



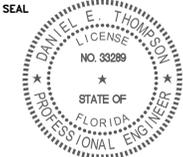
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ISSUED FOR: 10-13-14
DRC

BIDS
PERMIT 04-09-2015

CONSTRUCTION



PROJECT TITLE
**CITY OF
HALLANDALE
BEACH FIRE
RESCUE STATION**
7

111 FOSTER ROAD
HALLANDALE BEACH, FL
33009

REVISIONS

NUM.	DESCRIPTION	DATE
1	BUILDING DEPT. COMMENTS	05/15/15
3	BLDG DEPT. COMM./COORDINATION	07/10/15
5	ADDENDUM	09/14/15

THIS PROJECT HAS BOOK SPECIFICATIONS THAT ARE AN INTEGRAL AND COMPLEMENTARY PART OF THE OF THE CONSTRUCTION DOCUMENTS.

THESE DRAWINGS ARE PREPARED PER ESTABLISHED INDUSTRY STANDARDS AND REPRESENT THE ARCHITECT AND ENGINEERS DESIGN CONCEPT. THEY ARE NOT INTENDED TO PROVIDE EVERY DETAIL OR CONDITION REQUIRED TO CONSTRUCT THE BUILDING. THE CONTRACTOR THROUGH SUBMITTALS AND OTHER COORDINATION EFFORTS IS FULLY RESPONSIBLE FOR PROVIDING A COMPLETE AND OPERATIONAL BUILDING WHETHER INDICATED ON THE PLANS OR NOT.

DRAWING TITLE
**PLUMBING
SCHEDULES
AND DETAILS**

DATE 01/14/2015 DRAWN BY MB,DJM,AD
JOB NUMBER 140403/14069
DRAWING NUMBER

P-0.3

PLAN KEY NOTES

①	200 GALLON STORAGE TANK.	⑭	TERMINATE PAN DRAIN LINE(S) ABOVE FLOOR DRAIN.
②	119 GALLON INDIRECT WATER HEATER.	⑮	THERMOMETER.
③	DIFFERENTIAL TEMPERATURE CONTROLLER.	⑯	RE-CIRCULATING PUMP WITH TIME CLOCK AND AQUASTAT. SEE IN-LINE CIRCULATING PUMP DETAIL AND SCHEDULE.
④	DRAINBACK RESERVOIR WITH SIGHT GLASS ASSEMBLY.	⑰	THERMAL EXPANSION TANK.
⑤	EXPANSION TANK.	⑱	MV: HI-LO THERMOSTATIC MIXING VALVE: LEONARD MODEL # XL82-LF, LEAD FREE, 1" INLETS, 1-1/4" OUTLET. FULL LINE SIZE/FOLLOW METHOD "W". MINIMUM FLOW: 1 GPM. MAXIMUM FLOW: 61 GPM. 35" W x 46" H. PRESSURE DROP - 5 PSI. SET OUTLET TEMPERATURE TO 120°F.
⑥	GAS WATER HEATER.	⑲	CONTACT LEONARD VALVE FACTORY AUTHORIZED REPRESENTATIVE TO PERFORM START-UP: GORDON ROESSLER - EASTERN REGIONAL SALES MANAGER PHONE: (813) 230-2848 EMAIL: GROESSLER@LEONARDVALVE.COM
⑦	SOLAR COLLECTOR.	⑳	CONDENSATE NEUTRALIZATION KIT, TERMINATE GAS WATER HEATER CONDENSATE LINE ABOVE FLOOR DRAIN. REFER TO NOTE # 1 IN GAS WATER HEATER SCHEDULE FOR MODEL NUMBER.
⑧	WATER HEATER RE-CIRCULATING PUMP BY MANUFACTURER. BRONZE PUMP BODY - 120V-16-2/5 HP-5 AMPS.	㉑	WATER HEATER & STORAGE TANKS PAN: GALVANIZED OR OTHER METAL PAN OF EQUAL CORROSION RESISTANCE HAVING A MINIMUM THICKNESS OF 24 GAUGE. PROVIDE A 1-1/2" DRAIN CONNECTION.
⑨	CHECK VALVE.	㉒	FACTORY SUPPLIED PVC ASSEMBLY AND PVC UNION. REFER TO GAS WATER HEATER MANUFACTURER'S INSTRUCTION MANUAL AND DATA SHEETS FOR FURTHER DETAILS.
⑩	PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION. CONFIRM EXACT PIPE SIZING BETWEEN WATER HEATER AND STORAGE TANK WITH MANUFACTURER. CONTACT MANUFACTURER'S REP. PRIOR TO INSTALLATION. SEE GAS WATER HEATER SCHEDULE FOR CONTACT INFO.		
⑪	3/4" PRESSURE AND TEMPERATURE RELIEF VALVE. TERMINATE ABOVE PAN.		

