Project Management Initials: Designer: Designer Checked: Checker Approved: ApproverARCH E1 30" x 42"

GENERAL NOTES:

1. PROVIDE TEMPORARY BARRICADES AND OTHER FORMS OF PROTECTION TO PROTECT OWNER'S PERSONNEL FROM INJURY DUE TO THE REPAIR WORK. REMOVE AFTER WORK IS COMPLETE AND ACCEPTED BY OWNER.

2. IDENTIFY AND PROTECT SERVICES IN THE IMMEDIATE WORK AREA. THIS SHALL INCLUDE BUT NOT LIMITED TO ELECTRICAL AND CONTROLS. CONTROLS WIRING AND DEVICES TO INCLUDE ELECTRICAL AND PNEUMATIC.

3. OBTAIN HOT WORK PERMIT FOR BURNING, WELDING AND FLAME OPERATIONS.

4. DISPOSAL OF DEBRIS - CLEAN UP ALL MATERIALS, DEBRIS AND RUBBISH RESULTING FROM THE WORK. ALL DEBRIS SHALL BE TRANSPORTED OUT OF THE BUILDING IN COVERED CARTS WITH NO MATERIALS EXTENDING ABOVE THE RIM OF THE CART. REMOVE STAINS FROM CONCRETE FLOOR AND HOUSEKEEPING SLAB. PAINT THE FLOORING THREE FEET WIDTH AROUND THE ENTIRE PERIMETER OF THE HOUSEKEEPING PAD. LEAVE AREA IN "BROOM CLEAN " CONDITION.

5. MOBILIZE ALL MATERIALS TO WORK AREA IN BASEMENT. CONTRACTOR TO BE PREPARED TO HAVE ALL MATERIALS AVAILABLE FOR BASE WORK AND ALL ALTERNATES.

6. OWNER TO PROVIDE THE FOLLOWING MATERIALS:

(3) HEADER 661- BOTTOM HEADER MS85X, PAINTED BLACK
(2) 3 INCH VICTAULIC #H-107 GROOVED COUPLINGS
(4) 8 INCH VICTAULIC # H-107 GROOVED COUPLINGS

SCOPE:

1. BASE: SCOPE TO INCLUDE WORK ON THE HEATING WATER RETURN SIDE OF THE MULTISTACK MODULAR CHILLER. WORK IS TO REPAIR LEAK ON MODULE TWO AND ADJUST THE ALIGNMENT OF PIPING INTO MODULE 1.

2. ALTERNATE #1
WORK TO REPAIR LEAK ON MODULE #2 AND ANOTHER MODULE (EITHER # 1 OR #3) . CHECK AND ADJUST THE ALIGNMENT OF PIPING INTO THE ADJACENT MODULES.

3. ALTERNATE #2

WORK TO REPAIR LEAK ON MODULE #2 AND MODULES #1 AND #3 . CHECK AND ADJUST THE ALIGNMENT OF PIPING INTO THE ADJACENT MODULES.

4. ALTERNATE #3

LEAK DETECTION - INSTALL LEAK DETECTION SENSOR ON THE HOUSEKEEPING PAD BETWEEN MODULES 2 AND 3 AND NEAR THE INLET PIPING ON MODULE 1. SEPARATE ADDRESS FOR EACH. INTEGRATE WITH THE BUIULDING MANAGEMENT SYSTEM. A PANEL IS ADJACENT TO THE CHILLER FOR CONNECTION POINTS.

ORDER OF WORK,

MEANS AND METHODS OF THE WORK TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING:

ISOLATE AND DRAIN SYSTEM WITH SUPERVISION OF MAINTENENCE PERSONNEL. COORDINATE TO SHUT ALL MODULES DOWN AND DRAIN. VALVE OFF BOTH CHILLED AND HEATING WATER ISOLATION VALVES.

