Contact: John Nash

REGISTER OF UNIVERSITY OF IOWA
CAPITAL IMPROVEMENT BUSINESS TRANSACTIONS

Actions Requested: Consider recommending to the Board the:

A. Following actions for the**:**

1) **Utilities Distribution System – Replace Old Capitol Tunnel** and the
2) **Chilled Water Plant 2 (West) – Increase Cooling Tower Capacity** projects, both major capital projects as defined by Board policy.

- Approve permission to proceed with project planning, including the design professional selection process for both projects and the use of the design-build-bridging alternative delivery method in lieu of the traditional design-bid-build delivery method for the Chilled Water Plant project.

B. Following actions for the:

3) **Medical Laboratories - Renovate Laboratory Suites 1020 and 1040** ($2,600,000),
4) **Bowen Science Building – Renovate 1-500 Lab and Offices** ($3,800,000),
5) **Medical Education Research Facility – Construct GMP Facility in Room L182** ($2,200,000),
6) **L6 JPP Labor and Delivery Expansion – Phase 2** ($4,550,000), and the
7) **JPP Neurosurgery and Psychiatry Clinic Relocation Expansion** ($3,175,000) projects; all major capital projects as defined by Board policy:

- Accept the Board Office review and recommendation that the projects meet the capital project evaluation criteria for Board consideration; and
- Approve the schematic designs, project descriptions and budgets with the understanding that approval would constitute final Board approval and authorization to proceed with construction.

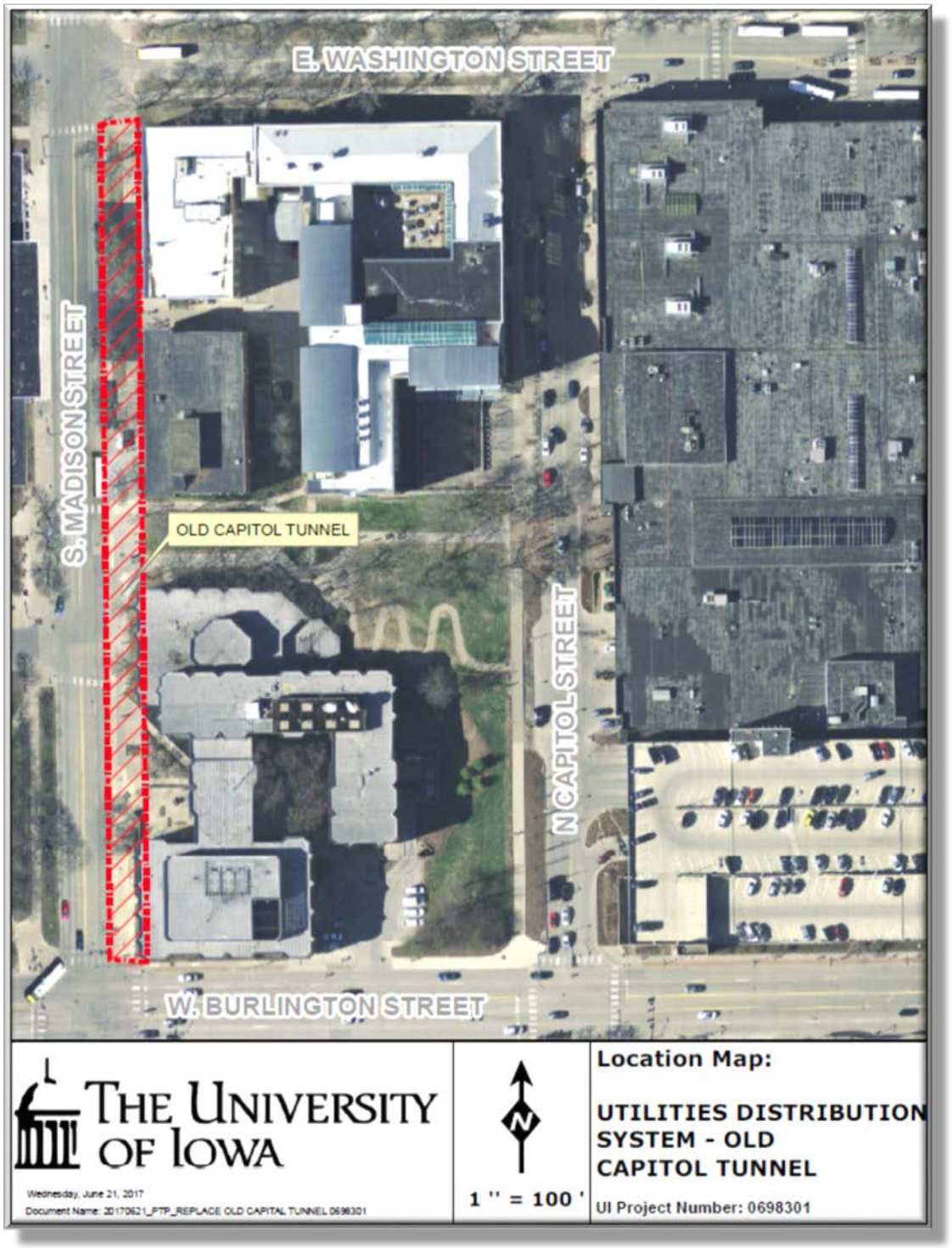
Project #1 of 7

Utilities Distribution System – Replace Old Capitol Tunnel

Executive Summary: The University requests permission to proceed with project planning to install direct-buried, insulated, steam and condensate pipe under the east sidewalk of Madison Street from Burlington Street to Washington Street (see page 3 for location). After installation, the existing 97-year-old Old Capitol Tunnel would be abandoned and/or demolished. The project budget of $8,000,000 to $10,000,000 would be funded by Utility Renewal and Improvement funds and/or Utility Enterprise Revenue Bonds.

Background: The 1920's Old Capitol Tunnel was originally constructed to provide steam from the Main Power Plant to the Pentacrest buildings. Today, the tunnel is one of two utility tunnels that provides steam to the entire East Campus and is a critical component of the campus heating system. A 2016 Tunnel Condition Assessment Study found the tunnel to have up to 60% severe deterioration due to age and exposure to snowmelt salts. Options considered were repair of the existing tunnel, build a new tunnel, or install direct-buried insulated pipe.

UNIVERSITY OF IOWA
Utilities Distribution System – Replace Old Capitol Tunnel Map



Project #2 of 7

Chilled Water Plant 2 (West) – Increase Cooling Tower Capacity

Executive Summary: The University requests permission to proceed with project planning to install a new cooling tower on the roof of the existing Chilled Water Plant 2 (West) thereby increasing cooling capacity and overall performance of the plant (see page 5 for location). The project budget of $5,000,000 to $10,000,000 would be funded by Utility Renewal and Improvement funds and/or Utility Enterprise Revenue Bonds.

