

UMass Boston Campus Master Plan Update

2023



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Acknowledgments



Dear Beacons,

In crafting our new strategic plan, *For the Times*, our principal goal was to build on our distinctive strengths – our dedication to preserving and advancing knowledge in the service of Boston, the Commonwealth, and the greater good; our resolve to be a leading anti-racist, health-promoting institution; our devotion to holistic student success; our existential commitment to a sustainable world.

At the same time, we developed a Campus Master Plan to support the strategic plan. The Campus Master Plan that follows is about amplifying our signature student- and community-centered approach to educating. It is about harnessing the ‘power of place’ in our unmatched harbor location to foster an ethic of care for all. It is about reimagining the campus in our own image, as Beacons.

It is about bold and vital ideas.

Belonging. We thrive as a community of people who learn from each other and from life experiences and cultures that may be different from our own. This plan articulates a connected learning environment that embraces all and highlights our diversity and equity.

Openness. The plan promotes an open, community-facing campus culture. On the strength of the plan, UMass Boston will emerge as a setting that encourages intellectual curiosity, and a place that feels connected to the civic life, demographic trends, and economic dynamism of our city and region.

Sustainability. Consistent with our commitment to environmental stewardship, this plan boldly aims to reduce our carbon footprint. It envisions energy efficient buildings, renewable energy sources, use of recyclable and locally available materials, and clean transportation alternatives.

Collaboration. The Campus Master Plan will also enable UMass Boston to pursue integrated, cross-disciplinary scholarship in areas we prioritize in *For the Times* – most notably, the Grand Scholarly Challenges. We can be more purposeful in curating our research and teaching to address today’s complex challenges, like climate change and inequality. It improves prospects for our scholarship to have meaningful impact in the world and deepens the academic excellence that is central to our mission.

The buildings and spaces we design shape our lives. Along with pragmatic purpose – functionality, sustainability, access to all – buildings and spaces mirror our values and telecast our aspirations. They are our architectures of care. We are immensely proud of this Campus Master Plan. It is about a campus environment that is for a university on the move – a university for the times, no matter the times. We invite you to peruse this plan and watch as UMass Boston continues to evolve.

Sincerely,

Chancellor Marcelo M. Suárez-Orozco





1. OUR VISION FOR THE FUTURE

Our Vision for the Future

“To develop a plan for our university that is data-informed, adapts best practices to our unique campus, builds on and enhances our significant existing assets, creates opportunities where we have gaps, and is bold yet realistic in its ambitions.”

- Chancellor Marcelo Suárez-Orozco





**UMass Boston, for the times,
no matter the times.**

...we commit ourselves to a vision of higher education, basic research, and community engagement as indispensable tools for forging a more democratic, inclusive, sustainable, and just Boston, commonwealth, and beyond.

UMass Boston is a university for the times.

UMass Boston is a research university and academic community that is open and welcoming to all, with an unwavering commitment to diversity, equity, and inclusion. Our story began with our founding in the 1960s, a time of profound civic and political change that nurtured an ardent social conscience at UMass Boston. As the only public research university in Boston, UMass Boston continues to provide an accessible and affordable opportunity for higher education to a diverse population, particularly those of modest means. Then and now, education for us remains an indispensable tool for a more democratic, inclusive, sustainable, and just world.

Our deep connection to Boston

Situated on the waterfront in the heart of Boston, UMass Boston boasts an extraordinary locational endowment. We believe that an engaged UMass Boston and a thriving Boston go hand in hand. Year after year, UMass Boston brings people and ideas together to elevate Boston – through scholarship and engagement that informs public policy and shapes strong, resilient communities.

Closely aligned with the priorities of the city and region, our waterside campus is home to ecosystems of faculty, staff, and students arrayed around influential areas of discovery like biotechnology and data science. Our campus community drives groundbreaking research and scholarship in all fields of study. We embed environmental resilience across our campus culture, in our planning, curriculum, and operations. We model health and well-being, preparing the next generation of healthcare professionals and expanding Boston's biomedical economy. We are an economic catalyst, unrivaled in providing Boston's workforce with a versatile talent pipeline across sectors and industries. UMass Boston will continue to leverage partnerships to shape new community assets, including the development of Dorchester Bay City, the Calf Pasture Pumping Station, and other partner relationships that benefit the community and university. This will entail deepening partnerships with employers and community organizations to increase experiential learning opportunities for students and broadening stakeholder access to the UMass Boston campus.



“Our students have backgrounds and life experiences full of challenges and achievements. A large portion of them face housing and food insecurities as well as the financial challenges of being a college student. Being primarily a commuter campus, over half of our students are estimated to stay on campus as long as they possibly can during the day before going ‘home’ to sleep. Our campus is in some ways a safe second home for many of our students. The environment we envision building has to be flexible, multi-purposed, attractive, and functional to fully support our student body.”

- Dennis Swinford, Director of the Office of Campus Planning and Sustainability

Our students’ success

Being a Beacon is the college experience of a lifetime. UMass Boston is a place where doors swing open. It is where our students rise to meet the challenges of today and tomorrow and prepare for lives of consequence. It is where they expand the knowable world and realize flights of imagination.

UMass Boston students study what they love. They are artists and neuroscientists, poets and engineers, athletes, advocates and accountants. They want to create things, build things, and make a difference in their communities. They seek to take on racial injustice, climate change, and health inequity. We continue to rise in the ranks of the nation’s top public research universities, affirming our reputation as a leader in producing groundbreaking research and scholarship that moves the world forward.

Our academic leadership calls for a physical infrastructure that is commensurate with the world-class teaching and research excellence at UMass Boston. We will prioritize the completion of current Campus Master Plan initiatives and alignment of our physical space with our new strategic plan, *For the Times*, to ensure state-of-the-art teaching, learning, research, sports and recreation, and co-curricular spaces on campus. We will complete ongoing major campus projects including the new quad and we will continue to renovate, upgrade, and tailor physical spaces to support teaching, learning, well-being, health promotion, research, and community engagement by sequencing the Campus Master Plan’s major capital projects over the next 10 years and beyond.



“The consummate goals of higher education cannot be achieved (or even pursued) until students feel a sense of connectedness, membership, and belonging in college.”

- Terrell Strayhorn, College Students’ Sense of Belonging: A Key to Educational Success for All Students

Our commitment to a healthy and sustainable community

UMass Boston will amplify sustainability initiatives at all levels. We seek to foster a consciousness of nature’s centrality to the human experience and our collective obligation to environmental sustainability. We understand that sustainability is not only about environmental and economic impacts, but it is about the overlap and interdependence of environmental and economic issues with restorative justice, equity, diversity, and inclusion. Therefore, we define sustainability as “an interdisciplinary effort to simultaneously support human health and well-being, preserve environmental quality, and maintain fiscal responsibility.”

From our founding, UMass Boston has attracted scholars dedicated to the pursuit of truth, beauty, and justice who questioned exclusion and the many faces of inequality. We are an institution that has long admired the power of diversity to expand scholarly ways of knowing, endeavored to redefine the boundaries of academic knowledge, and expanded the purposes of higher education. We are proud to be the most diverse university in New England and the third most diverse in the nation. We are equally proud that UMass Boston students represent our national demographic future. We thrive as a community of people who learn from each other and from life experiences that are different from our own. At UMass Boston, we democratize access to education.



UMass Boston is working to integrate disparate sustainability efforts that address environmental, social, and economic issues into a purposefully integrated approach.

We welcome all. We recognize that we have tremendous opportunities to transform our campus environment to better support our mission. We aspire to create a campus context that affirms diverse identities and experiences, fosters value and respect for all community members, and celebrates differences. The proposed 2023 Campus Master Plan Update embraces our commitment to provide an inclusive and equitable campus environment that promotes integrity and student success for all students.

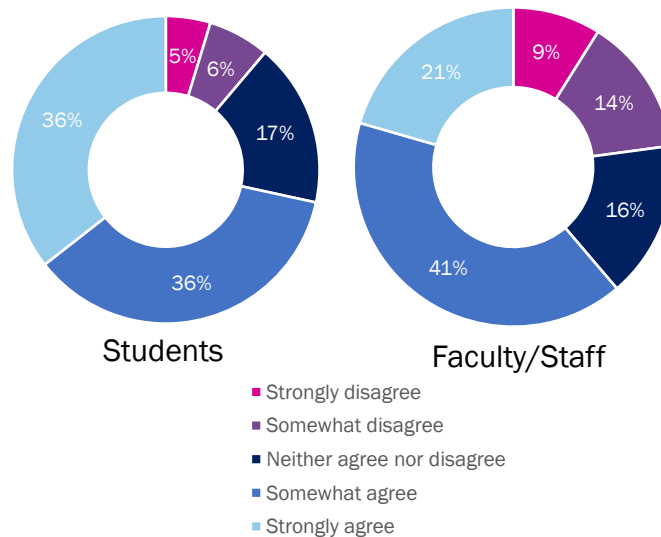
As stewards of the environment, the university has developed a Campus Master Plan that incorporates sustainable site development, energy-efficient building design and materials, renewable energy sources and technologies, use of recyclable and locally available materials, and clean transportation alternatives. We promote buildings that are both resource-efficient in construction and operation and supportive of human health and well-being. Additionally, UMass Boston understands the campus landscape itself has the potential to sequester carbon and provide coastal resilience against storm surge. Campus Master Plan recommendations elevate the relationship between landscape performance, stormwater management, and climate change adaptation and mitigation.

Key Campus Master Plan Themes

A comprehensive analysis of the existing campus and its ability to support the university's population and strategic plan, along with input from a diverse range of stakeholders, shaped the Campus Master Plan and its key themes. The process was inclusive and transparent, seeking input from students, faculty, and staff through town halls, surveys, stakeholder interviews, and workshops. Stakeholder responses in all engagement formats focused on several overarching themes that informed the development of the final plan:

- Diversity, equity, and inclusion are core values that drive institutional practices.
- UMass Boston is a health-promoting institution focused on well-being and an ethic of care.
- Investment in a high-quality learning environment will support an enhanced student experience for students of all identities and backgrounds.
- Environmental and racial justice align with sustainable economic and planning decisions.
- UMass Boston's location can be leveraged by enhancing physical and programmatic connections to Boston.

The campus creates a climate that affirms diverse identities and experiences, fosters value and respect of all community members, and celebrates differences.

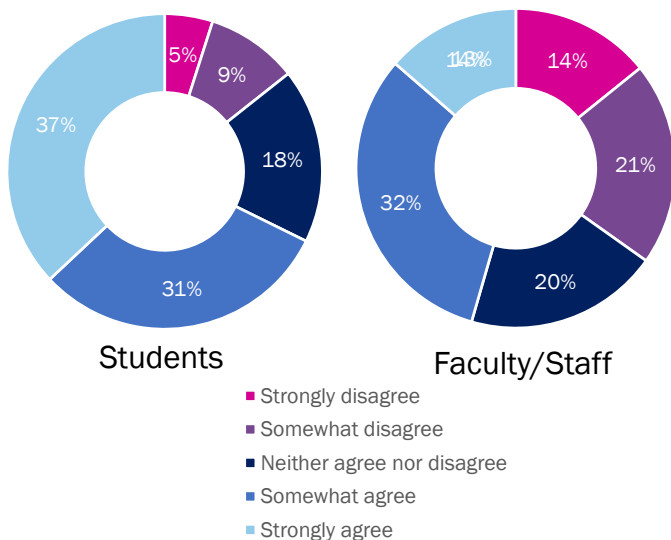


Assumptions and Drivers

- On-campus undergraduate enrollment will remain constant; graduate enrollment is likely to increase slightly.
- Remote and hybrid learning and engagement will continue to increase in popularity and frequency, and the university will seek ways to support this and other changes in teaching modalities.
- Enhancing the student experience through the renovation of the heritage buildings is a significant priority.
- Over time, the university will look to strategically add additional space through both traditional and innovative means.
- The university will seek to make physical and meaningful connections with neighbors on the peninsula and within the Boston metropolitan region.
- The university will encourage the integration of the Calf Pasture development with the Strategic Plan and the Campus Master Plan.

The Campus Master Plan provides a long-range vision for the future of the campus that is both visionary and realistic, and it builds on the successful implementation of the 2009 Campus Master Plan. While the 2009 Plan focused on remediation and infrastructure stabilization, this Campus Master Plan aligns with the planning principles established during the planning process and prioritizes campus investments that will help establish a cohesive physical campus that supports the university’s new strategic plan.

All members of the campus community are included, respected, and valued in all spaces.



PLANNING PRINCIPLES

The planning principles are goals set forth to align UMass Boston's mission and vision with the physical campus. Closely aligned with the strategic plan, they were developed through a consensus-driven planning process. They reflect the culture, traditions, aspirations, and context of UMass Boston. While ambitious in nature, the principles inform the intent, direction, and priorities articulated in the Campus Master Plan and will serve as a benchmark against which future planning decisions can be measured.

1

Create a welcoming, inclusive, and health-promoting UMass Boston campus.

- Create an equitable physical environment that is welcoming and inclusive and that serves students, faculty, staff, and community members of all identities and backgrounds.
- Foster a sense of belonging through improved way-finding and building connectivity.
- Improve campus edge identity and arrival experience.
- Enliven ground floor spaces with increased transparency and improved building access.
- Integrate the campus with the waterfront and the surrounding community.

2

Invest in a high-quality and inclusive learning environment that supports the university's core values.

- Reinvest in heritage buildings to align with current pedagogies and eliminate the disparities between existing campus facilities.
- Provide new and enhanced physical space to support teaching, learning, research, and community engagement.
- Create a more sustainable campus to reflect the university's commitment to the environment and to ensure future growth and longevity.



3

Create a physical campus that supports community-university reciprocal engagement.

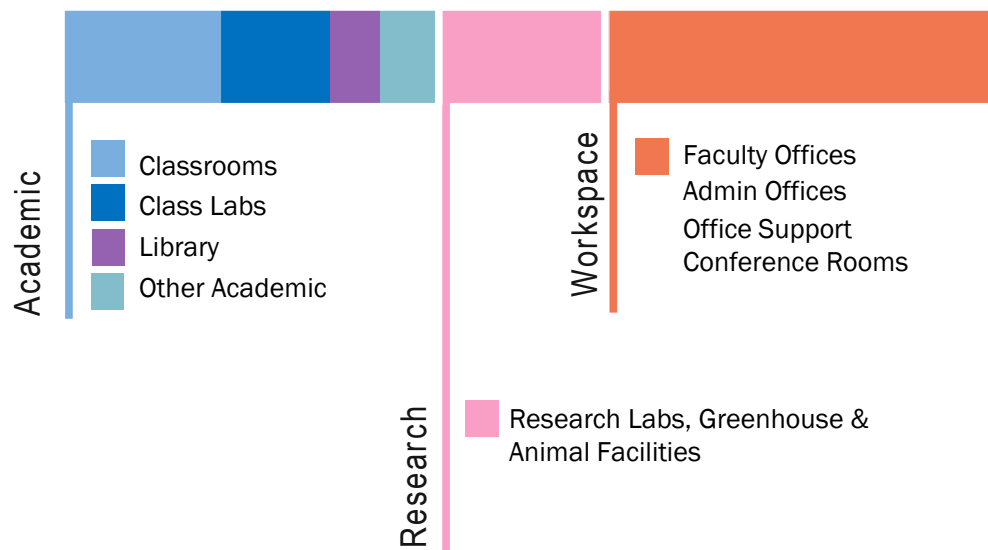
- Leverage the campus location and provide increased community access to support academic priorities that advance UMass Boston's urban mission.
- Cultivate collaborative strategies and partnerships that integrate campus plans with those of the larger community.
- Explore opportunities to expand beyond Columbia Point to enhance community, workforce, and economic development and increase experiential learning opportunities.

4

Leverage assets and resources to support a sustainable, resilient, and nimble campus.

- Prioritize sustainable site development, energy-efficient building design and materials, renewable energy sources and technologies, use of recyclable and locally available materials, and increased reliance on clean transportation alternatives.
- Maximize the versatility of space and infrastructure to accommodate modifications to meet future needs.
- Minimize carbon emissions and meet our commitment for net zero by 2050.
- Prioritize projects at a variety of scales that have the greatest impact.

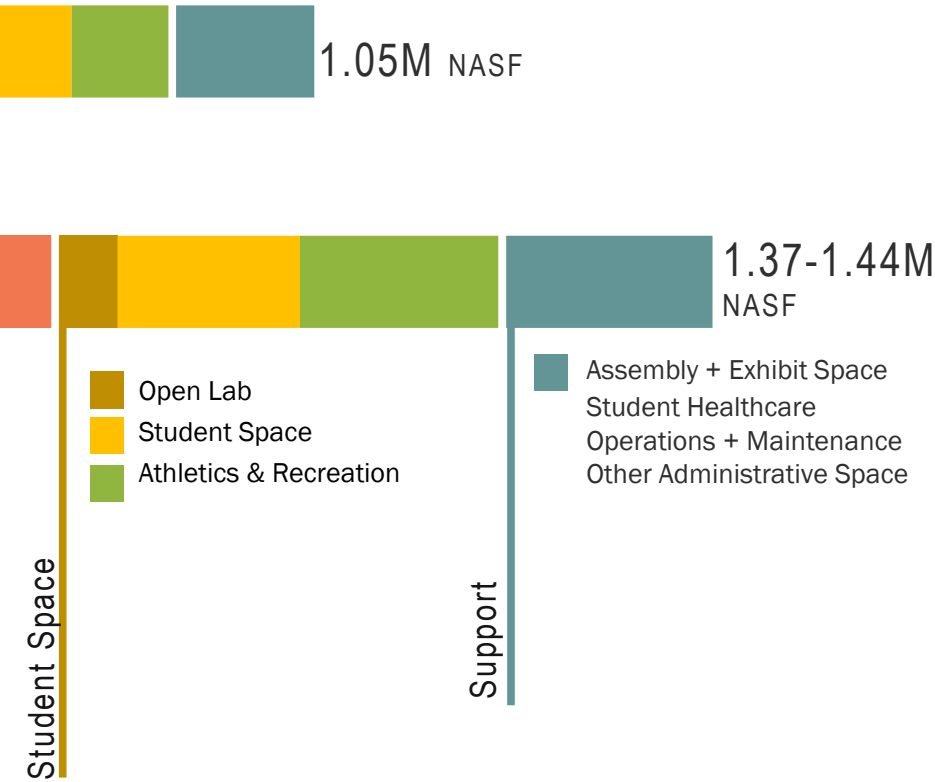
315 - 385k = 570 - 700k
 NASF Needed GSF Needed



Space Needs Assessment

A Space Needs Analysis was completed during the planning process to quantify our space needs and enable us to make data-informed decisions. Understanding our existing space will help us leverage campus assets and align space with our strategic vision moving forward. The planning process evaluated both qualitative and quantitative space deficiencies and identified opportunities to modernize the learning environment for students, optimize existing facilities, and realize new construction to have the most significant impact on student success in the future.

In aggregate, the space assessment identified 315,000-385,000 net square feet (NASF) or 570,000-700,000 gross square feet (GSF) of space needs campuswide in the near- and mid-term. The Campus Master Plan focuses on creating an equitable student experience while also responding to the university's unmet needs for student space and learning environments. Implementation will be achieved through a variety of strategies including renovation and efficient utilization of existing space, new construction, and creative partnerships.



Future campus investments, both renovations and new construction, will be driven by pedagogical shifts in program or course-delivery methods, accreditation requirements, enrollment shifts, faculty/staff population and workplace strategies, research trends, external partnerships, and the age and condition of existing facilities. The plan envisions near-term projects which could be completed within 10 years, as well as long-term initiatives which would occur beyond the 10-year planning horizon. While future flexibility is important, qualitative drivers of alignment include:

- Places to collaborate, formally and informally, for faculty, staff, and students
- Communal spaces that support the holistic entirety of the graduate and undergraduate student population including commuters, non-traditional students, and marginalized communities
- Flexible and adaptable instructional space
- A range of study spaces across all buildings to create equitable learning and study opportunities for all students, regardless of discipline

Existing



Proposed



- Academic
- Student Space
- Recreation/Athletic
- Student Housing

The Campus Master Plan Supports Our Vision for the Future.

The Campus Master Plan is the culmination of ideas generated through a rigorous planning process. Reimagining all aspects of our built environment will strengthen the foundation of our campus, and our new Campus Master Plan will help us leverage our location and facilities in pursuit of our mission. Developed concurrently with our new strategic plan, *For the Times*, the Campus Master Plan seeks to align physical space on campus with the strategic plan and with the university's mission and vision.

The plan prioritizes the renovation of our six original buildings which represent our heritage, Wheatley, McCormack, Healey, Quinn, Service and Supply, and Clark – so that the student experience is equitable across all facilities and disciplines. In addition to building renovations, the Campus Master Plan includes strategies that support campus connectivity, comfort, safety, well-being, wayfinding, and choices that can reinforce a sense of belonging and signal an environment that welcomes a diversity of individuals, perspectives, experiences, and activities.

The Campus Master Plan further identifies projects that help realize the university's strategic goals by addressing campus-wide initiatives and new on-campus development. At a campus level, gateways, building connectivity, open space, and access to the water will create a more welcoming and inclusive campus. Activation of the new quad with transparent and active student space, both through renovations and new construction, will strengthen the campus community and will support sustainability and well-being.

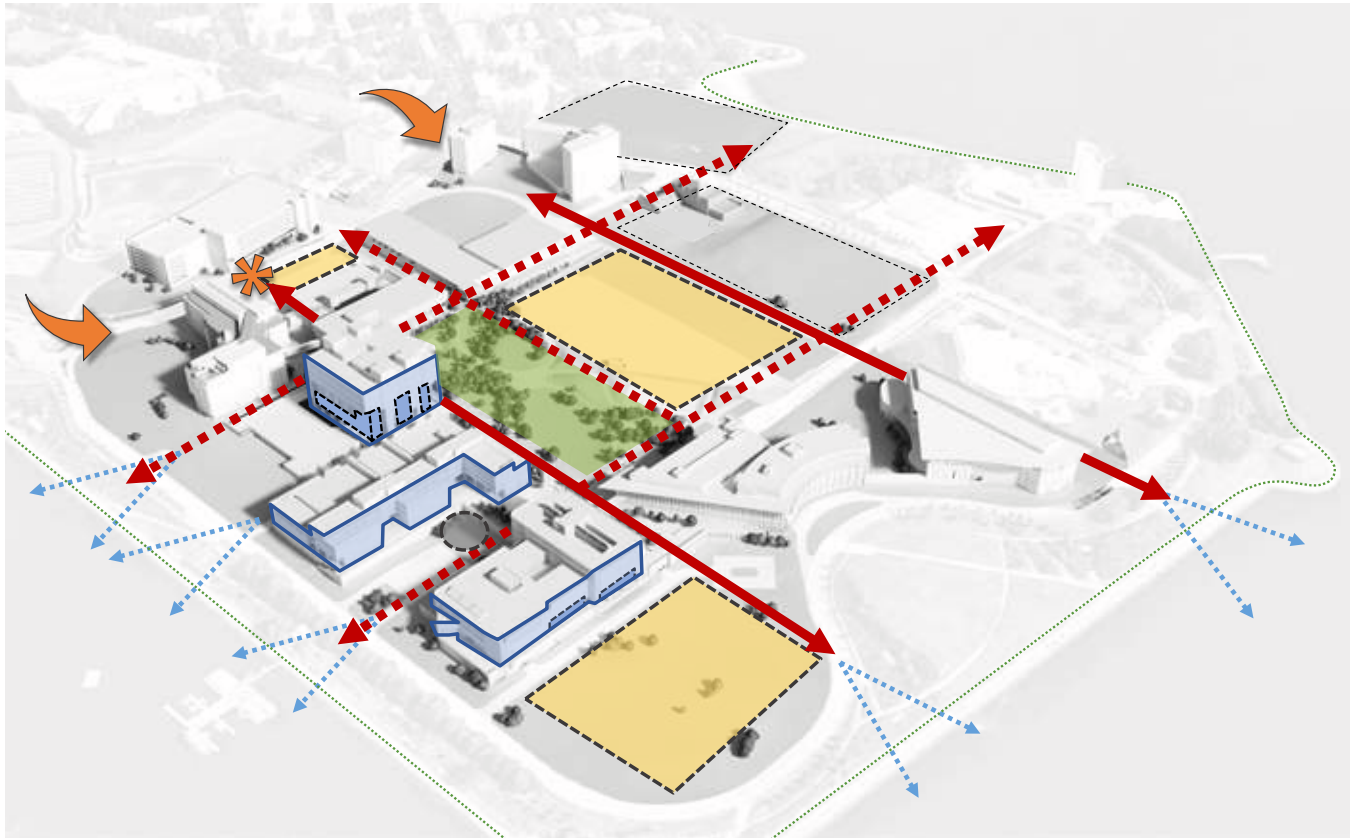









An active and vibrant quad



Planning Concepts



-  Campus Gateway
-  Improved Arrival Experience
-  Major Circulation Axis
-  Secondary Circulation Axis
-  Water Views
-  Heritage Building Renovation
-  Increased Transparency/Infill
-  Central Receiving
-  New Development Site
-  Integration with the Calf Pasture

Urban Design Framework

The UMass Boston Columbia Point campus opened its doors in 1974 as an inward-facing set of buildings and open space that created a fortress-like separation from its neighbors. Recent campus additions, including the removal of the original Science Center and construction of the ISC, as well as landscape improvements along the campus' southeast edges, have turned the campus outward to embrace the Boston Harbor and adjacent private and Commonwealth uses.

The Campus Master Plan envisions an even more powerful opportunity for the campus to blur its edges and to provide the campus and wider community with a legible network of corridors, open space, and landmarks. The plan's urban design framework builds on the planning principles in an effort to knit together existing structures, emerging open space, and future built projects into a cohesive whole.

Opportunities for Renovation and New Construction

The planning process identified future development sites, quantified their development capacity, and proposed appropriate programmatic uses. The assessment of our existing space highlighted that there is a significant disparity in the condition of our existing buildings. Although we teach our students that they are entitled to the best, our physical plant does not convey that message consistently. While new construction strives to create an ideal quantity of additional space, we must prioritize renovation of our heritage buildings to provide high-quality equitable and physically accessible space, support academic success, and enhance the student and staff experience. Investment in the renewal of existing space will consider infrastructure, location, capacity, accessibility, and programmatic needs. The Campus Master Plan explored the transformative opportunities of heritage building renovations using Wheatley Hall as a prototype.

The ten-acre UMass Boston-owned Calf Pasture development site presents an extraordinary opportunity to leverage the benefits of public private investment in a transit-oriented, mixed-use project. The Calf Pasture development provides the potential integration of residential, academic, and private sector uses with the adjacent campus and neighbors on Columbia Point. Adaptive reuse of the Pumping Station, envisioned as the centerpiece of the new development, is an opportunity to create a public-facing amenity for the university. A mixed-use building along University Drive North adjacent to the Pumping Station could potentially provide space for academic colleges, research, and public-private partnerships. The development also provides the opportunity for new residential buildings along Beacons Walk to create synergies with existing student housing, dining, athletic, and proposed recreation uses. Highly transparent active uses such as retail and dining at the ground floor would establish Beacons Walk as a vibrant neighborhood amenity serving both the campus and the surrounding community. The site north of University Drive offers additional opportunities for mixed-use, university-focused development.



Beacons Walk



Strategies for addressing the space deficit:

- Leveraging existing facilities through **renovation**
- Efficient and flexible **utilization** of existing space
- New **construction**
- Creative **partnerships** and other innovative opportunities



- Heritage Building Renovation
- New Construction



Illustrative Campus Master Plan

Heritage Building Renovation

- 1 Wheatley Hall
- 2 McCormack Hall
- 3 Healey Library
- 4 Quinn Administration Center
- 5 Service & Supply
- 6 Clark Athletic Center

Other Campus Facilities

- 7 Integrated Science Complex
- 8 West Garage
- 9 Campus Center
- 10 University Hall
- 11 Residence Hall East & West
- 12 Softball Field
- 13 Monan Park
- 14 Fox Point Dock

New Construction

- A Academic Building A
- B Academic/Recreation B
- C Academic Building C
- D Academic Building D
- E Academic Building E
- F Central Plant
- G ISC Addition
- H Campus Support Building
- I Clark Athletic Center Addition
- J Multi-purpose Field & Structured Parking

Calf Pasture Development

- K Historic Pumping Station
- L Calf Pasture Development Site

Site Improvements

- M Central Receiving
- N Grand Stair
- O Open Space/Plaza
- P Transit Hub

- Heritage Building Renovation
- New Construction





Harbor Point

Dorchester Bay

Mt Vernon St

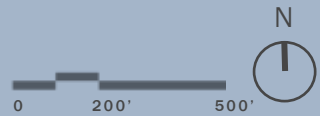
John F. Kennedy Library

Edward M. Kennedy Institute

University Drive North

Massachusetts Archive

University Drive South





View looking northwest



Wheatley as a prototype

The disparity among buildings is perhaps most apparent in Wheatley Hall where current conditions impact productivity, restrict program and faculty growth and negatively impact the self-image of our students, faculty, and staff. The building was named in honor of Phyllis Wheatley, the first African American published poet who was once enslaved, but freed in 1773. We have a responsibility to our students and our community to reflect the significance of her accomplishments through the realization of a major renovation.

Wheatley Hall houses over a third of the university's general-purpose classrooms, thus its condition impacts a large percentage of our campus community. Using Wheatley as a prototype, the planning team explored opportunities to transform the heritage buildings through phased major renovation that would clarify circulation, provide enhanced student spaces, increase transparency and daylight, and facilitate flexible learning spaces to support multiple technologies and pedagogies. The proposed renovation of Wheatley includes increasing exterior glazing, infilling the perimeter structure at the ground and second floor, and potentially extending the upper floor court to the ground floor and enclosing it to create a central student space filled with natural light.



Proposed Plaza Level Collaboration Space, Cannon Design



Proposed Active-Learning Classroom, Cannon Design

LEVEL 06

LEVEL 05

The atrium stair extends to Levels 05 and 06 to provide open circulation between floors. Activity based work areas include communal areas for collaboration, open work areas, huddle rooms, and meeting rooms.

LEVEL 04

The fourth floor provides active learning classrooms, class labs, and college/program hubs. Student space terminates corridors and overlooks the atrium.

LEVEL 03

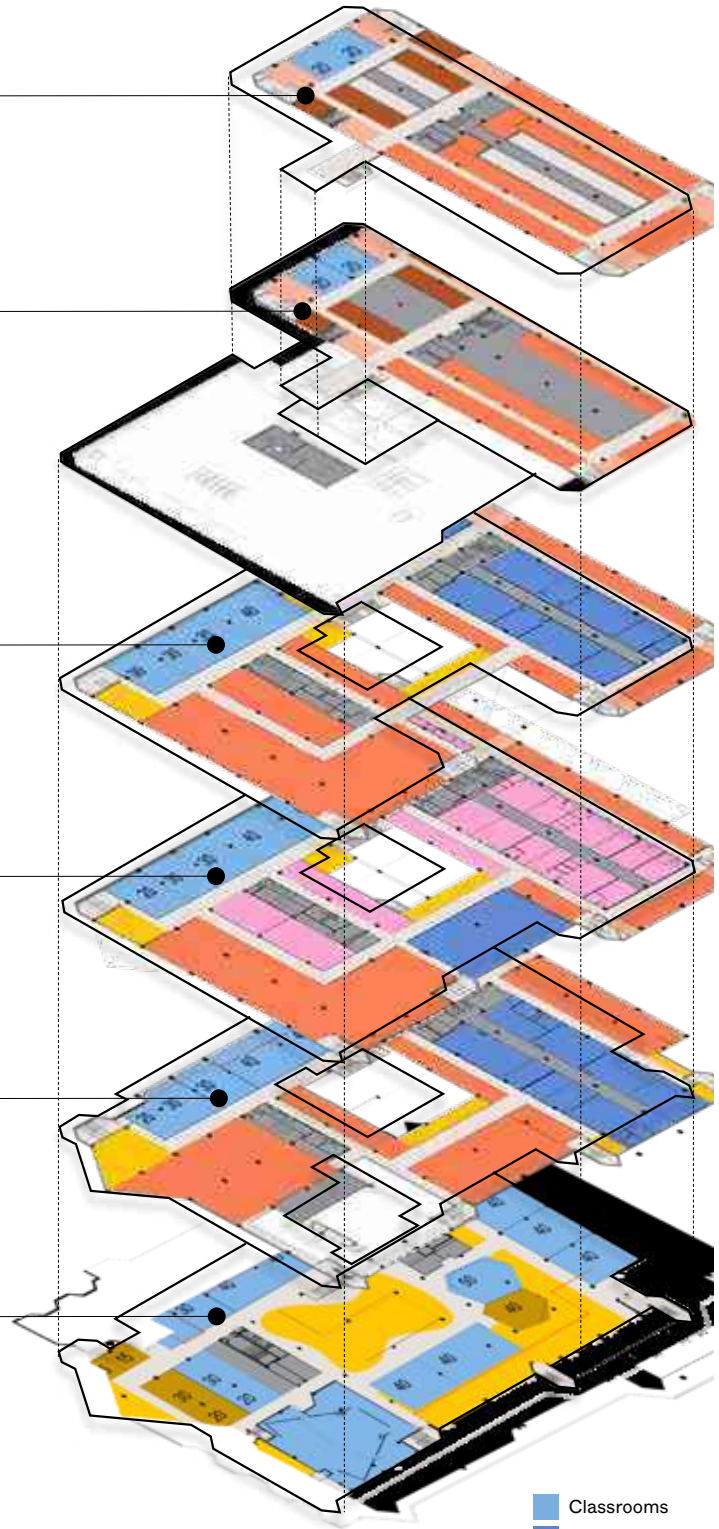
The third floor houses the research facilities, active learning classrooms and college/program hubs. A large double height class lab provides an opportunity for an engineering lab. Student space terminates corridors and overlooks the atrium.

LEVEL 02

The second floor provides active learning classrooms, class labs, and college/program hubs. The central atrium provides daylight to interior student space and workspace. Student space terminates corridors and overlooks the atrium.

PLAZA LEVEL

Glass walls infill to the line of existing structure to provide additional classrooms and student space. The atrium extends to the Plaza Level providing natural light to a central student space. Active learning classrooms and open labs surround the atrium.



- Classrooms
- Class labs
- Student space
- Open labs
- Research
- Workspace
- Communal area
- Meeting space



We're just getting started.

The Campus Master Plan Update is intended to be a living and flexible document that guides decision-making for the future of the physical campus. The plan does not sequence new construction but instead maintains flexible implementation by minimizing enabling projects which would dictate an order of completion. It supports the four cross-cutting commitments identified in *For the Times* by advancing the university's teaching, research, and service mission; fostering an antiracist and health-promoting institutional culture; providing physical opportunities for collaborating with community partners; and modeling operational excellence.

UMass Boston's future will be shaped by a variety of factors including student demographics and academic market demand, changes in technology, political priorities, the ability to secure funding, and the local and global economy. Partnership opportunities, course delivery methods, research initiatives, student life amenity and dining trends, housing demand, sports and recreation needs, and deferred maintenance priorities will inform implementation decisions during the tenure of the Campus Master Plan. Furthermore, the COVID-19 pandemic has introduced additional uncertainty about the future of work and gathering that reinforces the need for flexibility to adapt to changes in society and higher education. The Campus Master Plan provides a coherent vision that will allow the university to react to these challenging forces and respond to opportunities in the near- and long-term. The planning principles, concept plan, goals, vision, and strategies identified in the plan are designed to guide our decisions in anticipation of change.

The Campus Master Plan recommendations are bold and, while daunting, are not different in scale from the campus transformation achieved in the ten years following the 2009 Campus Master Plan. That plan catalyzed 420,000 gross square feet of academic space, over 1,000 residential beds, 1,400 parking spaces, and a transformative campus quad. Like the 2009 plan, implementation of the current Campus Master Plan will occur over time and as funding becomes available. The Campus Master Plan prioritizes the renovation of existing space, specifically the heritage buildings, to meet programmatic needs, improve adjacencies, address deferred maintenance, and increase efficiency. The plan incorporates strategies and recommendations that reinforce the strengths of the campus and address challenges and opportunities to create a better physical environment for the entire campus community.

