

CAPITAL PROJECTS DETAIL

241 Minot State University

Version: 2011-R03-00241

Date: 01/13/2011

Time: 12:01:28

Capital Project			
Security Blue Lights			
	Total Project Cost	Request/Optional	Recommendation
	General Fund	377,000	0
	Federal Funds	377,000	0
	Special Funds	0	0
	Bonding	0	0

Is this a multibiennium project? No No of Biens: 1 Est. Costs 377,000

Future Increased Costs Associated with Project Approval								
	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017	
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00	
Operating Expenses	0	0	0	General Fund	0	0	0	0
Equipment > \$5,000	0	0	0	Federal Funds	0	0	0	0
IT Equipment > \$5,000	0	0	0	Special Funds	0	0	0	0
Special Lines	0	0	0	Total	0	0	0	0
Total	0	0	0					

Project Specifics and Justification

The installation of blue lights is part of a comprehensive security upgrade on campus. Blue light stations will be strategically located across campus to provide a point for a person in need to access emergency services and to be located quickly. These units provide a blue flashing light that engages when the button is pushed. Emergency services will have audio visual access when the station is engaged. The units also provide public address capabilities for emergency alert. Enhancement of campus security is part of the Federal Clery Act and is a necessary part of campus security. This system complements our emergency operations plan. The intent is to install 24 stations across campus beginning by the dorms and moving across campus.

CAPITAL PROJECTS DETAIL

241 Minot State University

Version: 2011-R03-00241

Date: 01/13/2011

Time: 12:01:28

Capital Project			
Old Main Windows			
	Total Project Cost	Request/Optional	Recommendation
	General Fund	750,000	0
	Federal Funds	500,000	0
	Special Funds	0	0
	Bonding	250,000	0
		0	0

Is this a multibiennium project? No No of Biens: 1 Est. Costs 750,000

Future Increased Costs Associated with Project Approval								
	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017	
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00	
Operating Expenses	0	(18,604)	(18,604)	General Fund	0	0	0	
Equipment > \$5,000	0	0	0	Federal Funds	0	0	0	
IT Equipment > \$5,000	0	0	0	Special Funds	0	0	0	
Special Lines	0	0	0	Total	0	(18,604)	(18,604)	
Total	0	(18,604)	(18,604)					

Project Specifics and Justification

The windows in Old Main were last replaced in 1960. Due to changing energy requirements and age, the windows are very inefficient. On windy days in some areas of the building, the windows rattle so loudly that it is virtually impossible to hear in the offices or classrooms over the noise. An energy study was completed by Prairie Engineering that determined an annual cost savings of \$9,302.00 could be realized by installing new energy efficient windows. Current and future federal legislation encourages and will mandate energy efficiency in all public building designs, especially in windows. This project has been approved by the State Historical Society due to the almost 100 year old age of this building.

CAPITAL PROJECTS DETAIL

241 Minot State University

Version: 2011-R03-00241

Date: 01/13/2011

Time: 12:01:28

Capital Project			
Landscape Plan Phase II and III of 10 year plan			
	Total Project Cost	Request/Optional	Recommendation
	General Fund	800,000	800,000
	Federal Funds	0	0
	Special Funds	800,000	800,000
	Bonding	0	0

Is this a multibiennium project? No **No of Biens:** 5 **Est. Costs** 10,000,000

Future Increased Costs Associated with Project Approval							
	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00
Operating Expenses	0	0	0	General Fund	0	0	0
Equipment > \$5,000	0	0	0	Federal Funds	0	0	0
IT Equipment > \$5,000	0	0	0	Special Funds	0	0	0
Special Lines	0	0	0	Total	0	0	0
Total	0	0	0				

