PIPING LOCATED BELOW FLOOR/SLAB
—•—	COLD WATER PIPING (CW)
—••—	HOT WATER PIPING (HW)
—•••—	HOT WATER RECIRCULATING PIPING (HWR)
—TW—	TEMPERED HOT WATER PIPING (TW)
—W—	WATER SERVICE - EXTERIOR
—SAN—	SANITARY SEWER PIPING
—V—	VENT PIPING
—G—	NATURAL GAS PIPING (G)
—>	ELBOW DOWN
—<	ELBOW UP
—T—	BOTTOM/TEE CONNECTION
—+—	TOP TEE CONNECTION
—∞—	"P" TRAP
— —	PIPE CONTINUATION
— —	CAP OR PLUG

PLUMBING SYMBOL LIST	
SYMBOL	DESCRIPTION
—	DECK PLATE CLEANOUT (DPCO)
—	WALL PLATE CLEANOUT (WPCO)
—	CLEANOUT (CO)
—	FLOOR DRAIN (FD) / FLOOR SINK (FS)
—	WALL HYDRANT (WH) / HOSE BIBB (HB)
—	STRAINER
—	WATER METER
—	SHUT OFF VALVE
—	BALANCING VALVE
—	CHECK VALVE
—	RELIEF VALVE
—	UNION
—	RECIRCULATION PUMP
—	THERMOMETER
—	PRESSURE GAUGE

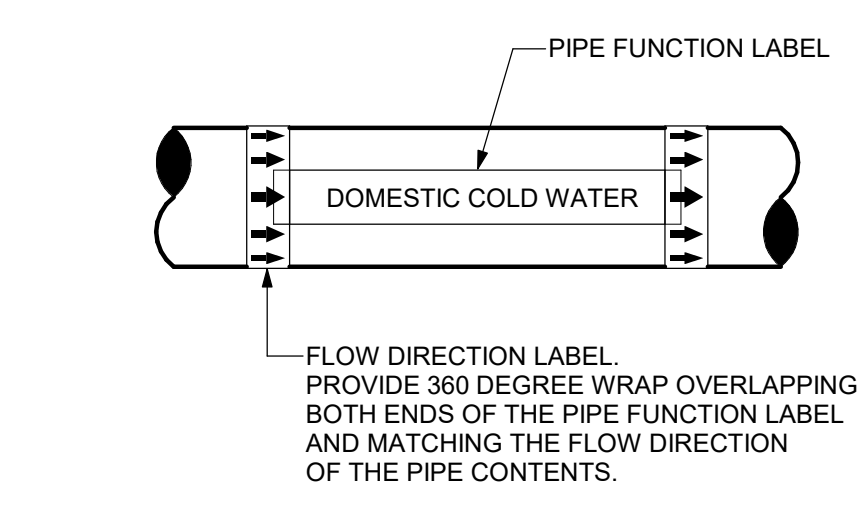
GAS-FIRED APPLIANCE SCHEDULE					
ITEM NO.	QUANTITY	DESCRIPTION	BTUH INPUT	SIZE	REMARKS
1	1	CLOTHES DRYER	20,000	3/4"	
2	1	FIREPLACE	46,000	3/4"	
3	1	OVEN	142,000	1-1/4"	
4	1	FURNACE	100,000	1-1/4"	REFER TO DIVISION 23
5	1	RANGETOP	18,000	3/4"	
6	2	WATER HEATER	199,999	3/4"	SEE WATER HEATER SCHEDULE

SHOCK ABSORBER SCHEDULE				
NO.	FIXTURE UNIT RATING	SIZE IN INCHES	PDI SYMBOL	
SA-A	1 - 11	1/2"	A	
SA-B	12 - 32	3/4"	B	
SA-C	33 - 60	1"	C	
SA-D	61 - 113	1 1/4"	D	
SA-E	114 - 154	1 1/2"	E	
SA-F	155 - 330	2"	F	

FIXTURE AND EQUIPMENT CONNECTION SCHEDULE						
DESIGNATION	DESCRIPTION	COLD WATER	HOT WATER	WASTE OR SANITARY	VENT	REMARKS
WC	WATER CLOSET	1/2"	-	4"	-	FLUSH TANK
LAV	LAVATORY	1/2"	1/2"	1 1/2"	1 1/2"	SEE DETAIL 3/P-104
FD	FLOOR DRAIN	1/2"	-	4"	2"	TRAP PRIMER
SH	SHOWER	1/2"	1/2"	3"	1 1/2"	
SK	SINK	1/2"	1/2"	1 1/2"	1 1/2"	
BT	BATHTUB	1/2"	1/2"	3"	1 1/2"	INCLUDE FOOD DISPOSER
WH	HOSE BIBB	3/4"	-	-	-	
DN	DOWNSPOUT	-	-	-	-	3" STORM CONNECTION
RD	ROOF DRAIN	-	-	-	-	3 1/4" STORM CONNECTION
AAV	AIR ADMITTANCE VALVE	-	-	1 1/2"	-	

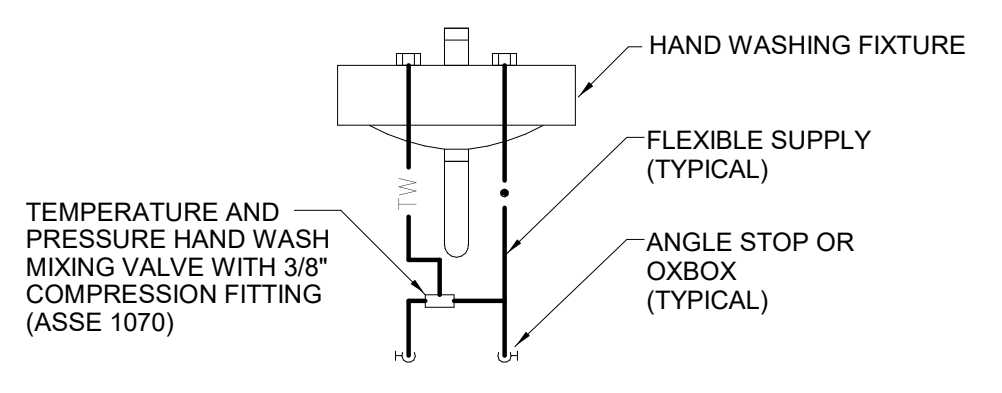
PUMP SCHEDULE									
NO.	LOCATION	SERVICE	GPM	HEAD FT WATER	MOTOR HP	VOLTAGE	PHASE	RPM	DESIGN MAKE
HWRP-1	MECHANICAL	HW RECIRCULATION	3.0	40	2/5	115	1	3250	BELL & GOSSETT PL-55 - 1BL068LF

WATER HEATER SCHEDULE									
NO.	SERVICE	TYPE	BTUH INPUT	FLOW RATE (GPM)	TEMP RISE DEG F	FUEL TYPE	INTAKE/EXHAUST	ELECTRIC	DESIGN MAKE
WH-1	HW	INSTANTANEOUS	199,999	4.4	90	GAS	4 1/4"	120/1/60	NAVIEN - 240S WITH COMMON VENT KIT



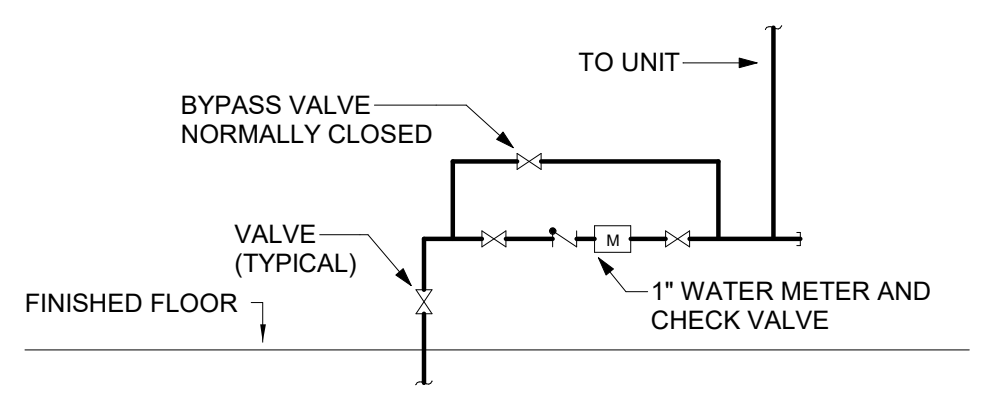
- DETAIL NOTES:
- PROVIDE A PIPE LABEL FOR EACH PIPE FUNCTION.
  - PROVIDE AT LEAST ONE LABEL ON EACH PIPE FOR EVERY ROOM THE PIPE PASSES THROUGH.
  - PROVIDE LABELS IN LARGE SPACES ON MAXIMUM 20'-0" CENTERS FOR EVERY PIPE UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS.
  - LABELS TO BE LOCATED IN AN EASILY VISIBLE LOCATION AS THEY WOULD NORMALLY BE SEEN. IE. ON THE BOTTOM HALF OF PIPES IN THE AIR AND ON THE TOP HALF OR SIDES OF PIPES MOUNTED LOW.
  - LABELS SHALL BE, COLOR CODED, PRE-PRINTED, SELF ADHESIVE VINYL.
  - SEE SPECIFICATION FOR OTHER REQUIREMENTS AND LIST OF PIPE FUNCTIONS.