Recognizing that land area and funding capacity may limit on-campus growth, the university will also explore options that provide flexibility in meeting programmatic needs through alternative means including leased space, satellite locations, and potential partnerships such as the future Calf Pasture mixed-use development, Dorchester Bay City, and other off-campus opportunities that provide unique avenues for alignment with the university's mission.



Watch our transformation

Key challenges lie before us as we confront unchecked climate change, healthcare disparities, the reckoning of racial inequalities, assaults on truth and civility, and a rapidly evolving world of work. At the same time, the future of higher education is shifting to great urban centers and must embrace the cultural wealth and diversity that is the demographic future of Boston and the Commonwealth. In these times, UMass Boston, as the only public research university in the great city of Boston, and as the most diverse public university in New England, is poised to be indispensable, more relevant, and more valuable than ever before.

Looking ahead, watch as new campus spaces for connection emerge to bring our community closer together. This includes the completion of our new quad that will transform the center of campus from a construction zone into a beautiful, five-and-a-half-acre green space and hub for student life. Watch as our new strategic plan charts new pathways to student success. Watch as our investments in the life sciences, technology, and other fields create new ties to the local economy.

Now and moving forward, when we set our gaze on our blue Beacon, we are filled with pride because it reminds us that UMass Boston is true to its values and for the times.



Welcome to UMass Boston



W. W. Rouse Ball Society
10 and above

W. W. Rouse Ball Society
10 and above

W. W. Rouse Ball Society
10 and above

STUDY SPACE

Ultimate Study, Campus Master Plan

How do you study in study?

STUDY LOCATION



STUDY ENVIRONMENT



STUDY FACILITIES



CAMPUS EXPERIENCE

Ultimate Study, Campus Master Plan

How do you experience campus?



STUDY FACILITIES





2.

INTRODUCTION, PROCESS, AND ENGAGEMENT

Introduction, Process, and Engagement

Colleges and Schools

- *College of Education and Human Development*
- *College of Liberal Arts*
- *College of Management*
- *Manning College of Nursing and Health Sciences*
- *College of Science and Mathematics*
- *Honors College*
- *McCormack Graduate School of Policy and Global Studies*
- *School for the Environment*

Campus Master Plan Overview

The University of Massachusetts Boston is a nationally recognized model of excellence for urban public research universities. Founded in 1964 amid growing political turmoil, civil-rights activism, urban unrest, and a rapidly increasing demand for higher education, UMass Boston has a history of providing an accessible, inclusive, and affordable public college education to students from all backgrounds. It is an institution that has always embraced the power of diversity to expand scholarly ways of knowing, and has endeavored to redefine the boundaries of academic knowledge, thus expanding the purposes of higher education. Service, equity, diversity, inclusion, and the public good remain the hallmarks of a UMass Boston education.

The university's eight colleges and schools offer 80 undergraduate programs (bachelor's degrees, undergraduate certificates, post-baccalaureate certificates) and over 110 graduate programs (master's degrees, doctoral degrees, graduate certificates, CAGS, and post-masters certificates).

UMass Boston's exceptionally diverse student population is one of its greatest assets. With its founding mission to serve the city of Boston, the university reflects the growing diversity of the community it represents: a mixture of people, cultures, and demographics unlike that of any other research university in the Northeast. With students from more than 140 different countries, UMass Boston fosters a collaborative, inclusive environment where students learn to view issues from different perspectives and offers its student body of just over 12,200 undergraduate and 3,300 graduate students a global context for learning. The university's Boston location provides connections to employers in industries such as finance, health care, technology, service, and education, offering students opportunities to gain valuable in-school experience through internships, clinicals, and other career-related placements.

The university is a research leader in areas such as inclusion and social development, STEM teaching and learning, developmental and brain sciences, and environmental sustainability. It is ranked as a Doctoral University – Higher Research Activity, the second level of Carnegie's tiered classification system, and leverages its location to form high-impact research alliances with a variety of key partners.

UMass Boston Mission:

The University of Massachusetts Boston is an academic community dedicated to pursuing locally rooted and globally engaged research, teaching, and learning at the highest level of scholarly excellence. Firmly rooted in the city of Boston, we are committed to truth-seeking and service in the quest for social justice.

Our expansive scholarly and creative contributions are directed at advancing knowledge in partnership with the communities we serve, especially the historically marginalized. We honor and uplift the cultural wealth and well-being of our students, faculty, and staff to sustain a vibrant and just campus community.

Building on Past Planning

The primary purpose of a Campus Master Plan is to develop a comprehensive planning document that establishes a long-term vision that is shared by the university and its community partners and constituents, and that serves as a framework and guide for the future physical development of the campus. The intended outcome of implementing the Campus Master Plan is the advancement of the university mission, and the achievement of its strategic goals and objectives.

- Develop a comprehensive long-range (10-20 year) vision for the development of the physical campus that supports the goals of the new strategic plan.
- Advance near-term priority projects within the context of a long-term vision.
- Address needs and explore opportunities for existing buildings, new buildings, campus open spaces, and infrastructure.
- Build consensus within the campus community for the future development of campus.
- Support capital planning, fundraising, and creative partnerships required for implementation.

The Campus Master Plan continues a long tradition of successful planning at UMass Boston. Many of the opportunities identified in the prior campus master plan have now been realized. This plan looks beyond the transformation achieved with the completion of the Substructure Demolition and Quad Development (SDQD) project and envisions the next phase of campus-wide improvements. Many issues identified in the 2009 plan remain relevant: challenges of deferred maintenance, space shortages, and connectivity between buildings and between the campus and the surrounding community. As a plan update, this plan strives to build on the accomplishments of the past plan and identify opportunities that will ensure an equitable and sustainable future.

Planning Process and Schedule

The Campus Master Plan is the culmination of diverse ideas generated through a rigorous planning process. The plan – developed concurrently with the university’s new strategic plan, *For the Times*—seeks to align physical space on campus with the university’s vision and mission.

The comprehensive analysis of the existing campus and its ability to support the university’s population and strategic plan, along with input from a diverse range of stakeholders, shaped the Campus Master Plan and its key themes. The plan focuses on creating an equitable student experience while also responding to the university’s unmet needs for student space and learning environments through renovation, redevelopment, and new construction.

UMass Boston, for the times, no matter the times.

...we commit ourselves to a vision of higher education, basic research, and community engagement as indispensable tools for forging a more democratic, inclusive, sustainable, and just Boston, commonwealth, and beyond.



The planning process began in the fall of 2021 and was organized into three main phases: Discover + Analyze, Explore, and Refine + Document. Each phase was reinforced by engagement with the campus community and key leadership who helped guide the plan and provided input throughout. A 24-member Working Group provided consensus-driven decision-making at each phase of the project and ensured alignment with the concurrent development of the university’s strategic plan.

The planning process was led by a collaboration between STUDIO ENÉE architects—a Minority and Woman-owned (MBE/WBE) firm in Boston, and Ayers Saint Gross, a national design firm specializing in planning and design for higher education. The design team also included Eastley + Partners, an urban design firm in Boston; WSP, an engineering firm with expertise in mechanical, electrical, and plumbing; Nitsch Engineering, a Boston-based civil engineering firm; and Faithful+Gould, an international cost and program management consultancy.

Discover + Analyze

The first phase included a quantitative and qualitative analysis of existing campus conditions. The design team toured the campus, reviewed and analyzed university data, engaged with over 29 stakeholder groups, assessed existing conditions, and presented a facility conditions report. A comprehensive Space Needs Assessment was conducted as part of this phase to identify existing deficiencies and future space needs. The space analysis included a classroom utilization analysis, a space adequacy assessment, and a facilities audit. Campus strengths and opportunities were summarized to determine key drivers and to inform the planning principles that guide the plan.

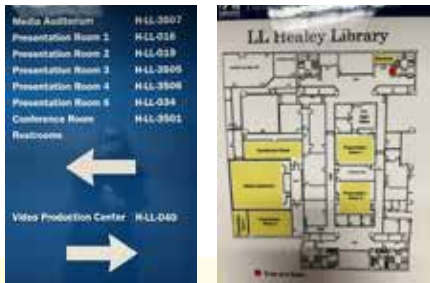
Campus Strengths

- Location within the Boston metropolitan area
- Proximity and access to the Boston Harbor and waterfront open space
- Access to public transit
- Successful implementation of the previous 15-year multimillion dollar campus master plan
- Significant reinvestment that provides new academic and student life spaces
- Compact and walkable campus core with minimal vehicular conflicts



Campus Opportunities

- Strengthen connections to our Dorchester neighbors
- Provide stronger campus gateways, arrival experience, and identity
- Leverage the Calf Pasture and other public-private partnerships to support the future of UMass Boston
- Clarify wayfinding within the campus, both outdoors and indoors
- Leverage existing buildings through renovation and additions to meet current and future needs
- Identify and preserve future development sites within the campus core



Explore

Based on information collected in the Discover + Analyze phase, the design team developed programmatic drivers, planning principles and goals, and a conceptual framework based on campus strengths and opportunities. The campus analysis documented existing open space, campus edges, views, scale, pedestrian and vehicular circulation, building use, stormwater, and utility infrastructure. The space analysis and the draft strategic plan informed the Space Needs Assessment which quantified space required to meet current enrollment and programs.

The design team generated alternative development scenarios and design ideas that addressed short- and long-term development opportunities in response to the most pressing campus needs. The scenarios explored alternatives for building use, campus land use, entries to campus, student housing, recreation and athletic facilities, improvements to the open space network, circulation and accessibility, and parking and service. These scenarios were shared with stakeholders, the Working Group, and campus leadership, and were then revised based on feedback received.

Refine + Document

The final phase refined, developed, and compiled the work generated during the previous phases. Ideas from the planning scenarios were synthesized and further developed into a single illustrative plan that reflects a shared vision for the spatial development of the university aligned with stakeholder input, the final strategic plan, the Space Needs Analysis and the university's sustainability goals. The developed plan identifies existing buildings, proposed renovation, new development, open space, and consideration of adjacent neighbors and the future Calf Pasture development.

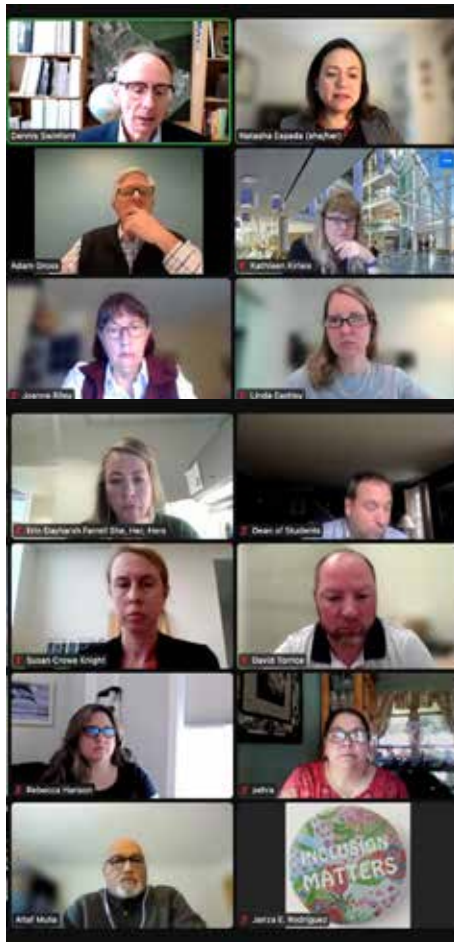
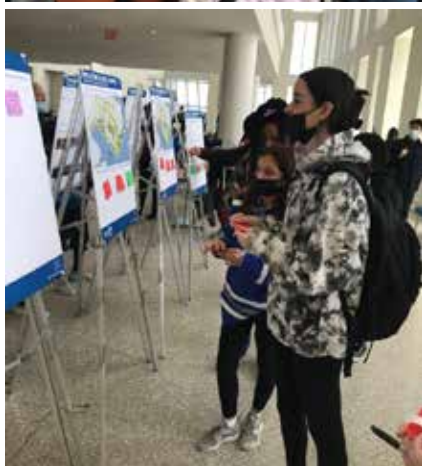
The draft plan and recommendations were shared with the Working Group and presented at a campus-wide Town Hall. Comments from participants were incorporated in the final plan and recommendations. Cost estimates were completed for proposed projects and a prioritization and implementation framework was generated to provide a roadmap for immediate and long-term projects. This final documentation provides a holistic set of recommendations for a long-range vision with strategies for implementing renovation and new construction projects that are aligned with the university's new strategic plan.

Engaging Stakeholders

COVID-19 Pandemic

The planning process occurred during the COVID-19 pandemic. Working with the university, the design team endeavored to create a fluid, adaptive, and highly engaging planning process. Although more in-person events and engagement would have been preferred, virtual engagement in many cases resulted in increased participation and more frequent collaboration. Online forums, stakeholder interviews, town halls, and surveys provided multiple opportunities for input from faculty, staff, and students.

The planning process was inclusive and transparent, providing multiple opportunities and formats for faculty, staff, and student participation. Although much of the planning process occurred during the COVID-19 pandemic, the design team carefully crafted an engagement strategy that sought broad stakeholder feedback and input without compromising the health of participants.



6 Working Group Sessions totaling over 20 hours of meetings

3 Review presentations to Strategic Chairs Committee

40 Stakeholder Group and Individual Interviews reaching approximately 275 different individuals

2 All-Campus surveys, Faculty/Staff and Students receiving over 1,000 responses

2 All-Campus presentations with dozens of participants

2 Drop-in Sessions at Campus Center with over 600 participants

29 Stakeholder and Focus Group Interviews

- *Provost*
- *Faculty Support Co-Chairs*
- *Campus Services*
- *Research*
- *School of the Environment*
- *College of Science and Math*
- *Diversity Inclusion Black Life*
- *Office of Environmental Health and Safety*
- *Human Resources and Title IX*
- *Student Affairs*
- *Marketing and Engagement*
- *Admissions*
- *College of Liberal Arts*
- *College of Management*
- *Manning College of Nursing and Health Sciences*
- *Library*
- *College of Education and Human Development*
- *Strategic Initiatives and Administration*
- *Sustainability*
- *Advancement*
- *Dining*
- *Transportation Services*
- *Honors College*
- *Student Success*
- *Registrar*
- *Administration and Finance*
- *Facilities Department*
- *Public Safety*
- *Health Services*
- *Athletics and Recreation*
- *Student Leadership Committee*

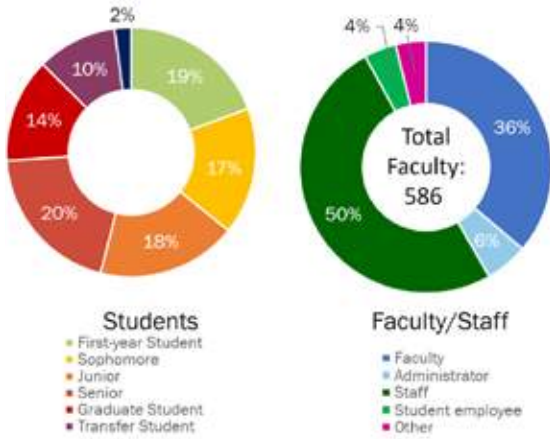
Stakeholder and focus group listening sessions were conducted virtually to enable maximum participation and equitable access. Interviews were structured informally allowing each group to identify and articulate the issues of most importance to their needs. Topics ranged from specific concerns regarding current facilities to aspirational goals and future initiatives.

As part of the initial outreach, a student survey and a faculty/staff survey were distributed to the campus community. Survey questions were similar between the two surveys and were focused on topics that addressed student experience, campus facilities, and learning environments. The survey yielded 1,192 responses which were well balanced between 606 students and 586 faculty/staff. Respondents represented diversity in both academic affiliation and demographics.

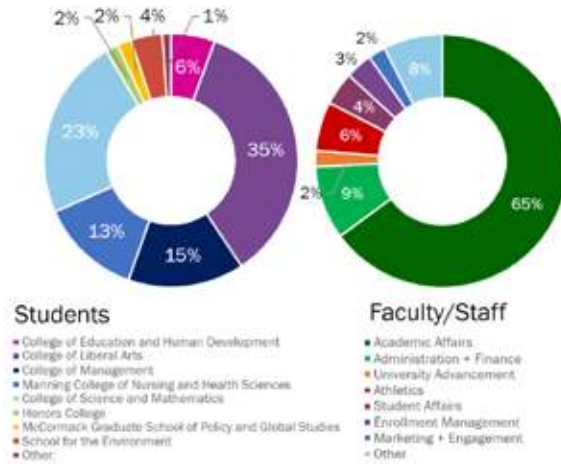
Survey Findings

- Most respondents felt the campus climate supports diversity and values all community members
- Students more than faculty/staff felt that all members of the campus community are included, respected, and valued
- Most students spend 2 hours or less of non-class time on campus, most spend that time studying alone
- Most faculty prefer in-person or mostly in-person delivery while a significant number of students prefer hybrid/hyflex or online courses
- Most respondents to both surveys expressed a strong interest in sustainability

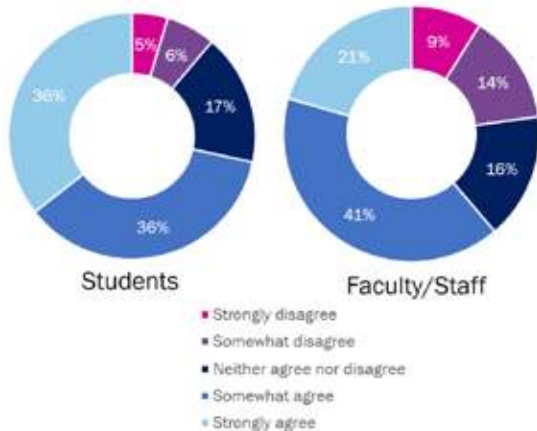
Tell us about yourself. Select all that apply:



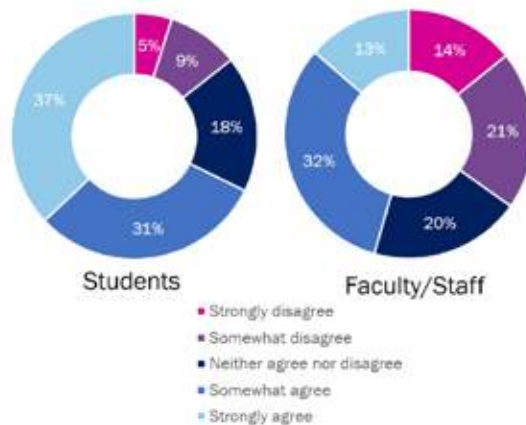
Which College / School are you associated with?



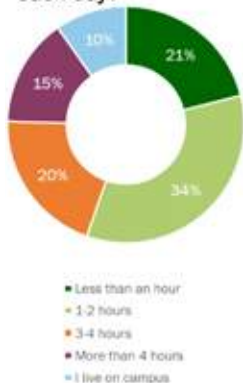
The campus creates a climate that affirms diverse identities and experiences, fosters value and respect of all community members, and celebrates differences.



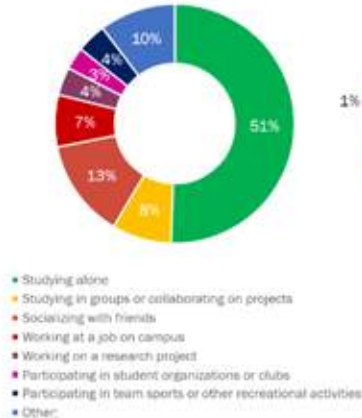
All members of the campus community are included, respected, and valued in all spaces.



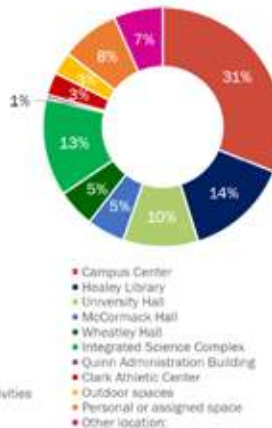
How much unscheduled (non-class time) do you typically spend on campus each day?



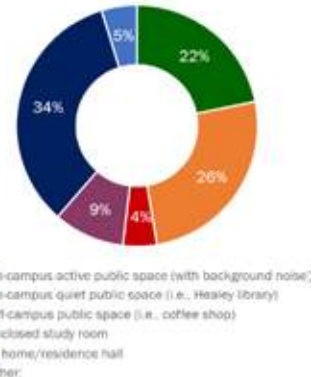
How do you typically spend your unscheduled time on campus?



Where do you spend your unscheduled time on campus?



Where do you prefer to study?



In addition to stakeholder interviews and surveys, the design team held two Town Halls and facilitated an on-campus intercept survey. Stakeholder responses in all engagement formats focused on several overarching themes that informed the development of the Campus Master Plan. These overarching themes are reflective of the goals and mission of the university.

- Diversity, equity, and inclusion are core values that drive institutional practices.
- UMass Boston is a health-promoting institution focused on well-being and an ethic of care.
- Investment in a high-quality learning environment will support an enhanced student experience for students of all identities and backgrounds.
- Environmental and racial justice align with sustainable economic and planning decisions.
- UMass Boston's location can be leveraged by enhancing physical and programmatic connections to Boston.

The ten comments heard most frequently across all engagement formats:



1

The poor condition of our heritage buildings impacts productivity as well as the self-image of our students, faculty, and staff.

- There is a significant disparity in the condition of buildings on campus.
- We teach students that they are entitled to the best, but our physical plant does not convey that message.
- Conditions in Wheatley and McCormack do not meet the expectations of current or prospective students.
- Students, faculty, and staff are less productive in buildings that have significant deferred maintenance and outdated learning environments.
- Renovation and new construction projects will align with the university's sustainability goals.
- The campus must be physically accessible to support the needs of all students, faculty, and staff.



2

Cultural diversity should be reflected in our physical space.

- Diversity, inclusivity, and accessibility are top UMass Boston priorities.
- The diversity of our student body is a key strength and has high value to students. UMass Boston is the most racially diverse public institution in Massachusetts.
- 60% of our students are first generation college students.
- We provide an affordable, quality education with research opportunities.
- We need a culture of caring.
- Campus spaces should foster a sense of belonging that, in turn, will support student success.



3

We should leverage our Boston location.

- UMass Boston is the only public research institution in Boston. We should leverage the opportunities the city offers.
- We should strengthen partnerships to deliver the university's academic mission through coursework, research, internships, and practice.
- Our location is a HUGE asset– harbor walk, amazing views, close to the public transportation.
- We should capitalize on the academic opportunities provided by our waterfront location; we are the only research institution in Massachusetts that is on the sea.



4

UMass Boston is a gated community without a gate – we need to create a more welcoming campus.

- We must attract more people to campus. The community is all around us, but visits must be intentional because the peninsula is geographically insulated.
- As an urban public institution, UMass Boston has a responsibility to host public events. We should be the first place the city thinks about when looking for a public space.
- The university should remove barriers that restrict public events on campus.
- The cost of attending campus events sends the message that the external community is not welcome.
- We should encourage the community to visit campus by hosting lectures, concerts, cultural events, etc.



5

The library needs to be a hub of student access.

- We are an academic enterprise. We value what happens in the library.
- Healey Library should be a hub, not a spoke – it helps everyone be successful.
- The library is an anchor and must be accessible. All roads must lead to the library.



6

There isn't enough student space and we would like more.

- We need to borrow from residential colleges and universities by providing spaces that keep students on campus. The campus must provide the same labs, library, and other resources of a residential campus.
- The campus should be a “home away from home” for both residential and commuter students. Outside the classroom space is needed for students to socialize, collaborate, study, and hold extracurricular activities.
- Students should see the campus as a destination. Space to study and learn during unscheduled time on campus will support student success.
- The Campus Center is not a Student Union. We need to prioritize the use of space and allocate more space to students.



7

We need spaces that support collaboration and an open communal way of working.

- Organizational silos are manifested in our space.
- We need to provide faculty collaboration and gathering space. Faculty need affinity space too.
- We talk about collaboration and accessibility, but our space and the way we work are counter to the way we talk about ourselves.
- College faculty, administration, and teaching spaces are not collocated making collaboration more difficult.



8

Space constraints have a negative impact on current programs and impede future growth.

- “Space on campus is harder to get than a pay raise.”
- We need 21st century space for 21st century learning.
- The old model of solitary learning doesn’t work. We need larger classrooms with contemporary, movable furniture that allows for collaboration and enables students of all sizes to engage with each other.
- Our current space is at capacity. We need more space to be able to grow research, faculty, enrollment, and programs.



9

Better wayfinding would improve the sense of belonging.

- Building signage is confusing and inaccurate. Interior and exterior wayfinding should be improved with a holistic strategy.
- Poor wayfinding creates significant barriers for those in wheelchairs or with other accessibility challenges.
- Visitors have difficulty finding the 'way in' to campus.

10

There needs to be better connectivity and accessibility between buildings.

- Removal of the catwalks has cut the library off from the rest of campus. "We can't get to the library."
- Catwalks provided an important connection for people with disabilities. Without the catwalks, we need to address the physical accessibility issue.
- The new quad and associated circulation will provide at-grade paths that re-establish campus connections and provide accessible routes to each building.





3.

EXISTING CAMPUS



Existing Campus



UMass Boston at Park Square

History of UMass Boston

Prior to 1964, the University of Massachusetts in Amherst was the only public university in the Commonwealth. Amid growing political turmoil, civil-rights activism, and urban unrest, the university was unable to accommodate qualified applicants on the Amherst campus. Recognizing the need to offer an affordable public college education in Boston, Massachusetts legislators voted to establish UMass Boston, the second university in the UMass system.

UMass Boston opened in 1965 with 1,227 undergraduate students and 200 faculty in a renovated building at Park Square in downtown Boston. Enrollment increased rapidly, particularly among Vietnam veterans, African Americans, and students who could not afford a private college education. Although the downtown location was ideal, expansion options were limited.

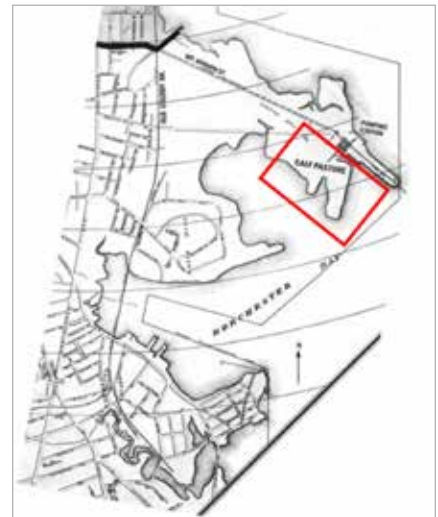
In 1968, despite student and faculty protests to remain downtown, Columbia Point in Dorchester was chosen as the future site of the UMass Boston campus. Although somewhat isolated, a 1967 report by the Boston Redevelopment Authority (BRA) embraced the potential of the Columbia Point site as an “Urban Campus by the Sea,” stating that “the site is accessible to rapid transit and the Southeast Expressway; it is immediately available with no disruption of family or business, and no threat to an existing community; no tax-producing properties are impaired; land acquisition costs are low (\$2 million); the site offers ample space for student housing, outdoor athletic facilities, and parking; [and] the site offers unique access to Boston’s shoreline.”

The university is a research leader in areas such as inclusion and social development, STEM teaching and learning, developmental and brain sciences, and environmental sustainability. It is ranked as a Doctoral University – Higher Research Activity, the second level of Carnegie's tiered classification system, and leverages its location to form high-impact research alliances with a variety of key partners.

Transformation of Columbia Point

The UMass Boston campus sits primarily on a landfill that was part of the expansion of Boston during the 19th and 20th centuries. The original 14-acre Dorchester Bay peninsula was called “Mattaponnock” by Native Americans and served as a landing place for Puritan Settlers in the 1600s. Between 1630 and 1869, the area known as the Calf Pasture was a tidal marsh used for cattle grazing. The first significant structure on the peninsula was the Calf Pasture Pumping Station which opened in 1883 with later additions completed in 1905. A model for the creation of healthy urban living conditions at the time, the Pumping Station collected raw sewage and discharged it into Boston Harbor. The stone Romanesque structure that remains on the campus today housed enormous mechanical pumps that were in operation until 1968. In fact, the construction of the Pumping Station initiated significant landfill on the peninsula.

Additional land was added in the 1880s by the Boston Consolidated Gas Company to accommodate several gas tanks in the area currently occupied by the Service and Supply Building and the Clark Athletic Center.



Map of Calf Pasture and vicinity in 1880



Calf Pasture 1923



Calf Pasture 1923

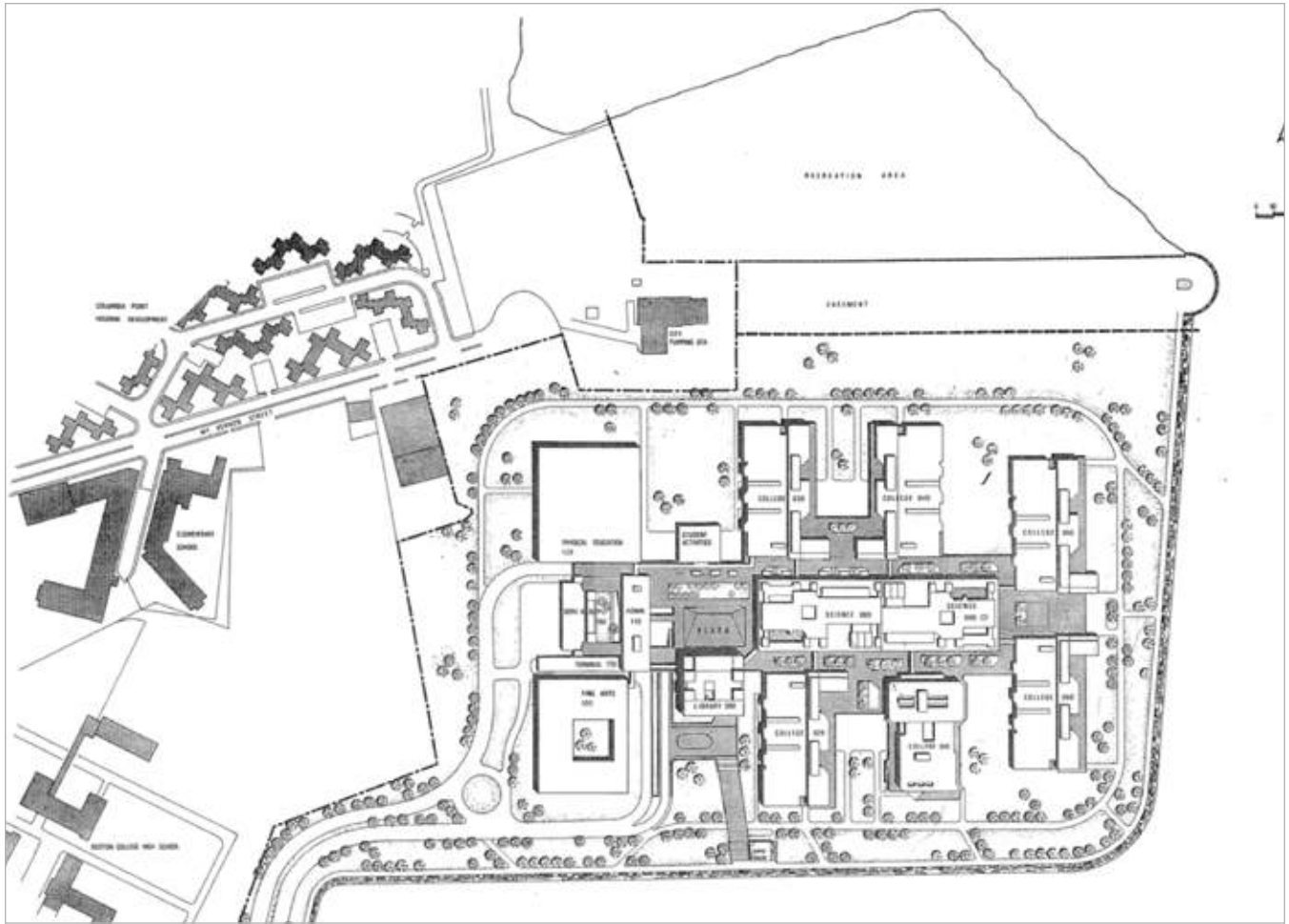
In subsequent years, the Calf Pasture Peninsula, renamed Columbia Point in the 1950s, was used as a garbage dump for the city of Boston with an additional landfill expanding the peninsula to 350 acres and adding 30 feet of additional soil depth. Significant development during the 1950s and '60s included Boston College High School (BCHS), completed in 1950, and the Columbia Point Housing Development, a public housing project with 1,504 apartments and 6,110 residents, completed in 1954. The Paul A. Dever Elementary School was constructed in 1957, and the John W. McCormack Middle School was completed in 1967.

The relocation of UMass Boston to Columbia Point in 1974 dramatically changed the character of the peninsula from its utilitarian origins to an institutional and academic hub. In 1979, the John F. Kennedy Library and Presidential Museum were dedicated following the final landfilling of Columbia Point at the northeastern quadrant of the peninsula. In 1985, the Massachusetts Archives was relocated to a new facility sited between UMass Boston and the John F. Kennedy Library and Presidential Museum. Between 1986 and 1990, the Columbia Point Housing Development public housing project was transformed into Harbor Point Apartments, a successful mixed-income residential community. The Peninsula Apartments were completed in two phases in 2006 and 2009 and the Edward M. Kennedy Institute for the U.S. Senate, adjacent to the JFK Library, was completed in 2015.

Despite significant development, the pattern of urban growth and transportation infrastructure virtually bypassed Columbia Point, thus isolating it from the urban fabric of Dorchester and greater Boston. The peninsula's physical separation from its urban context continues to challenge the university's goal of creating a welcoming campus and developing connections with surrounding neighbors.



Columbia Point 1967 (Source: Boston City Archives)



Original Campus Master Plan, University of Massachusetts/Boston, Columbia Point Campus



Quinn Administration Building, Goody, Clancy Assoc., Inc.



Wheatley Hall, Haldeman Goranson Assoc., Inc.



McCormack Hall Rendering, Cambridge Seven Associates



Healey Library Rendering, Harry Weese Associates

Campus Development: 1968 - Present

The original campus master plan for UMass Boston organized the university into individual colleges, each with 2,500 students. This autonomous college model was a carry-over from the original Park Square campus in downtown Boston where the university envisioned a dispersed linear campus for up to seven colleges on mixed-use sites linked by Boston's subway system. Similar to the Park Square concept, the original plan for the Columbia Point campus was comprised of six colleges arrayed around a large science center. Each college was complete within itself and contained classrooms, laboratories, offices, auditorium, library, gymnasium, food service, and student activity spaces. The academic cluster was connected to a central campus plaza shared by the main library, administration building, and pool house. An outer layer of facilities for the fine arts, service building, and athletic center completed the campus. Buildings were connected by two levels of above-grade parking and a series of elevated pedestrian bridges called "catwalks."

The first phase of construction, completed in 1974, included: the above-grade parking garage and plaza, Wheatley and McCormack, the first phase of the Science Center, Healey Library, Quinn Administration Building, and the Service and Supply Building. Wheatley housed College 1, McCormack housed College 2, and the Science Center was intended to house College 3, but the nomenclature changed with the creation of the College of Arts and Sciences. The Clark Athletic Center and Pool were added in 1980. The campus saw little change until 2004 when the Campus Center was completed. The original campus entrance, now University Drive South, provided views of the monumental portal under Healey Library and connections to the substructure parking. Most commuters and visitors arrived through the substructure, entering buildings directly through vertical cores or from entrances facing the central plaza that topped the substructure. With the exception of Healey Library, the campus turned its back to the water and oriented the front faces of the academic and service buildings to the campus interior. The Campus Center broke with tradition by providing a monumental entrance and open space facing the water.

The first phase of construction, completed in 1974, included: the two-level above-grade parking garage and plaza, Wheatley and McCormack, the Science Center, Healey Library, Quinn Administration Building, and the Service and Supply Building. Wheatley housed College 1, McCormack housed College 2, and the Science Center was intended to house College 3, but the nomenclature changed with the creation of the College of Arts and Sciences. The Clark Athletic Center and Pool were added in 1980. The original campus entrance, now University Drive South, provided views of the monumental portal under Healey Library and connections to the substructure parking. Most commuters and visitors arrived through the substructure, entering buildings directly through vertical cores or from entrances facing the central plaza that topped the substructure. With the exception of Healey Library, the campus turned its back to the water and oriented the front faces of the academic and service buildings to the campus interior. The campus saw little change until 2004 when the Campus Center was completed.



