

**Program for:**

**Institute of Comparative Computational Medicine  
Nanotechnology Innovation Center of Kansas State**

**Department of Anatomy and Physiology  
College of Veterinary Medicine  
Kansas State University**

Prepared by:

Bowman Bowman Novick, Inc.  
Manhattan, Kansas

Program for:

**Institute of Comparative Computational Medicine  
Nanotechnology Innovation Center of Kansas State**

**Index**

- I. Program Statement
- II. Project Site
- III. Program Spaces
- IV. Building Systems
- V. Owner's Use of Site
- VI. Project Development Schedule
- VII. Project Administration
- VIII. Project Construction Budget.
- IX. Space Description Sheets
- X. Program Summary Table
- XI. Appendix
  - Exhibit A – Project Construction Budget
  - Exhibit B – Function Relationship Diagram
  - Exhibit C – Building Key Plan
  - Exhibit D – Work Area Plan
  - Exhibit E – Program Zoning Study

## II. Project Site

These ICCM/NICKS will occupy remodeled space within the College of Veterinary Medicine complex. The project Site will be the North end of Mosier Hall. Visitors to the Centers will enter the Northwest entrance to the building. ICCM/NICKS will share the existing entry lobby with the Diagnostics department. This project will include new finishes in the lobby which will reflect the image of the new centers. Signage, finishes and any furnishings in this lobby should direct visitors to the second floor via the existing stairs and elevator adjacent to the lobby. Finishes in the stair and elevator should be updated and improved from the current hospital-institutional aesthetic to a more welcoming image for an academic research center.

To accommodate this new work, most of the North portion of the second floor of Mosier hall will be vacated. This portion of the building currently houses laboratories, meeting rooms, offices and small animal holding facilities. Existing construction can generally be described as a cast-in-place structural concrete frame with beamed concrete floor slabs. Exterior walls and interior partitions are concrete masonry construction, with limestone veneer on the exterior walls. Stairs are cast-in-place concrete. Interior finishes include both vinyl composition tile and resinous floor finishes, painted masonry walls. And both suspended gypsum board and suspended acoustical panel ceilings. Interior and exterior selective demolition will be part of the Work.

### **III. Program Spaces**

The makeup of the combined centers will consist of approximately 43% office, administrative and conferencing space, and 57% laboratory and laboratory support and related space. A brief narrative description of each of those realms follows.

#### **Administrative Suite**

This Suite serves as the primary front door and entrance to the facilities. Visitors will enter a modest reception area where they will be greeted by either the Administrative Assistant or the Assistant. The assistants will control access to the Director's offices, the Conference rooms and the laboratory areas. A small but comfortable waiting Area to accommodate 4-6 visitors will be provided where waiting guests should be able to view a flat screen monitor with video information on the Centers. The Administrative Assistants should have direct access to a small Work/File Area where outgoing mail will be collected, incoming mail will be sorted and distributed, and printing, collating, and filing tasks will occur. Director's Offices should be nicely appointed with executive desk and credenza groupings and a meeting area for up to four individuals either at a small table or a soft seating grouping. This area should impress visitors with an image of professionalism and be a reflection of the prominence of a national research center.

#### **Break Room**

A modest Break Room will be a central location for faculty and staff to access food and beverage and to take respite from the lab and/or office. Appointments should include cabinetry for storage of food, flatware, and paper products, a coffee maker, a small microwave oven, , a residential refrigerator, a table and chair for up to 8 people, and power and network access ports for personal laptops.

#### **Main Conference Room**

One of the mainstays of this Center will be outreach and distance collaboration and learning opportunities. The Main Conference Room will provide the setting for

collaborative in-house meetings as well as broadband real time audio/visual connection to other campuses and institutions. Room should be equipped with video-conferencing and teleconferencing systems, video display monitors, and enhanced acoustic treatments. Furniture will include modular, reconfigurable conference tables, 25 upholstered conference room chairs, stackable side chairs, 4 foot by 6 foot marker board, and a podium equipped for control of the A/V systems. Casework will include housing for the A/V system components and countertop to serve as a beverage station.

### Conference Room

This space will serve as an executive meeting room and will also be available for faculty and staff use for meetings of up to 10 people. Room should be equipped with teleconferencing and videoconferencing systems and will be furnished with a wire-managed conference table and 10 executive conference room chairs and a 4 foot by 6 foot marker board. A credenza will house A/V system components and will serve as a beverage station.

### Laboratory Areas

In general, the laboratory and laboratory support spaces for this facility will be planned using a modular lab approach. This modularity makes the laboratories highly flexible, being able to adapt to a variety of functions, as well as to grow or contract as needs change. Laboratory casework and partitions will be of moveable lab furnishing systems with overhead service.

### Computational Laboratory

This area is the heart of the center's mathematical modeling and simulation efforts. Four faculty will primarily occupy this area, working in individual, but open offices. These office areas should be immediately adjacent to a collaborative work area that will be equipped with marker board surfaces, a large wall mounted monitor and broadband connection to the LCAT system. Collaborative work is key to the function of this lab, both in-house and with remote campuses and institutions. Two "break-out" conference rooms, with seating for 6-8 people and video monitors, will provide the ability for more private or focused collaboration. In addition, 12 "touchdown" spaces – open work cubicles – will be provided for visiting researchers who may spend from a few hours to a few weeks on collaborative research projects.

### Analytical Chemistry Laboratory

This large modular chemistry laboratory will be used for laboratory experimentation as a continuation of mathematical modeling and simulations performed in the Computational Laboratory. Adjacency to the Computational Laboratory is necessary, as well as access to the Perfusion and Radioisotope laboratories. Care needs to be taken to separate this lab from the Cell Culture and tissue processing functions, in order to avoid contamination of materials.

### FARAD Call Center

FARAD is a USDA-sponsored database program cataloging residue avoidance information in an attempt to avoid or minimize the occurrence of chemical residues in food animal products. This location will house a regional call center providing emergency access to the database. The room shall be near the Computational Laboratory. It should be acoustically separated from the open office areas and should be equipped with two workstations with telephone and ethernet access.

### Cell Culture Facility

This wet lab will be used for tissue handling and cell cultures. It requires a close relationship to the Utility area where most tissue samples will be stored.

### Surgery Room

This small procedure room will be used for performing minor surgery on animal specimens for *in vivo* experimentation. The room should have an adjustable surgical table, overhead surgical lighting, an anesthesia machine, and an area for scrub—in including a pedal operated hand sink.

### Histopath Preparation/EM Laboratory

This laboratory, where tissue samples will be processed and prepared for microscopic examination, may exist within the Cell Culture Laboratory. Adjacency to the Microscopy Room is preferred.

### Microscopy Room

This Room will house the sensitive microscopy equipment used by the centers. It may house up to 5 types of scopes, with 2 people working at each scope station. Lighting control and vibration isolation of equipment are critical. This Room should be adjacent to the Cell Culture and Histopath Prep Labs.

### Instrument Room

The Instrument Room is a dry laboratory that will hold sensitive equipment shared by several labs. The Instruments are primarily benchtop units with accompanying computers. Primary adjacencies include the Cell Culture Lab and the Utility Area.

### Perfusion Laboratory

This laboratory will be used for tissue preparation and perfusion operations. The lab should have a "dirty" area for the tissue preparation, and a clean area for the equipment and investigation. This lab needs to be adjacent to the Radioisotope laboratory and should have access to the Sample Prep Room and the Utility Area. This lab should be equipped with a video surveillance system with remote monitoring capabilities for monitoring long-duration processes.

### General Laboratories

There shall be two General laboratories included for use by visiting faculty or for specific research projects of finite duration. These should be wet labs with adjustable bench systems and they should be close to the Utility Area.

### Radioisotope Laboratory

A small wet laboratory will be dedicated to processed involving Radioisotope materials. This lab should be adjacent to the Perfusion Lab, and should have easy access to the Analytical Chemistry lab and the Utility Area. Lab equipment will include 2 liquid scintillation systems and a benchtop centrifuge.

### Sample Prep Room

This is a small wet lab dedicated to the collection and preparation of animal tissue samples for use in other labs. This is considered a “dirty” area, and should be segregated from other labs to avoid contamination. This room should be equipped with a stainless steel wash table and moveable lab bench systems.

### Utility Area

The Utility Area should be in a location central to all of the Lab functions. It will hold storage and equipment to be shared among the labs. In addition to laboratory instrument and supply storage it will hold up to 16 sample freezers.

### Faculty Office Suites

Up to 11 faculty members will be housed in individual offices. These offices should be clustered around collaboration areas designed for both spontaneous and planned interactions. Ideally, these clusters will have access to daylight and views and will be easily accessible from the lab areas and administrative areas.

### Post Doc Offices

These offices may be in the form of flexible office systems furnishings or in shared offices (up to 3 per 150 s.f. enclosed office). These offices may be arrayed adjacent to the Faculty Office collaborative areas or as part of the labs.

## IV. Building Systems

### Mechanical Systems

The existing building's heating and air conditioning operate off of the University steam system and the veterinary Complex central Chiller Plant. The chilled water system is aged and considered inadequate to serve these new functions. Large air handling units exist in the second floor mechanical room near the northwest corner of the building. These units are extremely noisy, rendering adjacent spaces virtually unusable. For these reasons, and to minimize lengthy system shutdowns during construction, new rooftop mechanical units are to be included. The existing air handlers should also be replaced or modified to mitigate the noise issues as they continue to serve the remainder of the facility. One of those existing air handling units is to be replaced by a new unit in a new rooftop penthouse mechanical room as part of this project.

### Electrical Systems

As part of the Work it is anticipated that several electrical panels and switches will be removed and replaced or relocated and additional panel capacity will be added. Replacement of the existing electrical switchboard is also included.

Much of the research equipment and materials related to the new laboratories must be protected from power interruption. While the building is currently equipped with a standby power system, the generator lacks the capacity to serve the new labs. A new generator and distribution system sized to serve these labs should be included.

## **V. Owner's Use of Site**

Mosier Hall will continue to operate throughout demolition and construction. Construction activities shall be sequenced and performed to minimize disruption of the ongoing operations. Two existing laboratories, two offices, and an elevator that are generally located in the center of the work area must also remain in operation throughout demolition and construction. Egress from occupied areas of the building must be maintained. In order to accomplish this, the work will likely need to be conducted in a minimum of two phases. A new egress stair may be included in the work to free up floor space for program functions and to facilitate phasing. Any interruptions in services to occupied portions of the building must be limited in number, minimal in duration, and closely coordinated with the College of Veterinary Medicine, Facilities Planning, and the occupants.

