



**The Florida State University
Facility Program**

for

The Hoffman Teaching Lab Renovation

Facilities Project No.: FS-264

September 28, 2017

Prepared by:

**The Facilities Department
Facilities Planning and Space Management Section**

Introduction

The major impetus for embarking on this project is to provide teaching laboratory space within Hoffman Teaching Lab (HTL) to accommodate prerequisite and requisite chemistry lab courses necessary for a two new undergraduate majors at Florida State University, Interdisciplinary Medical Sciences (IMS) and Neuroscience.

Begun in fall 2017, the IMS BS Degree is designed for students interested in health-related careers. A rigorous science curriculum serves as the foundation of the degree. Students may pursue individual specialized and pre-professional interests with any of the three major options:

- Pre-Health Professions Major
- Community Patient Care Major
- Health Management, Policy and Information Major

Coursework and degrees in this major help prepare for entry into professional training programs or become part of the healthcare workforce. Career choices in healthcare include professional schools for medicine, dentistry, physical therapy, or physician assistant, or working in health related nonprofit organizations, governmental and community agencies, medical records, patient education, geriatric care settings, diagnostic laboratories, hospitals, the pharmaceutical industry, medical and wellness facilities, and businesses.

Although administratively through the College of Medicine, the curriculum is delivered by seven (7) colleges at FSU. In addition to the College of Medicine, the College of Arts and Sciences, the College of Human Sciences, the College of Communication and Information, the College of Nursing, the College of Social Sciences and Public Policy, and the College of Social Work are IMS degree program partners.

Beginning in fall 2018, an undergraduate degree in Neuroscience will be offered. Program partners include Department of Psychology, Biology and Mathematics and the College of Medicine.

Hoffman Teaching Lab Building-History and Current Condition

The Hoffman Teaching Laboratory is situated along the tree-lined brick and concrete paved Call Street pedestrian corridor. It was named in 1985 after professor and alumna Katherine “Kitty” B. Hoffman, who taught chemistry to thousands of students in her four decades of teaching, mostly at Florida State University. She also served as the first woman president of the faculty senate and as the last dean of women at FSU.

Hoffman Teaching Laboratory was built in 1969, with an overall gross area of 79,365 square feet. The Hoffman Teaching Laboratory is a five-story poured-in-place and pre-cast concrete structure with brick masonry. The dominant horizontal bands of gray

concrete and brick screen partitions conceal this nearly windowless structure. This modern, stark and functional facility is typical of the style of architecture of the time in the science buildings at FSU. Currently the exterior surfaces are stained, detracting from the aesthetic of this facility.

Some of the laboratories in Hoffman have been recently upgraded or renovated. The biochemistry lab, Room 407, as well as the adjacent rooms, was recently renovated and included new HVAC, hoods, snorkels, countertops, and asbestos removal. On the 5th floor of HTL, rooms 505, 506, and 507 have been renovated and are in good condition with many functioning hoods for organic labs.

Goals and Objectives

In order to handle the prerequisites and requirements of the new Interdisciplinary Medical Sciences (IMS) major, the Chemistry Department is offering three new courses. A fourth existing course will be taught but expects to see a significant increase in enrollment with this new major.

The new chemistry courses needed to accommodate new IMS major are:

- CHM2047-General Chemistry. A new lab will be created to go along with this course (CHM20147L).
- CHM3217/18-Organic / Biochemistry sequence. A new lab will be created to accompany CHM3217 (CHM3217L) but there will be no lab for CHM3218.

This existing chemistry course needed to accommodate the new IMS major is:

- CHM3120-Analytical Chemistry. The lab portion is CHM3120L.

It is not clear at this time if the expected increase in enrollment due to the IMS major is because new students are attracted to FSU because of this new major, or are FSU students depopulating existing majors to enroll in IMS. Of course, this uncertainty complicates planning because if they are new students, then there is a need to accommodate this enrollment while maintaining enrollment in other courses. On the other hand, if they are students changing into IMS, this would tend to shift enrollment from the existing General and Organic Chemistry courses into the new ones with no net increases in enrollment. Until the uncertainty surrounding shifted versus new enrollments in the General and Organic/Biochemistry courses clarifies, sections of all courses (e.g., existing and new courses) to meet the IMS demand and the requirements of other departments that rely on existing Chemistry curriculum will need to be offered. This assumption will tend to over-inflate our numbers for CHM3217/18 but it provides the safest course of action at this time.

