



Project BOLD

Summary Report

A Campus Unification and
Modernization Study

Salem State University

July 2020

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Introduction

Project Overview

Salem State University (SSU) has a strong focus on programs for science that are not being fully realized due to aging and inadequate infrastructure. As part of a broader program of physical consolidation and pedagogical enhancement, SSU is seeking to upgrade the quality of science education. At the same time, SSU is in the process of enabling the divestment of the South Campus and the relocation of its programs elsewhere on the North and Central Campuses. This Plan ensures the best and most comprehensive result to resolve science needs, consolidate the campus, and maximize the use of existing building assets.

Project Goals

The Readiness Study has three primary goals. The first is to provide the best fit for the sciences, including modern labs appropriate for a teaching university that fall within anticipated funding amounts. The science programs should be refined and located on North Campus with an emphasis on maximizing the potential of a renovated Meier Hall, while taking advantage of the swing space offered by the vacated Horace Mann building. Addressing deferred maintenance through renovation of existing space as feasible is a primary goal.

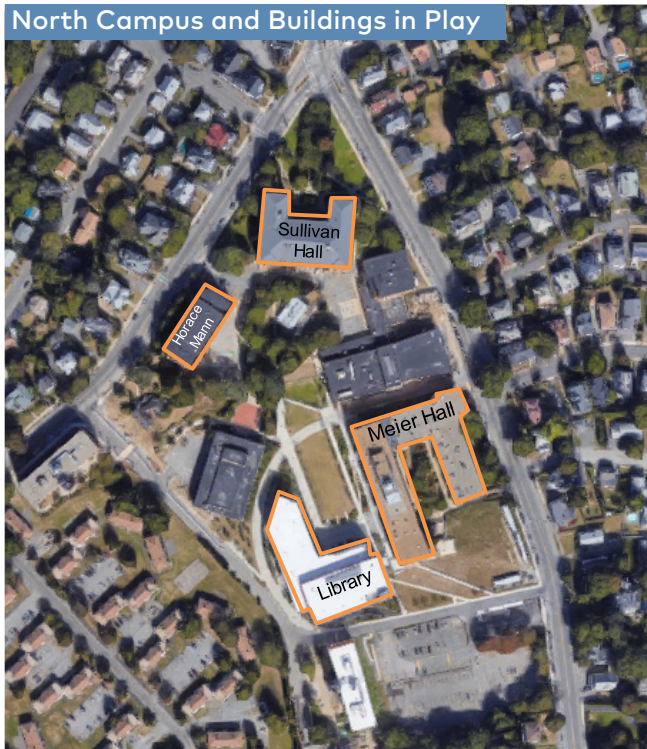
The second goal is that the study must provide an actionable plan that solves the needs for the sciences. The outcome of a first phase project must improve the quality of science instructional facilities; it cannot be an enabling project that delays implementation of improvements to the science labs. The short-term solution must serve as an incremental step towards achieving a long-term solution.

Third, the plan should build on the broader campus-wide Master Vision prepared in 2013 and 2017, as well as the 2015 study for the Science Teaching Laboratories. This will ensure a coordinated and integrated plan for the university.

Salem State Campuses



North Campus and Buildings in Play



Planning Context

Meier Hall & The Sciences

Meier Hall is Salem State's original science building, constructed in 1965. Since that time, it has undergone no major renovations to interior space, despite tremendous changes to pedagogy and growth in overall university enrollment, particularly in the STEM disciplines. Meier Hall does, however, benefit from a strategic location on North Campus. Moreover, the building's structure is generally favorable to support a renovation with a design live load likely suitable for labs and a relatively flexible layout to support renovations.

South Campus

The sale of South Campus allows SSU to unify academic programs, physically bringing the community closer together and allowing for increased multidisciplinary collaboration that will improve student experience and retention. South Campus houses most of the programs in the College of Health and Human Services (CHHS) in a building that requires significant upgrades, especially in the nursing and occupational therapy (OT) SIM labs. Their South Campus location is challenging both for students and faculty because of the physical distance and travel time between campuses. These programs are further constrained by capacity as the existing SIM lab spaces cannot accommodate student demand or clinical experiences that could be achieved in updated facilities.



Meier Hall

Horace Mann

The Horace Mann building was vacated in June of 2017, when the Salem Public Schools' Horace Mann Laboratory School moved off campus and into a building on Wilson Street. The building has sat vacant since because of the significant amount of upgrades required to open it to university use. The building exists as a four-story structure constructed of load-bearing walls, with wood joist floors. While spatially the building comfortably fits large-sized teaching labs, vibration criteria and design load capacity limit its feasibility to house these labs and make Horace Mann an ideal candidate for classrooms, dry labs, and/or offices.

Berry Library

Built in 2014, the Berry Library provides a blend of modern library and vibrant student center. Despite its success, there does remain underutilized space within the building which could be repurposed. The Library's location adjacent to Meier Hall, as well as its ideal bay spacing for classrooms, make this a candidate for swing space and as an enabling asset for campus consolidation.

Sullivan Building

The early phases of the study contemplated reuse and/or renovation to the Sullivan Building. Ultimately, Sullivan was deemed not critical to solving the needs for the following reasons: the structure is not suitable to support laboratory use; vibration sensitivity is likely an issue; current programs housed in Sullivan would need to find suitable alternative homes, delaying the ability to address science needs in a near-term phase.



Horace Mann



Berry Library



Sullivan Building

Existing Conditions

Horace Mann Building

The existing structure for the Horace Mann Building consists of brick masonry bearing exterior and corridor walls. Typical floor framing at the classrooms consist of 3"x13 ½" wood floor joists spanning from corridor wall to exterior walls. Floor framing at the corridors consists of 2"x12" wood floor joists spanning between corridor walls. The floor structure consists of a diagonal wood sheathing floor diaphragm.

The roof framing at the low roofs on each end of the building consists of 3"x14" wood joists at 18" on center, spanning from corridor wall to exterior wall. The roof framing at the central portion of the building consists of 2"x12" wood joists at 20" on center spanning between built-up steel beams that clear span between exterior walls. See framing plan markups on pages 40 and 41.

Sullivan Hall

The existing structure for the Sullivan Hall consists of brick masonry bearing walls and wood joist floor framing. At the First Floor there is a series of long-span steel beams with wood infill framing. The long-span steel framing may also function as transfer framing for vertical structural elements above the First Floor. The roof structure consists of wood timber trusses with wood purlins and rafter framing.

Meier Hall

The existing structural system for Meier hall consists of cast-in-place concrete, one-way rib slabs with concrete beams. Floor framing is supported by concrete columns, bearing on spread footings. No discreet lateral system is detailed. It is assumed that lateral loads are resisted through moment frame action of perimeter beams and columns.

Structural Assessment & Implications of Building Renovation

The building code allows for a maximum 5% increase on the demand capacity ratio of gravity load resisting elements. Further load increase or excessive modification to the framing will require reinforcing of the existing framing.

The building code states that the demand-capacity ratio of lateral load resisting systems may not be increased by more than 10%. Further increase will trigger a full seismic upgrade.

In the case of all building renovations, further analysis and consideration should be given to exterior conditions, as well as to accessibility, MEP, and life safety systems.

Horace Mann Building

The structural conditions appeared to be in good shape based on the observed framing.

A structural analysis of the floor joists in the existing building revealed that the live load capacity of the existing floor meets the design live load of 40-50 psf, in accordance with the MA building code, based on the original classroom use. Changing the building use to lab programming would likely necessitate reinforcing of the existing structure to increase live load capacity and/or to support the use of sensitive equipment.

Sullivan Hall

The structural conditions appeared to be in good shape based on the observed framing.

Existing structural drawings were not available and observations of the existing structure was limited, therefore no structural analysis of the floor joists was conducted. However, the building is currently in use as a classroom building, which corresponds to a design live load of 40 psf in accordance with the current MA building code. Any increase in floor loading due to a change in program would likely result in the need to reinforce the existing structure. It should also be noted that the current layout of the building may

not be suitable for lab programming. Altering the structural layout to allow for lab space programming may be prohibitively difficult due to the extensive bearing walls and the potential transfer beams at the First Floor.

Meier Hall

The structural conditions appeared to be in good shape based on the observed framing.

Existing drawings for the original building and the addition indicate that the structure is adequate to support a design load of 75 psf live load and 100 psf live load respectively. Depending on the exact program, the existing structure design live load capacity may be suitable for lab programming. Additionally, concrete framing is an inherently stiff and massive (heavy) structural system. These characteristics of the structure mean that Meier Hall may perform well from a vibration standpoint and may mean the structure can support the use of sensitive lab equipment.