## VI. Project Development Schedule

Time is of the essence in this project. Alternative methods of delivery will be considered in order to minimize the time needed until occupancy, including multiple bid packages, fast-track delivery, and the like. Spaces within the area of work will need to be vacated and the occupants relocated prior to demolition and construction activities, which may impact phasing strategies.

Generally, the project development schedule is anticipated as follows:

November 1, 2012	Advertise Project in Kansas Register
November 15, 2012	Qualification Statement Submittal
November 26-Dec. 7, 2013	Interviews, Selection, and Notification
January 3, 2013	Contract Execution
February 1, 2013	Completion of Program Verification and Schematic Design Phase
March 1, 2013	Completion of Design Development Phase
April 1, 2013	Completion of Construction Documents
December 28, 2013	Construction Complete

## **VII. Project Administration**

This project is funded through State of Kansas budget allocations and is subject to the statutory processes, limitations, and requirements thereof. The project is to be awarded, designed, and reviewed, approved and procured per the Kansas State Office of Facilities and Property Management requirements as stated in the 2012 OFPM Building Design and Construction Manual.

## **VIII. Project Construction Budget**

See attached Exhibit A

## **IX. Space Description Sheets**

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	NICKS/ICCM	Space ID No.:	
Space Name:	ADMINISTRATIVE SUITE	Occupants:	9 to 10

**Description:** The main greeting and administrative area should be welcoming and easily accessible. This space will express the mission and personality of the Centers. The Waiting Area should include a video display showcasing achievements on ongoing research .

Area:	1 Reception/Administrative Assistant	80 s.f.	80 s.f.
	1 Assistant	60 s.f.	60 s.f.
	1 Waiting Area	150 s.f.	150 s.f.
	1 Mail/File Area	50 s.f.	50 s.f.
			<hr/> 340 s.f.

**Key Adjacencies:** Immediately adjacent to entry, Director's offices, Main Conference Room and Conference Room. Waiting Area will serve as an anteroom for Main Conference Room.

<b>ARCHITECTURAL</b>			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT		Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	_____	Gyp Board, Epoxy Paint	3' x 7'
Epoxy	_____	Epoxy/Fiberglass system	3' x 7' Pair
Sealed Concrete	_____	Other	3' x 7' + 1'-6" x 7'
Carpet	_____X_____		Vision Panel
Other	_____		
		<b>Ceiling</b>	
<b>Base</b>		Open	<b>MECHANICAL</b>
4" Vinyl		Acoustic Tile	Temperature
4" Rubber	_____	Gyp Board, Paint	68 - 75 deg +/- 2 deg F
Integral w/ floor	_____	Height	Other
Wood	_____X_____	Natural Daylight	Humidity
		Marker Board	Ambient
			Other

**Special Equipment**

Reception desk with phone and computer/printer for the Administrative Assistant and the Assistant.

Waiting area should have soft seating, video monitor.

Mail /File area - Faculty mailboxes, mail sorting counter with supply storage, file cabinets.

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	ICCM	Space ID No.:	
Space Name:	DIRECTOR'S OFFICE	Occupants:	Up to 4

Description: Primary office space for the Center's Director. Should be accesible from Waiting Area, but should offer privacy for meetings and concentrated work. Image should convey professionalism as well as the importance of the position.

Area: 1 Director's Office 180 s.f. 180 s.f.

---

180 s.f.

Key Adjacencies: Adjacent to administrative Suite and Administrative Conference Rooms

ARCHITECTURAL					
<b>Floor</b>		<b>Partitions</b>		<b>Doors</b>	
VCT	_____	Gyp Board, Paint	X	3'-6" x 7'	_____
Welded Seam Sheet Vinyl	_____	Gyp Board, Epoxy Paint	_____	3' x 7'	X
Epoxy	_____	Epoxy/Fiberglass system	_____	3' x 7' Pair	_____
Sealed Concrete	_____	Other	_____	3' x 7' + 1'-6" x 7'	_____
Carpet	X			Vision Panel	_____
Other	_____	<b>Ceiling</b>			
		Open		<b>MECHANICAL</b>	
<b>Base</b>		Acoustic Tile	X	Temperature	
4" Vinyl	_____	Gyp Board, Paint	_____	68 - 75 deg +/- 2 deg F	X
4" Rubber	_____	Height	_____	Other	_____
Integral w/ floor	_____			Humidity	_____
Wood	X	Natural Daylight	X	Ambient	X
		Marker Board	X	Other	_____

**Special Equipment**

Executive Desk and Credenza, Bookcases, Seating Area for 4.  
Computer, Printer, phone.  
Wall mounted video monitor.

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	NICKS	Space ID No.:	
Space Name:	DIRECTOR'S OFFICE	Occupants:	Up to 4

Description: Primary office space for the Center's Director. Should be accesible from Waiting Area, but should offer privacy for meetings and concentrated work. Image should convey professionalism as well as the importance of the position.

Area:	1 Director's Office	180 s.f.	180 s.f.
			180 s.f.

Key Adjacencies: Adjacent to administrative Suite and Administrative Conference Rooms

ARCHITECTURAL			
Floor		Partitions	Doors
VCT	_____	Gyp Board, Paint	3'-6" x 7' _____ X
Welded Seam Sheet Vinyl	_____	Gyp Board, Epoxy Paint	3' x 7' _____ X
Epoxy	_____	Epoxy/Fiberglass system	3' x 7' Pair _____
Sealed Concrete	_____	Other	3' x 7' + 1'-6" x 7' _____
Carpet	_____ X		Vision Panel _____
Other	_____		
		Ceiling	MECHANICAL
		Open	Temperature
<b>Base</b>		Acoustic Tile	68 - 75 deg +/- 2 deg F _____ X
4" Vinyl	_____	Gyp Board, Paint	Other _____
4" Rubber	_____	Height	Humidity _____
Integral w/ floor	_____		Ambient _____ X
Wood	_____ X	Natural Daylight	Other _____
		Marker Board	

**Special Equipment**

Executive Desk and Credenza, Bookcases, Seating Area for 4.  
Computer, Printer, phone.  
Wall mounted video monitor.

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	ICCM/NICKS	Space ID No.:	
Space Name:	BREAK ROOM	Occupants:	Up to 8

Description: This room is a basic facility to afford faculty and students a venue for enjoying food and drink and informal conversation outside the lab and office areas.

Area:	1 Break Room	150 s.f.	150 s.f.
			150 s.f.

Key Adjacencies: Readily accessible from administrative, lab, and office areas.

ARCHITECTURAL			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT	X	Gyp Board, Paint	X
Welded Seam Sheet Vinyl	_____	Gyp Board, Epoxy Paint	_____
Epoxy	_____	Epoxy/Fiberglass system	_____
Sealed Concrete	_____	Other	_____
Carpet	_____		_____
Other	_____		_____
		<b>Ceiling</b>	
<b>Base</b>		Open	
4" Vinyl	_____	Acoustic Tile	X
4" Rubber	X	Gyp Board, Paint	_____
Integral w/ floor	_____	Height	_____
Wood	_____	Natural Daylight	_____
		Marker Board	X
			<b>MECHANICAL</b>
			Temperature
			68 - 75 deg +/- 2 deg F
			Other
			Humidity
			Ambient
			Other

**Special Equipment**

- Tables and chairs for 8.
- Refrigerator
- Microwave
- Coffee Maker
- Water cooler
- Counterspace and cabinetry for storing food, paper products, flatware, etc.
- Television monitor
- Phone
- Wireless

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	ICCM	Space ID No.:	
Space Name:	MAIN CONFERENCE ROOM	Occupants:	Up to 25

Description: This is the primary meeting space for faculty and visitor's to the Centers. This room will represent the image of the Centers and should demonstrate professionalism and the commitment to technology. Lighting control, presentation visibility, and acoustics are critical.

Area:	1 Conference Room	800 s.f.	800 s.f.
			<hr/> 800 s.f.

Key Adjacencies: Adjacent to Administrative Suite, Director's Offices, Conference Room. Easily accessible by faculty.

ARCHITECTURAL			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT	_____	Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	_____	Gyp Board, Epoxy Paint	3' x 7'
Epoxy	_____	Epoxy/Fiberglass system	3' x 7' Pair
Sealed Concrete	_____	Other	3' x 7' + 1'-6" x 7'
Carpet	_____X_____		Vision Panel
Other	_____		
		<b>Ceiling</b>	
<b>Base</b>		Open	<b>MECHANICAL</b>
4" Vinyl	_____	Acoustic Tile	Temperature
4" Rubber	_____	Gyp Board, Paint	68 - 75 deg +/- 2 deg F
Integral w/ floor	_____	Height	Other
Wood	_____X_____	Natural Daylight	Humidity
		Marker Board	Ambient
			Other

**Special Equipment**

- Reconfigurable, wire-managed conference tables with upholstered conference chairs for 25.
- Podium with A/V, computer interface.
- Ceiling mounted projector and projection screen.
- Cameras, microphones, phone equipment, and broadband connection for video conferencing and teleconferencing.
- Cabinetry for storage of equipment and supplies and for beverage service.
- Dimmable Lighting.
- Acoustic wall treatment.

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department: ICCM	Space ID No.:
Space Name: COMPUTATIONAL LAB	Occupants: 8 to 12

Description: Computational Lab Area where researchers will work individually and collaboratively on computer modelling and data analysis. Highly visible and accessible.

Area:	1 Computing Area @	480 s.f.	480 s.f.
	8 "Touchdown" Spaces @	50 s.f.	400 s.f.
	2 Breakout Rooms @	160 s.f.	320 s.f.
	1 Network Equipment Closet @	50 s.f.	50 s.f.
			<hr/> 1250 s.f.

