

REQUEST FOR COMMISSIONING SERVICES

Veterinary Medicine Addition & Renovation UW Madison DFDM Project No. 18H2H

FOR THE STATE OF WISCONSIN
DEPARTMENT OF ADMINISTRATION, DIVISION OF FACILITIES DEVELOPMENT & MANAGEMENT
STATE ADMINISTRATION BUILDING, 101 EAST WILSON STREET,
MADISON, WISCONSIN 53703

PROJECT INFORMATION

Background:

The School of Veterinary Medicine facility (144,330 ASF/248,850 GSF) was constructed in 1983 and an 8,100 GSF addition was added in 2009 to house a tomography unit and associated clinical space. The School also occupies the SVM-Hanson Biosciences Building (27,300 ASF/43,500 GSF constructed in 1962) and has a large animal instructional facility located on Mineral Point Road. More SVM faculty research programs are scattered around campus in a variety of buildings, including the Biotron Laboratory and the Waisman Center. These facilities collectively house a veterinary medical teaching hospital, UW Veterinary Care, and instructional and research space.

The curriculum provides a broad education in veterinary medicine with learning experiences in food animal medicine and other specialty areas including human vaccinations for rare viruses such as Ebola, Zika, and other newly emerging diseases. Faculty in the school's four academic departments train 87 students each year in a four-year program leading to a Doctor of Veterinary Medicine (DVM) degree. In addition, the school provides exceptional graduate research training in core areas of animal and human health through its Comparative Biomedical Sciences Graduate Degree Program. Students may also choose from a variety of dual degree options. The program has earned a reputation as one of the country's leading schools for veterinary medicine. A feasibility study to determine the appropriate and adequate SVM facilities expansion for the next 30 years was completed in 2013. The study also assessed the existing facilities to determine the highest and best use for clinical and research space in the context of the proposed expansion. The results and recommendations from the feasibility study form the basis for this capital project request.

Project Description:

This project constructs a new three-story building on the Lot 62 site, just north of the School of Veterinary Medicine (SVM) between Observatory and Linden Drives. The new facility will provide space for the small animal clinic and connect it to the existing clinic; construct new research, animal biosafety level 3, and biosafety level 2 and 3 laboratories; and include new offices, conference rooms, and shared collaboration/interaction spaces to support the teaching hospital. The clinical space will be expanded to increase access to the small and large animal isolation suites that are required to meet accreditation standards, increase the quantity of specialized surgery environments and equipment, provide imaging space for horses and cattle, and separate patient access to medical oncology services. The clinic currently has inadequate space for patient waiting and separation of species, and little privacy for admissions and discharge. Additional space will be dedicated to student work center diagnostics, treatment planning, medical records updates, client communications, and classrooms. This project will also renovate portions of the animal hospital and raze three buildings (Veterinary Diagnostic Laboratory, Farm House, Storage Building I) at the SVM Charmany site. The following summary is the construction cost portion for the proposed scope of work.

Project Cost:

The current total project cost estimate is \$107,500,000.

The owner's project requirements are described in Expansion Feasibility Study for the School of Veterinary Medicine, dated September 23, 2015 (DFDM 1311S)

Proposed Schedule

AE Selection	Apr 2019
Design Report	Jan 2020
SBC Approval	Feb 2020
Bid Date	Jan 2021
Start Project	Apr 2021
Substantial Comp	Feb 2023

Project Design Team

Design team includes prime A/E Flad Architects, Madison and primary subconsultants Affiliated Engineering, Inc, Madison.

Agency Contact:

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COMMISSIONING SERVICES

Commissioning services will be in accordance with DFDM [Policy and Procedure Manual for A/E and Consultants](#), Section Two - Commissioning. The intent is to verify that systems and equipment are installed and perform according to the owner's project requirements, basis of design, and construction documents and that the building operator has received equipment and systems documentation and training.

The commissioning services provider (CxP) will be independent of the design team and will report directly to DFDM. DFDM expects commissioning services to commence at the Preliminary Design phase.

Scope of commissioning activities and commissioned systems are indicated on the two attached tables.

Special commissioning requirements are to include biosafety laboratory zone.

Deliverables

Distribute the Commissioning Report as one hard copy and one electronic copy in PDF format to DFDM, the Agency and A/E.

LETTER OF INTEREST

Proposed commissioning team: Identify who will be providing commissioning services, their roles and any sub consultants.

Qualifications: Provide documentation of expertise, qualifications and descriptions of relevant past projects for the consulting firm and for the individual(s) who will be performing the services.

