



Addendum No. 1
November 30, 2022

Tri-Cities CIC: Chiller Replacement
Washington State University
Richland, WA

Project No. 1744-2022
Washington State University
Facilities Services, Capital

**Addendum No. 1
11/30/2022**

**Tri-Cities CIC: Chiller Replacement
Washington State University
Richland, WA**

Bid Date: December 6, 2022 prior to 2:00 PM

1. This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated November 8, 2022, and any prior addenda, as noted below.
2. Please acknowledge receipt of this addendum on the Form of Proposal.

This Addendum consists of 14 total pages including the following Attachments:

Pre-Bid Meeting 11/23/2022: Meeting Minutes
Pre-Bid Meeting 11/23/2022: List of Attendees
SECTION 23 21 23 – Hydronic Pumps
Sheet M-502 Revised Detail 7 and 8 Drawing

Changes to prior Addenda:

N/A

Changes to Bidding Requirements:

1-1. SECTION 00 11 13 – Advertisement for Bids

Item 1. Replace "...Substantial Completion shall be achieved by June 1, 2023. Proposals MUST BE based on this Contract Time."

Make read

*"...Substantial Completion shall be achieved by **September 1, 2023**.
Proposals MUST BE based on this Contract Time."*

Changes to Specifications:

SP 1-1. SECTION 00 00 01- Table of Contents

Item 1. DELETE 23 05 13 – Motors

Item 2. ADD 23 21 23 Hydronic Pumps

SP 1-2. SECTION 00 50 00 – Agreement between Owner and Contractor

Item 1. Delete: "4.3 Substantial Completion and Final Completion. Contractor shall achieve Substantial Completion of the Work by June 1, 2023, subject to adjustments as provided in the Contract Documents, and shall achieve Final Completion not later than Thirty (30) Days thereafter. Contractor

represents to Owner that the Contract Time is adequate for full performance of the Work. Contractor shall also achieve any interim milestones and phasing requirements set forth in the Contract Documents.”

Make read

*“4.3 Substantial Completion and Final Completion. Contractor shall achieve Substantial Completion of the Work by **September 1, 2023**, subject to adjustments as provided in the Contract Documents, and shall achieve Final Completion not later than Thirty (30) Days thereafter. Contractor represents to Owner that the Contract Time is adequate for full performance of the Work. Contractor shall also achieve any interim milestones and phasing requirements set forth in the Contract Documents.”*

SP 1-3. SECTION 01 11 00 – Summary of Work

Item 1. Delete: Part 1, 1.05 SPECIAL CONDITIONS “B. Schedule and Phasing: The entire project must be completed by June 1, 2023.”

Make read

*“B. Schedule and Phasing: The entire project must be completed by **September 1, 2023.**”*

SP 1-1. SECTION 06 10 00 – Rough Carpentry

Item 1. Part 3 Execution, Article 3.02 Protection, delete article in its entirety.

SP 1-2. SECTION 23 21 23 – Hydronic Pumps

Item 1. ADD section in its entirety. See attached.

SP 1-3. SECTION 23 05 13 – Motors

Item 1. Delete the section in its entirety.

Changes to Drawings:

DWG 1-1. Sheet T-001 – Project Cover Sheet

Item 1. Revise the index of drawings as follows:
Sheet # M-401 shall read M-502
The sheet title for M501 shall read “Mechanical Details”

DWG 1-2. Sheet M201 – First Floor North Mechanical

Item 1. REVISE M-201, Key Note 2 to read “CONNECT EXISTING 6” CHW TO NEW CHILLER. SEE DETAIL 3/M-501. POOR NEW 4” THICK CONCRETE PADS FOR EACH NEW PIPE SUPPORT.”

DWG 1-3. Sheet M502 – Mechanical Details

Item 1. REVISE M-502, Detail 7 and 8 as shown in attached detail drawing.

