

UNM HSC College of Pharmacy

Program Plan and Concept Design

January 10, 2023





Section 1.0 | Introduction

- 1.1 Executive Summary
- 1.2 Acknowledgments

1.1 Executive Summary

Background

The University of New Mexico Health Science Center's (UNM HSC) College of Pharmacy (CoP) has been educating students since 1945 and enrolls more than 250 students each year. It is home to the New Mexico Poison and Information Center and was the world's first licensed radiopharmacy. The College of Pharmacy's mission is **"...to develop pharmacists, educators and scientists whose leadership, dedication and innovation improve the health of our local and global communities."**

Four enduring goals guide the College's growth and development. These goals include the following:

- Educate and train pharmacists and scientists for the changing worlds of health care and research.
- Advance the discovery, development and dissemination of new biomedical knowledge and technology.
- Develop innovative and inter-professional models of care that enhance health for communities of New Mexico and are best practices for the nation and the world.
- Foster community engagement to proactively address concerns and health care needs.

The College of Pharmacy offers several educational programs including Doctor of Pharmacy (PharmD), undergraduate and graduate degrees in Pharmaceutical Sciences, pharmacy residencies and fellowships, nuclear pharmacy training, and continuing education services. The CoP also supports several research programs including developing cancer treatments, researching Fetal Alcohol Syndrome and Substance Disorder, developing treatments for infectious diseases, preventing heart disease, and combating toxic environmental exposures. The CoP has over 45 U.S. patents and is nationally recognized. In 2022, their research funding totaled over \$17 million. They rank 8th nationally for NIH funding, and 15th nationally for federal funding.

Facility Goals

The CoP currently shares a building with the UNM College of Nursing (CoN) and has a presence in seven other buildings on the HSC campus as well. The College of Nursing will vacate the top two floors of the shared building when their new building is complete in 2023. The shared CoP/CoN building will then be renovated to meet the needs of the College of Pharmacy.

UNM HSC/CoP leadership engaged a nationally renowned design consultant (FBT/HDR) to develop a forward-thinking functional space program and concept design for the College of Pharmacy with the following pragmatic goals:

- Meet both initial and projected needs for teaching, wet and dry lab research, faculty and staff workplace, and student enrichment and study space.
- Develop the existing CoP building to its highest and best use.
- Consolidate the college as much as possible, facilitating research and teaching conversations and collaborations.

Additional aspirational guiding principles were developed through visioning workshops and listening sessions resulting in a UNM HSC College of Pharmacy building renovation that **"should...**

- **deliver a clearly defined and beautiful path forward."** (physically and academically)
- **be welcoming and accessible to all."** (students, faculty, and community)
- **encourage growth and collaboration in the study of nature and science."** (wellness and sustainability)
- **utilize the latest technology to push innovation and access."** (global infrastructure)
- **embrace autonomy for faculty, staff, and students to pursue their own journey and discoveries."** (promote flexibility and transparency within the department)
- **be grounded in the local culture, with a foundation that is prepared to evolve over time."** (proud of New Mexico's past and leader in New Mexico's future)

1.1 Executive Summary

Explanation of Need

The current physical facilities of the Nursing and Pharmacy Building are nearly a half century old, and have had no significant infrastructure or design improvements since the original construction. A top 20 nationally-ranked pharmacy program deserves a state-of-the-art academic model, not one from 1975. The program needs additional contiguous square footage to accommodate a program that is dispersed across 8 campus locations. It also requires significant infrastructure improvements as its outdated infrastructure has a direct impact on the culture, quality, recruitment & retention, and safety of CoP students and faculty. Through a robust and inclusive investigation together the design team, CoP faculty leadership, and student leadership identified the following top 10 deficiencies that have been and targeted in the new 2022 CoP Renovation Program Plan. The list below is no specific order of importance.

- Technology in classrooms
- Laboratory Infrastructure
- Wellness / Inclusive spaces
- Modern student lounge – connectivity & studying
- Active / Flexible Learning classrooms
- Building HVAC (Lab Safety), Electrical (Robust), and IT (connected)
- Collaborative & wellness-focused work environment
- WOW factor deserving of a top-ranked UNM Pharmacy program
- Interdepartmental Collaboration / Co-location
- Innovative & distributed informal student-focused common areas



A group of student pharmacists providing free services at Dreamstyle Arena in Albuquerque

1.1 Executive Summary

Project Introduction

The proposed project is a \$60M renovation of the 78,000 GSF, Nursing & Pharmacy Building, originally constructed in 1975. The renovated building will deliver desperately needed state-of-the-art, safe, and efficient research laboratories (wet & dry), modern flexible classrooms, wellness-focused faculty workplace environments, and forward-looking, dedicated informal student spaces. All will encourage culture-building student engagement, faculty collaboration, research innovation, and program growth. In addition to progressive interior spaces, the project scope includes a new energy-efficient exterior envelope, and a complete replacement of major mechanical, electrical, plumbing, and IT infrastructure.

Currently, the Nursing and Pharmacy building is the most expensive building (per square foot) to operate and maintain on campus. Couple this with the reality that most of its spaces are outdated, unsafe, or undesirable from a health and wellness perspective, and the building in its current state is financial liability for UNM HSC with respect to program growth and safety. Reusing the existing site and structural infrastructure provides the CoP with the opportunity to both remain in the heart of the HSC campus near its research partners (Medical School & Cancer Center), leverage site develop cost savings, and significantly reduce the project's cost and embodied carbon footprint.

The proposed design concept for the new College of Pharmacy building will locate a new lobby, pharmacy museum, student engagement spaces, administrative offices, and a new flexible flat-floored large assembly auditorium on level 1. Academic classrooms, faculty offices, and dry research laboratories will be located on levels 2 and 3. The basement will primarily be comprised of research-specific wet labs, animal labs, and core labs. Many of the basement spaces will have views to an expanded garden patio delivering daylight and respite into an area currently void of modern human-centered wellness design.