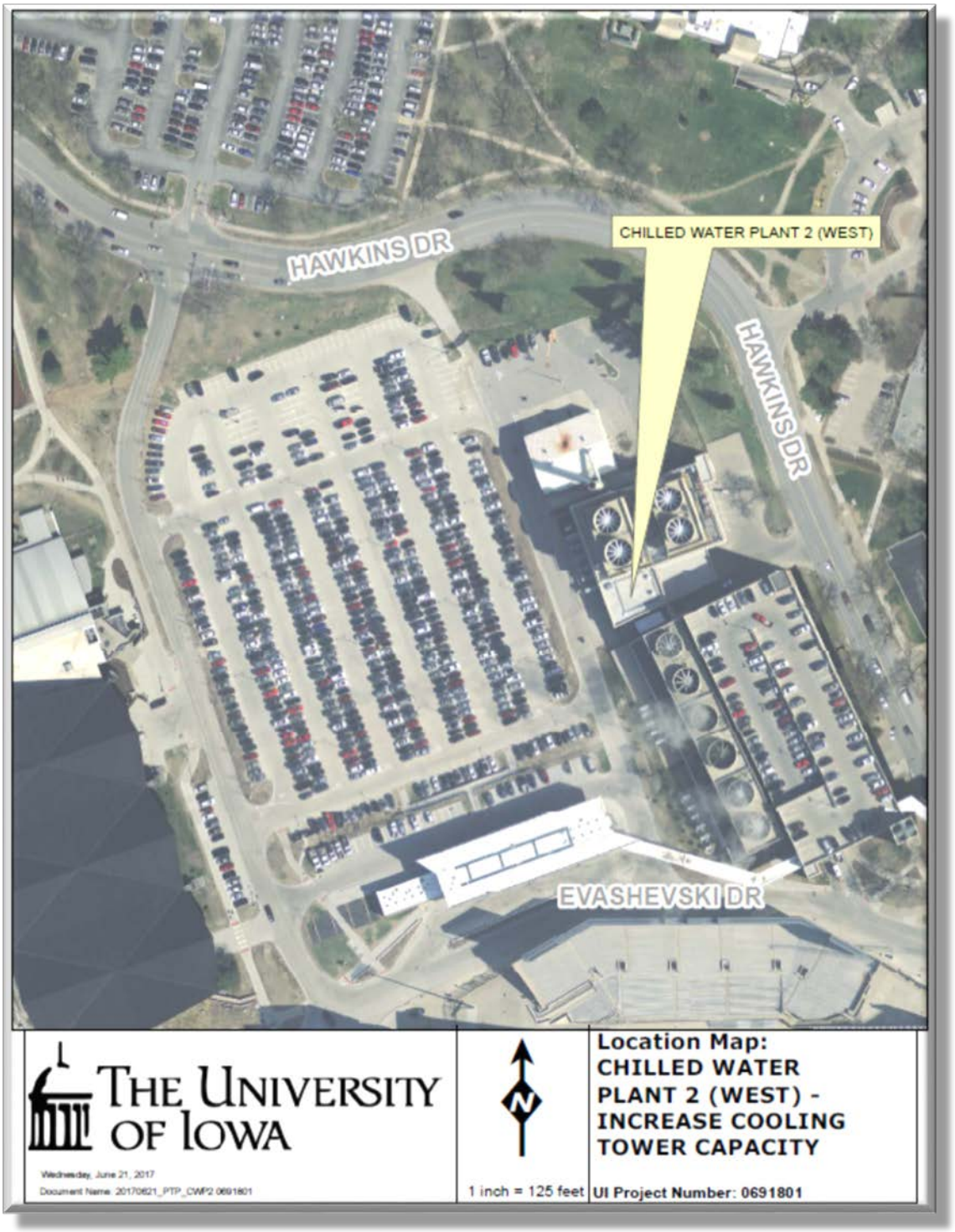
Background: The University of Iowa uses a centralized chilled water system in which chilled water is produced by central plants and is pumped throughout the campus to provide air-conditioning and equipment cooling to campus buildings, including the nearby University of Iowa Stead Family Children's Hospital. Chilled Water Plant 2 on the west campus does not currently have cooling tower capacity to operate at full capacity during the peak of cooling season when hot / humid conditions make cooling tower operation less efficient than usual. This project would provide the needed increased capacity to meet campus needs on those peak cooling days.

While it would require reinforcement of the existing building structure, installing the tower on the existing plant roof would eliminate expenses associated with new foundations and structures, locates the new tower at the optimum elevation relative to other towers, and preserves adjacent land for future developments.

The use of the design-build-bridging alternative delivery method would to expedite the schedule and the delivery of the needed additional cooling.

Chilled Water Plant 2 (West), built in 2009

UNIVERSITY OF IOWA
Chilled Water Plant 2 (West) – Increase Cooling Tower Capacity
Location Map



Project #3 of 7

Medical Laboratories - Renovate Laboratory Suites 1020 and 1040

Executive Summary: This project would renovate the south wing of the first floor for 36 Department of Pathology staff in this 90-year-old facility (see page 7 for location). Tissue culture/equipment labs, four offices, a break room would be remodeled. The project budget of $2,600,000 would be funded by Carver College of Medicine Gifts and Earnings, Building Renewal, and Treasurer's Temporary Investment Income.

Background:

	Amount	Date	Board Action
Design Professional Selection (Rohrbach Associates, Iowa City)		May 2017	Not Required*
Design Professional Agreement (Schematic Design-Construction Services)	$ 185,300	July 2017	Not Required*
Program Statement		Aug. 2017	Not Required*
Schematic Design		Sept. 2017	Requested
Project Description and Budget	2,600,000	Sept. 2017	Requested

***** Approved by Executive Director, consistent with Board policy.

A 2017 feasibility study explored potential locations for the labs and office within the Medical Laboratories building. The study examined spaces on the west and south sides but ultimately focused on the south location for this project. This area currently does not maximize the number of workstations and equipment areas nor does it take advantage of natural light in the offices. A more efficient and modern research lab and office space is desired to accommodate four additional investigators, each with a staff of eight.

Project Program

	Approved Building Program	Schematic Design
Total Net Assignable Space	4,933	4,933
Anticipated Gross Square Feet	5,845	5,845
Anticipated Net-to-Gross Ratio	84 percent	84 percent