**2** PIPE LABEL DETAIL  
P-501 NOT TO SCALE

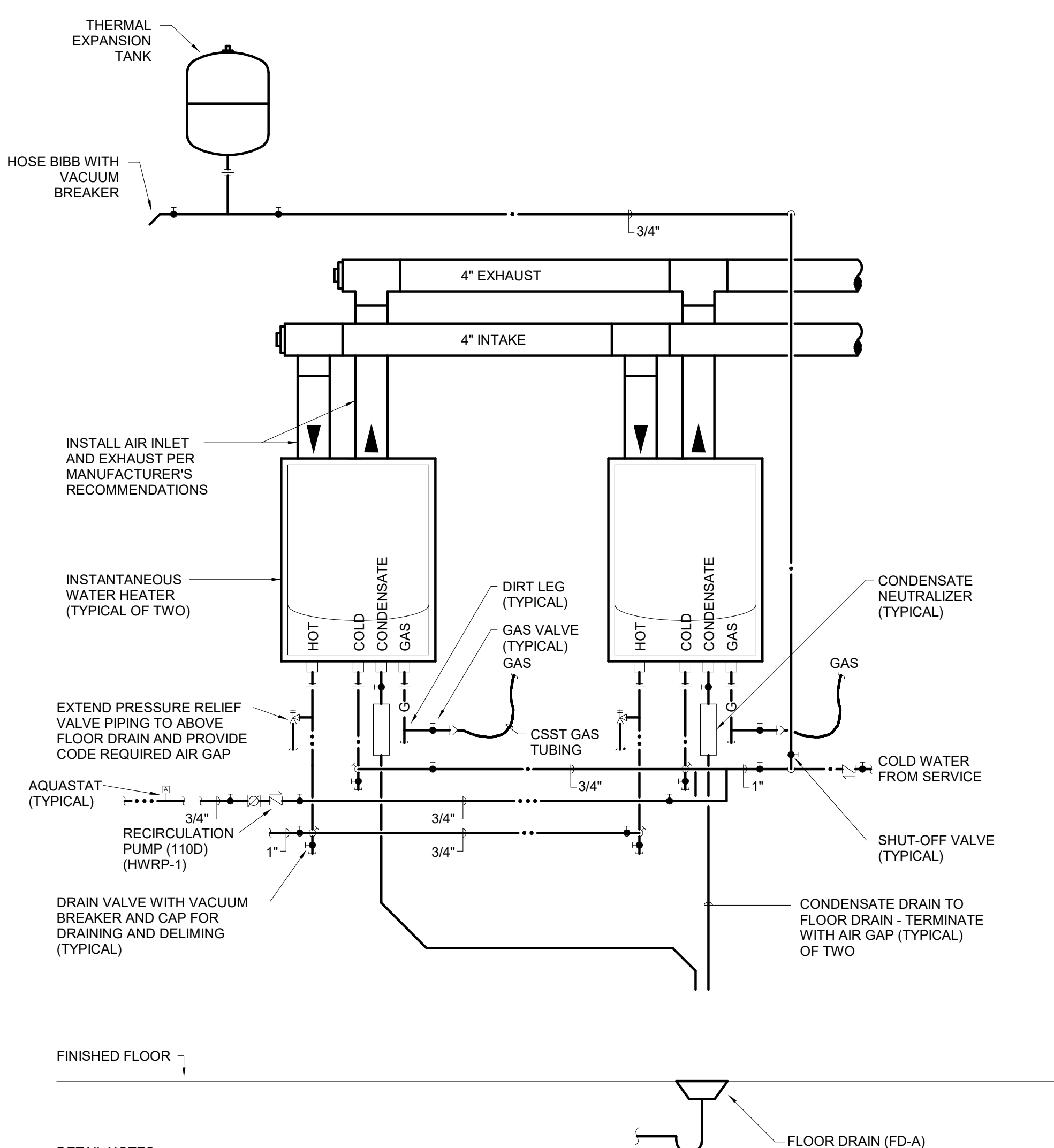


- DETAIL NOTES:
- PROVIDE A MIXING VALVE FOR EACH LAVATORY AND SINK.
  - MIXING VALVE SHALL BE ADJUSTED TO DELIVER TEMPERED WATER AT 105°F.