In addition to the 78,000 GSF renovation, the project cost includes strategic improvements to 23,000 GSF of wet laboratories in the Research Incubator Building (RIB) and Multidisciplinary Research Facility (MRF directly east of the Pharmacy building, and a modest renovation of the Stanford House



Rendering of proposed CoP building exterior renovations - looking NW

where research patients are seen. While not ideal, the reuse / investment in RIB, MRF, and Stanford will afford a significant cost savings with minimal compromise to the CoP's full department co-location goals. Leveraging existing infrastructure accompanied by destination teaching and specialized research facilities will create the department energy and gravitational pull necessary to overcome the short distance to these neighboring facilities.

Lastly, the renovated CoP building concept has master-planned an additional 35,000 GSF, 5-story wet lab research tower expansion to the south of the existing CoP building. This expansion could accommodate future CoP growth, a transition of space from RIB and MRF, or be a translational catalyst acting as a co-location destination for shared research opportunities between the CoP, School of Medicine, and the Cancer Center.



Section 3.0 | Programming & Planning

- 3.1 Programming Process
- 3.2 Existing Conditions
- 3.3 Programmatic Description
- 3.4 Changing Factors & Projected Needs
- 3.5 Building Design Scenarios

3.1 Programming Process

Introduction

The UNM College of Pharmacy is one of the most highly ranked in the country. The CoP currently shares a building with the College of Nursing and has a presence as well in seven other buildings on the HSC campus. The College of Nursing will vacate the top two floors of the shared building when their new building is complete. The shared COP/CON building will then be renovated to meet a portion of the space needs of the College of Pharmacy, along with renovation of RIB, MRF and the Stanford House.

FBT / HDR was engaged to develop a forward-thinking functional and space program for the College of Pharmacy with the following goals:

- Meet both initial and projected needs for teaching, wet and dry lab research, faculty and staff workplace and student enrichment and study space
- Develop the existing COP building to its highest and best use
- Consolidate the college as much as possible, facilitating research and teaching conversations and collaborations

Methodology

The program was developed through a series of workshops and group interviews with the College of Pharmacy, conducted between August and October 2022. From information gathered during the initial workshops, the team developed a space program that, when realized, would meet the College's needs well into the future. Five test fit options were developed that would enable the program to be met in different ways, with different renovation and new construction options and corresponding construction costs.

Program Goals

The goals for the space program were established through two companion sessions held in August 2022. The first was a Visioning Session, whose purpose was to engage the College's leadership in high level thinking about what success for the COP really means and how facilities design could help bring about that success. That was immediately followed by a KISS session – Keep this; Improve this; Stop this; Start this; – a tactile session to enable those that live and work in the College's facilities to communicate processes and spaces that work well and should continue, those that are functional but need improvement, and spaces that the college has but does not need and/or needs but does not have.

The Vision

Through a spirited session that involved choice, challenge and consensus, the College of Pharmacy chose six images from a starting deck of fifty-two. These six images, together with the ideas generated, form the vision for what the College's facilities should represent going forward. The six images selected and a summary of the associated ideas generated and facilities response can be found on the next few pages.

From those ideas and ideal responses, the following *guiding principles* were established:

The UNM HSC College of Pharmacy building renovation should achieve:

- A clearly defined and beautiful path forward
- That is welcoming and accessible to all
- Encourages growth and collaboration in the study of nature and science
- Utilizes latest technology to push innovation and access
- Embraces autonomy for faculty staff and students to pursue their own journey and discoveries
- Grounded in the local culture, with a foundation that is prepared to evolve over time.

3.1 Programming Process

Visioning Session

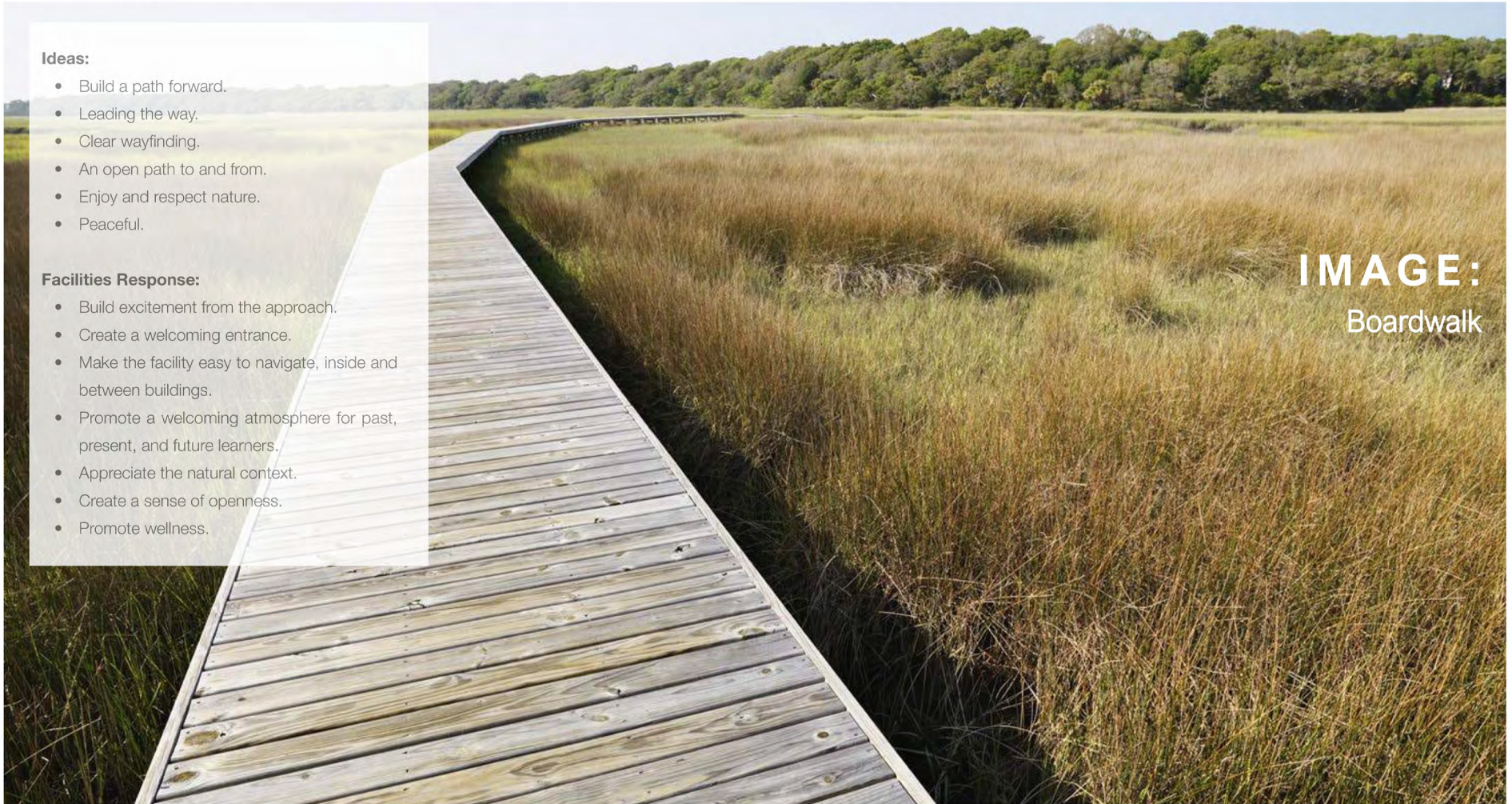
Ideas:

- Build a path forward.
- Leading the way.
- Clear wayfinding.
- An open path to and from.
- Enjoy and respect nature.
- Peaceful.

Facilities Response:

- Build excitement from the approach.
- Create a welcoming entrance.
- Make the facility easy to navigate, inside and between buildings.
- Promote a welcoming atmosphere for past, present, and future learners.
- Appreciate the natural context.
- Create a sense of openness.
- Promote wellness.

IMAGE:
Boardwalk



3.1 Programming Process

Visioning Session

Ideas:

- Tech savvy.
- State-of-the-art.
- Futuristic approach.
- Science and pharmacy.

Facilities Response:

- Leverage the student atmosphere and new technology.
- Utilize instant communication, both within the school and for community outreach, including rural areas.
- Provide new systems / platforms.
- Embrace technology rather than react to it.
- Consider technology and the human connection.

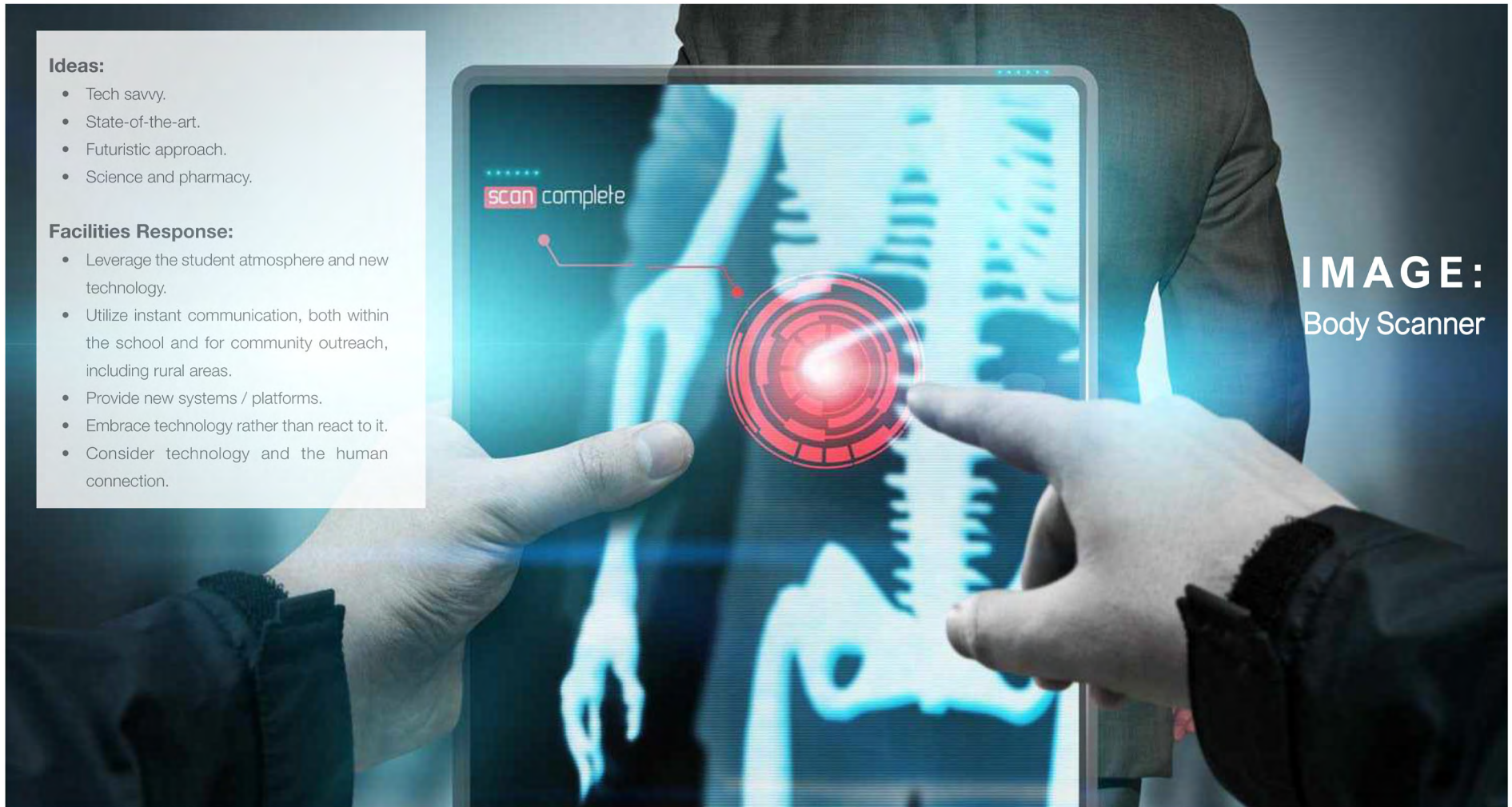


IMAGE:
Body Scanner

3.1 Programming Process

Visioning Session



IMAGE:
Senior Young Hands

Ideas:

- Accessible, comforting, & safe.
- Compassion
- Connection
- Mentoring, nurturing.
- Helping hands, reaching out.
- Intergenerational understanding.

