



## FACILITIES AUTOMATION DIVISION

3847 Crum Road, P.O. Box 4209  
Youngstown, Ohio 44515-0209

(330) 793-5571  
1-800-USA-ROTH  
FAX: (330) 799-3369  
[www.rothbros.com](http://www.rothbros.com)

### 11/03/14      VA Provide Process Loop Tie-Ins – Technical Questions

- #1** Regarding: Drawing 1-M5. Flexim Meters.  
Question: Does each application (Toshiba, Phillips, & Linear Accelerators) have a Chilled Water and Domestic Water Meter? If so, can we provide a Dual Channel Flexim Meter with Chilled Water on Channel A and Domestic Water on Channel B? Is this acceptable? Please elaborate.
- #2** Regarding: Drawing 1-M5. Flexim Meters.  
Question: What are the line sizes for the Chilled Water and Domestic Water lines for all? Please elaborate.
- #3** Regarding: Drawing 1-M5. Flexim Meters.  
Question: Is a separate flow switch required for each Chilled Water and Domestic Water application? We can provide a low flow switch from the Flexim Meter with a solid state relay output or we can provide an insertion thermal dispersion separate flow switch. Which way would be acceptable? Please elaborate.

*#1 - Yes, each application has a Chilled Water and Domestic Water meter. Yes, it is acceptable to provide a dual channel Flexim meter.*

*#2 - Linear accelerator chilled water and domestic water pipe sizes are indicated on drawing 1-M4. MRI chilled water sizes are indicated on drawing 1-M3. Domestic water back-up pipe sizes to MRI equipment should be verified in the field.*

*#3 - Provide separate flow switches. Flow switches shall meet specifications.*



## FACILITIES AUTOMATION DIVISION

3847 Crum Road, P.O. Box 4209

Youngstown, Ohio 44515-0209

(330) 793-5571  
1-800-USA-ROTH  
FAX: (330) 799-3369  
[www.rothbros.com](http://www.rothbros.com)

**11/05/14**

### **VA Provide Process Loop Tie-Ins – Technical Questions 2**

- #1** Regarding: Drawing 1-M5. Sequence of Operation for Toshiba Chilled Water System and its diagram.  
Question: Is this the new Drake heat exchanger? Drawing 1-M8. General Note C. Please elaborate.
- #2** Regarding: Drawing 1-M5. Sequence of Operation for Toshiba Chilled Water System.  
Question: Note 2. “..from local JCI controller to existing Andover..”  
What is this JCI controller and in what protocol will it communicate? BACnet MSTP? Please elaborate.
- #3** Regarding: Drawing 1-M5. Sequence of Operation for Toshiba Chilled Water System and its diagram.  
Question: Are the listed points either within the dashed line or in the sequence hard wired (physical) to the Andover? Or are they all virtual and passed thru software? Please elaborate.
- #4** Regarding: Drawing 1-M5. Tridium Controls System Notes.  
Question: Who is the VA's licensed Tridium vendor? Please provide there contact information.
- #5** Regarding: Drawing 1-M5. Remote Alarm Indication Station.  
Question: Who is the VA's Remote Alarm Indication Station vendor? Please provide there contact information as well as the part number(s) and specification for this item.
- #6** Regarding: Drawing 1-M5. General Note E.  
Question: The specifications 29 03 29 list the Andover Infinet 2 network as the basis of design however general note E states Andover BACnet protocol. By installing an Andover BCX C/R we can translate any Andover Infinet 2 I/O into BACnet protocol. Which is the preferred method at this time? Please elaborate.
- #7** Regarding: Drawings 1-M4 and 1-M5. Linear Accelerator diagram.  
Question: The diagram shows both water DP's and current switches to prove pump status. Are both desired or can one method be eliminated? Please elaborate.
- #8** Regarding: Drawing 1-M8. MRI Rooms.  
Question: Are the MRI rooms copper or lead lined? Are wave guide kits required for wall penetrations? Please elaborate.
- #9** Regarding: Drawings 1-M2 and 1-M3. Loop shutdowns and tie-ins.  
Question: Will the temperature control contractor be required to be on site while these shutdowns occur? Or will these shutdowns be handled/covered by VA personnel? Please elaborate.
- #10** Regarding: Specification 29 09 23, 2.1, E. Servers. “..new Controls System Application Server(s) shall..”  
Question: This section calls for new servers. We believe that the existing servers should be used for this project, not new. Is this correct?
- #11** Regarding: Specification 29 09 23. Operators Workstation.  
Question: We do not believe a new Operators Workstation is required for this project. Is this correct?
- #12** Regarding: Commissioning.  
Question: I did not see a Commissioning specifications section such as 23 08 00. Will this project have a formal commissioning with a commissioning agent?

#1 - Yes.

#2 - *Extending controls from JCI controller is not required. The points indicated in the diagram shall be hard wired to the Andover system. The Drake unit is a packaged, self-controlled system, however, has contacts available for the noted devices in the outlined (dashed) boxes on drawing 1-M5.*

#3 - *The Drake unit is a packaged, self-controlled system for the Toshiba MRI. Hard wire points to Andover BAS.*

#4 - A Tridium factory-authorized vendor shall be used.

#5 - The VA does not have a vendor for this remote alarm.

#6 - Either is acceptable.

#7 - *One can be eliminated. All shall be provided the same chosen method.*

#8 - *MRI rooms are copper lined. There should not be any penetrations of the MRI rooms.*

#9 - Shutdowns are to occur per the project specifications. The requirement for sub-contractors to be on station during the shutdowns shall be identified through coordination with the prime contractor.

#10 - Yes. Correct.

#11 - Yes. Correct.

#12 - *Yes. The project will involve a 3rd party commissioning group, under contract by the VA. Specifications are included.*