MONTANA TECHNOLOGICAL UNIVERSITY

Campus Facilities Plan 2023

MONTANA TECHNOLOGICAL UNIVERSITY

NAC ARCHITECTURE

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SECTION A

EXECUTIVE SUMMARY

In early spring of 2021, Montana Technological University (MTU) engaged NAC to conduct a space analysis and improvements study. The goal of this study was to assess and analyze the usage of buildings throughout the campus and develop a long-range vision for synergistic adjacencies and building improvements. During the planning effort, stakeholder meetings were held with staff, faculty, and administration to gather a broad range of input including campus leadership, faculty, and staff. The assessment focused primarily on academic, student, and support service spaces.

Work was broken into three phases: Collection, Analysis, and Synthesis. The Collection Phase started by reviewing all building plans and evaluating space layout and area calculations. This phase also included three days spent on campus. Time on campus included building tours and meetings with key staff and department heads to better familiarize our team with the University and future development plans. The tour allowed the team to understand the spatial organization of the campus and was a great opportunity to assess building vitality and the effectiveness of current planning strategies. The tour provided an opportunity to informally assess building condition, accessibility, and space use for all buildings on campus.

CAMPUS FACILITIES PLANNING COMMITTEE

Charge: The Campus Facilities Planning Committee will establish a shared vision for the development and maintenance of the physical campus environment. The master plan will provide a roadmap for future changes to the physical campus designed to support and enable the accomplishment of the university mission.

The committee's initial work will combine the Campus Refresh Committee recommendations with preliminary planning work from NAC Architects and the State of Montana Long Range Building Program.

Membership:

Ron Muffick	VC Administration & Finance
Layne Sessions	Facilities Director
Jaime Heppler	Montana Tech Foundation - CEO
Michele Hardy	Dean - CLSPS
Ken Lee	Dean - Lance College of Mines & Engineering
Kinsley Rafish	Staff Senate
Kylie Godfrey	ASMT President
Sarah North Wolfe	Interim Dean of Students and VC of Student Affairs
Rita Spear	Faculty Member
Marissa Morgan	Director, Environmental Health and Safety

Guiding Principles:

Enrich Student Life and Experiencew

Support High-Quality Learning

Enhance Campus Environment

The 'Griz' and Main Hall

Initial Findings

- The campus has great history and impressive historic buildings. This is a clear point of pride and differentiator for the campus. The setting poised over Butte is striking.
- There are high quality new buildings, but older buildings need preservation and renovation improvements to maximize their effectiveness and utilization.
- Distributed and decentralized student activity zones leads to a low concentration of students, resulting in a feeling of limited activity.
- Distributed student support services require students to travel to various buildings across campus creating unnecessary obstacles for support.
- Academic departments are separated from synergistic peers.
- Some faculty offices and graduate research spaces are separated from academic functions.
- Significant portions of campus buildings are not in compliance with the Americans with Disabilities Act (ADA)

- Underutilized spaces exist throughout the campus and need refresh, clean up, or reprioritization towards new, more active functions. For instance the Pintler conference room in the SUB, Alumni Lounge in the Mill, and work spaces reserved for faculty whom have left MTU.
- MTU is a compact, pedestrian-focused campus, but buildings outside the original campus core lack organization and clear wayfinding. Many building entrances are tucked away, and are not intuitive to navigate between such as Main or URC, ELC, and NRRC.
- Park Street: Splits the campus into two sections. There is a need for a linking element that brings the campus together and provides safer, more clearly defined pedestrian crossings.
- Campus plaza: The predominately hardscaped plaza lacks student engagement zones. The raised center divides the already small space into less useable pieces, creating circulation challenges and limiting flexibility. There is a need for a clear and useable outdoor “campus center” for students to gather that supports a range of activities and provides an “Instagram moment” which is uniquely MTU branded.

During the Analysis and Synthesis Phases, a series of functional arrangements were evaluated to testing the viability of consolidating varying functions together within different buildings throughout the campus. These models were reviewed and refined with the core team, and focus groups were conducted to assess viability and realignment. Test fits for programmatic changes to buildings were tested to understand impacts and opportunities. The completion of the planning process concluded with a comprehensive presentation to the leadership team, reviewing the space analysis findings and outlining the opportunity for adjacencies and utilization for buildings on campus.

