October 15, 2020

MIDDLETON ASSOCIATES INCORPORATED
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ADDENDUM NUMBER 1
TO THE DRAWINGS AND SPECIFICATIONS

PROJECT: McLean County Unit District No. 5 Chiller #2 Replacement Normal Community West High School

FOR: McLean Co. Unit District No. 5
1809 W. Hovey Ave.
Normal, IL 61761

A/E PROJECT NO: 25352320

ISSUE DATE: September 29, 2020

BID OPENING: Wednesday, October 21, 2020, 10:00 a.m. prevailing time
Maintenance Office, 1999 Eagle Road, Normal, IL 61761

THIS ADDENDUM DOES NOT CHANGE THE BID DATE OR BID TIME.

Upon receipt of this ADDENDUM, insert same into the documents, which were issued to you. Hereafter, said ADDENDUM shall be as much a part of the said documents as though originally set forth therein. THIS ADDENDUM DOES NOT CHANGE THE BID DATE.

1. TO THE SPECIFICATIONS: SECTION 230508; Project Summary: Paragraph 27.1.a; Change to read: Chiller installation is connected to the main electrical panel.

2. TO THE SPECIFICATIONS: SECTION 230508; Project Summary: Paragraph 24.A.2; Delete “R-22.” Insert: “R-123.”

3. TO THE SPECIFICATIONS: SECTION 230508; Project Summary: Paragraph 24.A.2; Delete “Unit 5 personnel will disconnect and remove R-22 and retain the existing refrigerant” and insert “Contractor will remove R-123 refrigerant from chiller and dispose.”

4. TO THE SPECIFICATIONS: SECTION 230508; Project Summary: Paragraph 24.A.1; Change specified voltage to 460v to match existing voltage.

5. TO THE SPECIFICATIONS: SECTION 230508; Project Summary: Paragraph 8.A.1; Change to read: On site work may commence on March 20, 2021.

6. TO THE SPECIFICATIONS: SECTION 230508; Project Summary: Paragraph 8.A.2; Delete “January 15, 2021.” Insert “May 16, 2021.”

7. TO THE SPECIFICATIONS: SECTION 230508; Project Summary: Paragraph 24.A.4; Attached is a proposal from a supplier for the chiller.

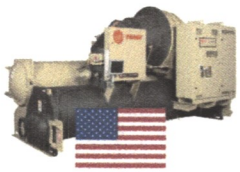
END ADDENDUM NO. 1

Unit Features

Chiller Model	Refrigeration Capacity	Total Power	Fullload Eff	NPLV.IP	IPLV.IP	Refrigerant	Line Volt	Line Frequency	Starter Type
CVHE	366.7 tons	199.8 kW	0.5448 kW/ton	0.4788 kW/ton	N/A	R-514A	460. V	60. Hz	Mechanical

Unit Overview

Application type	Standard cooling
Tracer Controls	BACnet
Tracer Internet Module	Tracer Internet Protccol
Spring Isolators	Spring isolators
Compressor	500
Impeller	232
Orifice	500



Selection Tolerances

Selection Tolerance	AHRI Tolerance

Shell Information

	Evaporator	Condenser
	Fluid Temperature	
Entering	56.00 F	85.00 F
Leaving	44.00 F	93.56 F
	Fluid Properties	
Fluid Type	ethylene glycol	water
Fluid Concentration	30.00 %	0.00 %
Fouling Factor	0.000100 hr-sq ft-deg F/ Btu	0.000250 hr-sq ft-deg F/ Btu
	Flow Rate	
Design Flow	800.0 gpm	1200 gpm
Min Flow	403.9 gpm	486.8 gpm
Max Flow	1546 gpm	1785 gpm
	Fluid Pressure Drop	
Design PD	23.1 ft H2O	16.7 ft H2O
Min PD	4.26 ft H2O	3.36 ft H2O
Max PD	82.3 ft H2O	33.9 ft H2O

	Evaporator	Condenser
	Construction Features	
Shell Size	050L	050L
Bundle Size	480	500
Tube Type	TECU	IECU
Tube Thickness	0.025"	0.028"
Connection Type	Victaulic connection evap.	Victaulic connection cond.
Water box type	non-marine	non-marine
Water box pressure	150 psig	150 psig
Wbox Arrangement	Evap in RH end - evap out RH end	Cond in LH end - cond out LH end
Flow Proving	Thermal dispersion flow switch (IFM)	Thermal dispersion flow switch (IFM)
Number of Passes	Two pass evap water box	Two pass cond water box

Unit Electrical

Wye-delta starter type	Unit Mounted WyeD
Wye-delta starter conn type	Terminal block connection
Wye-delta starter size (max RLA)	346 max RLA
Motor	285
Total Power	199.8 kW

Min Circuit Ampacity	380.00 A
Max Overcurrent Protection	600.00 A
Nameplate RLA	296.80 A
Primary RLA	305.50 A
Motor Locked Rotor Amps	2234.00 A
Un-Corrected Power Factor	0.87

Physical Information

Operating Weight	20373.0 lb	Shipping Weight	17965.0 lb	Refrigerant charge	750.0 lb
Cond Shell Construction	Standard condenser construction	Heat Rejection Capacity	3.41 MBh		
Agency Listing	U.L. listed (United States requirement)				

Information for AHRI and ASHRAE Projects

AHRI 550/590 2015 classification	Certified
ASHRAE 90.1-2010	Complies
ASHRAE 90.1-2013	Complies
ASHRAE 90.1 - 2016	Complies

Certified in accordance with the AHRI Water-Cooled Water-Chilling and Heat Pump Water-Heating Packages Certification Program, which is based on AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI). Unit contains freeze protection fluids in the condenser or in the evaporator with a leaving chilled fluid temperature above 32°F [0°C] and is certified when rated per the Standard with water. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

Warranty

Parts whole unit	Year 2nd-5th Parts Warranty Unit	**Labor 1st year**	1st year labor warranty whole unit
Parts less motor and compressor	No parts less motor & cmpr warranty	**Labor after 1st year**	2nd year labor warranty whole unit
Motor/compr parts warr. up to 10 years	No motor & compressor warranty		

Information for LEED Projects

Refrigeration capacity	366.7 tons	**Total power**	199.8 kW
Refrigerant charge	750.0 lb	**NPLV.IP**	0.4788 kW/ton
Green Seal certification	No		

Compliant with the requirements of the LEED Energy and Atmosphere Enhanced Refrigerant Management Credit (EAc4) due to the R-514A refrigerant GWP being greater than 2.

Note: Trane recognizes and respects the U.S. Green Building Council® mandate that a default 2% Refrigerant Leakage Rate (Lr) be used by all manufacturers of centrifugal chillers when calculating the Enhanced Refrigerant Management Credit because there is no industry standard. Trane has exhaustively documented a leak rate of less than 0.5% for CenTraVac™ chillers (models CVHE, CVHF, CVHG, CVHL, CVHS, CVHM, CDHF, CDHG, CVHH and CDHH) and utilizes an average design refrigerant charge of less than 2 lb./ton. The overall environmental performance of the CenTraVac chiller is verified in its product-specific Type III Environmental Product Declaration (EPD) in accordance with ISO 14025, further demonstrating Trane's commitment to safeguarding the environment.

The U.S. Green Building Council's LEED® green building program is the preeminent program for the design, construction, maintenance and operations of high-performance green buildings. It provides independent, third-party verification that a building project meets the highest green building and performance measures.

Trane Select Assist Version Number: 55221
Data Generation Date: 7/31/2020