COMMISSIONING ACTIVITIES / SERVICES

The following activities correspond to DFD’s Commissioning policy and procedures that can be found in Section Two of the [Policy and Procedure Manual for A/E and Consultants](#). Reference the manual for a more detailed description of the required services.

ENVELOPE COMMISSIONING SERVICES:

DESIGN PHASE

1. Lead a Cx kick-off meeting to review overall project expectations, building enclosure performance expectations, confirm scope of Work.
2. Review Opinion of Probable Cost, Preliminary & Final Design Documents to confirm and validate building enclosure design and function, provide comments and recommendations.
3. Review Opinion of Probable Cost, Preliminary & Final Design Documents regarding the design's ability to meet the performance goals set at the kick-off meeting.
4. Develop a Commissioning plan.
5. Provide Construction Verification Checklists and Functional Performance Test Forms relative to the building envelope to be incorporated into the Specifications.
6. Participate in Cx meetings and conference calls with the Project Team. (quantity TBD)

CONSTRUCTION PHASE

1. Participate in Cx meetings and conference calls with the Project Team. (quantity TBD)
2. Participate in review and comment on building envelope shop drawings and submittals, including verification of material assembly and compatibility. This review will be in conjunction with the review by the AE of Record.
3. Participate in building envelope Pre-Installation Meeting(s). The purpose will be to meet with the General Prime Contractor and all building envelope trade contractors to confirm overall project performance expectations, review specific details, and review façade mock-up.
4. Perform periodic site visits to review work in progress and completed work to note compliance with the contract documents and deficiencies (work not in compliance with the contract documents). A report shall follow no later than 5 days from each visit. During the site visit CVCs and FPT forms will be reviewed.
5. Witness building envelope FPT and provide documentation.

POST CONSTRUCTION PHASE

1. Prepare building envelope final commissioning report including: Executive Summary of project, meeting minutes from commissioning meetings, CVCs and FPTs, issues list and outcome, lessons learned.
2. Conduct a 10-month site visit (during the 12 month warranty period) with Agency staff and prepare formal report of findings and requirements for remedial repairs (if any).
3. Update building enclosure commissioning final report as needed.

Commissioning Requirement		Cx Policy Reference	Table 2.1 & 2.2 Ref.
Design Phase			
<input checked="" type="checkbox"/>	Review Basis of Design/Design Concept to evaluate if construction documents meet Owner’s Project Requirements and DFDM guidelines.	2.E.2.a	4.
<input checked="" type="checkbox"/>	Provide input to A/E for inclusion in the Construction Verification Checklists and Functional Performance Test forms into the project manual.	2.E.2.b	5.
<input checked="" type="checkbox"/>	Review Preliminary Design documents to evaluate and comment on the design meeting the Owner’s Project Requirements and project goals.	2.E.2.b	5.
<input checked="" type="checkbox"/>	Review Final Design documents to ensure incorporation of preliminary review comments, elimination of construction ambiguities and completeness of the Construction Verification Checklists and Functional Performance Test forms.	2.E.2.b	5.
<input type="checkbox"/>	Review Bid documents for inclusion of DFDM & CxP comments.	2.E.2.b	5.
<input checked="" type="checkbox"/>	Develop a Commissioning Plan identifying the commissioning team, procedures, system tests, test sampling, milestones and responsibilities.	2.E.2.c	8.
Construction Phase			
<input type="checkbox"/>	Attend and participate in the Construction Progress Meetings and lead the commissioning team of contractors and consultants. Provide Commissioning Plan overview at the Pre-construction Conference.	2.E.3.a/c	10.