**3** LAVATORY SUPPLY DETAIL  
P-501 NOT TO SCALE

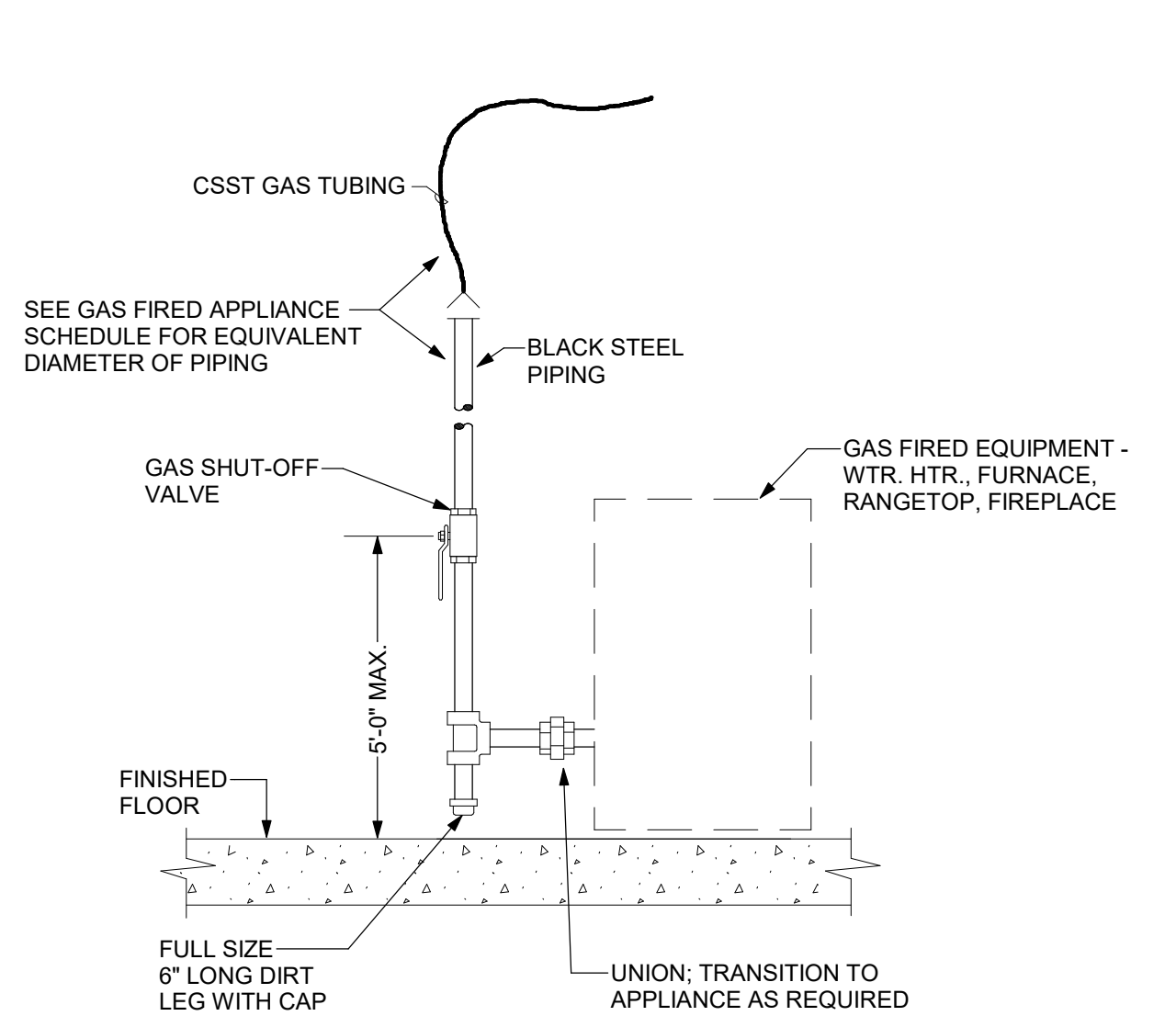


**4** WATER SERVICE ENTRANCE DETAIL  
P-501 NOT TO SCALE



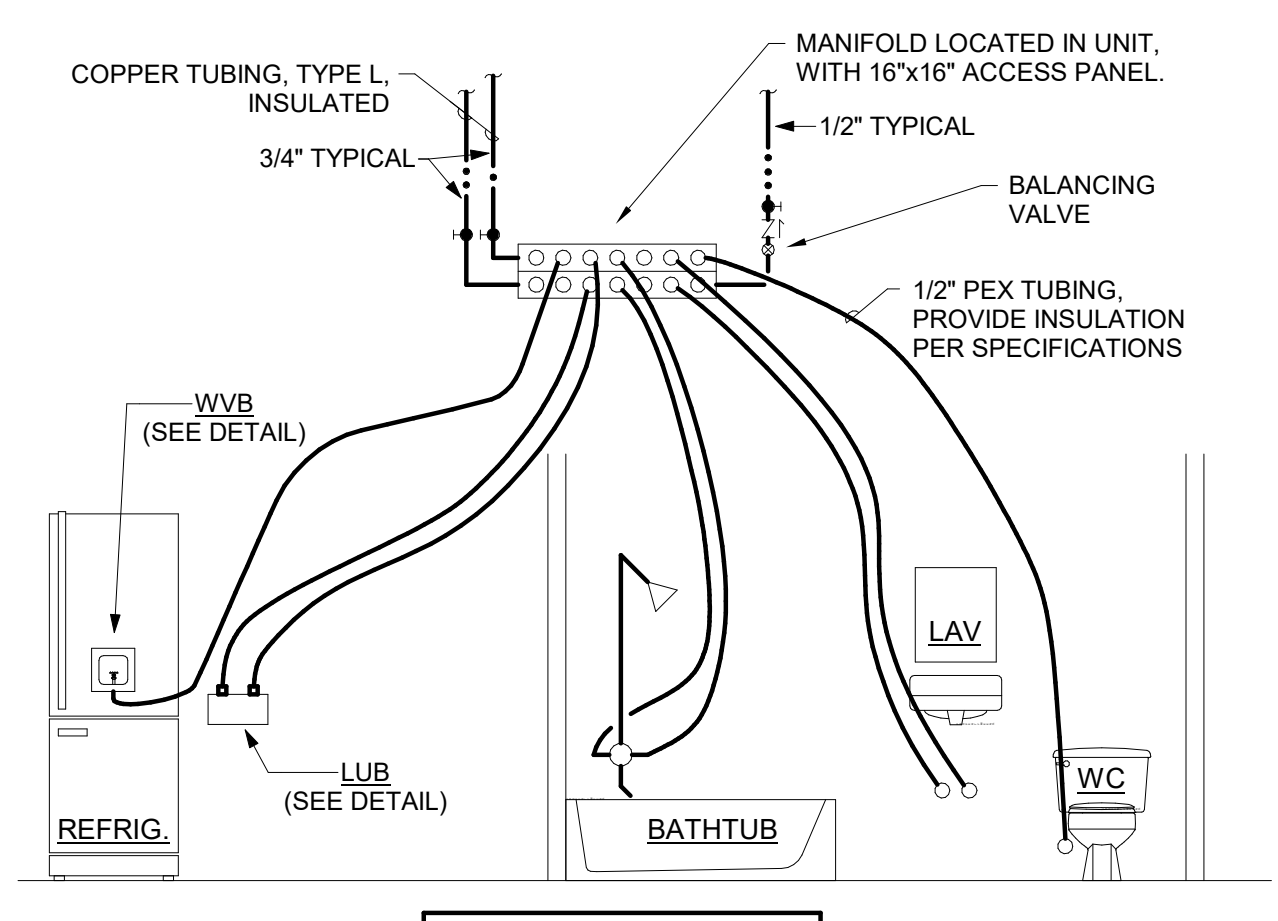
- DETAIL NOTES:
- SECURE HEATER TO WALL WITH BOTTOM OF HEATER 2'-6" ABOVE FINISHED FLOOR. INSTALLATION TO COMPLY WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.
  - REFER TO EXPANSION TANK DETAIL. COORDINATE LOCATION WITH STAIR STRUCTURE.

**1** DUPLEX INSTANTANEOUS WATER HEATER DETAIL  
P-501 NOT TO SCALE



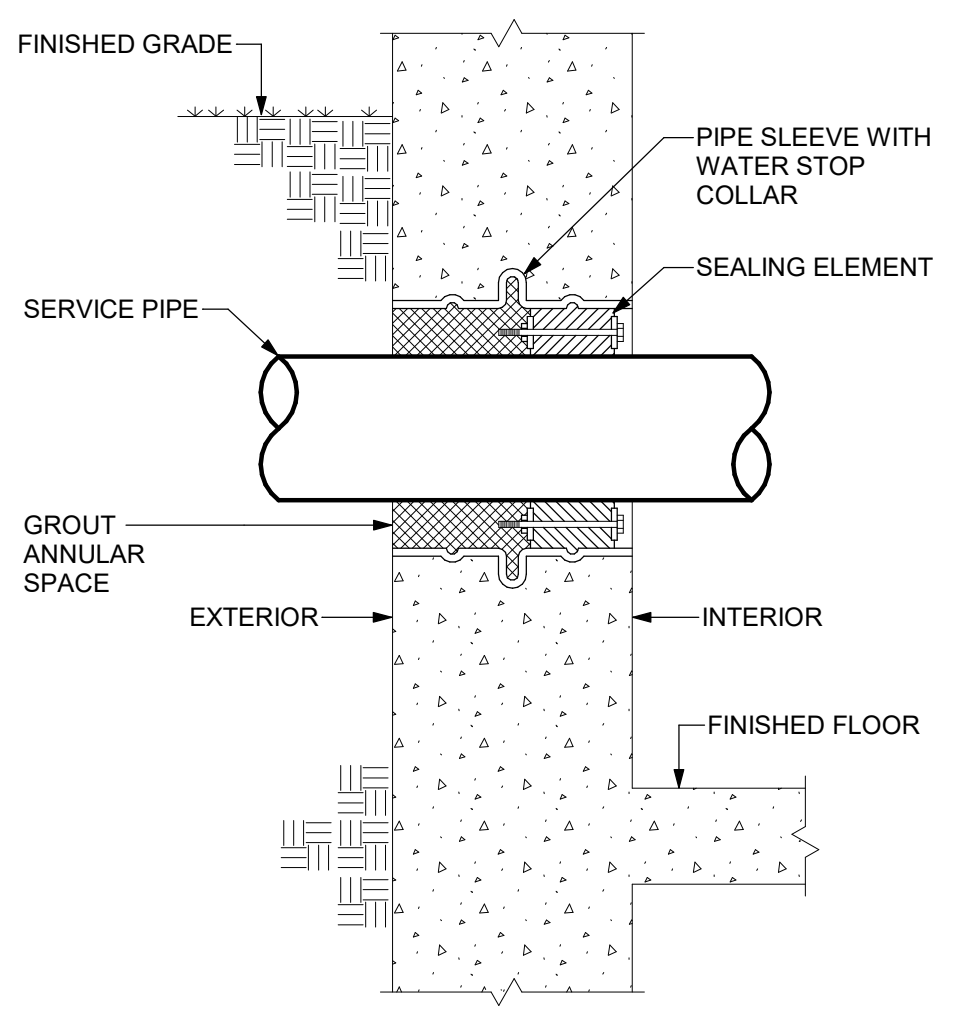
- DETAIL NOTES:
- PROVIDE SHUT-OFF VALVE, DIRT LEG AND UNION AT EACH GAS CONNECTION ON EACH PIECE OF EQUIPMENT.
  - VERIFY CONNECTION SIZES, QUANTITIES AND LOCATIONS WITH M.C.
  - DIVISION 22 IS RESPONSIBLE FOR FINAL CONNECTION.

