



ARKANSAS SCHOOL FOR MATHEMATICS, SCIENCES, AND THE ARTS

2015 Campus Master Plan Update
Creativity and Innovation Complex
Feasibility Study



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PROJECT OVERVIEW

The physical transformation of the ASMSA campus began earlier this decade with the construction of the Student Center. As the program celebrated twenty years of success, the institution finally had a residential space to match the quality of the academic experience at ASMSA.

With completion of that project, our community of learning now turns its attention to relocating programs from the Pine Street Wing of the former St. Joseph Hospital complex. That space currently houses computer science classrooms, art studios, Information Technology offices, Networks infrastructure, counseling offices, a study center, and faculty offices.

To provide these students, colleagues, and programs with the spaces and tools to continue their exemplary work, ASMSA seeks to explore two options for moving forward with the Campus Master Plan: the construction of the Creativity and Innovation Complex (CIC) or the renovation of the Cedar Street Building. Both options seek to address not only many of our basic instructional needs but will also serve to highlight critical components of ASMSA’s mission.

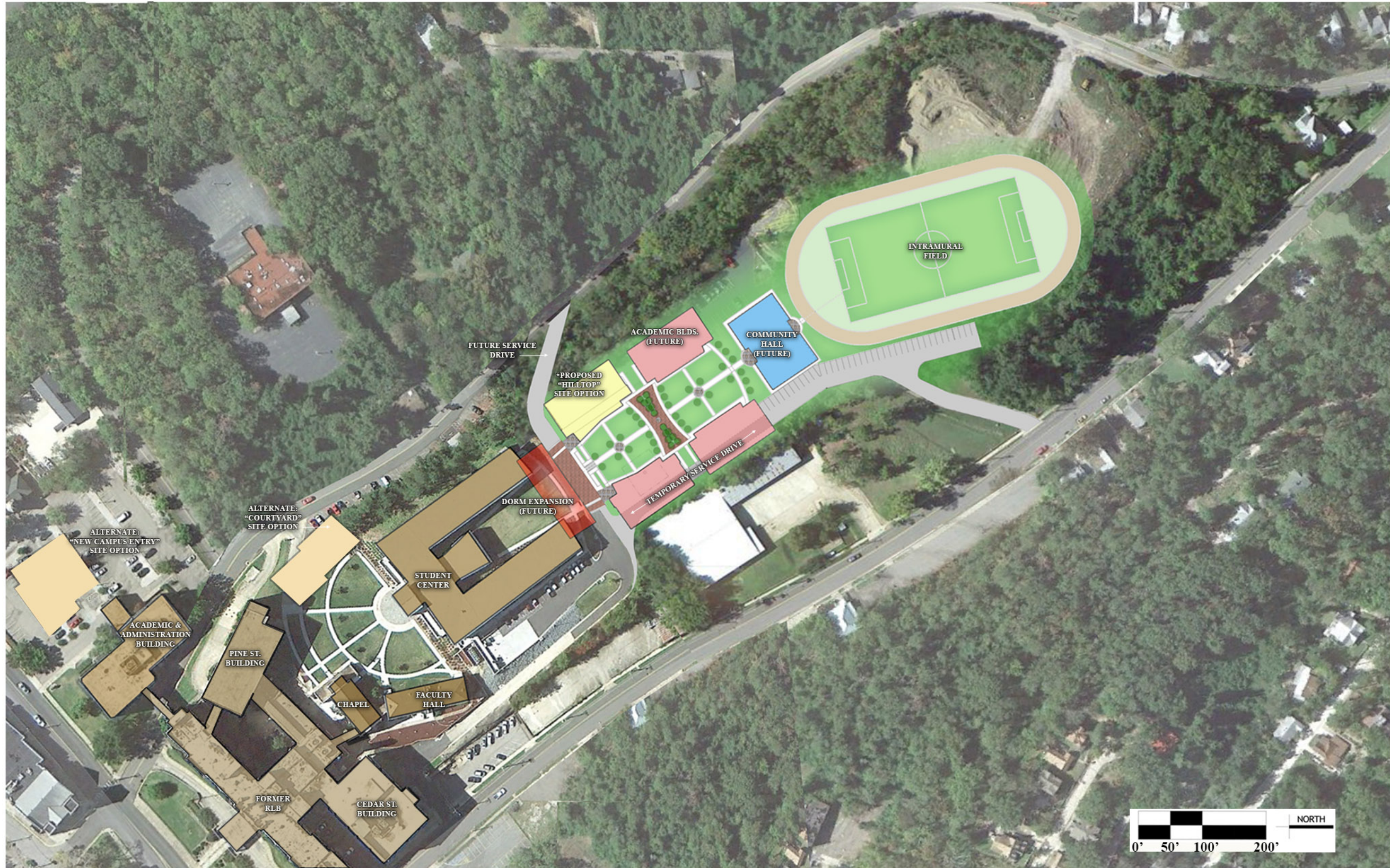
In addition, ASMSA remains one of only a handful of schools in Arkansas offering advanced computer science education. At present, ASMSA accounts for 1 in 4 high school students in Arkansas studying computer programming. With growing attention in our state to the potential for entrepreneurship, technology development and the knowledge-based economy, ASMSA will continue to lead the way by providing innovative and challenging opportunities for students to help code the future of our state.

The next classroom space will provide both of these marquee programs with appropriate learning spaces in support of our residential students and outreach programs for talented Arkansas middle and high school students.

The facility will also house ASMSA’s Information Technology staff and network infrastructure. It will also feature a “maker space” for 3D printing, CNC milling, laser cutting, wood work, and rapid prototyping that could serve as a valuable resource for both the Hot Springs business and manufacturing communities. Finally, the building will house the counseling offices and Study Center, which encompass services that underscore the critical role that academic success plays in the lives of each ASMSA student.

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REVISED CAMPUS MASTER PLAN

Campus Master Plan Update- Creativity and Innovation Complex Feasibility Study

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Creativity and Innovation Complex Program Needs:

IT Department:

IT Offices (4) @ 200SF each.....	800 SF
IT Conference Room.....	225 SF
IT Workroom.....	350 SF
IT Server Room.....	250 SF

Computer Science:

Computer Science Lab-1.....	850 SF
Computer Science Lab-2.....	550 SF
Faculty Office (2) @ 200SF each.....	400 SF

Maker Space:

Robotics Lab/ Maker Space.....	550 SF
Woodshop.....	850 SF
Faculty Office.....	200 SF

Counseling:

Counselor Offices (3) @ 200SF each.....	600 SF
Registrar Office.....	200 SF
Counseling Conference Room.....	225 SF

Study Center:

Study Center.....	1000 SF
Peer Mentoring.....	300 SF

Visual Arts:

2D Art Studio.....	750 SF
3D Art Studio.....	500 SF
Art Studio.....	750 SF
Gallery.....	400 SF
Art Faculty Office/ Studio.....	400 SF
Art Storage.....	300 SF

Music and Film:

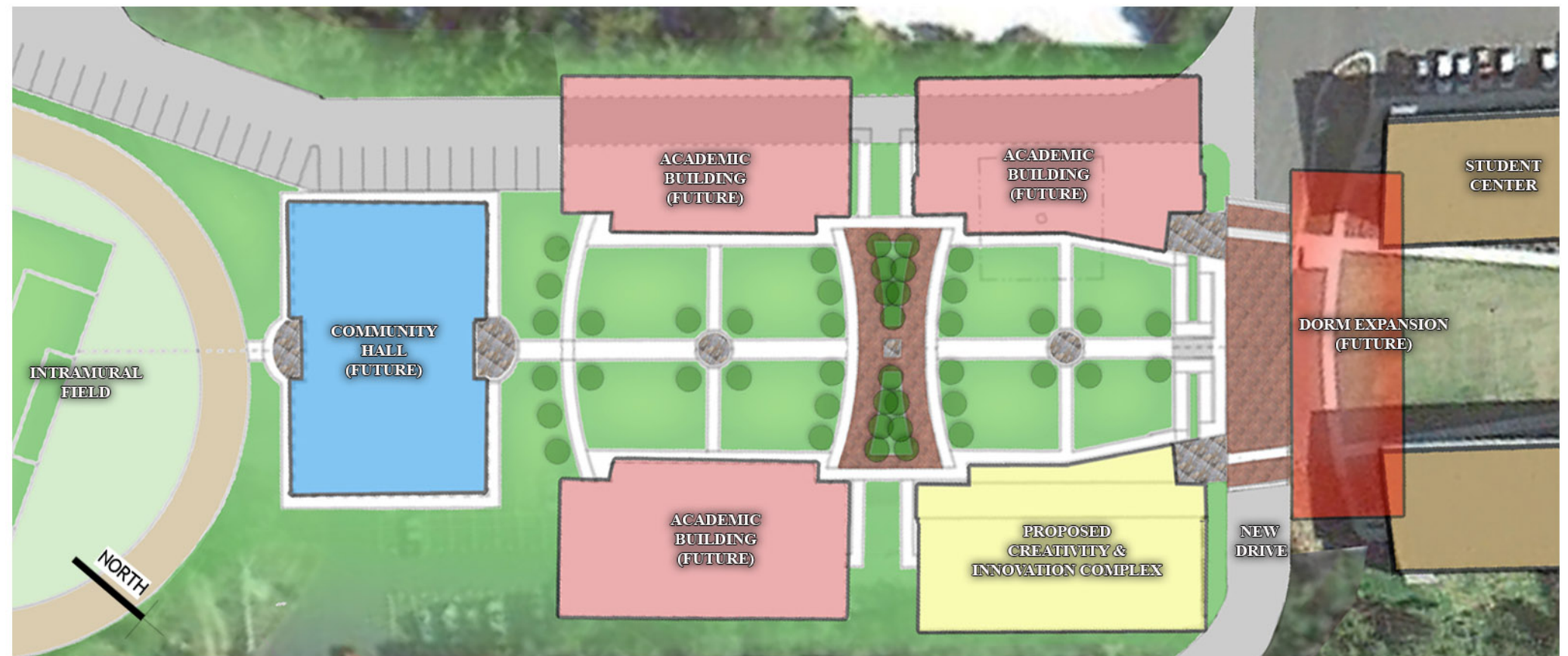
Digital Arts Lab.....	550 SF
Piano Practice Room.....	200 SF
General Practice Rooms (2) @ 200 SF each.....	400 SF
Instrument Storage.....	200 SF
Rehearsal Room.....	750 SF
FMA Room.....	400 SF
FMA Storage.....	200 SF
Recording Studio.....	200 SF

