

Department of Veterans Affairs

Project 614-13-119

Replace Chiller and Cooling Tower

VA Medical Center
1030 Jefferson Avenue
Memphis TN 38104

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V A M C
1030 JEFFERSON AV.
MEMPHIS, TN. 38104

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TITLE SHEET

REPLACE
CHILLER AND
COOLING TOWER

SCALE: NO SCALE

DATE
APR. 2013

DRAWN BY
S. NEYHART

CHECKED BY

DRAWING NO.

1

CHILLER																	
TAG	LOCATION	TYPE	REFRIG	NUMBER OF COMPRESSORS	TONS	FULL LOAD (KW/TON)	IPLV (KW/TON)	EVAPORATOR				CONDESER				VOLTAGE	MAX UNIT RLA (AMPS)
								GPM	PD (FT H2O)	EWI (°F)	LWT (°F)	GPM	PD (FT H2O)	EWI (°F)	LWT (°F)		
CH-6	BWG-1 MEZZANINE	CENTRIFUGAL MAGNETIC BEARING	R-134A	2	220	.56	.33	528	14.8	53.99	44.0.0	660	9.1	85.0	94.25	460-3-60	178

NOTES:

1. UNIT SHALL HAVE COMPLETE 5 YEAR LABOR, REFRIGERANT, AND PARTS WARRANTY.
2. CHILLER MANUFACTURER SHALL INCLUDE A FULL 5 YEARS SERVICE MAINTENANCE AGREEMENT AS PART OF THIS BID.
3. UNIT SHALL BE STARTED BY EQUIPMENT MANUFACTURER.
4. CHILLER SHALL HAVE TWO COMPRESSORS.
5. PROVIDE FACTORY MOUNTED NON-FUSED DISCONNECT SWITCHES FOR EACH COMPRESSOR.
6. PROVIDE FIELD INSTALLED CHILLED WATER AND CONDENSER WATER FLOW SWITCH.
7. CHILLER SHALL BE INSTALLED ON VIBRATION ISOLATOR PAD.
8. PROVIDE FACTORY MOUNTED BACNET INTERFACE MODULE.
9. PROVIDE FACTORY MOUNTED GROUND FAULT PROTECTION.
10. CHILLER SHALL HAVE TWO OIL-LESS MAGNETIC BEARING COMPRESSORS.
11. CHILLER SHALL BE ARI CERTIFIED.
12. PROVIDE FACTORY CERTIFIED PERFORMANCE TEST AT FULL LOAD.
13. PROVIDE DOUBLE LAYER 1.5' THICK FACTORY INSULATION.
14. INSTALLING CONTROLS CONTRACTOR SHALL HARD WIRE INTERLOCK THE CHILLER TO CHILLED WATER AND CONDENSER WATER PUMPS.
15. INSTALLING CONTROLS CONTRACTOR SHALL HARED WIRE INTERLOCK THE CHILLER TO CHILLED WATER AND CONDENSER WATER FLOW SWITCHES.
16. INSTALLING CONTROLS CONTRACTOR SHALL PROVIDE AND TERMINATE CONDENSER WATER REGULATING VALVE FOR EACH CHILLER.
17. CHILLER SHALL HAVE REFRIGERANT SERVICE ISOLATION VALVES.
18. CHILLER SHALL HAVE TWO USER INTERFACE DEVICES FOR REDUNDANCY. CHILLER SHALL HAVE A PASSWORD PROTECTED GRAPHICAL TOUCH SCREEN USER INTERFACE DEVICE.

COOLING TOWER										
TAG	LOCATION	MODEL	NO OF FANS	TEMP *F			FAN MOTORS			VOLTAGE
				AIR WB	WATER IN	WATER OUT	SPEED	HP	VOLTAGE	
SURGERY COOLING TOWER	ROOF	TTXL081950	8	80	95	85	VARIABLE	5	480-3-60	460-3-60

NOTES:

1. UNIT SHALL HAVE BASIN HEATERS.
2. FANS SHALL HAVE VARIABLE SPEED DRIVES.
3. PROVIDE CONTROL PANEL.
4. PROVIDE BASIN HEATERS.
5. PROVIDE LEVEL CONTROLLER WITH VALVE.
6. INSTALL PRESSURE REDUCING VALVE FOR MAKE UP WATER.
7. PROVIDE FACTORY STARTUP PROVIDED BY FACTORY TRAINED TECHNICIAN.

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NOTES FOR LAB CHILLER INSTALLATION:

- 1. DEMO EXISTING LAB CHILLER LOCATED IN BWG-1 ON THE MEZZANINE.
- 2. INSTALL NEW LAB CHILLER. MODIFY EXISTING PIPING AS NECESSARY TO INSTALL NEW CHILLER.
- 3. INSULATE ANY NEW PIPING AND REINSULATE ANY DISTURBED INSULATION.
- 4. INSTALL NEW ELECTRICAL POWER CONNECTIONS FROM EXISTING CHILLER FEED TO NEW CHILLER.
- 5. TEST AND BALANCE CHILLED WATER AND CONDENSER WATER PUMPS TO THE REQUIRED FLOW RATES.
- 6. ALL WORK TO BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
- 7. CONNECT CONTROLS TO BACNET ENERGY MANAGEMENT SYSTEM. PROVIDE GRAPHICS ON MANAGEMENT SYSTEM.
- 8. ALL ELECTRIC WIRING INCLUDING CONTROLS TO BE CONTAINED IN CONDUIT.

NOTES FOR SURGERY COOLING TOWER INSTALLATION:

- 1. DEMO EXISTING SURGERY CHILLER LOCATED ON BUILDING 1 ROOF.
- 2. PROVIDE DESIGN FROM REGISTERED STRUCTURAL ENGINEER FOR COOLING TOWER ROOF SUPPORTS.
- 3. CONSTRUCT COOLING TOWER SUPPORTS PER APPROVED DESIGN.
- 4. INSTALL NEW COOLING TOWER ON ROOF.
- 5. MAKE PIPING CHANGES NECESSARY TO CONNECT COOLING TOWER.
- 6. INSULATE NEW PIPING AND REINSULATE ANY DISTURBED INSULATION.
- 7. INSTALL HEAT TRACE ON CONDENSER WATER LINES.
- 8. INSTALL NEW ELECTRICAL POWER CONNECTIONS FROM EXISTING TOWER FEED TO NEW TOWER.
- 9. ALL WORK TO BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
- 10. CONNECT CONTROLS TO BACNET ENERGY MANAGEMENT SYSTEM. PROVIDE GRAPHICS ON MANAGEMENT SYSTEM.
- 11. ALL ELECTRIC WIRING INCLUDING CONTROLS TO BE CONTAINED IN CONDUIT.
- 12. TEST AND BALANCE CONDENSER WATER PUMP TO THE REQUIRED FLOW RATE.

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