END OF ADDENDUM No. 1

PRE-BID MEETING MINUTES

1744-2022 – CIC – Replace Chiller WSU Tri-Cities, Richland, Washington

PRE BID MEETING

Meeting Date: **November 23, 2022**

ATTENDING	REPRESENTING	PHONE #	E-Mail
David Carry	SnoValley Process Solutions	509-731-5257	dave@snvalleyprocess.com
Andrew Noles	Matson Construction	509-440-2210	andrew@matsonconstruction.com
Aaron Donnelly	MSI Engineers	509-624-1050	aaron@msi-engineers.com
Tanner Lindstrom	Columbia River Plumbing	509-492-6774	tanner@columbiariverplumbing.com
Scott Harvey	Holaday Parks	360-521-4952	scotth@holadayparks.com
Rob Harborkorn	ICC of Tri-Cities	509-979-5884	rob@icctri-cities.com
Dennis Nihe	Elite Construction & Development	509-308-4539	dennism@elitecnd.com
Bill Dardon	Elite Construction & Development	509-713-4514	billd@elitecnd.com
Reid Craig	JRT Mechanical	509-378-4387	reidc@jrtmechanical.com
Matt Massie	JRT Mechanical	509-303-3008	mattm@jrtmechanical.com
Shane Tucker	McKinstry	509-929-9584	shanet@mckinstry.com
Kelvin Ratchford	Apollo Mechanical	509-440-0945	Kelvin.ratchford@apollomech.com
Jake Raines	Sierra Electric	727-727-3651	sraines@sierraelec.net
Steven Borley	Apollo Mechanical	509-380-1798	Steven.borley@apollomech.com

Attach a copy of the completed sign-in sheet(s) to the minutes.

Note: A Pre-printed agenda in the form of Pre-Bid meeting minutes indicates routine items discussed at these meetings in standard print. The actual discussions that occurred at the meeting are printed in *italics*. The meeting notes and minutes will be routed to plan holders with the addendum that follows this meeting.

PROJECT SPECIFICS

- Introductions
 - Project Manager, **Craig Cole** (craig.cole@wsu.edu, 509-335-9035)
 - Construction Manager, **Jason Harper** (jaharper@wsu.edu, 509-335-8299)
 - A/E, **MSI Engineers (Mechanical)** Aaron Donnelly, aaron@msi-engineers.com
- Project Description
 - *Replacement of the CIC Chiller and all associated electrical and mechanical. The chiller is a long lead time and must be procured accordingly. Contract shall be be substantially complete by 1 June 2023. Proposals MUST be based on this contract time.*
- The estimate for the project, not including taxes, is \$550,000-\$600,000
- Schedule for completion is 1 June 2023.

PRE-BID MEETING MINUTES

- Bid Form
 - *Bid Form must be received prior to 2:00pm on December 6, 2022.*
 - *Bid proposal format can be found in Section 00 21 13 Instructions to Bidders, Part 1.10.*
 - *Bids can be mailed or Contracts@wsu.edu or mailed to FS Contracts, 2425 E Grimes Way, Pullman WA 99164*
 - *It is the bidder's responsibility for getting the bid in **prior** to the bid date and time.*
- General
 - This is an active campus. There are students, faculty and visitors who either will not be aware of construction or will be distracted. Contractors must routinely work around the pedestrian population on campus as well as control noise and other construction related activities to minimize the affect on the campus.
 - WSU is committed to a completely accessible campus. This means that when construction activities interfere with accessible pathways, that the General Contractor is responsible for putting in place temporary facilities (ramps, pathways, etc.,) to assure that all accessible pathways are available.
 - Harassment in the workplace is not tolerated at WSU. All trades are required to conduct themselves such that harassment, real or perceived, does not occur. Offending individuals will be permanently removed from the project.
- Project Specific
 - This is a non-mandatory Pre-Bid Meeting. Be sure to sign in as a General Contractor / Prime Bidder. Bids received from firms that did not attend and sign in will not be accepted.
 - Refer to Section 00100, "Low Responsible Bidder". Contractor responsibility will be evaluated. Be prepared to submit the required information within 48 hours of receipt of request.
 - Liquidated Damages in accordance with Section 00800 are ***\$166/day until Substantial Completion and then \$122/day until Final Completion.***
 - Discuss project location: The work location is on the WSU Tri-Cities campus. Consolidated Information Center Bldg is on the North end of the campus.
 - Discuss Access Routes: Access to the site is from University Way, down Crimson Way to the large parking lot. There is a service lane on the North side of CIC that will provide access all the way back to the loading dock area and the chiller location. The contractor laydown area will be in the open field to the North of this service road. Coordination with the local campus staff will be required before any portion of the parking lot is set aside for contractor use.
 - Discuss parking. The General Contractor will be allowed to park 2 vehicles within the construction fence. All other workers will have to park in the adjacent parking lot, but please park in the furthest corner of the lot (Northeast corner). There is no charge for parking on the Tri-Cities campus.
 - Discuss temporary utilities. No telephone service will be provided by the University. The contractor will need to make their own arrangements. Temporary electric service must be arranged with the University. *A temporary connection may be available from the CIC building.*
 - If the bidder decides to put up a construction fence around their laydown area, it must not impede the Fire Access lane to the CIC building.
 - The General Contractor is to have a Superintendent and/or a Project Engineer on the project at all times that construction occurs.
 - On-Site WSU coordinator will be Andy Percifield, WSU Tri-Cities Maintenance Supervisor, his phone number is 509-372-7605. Otherwise, you can contact the Project Manager or Construction Engineer.
 -