Campus circa 1974



Aerial view of campus 1979

Heritage Building Namesakes

**Phillis Wheatley**

*A pioneering African-American poet, Phillis Wheatley was brought to Boston on a slave ship around 1753 as a young girl and purchased by John Wheatley as a servant for his wife. Wheatley received lessons in theology, English, Latin, and Greek at a time when African Americans were discouraged and intimidated from learning how to read and write. Her first and only book of poems, *Poems on Various Subjects, Religious and Moral*, was published in 1773 making her the first African-American author of a published book of poetry.*

**John W. McCormack**

John W. McCormack was a committed public servant and a champion for the disadvantaged, a staunch advocate for the elderly, ethnic minorities, and families. During his 42-year career in the U.S. Congress, he helped to pass groundbreaking bills on civil rights, economic security, education, foreign aid, health care, housing, immigration, labor, protecting the environment, and voting rights.



Joseph P. Healey

Healey Library was named in memory of Joseph P. Healey who served as a University of Massachusetts Trustee for 22 years. Healey was elected Chairman of the University of Massachusetts Board of Trustees in 1969.



Robert H. Quinn

As a member of the Massachusetts House of Representatives, Robert H. Quinn co-sponsored the legislation that established the University of Massachusetts Boston. Quinn served as Massachusetts Attorney General in the early 1970's. He championed the "Quinn Bill" - legislation that provided financial support to law enforcement officers who pursued higher education. Quinn ran for governor in 1974 but was defeated by Michael Dukakis. He served as Chairman of the Board of Trustees for the University of Massachusetts from 1981-1986.



Catherine "Kit" Clark

Kit Clark was a lifelong resident of Savin Hill and a longtime Dorchester civic leader, whose concern bridged youth and older generations, local government, and higher education, and unified them with an uncompromising belief in community. Most particularly, she is remembered for her deep commitment to services of high quality for students and led the effort to assure the construction of an athletic facility on the UMass Boston campus

Over time, due to many reasons, the concrete of the above-grade parking structure began to deteriorate. Concrete began to spall from the garage floors, ceilings, and columns, exposing the steel to continuous corrosion from the salt air that surrounds the peninsula.

In 2006, the condition of the concrete had reached a critical point of concern for public safety and prompted the closing of the 1,560-car substructure. Preliminary cost and construction analyses led to the decision to temporarily stabilize the substructure, replace the parking with a new free-standing garage—now called West Garage—and then demolish the substructure. This conclusion initiated the first campus master plan which was completed in 2009.

The 25-year Campus Master Plan, prepared by Chan, Krieger, Sieniewicz, outlined development that would address the deterioration of the substructure and transform the campus into a cutting-edge, sustainable, and attractive environment. This 2009 plan reflected the physical realization of the university's strategic vision of the time: becoming a

25 Year Campus Master Plan of building parcels and open space network for UMass Boston



model student-centered, urban public research university of the 21st century. Reinventing the 1970s campus, the plan called for new buildings, landscapes, circulation corridors, and utilities.

The university has implemented a number of transformative projects identified in the 2009 Campus Master Plan. These projects have improved teaching, student life, research, transportation, and the physical environment. The Integrated Sciences Complex (ISC) and University Hall grew out of the plan as did the West Garage and the first campus residence halls. The 2009 plan also precipitated the Substructure Demolition and Quadrangle Development (SDQD) project, which demolished the Science Center and Pool and facilitated structural stabilization while creating a transformative central open space that is scheduled for completion in 2023. The Renovation to Existing Buildings (REAB) projects included much-needed improvements in Wheatley Hall and Quinn. Other projects completed with the implementation of the 2009 plan include the Utility Corridor and Roadway Relocation and HarborWalk Improvements and Shoreline Stabilization.

25 Year Illustrative Campus Master Plan



The recommendations in the 2009 plan have served as a flexible blueprint and framework for campus infrastructure and landscape elements that reflect UMass Boston's highest academic ambitions, its urban mission, and its commitment to enhancing the student experience and improving connections with its neighbors. The Campus Master Plan Update will build on the 2009 plan by prioritizing renovations not yet completed, identifying opportunities for future development, and aligning the physical campus with the university's new strategic plan, *For the Times*.

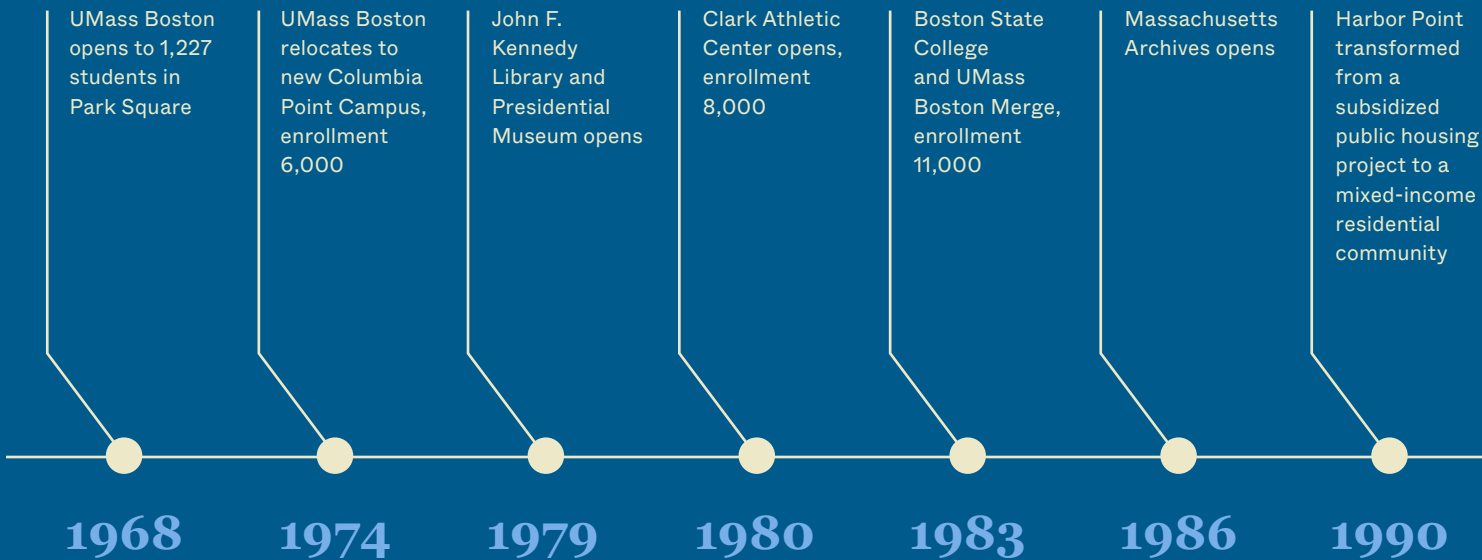
Existing Campus





CAMPUS DEVELOPMENT HISTORY

*Enrollment numbers indicate total headcount.



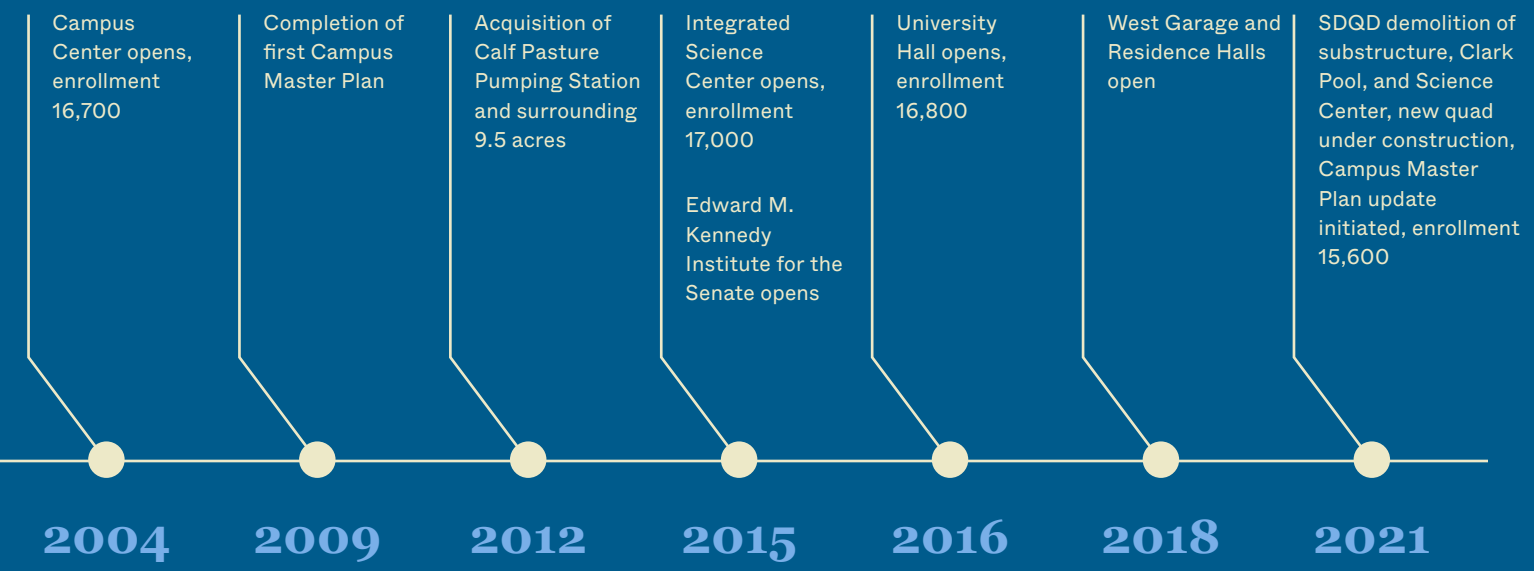
1968 UMass Boston Park Square



1974 UMass Relocates to Columbia Point



2004 Campus Center Opens



2012 Acquire Pumping Station



2018 UMass Residence Hall



2021 SDQD

Vehicular Neighborhood Circulation



Transit and Pedestrian Neighborhood Circulation



Campus Analysis

The UMass Boston campus context is unique and unprecedented amongst Commonwealth colleges and universities. Sited at the tip of the Columbia Point peninsula, and surrounded by Boston Harbor and Dorchester Bay, the campus is highly visible from I-93, Morrissey Boulevard, and the water. With the exception of the Peninsula Apartments and Harbor Point which are residential, all adjacent land parcels are occupied by other institutions including the John F. Kennedy Library, the Edward M. Kennedy Institute, the Massachusetts Archive, the Boston College High School, the Paul Dever Elementary School, and the John W. McCormack Middle School. The university's land area and future growth is limited by adjacent land uses and the peninsula water frontage.

Neighborhood Circulation

A multi-layered nest of transportation spines – including Interstate Highway I-93, parkway-scaled Morrissey Boulevard, the above-ground MBTA Red Line subway, and three MBTA commuter rail lines serving the South Shore – separate UMass Boston from the rest of Dorchester and downtown Boston, contributing to the campus' perceived isolation. While the transportation network continues to act as a visual and physical barrier, it does provide effective and convenient public transportation for students, faculty, and staff. The network of roads, subway, buses, and commuter rail easily connects the campus to downtown Boston, a relatively short 2.5 miles to the north. The MBTA Red Line at JFK/UMass Station links the campus to South Station a mere three stops away, and the downtown hub at Park Street Station is only five stops away.



Campus Center Transit Hub



Campus Vehicular Circulation and Parking

UMass Boston has been called a “gated community without a gate” due to its location on the Columbia Point peninsula with limited connections to adjacent neighborhoods. From the north, campus access requires navigation around Kosciuszko Circle, a multi-layered, multi-modal transportation hub that provides access to both Mt. Vernon Avenue and Morrissey Boulevard. Two gateways serve as the main vehicular entry to campus. The first, accessed from Morrissey Boulevard, arrives at a rotary connecting Bianculli Boulevard, University Drive West, and University Drive South. Impressive views of Savin Hill Cove, the ISC, and easy access to the West Garage frame this entrance. However, views of the service area and loading bays associated with the Service and Supply Building and the blank walls of the Clark Athletic Center counter these views and produce an unwelcoming arrival experience. The intersection of Mt. Vernon Street and University Drive West provides a second gateway where a branded sign, the new residence halls, and plaza announce arrival.

The campus is served by a variety of public transportation options. The MBTA Red Line and commuter rail at the JFK/UMass station is less than a mile from campus and walkable in 20 minutes. University shuttles provide service to the T station and stop at multiple locations on campus. The university provides safe and affordable multi-modal transportation options including Wheels, Bluebikes, and Zipcar to reduce traffic congestion and the use of single occupancy vehicles (SOV). The university is also a member of A Better City TMA which provides a variety of commuter services.

Over 70% of the university's students, faculty, and staff utilize public transit. The remaining 30% drive to campus. Just over 2,000 parking spaces are available on or adjacent to campus with an additional 300 temporary surface spaces to be completed as part of the SDQD project. The West Garage, with 1,400 spaces, and the Campus Center Garage, with 145 spaces, are the only permanent parking locations. Both the new SDQD lot and the existing surface lots are identified as future development sites and thus considered temporary. The university is carefully tracking parking data to ensure adequate parking is available. Given the uncertainty of parking demand relative to COVID-19 schedules and a future remote work policy, the planning process did not include a transportation analysis or a parking study. The Campus Master Plan identifies locations for future parking that can be developed if they are needed.

Campus Bicycle Circulation and Programs

Dedicated bike lanes connect the UMass Boston campus to the JFK/UMass station. Bike lanes circumnavigate the campus and continue to William T. Morrissey Boulevard. A shared-use path along the Harborwalk, accommodating both pedestrians and cyclists, connects the campus to Moakley Park, the beaches, and Fort Independence Park. Bicycle commuting challenges are not on the peninsula, but in developing better connections beyond the JFK station to arteries such as Dorchester Avenue.

The university offers multiple bicycle programs including maintenance classes and trip planning services. The West Garage provides secure covered bike parking and a fix-it station for use by the UMass community. The university maintains a Bluebikes program with hubs located at JFK/UMass station and in front of the Campus Center.

In 2021, UMass Boston partnered with the Massachusetts Bay Transportation Authority (MBTA) and Wheels to offer hybrid micromobility devices—popularly referred to as e-bikes—on campus. The hybrid micromobility devices are available at the JFK/UMass station and are located at the West Garage, the ISC, Wheatley Hall, University Hall, the Clark Athletic Circle, and Bayside on campus.

“We wanted to offer additional first-last mile solutions to our community members that protect the health of our students and employees.” - Daniel Scavongelli





Wheels at Campus Center, Image courtesy of Boston Business Journal/Gary Higgins

Campus Pedestrian Circulation

UMass Boston has a compact academic core with vehicular circulation organized at the campus perimeter, thus minimizing conflicts between vehicular and pedestrian circulation at the campus interior. However, conflicts do occur from West Garage crossing University Drive West and between the campus core and the waterfront. Special consideration should be given to traffic tables or other traffic calming devices at major crossing points, both existing and proposed.

A major pedestrian circulation spine connects entrances to the Quinn Administrative Center, Healey Library, McCormack Hall, Wheatley Hall, and the Campus Center. Several of the catwalks that originally connected campus destinations at the second level were removed with the SDQD project. Catwalks still connect Quinn to both the ISC and Healey Library and Wheatley Hall to the Campus Center. In addition, an at-grade enclosed walkway connects the Campus Center to University Hall. Although not precluded, the catwalks are not prioritized for replacement. Plaza-level circulation improvements implemented with the SDQD landscape project will activate the ground plane and provide a network of accessible pedestrian paths.

Campus Vehicular Circulation



Campus Pedestrian Circulation



Beacons Walk provides an accessible major pedestrian route from Mt. Vernon Street and the connection to the T, through the Residence Halls, continuing past the Pumping Station and the future Calf Pasture Development site, and between the Campus Center and the Archives, and terminating at the HarborWalk.

The HarborWalk provides a continuous walkway along the perimeter of Columbia Point and provides benches, lighting, gathering spaces, landscaping, and interpretive signs along the restored peninsula shoreline. It provides enhanced public access to the waterfront and offers the potential for improved connections to the campus aligned with well-being goals.



Harborwalk

Open Space

At the time of this Campus Master Plan, a new landscaped quadrangle open space is under construction as the final phase of the SDQD project. The new quad will transform the campus by creating a new landscape and exterior spaces that will connect buildings at the plaza level. When completed, the new quad will be a transformational open space, connecting campus buildings at an elevated ground level and providing a variety of outdoor spaces and landscape elements. The quad will become the internal organizing element of the campus. Unlike the original campus plan elevated plaza, the intent of the new quad is not to isolate, but to engage the campus perimeter. Secondary open spaces between buildings connect physically and visually across University Drive to the HarborWalk providing opportunities for a more porous and welcoming perimeter. The university's only existing on-campus active open space is the softball field. The university shares the adjacent Monan Park baseball stadium with Boston College High School and has shared-use agreements with the high school for use of other outdoor playing fields.

New Quadrangle Open Space



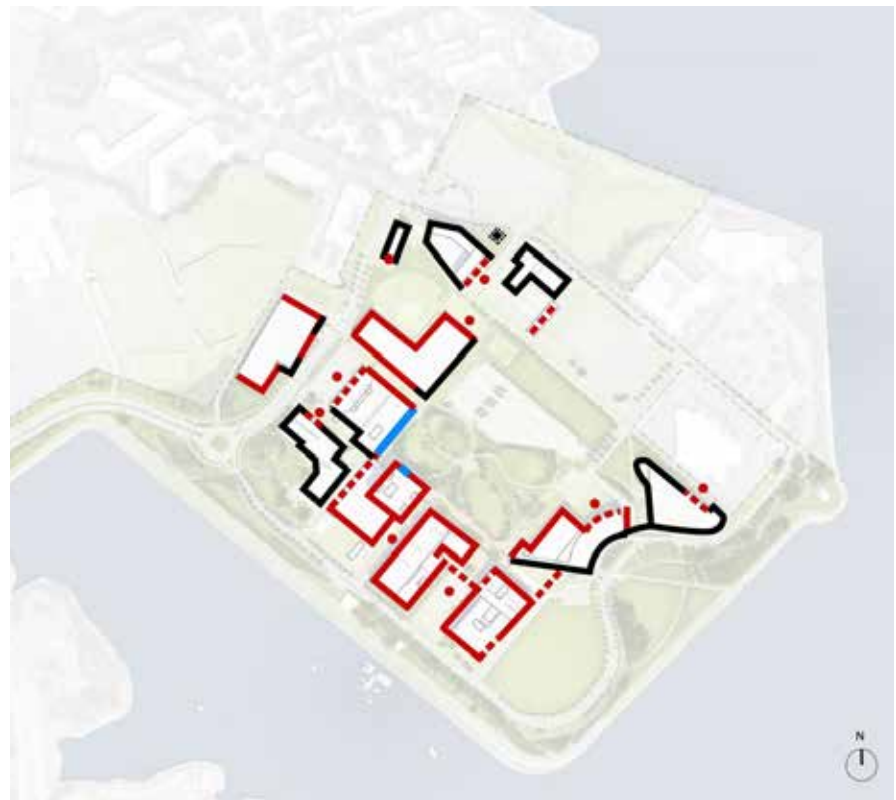
Open Space

- Harbor Walk
- Streetscape
- Pedestrianized Streetscape
- Formal Landscape
- Informal Landscape
- ▨ Waterfront Park
- Plaza / Pedestrian Concourse
- Sports / Rec Field



Edges

- Desirable Edge Condition
- Undesirable Edge Condition
- Service / Loading
- TBD (Under Construction)

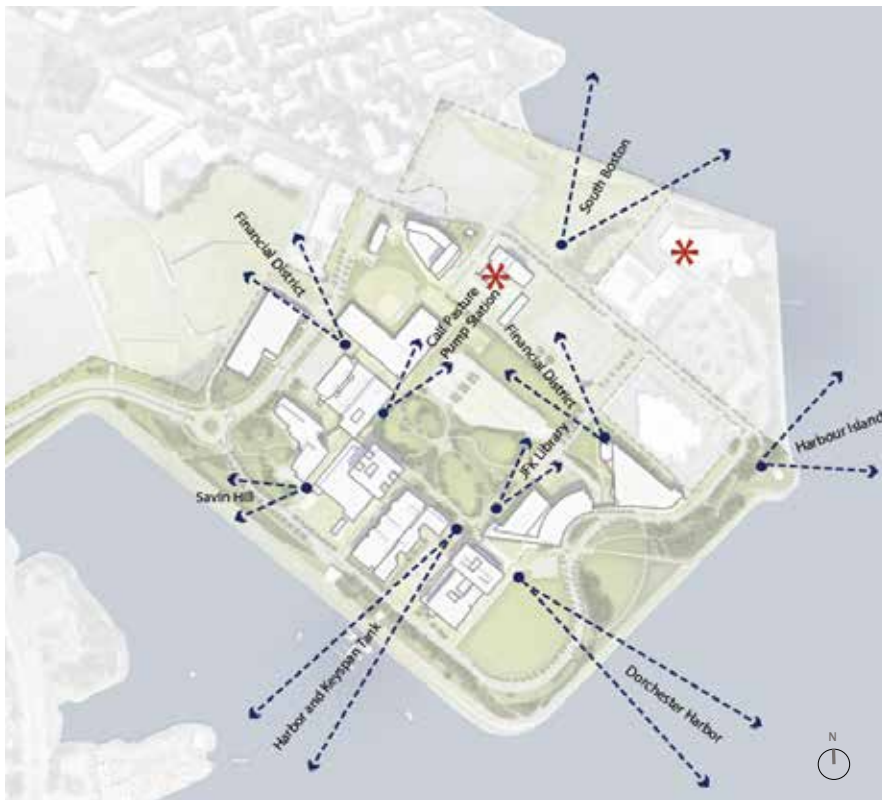


Athletic / Recreation Fields



- Athletic Building
- Own
- Co-own
Baseball (a 99 year agreement)
- Rent
 - Stadium Field (practices, games, intramurals)
 - Tennis (practices, matches)
 - Multi-Purpose Field (practices)
 - Soccer (practices)

Views



- Views
- * Landmark

Architecture

The UMass Boston campus developed quickly with all five of the original heritage buildings being completed within ten years. Extensive development within a short period of time resulted in a homogeneous, cohesive and architecturally consistent campus. The heritage buildings are all undecorated red brick with ribbon windows, representative of the Brutalist and Modernist aesthetic prevalent during the 1970s. The Campus Center completed 25 years later, expanded the palette to include buff-colored stone while still incorporating red brick as a contextual gesture. University Hall continued the use of stone cladding and red brick and incorporated similar large-scale fenestration and dominant roof overhangs consistent with the Campus Center. Although the ISC was constructed at the same time as University Hall, it departed from the original campus-wide aesthetic by utilizing metal panels, buff-colored masonry, and curtain-wall glazing.





Campus Center



University Hall



Integrated Science Complex (ISC)



Residence Hall East and West

Campus Scale Comparison

As a result of original planning objectives and the brutalist aesthetic, the scale of buildings and open spaces on the UMass Campus are larger and less varied than comparable universities that developed over a longer period of time. In comparison to UMass Amherst—shown below at the same scale—the lack of diversity in building footprint sizes and open spaces is apparent. Future planning should look for opportunities to reduce the apparent scale of existing buildings by increasing ground-floor transparency and developing a series of smaller more intimate open spaces.

Environmental Context

The university's location on the peninsula provides little protection from the elements including solar exposure, strong winds, buffeting waves, and corrosive salt water-laden air. Additionally, flight paths into and out of Logan International Airport cross the southern edge of the peninsula resulting in disruptive aircraft noise.

In response to these elements, the original campus was internally focused with physical barriers including large expanses of solid masonry walls and small ribbon windows, glass that sealed the interior from external

UMass Boston



UMass Amherst



noise, parking under the entire campus that facilitated direct arrival and departure to specific buildings without campus interaction, and a continuous enclosed catwalk network that further disengaged the campus from its natural surroundings.

Both the 2009 Campus Master Plan and the current Campus Master Plan recognize the importance of establishing stronger connections between campus open spaces, particularly connections between the new quad and the waterfront 25' below. Although the SDQD project stabilized the substructure, the two lower levels are intended to remain unoccupied due to structural limitations. The blank façades of the unoccupied space contribute to the ongoing challenge to create meaningful connections and a welcoming arrival along University Drive South.

Storm Water

The UMass Boston storm drainage system was originally constructed in the 1960s and was substantially reconstructed during the Utility Corridor and Roadway Reconstruction Project (UCRR). The existing campus stormwater management system captures stormwater runoff from buildings and campus sites and conveys them to ten outfalls located at various locations that discharge into Dorchester Bay. The university's current Stormwater Management Program (SWMP) is managed by the Office of Environmental Health and Safety (OEHS) and supported by the Facilities Department which oversees the operation of buildings, utility systems, grounds maintenance, and roadways.

Resilience

The design of future buildings and their respective site design should be based on the current FEMA floodplain maps and should reflect sea level rise projections for each development site. The current Massachusetts Coast Flood Risk Model (MC-FRM) should also be considered. Under average conditions, the campus remains generally free from inundation, but an area of historic inundation along the northern edge of the campus has expanded, potentially impacting campus access. Additionally, there is more inundation along the east and south property lines than experienced in previous years. Additional information regarding resiliency and anticipated sea-level rise is included in the Carbon and Energy Master Plan (CEMP).



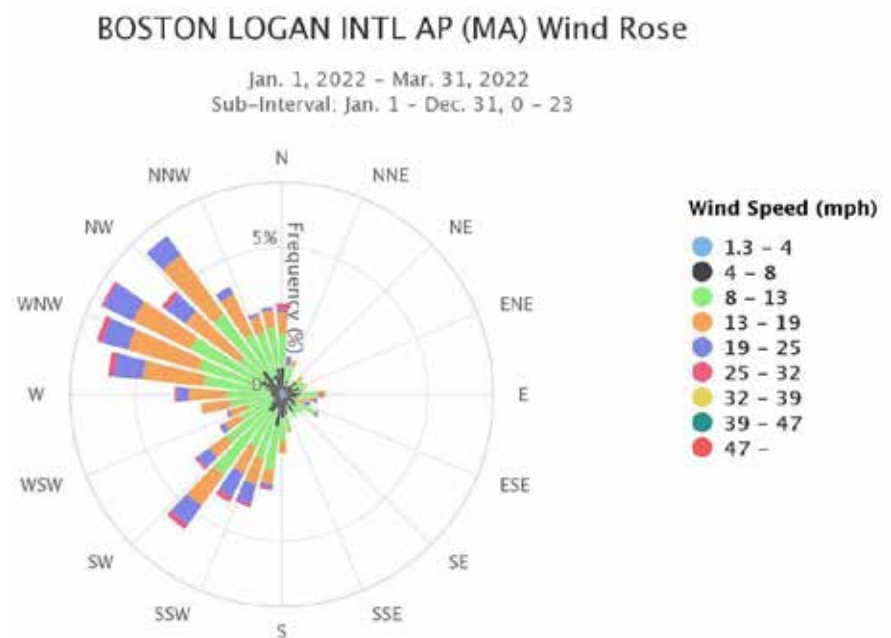
Existing campus bioretention areas

Wind

Because of the waterfront location, the impact of wind on campus should be considered in the design of outdoor space and building connections. The Boston Planning and Development Agency (BPDA) has adopted two standards for assessing wind comfort for pedestrians – the first based on gust velocity, and the second on the activity category. Areas where active uses are planned can tolerate a higher wind speed than areas planned for more passive activities. Studies for other Boston sites have found that downtown locations are generally comfortable for pedestrians and meet BPDA guidelines. Preliminary evaluation based on studies conducted at Logan Airport suggests that winter winds are primarily from the northwest and southwest; however, building configuration, building height, and gaps between buildings can create location-specific wind effects. After the new quad is complete, the university should assess the need for wind control measures such as wind screens or dense planting.

Heat Island

Buildings, roads and other structures on campus absorb and re-emit the sun's heat at a greater intensity than natural landscapes or water. The completion of the new quad will significantly increase the vegetated area of campus and will help reduce the heat island effect.



Utility Infrastructure

Campus infrastructure supports all buildings, services, and student and faculty needs. The existing infrastructure systems reflect decades of campus growth and building expansions and represent a significant investment in the UMass Boston present and future. Planning ahead for infrastructure to support future campus expansions and building renovations with new uses is critical to long-term UMass Boston campus success.

Major upgrades to the UMass Boston campus utility systems were constructed as part of the Utility Corridor and Roadway Reconstruction Project (UCRR) between 2015 and 2019. This project included the relocation of many major utilities from the core of the campus out to the perimeter of the campus under University Drive, which rings most of the campus. Additional, smaller utility branches were constructed for each building and into the core of the campus both to serve existing buildings and future development.

The UMass Boston Sanitary Sewer system consists of two major branches that connect to an 18-inch BWSC-owned sanitary sewer main in Mount Vernon Street. The UCRR project sized the campus sanitary sewer system for current and future development on campus. The water system consists of two loops that encircle the campus under University Drive: a 16-inch domestic water main and a 12-inch fire protection main. Campus domestic and fire protection services are fed from these two UMass Boston-owned mains.

The central utility plant is roughly 150,000 square foot space located southwest of Healey Library. The central utility plant systems were installed in 2001/2002. The central plant provides heating and cooling to many of the campus buildings. Hot water for heating is provided on a campus hot water loop. Three (3) large Cleaver Brooks natural gas-fired boilers manufactured in 2001 and installed in 2002 provide 125 psi medium pressure steam to heat exchangers that then circulate the hot water to the buildings. There is a dedicated and metered natural gas line supplying the boilers. The chilled water is provided by four (4) large shell and tube chillers. Chiller #1 is the newest chiller, made by Trane, which replaced a previous failed chiller. Chillers #2 through #4 are the originally installed 2001 York chillers. Chillers #2 and #3 were offline for a few years and were fixed and recommissioned in 2019 and 2020, respectively. The condensing water for the chillers is on a loop that runs to the Salt Water Pumping Station on the Boston Harbor. The Salt Water Pumping Station allows the campus discharge a portion of the heat from building cooling into Boston Harbor. The EPA limits the amount of heat dumped back into the harbor water. It was noted that the plant's full capacity is limited at 70% to abide by the EPA guidelines.

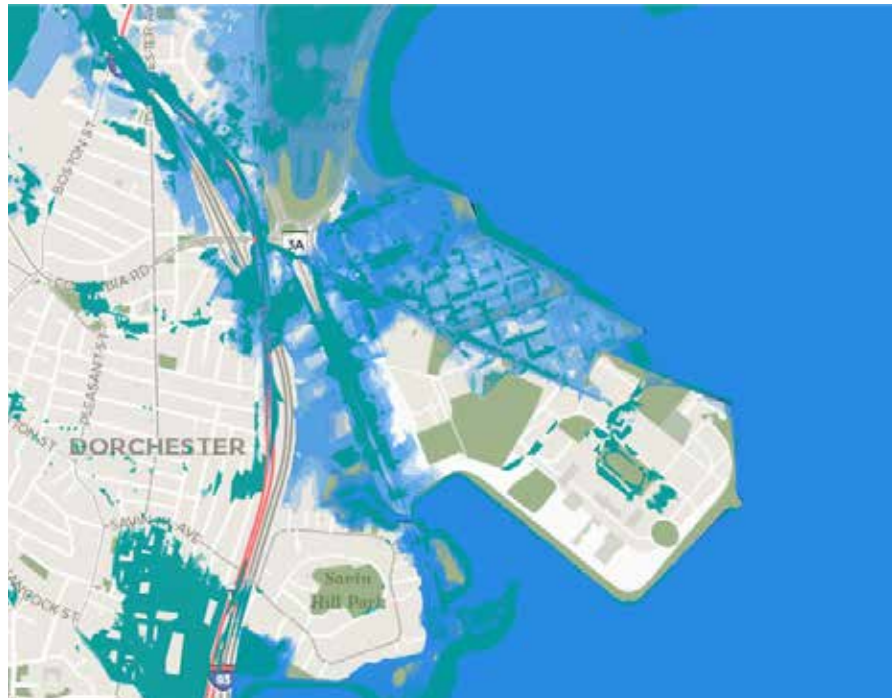
Topography / Flood Plains

- 5' CONTOURS
- 1% FEMA ANNUAL CHANCE FLOOD HAZARD
- LIMIT OF MODERATE WAVE ACTION



Coastal Storm Water Flooding

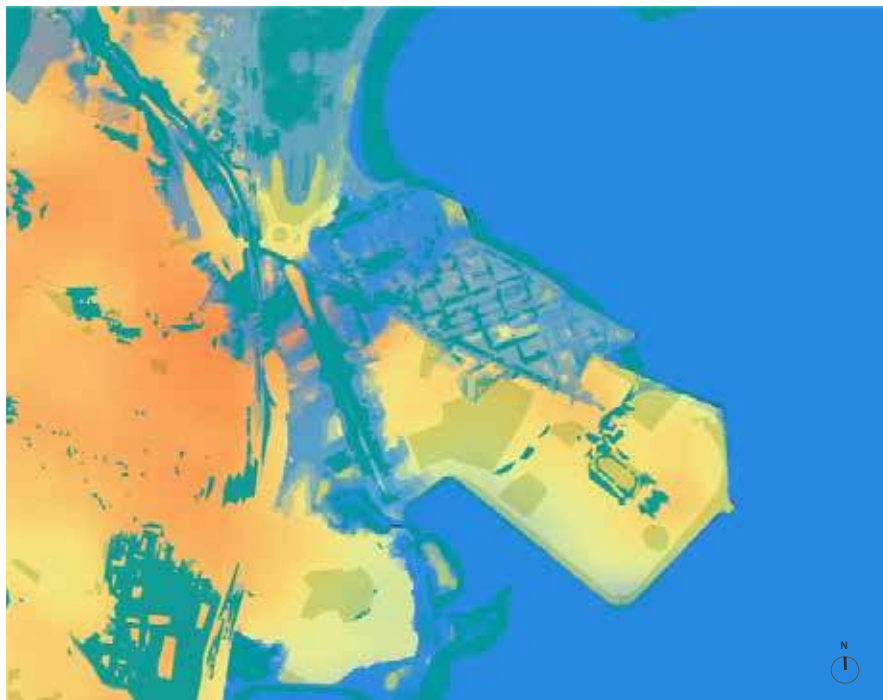
Map does not reflect SDQD improvements which will reduce or eliminate campus flooding.



Storm Water



Urban Heat Island Intensity



Map does not reflect SDQD improvements which will improve the campus urban heat island intensity

Facility Conditions

The University's campus buildings were constructed in two phases. The original heritage buildings were constructed in the 1970s and include Healey Library, Wheatley Hall, McCormack Hall, Quinn Administration, and Service and Supply Building. Clark Athletic Center was built in 1980, concluding the first phase of development. Following the construction of the Campus Center in 2004 and the 25-year Campus Master Plan framework created in 2009, the Integrated Sciences Complex (ISC), University Hall, Residence Halls, and the West Parking Garage were constructed between 2014-2018.

There is a significant disparity in the condition of buildings on campus. The original heritage buildings have had minimal renovations and systems and are in poor or poor/fair condition and in need of full or significant renovation. The mechanical and electrical systems are past the rated life expectancy and are recommended to be replaced as part of any major program renovation. These buildings have minimal insulation and there are large expanses of inefficient single-pane glass.

The newer buildings, constructed after 2004, are in good condition. At the time of this Campus Master Plan, a new landscaped quadrangle open space, part of the SDQD project, is under construction, and connections between buildings at the plaza level are in progress. The new quad will transform the campus by creating a new landscape and exterior spaces that will connect buildings at the plaza level.