In Spring of 2023 a planning committee including representative faculty, staff and students was formed to review and validate previous findings. Relocation, renovation, new construction, and site improvements were discussed in the context of currently funded projects and specific needs and opportunity. University vision, mission, and goals were also reviewed for key phrases and guiding concepts. Projects were then listed in a matrix, scored in their support of each mission/vision/goal-related key phrase or concept and compared against one another. This process eliminated any potential biases and helped to clarify projects that might make the most impact to the university given current conditions and/or opportunities for immediate improvements. Results point to Main, Engineering Hall and the Library as the most impactful initially in meeting MTU's long term goals and vision.

It should be noted that during the planning team's conversations MTU student culture was thoughtfully discussed. MTU students build community most around academics versus strictly socially, perhaps more so than other institutions. The prevalence of rigorous STEM focused programs attracts a student population that is studious and committed to learning. Maximizing access and creating spaces across campus that encourage peer to peer learning and academic growth not only impacts learning outcomes, but was seen as a fundamental component to the Montana Tech student experience. Updating teaching facilities, collaboration areas, and access to technology was seen as a high priority across campus. (This is one reason the Library scored well in the project analysis.) Investment does not need to wait for major building remodels, but could be prioritized with operational or minor capital adjustments such as increasing building hour access or creating small group study areas with comfortable and flexible furniture paired with access to whiteboards and technology.

Main Hall

Currently listed in the Montana Long Range Building Program (LRBP), Main Hall will receive state funding for improvements. With strong adjacency to the campus core, the modernized facility will create the opportunity for new academic spaces, research labs and faculty offices. This will include modernized mechanical, electrical, and code-required upgrades including accessibility. Programing needs will be evaluated to define optimal uses. The renovated Main will provide modernized amenities and create highly desirable student study and collaboration spaces.

Engineering Hall

Strategic proximity to the campus core makes Engineering Hall an ideal candidate for modernization of classrooms, faculty offices, and student spaces. The envisioned upgrades encompass modernized mechanical, electrical, and code-required improvements, with a focus on accessibility. Strategic programming is essential to define the optimal use of available space. The revitalized Engineering Hall will increase utilization and offer contemporary amenities and teaching environments. Engineering Hall is included for funding in the Montana LRBP and will receive state funding.

MG

While not currently on the LRBP, MG's third floor was seen as an opportunity to expand the amount of academic space, faculty offices and research labs for science and engineering focused programs. For these spaces to be captured operational functions like the Business Office and University leadership offices would need to be relocated. Placing these functions in a more centralized and visible location at the core of campus will create an opportunity for increased access and engagement with students, faculty, and staff.

Student Union Building (SUB)

The SUB should be the heart of student life outside of the academic experience and needs modernization including a new rightsized bookstore, game room, health and wellness center, student study spaces, new student government offices, lounge area, and modernized conference spaces. These projects could be phased, but funding would need to come from a combination of fundraising and student fees.

Mill Building

Centrally located at the heart of the campus quad the Mill is underutilized and could serve as surge space during the construction of Main and Engineering for offices and classrooms. Once student government and the game room are relocated to the SUB, the Mill is envisioned for the Business Office, Human Resources, Marketing Payroll, and Enrollment Services.

Library

The library's overall square footage is greater than needed particularly if the book stacks are consolidated. Evolving into a learning commons would better serve students. The reimagined Learning Commons would be flexible and transparent inviting students to engage and collaborate. Providing space for academic support services, career preparation coaching and a study areas with a variety of seating will transform the existing library into a true 21st century learning space. LRB funding is anticipated to be requested in fiscal year 26-27

Park Street and Quad

Beyond the projects listed above, the Central Campus Plaza and Park Street were identified as priority projects for refreshing the overall look and feel of the campus. The scope of these renovations needs more definition through student and campus input however the initial vision is a Central Plaza that serves becomes a stronger, more useable campus core supporting and showcasing the vibrancy of campus culture at Montana Technological University. Traffic calming, and increased branding will then help to connect the campus core across Park Street while offering a more inviting and identifiable entrance to the university. Renovation of the campus plaza should be prioritized and include more student gathering space, flexible programming , and clear Montana Tech branding to create a space that is clearly the heart of campus. These projects present a great fundraising opportunity for donors and alumni. Montana Technological University has a bright future ahead. With a concerted effort MTU will strengthen the campus community, educational experience, and unique sense of place MTU offers its students, staff, and faculty. Ensuring that MTU remains an institution of innovation and opportunity for all.