Increased demands on courses listed above could be expected as early as fall 2017 as the IMS major is fully implemented. While it is not clear how much CHM2047-General Chemistry will increase in enrollment, CHM3217/18-Organic / Biochemistry sequence and CHM3129-Analytical Chemistry may increase significantly. These courses are expected to step up enrollment dramatically in the next few years, so that in academic year 2019/20, IMS enrollments in each of these courses may exceed 200.

Normally, a chemistry course has a 1-hour lecture once a week coupled with a chemistry lab twice a week for 3 or 4 hours. Chemistry labs in HTL are currently scheduled Monday through Thursday until 8:00 pm. Friday serves as a “reset” day, as this is when the chemicals, glassware and equipment for that week’s labs are removed and replaced with the next week’s labs. While increasing staffing to support night and / or weekend labs is a possible option to handle the expected increased demand, the most likely as well as ultimate option and therefore the focus of this facility program, is to provide a targeted renovation of the existing Hoffman Teaching Lab (HTL). It may be one renovation can be done in phases or all at the same time, depending on a number of factors related to scheduling.

Specifically, the Chemistry Department recommends upgrades to most of the 4th and 5th floors of HTL. With these upgrades the department can expand the number of lab offerings and provide flexibility in scheduling additional 3120L and 3217L labs that they expect to offer starting in the Fall of 2018.

Program Area

Priority Renovations Needed

4th Floor Space can be renovated and a room converted to create additional analytical chemistry labs:

- Room #411-Although this is a currently operating wet lab, an upgrade is needed for physical chemistry. A new air handler will be required to handle new hoods and snorkels. This room also needs new sinks, benches and benchtop replacements.
- Room #416-This room was at one time a wet lab, but now serves as a computer lab. The chemistry department would like to return this space back to a wet lab. Existing lab electrical and plumbing stub outs should facilitate an easier conversion of this room. The computer lab could be relocated to a room on the second floor of this building.

5th Floor-Three spaces on this floor can be upgraded to create additional organic (synthetic) chemistry labs:

- Room #509-This space is currently serves as a wet lab, however its “dated” appearance and function could be improved. Additional hoods and/or snorkels are needed along with bench tops and new flooring.
- Room #517-This currently serves as chemical and supply storage and lab prep room. The department wishes to convert this into a wet lab. New benches, sinks and snorkel and/ or hoods are required. Additional space to store and prepare chemicals would need to be found in HTL. The dry chemicals could be stored elsewhere.
- Room #520-Currently this is used as a classroom for recitation sections. The chemistry department would like to convert this to a wet lab space with hoods and/or snorkels. There is one existing hood and plumbing connections in the floor. Benches, sinks and snorkels/hoods will be needed.

The renovations may require new air-handling units. The 4th floor of HTL currently has 3 independent HVAC systems. However, it is expected HVAC upgrades will be needed in conjunction with lab renovations and conversion on the #411 and #416 spaces on this floor. Currently, there is only one air handler for the entire 5th floor. The design team will need to determine whether new AHU(s) are needed. The department has reduced the scale of the organic chemistry labs so that most of the lab work can be done on the open bench tops with snorkels, rather than hoods. Each renovated organic lab will still require one or two hoods in each lab for the most sensitive work. Use of snorkels should reduce the air-handling demands over what would be needed for a hood-intensive lab. As these labs are renovated additional equipment to populate each.

ADA Compliance Upgrades

Additionally, accessibility (ADA) upgrades are needed throughout the building. The D/B team will need to determine the extent of these upgrades. The ISES Facility Condition report lists nearly \$300 K in repairs and upgrades. The fourth floor men’s and women’s restrooms need to be made accessible. Code compliant fixtures, hardware and accessories need to be provided and layout should provide adequate turning radii and clearances. In addition, a power-assisted restroom door openers should be provided at all restroom entrance doors. Single-level drinking fountains on floors one, two, four and five should be replaced with a compliant, dual-level, refrigerated units. Most of the building needs to be fitted with accessible handrails and code compliant guardrails. Code compliant hardware needs to be provided to nearly the entire building. All of the building interior signage needs to be replaced and brought up to ADA standards. The university is in the process of updating its transition plan. However, it may not be published until months from now. The D/B team should review this with the facilities department and determine what additional ADA compliance upgrades are needed.

Asbestos Survey

Although a building-wide asbestos survey was done in 2002, there is much concern about its quality. Therefore, having an updated design survey is necessary as a first step in this project. FSU's Environmental, Health and Safety (EH &S) has developed a summary of asbestos materials that have tested positive, negative, or have been removed.