PRE-BID MEETING MINUTES

GENERAL ADMINISTRATION/MANAGEMENT

• MWBE PARTICIPATION

Washington State University is committed to the enhancement of opportunities for minority and women's owned and controlled firms in public contracting. While neither required nor a part of bidder responsiveness, the use of solicitation of minority and women's business enterprise firms is expressly encouraged.

• SUPERVISION

In accordance with specification 01005-2, Para 1.09 a competent job superintendent is to be continuously on the grounds during all work of this contract. For WSU this means for each project a contractor undertakes for WSU that there will be a specific designated superintendent on that project.

• PROJECT CLARIFICATIONS

- O&M Manuals are required for "Substantial Completion".
- As-Built Drawings are required for "Substantial Completion".

• ADDENDUM

- Questions and substitution requests must be received by **November 30, 2022**.
- Addenda expected to be issued no later than **December 2, 2022**.

PROJECT SITE VISIT

The site visit toured the future construction site and the areas affected by access, including the fenced chiller area next to the building.

CONTRACTOR QUESTIONS

1. What needs to be done with the glycol in the system? Answer – *The intent is to reclaim the glycol and put it back into the system. If the fluid is so contaminated that it cannot be re-used, then a change order would be necessary.*
2. How many gallons of glycol fluid does the entire system hold? Answer: *~1300 gal*
3. The VFDs that were specified, can their be substitutes? Answer: *All requests for substitutions need to be received by 30 November, 2022 by 5pm.*
4. What part of the system will remain? Answer – *refer to the drawings for the parts of the system that are to be removed or remain.*
5. What Control System is being installed? Answer – *A new Siemens panel is being installed, operating system is Insight with BACnet capability. The new controls for the chiller should be compatible with the new panel and wiring to the new different components should be included in the scope as per the drawings.*
6. Will Siemens be providing anything else? Answer – *Siemens will be installing a new BAS panel. Additional control scope associated with the chiller is indicated on M-601 and specification 230900.*
7. There may be lead times issue with the VFDs? Answer – *if there are substantial lead time issues with the VFDs and you cannot make the substantial completion date, then suggest a suitable substitute and justify why.*
8. Is the chilled water piping copper? Answer – *some of the chilled water piping is copper, we do not know the full extent until the insulation is removed.*
9. For the electrical – how far back do they need to demo? Answer – *When removal of a device (like a pump) is indicated on the drawing, remove the electrical wiring all the way back to the panel including the components of the disconnect.*

PRE-BID MEETING MINUTES

10. Also, what about the control wiring? Answer - *When removal of a device (like a pump) is indicated on the drawing, remove the control wiring all the way back to the control panel. Removal of control programming and graphics shall also be removed.*
11. Is the R-22 in the existing chiller to be disposed of or salvaged back to WSU? Answer – *Salvage back to WSU.*
12. Who supplies the VFDs, the MC or Siemens? Answer – *The VFDs are specified under Div 23. It is the mechanical contractor's responsibility to coordinate the scope of supply among their subs.*
13. Is there additional concrete planned for support of the pipe stands shown on M-502? Answer – *Yes, will clarify via addendum.*

Date recorded: 11/23/2022

Recorded by Craig Cole

These minutes represent the author's understanding of discussions held and decisions reached at the meeting. Amendments to these notes should be submitted to the author within three (3) working days after issuance or these minutes will stand as written.