**5** GAS EQUIPMENT CONNECTION DETAIL  
P-501 NOT TO SCALE

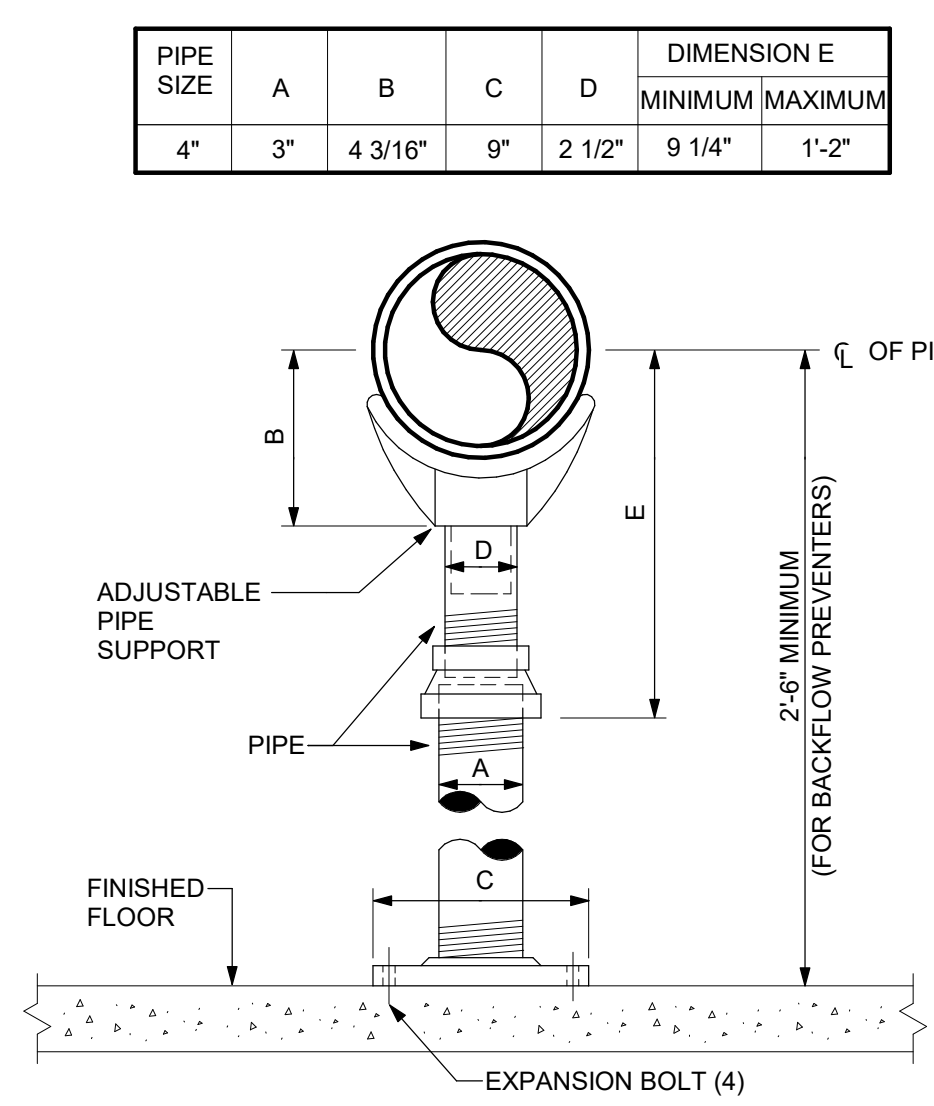


- DETAIL NOTE:
- PEX PIPING SHALL BE INSTALLED ONLY IN INDIVIDUAL DWELLINGS
  - A CENTRAL MANIFOLD SHALL BE INSTALLED INSIDE EACH DWELLING UNIT. SHUT-OFF VALVES SHALL BE INSTALLED ON THE MANIFOLD INLET PIPING. MANIFOLD SHALL BE COPPER OR BRASS AND HAVE INDIVIDUAL BRASS SHUT-OFF VALVES ON EACH LINE
  - LABEL EACH MANIFOLD SHUT-OFF VALVE TO INDICATE FIXTURE SERVED
  - ALL FIXTURES SHALL BE PIPED DIRECTLY FROM MANIFOLD AND NO CONNECTORS OR UNIONS SHALL BE INSTALLED BETWEEN THE MANIFOLD AND THE FIXTURE STUB-OUT. STUB-OUTS SHALL BE COPPER.
  - CONNECTORS SHALL BE BRASS WITH A COPPER, BRASS OR S.S. CRIMP RING. SLIP FIT, PUSH FIT AND ADJUSTABLE STRAP CLAMP TYPES ARE NOT ACCEPTABLE.
  - SYSTEM SHALL BE PRESSURE TESTED TO 100 PSI FOR A MINIMUM OF 4 HOURS

**6** PEX MANIFOLD CONNECTION DETAIL  
P-501 NOT TO SCALE



**7** PIPE THRU NEW EXTERIOR WALL DETAIL  
P-501 NOT TO SCALE



**8** ADJUSTABLE PIPE DETAIL  
P-501 NOT TO SCALE

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SECTION 220500 - BASIC MECHANICAL REQUIREMENTS

A. GENERAL

- 1. ALL WORK SHALL COMPLY WITH ALL BUILDING AND PLUMBING CODES OF NEW YORK STATE, LIFE SAFETY CODE (LSC) - NFPA 101, NEW YORK STATE HEALTH CODE, CITY OF BUFFALO PLUMBING CODES AND ALL OTHER APPLICABLE CODES, STANDARDS AND RECOMMENDED PRACTICES. ALL EQUIPMENT AND PLUMBING FIXTURES SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
2. GENERAL:
a. COORDINATE PLUMBING WORK WITH OTHER TRADES TO AVOID ANY INTERFERENCES IN THE FIELD. ADJUST LOCATIONS OF WORK AS REQUIRED.
b. CONTRACTOR SHALL EXAMINE THE FIELD CONDITIONS AS WELL AS THE DRAWINGS AND SHALL MAKE HIS OWN DETERMINATION AS TO THE EXTENT OF THE WORK.
c. SUBMIT SIX (6) COPIES OF SHOP DRAWINGS COVERING ALL MATERIALS AND EQUIPMENT TO BE FURNISHED. SUBMIT TO ENGINEER FOR APPROVAL PRIOR TO START OF WORK.
d. THE CONTRACTOR SHALL OBTAIN ALL PERMITS, LICENSES AND INSPECTIONS AND SHALL PAY ALL LEGAL AND PROPER FEES AND CHARGES IN CONNECTION WITH THIS WORK.
e. ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
f. PROVIDE FOUR (4) SETS OF OPERATING AND MAINTENANCE MANUALS AND INSTRUCT OWNER'S PERSONNEL IN OPERATION OF EQUIPMENT AND SYSTEMS.
g. THE CONTRACTOR SHALL OBTAIN AT HIS EXPENSE, FOR A COST OF \$50.00 PER DRAWING FILE, CONTRACT DRAWINGS FROM THE ENGINEER IN THE FORM OF ELECTRONIC FILES. FOR THE PURPOSE OF RECORDING AS-BUILT CONDITIONS, COMPLETE ELECTRONIC FILES SHALL BE CERTIFIED AS REFLECTING AS-BUILT CONDITIONS AND SUBMITTED TO THE ENGINEER FOR APPROVAL. PROVIDE THE OWNER WITH TWO (2) SETS OF PLOTS, ONE (1) SET OF REPRODUCIBLE DRAWINGS AND ONE (1) ELECTRONIC FILE ON CD.
3. CUTTING AND REFINISHING:
a. ALL CUTTING, FITTING, REPAIRING, PAINTING AND FINISHING OF MASONRY, CONCRETE WALLS AND FLOORS, METAL AND CARPENTRY WORK, ETC., THAT MAY BE NECESSARY FOR THE OPERATIONS REQUIRED BY THIS CONTRACTOR SHALL BE DONE BY CRAFTSMEN SKILLED IN THEIR RESPECTIVE TRADES AND AT THE EXPENSE OF THIS CONTRACTOR UNLESS OTHERWISE INDICATED, IN A MANNER APPROVED BY THE ARCHITECT.
b. THIS CONTRACTOR SHALL COORDINATE ALL NEW PLUMBING LOCATIONS WITH EXISTING STRUCTURE, DUCTWORK, PIPING, ETC.
c. CUT EXISTING WALLS AND FLOORS AS REQUIRED FOR NEW WORK UNLESS OTHERWISE NOTED. PATCH TO MATCH ADJACENT SURFACES.
4. FIRE STOPPING:
a. PROVIDE FIRESTOP SYSTEM SEALS AT ALL LOCATIONS WHERE PIPING OR TUBING PASS THROUGH OR PENETRATE FIRE-RATED WALLS OR BLOCK WALLS. PROVIDE FIRESTOP SEAL BETWEEN SLEEVE AND WALL FOR DRYWALL CONSTRUCTION. THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH LIFE SAFETY CODE (LSC, NFPA 101) AND INDUSTRY STANDARDS. FIRESTOP SYSTEM SHALL BE 3-M FIRE PRODUCTS OR HILTI FIRE PRODUCTS. ALL TRADES SHALL USE PRODUCTS OF THE SAME MANUFACTURER. COORDINATE WITH OTHER TRADES.