Additional Scope and Considerations

As already mentioned, HTL does not currently have an automatic fire suppression system. Provisions for a building-wide system will be part of this program. The facility condition report discussed in the section below mentions consideration should be given to installing a wet-pipe sprinkler system. Flow switches and sensors that interface with the fire alarm system should also be provided.

The D/B team should be prepared to address the building's limitations for the storage of flammable and combustible chemicals under NFPA 45.

Although equipped with a fire alarm system, it is antiquated and in need of replacement throughout the building.

Additional Scope only as Budget Allows

Budget indicated in this document may be generous enough to allow for additional scope of work that can practically be accomplished during the course of this project. The Design Build (D/B) Team shall assist in prioritizing upgrades and renovations as budget allows.

Consideration should be given to upgrading labs adjacent to labs described as priority renovations above. The paragraphs below describe deficiencies as described in the facility condition analysis by ISES corporation, provided in May of 2012 at the request of the university. The report indicated there were over \$8 M in repairs and upgrades needed. In addition to the ADA issues listed, numerous deficiencies were noted in electrical, plumbing, HVAC, fire/life Safety, health, exterior, interior finishes /systems.

The existing generator should be removed and replaced with an adequately sized diesel generator set with will include fuel tank battery and charger.

Incandescent and HID fixtures around building perimeter should be replaced with new energy efficient units. An upgrade of the building electrical system is also recommended. Aged electrical components and branch circuitry should be removed. New power panels, switches, raceways, conductors, and devices should be provided. Electrical loads should be redistributed to appropriate areas to ensure safe and reliable power to building occupants. GFCI protection should be provided as needed. Existing electric service equipment should be removed. New transformers, switchgear, conductors, connections and terminations should be installed. Main switchgear components should include a

ground fault main circuit breaker, draw-out distribution breakers for ease of maintenance, digital metering for remote control / monitoring, and transient surge protection.

Water supply and process piping needs to be replaced throughout the facility. This includes gas lines, vacuum lines, compressed air lines, purified water lines and process steam lines. Replacement of sanitary and storm drain piping is recommended throughout the facility. Additionally, replacement of the domestic hot water converter is recommended. There is a recommendation to remove the two air compressors in the first floor mechanical room and replace it with a new laboratory-grade compressor. Existing plumbing fixtures should be replaced and new water-conserving fixtures should be provided in its place for restrooms and labs.

Over half of the lab cabinetry and countertops are recommended for replacement. The new cabinetry should be designed in accordance with accessibility requirements and include utility upgrades. Interior finishes should be considered for replacement. Floor tile should be replaced. Re-carpeting the entire facility should be considered in rooms where carpeting is practical. Exposed concrete floor areas should be cleaned and surfaces resealed. Consideration should also be given to replacing the 2 x 2 suspended acoustical tile ceilings and fume hoods.

Some exterior work is needed to improve the buildings aesthetic and provide secure weather protection. Some areas will need brick pointing, mortar repair, and / or construction joint caulking to restore weather protection. Additionally, the wall of ramp connecting to the building on the north-east side has exposed re-bar that should be investigated and repaired.

Space and Budget Summary

Sept. 28, 2017

PROJECT DESCRIPTION: Hoffman Teaching Lab Renovation

	Planning	Construction	Equipment	Total
SCHEDULE OF PROJECT COMPONENTS				
1. Construction Components (Basic Construction Cost)				
a. Construction Cost		7,500,000		7,500,000
b. Site Preparation / Demolition		0		0
c. Landscape and Irrigation		0		0
d. Walks, Patios, and Drives		0		0
e. Telecommunications - Outside Plant (OSP)		0		0
f. Site Utilities		0		0
(1) Total Basic Construction Costs		7,500,000		7,500,000
2. Other Project Components (Other Project Costs)				
a. Land/existing facility acquisition		0		0
b. Professional Fees				
Basic Services (Group C)	700,000			700,000
Design Contingency (10% Bas.Serv.)	70,000			70,000
c. Preconstruction Services	7,500			7,500
d. Inspection Services				
Plans Review/Inspection	50,000			50,000
d. Insurance Consultant (.0006)	4,500			4,500
f. Surveys & Tests				
Topographic Survey	0			0
Geotechnical Investigation	0			0
Testing During Construction	0			0
HVAC Testing/Balancing		0		0
g. Furnishings & Equipment (incl. classroom technology)		800,000	0	800,000
h. Telecommunications		100,000		100,000
i. Artwork		0		0
k. Infrastructure Assessment		0		0
l. Project Contingency (10.24%)	168,000	600,000		768,000
(2) Total - Other Project Costs	1,000,000	1,500,000	0	2,500,000
ALL COSTS (1) + (2)	1,000,000	9,000,000	0	10,000,000

Project Schedule

Below is a proposed schedule. It is expected that the construction manager shall review this schedule and make recommendations for adjustment. The date of occupancy is based on the academic school calendar and having facilities ready for the expected upsurge of chemistry labs required for the newly formed Interdisciplinary Medical Sciences (IMS) major.