Key Adjacencies: Access to Administrative Suite  
May incorporate Farrad Call Center

ARCHITECTURAL			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT	_____	Gyp Board, Paint	3'-6" x 7' _____ X
Welded Seam Sheet Vinyl	_____	Gyp Board, Epoxy Paint	3' x 7' _____
Epoxy	_____	Epoxy/Fiberglass system	3' x 7' Pair _____
Sealed Concrete	_____	Other	3' x 7' + 1'-6" x 7' _____
Carpet	_____ X _____		Vision Panel _____
Other	_____		
<b>Base</b>		<b>Ceiling</b>	<b>MECHANICAL</b>
4" Vinyl	_____	Open	Temperature
4" Rubber	_____ X _____	Acoustic Tile	68 - 75 deg +/- 2 deg F _____ X
Integral w/ floor	_____	Gyp Board, Paint	Other _____
Wood	_____	Height	Humidity _____
		Natural Daylight	Ambient _____ X
		Marker Board	Other _____

**Special Equipment**

- Touchdown Spaces (each)
  - Systems furniture workspace
  - Access to phone, data
  - Lockable Cabinet
- Cbreakout Rooms
  - Table and Seating for 8
  - Marker Board
  - Wall mounted video monitor
  - Data, phone
  - Dimmable Lights
- Computing Area
  - Systems furniture for 6
  - large screen video conferencing system
  - multiple white boards
  - High speed linkage to LCAT
  - Soft chairs with tablet arms for collaboration

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department: ICCM	Space ID No.:
Space Name: CONFERENCE ROOM	Occupants: Up to 10

Description: This is the secondary meeting space for faculty and visitor's to the Centers. This room should be finished similarly to the Main Conference Room.

Area:	1 Conference Room	240 s.f.	240 s.f.
			240 s.f.

Key Adjacencies: Adjacent to Administrative Suite, Director's Offices, Main Conference Room. Easily accessible by faculty.

ARCHITECTURAL					
<b>Floor</b>		<b>Partitions</b>		<b>Doors</b>	
VCT	_____	Gyp Board, Paint	X	3'-6" x 7'	_____
Welded Seam Sheet Vinyl	_____	Gyp Board, Epoxy Paint	_____	3' x 7'	X
Epoxy	_____	Epoxy/Fiberglass system	_____	3' x 7' Pair	_____
Sealed Concrete	_____	Other	_____	3' x 7' + 1'-6" x 7'	_____
Carpet	X			Vision Panel	_____
Other	_____	<b>Ceiling</b>			
		Open	_____	<b>MECHANICAL</b>	
<b>Base</b>		Acoustic Tile	X	Temperature	
4" Vinyl	_____	Gyp Board, Paint	X	68 - 75 deg +/- 2 deg F	X
4" Rubber	_____	Height	_____	Other	_____
Integral w/ floor	_____			Humidity	_____
Wood	X	Natural Daylight	X	Ambient	X
		Marker Board	X	Other	_____

**Special Equipment**

Reconfigurable, wire-managed conference tables with upholstered conference chairs for 10.  
Credenza with A/V, computer interface.  
Wall mounted video monitor

Cameras, microphones, phone equipment, and broadband connection for video conferencing and teleconferencing.

Cabinetry for storage of equipment and supplies and for beverage service.

Dimmable Lighting.

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department: ICCM	Space ID No.:
Space Name: COMPUTATIONAL LAB	Occupants: 8 to 12

Description: Computational Lab Area where researchers will work individually and collaboratively on computer modelling and data analysis. Highly visible and accessible.

Area:	1 Computing Area @	480 s.f.	480 s.f.
	8 "Touchdown" Spaces @	50 s.f.	400 s.f.
	2 Breakout Rooms @	160 s.f.	320 s.f.
	1 Network Equipment Closet @	50 s.f.	50 s.f.
			<hr/> 1250 s.f.

Key Adjacencies: Access to Administrative Suite  
May incorporate Farrad Call Center

ARCHITECTURAL			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT	_____	Gyp Board, Paint	3'-6" x 7' _____ X
Welded Seam Sheet Vinyl	_____	Gyp Board, Epoxy Paint	3' x 7' _____
Epoxy	_____	Epoxy/Fiberglass system	3' x 7' Pair _____
Sealed Concrete	_____	Other	3' x 7' + 1'-6" x 7' _____
Carpet	_____ X _____		Vision Panel _____
Other	_____		
<b>Base</b>		<b>Ceiling</b>	<b>MECHANICAL</b>
4" Vinyl	_____	Open	Temperature
4" Rubber	_____ X _____	Acoustic Tile	68 - 75 deg +/- 2 deg F _____ X
Integral w/ floor	_____	Gyp Board, Paint	Other _____
Wood	_____	Height	Humidity _____
		Natural Daylight	Ambient _____ X
		Marker Board	Other _____

**Special Equipment**

- Touchdown Spaces (each)
  - Systems furniture workspace
  - Access to phone, data
  - Lockable Cabinet
- Cbreakout Rooms
  - Table and Seating for 8
  - Marker Board
  - Wall mounted video monitor
  - Data, phone
  - Dimmable Lights
- Computing Area
  - Systems furniture for 6
  - large screen video conferencing system
  - multiple white boards
  - High speed linkage to LCAT
  - Soft chairs with tablet arms for collaboration

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department: ICCM	Space ID No.:
Space Name: ANALYTICAL CHEMISTRY LAB	Occupants: 8 to 12

Description: Large wet chemistry lab.

Area: 1 Laboratory @	1300 s.f.	1300 s.f.
		1300 s.f.

Key Adjacencies: Adjacent to Utility Area  
Near Computation Lab Area, Perfusion and Radioisotope Labs  
Separate from Tissue Labs

<b>ARCHITECTURAL</b>			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT	_____	Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	_____	Gyp Board, Epoxy Paint	3' x 7'
Epoxy	X	Epoxy/Fiberglass system	3' x 7' Pair
Sealed Concrete	_____	Other	3' x 7' + 1'-6" x 7'
Carpet	_____		Vision Panel
Other	_____		
		<b>Ceiling</b>	<b>MECHANICAL</b>
<b>Base</b>		Open	Temperature
4" Vinyl	_____	Acoustic Tile	68 - 75 deg +/- 2 deg F
4" Rubber	_____	Gyp Board, Paint	Other
Integral w/ floor	X	Height	Humidity
Wood	_____	Natural Daylight	Ambient
		Marker Board	Other

<b>LABORATORY FEATURES</b>			
<b>HOODS</b>		<b>PLUMBING</b>	<b>ELECTRICAL</b>
Chemical Fume Hood	6'	Laboratory Gas	Emergency Power
Radioisotope Hood	_____	Laboratory Vacuum	UPS
Laminar Flow Hood	_____	Laboratory Air	Phone
Biological Safety Cabinet	_____	Potable Hot Water	Data
Snorkel	_____	Potable Cold Water	Task Lighting
Canopy Hood	_____	Purified Water (DI/RO)	Darkenable
		Chilled Water	Zoned Lighting
<b>LABORATORY EQUIPMENT</b>		Carbon Dioxide	
Vibration Sensitive	_____	Nitrogen Gas	<b>CHEMICALS</b>
Light Sensitive	_____	Cylinder Gases	Bases
Vibration Producing	_____	Inert	Acids
Heat Producing	_____	Flammable	Solvents
Noise Producing	_____	Toxic	Radioisotopes
		Floor Drain	Carcinogens/Regulated
		Floor Sink	Chemical Waste Storage
		Safety Shower/ Eyewash	Biological Storage
			Radioisotope Storage
			Chemical Storage

**Special Equipment**

- Moveable bench systems
- Liquid Chromatography - Mass Specrometry
- Gas Chromatography - Mass Specrometry
- BSAI Index
- Nitrogen Generator
- Include 6 recording carrels for lab technicians.

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	ICCM	Space ID No.:	
Space Name:	FARAD CALL CENTER	Occupants:	2

Description: Hotline call center for access to and assistance with Center's database.

Area: 1 Call Center Office @ 150 s.f. 150 s.f.

150 s.f.

Key Adjacencies: Direct Access to Computational Lab  
24 hour operation

ARCHITECTURAL			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT	_____	Gyp Board, Paint	3'-6" x 7' _____ X
Welded Seam Sheet Vinyl	_____	Gyp Board, Epoxy Paint	3' x 7' _____
Epoxy	_____	Epoxy/Fiberglass system	3' x 7' Pair _____
Sealed Concrete	_____	Other	3' x 7' + 1'-6" x 7' _____
Carpet	_____ X _____		Vision Panel _____
Other	_____		
<b>Base</b>		<b>Ceiling</b>	<b>MECHANICAL</b>
4" Vinyl	_____	Open	Temperature
4" Rubber	_____ X _____	Acoustic Tile	68 - 75 deg +/- 2 deg F _____ X
Integral w/ floor	_____	Gyp Board, Paint	Other _____
Wood	_____	Height	Humidity _____
		Natural Daylight	Ambient _____ X
		Marker Board	Other _____

**Special Equipment**

2-workstations with computer and phone  
Acoustic control important

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	NICKS	Space ID No.:	
Space Name:	CELL CULTURE FACILITY	Occupants:	2 to 6

Description: Wet lab for the pupose of cell culture and incubation.

Area: 1 Laboratory @ 600 s.f. 600 s.f.

600 s.f.

Key Adjacencies: Access to Utility Area

ARCHITECTURAL			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT		Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	X	Gyp Board, Epoxy Paint	3' x 7'
Epoxy		Epoxy/Fiberglass system	3' x 7' Pair
Sealed Concrete		Other	3' x 7' + 1'-6" x 7'
Carpet			Vision Panel
Other			
		<b>Ceiling</b>	
<b>Base</b>		Open	
4" Vinyl		Acoustic Tile	<b>MECHANICAL</b>
4" Rubber		Gyp Board, Paint	Temperature
Integral w/ floor	X	Height	68 - 75 deg +/- 2 deg F
Wood		Natural Daylight	Other
		Marker Board	Ambient
			Other

LABORATORY FEATURES			
<b>HOODS</b>		<b>PLUMBING</b>	<b>ELECTRICAL</b>
Chemical Fume Hood	<a href="#">L@b</a>	Laboratory Gas	Emergency Power
Radioisotope Hood		Laboratory Vacuum	UPS
Laminar Flow Hood	4'	Laboratory Air	Phone
Biological Safety Cabinet	6'	Potable Hot Water	Data
Snorkel		Potable Cold Water	Task Lighting
Canopy Hood		Purified Water (DI/RO)	Darkenable
		Chilled Water	Zoned Lighting
<b>LABORATORY EQUIPMENT</b>		Carbon Dioxide	
Vibration Sensitive		Nitrogen Gas	<b>CHEMICALS</b>
Light Sensitive		Cylinder Gases	Bases
Vibration Producing		Ineret	Acids
Heat Producing		Flammable	Solvents
Noise Producing		Toxic	Radioisotopes
		Floor Drain	Carcinogens/Regulated
		Floor Sink	Chemical Waste Storage
		Safety Shower/ Eyewash	Biological Storage
			Radioisotope Storage
			Chemical Storage

**Special Equipment / features**

- 2 Incubators
- 1 refrigerator
- Moveable bench systems
- Include 4 recording carrels for lab technicians.

