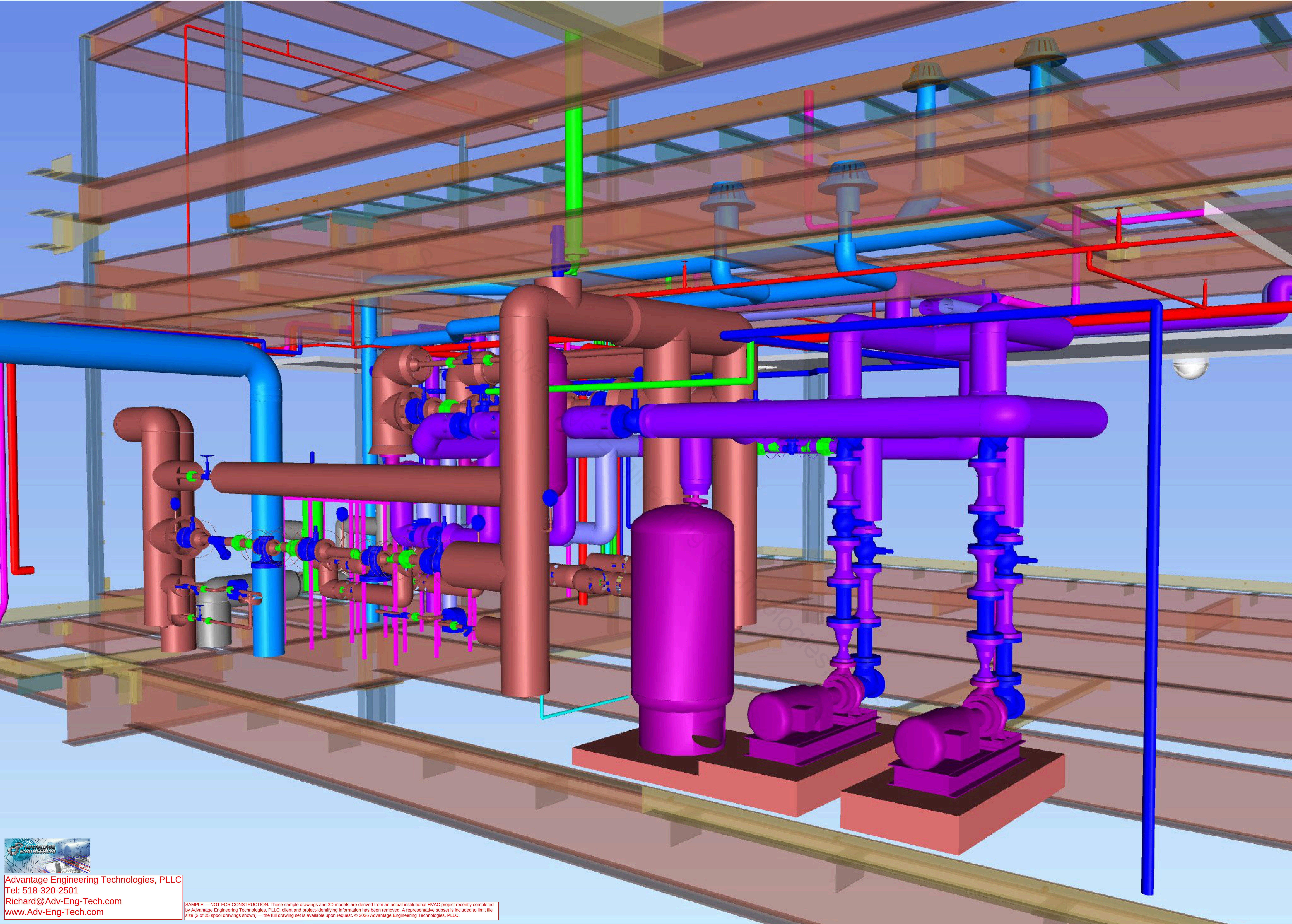
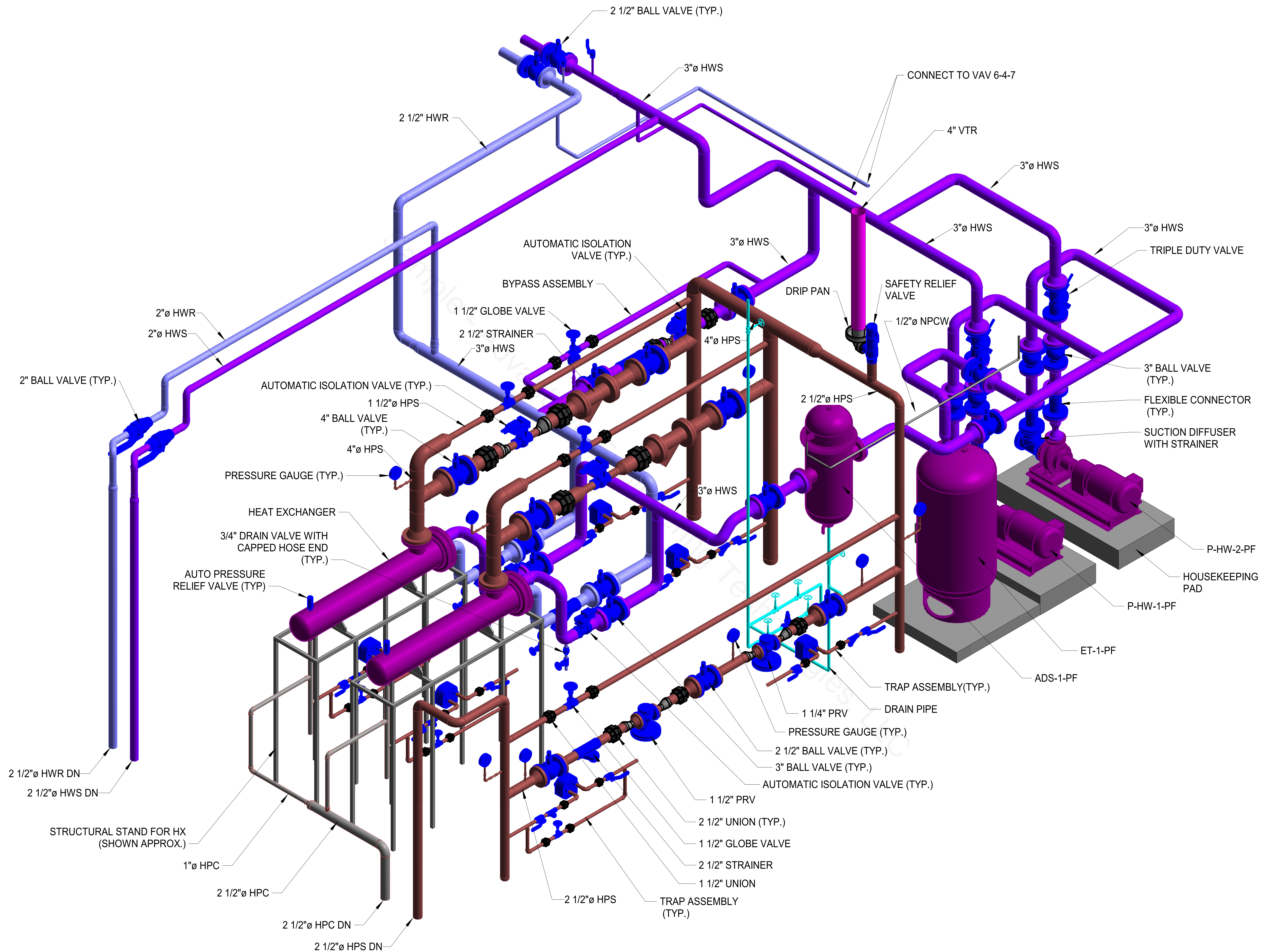


