



- GENERAL NOTE :**
1. ADD ISOLATION VALVES AND UNIONS AS NEEDED.
- KEYED NOTES :**
- 1 INSTALL KINGSPAN, HP-450 SOLAR COLLECTORS IN SERIES UP TO 6 UNITS. FOR MULTIPLE ROW SYSTEMS REFER TO SOLAR ARRAY FLOW DIAGRAM, DHW-10.
  - 2 SOLAR CONTROL AND PUMP STATION. CONNECT TO ALL RTD's (TT) AND OPTIONAL HEAT DISSIPATER (11).
  - 3 MIXING VALVE (SEE MIXING VALVE DETAIL DHW-0)
  - 4 ROUTE T&P RELIEF VALVE (PRESSURE RELIEF ONLY FOR SOLAR STORAGE TANKS) DISCHARGE, FULL SIZE, TO FLOOR DRAIN.
  - 5 PRESSURE REDUCING VALVE - INSTALL ONLY IF WATER SUPPLY PRESSURE EXCEEDS 75% OF WATER HEATING SYSTEM DESIGN PRESSURE.
  - 6 ASME THERMAL EXPANSION TANK - SIZE ACCORDING TO MANUFACTURER'S RECOMMENDATION.
  - 7 COMBINATION TEMPERATURE AND PRESSURE GAUGE. INSTALL WITHIN 12" OF HOT WATER OUTLET.
  - 8 PROVIDE FULL-PORT DRAIN VALVE AND ROUTE TO FLOOR DRAIN.
  - 9 RECIRCULATION PUMP. PROVIDE AQUASTAT ONLY IF REQUIRED BY CODE WITH LETTER TO OWNER REQUIRING RELEASE OF LIABILITY (NON-MOVING WATER PROMOTES LEGIONELLA).
  - 10 FREEZE PROTECTION VALVE, THERMO-MEGA TECH MODEL 3/4" IC/FP-035, INSTALL ON COMMON SOLAR HOT WATER RETURN LINE TO DISCHARGE ON ROOF. VALVE AND TEE TO REMAIN UN-INSULATED.
  - 11 FAN COIL UNIT, SIZED TO DISCHARGE AT LEAST 5,000 BTUH PER COLLECTOR. 3 PORT VALVE TO DIVERT COLLECTOR RETURN AWAY FROM STORAGE TANKS TO DISSIPATER AND ACTIVATE HEAT DISSIPATER FAN WHEN COLLECTOR REACHES 230 DEG F. DUCT DISCHARGE THROUGH NEAREST OUTSIDE WALL.
  - 12 PROVIDE 3/4" SHUTOFF VALVES FOR FUTURE ACCESS POINTS, ACCESSIBLE WITHIN SAME AREA.
  - 13 3-WAY VALVE DIVERTS HOT WATER FROM SOLAR STORAGE TANK DIRECTLY TO MIXING VALVE WHEN TEMPERATURE IS 160 DEG F OR HIGHER.
  - 14 FOR MX AND PLC CONTROLS ONLY, INSTALL MOTORIZED FREEZE PROTECTION BALL VALVE, 3/4", STAINLESS VALVE BODY, WITH ACTUATOR TO OPEN TO FLOOR DRAIN WHEN COLLECTOR TEMPERATURE SENSOR DETECTS ABOUT 38 DEG. F AND SOLAR PUMP IS NOT ACTIVATED.

		<b>RAND ASSOCIATES INCORPORATED</b>		
		Domestic Hot Water Flow Diagram Water Heater with Single Solar Storage Tank		
PIPING DIAGRAM	Size: B	FSCM No: -	Drawing No: DHW-3	Version: 15
	Drawn By: BLW	Scale: NONE	Date: 09.16.2012	Sheet: 1 of 1

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