Facilities Response:

- Create a welcoming atmosphere.
- Emphasize safety and security.
- Enable connection through shared spaces.
- Foster a community of learners.
- Highlight the availability of assistance.
- Provide universal accessibility.

3.1 Programming Process

Visioning Session



IMAGE:

Seedlings in Test Tube

Ideas:

- Sustainability.
- Science to improve health.
- Marriage of science, technology, and nature.
- Planting seeds, nurturing the next generation.

Facilities Response:

- Integrate sustainable techniques and performance criteria.
- Spotlight the science and research that takes place in the facility.
- Incorporate light and nature wherever possible (windows!).
- Foster an environment that promotes learning and collaboration.
- Build in flexibility and adaptability for growing and evolving needs.
- Establish a framework for future growth.

3.1 Programming Process

Visioning Session

Ideas:

- Creation with science.
- Carefree and happy.
- Light and shiny.
- Autonomy.
- Going where your mind directs you.
- No boundaries / spreading out.
- Different people, paths, sizes.

Facilities Response:

- A scientific foundation, beautifully designed.
- Incorporate spaces for wellness that promote happiness, relaxation, decompression, enjoyment.
- Bring the WOW factor by showcasing pride in the facility, accomplishments, and the school.
- Promote autonomy and the freedom to pursue one's own path.
- Provide a mixture of open and closed spaces with built-in flexibility. Embody the diversity of staff, students, and science.
- Equal quality and inclusion.

IMAGE:
Bubbles

3.1 Programming Process

Visioning Session

Ideas:

- Natural beauty.
- Variation of light.
- Movement.
- Longevity, ability to evolve.
- Spirituality.
- Natural colors, New Mexico culture.

Facilities Response:

- Incorporate influences from the local natural context.
- Incorporate views to the mountains and nature.
- Bring in as much natural light as possible.
- Create vertical transparency and communication between floors.
- Encourage free-flowing movement and connectivity between spaces.
- Invest in strong infrastructure with long-term and sustainable strategies.
- Promote a sense of happiness, relaxation, decompression, enjoyment – people should want to be here.
- Honor the diversity and cultures of New Mexico.
- Establish a sense of pride in the facility.

IMAGE:
Antelope Canyon

3.3 Programmatic Description

Wet Labs Research

Bench-based open laboratories were originally anticipated to be consolidated within the CoP building on the basement and levels 2 and 3. The program standard was four researchers per 35' module, providing 5-7 linear feet of bench per person. The program provides space for 100 research personnel in the open labs. The current premise is that, rather than using the upper floors for wet lab research, eight principal investigators will occupy the basement of the COP building along with a renovated and enlarged animal facility and the core labs, five will occupy RIB and five will occupy MRF.

For life sciences, the amount of lab support space needed to enable that density in the open lab ranges between 80-100%. Lab support spaces in the program include tissue culture, instrument rooms for shared benchtop instruments, equipment rooms for floor-standing equipment need to be distributed on the lab floors for quick access by researchers. Several other specialized research spaces specific to individual faculty are included in the program as well. In addition, core labs that support the entire research neighborhood, including bioanalytical chemistry, a future genetics / genomics core and an ISO 7 clean room as well as sample drop-off and prep are included.

To meet the anticipated twenty years needs of the College of Pharmacy's wet lab research programs, including offices and workstations for the faculty and staff conducting that research, a total of 37,198 ASF is included in the space program.

Dry Lab Research

UNM College of Pharmacy has a robust and well-funded dry/clinical lab program, including the Substance Use Research and Education (SURE) Center, and four centers within Community and Environmental Health: the Metals Superfund Research Center, the Center for Metals in Biology and Medicine, the Center for Native Environmental Health Equity Research, and the Navajo Birth Cohort Study. A total of 45 faculty and staff work within these centers.

The space program envisions a consolidated research center that would include "front-of-house" spaces that research patients can drive to easily, enter and work with faculty and staff to be tested, provide research samples, etc. There would also be a "back-of-house" area, not accessed by the research patients, where the actual research is conducted. A consolidated clinical research center would provide ease of access for the research patients and enable collaboration and efficiency for the lab activities. It is important to note that some wet-lab space is necessary to support this activity and is included in the space program.

A total of 10,873 ASF is included in the program to support the research patient space, the wet and dry laboratory space, and the offices and workspace for the people working there.

Instructional Space

As with all other colleges in the Health Sciences Center, the College of Pharmacy conducts many of their classes in the Domenici Center and will continue to do so. Instructional space provided in this program includes right sizing some classrooms already in the building for active learning and modern technology. Instructional space currently in the program includes transforming the current sloped auditorium with theater seating into a flat-floor, active-learning classroom, replacing the current B-15 active learning classroom, and providing four additional classrooms of 30 seats. All classrooms going forward should be sized and contain appropriate furniture and technology for active learning: tables and movable chairs that allow students to work together in groups, with technology at each table as well as centralized screens, so students can be working individually, in groups at their individual tables, and as an entire class. Six seminar rooms for 12 people each round out the instructional space, for a total of 9,929 ASF.

One teaching lab for 24 students is included in the program; this is anticipated to be a multi-functional teaching laboratory equipped with bio-safety cabinets for sterile product development as well as 2-3 fume hoods for biochemistry and bench space for student work. A prep and supply storage room should be directly adjacent and with direct entry into the teaching lab.

3.3 Programmatic Description

Student Spaces

Students today in any form of higher education, and especially those in graduate level programs, have multiple demands on their time, including families, part- or full-time jobs, health issues, and many other life factors. With today's technological capabilities, many activities that formerly required students to be on campus in the classroom can today be conducted virtually from anywhere. It is imperative that when capital dollars are spent on campus spaces, those space be designed to enable faculty, staff, and students to make productive use of all their time, including when they have an hour or two between classes. Thus ,student spaces, both formal and informal, are an integral part of a successful learning environment today.