SECTION 220523 - VALVES

- A. REQUIRED FOR ALL BRANCH MAINS AND AT EQUIPMENT.
B. MANUFACTURER:
1. BALL VALVES: LEAD-FREE WATTS FULL PORT LF-FBV-3C SERIES (THREADED ENDS) OR WATTS LF-FBVS-3C SERIES (SWEAT ENDS).
2. CHECK VALVE, 2 IN. AND SMALLER: LEAD-FREE BRONZE, SWING CHECK, 200 SWP; NIBCO T-413-Y-LF (THREADED ENDS) OR NIBCO S-413-Y-LF (SWEAT ENDS).
3. BALANCE VALVES, 2 IN. AND SMALLER: LEAD-FREE BRASS BODY, BRASS PLUG AND STEM, TEFLON SEAT RINGS, THREADED ENDS, DIFFERENTIAL READOUT PORTS, CALIBRATED NAMEPLATE, MEMORY STOP INDICATOR AND PRE-FORMED INSULATION TO PERMIT ACCESS FOR BALANCING AND READOUT; WATTS SERIES LFC5M-61-S.

SECTION 220553 - PLUMBING IDENTIFICATION

- A. QUALIFICATIONS:
1. ALL IDENTIFICATION DEVICES SHALL COMPLY WITH ANSI A13.1 FOR LETTERING SIZE, LENGTH OF COLOR FIELD, COLORS, AND VIEWING ANGLES.
B. MAKES:
1. ALLEN SYSTEMS, INC., BRADY (W.H.) CO., SIGNMARK DIV., INDUSTRIAL SAFETY SUPPLY CO., INC., SETON NAME PLATE CORP.
C. PIPING IDENTIFICATION:
1. IDENTIFICATION TYPES:
a. PRESSURE SENSITIVE TYPE: PROVIDE MANUFACTURER'S STANDARD PRE-PRINTED, PERMANENT ADHESIVE, COLOR CODED, PRESSURE SENSITIVE VINYL PIPE MARKERS COMPLYING WITH ANSI A13.1. PROVIDE A 360 DEGREE WRAP OF FLOW ARROW TAPE AT EACH END OF PIPE LABEL.
2. LETTERING:
a. PIPING LABELING SHALL CONFORM TO THE FOLLOWING LIST:
PIPE FUNCTION IDENTIFICATION
COLD WATER DOMESTIC COLD WATER
HOT WATER DOMESTIC HOT WATER
HOT WATER RECIRCULATING HOT WATER RECIRC.
VENT VENT
SANITARY WASTE SANITARY WASTE

- 3. GENERAL:
a. PROVIDE PIPING IDENTIFICATION WITH DIRECTIONAL FLOW ARROWS FOR ALL PIPING ON PROJECT, MAXIMUM EVERY 15 FT-0 IN. FOR PIPING INSTALLED THROUGH ROOMS. PROVIDE AT LEAST ONE PIPE LABEL IN EACH ROOM, FOR EACH PIPE FUNCTION.
b. PROVIDE HOT WATER TEMPERATURE LABELING AS REQUIRED.

SECTION 220700 - INSULATION

- A. ALL WATER PIPING: GLASS FIBER - COLD - 1-1/4 IN. AND SMALLER PIPING: 1/2 IN. THICK WITH VAPOR BARRIER; 1-1/2 IN. AND LARGER PIPING: 1 IN. THICK WITH VAPOR BARRIER; HOT - 1-1/4 IN. AND SMALLER PIPING: 1 IN. THICK, 1-1/2 IN. AND LARGER PIPING: 1-1/2 IN. THICK.
B. INSULATION SHALL HAVE WHITE ALL SERVICE JACKETS.
C. INSULATION FITTINGS, VALVES, ETC., WITH INSULATING CEMENT THE SAME THICKNESS AS PIPE INSULATION OR WITH "ZESTON" TYPE SYSTEM AS APPROVED.

SECTION 221010 - PIPE AND PIPE FITTINGS

- A. COPPER PIPE AND FITTINGS:
1. HARD TEMPER, ASTM B88, TYPE L OR DWV, AS CALLED FOR. TYPE L.
2. SOLDER, WATER AND SANITARY PIPING: NO-LEAD SOLDER.
B. PEX PIPING:
1. PIPE: CROSS-LINKED, HIGH DENSITY, POLYETHYLENE TUBING FOR POTABLE WATER, ASTM F-876/F-877, ANSIS F61, PLANS SHOW NOMINAL TUBE SIZES.
2. MANIFOLDS: COPPER MANIFOLD WITH SWEAT ENDS AND 1/2 IN. OUTLETS ON 3 IN. CENTERS. PROVIDE REDUCING COUPLINGS AS REQUIRED FOR INDIVIDUAL OUTLETS.