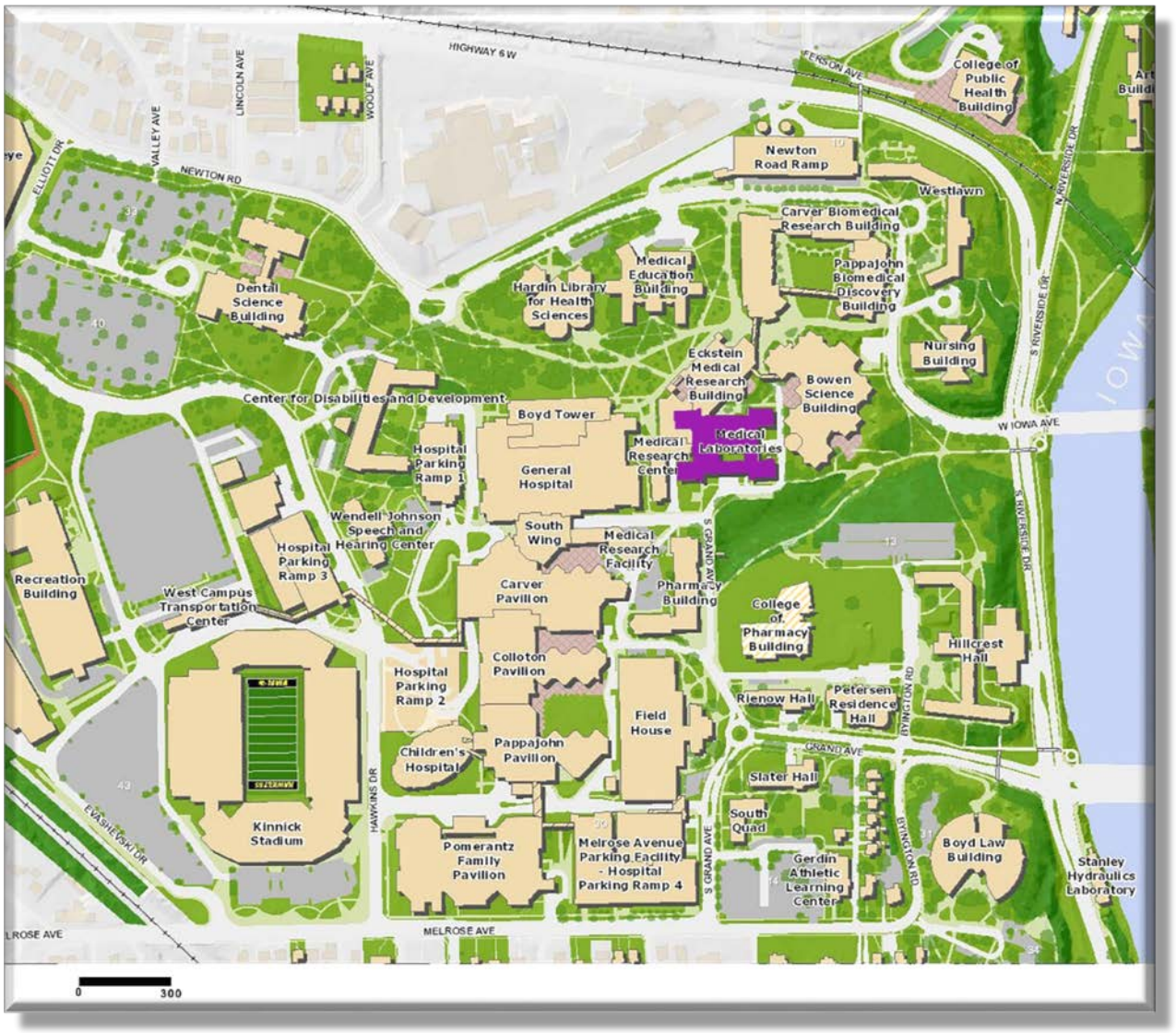
Project Budget

Planning, Design & Management	$ 330,000
Construction	2,020,000
Furniture & Equipment	50,000
Contingency	200,000
Total	**$ 2,600,000**

Source of Funds: Carver College of Medicine Gifts and Earnings, Building Renewal, Treasurer's Temporary Investment Income

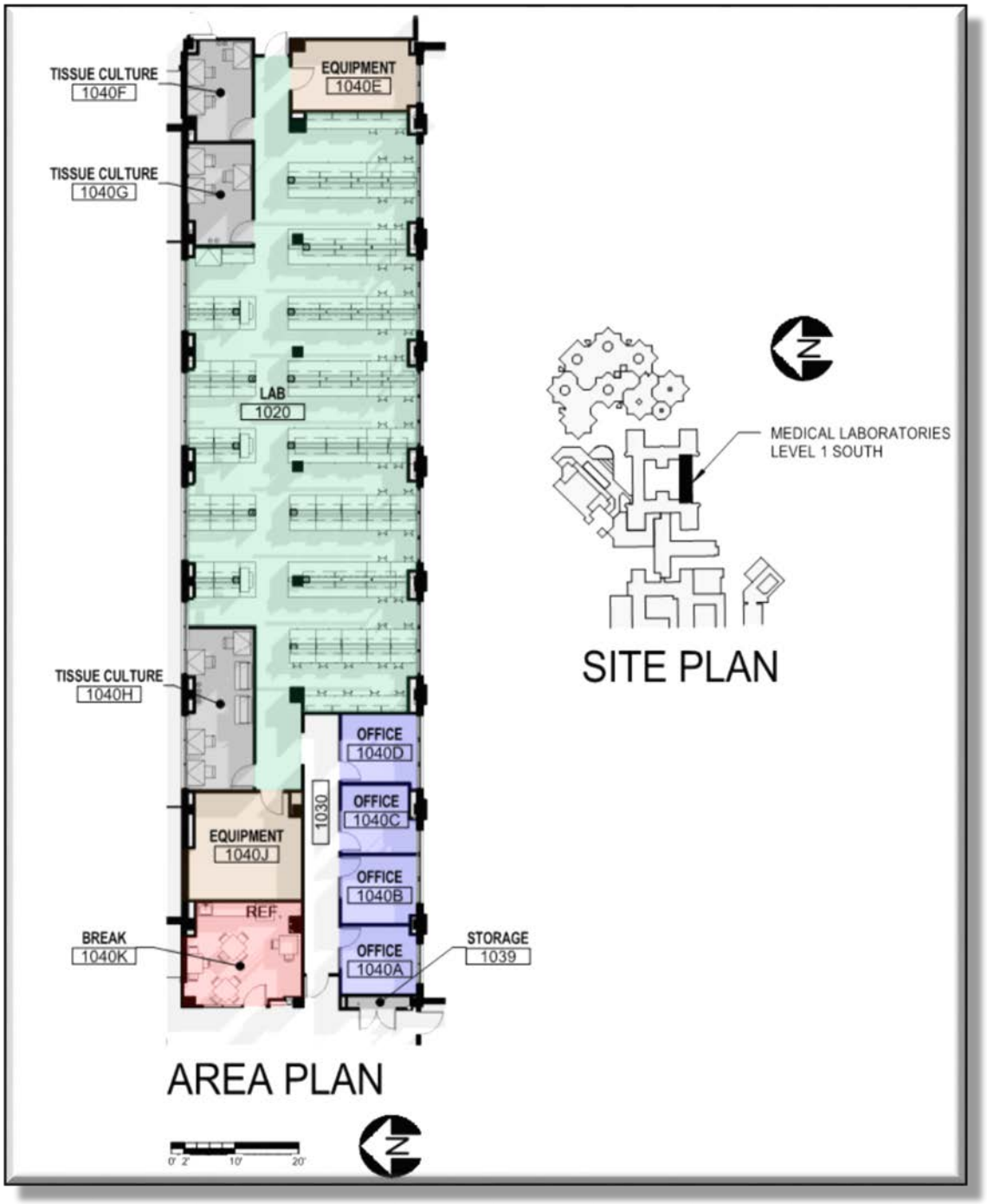
UNIVERSITY OF IOWA
Medical Laboratories - Renovate Laboratory
Suites 1020 and 1040

Schematic Design: Location Map



UNIVERSITY OF IOWA
Medical Laboratories - Renovate Laboratory
Suites 1020 and 1040

Schematic Design: Area Plan and Site Plan



Project #4 of 7

Bowen Science Building – Renovate 1-500 Lab and Offices

Executive Summary: This project would renovate 7,600 square feet of the first floor for the Human Toxicology and Exposure Sciences Group who plan to move out of their Oakdale campus location (see page 11 for location). The renovated space would include lab space, offices, a freezer farm, a neurobehavioral testing room, a microscopy room, and storage for lab supplies. The project budget of $3,800,000 would be funded by Building Renewal and Treasurer's Temporary Investment Income.

