

AIR COOLED CHILLER SCHEDULE								
UNIT #	CAPACITY (TONS)	D.A.T	E.W.T	GPM	MAX. PRESSURE DRDP	MINIMUM EFFECTIVE IPLV	ELECTRICAL CHARACTERISTICS	TYPE/NUMBER OF COMPRESSORS
FC413	60.7	95 F	44 F	144	13 FT	13.2	460/3 PH/60 HZ	SCREW, SCROLL/MINIMUM 2

TITLE: Replace chiller  
ATTACHMENTS:  
1. MAXIMD Equipment update form  
2. Site Map

**SCOPE OF WORK:** The contractor shall provide all material, labor, equipment, and supervision required to accomplish the following:  
**General description -** The contractor shall replace the McQuay chiller located at building FC413.

**Detailed requirements and specifications -** The contractor shall remove and dispose of the existing 60 ton air-cooled chiller and provide and install an air cooled chiller to the following specifications and installation requirements:

**Additional Chiller Specifications:**

1. Liquid, suction and discharge service valves.
2. Replaceable core filter drier on each refrigeration circuit.
3. Each compressor shall have individual service valves for isolating compressor from the refrigerant circuit.
4. Integral GFCI convenience outlet.
5. Machine controller default language shall be English.
6. Phase monitor to include:
  - a. Phase imbalance
  - b. Over/under voltage
  - c. Phase loss
  - d. Delay on break timer to delay automatic restarts
  - e. Non-critical fault delay
  - f. Programmable auto-manual restart
7. Ambient and line side monitoring
8. Factory installed Louvered coil guards.
9. Compressor access guards.
10. Condenser coil shall be capable of meeting ASTM B-117 3000 (American Society for Testing and Materials (ASTM) B 117 (neutral salt fog) for 3000 hours) via inherent condenser properties or factory/field applied chemical coatings.
11. Integral heat trace tape for piping and evaporator/chiller barrel freeze protection.
12. Control panel shall have access to micro processor (controller) for viewing or setup, without interrupting machine operation. Hinged control panels are desired.
13. Control power transformer.
14. Single point power connection.
15. Factory start-up assistance w/report.
16. First year compressor labor warranty.
17. Five year compressor warranty (parts).

**Construction Notes**

1. Demo and dispose of existing McQuay chiller. The chiller shall become the property of the contractor and disposed of at the contractor's discretion.
2. Provide and install new air cooled chiller to provided specifications.
3. Chiller shall be mounted on vibration isolators with level adjustment.
4. Welding is not permitted on chillers. Water connections shall be by grooved fitting or flange. Provide 16-20 mesh, #4 type strainer on chill water inlet.
5. 2" polyisocyanurate or cellular glass equivalent insulation w/metal jacket on all exposed piping.
6. Demo the existing and provide and install new evaporator flow switch in chilled water discharge (outlet) line. Flow switch shall be rain tight/ vapor proof and shall be set to interrupt chiller operation when the minimum water flow is not met as provided by the manufacturer's requirements.
7. Provide and install new water balancing valve and balance to manufacturer's specifications
8. Demo existing chill water isolation (stop) valves and provide and install new stop valves on supply and return water at chiller. Locate stop valves to allow for strainer isolation if not already positioned so.
9. Strict adherence to manufacturer's installation instruction manual shall be followed with special attention to references to

evaporator chilled water pump's necessity to be controlled by the chiller output.  
10. Re-install any and all Direct Digital Controls present on the removed chiller and verify proper operation.  
11. Provide and install #4 P/T ports on supply and return water pipe lines  
12. Modify chiller slab as necessary to allow for differences in physical dimensions and manufacturer's guidelines for minimum obstacle (building) clearances.

**GENERAL REQUIREMENTS:**

- SUBMITTALS:**  
1. Provide installation, start up and maintenance manuals for new equipment.  
2. Complete and submit a MAXIMD Equipment up-date form for each piece of newly installed equipment.  
3. Provide manufacturer specifications for proposed chiller with quote.  
4. Provide material lead time with bid proposal.  
5. Provide factory start-up report.

**SPECIAL SCHEDULING AND ACCESS:** All work shall be completed on this project no later than April 15, 2010.

**SPECIAL CONDITIONS:** None Identified

**HAZARDOUS MATERIALS:** None Identified

**ENVIRONMENTAL:**

1. All EPA regulations concerning ozone depleting refrigerants shall be followed in the performance of this contract.

BLDG #FC413	SHEET 2 OF 2
CONTRACT# N40085-10B-0415	
DWG: SCOT WILLIAMS	PROJECT# 10M018CN

TITLE: REPLACE CHILLER
USMC CAMP LEJUNE

M-1	SCHEDULE/SCOPE
-----	----------------