Total Program Space Needs:.....13,350 SF

Additional Ancillary Spaces Required:

- Lobbies
- Circulation
- Restrooms
- Mechanical Spaces
- Breakroom
- Stairs/ Elevators
- Storage

Total Square Footage Required:.....~20,000 SF

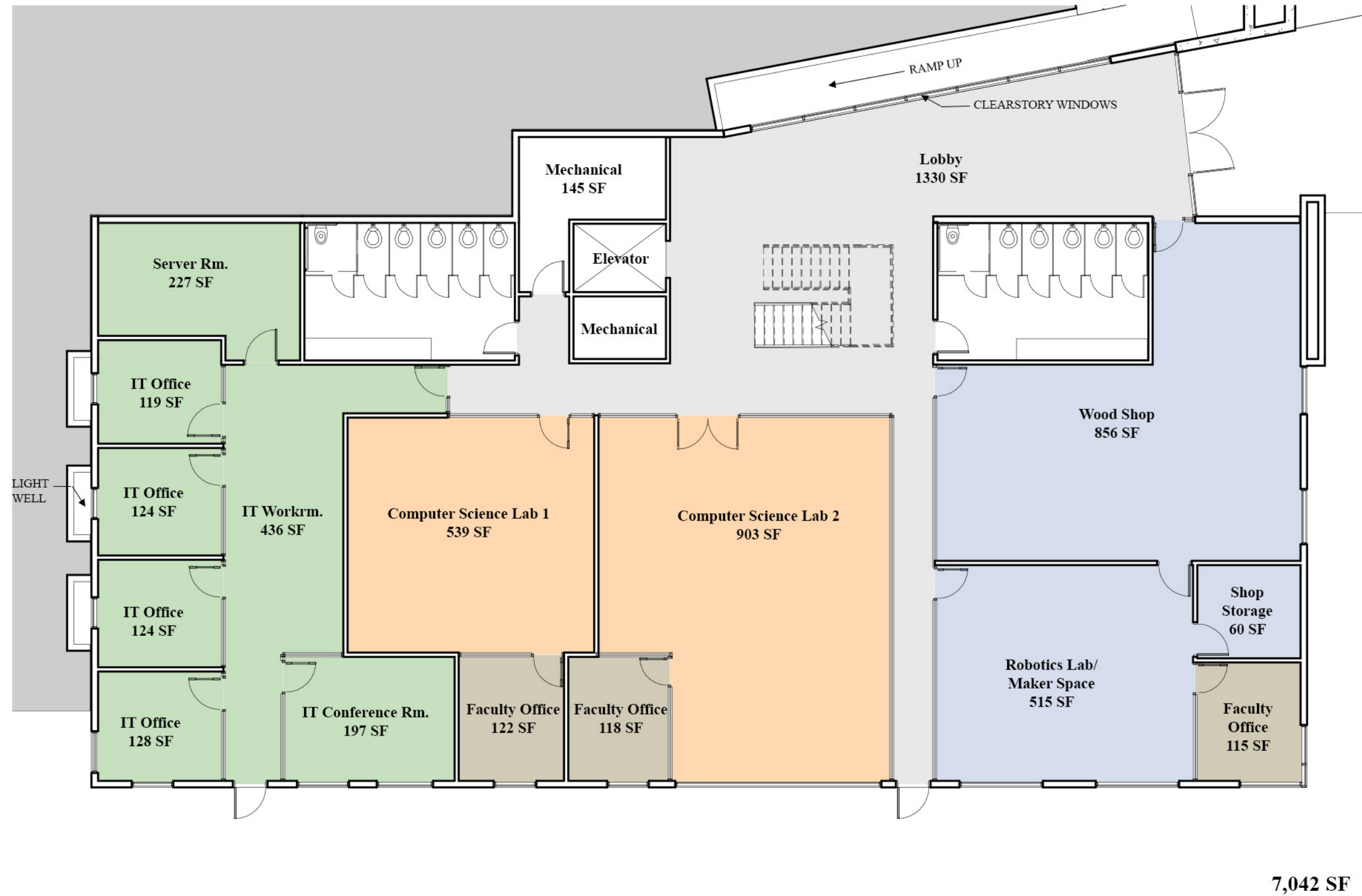


**Image to Right: Enlarged Plan of Revised Master plan*

PROGRAM AND SQUARE FOOTAGE NEEDS

Campus Master Plan Update- Creativity and Innovation Complex Feasibility Study

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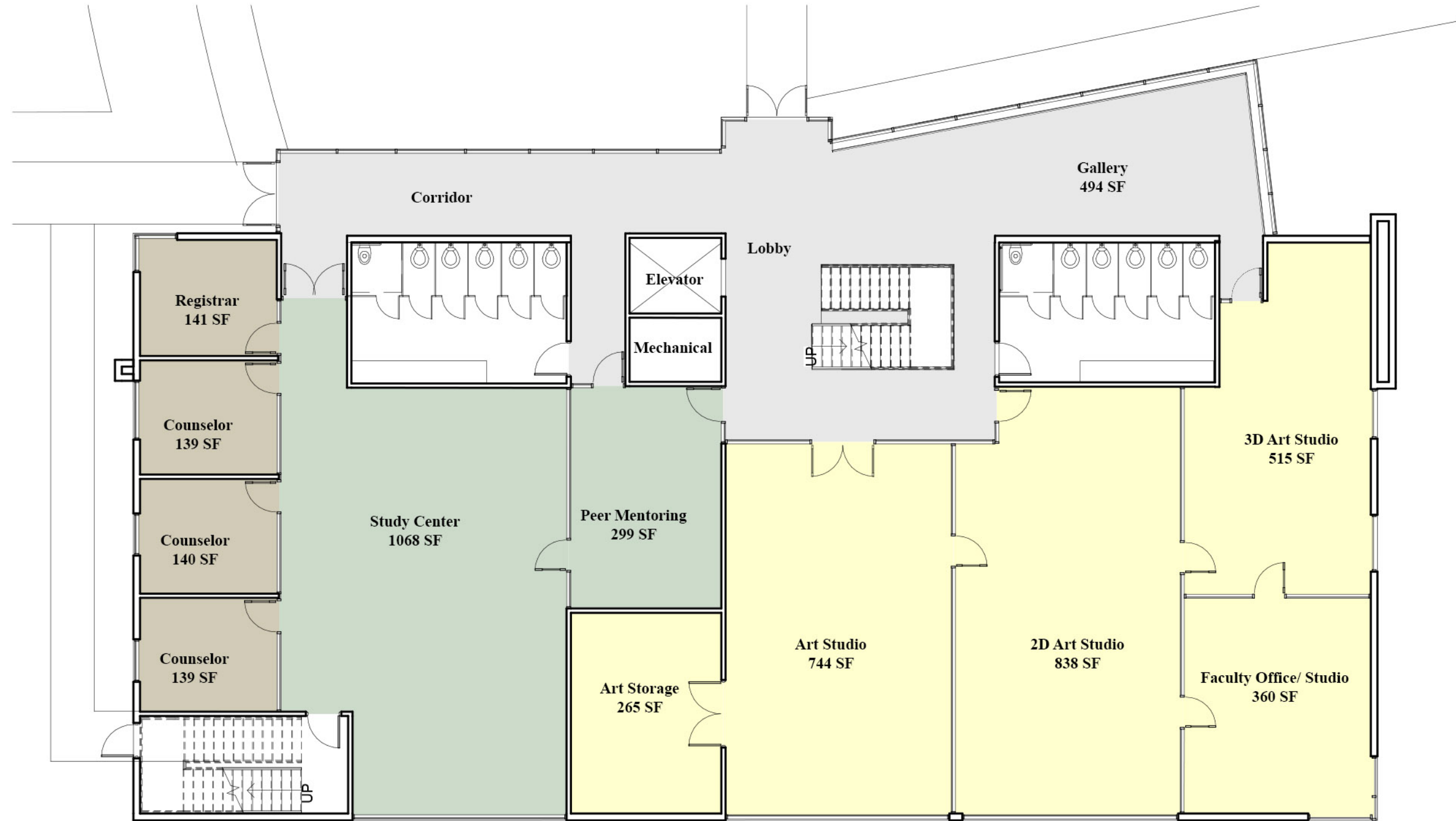
7,042 SF