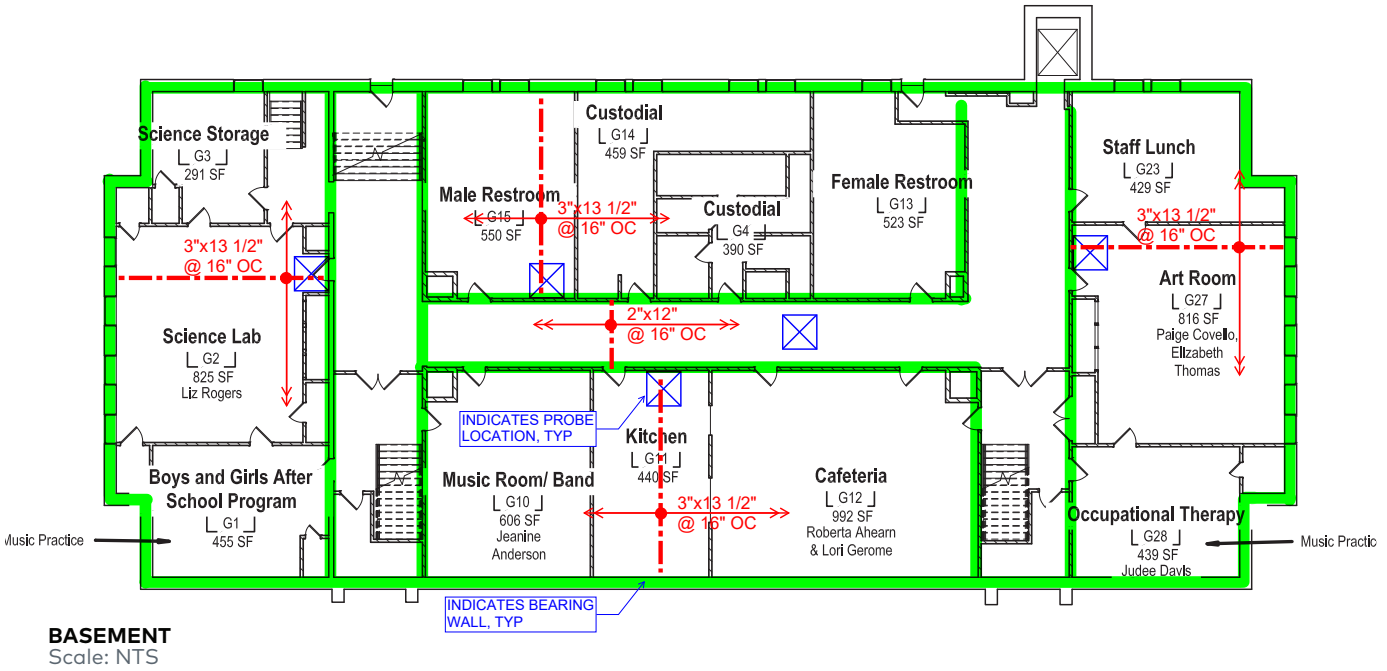
However, concrete framing is difficult to modify and may be less flexible for renovations. For example, if existing structural bays are not conducive to lab planning, it is very difficult to modify, and if existing framing does not meet loading or vibration criteria, it is difficult to reinforce the existing concrete structure.

The lack of an existing lateral system would make a full seismic upgrade difficult and would require significant additions to the existing structure (e.g. new cast-in-place concrete shear walls). Any potential renovations to Meier Hall should strive to limit the scope so as to not trigger a seismic upgrade.

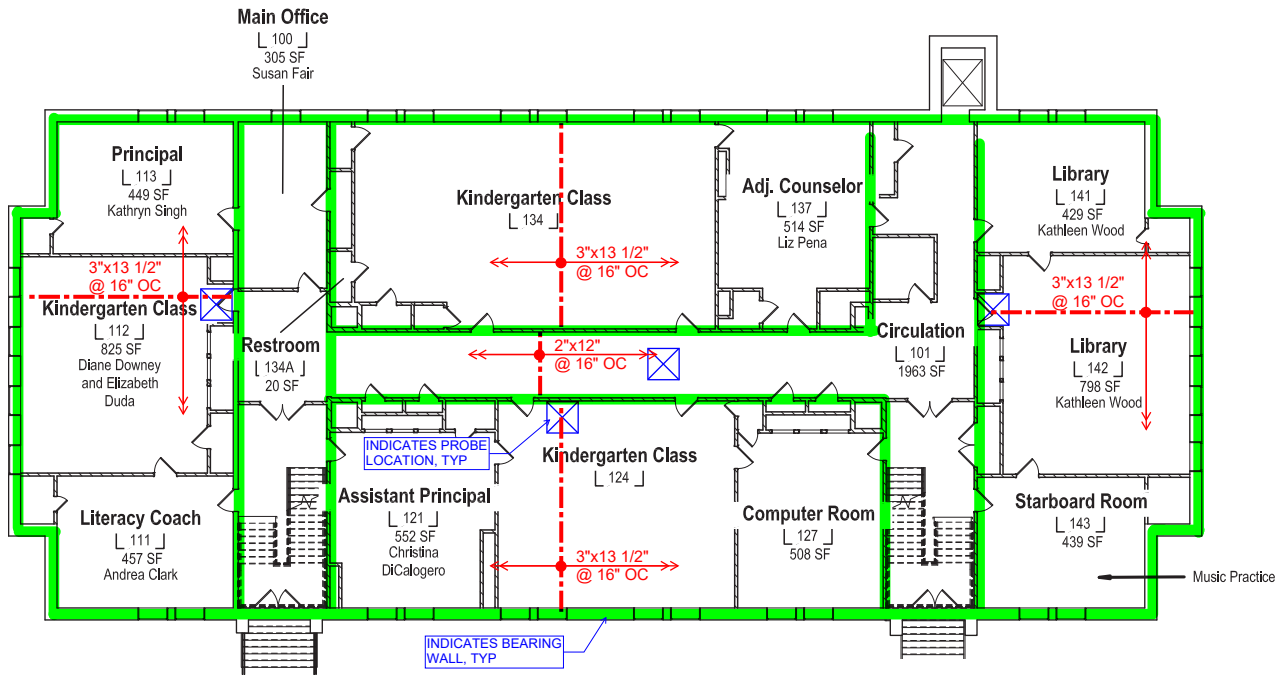
EXISTING BUILDING DISCLAIMER:

This building assessment is based on structural elements visible at the time of the site visit. Note that most of the structural framing and foundations reviewed as part of this inspection were hidden within interior finishes or below grade, respectively. Due to this fact, the exact condition of the structure that is "out-of-sight" cannot be determined as part of this review, nor can RSE Associates make an assessment of the ability of these elements to support structural loads imposed on them.