PRE-BID MEETING MINUTES

SIGN IN SHEET

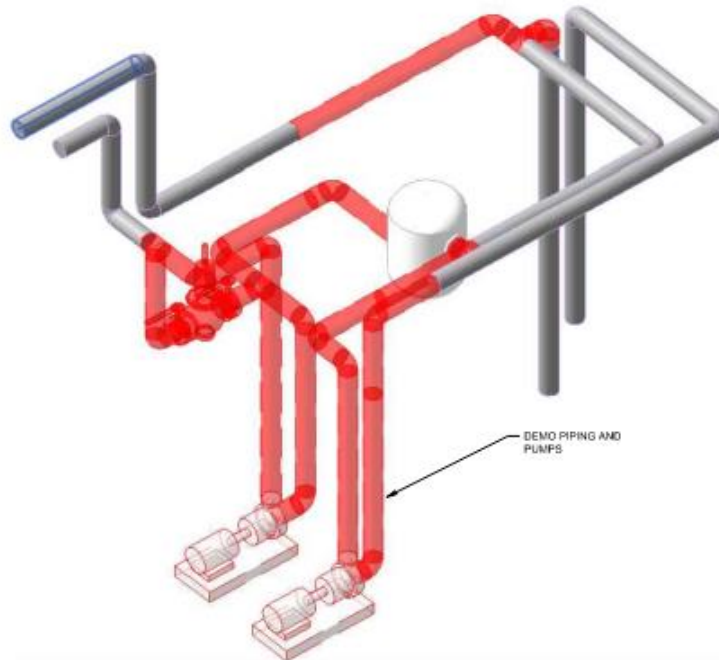
PROJECT 1744-2022 – CONSOLIDATED INFORMATION CENTER – REPLACE CHILLER