GROUND FLOOR PLAN- CREATIVITY & INNOVATION COMPLEX

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7,125 SF

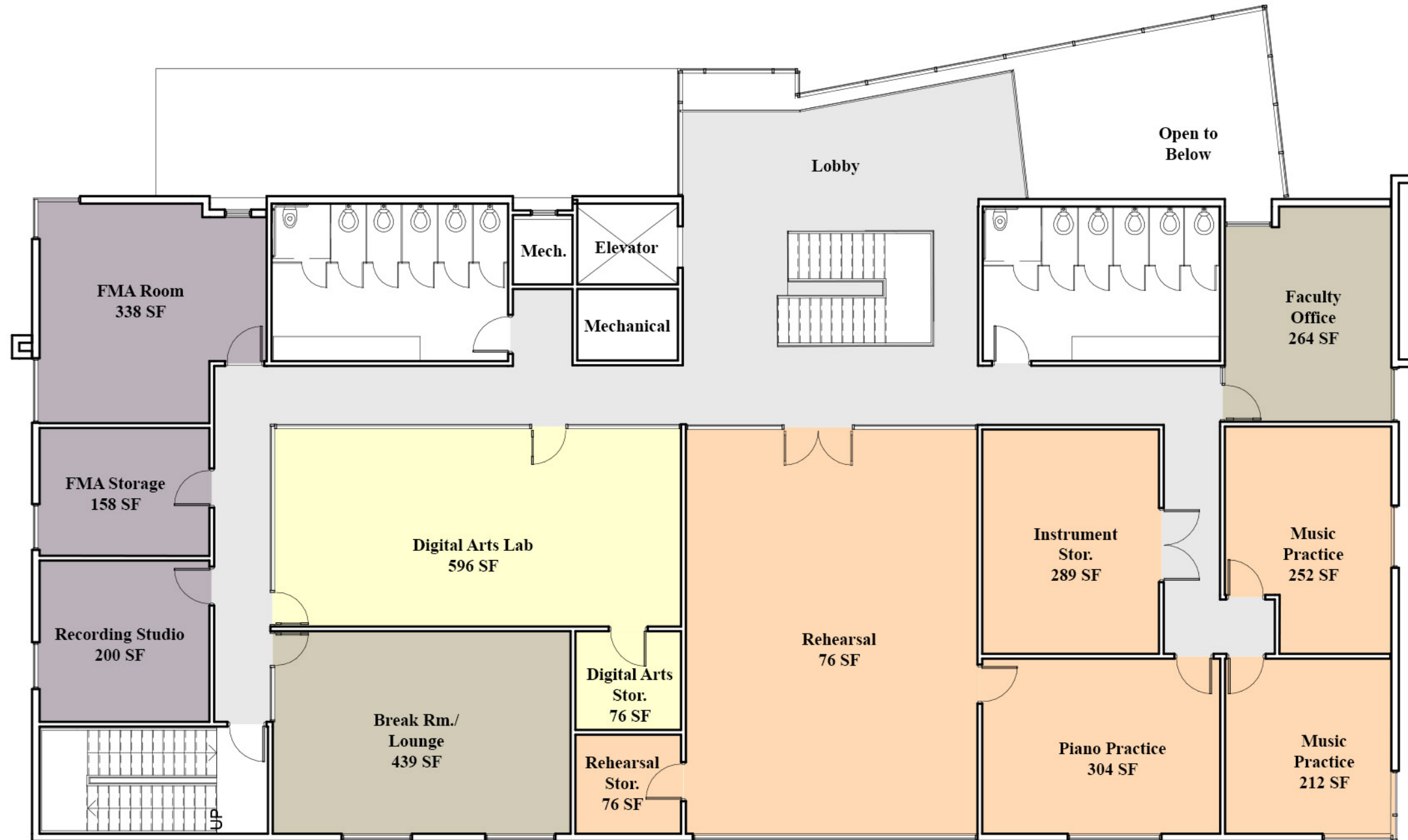


FIRST FLOOR PLAN- CREATIVITY & INNOVATION COMPLEX

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6,286 SF



SECOND FLOOR PLAN- CREATIVITY & INNOVATION COMPLEX

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CREATIVITY AND INNOVATION COMPLEX CONCEPTUAL RENDERING

Campus Master Plan Update- Creativity and Innovation Complex Feasibility Study

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CREATIVITY & INNOVATION COMPLEX CONCEPTUAL RENDERING

Campus Master Plan Update- Creativity and Innovation Complex Feasibility Study

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As part of the study for new classroom space, an objective analysis of existing buildings was made to determine the feasibility of renovating Cedar St. vs. building new. In some respects, Cedar St. is a good option. The building offers 50,000+ SF of space available for renovation. There is plenty of room to renovate for the school's present needs and still have space available for growth in the future. Most opportune is the building's prominent location on campus near Central Ave. and its adjacency to the other academic buildings on campus.

While Cedar St. is a large building already existing on campus, it should be understood that there are many obstacles to overcome which could make it cost prohibitive. These obstacles include the following:

Campus MEP Services, Connections, and Sequencing: This is arguably the most cost and time prohibitive issue surrounding the renovation of Cedar St. The diagram to the right explains how several of the campus buildings' MEP systems are interwoven. When Cedar St. was built, a link between the RLB and Cedar St. was constructed. The 6th floor of Cedar St. is partly mechanical mezzanine and open roof deck. In both the mechanical mezzanine and the RLB link, there are multiple chillers, boilers, air handlers, and cooling towers. All of this equipment serves multiple buildings. Piping and electrical conduits are routed through the Cedar St. building and the Former RLB to Faculty Hall, the Chapel, and the Pine St. Building as well as serve the RLB and Cedar St.

*The Former RLB is now a vacant building on the ASMSA campus that will be returned to the jurisdiction of the City of Hot Springs. This building is scheduled for demolition; however, demo cannot occur as long as campus building systems are being routed through it.

*If Cedar St. is to remain and be renovated, it will have to be separated from the RLB, which is scheduled for demolition.

*Pine St., Faculty Hall, and the Chapel have to remain in service in the interim period and cannot be taken off-line. To ensure uninterrupted service for the Chapel and Faculty Hall, new mechanical systems will have to be provided in a location independent of the RLB. Pine St. building can be left as is because it will be torn down along with the RLB.

*When the RLB, Pine St. building, and Cedar St. building are ultimately torn down, new MEP equipment will still have to be provided for the Chapel and Faculty Hall. It is recommended that the basements of each of these buildings be used to house their respective mechanical equipment. A preliminary price estimate for this work has been provided at the end of this document.

Age: The building was built as an addition to an already existing two-story parking deck in 1972. The addition is 43 years old.

Code Compliance: The ENTIRE building will have to be brought up to compliance with current building codes. This includes not only life safety but also mechanical, electrical, and plumbing systems. In order to put an education occupancy in the building, and because of the large square footage per floor and the height/ number of stories, all six stories will have to be fully protected by a new sprinkler system.

