



Improve Kentland Facilities, Phase I

project 1 of 1

Virginia Cooperative Extension and Agriculture Experiment Station (229)

General Information

Project Type: Project Code: Start Year:

Agy Priority: Location: Facility:

Building #: Building Name:

Building Function:

Is this an Umbrella Project? OR a higher education blanket project?

Projected time to submit working drawings: months

Projected time to occupy facility or complete project: months

Projected time to award construction contract: months

Included in the existing Six Year Capital Plan

Contact Information

Name:

Email:

Phone:

Agency Narrative

Description

The University is developing a long-term sustainable land-use strategy for agricultural property which involves the land and facilities on campus as well as at the Kentland Farm. This strategy calls for a multi-phase relocation of agriculture research and teaching facilities. This project is the first phase which includes improving the facilities at the Kentland Farm to support instructional and research activities of the dairy science program. Specifically, the University proposes to relocate approximately 550 cows in the lactating and non-lactating herds from their current campus location to Kentland Farm. Additionally, approximately 100 bovine palpation teaching cows will be relocated from the current campus location to expanded animal teaching facilities at Plantation Road.

The relocation of the dairy science operations is a high priority from a timing perspective because these operations will be directly impacted by imminent pressures on campus land currently supporting the dairy science program, which are expected to initiate within the next 12 months. Thus, this relocation is proposed as the initial phase of a long-term land-use plan to reposition agricultural and animal science programs on campus. The relocation of the dairy science facilities from campus to the Kentland Farm and Plantation Road is envisioned to include the relocation and construction of approximately 154,000 gross square feet of herd housing, feed facilities, support structures, and program space. This is a new project, and the University is proposing to include the project as priority item in the State's Six-Year Capital Outlay Plan update for 2010.

The scope of the project is based on a recently completed consultant study that identifies the necessary facilities to house a 650 herd operation based on modern standards.

Justification

Program Description:

The dairy science operations include three major components, the relocation of which may be phased. These are non-lactating herd operations, lactating herd operations, and bovine palpation herd. Based on findings of the recent Land Use Plan, these dairy operations are a good fit at the Kentland Farm and Plantation Road in terms of land capacity, feed production and operational efficiencies.

The mission statement of Virginia Tech as a public land-grant University serving the Commonwealth of Virginia, the nation, and the world community includes discovery and dissemination of new knowledge central to its mission. Through its focus on teaching and learning, research and discovery, and outreach and engagement, the University creates, conveys, and applies knowledge to expand personal growth and opportunity, advance social and community development, foster economic competitiveness, and improve the quality of life.

The University's strategic plan includes three scholarship domains: Learning, Discovery, and Engagement; and three Foundational Strategies: Development of the Organization, Investment in the Campus Infrastructure, and Effective Resource Development, Allocation, and Management. This project supports several key domains and strategies of the strategic plan, and the specific goals of each area addressed by this project are listed below.

Learning: (1) Increase student involvement in discovery and engagement by creating more opportunities for undergraduates to be involved in research capstone experiences, education abroad, and experiential learning; (2) Strengthen and integrate all aspects of the undergraduate academic experience, including the academic experience for transfer students; (3) Invest in departmental and university-level support for undergraduate education; (4) Enhance quality graduate and professional education; (5) Establish a graduate education portfolio reflective of a 21st century university; (6) Develop and integrate advanced technology and information systems applications that assist collaboration, reflection, assessment, and sharing among faculty members, students, and staff members; and (7) Contribute to the holistic and transformative educational experiences of Virginia Tech undergraduate and graduate students.

Discovery: (1) Strengthen research activities with a focus on energy; (2) Strengthen research activities with a focus on materials; (3) Strengthen research activities with a focus on the environment; (4) Establish research strengths in the study of infectious disease; (5) Establish research strengths in the study of health, food, and nutrition; and (6) Achieve research strength in the areas of innovative technologies and complex systems through the strategic integration and support of critical research areas.

Engagement: (1) Connect the University's discovery, learning, and engagement assets through partnerships with both the public and private sectors to advance the economic vitality of the commonwealth and the quality of life of its citizens; and (2) Engage students, at the undergraduate and graduate levels, in opportunities for service learning and experiential education that prepare them to serve a diverse and complex marketplace and society while building the capacity of communities.

Foundational Strategies: (1) Effectively manage the University's space and land resources for learning, living, and work; and (2) Enhance health, safety, and security operations to support the University's discovery, learning, and engagement endeavors.

Existing Facilities:

The existing assets that support the dairy science program at the current campus location and require replacement are listed below. These facilities will be razed and replaced in a location that is optimal for the long-term operation of the program.

Non-lactating Dairy Facilities: Calf housing pens, calf housing- handling facilities, heifer housing structures, animal handling buildings, and support and storage buildings. These facilities are generally outdated and require complete replacement.

Lactating Dairy Facilities: free stall barn, milking center, animal handling facility, and support and storage buildings. These building are in generally good condition are may be dismantled and relocated.

Bovine Palpation Herd Facilities: animal housing building, administration/teaching building, animal handling facility, and support and storage buildings. These facilities are generally outdated and require complete replacement.

Funding Plan:

The funding plan includes a combination of federal funds for reimbursement of the property impacted by an airport runway extension project and state funding. The University is expecting to receive about \$5 million of federal funds, and requests state support for the balance. If the federal amount is greater, the amount of state support may be adjusted accordingly.