Campus Growth Timeline



Building Use



Building Condition



The campus buildings were evaluated and classified into categories based on their conditions:

- **Poor Condition**- Needs full renovation:
 Healey Library (1973), McCormack Hall (1973), and Wheatley Hall (1973)
- **Fair/Poor Condition** – Needs significant renovation:
 Quinn Admin Bldg (1973), Service and Supply (1973), and Clark Athletic Center (1980)
- **Good Condition** – Needs some Renovation:
 Campus Center (2004)
- **Good Condition** – Recently Completed:
 Integrated Science Complex (2015), University Hall (2016), Residence Halls (2018), West Garage (2018)
- **Utility Infrastructure**:
 Utility Plant, Salt Water Pump House

University of Massachusetts Boston Building Information*

| Existing Buildings | Year Built | Year Renovated | Building GSF | NASF* | Efficiency |
|-------------------------------|------------|----------------|------------------|------------------|-------------|
| Healey Library | 1973 | | 337,500 | 181,254 | 0.54 |
| McCormack Hall | 1973 | 2020** | 266,100 | 153,479 | 0.58 |
| Wheatley Hall | 1973 | 2020** | 268,500 | 170,001 | 0.63 |
| Quinn Administration Building | 1973 | 2020** | 96,900 | 55,357 | 0.57 |
| Service and Supply Building | 1973 | | 74,300 | 50,169 | 0.68 |
| Clark Athletic Center | 1980 | 2023 | 104,400 | 76,526 | 0.73 |
| Campus Center | 2004 | | 330,000 | 109,546 | 0.33 |
| Integrated Sciences Complex | 2014 | | 229,500 | 118,158 | 0.51 |
| University Hall | 2016 | | 194,400 | 97,692 | 0.50 |
| West Parking Garage | 2018 | | 490,000 | | |
| TOTAL | | | 2,391,600 | 1,012,182 | 0.42 |
| Residence Hall | 2018 | | 248,700 | | |
| Utility Plant | 1973 | 2012 | 27,900 | | |

* Building GSF based on 2020 UMB Building Inventory provided by UMass Boston (post SDQD)

** Renovations part of the REAB project.



Healey Library

Healey Library, built in 1973, is a heritage building and is one of six original buildings that comprised the campus when it opened in 1974. It serves as the main library and it is centrally located on campus. Its 13 stories (including the upper and lower basements) contain 337,500 GSF and its program includes library reading rooms, library stacks, computer labs, study spaces, a café (currently closed), classrooms, and offices.



The northeast side and main entrance to Healey Library face the future quad (SDQD project) which is currently under construction. The northwest corner of the library is currently connected to the Quinn Administration building at the second floor level via a catwalk. The southeast side of the library faces McCormack Hall and the southwest side faces University Drive South and the Harborwalk. The existing building offers spectacular views to downtown Boston and the Boston Harbor from the upper levels.



The building is in poor condition and significant deferred maintenance has been identified. The original windows and doors are in need of replacement and the brick veneer requires repair. Building insulation does not meet current energy code requirements, however, the roof was replaced in 2012-2014 and remains in good condition. The elevators were recently updated as part of the SDQD project but additional work may be required. The restrooms are original and do not meet current accessibility requirements. The mechanical and electrical systems are past the rated life expectancy and are recommended to be replaced as part of a major program renovation. A fire suppression system is currently installed on Level 11. Future renovations should consider providing a fire suppression system throughout the entire building. Life safety system improvements to meet current high-rise code requirements are recommended. Level 11 has been recently renovated but the remaining interior finishes including ceilings, flooring, and walls are beyond their useful life and also are in need of replacement. Furniture and equipment in study spaces and classrooms are in poor condition.



McCormack Hall

McCormack Hall, built in 1973, is a heritage building and is also one of the six original buildings. The academic building is five stories (excluding the upper and lower basements), 266,100 GSF and its program includes classrooms, offices, wet and dry research labs, the Beacon Fitness Center, and McCormack Theater. Interior portions of the building have been recently partially renovated with new lab spaces as part of the REAB renovation project.

The northeast side and entrance of McCormack Hall face the future landscaped quad currently under construction. The southwest side of the building faces University Drive South and the Harborwalk. The existing building offers sweeping views of Savin Hill Cove.

The building condition is poor and significant deferred maintenance has been identified. The original doors and windows are in need of replacement and the brick veneer requires repair. Minimal wall exploration was conducted by the University in 2022 and no exterior wall insulation was discovered; historical records indicate that the building consumes much more energy per square foot than other heritage buildings. Building envelope does not meet current energy code requirements, however, the original roof will be replaced in 2023. The elevators were recently updated in 2018. The restrooms are original and do not meet current accessibility requirements. The mechanical, electrical, and plumbing systems are past the rated life expectancy and are recommended to be replaced as part of a major program renovation. McCormack Hall is fully sprinklered with a new fire alarm system. Several lab spaces were renovated recently as part of the REAB project, but the remaining interior finishes including ceilings, floors and walls are beyond their useful life and in need of replacement. Furniture in classrooms is in poor condition.





Wheatley Hall

Wheatley Hall, built in 1973, is also one of the original heritage buildings. The academic building is six stories (excluding the upper and lower basements), 268,500 GSF and its program includes classrooms, class labs, wet and dry research labs, and offices. There is a large exterior courtyard on the third floor. Interior portions of the building have been recently partially renovated as part of the REAB renovation project including spaces for the Math Department, Child Development, and science labs. The new Venture Development Center was also part of a recent interior renovation.



Wheatley Hall is located on the southern most corner of campus. The southwest side of the building faces University Drive South and the Harborwalk and the southeast side of the building has views of Boston Harbor. The northeast side faces the Campus Center and the northwest side faces McCormack Hall. A second-floor catwalk connects Wheatley Hall to the Campus Center. There is a PV solar array on the 4th level roof level.



The existing building is in poor condition and significant deferred maintenance has been identified. The original windows and doors are in need of replacement and the brick veneer requires repair. Building envelope does not meet current energy code requirements, however, the roof was partially replaced in 2008/2009. A roofing project is currently underway. The elevators were recently updated in 2018. The restrooms are original and do not meet current accessibility requirements. The mechanical, electrical, and plumbing systems are past the rated life expectancy and are recommended to be replaced as part of a major program renovation. Wheatley Hall is fully sprinklered with a new fire alarm system. Selected interior portions of the building were recently partially renovated, but the remaining interior finishes including ceilings, floors and walls are beyond their useful life and in need of replacement. Furniture in classrooms is in poor condition.

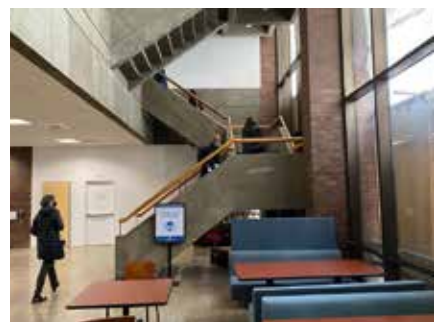


Quinn Administration Building

Quinn Administration Building, also a heritage building built in 1973, is a four-story brick academic building (excluding the lower basement). It is 96,900 GSF and its program includes classrooms, class labs, faculty and administration offices, University Health Services, and Department of Public Safety. Some interior portions of the building have been recently renovated with new lab spaces as part of the REAB renovation project including spaces for the Manning College of Nursing and Health Sciences.

Quinn is connected to the Service and Supply Building at the upper basement level (UL). The southeast side faces the future quad currently under construction as part of SDQD. Catwalks connect Quinn to Healey Library at Level 02 and to the ISC at Level 01.

The existing building is in fair/poor condition and significant deferred maintenance has been identified. The original windows and doors are in need of replacement and the brick veneer requires repair. Building envelope does not meet current energy code requirements, however, the roof was replaced in 2021. Entrances and egress doors are planned to be replaced 2023-2025. The elevators were recently updated in 2018. The restrooms are original and do not meet current accessibility requirements. However, the toilet rooms on Level 3 have been renovated and are in fair to good condition. The mechanical, electrical and plumbing systems are past the rated life expectancy and are recommended to be replaced as part of a major program renovation. Quinn Administration Building is partially sprinklered with limited fire alarm coverage. Consideration should be given to fully sprinklering the building and providing a full fire alarm system upgrade as part of future renovation projects. The upper basement and first floor of Quinn were renovated as part of the REAB project, including the Manning College of Nursing and Health Sciences, but the remaining interior finishes including ceilings, floors and walls are in fair/poor condition and in need of replacement.





Service and Supply Building

Connected to the Quinn at the upper basement level (UL), the Service and Supply building is a two-story brick support building. It is 74,300 GSF and its program includes central receiving with multiple loading and service bays, Facilities and administrative offices, storage, and a materials lab/machine shop.

The northwest side faces University Drive West directly across from the West Parking Garage. The utilitarian lower basement (LL) entrance through Stair 1 is the primary connection between the West Garage and the academic core. Campus wayfinding is poor and needs to be improved.



The existing building is in fair/poor condition and significant deferred maintenance has been identified. The original windows and doors are in need of replacement and the brick veneer requires repair. Building envelope does not meet current energy code requirements. Entrances and egress doors are planned to be replaced 2023-2025. The elevators were recently updated in 2018. The restrooms are original and do not meet current accessibility requirements. The mechanical, electrical and plumbing systems are past the rated life expectancy and are recommended to be replaced as part of a major program renovation. Service and Supply Building is partially sprinklered with limited fire alarm coverage. Consideration should be given to providing full sprinkler coverage and providing a full fire alarm system upgrade as part of future renovation projects. The building's interior finishes including ceilings, floors and walls are in fair/poor condition and in need of replacement.



Clark Athletic Center

Clark Athletic Center, built in 1980, is a two-story, 104,400 GSF brick building. The building's program includes a gymnasium, hockey rink, locker rooms, and offices for the Department of Athletics.

A portion of the building is currently under renovation as part of the SDQD project. The original swimming pool has been demolished and portions of the southeast façade are under construction. The locker rooms and other support spaces are currently being renovated as part of a separate project to create equitable athletic spaces.

The existing building is in fair/poor condition and significant deferred maintenance has been identified. The original windows and doors are in need of replacement. Entrances and egress doors are planned to be replaced 2023-2025. The building envelope is in fair condition and sections are under renovation. The roof was replaced in phases in 2003, 2016, and 2018. The elevators were recently updated in 2018. The locker rooms are currently under renovation. The existing AHUs at the basketball court and ice rink are past the rated life expectancy and recommended to be replaced. Clark Athletic Center is currently non-sprinklered with limited fire alarm coverage. Consideration should be given to providing full sprinkler coverage and providing a full fire alarm system upgrade as part of future renovation projects. In general, the building's interior finishes including ceilings, floors and walls are in fair/poor condition and in need of replacement. The gym floor and bleachers were replaced in 2013. The concrete and rubber flooring in the hockey rink is in good condition. Furniture is in poor condition.





Campus Center

The Campus Center, built in 2004, is a four-story, 330,000 GSF building. The building's program includes student services, dining, administrative offices, a ballroom, conference facilities, and parking.

The upper basement (UL) entrance along University Drive East, is a ceremonial campus arrival point with a transit hub providing shuttle service to the T. The northwest side of the Campus Center faces the future quad that is under construction as part of the SDQD project. An enclosed walkway connects Campus Center to University Hall at the upper basement level (UL).



Exterior stairs on the south side of the building provide access between the upper basement (campus shuttle drop-off) and Level 01 (plaza/quad level).

The building is in good condition, but in need of some renovation as the building is nearly 20 years old.



Integrated Science Complex

Integrated Science Complex, built in 2014, is a five-story, 229,500 GSF academic building. The building's program includes research and teaching labs, faculty offices, meeting rooms, and a coffee shop. Located on the western corner of the campus, ISC is highly visible from the main campus ring road entrance. An existing catwalk connects it to the Quinn Administration Building Level O2. The existing building condition is good since the building is recently completed.



University Hall

University Hall, built in 2016, is a four-story, 194,400 GSF academic building. The building's program includes academic classrooms, lab, and offices for the departments of music, dance, art, theater, and science. In addition, University Hall has general classrooms (ranging in size from 20-seats to 200-seats), a theater, a 500-seat auditorium, a 120-seat recital hall, and a café. Located on the eastern part of campus, University Hall has excellent views of Boston Harbor.



The existing building condition is good.

Residence Halls

The East and West Residence Halls, built in 2018, are eight and twelve stories, respectively, and a total of 248,700 GSF residential/ student life buildings. The buildings' program includes student housing on the upper levels and shared amenities on the first level of the East Residence Hall; including a dining hall, student study/meeting spaces, and a convenience store. The buildings are located at the intersection of University Drive West and University Drive North. The West Residence Hall and the upper levels of the East Residence Hall were not assessed as part of this report.



The existing building condition of the lower levels of the East Residence Hall is good since the building is recently completed.





West Parking Garage

The West Parking Garage, built in 2018, is an eight-story, 490,000 GSF parking garage with 1,400 parking spaces. The building is highly visible from the campus entrance at Morrissey Boulevard and is located on University Drive West across from the Service and Supply building. There is a PV solar array at the roof level. The building is in good condition.



Utility Plant

The Utility Plant, built in 1973 and renovated in 2012, is located adjacent to Healey Library and separated from the ISC by a driveway. It is one story below grade with an office loft and includes an open-bay space for utilities including the campus chiller plant, switchgear, expansion tanks, power distribution, and transformers. It also includes offices, a locker room, and men's and women's toilet rooms. The building is an exposed concrete double-height structure with metal stairs. The building is in good condition as it was renovated 12 years ago as part of the substructure stabilization and waterproofing project. The Salt Water Pumping Station on Savin Hill Cove southwest of University Drive runs a loop to the Central Utility Plant. This loop serves as the condensing water loop for the chillers. The salt water runs through heat exchangers at the pump house. EPA limits the amount of heat dumped back into the harbor water. It was noted that the plant's full capacity is limited at 70% to abide by the EPA guidelines. The Salt Water Pumping Station systems are well maintained.



Fox Point Dock

Fox Point docking facility is a year-round, multi-purpose facility located in Savin Hill Cove (between Wheatley and McCormack towards the water). The basin is weather protected and offers an 80ft. The main float with two 60ft finger floats for smaller vessels. Docking here is available for vessels up to 5ft draft. This facility has recently been fortified with steel pilings, shore power, a security gate, and safety lighting.









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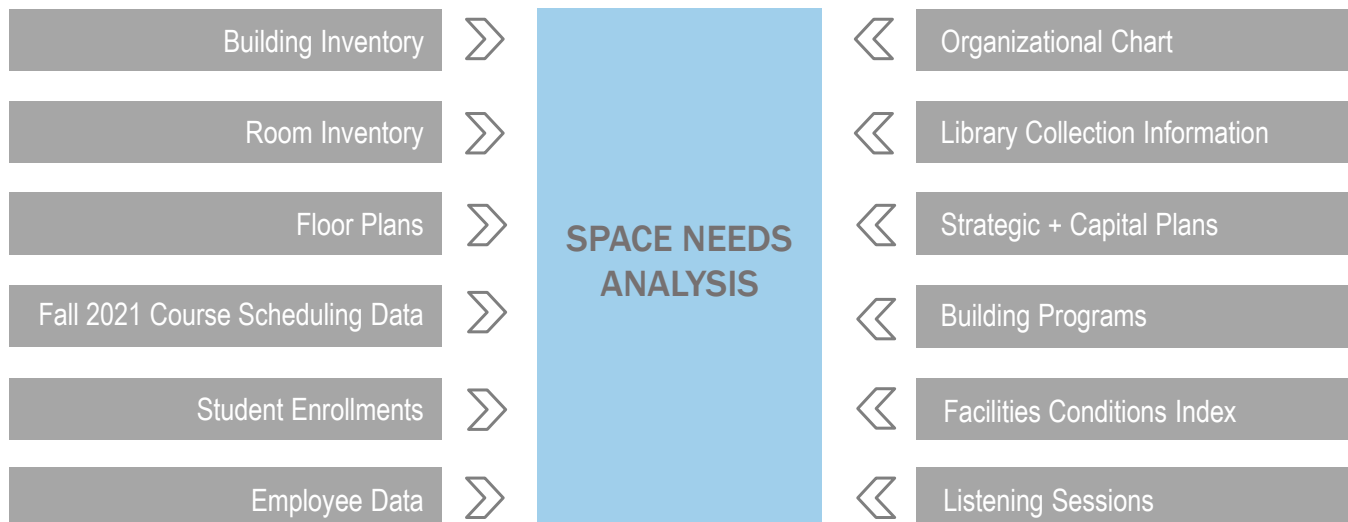
CAMPUS SPACE ANALYSIS

Space Analysis

Space Utilization and Metrics Summary

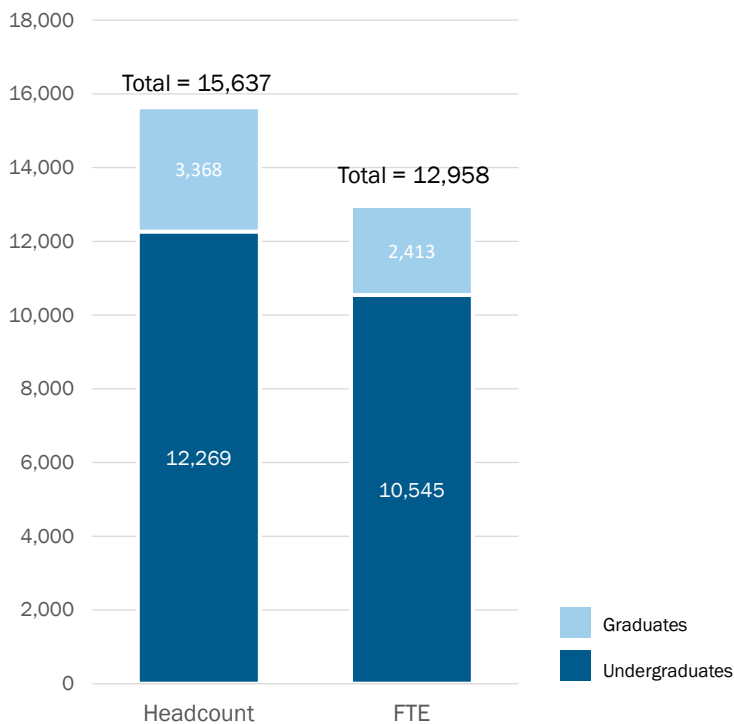
Ayers Saint Gross was charged with conducting a space assessment as part of the Campus Master Plan. The assessment quantifies the amount of space the university currently has and how much construction and renewal it needs to support the goals and initiatives of the Campus Master Plan.

A space needs assessment is a functional assessment that tells a university's physical space story in numbers. The assessment quantifies the amount of space the university currently uses, and the amount of space needed to support institutional goals and initiatives for short-term and long-range growth. For UMass Boston, the space assessment addresses approximately 1.05 million net assignable square feet (NASF) of built space. The assessment incorporates data concerning students, curriculum, employment levels, building conditions, and space use from a variety of university resources to provide a snapshot of space quantity, quality, and utilization at a specific moment in time.



During the initial phase of the Campus Master Plan, data was collected and analyzed using SAMi™ (Space Analytics Modeling Interactive), an interactive data visualization tool that documents existing conditions and provides data on how institutions utilize and manage space. This data, quantitative in nature, was combined with a series of listening sessions that engaged UMass Boston students, faculty, staff, and community stakeholders. The process was comprehensive in that it assessed the quantitative and qualitative character of spaces to inform metrics reflective of today’s pedagogies and modern learning environments.

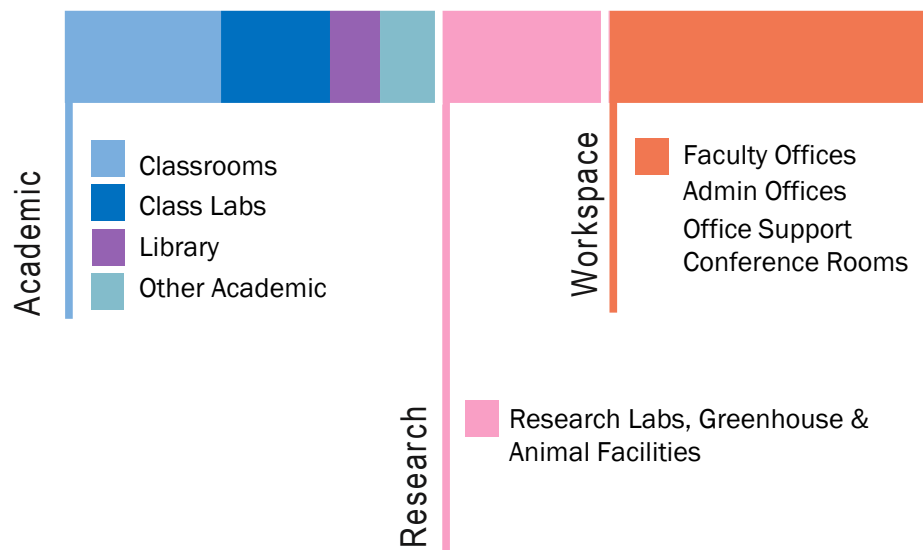
The space metrics used to generate the analysis were based on normative guidelines applicable to similar institutions and paired with the consultant team’s extensive higher education experience. The parameters generate an ideal amount of space adaptable to a variety of design solutions. Space is organized in two manners: first, based on its primary academic or administrative unit; and second, based on its primary function as academic, administrative, or student space. Though space for this analysis is categorically separated and individual research-informed metrics are considered for different space types, the planning team recognizes that spaces work together to provide a cohesive learning environment. The university provided Fall 2021 data as a snapshot in time. For Fall 2021, UMass Boston had 12,958 full-time equivalent students (FTE) utilizing physical space on campus. The metric equates to 81 NASF/FTE, which is lower than we’d expect to see at a campus of this type, even given post-pandemic trends around hybrid activities.



315 - 385k = 570 - 700k

NASF Needed

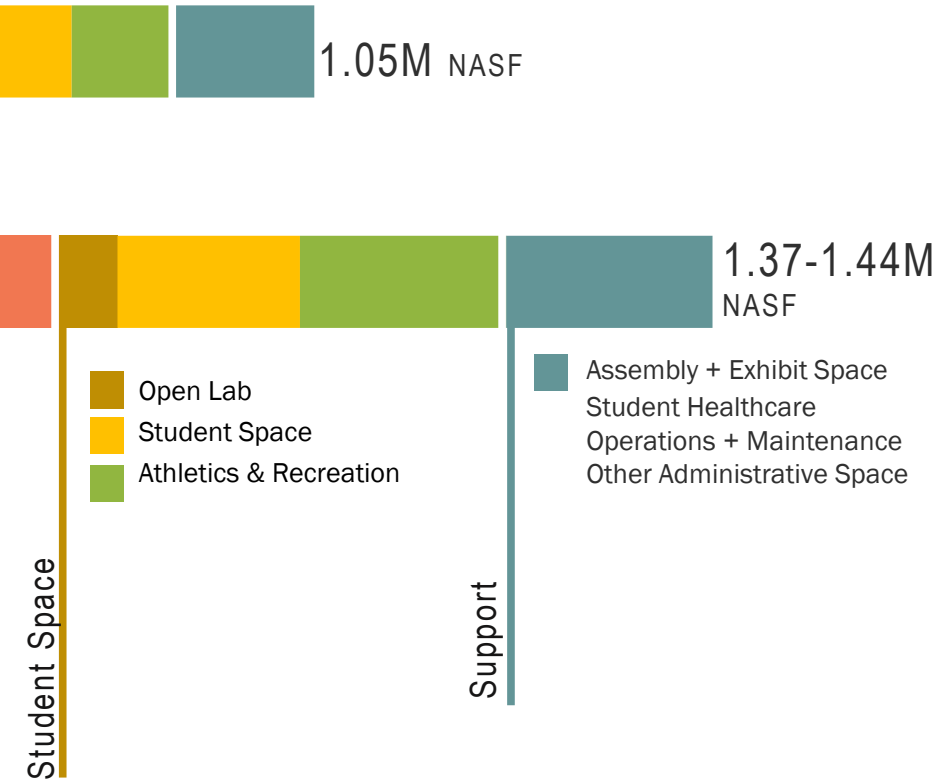
GSF Needed



Current Space Needs

Understanding current space needs helps align existing resources with the university's new strategic plan. Approximately 330,000 – 400,000 NASF of additional space is needed to support academic and administrative programs on campus. While new construction strives to create an ideal amount of space within budget constraints, renovations optimize the adaptive reuse of existing buildings. Investments in space renewal should consider infrastructure, location, capacity, and the activities that maximize the benefit of place. Future campus investments will be driven by pedagogical shifts in program or course delivery methods, enrollment shifts, faculty/staff population and workplace strategies, research trends, external partnerships, and the age and condition of existing facilities. Qualitative drivers of alignment include:

- Places to collaborate, formally and informally, for faculty, staff, and students
- Communal spaces that support the holistic entirety of UMass Boston's student population – including commuters, non-traditional students, and marginalized communities
- Flexible and adaptable instructional space



- A range of study spaces across all buildings to create equitable learning and study opportunities for all students regardless of discipline

Understanding UMass Boston’s space can help leverage campus assets to better align space with its strategic vision moving forward. The Space Needs Analysis helps the university understand its space needs and make data-informed decisions throughout the Campus Master Plan. Scenario drivers include addressing qualitative and quantitative deficiencies of space, modernizing the learning environment for UMass Boston students, optimizing existing facilities, providing for growth in research activity, and locating new construction to have the most significant impact on student success in the future.

Overview of Findings Across Space Types

The analysis focused on academic space, research space, workplace, student space, and support. Space use categories were categorized based on the Postsecondary Education *Facilities Inventory and Classification Manual* (FICM) published by the National Center for Education Statistics. Academic spaces include scheduled spaces such as classrooms and teaching labs as well as the library. Modern academic learning spaces are flexible and adaptable, with clear sightlines, multiple teaching walls, and access to natural light and views. Physiological and ergonomic comfort are considered and the space allows for plug-and-play of a student or instructor's technology.

In terms of research, the analysis looked at research laboratories, greenhouse space, and animal facilities. Many institutions are moving towards a model of shared research space, with modular but open laboratories, flexible benches, collaboration across disciplines, and shared equipment cores.

Workspace, including faculty and administrative offices, conference, collaboration space, and support spaces, is transforming from separated, closed-off, individual spaces into a palette of places. Today's workplace is an ecosystem of interconnected and interspersed places for employees to choose where and how they work. They are easy and efficient for students to navigate while being flexible to accommodate different numbers of people and projects. Like other spaces on campus, natural light and views should be prioritized alongside acoustics, ergonomics, and physiological comfort.

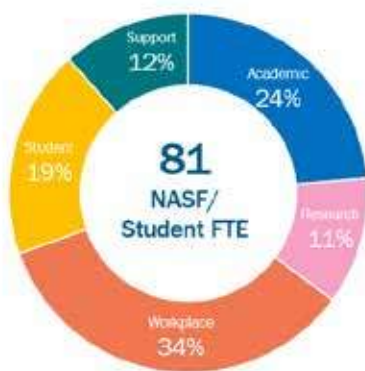
Successful student-centered spaces, including open labs, study spaces, and athletic and recreational facilities, are active and nimble. Like their academic counterparts, these spaces consider biophilic design and physiological comfort. High-quality acoustics, views, and access to adaptive technologies are essential.

There is a significant disparity in the condition of buildings on campus. We teach students that they are entitled to the best, but our physical plant does not convey that message. The poor condition of UMass Boston's heritage buildings impacts the self-image of our students, faculty, and staff. The current conditions in Wheatley and McCormack do not meet the expectations of current or prospective students and users are less productive in facilities with deferred maintenance and outdated learning environments.

UMass Boston is the most diverse public institution in Massachusetts; 60% of its students are first-generation students. The diversity of the student body is a key strength and has high value to students. The institution must be accessible and reflect a culture of caring. Campus spaces should foster a sense of belonging and that, in turn, will support student success.

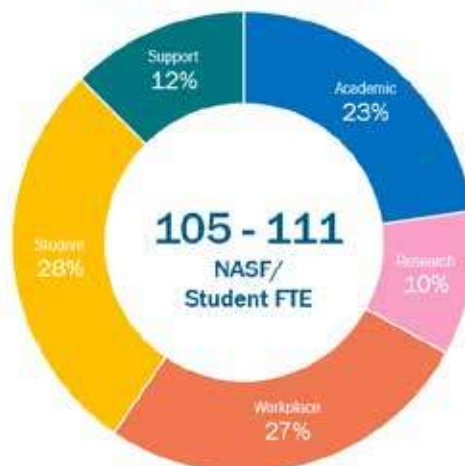
| | EXISTING NASF | TARGET LOW | TARGET HIGH | PERCENT INCREASE |
|----------------------------|------------------|------------------|------------------|------------------|
| ACADEMIC | | | | |
| Classrooms | 83,590 | 130,000 | 135,000 | |
| Class Laboratories | 77,384 | 90,000 | 95,000 | |
| Library | 66,779 | 40,000 | 45,000 | |
| Other Academic | 20,563 | 50,000 | 55,000 | |
| | 248,316 | 310,000 | 330,000 | 33% |
| RESEARCH | | | | |
| | 121,563 | 140,000 | 145,000 | 19% |
| WORKPLACE | | | | |
| | 361,486 | 370,000 | 375,000 | 4% |
| STUDENT SPACE | | | | |
| Open Laboratories | 30,129 | 50,000 | 55,000 | |
| Study & Collaboration | 41,202 | 80,000 | 85,000 | |
| Student-Centered Space | 43,454 | 75,000 | 80,000 | |
| Recreation & Fitness Space | 14,205 | 80,000 | 85,000 | |
| Athletic Space | 70,058 | 95,000 | 100,000 | |
| | 199,048 | 380,000 | 405,000 | 103% |
| SUPPORT | | | | |
| Assembly & Exhibit Space | 49,846 | 70,000 | 75,000 | |
| Other Administrative Space | 50,831 | 50,000 | 55,000 | |
| Healthcare | 1,920 | 7,000 | 8,000 | |
| Operations | 19,024 | 40,000 | 45,000 | |
| | 121,621 | 167,000 | 183,000 | 50% |
| TOTAL NASF | 1,052,034 | 1,367,000 | 1,438,000 | 37% |

Existing Space Distribution



1.05M
Total NASF

Target Space Distribution



1.37-1.44M
Total NASF

Target NASF is based on current enrollment and programs (Fall 2021)

The amount of space needed in each space type is influenced by a university's mission, the size of the student body, the density and scale of the university campus, its academic program mix, the curriculum and pedagogy specific to a university, research intensity, intercollegiate athletics, and the number of high demand space programs such as engineering or health sciences. Although supported by current design thinking, one set of simplistic space allocations cannot determine the amount of space needed for a particular project—but they can provide a general rule of thumb.

The goal of the space allocation is to find a reasonable average metric that works for UMass Boston. The metrics applied for UMass Boston determined that the university needs additional student space and collaboration space.

UMass Boston needs spaces that support collaboration and an open way of working. Organizational silos are manifested in existing space. The facilities should provide faculty collaboration, gathering, and affinity space. UMass Boston is built on collaboration and accessibility, but the spaces and the way faculty and staff work are counter to the way the institution presents itself. College faculty, administration, and teaching spaces are not collocated making collaboration more difficult.

UMass Boston also needs additional student space to achieve its mission. The campus should provide an environment that encourages students to stay on campus longer, providing a “home away from home” for both residential and commuter students. Students should have access to the same labs, library, and other resources as those that would be available on residential campuses. Outside the classroom, space is needed for students to socialize, collaborate, study, and hold extracurricular activities. Students should see the campus as a destination. Space to study and learn during unscheduled time on campus will support student success. Existing space constraints have a negative impact on current programs and future growth. The current space is at capacity and the institutions need more space to be able to grow research, faculty, enrollment, and programs. The old model of solitary learning doesn't work. The institution needs larger classrooms with contemporary, movable furniture that allows for collaboration and enables students of all sizes to engage with each other.

Drivers of space utilization vary between colleges at the university; however, many key findings are shared across units and space types. Although UMass Boston has invested in both new construction and renovations over the past decade, the study recognized a significant disparity between the heritage buildings and more recent construction. Though some investments have been made in these facilities, overall they have not kept up with the increasing change of pace in higher education, including trends of collaboration, active learning and teaching, technology, and entrepreneurship. Facility condition data reveals that there is a disparity in space quality from building to building, and several buildings within the campus core need major renovations.

Improvements to space and facility conditions are needed to support the mission and goals of UMass Boston. Instructional space (e.g., classrooms, class laboratories, and open laboratories) have large percentages of space in buildings where the facility is no longer suitable to the pedagogical and programmatic needs of its departmental user. As UMass Boston moves forward with implementing the Campus Master Plan, there is an existing need to continue modernizing classroom, study, and workplace environments within Wheatley and McCormack to alleviate overcrowding and rethink student-centered design strategies.

The Space Utilization Assessment found strategic opportunities to address space needs through renovation, repurposing, and new construction to allow for reasonable comparability for each college and space type, as appropriate. Renewal and repurposing will allow the heritage buildings to be suitable for contemporary education. In alignment with the Campus Master Plan, the existing condition and/or potential capacity for redevelopment of several buildings makes them candidates for major renovations over the long term. Collaboration is essential to problem-solving and integrated research and teaching; therefore, spaces should be flexible, with building design decisions based on flexibility and function, not ownership. Interdisciplinary space is critical for advancing and leveraging research and funding. Specialized facilities should be highly utilized and complemented with hubs of activity and maker spaces, collaboration spaces with tools and resources to support a wide range of projects.

Academic Space

This category includes classrooms (FICM 110 room use codes) and class laboratories (FICM 210 room use codes) and was expanded to include library collection, stack and support space (FICM 420-440 room use codes). Utilization targets are established for each category based on a mix of state standards, peer benchmarking, and modern best practices for higher education.

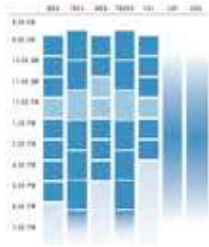
Classrooms

A shortage of classroom space may not be about needing more classrooms but needing more space per student seat within the room. The reason for under-utilized rooms are many – lack of technology, overcrowding, poor furniture, wrong location, etc. Sometimes departmentally controlled classrooms are needed to provide unique scheduling grids and special room requirements like technology or equipment.

UMass Boston has 117 classrooms that occupy 92,488 net assignable square feet (NASF) on campus. Classrooms range in size from 247 to 5,565 NASF with the average size being 750 NASF and the most frequent size range being 300 to 500 NASF. There are 5,452 desks in the inventory, with classroom capacities ranging from 14 to 500. The average classroom has 47 desks whereas the most frequent capacity size is 28. Students have approximately 11 to 49 square feet per seat, with the average amount of space per student being 17 NASF/seat. 72% of the inventory allows for less than 20 NASF/student, far below the expected norm for modern learning environments.

Utilization of classrooms at UMass Boston is above the DCAMM targets for weekly room hours and seat fill rate, but below targets for NASF/student. Space metrics highlight condition issues in classroom space and the need for more space per seat to accommodate active learning.

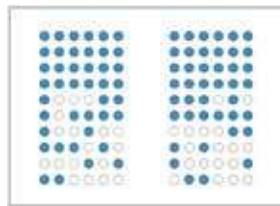
WEEKLY ROOM HOURS (utilization)



The average number of hours a week a room is scheduled for instruction.

Indicates how frequently the course is scheduled throughout the week.

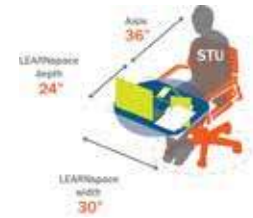
SEAT FILL (occupancy)



The average number of students enrolled in a course section as a percentage of the room's capacity.

Indicates the alignment between seat count and course enrollment.

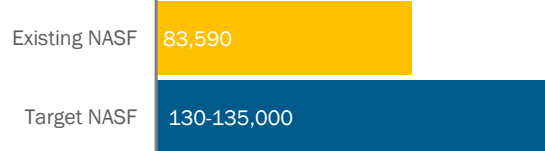
NASF PER STUDENT



The amount of space per student station in a learning space.

Indicates the space's ability to support different teaching and learning styles.