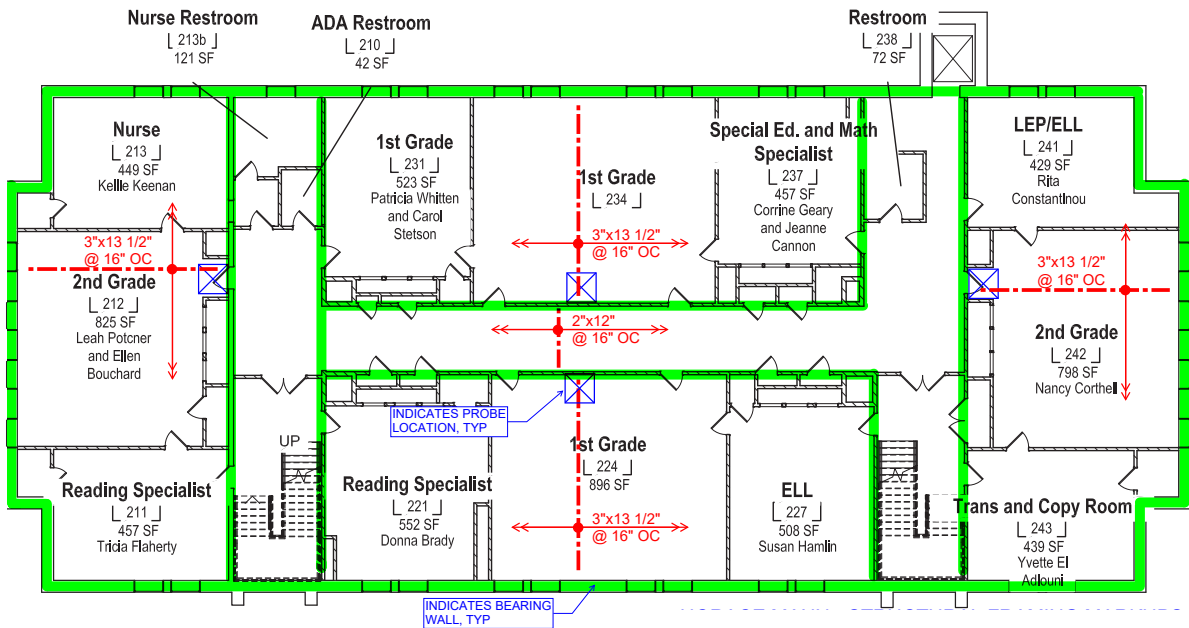
Horace Mann Structural Framing Markups



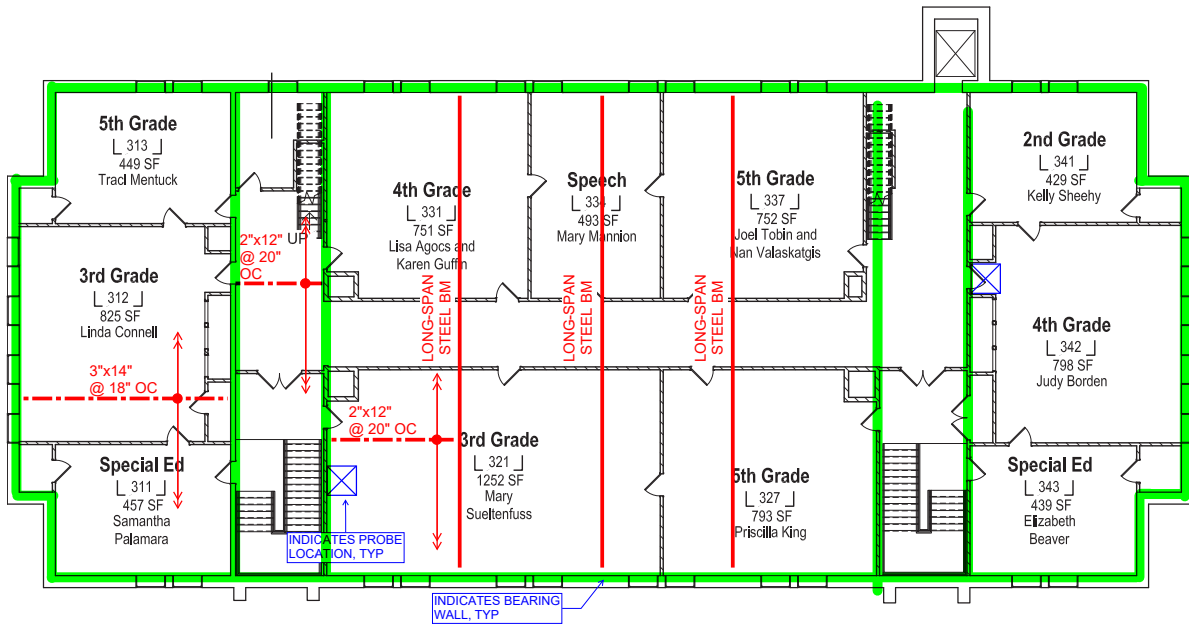
BASEMENT
Scale: NTS



FIRST FLOOR
Scale: NTS



BASEMENT
Scale: NTS



FIRST FLOOR
Scale: NTS

Alternatives

Several alternative strategies were explored to accommodate future science programs. The results of the analysis phase determined that Meier Hall is the best long-term fit for STEM-related needs. While Horace Mann and the Berry Library are important building assets for the campus - that play a critical role in supporting campus unification - they proved not suitable for reuse for science laboratory use. Sullivan Hall, also an important North Campus asset, was studied but its value was determined to be in support of existing programs there.

Three alternative strategies for Meier Hall, described in the following pages, were studied to determine viability of renovation and/or new construction options. These strategies include:

- Renovate in Place
- Renovate Wing by Wing
- The Battery Pack

The team also investigated the use of Berry Library and Horace Mann for use by the sciences.

Renovate in Place

This scenario proposes a series of renovations to Meier Hall of existing lab and prep spaces one by one or in groups of adjacent rooms could be made available simultaneously. Rather than relying on swing space, the plan would be to minimize the time for each renovation to avoid disruption of course offerings. The projects would take place over summers, or summers combined with a semester in which the courses could be taught elsewhere or skip a semester.

The exact number of phases this would require depends on availability of specific labs, but anticipates operating on approximately fifteen different areas. The overall duration depends on how many projects could happen simultaneously in the building. The greatest unknown is the extent to which mechanical, electrical, and plumbing upgrades are required, which could drive shutdowns of corridors that would be highly disruptive to ongoing activities in Meier.

Apart from the corridor work, these in-place renovations have the least impact on adjacent programs and spaces of the three options. This option also likely has the minimum impact in terms of change to the experience of the building and achieving pedagogical objectives.

However, this option does the least to transform the sciences, and Meier Hall itself. A significant concern is that the resulting renovation has a series of disconnected, but improved, teaching labs in a building that is otherwise unchanged. It also makes future renovation more difficult to phase due to the spottiness of investment throughout the building.



LEVEL 1
Scale: NTS
North ⤴

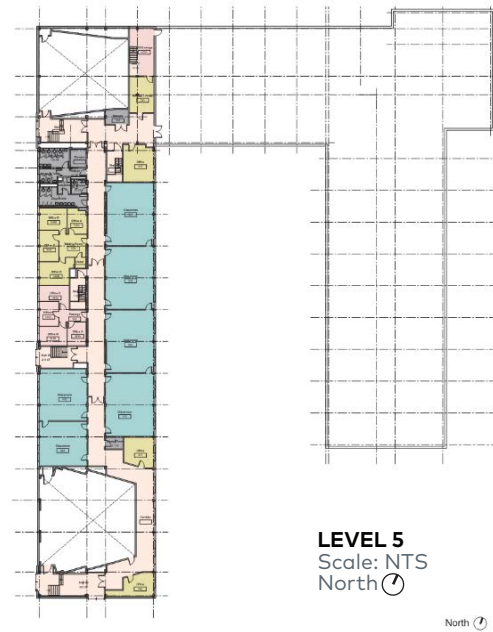
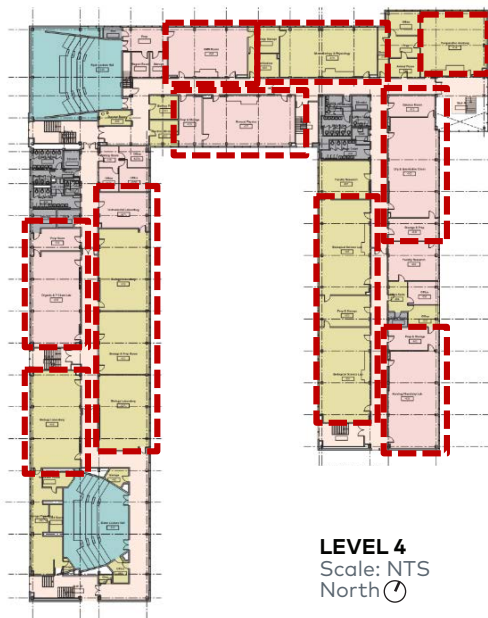


LEVEL 2
Scale: NTS
North ⤴

- | | |
|--|---|
| Biology | Classroom Pool (Registrar) |
| Art + Design | Shared |
| Building Support | General Arts & Sciences |
| Chemistry & Physics | University Administration |
| Computer Sciences | Circulation |
| Economics | Unassigned |
| English | Labs to be Renovated |
| Geography | |
| Geology | |
| Political Science | |
| Psychology | |
| Sociology | |



- Biology
- Art + Design
- Building Support
- Chemistry & Physics
- Computer Sciences
- Economics
- English
- Geography
- Geology
- Political Science
- Psychology
- Sociology
- Classroom Pool (Registrar)
- Shared
- General Arts & Sciences
- University Administration
- Circulation
- Unassigned
- Labs to be Renovated



OPPORTUNITIES

- Minimize impacted footprint and moving pieces within Meier Hall
- Maintain existing location of all functions
- Potentially the low-cost option

CHALLENGES

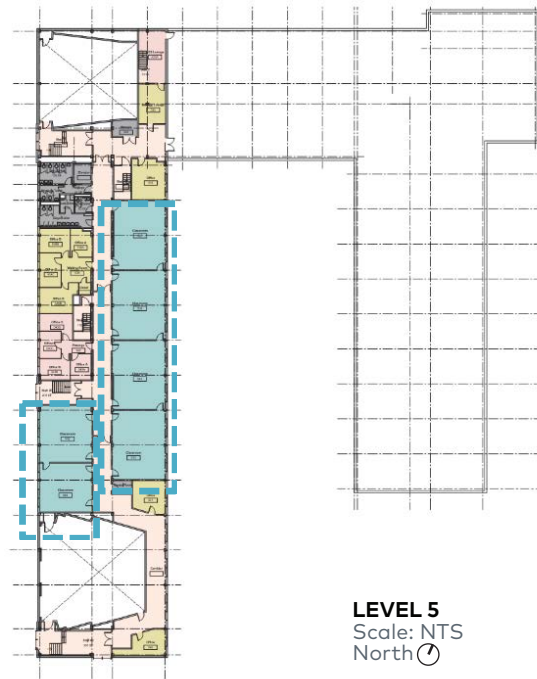
- Low impact to the overall experience of Meier Hall
- Potentially occurs over a long series of small phases
- Teaching labs are upgraded but not optimally transformed to allow new class sizes or pedagogies
- Infrastructure upgrades likely require extensive work in occupied corridors

Wing by Wing Renovation

An alternative approach is to renovate in larger chunks, such as a floor of a wing at a time. The first step in doing this is to clear out non-lab space so that new labs can be built without interrupting current teaching labs. There are multiple possible paths to achieve this objective, depending on time priorities, desired adjacencies and strategic scale of phases. Advantages of going wing by wing include the ability to re-work entire runs of ductwork and other systems without interrupting active corridor space, as well as the efficiency of fewer projects of a slightly larger scale.

The west wing of level 3 could be opened up for renovation by moving programs which have a lower cost to move than teaching labs, such as classrooms and offices. The illustrated scheme suggests relocating classrooms on the 5th floor to a location outside Meier, and renovating the empty space for Geology teaching labs. This would clear Geology from the West and North wings of level 3. The Digital Geography lab that currently occupies a spot in the West wing of level 3 could move into the vacated Geology teaching lab space in the North wing, collocating it with the rest of the Geography department. Relocating the classrooms and Sociology and Political Science departmental offices would leave the entirety of the wing ready to be renovated for teaching labs that currently occupy the East wing of level 4. This first step is the most complex phase, creating the swing space that enables three more phases of approximately five labs each. At the end of the proposed phasing, the West wing of level 4 would exist as vacant space for future growth or campus consolidation.

The Library building could reasonably accommodate twelve classrooms. This would require substantial consolidation of library stack space. Payette did not look at potential space for the Sociology and Political science departmental offices.



Phase 1/Enc

Relocate Level 5 classrooms to space in Horace Mann or Berry Library. Temporarily relocate some science department offices during construction.