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	NICKS	Space ID No.:	
Space Name:	SURGERY ROOM	Occupants:	2 to 4

Description: A small surgery room used for performing surgical procedures on animals.

Area:	1 Surgery Room @	180 s.f.	180 s.f.
			180 s.f.

Key Adjacencies: Proximity to Cell Culture laboratory.  
Proximity to Sample Prep laboratory.

<b>ARCHITECTURAL</b>			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT		Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	X	Gyp Board, Epoxy Paint	3' x 7'
Epoxy		Epoxy/Fiberglass system	3' x 7' Pair
Sealed Concrete		Other	3' x 7' + 1'-6" x 7'
Carpet			Vision Panel
Other			
<b>Base</b>		<b>Ceiling</b>	<b>MECHANICAL</b>
4" Vinyl		Open	Temperature
4" Rubber		Acoustic Tile	68 - 75 deg +/- 2 deg F
Integral w/ floor	X	Gyp Board, Paint	Other
Wood		Height	Humidity
		Natural Daylight	Ambient
		Marker Board	Other

<b>LABORATORY FEATURES</b>			
<b>HOODS</b>		<b>PLUMBING</b>	<b>ELECTRICAL</b>
Chemical Fume Hood		Laboratory Gas	Emergency Power
Radioisotope Hood		Laboratory Vacuum	UPS
Laminar Flow Hood		Laboratory Air	Phone
Biological Safety Cabinet		Potable Hot Water	Data
Snorkel		Potable Cold Water	Task Lighting
Canopy Hood		Purified Water (DI/RO)	Darkenable
		Chilled Water	Zoned Lighting
<b>LABORATORY EQUIPMENT</b>		Carbon Dioxide	
Vibration Sensitive		Nitrogen Gas	<b>CHEMICALS</b>
Light Sensitive		Cylinder Gases	Bases
Vibration Producing		Inert	Acids
Heat Producing		Flammable	Solvents
Noise Producing		Toxic	Radioisotopes
		Floor Drain	Carcinogens/Regulated
		Floor Sink	Chemical Waste Storage
		Safety Shower/ Eyewash	Biological Storage
			Radioisotope Storage
			Chemical Storage

**Special Equipment / features**

- Hand washing area with foot pedal sink.
- Adjustable surgical table.
- Adjustable overhead surgical light.
- Anesthesia machine.
- Cabintry for supply storage.

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	NICKS	Space ID No.:	
Space Name:	HISTOPATH PREP/EM WET LAB	Occupants:	2 to 3

Description:

Area:	1 Laboratory @	350 s.f.	350 s.f.
			350 s.f.

Key Adjacencies: Access to Utility Area  
Can be within the Cell Culture Facility  
Adjacency to Microscopy Room

ARCHITECTURAL			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT		Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	X	Gyp Board, Epoxy Paint	3' x 7'
Epoxy		Epoxy/Fiberglass system	3' x 7' Pair
Sealed Concrete		Other	3' x 7' + 1'-6" x 7'
Carpet			Vision Panel
Other			
<b>Base</b>		<b>Ceiling</b>	<b>MECHANICAL</b>
4" Vinyl		Open	Temperature
4" Rubber		Acoustic Tile	68 - 75 deg +/- 2 deg F
Integral w/ floor	X	Gyp Board, Paint	Other
Wood		Height	Humidity
		Natural Daylight	Ambient
		Marker Board	Other

LABORATORY FEATURES			
<b>HOODS</b>		<b>PLUMBING</b>	<b>ELECTRICAL</b>
Chemical Fume Hood	6'	Laboratory Gas	Emergency Power
Radioisotope Hood		Laboratory Vacuum	UPS
Laminar Flow Hood		Laboratory Air	Phone
Biological Safety Cabinet		Potable Hot Water	Data
Snorkel		Potable Cold Water	Task Lighting
Canopy Hood		Purified Water (DI/RO)	Darkenable
		Chilled Water	Zoned Lighting
<b>LABORATORY EQUIPMENT</b>		Carbon Dioxide	
Vibration Sensitive		Nitrogen Gas	<b>CHEMICALS</b>
Light Sensitive		Cylinder Gases	Bases
Vibration Producing		Inert	Acids
Heat Producing		Flammable	Solvents
Noise Producing		Toxic	Radioisotopes
		Floor Drain	Carcinogens/Regulated
		Floor Sink	Chemical Waste Storage
		Safety Shower/ Eyewash	Biological Storage
			Radioisotope Storage
			Chemical Storage

**Special Equipment / features**

- Stainer
- Cryostat
- Balances
- Tissue Processor
- Moveable Bench Systems
- Include 1 recording carrel for lab technician

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	NICKS	Space ID No.:	
Space Name:	MICROSCOPY ROOM	Occupants:	2 to 8

Description: Light controlled dry lab for the use of various types of microscopy equipment.

Are:	1 laboratory @	200 s.f.	200 s.f.
			200 s.f.

Key Adjacencies: Access to Utility Area  
Adjacency to Cell Culture/Histopath Prep Lab

ARCHITECTURAL			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT		Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	X	Gyp Board, Epoxy Paint	3' x 7'
Epoxy		Epoxy/Fiberglass system	3' x 7' Pair
Sealed Concrete		Other	3' x 7' + 1'-6" x 7'
Carpet			Vision Panel
Other			
<b>Base</b>		<b>Ceiling</b>	<b>MECHANICAL</b>
4" Vinyl		Open	Temperature
4" Rubber		Acoustic Tile	68 - 75 deg +/- 2 deg F
Integral w/ floor	X	Gyp Board, Paint	Other
Wood		Height	Humidity
		Natural Daylight	Ambient
		Marker Board	Other

LABORATORY FEATURES			
<b>HOODS</b>		<b>PLUMBING</b>	<b>ELECTRICAL</b>
Chemical Fume Hood		Laboratory Gas	Emergency Power
Radioisotope Hood		Laboratory Vacuum	UPS
Laminar Flow Hood		Laboratory Air	Phone
Biological Safety Cabinet		Potable Hot Water	Data
Snorkel		Potable Cold Water	Task Lighting
Canopy Hood		Purified Water (DI/RO)	Darkenable
		Chilled Water	Zoned Lighting
<b>LABORATORY EQUIPMENT</b>		Carbon Dioxide	
Vibration Sensitive	X	Nitrogen Gas	<b>CHEMICALS</b>
Light Sensitive	X	Cylinder Gases	Bases
Vibration Producing		Inert	Acids
Heat Producing		Flammable	Solvents
Noise Producing		Toxic	Radioisotopes
		Floor Drain	Carcinogens/Regulated
		Floor Sink	Chemical Waste Storage
		Safety Shower/ Eyewash	Biological Storage
			Radioisotope Storage
			Chemical Storage

**Special Equipment / features**

- Cytovivascope
- Nanocyte
- Fluorescent Scope
- Confocal
- Can be a long narrow, space
- 2 people work at each scope
- Vibration isolation and lighting control are critical

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	NICKS	Space ID No.:	
Space Name:	INSTRUMENT ROOM - DRY LAB	Occupants:	

Description: Dry lab for the use of sensitive equipment shared by several labs.

Area:	1 laboratory @	150 s.f.	<u>150 s.f.</u>
			150 s.f.

Key Adjacencies: Access to Utility Area, Cell Culture Facility

ARCHITECTURAL			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT		Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	X	Gyp Board, Epoxy Paint	3' x 7'
Epoxy		Epoxy/Fiberglass system	3' x 7' Pair
Sealed Concrete		Other	3' x 7' + 1'-6" x 7'
Carpet			Vision Panel
Other			
		<b>Ceiling</b>	<b>MECHANICAL</b>
<b>Base</b>		Open	Temperature
4" Vinyl		Acoustic Tile	68 - 75 deg +/- 2 deg F
4" Rubber		Gyp Board, Paint	Other
Integral w/ floor	X	Height	Humidity
Wood		Natural Daylight	Ambient
		Marker Board	Other

LABORATORY FEATURES			
<b>HOODS</b>		<b>PLUMBING</b>	<b>ELECTRICAL</b>
Chemical Fume Hood		Laboratory Gas	Emergency Power
Radioisotope Hood		Laboratory Vacuum	UPS
Laminar Flow Hood		Laboratory Air	Phone
Biological Safety Cabinet		Potable Hot Water	Data
Snorkel		Potable Cold Water	Task Lighting
Canopy Hood		Purified Water (DI/RO)	Darkenable
		Chilled Water	Zoned Lighting
<b>LABORATORY EQUIPMENT</b>		Carbon Dioxide	
Vibration Sensitive		Nitrogen Gas	<b>CHEMICALS</b>
Light Sensitive		Cylinder Gases	Bases
Vibration Producing		Inert	Acids
Heat Producing		Flammable	Solvents
Noise Producing		Toxic	Radioisotopes
		Floor Drain	Carcinogens/Regulated
		Floor Sink	Chemical Waste Storage
		Safety Shower/ Eyewash	Biological Storage
			Radioisotope Storage
			Chemical Storage

**Special Equipment / features**

Moveable Bench Systems  
Primarily benchtop equipment  
Zetasizer and Computer  
Luminex and Computer  
Fluorinert

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	ICCM/NICKS	Space ID No.:	
Space Name:	PERFUSION LABORATORY	Occupants:	2 to 6

Description: A wet laboratory used for preparing tissue samples and for perfusion operations.

Area:	1 Laboratory	@	550 s.f.	550 s.f.
				550 s.f.

