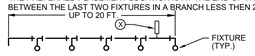
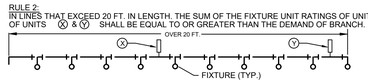
WATER HAMMER ARRESTOR SCHEDULE

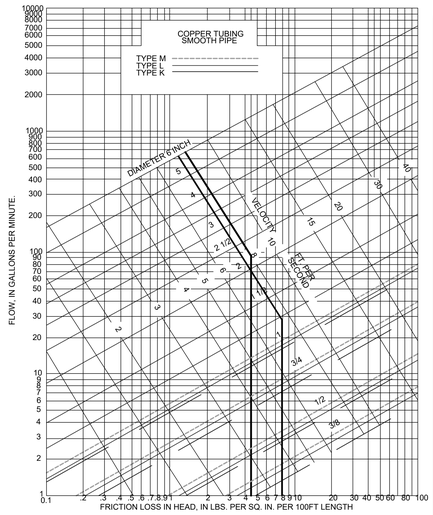
P.D.I. SYMBOL	MANUFACTURE	MODEL NO.	CONNECTION SIZE	FIXTURE UNIT RATING	REMARKS
"A"	J.R. SMITH	5005	3/4"	1-11	THREADED NIPPLE CONNECTION
"B"	J.R. SMITH	5010	1"	12-32	THREADED NIPPLE CONNECTION
"C"	J.R. SMITH	5020	1"	33-60	THREADED NIPPLE CONNECTION
"D"	J.R. SMITH	5030	1"	61-113	THREADED NIPPLE CONNECTION
"E"	J.R. SMITH	5040	1"	114-154	THREADED NIPPLE CONNECTION
"F"	J.R. SMITH	5050	1"	155-330	THREADED NIPPLE CONNECTION

RULE 1:
THE PREFERRED PLACEMENT LOCATION IS AT THE END OF THE BRANCH LINE BETWEEN THE LAST TWO FIXTURES IN A BRANCH LESS THEN 20 FEET.



RULE 2:
IN LINES THAT EXCEED 20 FT. IN LENGTH, THE SUM OF THE FIXTURE UNIT RATINGS OF UNITS OF UNITS (X) & (Y) SHALL BE EQUAL TO OR GREATER THAN THE DEMAND OF BRANCH.





PLUMBING CALCULATIONS BASED ON 2018 IPC:

	WATER	WASTE
SPRAY HOSE	5 x 1.4 WSFU = 7 WSFU	____
WATER CLOSET (FT)	3 x 5 WSFU = 15 WSFU	3 x 4 DFU = 12 DFU
DRINKING FOUNTAIN	2 x .25 WSFU = 0.5 WSFU	2 x 0.5 DFU = 1 DFU
LAVATORY	2 x 2 WSFU = 4 WSFU	2 x 1 DFU = 2 DFU
URINAL	1 x 5 WSFU = 5 WSFU	1 x 5 DFU = 5 DFU
SINK	8 x 2 WSFU = 16 WSFU	8 x 2 DFU = 16 DFU
MOP/SERVICE SINK	6 x 3 WSFU = 18 WSFU	6 x 2 DFU = 12 DFU
HOSE BIBB (FIRST)	1 x 3 WSFU = 3 WSFU	____
HOSE BIBB (EACH ADDITIONAL)	3 x 1 WSFU = 3 WSFU	____
FLOOR OR TRENCH DRAIN, 3"	____	3 x 4 DFU = 12 DFU
FLOOR OR TRENCH DRAIN, 4"	____	9 x 6 DFU = 54 DFU
TOTAL FIXTURE UNITS	= 71.5 WSFU	TOTAL = 114 DFU

71.5 FIXTURE UNITS — 36.0 GPM

HIGHEST ELEVATION — 18 FEET

(18 FT.) x 0.43 = 7.74 PSI STATIC LOSS

HORIZ. PIPE LENGTH METER TO BUILDING (PRV) * — 10 FEET
HORIZ. PIPE LENGTH BLDG. (PRV) TO LAST FIXTURE — 270 FEET
VERT. PIPE LENGTH BLDG. RISE TO HIGHEST FIXTURE — 18 FEET
TOTAL PIPE LENGTH (FROM PRV TO LAST FIXTURE) — 360 FEET