Campus Facilities Plan 2023

1. Main- This priority project, funded through Long Range Building funds, aims to implement various improvements. These include upgrading building systems, meeting ADA and code requirements, establishing new research laboratories, modernizing teaching spaces, and faculty offices.
2. Engineering- This priority project, funded through Long Range Building funds, focuses on several key elements. It includes upgrading building systems, implementing necessary ADA and code requirements, establishing a new computer lab, modernizing teaching spaces, and new faculty offices.
3. Mill- Potential surge space for displaced classrooms and faculty offices during construction of Main and Engineering. Once complete opportunity for new conferencing space, business office, finance, payroll, HR, and Admin.
4. SUB- renovated bookstore and student health and wellness center with new study spaces, conferencing, student government and lounge for students
5. Reed House- Future center for Leadership and Community Engagement
6. MG- New graduate and research labs, faculty space, and expansion of civil engineering labs/classrooms
7. Library- Revitalized library into an innovative Learning Commons, designed to foster collaboration among students. This new space will provide dedicated study areas, academic support resources, and career services, reimagining the traditional library as a modern hub for learning and student collaboration.
8. Street scape- Park Street will undergo enhancements aimed at implementing traffic calming measures and increased campus branding to establish safe, unobstructed pathways that connect crucial buildings, effectively bridging the historic campus core across Park Street.
9. Campus Quad- Renovate the campus quad, creating a central area that truly embodies the heart of the campus by offering ample gathering space for students, versatile programming options, and a prominent Montana Tech identity

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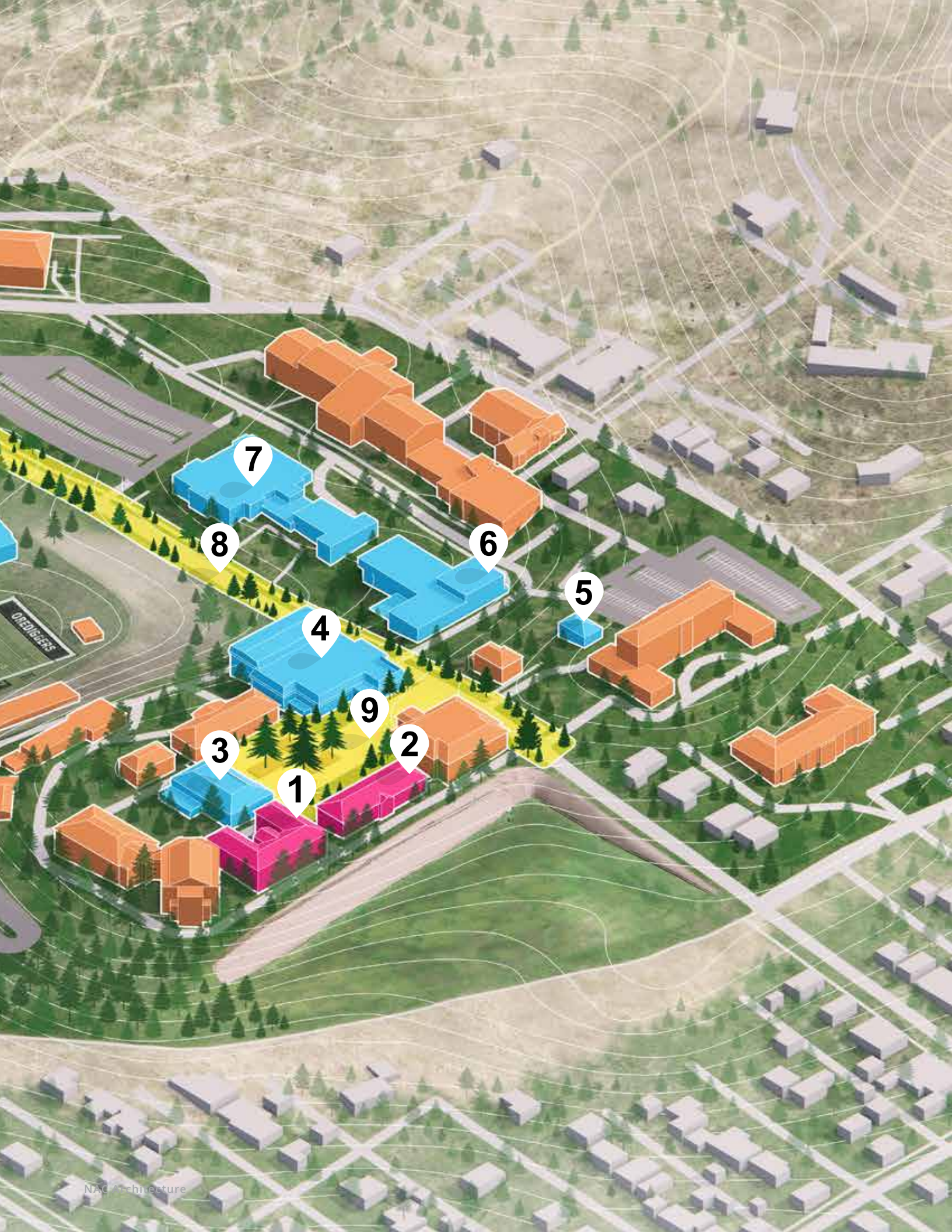
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APPENDIX

