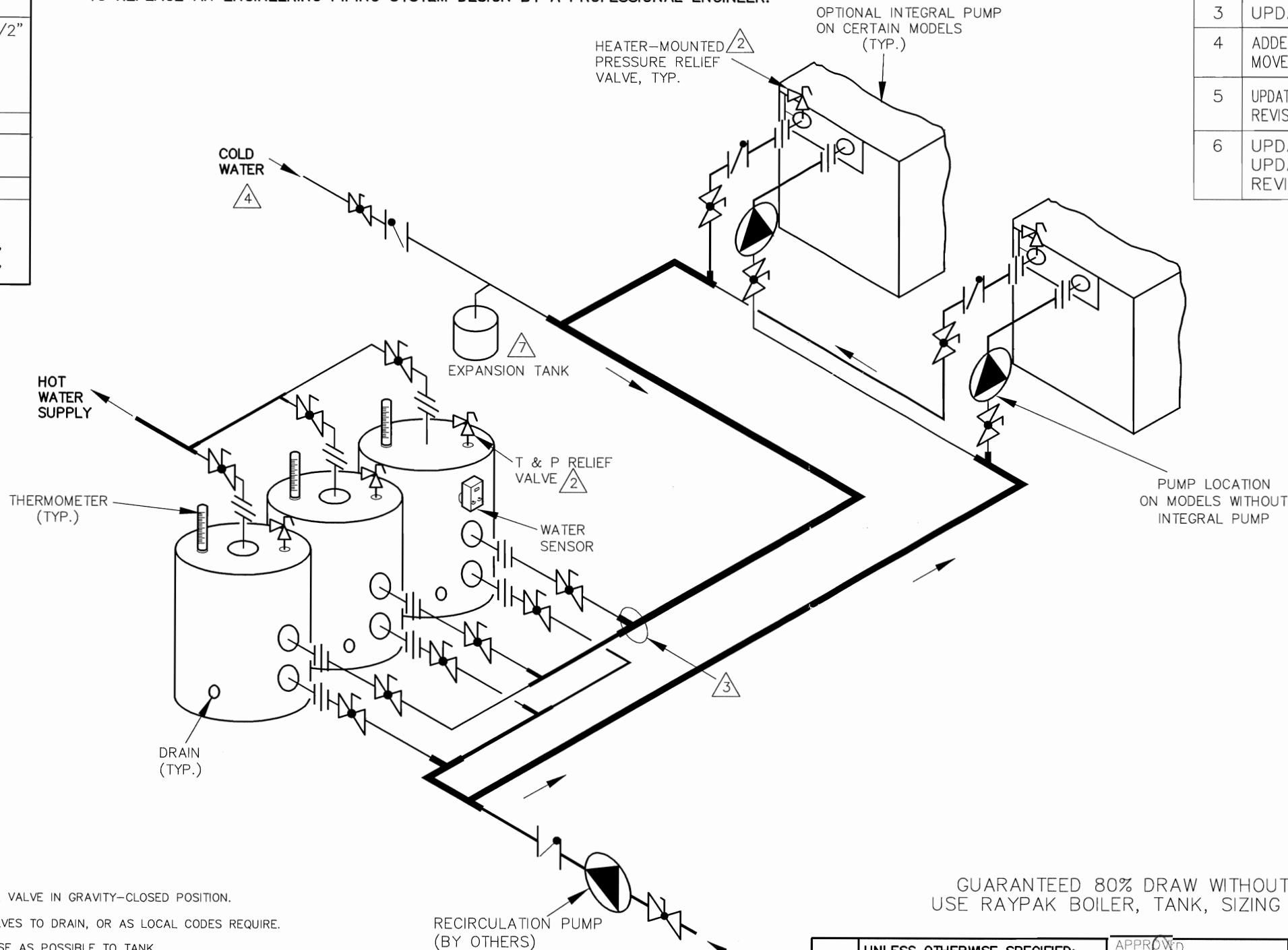


PIPE SIZES

	1 UNIT	2 UNITS
RAYTHERM		
133	1-1/4"	1-1/2"
181-401	1-1/2"	2"
514-824	2"	3"
926-1826	2-1/2"	3"
2100-4001	3"	4"
MVB		
503-754	2"	3"
1003-2004	2-1/2"	4"
HI DELTA		
HD101-HD401	1-1/2"	2"
302-902	2"	3"
992-2342	2-1/2"	4"

THIS PIPING DIAGRAM IS RAYPAK'S RECOMMENDATION AND IS NOT INTENDED TO REPLACE AN ENGINEERING PIPING SYSTEM DESIGN BY A PROFESSIONAL ENGINEER.