RECOVER REFRIGERANT ON MODULE #2 TOWARD CWS / CHWS CONNECTION. REMOVE HYDRONIC HEATING WATER HEAT EXCHANGER AND HEADER. CUT THE REFRIGERANT PIPING AND SWEAT OFF REMAINING PART OF OLD ELBOW.

INSPECT THE GASKETS AND FITTINGS FOR COMPROMISE. REMOVE CLOSED CELL INSULATION AND STORE FOR REINSTALLATION OR RE INSULATE WITH CLOSED CELL INSULATION TO MATCH EXISTING IF COMPROMISED.

INSPECT THE GROOVES ON ADJOINING HEADERS AND HEADERS IN QUESTION. REPORT TO OWNER AND ENGINEER. OWNER AND ENGINEER WILL BE PRESENT TO DOCUMENT THE CONDITION OF EXSITING PARTS.

EXAMINE CAUSE OF HEADER SUPPORT LEAKAGE FOR ALIGNMENT OF MODULES WITH THE HEATING WATER RETURN PIPE AT INLET TO MODULE 1. ADJUST THE HEIGHT AND OR ALIGNMENT OF EXISTING FLOOR PIPE SUPPORT. GROUT UNDER SUPPORT WHEN COMPLETED.

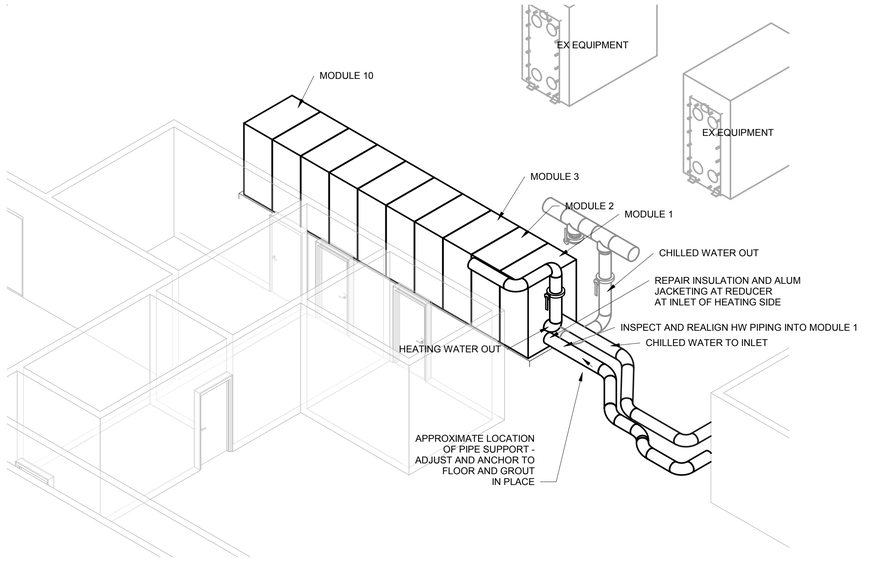
REPLACE THE HEATING WATER HEADER ON MODULE 2. INSTALL TWO NEW THREE INCH GROOVED PIPE COUPLINGS WITHIN THE MODULE. INSTALL TWO NEW 8" GROOVED PIPE COUPLINGS ON CONNECTION BETWEEN UNITS 1 AND 2 AND TWO NEW 8" GROOVED PIPE COUPLINGS BETWEEN 2 AND 3. LEAK CHECK THE CONNECTIONS.

INSTALL DRIERS AND COUPLINGS ON REFRIGERANT LINES. DURING BRAZING PURGE IN LOW PRESSURE NITROGEN. EVACUATE TO 500 MICRONS AND LET STAND TWENTY MINUTES FOR VACUUM CHECK. CHARGE REFRIGERANT - APPROXIMATELY 28 POUNDS. REINSTALL INSULATION ON REFRIGERATION PIPING AS REQUIRED.