Key Adjacencies: Adjacent to Radioisotope Lab  
Access to Sample Prep Room and Utility Area

ARCHITECTURAL			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT		Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	X	Gyp Board, Epoxy Paint	3' x 7'
Epoxy		Epoxy/Fiberglass system	3' x 7' Pair
Sealed Concrete		Other	3' x 7' + 1'-6" x 7'
Carpet			Vision Panel
Other			
<b>Base</b>		<b>Ceiling</b>	<b>MECHANICAL</b>
4" Vinyl		Open	Temperature
4" Rubber		Acoustic Tile	68 - 75 deg +/- 2 deg F
Integral w/ floor	X	Gyp Board, Paint	Other
Wood		Height	Humidity
		Natural Daylight	Ambient
		Marker Board	Other

LABORATORY FEATURES			
<b>HOODS</b>		<b>PLUMBING</b>	<b>ELECTRICAL</b>
Chemical Fume Hood	<u>1@12'</u>	Laboratory Gas	Emergency Power
Radioisotope Hood		Laboratory Vacuum	UPS
Laminar Flow Hood		Laboratory Air	Phone
Biological Safety Cabinet	X	Potable Hot Water	Data
Snorkel		Potable Cold Water	Task Lighting
Canopy Hood	X	Purified Water (DI/RO)	Darkenable
		Chilled Water	Zoned Lighting
<b>LABORATORY EQUIPMENT</b>		Carbon Dioxide	
Vibration Sensitive		Nitrogen Gas	<b>CHEMICALS</b>
Light Sensitive		Cylinder Gases	Bases
Vibration Producing		Inert	Acids
Heat Producing		Flammable	Solvents
Noise Producing		Toxic	Radioisotopes
		Floor Drain	Carcinogens/Regulated
		Floor Sink	Chemical Waste Storage
		Safety Shower/ Eyewash	Biological Storage
			Radioisotope Storage
			Chemical Storage

**Special Equipment / features**

2 benchtop diffusion systems  
IPPSF  
Moveable bench system  
Needs "dirty" area for tissue prep  
Surveillance camera system for 24 hour monitoring of processes.  
Include 4 recording carrels for lab technicians.

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	ICCM/NICKS	Space ID No.:	
Space Name:	GENERAL LABORATORY	Occupants:	2 to 3

Description: A generalized flexible wet laboratory used for specific, limited term research projects or to serve visiting researchers.

Area: 2 General laboratories @ 300 s.f. 600 s.f.

600 s.f.

Key Adjacencies: Access to Utility Area

<b>ARCHITECTURAL</b>			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT		Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	X	Gyp Board, Epoxy Paint	3' x 7'
Epoxy		Epoxy/Fiberglass system	3' x 7' Pair
Sealed Concrete		Other	3' x 7' + 1'-6" x 7'
Carpet			Vision Panel
Other			
<b>Base</b>		<b>Ceiling</b>	<b>MECHANICAL</b>
4" Vinyl		Open	Temperature
4" Rubber		Acoustic Tile	68 - 75 deg +/- 2 deg F
Integral w/ floor	X	Gyp Board, Paint	Other
Wood		Height	Humidity
		Natural Daylight	Ambient
		Marker Board	Other

<b>LABORATORY FEATURES</b>			
<b>HOODS</b>		<b>PLUMBING</b>	<b>ELECTRICAL</b>
Chemical Fume Hood		Laboratory Gas	Emergency Power
Radioisotope Hood		Laboratory Vacuum	UPS
Laminar Flow Hood		Laboratory Air	Phone
Biological Safety Cabinet		Potable Hot Water	Data
Snorkel		Potable Cold Water	Task Lighting
Canopy Hood		Purified Water (DI/RO)	Darkenable
		Chilled Water	Zoned Lighting
<b>LABORATORY EQUIPMENT</b>		Carbon Dioxide	
Vibration Sensitive		Nitrogen Gas	<b>CHEMICALS</b>
Light Sensitive		Cylinder Gases	Bases
Vibration Producing		Ineret	Acids
Heat Producing		Flammable	Solvents
Noise Producing		Toxic	Radioisotopes
		Floor Drain	Carcinogens/Regulated
		Floor Sink	Chemical Waste Storage
		Safety Shower/ Eyewash	Biological Storage
			Radioisotope Storage
			Chemical Storage

**Special Equipment / features**

Moveable bench systems

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	ICCM/NICKS	Space ID No.:	
Space Name:	RADIOISOTOPE LABORATORY	Occupants:	2 to 3

Description: Wet laboratory dedicated to processes involving Radioisotope materials.

Area:	1 Laboratory	@	150 s.f.	150 s.f.
				150 s.f.

Key Adjacencies: Adjacent to Perfusion Laboratory  
 Access to Utility Area  
 Access to Analytical Chemistry Lab

<b>ARCHITECTURAL</b>			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT		Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	X	Gyp Board, Epoxy Paint	3' x 7'
Epoxy		Epoxy/Fiberglass system	3' x 7' Pair
Sealed Concrete		Other	3' x 7' + 1'-6" x 7'
Carpet			Vision Panel
Other			
<b>Base</b>		<b>Ceiling</b>	<b>MECHANICAL</b>
4" Vinyl		Open	Temperature
4" Rubber		Acoustic Tile	68 - 75 deg +/- 2 deg F
Integral w/ floor	X	Gyp Board, Paint	Other
Wood		Height	Humidity
		Natural Daylight	Ambient
		Marker Board	Other

<b>LABORATORY FEATURES</b>			
<b>HOODS</b>		<b>PLUMBING</b>	<b>ELECTRICAL</b>
Chemical Fume Hood		Laboratory Gas	Emergency Power
Radioisotope Hood	6'	Laboratory Vacuum	UPS
Laminar Flow Hood		Laboratory Air	Phone
Biological Safety Cabinet		Potable Hot Water	Data
Snorkel		Potable Cold Water	Task Lighting
Canopy Hood		Purified Water (DI/RO)	Darkenable
		Chilled Water	Zoned Lighting
<b>LABORATORY EQUIPMENT</b>		Carbon Dioxide	
Vibration Sensitive		Nitrogen Gas	<b>CHEMICALS</b>
Light Sensitive		Cylinder Gases	Bases
Vibration Producing		Inert	Acids
Heat Producing		Flammable	Solvents
Noise Producing		Toxic	Radioisotopes
		Floor Drain	Carcinogens/Regulated
		Floor Sink	Chemical Waste Storage
		Safety Shower/ Eyewash	Biological Storage
			Radioisotope Storage
			Chemical Storage

**Special Equipment / features**

2 Liquid Scintillation systems  
 Benchtop centrifuge  
 Moveable bench system  
 Include 1 recording carrel for lab technician.

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	ICCM/NICKS	Space ID No.:	
Space Name:	SAMPLE PREP ROOM	Occupants:	2 to 3

Description: A wet lab dedicated to the collection and preparation of animal tissue samples. for use in other labs. This is considered a "dirty" area.

Area:	1 Sample Prep Room @	300 s.f.	300 s.f.
			300 s.f.

Key Adjacencies: Access to Utility Area  
Must be segregated from other labs to avoid contamination.

<b>ARCHITECTURAL</b>			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT	_____	Gyp Board, Paint	3'-6" x 7' _____
Welded Seam Sheet Vinyl	_____	Gyp Board, Epoxy Paint	3' x 7' _____
Epoxy	X _____	Epoxy/Fiberglass system	3' x 7' Pair _____
Sealed Concrete	_____	Other	3' x 7' + 1'-6" x 7' _____
Carpet	_____		Vision Panel _____
Other	_____		
<b>Base</b>		<b>Ceiling</b>	<b>MECHANICAL</b>
4" Vinyl	_____	Open	Temperature
4" Rubber	_____	Acoustic Tile	68 - 75 deg +/- 2 deg F _____
Integral w/ floor	X _____	Gyp Board, Paint	Other _____
Wood	_____	Height	Humidity
		Natural Daylight	Ambient _____
		Marker Board	Other _____

<b>LABORATORY FEATURES</b>			
<b>HOODS</b>		<b>PLUMBING</b>	<b>ELECTRICAL</b>
Chemical Fume Hood	_____	Laboratory Gas	Emergency Power _____
Radioisotope Hood	_____	Laboratory Vacuum	UPS _____
Laminar Flow Hood	_____	Laboratory Air	Phone _____
Biological Safety Cabinet	_____	Potable Hot Water	Data _____
Snorkel	_____	Potable Cold Water	Task Lighting _____
Canopy Hood	_____	Purified Water (DI/RO)	Darkenable _____
		Chilled Water	Zoned Lighting _____
<b>LABORATORY EQUIPMENT</b>		Carbon Dioxide	
Vibration Sensitive	_____	Nitrogen Gas	<b>CHEMICALS</b>
Light Sensitive	_____	Cylinder Gases	Bases _____
Vibration Producing	_____	Inert	Acids _____
Heat Producing	_____	Flammable	Solvents _____
Noise Producing	X _____	Toxic	Radioisotopes _____
		Floor Drain	Carcinogens/Regulated _____
		Floor Sink	Chemical Waste Storage _____
		Safety Shower/ Eyewash	Biological Storage _____
			Radioisotope Storage _____
			Chemical Storage _____

**Special Equipment / features**

- Centrifuge
- 4 to 6 Commercial benchtop blenders
- Moveable bench systems
- Stainless steel wash table
- Low temperature freezer (-20)
- Supply storage

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	ICCM/NICKS	Space ID No.:	
Space Name:	UTILITY AREA	Occupants:	Transient

Description: Centralized area for housing shared equipment and resources available to all labs.

Are: 1 Utiliry Area @ 750 s.f. 750 s.f.

750 s.f.

Key Adjacencies: Access to all labs.

