

SOUTH DAKOTA BOARD OF REGENTS

Budget and Finance

AGENDA ITEM: 7 – C

DATE: May 9, 2023

SUBJECT

SDSU Cottonwood Range and Livestock Field Station Renovations and Upgrades Facility Program Plan (FPP)

CONTROLLING STATUTE, RULE, OR POLICY

[SDCL § 5-14-1](#) – Classification of Capital Improvements

[SDCL § 5-14-2](#) – Supervision by Bureau of Administration of Capital Improvement Projects – Payment of Appropriated Funds

[SDCL § 5-14-3](#) – Preparation of Plans and Specifications for Capital Improvements – State Building Committees – Approval by Board or Commission in Charge of Institution

[BOR Policy 6:4](#) – Capital Improvements

[BOR Policy 6:6](#) – Maintenance and Repair

BACKGROUND / DISCUSSION

South Dakota State University (SDSU) requests approval of this Facility Program Plan (FPP) to continue planning the new Cottonwood Range and Livestock Field Station renovations and upgrades. The Cottonwood Field Station is located near Phillip, SD, and consists of 2,640 acres at the home site with an additional 1,100 grazing acres near Sturgis, SD. The site includes appropriate utilities and access. The property includes areas suitable for all improvements needed to renovate and modernize the Cow/Calf Field Research and Education Unit including open pens, semi-enclosed holding pens, sorting pens, enclosed animal handling pens, commodity storage, and classroom/conference facilities.

IMPACT AND RECOMMENDATIONS

This project would transform the Cottonwood Field Station into a nationally recognized, innovative range beef cattle research and education site supporting ranchers and rangeland managers. It would enable the highest quality research possible, support the transfer of the latest information to the South Dakota beef industry, enable faculty to better compete for research grants and contracts, and facilitate industry collaborations. Upgrading the station

(Continued)

DRAFT MOTION 20230509_7-C:

I move to approve SDSU’s Facility Program Plan for the Cottonwood Range and Livestock Field Station Renovations and Upgrades which will be funded by FY23 onetime general funds and private donations.

SDSU Cottonwood Range and Livestock Field Station Renovations and Upgrades Facility
Program Plan (FPP)

May 9, 2023

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would provide modern facilities for experimental research in beef production, handling, grazing, nutrition, breeding, and grassland management.

SDSU requests approval of this Preliminary Facility Statement to complete planning and construction of the Cottonwood Range and Livestock Field Station renovations and upgrades. We request the appointment of a building committee and the selection of design/build consultants to provide design and construction services for this project.

PROPOSED FUNDING SOURCE

Legislative approval was granted for this project through Senate Bill 84 (SB84) during the 2022 legislative session. SB84 authorized \$6.0 million in general funds. The project would be funded by the FY23 one-time general funds and private donations.

ATTACHMENTS

Attachment I – SDSU Cottonwood Range and Livestock Field Station Renovations and Upgrades Facility Program Plan (FPP)

Attachment II – SDSU Cottonwood Project – Overall Buildings – Concept Plan

**FACILITY PROGRAM PLAN
FOR
SOUTH DAKOTA STATE UNIVERSITY
COTTONWOOD RANGE AND LIVESTOCK FIELD STATION
RENOVATIONS AND UPGRADES; PHILIP, SD**

DATE: April 3, 2023

SDSU requests approval of this Facility Program Plan to continue planning the new Cottonwood Range and Livestock Field Station renovations and upgrades.

The Preliminary Facility Statement (PFS) was approved at the June 22-23, 2022, Board of Regents meeting.

a. Programmatic justification for discrete spaces

This project would transform the Cottonwood Field Station into a nationally recognized range beef cattle research and education site supporting ranchers and rangeland managers. It would enable the highest quality research possible, enable faculty to better compete for research grants, support the transfer of new information to the South Dakota beef industry, and facilitate industry collaborations. Upgrading the station would provide modern facilities for experimental research in beef production, handling, grazing, nutrition, breeding, and grassland management. In addition to enhancing undergraduate animal science and natural resource management curricula, the field station would expand opportunities for graduate education and research.