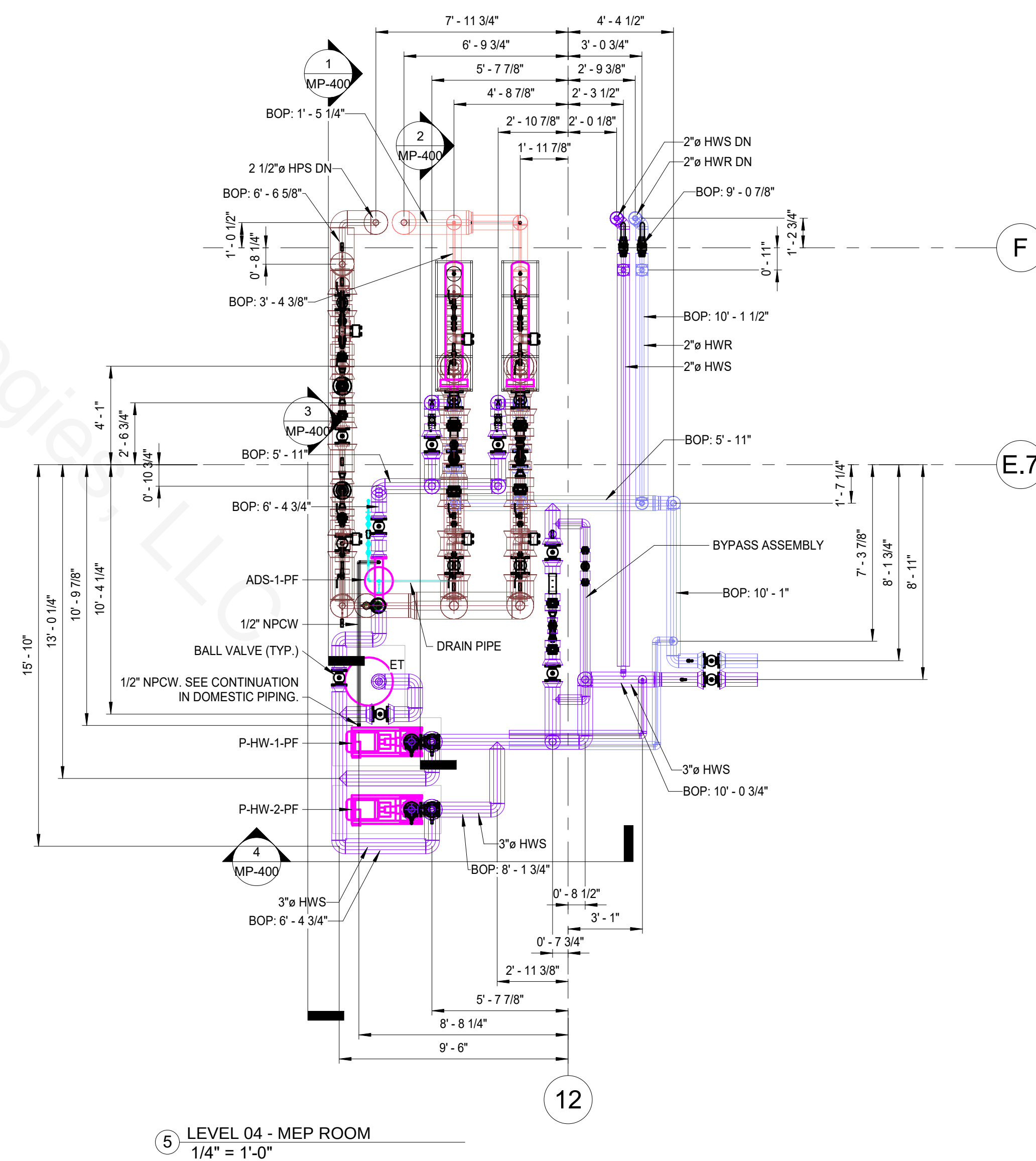
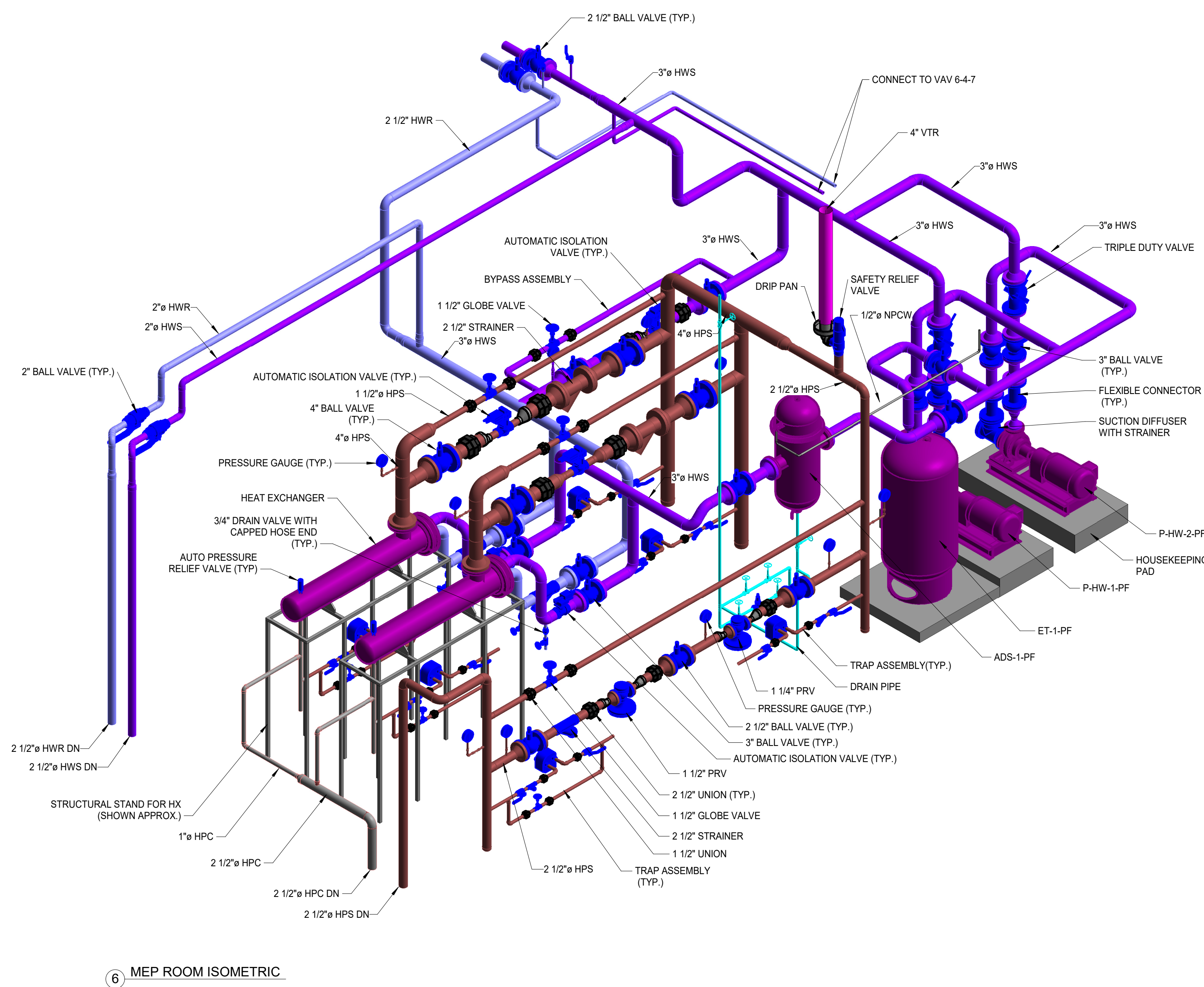
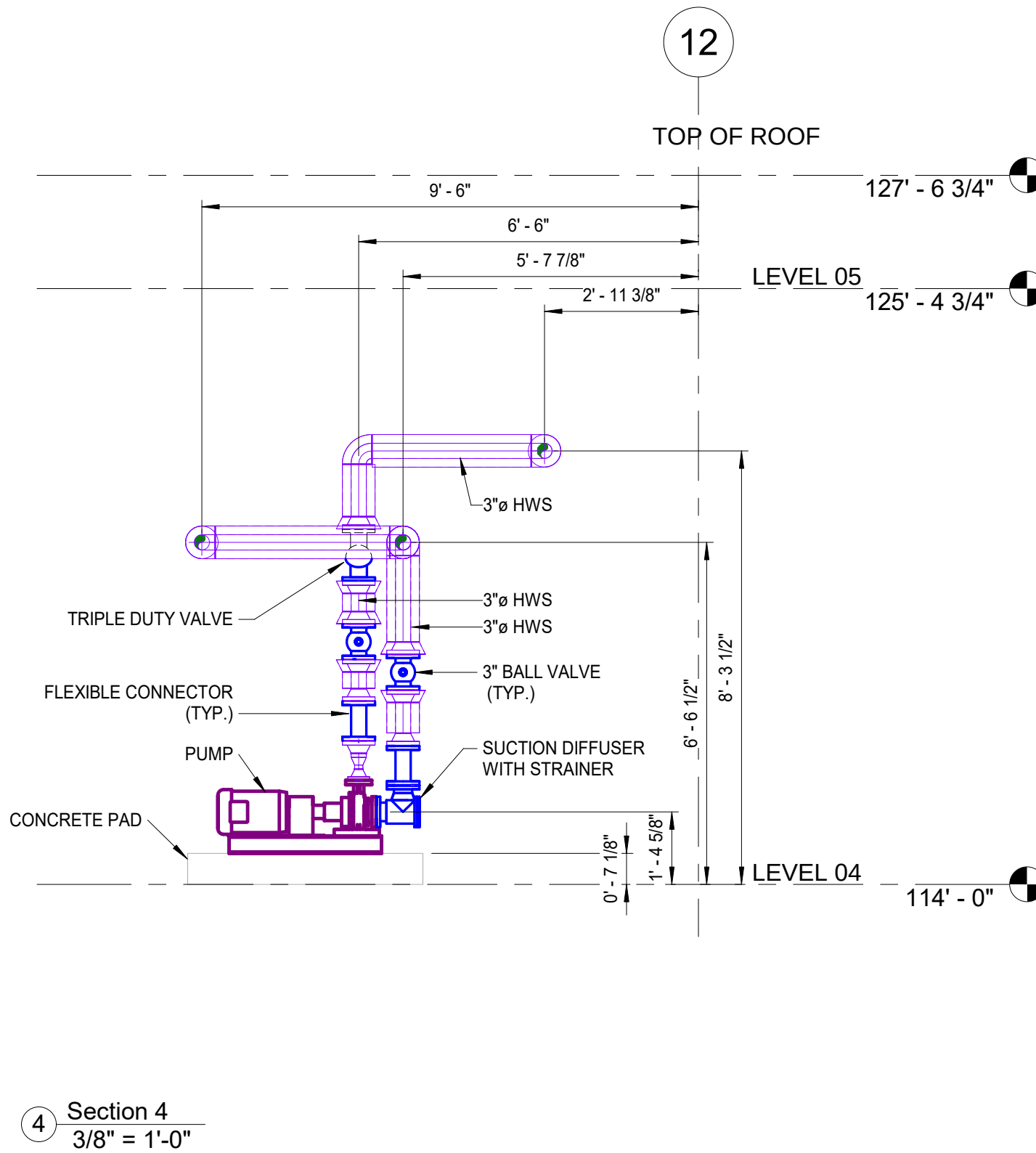
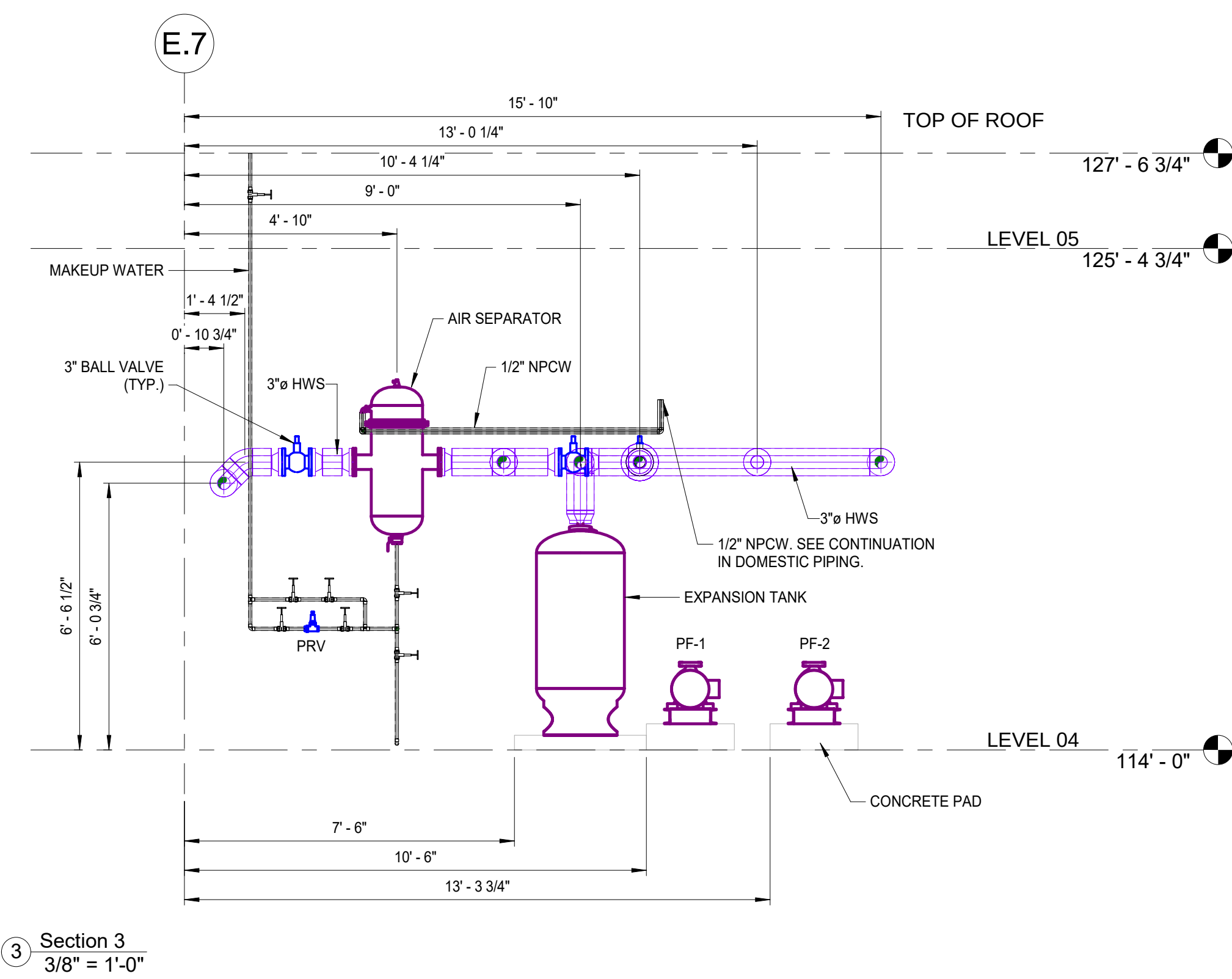
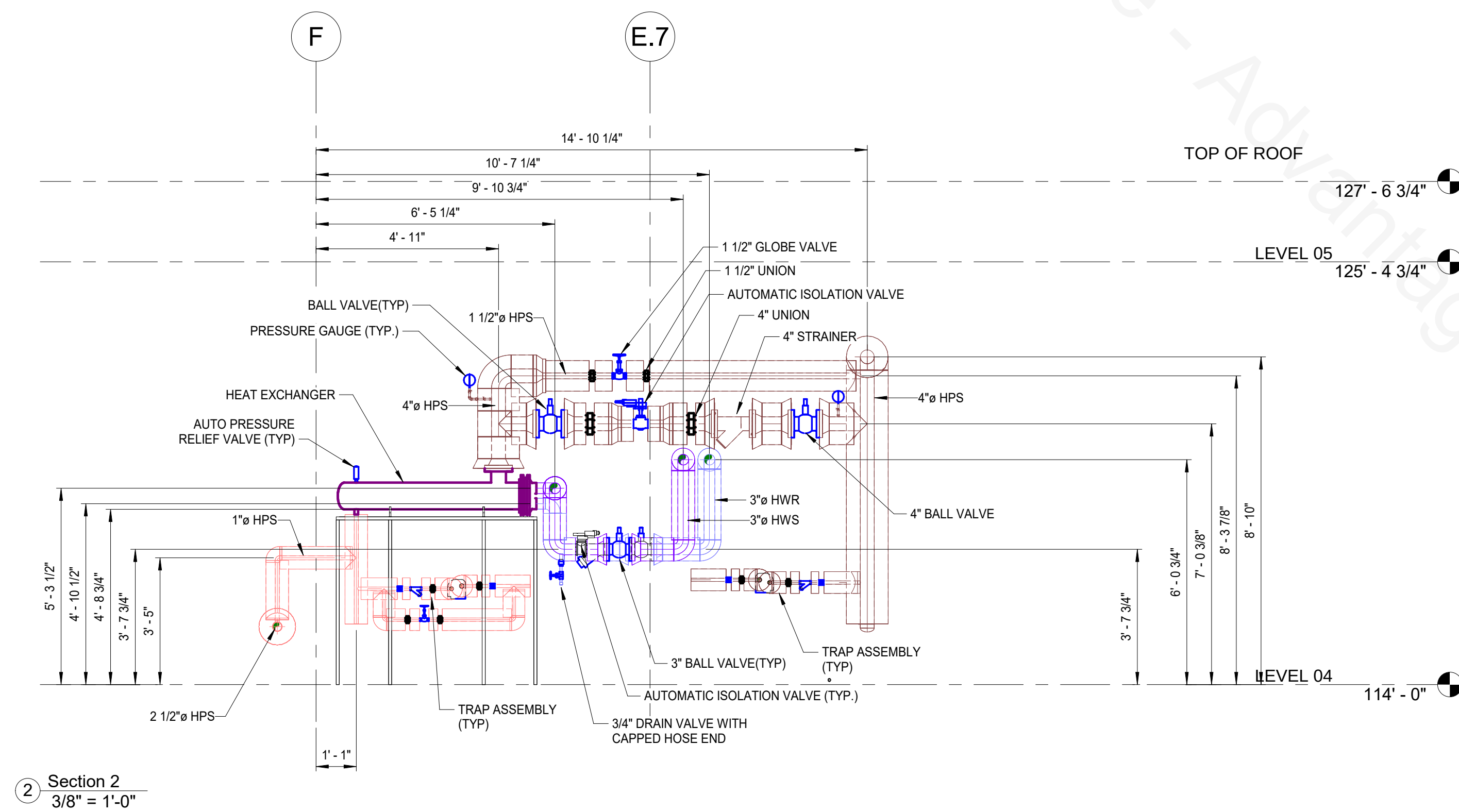
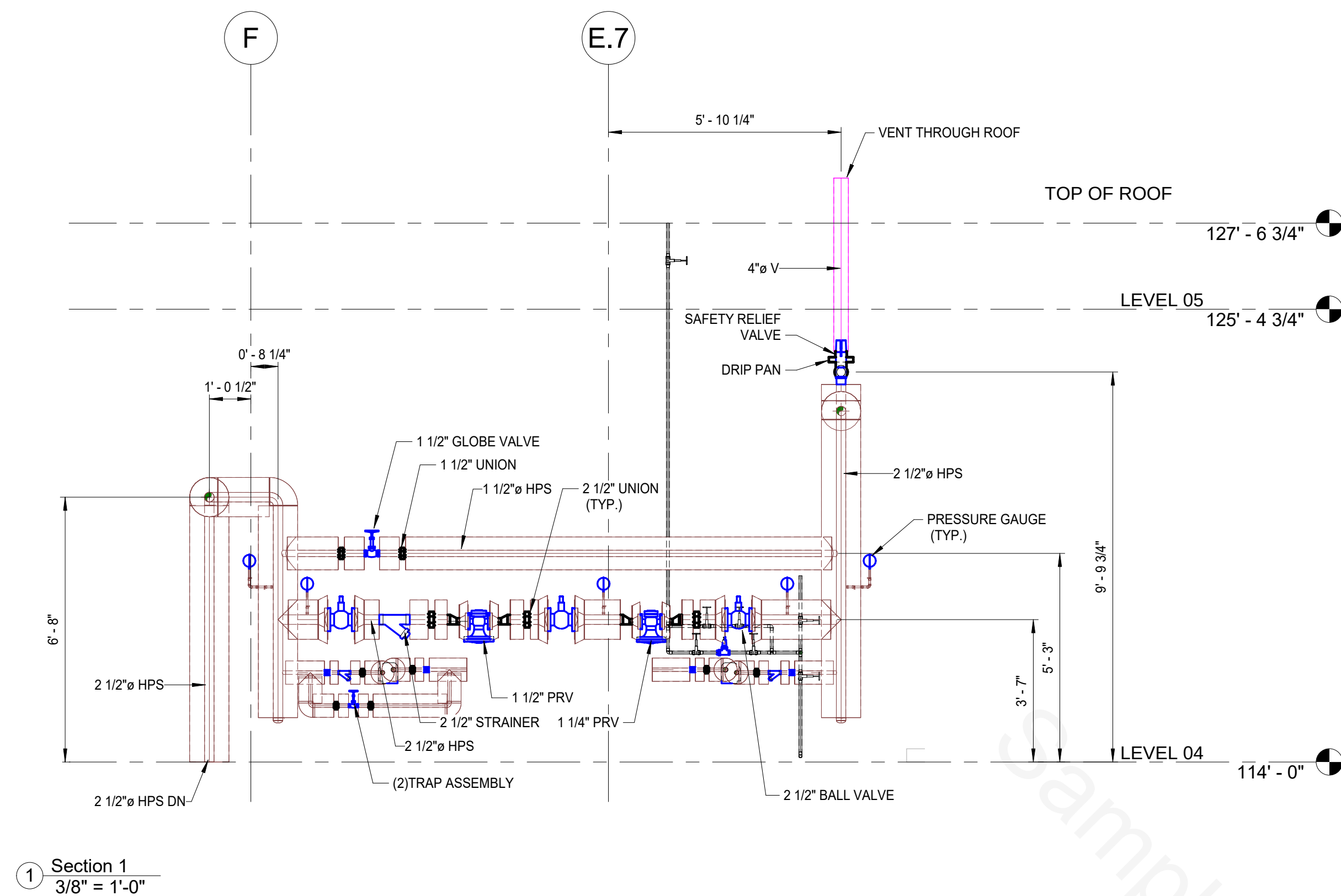
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[SAMPLE — NOT FOR CONSTRUCTION. These sample drawings and 3D models are derived from an actual institutional HVAC project recently completed by Advantage Engineering Technologies, PLLC; client and project-identifying information has been removed. A representative subset is included to limit file size (3 of 25 spool drawings shown) — the full drawing set is available upon request. © 2026 Advantage Engineering Technologies, PLLC.]