ARCHITECTURAL			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT		Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	X	Gyp Board, Epoxy Paint	3' x 7'
Epoxy		Epoxy/Fiberglass system	3' x 7' Pair
Sealed Concrete	X	Other	3' x 7' + 1'-6" x 7'
Carpet			Vision Panel
Other			
<b>Base</b>		<b>Ceiling</b>	<b>MECHANICAL</b>
4" Vinyl		Open	Temperature
4" Rubber	X	Acoustic Tile	68 - 75 deg +/- 2 deg F
Integral w/ floor		Gyp Board, Paint	Other
Wood		Height	Humidity
		Natural Daylight	Ambient
		Marker Board	Other

LABORATORY FEATURES			
<b>HOODS</b>		<b>PLUMBING</b>	<b>ELECTRICAL</b>
Chemical Fume Hood		Laboratory Gas	Emergency Power
Radioisotope Hood		Laboratory Vacuum	UPS
Laminar Flow Hood		Laboratory Air	Phone
Biological Safety Cabinet		Potable Hot Water	Data
Snorkel		Potable Cold Water	Task Lighting
Canopy Hood		Purified Water (DI/RO)	Darkenable
		Chilled Water	Zoned Lighting
<b>LABORATORY EQUIPMENT</b>		Carbon Dioxide	
Vibration Sensitive		Nitrogen Gas	<b>CHEMICALS</b>
Light Sensitive		Cylinder Gases	Bases
Vibration Producing		Ineret	Acids
Heat Producing	X	Flammable	Solvents
Noise Producing	X	Toxic	Radioisotopes
		Floor Drain	Carcinogens/Regulated
		Floor Sink	Chemical Waste Storage
		Safety Shower/ Eyewash	Biological Storage
			Radioisotope Storage
			Chemical Storage

**Special Equipment / features**

- 4 to 8 Ultralow temperature freezers (-80)
- 4 to 8 Low temperature freezers (-20)
- Liquid nitrogen and carbon dioxide storage tanks
- Laboratory instrument and supply storage
- Bench and sink
- Washer and Dryer (If possible)

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	ICCM	Space ID No.:	
Space Name:	FACULTY OFFICE SUITE	Occupants:	Up to 8

Description: Offices for faculty with shared Collaboration Space.

Area:	6 Faculty Offices @	144 s.f.	864 s.f.
	1 Collaboration Space @	150 s.f.	180 s.f.
			1044 s.f.

Key Adjacencies: Readily accessible from administrative, lab, and office areas.  
Accessible to NICKS Office Suite

ARCHITECTURAL			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT		Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	_____	Gyp Board, Epoxy Paint	3' x 7'
Epoxy	_____	Epoxy/Fiberglass system	3' x 7' Pair
Sealed Concrete	_____	Other	3' x 7' + 1'-6" x 7'
Carpet	_____x		Vision Panel
Other	_____		
		<b>Ceiling</b>	
<b>Base</b>		Open	<b>MECHANICAL</b>
4" Vinyl		Acoustic Tile	Temperature
4" Rubber	_____x	Gyp Board, Paint	68 - 75 deg +/- 2 deg F
Integral w/ floor	_____	Height	Other
Wood	_____	Natural Daylight	Humidity
		Marker Board	Ambient
			Other

**Special Equipment**

Offices-  
Office desk, credenza, desk chair, side chairs, book shelving  
Computer, phone

Collaboration Area-  
Reconfigurable tables and chairs for 8  
Marker Board  
Tack Board  
Storage cabinet  
Wireless access  
Optional - Moveable soft seating with tablet arms

**Institute for Computational Comparative Medicine**  
**Nanotechnology Innovation Center of Kansas State**  
**Bowman Bowman Novick Inc.**

Department:	NICKS	Space ID No.:	
Space Name:	FACULTY OFFICE SUITE	Occupants:	Up to 8

Description: Offices for faculty with shared Collaboration Space.

Area:	5 Faculty Offices @	144 s.f.	720 s.f.
	1 Collaboration Space @	150 s.f.	180 s.f.
			900 s.f.

Key Adjacencies: Readily accessible from administrative, lab, and office areas.  
 Accessible to ICCM Office Suite

ARCHITECTURAL			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT		Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	_____	Gyp Board, Epoxy Paint	3' x 7' _____ X
Epoxy	_____	Epoxy/Fiberglass system	3' x 7' Pair _____
Sealed Concrete	_____	Other	3' x 7' + 1'-6" x 7' _____
Carpet	_____ X		Vision Panel _____
Other	_____		
		<b>Ceiling</b>	
<b>Base</b>		Open	<b>MECHANICAL</b>
4" Vinyl		Acoustic Tile	Temperature
4" Rubber	_____ X	Gyp Board, Paint	68 - 75 deg +/- 2 deg F _____ X
Integral w/ floor	_____	Height	Other _____
Wood	_____	Natural Daylight	Humidity _____
		Marker Board	Ambient _____ X
			Other _____

**Special Equipment**

Offices-  
 Office desk, credenza, desk chair, side chairs, book shelving  
 Computer, phone

Collaboration Area-  
 Reconfigurable tables and chairs for 8  
 Marker Board  
 Tack Board  
 Storage cabinet  
 Wireless access  
 Optional - Moveable soft seating with tablet arms

**Institute for Computational Comparative Medicine  
Nanotechnology Innovation Center of Kansas State  
Bowman Bowman Novick Inc.**

Department:	ICCM/NICKS	Space ID No.:	
Space Name:	POST DOC OFFICE AREA	Occupants:	Up to 12

Description: Office area for Post Docs.  
May be in the form of flexible office systems furniture or shared offices.  
(3 per 150 s.f. office). These spaces may also be used by visiting faculty  
who may need temporary access to workspace with phone and data.

Area:	12 Workspaces @	50 s.f.	600 s.f.
			600 s.f.

Key Adjacencies: Readily accessible from administrative, lab, and office areas.

ARCHITECTURAL			
<b>Floor</b>		<b>Partitions</b>	<b>Doors</b>
VCT	_____	Gyp Board, Paint	3'-6" x 7'
Welded Seam Sheet Vinyl	_____	Gyp Board, Epoxy Paint	3' x 7'
Epoxy	_____	Epoxy/Fiberglass system	3' x 7' Pair
Sealed Concrete	_____	Other	3' x 7' + 1'-6" x 7'
Carpet	_____X		Vision Panel
Other	_____		
		<b>Ceiling</b>	
<b>Base</b>		Open	<b>MECHANICAL</b>
4" Vinyl	_____	Acoustic Tile	Temperature
4" Rubber	_____X	Gyp Board, Paint	68 - 75 deg +/- 2 deg F
Integral w/ floor	_____	Height	Other
Wood	_____	Natural Daylight	Humidity
		Marker Board	Ambient
			Other

**Special Equipment**

Offices- Equip workspaces with phone line, data line, access to wireless, worksurface and chair.

## X. Program SummaryTable

ICCM - Institute of Computational Comparative Medicine  
 NICKS - Nanotechnology Innovation Center of Kansas State

Center Affiliation	Space Name	Occupants	Critical Adjacencies or Segregations	Special Equipment	Key Features	Area
ICCM/ NICKS	Administrative Suite  1 ICCM Director Office @ 180 s.f. 1 NICKS Director Office @ 180 s.f. 1 Admin. Assist. @ 80 s.f. 1 Assist. @ 60 s.f. 1 Waiting Area @ 100 s.f. 1 Mail / File Area @ 50 s.f.	9-10 people	Access directly from entry  Access to Main Conference		Inviting for visitors and campus users  Video screen in waiting area	700 s.f.
ICCM/ NICKS	Break Room	6-8 people	Access from administrative and lab areas	Refrigerator microwave coffee maker counter space and storage table and chairs for 8		150 s.f.
ICCM/ NICKS	Main Conference Room	25 people	Access to Reception Access to Director's offices		Video Conferencing Broadband link to KSU Olathe Prefer Rectangular room proportions	800 s.f.
ICCM/ NICKS	Conference Room	10 people	Access to Reception Access to Director's offices		Conference table Video Conferencing	240 s.f.
ICCM	Computational Lab  1 Main Computer @ 400 s.f. 8 touchdown spaces @ 50 s.f. 2 conference rooms @ 140 s.f.	8-12 people	Access to Reception Area	Systems furnishings	large screen video conferencing multiple white boards collaboration space Linkage to LCAT	1250 s.f.
ICCM	Analytical Chemistry Laboratory	8-12 people	Access to Utility Area Near Computer Area Close to Perffusion and Radioisotope Labs Segregated from Tissue labs	Liquid Chromatography - Mass Spectrometry Gas Chromatography - Mass Spectrometry BSAI Index 6' Chemical Fume Hood Nitrogen Generator Benches and Sinks	Prep area 6 recording carrels for techs	1,300 s.f.

Center Affiliation	Space Name	Occupants	Critical Adjacencies or Segregations	Special Equipment	Key Features	Area
ICCM	FARAD Call Center	2 people		2 workstations w/ computer and phone		150 s.f.
NICKS	Cell Culture Facility	2-6 people	Access to Utility Area	2-6' laminar flow cabinets 1-4' laminar flow cabinet Biological safety cabinet 2 incubators 1 refrigerator Bench space and sink	4 recording carrels for techs.	600 s.f.
NICKS	Surgery Room	2-4 people	Proximity to Cell Culture Facility Proximity to Sample Prep Lab	Hand washing area with foot pedal sink. Adjustable surgical table. Adjustable overhead surgical light. Anesthesia machine. Cabintry for supply storage.		180 s.f.
NICKS	Histopath Prep/EM - Wet Laboratory	2-3 people	Access to Utility Area	1 - 6' Chemical Fume Hood Stainer Cryostat Balances Tissue Processor Bench space and sink	Can be 1 wall of a larger lab 1 recording carrel for tech.	350 s.f.
NICKS	Microscopy Room	2-8 people	Access to Utility Area	Cytovivascop Nanocyte Fluorescent Scope Confocal	Can be a long, narrow space 2 people work at each scope Vibration Isolation Lighting control critical	250 s.f.
NICKS	Instrument Room - Dry Laboratory		Adjacent to Cell Culture lab	Zetasizer and Computer Luminex and Computer Fluorinert	Primarily benchtop equipment	150 s.f.
ICCM/ NICKS	Perfusion Laboratory	2-6 people	Adjacent to Radioisotope Lab Access to Utility Area	2 benchtop diffusion cell systems 1 - 12' chemical fume hood IPPSF Biological Safety Cabinet Bench and sink	Consider snorkel system to replace 12' hood Needs camera surveillance Needs "dirty " area for tissue prep 4 recording carrels for techs.	550 s.f.
ICCM/ NICKS	General Labs  2 Labs @ 300 s.f.	2-3 people each	Access to Utility Area	Benches and Sinks	No Hoods Flexible Use	600 s.f.