OPPORTUNITIES

- Allows expansion of teaching labs beyond existing sizes
- Infrastructure upgrades can occur in corridors that are not occupied
- Reduces the number of overall phases
- Leaves some free space left over in Meier Hall

CHALLENGES

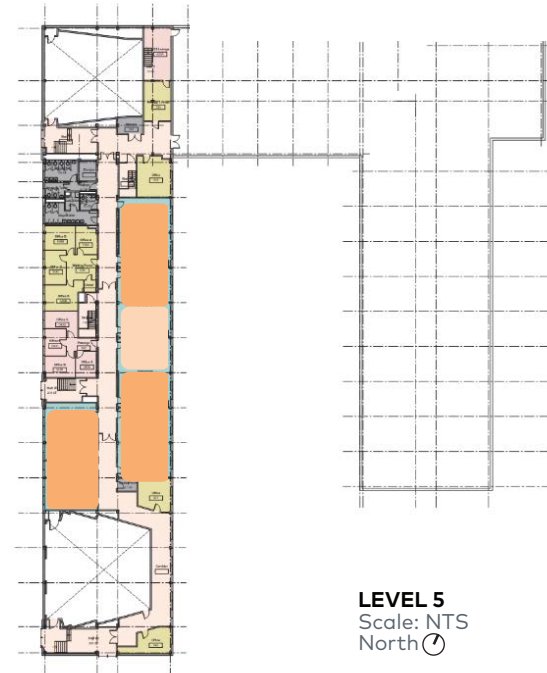
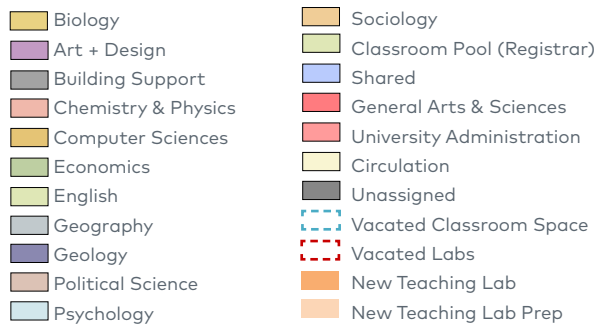
- Requires relocation of up to 10 classrooms to Berry Library
- Requires certain non-science programs move, either to other locations in Meier or temporarily out of Meier to fully empty wings
- Limits the size and number of labs based on the existing floorplan



Phase 2:























Phase 2A: Renovate level 5 for the Geology Department

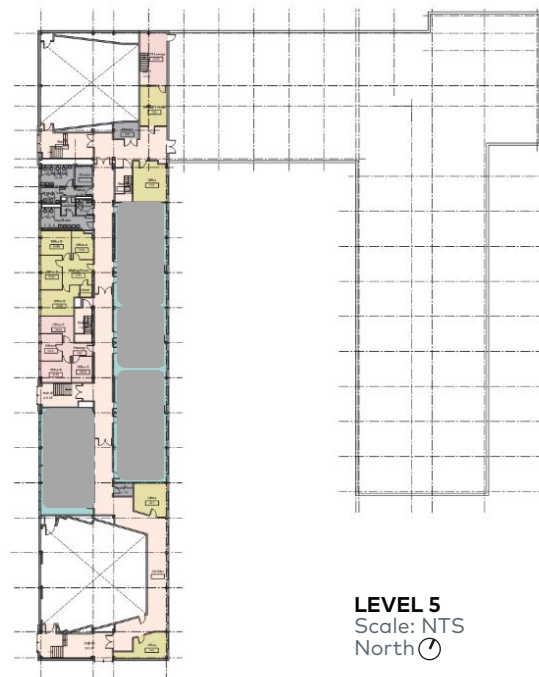
Phase 2B: Relocate Geography lab into vacated Geology lab on level 3



Phase 3A:

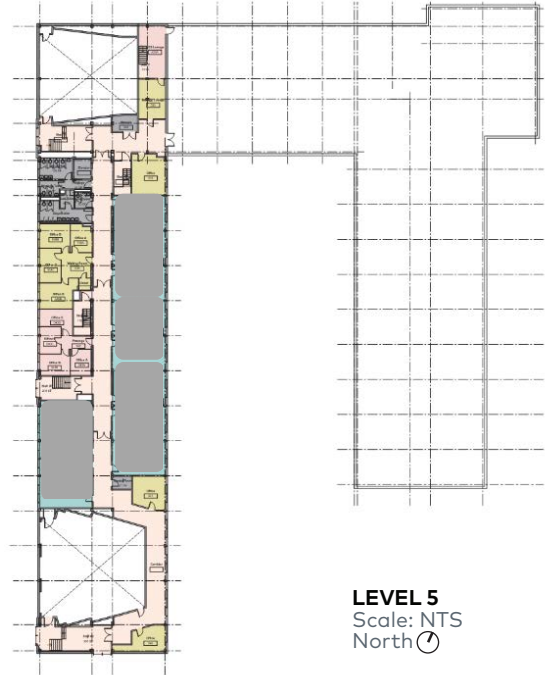
Relocate Classrooms from Level 3 to Berry Library. Temporarily relocate Geology, Political Science, and Sociology Offices, to move into Level 4 at end of project.

- | | |
|---|--|
|  Biology |  Sociology |
|  Art + Design |  Classroom Pool (Registrar) |
|  Building Support |  Shared |
|  Chemistry & Physics |  General Arts & Sciences |
|  Computer Sciences |  University Administration |
|  Economics |  Circulation |
|  English |  Unassigned |
|  Geography |  Vacated Classroom Space |
|  Geology |  Vacated Labs |
|  Political Science |  New Teaching Lab |
|  Psychology |  New Teaching Lab Prep |



Phase 3B:

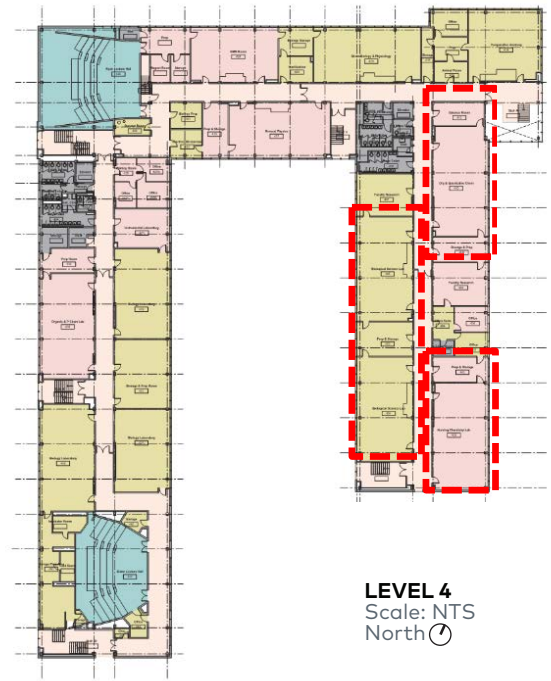
Renovate west wing of Level 3 as teaching labs for Biology/Chemistry/Physics.



LEVEL 5
Scale: NTS
North ⤴



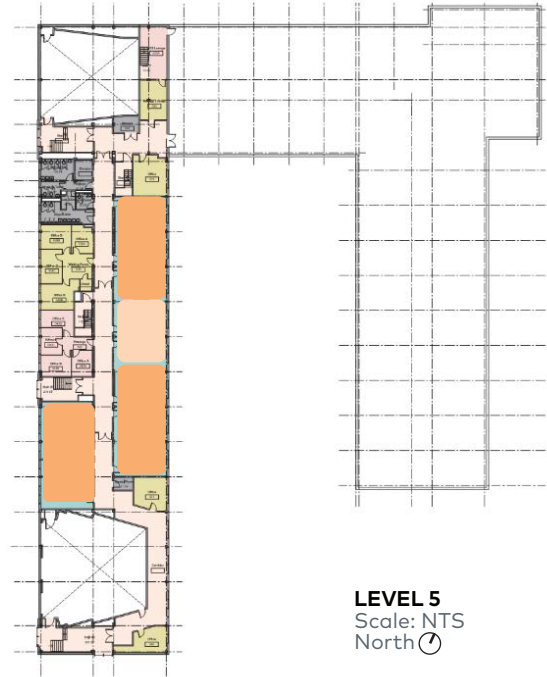
LEVEL 3
Scale: NTS
North ⤴



LEVEL 4
Scale: NTS
North ⤴

Phase 4:

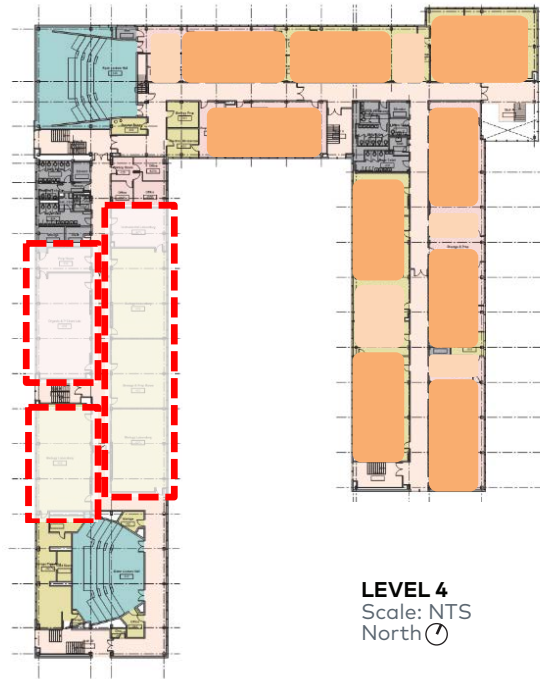
Renovate labs from north wing of level 4 into east wing of level 4.