Appendix

PROJECT PRIORITIES MATRIX

NAC

0		NA
-1		Negative
1		Minor
2		Major

Project	Mission	Values					Goal 1 - Student Succe
	Advancing Science, Engineering, and Technology	Transformational **student experience** (unparalleled)	Fair, equitable community where all are valued	determined doer through collaboration	Hands on, applied, experiential	Innovation, creativity, and forward thinking	Strategic enrollment Immersive orientation Comprehensive advising structure Support mental health and wellness Co-curricular and community engag Support at-risk and underserved stu
Engineering hall							
Main							
MG (third/2nd floor)							
Mill							
SUB							
Library (Learning Commons)							
SSC							
Reed House							
Highlands							
Athletics							
Plaza/site scape							

ss	Goal 2 - Programs of Distinction	Goal 3 - Healthy and Vibrant Campus Ecosystem	Opportunity for private funding	Opportunity for Public funding	Immediate opportunity / Minimal Disruptions / Logistics	
s gement udents	Multi disciplinary approach to all academic programs Support faculty instruction Partnership between academics and in Thematic Cluster of distinction Create stackable credential opportunities foster belonging and support for diverse populations	Build Campus Community Professional development Improve campus work environment equity, inclusion, and belonging robust onboarding culture of safety, efficiency, responsiveness Supports the academic, research, and student learning Provide exceptional facilities leverage technology				
						7
						6
						7
						2
						7
						10
						3

SUB RENOVATION

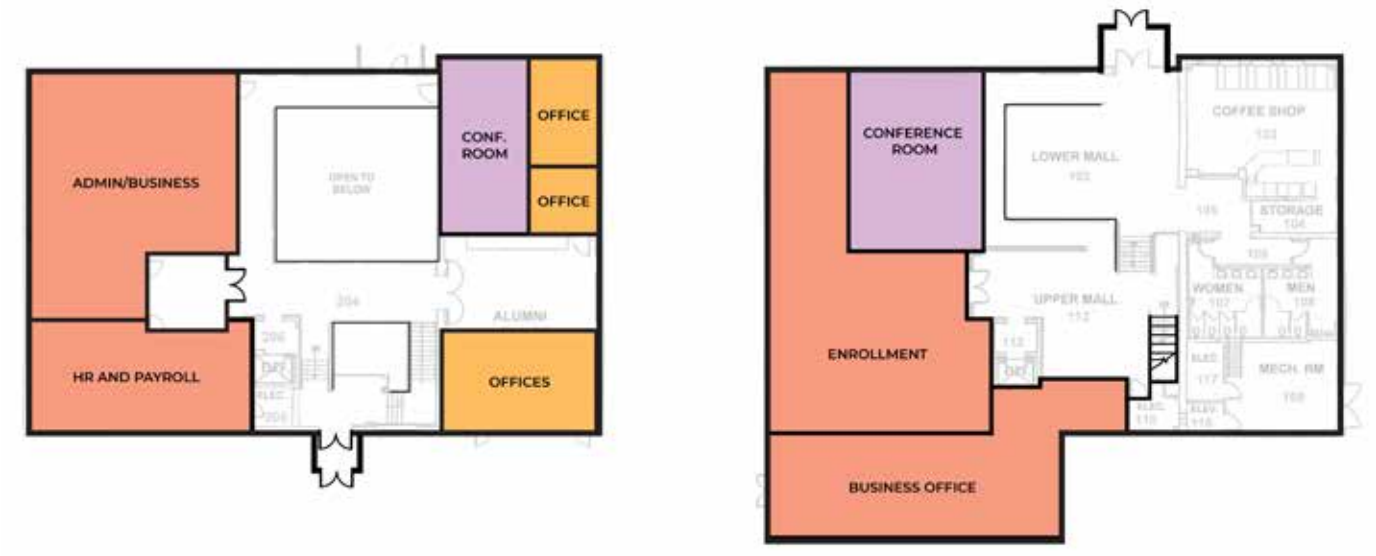
The SUB should be the heart of student life outside of the academic experience and needs modernization including a new bookstore, game room, health and wellness center, student study spaces, new student government offices, lounge area, and modernized conference spaces. These projects could be phased, but funding would need to come from a combination of fundraising and student fees.