Project Specifics and Justification

Minot State University approved a campus wide landscape plan that sets forth the blue print for a multi-year campus wide landscape project. The underlying design basis is to develop a sense of place on campus and embrace the geological features of North Dakota. Input into the plan came from various stakeholders. Phase I provided for the construction of a monument sign and the redesign of the 10th avenue east-west corridor from Broadway to the west side of Cook Hall. It was completed in Spring 2010 at a cost of \$298,350 (\$159,044 GF carryover and \$139,306 OF). Phase II is planned to complete the area around the newly remodeled Swain Hall and complete the commons area bordered by Swain Hall, Pioneer Hall, Old Main, and Moore Hall. Phase III is planned to include extending the 10th avenue corridor from Cook Hall to Dakota Hall and then over to Old Main. This 10th avenue corridor provides a main pedestrian walkway through the heart of campus. The total landscape plan is estimated to cost \$10 million, which includes the cost to re-open 11th Avenue through campus. Phase II and Phase III are estimated to cost a total of \$800,000. Project design is being developed through consulting with a campus wide landscape committee that includes representation from several areas across campus. A consultant landscape architect is also working on project alternatives and cost projections. Funds for Phase II and Phase III will come from locally generated monies. To maintain the landscape features, there will be ongoing expenses which will be comparable to current ground maintenance costs. This project is important to move forward in the "greening" of campus and to make our exterior spaces more inviting and useable for our campus population and visitors.

CAPITAL PROJECTS DETAIL

241 Minot State University

Version: 2011-R03-00241

Date: 01/13/2011

Time: 12:01:28

Capital Project			
Old Main Classroom Remodel			
	Total Project Cost	Request/Optional	Recommendation
	General Fund	0	750,000
	Federal Funds	0	0
	Special Funds	0	750,000
	Bonding	0	0

Is this a multibiennium project? No No of Biens: 1 Est. Costs 750,000

Future Increased Costs Associated with Project Approval								
	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017	
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00	
Operating Expenses	0	0	0	General Fund	0	0	0	0
Equipment > \$5,000	0	0	0	Federal Funds	0	0	0	0
IT Equipment > \$5,000	0	0	0	Special Funds	0	0	0	0
Special Lines	0	0	0	Total	0	0	0	0
Total	0	0	0					

Project Specifics and Justification

Remodel two existing College of Business computer labs in Old Main to provide flexible instructional space to simulate the corporate business environment. Funds to be donated by the MiSU Foundation.

CAPITAL PROJECTS DETAIL

241 Minot State University

Version: 2011-R03-00241

Date: 01/13/2011

Time: 12:01:28

Capital Project			
Memorial Hall Carpet and Paint			
	Total Project Cost	Request/Optional	Recommendation
	General Fund	400,000	0
	Federal Funds	400,000	0
	Special Funds	0	0
	Bonding	0	0

Is this a multibiennium project? No No of Biens: 1 Est. Costs 400,000

Future Increased Costs Associated with Project Approval							
	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00
Operating Expenses	0	0	0	General Fund	0	0	0
Equipment > \$5,000	0	0	0	Federal Funds	0	0	0
IT Equipment > \$5,000	0	0	0	Special Funds	0	0	0
Special Lines	0	0	0	Total	0	0	0
Total	0	0	0		0	0	0

Project Specifics and Justification

Memorial Hall was last remodeled in 1996 and the floors and walls are showing wear. Memorial Hall sees extensive daily traffic due to their outreach clinics in addition to a large number of students enrolled in the classes taught in the building. Good planning shows that carpets and wall coatings should be re-done every ten to fourteen years to prevent potential damage to underlying features. Visually it is self evident that the carpet is wearing and the walls are discoloring. Also, tile work can become a hazard as it wears out and delaminates from the existing floor. If this project is funded, operation and maintenance costs will be reduced by not having to repair walls, frayed carpets, or tile work. If this project is not funded, the repairs will be delayed until funding becomes available thereby causing further deterioration.

CAPITAL PROJECTS DETAIL

241 Minot State University

Version: 2011-R03-00241

Date: 01/13/2011

Time: 12:01:28

Capital Project			
Fiber Network Rebuild			
	Total Project Cost	Request/Optional	Recommendation
	General Fund	1,000,000	0
	Federal Funds	500,000	0
	Special Funds	0	0
	Bonding	500,000	0
		0	0

Is this a multibiennium project? No No of Biens: 1 Est. Costs 1,000,000

Future Increased Costs Associated with Project Approval							
	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00
Operating Expenses	0	0	0	General Fund	0	0	0
Equipment > \$5,000	0	0	0	Federal Funds	0	0	0
IT Equipment > \$5,000	0	0	0	Special Funds	0	0	0
Special Lines	0	0	0	Total	0	0	0
Total	0	0	0				

Project Specifics and Justification

The campus wide fiber network cabling system was originally installed in the 1980's and is aging. In order to support the new generation of data switch equipment and transmission speeds, we need to upgrade the network's fiber backbone. The campus has an extensive offering of on-line classes that require seamless access. Our Information Technology department is well into a campus wide conversion of their phone system from conventional phone line cabling to an IP based network. As the system ages, it creates interruptions that require added staff time for repairs and lost time for our users. This project is intended to be funded jointly with state funds and local campus funds. The network and cabling system under consideration can easily be upgraded in the future as technology changes.