REVISIONS					
REV	DESCRIPTION	E.O.	BY	DATE	CHECK
3	UPDATED FORMAT, USAGE DATA.		DRB	6-15-04	DRB
4	ADDED MAIN AND BRANCHES, DEPICTED PIPE SIZES. MOVED CITY WATER CLOSER TO TANK.		EA	3-16-06	DRB
5	UPDATED FORMAT. ADDED MVB USAGE, DELETED ADB USAGE. REVISED TANK OUTPUT PIPING LOGIC.		RAN	11-4-08	DRB
6	UPDATED FORMAT. REVISED PIPING LOGIC. UPDATED TITLE. ADDED NOTE 8. REVISED NOTES 5 & 6.		RAN	7-2-12	<i>[Signature]</i>

- NOTES:
1. PLUMB SWING CHECK VALVE IN GRAVITY-CLOSED POSITION.
 2. PIPE ALL RELIEF VALVES TO DRAIN, OR AS LOCAL CODES REQUIRE.
 3. LOCATE TEE AS CLOSE AS POSSIBLE TO TANK.
 4. INSTALL COLD WATER BETWEEN HEATER OUTLET AND TANK.
 5. SEE CHART "PIPE SIZES" FOR PIPE SIZES CALCULATED AT MAXIMUM FLOW, NOT TO EXCEED 7.5 FT/SEC.
 6. STANDARD PUMP SIZING BASED ON 75 EQUIVALENT FEET OF PIPING. IF DISTANCE IS GREATER, THE PUMP MUST BE SIZED TO ACCOMMODATE INCREASE IN PIPING-RELATED LOSSES.
 7. PROVIDE FOR THERMAL EXPANSION OF HOT WATER IF A BACKFLOW PREVENTER, CHECK VALVE, WATER METER, OR PRESSURE REDUCING VALVE IS INSTALLED IN THE COLD WATER LINE.
 8. IF HIGH-TEMP HOT WATER SETPOINT EXCEEDS 160°F WITH MAX FLOW, SPECIFY "H" BOILERS INSTEAD OF "WH" WATER HEATERS.

GUARANTEED 80% DRAW WITHOUT TEMPERATURE DROP, USE RAYPAK BOILER, TANK, SIZING TABLE AND HOOK-UP DATA

KEY	
	PRESSURE RELIEF VALVE
	PUMP
	UNION
	CHECK VALVE
	BALL VALVE
	THERMOMETER

ACAD: 8110. DWG
HEATERS SHOWN REPRESENT VARIOUS MODELS. BECAUSE INDIVIDUAL MODELS WILL VARY IN DESIGN AND SIZING, SEE EACH SPECIFIC HEATER TYPE FOR DETAILS.

8110	UNLESS OTHERWISE SPECIFIED: ALL UNITS ARE IN INCHES FRACTIONS ±1/32 ANGLES ±1° X. = ±.12 X.X = ±.06 X.XX = ±.03 X.XXX = ±.010 DRAFT ___ WALL ___ RADII ___ CONCENTRICITIES .020 DIA. SQUARENESS .015 IN./IN. BREAK EDGES .015 MAX. SURFACE FINISH PER ASME Y14.36M-1996		APPROVED <i>[Signature]</i>	DATE 2/13/14	OXNARD, CALIFORNIA
	CHECKED D BALDWIN	DATE 7-21-97	E.O. SPR	SCALE NONE	
	DRAWN D BALDWIN	DATE 7-21-97	THIS DRAWING SUBMITTED UNDER CONFIDENTIAL RELATIONSHIP, AS IT EMBODIES PROPRIETARY INFORMATION, WITH ALL RIGHTS RESERVED BY RAYPAK, INC.		
	TITLE PIPING, UNI-TEMP 80: 2 HEATERS, 3 V TANKS	SERIES/MODEL WH	DWG. NO. 8110	REV 6	