WSU TRI-CITIES

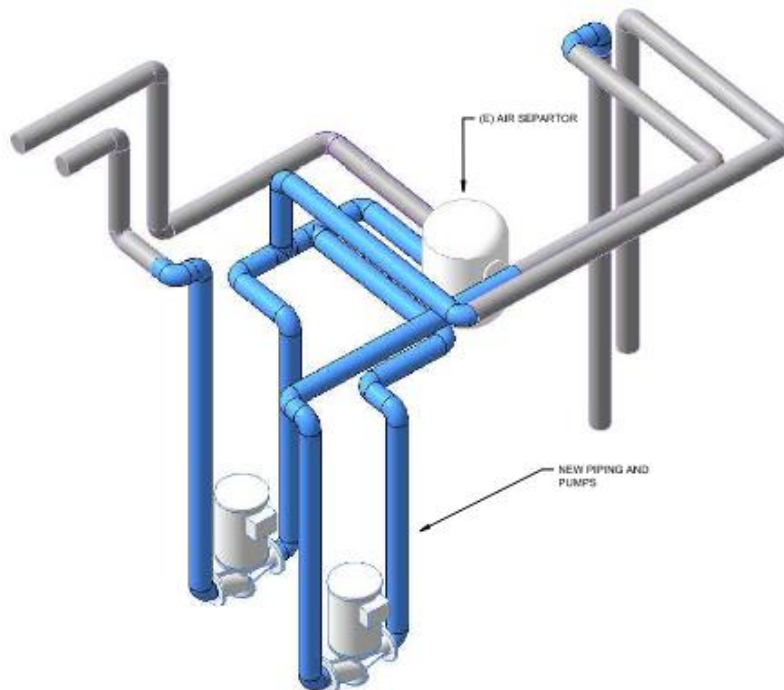
PRE-BID MEETING

November 23, 2022 at 10:00 am

Name	Company	Phone	e-mail
David Carley	Sno Valley	509-131-5257	Dave@snvalleyprocess.com
Andrew Niles	Matson Construction	509-449-2200	Andrew@matsonconstruction.com
Aaron Donnelly	MSI ENGINEERS	509-624-1050	aaron@msi-engineers.com
Tanner Lindstrom	CRP	509-492-6774	Tanner@ColumbiaRiverPlumbingCo
Scott HARVEY	Holaday PARKS	509-521-4952	scotth@holadayparks.com
Rob Hubertson	ICC of Tri-Cities	509-929-3884	Rob@ICCofTri-Cities.com
Dennis Nixie	ELITE CONST + DEV.	509-308-4539	dennison@elitecnd.com
Bill Dardon	Elite Con. Dve	509-713-4514	BillD@elitecnd.com
Shane Tucker	McKinstry	509-924-4594	shaneT@McKinstry.com
Reid Craig	JRT Mechanical	509-378-4387	reidc@jrtmechanical.com
Matt Maselle	JRT Mechanical	509-303-3008	MattM@JrtMechanical.com
Kelvin Ratchford	Apollo Mechanical	509-440-0945	Kelvin.Ratchford@apollo-mech.com
Jake Raines	Sierra Elec	509-727-3451	JRaines@sierraelect.com
STEVEN BORLEY	APOLLO MECHANICAL	509-380-1798	STEVEN.BORLEY@APOLLOMECH.COM



7 MECH ROOM PIPING ISO VIEW - DEMOLITION
 Scale: NOT TO SCALE



8 MECH ROOM PIPING ISO VIEW - NEW
 Scale: NOT TO SCALE

END OF ADDENDUM

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following vertical in-line centrifugal pumps.

1.2 SUBMITTALS

- A. Product Data: Include certified performance curves and rated capacities, operating characteristics, furnished specialties, final impeller dimensions, and accessories for each type of product indicated. Indicate pump's operating point on curves.
- B. Shop Drawings: Show pump layout and connections. Include setting drawings with templates for installing foundation and anchor bolts and other anchorages.
- C. Operation and maintenance data.

1.3 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. UL Compliance: Comply with UL 778 for motor-operated water pumps.

PART 2 - PRODUCTS

2.1 SPLIT-COUPLED, VERTICAL IN-LINE CENTRIFUGAL PUMPS

- A. Manufacturers
 - 1. Armstrong Pumps Inc.
 - 2. Bell & Gossett Pumps.
 - 3. Taco.
- B. Description: Factory-assembled and tested, centrifugal, split-coupled, vertical in-line pump as defined in HI 1.1-1.2 and HI 1.3; designed for vertical installation with pump and motor shafts mounted vertically. Rate pump for 175-psig minimum working pressure and a continuous water temperature of 225 deg F.
- C. Pump Construction:
 - 1. Casing: Cast iron, with equal suction and discharge ports, with replaceable bronze wear rings, threaded gage tappings at inlet and outlet, drain plug at bottom of volute and companion-flange connections. Provide integral mount on volute to support casing, motor and attached piping to allow removal and replacement of impeller or seals without disconnecting piping or requiring realignment of pump and motor shaft.
 - 2. Impeller: ASTM B584, cast bronze; statically and dynamically balanced, keyed to shaft, and secured with a locking cap screw. Trim impeller to match specified performance.
 - 3. Pump Shaft: Stainless Steel.
 - 4. Mechanical Seal: Seal shall be stainless steel multi-spring balanced type with Viton secondary seal, carbon rotating face and silicon carbide stationary seat. Provide 316 stainless steel gland plate. Provided factory installed flush line with manual vent.

5. All split coupled pumps shall be provided with a lower seal chamber throttling bushing to ensure seals maintain positive cooling and lubrication.
 6. Provide seal flush line filter.
- D. Shaft Coupling: High tensile aluminum split style coupling. Couplings shall be drop-out type to allow disassembly and removal without removing pump shaft or motor.
- E. Coupling Guard: Dual rated; ANSI B15.1, Section 8; OSHA 1910.219 approved; steel; removable; attached to mounting frame.
- F. Motor: Single speed or variable speed, designed for vertical pump mounting applications, with appropriate type ball bearings, rigidly mounted to pump casing. Comply with requirements in Section 23 00 00 – HVAC General Provisions.
- G. Capacities and Characteristics:
1. See drawings for schedule.
- 2.2 PUMP SPECIALTY FITTINGS
- A. Suction Diffuser: Angle pattern, 175-psig pressure rating, cast-iron body and end cap, pump-inlet fitting; with bronze startup and bronze or stainless-steel permanent strainers; bronze or stainless-steel straightening vanes; drain plug; and factory-fabricated support.
- B. Rubber Flexible Connector: ASTM F1123, fabric-reinforced rubber with external control rods and complying with FSA's "Technical Handbook: Non-Metallic Expansion Joints and Flexible Pipe Connectors."
1. Manufacturers:
 - a. Mason Industries.
 - b. Metraflex, Inc.
 - c. MG Piping Products Co.
 - d. Vibration Mountings & Controls, Inc.
 2. Arch Type: Multiple arches.
 3. Spherical Type: Multiple spheres.
 4. Material: EPDM.
 5. End Connections: Full-faced, integral, steel flanges with steel retaining rings.
- C. Triple-Duty Valve: Not allowed. Use individual check valve, shut-off valve and balance valve or flow measuring venturi as indicated on plan details.