CAPITAL PROJECTS DETAIL

241 Minot State University

Version: 2011-R03-00241

Date: 01/13/2011

Time: 12:01:28

Capital Project			
Geothermal Heating and Cooling			
	Total Project Cost	Request/Optional	Recommendation
	General Fund	13,734,555	0
	Federal Funds	5,000,000	0
	Special Funds	0	0
	Bonding	8,734,555	0
		0	0

Is this a multiennium project? No **No of Biens:** 2 **Est. Costs** 16,234,555

Future Increased Costs Associated with Project Approval							
	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00
Operating Expenses	0	0	(502,986)	General Fund	0	0	(502,986)
Equipment > \$5,000	0	0	0	Federal Funds	0	0	0
IT Equipment > \$5,000	0	0	0	Special Funds	0	0	0
Special Lines	0	0	0	Total	0	0	(502,986)
Total	0	0	(502,986)				

Project Specifics and Justification

In February 2008, the central heating plant's coal boiler and ash handling system broke down and the repairs were found to be very costly. Engineers have looked at replacing the coal boiler and ash handling system. The FY2008 cost to replace the coal boiler was estimated at over \$10,000,000. The 2009 legislature appropriated \$2.5 million towards refurbishing, or replacing the existing coal boiler system. Minot State University has contracted with MEP Associates to look at the feasibility of replacing the existing central heating plant with a geothermal ground source heating and cooling pump system campus wide. We have included the original engineering report and the February 24, 2010 update that revised the project costs by eliminating the dorm air conditioning and the system solar components.

MiSU is seeking funding to assist in the transition from an existing inoperable coal-fired boiler to a primary geothermal system with secondary alternative sources. MiSU's campus buildings have been heated through an on-site central steam plant and distribution system, while cooling for individual buildings has been provided through a variety of distributed cooling equipment located at each individual building. The primary heating fuel for MiSU's central plant was coal with natural gas backup. The coal-fired steam boiler is in need of replacement at this time. Using natural gas/fuel oil boilers as a backup comes at a significantly higher cost than using the coal-fired burner. Continuing to use natural gas is cost prohibitive as the cost of natural gas continues to rise. The North Dakota State legislature allocated \$2.5 million to MiSU for replacing the coal-fired boiler. This \$2.5 million could be contributed toward refurbishing the currently inoperable coal-fired boiler, but this solution is limited because the life of the refurbished boiler will only be six to eight years. Additionally, while North Dakota has an abundant supply of coal, the quality of the coal is such that it creates heating inefficiencies as well as stress on any boiler system implemented.

It is fiscally and environmentally critical that MiSU move forward to use other sustainable fuel sources than the current combination of coal, oil, and natural gas, one that has fewer negative impacts on the environment and the acceleration of global warming and other environmental damage, and one that will prove cost effective over the long term. MiSU has thoroughly investigated its options for future energy requirements and feels strongly that replacing the existing coal-fired boiler with geothermal power generation supplemented with alternative systems is the best option, both for sound fiscal and environmental reasons.

CAPITAL PROJECTS DETAIL**Date:** 01/13/2011**241 Minot State University****Time:** 12:01:28**Version: 2011-R03-00241**

Additionally, implementation of geothermal power generation will result in increased interest and development of curricular programming related to geothermal and other energy alternatives. MiSU students and faculty will take part in a variety of research initiatives relating to the implementation and operation of this alternative energy system, thereby increasing their energy and the environmental awareness.

Total Project Cost

Total Construction	\$12,445,465
Bond Costs	900,000
Contingency	1,978,828
Architect/Engineer Fees	<u>910,262</u>
Total	<u>\$ 16,234,555</u>

Funding source description and detail**2011-13 Biennial Budget Request (\$5 million GF; \$8,734,555 SF):**

General Fund	\$ 5,000,000
2010 Department of Commerce Stimulus Grant	\$1,000,000 to \$3,000,000
Federal Grant	\$2,000,000 to \$4,000,000
15 year performance contract or a 20 year bond payment, either of which would be paid for with the expected savings in utility costs per year	<u>\$1,734,555 to \$5,734,555</u>

Total 2011-13 Request**\$13,734,555****Carryover of 2009-11 GF Authority****2,500,000****Total funding sources****\$16,234,555****Deferred maintenance that will be addressed**

Replace aging steam lines, inoperable coal boiler and aging natural gas boilers with new state of the art heating and cooling system that is energy efficient and environmentally friendly.

