



## Major Repairs: \$19,695,000

- ❖ **Major Repair projects are defined as: Renovation, alteration, replacement or repair projects with a total cost of less than \$2.5 million or a new facility with a total construction cost of less than \$250,000**

### **MUS Major Repair Projects with Priority Number Assigned in HB5**

#### **TECH Heating System Upgrades – Phase 1: \$2,480,000**

- MR Priority 2
- This project will replace Montana Technological University's failed steam distribution system. This project upgrades existing tunnels where needed for safety and maintenance and replaces failed direct buried piping with new tunnel sections. Steam tunnels run under older buildings on the Montana Tech campus. Some of these tunnels are still open for walking from one building to another. Little or no repair work has been done on the tunnels and at some point, they will need to be repaired or at a minimum closed off from the public. The ceilings are lower than normal with steam lines and other utility pipes running below the ceiling. Adding tunnels to the remainder of the campus will protect infrastructure that is direct burial. This will allow better maintenance and inspection procedures to be used.

#### **UM FLBS Sewer Treatment Plant: \$1,750,000**

- MR Priority 3
- This project will replace the existing sewer treatment facility at the Flathead Lake Biological Station. The existing sewer treatment plant is extremely old and is at risk of failing. The system has deteriorated to the point that the redundancy originally designed into the plant is no longer available. If the plant fails, the station will have to rely on pumping the collection tank daily depending on the seasonal flows.

#### **MSU Reid Hall Fire System Upgrades: \$1,700,000**

- MR Priority 4
- Construct a fire suppression and alarm system to improve the life-safety and code compliance in Reid Hall, one of Montana State University's largest classroom facilities. Reid Hall is the most heavily occupied academic teaching facility on Montana State University's campus. This project proposes the construction of a fire suppression and alarm system to improve the life safety and code compliance of Reid Hall, protect property from damage and/or loss, and most importantly, protect building occupants from harm.

#### **UM Urey Lecture Hall Roof: \$350,000**

- MR Priority 5
- The existing Urey Lecture Hall roof membrane is original from 1981 and is leaking. As it protects an entire 400 seat underground lecture hall, its critical to have a 100% reliable roof membrane. Replace the existing 1981 EPDM roof membrane that is below the brick pavers and rigid insulation boards. A new single-ply membrane is required. The existing roof membrane has

exceeded its life expectancy by at least 20 years. Costly damage to structure and contents could result if any of the proposed work is deferred again.

#### **UM Mansfield Library Roof Replacement: \$1,200,000**

- MR Priority 8
- This project will replace the ballasted EPDM roofing membrane that was installed in 1990. The Mansfield Library roof is approximately one acre in size. The existing roof membrane has exceeded its life expectancy by at least 15 years. Costly damage to structure and contents could result if any of the proposed work is deferred again.

#### **MSU Haynes Hall Lab Ventilation Upgrades: \$1,600,000**

- MR Priority 9
- Upgrade ventilation systems in instructional labs throughout Haynes Hall. There are needed ventilation improvements in the painting, ceramic, welding and sculpture instructional labs to improve air quality and safe learning environments. Upgrade mechanical ventilation system in Haynes Hall for occupant safety and code compliance. This project specifically addresses needed HVAC upgrades in the painting, ceramic, welding, and sculpture areas.

#### **TECH Fire Alarm Upgrades: \$200,000**

- MR Priority 10
- This request will provide upgraded or replaced alarm systems for buildings that no longer have adequate basic protection for occupants and assets due to obsolescence of equipment. Some of these systems are 40-years old and are becoming dangerously unreliable and not repairable. This request would provide funding to replace fire alarm systems that are, in some cases, decades past their planned life, and provide critical fire access. Replacement is necessary to provide adequate protection to occupants and assets. Fire alarm panels and alarm notification is not code compliant.

#### **MSU Montana Hall Fire System Upgrades: \$455,000**

- MR Priority 12
- Construct a fire suppression system to improve the life-safety code and code compliance in Montana Hall. Construct a fire suppression system to improve the life-safety code and code compliance in Montana Hall.

#### **MSUB Art Annex Safety & System Upgrades: \$1,200,000**

- MR Priority 13
- Replacement of life safety building systems in the Art Annex to improve the safety and continued use of the facility. This project proposes the replacement of life-safety systems in the Art Annex Building. The existing facility that is well past its effective lifespan provides to support to academic programs. Life safety work will extend the operational life of the facility.