The space program includes a student lounge with kitchen wall, refrigerator, microwave, sink and mix of seating types including soft seating, small booths, and tables. Informal study areas are included in the program, not to be walled and distributed as the design allows. Four small group study rooms are reservable for study groups and/or office hours. A Pharm D Computer Lab with eighteen stations allows for teaching and learning of proprietary software. Graduate student desk pods are planned for a total of 40 students; it is recommended that these be groups of eight students rather than large rooms, limiting distractions from different activities within the space.

Student space within the program comprises 7,808 ASF.



UNM McKinnon Center



UNM McKinnon Center

Workplace

The office workplace has undergone major changes over the past two decades as technology has made it possible to do many tasks literally from anywhere. This program is based on the requested individual offices for each group at a module size of 11'-4" x 10', or 113 ASF. This size works within the building structure and falls within the office standards of UNM. Net assignable square feet (NASF) includes assignable square feet and secondary circulation.

Office groups in the program include:

- The Dean's Office: 1301 NASF
- Student Support Offices: 3355 NASF
- Infrastructure / Support Offices: 2,142 NASF
- Department and Faculty Offices: 5,661 NASF
- Amenity / Office and Workplace Support: 12,389 NASF

Within each of these office groups, office support space including work / supply room, student file storage and office storage is included. The amenity / office and workplace section includes eight conference rooms for 12p, four conference rooms for 24p, and 12 huddle rooms of 4p. This number and varied size of conference rooms will allow for lab group meetings, administrative and management meetings, small meetings with one faculty and a few students, etc. It also includes a faculty/staff lounge for breaks, food storage, coffee, and respite.)

The total workplace space to support all faculty and staff as described above totals 24,858 NASF.

Specialty Spaces

Two spaces within the College of Pharmacy are unique and will require special design consideration: these are the Pharmacy Museum and the Greenhouse. Together, the program for these comprises 654 NASF.

3.4 Changing Factors & Projected Needs

Introduction

In considering a cutting-edge environment for first class research and education, it is important to consider how both science and education have progressed since many campus facilities were designed and built.

Classrooms

First, 90% of what we know about the human brain has been discovered in the last 30 years. We now understand that deep learning does not occur when students listen passively to a lecture or even read their course work. It happens when they are exposed to a concept and are then challenged to manipulate that concept in a hands-on, active way. This has revolutionized the design of both classrooms and teaching laboratories, although that was always the intent of teaching laboratories.

When classrooms are designed for active learning, student learning is the top priority. Best practice includes movable tables and chairs that can be regrouped and reconfigured, or a team-based arrangement where teams of 4-6 students, occasionally more, are identified and tables accommodate that size team. Technology and screens are available at each table, and the software allows the instructor to control whether students are working individually, individually by table, or as an entire class. Larger screens are arranged around the room so that views from any seat are optimal.

Acoustics are excellent, with a reverberation of no more than 0.4 seconds. Typically, carpet and acoustic ceiling panels alone are not sufficient to achieve this. Good acoustics are critical in a classroom; research has shown that as many as 30% of students on any given day may have difficulty hearing clearly due to allergies and colds, English as a second language, simple hearing loss or sensory issues. The room itself should provide clear, non-reverberating language from the instructor or presenter, not hinder the ability to hear clearly.

Finally, as the students are working to master the concepts, the instructor should have the ability to move around and circulate among them to monitor activity and ask questions. All these factors together require more area per student than 20th century classrooms provide, since they were designed at the time for tablet armchairs facing forward. Space standards to allow optimal active learning to range from 30-35 ASF per student. Classrooms in this program are based on 33 ASF per seat for the larger ones and 35 ASF per seat for the 30-person classrooms. These will add needed flexibility to the overall HSC classroom portfolio and relieve some of the needs of the College of Pharmacy.



Active Learning Classroom - University of Maryland Brendan Iribe Center

3.4 Changing Factors & Projected Needs

Wet Labs

Wet lab research in the life sciences has evolved dramatically as technology and automation have replaced many of the tasks that were originally conducted manually by graduate students and lab technicians. This trend has multiple effects when comparing a lab today to one that was designed twenty years ago:

- Every researcher, from the principal investigator down to the most junior graduate student, spends more time analyzing data and less time at the bench than in the past.
 - More automated equipment is needed in the lab, both benchtop and floor standing. This means that individuals need less bench space per person, typically 5-6 linear feet today when it may have been double that in the past.
- Cell and tissue culture have always been a large part of biology and biomedical research; as science and the ability to measure have reached greater precision, and researchers have developed techniques such as organ-chip models and organoids, cell culture of different types is an inherent part of most biomedical and pharmaceutical research today. Some clean cell culture can be performed in a bio-safety cabinet within the main laboratory; other types, for instance cultures involving yeast, viral vectors and other sensitive materials still need to be conducted in tissue culture rooms. Part of detailed programming will involve development of dedicated and shared tissue culture rooms.
- As our society has become more environmentally conscious, sustainability has become an important component of lab design, with several important aspects:
 - Designers try to limit the size of spaces that require once-through air. Desks for grad students and techs are placed outside the lab proper, reducing the amount of once-through air required and keeping them safe in the occasional event of an accident or spill.
 - Fume hoods, once considered a staple in every laboratory, are more often now an occasionally used resource and can be located in shared areas. There are specialty functions which still need constant access, so the number and type of fume hoods will need to be addressed during detailed programming.
 - For most biomedical / biotech applications, 12 air changes per hour (ACPH), once considered standard, are no longer required. If fumehoods are placed within an alcove or shared hood room, the main laboratory has less risk and can be designed at 8 ACPH or less.
- Common instrument rooms for benchtop instruments and common equipment rooms for floor-standing equipment such as refrigerators, freezers, ultra-centrifuges, ice flakers, etc. are critical support spaces. These rooms allow equipment that produces heat and noise to be contained in a room designed to handle it, allowing the main lab to be quieter and provide greater density of researchers.
- Lab support space including tissue culture, instrument and equipment rooms, and shared supply storage should range from 80-100% when compared to the lab space. This is markedly different than the 20-25% that was routinely programmed in 20th century research buildings.
- Core Labs are defined as specialized labs, run by dedicated staff, and overseen by a principal investigator, that serve the institution. They contain highly specialized equipment, and the design must be driven by allowing optimal function of the equipment, not by square feet per person. This program contains a bioanalytical chemistry core, which exists and has recently been renovated; it is already full and there are plans to expand the equipment, so more space is needed. A small ISO 7 clean room is also included, as well as a future genetics/genomics core lab.