Classrooms



Metrics

Peer and Best Practice Benchmarks

35 weekly room hours

80% seat fill rate

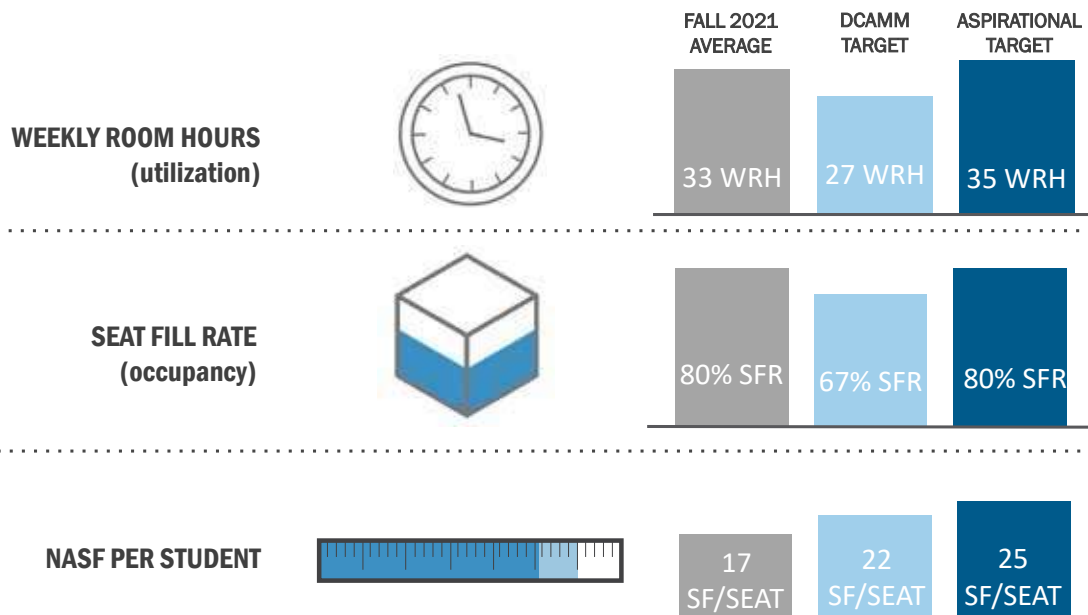
25 NASF/seat

Key Takeaways

- Significant lack of classrooms that accommodate current pedagogy
- Furniture style and seating density limit student-centered learning opportunities
- Section sizes are misaligned with room inventory resulting in low seat fill rates in larger capacity classrooms

Utilization Mathematics

Utilization of classrooms is determined through the combined analysis of course and room inventory data. Scheduled use of classrooms is analyzed by day and time of day as well as through average weekly room hour use, average student seat fill percentage, and weekly seat hours. The analysis is built room-by-room and then averaged based on a cluster of rooms. The clusters could represent a variety of themes but usually includes a summary by building, seat capacity range, primary occupant, and by classroom type.



Classroom Weekly Room Hours (WRH)

Weekly room hours are determined by the number of days a course meets multiplied by the class duration in hours. The utilization expectations—weekly room hours (WRH) and percent of seats filled—met or exceeded DCAMM targets. Peak scheduling hours are between 9 am and 3 pm with Tuesdays and Thursdays scheduled more frequently than other days. Monday, Tuesday, and Wednesday afternoons at 4 pm and 6 pm are also popular start times. This finding is consistent with the commuter nature of the campus.

| | | | | | | | |
|----------|-----------------|------------------|------------------|------------------|-----------------|-----------------|-------------------------------|
| 8:00 AM | 38% 44 Rooms | 47% 55 Rooms | 36% 42 Rooms | 45% 53 Rooms | 33% 39 Rooms | 40% 47 Rooms | Total classrooms = 117 |
| 9:00 AM | 68% 79 Rooms | 90% 105 Rooms | 65% 76 Rooms | 89% 104 Rooms | 59% 69 Rooms | 74% 87 Rooms | |
| 10:00 AM | 75% 88 Rooms | 81% 95 Rooms | 74% 86 Rooms | 80% 94 Rooms | 71% 83 Rooms | 76% 89 Rooms | |
| 11:00 AM | 77% 90 Rooms | 86% 101 Rooms | 74% 87 Rooms | 85% 99 Rooms | 67% 78 Rooms | 78% 91 Rooms | |
| 12:00 PM | 65% 76 Rooms | 91% 107 Rooms | 64% 75 Rooms | 92% 108 Rooms | 55% 64 Rooms | 74% 86 Rooms | |
| 1:00 PM | 62% 73 Rooms | 85% 100 Rooms | 59% 69 Rooms | 85% 100 Rooms | 51% 60 Rooms | 68% 80 Rooms | |
| 2:00 PM | 57% 67 Rooms | 83% 97 Rooms | 53% 62 Rooms | 81% 95 Rooms | 45% 53 Rooms | 64% 75 Rooms | |
| 3:00 PM | 19% 22 Rooms | 83% 97 Rooms | 14% 16 Rooms | 79% 93 Rooms | 9% 11 Rooms | 41% 48 Rooms | |
| 4:00 PM | 65% 76 Rooms | 63% 74 Rooms | 59% 69 Rooms | 48% 56 Rooms | 7% 8 Rooms | 49% 57 Rooms | |
| 5:00 PM | 74% 87 Rooms | 74% 86 Rooms | 68% 80 Rooms | 60% 70 Rooms | 4% 5 Rooms | 56% 66 Rooms | |
| 6:00 PM | 65% 76 Rooms | 48% 56 Rooms | 50% 58 Rooms | 32% 38 Rooms | 4% 5 Rooms | 40% 47 Rooms | |
| 7:00 PM | 43% 50 Rooms | 26% 30 Rooms | 31% 36 Rooms | 23% 27 Rooms | 1% 1 Rooms | 25% 29 Rooms | |
| 8:00 PM | 38% 44 Rooms | 26% 30 Rooms | 31% 36 Rooms | 23% 27 Rooms | 1% 1 Rooms | 24% 28 Rooms | |
| | Monday | Tuesday | Wednesday | Thursday | Friday | *Average | |

Classroom Percent of Seats Filled

DCAMM's standard is 67% seat fill rate. The target metric used for this study was set slightly higher at 80%. Percentage of seats filled indicates the average percentage of student seats that are occupied when classrooms are in use. This figure is a helpful indicator of how close to capacity an institution's courses are to the rooms in which they are scheduled, but it does not indicate the overall efficiency of utilization since it does not account for the frequency of use of the room. It also does not account for the square footage per seat, which is often too low for today's dynamic teaching environments.

Space per Student Seat

The target net assignable square foot (NASF) metric for this study is 25 NASF per student, which is a blended average between seminar rooms, case study classes, flat floor flexible classrooms, and larger lecture halls. UMass Boston's current average NASF for all its classrooms is 18 NASF per student. The challenge that UMass Boston and many similar institutions face is to increase the number of active learning classrooms to accommodate a variety of teaching pedagogies; however, flexible spaces and diverse student populations require a greater amount of space per seat than traditional classrooms. The square foot per seat is low for most room size categories, limiting the quality and flexibility of the learning environment. Although didactic style teaching in more traditional spaces furnished with tablet armchairs will inherently persist, the suggested space allocation provides for modernized environments, which will ultimately increase utilization rates.

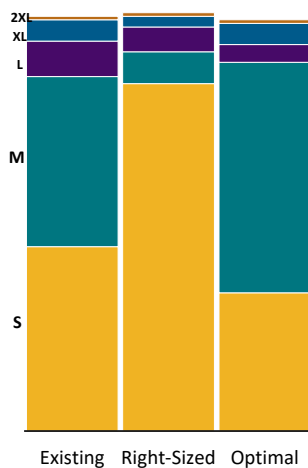
| Existing Seating Capacity | Classroom Groups | Weekly Room Hour Demand | Existing No. Rooms | Total NASF | Existing Average NASF/Seat | Right-Sized No. of Rooms | Optimal No. of Rooms | Overage/ (Need) |
|---------------------------|------------------|-------------------------|--------------------|---------------|----------------------------|--------------------------|----------------------|-----------------|
| 30 or fewer | S | 1,347 | 52 | 23,487 | 20 | 98 | 39 | 59 |
| 31 – 60 | M | 2,286 | 48 | 30,228 | 16 | 9 | 65 | (56) |
| 61 – 100 | L | 154 | 10 | 13,695 | 18 | 7 | 5 | 2 |
| 101 – 300 | XL | 201 | 6 | 15,109 | 15 | 3 | 6 | (3) |
| 301+ | 2XL | 3 | 1 | 5,565 | 11 | 1 | 1 | 0 |
| | TOTAL | 3,991 | 117 | 88,084 | | 117 | 116 | 1 |

There are two ways to create more space in each room—remove the number of seats in the room, thus creating more space per seat, or make the room larger by combining adjacent spaces. More than likely, a combination of both strategies will be needed. The goal of removing seats within the room is to ultimately replace the seating with stackable, movable tables and chairs (preferably on casters) to create a more flexible environment that encourages active learning pedagogies.

The second strategy of enlarging the room requires an in-depth examination of floor plans and the current locations of classrooms. Future renovations should look for opportunities to combine two smaller under-utilized classrooms to create one larger classroom. The aspect ratio of the combined new space should not exceed 1:1.5. Renovations would include replacing fixed furnishings with mobile team-based furniture and updating finishes to replace singular, front-facing teaching spaces with student-centered, facilitated, and interactive learning environments. In addition, power, data, projection capabilities, and writable surfaces should be considered to complement both current and future pedagogy and technology. Renovations must be forward-thinking and flexible to accommodate future delivery methods.

De-densifying the inventory to align with aspirational guidelines shifts the need toward 31- to 60-seat classrooms and adds a need for larger classrooms. This strategy would also create a large overage of classrooms in the 30 and under capacity, which would allow UMass Boston to renovate classroom space into informal gathering and study space.

The chart below categorizes the existing classrooms in three ways. The column titled "Existing No. of Rooms" quantifies classrooms based on the current seat count of each classroom. The column titled "Right-Sized No. of Rooms" refers to the number of classrooms in each classroom group if the NASF per student was aligned with the recommendation of 25 NASF per student. The "Optimal No. of Rooms" identifies the number of classrooms needed in each group.



- Demand for 2XL room likely extends beyond scheduled instruction
- Cost-benefit should be evaluated before right-sizing, especially with larger rooms
- Right-sizing of all rooms would result in a need for 56 mid-sized rooms
- Right-sizing of all rooms would result in a 59 Small Room Surplus

Class Laboratories

More laboratory space is needed to support the disciplinary growth in Nursing and STEM. Better quality laboratory space is needed to support the arts.

Although a bit more complicated, instructional labs work in a similar fashion as classrooms except that the amount of space needed per seat as well as the weekly room hour expectancy varies by discipline. The NASF per seat reflects the space within the laboratory itself as well as laboratory service spaces such as prep areas and storage. What makes a laboratory an instructional laboratory is the regularity with which the space is scheduled. The room is generally not reserved for special term-long experiments or set up to accommodate student projects where students come and go as they have time.

The variance in weekly room hours is attributed to the dense scheduling of lower-division labs versus upper-division labs, where one or two courses may be offered. Some labs or studios must also be available for unscheduled practice time, such as an art studio. The normal rule of thumb is that for every hour of scheduled use, a student spends in the lab or studio, an additional two hours need to be spent practicing their craft in the lab or studio. In the case of graduate-level labs, an experiment may involve a team of students and be of a larger scale, so it is not reasonable to expect others to utilize the lab without disturbing the experiment. To achieve a good average of class lab use, the consultant team recommends using the higher utilization rates in the lower division labs to offset the upper division labs where scheduled use is much lower. UMass Boston has 89,000 NASF of lab space, just shy of the 90-95,000 NASF it needs to best serve its current student population.

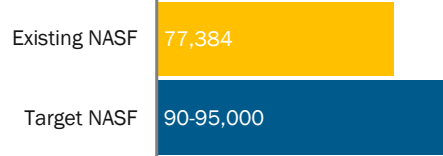
Class Laboratories



University Hall



Wheatley



Metrics

DCAMM Standards

16-24 weekly room hours

80% seat fill rate

35-110 NASF/seat

Key Takeaways

- Weekly seat hours and seat fill rate are below targeted metrics
- Exceptions: Performing Arts, Chemistry, and Engineering
- More lab space is needed to support Engineering and Chemistry
- Some disciplines lack quality class laboratories

Class Laboratories Percent of Seats Filled

The seat fill rate for class laboratories was set at 80% for this study. Because there is usually a safety issue with the use of class laboratories, most institutions monitor the size of the laboratory sections closely. Laboratories are also some of the most expensive spaces that are constructed at an institution. For these reasons, the consultant regularly promotes achieving an 80% seat fill rate regardless of level or type of laboratory. Weekly seat hours and seat fill rates are below targeted metrics except for performing arts, chemistry, and engineering. Classes with a low percentage of seats filled corresponded to rooms with severe shortages of NASF per student. The design team recommends that the university remove seats from these laboratories to increase both NASF per student and seat fill rates.

Space per Student Seat

As with classrooms, the class laboratory NASF per seat recommended for this study is a culmination of a variety of analyses and concerns. The initial concern is that again, this number represents an average.

Standards of class laboratories typically fall into four categories, based on discipline requirements:

- High Intensive (e.g., Engineering and intensive Fine Arts)
- Intensive (e.g., Biological Sciences, Health Professions, and Physical Sciences)
- Moderately Intensive (e.g., Communications, Education)
- Non-Intensive (e.g., Business, Languages)

Metrics for highly intensive labs are above 100 NASF per seat, while metrics for non-intensive labs such as language and mathematics are just above classroom requirements at 35 NASF per student. Class laboratories at UMass Boston generally fall into the “Intensive” or “Moderately Intensive” category with guidelines set between 50 and 100 NASF per seat.

Other Considerations

Instructional lab metrics are indicators of needs or surpluses and vary from program to program. Inter-professional and cross-disciplinary education is growing, creating opportunities for shared spaces in terms of simulation, fundamental labs, and maker spaces. Instructional labs should be developed around student stations with mobile benches, overhead utilities, and perimeter casework. Support and storage space is critical, especially if multiple programs operate out of the same lab. Laboratories at UMass Boston lack sufficient service and storage space. More lab space is needed to support growth in specific disciplines such as engineering and chemistry. Other disciplines, specifically in the social sciences and physical sciences, lack quality class laboratories.

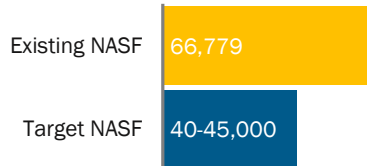
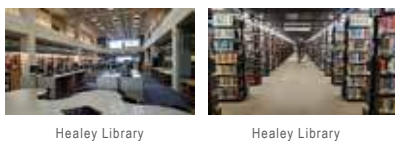
Library Space

The library supports the campus's academic pursuits; it provides resources to guide students towards the discovery of knowledge and the effective use of information. The library facilitates scholarly conversations around effective learning, research, and communication. As more of the library collection is moving to digital, many institutions are seeing a decreased need for collection space.

Libraries provide physical resources and space that advances the academic mission of the university. As part of this space category, the design team worked to understand the physical collections by type of collection and convert that to a physical volume equivalent (PVE). During the study, the library held 398,474 items in its collection, a PVE of 27,674 assignable square feet. In addition to the collection, the Design Team looked at additional space for archival materials, reading rooms, exhibition space, and service space in Healey Library.

UMass Boston is culling its physical volume collection and the library has empty shelving that should be removed. The library should no longer simply be a vessel for books, but the hub of student access. Study survey results reveal that students spend three to four unscheduled hours on campus on a typical day. Over half of the student body reports studying alone and 26% study on campus in a quiet space such as Healey Library. The overall footprint for stack and service space within the library could be reduced by approximately 38% to better align with current trends and the way students use the virtual and physical learning resources available from the university.

Library Space



Metric Considerations

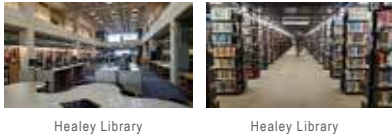
Peer and Best Practice Benchmarks

0.07 NASF
per physical volume equivalent
+
10% for service space

Key Takeaways

- Library is a critical shared common space for commuter students
- Empty shelves should be removed and converted to student space
- Analysis confirms lived experience heard in listening sessions

Other Academic Space



Healey Library

Healey Library

Existing NASF

66,779

Target NASF

40-45,000

Metric Considerations

Peer and Best Practice Benchmarks

0.07 NASF

per physical volume equivalent

+

10% for service space

Key Takeaways

- Library is a critical shared common space for commuter students
- Empty shelves should be removed and converted to student space
- Analysis confirms lived experience heard in listening sessions

Research Space

Research activities can be space and energy-intensive and require careful planning for high utilization. Unlike instructional space, there are no clear space metric trends in research laboratories.

Research labs are spaces used for experimentation or training in research methods and observation, and they are not typically scheduled. Research is inherently complicated. When most people think of research space, they picture a scientific wet lab where biological matter, chemicals, or other materials are tested. This type of lab usually is equipped with benches, running water, ventilation (fume hoods), various scopes and equipment, gases, and piped utilities and therefore requires considerable thought when planning infrastructure and services. Much of this type of lab space at UMass Boston is concentrated in the new Integrated Sciences Complex (ISC).

Research Space



Integrated Science Complex

Existing NASF

121,563

Target NASF

140-145,000

Metrics

Peer and Best Practice Benchmarks

640 NASF

per Principal Investigator

+

10%

for Core Space

Key Takeaways

- 187 Principal Investigators
- Assumes existing animal facilities space is sufficient
- Do other tenure-tenure/track faculty need research space?

Realistically, research takes on many forms, all of which require numerous lab types. As such, the traditional nomenclature of 'wet lab' and 'dry lab' is not always adequate in describing lab needs today. The team noted a minimum of five types of research lab typographies at UMass Boston:

- Wet/Experimental Labs
- Dry Labs
- Computational Labs
- Human Test Subject Labs
- Industrial/Specialty Labs

As universities become more intentionally collaborative, research increasingly transcends traditional disciplinary boundaries. The research lab typology is shifting from wet to dry research and from static, individual labs to open, shared spaces. This trend can be seen in the flexible lab space within the ISC. But research is expensive and space intensive. Open lab formats are becoming more common across research institutions and can increase efficiency; however, efficiency and productivity cannot be measured the same between disciplines. Designing flexibility into today's research labs pays off in efficiency, grant dollars, and recruitment and retention if lab space is properly allocated. A challenge noted at UMass Boston is the use of expensive wet lab space by dry and computational researchers, which may be a result of the inconsistent quality of research lab space across disciplines and typologies or flaws in how labs are assigned.

Research space is assigned departmentally and there is not one metric that considers all dynamics, including staff, equipment, funding, and recruitment. Some disciplines, such as math and statistics, do not require a typical lab environment but instead need a dedicated collaboration space for research. Other disciplines, such as psychology and education, work with human subjects and need an accessible and outward-facing research space whereas vivarium research space needs to be in a secure and controlled environment away from core activity. In some departments, research is being conducted but only a percentage of that research is grant-funded. There are multiple ways to approach space allocation for research. Some institutions use the researcher's title, others use financial productivity. Other institutions allocate space based on average group size or individual team size.

Square foot per primary investigator (PI) is typically dependent on a combination of team size, equipment usage, and the university's research culture. The design team used a mix of NASF allocations based on space type. For baseline hood intensive and experimental research, the team used an allocation of 640 NASF/PI. This allocation is a sum of wet bench space, write-up space, and lab support. These spaces are listed under FICM codes 250 and 255. A space allocation of 640 was also assigned to dry lab space. As dry labs vary drastically in size and functionality, planning metrics usually follow experimental research. Computational research was allocated an NASF/PI of 240. This metric assumes four people working in a computer-based lab space within or outside of a private office environment. Computational space does not have the intensive HVAC needs of other research lab space.

The existing research space on campus does not meet the current research needs in terms of quantity or quality. Research space should grow by approximately 10%. In addition, a greenhouse is needed. UMass Boston may want to consider a more focused research study as a means of assessing and reallocating research space to better align space with the task.

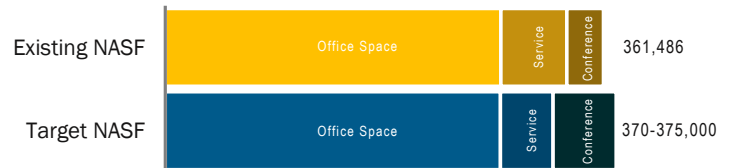
| Phenotype | NASF / PI | Space Planning Assumptions |
|--|------------|--|
| Baseline Hood Intensive Experimental Research <i>Sum of 250+255 Spaces</i> | 640 | Experimental Lab space that has benches, sinks, fume hoods, and biosafety cabinets; requires specialized equipment and ventilation |
| <i>Wet Bench</i> | <i>250</i> | <i>Assumes PI + 4 as an average functional capacity / module</i> |
| <i>Write-Up Space</i> | <i>140</i> | |
| <i>Lab Support</i> | <i>250</i> | <i>1:1 ratio for wet lab bench to lab support space Lab support includes owned space and shared space</i> |
| Dry Labs | 640 | Dry labs vary drastically in size and functionality; planning metric usually follows experimental research |
| Computational Research | 240 | Assumes 4 people working in a computer-based lab space <u>outside</u> of a private office environment and does not have bench, pipe, or venting requirements |
| + Core Labs | | Typically, 8-12% of total experimental/wet lab space |

Workspace

Office space makes up 34% of UMass Boston’s academic space, and efficiencies can have a significant impact on space use.

Current workplace trends focus on creating innovative, energizing office environments through modular and ergonomic furniture, natural light, views, creativity, innovation, and technology. In light of hybrid work strategies implemented during the pandemic, space allocation to individual offices is being reduced in favor of open, flexible, team-based spaces for collaboration and sharing. Today’s office space metrics are less than historical space metrics. A couple of decades ago, it was common to see 140 to 150 NASF per full-time faculty or professional, non-faculty person. At most public institutions, this number has dropped to around 110 to 120 NASF per full-time faculty or professional, non-faculty person. While designing for new construction or renovation, such as University Hall, lower space per person allocations is appropriate. At UMass Boston, office size varies significantly from building to building, indicating opportunities for better efficiencies as renovations occur. Metrics were set using a benchmark range from 120 to 180 NASF per FT occupant and 90 NASF per PT occupant. Additional space was allocated per FTE for conference rooms and service spaces such as work rooms, lounges, storage and other support spaces. Departments are split across buildings and there is a need for meeting and conference spaces for both academic and administrative units. The overall quantity of space appears to be balanced, but may not be allocated correctly between departments and functions.

Workspace



Metrics

DCAMM Standards*

| | Office NASF | Service NASF | Conference NASF |
|---------------------------|-------------|--------------|-----------------|
| FT Execs & Administrators | 180 | 25 | 30 |
| FT Faculty | 120 | 25 | 30 |
| FT Professionals | 120 | 25 | 30 |
| FT Classified | 120 | 25 | 30 |
| PT Execs & Administrators | 180 | 0 | 0 |
| PT Faculty | 90 | 0 | 0 |
| PT Professionals | 90 | 0 | 0 |
| PT Classified | 90 | 0 | 0 |

Key Takeaways

- Some departments are split across buildings
- Lack of privacy in open office environments, particularly those that are student facing
- Quantity of space appears balanced but may not be allocated correctly between departments and functions

One size does not fit all when it comes to faculty and staff offices at a university, and a cultural shift may be necessary in some departments to make a modern, open-office environment successful. For the Humanities and Social Sciences, where research is typically done within the office, consideration should be given to a small additional allocation of office space for research as well as creating collaborative meeting and conference environments in support of team-based research. Some offices require resource centers, testing centers, or other additional space allocations to serve a designated institutional population. Other units that are student-facing may need private spaces for sensitive student conversations.

Student Space

This category includes a broad range of non-scheduled co-curricular spaces that support both academic and non-academic needs of the student body. Student Space includes a number of subcategories, including open laboratories (FICM 220 room use codes), study facilities (FICM 410 room use codes), special use facilities related to athletics (FICM 520 room use codes), and general use facilities (FICM 600 room use codes). These are the spaces that supplement the scheduled spaces where someone besides the student is dictating the activity and learning objectives. Student spaces foster belonging, engagement and have the greatest impact towards creating an inclusive, resilient, and nimble campus environment.



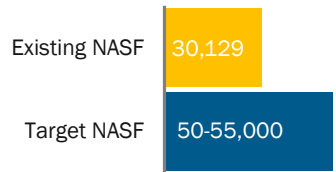
Open Laboratories

Unlike instructional labs, open labs are irregularly scheduled, if they are scheduled at all; therefore, there was no data to review to see how they are being used. They can include open-access laboratories and might provide equipment to serve the needs of a particular discipline for group instruction or might be used for individual student experimentation, observation, or practice in a particular field of study. The key is that these spaces are typically not scheduled in a formal manner. Types of rooms included in this category include computer laboratories, language labs, learning labs, testing and tutorial labs, music practice rooms, and individual art studios. Undergraduate research and senior capstone spaces could also be considered in this category.

Because there is no data to measure open lab space use, a very common practice is to determine the square footage per student FTE for the campus. In many benchmarking studies conducted by the consultant, a range of between five and ten NASF per student FTE is the norm. This square footage is carefully considered through a thorough review of the program mix and scale of the campus. The metric used for this study was four NASF per student FTE.

Open labs should be designed with flexibility for adaption and deviation. Like instructional labs, dimensions should be developed around student stations with mobile seating and tables, flexible power locations, and overhead services. Students often work in groups. Discussion and presentation space should be considered, as should writable wall surface and presentation abilities. Student storage of projects and materials should also be a consideration. Adjacency is important with open labs, as maker spaces should often be located near shops, support, and outdoor spaces. UMass Boston’s shortage of open labs indicates a lack of maker space for students to produce their own material in such disciplines as engineering, nursing, and visual arts. The shortage also indicated a need for additional storage space for student-directed projects.

Open Laboratories



Metrics

Peer and Best Practice Benchmarks

4 NASF
per Student FTE

Key Takeaways

- Open labs, project labs, and maker spaces should be distributed across campus as shared, multidisciplinary spaces
- Open labs should contain sufficient storage space for student project work

Campuswide Study Space

Currently, study space accommodates approximately 8% of the student population at any given time, while the metric suggests a need to accommodate 15% of the population. In addition, the quality and quantity of study and collaboration space are not equitable between buildings, which doesn't reinforce UMass Boston's values around belonging and campus connection. This type of space is needed in each academic building at a rate of approximately 15% to 20% of classroom and instructional lab space to support modern pedagogies and research environments. It creates impromptu informal environments where students can work together, students and faculty can meet outside of class times, and faculty can informally meet with each other. There is a diverse set of needs—group study rooms, individual study areas, and teleconferencing rooms—embedded within this category. Adding seating alcoves to circulation areas, such as the ones at University Hall, can allow for quick exchanges between students and faculty outside of class and can also minimize congestion as students wait to enter classrooms. Commons and library spaces should be attractive and flexible, offering casual and relaxed furnishings for students, access to power, and the ability to eat in these spaces. Acoustics should be considered to allow for productive conversations. Students, faculty, and staff are steered toward “creative collisions.” The plan recognizes the preeminent value today of ubiquitous creativity and art, technological capacity, resources for innovation, and encouragement of holistic physical and mental health of the entire campus community.

Study & Collaboration Space



Integrated Science Complex

Existing NASF

121,563

Target NASF

140-145,000

Metrics

Peer and Best Practice Benchmarks

640 NASF
per Principal Investigator
+
10%
for Core Space

Key Takeaways

- 187 Principal Investigators
- Assumes existing animal facilities space is sufficient
- Do other tenure-tenure/track faculty need research space?

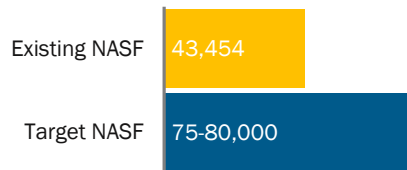
Campuswide General Use

Student Gathering + Lounge Space

Learning and innovation happen everywhere; the student life and social space strategy is a critical component of the intellectual environment. Student spaces provide opportunities for connections, collaboration, and learning outside the classroom. Most campuses are struggling to create these spaces in existing facilities, many of which lack this type of space in general.

Student-centered space includes media production, assembly, exhibition, food facilities, lounges, merchandising, recreation, meeting rooms, and central storage. Building a compelling and holistic student experience is what influences students to choose a university and attracts them to live on campus. Given the large commuter population at UMass Boston, a target metric for student space is 5 NASF per student headcount. Even with this low metric, approximately 80% more space is needed throughout campus in this category. To support its growing residential population, UMass Boston should invest in additional dining and event space, dispersed study space, comfortable lounge and kitchen areas, usable greenspace, and places to focus on physical, mental, and cognitive well-being. The Campus Center currently serves many programmatic needs but lacks adequate space for a multitude of student uses including study space, student organization space, and designated spaces for diverse populations. Student-centered space does not need to be centralized. It can be interspersed with study and collaboration space. The defining features are seating type and food service or vending. If there is a lack of student organization space, classrooms can serve double duty and be scheduled for student meetings after prime hours. A shortage of meeting spaces was identified across campus, and evidence suggests that students use classrooms after hours to fill the gaps, but that the use is informal and unscheduled.

Student-Centered Space



Metrics

Peer and Best Practice Benchmarks

5 NASF
per Student Headcount

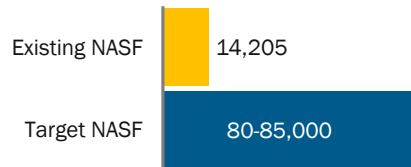
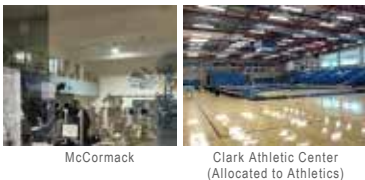
Key Takeaways

- Category includes student organization spaces, dining services, & student lounges
- Lack of student social / hang-out space
- Many buildings lack adequate student lounge space
- Analysis confirms lived experience heard in listening sessions

Recreation, Fitness, and Athletics

Universities across the country are putting a renewed focus on well-being with increases in recreation and fitness spaces including gymnasiums, court facilities, training facilities, supporting locker room and shower/toilet facilities, equipment storage and check-out rooms, and rehabilitation facilities. The indoor space required in this category was based on the student headcount. The metric used 6 NASF per student for 100% of the undergraduate student population, 25% of the graduate population, and 15% of non-student employees. With the application of this metric, there was a severe shortage of space with a stated need for additional activity and court space. In addition, the location of the existing weight room in McCormack is difficult to find and disruptive to the adjacent recreation space. Clark lacks locker rooms and storage for recreational teams, and there is an overall lack of court space for a growing residential-based student population.

Recreation and Fitness Space



Metrics

Peer and Best Practice Benchmarks

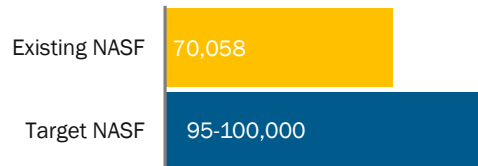
6 NASF

per 100% of undergraduates,
25% of graduates,
& 15% of employees

Key Takeaways

- Need is based on students, faculty, and staff
- Location in McCormack is hard to find and disruptive to adjacent academic space
- Rec use of athletics space in Clark isn't sufficient, lacks locker rooms, storage for rec teams
- Lack of court space

Intercollegiate Athletics



Metrics

Peer and Best Practice Benchmarks

High-level benchmark based
on division and sports
programs

Key Takeaways

- Need include additional locker room space
- Need better arrival sequence
- Lack of coaches' offices
- Lack of indoor practice space, need additional gym to support athletic and rec use

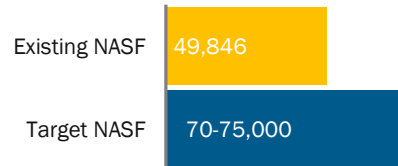
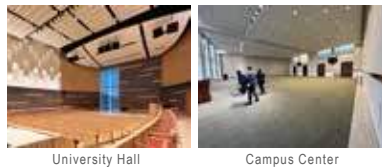
Support Spaces

Assembly and Exhibit Space

Events and exhibits enrich campus life and should take place across campus. Assembly and exhibit space need is driven not only by academic programs but also by the university's mission. Art is a collaborative process and, as such, assembly and exhibition space at UMass Boston is used by students, faculty, and the community. Assembly and exhibition space encompasses any space on campus designated and equipped for the assembly of a large number of people and in direct support of academic programs and experiences. At UMass Boston, examples include the theaters in McCormack and Wheatley and the Campus Center ballroom.

The guideline that was applied to space in this category is promulgated by the Association for Learning Environments (formally the Council of Educational Facility Planners International). For institutions with more than 5,000 students, the guideline has a core allowance of 27,450 NASF, with an additional 5 NASF per student headcount for student levels over 5,000. Application of this guideline showed a 257% shortage of space. The Planning Team suspects though, that the coding of spaces used by Performing Arts as both class labs double as assembly spaces, such as those in University Hall, which means that the proposed need could be greatly decreased. Nonetheless, minimal space is dedicated to exhibits.

Assembly and Exhibit Space



Metrics

Peer and Best Practice Benchmarks

27,450 NASF
+
5 NASF
per Student FTE over 5,000

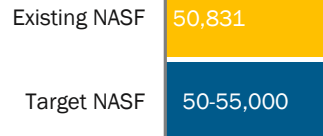
Key Takeaways

- New performance spaces in University Hall
- Theaters in McCormack and Wheatley could be better utilized if updated
- Minimal dedicated exhibit space
- Some assembly spaces are also used heavily for instruction

Other Administrative Space



Campus Center



Metrics

Peer and Best Practice Benchmarks

4 NASF
per Student FTE

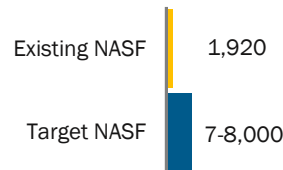
Key Takeaways

- Includes Healey radio station, bookstore, mail services, general purpose meeting rooms

Student Health Care Facilities



Quinn



Metrics

Peer and Best Practice Benchmarks

0.5 NASF
per Student Headcount

Key Takeaways

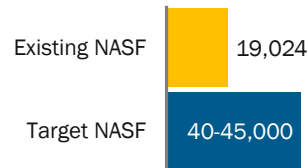
- Need for additional clinical space for both medical and counseling services
- Opportunity for future increase in telemedicine will offset need for additional exam rooms
- Significant shortage of space for both clinics

Operations & Maintenance



Service & Supply

Service & Supply



Metrics

Peer and Best Practice Benchmarks

4%
of existing NASF on campus

Key Takeaways

- Programming study underway for Service & Supply

Space Adequacy Assessment

As a part of the larger Campus Master Plan, the design team conducted an educational adequacy assessment of UMass Boston's academic and administrative buildings. Unlike the space needs assessment which analyzed quantitative data, the space adequacy assessment evaluated qualitative criteria. The evaluation included a room-by-room tour of approximately 1,000,000 NASF across seven buildings: Wheatley Hall, McCormack Hall, Healey Library, Quinn Administration Center, Campus Center, the ISC, and University Hall. The educational adequacy assessment examined a sampling of academic and administrative space within each building that portrayed the overall best, worst, and normative conditions. The design team conducted examinations separately from stakeholder interviews. Instructional spaces, research labs, offices, and formal and informal gathering spaces were included in the assessment; structural, mechanical, and electrical spaces were not included. Ratings are built from best practices in modern teaching and learning spaces. During the assessment, the design team was accompanied by representatives from Campus Planning at UMass Boston, who provided insight into the buildings' history and existing conditions. While on campus, the design team scored each building individually based on their expertise and observations. At the end of each day, the team collectively reviewed the buildings they had assessed and unanimously determined a combined draft assessment rating for each facility. The design team then adjusted ratings after departmental interviews to account for conditions that were not readily apparent during the physical walk-through, such as pedagogical needs, safety and security measures, and campus adjacencies and relationships. Finalized ratings reflected existing conditions at the time of the assessment and did not account for planned renovations or ongoing construction. Facilities were rated by the same members of the design team to keep rating methodologies and interpretations as consistent as possible.



The assessment team develops rating criteria



The team tours and photographs a representative sampling of space types in each building



The team scores each building using the pre-determined criteria. Listening sessions are used to supplement walk-throughs.