Bowen Science Building – Renovate 1-500 Lab and Offices project (interior only): built in 1972

Background:

	Amount	Date	Board Action
Design Professional Selection (Shive-Hattery, Inc., Iowa City)		Jul. 2016	Not Required*
Design Professional Agreement (Pre-Design through Record Documents)	$ 265,300	May 2017	Not Required*
Program Statement		Aug. 2017	Not Required*
Schematic Design		Sept. 2017	Requested
Project Description and Budget	3,800,000	Sept. 2017	Requested

***** Approved by Executive Director, consistent with Board policy.

The Human Toxicology and Exposure Sciences Group is housed on the Oakdale Campus in the Institute for Rural and Environmental Health (IREH) facility. The condition of IREH limits the group's ability to perform research, maintain equipment, and recruit new faculty. Relocation of the Human Toxicology and Exposure Sciences group to Bowen Science Building would strengthen ties with other biomedical investigators on the main campus, expand the availability of services, and build new synergies for innovation.

The scope of work includes demolition and construction of new walls, finishes, doors and hardware, lighting, plumbing, installation of a full fire suppression system on the first floor, and upgrading the exhaust / HVAC system within the space as required to support the group's research.

Project Program

	Approved Building Program	Schematic Design
Total Net Assignable Space	5,765	5,765
Anticipated Gross Square Feet	7,656	7,656
Anticipated Net-to-Gross Ratio	75 percent	75 percent

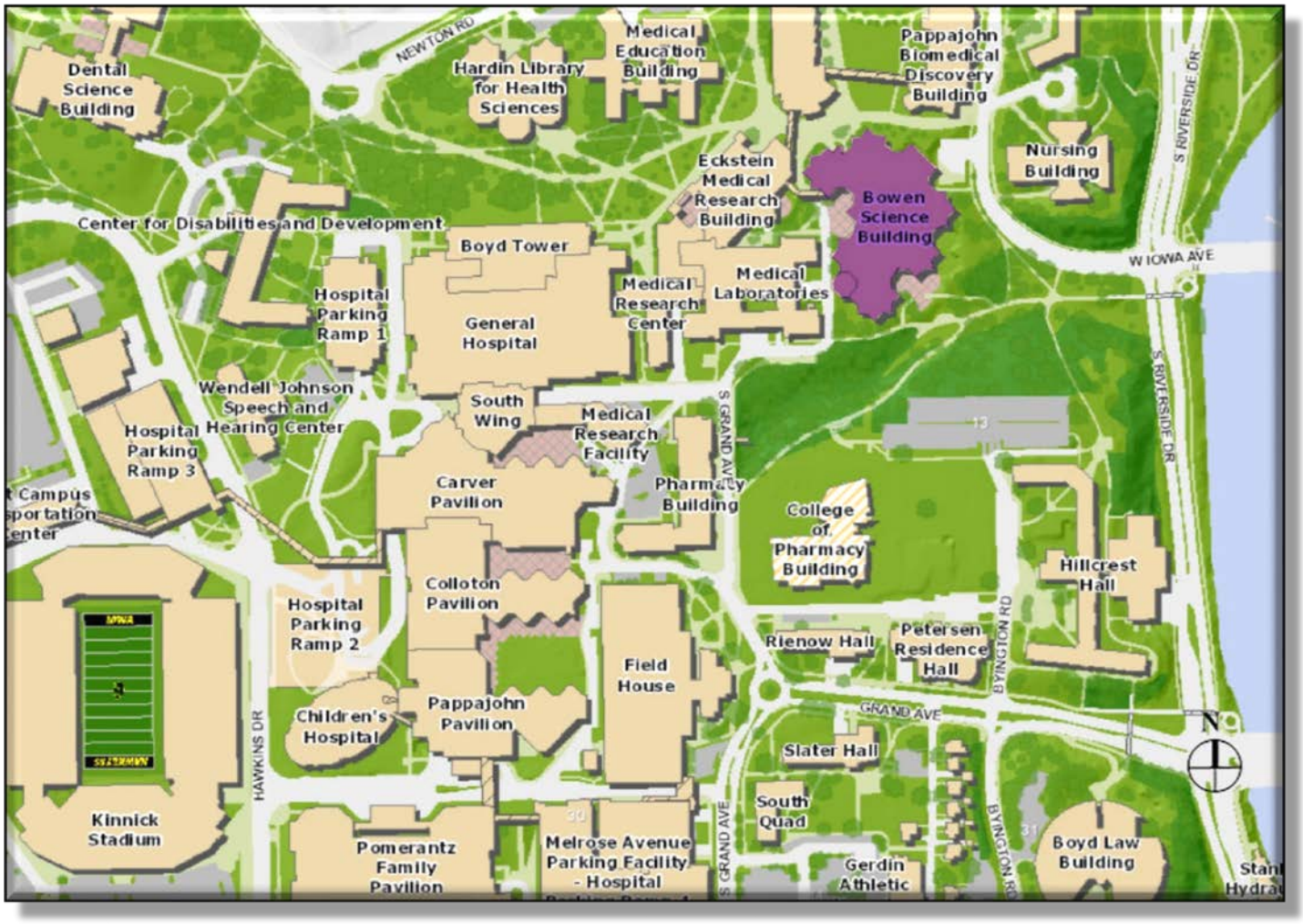
Project Budget

Planning, Design & Management	$ 500,000
Construction	2,900,000
Furniture & Equipment	100,000
Contingency	300,000
Total	**$ 3,800,000**