SOLAR WATER HEATING SYSTEM SCHEDULE

TAG	DESCRIPTION	QTY.	MFG.	MODEL	CAPACITY (GALLONS)	DIMENSIONS (INCHES)	CONNECTION			COLLECTOR INLET (IN)	COLLECTOR OUTLET (IN)
							COLD INLET (IN)	HOT OUTLET (IN)	TEMPERATURE & PRESSURE RELIEF (IN)		
SC-1,2,3	SOLAR COLLECTORS	3	ALTERNATE ENERGY TECHNOLOGIES	AE-40	-	121"(L) x 47"(W)	-	-	-	3/4"	3/4"
ST-1	INDIRECT WATER HEATER	1	LOCHINVAR	SIT119	113	28"ø x 69"(H)	-	-	1-1/2"	1-1/2"	-
-	TEMPERATURE DIFFERENTIAL CONTROLLER	1	ALTERNATE ENERGY TECHNOLOGIES	DTC-ES1	-	-	-	-	-	-	-
DB	DRAINBACK RESERVOIR	1	ALTERNATE ENERGY TECHNOLOGIES	DB-15C	15	-	3/4"	3/4"	-	-	-
RCP-3	SOLAR LOOP PUMP	1	GRUNDFOS	UP15-100F	-	-	3/4"	3/4"	-	-	-

- NOTES
- TEMPERATURE DIFFERENTIAL CONTROLLER - 115 V-1Ø.
 - SET CONTROLLER HIGH TEMPERATURE LIMIT AT 140°F.
 - SOLAR LOOP PUMP, RCP-3: 115 V-1Ø-1/25 HP-1.1 AMPS.
 - CONTRACTOR TO HAVE ROOF MOUNTS ENGINEERED AND DESIGNED BY STRUCTURAL ENGINEER. STRUCTURAL ENGINEER TO PROVIDE WIND LOAD CALCULATIONS IF REQUIRED. LOW VOLTAGE CONTROL WIRING TO BE DONE BY ELECTRICAL OR CONTROLS CONTRACTOR. VERIFY DETAILS WITH MANUFACTURER.
 - FACTORY START-UP AND OWNER'S TRAINING MUST BE PROVIDED BY FACTORY REPRESENTATION.
 - CONTACT COMMERCIAL PROJECTS MANAGER AT ALTERNATE ENERGY SOLUTIONS PRIOR TO ORDERING AND INSTALLATION AND FOR START-UP: JOHN ALGER, P.E. PHONE: 800-874-2190, EMAIL: J.ALGER@AETSOLAR.COM
 - CONTACT LOCHINVAR MANUFACTURER'S REPRESENTATIVE FOR FURTHER INFORMATION ON INDIRECT WATER HEATER (ST-1): WILL HIDALGO - DISTRICT SALES MANAGER PHONE: 561-322-5772, EMAIL: WHIDALGO@LOCHINVAR.COM
 - INSTALLATION SHALL BE IN STRICT CONFORMANCE WITH MANUFACTURER'S REQUIREMENTS.

GAS WATER HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	BTU/HR INPUT	TANK CAPACITY (GALLONS)	RECOVERY GPH @ 100°F RISE	1ST HOUR RATING RATING (GALLONS)	DIMENSIONS (INCHES)
GWH	LOCHINVAR	AWN286PM-M9	285,000	-	332	332	-
ST-2	LOCHINVAR	RJA200	-	200	-	200	32"øx77-1/4"(H)
EXP	AMTROL	ST-25V	-	10.3	-	-	15-3/8"øx19-1/4"(H)
TOTAL PERFORMANCE			285,000	200	332	532	-