Scores are calculated and organized into rating groups

The criteria for the space adequacy assessment were organized into eighteen categories, including furniture style and suitability, capacity/configuration/dimensions, instructional space flexibility, and program and building suitability. Each category was assessed on a scale of 0 – 5. This equated to a total possible building raw score between 0 – 90, which was then converted to a percentage on a 0 – 100 scale. Buildings that received a score between 90 – 100 were considered “Best,” meaning that their spaces generally met today’s expectations or could easily be adapted to meet those expectations. Buildings that scored between 80 – 89 were considered “Above Average.” These buildings, though possibly aging, still met the demands of current teaching, research, and administrative processes. Buildings that scored between 70 – 79 were considered “Average.” These buildings often showed signs of aging that might begin to impact the programs they housed adversely. Buildings that scored between 60 – 69 were considered “Below Average.” These buildings were dated, had deferred maintenance issues, and offered little room for flexibility in teaching or workplace arrangements. Buildings that received a score below 60 were considered “Poor.” These buildings have most likely reached the end of their useful life and will require significant renovations to contribute positively to the campus learning environment.

Scores are assigned by building as follows:

| Space | Feature | Possible |
|-----------------------|-----------------------------------|-----------|
| Classrooms | Capacity/Configuration/Dimensions | 5 |
| | Furniture Style + Suitability | 5 |
| | Instructional Space Flexibility | 5 |
| | Instructional Technology | 5 |
| Class Labs | Capacity/Configuration/Dimensions | 5 |
| | Furniture Style + Suitability | 5 |
| | Instructional Space Flexibility | 5 |
| | Instructional Technology | 5 |
| Research Labs | Size/Configuration/Dimensions | 5 |
| | Lab Furniture Style + Suitability | 5 |
| Building-wide | Offices | 5 |
| | Study/Collaboration | 5 |
| | Corridors | 5 |
| | Daylight | 5 |
| | Space Efficiency + Flow | 5 |
| | Program Suitability | 5 |
| | Building Suitability | 5 |
| Campus | Contextual Alignment | 5 |
| TOTAL POSSIBLE | | 90 |

- Only space types that exist in the building count towards scores
- Scores are then converted to a percentage out of 100%
- Percentages are translated into (5) categories: Best, Above Average, Average, Below Average, Poor

The following information provides more detail about the criteria used to assess each building. When specific criteria did not apply to a building, those criteria were excluded.

Classroom capacities, Configurations + Dimensions

- Are there good sightlines for all participants in discussion-based, presentation-focused, and team-based configurations?
- Does the configuration of the space provide for easy movement throughout the room?
- Is the acoustic quality designed to equalize the listening experience of the nearest and furthest occupants?
- Is there an appropriate density of seating for the room's function(s)?
- Is there adequate access to storage?

Classroom Furniture Styles

- Is the furniture comfortable and appropriate for the room's function(s)?
- Is the furniture easily movable?
- Does the layout of the furniture and other furnishings excite innovation and collaboration?

Instructional Space Flexibility

- Is there access to informal and formal learning spaces/areas both inside and outside the classroom?
- Does the layout of furnishings allow for a wide range of activities in the room?
- Can the furniture be transitioned between learning styles quickly and easily?

Instructional Technology

- Are there any sound amplification issues? Is the sound system adequate for the space?
- Is there a writable surface and/or display for the presenter that is visible to all students; or multiple surfaces/displays that allow occupants equal viewing opportunities?
- Are the connectivity and bandwidth appropriate for the room's use(s)?
- Is audio/visual interface and control adequate?
- Are lecture-capturing capabilities available and accessible?

Instructional Lab Capacities, Sizes, Dimensions + Configurations

- Does the configuration of the space provide for easy movement throughout the room?
- Are there good sightlines for all participants in discussion-based, presentation-focused, and team-based configurations?
- Is the acoustic quality designed to equalize the listening experience of the nearest and furthest occupants?
- Is there appropriate service space within and/or adjacent to the lab?

Instructional Lab Furniture Style and Suitability

- Is there an appropriate density of seating for the room's function(s)?
- Is the furniture comfortable and appropriate for the room's function(s)?
- Is the furniture easily movable?
- Is the FFE up to date?

Instructional Lab: Instructional Space Flexibility

- Is there access to informal and formal learning spaces/areas both inside and outside the laboratory?
- Does the layout of furnishings allow for an appropriate range of activities in the room?
- Can the furniture be transitioned between learning styles quickly and easily as needed?

Instructional Lab: Instructional Technology

- Are there any sound amplification issues? Is the sound system adequate for the space?
- Is there a writable surface and/or display for the presenter that is visible to all students; or multiple surfaces/displays that allow occupants equal viewing opportunities?
- Are the connectivity and bandwidth appropriate for the room's use(s)?
- Is audio/visual interface and control adequate?
- Are lecture-capturing capabilities available and accessible?

Research Lab Sizes, Dimensions + Configurations

- Does the configuration of the space provide for easy movement throughout the room?
- Is there appropriate service space within and/or adjacent to the lab?
- Is the lab's design flexible and allows for changes in team sizes and configurations?
- Is the lab's design flexible and allows for changes in the type of research conducted?

Research Lab Furniture Style and Suitability

- Is there an appropriate density of seating and bench space for the room's function(s)?
- Is the furniture comfortable and appropriate for the room's function(s)?
- Is the furniture easily movable?
- Is the FFE up to date?

Office Capacities, Sizes, Dimensions + Environments

- Does the configuration of the space provide for easy movement throughout the room?
- Is the acoustic quality consistent and sufficient for all occupants?
- Is the furniture appropriately sized for the size and/or use of the room?
- Is the office appropriately sized for the type of employee and room use?

Study and Collaboration Spaces

- Is there appropriate access to informal and formal learning spaces?
- Are these spaces conducive to collaboration?
- As appropriate, are there writing surfaces and/or technology in these spaces?
- As appropriate, is there flexible and comfortable furniture?

Corridors

- Are the corridors appropriate for their use (i.e., is there heavy traffic in narrow hallways)?
- Do the corridors allow for appropriate views both through the building and into learning spaces?
- Do corridors provide adequate waiting space for students to gather before classes begin?
- Are the corridors appropriately lit?

Daylight

- Can the space block out natural sunlight and black out the room, if appropriate?
- Are there adequate views to the exterior?
- Does the space have lighting control to create zoned and preset lighting conditions?
- Does the space have the appropriate level of daylight?

Space Efficiencies

- How does the observed space flow?
- Is the layout appropriate for its use?
- Is there wasted space (e.g., inefficiencies)?

Program Suitability

- Are the furnishings and finishes appropriate to the programs within the facility?
- Overall, is the building's design appropriately suited for the building's function(s)?

Building Suitability

- What is the quality of the building's structure? Within structural parameters, what is the flexibility of the space (e.g., floor-to-floor heights, column layout)?
- What is the overall condition of the building's systems (e.g., mechanical, electrical, plumbing, HVAC, data connectivity, and wireless access)?
- Are the building's systems suitable to the program(s) it houses?
- What is the overall condition of the building's envelope (e.g., walls, windows, roofing)?
- Is the building accessible and/or comfortable for students with disabilities?
- What is the level of thermal comfort and control?
- Can the building adapt to changing uses over time (future-proof)?

Campus Context

- Does the building align with the campus’s academic strategy?
- Does the building align with the Campus Master Plan?
- Is the building appropriate from a land-use perspective, and does it have the appropriate density?

Of the buildings assessed, three scored as Poor (Healey, Wheatley, and McCormack), two as Above Average (Quinn and Campus Center), and two as Best (University Hall and ISC). Approximately 57% of UMass Boston's total NASF scored as Poor, 19% as Above Average, and 24% as Best. Key drivers included finish conditions, density, and instructional spaces that were not designed with flexibility in teaching style.

| BUILDING | SCORE |
|-----------------------|-------|
| Healey Library* | 42% |
| Wheatley* | 43% |
| Mc Cormack* | 47% |
| Quinn Administration* | 81% |
| Campus Center | 88% |
| University Hall | 96% |
| Integrated Sciences | 99% |

| Percentage | Rating |
|------------|---------------|
| 90% - 100% | Best |
| 80 - 89% | Above Average |
| 70 - 79% | Average |
| 60 - 69% | Below Average |
| 0 - 59% | Poor |

*Heritage Buildings



Number of Buildings

| Percentage | Rating |
|------------|---------------|
| 90% - 100% | Best |
| 80 - 89% | Above Average |
| 70 - 79% | Average |
| 60 - 69% | Below Average |
| 0 - 59% | Poor |



Percent of Total NASF

Healey Library

Libraries serve as the academic heart of campus, where information is found, and knowledge is constructed. The location of Healey Library is ideal, but the library is severely outdated and no longer meets the needs of today's students. With a score of 42%, Healey was the lowest-rated building on UMass Boston's campus. The library offered little variety in study seating options for group and quiet study. The project team and collaboration rooms were lacking, as was modern maker space.

The library has two centrally-scheduled classrooms and dedicated classroom space, but the rooms were scattered across multiple floors and hard to locate. Configurations and dimensions of classroom spaces were constrained, with challenging sightlines and little ability for students and instructors to circulate the room. Class laboratory spaces were slightly better but still below the average quality space expected for an institution such as UMass Boston. Research lab layouts and configurations also scored below average. Instructional technology throughout instructional and research spaces was subpar, especially for what one would expect in a library.

Office space scored average, while study and collaboration space fell below expectations. Wayfinding is a considerable challenge, which is a barrier to campus inclusion. Space efficiency and flow need investment. In addition, the facility has large windows and good views. Still, the dated furnishings and finishes detract from the architecture of the building and create an environment that feels cold and uninviting.





Wheatley

Wheatley is an older heritage facility at UMass Boston that has seen little renovation investment throughout the last five decades. The steel structure building has concrete block partitions creating double-loaded corridors lined with classrooms and offices. A good number of the classrooms do not have natural light and even more lack views. There is little room outside the classrooms for unscheduled, serendipitous connections. Though the small classrooms have good proportions, they are dense with dated furnishings that limits instructional delivery to front-of-the-room lectures. Both furniture and instructional technology scored low. Although some labs were renovated with the Renovation of Existing Academic Buildings (REAB) project, others are underutilized and in need of renovation. Overall wayfinding in Wheatley is a significant challenge. When a student, instructor, or visitor to campus cannot find their way into a facility, it creates feelings of insecurity and exclusion.



Wheatley has had a few minor surgical interventions such as the Venture Development Center (VDC) that reveal the potential of the facility to accommodate modern learning. The VDC renovation illustrates that it is possible to retain the facility and transform it into an environment more conducive to modern learning. It's important to note that Wheatley Hall is the only facility on campus named after a Black female. A significant and thoughtful investment could transform this facility into an open, modern, and forward-looking building symbolic of the diversity of backgrounds and thoughts representative of the UMass Boston stakeholder population.



McCormack

Like Wheatley, McCormack is an instructional workhorse facility that hosts many classrooms and class labs that serve students in their day-to-day schedules. The facility is mostly outdated, but strategic investments have been made in instructional and research laboratories as part of recent renovations.

McCormack is difficult to navigate, with a confusing numbering system and a layout that contains repetitive pockets of classrooms tucked off an expansive main lobby. Most of the labs and lab corridors do not have natural light. Classroom windows are low and restrict views. Classroom aspect ratios are distorted, and furnishings and finishes are dated and static. Although some labs were renovated with the Renovation of Existing Academic Buildings (REAB) project, others are underutilized and in need of renovation. The facility is an odd mix of instructional space, a large auditorium, and a fitness center. The building lacks cohesion and could use a significant financial investment to bring it to modern standards.

The investments made in McCormack's research and class laboratories bring those spaces up to more average standards than peer institutions. Nonetheless, the spaces are still segmented, inflexible, and hard to navigate. A more significant and intentional building-wide investment could help improve circulation, efficiency, proportions, and overall program suitability across space types.





Quinn Administration

Quinn Administration is a mix of updated instructional and research spaces for the Manning College of Nursing and Health Sciences and administrative office spaces that serve the larger university. Classrooms, lab, and research spaces scored above average in layout, furniture style, flexibility, and suitability.

The administrative offices vary in quality as some have been updated while others could use a refresh. The office and academic spaces for the Manning College of Nursing and Health Sciences are newly renovated and are suitable for the program they house, but many of the second and third floor spaces are dated and hard to navigate. Light equity is uneven across offices, often leaving administrative assistants that spend most of their time at their desks with little to no access to natural light. More deliberate interventions and renovations could improve the building's office space, circulation, and flow.



Campus Center

The Campus Center scored 88%, putting it just shy of the "best" category. Though the quantity of space does not meet programmatic needs, spaces are bright, airy, and easy to navigate. Finishes and furnishings are updated, there is an appropriate level of natural light, and the facility is easy to navigate for those with physical disabilities. However, there are some privacy concerns with several office spaces, some of the student-facing services are harder to find within the facility, and the building needs more student organization space.



There is no classroom, class lab, or research space within the campus center; therefore, these categories were not scored. Of the building-wide assessment made of this facility, all categories scored above average at either a "4" or a "5" by all team members.



University Hall

University Hall is a new facility with spacious floor-to-ceiling heights and beautiful views that showcase UMass Boston's location along the water. The facility has a blend of formal, scheduled and unscheduled study and social spaces for students, faculty, and staff to interact outside class. All categories achieved ratings of a "4" or "5" from all team members.

The instructional labs and performance spaces are high quality and reflective of best practices. Classrooms, however, did not score quite as well since many are front-facing and didactic with furniture and densities that limit flexibility. Easy remedies include removing seats to de-densify seat counts, replacing tablet-arm furniture with mobile table and chair arrangements, and adding additional whiteboards to create multiple fronts of room.





Integrated Sciences Complex (ISC)

The ISC, completed in 2015, is open and airy and puts learning on display. The building is a mix of research and instructional labs with a limited number of offices. The building has an abundance of student study and lounge space to complement programmed spaces.

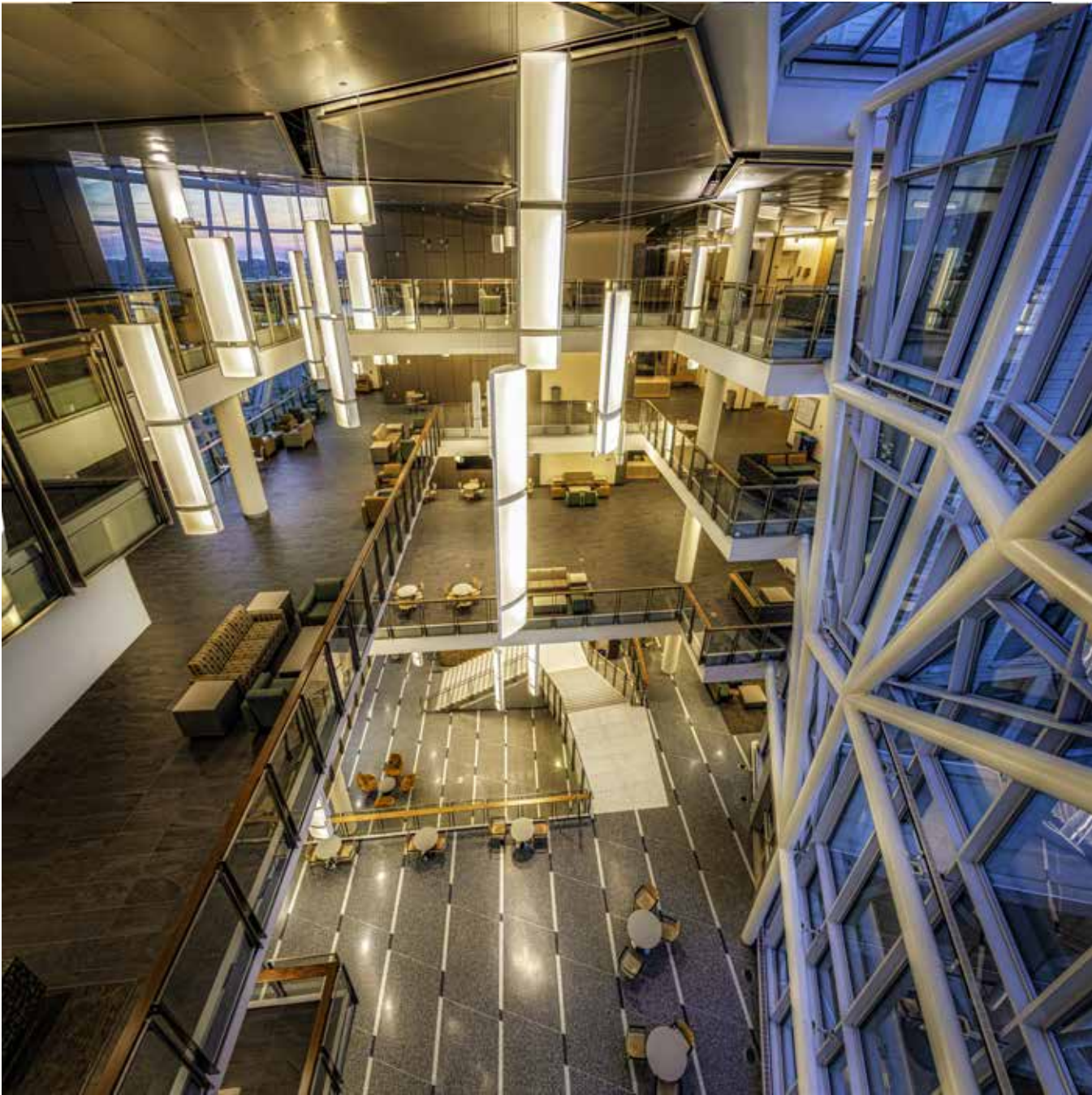
The research labs are primarily wet lab space, with a mix of open, flexible space and more traditional dedicated research suites. Research labs were rated a "5" by all team members for their flexibility, proportions, and overall suitability to the academic program.



Class labs are spacious, well-furnished, and of proper proportions and densities to serve the disciplines scheduled in the facility.

Though adequate in size and proportion, faculty offices discouraged collaboration with their location down narrow corridors behind locked doors. The layout of offices in this building gives off the impression, intentional or not, that faculty offices are not accessible to students. As everything else in the facility is open, on display, and accessible, the institution could reconsider the location and design of faculty offices as the budget allows.





Learning Space Rating System (LSRS) Evaluation

In addition to the larger building-wide adequacy assessment, the design team performed a deep dive into centrally-scheduled classroom environments at UMass Boston. Centrally-scheduled classrooms are available for use by any college at the university. They are not tied to specific subjects or disciplines by equipment in the room or the configuration of the space. They should be reachable via public corridors and meet ADA accessibility standards. It is important for centrally-scheduled classrooms to be consistent in quality, furnishings, and technology, and to be easily accessible and clearly signed.

Classrooms are malleable spaces that require flexible and comfortable furniture and finishes, multiple fronts-of-room, and modern and adaptable instructional technologies. Classrooms influence the cross-pollination of ideas and innovations. If an institution limits any of these key classroom installations, abilities to adopt modernized and innovative teaching modalities are challenged. In addition, students will have fewer opportunities for symbiotic learning. Significant hallmarks of successful classroom spaces include collaborative areas for student-student and student-teacher interaction, ample space for flexible seating configurations, mobile lecterns, and adequate access to both natural daylight and artificial lighting, amongst others. The role of the instructor has changed over time from a disseminator of knowledge to a facilitator of learning. To provide instructors with a cohesive active-learning environment, neither technologies nor furniture can create barriers to opportunities for self-directed learning.

UMass Boston provided the design team with building inventory, room inventory, floor plans, furniture layouts, course enrollment and scheduling data, and previous studies and plans. The design team devoted a significant amount of time and effort to verify these data sets through an on-site verification of each of the 118 classrooms in the centrally-scheduled inventory in January 2022. During the site visit, the design team toured each classroom to verify the size, capacity, and layout; completed a survey to assess the condition of the room and its potential for being conducive to multiple modes of learning; and photographed each room extensively. All of this information was combined to inform the space analysis.

Classrooms were analyzed using the Learning Space Rating System (LSRS)*, a methodology developed by Educause for measuring a classroom's potential to support a broad range of pedagogies. Credits are earned for physical features that allow a space to be used for active and engaged learning, and flexibility and inclusiveness are weighted heavily in the system.

The design team rated each space in four main categories: Environmental Quality, Layout and Furnishings, Technology and Tools, and Inclusion. A total of 30 points were reviewed. The Planning Team found that UMass Boston could be measured on approximately a 25-point scale. Classrooms were divided into five categories based on their score: best, above average, average, below average, or poor. Of the 117 classrooms reviewed, twenty fell into the “best” and “above average” categories, nine into the “average” category, 70 into the “below average” category, and eighteen in the “poor” category. 57,687 NASF out of 88,083 total NASF allocated to classrooms, two-thirds of the inventory, fell into the “below average” or “poor” category. This is significantly more than peer institutions the Planning Team has assessed.



Number of Classrooms



NASF of space



Overall, UMass Boston’s classrooms scored high in the Environmental Quality category, with many rooms receiving credits for daylight, visibility, and acoustics. Room for improvement was seen in Layout and Furnishings, particularly with seating density, adaptability, work surface size, and adjacent informal spaces. Within the Technology and Tools category, the classroom inventory scored well on visual displays and sound amplification, but there is much room for improvement in the availability of electrical power throughout classrooms. Room for improvement was also seen in the Physical Inclusion category, where more than half of the rooms received no points because they lack dedicated work surfaces for students using wheelchairs.

LSRS – Environmental Quality | 8 possible points



Daylight (1 pt)

- Access to daylight via window or skylight



Visual Connection to Nature (2 pts)

- Views to natural landscape elements OR
- Views to interior planted areas



Visibility (1 pt)

- Unobstructed views for all participants to see one another and writable surfaces



Lighting Control (1 pt)

- Dimming controls and/or blackout shades



Thermal Comfort and Control (1 pts)

- Operable windows, thermostat, or fan OR
- Ability to increase air movement such as with a ceiling fan



Acoustic Quality (1 pt)

- Elements such as carpet, acoustic ceiling tile, or acoustic wall treatments



Materials, Patterns, and Forms (1 pt)

- Natural materials, patterns, or forms such as wood

LSRS – Layout and Furnishings | 15 possible points



Proximity (1 pt)

- 1 pt = students can face each other and instructor can be within 15 ft of each student



Work Surfaces (1 pt)

- 1 pt = each student has a work surface of at least 24x30



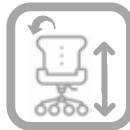
Writable Surfaces (1 pt)

- 1 pt = multiple teaching walls OR mobile whiteboards



Movement (1 pt)

- 1 pt = users can circulate through room



Seating Comfort (1 pt)

- 1 pt = seating is adjustable in at least two ways



Physical Storage (1 pt)

- 1 pt = storage for auxiliary equipment or furniture



Density (2 pts)

- 1 pt = >25 NASF/student
- 2 pts = >30 NASF/student



Transparency (1 pt)

- 1 pt = sightlines between rooms



Adaptability (1 pt)

- 1 pt = infrastructure is designed to adapt to changing uses



Furniture Configuration (4 pts)

- 1 pt = chairs with casters
- 1 pt = tables with casters
- 1 pt = Stackable chairs
- 1 pt = height adjustable furniture



Access to Informal Areas (1 pt)

- 1 pt = informal space within sight from classroom door

LSRS – Tools + Technology | 5 possible points



Electrical Power (1 pt)

- 1 pt = safe and convenient access to electrical power for student use throughout classroom



Sound Amplification (1 pts)

- 1 pt = microphones and speakers (or small room)



Visual Displays (3 pts)

- 1 pt = visual display appropriate to size and capacity of room
- 2 pts = ability to project from multiple sources simultaneously
- 3 pts = multiple visual displays capable of supporting small group and collaborative activity

LSRS –Inclusion | 2 possible points



Physical Inclusion in Universal Design (2 pts)

- 1 pt = student in wheelchair has station in classroom
- 2 pts = student in wheelchair can occupy any station in classroom

Many classrooms at UMass Boston's campus are new, including those in University Hall. These rooms could use modest improvements to allow for more active and meaningful in-person engagement. Classrooms in older facilities are of good scale and proportion that an adjustment to density, furnishings, finishes, and technology could have a large return on investment. In other words, these classrooms have "good bones" and the upgrades are relatively cosmetic.

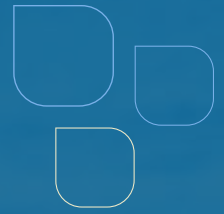


University Hall



Wheatley Hall





5.

PLANNING DRIVERS



Planning Drivers

Strategic Plan Alignment

For the Times affirms our standing as a leading public research university—one that posits diversity as a centerpiece for leading discovery and advancing knowledge and tackles unprecedented global challenges with impactful research directed at solutions that serve the public good.

On the strength of this plan, UMass Boston is poised to build on our legacy—of basic research, service, teaching and learning, community engagement, and the imperative of socially just inclusion.

The Campus Master Plan Update aims to align the physical campus with the university's strategic plan, *For the Times*. Completed in 2022, *For the Times* is a 10-year plan to build on the university's legacy of basic research, service, teaching and learning, community engagement, and the imperative of socially just inclusion. Five strategic priorities provide the framework that structures the plan:

Strategic Priority 1: Holistic Student Success

Strategic Priority 2: Impactful Research and Scholarship

Strategic Priority 3: For the City

Strategic Priority 4: Enriching Our Human Core

Strategic Priority 5: Reimagining Campus Space

While supporting each of the priorities, the Campus Master Plan is most closely aligned with Priority 5 which calls for building a physical infrastructure that is commensurate with the world-class teaching and research excellence at UMass Boston. Priority 5 also articulates the university's sustainability goals including sustainable site development, energy-efficient building design and materials, renewable energy sources, use of recyclable and locally available materials, and clean transportation alternatives, all of which support the university's commitment to zero carbon emissions. The Campus Master Plan prioritizes the renovation of the heritage buildings to ensure an equitable campus environment that supports teaching, learning, well-being, health promotion, research, and community engagement.

For the Times includes four cross-cutting commitments that will anchor UMass Boston's work:

Commitment 1: Teaching, Research, and Service Mission

Commitment 2: Antiracist and Health-Promoting Culture

Commitment 3: Community Collaboration

Commitment 4: Operational Excellence

The Campus Master Plan supports each of these commitments through the allocation of space, the prioritization of projects, and the integration of the campus with surrounding neighbors and the waterfront context.

Campus Master Plan Assumptions

The following assumptions guided critical planning decisions:

- On-campus undergraduate enrollment will remain constant; graduate enrollment is likely to increase.
- Remote and hybrid learning will continue to increase. The university will seek ways to support increases in these teaching modes.
- Enhancing the student experience through the renovation of the heritage buildings is a significant priority.
- Over time, the university will look to strategically add additional space through both traditional and innovative means.
- The university will seek to make physical and meaningful connections with neighbors on the peninsula and within the Boston metropolitan region.
- The university will encourage the integration of the Calf Pasture development with the Strategic Plan and the Campus Master Plan.

**UMass Boston, for the times,
no matter the times.**

...we commit ourselves to a vision of higher education, basic research, and community engagement as indispensable tools for forging a more democratic, inclusive, sustainable, and just Boston, commonwealth, and beyond.

PLANNING PRINCIPLES

The planning principles are goals set forth to align UMass Boston's mission and vision with the physical campus. Closely aligned with the strategic plan, they were developed through a consensus-driven planning process. They reflect the culture, traditions, aspirations, and context of UMass Boston. While ambitious in nature, the principles inform the intent, direction, and priorities articulated in the Campus Master Plan and will serve as a benchmark against which future planning decisions can be measured.

1

Create a welcoming, inclusive, and health-promoting UMass Boston campus.

- Create an equitable physical environment that is welcoming and inclusive and that serves students, faculty, staff, and community members of all identities and backgrounds.
- Foster a sense of belonging through improved way-finding and building connectivity.
- Improve campus edge identity and arrival experience.
- Enliven ground floor spaces with increased transparency and improved building access.
- Integrate the campus with the waterfront and the surrounding community.

2

Invest in a high-quality and inclusive learning environment that supports the university's core values.

- Reinvest in heritage buildings to align with current pedagogies and eliminate the disparities between existing campus facilities.
- Provide new and enhanced physical space to support teaching, learning, research, and community engagement.
- Create a more sustainable campus to reflect the university's commitment to the environment and to ensure future growth and longevity.



3

Create a physical campus that supports community-university reciprocal engagement.

- Leverage the campus location and provide increased community access to support academic priorities that advance UMass Boston's urban mission.
- Cultivate collaborative strategies and partnerships that integrate campus plans with those of the larger community.
- Explore opportunities to expand beyond Columbia Point to enhance community, workforce, and economic development and increase experiential learning opportunities.

4

Leverage assets and resources to support a sustainable, resilient, and nimble campus.

- Prioritize sustainable site development, energy-efficient building design and materials, renewable energy sources and technologies, use of recyclable and locally available materials, and increased reliance on clean transportation alternatives.
- Maximize the versatility of space and infrastructure to accommodate modifications to meet future needs.
- Minimize carbon emissions and meet our commitment for net zero by 2050.
- Prioritize projects at a variety of scales that have the greatest impact.





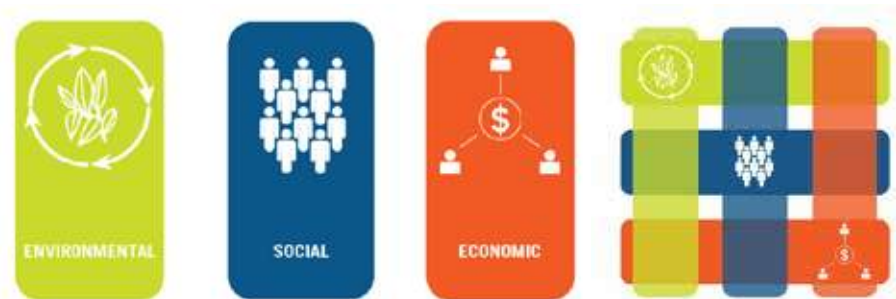
6. HEALTHY AND SUSTAINABLE CAMPUS COMMUNITY



Healthy and Sustainable Campus Community

Purposeful Integration

Sustainability is not only about environmental and economic impacts but is about the overlap and interdependence of environmental and economic issues with restorative justice, equity, diversity, and inclusion. Therefore, the university defines sustainability as “an interdisciplinary effort to simultaneously support human health and well-being, preserve environmental quality, and maintain fiscal responsibility.” Sustainability efforts are deeply connected to diversity, equity, and inclusion work; there is no sustainability without social justice.



UMass Boston is working to integrate disparate sustainability efforts that address environmental, social, and economic issues into a purposefully integrated approach.

As the only public research university in Boston, UMass Boston takes the relationship between the university and its surrounding community seriously. Gathering spaces both outside and indoors are a high priority supporting both sustainability outreach as well as providing broader opportunities for engagement between the university’s academic mission and the general public. This engagement between the institution and its community is directly related to diversity, equity, and inclusion activities on campus.

The intersections of health and well-being with sustainability have increased as our world has responded to the COVID-19 pandemic and more frequent and severe impacts from climate change. Active mobility solutions for those who are able, high indoor air quality, and other strategies integrate the topics of health, well-being, and sustainability to support the UMass Boston community.

The Campus Master Plan incorporates sustainable site development, energy efficient building design and materials, use of recyclable and locally available materials, and clean transportation alternatives. Electrification of most campus energy uses along with renewable electricity provides a path to zero carbon emissions. The university is committed to investing in buildings that are both resource-efficient in construction and operation and supportive of human health and well-being. The university's location on a peninsula creates a particularly unique relationship between stormwater and sea level rise, elevating the potential impact of these issues on future campus development. Recommendations of this plan elevate the relationship between landscape performance, stormwater management, and climate change adaptation and mitigation.

As UMass Boston advances its commitments to sustainability, it engages the Commonwealth of Massachusetts legislation; the University of Massachusetts Sustainability Policy; the Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment Rating System (AASHE STARS); and its own unique social and physical environment. While all of these accountability tools are a priority, the university's primary organizational structure for communicating sustainability goals, targets, and actions most closely aligns with the University of Massachusetts Sustainability Policy and specifically its ten organizing principles.

UMass Boston plans to develop a Sustainability Plan that will integrate the recommendations made in the Campus Master Plan Update and the Energy and Carbon Master Plan while furthering the development of goals, targets, and actions related to the built and unbuilt aspects of sustainability, as well as climate change adaptation and mitigation, and their intersections with health and well-being and environmental and racial justice. The sustainability recommendations included in the Campus Master Plan focus primarily on elements of sustainability that have a built implication, but many other important aspects of sustainability will be incorporated in the forthcoming UMass Boston Sustainability Plan.

UMass Boston anticipates completing its first AASHE STARS submission in 2023 and maintaining that documentation every three years. Beyond annual systemwide reporting on how achievements meet the Commonwealth's Executive Order, maintaining an AASHE STARS report will elevate the university's ability to communicate its sustainability accomplishments and will support better peer benchmarking.

The various accountability tools noted above – Commonwealth legislation; the University of Massachusetts Sustainability Policy; and AASHE STARS – speak to diversity, equity, inclusion, and health and well-being to varying degrees, but not necessarily to the extent with which UMass Boston values these topics. Recommendations within this plan elevate these issues to support the institution in achieving its unique sustainability goals.

Contributing Elements

Clean Energy and Decarbonization

To continue advancing UMass Boston toward its 2050 carbon neutrality target, the institution will implement its Energy and Carbon Master Plan (ECMP) including recommendations to:

- Phase central plant electrification through expansion of the Salt Water Pumping Station or air source heat pumps
- Standardize functional criteria for campus mechanical systems
- Complete major renovations to achieve energy savings and resiliency improvements

Additional information is included in the ECMP.

Climate Resilience and Preparedness

In alignment with *Executive Order 594* Leading by Example: Decarbonizing and Minimizing Environmental Impacts of State Government, UMass Boston has begun to evaluate energy and resiliency strategies through its Energy and Carbon Master Plan. The Energy and Carbon Master Plan evaluates the university's exposure to future flood, wind, heat, and drought hazards to assess existing conditions. Most of the campus is outside of the anticipated flood zone, but as climate change continues to progress, it is possible that the campus will be susceptible to storm surge and sea level rise. Extreme heat is also a risk to campus as no cooling systems currently have standby power. The Energy and Carbon Master Plan (ECMP) makes recommendations regarding how to best mitigate exposure to these risks.



ECMP Resiliency Strategies

| Strategy | Climate Hazard | | | Cost |
|--|--|--|---|--------|
| | Precipitation  | Storm Surge  | Extreme Heat  | |
| Structure and Envelope | | | | |
| Flood damage resistant materials should be continuous from the lowest point in the building up to the Design Flood Elevation (DFE). | | | | \$\$ |
| Openings including those for HVAC, electrical, plumbing, etc. should be located above the design flood elevation. | | | | \$ |
| High thermal performance masonry with attention to managing moisture and permeability. | | | | \$\$ |
| Design roof drainage to prevent water infiltration and structural failures. Improving roof insulation at the eaves of sloped roofs will reduce the freeze-thaw cycling of ice and snow on the roof that leads to ice dams. | | | | \$ |
| Use a light colored 'cool roof' to reduce roof temperatures compared to standard built up asphalt, rubber, black EPDM, or other dark roofs. | | | | \$\$ |
| Shading devices, operable windows, and screens can be integrated into the design to help reduce temperature-related climate impacts, including overheating during heat waves. | | | | \$\$ |
| Windows play an important role in minimizing the negative effects of climate hazards like extreme heat and flooding, by providing daylighting, improved thermal performance, enabling emergency egress, and providing building occupant comfort. | | | | \$ |
| Interiors | | | | |
| Install slip resistant waterproof flooring such as textured tile in common areas to both resist flood water damage and to help prevent injury during egress in the event floors become wet. | | | | \$\$ |
| Ground floors that are used for residential, classroom, or utility space and located below the design flood elevation can be repurposed to parking, access, or storage space and wet floodproofed. | | | | \$\$\$ |
| Ground floors with high ceilings can be reconstructed to elevate portions above design flood elevations. | | | | \$\$\$ |
| Raise elevator components above the design flood elevation and mitigate flooding in elevator pits by waterproofing the interior of the pit and installing sump pumps. | | | | \$\$\$ |
| Systems | | | | |
| Design generator capacity to include cooling center room in critical buildings or a permanent exterior electrical connection so that temporary generators can be connected to emergency circuits. | | | | \$\$\$ |
| Locate critical equipment such as electrical equipment, conduits, panels, wiring, etc. above design flood elevation. | | | | \$\$ |
| Locate HVAC equipment above design flood elevation. | | | | \$\$\$ |
| Sump pumps can be installed to remove water from below-grade areas and drain to a landscaped area outside of the building. | | | | \$\$ |
| Seal penetrations through outside walls, especially where service runs underground. | | | | \$\$ |
| Site | | | | |
| Deployable flood barriers can serve as an additional strategy beyond the building. | | | | \$\$\$ |
| Use light colored pavement (high albedo) and open grid pavement to help reduce heat impacts. Open grid and permeable pavements help absorb stormwater. Some materials will require modified maintenance practices. | | | | \$\$ |
| When planning landscaping, consider the potential flood mitigation and cost savings opportunities that Low Impact Development (LID) or green infrastructure may present. LID techniques, such as implementation of bioswales or rain gardens (for stormwater management) also have co-benefits including area beautification and localized temperature moderation. | | | | \$\$ |

Diversity, Equity, and Inclusion

Founded to serve the City of Boston, the university reflects the growing diversity of the community it represents - UMass Boston's community includes representation from 136 countries. The university community is the most diverse in New England and the third most diverse in the nation. UMass Boston brings people and ideas together to elevate Boston through scholarship and engagement that informs public policy and shapes strong, resilient communities.