Through the programming and planning process, three new facilities are proposed. A main (multi-purpose) building would provide classroom, office, laboratory, animal handling, calving, and support facilities. Calving and animal handling space would implement state of the art “bud box” animal handling methods. All main building spaces would be jointly used for academic classes, research, demonstrations, and practical applications of animal handling for students and producers.

The second facility would be a monoslope building that would provide semi-enclosed cow and calf feeding pens and housing. The proposed plan would include a ‘C-Lock’ smart-feeding system. This automated feeding system would allow research for a wide range of animal nutrition trials. The system would provide the opportunity to increase the efficiency and variety of research and teaching trials conducted at the site. In addition, it would allow smaller feeding facilities to be built, since trial group sizes could be reduced without compromising experimental power.

The third facility would be for commodity storage. The combination of bins, tanks, storage spaces, and silos associated with the facility would allow numerous and varied feeding trials for teaching and research work.

b. Gross Square Footage

Main Building Space Program

Program Function	Space Use Code*	Gross Square Footage (GSF)	Notes
Classroom	110	1,500	University Scheduled Classes, Meetings & Seminars
Classroom Service	115	215	Classroom storage
Office	310	240	Office
Meeting Room	350	280	Conference Rooms, Workroom, and Collaboration.
Research Lab	250	370	Research lab
Research Service	255	200	Research lab storage
Animal Facilities**	570	6,540	Animal handling area, calving area
Building Service	XXX	1,050	Restrooms, Custodial, Vending, IT, Electrical and Mechanical
Circulation Space	WWW	3,100	General Building Circulation and Entrance Lobby
Total GSF		13,465	

*Space use codes as defined by the National Center for Education Statistics Facilities Inventory and Classification Manual (FICM)

**All spaces will be heated and ventilated. Animal facilities in the main building will not be cooled.

Monoslope Building Space Program

Program Function	Space Use Code*	Gross Square Footage (GSF)	Notes
Animal Facilities**	570	17,480	Feed alley, cow/calf housing, & feeding pens
Total GSF		17,480	

*Space use codes as defined by the National Center for Education Statistics Facilities Inventory and Classification Manual (FICM)

**The monoslope building would not be mechanically conditioned. It would rely on passive ventilation for cooling.

Commodity Storage Building Space Program

Program Function	Space Use Code*	Gross Square Footage (GSF)	Notes
Animal Facilities Service**	575	6,000	Commodity bins, bunker silos, and ag bag areas, semi-enclosed for storage of bulk feed and additives
Total GSF		6,000	

*Space use codes as defined by the National Center for Education Statistics Facilities Inventory and Classification Manual (FICM)

**The commodity storage building would not be mechanically conditioned.

c. Site Analysis

The Cottonwood Field Station is located near Phillip, SD, and consists of 2,640 acres, an additional 1,100 acres of grazing pasture is located near Sturgis, SD. The site includes appropriate utilities and access. The property is suitable for all improvements needed to renovate and modernize the Cow/Calf Field Research and Education Unit including open pens, semi-enclosed holding pens, sorting pens, enclosed animal handling pens, commodity storage, and classroom/conference facilities.

production facility would be equal to 1% to 1.5% of the construction costs or the building replacement value. The annual M&R allocation is estimated to be between \$53,000 and \$80,000 to support the lifecycle maintenance and repairs of the facilities.

h. Budget for ongoing operational expenses

The main building would be ventilated and heated, but only classroom and research functions would be cooled. Annual utility expenses are estimated to be \$20,000 and routine maintenance expenses are estimated to be approximately \$30,000 based on similar facility types. The simplicity of the facility and mechanical systems may reduce these estimated operational expenses.

i. Proposed funding sources

Funding Sources

Construction		
State General Funds SB 84 2022 SDSL	\$	6,000,000
Total	\$	6,000,000
Utilities, Operations, Maintenance & Repairs		
Agriculture Experiment Station & Production Revenue	\$	20,000
Agriculture Experiment Station & Production Revenue		30,000
Agriculture Experiment Station & Production Revenue		80,000
Total	\$	130,000

End of report

SDSU Cottonwood project - Overall
Buildings - Concept Plan

