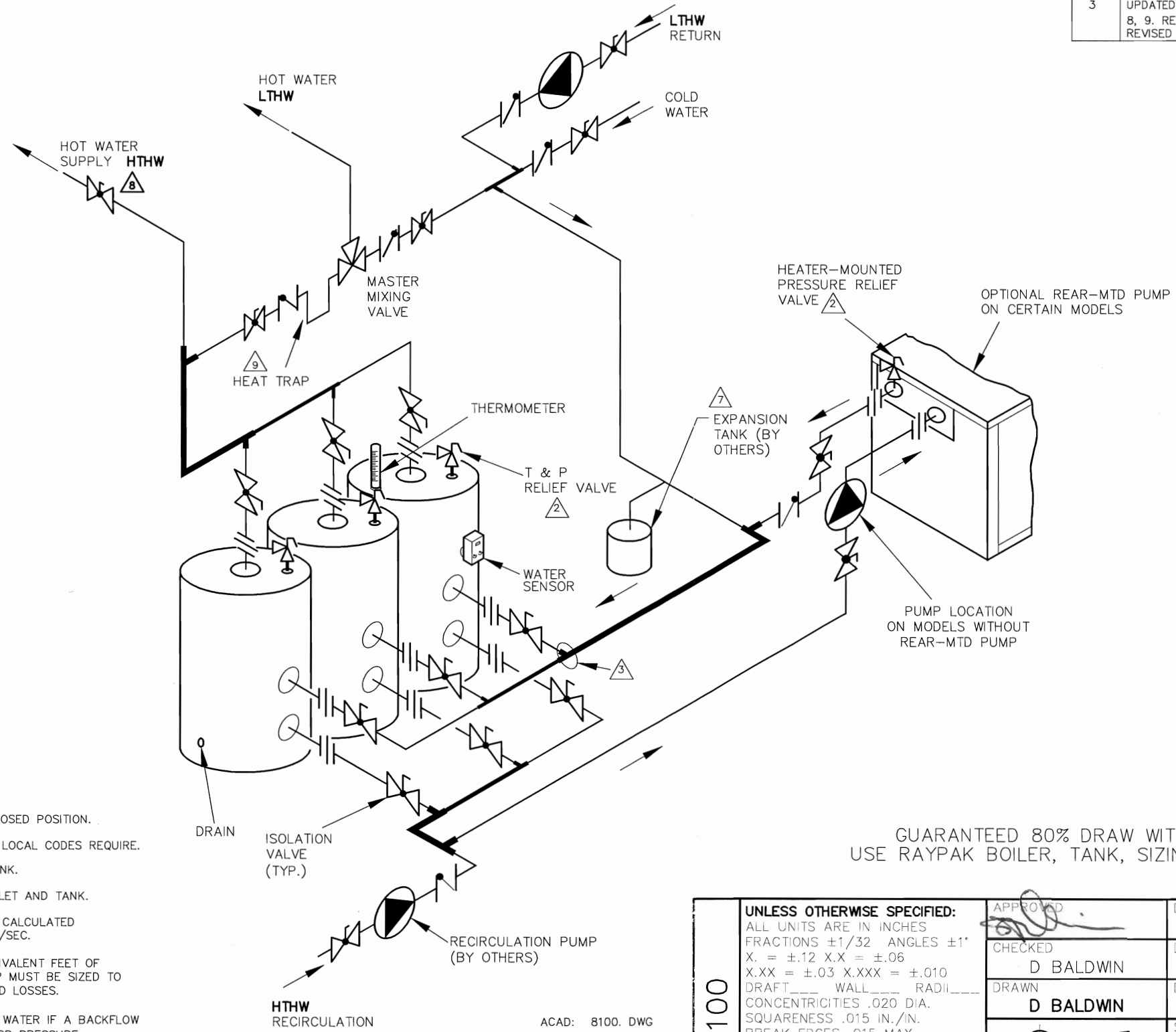


PIPE SIZES		
	HEATER	MAIN
RAYTHERM		
133	1-1/4"	1-1/2"
181-401	1-1/2"	2"
514-824	2"	3"
926-1826	2-1/2"	3"
2100-4001	3"	4"
MVB		
503-754	2"	3"
1003-2004	2-1/2"	4"
HI DELTA		
HD101-HD401	1-1/2"	2"
302-902	2"	3"
992-2342	2-1/2"	4"

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

REVISIONS					
REV	DESCRIPTION	E.O.	BY	DATE	CHECK
2	UPDATED FORMAT.		RLH	11-22-99	DRB
3	UPDATED FORMAT. ADDED HI DELTA/ MVB USAGE. ADDED NOTES 8, 9. REVISED NOTE 5. ADDED RECOMMENDDATION NOTE. REVISED MIXED WATER PIPING.		RAN	2-1-10	<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 BOILER 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.
  9. 24" HEAT SINK "U" REQUIRED PER RECOMMENDATIONS PER MFR OF 3-WAY MIXING VALVE.

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: 8100. DWG

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

8100	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	<b>Raypak</b> OXNARD, CALIFORNIA	
			CHECKED D BALDWIN	DATE 4-15-97		
			DRAWN D BALDWIN	DATE 4-15-97	E.O. SPR	SCALE NONE
					SIZE B	THIS DRAWING SUBMITTED UNDER CONFIDENTIAL RELATIONSHIP, AS IT EMBODIES PROPRIETARY INFORMATION, WITH ALL RIGHTS RESERVED BY RAYPAK, INC.
TITLE <b>PIPING, UNI-TEMP 80: 1 HEATER, 3 V TANKS, 2 TEMP</b>						
MAT'L.	SERIES/MODEL WH		DWG. NO. 8100		REV 3	