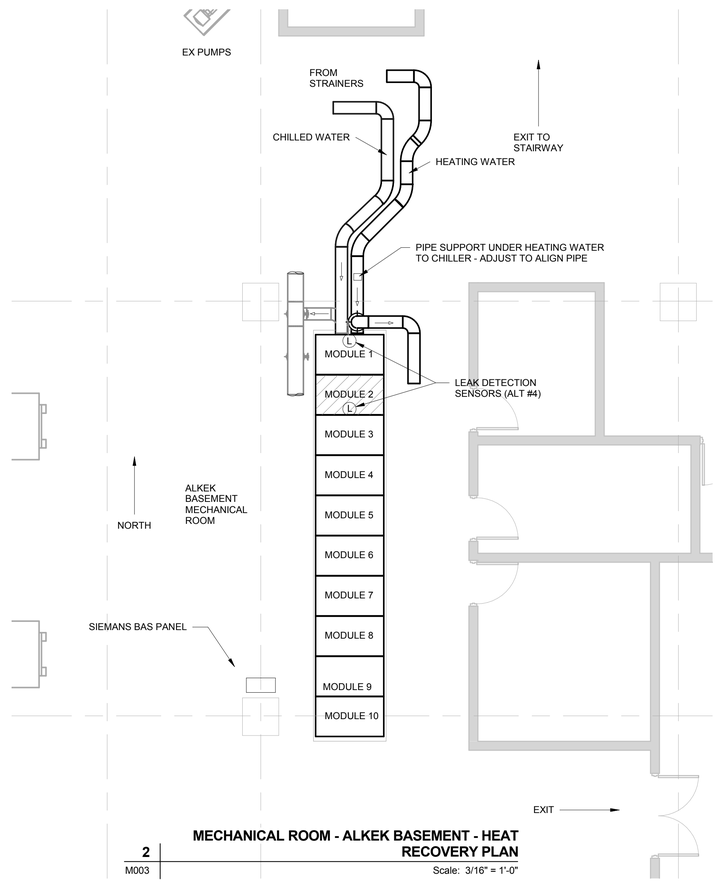
RESTORE CHILLED AND HEATING WATER FLOW. RUN FOR 24 HOURS TO OBSERVE FOR LEAKS. AFTER LEAK TEST IS COMPLETE REINSULATE HEAT EXCHANGER.

START UNIT AND RECORD RUN LOG USING FACTORY CERTIFIED MULTISTACK TECHNICIAN.

NOTE: THIS IS SPECIFIC TO BASE WORK. REPEAT AS REQUIRED FOR ALTERNATES.



1 **VIEW OF CHILLER CONNECTIONS**
Scale:



2 **MECHANICAL ROOM - ALKEK BASEMENT - HEAT RECOVERY PLAN**
M003 Scale: 3/16" = 1'-0"

AECOM

PROJECT

ALKEK HRC CHILLER

60571992 - MECHANICAL

M. D. ANDERSON

CLIENT

M. D. ANDERSON HEAT RECOVERY CHILLER REPAIR

CONSULTANT

AECOM
19219 Katy Freeway
Suite 100
Houston, Tx 77094-1009
http://www.aecom.com

CONSULTANTS

MECHANICAL
AECOM
19219 Katy Freeway Suite 100
Houston, Tx 77094-1009
281.646.2400 tel 281.646.2401 fax
www.AECOM.com

REGISTRATION

STATE OF TEXAS
SAYED S. KHAN
94942
REGISTERED
PROFESSIONAL ENGINEER

05/21/2018

ISSUE/REVISION

I/R	DATE	DESCRIPTION
	05/21/18	CONSTRUCTION DOCUMENT

PROJECT NUMBER

60571992

SHEET TITLE

MECHANICAL PLAN, VIEW AND NOTES

SHEET NUMBER

M101

Last Plotted: 5/18/2018 12:07:24 PM
Filename: C:\Users\randy.w.mueller\Documents\60571992_MDA-ALKEK HRC CHILLER_Randy.W.Mueller@aecom.com.rvt

Printed on ___% Post-Consumer Recycled Content Paper

©2017 AECOM Corporation