SAMPLE · NOT FOR CONSTRUCTION

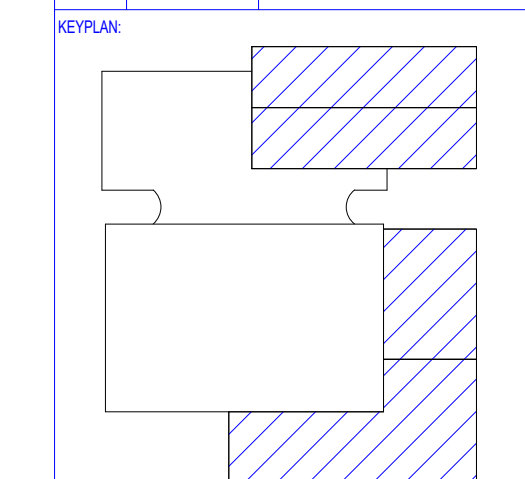
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RECORD OF TRADE COORDINATION			
AUTHORIZED DRAWING	DATE	COMPANY	TITLE
			HEADQUARTERS
			PLANNING
			RESEARCH
			FINANCE
			ELECTRONICS
			GENERAL
			ENGINEERING
			ARCHITECT

REVISIONS:		
NO.	DATE	DESCRIPTION
1.		AS BUILT DRAWING

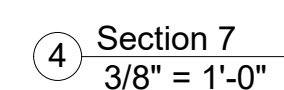
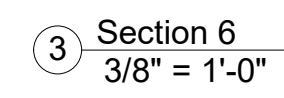
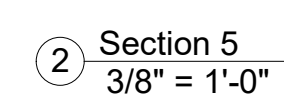


PROJECT NO.	SCALE: As indicated
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ISSUE DATE: -	

**LEVEL 04 MEP ROOM -
DETAIL AND SECTION
VIEWS**

DISCIPLINE-CATEGORY-SUB-CATEGORY-SHEET

MP-400

[illegible]

PROJECT NO:	SCALE: As indicated
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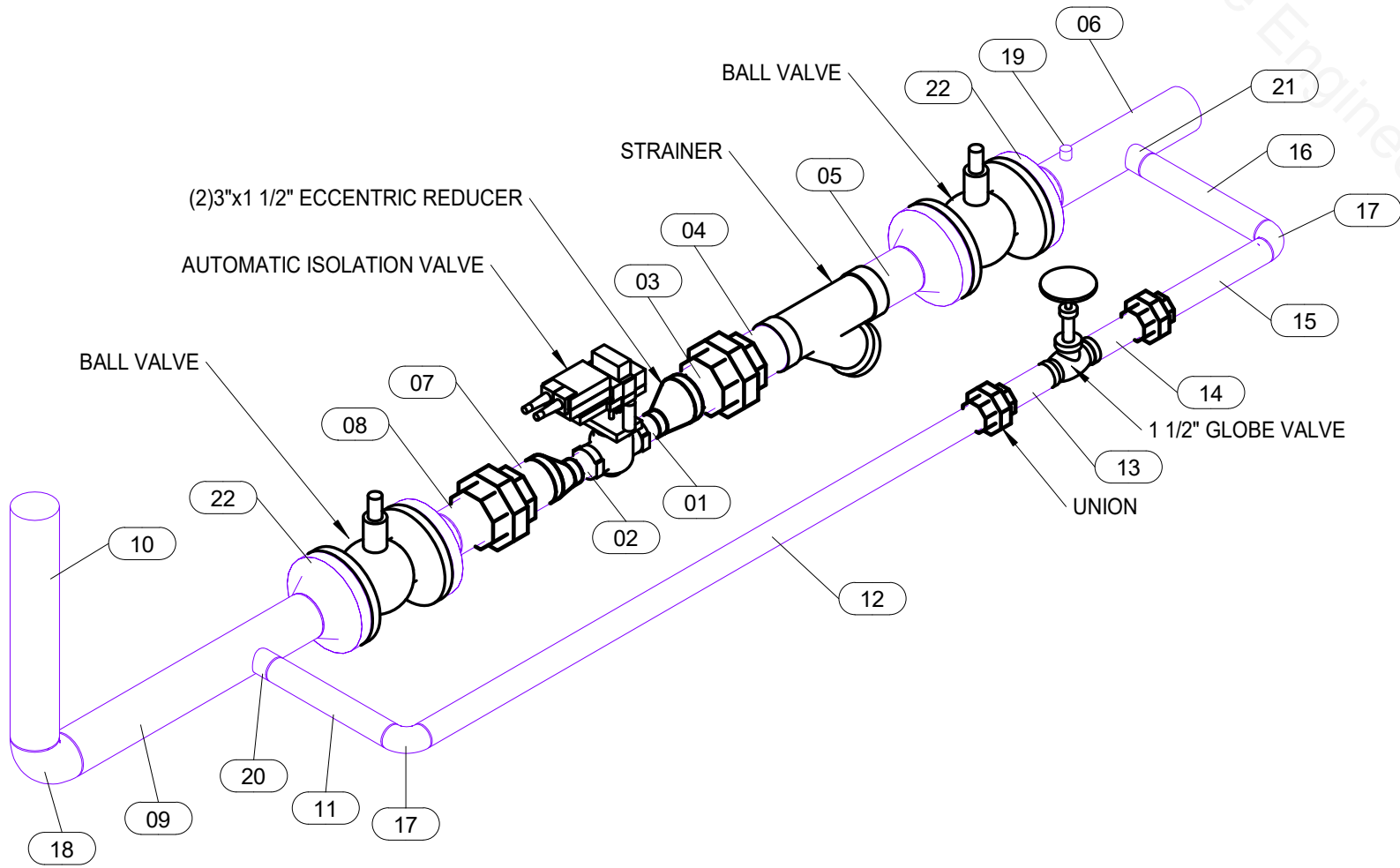
MEP ROOM
MECHANICAL PIPING
SPOOL MAP