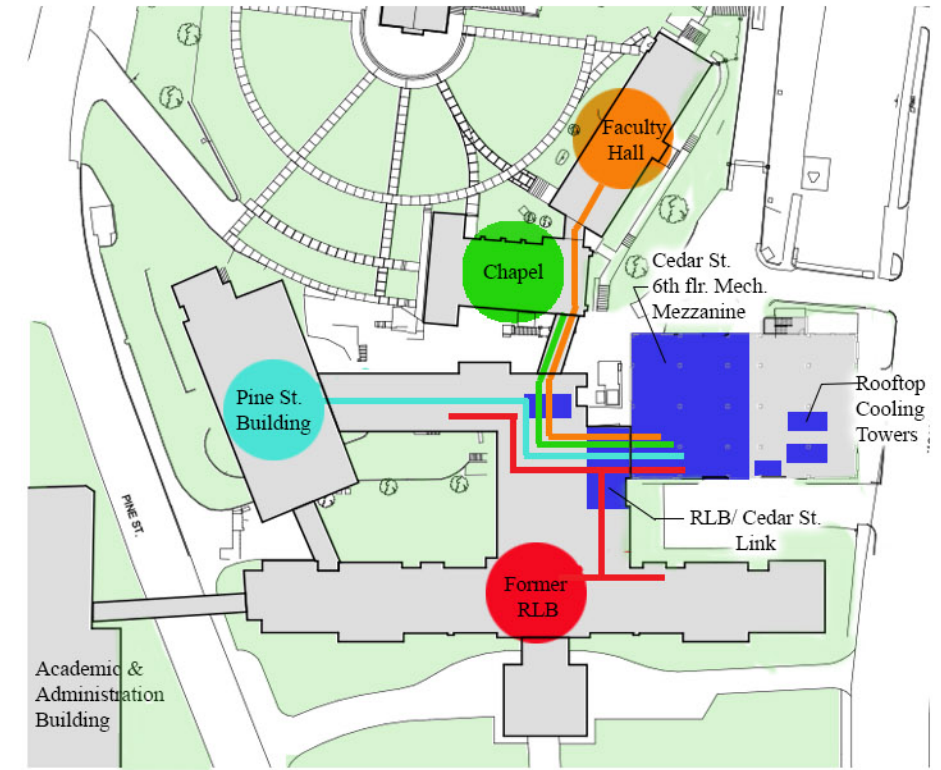
Remediation: Given the year it was built, there is a high probability that the building contains asbestos and lead-based paint. An environmental assessment of the building must be made.

Quality of Construction: The exterior walls of the building are built with 8" lightweight concrete block with brick veneer mortared to the outside. The exterior walls do not contain insulation, nor is there a vapor/ weather barrier. The windows are single pane, un-insulated glass. (The 5th floor does not even have windows.) These issues raise concerns over mold and moisture problems, not to mention that it is incredibly inefficient by today's standards. It is recommended that the exterior walls be demolished and a new facade be rebuilt.

Stairs/ Elevators: There is only one stair tower in the building currently, which does not meet current code for the amount of square footage. In addition, the elevators that serve the building are located in the RLB. They are obsolete and do not meet code. At least one new stair tower will have to be built and multiple elevators installed to serve all six stories.

Architectural/ Space Planning: The building was, first, a parking garage and then converted to a hospital with surgical suites. As such, the layout of the building, while it is generous in square footage, does not lend itself to the desired layout and spatial adjacencies that are ideal for the educational programs the school needs. 10,000 SF per floor actually causes inefficiently sized spaces and much more circulation. In effect, the school would be paying for more square footage than it needs.

Second Floor Ceiling Height: There is only 8'-0" to the bottom of the concrete beams on the second floor. Minimum ceiling height per current building codes is 7'-6". This means that there is virtually no room to run mechanical duct work, piping, or electrical. This floor would not be feasible for any meaningful use by the school. Refer to the building section and description on page 13 for further description.



Above:
Existing Conditions: Mechanical equipment locations and routing
A preliminary assessment of existing systems done during the original Campus Master Plan Report in 2008 determined that the system(s) "has little or no remaining economic life." "Significant problems include...deferred maintenance, obsolete equipment, regulatory compliance concerns, thermal comfort complaints, & poor indoor air quality."

CEDAR ST. RENOVATION: PROS & CONS

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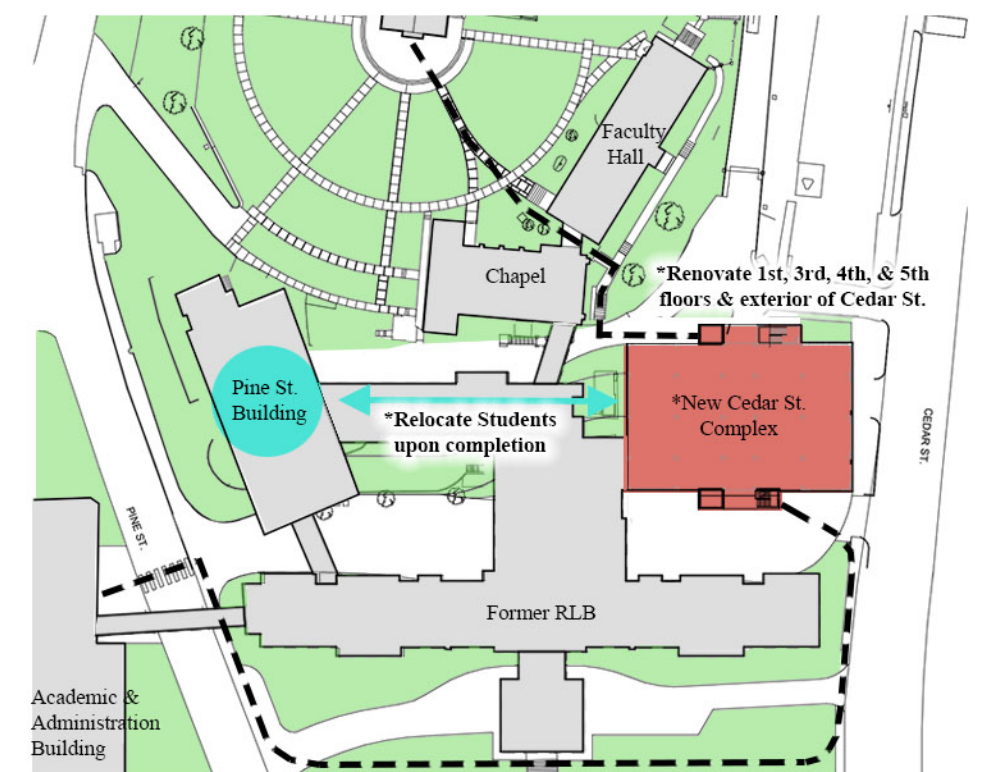
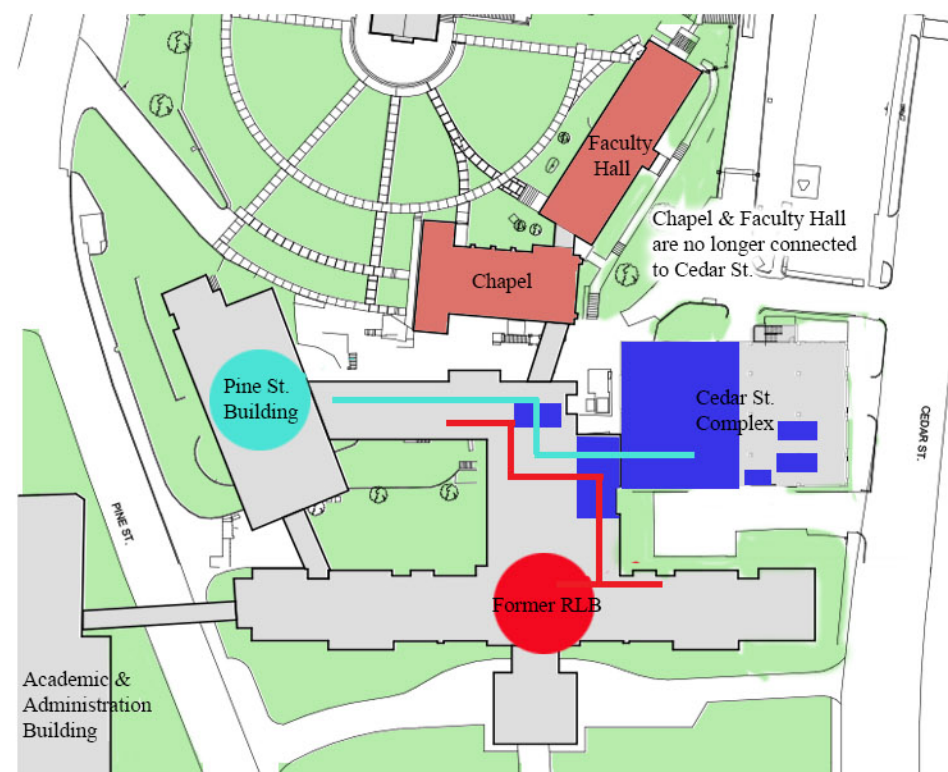
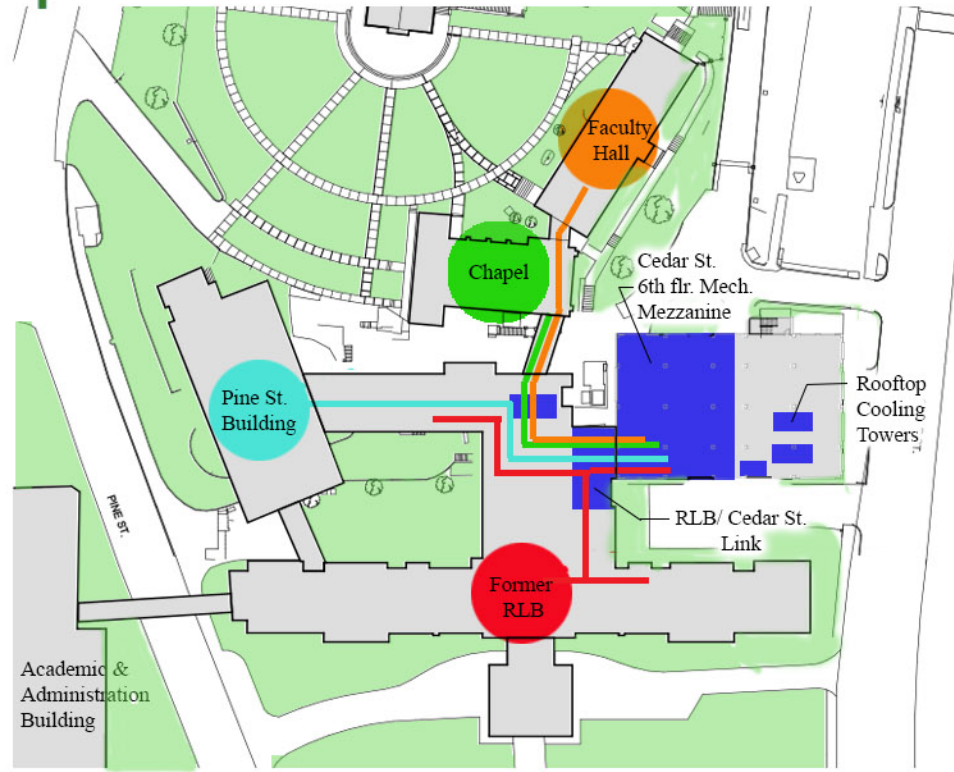
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CEDAR ST. BUILDING EXISTING PHOTOS