- NOTES
- PROVIDE KIT-3087, CONDENSATE NEUTRALIZATION KIT, TERMINATE LINE OVER FLOOR DRAIN.
 - 96% THERMAL EFFICIENCY (AHRI CERTIFIED).
 - DIRECT VENT / SEALED COMBUSTION - DRAWS ALL COMBUSTION FROM OUTSIDE AND VENTS ALL BYPRODUCTS OUTDOORS. SOLID WALL SCHEDULE 40 PVC 4" AIR INTAKE AND 4" EXHAUST PIPE, PLUMBING CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF VENTS & INTAKES IN ACCORDANCE TO THE LATEST EDITION OF THE NFPA-54.
 - VENTS & INTAKES IN ACCORDANCE TO THE LATEST EDITION OF THE NFPA-54.
 - WATER HEATER MUST MODULATE WITH A 5:1 TURNDOWN (20% TO 100% FIRING RATE)
 - SMART SYSTEM CONTROL - BUILT IN SEQUENCER TO ROTATE UNITS EVERY 24 HOURS (LEAD LAG).
 - SAFETY SENSORS REQUIRED: INLET SENSOR, FLUE SENSOR, CONDENSATE SENSOR, AND FLOW SWITCH.
 - ALL BRONZE CIRCULATING PUMP TO INSURE PROPER FLOW THROUGH HEAT EXCHANGER AND GUARANTEE SCALE FREE OPERATION.
 - STORAGE TANKS TO HAVE BUILT IN BAFFLE TO GUARANTEE 80% DRAW DOWN AND SHALL BE GLASSED LINED.
 - 120V AND 24V VOLTAGE WIRING SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR.
 - 5 YEAR STAINLESS STEEL HEAT EXCHANGER WARRANTY, 1 YEAR PARTS WARRANTY & 5 YEAR STORAGE TANK WARRANTY.
 - FACTORY START-UP AND OWNER'S TRAINING MUST BE PROVIDED BY FACTORY REPRESENTATION.
 - CONTACT LOCHINVAR MANUFACTURER'S REPRESENTATIVE PRIOR TO ORDERING AND INSTALLATION AND FOR START UP: WILL HIDALGO - DISTRICT SALES MANAGER PHONE: 561-322-5772, EMAIL: WHIDALGO@LOCHINVAR.COM