Minot State University will replace its existing coal-fired boiler with geothermal power generation and supplemental alternative systems. The current need to replace the coal-fired boiler presents an opportunity for MiSU to be a state and regional leader in phasing in more sustainable energy sources campus wide. Renewable sources of energy are abundant in the state and present an excellent opportunity for MiSU to utilize new technology. Converting the MiSU campus to renewable energy sources also presents an opportunity to promote increased awareness of alternative energy generation operations and their effects on the environment to students, faculty, staff, and the surrounding Minot community. Students and faculty will have the opportunity to use the new system to monitor usage and the system's function.

Estimated change in operating costs

Operation costs will be reduced by eliminating the use of fossil fuels to create steam heat in a central boiler plant, and by utilizing a geothermal based decentralized heating and cooling system. The total cost of the geothermal project is estimated at \$16,234,555, with an estimated savings in year four of \$502,986, in year ten \$614,722, and in year 20 \$858,815. We have already reduced our salary budget to reflect the elimination of three boiler plant positions, and would expect to use the salaries from the remaining two positions to fund two positions to use as geothermal maintenance people.

Purpose or support for the project

The proposed geothermal project will provide a new energy efficient heating and cooling system for the campus. The MEP Associates feasibility study, found in the following attachments, outlines the proven nature of this technology and the potential savings in labor and utility costs that will occur when installed. The campus currently

CAPITAL PROJECTS DETAIL**241 Minot State University****Version: 2011-R03-00241****Date:** 01/13/2011**Time:** 12:01:28

burns natural gas fossil fuels for heating, and electricity is generated by coal fired power plants. This new system will utilize in part electricity produced by wind energy, and heating and cooling created by using the earth's own internal temperature to regulate building climates. This project, when completed, will replace antiquated technology with new environmentally friendly technology.

CAPITAL PROJECTS DETAIL

241 Minot State University

Version: 2011-R03-00241

Date: 01/13/2011

Time: 12:01:28

Capital Project			
Resident Apartments		Request/Optional	Recommendation
	Total Project Cost	3,500,000	3,500,000
	General Fund	0	0
	Federal Funds	0	0
	Special Funds	3,500,000	3,500,000
	Bonding	0	0

Is this a multibiennium project? No No of Biens: 1 Est. Costs 3,500,000

Future Increased Costs Associated with Project Approval								
	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017	
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00	
Operating Expenses	0	112,400	116,941					
Equipment > \$5,000	0	0	0	General Fund	0	0	0	
IT Equipment > \$5,000	0	0	0	Federal Funds	0	0	0	
Special Lines	0	0	0	Special Funds	0	354,000	364,691	
Total	0	112,400	116,941	Total	0	112,400	116,941	

Project Specifics and Justification

Minot State University has begun planning for a new resident apartment building near our existing Campus Heights apartment building. In 1984, Campus Heights was built and the plans included two future apartment buildings. There is a high demand by students for apartment style living, and there is a considerable waiting list for our existing apartments. The water and sewer lines installed for the first apartment unit are of sufficient size to handle two more buildings. There is sufficient area leveled and in close proximity to a major city street and the existing building. The existing building has a wood frame, and the new building would be built with more durable materials because the older wood frame building is showing its wear. The project funding would come from a bond issue supported by apartment rental income.

Current campus residence halls are at full capacity due to a shortage of off campus rental housing and also due to an increased number of students. Minot State requires first year students to live on campus. All resident halls are in use, and an existing building would not be available for remodeling into an apartment style building.

Facilities maintenance for this new building can be covered with existing staff because tenants are responsible for cleaning within the apartments. This building would be designed with maximum energy efficiency and ease of operation. Additional operating costs will include utilities such as water, sewer, electricity, and gas. These costs will be offset by apartment rent revenue.