Source of Funds: Building Renewal and Treasurer's Temporary Investment Income

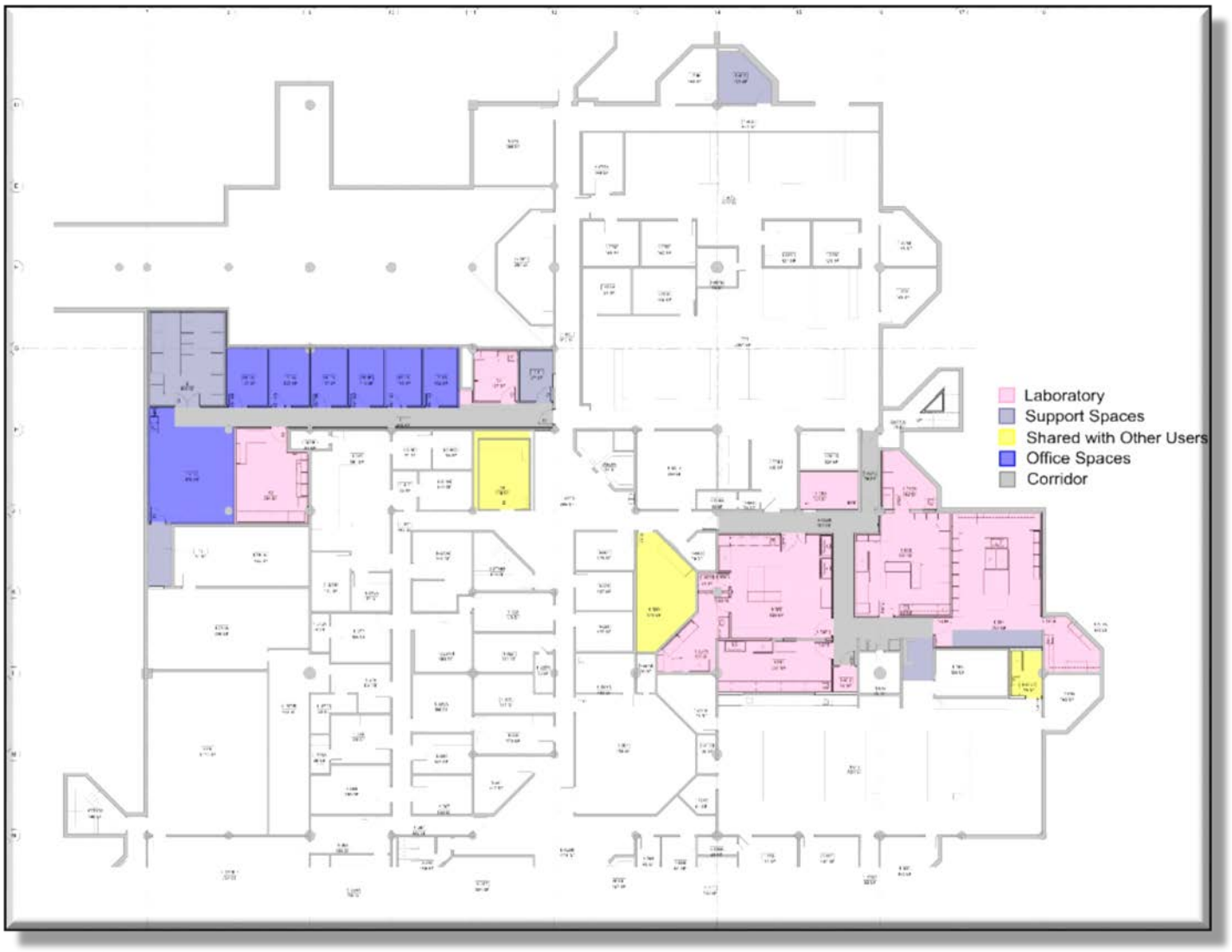
UNIVERSITY OF IOWA
Bowen Science Building – Renovate 1-500 Lab and Offices

Schematic Design: Location Map



UNIVERSITY OF IOWA
Bowen Science Building – Renovate 1-500 Lab and Offices

Schematic Design: Level 1 Floor Plan



Project #5 of 7

Medical Education Research Facility – Construct GMP Facility in Room

Executive Summary: The project would demolish a laboratory space and construct a cleanroom facility including a gowning room, processing area, centrifuge room, and material storage (see page 14 for location). The project budget of $2,200,000 would be funded by Carver College of Medicine Gifts and Earnings.

Background:

	Amount	Date	Board Action
Project Description and Budget	$2,200,000	Sept. 2017	Requested

In 2014, a cleanroom laboratory space dedicated to production of gene and stem cell based therapeutics for the treatment of inherited retinal degeneration was completed. This modular facility was designed such that three gene-based therapeutics and 12 autologous stem cell derived retinal grafts could be made each year.

In order to accelerate the rate of gene therapy and stem cell product production, and in turn the rate at which patients can be treated, additional cleanroom space is needed. This additional cleanroom space would allow for the production of gene-based therapeutics products to increase from three to 12 per year while simultaneously increasing the autologous stem cell derived retinal cell graft production from 12 to 24 per year.

The cost of the cleanroom equipment is a large part of the overall project budget. The renovation would include new lighting, HVAC equipment, electrical systems, process gases, and other utilities necessary to support the new cleanroom.

Project Budget

Planning, Design & Management	$ 300,000
Construction	700,000
Furniture & Equipment	1,000,000
Contingency	200,000
Total	**$ 2,200,000**

Source of Funds: Carver College of Medicine Gifts and Earnings

UNIVERSITY OF IOWA
Medical Education Research Facility – Construct GMP Facility in Room
Location Map

Project #6 of 7

L6 JPP Labor and Delivery Expansion – Phase 2

Executive Summary: The **L6 (Level 6) JPP (John Pappajohn Pavilion) Labor and Delivery Expansion – Phase 2** project would provide a 3,800 square foot expansion of the Labor and Delivery Suite on Level 6 and 6,200 square foot renovation of the Mother-Baby inpatient unit on Level 3 of the John Pappajohn Pavilion (JPP) (see page 17 for locations). The project budget of $4,550,000 would be funded by University Hospitals Building Usage Funds.

Background:

	Amount	Date	Board Action
Design Professional Selection (Heery Design, Iowa City)		Apr. 2017	Not Required*
Design Professional Agreement (Schematic Design-Record Documents)	$ 467,700	May 2017	Not Required*
Program Statement		Jun. 2017	Not Required*
Schematic Design		Sept. 2017	Requested
Project Description and Budget	4,550,000	Sept. 2017	Requested

***** Approved by Executive Director, consistent with Board policy.

The UIHC has experienced significant growth in labor and delivery (L&D) volumes in recent years and these volumes continue to trend upward. In the past four years, deliveries at UIHC have increased over 14% growing from 1,878 total deliveries in FY 2013 to 2,142 deliveries in FY 2016. Projection modeling indicates these volumes would continue to climb reaching approximately 2,500 deliveries by 2025. This increase in current and projected L&D volumes has created capacity constraints on existing facilities.

This project would also enable the UIHC to create additional post-partum and ante-partum capacity by expanding the Mother Baby Unit on level 3 JPP. As Iowa's only teaching hospital, UIHC serves some of the highest acuity obstetrical patients who often stay on the level 6 JPP for several weeks. Creating additional post-partum beds on level 3 JPP would allow the unit to relocate low acuity post-partum mothers from level 6 JPP to level 3 JPP and create additional capacity for long-term ante-partum patients on level 6 JPP thus enabling the entire group to run more efficiently.