LEVEL 5
Scale: NTS
North ↻



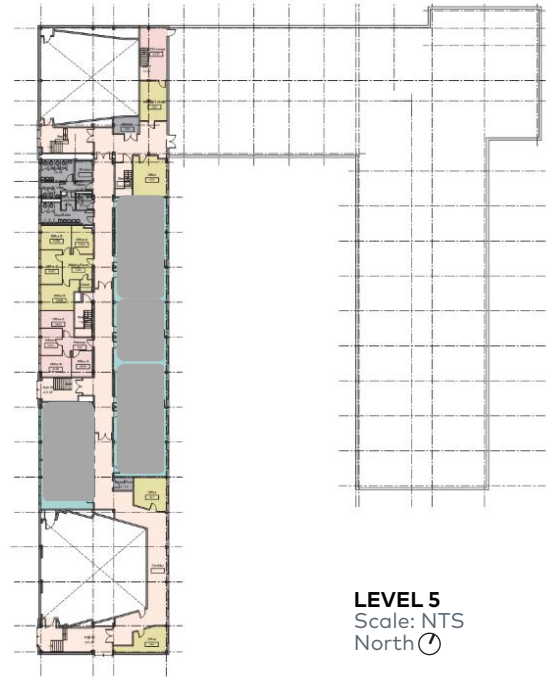
LEVEL 3
Scale: NTS
North ↻



LEVEL 4
Scale: NTS
North ↻

Final Phase:

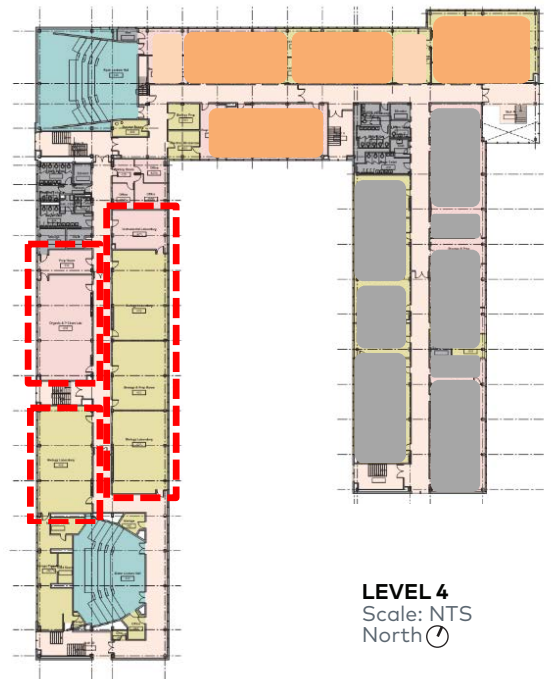
Vacated Space: The last lab move opens up space for the temporarily relocated offices.



LEVEL 5
Scale: NTS
North ⤴



LEVEL 3
Scale: NTS
North ⤴



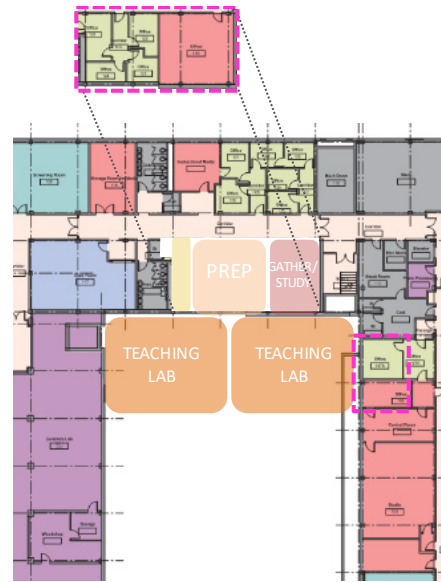
LEVEL 4
Scale: NTS
North ⤴

Battery Pack

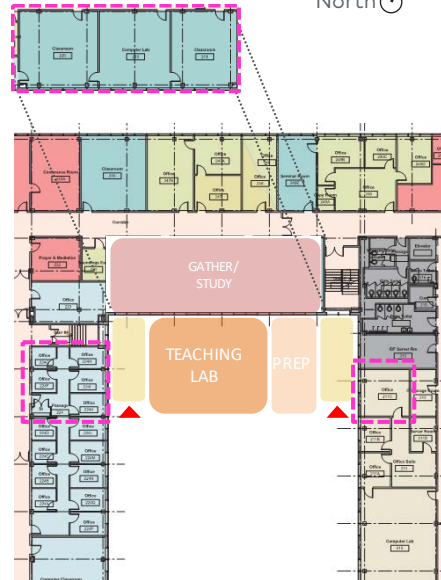
The “battery pack” approach seeks to maximize the impact of dollars spent in the short term, as part of a long-term strategy for Meier Hall. Rather than finding swing space in other buildings, a strategic addition consisting entirely of teaching space would provide seven teaching labs at an idealized size, breaking free from the constraints of Meier Hall’s structural grid. These new spaces would provide swing space, allowing the choice to renovate the rest of the labs room by room, wing by wing, or a combination of the two.

Nestling the addition at the northern end within the U-shaped courtyard offers a number of strategic advantages. Programmatically it develops a new teaching hub at the meeting point of the East and West wings. The space in front of the new teaching labs could be a combination of prep space and student space, vital places for students to meet or study in-between classes, enhancing the vitality of the learning community within Meier Hall.

Building up against three sides of the existing building is a highly cost effective way to build new space, minimizing the amount of new exterior envelope required. By utilizing the existing bathrooms and stairs in Meier, the project focuses its energy on assignable square footage. The new roof area of the addition would also provide space for new mechanical equipment to serve not only the addition, but potentially feed into the rest of existing building, possibly through a shaft created within the new addition footprint. In this way the addition could help with upgrades to the existing mechanical systems of Meier Hall.



LEVEL 1
Scale: NTS
North ↻



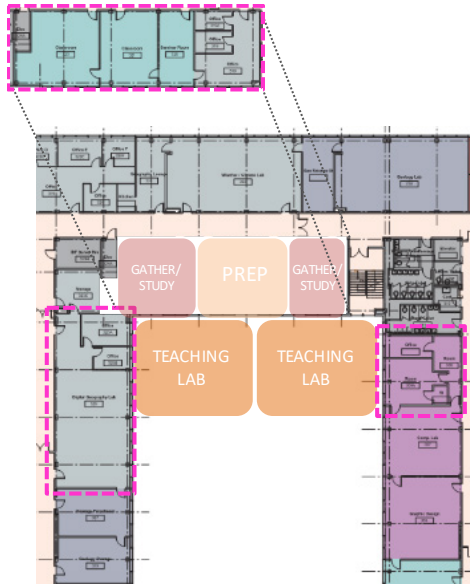
LEVEL 2
Scale: NTS
North ↻

OPPORTUNITIES

- Strategic location minimizes the amount of exterior skin to be built
- New structural grid can be optimized around seven “right-sized” flexible teaching labs
- Creates space for new rooftop mechanical equipment, and potentially new vertical path for infrastructure
- Enhances flexibility of follow-on renovations (could do wing by wing, or in place)
- Creates new student gathering space at the nexus of the U-shaped building
- Leaves some free space left over in Meier Hall

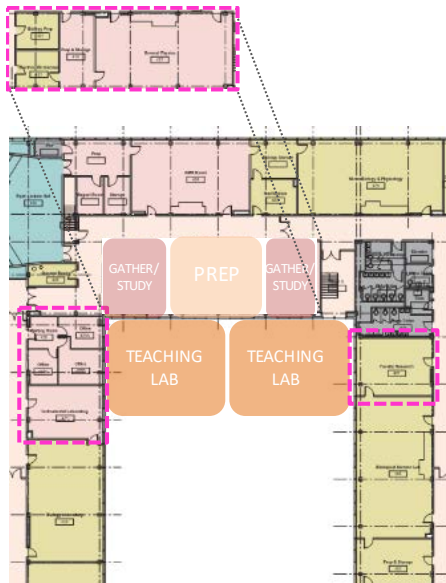
CHALLENGES

- Requires relocation of 6 classrooms to Berry Library
- Requires certain non-science programs move (in part because of covered windows) either to other locations in Meier or temporarily out of Meier



LEVEL 3
Scale: NTS
North ⤴

- Biology
- Art + Design
- Building Support
- Chemistry & Physics
- Computer Sciences
- Economics
- English
- Geography
- Geology
- Political Science
- Psychology
- Sociology
- Classroom Pool (Registrar)
- Shared
- General Arts & Sciences
- University Administration
- Circulation
- Unassigned
- Spaces Affected by the Addition
- New Teaching Lab
- New Teaching Lab Prep
- Gathering/ Study Space



LEVEL 4
Scale: NTS
North ⤴

The drawing identifies the variety of adjacent space (outlined in magenta) affected by the construction of the addition. Relocating these spaces must be factored into the planning of post-addition phases.

Horace Mann

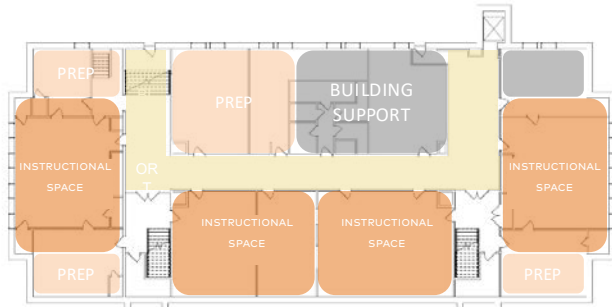
Horace Mann is an existing four story classroom building constructed of load-bearing walls, with wood joist floors. A test fit showed that the building's structural layout could comfortably accommodate large-size instructional spaces with appropriate support areas. Horace Mann was considered for long-term accommodation of science teaching labs; however, although the building's layout can support a number of appropriately sized labs, it is not suitable for the sciences for the following reasons.

First, the wood joist floors present great uncertainty regarding vibration criteria and design load capacity. Given the building's current use as classrooms, the assumption is a 50 pound per square foot load capacity, less than the 100 pounds per square foot we might typically use, or the 75 pounds per square foot we have seen in the original Meier Hall building and at other campuses.