CAPITAL PROJECTS DETAIL

241 Minot State University

Version: 2011-R03-00241

Date: 01/13/2011

Time: 12:01:28

Capital Project

Security Phase IV and V of 10 yr plan

	Request/Optional	Recommendation
Total Project Cost	500,000	0
General Fund	500,000	0
Federal Funds	0	0
Special Funds	0	0
Bonding	0	0

Is this a multibiennium project? No No of Biens: 5 Est. Costs 2,000,000

Future Increased Costs Associated with Project Approval

	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00
Operating Expenses	0	0	0	General Fund	0	0	0
Equipment > \$5,000	0	0	0	Federal Funds	0	0	0
IT Equipment > \$5,000	0	0	0	Special Funds	0	0	0
Special Lines	0	0	0	Total	0	0	0
Total	0	0	0				

Project Specifics and Justification

This is part of a ten year program to provide secure card key access to buildings and to provide 24/7 camera monitoring for campus security. Phase I is complete, which included the installation of cameras and card key access in resident halls. Two academic buildings have been retrofitted to add card access locks and security cameras. The integration backbone allows flexible expansion of the cameras and card key access system through our IP based system. The existing campus ID cards allow expansion into card key access. It is planned to upgrade Cyril Moore Hall and Memorial Hall which are academic buildings in Phase II and III and the Gordon B Olson Library, the Dome and the Administration Building in future projects, Phase IV & V. The design for remodeling Swain Hall and the new construction of the Wellness Center both include card key access and camera security. Federal rules and regulations continue to tighten concerning campus student safety which reinforces the need for these types of systems. Delay of these projects potentially affects the safety and security of our campus.

CAPITAL PROJECTS DETAIL

241 Minot State University

Version: 2011-R03-00241

Date: 01/13/2011

Time: 12:01:28

Capital Project			
Model Hall Windows			
	Total Project Cost	Request/Optional	Recommendation
		450,000	0
	General Fund	450,000	0
	Federal Funds	0	0
	Special Funds	0	0
	Bonding	0	0

Is this a multibiennium project? No No of Biens: 1 Est. Costs 450,000

Future Increased Costs Associated with Project Approval							
	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00
Operating Expenses	0	(14,936)	(14,936)				
Equipment > \$5,000	0	0	0	General Fund	0	0	0
IT Equipment > \$5,000	0	0	0	Federal Funds	0	0	0
Special Lines	0	0	0	Special Funds	0	0	0
Total	0	(14,936)	(14,936)	Total	0	(14,936)	(14,936)

Project Specifics and Justification

The windows in Model Hall were last replaced in the 1970's. Due to the age of the windows, air can be felt entering the building. An energy study was completed by Prairie Engineering that determined an annual cost savings of \$7,468 could be realized by installing new energy efficient windows. Current and future federal legislation encourages and will mandate energy efficiency in all public building designs, especially in windows.

CAPITAL PROJECTS DETAIL

241 Minot State University

Version: 2011-R03-00241

Date: 01/13/2011

Time: 12:01:28

Capital Project

Security Phase II and III of 10 yr plan

	Request/Optional	Recommendation
Total Project Cost	500,000	0
General Fund	500,000	0
Federal Funds	0	0
Special Funds	0	0
Bonding	0	0

Is this a multibiennium project? No No of Biens: 5 Est. Costs 2,000,000

Future Increased Costs Associated with Project Approval

	2011-2013	2013-2015	2015-2017		2011-2013	2013-2015	2015-2017
Salaries and Wages	0	0	0	FTE	0.00	0.00	0.00
Operating Expenses	0	0	0	General Fund	0	0	0
Equipment > \$5,000	0	0	0	Federal Funds	0	0	0
IT Equipment > \$5,000	0	0	0	Special Funds	0	0	0
Special Lines	0	0	0	Total	0	0	0
Total	0	0	0				

Project Specifics and Justification

This is part of a ten year program to provide secure card key access to buildings and to provide 24/7 camera monitoring for campus security. Phase I is complete, which included the installation of cameras and card key access in resident halls. Two academic buildings have been retrofitted to add card access locks and security cameras. The integration backbone allows flexible expansion of the cameras and card key access system through our IP based system. The existing campus ID cards allow expansion into card key access. It is planned to upgrade Cyril Moore Hall and Memorial Hall which are academic buildings in Phase II and III and the Gordon B Olson Library, the Dome and the Administration Building in future projects. The design for remodeling Swain Hall and the new construction of the Wellness Center both include card key access and camera security. Federal rules and regulations concerning campus student safety continue to tighten which reinforces the need for these types of systems. Delay of these projects potentially affects the safety and security of our campus.