- 3. VALVES: BRASS BODY BALL VALVES WITH SWEAT X PEX COMPRESSION ENDS RATED FOR 250 PSI AND 250 DEG F. PROVIDE CRIMP RING FOR PEX COMPRESSION CONNECTIONS.
4. ACCEPTABLE MANUFACTURERS: WIRSBO, VIEGA, ZURN OR APPROVED EQUAL.
C. CORRUGATED STAINLESS STEEL TUBING
1. CORRUGATED STAINLESS STEEL TUBING (CSST) COMPLYING WITH ANSI LC 18 FUEL GAS PIPING SYSTEMS USING CORRUGATED STAINLESS STEEL TUBING.
2. PIPE: ASTM A240, TYPE 300 CORRUGATED STAINLESS STEEL TUBING WITH AMINIMUM WALL THICKNESS OF 0.008 IN. JACKETING OF UV RESISTANT POLYETHYLENE MEETING THE REQUIREMENTS OF ASTM E84 FOR FLAME SPREAD AND SMOKE DENSITY.
3. FITTINGS: ALL MECHANICAL TUBING FITTINGS SHALL BE SAE CA360 BRASS WITH DOUBLE WALL FLARE SEALS AND SHALL BE BY THE SAME MANUFACTURER AS THE TUBING.
4. BONDING: PROVIDE PERMANENT DIRECT BONDING OF CORRUGATED STAINLESS STEEL GAS PIPING TO THE ELECTRICAL SERVICE PER MANUFACTURER'S RECOMMENDATIONS AND NEC 2005, ARTICLE 250.70 ON BONDING JUMPERS. BONDING ATTACHMENT TO THE PIPING SHALL BE MADE USING A BONDING/GROUNDING CLAMP LISTED TO UL 467.
5. EACH CSST INSTALLER SHALL BE TRAINED AND CERTIFIED BY THE MANUFACTURER OF THE CSST PIPING BEING INSTALLED.
6. PIPING SIZES SHOWN ON THE PLANS, UNLESS OTHERWISE NOTED, ARE BASED ON IRON PIPE SIZES. WHEN PROVIDING CSST, THE CONTRACTOR SHALL SUBMIT CALCULATIONS CONFIRMING THE FLOW AND PRESSURE DELIVERED TO THE EQUIPMENT WILL BE ADEQUATE. CSST PIPE SIZES SHALL BE INCREASED WHEN FLOW AND PRESSURE IS NOT SUITABLE FOR THE OPERATION OF THE SPECIFIED EQUIPMENT.
7. ACCEPTABLE MANUFACTURERS: GASTITE, OMEGAFLEX, WARDFLEX OR APPROVED EQUAL.
D. STEEL PIPING AND FITTINGS
1. PIPE: ASTM A53, OR ASTM A106 SEAMLESS, SCHEDULE 40 OR SCHEDULE 80 WEIGHT; BLACK OR GALVANIZED FINISH AS CALLED FOR; ENDS CHAMFERED FOR WELDING OR GROOVED FOR GROOVED MECHANICAL CONNECTIONS.
2. FITTINGS: SAME MATERIAL AND PRESSURE CLASS AS ADJOINING PIPE.
A. WELDED FITTINGS: FACTORY FORGED, SEAMLESS CONSTRUCTION, BUTT WELD TYPE CHAMFERED ENDS, WHERE BRANCH CONNECTIONS ARE TWO OR MORE SIZES SMALLER THAN MAIN SIZE, USE OF "WELDOLETS", "THREDOLETS" OR "SOCKLETS" ACCEPTABLE. MITERED ELBOWS, "SHAPED" NIPPLES, AND JOB FABRICATED REDUCTIONS NOT ACCEPTABLE UNLESS SPECIFICALLY CALLED FOR. SOCKET WELD TYPE, 2000 PSI WP, WHERE CALLED FOR.
B. THREADED FITTINGS: CAST OR MALLEABLE IRON, BLACK OR GALVANIZED, AS CALLED FOR; DRAINAGE TYPE WHERE CALLED FOR; ULLISTED AND FM APPROVED FOR FIRE PROTECTION SYSTEMS. STREET TYPE 45 DEG AND 90 DEG ELBOWS ARE NOT ACCEPTABLE.
3. FLANGES, UNIONS, AND COUPLINGS:
A. THREADED CONNECTIONS:
1) FLANGES: CAST IRON COMPANION TYPE; FOR SIZES 2-1/2 IN. AND LARGER.
2) UNIONS: MALLEABLE IRON, BRONZE TO IRON SEAT, 300 LB. WWP; FOR SIZES 2 IN. AND SMALLER.
3) COUPLINGS: MALLEABLE IRON, STEEL, THREAD PROTECTORS ARE NOT ACCEPTABLE AS COUPLINGS.
B. WELDED CONNECTIONS:
1) FLANGES: WELDING NECK TYPE, SLIP-ON TYPE NOT ALLOWED UNLESS NOTED AND SHALL NOT BE INSTALLED IN CONJUNCTION WITH BUTTERFLY VALVES.
E. SOIL PIPE AND FITTINGS:
1. PIPE: ASTM 74 SERVICE WEIGHT CAST IRON, COATED.
a. FITTINGS: SWCI WITH NEOPRENE GASKET TYPE OR NO-HUB TYPE JOINTS (NO-HUB TYPE JOINTS ABOVE GROUND ONLY).
2. PIPE: ASTM B306, TYPE DWV, HARD TEMPER.
1) FITTINGS: WROUGHT COPPER, ANSI B16.29 OR CAST BRONZE, ANSI B16.23, SOLDER END CONNECTIONS.
2) FLUX MATERIALS: FLUX SHALL COMPLY WITH ASTM B813 AND THE PROVISIONS OF THE NEW YORK STATE PLUMBING CODE.
3) SOLDER MATERIALS: NO LEAD SOLDER, USING ALLOYS MADE FROM TIN, COPPER, SILVER AND NICKEL.
4) ACCEPTABLE MANUFACTURERS: HARRIS, INC., "STAY-SAFE 50" AND "BRIGHT", ENGELHARD "SILVABRIGHT 100", CANFIELD "WATERSAFE", OR APPROVED EQUAL.
F. HANGERS, INSERTS AND SUPPORTS:
1. HANGERS: ADJUSTABLE WROUGHT RING TYPE FOR SMALLER SIZES AND ADJUSTABLE STEEL CLEVIS TYPE FOR LARGER SIZES. DO NOT USE "C" CLAMPS ON JOISTS, USE CONCENTRIC TYPE CLAMPS ON TOP OR BOTTOM CHORD PANEL POINTS ONLY.
2. NO-HUB PIPE, ETC.: PROVIDE ADDITIONAL SUPPORTS AS RECOMMENDED BY PIPE MANUFACTURER.
3. SLEEVES: REQUIRED FOR ALL PIPING PASSING THROUGH FLOORS OR WALLS.

SECTION 221100 - WATER SUPPLY

- A. INTERIOR PIPING: ALL BRANCH MAIN PIPING SHALL BE TYPE L COPPER, NO-LEAD SOLDER FITTINGS. PEX PIPING FROM MANIFOLDS TO PLUMBING FIXTURES.
B. SUPPLY PIPING TO ALL FIXTURES ANCHOR TO PREVENT MOVEMENT.
C. RUN PIPING SLIGHTLY OFF LEVEL TO LOW POINTS, PROVIDE DRAIN VALVES.
D. SYSTEMS SHALL BE STERILIZED AS REQUIRED BY BUILDING CODES AND NEW YORK STATE HEALTH DEPARTMENT. SUBMIT TEST REPORTS.
E. TESTING: PROVIDE ALL NECESSARY ITEMS TO COMPLETE PROPER TESTING OF ALL WATER PIPING. TEST AT 150% OF WORKING PRESSURE FOR TWO HOURS. SUBMIT TEST REPORTS.
F. LEAKS, DAMAGE OR DEFECTS DISCOVERED RESULTING FROM TESTS SHALL BE REPAIRED OR REPLACED TO A LIKE NEW CONDITION. LEAKY PIPE JOINTS, ETC. SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE MATERIALS AND WORKMANSHIP.

SECTION 221300 - WASTE WATER SYSTEMS

- A. PLUMBING WASTE DRAINAGE SYSTEM:
1. INTERIOR:
a. SERVICE WEIGHT CAST IRON SOIL PIPE AND FITTINGS, CAST IRON NO-HUB OR TYPE DWV COPPER PIPE.
B. VENT PIPING:
1. TYPE DWV COPPER PIPE, OR CAST IRON, NO-HUB.
C. TESTING: PROVIDE ALL NECESSARY ITEMS TO COMPLETE PROPER TESTING OF WASTE WATER SYSTEMS. HYDROSTATIC TEST AT 10 FT. HEAD OF WATER ABOVE HIGHEST POINT OR SECTION BEING TESTED FOR SIX HOURS. SUBMIT TEST REPORTS.
D. LEAKS, DAMAGE OR DEFECTS DISCOVERED RESULTING FROM TESTS SHALL BE REPAIRED OR REPLACED TO A LIKE NEW CONDITION. LEAKY PIPE JOINTS, ETC. SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE MATERIALS AND WORKMANSHIP.