This space program was derived with room for growth; currently twelve principal investigators are conducting wet lab research, and the program allows for eighteen PIs. This will allow for new hires as well as replacement of non-wet lab faculty who may be retiring and replaced by someone interested in wet lab research.

3.4 Changing Factors & Projected Needs

Dry Lab Research

The dry/clinical research lab component of the program brings together the College's clinical research centers in a collaborative environment that will allow for economies of scale, shared resources and potential cross-training of staff. These activities are currently scattered in several buildings on the campus, including two different houses that divide staff who ideally would work together. A good clinical research center provides space for research patients that allows them to approach and park easily, find their way easily to their destination, provide their information or samples and be on their way. Once those samples are taken, there is an active clinical lab component of the center, both wet and dry, where those samples are processed, analyzed, and the data collected. Collocation of staff and lab space inherently provides a more efficient operation than when they are separated, and space is fragmented and must be duplicated.

Workplace

The office workplace, like the laboratory, has undergone dramatic changes since the days when one's private office was a status symbol. Trends today include:

- Minimally sized private offices that are all the same size, for flexibility to assign one senior person, two post-docs or mid-level administrators, or 3-4 graduate students. This allows flexibility to change the balance of personnel over time.
- Private offices not on windows. Typically, senior people get private offices, and those offices are on the perimeter, yet those people spend less time at their desk and more time in meetings, at other sites, etc. A modern design strategy is to place those private offices in the interior of the building and place workstations for those that spend the most time at their desks near the windows.
- The pandemic has forced institutions to take a hard look at who needs to be physically present in and office and whether that office needs to be on campus at all. Those offices that deal with students ideally are on campus and easily accessible by the students, but many administrative functions are now located off campus or on its perimeter, and work-at-home policies have often dramatically reduced the amount of office space an institution requires.



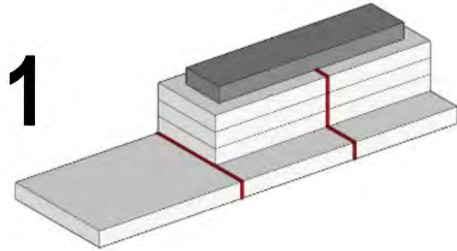
University of Sydney



University of New South Wales

3.5 Building Design Scenarios

Design Scenario Overview



Full Renovation = 78,720 GSF

- **~66% program**
- **Existing plaza remains**
- **No daylighting through plaza**
- **No structural renovation**

Selected Design Option

Modified Option 1

A full renovation of the existing building was selected as the option the design team would further develop. This option was selected after the UNM HSC / CoP team reviewed the cost estimate for each of the options proposed.

Option 1 was determined to be the most efficient and effective use of the funding available while still serving the College of Pharmacy's priorities and plans for long-term growth. This option includes a strategic interior renovation of the existing building, including all floor except the sub-basement. The interior renovation approach is to complete a more extensive renovation of the laboratories and public spaces. This would, in some cases, mean relocating laboratories and moving interior partitions. Offices and classrooms would generally remain in their current locations and receive a less extensive renovation consisting of an upgrade to interior finishes. A more extensive renovation to the exterior envelope is also included in this option. Exterior renovations would consist of new rigid insulation to bring the building into compliance with current energy codes. It would also include new exterior finish systems such as EIFS, metal panel and louvered awnings for sun control.

Finally, some site rework is included in the option. This entails a renovation of the sunken garden area, a new entrance on the west side of the building, and new landscape plantings.

Option 1 also serves CoP's desire to support future growth by planning for a future shared laboratory tower. More information about the proposed tower can be found on the following page.



Section 4.0 | Facilities Response

- 4.1 Building Design Response
- 4.2 Space Requirements
- 4.3 Building Systems
- 4.4 Sustainability
- 4.5 Construction

4.1 Building Design Response

Building Design Introduction

Providing a “new front door” with a “wow experience” the west and south frontage of the renovated College of Pharmacy Building will be incredibly important from an articulation and materiality perspective. The building should clearly communicate the CoP’s mission as a premier destination for exceptional pharmacy education, research, and patient care programs using exterior and interior materials, massing, and imagery. The exterior concept should be respectful to the existing campus vernacular but be a design that is of its time. It should also remain a sensitive neighbor to the neighboring materials and detailing that are part of the campus’s aesthetic.

Design that informs and improves campus space-making, such as:

- Through connections to greenspace
- Activated exterior space
- Support quality access and wayfinding from multi-modal experiences

Design that creates a vibrant, lived experience supporting diverse users and is welcoming to the entire campus community.

As the first of several buildings targeting renovation or replacement in the campus core neighborhood, the exterior concept of the CoP Building should perhaps set a new (yet harmonic) standard for projects on campus that offer a much more contemporary, transparent, and dynamic aesthetic.

Careful consideration must be given to the north elevation of the building, since it is in the line of sight of offices and windows of the Health Sciences and Services Building. Likewise, redesign of the loading access and service areas at the northeast corner of the existing building will impact the site’s neighboring buildings. Care must be given to visually screen these areas and to prevent vehicle exhaust from becoming a nuisance to nearby building occupants.

Level 1 (Plaza) and Basement (Garden) Level engagement of the public is essential, inviting inquisitive visitors to spend time understanding the science and research that occurs within the building’s walls. Interior design and material selections should communicate the “diversity in people and thinking” educational mission of the CoP. The entry sequence should employ spaces that celebrate the School’s history, New Mexico’s culture, and an innovative CoP future in an engaging and memorable design. The space should be warm and inviting, yet dynamic to add visual interest when entering the building.