Center Affiliation	Space Name	Occupants	Critical Adjacencies or Segregations	Special Equipment	Key Features	Area
ICCM/ NICKS	Radioisotope Lab	2-3 people	Adjacent to Perfusion Lab Access to Utility Area	2 - Liquid scintillation systems Radioisotope Storage 6' radioisotope Hood Benchtop Centrifuge Benches and sink	1 recording carrel for tech	150 s.f.
ICCM/ NICKS	Sample Prep Room - Wet Lab	2-3 people	Must be segregated from other labs Access to Utility Area	Centrifuge 4-6 Benchtop blenders Stainless Steel wash table Freezer for sample storage Bench and sink Supply storage	"Dirty " area Organ removal procedures	300 s.f.
ICCM/ NICKS	Utility Area		Accessible to all labs	4-8 -80 deg freezers 4-6 -20 deg freezers Liquid Nitrogen and carbon dioxide tanks Lab supply storage Washer/dryer if possible Bench and Sink		750 s.f.
ICCM	Offices 6 Faculty @ 144 s.f. 1 Collaboration Space @ 150 s.f.					1014 s.f.
NICKS	Offices 5 Faculty @ 144 s.f. 1 Collaboration Space @ 150 s.f.					870 s.f.
ICCM/ NICKS	Post Doc Offices 12 Workspaces @ 50 s.f.				Office systems furniture or shared offices.	600 s.f.

Net Programmed Area	10,954 s.f.
Grossing Factor (.40)	<u>4,382 s.f.</u>
Gross Area	15,336 s.f.

## **XI. Appendix**

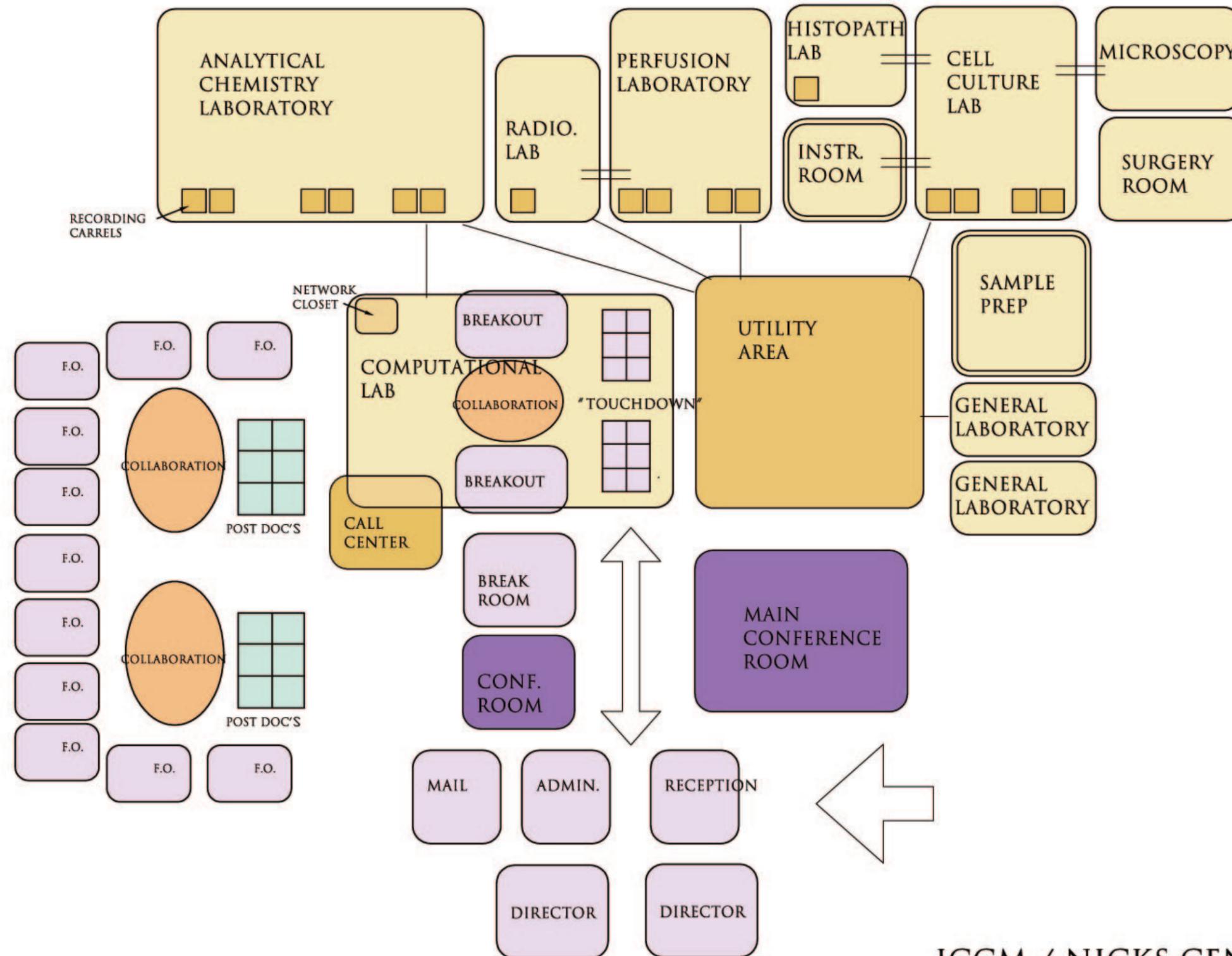
## EXHIBIT A

Mosier Hall Research Center Remodel - ICCM/NICKS  
Program Phase Construction Budget  
Bowman Bowman Novick Inc.

Selective Demolition	16,000 s.f.	@	\$ 10.00 /s.f.	\$ 160,000.00
Spatial Build-out (Walls, floor and ceiling finishes)	16,000 s.f.	@	\$ 80.00 /s.f.	\$ 1,280,000.00
Laboratory Fit Up (Casework, fittings, and fixed equipment)	5,500 s.f.	@	\$ 95.00 /s.f.	\$ 522,500.00
Mechanical/Electrical/Plumbing (Assumes new systems for this area)	16,000 s.f.	@	\$ 200.00 /s.f.	\$ 3,200,000.00
Replace Electrical Switchboard	1 l.s.	@	\$ 50,000.00	<u>\$ 50,000.00</u>
Subtotal				\$ 5,212,500.00
New Generator and distribution to serve labs associated with this project	1 l.s.	@	\$ 140,000.00	\$ 140,000.00
Modifications/Replacement of 2 Air Handling Units to resolve mechanical noise issue	1 l.s.	@	\$ 500,000.00	\$ 500,000.00
Penthouse for New Air Handling Units	1 l.s.	@	\$ 106,000.00	<u>\$ 106,000.00</u>
Total				\$ 5,958,500.00

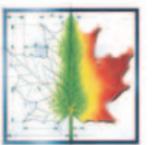
Figures include Contractor Fees.

Design Fees, Permits, hazardous Material Abatement, and Loose furnishings and equipment are not included.

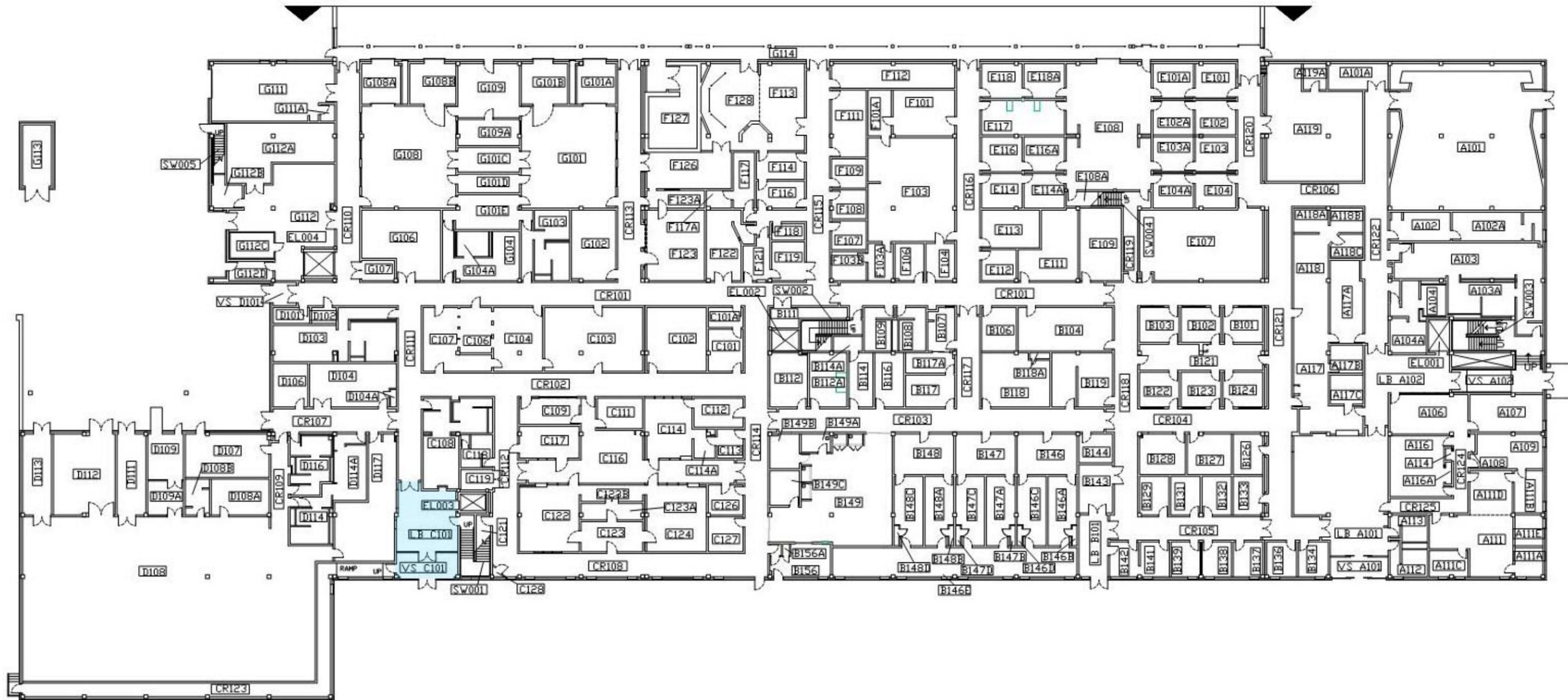


ICCM / NICKS CENTER  
 COLLEGE OF VETERINARY MEDICINE  
 KANSAS STATE UNIVERSITY

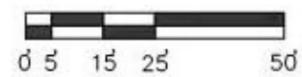
FUNCTION RELATIONSHIP DIAGRAM  
 BOWMAN BOWMAN NOVICK INC



INTEGRATING NATURE  
 AND ARCHITECTURE  
 BOWMAN  
 BOWMAN  
 NOVICK  
 INC

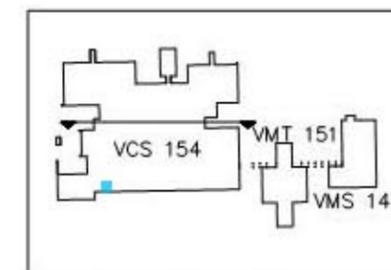


**1ST FLOOR OVERALL PLAN**



 **PROJECT AREA**

**INSTITUTE FOR COMPUTATIONAL COMPARATIVE MEDICINE  
 NANOTECHNOLOGY INNOVATION CENTER OF KANSAS STATE  
 MOSIER HALL - KANSAS STATE UNIVERSITY**