SECTION 223010 - EQUIPMENT

- A. CLEANOUTS:
1. FLOORS: CAST IRON BODY, NICKEL BRONZE TOP WITH ADJUSTABLE FEATURE, BRONZE PLUG AND FLASHING CLAMP WHERE REQUIRED, CARPET MARKER AND TILE COVER WHERE APPLICABLE; JAY R. SMITH SERIES #4028.
B. FLOOR DRAINS (FD-A):
1. DRAIN DESCRIPTION: ALL FLOOR DRAINS TYPE A UNLESS OTHERWISE NOTED.
a. TYPE A: CAST IRON BODY, FLASHING COLLAR WITH WEEP HOLES, NICKEL BRONZE, 7 IN. DIAMETER ADJUSTABLE STRAINER; JAY R. SMITH FIGURE #2010-A.
2. MAKE: JOSAM, JAY R. SMITH, WADE, WATTS, MIFAB OR ZURN.
C. TRAP GUARDS
1. ELASTOMERIC, NORMALLY CLOSED SEAL TO PREVENT EVAPORATION OF P-TRAPS. INSERTS INTO THROAT OF FLOOR DRAIN. PROVIDE FOR EACH NEW FLOOR DRAIN.
2. MAKE: PROVENT SYSTEMS, INC. "PROSET TRAP GUARD".
SECTION 224000 - PLUMBING FIXTURES AND TRIM
A. WATER CLOSET:
A. WC-A:
1. AMERICAN STANDARD #2467.100, CADET RIGHT HEIGHT, FLOOR MOUNTED, VITREOUS CHINA, PRESSURE ASSISTED, TANK TYPE ELONGATED BOWL, THICKNESS OF 0.008 IN. JACKETING OF UV RESISTANT POLYETHYLENE MEETING THE REQUIREMENTS OF ASTM E84 FOR FLAME SPREAD AND SMOKE DENSITY.
A. CHURCH#383SS EXTRA HEAVY WEIGHT, WHITE ELONGATED SOLID PLASTIC, OPEN FRONT SEAT WITH COVER.
B. MCGUIRE#166 CHROME PLATED ANGLE SUPPLY WITH 3/8 IN. X 1/2 IN. FLEXIBLE RISER, WHEEL HANDLE STOP AND WALL ESCUTCHEON WITH SET SCREW.
C. CAST IRON CLOSING FLANGE WITH STAINLESS STEEL BOLTS AND WAX SETTING RING.
D. COLOR MATCHING BOLT CAPS.
B. LAVATORIES
1. LAV-A:
A. AMERICAN STANDARD #0476.028 THREE HOLE AQUALYN, 20 IN. X 17 IN. OVAL, SELF-RIMMING COUNTERTOP, VITREOUS CHINA LAVATORY WITH FRONT OVERFLOW AND FAUCET LEDGE, FITTED WITH THE FOLLOWING
1) CHICAGO#089-317-FCABCP DECK MOUNTED 4 IN. FIXED CENTERS, QUARTZ COMBINATION LAVATORY FITTING WITH RIGID GOOSENECK SPOUT WITH 1.5 GPM LAMINAR FLOW CONTROL INSERT, NO. 317 4 IN. WRIST CONTROL HANDLES.
2) MCGUIRE#165-WC OFFSET CHROME PLATED PO PLUG WITH OPEN GRID STRAINER AND 1-1/4 IN., 17 GAUGE TAILPIECE.
3) MCGUIRE#167LK, 3/8 IN., CHROME PLATED WALL SUPPLIES WITH LOOSE KEY ANGLE STOPS, CAST BRASS SET SCREW ESCUTCHEONS AND 12 IN. LONG FLEXIBLE TUBE RISERS.
4) MCGUIRE#802, 1-1/4 IN. X 1-1/2 IN., 17 GAUGE, CHROME PLATED BRASS "P" TRAP WITH CLEANOUT PLUG AND SET SCREW ESCUTCHEON.
5) PROVIDE TEMPERATURE/PRESSURE MIXING VALVE.
6) COVER WASTE, STOPS AND SUPPLY PIPING WITH ADA CONFORMING PIPE COVERS, TRUEBRO, INC. "LAV-GUARD".
C. SINKS:
1. SK-A:
A. ELKAY LUSTERTONE LRAD2218, 22 IN. X 19 IN. X 6 IN. DEEP NICKEL TYPE 302 STAINLESS STEEL, DOUBLE BOWL SINK, ADA COMPLIANT, THREE (3) FAUCET HOLES, 18 GAUGE, SELF RIMMING FOR COUNTERTOP INSTALLATION, FITTED WITH THE FOLLOWING:
1) CHICAGO#431ABCP, SINGLE LEVER WASHERLESS SINK FAUCET, 9-1/2 IN. CAST BRASS SWING SPOUT, TEMPERATURE LIMITER, DECK MOUNTED, 8 IN. CENTERS, 2.0 GPM, LEAD FREE, ADA COMPLIANT.
2) ELKAY #LKAD35 STRAINER WITH REMOVABLE CUP, LKAD05 1-1/2 IN. O.D. OFFSET TAILPIECE.
3) MCGUIRE#8912 SEMI-CAST BRASS ADJUSTABLE "P" TRAP, 1-1/2 IN. X 1-1/2 IN., WITH CLEANOUT PLUG AND CAST BRASS ESCUTCHEON WITH SET SCREW.
D. SHOWERS AND BATH TUBS
1. SH-A: SHOWER AREA WALLS AND FLOORS WILL BE CONSTRUCTED AND TILED BY OTHERS. THE DIVISION 22 CONTRACTOR SHALL PROVIDE THE FOLLOWING TRIM FOR EACH SHOWER.
a. POWERS#E425 "HYDROGUARD" MIXING VALVE, THERMOSTATIC/PRESSURE BALANCED TYPE, CHROME PLATED, METAL LEVER AND ESCUTCHEON PLATE, LEVER ASSEMBLY WITH INTEGRAL CHECK STOPS.
b. POWERS#141-163 DELUXE HAND HELD SHOWER MODIFIED WITH DOUBLE SPIRAL CHROME PLATED HOSE, 60" LONG, CHROME PLATED SUPPLY ELBOW AND FLANGE, SWIVEL CONNECTOR AND 24 IN. GLIDE BAR WITH ADJUSTABLE SHOWER MOUNT.
c. POWERS#131-258 TYPE V ELEVATED, CHROME PLATED BRASS, ATMOSPHERIC TYPE VACUUM BREAKER (IN-LINE TYPE VACUUM BREAKERS NOT ACCEPTABLE).
2. BATH TUB BT-A:
A. KOHLER# K-715S R.O. OR #K-716S L.O.
1) AS REQUIRED, 5 FT. - 0 IN. LONG X 30 IN. WIDE X 14 IN. HIGH, WHITE ENAMELED CAST IRON, RECESSED BATH TUB WITH SLIP RESISTANT BOTTOM AND THE FOLLOWING TRIM.
2) CONCEALED POP-UP WASTE WITH OVERFLOW, LEVEL HANDLE, BRASS ELBOWS, TEE AND 1-1/2 IN., 17 GAUGE BRASS TUBING.
B. ACCESSORIES:
1) MIXING VALVE: EQUAL TO POWERS HYDROGUARD TYPE #410 PRESSURE BALANCING VALVE WITH CHECK STOPS, LEVEL HANDLE, COLOR INSERT, STAINLESS STEEL TRIM AND ADJUSTABLE TEMPERATURE LIMIT STOP.
A) MAKE: POWERS; #802, SYMMONS, OR APPROVED EQUAL.
2) SHOWER HEAD: POWERS TYPE "K" STANDARD SHOWER HEAD WITH 1.5 GPM FLOW CONTROL (BUILT-IN) TYPE 1 STANDARD ARMAND FLANGE.
3) TUB SPOUT: POWERS TYPE "U" SLIP-ON LIFT LATCH (DIVERTER) SPOUT.
4) CURTAIN AND ROD: 1 IN. DIAMETER STAINLESS STEEL CURTAIN ROD, WHITE 10 OZ. CURTAIN WITH HOOKS.

- E. WASHING MACHINE BOX
1. LUB: SIOUX CHIEF 696-2313WR.
F. REFRIGERATOR SUPPLY BOX
1. VVW: SIOUX CHIEF 696-1010MR.
G. WALL HYDRANT/HOSE BIBB
1. HB-A: EXPOSED TYPE HOSE CONNECTION, LEAD-FREE, SOLDER CONNECTION, NICKEL BRONZE FACE, QUARTER TURN VALVE, NON-FREEZE TYPE, 3/4 IN. HOSE CONNECTION, SELF DRAINING, INTEGRAL VACUUM BREAKER WITH VANDAL RESISTANT CAP, LOOSE KEY CONTROL AND WALL CLAMP; JAY R. SMITH FIGURE #5690PT.