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Existing Conditions

Sequence One:

Before any work can be done in Cedar St., the Chapel and Faculty Hall mechanical systems will need to be disconnected and relocated. A preliminary assessment of space available in the basements of each building has been done. It is reasonable to assume that new mechanical equipment for each building can be located in each basement, respectively, with some outdoor equipment. Boring will have to be done for a new electrical feed. This work will have to be completed regardless of whether Cedar St. building is renovated or a new facility is built. However, the key point to note is that renovation in Cedar St. building cannot begin until this work is complete.

Sequence Two:

(A) An environmental assessment will have to be done on Cedar St., followed by abatement of all hazardous materials. This will have to be completed prior to demolition and new construction.

(B) Renovation of the Cedar St. Complex can begin in earnest at this time. Level one will house the building's mechanical systems and the Maintenance Department. Levels three, four, and a portion of five will be renovated for new classroom space. Level two has a very low floor to floor height and would be unsuitable for expansion (see building section on the following page.) All existing exterior walls of the building will be rebuilt new. In addition, a new stair tower and two new elevator towers will be constructed. Once renovation is complete, students can be relocated from Pine St. Before and during the demolition of the former RLB and Pine St. building, secure paths for students should be constructed to connect to the upper campus and Academic & Administration Building across Pine St.

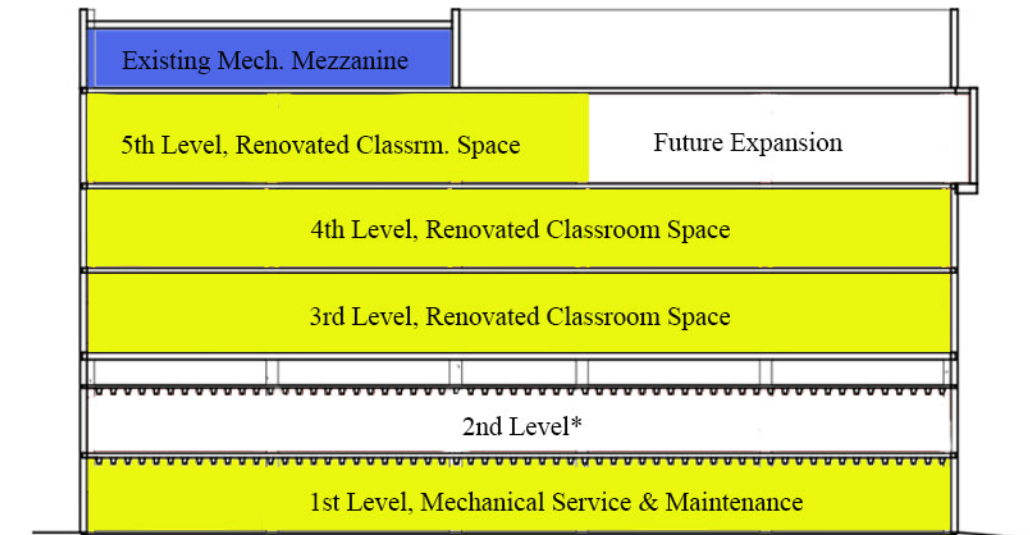
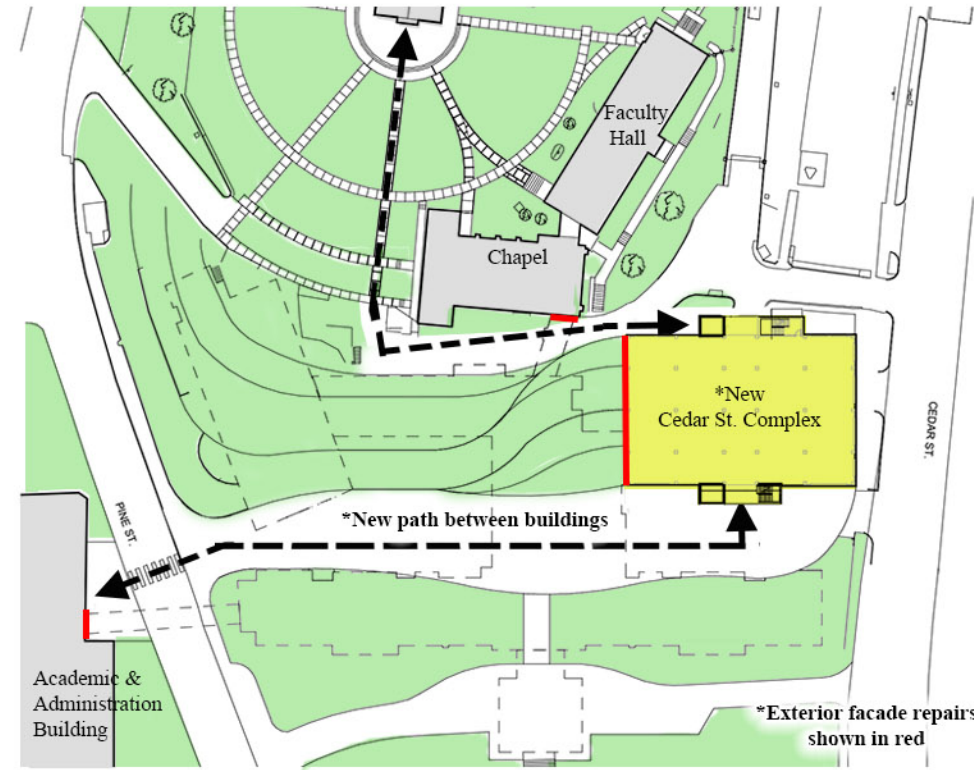
Estimated Time Frame: 4 months

Estimated Time Frame: 15 months

SEQUENCING CEDAR ST. BUILDING RENOVATIONS

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CEDAR ST. BUILDING SECTION

Sequence Three:

Demolition and abatement can begin once the renovation of the new Cedar St. Complex is complete and the Pine St. Building has been vacated. The City of Hot Springs will be responsible for demolition of both buildings. Their agreement with this school is to begin demolition no more than 12 months from the date of vacancy. They would then have 18 months to complete the work.

Cedar St. 6th floor mechanical mezzanine can now be taken completely offline. Old equipment can be removed and this floor can be prepped for future finish out. Safe and secure routes for students will need to be maintained during demolition.

Sequence Four:

Once the Pine St. Building and the Former RLB are demolished, there will be exterior facade renovations required on three separate buildings. Site grading and stabilization will occur at this time as well. Secure, direct paths between buildings will be created. A striped crosswalk on Pine St. will be required.