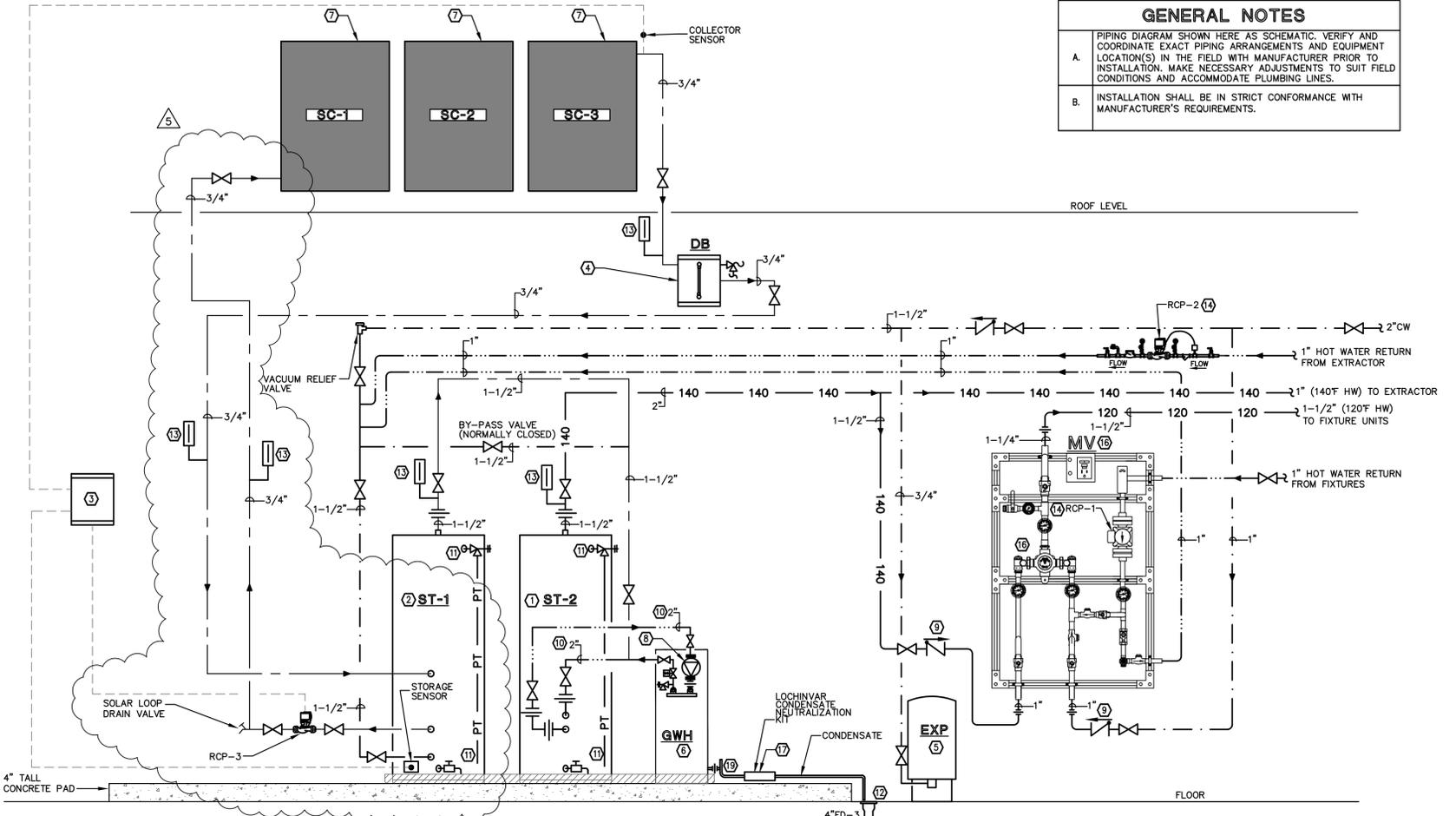
RE-CIRCULATION PUMP SCHEDULE

TAG	MFG.	MODEL	LOCATION	FLANGE SIZE (IN.)	FLOW RANGE (GPM)	HEAD RANGE (FT)	ELECTRICAL			
							VOLTS	PHASE	HZ	HP
RCP-1	TACO	0012-SF4	BOILER ROOM	1-1/4"	0-52	0-14.5	115	1	60	1/8
RCP-2	TACO	006-ST4	BOILER ROOM	3/4"	0-10	0-9	115	1	60	1/40

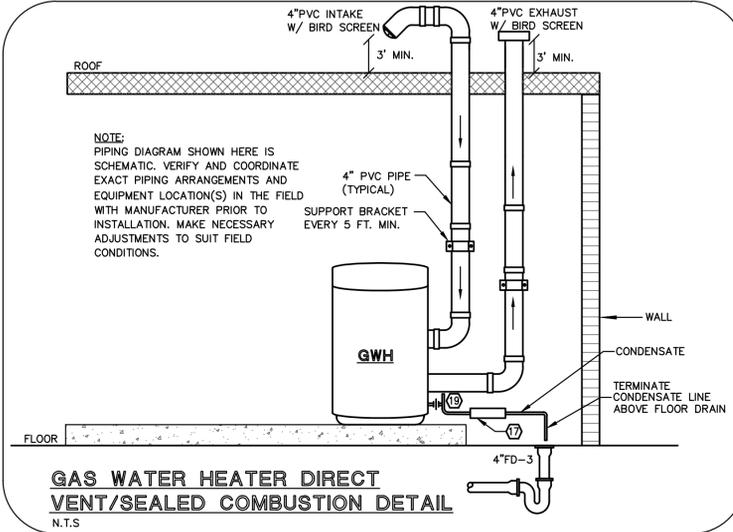
- NOTES
- PROVIDE TIME CLOCK AND AQUASTAT.
 - STAINLESS STEEL CIRCULATOR.

GENERAL NOTES

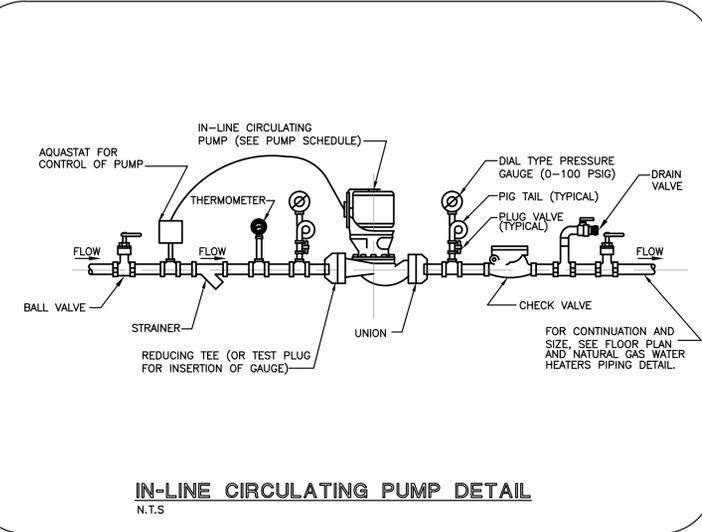
- A. PIPING DIAGRAM SHOWN HERE AS SCHEMATIC. VERIFY AND COORDINATE EXACT PIPING ARRANGEMENTS AND EQUIPMENT LOCATION(S) IN THE FIELD WITH MANUFACTURER PRIOR TO INSTALLATION. MAKE NECESSARY ADJUSTMENTS TO SUIT FIELD CONDITIONS AND ACCOMMODATE PLUMBING LINES.
- B. INSTALLATION SHALL BE IN STRICT CONFORMANCE WITH MANUFACTURER'S REQUIREMENTS.



SOLAR COLLECTORS-GAS WATER HEATER DETAIL
N.T.S.



GAS WATER HEATER DIRECT VENT/SEALED COMBUSTION DETAIL
N.T.S.



IN-LINE CIRCULATING PUMP DETAIL
N.T.S.

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BID SET 7-24-2015

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