

**DGS-30-456**

(Rev. 02/22)

## Construction Management at Risk Procurement Review Submittal Form

### General Project Information

Agency Name:	JAMES MADISON UNIVERSITY	
Is the agency a covered institution per §2.2-4379?		Yes
Project Name:	Improve East Campus Infrastructure Phase 2	
Project Number:	216-18595-000	

### Other Project Information

Advising A/E Name:	Tyler Morris	License Number:	402055060
COV Sections: §2.2-4380.B.2, §2.2-4381.C.2			
Attach written determination for use of CM at Risk.			
COV Sections: §2.2-4380.C.2, §2.2-4380.B.1; §2.2-4381.D.2, §2.2-4381.C.1			
Is the procurement process proposed a two-step process?			Yes
COV Sections: §2.2-4380.C.2, §2.2-4380.B.7; §2.2-4381.D.2, §2.2-4381.C.7			

### Agency Reasons for Use of CM at Risk

Construction Cost (COV Sections: §2.2-4381.B.1, §2.2-4380.C.3, §2.2-4381.D.3)	Yes
Building Use (COV Sections: §2.2-4381.B.1, §2.2-4380.C.3, §2.2-4381.D.3)	Yes
Project Timeline (COV Sections: §2.2-4381.B.1, §2.2-4380.C.3, §2.2-4381.D.3)	Yes
Need for Project Phasing (COV Sections: §2.2-4380.C.5, §2.2-4381.D.5)	Yes
Project Complexity (COV Sections: §2.2-4381.B.1, §2.2-4380.C.4, §2.2-4381.D.4)	Yes
Value Eng. and/or Constructability Analysis Concurrent with Design (COV Sections: §2.2-4381.A)	Yes
Need for Quality Control/Vendor Prequalification (COV Sections: §2.2-4380.C.5, §2.2-4381.D.5)	Yes
Need for Cost/Design Control (COV Sections: §2.2-4380.C.5, §2.2-4381.D.5)	Yes

### Supporting Information for Procurement Method Selection

Project Use (i.e. lab, classroom, office, etc.): (COV Sections: §2.2-4380.C.3; §2.2-4381.D.3)
The improve East Campus Infrastructure Phase 2 project will enhance and increase the steam and chilled water production capabilities of the East Campus Power Plant (ECP) to provide heating and cooling to James Madison University. The project will involve the delicate removal of most of the remaining decommissioned Resource Recovery Facility (RRF). It will also involve the delicate demolition and removal of the two old existing steam boilers. In the place of the old boilers, three new 1,200 Ton Chillers are to be installed. This project will also involve the construction of a new, purpose-built boiler plant in the place of the removed RRF. It will include the purchase and installation of two new 80,000 pph steam boilers which combined will provide 160,000 pph of steam. The increased capacity of the plant will meet the growing needs of the campus and provide improved reliability.

Construction Cost:	\$37,200,000 (COV Sections: §2.2-4380.C.3; §2.2-4381.D.3)			
Project schedule: (COV Sections: §2.2-4380.C.3; §2.2-4381.D.3)	Design Start Date	8/30/2023	Design Compl. Date	8/30/2024
	Const. Start Date	3/15/2024	Const. Compl. Date	12/1/2025
	Attach bar chart schedule to illustrate fast tracking or other schedule complexities. (COV Sections: §2.2-4380.C.3, §2.2-4380.C.4; §2.2-4381.D.3, §2.2-4381.D.4)			

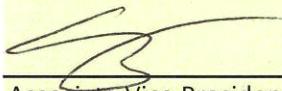
Additional description to highlight key attributes that affect the project complexity, need for value engineering/constructability analysis, quality control/vendor prequalification, and cost/design control as indicated by "Yes" answers above:

- 1) Construction Cost: Through real time cost tracking and analysis during the Design Phase of this project, the Construction Manager (CM) would be providing valuable cost control insights and options to the rest of the building team that when implemented will, in a more practical way, keep the cost of the project set firmly at the given Construction Budget value.
- 2) Building Use: The Steam Plant and Chiller Plant aspects of this project present specific and specialized construction challenges that will require a specific knowledge base and experience from Mechanical, Electrical, and Controls Subcontractors. During the Design phase of this project, the CM would be able to get a head start on seeking out, recommending, and starting to strategize with such qualified subcontractors. By using this same process, the CM would be able to find and engage with the right Demolition and Foundations subcontractors who will be charged with making (re)use of some portions of the existing Resource Recovery Facility (RRF). All this would go a long way to improving the overall project schedule and to better assure a (much) higher level of quality control for this project.
- 3) Project Time Line: There are portions of this project that need to be "delicately" removed early on so that the design, placement, and proper installation of significant pieces of equipment and piping can be verified in order to finalize shop drawings. There are also very long lead times for some of the equipment that is to be installed in those portions. To be able to have the CM planning and scheduling those installations during the Design phase has the real potential of reducing the duration of construction by a significant amount. It will also ensure that after it is installed, the equipment can be started up and tested within the narrow time frame allowed.
- 4) Project Phasing: The ability for the CM to implement Early Release packages (such as Demolition and Hazmat Abatement, Site Mobilization and Site Utilities, Early Equipment Purchases....) before the main body of construction, will help to compress the overall project schedule and thereby, also reduce costs.
- 5) Project Complexity: With this project, there are several significant "pass-through" utilities that will need to be rerouted and/or protected during demolition and construction. The CM (and select Subcontractors) would be best qualified to determine how that work could be accomplished, and when that should be done, and how to support and protect it. The planning for this could and should be done during the Design Phase, well prior to early release of the demolition work. With this project, there will also be a lot of very selective demolition which will require a high level of know-how within the Mechanical, Electrical, and the Controls trades (hence the need for qualified and experienced subcontractors).
- Also, the A/E team would like to make use of certain existing foundations/retaining walls from the RRF that is to be demolished. During the design phase, they would like to enlist the partnership of the CM to determine the best limits of demolition and sequencing of that work.
- 6) Value Engineering and Constructability Analysis: In conjunction with the preceding statement, the Design Team would like to involve the CM during the design phase to have them offer up options and to compare different ways of re-routing the significant "pass-through" utilities. They would also like to involve the CM in determining how best to test and retain certain portions of the existing foundations.

7) Cost/Design Control: Through real time cost tracking and analysis during the Design Phase of this project, the Construction Manager (CM) would be providing valuable cost control insights and options to the rest of the building team that when implemented will, in a more practical way, keep the cost of the project set firmly at the given Construction Budget value.

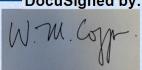
8) Additional Beneficial CM Services: With the great amount of steam piping threading through the existing Chiller Plant and that which will go into the new Steam Production Plant, another valuable service that a CM can bring to this project is the use of BiM modeling and clash control. When used in the preparation of Shop Drawings, this 3D modeling software tool enables the subcontractors to work together and "build" the full building virtually. With this, they are able to make sure that various systems and elements (such as steam piping and structure) aren't competing for the same space and therefore "clashing". This could then be corrected before ordering or constructing anything in the real physical space.

(COV Sections: §2.2-4380.C.4; §2.2-4381.D.4)

Submitted by: Craig Short Date: 2/13/2024  
Signature:   
Title: Associate Vice President, Business Services  
(Agency Head or Authorized Representative)

**For DGS Use Only**

Based upon the information provided by the Agency, the use of Construction Management at Risk  
**IS** recommended for this project.

Recommended by:  
DocuSigned by:  
  
W. Michael Coppa, RA  
Director, Division of Engineering and Buildings