Second, structural analysis is required to get a more definitive load capacity. Vibration criteria is even more difficult to nail down given the wood floors, but providing additional joists or sistering new beams onto the existing joists could provide increased stiffness. We have suggested that the basement level would be best for those teaching labs with high vibration criteria needs.

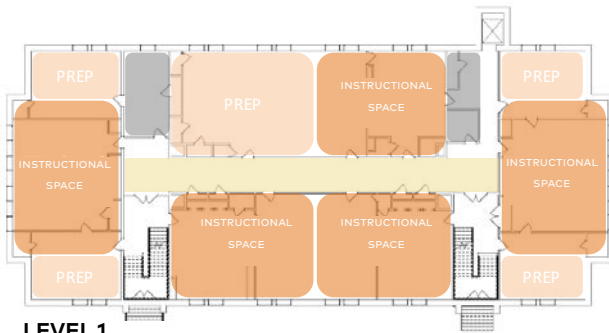
Third, renovating the building for labs would also require intensive HVAC upgrades to meet lab air requirements. New equipment could potentially go on the two lower portions of the roof, which have short spans for dunnage to cross. Additional work may be required to for life safety or accessibility and other building support functions such as toilet rooms.

Fourth, the existing Horace Mann space cannot support both offices and teaching labs and departmental representatives preferred not to have their teaching labs in a separate building from Meier Hall.

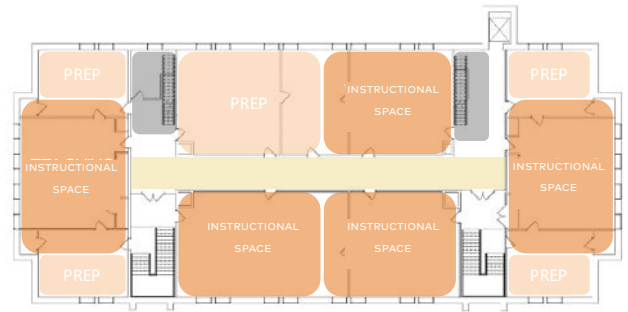


BASEMENT
Scale: NTS

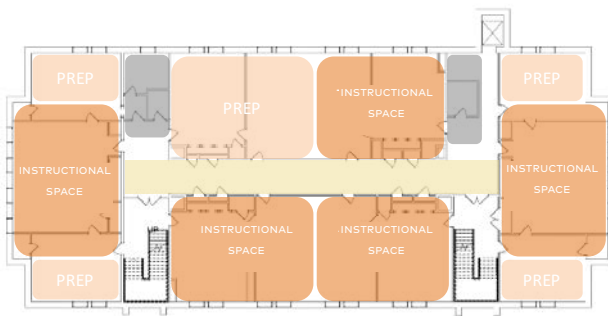
These floor plans illustrate a test fit and dimensional requirements to support instructional space in Horace Mann.



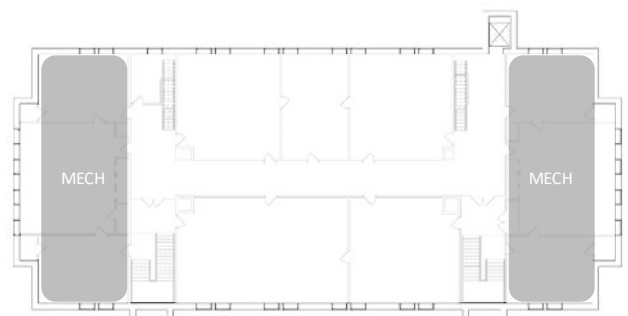
LEVEL 1
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LEVEL 3
Scale: NTS



LEVEL 2
Scale: NTS

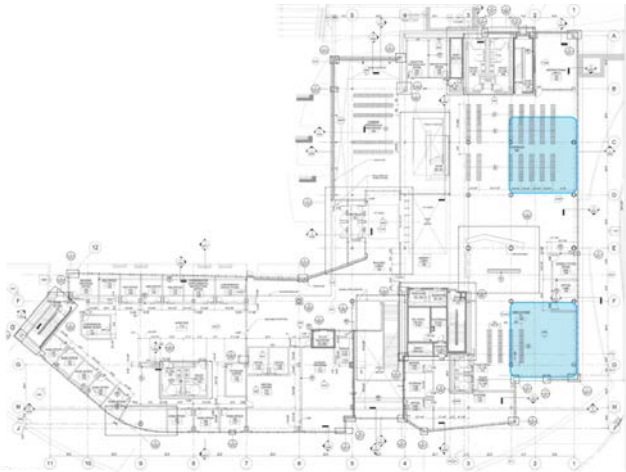


ROOF
Scale: NTS

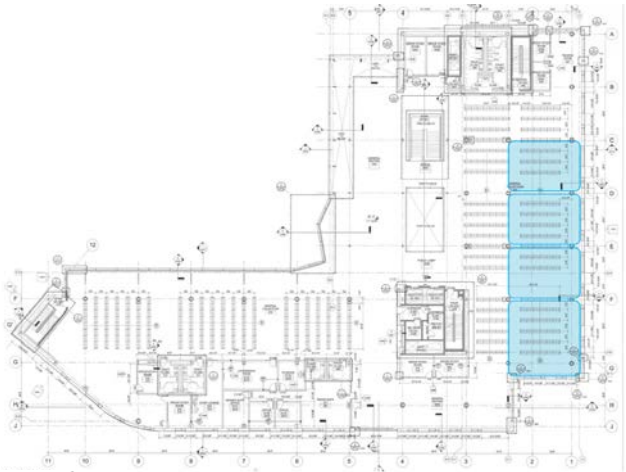
Berry Library

At the request of Salem State, the team looked at the potential of utilizing underutilized space in Berry Library. Teaching labs could be put into this building, though the structural grid is not ideal, and they would likely require significant HVAC upgrades. Locating teaching labs in a separate building from Meier hall also goes against the stated wishes of the departmental representatives. Classrooms would fit much more easily into the building module and may not require much MEP work. In order to minimize disruption and dust, a demountable partition system could be used, sitting on the existing carpet and going up the ceiling. These systems come with doors, glass panels, marker board panels, and acoustic panels, and could fit in well with the aesthetics of the library building.

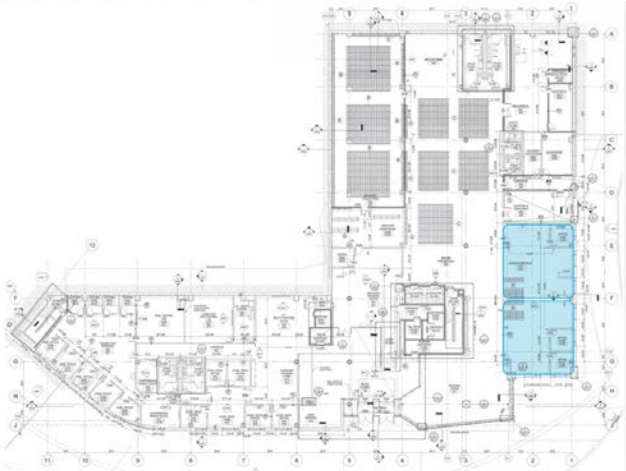
Berry Library Potential Proposed Classrooms