Project Program

	Approved Building Program	Schematic Design
Total Net Assignable Space	6,585	6,585
Anticipated Gross Square Feet	11,000	11,000
Anticipated Net-to-Gross Ratio	60 percent	60 percent

Project Budget

Planning, Design & Management	$ 456,000
Construction	3,040,000
Furniture & Equipment	304,000
Contingency	750,000
Total	**$ 4,550,000**

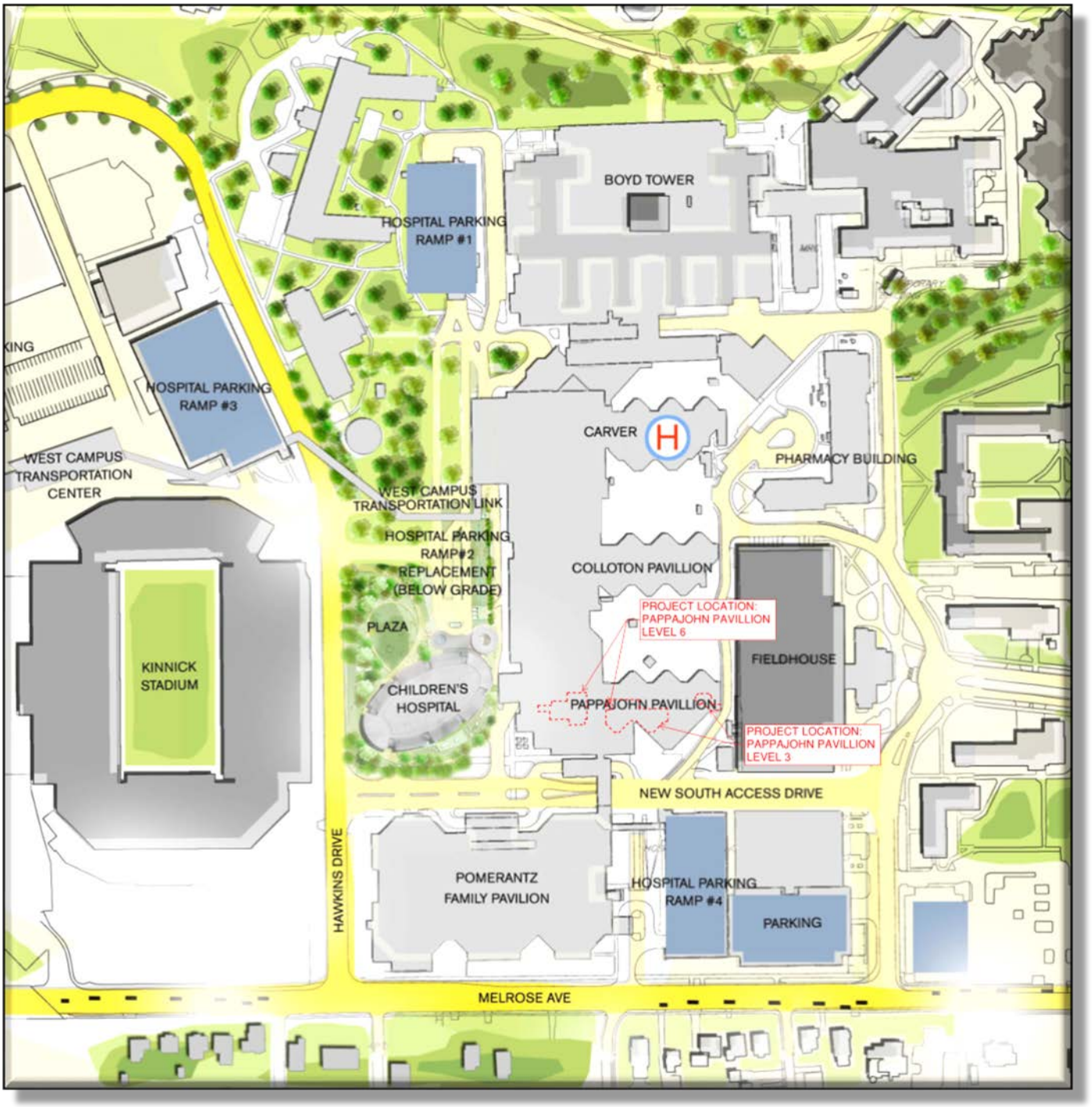
Source of Funds: University Hospitals Building Usage Funds

Schedule: Construction Start: Fall 2017
Construction Complete: Summer 2018

John Pappajohn Pavilion (JPP), built in 1991
project: L6 (Level 6) JPP Labor and Delivery Expansion – Phase 2 (interior only)

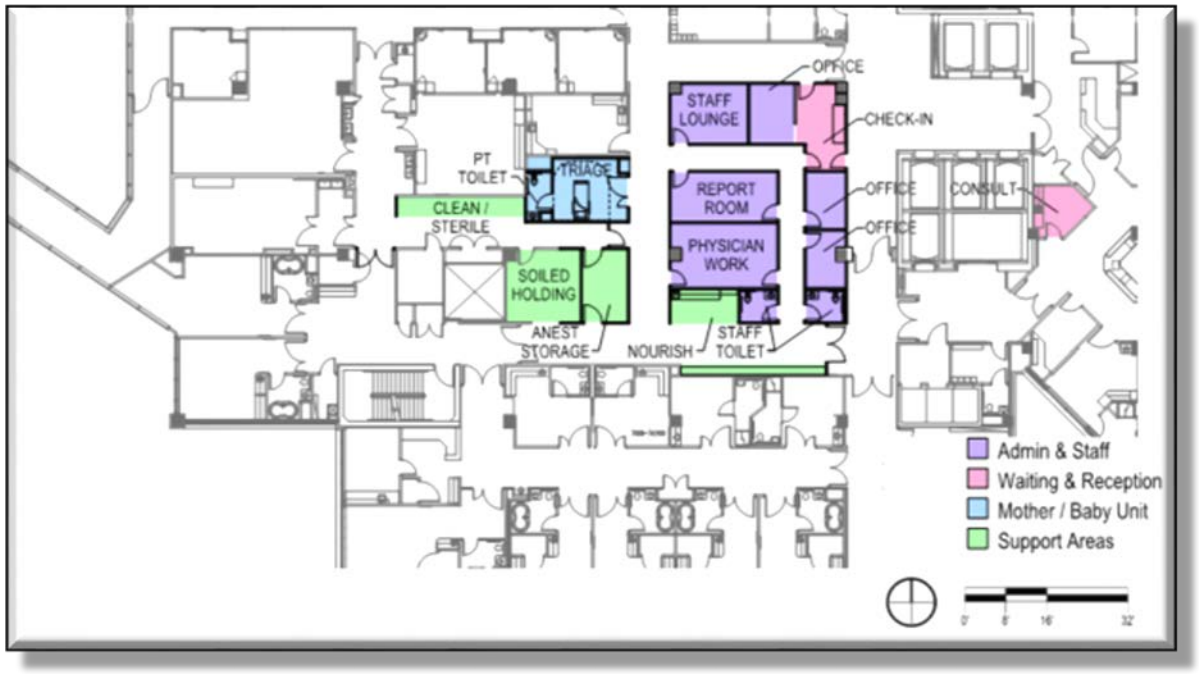
UNIVERSITY OF IOWA
L6 JPP Labor and Delivery Expansion – Phase 2