MP-405

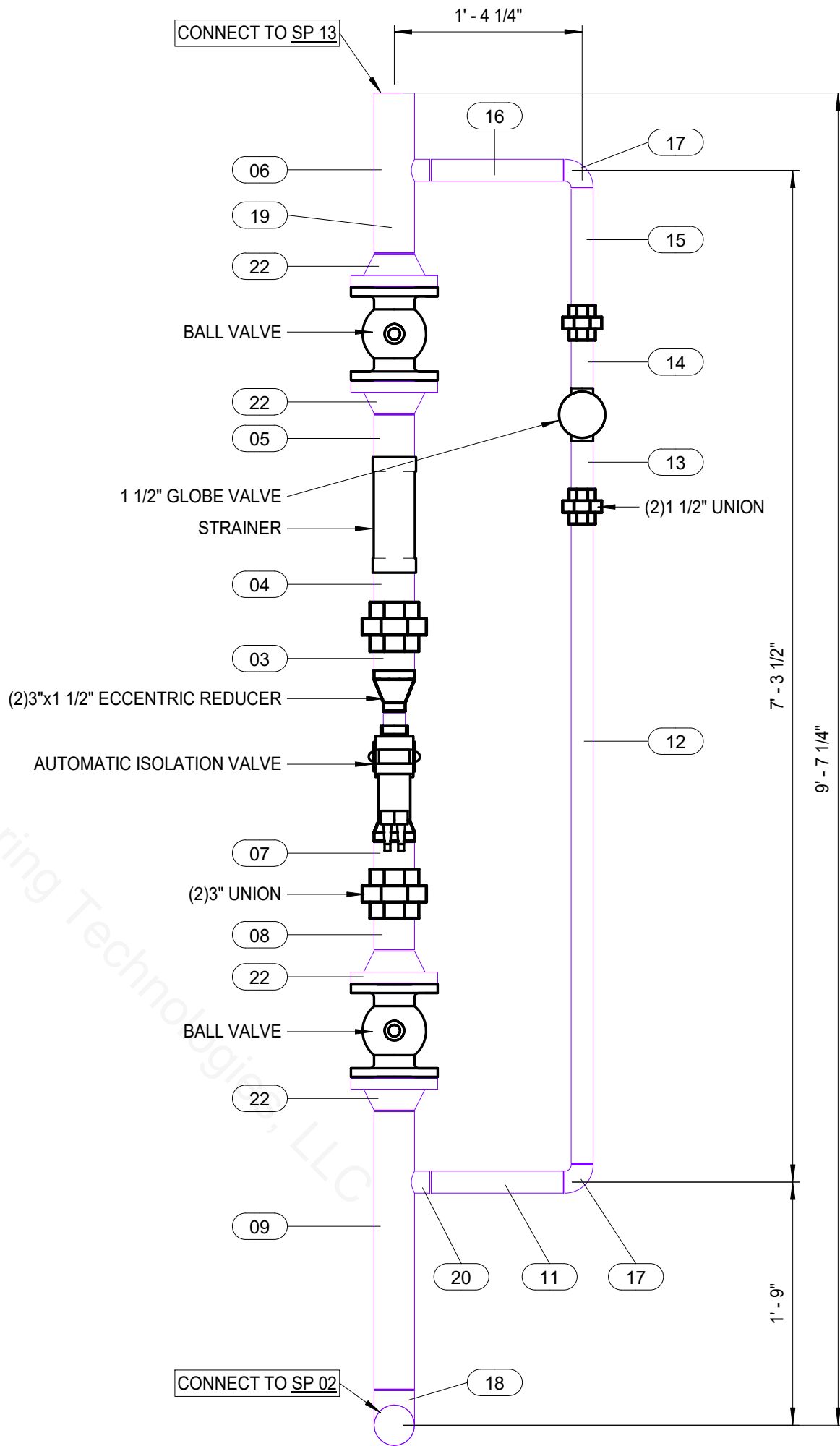
MEP Fabrication Pipework Schedule

Mark	Description	Size	Pipe Length	Qty
01	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	1 1/2"ø	0' - 1 7/8"	1
02	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	1 1/2"ø	0' - 1 3/4"	1
03	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	3"ø	0' - 2 1/2"	1
04	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	3"ø	0' - 3 1/2"	1
05	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	3"ø	0' - 3 5/8"	1
06	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	3"ø	1' - 1 7/8"	1
07	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	3"ø	0' - 3 1/4"	1
08	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	3"ø	0' - 3 5/8"	1
09	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	3"ø	2' - 0"	1
10	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	3"ø	1' - 8"	1
11	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	1 1/2"ø	0' - 11 1/2"	1
12	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	1 1/2"ø	4' - 7 7/8"	1
13	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	1 1/2"ø	0' - 4 3/4"	1
14	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	1 1/2"ø	0' - 4 3/4"	1
15	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	1 1/2"ø	0' - 10 5/8"	1
16	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	1 1/2"ø	0' - 11 1/2"	1
17	CS 90 SR Elbow STD	1 1/2"ø		2
18	CS 90 SR Elbow STD	3"ø		1
19	Weld-O-Let	3"ø-1/2"ø	0' - 0 3/4"	1
20	Weld-O-Let	3"ø-1 1/2"ø	0' - 1 3/8"	1
21	Weld-O-Let	3"ø-1 1/2"ø	0' - 1 3/8"	1
22	CS 150# RF WN Flange STD	3"ø	0' - 2 3/4"	4