Options Considered

The options considered and not selected include elimination of the herds, reduction in herd sizes, and deferring to a future biennium. The options that eliminate or reduce the herd size are not recommended because of the significant negative impact to the dairy science program. The option of deferring the project to a future time is not recommended because of time pressures associated with the extension of a nearby airport's runway with a protection zone that requires moving the dairy operations within the next two years.

Costing Methodology

The costs are based on a conceptual level study prepared by a professional consulting service. Virginia Tech is currently in the process of developing an RFP to solicit design services for this project. The costs for this project were developed by an independent cost estimating firm that focused on the relocation of the Lactating, Non-Lactating, and Bovine Palpation dairy programs. The construction budget of \$11.265 million and total project budget of \$20.5 million will ensure a successful relocation of these programs to Kentland Farms and Plantation Road. Project costs are estimated to the mid-point of construction using three percent escalation in accordance with the instructions for developing the Six-Year Capital Outlay Plan.

Project Costs

1. Aquisition of Property:	\$0
2. Acquisition of Plant	\$0
3. Building and Built-in Equipment	\$9,876,000
4. Sitework and Utilities	\$1,389,000
5. Architectural and Engineering Fee	\$2,062,000
6. Loose Furnishings and Equipment	\$4,998,000
7. Contigencies	\$437,000
8. Project Inspection	\$335,000
9. Other Costs	\$1,403,000
Total Cost	\$20,500,000

The following items (10, 11, 12) are included in above costs

10. Estimated Total Planning Costs:	\$2,246,000
11. Estimated New Construction Costs:	\$11,487,000
12. Estimated Improvements Costs:	\$0

Itemized "9. Other Costs"

1. Project Management In Capital Project Budget:	\$386,000
2. Special Consultants (if not included in A & E fees):	
A. Scheduling Consultant	\$0
B. HVAC Commissioning	\$21,000
C. Furniture Design	\$482,000
3. Asbestos and lead based paint survey and design:	
4. Asbestos abatement:	\$0
5. Independent Cost Estimates:	\$37,000
6. Value engineering	\$0
7. Subsoil investigations:	\$27,000
8. Construction testing services:	\$112,000

9. Printing	\$4,000
10. Advertisements	\$5,000
11. Work by owner	\$211,000
12. Signage	\$11,000
13. Miscellaneous utility charges	
14. Moving expenses	
<input type="text" value="\$0"/> 15. Miscellaneous other costs (itemize):	
A. Native Stone	<input type="text" value="\$0"/>
B. Review Process	\$21,000
C. Other	\$86,000
D. _____	

Operating and Maintenance Costs

	1st Year	2nd Year
1. Personal Services	\$188,085	\$205,183
2. Nonpersonal Services	\$894,322	\$975,624
3. Equipment	\$50,000	\$7,500
Total O and M	\$1,132,407	\$1,188,307
4. FTE Employees:	4.00	4.00
5. One Time Costs:	\$42,500	
6. Cost Savings		
7. FTE Savings		

8. Planned start date of new O and M costs (if different than the beginning of the fiscal year)

Funding Requests

F Year	GF	NGF	Tax Debt	9c Debt	9d Debt	Total Request
2011	\$0	\$450,000	\$0	\$0	\$0	\$450,000
Funding Phase: Pre-Planning						
2011	\$0	\$639,000	\$0	\$0	\$0	\$639,000
Funding Phase: Detail Planning						
2011	\$15,500,000	\$3,911,000	\$0	\$0	\$0	\$19,411,000
Funding Phase: Construction						

Prior Funding

no prior funding entered

Project Scope

1. Acquisition - Property	<input type="text"/>	Sq. Ft. / Acres	Cost per Sq. Ft. or Acre	<input type="text" value="n/a"/>
2. Acquisition - Plant	<input type="text"/>	Sq. Ft.	Cost per Sq. Ft.	<input type="text" value="n/a"/>
3. New Construction	153,400	Sq. Ft.	Cost per Sq. Ft.	\$75
4. Improvements	<input type="text"/>	Sq. Ft.	Cost per Sq. Ft.	<input type="text" value="n/a"/>
5. Capacity	<input type="text"/>	Beds/Units	Cost per bed/unit	

Capital Lease

Name of Lessor:

Space Requirements:

Need for Leased Space:

Time Period

Proposed Effective Date of Lease: Proposed Duration: months

Include Periodic Renewal: Renewal at option of: Renewal Extension Period: months

Lease payments that would be made during the six year capital planning period

Fund	Year1	Year2	Year3	Year4	Year5	Year6
<i>subtotals</i>	\$0	\$0	\$0	\$0	\$0	\$0

Total lease payments for six year period:

Total payments for the duration/terms of the lease:

Energy Component

Energy Component Description

Annual Energy Operating Costs by Energy Type and Fund Source

Energy Type	Fund Source	Cost
	Total	\$0

Cost Estimate for Energy Component

Subcomponent	Cost
Materials Cost	\$0
Labor Cost	\$0
Engineering & Design Cost	\$0
Total	\$0

Annual Cost Savings for Energy Component

Fund	Savings
	\$0
Total	\$0

PID: 6683