Schematic Design: Location Map

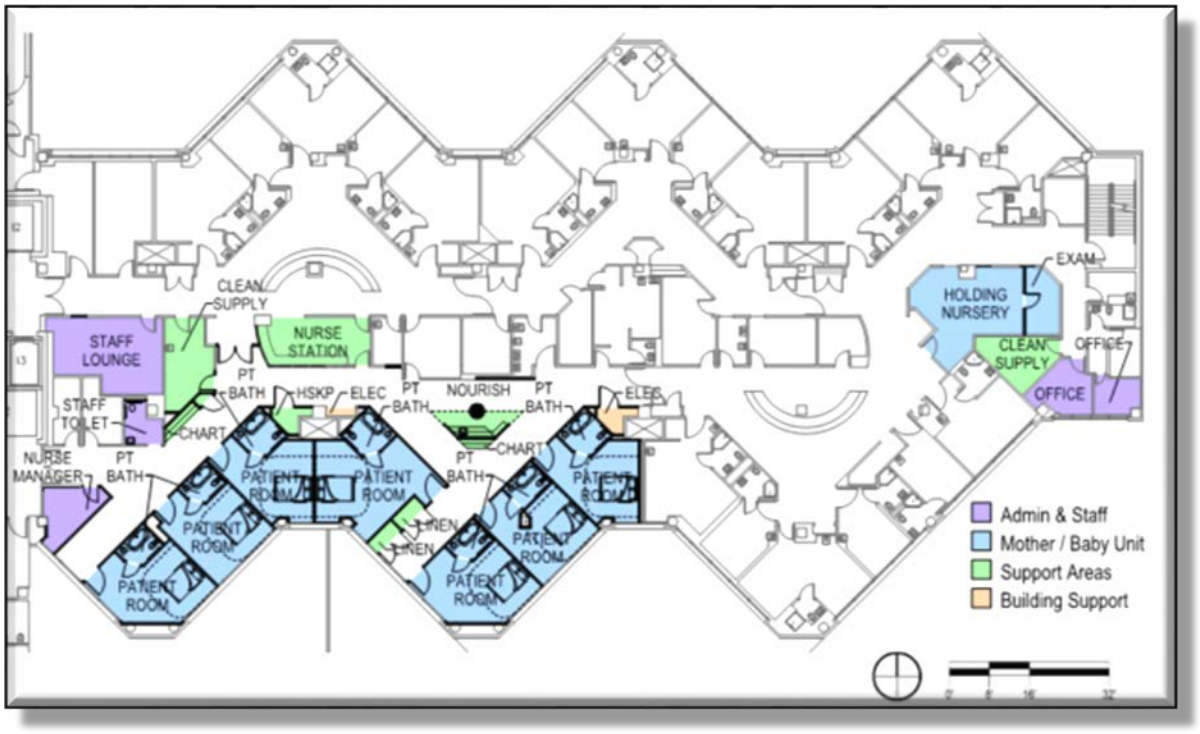


UNIVERSITY OF IOWA
L6 JPP Labor and Delivery Expansion – Phase 2

Schematic Design: Level 6 Floor Plan



Schematic Design: Level 3 Floor Plan



Project #7 of 7

JPP Neurosurgery and Psychiatry Clinic Relocation Expansion

Executive Summary: The **JPP Neurosurgery and Psychiatry Clinic Relocation Expansion** project would provide a 5,000 square foot renovation of Levels 1 and 2 for the Department of Neurosurgery and the Department of Psychiatry (see page 20 for location). Six exam rooms, a quiet room, a waiting room, a conference room and ten offices are included in the project. The project budget of $3,175,000 would be funded by University Hospitals Building Usage Funds.

Background:

	Amount	Date	Board Action
Design Professional Selection (OPN Architects, Inc., Cedar Rapids)		Feb. 2017	Not Required*
Design Professional Agreement (Pre-Design through Record Documents)	$ 238,345	Jun. 2017	Not Required*
Program Statement		Aug. 2017	Not Required*
Schematic Design		Sept. 2017	Requested
Project Description and Budget	3,175,000	Sept. 2017	Requested

***** Approved by Executive Director, consistent with Board policy.

Both Neurosurgery and Psychiatry have seen growth in patient volume necessitating expansion. This relocation and expansion would create additional Neurosurgery clinic exam rooms and provide additional Psychiatry faculty and staff offices, an expanded waiting area and enlarged conference room. Finishes in both areas would be significantly enhanced also.

This project provides for the development of additional exam rooms for the Department of Neurosurgery and clinical offices for the Department of Psychiatry. Psychiatry offices would be built in infill space on levels 1 and 2 of JPP. Construction of the Psychiatry offices in the infill space would enable Neurosurgery to expand exam room capacity directly adjacent to their existing clinic. Waiting room capacity and a clinical workroom would be added to support the additional Neurosurgery exam rooms. A quiet room, a conference room, and additional waiting space would also be added to support the new psychiatry clinical offices.

Project Program

	Approved Building Program	Schematic Design
Total Net Assignable Space	3,794	3,794
Anticipated Gross Square Feet	5,040	5,040
Anticipated Net-to-Gross Ratio	75 percent	75 percent

