



Virginia Department of Planning and Budget
Project Request Justification

2006-2008 Biennium Date: July 22, 2005

A. General Information

- 1. Agency name: Virginia Tech
- 2. Agency code: 208
- 3. Project title: Construct Infectious Disease Research Facility
- 4. Agency priority: 8
- 5. Contact Person: M. Dwight Shelton, Jr.
- 6. Contact's telephone number: (540) 231-8775
- 7. Contact's e-mail address: mdsjr@vt.edu

B. Proposed Project

1. Project Cost:

General Fund/General Fund supported debt	4,000,000
Nongeneral fund	4,000,000
9 (c) revenue debt	
NGF supported 9 (d) revenue bonds	
Total request	8,000,000

2. Project cost changes:

NONE.

3. Description:

- This project is a new item on the university's capital plan and has been inserted in the first biennium as a high priority because of a special opportunity to leverage \$4 million of federal funding from the National Institutes of Health (NIH) to support a state-of-the-art life sciences research laboratory.
- This proposed laboratory facility will include 16,300 gross square feet of state-of-the-art laboratory space to support eight faculty research teams, including support staff and graduate students and their specialized scientific equipment.
- The life expectancy of the building is 80 years with proper maintenance.
- The project scope is based on the amount of laboratory space needed to support the eight research teams. The NIH proposal is due December 15, 2005 and requires a schematic design document of the building as part of the submittal. The university plans to move

forward with the necessary design activity under a self-funded blanket authorization to meet the December 15, 2005 submittal due date.

- The estimated cost of the laboratory is \$8 million, and the funding plan calls for the NIH to cost share the building at 50 percent. This request is for \$4 million of nongeneral fund authorization for the federal support from NIH and \$4 million of General Fund support for the state's share for a total project request of \$8 million.

4. Project scope change:

NONE.

5. a. Approved Master Site Plan:

Yes No

If not, explain:

b. 2004-10 Capital Outlay Plan:

Yes No

If not, explain:

- This project is a new item on the university's capital plan and has been inserted in the first biennium as a high priority because of a special opportunity to leverage \$4 million of federal funding from the National Institutes of Health (NIH) to support a state-of-the-art life sciences research laboratory.

6. Equipment for a previously funded project.

NONE.

7. Supplement to a previously funded project.

NONE

C. Project Justification

1. a. Existing condition:

- Infectious disease and immunology research is primarily conducted at the Center for Molecular Medicine and Infectious Disease (CMMID) facility. These facilities, originally built in the 1960's and continuously renovated since that time, have been used at maximum capacity for at least five years. As an example, a faculty member with almost \$3 million in research funding from NIH since 1999 (about \$500,000 per year) has been moved to leased facilities at the Virginia Tech Corporate Research Center (VTCRC), due to a lack of space at the CMMID. This temporary space solution has no capacity for Bio-safety Level-3 (BSL-3) or animal care. As a result, his animal related and BSL-3 work is compromised because the CMMID facilities are at maximum use.

- The College is currently in the process of pursuing unmatched funding from NIH to renovate a small portion of animal and BSL-3 facilities at CMMID which would add to the general capacity.
- The new Biology/Vivarium Facility funded in the 2002 General Obligation Bond program will provide a vivarium with BSL-3 small rodent facilities; however, these facilities will only meet the needs of current faculty, and not the needs of new faculty in infectious disease and immunology who Virginia Tech is hiring as part of the Infectious Disease Research focus.

Higher Education Only

b. Facility Condition Index:

FCI _____

c. Space deficit:

Yes No

2. Programmatic information:

- This project is a high priority for Virginia Tech because of a special opportunity to request federal funding to support a state-of-the-art life sciences research laboratory program. The National Institutes of Health (NIH) sponsors a grant program to increase the number of life sciences laboratories in the United States with the capability to conduct cutting-edge biomedical research. The goal of the NIH program is to increase the national inventory of biomedical research laboratories with the capability to conduct its sponsored research projects.
- The Virginia-Maryland Regional College of Veterinary Medicine (VMRCVM) at Virginia Tech is in the process of preparing a proposal to submit to the NIH to build a laboratory facility for studying animal models of infectious disease and immunology, with a link to a future translational research facility which will convert the knowledge gained into commercial and economic development opportunities for human treatments.
- This proposed infectious disease research laboratory facility will strengthen the existing research in bacteriology, virology, immunology and parasitology, particularly research involving bio-threat agents underway in the college. It will provide additional Bio-safety Level-3 (BSL-3; the type of facility required for the study of bioterrorist agents such as those causing anthrax, bubonic plague, tularemia, brucellosis, etc.) and animal and laboratory facilities.
- This proposed facility will address a critical need for infectious disease laboratory and laboratory animal space at the university to support the new faculty in infectious diseases (eight new faculty teams in infectious diseases planned in the next two years as part of the university's focus on Infectious Disease Research).
- This facility will help to position Virginia Tech to become one of the leaders in a research area that has \$2.8 billion of funding from NIH, as well as substantial funding for bio-defense research from the Department of Defense. Further, this space will encourage outstanding new faculty currently being recruited to join Virginia Tech who will help make Virginia Tech one of the leading institutions in this research area. Thus, this facility is essential to increasing Federal research funding to Virginia Tech, and for creating an environment that

develops new vaccines, diagnostics, and therapeutics that would stimulate economic and job growth through the formation of new pharmaceutical and biotechnology businesses in Virginia.

3. Alignment to strategic plan:

This project will support Virginia Tech's strategic plan in the areas of Research and Scholarship, Graduate Education, Undergraduate Education, and Outreach. The Infectious Disease Research Facility will provide modern laboratory facilities for life science research, including cutting-edge infectious disease and immunology research. Costs will be shared with NIH and the research facilities provided will support the following goals of the university:

Research and Scholarship:

1. Increase the stature of Virginia Tech as a national research university in quality of research and scholarship.
2. Increase the stature of Virginia Tech as a national research university in quantity of research and scholarship.

Graduate Education:

1. Increase the quality of the graduate programs.

Undergraduate Education:

1. Maintain a current, relevant, and comprehensive undergraduate curriculum.
2. Strengthen the quality of undergraduate instruction.
3. Create learning experiences for undergraduate students that maximize the benefits of attending a large research university.

Outreach:

1. Sustain the university's commitment to the outreach mission.
4. Organize, coordinate, communicate about, and integrate the various economic and community development activities at Virginia Tech.

D. Options Considered

Other options considered but not selected include leasing, renovating existing space, or delaying the project entirely. Constructing a new facility is the selected option because of the significant and unique facility demands necessary to meet the requirements for conducting infectious disease and NIH sponsored research.

Leasing is not a feasible option because it is not financially viable to enter into a capital lease for this particular project because of its laboratory construction requirements, such as BSL-3, and its site on campus.

Renovating an already existing facility is not a viable option because the University currently operates with a shortage of research laboratory space. Thus, no existing space is available to allocate for renovation to accommodate this expanding program. Further, the majority of research laboratory space on campus is more than 30 years old and does not include adequate levels of essential infrastructure support and thus would be less economical to develop as opposed to new construction.

Delaying the project to a future biennium is not a viable option because the NIH proposal is due December 2005 and requires a schematic design document of the building as part of the submittal. Furthermore, without the near term availability of modern research facilities, the university will miss the opportunity to participate in research projects sponsored by the NIH, Department of Defense, and Centers for Disease Control.

E. Project Schedule Changes:

NONE.