(360 FT.) x 1.25 (FITTING LOSS) = 450 FEET TOTAL DEVELOPED LENGTH

SIZE	DEVICE	PSI LOSS
1-1/2"	BACKFLOW PREVENTOR	10.0
1-1/2"	METER	5.0
	STATIC	7.74
	FIXTURE	34.00

TOTAL BUILDING LOSS — 56.74 PSI

PRESSURE AT BLDG — 65.00 PSI
PRESSURE REGULATOR SETTING — NA
BUILDING LOSS — 56.74 PSI
DIFFERENCE — 8.26 PSI

(27.26/360) x 100 = 3.7 — **MAX. PSI DROP ALLOWABLE PER 100 FT. PIPE LENGTH**

BRANCH PIPE SIZING CHART - PSI LOSS

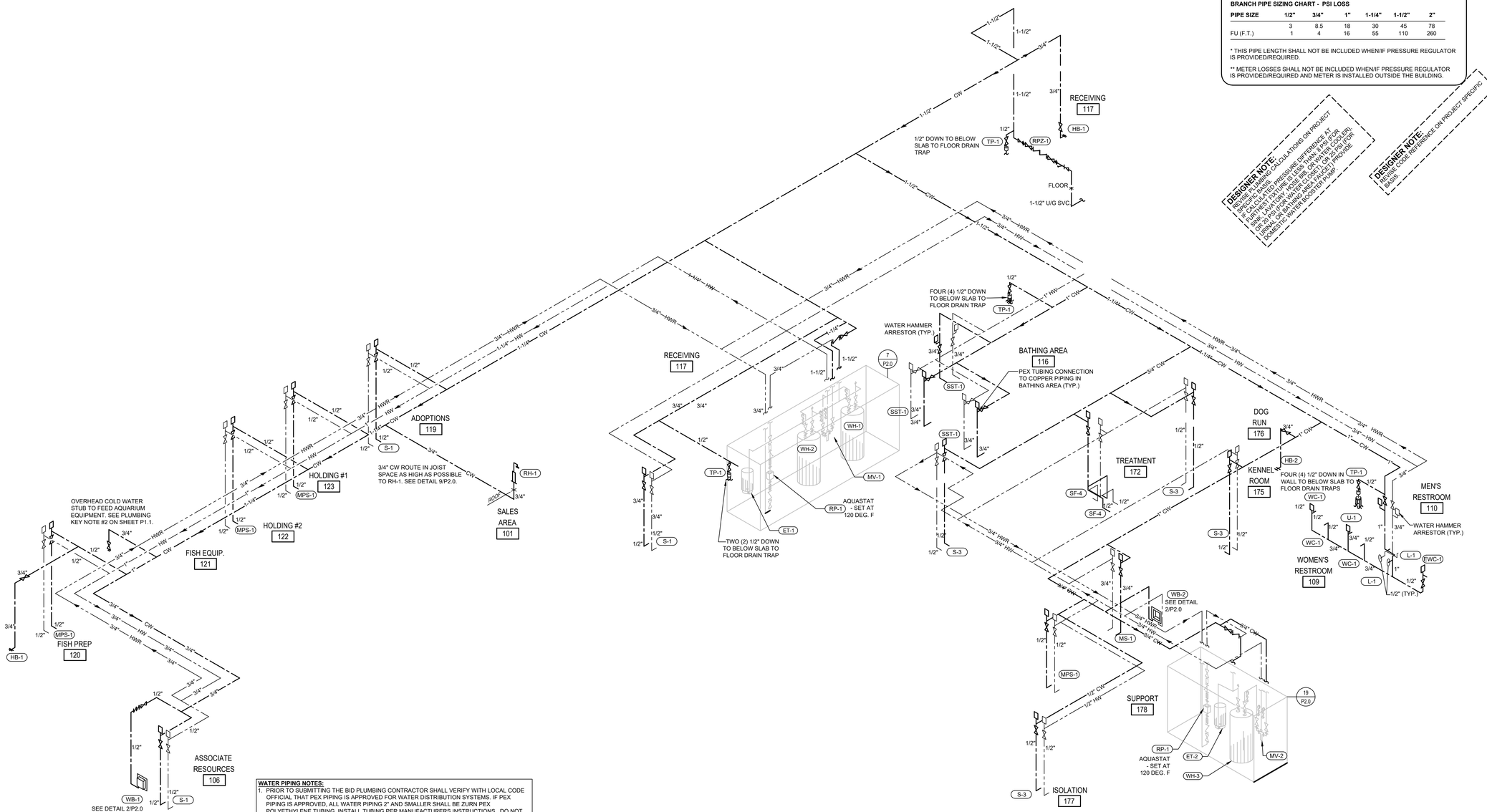
PIPE SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
	3	8.5	18	30	45	78
FU (F.T.)	1	4	16	55	110	260