<input type="checkbox"/>	Review Contractor's Quality Control Plan, comment to DFDM and incorporate into the Commissioning Plan.	2.E.3.a	9.
<input checked="" type="checkbox"/>	Conduct regularly scheduled Commissioning Meetings and regularly update the Commissioning Plan tracking status and responsibilities.	2.E.3.d	9.
<input checked="" type="checkbox"/>	Enter construction, functional performance, design discrepancies, etc. into the WisBuild Issues List or other tracking log. Track the issues to help move the issue to correction. When Contractor, A/E or DFDM indicates an issue is corrected, verify and close the issue within WisBuild or other tracking log.	2.E.3.e	11.
<input checked="" type="checkbox"/>	Perform field checks of the Contractor completed Construction Verification Checklists. Enter non-conformance items into the Issues List. If there is more than a 10% deficiency, Contractor to correct and CxP to recheck.	2.E.3.f	12.
<input checked="" type="checkbox"/>	Establish sampling protocol for Functional Performance Testing. Witness, record and document the testing and report any deficiencies on the Issues List.	2.E.3.g	13.
<input checked="" type="checkbox"/>	Review HVAC testing, adjusting and balancing report, field verify with contractor, report deficiencies on the Issues List, track issues to resolution, verify corrections and close the Issues.	2.E.3.h	14.
<input type="checkbox"/>	Review Operations and Maintenance Manuals and provide comments to the A/E so they can include with the A/E's review comments.	2.E.3.i	16.
<input type="checkbox"/>	Attend Agency training sessions, provide and collect attendee evaluation forms and evaluate training to ensure Agency training is adequate.	2.E.3.k	19.
<input checked="" type="checkbox"/>	Complete draft Commissioning Report and distribute to DFDM, A/E, Contractors and Agency Contact.	2.E.4.a	19.
Post Construction Phase			
<input checked="" type="checkbox"/>	Witness the Seasonal Functional Performance Testing, document the results and enter deficiencies into the Issues List and provide follow-up through closure.	2.E.4.c	23.
<input checked="" type="checkbox"/>	Within 10 months of substantial completion coordinate and facilitate a substantial completion review meeting and document findings to complete the final commissioning report.	2.E.4.d	22.
<input checked="" type="checkbox"/>	Complete final Commissioning Report and distribute to DFDM, A/E and Agency Contact.	2.E.4.c	21.
Optional Commissioning Activities/Services			
<input type="checkbox"/>	Complete an Energy Modeling Review	2.E.4.d	24.
<input checked="" type="checkbox"/>	Complete a M&V One-Year Report	2.E.4.d	24.
<input type="checkbox"/>	Complete Systems Manual	2.E.3.j	17.
<input type="checkbox"/>			

COMMISSIONED SYSTEMS - The following systems will be commissioned:

Divisions 3 thru 14 - General Construction

- Concrete
- Masonry
- Waterproofing
- Thermal Protection
- Building Envelope Sealing and Infiltration
- Roofing
- Doors and Windows
- Division 11 Equipment
- Division 13 Equipment
- Elevators
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Division 21 - Fire Suppression

- Sprinkler and Standpipe Systems
- Fire Pumps and Controls
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Division 22 - Plumbing

- Domestic Water Systems
- Domestic Hot Water Systems*
- Plumbing Equipment
- Plumbing Fixtures
- Lab and Healthcare Gas and Vacuum Systems
- Laboratory and Healthcare Pure Water Systems
- Fuel Piping Systems
- Solar Thermal Systems
- Food Service Equipment
- Swimming Pool Equipment
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Division 23 – HVAC*

- Temp. Control and Building Automation Systems*
- Testing and Balancing
- Variable Frequency Drives
- Piping Systems, Valves and Specialties
- Pumps
- Ductwork, Duct Accessories and Casing Systems
- Air Inlets and Outlets
- Filtration
- Coils and Heat Exchangers
- Fans and Air Handlers
- Compressors and Condensing Units
- Chillers and Cooling Towers
- Computer Room Air Conditioning Equipment
- Heat Pumps
- Dry Coolers and Heat Rejection Equipment

- Boilers and Fuel Fired Equipment
- Boiler Feedwater and Blowdown Systems
- Terminal Units
- Fan Coils, Unit Ventilators, Unit Heaters
- Energy Recovery Systems
- Humidifiers
- Smoke Control Systems
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Division 26 – Electrical

- Lighting and Daylighting Controls*
- Lighting Fixtures and Contactors
- Exterior Site Lighting and Controls
- Conductors, Conduit, Raceway and Cable Tray
- Grounding and Bonding
- Switchboards and Panelboards
- Motor Starters and Motor Control Centers
- Disconnect Switches and Circuit Breakers
- Wiring Devices, Switches, Receptacles, Etc.
- Generators and Transfer Switches
- Metering
- Surge Protective Devices
- Transformers
- Unit Substations
- Medium Voltage Switchgear
- Medium Voltage Cable
- Fire Alarm Systems
- Communication Cabling, Outlets and Equipment
- Audio/Visual Systems
- Access Control Systems
- Video Surveillance Systems
- Nurse Call Systems
- Solar Photovoltaic Systems
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Divisions 32 & 33 – Exterior Improvements & Utilities

- Soil Preparation, Seeding and Plantings
- Bioretention and Bioinfiltration Systems
- Correctional Fencing
- Water Distribution Systems
- Sanitary Sewer and Storm Drainage Systems
- Steam and Condensate Systems
- Chilled Water and Hot Water Systems
- Fuel Storage and Distribution Systems
- Geothermal Well Systems
- Renewable Energy Systems*
- Underground Storm Water Retention

Systems followed by an asterisk (*) are required to be commissioned in LEED® projects.