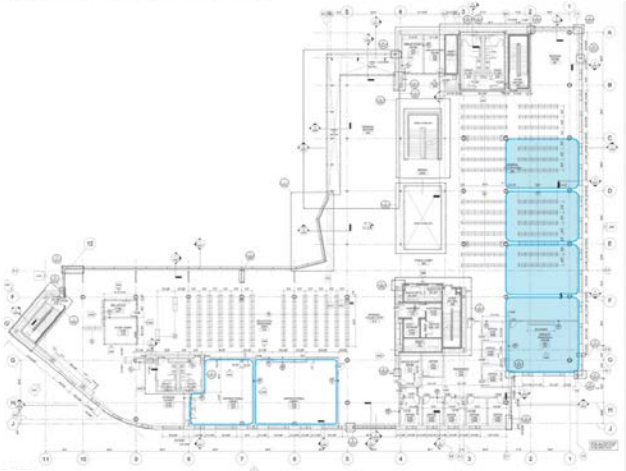
LEVEL 1
Scale: NTS



LEVEL 3
Scale: NTS



LEVEL 0
Scale: NTS



LEVEL 2
Scale: NTS

Project BOLD: Preferred Scenario

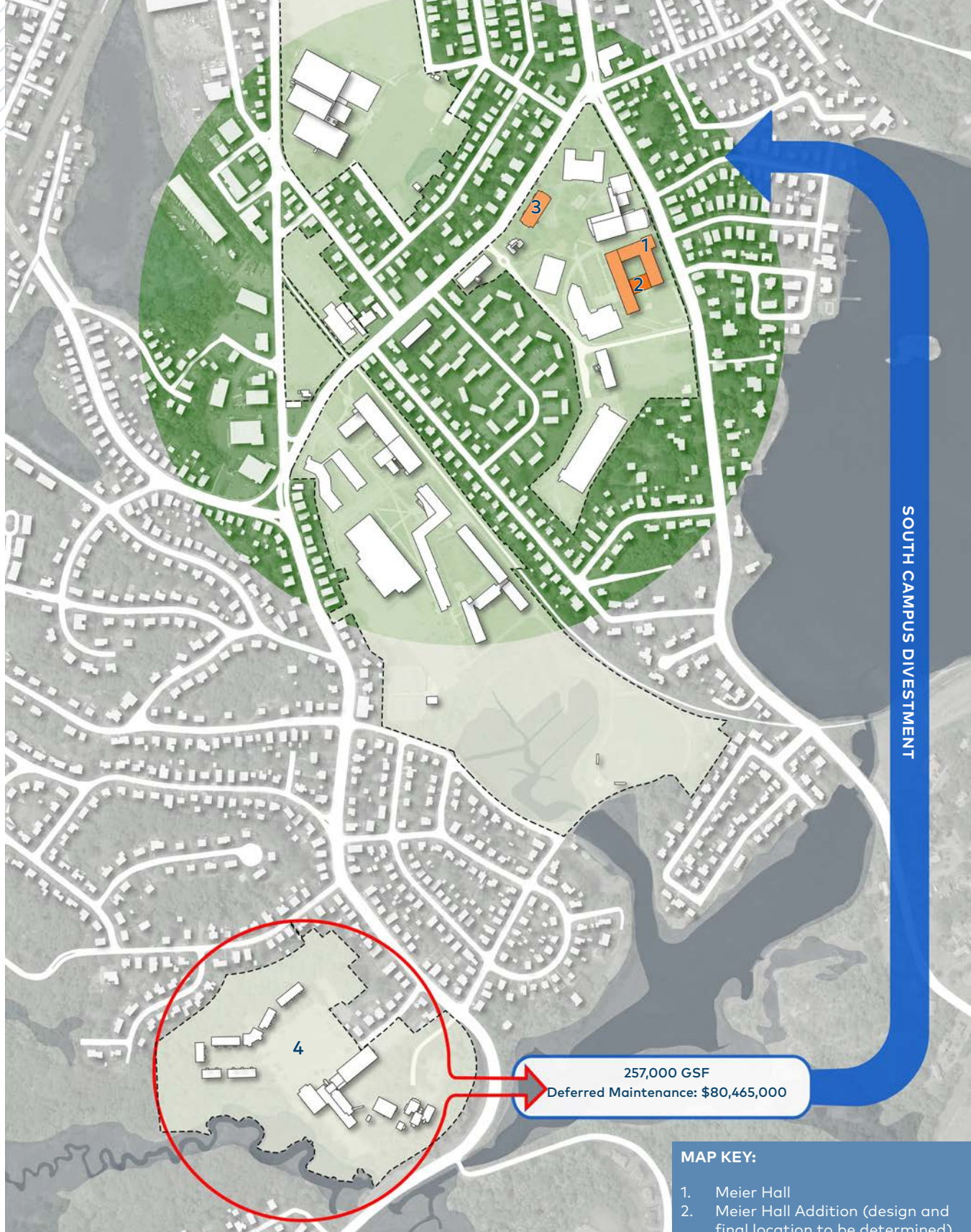
The BOLD Vision

The preferred scenario, known as SSU BOLD, reflects an overall Campus Unification and Modernization Project that addresses the major capital needs of the university identified in the Campus Master Vision through its consolidation of the Salem State campus footprint and the construction and renovation of lab spaces for the life science and healthcare programs. BOLD builds on the alternatives that were explored and presents an integrated scenario. BOLD establishes a compact and efficient campus core and maximizes programmatic synergies while streamlining operations. It also provides much needed modernized lab facilities that will give students authentic lab experiences that will correspond to those they will find in graduate school and the workforce. This exciting and transformative project enhances the overall campus experience for ALL students and positions Salem State well to serve the North Shore region and prepare its future workforce.

BOLD takes a multipronged approach to achieving SSU's capital goals in a way that utilizes the University's and the Commonwealth's resources in the most efficient way for both time and budget. It includes the sale of South Campus; the renovation of the Horace Mann Building; the construction of a Meier Hall Addition, which will house much needed, new wet labs; and the repurposing of underutilized space in the Berry Library and Learning Commons for instruction.

The sale of South Campus allows SSU to unify academic programs, physically bringing the community closer together and allowing for increased multidisciplinary collaboration that will improve student experience and retention. BOLD provides students with more course choice, as they will no longer need to consider travel time between campuses when deciding what courses to take each semester. In addition, the student housing located on South Campus is no longer needed as there is capacity in the residence halls on North and Central Campuses. In summary, the move will reduce operational costs and eliminate a significant amount of deferred maintenance and the need for future investments in buildings that have outlived their purpose; all while supporting the bottom line of BOLD through proceeds from the sale of South Campus.

Master Vision: Consolidation and Recent Projects



The renovation of the Horace Mann Building makes this consolidation possible. BOLD will allow for a complete renovation of Horace Mann and the opportunity to build new simulation labs for the health sciences. By relocating South Campus programming to North Campus, BOLD brings CHHS to the University's academic hub. Housing the majority of these programs in the Horace Mann Building provides students greater flexibility in their course scheduling, as they would no longer need to account for travel time between campuses. It also allows for easier interdisciplinary collaborations for faculty in areas of mutual interest, such as cybercrime, green chemistry, crime mapping, and climate resiliency. Additionally, it provides opportunities for much improved Nursing and OT SIM labs with greater capacity.

The Meier Hall Addition supports the consolidation by providing increased capacity in, and easier access to, modernized lab space for the life science courses required of our healthcare majors. The addition brings 7 new, state-of-the-art wet labs to SSU. It provides much needed, modernized and flexible lab space for biology and chemistry that cannot be retrofitted into the existing space built in the 1960s, while keeping all

courses in these programs housed within the same building. The flexible design of the labs within the addition increases capacity for our science programs and allows for multiple programmatic uses, creating greater flexibility in course scheduling, student and faculty research, and alternative delivery methods. The addition also frees up space in Meier Hall where biology and chemistry courses are currently taught, increasing capacity for courses that require less specialized spaces, all while adding capacity for general education and healthcare support courses.

Repurposing underutilized space in the Berry Library and Learning Commons into four new flexible, teaching spaces assists the project in two ways. First, it provides swing space for classes that will need to be relocated during the construction of the Meier Hall Addition. More importantly, however, it will accommodate the remaining South Campus programming, as well as other teaching and research activities, to make the full consolidation possible. Every department on campus will have access to these spaces and will benefit from having all academic programs within close proximity. This renovation will also allow for greater opportunity for faculty professional development and collaboration as the spaces will be flexible to meet those needs.

ADVANTAGES:

- Allows SSU to right size its facilities as a smaller university, given enrollment & demographic realities
- Vacate South Campus and consolidate programs to North Campus
- Reduce operating costs due to campus consolidation (reduced shuttles, snow removal etc.)
- A positive for recruiting students and STEM faculty
- Significantly improves STEM/health science facilities by January 2023, fostering adjacencies in Horace Mann & Meier Hall
- Makes near term use of the now-vacant Horace Mann asset
- Allows continued use of Meier Hall, albeit with deferred maintenance yet to be addressed despite new roof

Meier Hall Battery Pack Site Plan



Meier Hall: Battery Pack Connector

This preferred scenario for Meier Hall is based on the Battery Pack scheme explored during the Alternatives phase, but shifts the bar of new construction to better leverage efficiencies, and to better connect to the existing Meier Hall floorplan.

Meier Hall exists as a five-story concrete frame building built in two phases, in 1960s, with facades of yellow brick and ribbon type windows. The original "L" shaped building and subsequent addition form a "U" shaped complex with an interior characterized by long double-loaded corridors. The existing structural bay spacing precludes large open teaching lab spaces. The proposed "Battery Pack Connector" is a 4 story (including one basement level) insertion, connecting the free ends of the "U" to create a loop corridor network. The addition will have a 12 foot floor-to-floor height to match that of the existing building and is located to minimize the number of existing spaces impacted, and to align with an existing stair in the western wing of Meier Hall.

The proposed addition contains seven wet labs, including some chemistry labs that will include multiple fume hoods. The typical floor includes a single-loaded corridor opening to two labs, each with direct access to prep spaces located in adjacent renovated space within the existing building, occupying the spaces covered over by the new addition. The ground floor will include an entrance and access into the newly bounded courtyard, as well as a small student gathering space—a resource almost non-existent in Meier Hall today. The labs would be designed to provide accessible teaching spaces in accordance with ADA and MAAB standards, such as lower-height work surfaces at counters, sinks, and fume hoods. The new lab spaces will be served with air handling equipment located in a penthouse on top of the addition. This new mechanical area also presents an opportunity to provide upgrades or replacements to existing systems serving the building today.

Along with the building we propose a refresh and upgrade of the courtyard space, as well as a "front lawn" (including accessible paths) on the south side of the new addition. These spaces would be populated with loose seating and site lighting



Horace Mann

Horace Mann

The Horace Mann Building becomes the key enabling building asset towards achieving campus consolidation by accommodating relocated programs from the South Campus. The building currently totals roughly 38,000 GSF. The following breakdown suggests how the approximate amount of space required to right-size departments into new space:

Consolidates: Nursing, Criminal Justice, Occupational Therapy, and Healthcare Studies

Office:	10,000 asf
Classroom:	8,000 asf
Experiential Health (simulation and dry lab):	10,500 asf
Student Study:	600 asf
Total:	29,100 asf
	37,830 gsf

Note: Total classroom need for these programs is approximately 12,000 asf, including assumed growth. Assumes the additional 4,000 asf can be provided through higher utilization of Berry Library and/or making use of existing North Campus classroom pool.