***Cedar St. Second Floor Ceiling Height:**

Current building code requires a minimum ceiling height of 7'-6" in all public spaces. The 2nd level has an approximate 8'-0" clear head height to the bottom of the concrete beams. Existing ducts serving this level are encased in a concrete plenum above the ceiling that today is virtually inaccessible. New duct and piping would have to be run below the beams, which generally requires about 2 feet of depth. This would put a new ceiling at a height of 6 feet, which would make this level unfeasable for use.

Estimated Time Frame: 30 months

Estimated Time Frame: 3 months

**Total Estimated Time Frame: up to 52 months (4 years, 4 months)*

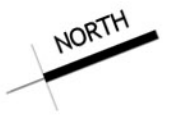
SEQUENCING CEDAR ST. BUILDING RENOVATIONS

Campus Master Plan Update- Creativity and Innovation Complex Feasibility Study

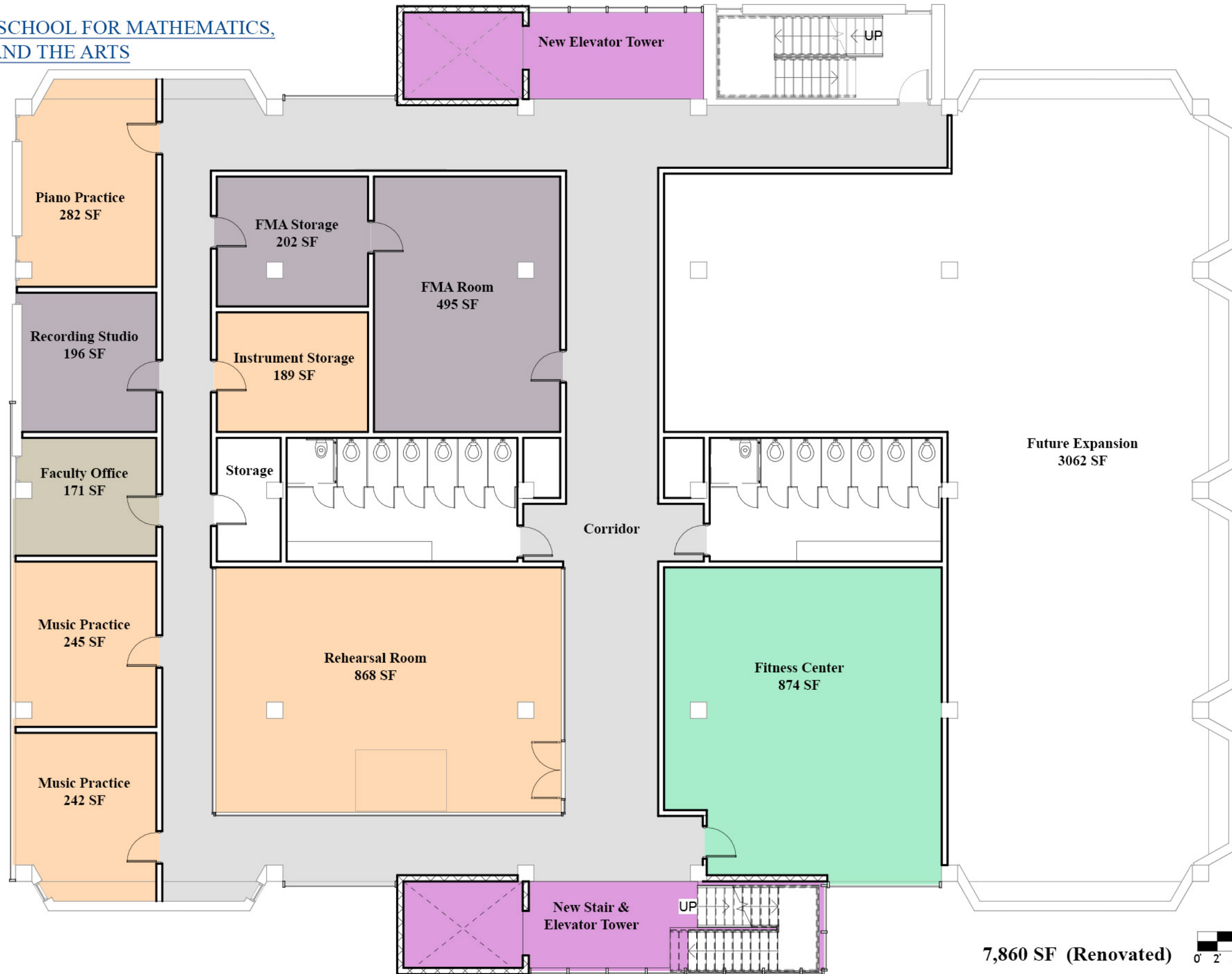
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9,860 SF



CEDAR ST. BUILDING LEVEL THREE



7,860 SF (Renovated)



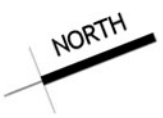
CEDAR ST. BUILDING LEVEL FIVE

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10,124 SF



CEDAR ST. BUILDING LEVEL FOUR

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Creativity and Innovation Complex: New Facility Option

General Conditions.....	\$250,000
Site Work.....	\$580,000
Concrete.....	\$275,000
Masonry.....	\$170,000
Structural Steel.....	\$888,000
Carpentry.....	\$275,000
Thermal and Moisture Systems.....	\$130,000
Doors and Windows.....	\$413,000
Finishes.....	\$456,000
Specialties.....	\$52,000
Elevator.....	\$80,000
Mechanical.....	\$1,174,000
Electrical.....	\$1,230,000
Total Construction Cost:.....	\$5,850,000

A&E Design Fees.....	\$380,250
FF&E + Signage Allowance.....	\$308,000
FF&E Interiors Fees & Interiors Contingency.....	\$55,000
Reimb. Exp. Est. (Lump Sum).....	\$60,000
Estimated Contingency (10% x Bldg. + Site Construction).....	\$585,000
Total Project Cost.....	\$7,238,250

Cedar St. Building Renovation Option*

General Conditions.....	\$365,000
Site Work.....	\$434,500
Concrete.....	\$134,000
Masonry.....	\$575,000
Structural Steel.....	\$472,000
Carpentry.....	\$146,000
Thermal and Moisture Systems.....	\$282,000
Doors and Windows.....	\$1,061,000
Finishes.....	\$1,108,000
Specialties.....	\$76,000
Elevator (2).....	\$418,000
Mechanical.....	\$5,932,000
Electrical.....	\$2,364,000
Total Construction Cost:.....	\$13,643,500
(includes Demolition)	

A&E Design Fees.....	\$1,023,263
Ff&E Allowance.....	\$308,000
FF&E Interiors Fees & Contingency.....	\$55,000
Reimb. Exp. Est. (Lump Sum).....	\$25,000
Estimated Contingency (5% x Bldg. + Site Construction).....	\$680,000
Total Project Cost.....	\$15,734,763

plus:

***Environmental Abatement of Cedar St. Building.....\$98,000-\$350,000**

Chapel and Faculty Hall MEP Systems Relocation

General Conditions.....	\$50,000
Basement Renovation to Accommodate New Equipment.....	\$50,000
Mechanical Equipment.....	\$850,000
Electrical.....	\$122,000
New Electrical Feed (bore).....	\$85,000

Total Construction Cost:.....\$1,157,000

A&E Design Fees.....	\$86,775
Reimb. Exp. Est. (Lump Sum).....	\$15,000
Estimated Contingency (10% x Renovation Construction).....	\$115,000

Total Project Cost.....\$1,373,775

Asbestos Abatement & Structure Demolition of Former St. Joseph Hospital (includes Hospital Building, Pine St. Building, and Cedar St. Building)