PROFESSIONAL SEAL

Table with columns: No., Description, Date

PROJECT NAME: New Construction: The West End 240-260 Lakefront Blvd Buffalo Ny, 14202

Issued for Permit: 01.23.2019
Drawn By: TAG
Checked By: RKS

DRAWING NAME: Specifications - Plumbing

DRAWING NO. P-600

Project No: 18.122

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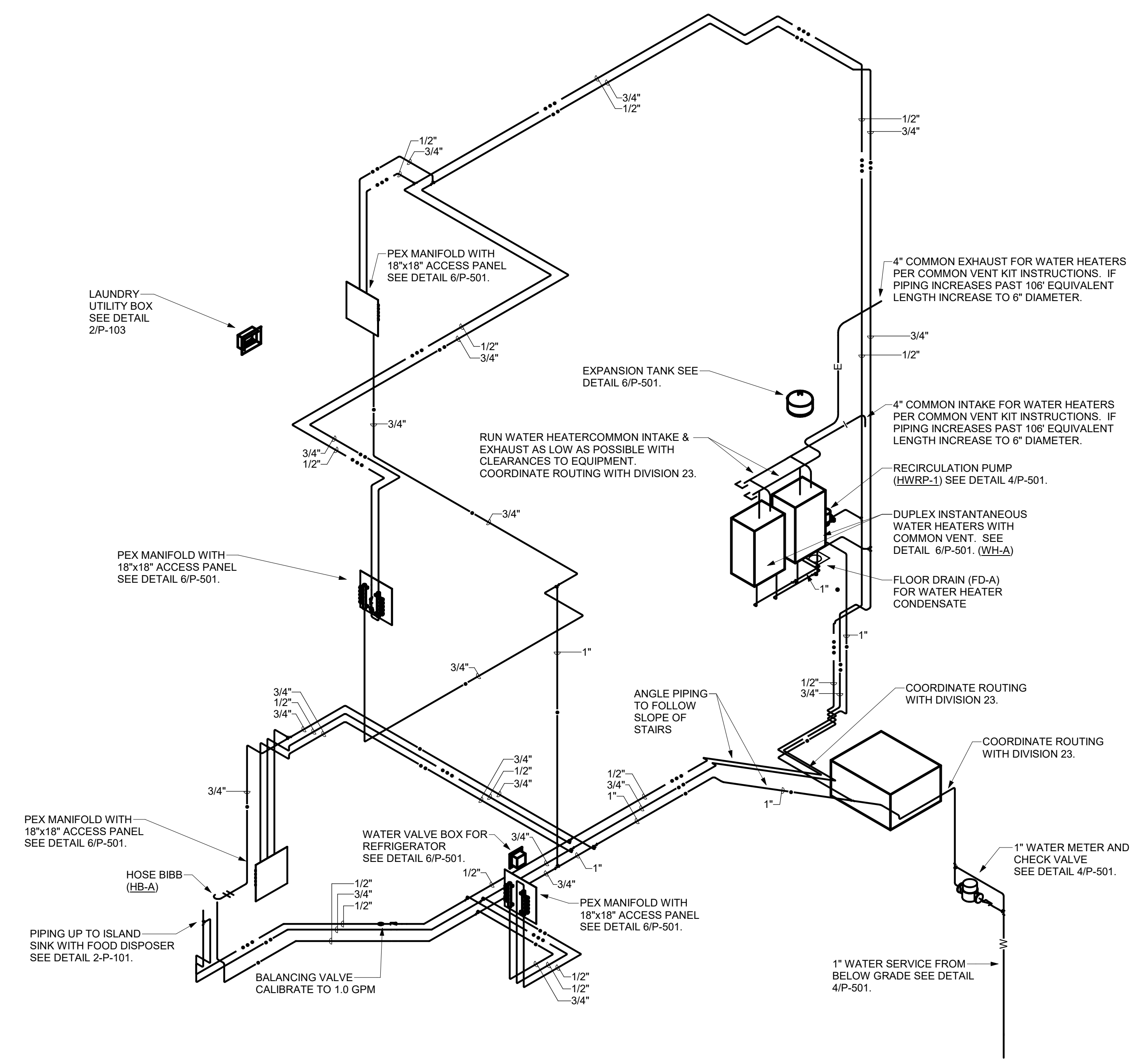
Issued for Permit: 01/12/19  
Drawn By: DMS2  
Checked By: RKS

**DRAWING NAME:**  
Riser Diagrams -  
Plumbing

**DRAWING NO.:**  
**P-701**

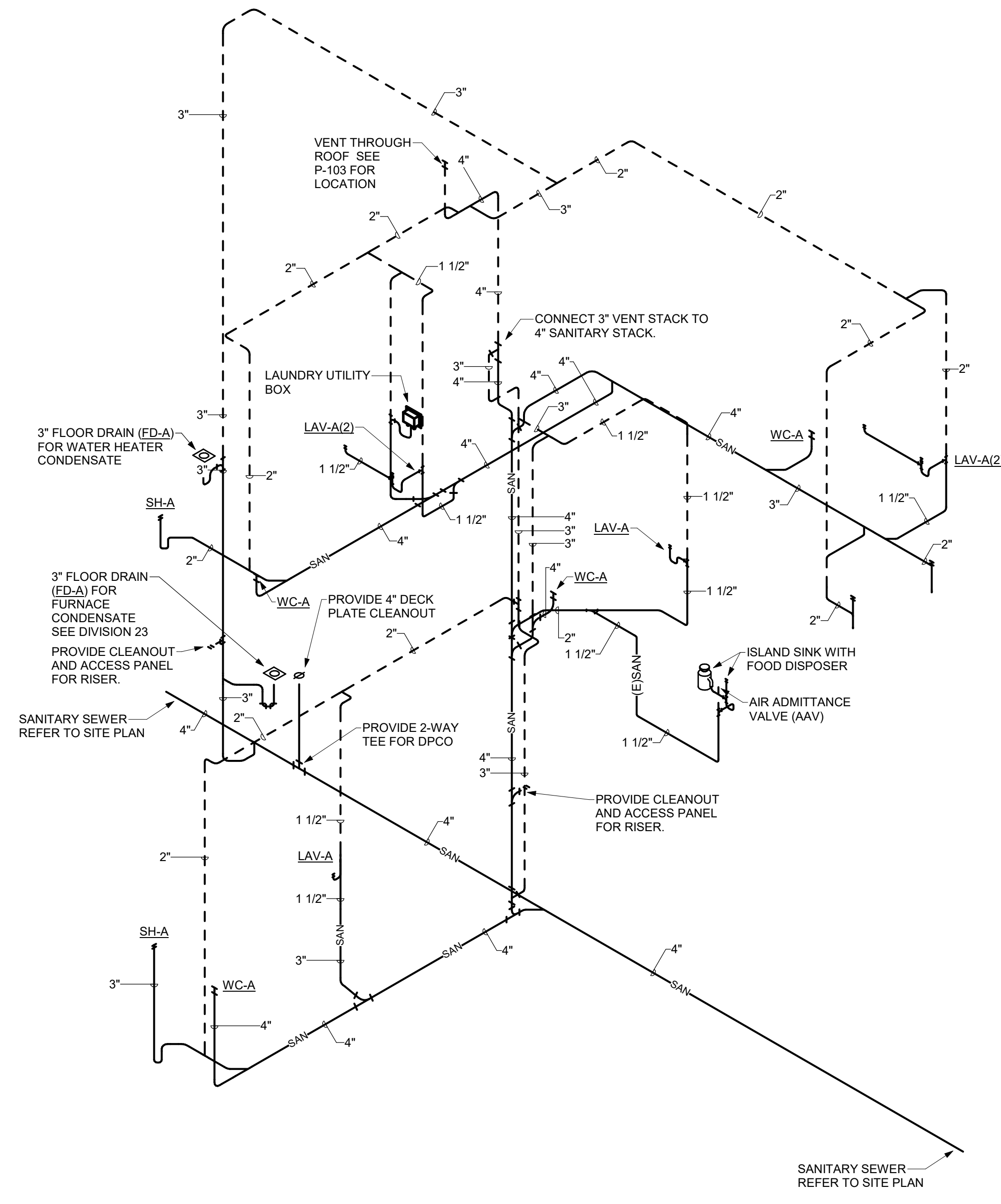
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**2** DOMESTIC WATER RISER DIAGRAM - PLUMBING  
P-701



SOME UNITS ARE OPPOSITE HAND

**1** SANITARY & VENT RISER DIAGRAM - PLUMBING  
P-701



SOME UNITS ARE OPPOSITE HAND

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