Staff, faculty, students, and researchers will spend long hours within the building. Workspaces must be pleasant, introducing daylight and borrowed light in as many spaces as possible, using native and contemporary materials, and developing forms and perceptions that reflect the cutting-edge technology of CoP research and teachings.

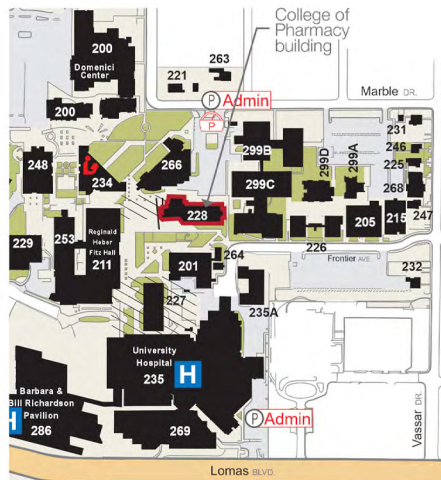
Landscaping and site design will be equally important. It will provide opportunities to connect pedestrians visually and physically to the building by providing intersecting paths and community gathering areas surrounded by well-selected plantings. Links to the greater campus to the west and south are important.

Ultimately, the design of the building must balance functional requirements with the desire to create a signature building for the campus.

4.1 Building Design Response

Site Design Response

The site design response works to activate the existing exterior spaces by providing accent paving, shade, and place-making components such as forum steps. It provides for easier wayfinding between the Sunken Plaza and Ground Level with the addition of a new exterior stair between the two. It also expands the Sunken Plaza to allow for increased daylighting into the basement while allowing the majority of the existing trees on-site to remain.



Vicinity Map



UNM North Campus - Partial Site Plan

4.1 Building Design Response

Exterior Design Concept

The new concept for the Pharmacy building consists into providing a fresh and contemporary look to the existing mid-20th century building characterized by the massive brutalism form. The building should reflect the excellence and tradition of the Pharmacy Program and local Culture. The contemporary look will apply a vast range of materials and textures providing contrast and homogeneity to the building. The glass panes in strategic places will provide plenty of natural light and create the feeling of large open spaces.

Utilizing the shell of the existing building as a start point, FBT Architects was able to create a more substantial entry on the South side. The new building form was sculpted to support the connection of the South entry with the West entry. The ground floor wraps the corner and culminates in a vertical expression at the West entry, highlighting it. This new entry will create connectivity between the building's interior to the West Plaza and sunken Garden.

The floating second and third floors also reinforce this entry element.

The overall character of the building is a contemporary expression of the Southwest architecture. The utilization of deep-set punched openings with horizontal sun control allows natural light to go into the building. The openings are irregularly spaced in response to the many different building expressions found on the HSC campus.



4.1 Building Design Response

Exterior Design Concept



4.1 Building Design Response

Exterior Design Concept



4.1 Building Design Response

Exterior Design Concept



UNM Pharmacy Building - Garden View

Copyright: FBT Architects

4.1 Building Design Response

Interior Design Concept



UNM Pharmacy building - Main Lobby

Copyright: FBT Architects

4.1 Building Design Response

Building Floor Plans - Sunken Plaza Level

The proposed building renovation for the basement level focuses on maximizing the animal research suite with close tunnel access, four new core lab spaces to support the various COP researchers, adequate open wet lab space, lab support, and associated workplace to support 8 PI's, as well as a new teaching lab and student workspace off the lower lobby. To maximize daylight in the new and improved basement, 204 linear feet of exterior glazing will be integrated into the south facade down to the garden level with direct connection and integrated indoor-outdoor collaboration spaces in the recessed garden.

Basement Level Program:

- (4) 35' Lab Modules for Teaching Lab + Support
- (20) 35' Lab Modules for Wet Lab Research
- (12) 25' Lab Modules for Lab Support
- (11) 25' Lab Modules for Core/Shared Labs
- (10) 25' Lab Modules for Animal Research
- (8) Wet Lab Offices
- (32) Wet Lab + (4) Core Lab Workstations
- (16) Grad Student Workstations
- (18) Pharm D Computer Lab Workstations
- (1) Conference, 24p
- (1) Break / Work Room



New Sunken Plaza Level Floor Plan

Not to scale

4.1 Building Design Response

Building Floor Plans - Plaza Level

The proposed building renovation for the plaza level focuses on a new front door and lobby for the COP - the WOW factor! By relocating the existing student lounge to an upper level, a grand open space is created for those entering from the west and south plazas. Plenty of space for lobby seating, students studying, reception and way-finding, and a new pharmacy museum. Existing Auditorium 135 is also proposed to be renovated and slightly enlarged to a flat floor active learning classroom. The Dean's Suite would remain in the same area, but updated and expanded to include the Student Support Offices.

Plaza Level Program:

- Active Learning Classroom, 75people
- Pharmacy Museum + Lobby
- Shared Reception + Waiting
- (1) Deans Office - 240 SF
- (4) Deans Staff Offices - 120 SF
- (18) Student Support Offices - 120 SF
- (1) Conference, 12people
- (1) Conference, 4people
- (1) Work Room
- (1) File Storage



New Plaza Level Floor Plan

Not to scale

4.1 Building Design Response

Building Floor Plans - Level 2

The proposed building renovation for the upper levels focuses on dry lab research, department and faculty offices, and classrooms and other student spaces. Previously occupied by the College of Nursing, there is an opportunity to utilize the existing space type and renovate existing classrooms and office space for the COP departments. On the west and off the upper lobby is a dry lab research suite. Classrooms and offices similar to their existing locations on the east.