GAME ROOM
CONFERENCE ROOM
STUDENT WELLNESS
BOOKSTORE
CONFERENCE ROOM
CONFERENCE ROOM
VETERAN'S LOUNGE


COPPER LOUNGE
SUB OFFICE
DIGGER CARD
STUDENT GOVERNMENT
CONFERENCE ROOM
MEDIA

MILL RENOVATION

Centrally located at the heart of the campus quad the Mill is underutilized and could serve as surge space during the construction of Main and Engineering for offices and classrooms. Once student government and the game room are relocated to the SUB, the Mill is envisioned for the Business Office, Human Resources, Marketing Payroll, and University Administration.


ADMIN/BUSINESS
CONF. ROOM
OFFICE
OFFICE
OPEN TO BELOW
204
ALUMNI
206
DN
ELEC.
206
HR AND PAYROLL
OFFICES
CONFERENCE ROOM
LOWER MALL
102
COFFEE SHOP
103
STORAGE
104
105
106
WOMEN
107
MEN
108
UPPER MALL
112
112
DN
ENROLLMENT
MAS.
117
MECH. RM
118
ELEV.
116
BUSINESS OFFICE

CAMPUS PLAZA & STREETSCAPE RENOVATION

Beyond the projects listed above, the Central Campus Plaza and Park Street were identified as priority projects for refreshing the overall look and feel of the campus. The scope of these renovations needs more definition through student and campus input however the initial vision is a flexible Central Plaza that creates a more useable campus core supporting and showcasing the vibrancy of campus culture at Montana Technological University. Traffic calming, and increased branding will help to connect the campus core across Park Street while offering a more inviting and identifiable entrance to the university. Renovation of the Campus Plaza should be prioritized and include more student gathering space, flexible programming , and clear Montana Tech branding to create a space that is clearly the heart of campus. These projects present a great fundraising opportunity for donors and alumni.

Ⓐ ENTRY FRAME

Ⓑ SUNNING BERM

Ⓒ UNIVERSITY CAMPUS LOGO

Ⓓ SEATING

MONTANA TECH | CONCEPT 1.1 | KEEP THREE TREES

SCJ STUDIO
LANDSCAPE ARCHITECTURE

Ⓐ ENTRY FRAME

Ⓑ SUNNING BERM

Ⓒ UNIVERSITY CAMPUS LOGO

Ⓓ SEATING

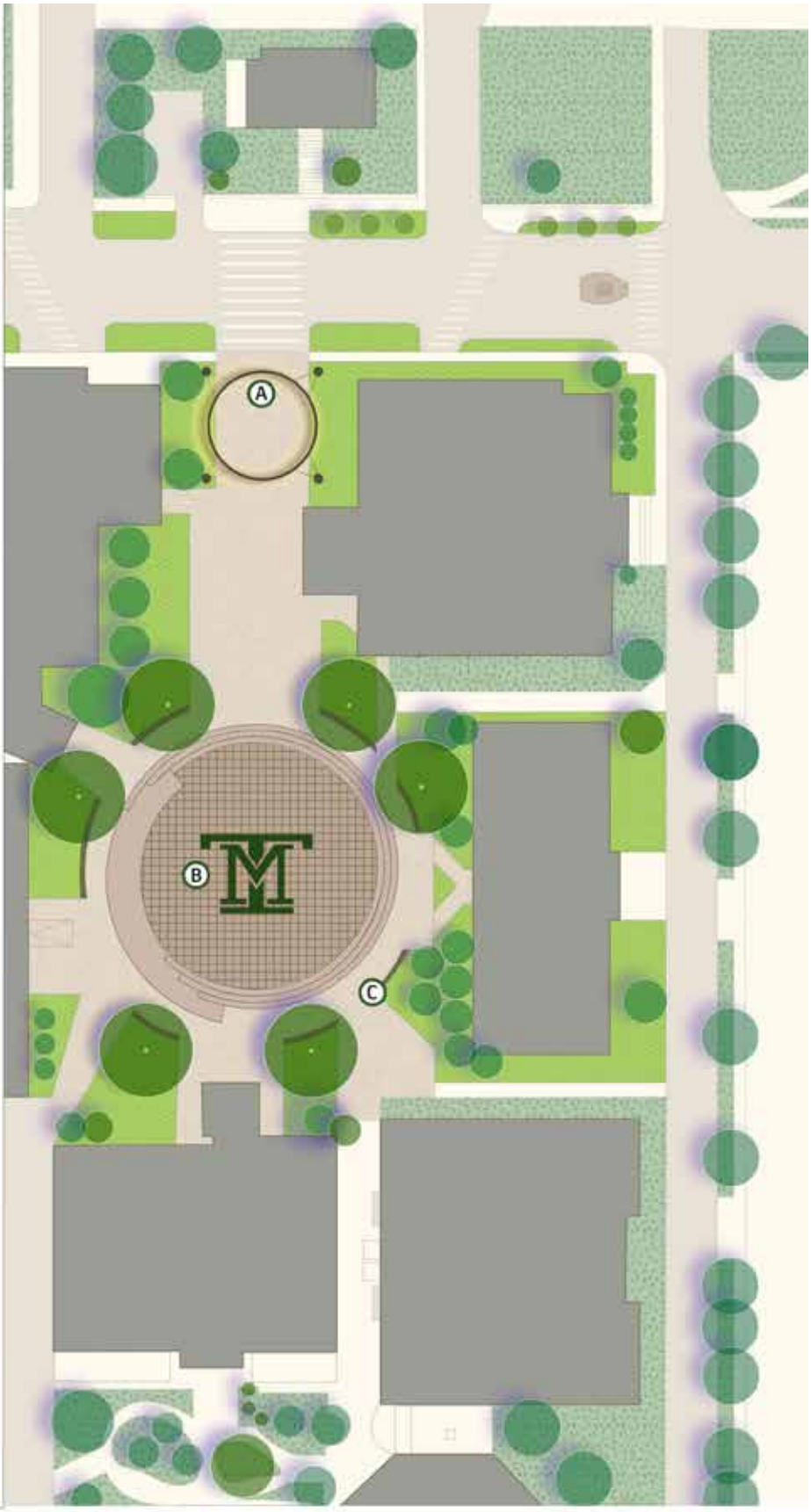
MONTANA TECH | CONCEPT 1.2 | KEEP TWO TREES