* THIS PIPE LENGTH SHALL NOT BE INCLUDED WHEN/IF PRESSURE REGULATOR IS PROVIDED/REQUIRED.

** METER LOSSES SHALL NOT BE INCLUDED WHEN/IF PRESSURE REGULATOR IS PROVIDED/REQUIRED AND METER IS INSTALLED OUTSIDE THE BUILDING.

DESIGNER NOTE:
REVISE PLUMBING CALCULATIONS ON PROJECT SPECIFIC BASIS.
IF CALCULATED PRESS/RE DIFFERENCE AT FURTHEST FIXTURE LESS THAN 35 PSI FOR SINK, LAVATORY, HOSE BIB, DRAIN, WATER COOLER, DRAIN, OR SATIANG DEVICE FAILS TO PROVIDE 1 GPM, OR SATIANG DEVICE FAILS, PROVIDE DOMESTIC WATER BOOSTER PUMP.

DESIGNER NOTE:
REVISE CODE REFERENCE ON PROJECT SPECIFIC BASIS.



WATER PIPING NOTES:
1. PRIOR TO SUBMITTING THE BID PLUMBING CONTRACTOR SHALL VERIFY WITH LOCAL CODE OFFICIAL THAT PEX PIPING IS APPROVED FOR WATER DISTRIBUTION SYSTEMS. IF PEX PIPING IS APPROVED, ALL WATER PIPING 2" AND SMALLER SHALL BE ZURN PEX POLYETHYLENE TUBING. INSTALL TUBING PER MANUFACTURERS INSTRUCTIONS. DO NOT STORE PEX TUBING AND FITTINGS IN DIRECT OR INDIRECT SUN LIGHT.
2. EXPOSED PIPING AND SHUT-OFF VALVES IN CEILING IN BATHING AREA SHALL BE COPPER.
3. ALL PIPING, FITTINGS AND VALVES FOR WATER HEATERS CONNECTIONS SHALL BE COPPER.

1 / P3.0 WATER PIPING SCHEMATIC
SCALE: N.T.S.

TENANT:
PETSMART
19601 North 27th Avenue
Phoenix, Arizona 85027 - (623) 580-6100

PROJECT:
18K 2025 U.S. VET SERVICES INSTRUCTION SET

FEBRUARY 12, 2025

ARCHITECT:

CONSULTANT:

SEAL:

CITY SEAL:

DISCLAIMER:
THIS DRAWING AND DESIGN IN COPYRIGHT PROTECTED WHICH SHALL NOT BE USED, REPRODUCED OR REVISED WITHOUT WRITTEN PERMISSION BY PETSMART. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND UTILITY LOCATIONS AND REPORT ALL ERRORS AND OMISSIONS PRIOR TO COMMENCING WORK.

THIS DRAWING IS NOT TO BE SCALED.

ISSUED FOR:

#	DESCRIPTION	DATE

PROJECT NO: 18K 2025 US INSTRUCTION SET

ORIGINAL SCALE: AS INDICATED

DRAWN BY: XXX

CHECKED BY: XXX

PAGE #: 01 OF: 56

IF THIS BAR IS NOT 1" LONG, ADJUST YOUR PLOTTING SCALE — 1"

DISCIPLINE: PLUMBING

TITLE:
SCHEMATICS AND SCHEDULES

SHEET NUMBER:
P3.0