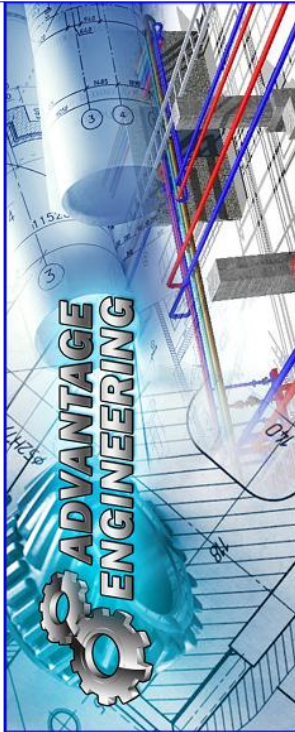
SP 04
1 QTY



1 3D Ortho



2 Elevation Top
1" = 1'-0"



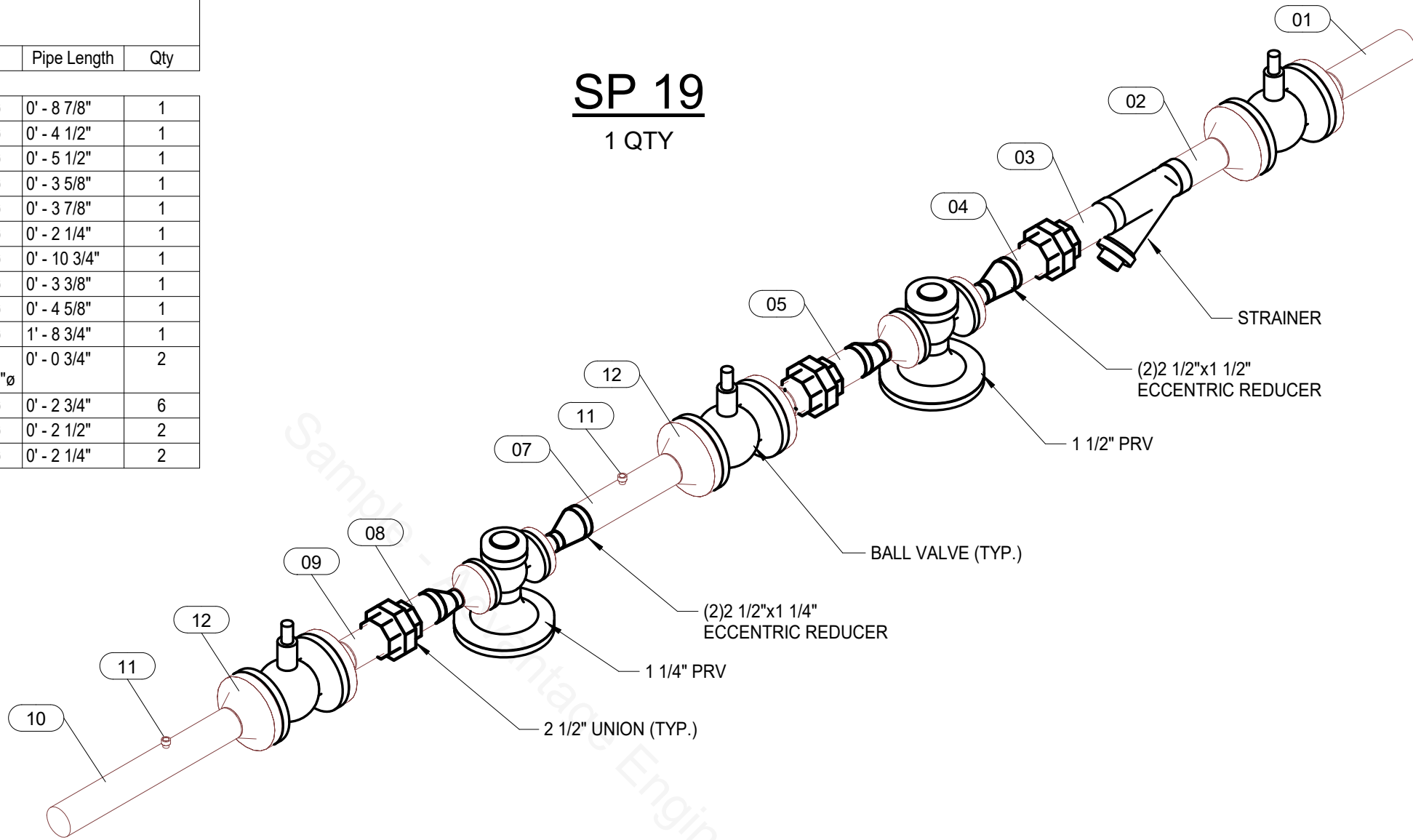
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ISSUE DATE:	
SHEET TITLE:	

MEP ROOM
MECHANICAL PIPING
SPOOL PIECES

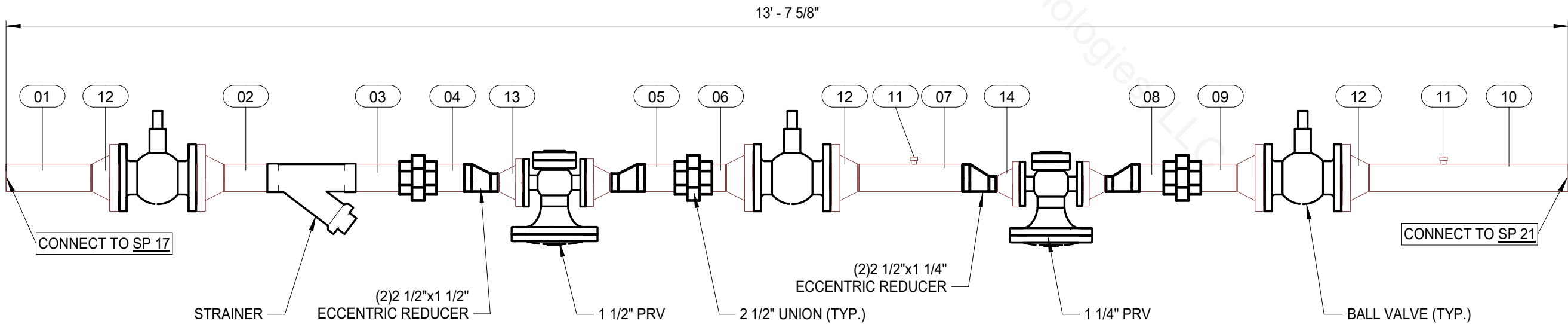
DISCIPLINE-CATEGORY-SUB-CATEGORY-SHEET

MS-404

MEP Fabrication Pipework Schedule				
Mark	Description	Size	Pipe Length	Qty
01	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	2 1/2"ø	0' - 8 7/8"	1
02	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	2 1/2"ø	0' - 4 1/2"	1
03	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	2 1/2"ø	0' - 5 1/2"	1
04	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	2 1/2"ø	0' - 3 5/8"	1
05	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	2 1/2"ø	0' - 3 7/8"	1
06	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	2 1/2"ø	0' - 2 1/4"	1
07	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	2 1/2"ø	0' - 10 3/4"	1
08	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	2 1/2"ø	0' - 3 3/8"	1
09	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	2 1/2"ø	0' - 4 5/8"	1
10	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	2 1/2"ø	1' - 8 3/4"	1
11	Thread-O-Let	2 1/2"ø-1/4"ø	0' - 0 3/4"	2
12	CS 150# RF WN Flange STD	2 1/2"ø	0' - 2 3/4"	6
13	CS 150# RF WN Flange STD	1 1/2"ø	0' - 2 1/2"	2
14	CS 150# RF WN Flange STD	1 1/4"ø	0' - 2 1/4"	2



1 3D Ortho



2 Elevation Left
1" = 1'-0"



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ISSUE DATE: -

SHEET TITLE:

MEP ROOM
MECHANICAL PIPING
SPOOL PIECES

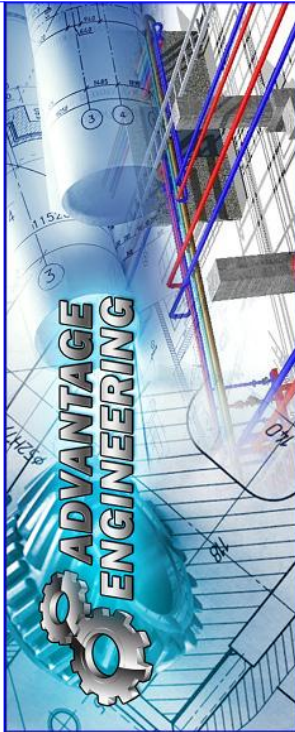
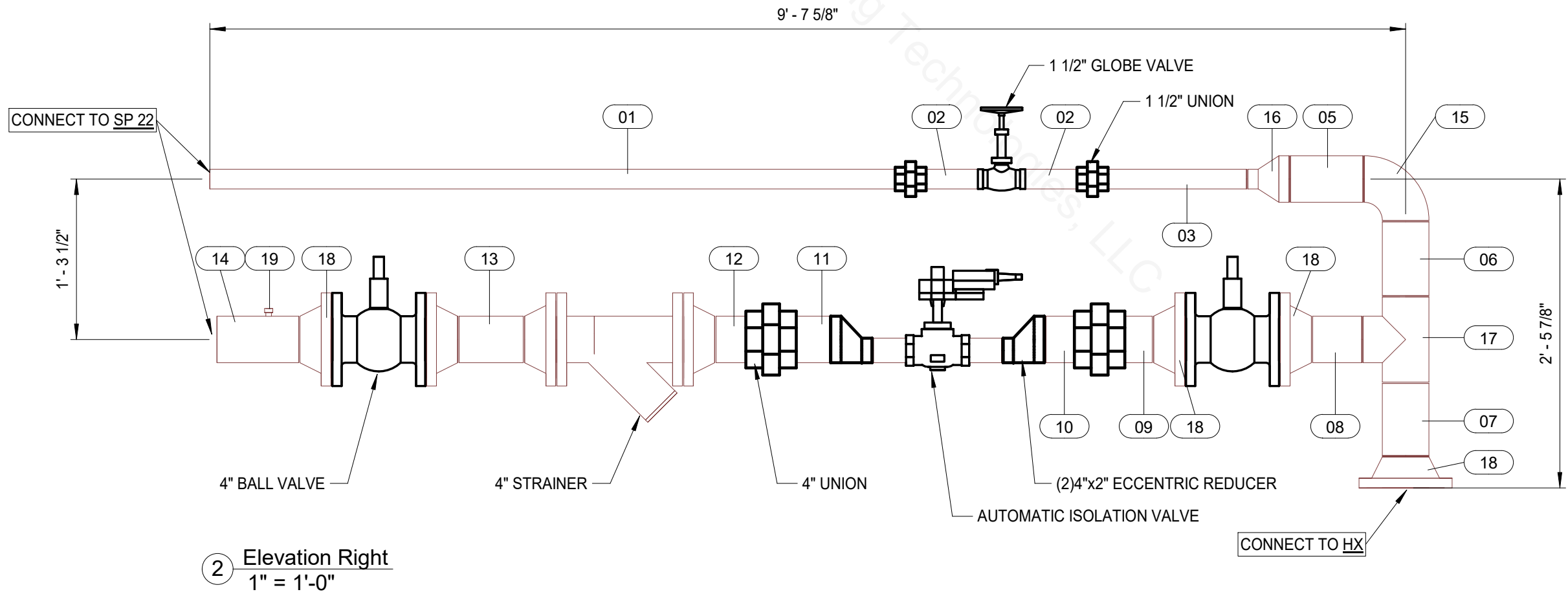
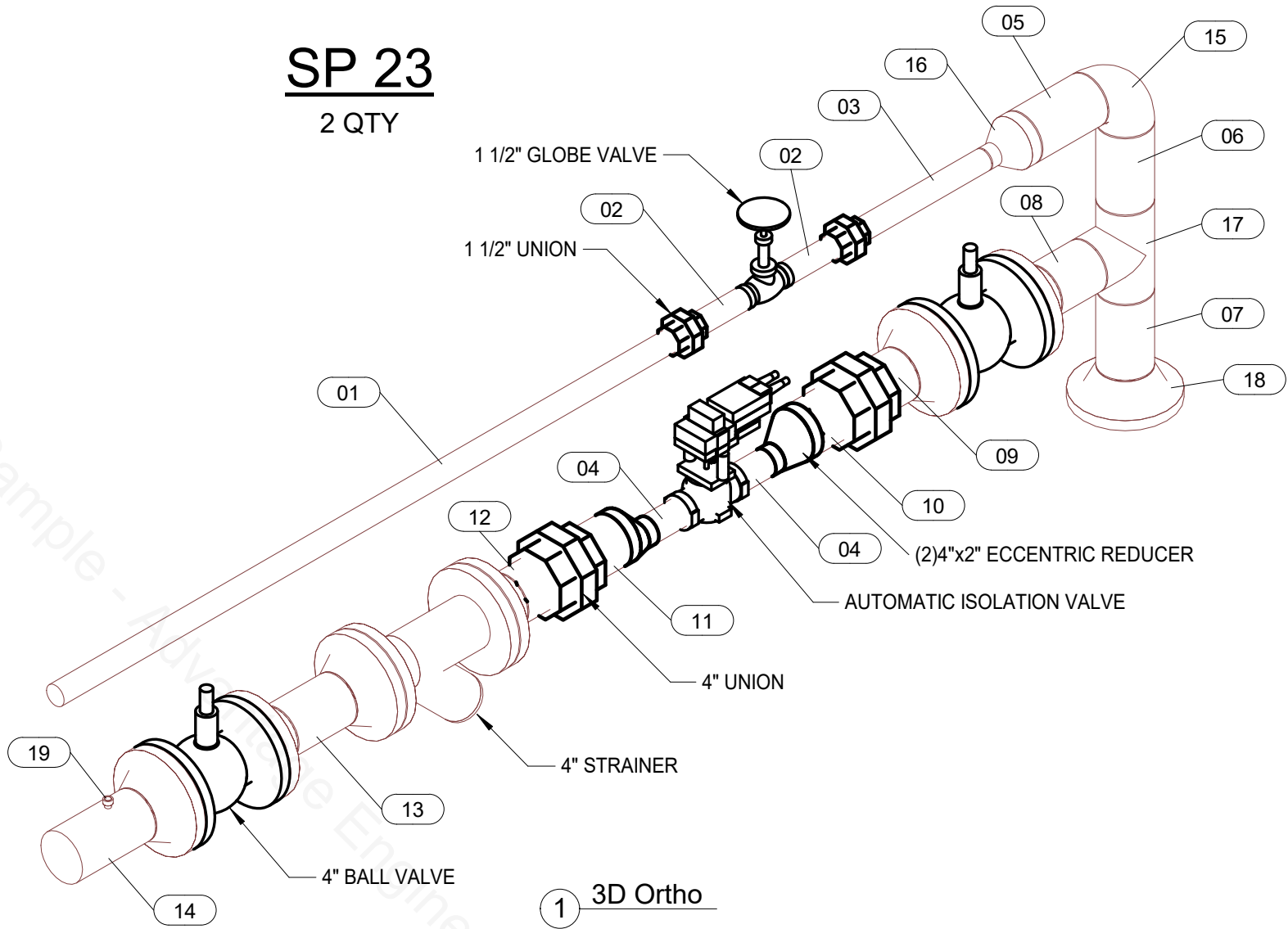
DISCIPLINE-CATEGORY-SUB-CATEGORY-SHEET

MS-419

MEP Fabrication Pipework Schedule

Mark	Description	Size	Pipe Length	Qty
	125 CI Y-Strainer 450C Flg	4"ø	0' - 3 5/8"	1
01	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	1 1/2"ø	5' - 6 3/4"	1
02	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	1 1/2"ø	0' - 5 1/2"	2
03	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	1 1/2"ø	1' - 1 7/8"	1
04	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	2"ø	0' - 3 7/8"	2
05	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	4"ø	0' - 7"	1
06	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	4"ø	0' - 7 1/8"	1
07	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	4"ø	0' - 7"	1
08	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	4"ø	0' - 4 3/4"	1
09	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	4"ø	0' - 3 3/4"	1
10	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	4"ø	0' - 3 3/4"	1
11	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	4"ø	0' - 4 1/4"	1
12	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	4"ø	0' - 3 7/8"	1
13	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	4"ø	0' - 6 1/4"	1
14	A53 ERW Gr-B Std Wt Blk Stl Pipe PE	4"ø	0' - 7 7/8"	1
15	CS 90 SR Elbow STD	4"ø		1
16	CS Concentric Reducer STD	4"ø-1 1/2"ø	0' - 2"	1
17	CS Straight Tee STD	4"ø	0' - 8 1/4"	1
18	CS 150# RF WN Flange STD	4"ø	0' - 3"	7
19	Thread-O-Let	4"ø-1/4"ø	0' - 0 3/4"	1

SP 23
2 QTY



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SHEET TITLE:

MEP ROOM
MECHANICAL PIPING
SPOOL PIECES

DISCIPLINE-CATEGORY-SUB-CATEGORY-SHEET

MS-423

BILL OF MATERIALS — LEVEL 4 MECHANICAL ROOM

Spool Drawing Package · For Material Ordering · SAMPLE — NOT FOR CONSTRUCTION · Advantage Engineering Technologies, PLLC

PIPE — BY SERVICE & SIZE					
Service	Size	Material	Pcs	Length	Sticks
HPS	1/4"ø	A53 Blk Stl Sch 40	13	2' - 6"	1
HPS	3/4"ø	A53 Blk Stl Sch 40	72	36' - 2"	2
HPS	1 1/2"ø	A53 Blk Stl Sch 40	12	28' - 4"	2
HPS	2"ø	A53 Blk Stl Sch 40	4	1' - 4"	1
HPS	2 1/2"ø	A53 Blk Stl Sch 40	17	30' - 2"	2
HPS	4"ø	A53 Blk Stl Sch 40	24	27' - 6"	2
HPC	1"ø	A53 Blk Stl Sch 40	7	15' - 1"	1
HPC	2 1/2"ø	A53 Blk Stl Sch 40	2	3' - 10"	1
HWS (Steel Mains)	1/4"ø	A53 Blk Stl Sch 40	1	0' - 2"	1
HWS (Steel Mains)	1/2"ø	A53 Blk Stl Sch 40	1	0' - 2"	1
HWS (Steel Mains)	1 1/2"ø	A53 Blk Stl Sch 40	8	8' - 6"	1
HWS (Steel Mains)	2 1/2"ø	A53 Blk Stl Sch 40	2	2' - 10"	1
HWS (Steel Mains)	3"ø	A53 Blk Stl Sch 40	55	69' - 3"	4
HWS (Copper Dist.)	1/2"ø	Type L Hard Copper	1	0' - 9"	1
HWS (Copper Dist.)	1"ø	Type L Hard Copper	3	8' - 7"	1
HWS (Copper Dist.)	2"ø	Type L Hard Copper	6	19' - 5"	1
HWS (Copper Dist.)	2 1/2"ø	Type L Hard Copper	1	8' - 1"	1
HWR (Steel Mains)	3/4"ø	A53 Blk Stl Sch 40	4	0' - 7"	1
HWR (Steel Mains)	2 1/2"ø	A53 Blk Stl Sch 40	5	12' - 3"	1
HWR (Steel Mains)	3"ø	A53 Blk Stl Sch 40	13	16' - 11"	1
HWR (Copper Dist.)	1/2"ø	Type L Hard Copper	1	0' - 9"	1
HWR (Copper Dist.)	3/4"ø	Type L Hard Copper	8	1' - 10"	1
HWR (Copper Dist.)	1"ø	Type L Hard Copper	4	11' - 10"	1
HWR (Copper Dist.)	2"ø	Type L Hard Copper	7	16' - 0"	1
HWR (Copper Dist.)	2 1/2"ø	Type L Hard Copper	1	8' - 1"	1
Condensate / Drains	3/4"ø	Type L Hard Copper	18	22' - 10"	2
NPCW (Makeup)	1/2"ø	Type L Hard Copper	4	8' - 7"	1
VTR	4"ø	No-Hub Cast Iron	1	4' - 4"	1
TOTAL PIPE			295	366' - 5"	36

MECHANICAL EQUIPMENT — FURNISH REFERENCE				
Mark	Description	Mfr	Model	Qty
ADS-1-PF	Air / Dirt Separator, Flanged	Taco	4903ADHR-42	1
ET-1-PF	Expansion Tank	Taco	CA300-125	1
HX-1-PF	Heat Exchanger, U-Tube Steam-to-Water	Taco	G8210S	1
HX-2-PF	Heat Exchanger, U-Tube Steam-to-Water	Taco	G8210S	1
P-HW-1-PF	HW Pump, Base-Mtd End-Suction, 10 HP	Taco	1506D	1
P-HW-2-PF	HW Pump, Base-Mtd End-Suction, 10 HP	Taco	1506D	1
TOTAL UNITS				6

ORDERING BASIS: Steel pipe in 21'-0" random lengths; Type L copper in 20'-0" lengths; no-hub cast iron in 10'-0" lengths. Stick counts rounded up per line item. Lengths shown in feet-inches, rounded to the nearest inch.
HWS / HWR are HEATING hot water (hydronic) services — steel mains with copper distribution. NOT domestic hot water. HPS/HPC = high-pressure steam / condensate. NPCW = makeup water. VTR = vent thru roof.
Joints line (Pipe Fittings panel) is labor reference only — one joint per pipe end; no material to order. Equipment is furnished/bought-out; listed for cross-reference to the spool and coordination drawings.