SCJ STUDIO
LANDSCAPE ARCHITECTURE

Ⓐ ENTRY LIGHTING

Ⓑ AMPHITHEATRE

Ⓒ SEATING

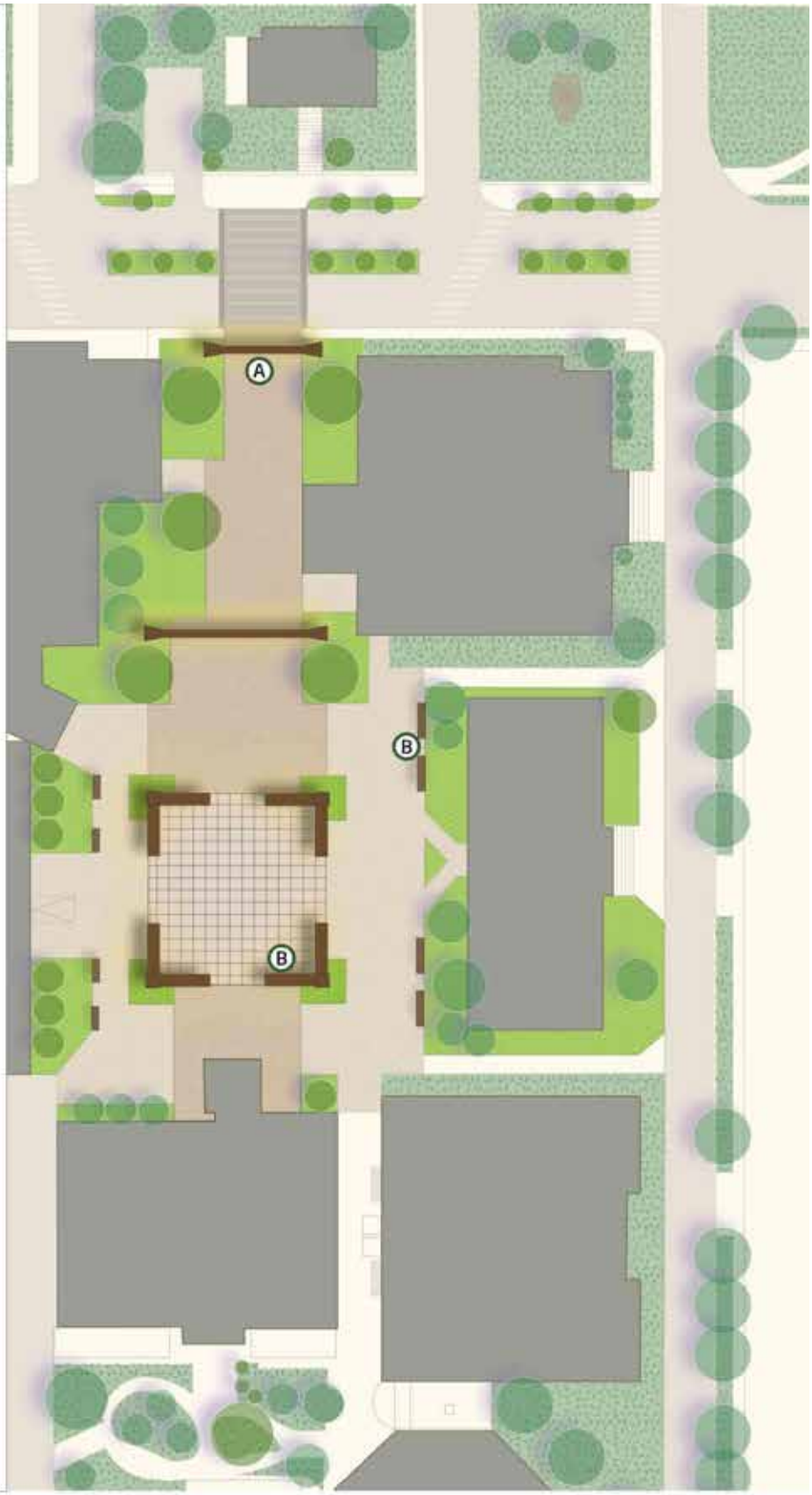


MONTANA TECH | CONCEPT 2 | AMPHITHEATRE PLAZA