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|---|--|--|
| Biology | Political Science | Vacated Spaces |
| Art + Design | Psychology | New Teaching Lab |
| Building Support | Sociology | New Teaching Lab Prep |
| Chemistry & Physics | Classroom Pool (Registrar) | Gathering/ Study Space |
| Computer Sciences | Shared | |
| Economics | General Arts & Sciences | |
| English | University Administration | |
| Geography | Circulation | |
| Geology | Unassigned | |

LEVEL 1
 Scale: NTS
 North

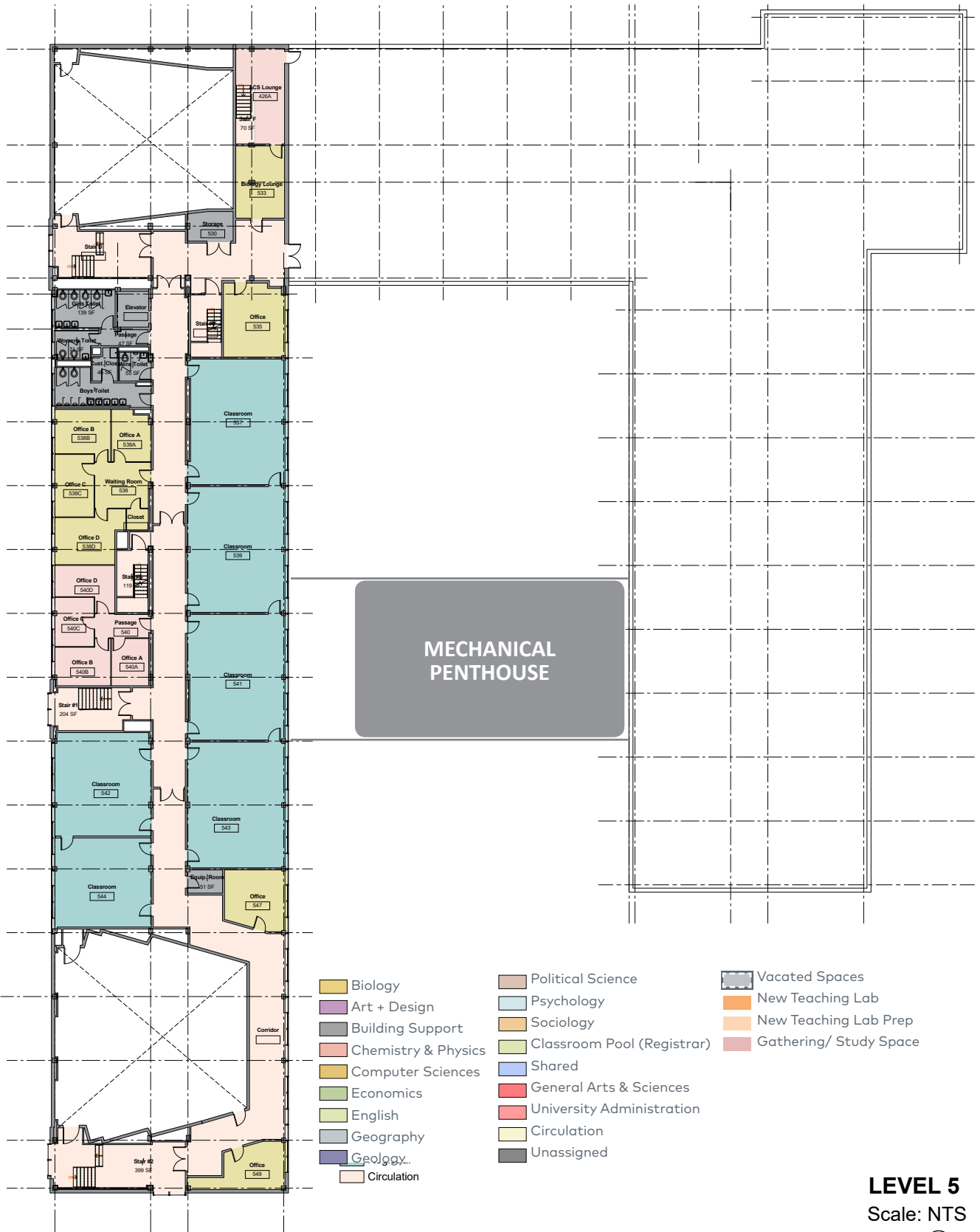


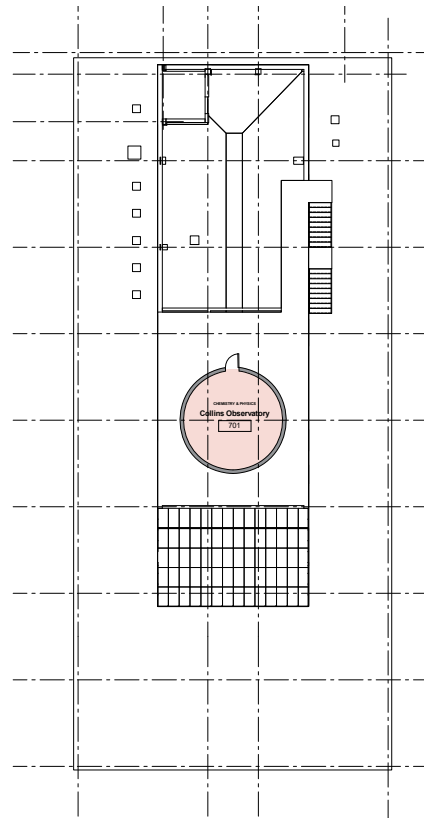
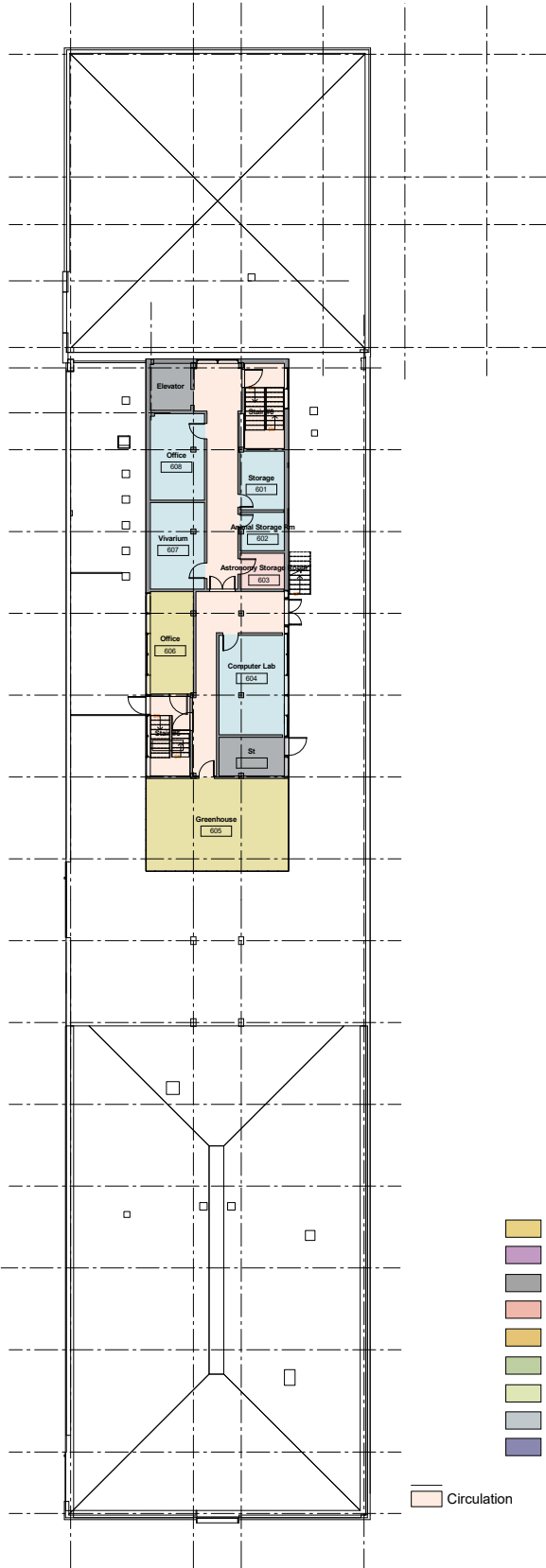
LEVEL 2
 Scale: NTS
 North





LEVEL 4
 Scale: NTS
 North





- | | | |
|---------------------|----------------------------|------------------------|
| Biology | Political Science | Vacated Spaces |
| Art + Design | Psychology | New Teaching Lab |
| Building Support | Sociology | New Teaching Lab Prep |
| Chemistry & Physics | Classroom Pool (Registrar) | Gathering/ Study Space |
| Computer Sciences | Shared | |
| Economics | General Arts & Sciences | |
| English | University Administration | |
| Geography | Circulation | |
| Geology | Unassigned | |

Circulation

LEVEL 6 / OBSERVATORY

Scale: NTS

North

Cost Summary

Cost Summary

Includes Escalation: Q3 2021 Start

Total project costs for Project BOLD were calculated to understand the potential financial impact of the strategy. As the project is designed, and the actual timeline is adjusted properly for inflation, costs will continue to be refined.

DIVISION SUMMARY	65,094 GFA
RENOVATION AREAS	44,484 GSF
ADDITION AREAS	16,730 GSF
SWING SPACE	3,880 GSF

STRATEGY OPTIONS	TOTALS	
	Total	\$/SF
MEP INFRASTRUCTURE	\$6,904,070	\$155
CORE RENOVATIONS & FITOUT	\$15,895,456	\$357
ADDITION / INFILL & FITOUT	\$19,366,599	\$1,158
SWING SPACE (BERRY LIBRARY)	\$954,575	\$246
SITE ALLOWANCE	\$387,656	\$23
TOTAL ANTICIPATED CONSTRUCTION COST	\$43,508,356	\$668
TOTAL ANTICIPATED PROJECT COST \$ (X 1.4)	\$60,911,699	\$936

Acknowledgments

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