Level 2 Program:

- (5) 25' Lab Modules for Dry Lab Research
- (5) Dry Lab Research Offices
- (18) Dry Lab + (12) Grad Student Workstations
- (3) Multipurpose Classroom / Seminar, 12people
- (1) Active Learning Classroom, 30people
- (25) Offices + (6) Workstations Dpt. / Faculty
- Break / Work Room



Level 2 Floor Plan

Not to scale

4.1 Building Design Response

Building Floor Plans - Level 3

The proposed building renovation for the upper levels focuses on dry lab research, department and faculty offices, and classrooms and other student spaces. Previously occupied by the College of Nursing, there is an opportunity to utilize the existing space type and renovate existing classrooms and office space for the COP departments. On the west and off the upper lobby is a dry lab research suite. On the east is a student suite with student lounge, small group study rooms, and classrooms of various sizes.

Level 3 Program:

- (5) 25' Lab Modules for Dry Lab Research
- (5) Dry Lab Research Offices
- (18) Dry Lab + (12) Grad Student Workstations
- (1) Student Lounge
- (4) Small Group Study Rooms (2) Active Learning Classroom, 30people
- (1) Active Learning Classroom, 48people
- (3) Multipurpose Classroom / Seminar, 12people
- Break / Work Room



Level 3 Floor Plan
Not to scale





Section 5.0 | Facilities Cost Response

- 5.1 Cost Estimate
- 5.2 Schedule / Phasing
- 5.3 Future Operating Costs & Controlled Maintenance Costs

5.1 Cost Estimate

Basis of Estimate

The cost analysis for the College of Pharmacy Building Assessment is based on a systems approach for strategic renovations and upgrade / replacement of the 84,243 gross square feet (GSF) facility. These include:

- Major Renovations & Wet Labs with substantial reconfiguration, replacement and upgrades to interior partitions, ceiling, wall and floor finishes, and the demolition and replacement of Wet Laboratory casework and accessories.
- Medium renovations including partial replacement & upgrades to finishes, casework and accessories
- Minor renovations including minimal replacement of finishes and painting of existing surfaces.
- Full Replacement and upgrades to all existing Mechanical, Plumbing, Fire Protection, Electrical and Technology systems based on the Building Assessment / Recommendations for MEP Systems Upgrades prepared by Bridgers & Paxton consulting engineers, dated November 2022
- Exterior Envelop Replacement as shown on exterior elevations and views prepared by FBT Architects.
- Construction of a new roof penthouse to support new mechanical systems
- Allowance for fixed equipment
- Site related costs for the facility basement
- Escalation is included and is calculated to the midpoint of construction (December, 2025) compounded at an annual rate of 4.4%

Costs used in the estimate based on system costs for similar facilities constructed at the University of New Mexico (UNM) and the UNM Health Sciences Center (HSC) in December 2022. All costs included Contractor Markups, Cost Escalation to the anticipated midpoint of construction and 10% Contingency. New Mexico Gross Receipts Tax (NMGR) is excluded from this cost estimate.

	UNM HSC College of Pharmacy 84,243 GSF			
	\$/SF	SF	Cost	Notes
Major Renovations & Wet Labs	\$ 250.00	36,786	\$ 9,196,500	
Medium Renovations	\$ 100.00	25,461	\$ 2,546,100	
Minor Renovations	\$ 32.00	21,996	\$ 703,872	
Mechanical, Electrical & Plumbing (MEP) full replacement	\$ 180.82	78,720	\$ 14,234,537	
Exterior Envelope Replacement:			\$ -	
Glazing @ of exterior surface area	\$ 125.00	15,600	\$ 1,950,000	Includes demolition & scaffolding
Opaque area (40% FRP/ACM panel, 60% EIFS)	\$ 70.00	10,400	\$ 728,000	Includes demolition & scaffolding
	\$ 372.95	78,720	\$ 29,359,009	
RIB & MRF			\$ 5,000,000	
Penthouse	\$ 250.00	11,381	\$ 2,845,250	
Fixed Equipment	\$ 15.00	84,243	\$ 1,263,645	
Site Related			\$ 500,000	Sitework & basement elevation improvements
			\$ 1,763,645	
Subtotal (Direct Cost)			\$ 38,967,904	
Markups & Escalation		39.97%	\$ 15,573,878	
Subtotal			\$ 54,541,782	
Contingency		10%	\$ 5,454,178	
GRAND TOTAL	\$ 712.18	84,243	\$ 59,995,961	

5.2 Schedule / Phasing



	2022 June	Nov	Dec	2023 Jan	Feb	Mar	2024 Jan	Sep	Nov	Dec	2025 Mar	May	Aug	Oct	Nov	2026 Mar	May	Aug	Dec	2027 Jan	Jun	Dec	2028 Jan	Mar	May
Programming	24 WKS			Review																					
Funding				48 WKS			Approvals																		
Pre-Design Services								RFQ	48 WKS			RFP	CMaR	GMP											
Bidding														BID 4 WKS											
Construction - Phase 1														PHASE 1	54 WKS					Occup.					
Construction - Phase 2																					PHASE 2	60 WKS		SUBS. COMPL.	RIBBON

PROGRAMMING	FUNDING	PRE-DESIGN & DESIGN SERVICES	BIDDING	CONSTRUCTION PHASE 1	CONSTRUCTION PHASE 2
<ul style="list-style-type: none"> June 2022 Programming & Concept Design Kick-off November 2022 Program/ Planning Scenario/ Project Budget Sign-off December 2022 Program Plan & Concept Design Complete 	<ul style="list-style-type: none"> January 2023 UNM HSC Core Committee votes on projects to submit for funding February 2023 UNM HSC submits recommended projects for funding March 2023 Capital Project Fundraising Campaign Kick-off January 2024 State of NM announces 2024 funding approvals 	<ul style="list-style-type: none"> September 2024 RFQ for Design Services released November 2024 Team selection December 2024 Design services Kick-off March 2025 RFP for Construction Manager at Risk released May 2025 CMaR selected / On-Boarding 	<ul style="list-style-type: none"> August 2025 GMP identified October 2025 Final Bid Documents Posted 	<ul style="list-style-type: none"> November 2025 Phase 1 Construction Commencement November 2026 Phase 1 Complete January 2027 Phase 1 Occupancy 	<ul style="list-style-type: none"> January 2027 Phase 2 Construction Commencement March 2027 Phase 2 Substantial Completion May 2028 Ribbon Cutting Graduation Ceremony