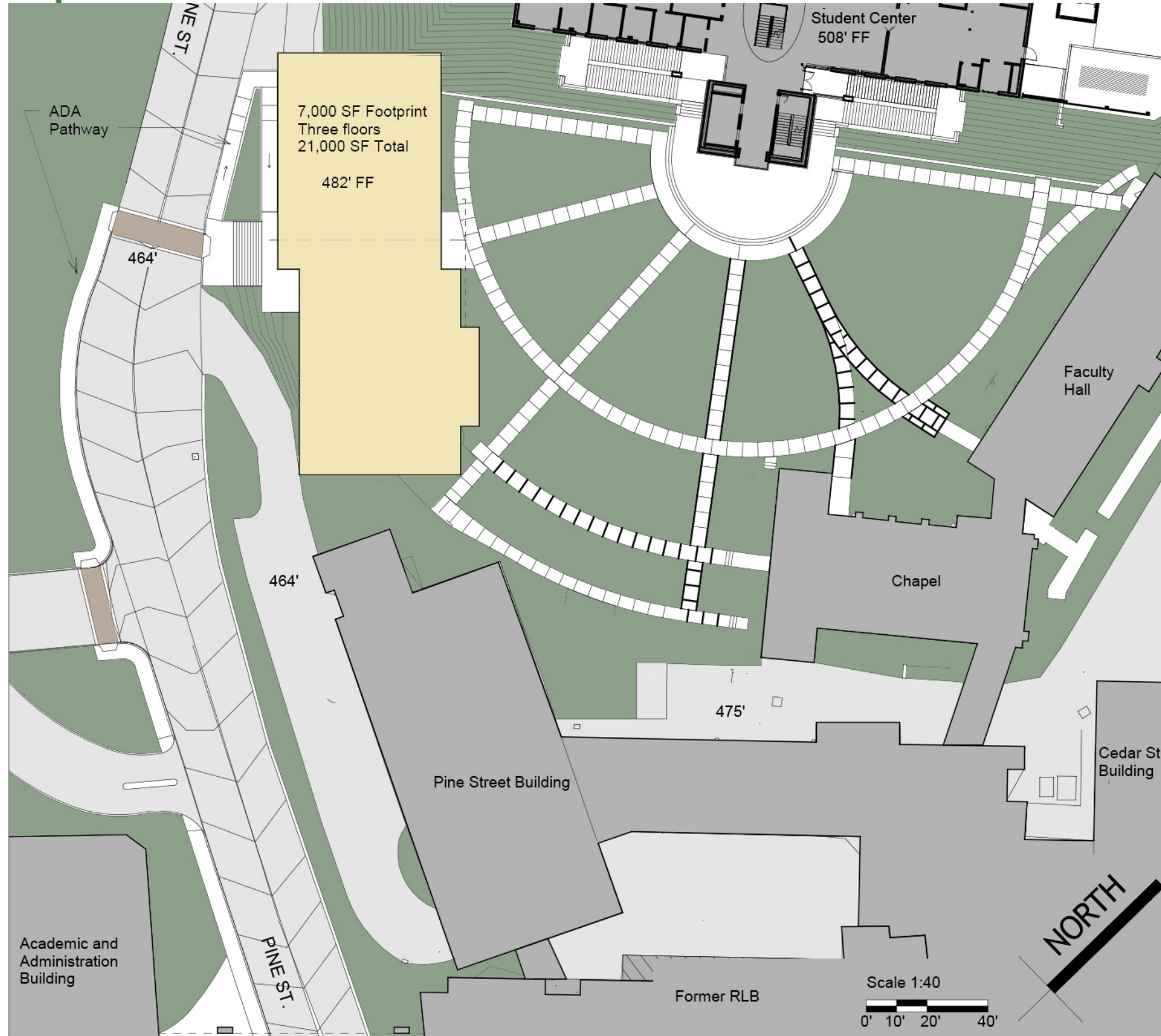
Asbestos Abatement.....	\$900,000- \$1,500,000
Demolition:	
Hospital & Pine St. Buidlings.....	\$1,226,000
Cedar St. Building.....	\$425,000

PRICING COMPARISONS

Campus Master Plan Update- Creativity and Innovation Complex Feasibility Study

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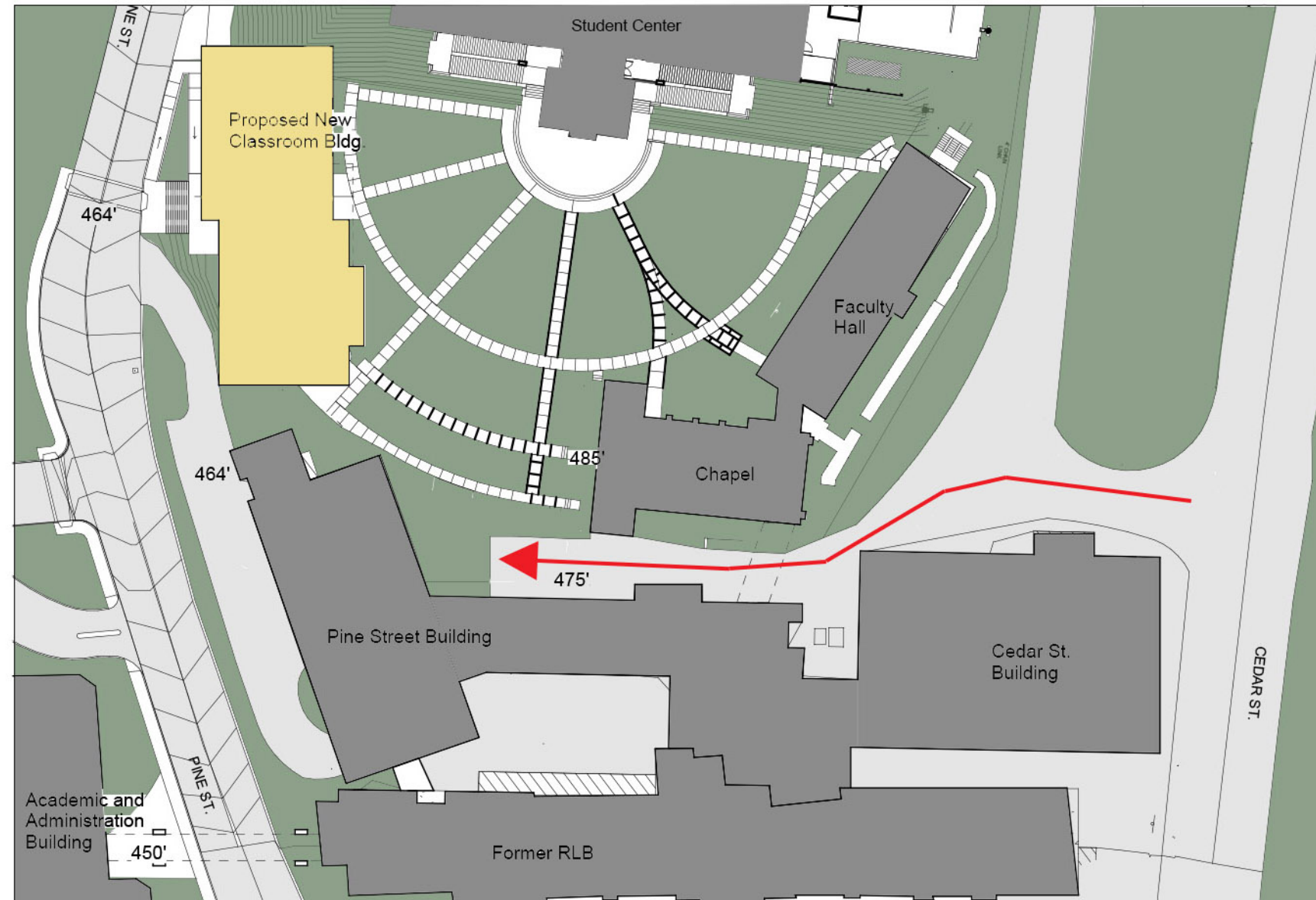