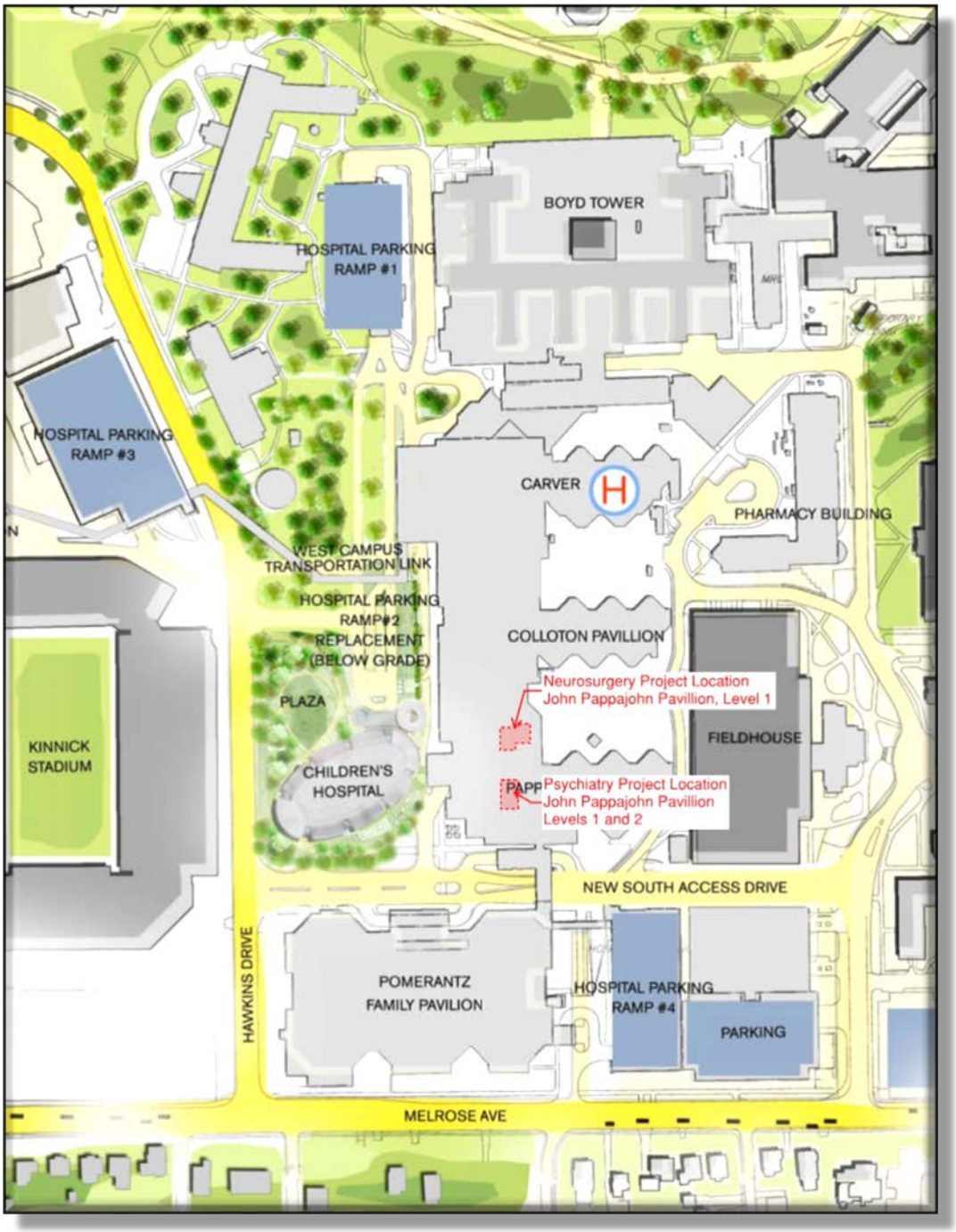
Project Budget

Planning, Design & Management	$ 345,000
Construction	2,300,000
Furniture & Equipment	230,000
Contingency	300,000
Total	**$ 3,175,000**

Source of Funds: University Hospitals Building Usage Funds

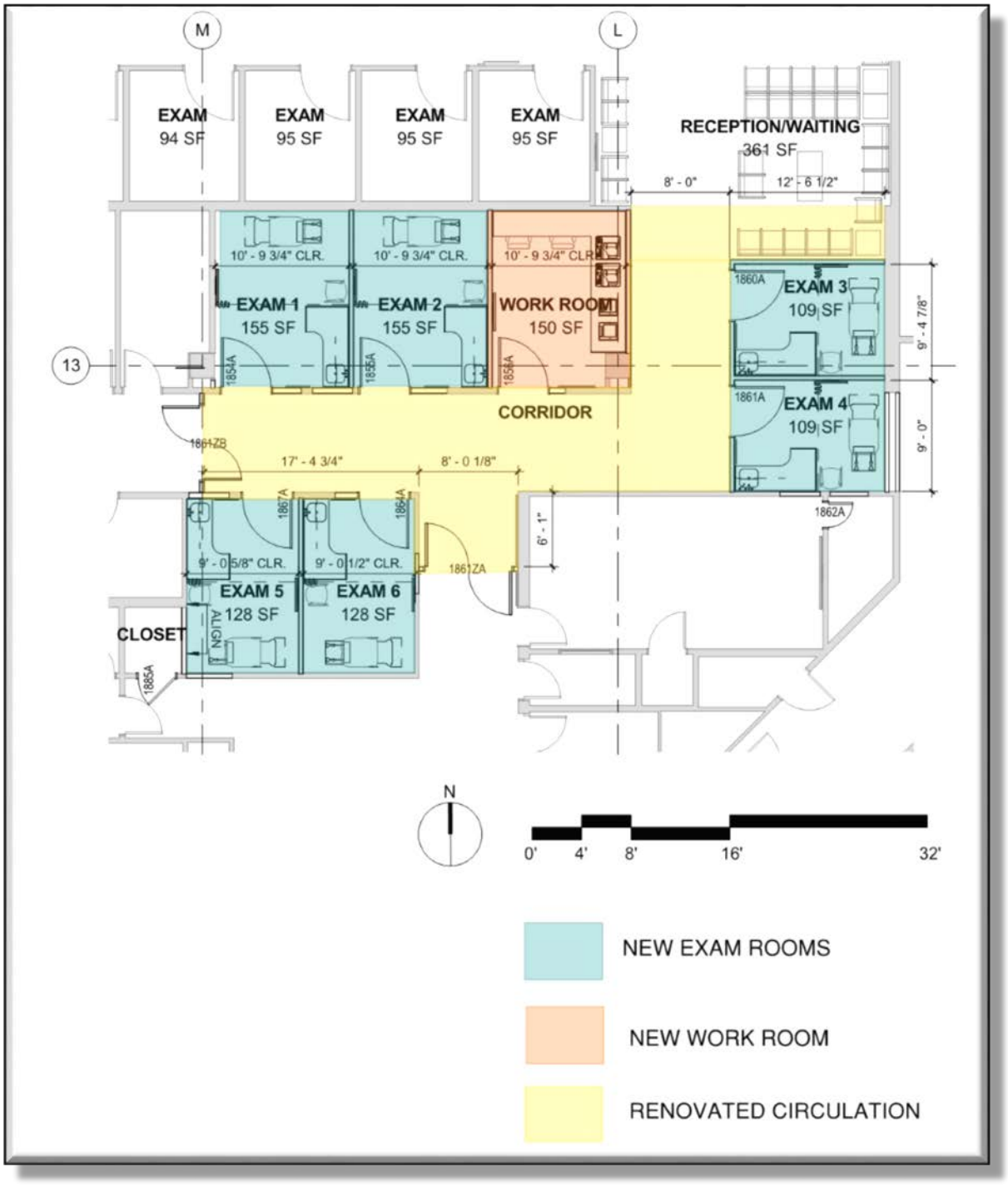
Schedule: Construction Start: Fall 2017
Construction Complete: Fall 2018

Schematic Design: Location Map



UNIVERSITY OF IOWA
JPP Neurosurgery and Psychiatry Clinic Relocation Expansion

Schematic Design: Level 1 Floor Plan (Neurosurgery)



UNIVERSITY OF IOWA
JPP Neurosurgery and Psychiatry Clinic Relocation Expansion

Schematic Design: Level 1 Floor Plan (Psychiatry)

UNIVERSITY OF IOWA
JPP Neurosurgery and Psychiatry Clinic Relocation Expansion

Schematic Design: Level 2 Floor Plan (Psychiatry)