SCJ STUDIO
LANDSCAPE ARCHITECTURE

Ⓐ ENTRY FRAME

Ⓑ SEATING



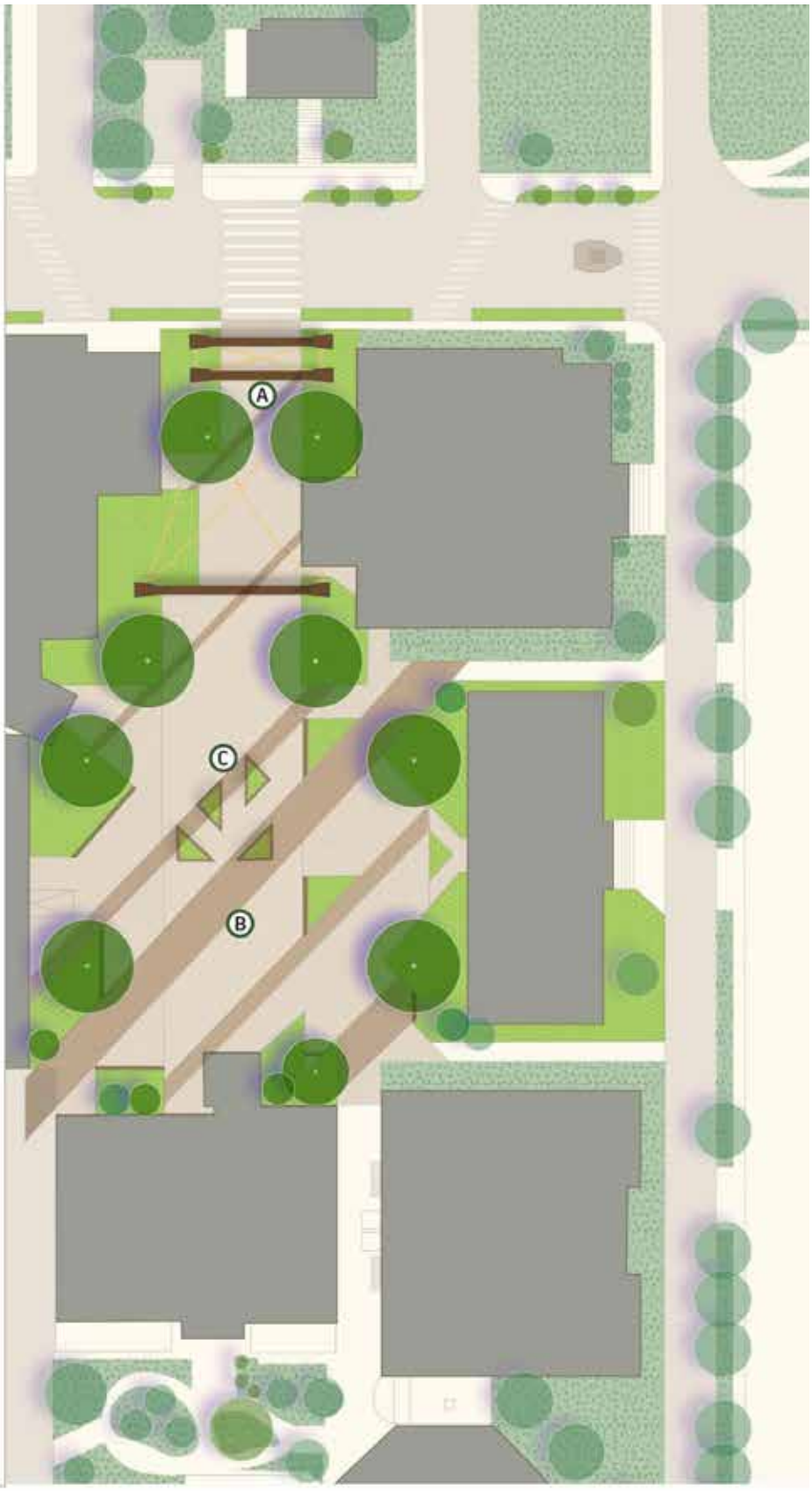
MONTANA TECH | CONCEPT 3 | FRAMED SEQUENCE