The campus reflects a diverse, complex world with an unwavering commitment to bring education to all. Students and faculty drive groundbreaking research in all fields of study, and the physical campus and campus culture model coastal resilience, health and well-being, and accessibility. UMass Boston is an economic catalyst, unrivaled in providing Boston's workforce with a versatile talent pipeline, across sectors and industries. This distinction is demonstrated by the advocacy for equality and inclusion and meeting all students where they are to support their success. The university thrives as a community of people who learn diverse life experiences from one another.

UMass Boston's Office of Diversity, Equity, and Inclusion (ODEI) aspires to create a campus climate that affirms diverse identities and experiences, fosters value and respect for all community members, and celebrates differences. ODEI actively supports and advances the university's values of diversity and inclusion, engagement, transformation, and cultural development. ODEI acts as an advocate, resource broker, educator, and dialogue facilitator to ensure that all members of the campus community are included, respected, and valued in all spaces.



To advance a diverse, equitable, and inclusive community the Campus Master Plan recommends:

- **Advancing spatial equity.** At present, spaces across campus offer dissimilar levels of occupant comfort, accessibility, and amenity. Upgrading programming and quality of space as well as envelope repairs, system improvements, accessibility, and connectivity will create a more equitable campus in which all community members have access to high-quality environments. Advancing spatial equity also includes bringing the quality of spaces in heritage buildings to comparable levels of performance and amenity to spaces within newer buildings on campus.
- **Creating inclusionary spaces for all races, cultures, and identities.** All races, cultures, and identities deserve space on campus that allows them to represent their authentic selves. Gathering spaces will allow for social interactions, meetings, and studying opportunities that meet the unique needs of various identities across campus.
- **Campus gateways that are intuitive and accessible.** The proposed gateway building, to be located on the existing Service and Supply Building site, is the hallmark of this objective. New development on this site will become the front door of the campus, welcoming the campus community and visitors while providing a vertical transition from University Drive West to the new quad. Intuitive and accessible campus gateways immediately make newcomers to campus feel welcome and included in the campus environment.
- **Wayfinding systems that simplify pedestrian connection and promote orientation.** The Campus Master Plan promotes a campus that is easy to navigate through visual cues and signage. The result is a legible system of campus connectors—interior and exterior—that fosters a strong sense of inclusion and belonging. Such systems should be multi-sensory and allow for diverse user groups with varied mobility to successfully navigate the physical campus.
- **Markers and signage that celebrate cultural heritage.** As one of the most diverse universities in the United States, UMass Boston has abundant opportunities to provide art, interpretive signage, and plantings that showcase people, place, and culture.
- **Promoting safety through programming.** Members of the campus community experience the physical campus with varying levels of safety. Having multiple learning and social functions within each interior and exterior space that extend programming throughout the day and evening hours will increase the perceived safety and vibrancy of campus for more members of the community.

Green Building Design

Green buildings are understood to have lesser environmental impact through their design, construction, operation, and decommissioning. In Massachusetts, green buildings are well defined through legislation and all new construction and major renovations at UMass Boston are required to achieve at minimum LEED Silver certification as well as reduce their energy use intensity (EUI) by at least 20% compared to an equivalent building that meets the Massachusetts Energy Code.

When it opened in 2015, UMass Boston's Integrated Sciences Complex (ISC) was the first new academic building on the University of Massachusetts Boston campus in nearly 40 years and the first campus building to achieve LEED Gold certification. University Hall (UH) followed in 2016 and became the second UMass Boston building to achieve LEED Gold certification. In 2019, UMass Boston's first-ever residence halls achieved LEED Gold status.

Beyond meeting these requirements, UMass Boston will consider how to integrate elements of the WELL Building Standard into the new construction and renovation of its facilities. WELL is a third-party building and operations rating system that evaluates the extent to which facilities support human health and well-being. While some elements of the system can be integrated into construction, such as access to daylight and views and the minimization of VOCs in construction products, other features of the system require building maintenance practices that ensure ongoing operations support occupant health and well being. Elevating elements of WELL in the development of UMass Boston's built environment emphasizes the institution's desire to develop buildings that are both resource-efficient to construct and operate, as well as supportive of human health and well-being.

UMass Boston will also consider how it might pursue LEED Zero Carbon and/or LEED Zero Energy, programs that are available to LEED-certified projects that recognize net zero carbon emissions through avoidance over a period of 12 months and source energy use balances of zero over a period of 12 months respectively. Achieving these certifications at a building scale could support the institution in demonstrating accountability toward its campus-wide carbon neutrality goal.



2015
Integrated Sciences Complex (ISC)
LEED Gold Certification



2016
University Hall
LEED Gold Certification

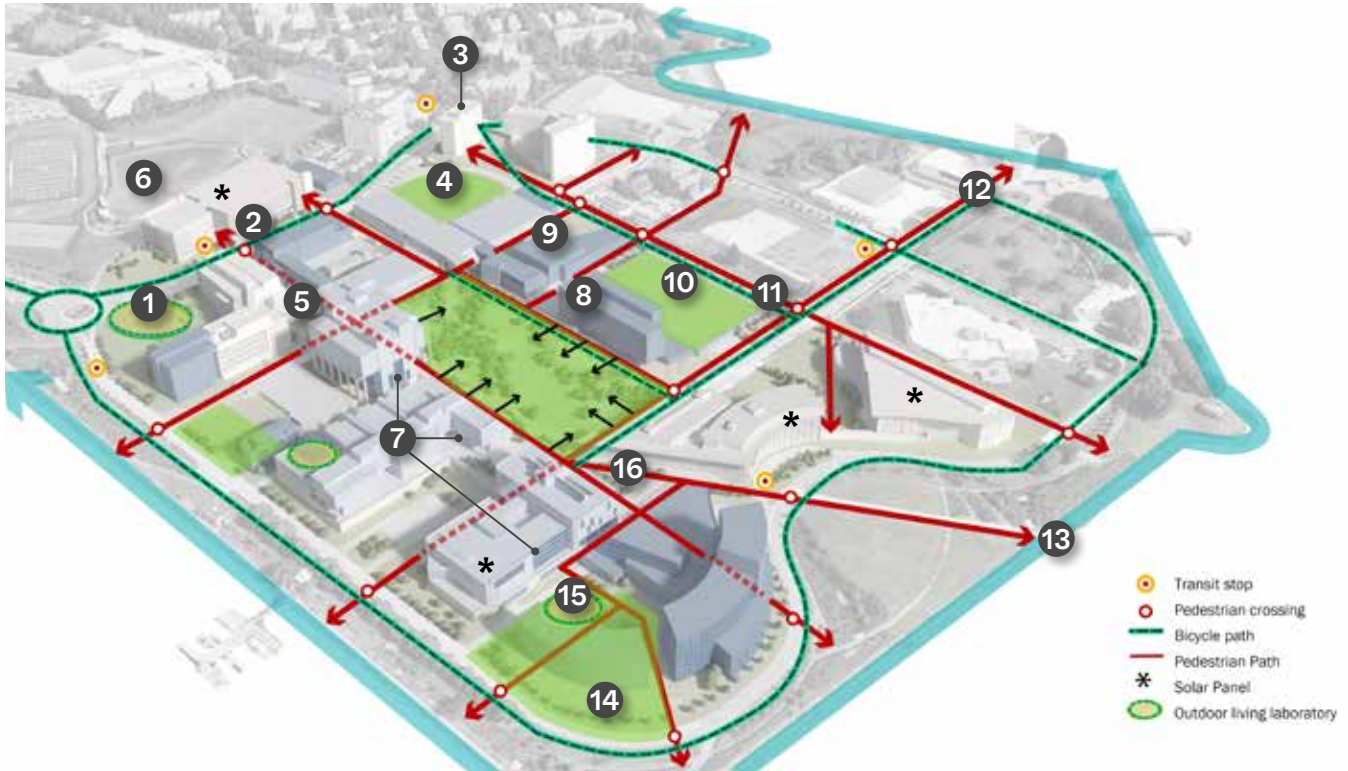


2018
Residence Halls
LEED Gold Certification

Healthy Campus

Human health and well-being are intrinsically connected with planetary health and environmental justice. The burden of poor human health resulting from environmental degradation is borne disproportionately by communities of color and low-income communities. UMass Boston is committed to developing a positive culture of health and well-being that is manifest in its physical environment, formal and informal learning spaces, and departmental expertise. This includes elevating biophilic connections that support humans' innate need to be connected to the natural environment. To advance human health and well-being the Campus Master Plan recommends:

- **Increasing connectivity within and beyond Columbia Point.** UMass Boston recognizes the importance of existing walkways that connect the campus with the MBTA, Moakley Park, and future Dorchester Bay City development. The Campus Master Plan broadens these connections through both visual and physical connections to nearby institutions such as the Archives, Kennedy libraries, and Boston College High School. The plan also links several internal walkways with the HarborWalk. Such connections provide opportunities for those who are able to access low-carbon physical mobility.
- **Adding green space and plantings that provide both respite and active recreation opportunities.** The quad, proposed playfields, and proposed courtyard spaces will become important additions to existing greenspace on campus. Collectively, these spaces will provide opportunities to elevate biophilic connections between the campus community and Boston Harbor while simultaneously providing opportunities for working landscapes that support coastal resilience.
- **Increasing outdoor comfort through landscapes and buildings.** Future building renovations, as well as new buildings and open space, should address Columbia Point's unique microclimate, and lengthen the number of days that the community can enjoy outdoor spaces. Providing shade in outdoor spaces during the summer, as well as windbreaks in the winter, can expand the seasons in which the campus community can comfortably engage the natural environment.
- **Prioritizing access to daylight and views in interior spaces.** New buildings and building renovations should provide transparency within their façades, particularly on the main levels. Access to daylight and views is necessary for orientation and well-being, showcases social and learning activities within building spaces, and reduces the demand for electric lighting to conserve energy.



- | | | | |
|---|---|---|--|
| <ul style="list-style-type: none"> 1 Campus as a living laboratory with areas showcasing natural and marine ecologies 2 Improved transit connection and additional shuttle stop(s) on West Campus Drive 3 Walkable Student Housing 4 Softball Field | <ul style="list-style-type: none"> 5 Welcoming, accessible and intuitive campus entry 6 Baseball field 7 More natural light for interior spaces 8 Active spaces open to quad 9 Wellness Center | <ul style="list-style-type: none"> 10 Multi-Purpose field 11 Provide dedicated bicycle networks and consider auto-free streets 12 Better outdoor connectedness, including connections within and beyond Columbia Point | <ul style="list-style-type: none"> 13 Connecting campus with the surrounding area, Harborwalk 14 New waterfront quad/passive recreation: New areas for outdoor passive and active recreation 15 Outdoor living laboratory 16 Introducing human-scale elements along the first floor of buildings |
|---|---|---|--|

While UMass Boston’s built environment is anticipated to grow in the coming years, the institution will also continue to operate and maintain over 1.7 million square feet of existing space. Ensuring existing space uses resources as efficiently as possible is critical to reducing the institution’s environmental impact.

It is anticipated the forthcoming Sustainability Plan will articulate further goals, targets, and actions related to sustainable campus operations that align with Commonwealth legislation, the UMass Sustainability Policy, AASHE STARS, and other considerations unique to UMass Boston.

Landscape and Biodiversity

UMass Boston's unique site on Columbia Point overlooking Boston Harbor is rich with opportunities to utilize the campus as a living laboratory for coastal resilience. A future greenhouse, access to the harbor via the ADA accessible Fox Point boat dock, campus gardens, and the HarborWalk can provide hands-on learning, serve as visible reminders of the campus' ecological context, and support classroom and research activities.

As UMass Boston continues to develop outdoor spaces, priority should be given to working landscapes that can protect against storm surge and provide habitat - as opposed to turf grass. Efforts should also be made to use full cutoff exterior light fixtures to preserve dark skies for migratory birds while preserving safety for pedestrians and vehicles.

- Evaluate landscape maintenance protocols to prioritize the use of electric or battery-powered equipment to preserve outdoor air quality.
- Codify integrated pest management strategies to ensure practices that reduce synthetic pesticides are maintained.

Sustainable Campus Fleet

In alignment with both Executive Order 594 and AASHE STARS metrics related to campus fleet electrification, UMass Boston is anticipating future infrastructure to support the transition away from fossil fuels. The university has a unique array of campus fleet vehicles including cars, trucks, and boats that support a wide range of engagement with Savin Hill Cove, Dorchester Bay, and beyond. The university should also explore options for more sustainable shuttle vehicles provided by external vendors.

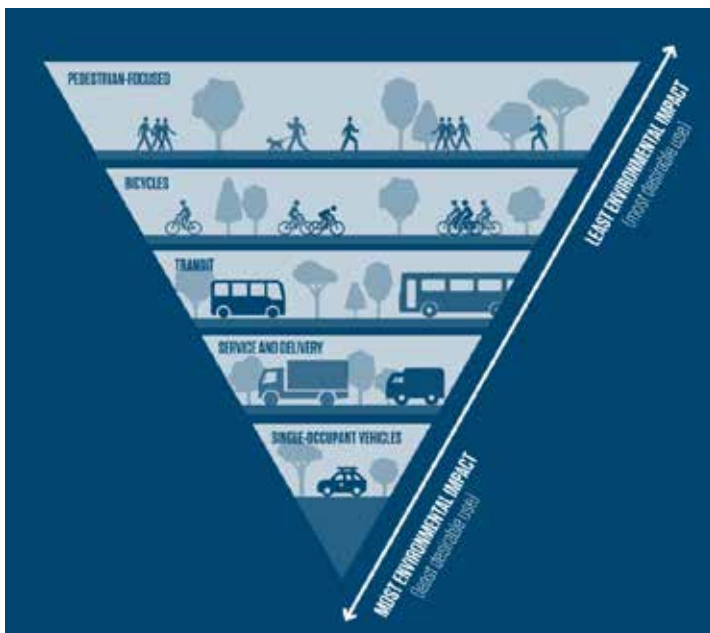


Sustainable Commuting

Beyond the campus fleet, the daily transit of 8,000 to 10,000 students, faculty, and staff to and from the UMass Boston campus has a substantial impact. Planning for low-carbon transportation that is safe, accessible, and easy to use is a critical priority included in the Campus Master Plan. Prioritizing active commutes (walking, bicycling) for those who are able also provides important connections to health and well-being for the campus community. Approximately 53% percent of students and 20% percent of faculty and staff currently arrive by public transit. Reinforcing this practice by adding transit hubs across from West Garage and north of Clark Athletic Center could help increase these percentages.

Additional strategies to increase sustainable commuting may include:

- Exploring the potential of campus access via water taxi.
- Expanding bicycle networks beyond those integrated into the loop road and Mt. Vernon Street in coordination with neighborhoods adjacent to campus.
- Adding new transit hubs and expanding the existing ones at the Campus Center.



Waste Reduction and Recycling

Waste management efforts should prioritize waste minimization which is intrinsically linked to issues of sustainable procurement. At some point, any product that is purchased reaches the end of its useful service life, thus waste minimization begins with prioritizing the procurement of products that have durable, circular life cycles. Waste diversion can be achieved through myriad strategies including recycling, composting, and manufacturer take back programs.

Waste comes in many forms and as a result, has varying management strategies:

- Organic wastes, such as those from foodservice operations and landscape maintenance
- Recyclables wastes, such as paper, cardboard, glass, and plastics
- Hazardous wastes, such as lab chemicals
- Electronic wastes, such as computers
- Durable goods, such as furniture
- Construction waste, such as concrete, steel, and aluminum

This campus plan prioritizes renovation and renewal of existing facilities as a waste minimization strategy. The demolition of existing buildings generates tons of construction waste. While this waste can often be diverted from landfill, building reuse is a waste minimization strategy that is critically aligned with UMass Boston's sustainability goals. Reuse of existing facilities also supports UMass Boston's environmental justice goals by reducing the volume of new construction materials required and therefore minimizing the impacts of supply chains on fenceline communities adjacent to resource extraction sites and manufacturing facilities.

The university already incorporates many sustainable waste reduction operations including a comprehensive recycling program, food and greenhouse waste composting, and zero-waste and eco-friendly dining. The following waste minimization strategies should continue and be expanded wherever feasible:

- Limiting the availability of single-use plastics.
- Replacing single-use items with easily cleaned, durable alternatives.
- Sharing electronic infrastructure such as printers and copiers centrally.
- Ensuring appropriate infrastructure for the temporary storage of movable equipment, capital equipment, and non-capital equipment is available including physical space, databasing, and interdepartmental access to inventory.

Wastes that cannot be avoided should be diverted from landfill to the greatest extent practical. Strategies for waste diversion may include:

- Evaluating the availability and viability of composting infrastructure for both back-of-house and front-of-house food service operations.
- Ensuring landscape wastes are composted either on-site or through third-party partnerships.
- Evaluating the scope and availability of waste diversion infrastructure. Ensure all recycling and landfill containers are consistently branded and collocated in both indoor and outdoor environments.
- Ensuring partnerships are maintained with qualified electronics recyclers to maintain data safety and appropriate recycling of electronic equipment.
- Engaging in manufacturer takeback programs to keep durable goods and construction materials from landfills.



Universal recycling containers support wider use by the campus community because only one behavior must be learned.

HPD, Health Product Declaration®

HPDs provide a standardized way of reporting the material contents of building products and their potential human health hazards.



EPD, Environmental Product Declaration®

EPDs provide an internationally standardized method for communicating the environmental performance of a product or service throughout its life cycle.



Cradle to Cradle Certified®

This global standard assesses the safety, circularity, and responsibility of materials and products' sustainability performance.



Green Seal Certified®

Green Seal certification ensures that a product or service is third-party verified to meet the performance, health, and environmental criteria of this science-based standard.



Green Label Plus

Green Label Plus for carpet, adhesives, and cushion verify products meet stringent volatile organic compound (VOC) emission requirements to support indoor air quality.



FSC, Forest Stewardship Council®

FSC certification ensures wood products come from responsibly managed forests that provide environmental, social and economic benefits.



NAF / NAUF / ULEF

Composite wood products often contain formaldehyde, a known human carcinogen and VOC. No-added formaldehyde (NAF) composite wood products should be specified whenever available. No-added urea-formaldehyde (NAUF) or ultra-low-emitting formaldehyde (ULEF) resins should be used when NAF is not available.



WaterSense Label

This label identifies the most water-efficient products on the market that have been independently certified to meet EPA criteria.



Environmentally Preferable Purchasing

Environmentally preferable purchasing at UMass Boston is governed by Commonwealth legislation that specifies the procurement of energy-conserving equipment such as office equipment, appliances, HVAC equipment, light bulbs, lighting ballasts, street lights, motors, water heaters, thermostats, and food service equipment. Commonwealth legislation also addresses the minimization of Volatile Organic Compounds (VOCs) in office equipment, furniture, flooring, paint, and construction materials.

Both Commonwealth legislation and AASHE STARS establish similar criteria for electronics purchases using Electronic Products Environmental Assessment Tool (EPEAT) Silver as a minimum criterion. The Environmentally Preferable Purchasing Program and AASHE STARS also establish minimum recycled content standards for office paper.

Working with the Unified Procurement Services Team (UPST), the university should review its procurement contracts to ensure it outperforms both Commonwealth legislation and benchmarks within the AASHE STARS program. Design guidelines should also be reviewed and updated to align with design and construction industry standards regarding environmental and human health disclosures for construction materials and products.

- Ensure the ten most commonly used architectural products on campus (e.g., acoustic ceiling tile, carpet tile, etc.) are procured in alignment with the Environmentally Preferable Purchasing Program.
- Audit ongoing consumables used by housekeeping to ensure procurement is in alignment with the Environmentally Preferable Purchasing Program.
- Audit cleaning products to ensure products used on campus meet the environmental specifications established by the Environmentally Preferable Purchasing Program.

Zero-Waste and Eco-Friendly Dining

Food service operations create a unique environment for both procurement and waste minimization and diversion. UMass Boston's kitchens and dining service use biodegradable and compostable bags. The campus is a leader in its zero-waste dining program.

Organics composting began at UMass Boston in the late 1990s and has grown to become a comprehensive zero-waste program over the years. The campus has been using biodegradable and compostable bags since the 2000s and in the spring of 2005 it established a zero-waste dining program with compostable bags and food ware and comprehensive recycling in its dining halls. As UMass Boston engages in further sustainability planning, it is anticipated that these programs will be expanded.

Sustainable Water Systems

Sustainable water systems are an especially unique consideration at UMass Boston and include four unique considerations:

- Indoor water use, such as that consumed by showers, toilets, and urinals
- Outdoor water use, such as that consumed by irrigation systems
- Process water use, such as that consumed by building-scale heating and cooling systems
- Stormwater management, including storm events
- Seawater/air-to-water heat pumps

For indoor water use, the university will continue to require WaterSense labeled flush and flow fixtures in new construction and retrofit such fixtures into existing buildings to the greatest extent practical.

In the exterior environment, the impact of irrigation systems can be minimized through the reduction of underutilized turf grass spaces into native and adapted species. A plant palette that primarily incorporates native and adapted species requires less irrigation and has a greater capacity to support stormwater management. Where irrigation systems are required, high-efficiency, weather-controlled drip systems will be used for planting beds, and high-efficiency, weather-controlled spray systems will be used for turf grass. Existing irrigation systems should be audited to ensure systems are appropriately mapped and metered.

To support total water use accountability, buildings should be metered separately with unique loads sub-metered to support better leak detection and maintenance. Particularly in irrigation systems, zoning the systems and metering them appropriately can substantially reduce the amount of time required to diagnose any points of system failure during operations.

Cooling towers should be tested regularly to ensure optimized operations that balance the need for water treatment and makeup water. Other process loads should be sub-metered to isolate their consumption and support efficient operations.

Academic and Research Programming

Executing the changes to learning and research space recommended by the Campus Master Plan will be a catalyst that will increase opportunities for the campus community to learn about climate change and sustainability as they engage the campus environment.

As UMass Boston develops a Sustainability Plan, the institution should define goals about the extent to which climate change and sustainability are integrated into academic programs as well as the student experience. Providing both curricular and co-curricular opportunities to learn about these topics is critical to ensuring graduates can meaningfully advance these topics in their professional endeavors and is in alignment with UMass Boston's strategic plan.

Community Engagement

Permanent signage in particular could be deployed across interior and exterior campus environments to showcase sustainability elements and elevate the utility of campus as a living laboratory. The university has made many significant investments in energy efficiency and other strategies that benefit the campus community and the general public, but many of these investments are invisible. Daylighting these projects through signage will lead to greater awareness and underscore the university's commitment to sustainability.

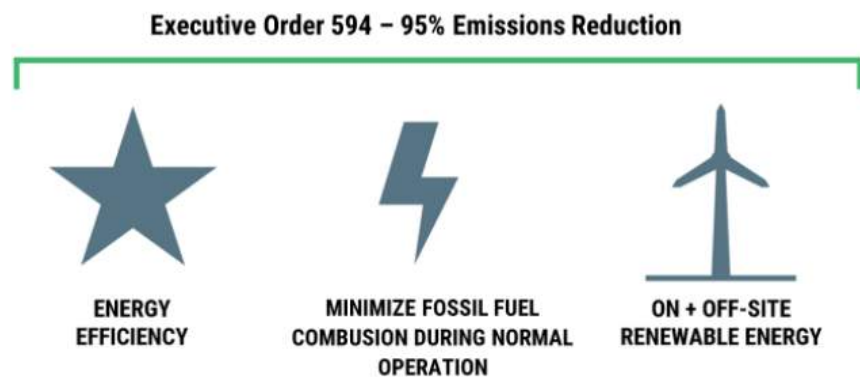
Accountability

Sustainability efforts at UMass Boston are guided by four reporting and accountability frameworks:

- Commonwealth of Massachusetts legislation, including Executive Orders 594 and 515
- The University of Massachusetts Sustainability Policy
- The Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment and Rating System (AASHE STARS),
- The unique social and physical environment of the University of Massachusetts Boston

Executive Orders 594 and 515

Executive Order 594, Decarbonizing and Minimizing Environmental Impacts of State Government, was issued in 2021 and builds on the Commonwealth's progress in achieving the goals of 2007's Executive Order 484. While Executive Order 484 spoke to reductions in greenhouse gas emissions across the Commonwealth, Executive Order 594 sets specific goals and requirements to decarbonize heating and cooling in state facilities and accelerate the shift to electric heating and vehicles that can be fueled with clean, renewable energy.



All UMass campuses are anticipated to work collectively to meet greenhouse gas emissions targets by reducing or eliminating emissions from onsite fossil fuel combustion in buildings and vehicles; expand energy efficiency efforts; ensure new construction and significant renovations meet the highest performance standards practical; prioritize electrification; increase onsite renewable energy generation; expand energy storage and other strategies to minimize peak demand; and ensure the resilience of state facilities in the face of climate change.

Executive Order 594 set specific targets for environmental performance including:

- Reducing emissions from a 2004 baseline associated with the burning of onsite fossil fuels at buildings and vehicles by 20% by 2025; 35% by 2030; 60% by 2040; and 95% by 2050.

- Acquiring vehicles such that the total state fleet consists of 5% zero-emission vehicles (ZEVs) by 2025; 20% ZEVs by 2030; 75% ZEVs by 2040; and 100% ZEVs by 2050.
- Reducing non-vehicle, petroleum-based oil consumption used to satisfy thermal loads for building and non-building uses from a 2004 baseline at state-owned facilities by 90% by 2025 and 95% by 2030.
- Reducing overall site energy use intensity (EUI), defined as weather-normalized Btu per square foot, from a 2004 baseline at state-owned buildings by 20% by 2025 and 25% by 2030.
- Increasing the total number of electric vehicle (EV) charging stations on state properties to 350 by 2025 and 500 by 2030.

The Executive Order also establishes requirements for the efficiency of new construction and renovations in the built environment, vehicle efficiency, and renewable and clean energy resources. Additional sustainability priorities are identified including demand management and energy storage, resilience, building-scale energy metering, water conservation, environmentally preferable purchasing, waste minimization and recycling, and sustainable landscaping.

UMass Boston follows the Environmentally Preferable Purchasing Program established by Executive Order 515, Establishing an Environmental Purchasing Policy, through the goals, targets, and actions of the University of Massachusetts Sustainability Policy.

Executive Order 515 defines environmentally preferable products and services as those that contain recycled materials; conserve energy or water; minimize waste; are less toxic and hazardous; reduce the generation, release, or disposal of toxic substances; protect open space; and/or otherwise lessen the impact of products or services on public health and the environment. All UMass campuses were directed through the Executive Order to reduce their environmental impact through the purchase of such products and services when they are readily available, perform satisfactorily, and represent best value.

Implementation of the order leverages independent, third-party standards and certifications including Green Seal, EcoLogo, ENERGY STAR, BioPreferredSM, GREENGUARD, and Forest Stewardship Council (FSC) among others to readily identify environmentally preferable products. Specific purchasing initiatives within the order include:

- Procuring only ENERGY STAR-rated office equipment, appliances, HVAC equipment, and other ENERGY STAR-rated products and ensuring that such equipment has the power saving mode enabled at the time of installation and that staff are aware of these functions and their benefits.
- Purchasing only energy-efficient light bulbs, such as compact fluorescent lamps (CFLs) or light emitting diodes (LEDs) unless the purchase of a standard bulb is necessary for a specific purpose or function.
- Supporting the procurement of other energy-efficient products wherever possible, including high-efficiency motors, tankless water heaters, programmable thermostats, heating, ventilation and air conditioning units/systems, and food service equipment.
- Purchasing and using only those cleaning products that meet the environmental specifications established by the Environmentally Preferable Purchasing Program.
- Requiring cleaning service contractors to utilize cleaning products that meet the same or better standards than the Environmentally Preferable Purchasing Program.
- Requiring pest control firms or licensed Commonwealth staff to employ an integrated pest management (IPM) approach in Commonwealth facilities.
- Procuring products that contain no or low amounts of Volatile Organic

Compounds (VOCs) wherever feasible, including office equipment, furniture, flooring, paint, and construction materials.

- Purchasing computers, monitors, laptops, and other relevant equipment that have achieved a minimum Silver rating from the Electronic Products Environmental Assessment Tool (EPEAT).

The Environmentally Preferable Purchasing Program also establishes minimum recycled content standards for office paper, printed materials, office supplies, packaging, and storage boxes; office panels and interior and exterior furniture and equipment; janitorial paper products and trash liners; transportation products such as antifreeze, motor oil, tires, and traffic control devices; carpeting and flooring; compost and mulch; and plastic containers such as recycling containers and compost bins.

The University of Massachusetts Sustainability Policy

As one of five campuses in the University of Massachusetts system, UMass Boston maintains autonomy in responding to the unique sustainability considerations of its immediate environment, it also works collaboratively with other system campuses to advance environmental stewardship, responsibly manage financial resources, and serve the public good.

The University of Massachusetts Sustainability Policy records the goals and targets of UMass system campuses that will support the achievement of the direction provided through Commonwealth legislation. The policy is reviewed regularly and is currently under revision to integrate Executive Order 594 as well as other ways in which sustainability in higher education has evolved since the policy was last renewed in 2016. Each system campus, including UMass Boston, provides data annually to demonstrate accountability in advancing toward the goals and targets of the policy.

As of September 2022, the policy includes 10 principles, 12 goals, and 12 metrics in areas such as strategic planning, clean energy, clean energy, climate resilience and preparedness, green building design and sustainable operations, sustainable transportation, waste reduction, environmentally preferable purchasing, sustainable food services and water systems, academic research and programming, and community engagement.

UMass Boston has already begun to address these principles, goals, and metrics by completing the Campus Master Plan as well as the Energy and Carbon Master Plan.

| PRINCIPLES | GOALS | METRICS |
|---|---|---|
| <p>1 Sustainability Strategic Planning – Integration of sustainability planning and strategies into the university's strategic planning processes.</p> | <p>1.1 Complete a sustainability plan with a focus on energy projects at each campus, or update any existing plans, to align with the principles and goals outlined in this policy in order to adequately and efficiently understand the energy needs and potential sustainability projects on each campus.</p> | <p>Biennially report on the development progress of an Energy Master Plan/Sustainability Plan consistent with the Capital Plan reporting.</p> |
| <p>2 Clean Energy – Supports the development and use of clean and renewable energy sources.</p> | <p>2.1 Achieve UMass commitment to carbon neutrality by 2050 or as specified through the sustainability planning process occurring through the development of campus-specific action plans, as identified in Goal 1.1 as being necessary to achieve carbon reduction commitments and meet sustainability objectives, and UMass system's guiding principles towards this goal.</p> <p>2.2 Procure a defined amount of annual electricity consumption through renewable and clean energy sources as identified in Goal 1.1 as being necessary to achieve carbon reduction commitments and meet sustainability objectives.</p> | <p>Annually publish the latest available greenhouse gas (GHG) emissions inventory</p> |
| <p>3 Climate Resilience and Preparedness - Implementation of strategies to mitigate or reduce environmental impact.</p> | <p>3.1 Build climate resilience and preparedness standards into the university's capital planning process and emergency management and business continuity planning.</p> | <p>Published plans including measurable objectives with corresponding strategies.</p> |
| <p>4 Green Building Design and Sustainable Campus Operations – Strategies to address emissions associated with designing, building, maintaining, and operating campus buildings and grounds.</p> | <p>4.1 Any new construction must meet the MA LEED Plus green building standards (LEED most current version) or other standards as identified in Goal 1.1 as being necessary to achieve carbon reduction commitments and meet sustainability objectives and continue to research and employ improved sustainable building practices.</p> <p>4.2 Reduce energy consumption and determine goals consistent with capital investments and annual programs implemented in support of energy consumption reduction, as identified in Goal 1.1 as being necessary to achieve carbon reduction commitments and meet sustainability objectives.</p> | <p>Total Energy Use Intensity Per Square Foot</p> |

| PRINCIPLES | GOALS | METRICS |
|--|---|---|
| <p>5 Sustainable Transportation - Integrating sustainable best practices for the use and maintenance of campus fleets, student/employee commuters, and public transportation options.</p> | <p>5.1 Reduce vehicle fuel consumption of the university vehicle fleet by promoting the use of public transportation, reducing the number of single occupancy vehicles, and increasing the use of other alternative fuel transportation for faculty, staff, and students.</p> | <p>Annually report on the vehicle fleet composition and growing commuting options for faculty, staff, and students</p> |
| <p>6 Waste Reduction and Recycling – Promote strategies to encourage waste reduction and re-use and acknowledge the importance of preventative measures.</p> | <p>6.1 Employ strategies around preventative measures in waste diversion to promote source reduction, re-use and recycling of used materials.</p> | <p>Annually report on materials recycled, reused, composted, and disposed</p> |
| <p>7 Environmentally Preferable Purchasing – Implement a procurement approach to access environmentally-conscious products whenever applicable and available.</p> | <p>7.1 Establish Environmentally-Preferable Products Procurement Program (EPP) and continue to implement annual procurement goals to move toward alignment with the standards of the Environmental Purchasing Advisory Council where ever appropriate and consistent with available funding.</p> | <p>Annually report on purchasing of electronics, office paper, cleaning products, etc. and progress towards meeting established goals</p> |
| <p>8 Sustainable Food Services – Supporting sustainable food systems through food and beverage purchases.</p> | <p>8.1 Strive for each campus food service operation to procure sustainable food products while maintaining accessibility and affordability for all students and campus patrons.</p> | <p>Annually report on the percentage of dining service food products that are third-party verified and/or local and community-based sustainable food products</p> |
| <p>9 Sustainable Water Systems – Reducing campus water withdrawals can reduce pressures on local aquifers, streams, rivers, lakes, and aquatic wildlife.</p> | <p>9.1 Reduce potable water usage and determine goals consistent with capital investments and annual programs implemented in support of reducing potable water.</p> | <p>Annually report the potable water use per weighted campus user compared to baseline</p> |
| <p>10 Academic and Research Programming and Community Engagement – Ensuring Sustainability is part of Academic and Research programming and part of community engagement efforts.</p> | <p>10.1 Comprehensively integrate sustainability and climate neutrality into the core academic curriculum and research programs to create a means to enable students to use their campus as a living, learning laboratory.</p> | <p>Annually report on sustainability curriculum available to undergraduate students and on-going curricular developments</p> |

Alignment with AASHE STARS

The Association for the Advancement of Sustainability in Higher Education (AASHE) is the premier professional association for higher education's sustainability community. AASHE provides a stage for colleges and universities across the world to discuss their sustainability successes and challenges and administers The Sustainability Tracking, Assessment Rating System (STARS).

STARS is a self-reported data-sharing platform that supports colleges and universities in reporting how their institution advances sustainability in the areas of Academics, Engagement, Operations, Planning and Administration, and Innovation and Leadership. Depending on the number of points achieved, an institution earns the designation of Reporter, Bronze, Silver, or Platinum. AASHE publishes a Technical Manual, a Credit Checklist for the most recent version of STARS, and an Innovation and Leadership Catalog.