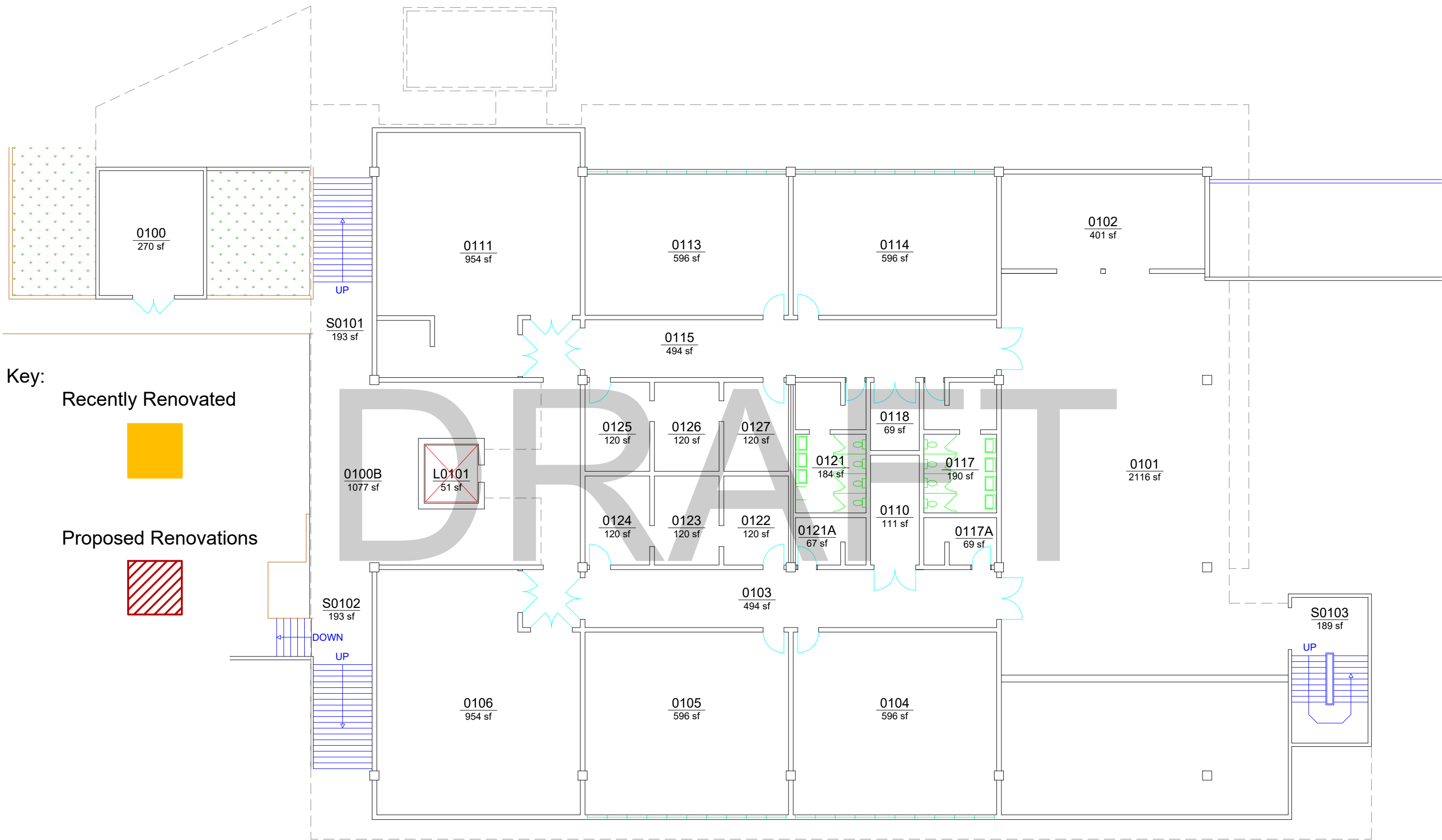
Milestones

Sept. 2017	Facility Program expected to be completed and approved. Design/Build (D/B) team selection process expected to begin.
Nov. 2017	D/B team selection process expected to be completed; D/B contract negotiated and executed; Notice to Proceed.
Dec. 2017	Targeted Asbestos Abatement commences*
July 2019	Substantial Completion Expected.
Aug. 2019	Final Construction Completion Expected.