SCJ STUDIO
LANDSCAPE ARCHITECTURE

Ⓐ ENTRY FRAME

Ⓑ PLAZA

Ⓒ FLEXIBLE SEATING



MONTANA TECH | CONCEPT 4 | MODERN PLAZA

SCJ STUDIO
LANDSCAPE ARCHITECTURE

1 SENSE OF ENTRY | ARRIVAL GATEWAY INTO QUAD

Ⓑ **FRAMES ENTRY WAY INTO CAMPUS HEART, VERTICAL CUES** | UNIVERSITY CITY SCIENCE CENTER, PHILADELPHIA, PA

Ⓐ **ENTRY FRAMES**

SCJ STUDIO
LANDSCAPE ARCHITECTURE

6 LANDSCAPE PLANTING | CONSISTENT, REPEATING THEMES, SHOWCASE NATIVE MOUNTAIN SCAPE

Ⓐ **NATIVE WILDFLOWERS AND GRASSES**

Ⓑ **SHRUBS AND TREES**

Ⓒ **STONE, ROCKERY, BOULDERS**

SCJ STUDIO
LANDSCAPE ARCHITECTURE

2 THE QUAD | CAMPUS CENTER | HEART OF UNIVERSITY


Ⓐ **CONNECTION, SITE LINES** | OHIO STATE UNIVERSITY, COLUMBUS, OH



Ⓑ **MOUNTAINS AS BACKDROP, ATRIUM** | BRIGHAM YOUNG UNIVERSITY, PROVO, UT


Ⓒ **CIRCULATION, VISIBILITY** | UNIVERSITY OF WASHINGTON, SEATTLE, WA


Ⓒ **FLOW, MOVEMENT** | LUBERT PLAZA | THOMAS JEFFERSON UNIVERSITY, PHILADELPHIA, PA

Ⓔ **INCLUSIVITY , PERSPECTIVE** | ALUMNI PLAZA | THE MALL | UNIVERSITTY OF ARIZONA, TUCSON, AZ

SCJ STUDIO
LANDSCAPE ARCHITECTURE

3 ALLEY, CORRIDOR, & WALKWAY ACTIVATION





Ⓐ **OVER HEAD LIGHTING, EXTERIOR ROOM, ART, BUILDINGS AS BACKDROP, SEATING ALONG ONE SIDE**


Ⓑ DAIRY BLOCK ALLEY, DENVER, CO

SCJ STUDIO
LANDSCAPE ARCHITECTURE

4 FLEX SPACES | MOMENTS

Ⓐ **LOUNGE NOOKS, PERIMETER SEATING, PATHS, MULTI USE OPEN SPACE**

Ⓑ MASS GENERAL BRIGHAM ADMINISTRATIVE OFFICE | SOMERVILLE, MA | OJB

SCJ STUDIO
LANDSCAPE ARCHITECTURE

5 STREETSCAPE & CROSSWALKS

Ⓐ **SEATING, PLANTERS, VEGETATED BUFFERS, INVITING EDGES**

Ⓑ **COLOR POP, ATTENTION GRABBING, PLACE MAKING LOCATIONS FOR TRAFFIC FLOW, INTEGRATED BIKE LANES**

SCJ STUDIO
LANDSCAPE ARCHITECTURE