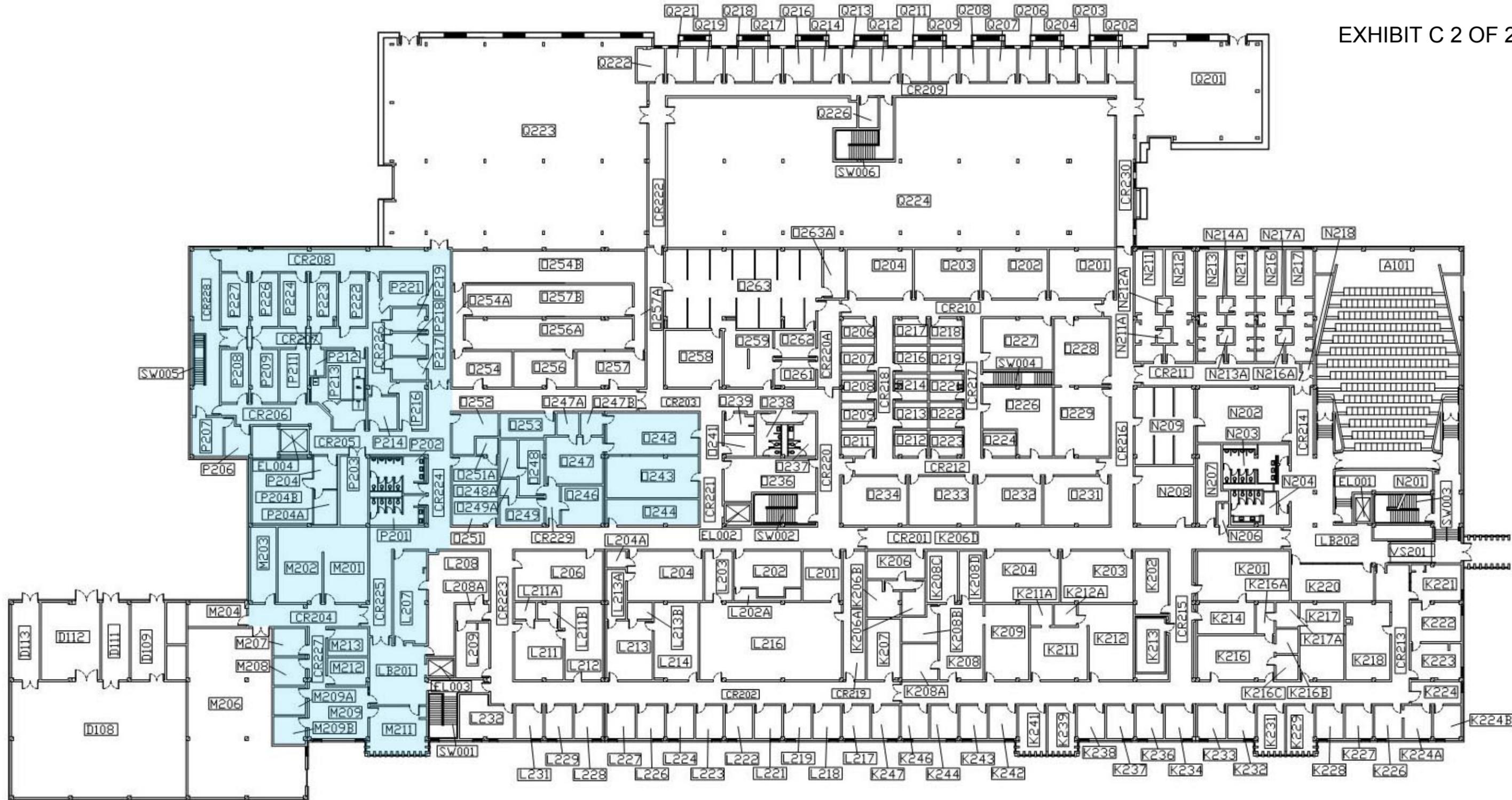
VETERINARY COMPLEX  
 LOCATION PLAN



INTEGRATING NATURE  
 AND ARCHITECTURE

**BOWMAN  
 BOWMAN  
 NOVICK  
 INC**



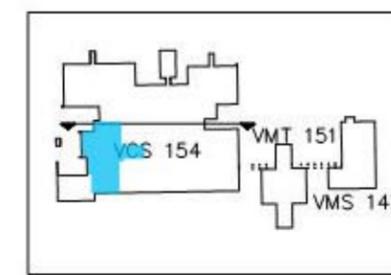


**SECOND FLOOR OVERALL PLAN**



**PROJECT AREA**

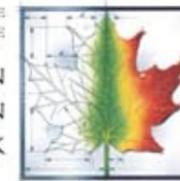
**INSTITUTE FOR COMPUTATIONAL COMPARATIVE MEDICINE  
 NANOTECHNOLOGY INNOVATION CENTER OF KANSAS STATE  
 MOSIER HALL - KANSAS STATE UNIVERSITY**

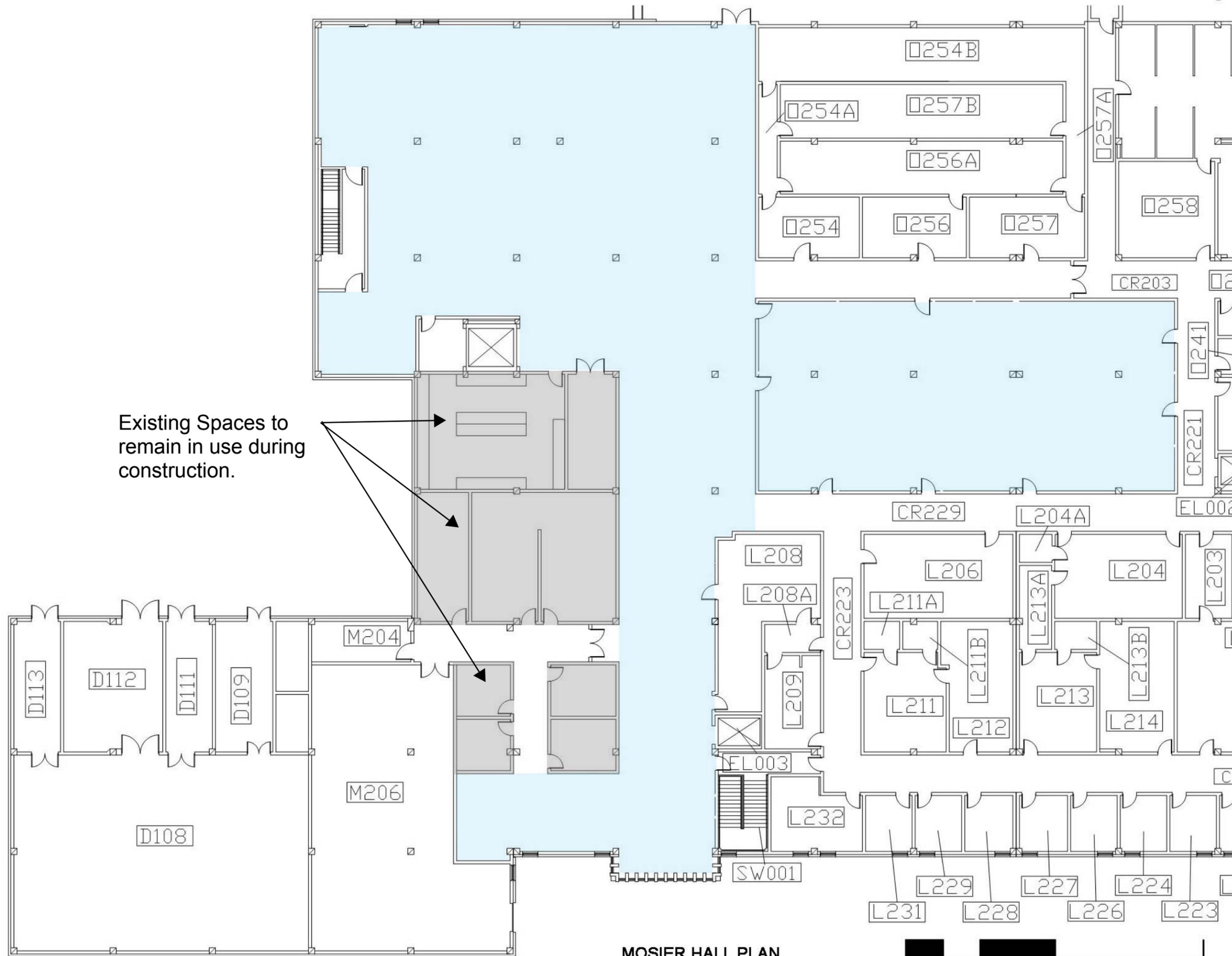


VETERINARY COMPLEX  
LOCATION PLAN



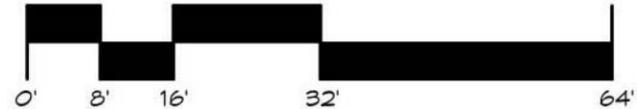
INTEGRATING NATURE  
 AND ARCHITECTURE  
**BOWMAN  
 BOWMAN  
 NOVICK  
 INC.**





Existing Spaces to remain in use during construction.

MOSIER HALL PLAN  
SCALE = 1/16" = 1'-0"





**PROGRAM ZONING STUDY**

**INSTITUTE FOR COMPUTATIONAL COMPARATIVE MEDICINE  
NANOTECHNOLOGY INNOVATION CENTER OF KANSAS STATE  
MOSIER HALL - KANSAS STATE UNIVERSITY**