*Targeted Asbestos Abatement may be accomplished during the academic calendar's Winter and/or Spring Break.

Appendix Items

The following pages are space/floor plans exhibited to show recently renovated space and renovations proposed by this project within the Hoffman Teaching Lab building.

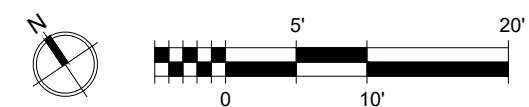


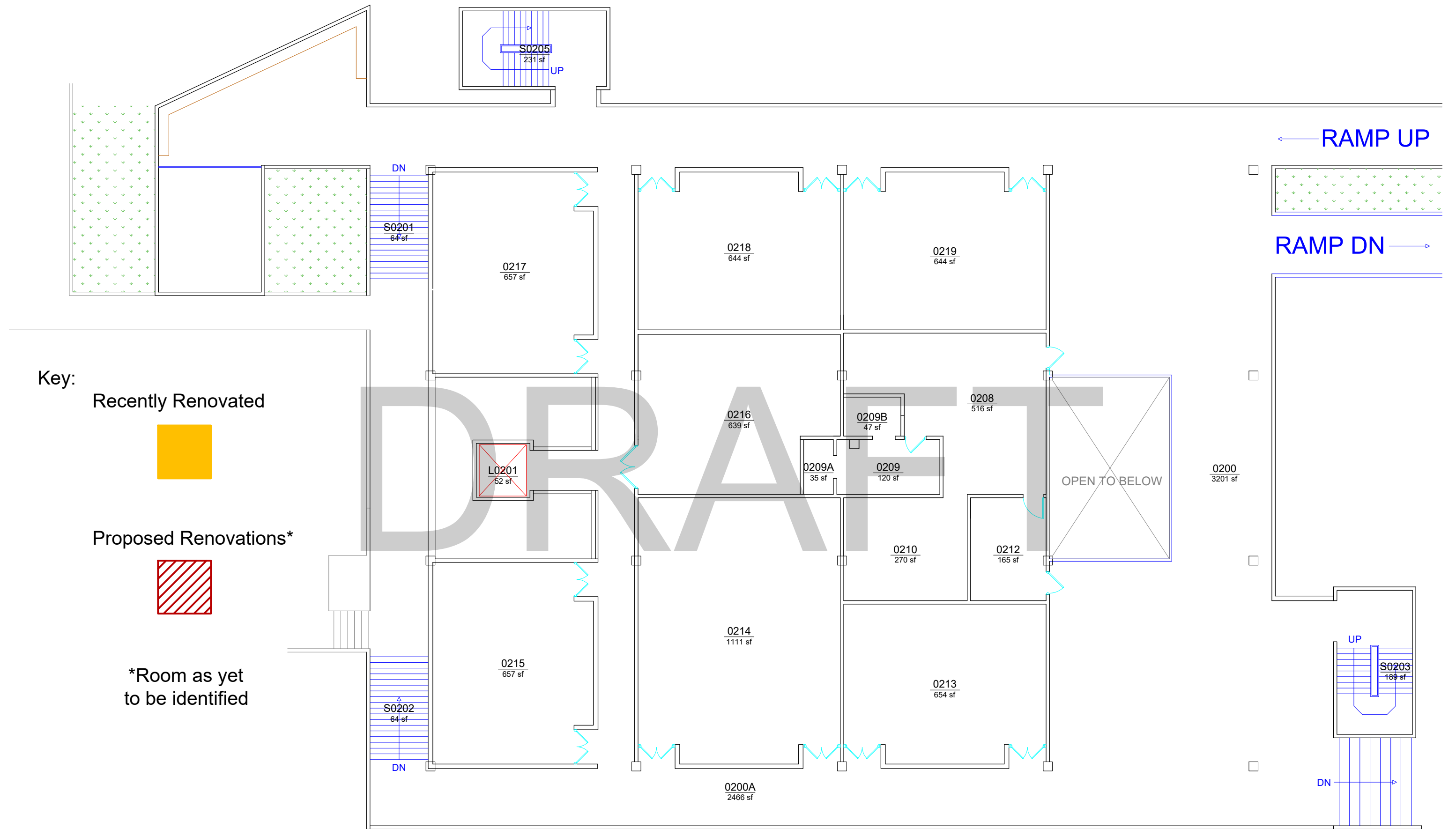
Key:

Recently Renovated

Proposed Renovations

FIRST FLOOR
BUILDING No. 0035



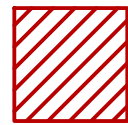


Key:

Recently Renovated

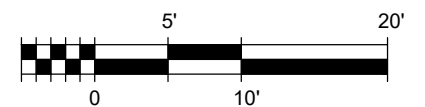


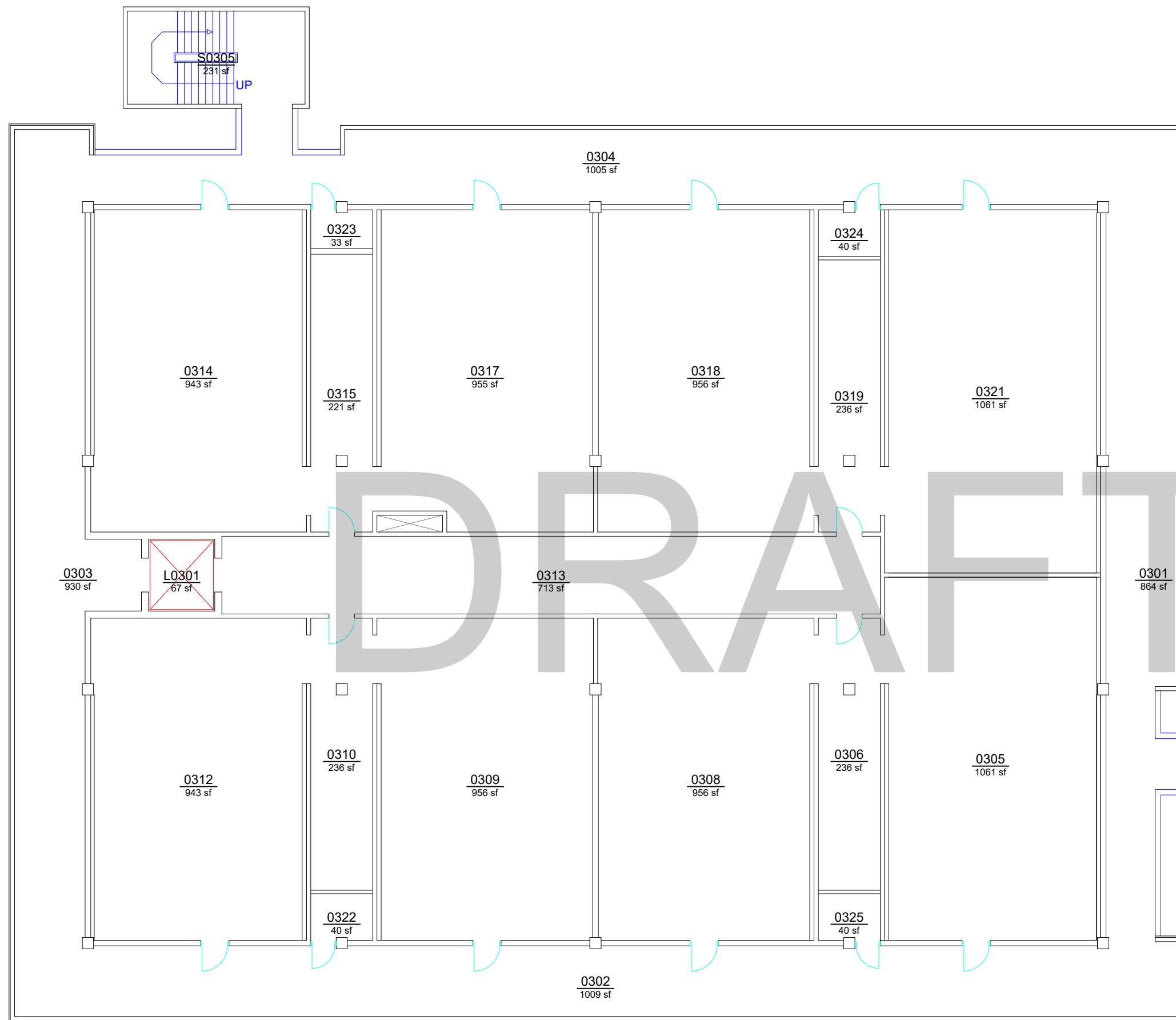
Proposed Renovations*



*Room as yet to be identified

SECOND FLOOR
BUILDING No. 0035





Key:

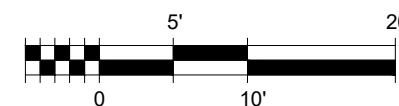
Recently Renovated

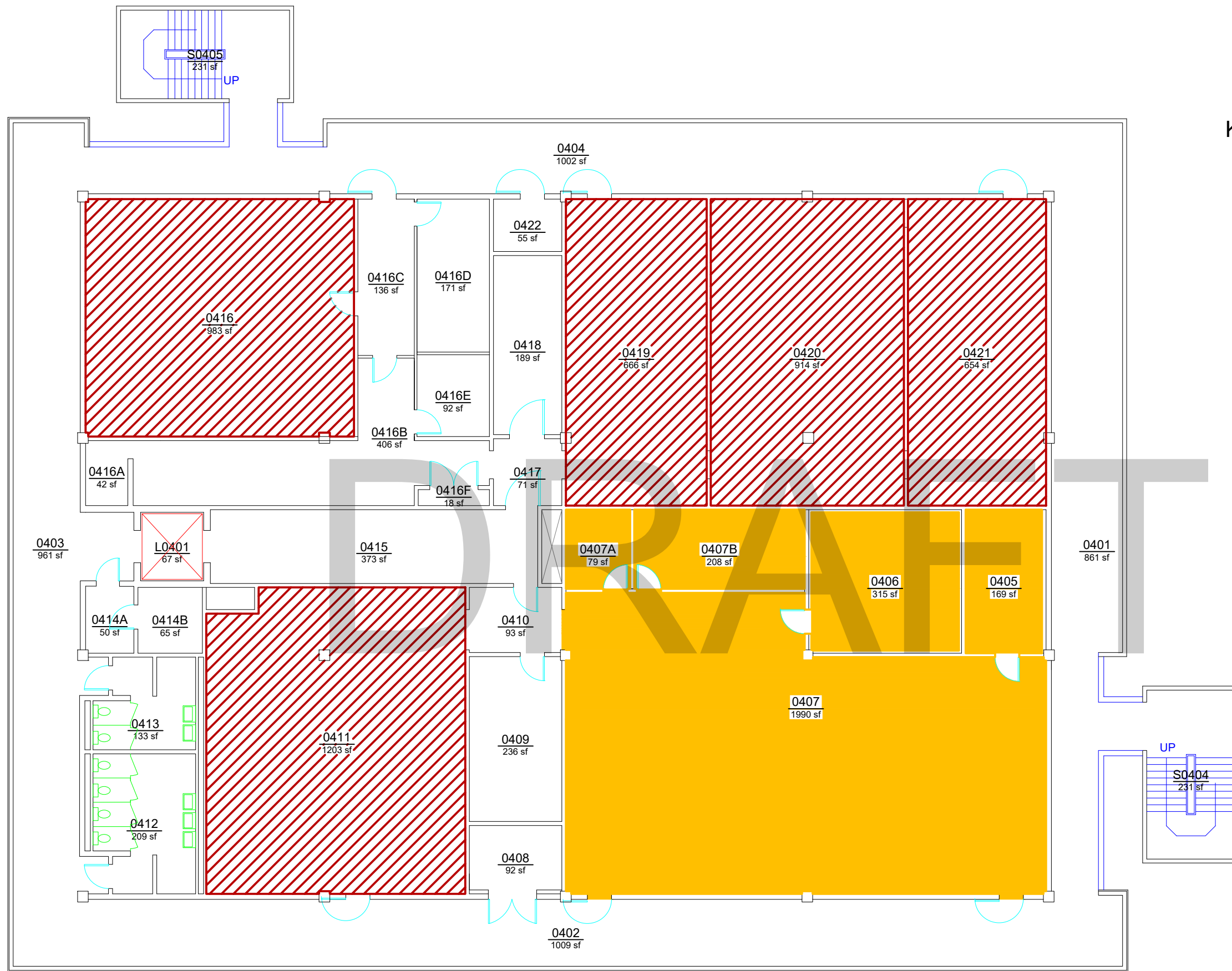


Proposed Renovations



THIRD FLOOR
BUILDING No. 0035

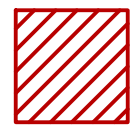




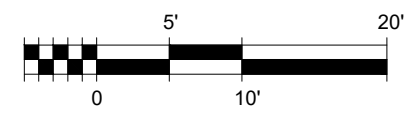
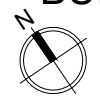