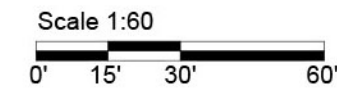
ALTERNATE ONE: "COURTYARD" SITE OPTION

Campus Master Plan Update- A Study for New Classroom Space

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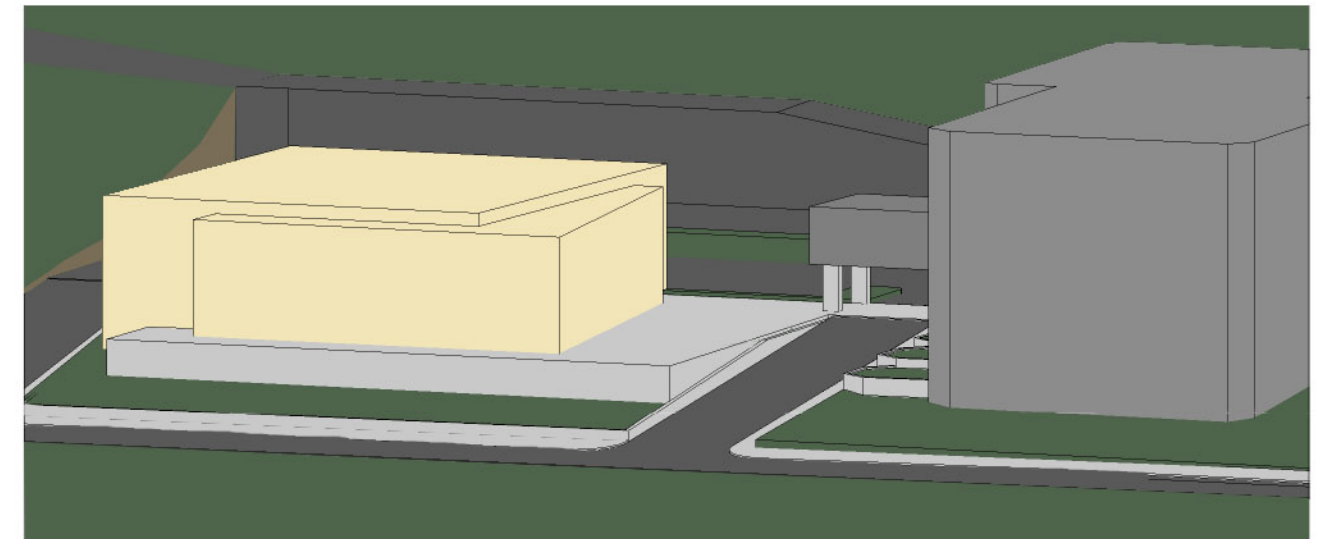
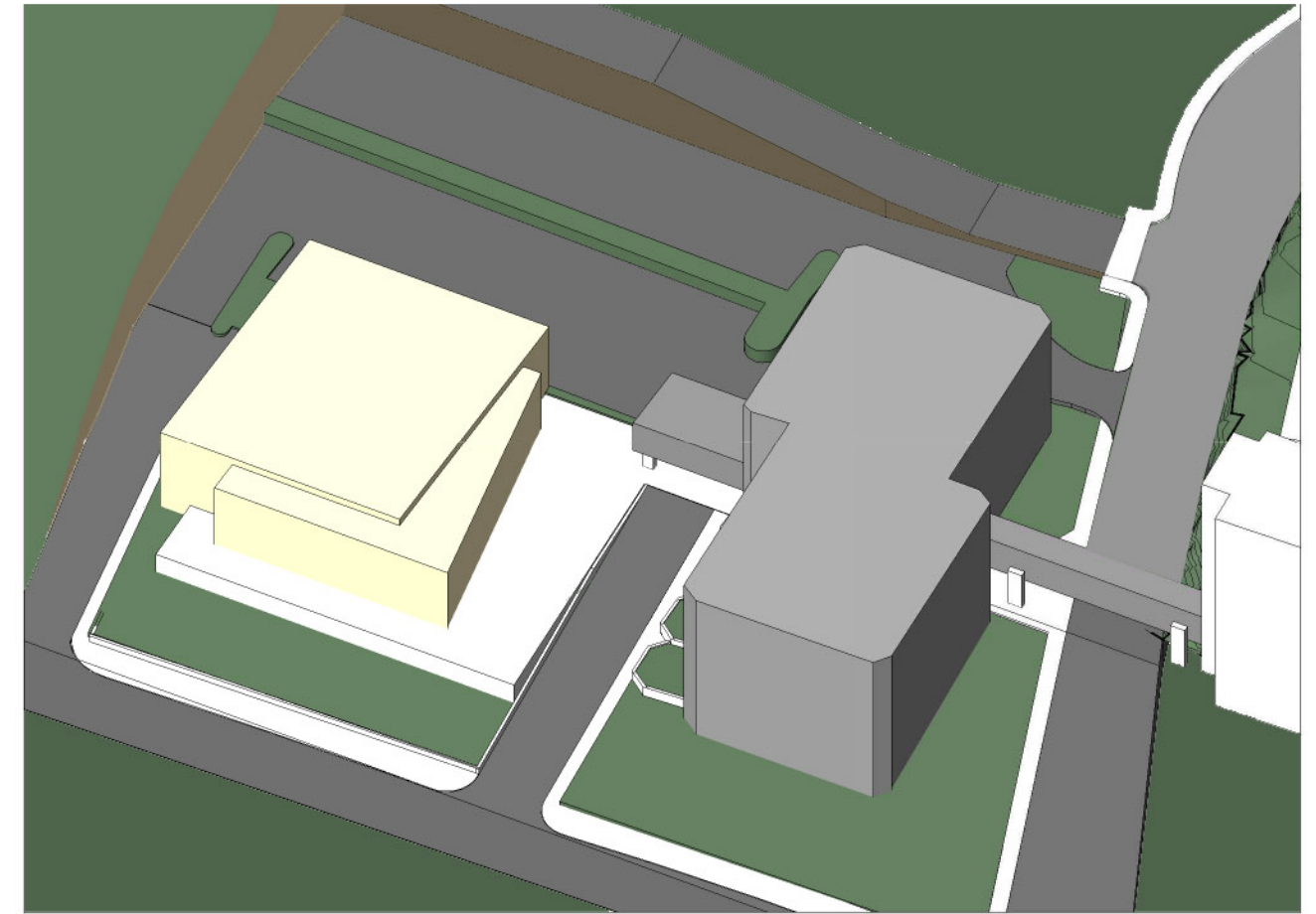
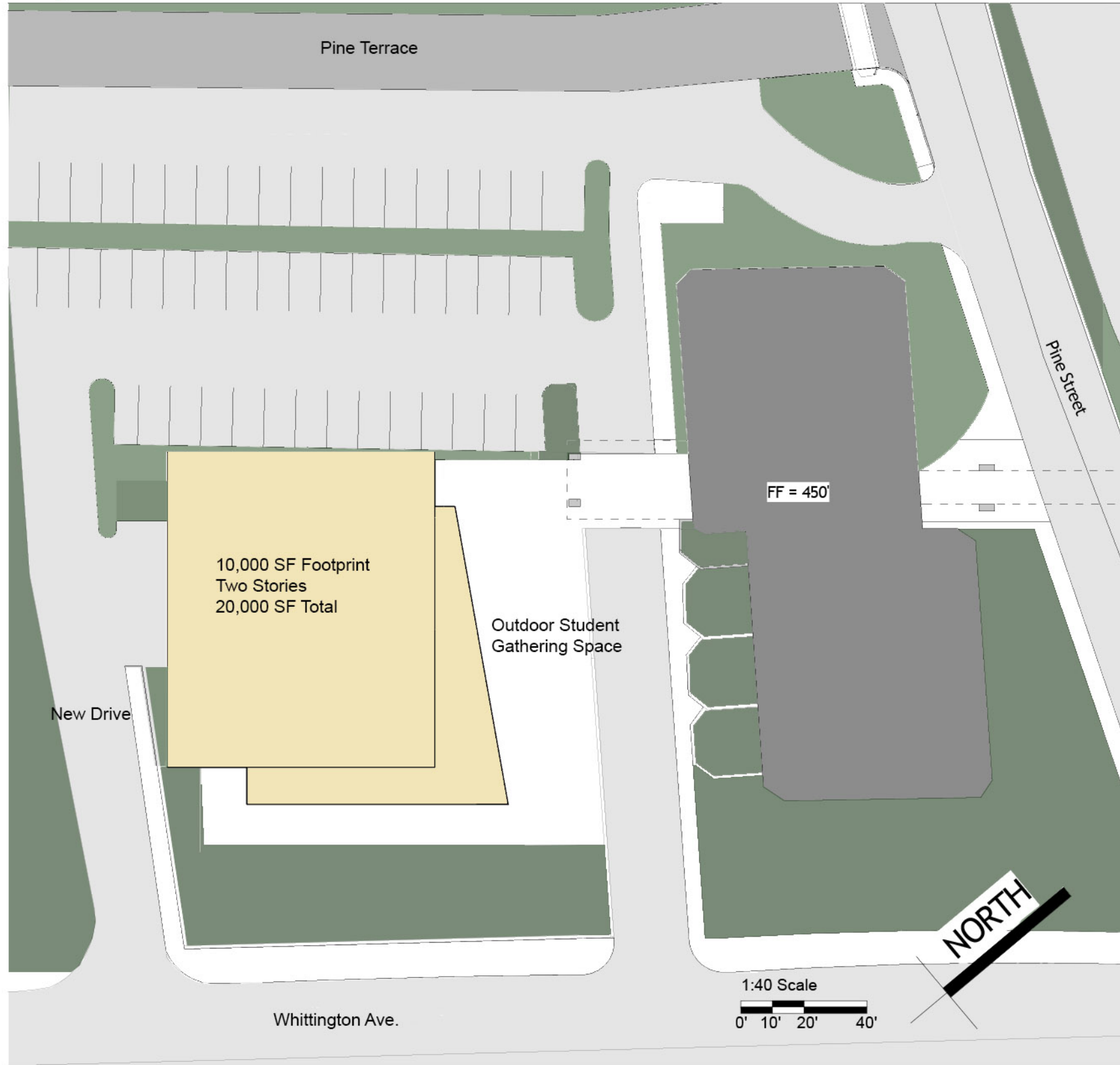
Proposed new fire lane to access the Student Center, new classroom building, Faculty Hall and Chapel shown in **RED**. The height clearance beneath the Chapel bridge will need to be reviewed. It may be that the bridge has to be removed to allow proper access.



ALTERNATE ONE: “COURTYARD” OPTION FIRE LANE DIAGRAM

Campus Master Plan Update- A Study for New Classroom Space

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ALTERNATE TWO: "GATEWAY" SITE OPTION

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