#### **HC Donaldson Building HVAC Upgrades: \$1,000,000**

- MR Priority 14
- This project will repair and replace HVAC and building control systems in Donaldson Building at Helena College. Removing the aging fluid-based heating and cooling system from the few remaining areas of the Donaldson Building and replacing it with a roof mounted HVAC system.

The current system involves routing either heated or cooled water through wall mounted fan boxes. The system does not allow for both heating and cooling options to occur without manually switching from the boiler to the chiller and then waiting for the water temperature to change which takes at least a day. The fan boxes create challenging classroom settings as they are noisy and make classroom instruction, presentations, and discussions difficult. A roof mounted forced air HVAC system would allow for more precise control of room temperature and keep background noise to a minimum.

#### **UMW Heating System Replacement & Repair: \$2,495,000**

- MR Priority 15
- This project will repair and replace steam and condensate systems on the University of Montana Western campus. This project would include the addition of a second low pressure boiler and the elimination of the high-pressure biomass boiler.

#### **UM Stone Hall Roof Replacement: \$400,000**

- MR Priority 17
- Replace existing sloped roofing and attic insulation of Stone Hall (formerly the Journalism Building). This building was built in 1936. This project will replace the worn-out roof, abate existing vermiculite insulation and replace with new attic insulation. The existing sloped roof shingles are beyond their life expectancy and wearing thin. The vermiculite attic insulation must be abated and replaced with new insulation. This project would replace the roof with new historic looking, long lasting shingles similar to Main Hall and Rankin Hall. The existing vermiculite attic insulation would also be replaced. The existing shingle roof has exceeded its life expectancy by at least 20 years. Costly damage to structure and contents could result if any of the proposed work is deferred again.

#### **MSUN Vande Bogart Library Roof Replacement: \$325,000**

- MR Priority 18
- Replace the aging roof membrane, insulation, and repair other roof components on the Vande Bogart Library. The Vande Bogart Library's roof membrane has many blisters and has begun pulling away from the parapet wall. This project replaces the roof membrane and insulation components which are beyond their useful life spans.

#### **MSU Lewis Hall Roof Replacement: \$1,600,000**

- MR Priority 23
- Reroof and roof framing upgrades to Lewis Hall. Lewis Hall has a clay tile roof that is original to the facility. This project addresses replacement/repair of missing or broken clay tiles, proper fastening of the preserved and new tiles, replacement of underlayment and insulation, and upgrades to the snow/ice fall protection and roof structure.

#### **MSUN Auto Tech Building System Improvements: \$535,000**

- MR Priority 25
- Upgrade Automotive Technology Building envelope and mechanical systems to retire a series of building deferred maintenance, improve system efficiency, and provide healthier and safer instructional environments. This project replaces the failing roof deck fasteners, causing the decking to buckle in three locations. Furthermore, this project upgrades the original and

obsolete exhaust and combustion system which is currently inadequate for the current instructional activities occupying the space today.

#### **UM Clapp Building Elevator Modernization: \$300,000**

- MR Priority 28
- This project will upgrade and modernize the main elevator in the Clapp Building. The existing elevator is original to the building and is currently out of compliance with the state elevator code. Parts for repair are hard to find. This elevator needs a total upgrade to meet current codes. This elevator has been well maintained over the years, but it has deteriorated to a point where it can no longer be effectively repaired. We are at risk of a major failure that could render the upper floors and the basement inaccessible.

#### **UMW Roof Replacements: \$450,000**

- MR Priority 38
- This project will replace the roofs on the following buildings: Business and Technology Building, the Engineers House, and the Chancellor's Residence. The roofing projects listed have exceeded their useful life. The replacement systems will be chosen to provide maximum protection with minimum maintenance. Additionally, where historical structures are involved, preference has been given to maintaining the historical nature of the roofing system. Finally, all roofing systems will incorporate current energy standards.

#### **TECH Roof Replacements: \$800,000**

- MR Priority 39
- This project will replace the roofs on the following buildings: Chancellor's Residence, Science and Engineering, Math and Computer Science, Chemistry/Biology, and Highlands College. The roofing projects listed have exceeded their useful life. The replacement systems will be chosen to provide maximum protection with minimum maintenance. Additionally, where historical structures are involved, preference has been given to maintaining the historical nature of the roofing system. Finally, all roofing systems will incorporate current energy standards.

#### **MSUN Brockmann Center HVAC & Energy: \$855,000**

- MR Priority 41
- Upgrade Brockmann Center's mechanical equipment and envelope to retire deferred maintenance and improve energy efficiency. The Brockmann Center's exterior windows and doors, and HVAC system are deficient and require replacement and upgrades to improve energy efficiency and improve occupant comfort.