PIPE FITTINGS & COMPONENTS		
Description	Size	Qty
COPPER — WROT, SOLDER-JOINT (CxC)		
90° Elbow, Wrot Cu CxC	1/2"ø	3
90° Elbow, Wrot Cu CxC	3/4"ø	4
90° Elbow, Wrot Cu CxC	1"ø	5
90° Elbow, Wrot Cu CxC	2"ø	7
45° Elbow, Wrot Cu CxC	2"ø	2
Tee, Wrot Cu CxCxC	3/4"ø	3
Adapter, Wrot Cu CxM	3/4"ø	14
Adapter, Cast Brass CxFPT	3/4"ø	14
Gate Valve, Bronze, Solder	3/4"ø	7
Tube Cap, Wrot Cu	3/4"ø	4
Reducing Coupling, Wrot Cu CxC	2 1/2"ø-2"ø	2
CARBON STEEL — BUTT-WELD, STD WT		
90° SR Elbow, BW Std Wt	1 1/2"ø	2
90° SR Elbow, BW Std Wt	2 1/2"ø	8
90° SR Elbow, BW Std Wt	3"ø	34
90° SR Elbow, BW Std Wt	4"ø	3
45° Elbow, BW Std Wt	3"ø	1
Straight Tee, BW Std Wt	4"ø	2
Concentric Reducer, BW Std Wt	3"ø-2 1/2"ø	2
Concentric Reducer, BW Std Wt	3"ø-1 1/2"ø	3
Concentric Reducer, BW Std Wt	4"ø-1 1/2"ø	2
Concentric Reducer, BW Std Wt	4"ø-2 1/2"ø	1
Concnetric Reducer, BW Std Wt	4"ø-2"ø	2
Cap, BW Std Wt	2 1/2"ø	2
Cap, BW Std Wt	4"ø	2
FLANGES, GASKETS & STRAINERS — 150#		
Weld-Neck Flange, 150# RF	1 1/4"ø	2
Weld-Neck Flange, 150# RF	1 1/2"ø	2
Weld-Neck Flange, 150# RF	2 1/2"ø	10
Weld-Neck Flange, 150# RF	3"ø	38
Weld-Neck Flange, 150# RF	4"ø	14
Weld-Neck Flange, 150# FF	1 1/2"ø	2
Gasket, 150# FF	1 1/4"ø	2
Gasket, 150# FF	1 1/2"ø	3
Gasket, 150# FF	2 1/2"ø	12
Gasket, 150# FF	3"ø	40
Gasket, 150# FF	4"ø	14
Bolt Set, 150# Hex	3"ø	2
Bolt Set, 150# Hex	4"ø	4
Y-Strainer, 125# CI Flanged	4"ø	2
BRANCH OUTLETS & THREADED — BLACK		
Weld-O-Let, Forged	1"ø-3/4"ø	2
Weld-O-Let, Forged	2 1/2"ø	3
Weld-O-Let, Forged	2 1/2"ø-1 1/2"ø	2
Weld-O-Let, Forged	2 1/2"ø-3/4"ø	2
Weld-O-Let, Forged	3"ø	7
Weld-O-Let, Forged	3"ø-2"ø	2
Weld-O-Let, Forged	3"ø-1 1/2"ø	2
Weld-O-Let, Forged	3"ø-1/2"ø	1
Weld-O-Let, Forged	4"ø	3
Weld-O-Let, Forged	4"ø-1 1/2"ø	2
Weld-O-Let, Forged	4"ø-3/4"ø	2
Thread-O-Let, Forged	3/4"ø	6
Thread-O-Let, Forged	1"ø	2
Thread-O-Let, Forged	2 1/2"ø-1"ø	1
Thread-O-Let, Forged	2 1/2"ø-1/4"ø	5
Thread-O-Let, Forged	4"ø-1/4"ø	4
Socket, BW x Thrđ	1/4"ø	18
Socket, BW x Thrđ	1/2"ø	1
Socket, BW x Thrđ	2"ø	2
Nipple, Blk Stl Std Wt	1/4"ø	18
Nipple, Blk Stl Std Wt	1/2"ø	1
Nipple, Blk Stl Std Wt	2"ø	2
90° Elbow, MI Threaded, Blk	1/4"ø	4
90° Elbow, MI Threaded, Blk	3/4"ø	18
90° Elbow, MI Threaded, Blk	1"ø	3
Reducer, Threaded, Blk	1/2"ø-1/4"ø	1
Reducer, Threaded, Blk	2 1/2"ø-1"ø	1
TOTAL FITTINGS & COMPONENTS		391
TOTAL JOINTS / CONNECTIONS (72 soldered · 91 threaded · 242 field welds) — Labor Reference Only; No Materials		405

VALVES, SPECIALTIES & ACCESSORIES		
Description	Size	Qty
Auto Pressure Relief Valve	3/4"ø	2
Ball Valve, Flanged	2 1/2"ø-2 1/2"ø	5
Ball Valve, Flanged	3"ø-3"ø	13
Ball Valve, Flanged	4"ø-4"ø	4
Ball Valve, HP Bronze (NIBCO HP840XE)	2 1/2"ø-2 1/2"ø	2
Ball Valve, SS (NIBCO NL95X06)	1/2"ø-1/2"ø	2
Ball Valve, SS (NIBCO NL95X08)	3/4"ø-3/4"ø	12
Control Valve, 2-Way (Belimo G240S)	1 1/2"ø-1 1/2"ø	1
Control Valve, 2-Way (Belimo G250B)	2"ø-2"ø	2
Control Valve, 2-Way, Flanged	3"ø-3"ø	2
Dielectric Union (Watts LF3001A)	3/4"ø-3/4"ø	4
Drip Pan Elbow (SRV Discharge)	4"ø-2 1/2"ø	1
Eccentric Reducer, Threaded	2 1/2"ø-1 1/2"ø	2
Eccentric Reducer, Threaded	2 1/2"ø-1 1/4"ø	2
Eccentric Reducer, Threaded	3"ø-1 1/2"ø	2
Eccentric Reducer, Threaded	4"ø-2"ø	2
Flexible Connector, Flanged	3"ø-3"ø	4
Gate Valve (SCI 8502)	3/4"ø-3/4"ø	4
Globe Valve	3/4"ø-3/4"ø	3
Globe Valve	1 1/2"ø-1 1/2"ø	4
PRV — Makeup Water (34-20XL)	3/4"ø-3/4"ø	1
Pressure Gauge (AGF Model 7500)	1/4"ø	10
Safety Relief Valve (Figure 41)	2 1/2"ø-2 1/2"ø	1
Steam PRV (Spence 1.25)	1 1/4"ø-1 1/4"ø	1
Steam PRV (Spence 1.5)	1 1/2"ø-1 1/2"ø	1
Steam Trap Assembly	3/4"ø-3/4"ø	6
Suction Diffuser w/ Strainer (Taco)	3"ø-2 1/2"ø	2
Triple-Duty Valve (Taco MPV 030-4)	3"ø-3"ø	2
Union, MI 150# Blk (Anvil MI-554)	3/4"ø-3/4"ø	18
Union, MI 150# Blk (Anvil MI-554)	1 1/2"ø-1 1/2"ø	8
Union, MI 150# Blk (Anvil MI-554)	2 1/2"ø-2 1/2"ø	3
Union, MI 150# Blk (Anvil MI-554)	3"ø-3"ø	2
Union, MI 150# Blk (Anvil MI-554)	4"ø-4"ø	4
Y-Strainer, Cast Iron (11M)	3/4"ø-3/4"ø	6
Y-Strainer, Cast Iron (11M)	2 1/2"ø-2 1/2"ø	1
Y-Strainer, Cast Iron (11M)	3"ø-3"ø	3
TOTAL VALVES & ACCESSORIES		142