PART 3 - EXECUTION

3.1 PUMP INSTALLATION

- A. Comply with HI 1.4.
- B. Install pumps with access for periodic maintenance including removal of motors, impellers, couplings, and accessories.
- C. Independently support pumps and piping so weight of piping is not supported by pumps and weight of pumps is not supported by piping.
- D. Install continuous-thread hanger rods and spring hangers of sufficient size to support pump weight. Vibration isolation devices are specified in Division 23 Section "Mechanical Vibration

and Seismic Controls." Fabricate brackets or supports as required. Hanger and support materials are specified in Division 23 Section "Hangers and Supports."

- E. Split Coupled, Vertical In-Line: Suspend vertically mounted, in-line centrifugal pumps independent of piping. Install pumps with motor and pump shafts vertical. Use continuous-thread hanger rods and spring hangers of sufficient size to support pump weight. Vibration isolation devices are specified in Division 23 Section "Mechanical Vibration and Seismic Controls." Hanger and support materials are specified in Division 23 Section "Hangers and Supports."
- F. Set vertical in-line on concrete foundation. Disconnect coupling before setting. Do not reconnect couplings until alignment procedure is complete.
 - 1. Support pump baseplate on rectangular metal blocks and shims, or on metal wedges with small taper, at points near foundation bolts to provide a gap of $\frac{3}{4}$ to 1-1/2 inches between pump base and foundation for grouting.
 - 2. Adjust metal supports or wedges until pump and driver shafts are level. Check coupling faces and suction and discharge flanges of pump to verify that they are level and plumb.

3.2 CONNECTIONS

- A. Piping installation requirements are specified in other Division 23 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to machine to allow service and maintenance.
- C. Connect piping to pumps. Install valves that are same size as piping connected to pumps.
- D. Install suction and discharge pipe sizes equal to or greater than diameter of pump nozzles.
- E. Install check valve and balancing valve on discharge side of pumps.
- F. Install flow balance valve or venture on discharge side of suction pumps where indicated on drawings.
- G. Install Y-type strainer and shut-off valves on suction and on discharge side of pumps.
- H. Install suction diffuser and shutoff valve on suction side of end suction or vertical in-line style pumps.
- I. Install suction diffuser and drain valve on suction side of pumps.
- J. Install flexible connectors on suction and discharge sides of pumps between pump casing and valves, when indicated on the drawings.
- K. Install pressure gages on pump suction, suction diffuser and discharge, at integral pressure-gage tapping, or install single gage with multiple input selector valve.
- L. Ground equipment and connect wiring according to Division 26.
- M. Coordinate piping installations and specialty arrangements with schematics on Drawings and with requirements specified in piping systems.
- N. Adjust metal supports or wedges until pump and driver shafts are level. Check coupling faces and suction and discharge flanges of pump to verify that they are level and plumb.

3.3 ADJUSTMENTS

- A. After the pumps are installed, checked out, started and made operational, the Test and Balance Agency shall verify actual performance matches the pump curves and that the system operational head pressures are being achieved. If balance data indicates that the pump impellers are oversized for the actual realized system head, the impellers shall be removed and trimmed to smaller diameters, in a facility approved by the pump manufacturer. The final trimmed impellers shall be reinstalled and the pumps retested to verify performance. Allow for trimming all pump impellers in the project work scope at no additional cost to the Owner.

END OF SECTION