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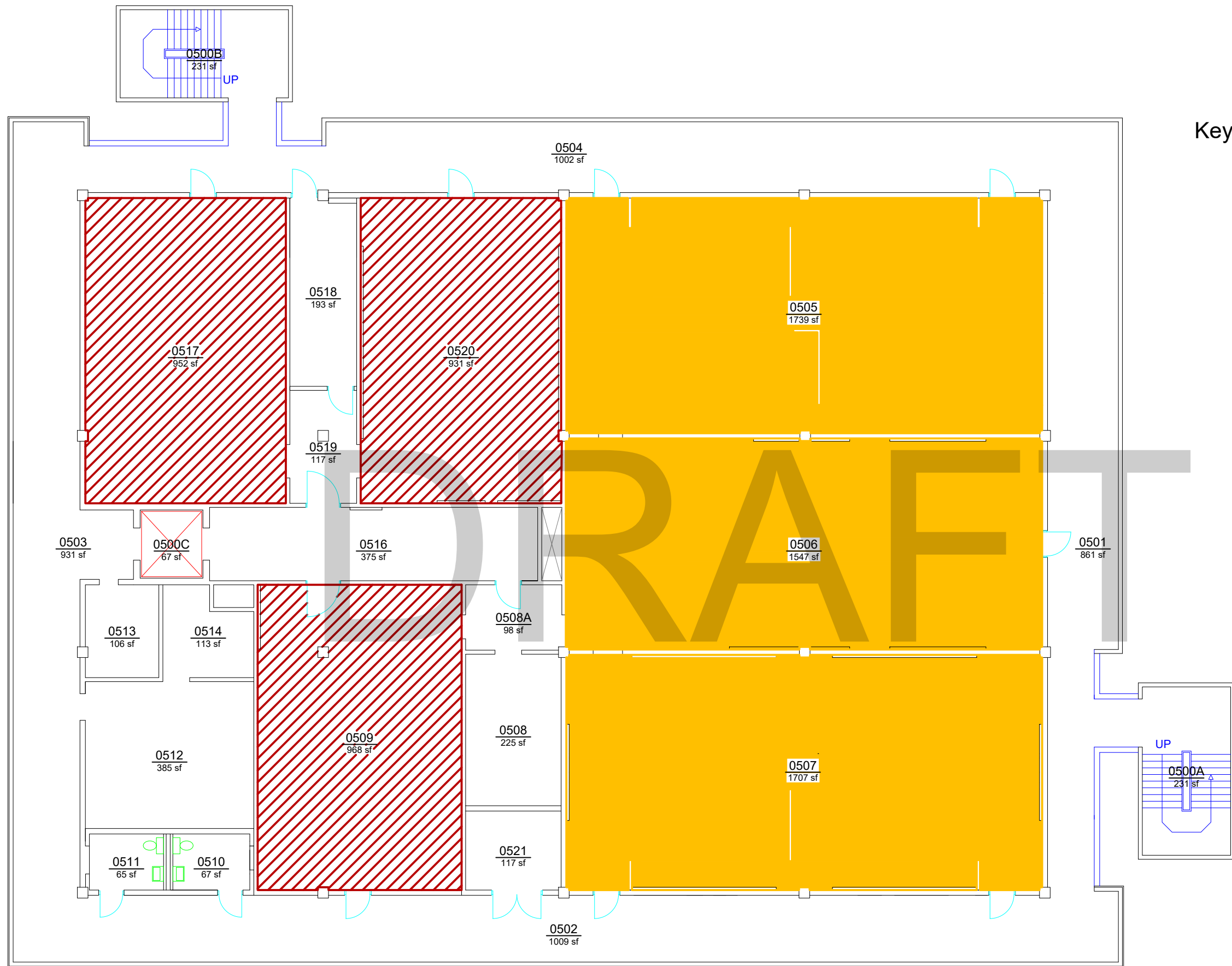


Proposed Renovations



FOURTH FLOOR
BUILDING No. 0035





Key:

Recently Renovated

Proposed Renovations

FIFTH FLOOR
 BUILDING No. 0035

0 5' 10' 20'