All scored AASHE STARS reports require unscored preface information to set the context for the institution's scored data. AASHE STARS requires an executive letter from the institution's president, chancellor, or other high-ranking executive that describes the institution's commitment to sustainability, background information, key achievements, and/or goals for future work. Institutions must also provide information about their campus boundaries and characteristics such as the gross square footage of campus buildings and current demographic data on enrollment, employees, and on-campus residents.

AASHE STARS' five major categories address Academics, Engagement, Operations, Planning Administration, and Innovation Leadership. The Academics category is further subdivided into two subcategories, Curriculum and Research, which acknowledges that one of the greatest impacts a university can have on global and local sustainability is the development of sustainability-literate graduates who are equipped to integrate resource conservation, financial literacy, and social responsibility into their work regardless of their course of study.

The Engagement category is similarly divided into two subcategories, Campus Engagement, and Public Engagement. Public Engagement is a particular priority at UMass Boston and the recommendations of the Campus Master Plan reflect that priority.

STARS' Operations category has the greatest overlap with this physical campus plan, as well as many of the goals and targets, articulated through Commonwealth legislation and the University of Massachusetts Sustainability Policy. Within Operations, STARS identifies numerous subcategories including Air Climate which primarily addresses greenhouse gas emissions; Buildings which addresses third-party certification of the built environment; Energy; Food Dining; Grounds; Purchasing which addresses procurement and aligns with the Commonwealth's Environmentally Preferable Purchasing Program; Transportation; Waste; and Water.

The Planning Administration category focuses on operational aspects of the university including how sustainability is planned for, how diversity and affordability are integrated into university operations, and how a college's finances can support sustainable investment. This category also focuses on the university as an employer and speaks to compensation and employee well-being.

Recognizing that every university is a distinct place with unique opportunities, STARS also includes an Innovation Leadership category to celebrate special undertakings an institution has made to advance sustainability in its community.





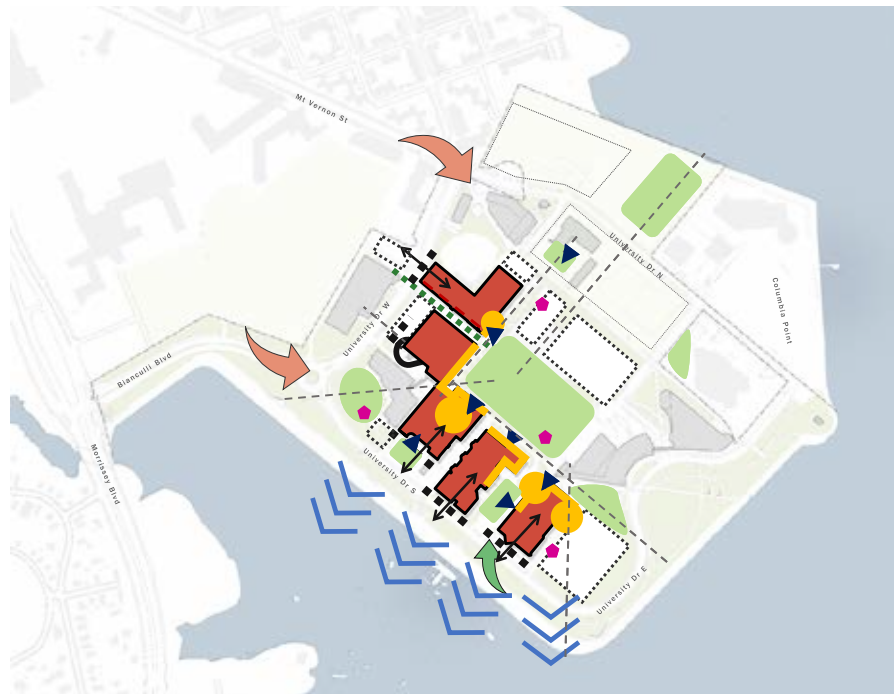
7.

CAMPUS MASTER PLAN

Campus Master Plan

Concept Plan

The concept plan established a framework of opportunities to improve the physical campus and to test development scenarios during the planning process. Building on UMass Boston's strengths by leveraging its waterfront location, the existing buildings, and the new quad, the concept plan prioritized heritage building renovations, improved connectivity, and increased transparency. It identified near- and long-term development sites and identified opportunities to integrate the campus with its neighbors and with the future Calf Pasture development. The concept plan responds to the university's priorities and reflects the shared aspirations of the future of the campus and serves as the basis for recommended campus improvements with features that tie back to the planning principles and campus analysis.



Concept Plan

Leverage Campus Location

- Strengthen partnerships and program opportunities within greater Boston.
- Take advantage of waterfront by maintaining, enhancing, and creating view corridors.
- Maintain expanded Fox Point boat dock resources for research, transit, and well-being.
- Enhance Harbor Walk with educational signage, well-being markers, and designated connections to campus core.



Leverage Campus Location

Improve Connectivity

- Create active, transparent, and accessible ground floor spaces fronting University Drive, Beacons Walk, and the new quad.
- Create visual and pedestrian connections to surrounding community including Harbor Walk, Kennedy Libraries, the Archives, Boston College High School, and the future Calf Pasture Development.
- Improve campus gateways and arrival sequence with branding and wayfinding.
- Provide improved and accessible connection between West Garage and academic core.
- Create building connections at the quad level that are accessible.



Improve Connectivity

Reduce the Campus Scale

- Create a network of open spaces at a variety of scales that integrate with the new quad, existing pedestrian circulation, University Drive, and the waterfront.
- Identify opportunities to modify existing buildings through additions, entries, and connections to exterior open space.
- Incorporate landscape elements and artwork to provide a human scale in large open spaces.



Reduce the Campus Scale



Increase Transparency and Permeability



Identify Future Campus Development Opportunities

Increase Transparency and Permeability

- Create active and transparent ground floor spaces fronting the new quad to showcase campus activity.
- Identify opportunities to increase frontage and entry from University Drive.
- Increase transparency in heritage buildings to provide water views.

Identify Future Campus Development Opportunities

- Optimize existing heritage buildings with major renovations.
- Identify opportunities for building additions and ground floor infill
- Densify the Academic Core.
- Integrate with future Calf Pasture Development.

Planning Scenarios

During the planning process, the design team explored multiple scenarios that further developed the concept plan and supported the university's goals. The options provided multiple strategies for achieving the development density to satisfy the findings of the space analysis. Each option strengthened campus connectivity, leveraged existing buildings through renovations, and included a variety of options for improved access to the water. They differed in their assumptions about development sites, playing fields, and central receiving. The scenarios were shared with the working group and the campus community to solicit comments on the strengths and weaknesses of each approach. The proposed plan combines the most successful ideas from each option into a single synthesized plan.

Campus Master Plan Update Overview

The Campus Master Plan provides a long-range vision for the future of the campus that is both visionary and realistic, and it builds on the successful implementation of the 2009 Campus Master Plan. While the 2009 plan focused on remediation and infrastructure stabilization, this plan aligns with the planning principles established during the planning process and prioritizes campus investments that will help establish a cohesive physical campus that supports the university's new strategic plan.

The Campus Master Plan identifies projects that help realize the university's strategic goals by addressing campus-wide initiatives, building-specific improvements, new development opportunities, and potential partnerships with the future Calf Pasture development. At a campus level, gateways, building connectivity, open space, and access to the water will create a more welcoming and inclusive campus. Activation of the new quad with transparent and active student space, both through renovations and new construction, will strengthen the campus community and will support sustainability and well-being.



Scenario A

| ELEMENT | INVESTMENT |
|---|--|
| Wheatley Hall McCormack Hall Healey Library Quinn Administration | Renovate |
| Campus Arrival | Upgraded circulation from West Garage to Plaza |
| Service and Supply | Façade improvements + modest addition |
| Development Sites | Along Quad, south of Wheatley |
| New Playfields | Multipurpose field along Beacons Walk |
| Service/Delivery | Reconfigured/screened at existing location |



Scenario B

| ELEMENT | INVESTMENT |
|---|---|
| Wheatley Hall McCormack Hall Healey Library | Renovate |
| Quinn Administration Service and Supply | Demolish and redevelop |
| Campus Arrival | Upgraded circulation from West Garage to Plaza |
| Development Sites | Quinn/Service and Supply, along Quad, south of Wheatley |
| New Playfields | Multipurpose field along Beacons Walk |
| Service/Delivery | Relocated to area between ISC and Healey |



Scenario C

| ELEMENT | INVESTMENT |
|--|---|
| Wheatley Hall McCormack Hall Healey Library Quinn | Renovate |
| Service and Supply | Major addition |
| Campus Arrival | Upgraded circulation from West Garage to Plaza |
| Development Sites | Service and Supply, between new quad and Beacons Walk |
| New Playfields | Southeast of Wheatley |
| Service/Delivery | Relocated to existing loading dock between Wheatley and McCormack |

Strategies for addressing the space deficit:

- Leveraging existing facilities through **renovation**
- Efficient and flexible **utilization** of existing space
- New **construction**
- Creative **partnerships** and other innovative opportunities



- Heritage Building Renovation
- New Construction



Illustrative Campus Master Plan

Heritage Building Renovation

- 1 Wheatley Hall
- 2 McCormack Hall
- 3 Healey Library
- 4 Quinn Administration Center
- 5 Service & Supply
- 6 Clark Athletic Center

Other Campus Facilities

- 7 Integrated Science Complex
- 8 West Garage
- 9 Campus Center
- 10 University Hall
- 11 Residence Hall East & West
- 12 Softball Field
- 13 Monan Park
- 14 Fox Point Dock

New Construction

- A Academic Building A
- B Academic/Recreation B
- C Academic Building C
- D Academic Building D
- E Academic Building E
- F Central Plant
- G ISC Addition
- H Campus Support Building
- I Clark Athletic Center Addition
- J Multi-purpose Field & Structured Parking

Calf Pasture Development

- K Historic Pumping Station
- L Calf Pasture Development Site

Site Improvements

- M Central Receiving
- N Grand Stair
- O Open Space/Plaza
- P Transit Hub

- Heritage Building Renovation
- New Construction





Harbor Point

Dorchester Bay

Mt Vernon St

John F. Kennedy Library

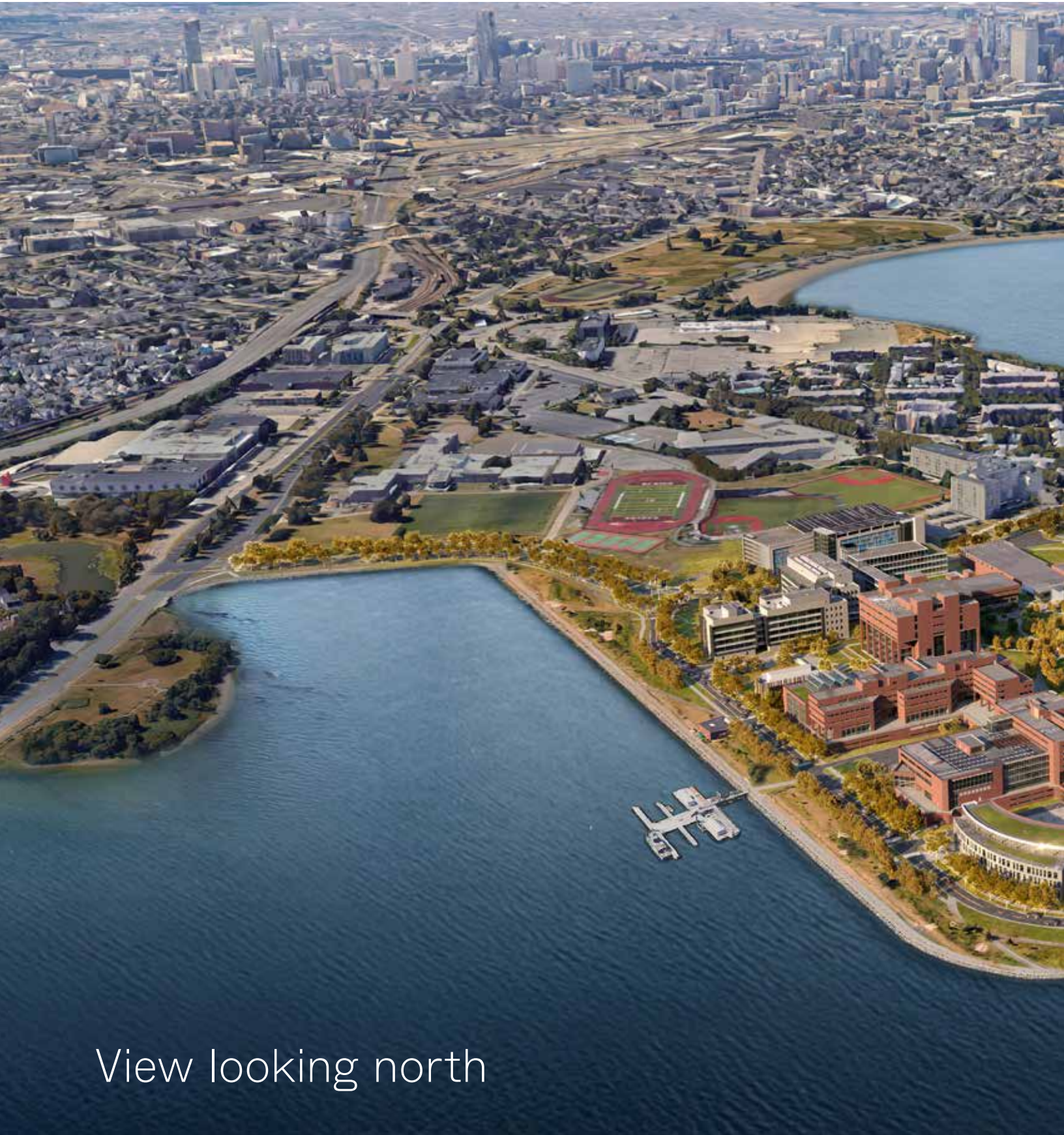
Edward M. Kennedy Institute

University Drive North

Massachusetts Archive

University Drive South





View looking north



Urban Design Framework

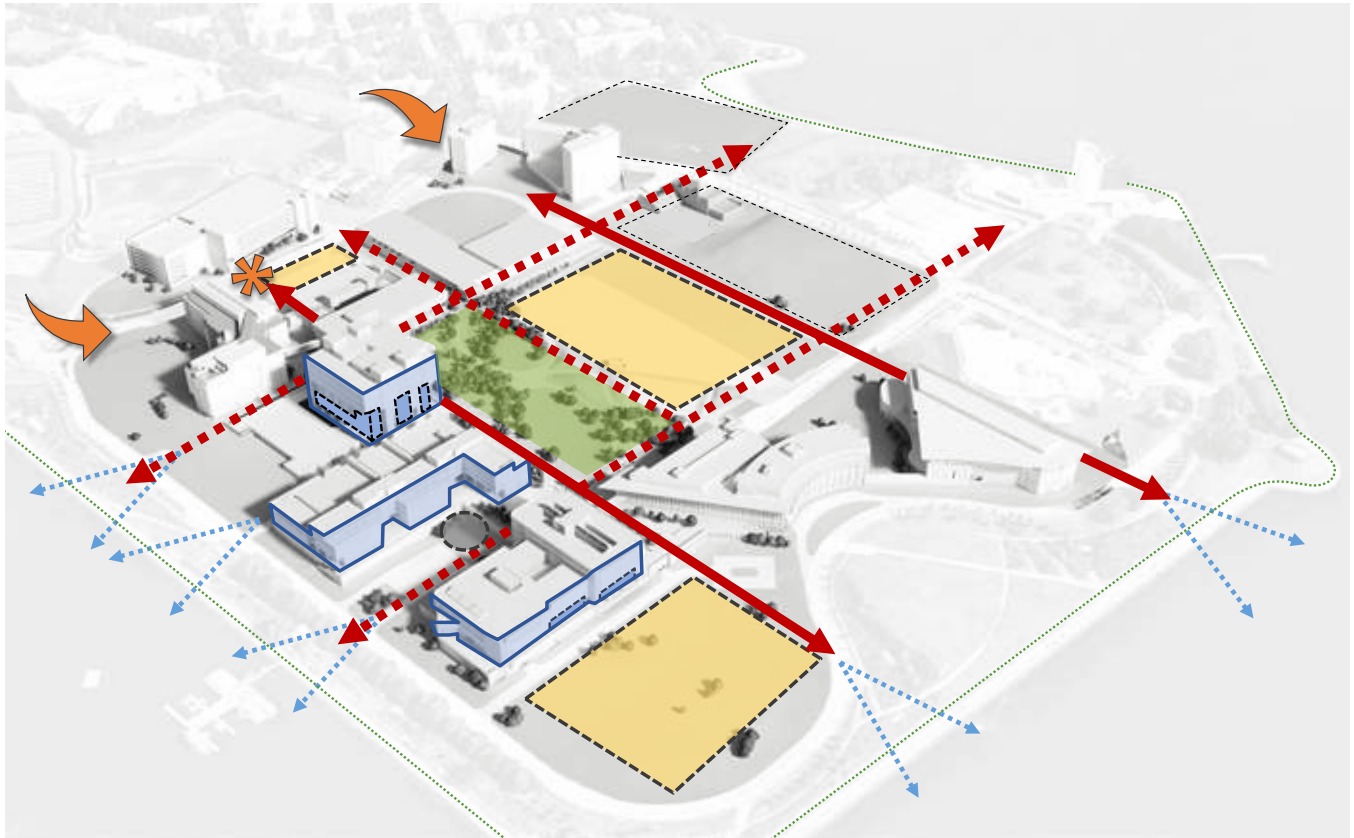
The UMass Boston Columbia Point campus opened its doors in 1974 as an inward-facing set of buildings and open space that created a fortress-like separation from its neighbors. Recent campus additions, including the removal of the original Science Center and construction of the ISC, as well as landscape improvements along the campus' southeast edges, have turned the campus outward to embrace the Boston Harbor and adjacent private and Commonwealth uses.








Contributing Elements and Systems

The Campus Master Plan envisions an even more powerful opportunity for the campus to blur its edges and to provide the campus and wider community with a legible network of corridors, open space, and landmarks. The plan's urban design framework builds on the planning principles in an effort to knit together existing structures, emerging open space, and future built projects into a cohesive whole.

- **Campus organization:** The proposed campus provides a welcoming face to surrounding institutional and residential neighbors, and celebrates its presence along the Boston Harbor. Topography plays a significant role in the experience of the campus with the main quad—currently under construction—located approximately 25 feet above the surrounding streets. To address this, buildings often have a lower-level entry and also a quad or concourse-level entry. Future landscapes and buildings are sited along the existing orthogonal organization of the campus. The urban design framework also anticipates the future Calf Pasture development—extending from the campus' northern boundary—and outlines possible massing and priority interconnected walkways to seamlessly connect the district.
- **Gateways:** All multi-modal traffic enters the campus from the northwest and southwest corners of campus. A future building on the site of the existing Service and Supply Building will create a primary gateway along University Drive West and will provide a new accessible campus entry with vertical circulation
- **Massing:** Existing campus buildings range from two stories to eleven stories, and consist of four 1974 buildings with austere façades and limited windows, one 1980s building, three modern buildings constructed over the last 18 years, and two residential buildings completed in 2018. The plan identifies four primary future campus buildings with heights ranging from six to ten stories and one energy support building. This massing complements the constellation of recent construction and also maximizes the limited building sites on campus. Intersection of exterior and interior space: A critical urban design goal is the transparent seam between the building edge and the open space at the sidewalk level. Proposed buildings should be designed to maximize glass along this level, taking advantage of both views of interior open space and long water vistas. Existing buildings should be renovated to remove opaque walls near primary pedestrian passageways, with an emphasis on building entries.

Planning Concepts



-  Campus Gateway
-  Improved Arrival Experience
-  Major Circulation Axis
-  Secondary Circulation Axis
-  Water Views
-  Heritage Building Renovation
-  Increased Transparency/Infill
-  Central Receiving
-  New Development Site
-  Integration with the Calf Pasture

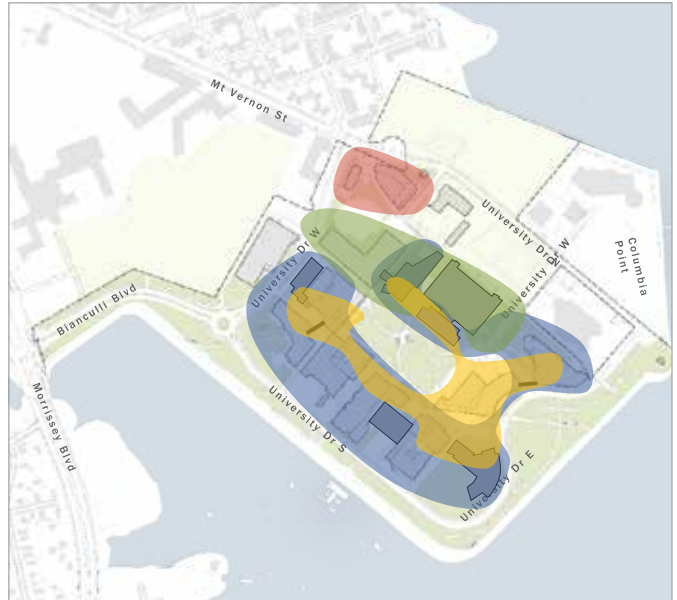
- **Mixed use:** Many of the heritage buildings were constructed to be self-contained environments that included learning, social, recreational, and cafeteria spaces. Today, much of the social space has been relocated to the Campus Center separating areas for social engagement from areas of formal learning. The result is a lack of vibrancy and student space in the heritage buildings. The Campus Master Plan recommends reintroducing student space into each building, supporting informal learning everywhere and providing nodes for collaboration, discussion, active study, and relaxation.
- **Open space and views:** The quad will be the centering, internal open space element for the campus, with a wave of perimeter open spaces that link the campus to the harbor. Wherever possible, glazing should be introduced in existing building façades that face the water, and long views supported at ground level along pedestrian walkways, in new open space—such as the proposed plaza and playfield southwest of Healey Library.
- **Circulation:** The system of roads seamlessly extends neighborhood and regional streets, including Mt. Vernon Street and Bianculli Boulevard, to University Drive. A network of pedestrian walkways parallels these roadways. An additional pedestrian overlay extends from the central quad, with primary north-south pedestrian pathways following the orthogonal grid and crossing the peninsula and through the campus, touching the water on both ends, and east-west walkways linking the water to the neighborhoods to the northwest. Over time, surface parking is repositioned into a structured garage whose roof is activated by an intercollegiate playfield.

These urban design features and systems combine to create a collegiate and memorable sense of place.

Existing



Proposed



- Academic
- Student Space
- Recreation/Athletic
- Student Housing



Existing Campus Connectivity



Proposed Campus Connectivity





An active and vibrant quad



Hierarchy of Open Space



The Campus Master Plan celebrates the campus' central quad and its unique oceanfront setting overlooking Boston Harbor. While there are limited views from the quad itself, pathways extend to overlooks and then cascade down to the water's edge, providing an intersection with marine activity and the HarborWalk recreational path that traces the shoreline approximately eight miles into downtown Boston.

Several landscape features enhance the organization of the campus and provide opportunities for respite, passive, and active recreation.

1. **Pedestrian-oriented campus:** The Campus Master Plan prioritizes pedestrian movement and establishes strong synergies between UMass Boston and its neighboring communities by creating multiple accessible public connections to the waterfront, and improving regional access through its new east-west pedestrian corridors.
2. **Welcoming, accessible, and intuitive campus entries:** The existing monumental sign at the north entry to campus and the traffic circle at the west campus entry announce arrival. The proposed new academic building adjacent to the existing Service and Supply is an important opportunity to improve the campus arrival experience and create a more welcoming campus. Connection between the West Garage and the new quad can be provided through both accessible vertical circulation and improved wayfinding. The Campus Master Plan also incorporates multiple primary and secondary pedestrian paths, as well as views, to improve campus connectivity and access to the water. The plan encourages active ground-level uses by suggesting outdoor learning spaces, seating areas, and recreation opportunities.

3. **Streetscape:** Canopy trees, signage, and—where appropriate—a furnishing zone should be integrated into all campus streets. Clear and accessible signage and wayfinding—both campus-wide and on identifying individual buildings and spaces—will support vehicular, cyclist, and pedestrian orientation.
4. **Connections to the Water:** The Campus Master Plan proposes enhanced universally accessible connections from the plaza level to the water 25' below. Pedestrian crosswalks at University Drive should have enhanced crossing treatments to ensure motorists anticipate and give right-of-way to all people crossing on foot, by bicycle, wheelchair, or electric personal vehicles.
5. **Outdoor comfort:** The university should continue to study micro-climate patterns on campus and provide mitigation if necessary. Pedestrian circulation that takes advantage of through-building corridors, arcades, and vegetative buffers should be considered.
6. **Playfields:** The Campus Master Plan identifies a series of university-owned and shared playfields to support intercollegiate and recreational sports. The existing softball field north of Clark Athletic Center will continue to serve university teams and will be joined by two proposed, on-campus facilities. First, a multi-purpose field is provided adjacent to Clark Athletic Center along Beacons Walk. The proposed field is located on top of structured parking. This playfield will provide practice and competition space for the university's soccer and lacrosse teams. This space also could be used for outdoor gatherings and programmed events. A smaller scale open space located adjacent to the proposed Healey Library plaza and facing the water provides opportunities for informal recreation. The size of this open space will be coordinated with the requirements of the future Central Utility Plant.
7. **Sustainability:** Open space and pedestrian amenities are integral to creating an active and vibrant public realm. All future buildings and landscapes should showcase campus sustainability elements for both existing initiatives—such as solar arrays and reflective roofs—and future opportunities such as building orientation, healthy buildings, increased daylighting to interior spaces, pedestrian-oriented features, carbon reduction, and campus as a living laboratory initiative.
8. **Campus as a living laboratory:** The Campus Master Plan recommends creating a series of outdoor areas that can be used as “living laboratories” on campus. The university should work with department heads to identify appropriate locations for these outdoor laboratories to assure that the spaces have appropriate orientation, access to tools and instruments, and adequate exposure. The goal is to have these spaces visible within the campus as observation areas for the campus community. These spaces can further support the research mission and build sustainability awareness. Potential ideas include showcasing natural and marine ecologies along the Harbor and southwest of the Integrated Science Complex and Wheatley Hall or test gardens along Campus Drive South. A more formal laboratory—a revisoned greenhouse area—is proposed on the rooftop of McCormack Hall.



Mobility

The Campus Master Plan embraces UMass Boston's unique urban setting and proposes to seamlessly integrate the campus into its surrounding community. The plan extends walkways and bikeways to its Columbia Point neighbors including the Kennedy libraries, Archives, and waterfront, and to future developments including the Calf Pasture and Dorchester Bay City. The campus' multi-modal transit network connects to the existing sidewalk and roadway network to link the university with the Red Line and bus routes. Improvements to bike, pedestrian, and transit networks encourage decreased reliance on single-occupancy vehicle access to campus.

Consistent with UMass Boston's goal of developing a pedestrian-oriented campus, the Campus Master Plan introduces a number of interventions to enrich the quality of the pedestrian experience and reduce pedestrian-vehicular conflicts. First is a robust series of north-south and east-west walkways. These new walkways connect the heart of the campus—the quad—to campus buildings and then connect these campus elements to the loop road, Harbor, and regional roads beyond. This pedestrian network also features views of the water from high points, and a series of stairways and accessible routes to navigate the campus topography. The Campus Master Plan specifically highlights a strong east-west pathway that begins at the West Garage, continues through proposed Building A, which functions as both gateway and vertical circulation, and joins to a covered concourse level that connects Healy Library, McCormack Hall, and Wheatley Halls. In addition to these improvements, the university should continue investing in wayfinding, site lighting, surface maintenance, and removing ADA barriers.

The university promotes cycling to and within the campus. Current cycle tracks are lined and marked along all perimeter campus roadways: University Drive West, North, East, and South. Addition of a cycle track along Beacons Walk may be considered to improve connections within the campus. Covered bicycle storage is located in the two existing parking garages, and the City of Boston requires covered bike storage in any new structured parking such as the proposed garage under playfield J.

Campus Bike Access



Pedestrian Circulation and Building Entrance



The Campus Master Plan identifies three new mobility hubs: an expansion of the existing Campus Center hub, a new hub along University Drive West across from West Garage, and a new hub along Beacons Walk adjacent to the Pumping Station. The new hubs will enhance access to the campus shuttle service which runs between the Red Line's JFK/UMass T station and the Campus Center. They could include covered shuttle stops, wayfinding kiosks, BlueBike stations, and access to other mobility modes as needs develop. The Campus Master Plan also encourages better pedestrian and cyclist mobility by integrating the campus' streetscape with the city's Complete Streets initiative along Mt. Vernon Street. Roadway signage and campus entries should be further enhanced to be intuitive to the first-time visitor to provide cues for accessible routes and to elevate pedestrian awareness at potential vehicle/pedestrian conflict areas.

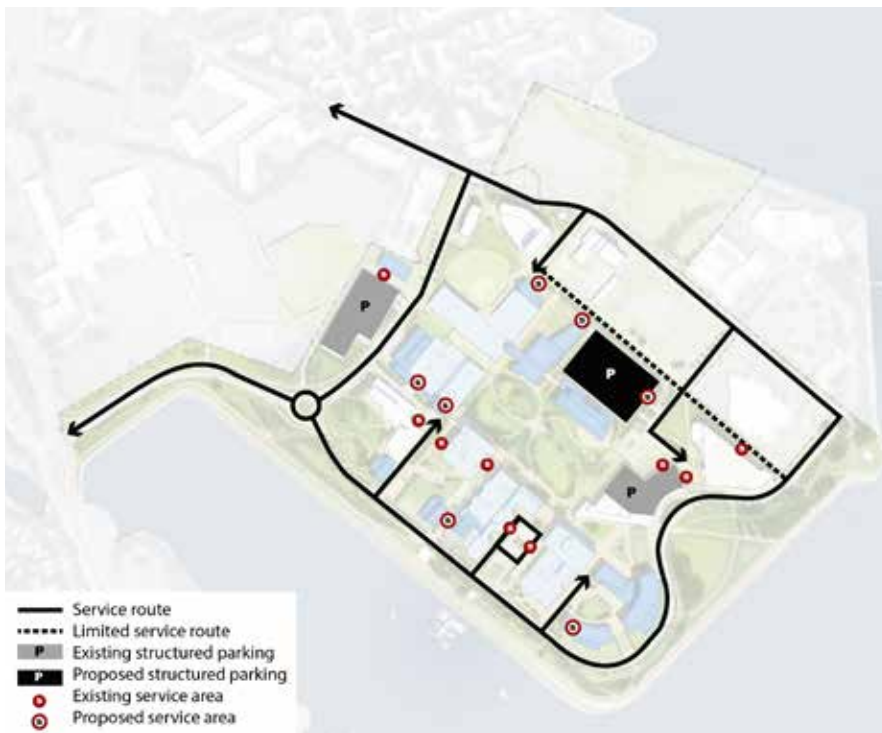
Campus parking is currently located in two structured areas—the West Garage and beneath the Campus Center. This is augmented by several small, surface lots that are accessed from the campus loop road. The existing structured parking that was constructed underneath the heritage buildings has been discontinued. The current plan calls for an additional [440] parking spaces. These will be located in surface lots southwest of Beacons Walk until the proposed Buildings B and C and parking/playfield J are constructed. These spaces then will be accommodated in a new two-to-three level garage that will be bounded by the proposed Building C and will support an intercollegiate multi-purpose field on its roof.

The Campus Master Plan recommends relocating the central loading and receiving functions that are now part of the Service and Supply Building. These uses will be accommodated in an upgraded facility between McCormack Hall and Wheatley Hall, directly accessed from University Drive South. This provides an opportunity for a more welcoming, accessible, and intuitive campus entry with the new building wrapping around Quinn Administration Center/Service and Supply building.

Mobility Hubs



Parking and Services



Campus Views



Connections to the Water

The Campus Master Plan identifies four opportunities for grand stairs with accessible ramps to provide connections between the plaza level and the natural grade of the Harbor Walk and perimeter roads approximately 25 feet below. Proposed locations provide access from the elevated plaza southwest of Healey Library, the plaza along the northwest face of Wheatley Hall, within the open space enclosed by Academic Buildings D and E, and finally along the northwest face of Academic Building D terminating the axis connecting to Quinn and the West Garage. Similar in scale to the existing stair along the south face of the Campus Center, the proposed stairs would be ADA-accessible in support of the university's diversity, equity, and inclusion priorities.



Roemer Plaza, Suffolk University, KMDG



Lower Sproul Redevelopment, UC Berkeley
Clay Holden Architects



Wasserplatz, Luneburg
Bruun & Mollers

Gateways

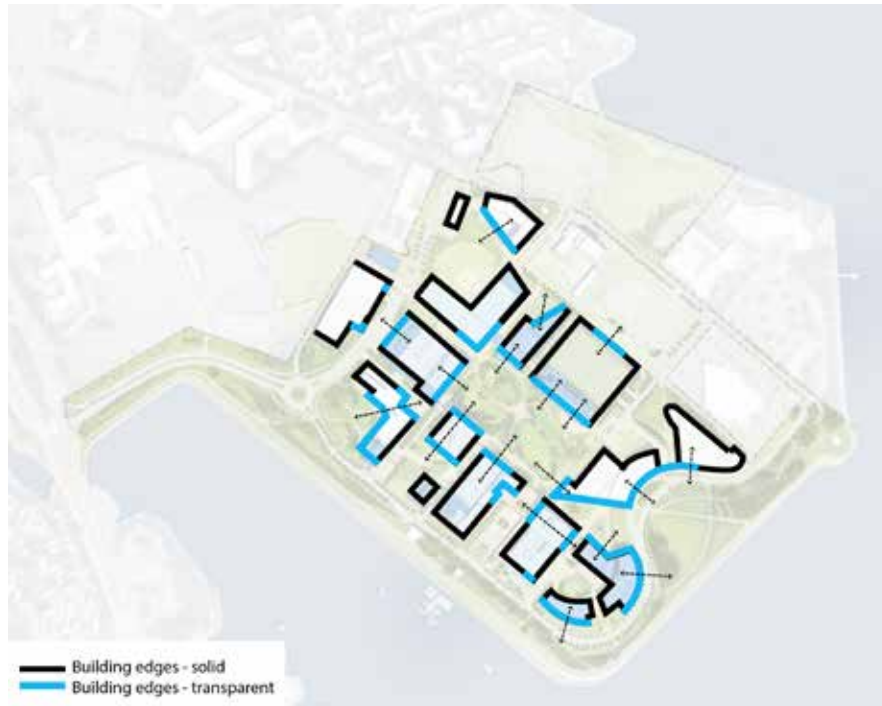


Campus Gateways

Investments in campus gateways will create a welcoming environment and positive first impression. Gateways promote a sense of place and identity through the consistent use of materials. Gateways also help distinguish the campus from local surroundings and establish a clear sense of arrival. They provide a landmark presence at integral locations outside of campus edges. Campus gateways should address different types of entries and thresholds onto campus. Varying scales of gateways into campus require different design and scale approaches, but they should maintain a shared language of materials and expression.

The Campus Master Plan identifies locations and examples of different scales of gateway designs at key entries around campus. While the north campus entry from Mount Vernon Street provides a welcoming arrival with a monumental sign and a landscaped plaza that threads between the new residential buildings, the signage marking the entry from Morrissey Boulevard is shared with the other institutions on the peninsula. The campus is highly visible across the water approaching Morrissey Boulevard and presents an opportunity for large-scale branding, perhaps integrated with the southwest face of West Garage. The presence of the ISC and the circle itself provide opportunities for an iconic arrival marker. Beyond the ISC, the plan proposes a development site that would replace the loading docks of the Service and Supply Building and the utilitarian stair leading to the plaza with a dynamic new entrance and vertical circulation that welcomes students, faculty, staff, and visitors at a scale commensurate with a major campus entrance.

Building edges and transparency



Transparency

Strategic use of glass plays an important role in animating building façades, creating a vibrant and welcoming campus, and providing daylit interior spaces that support well-being. Increasing ground floor transparency, a critical component of the planned heritage building renovations, will activate the new quad and provide connectivity between interior and exterior spaces. For the same reason, new campus development should also be highly transparent on the ground floor. The percentage of glazing and window sizes for upper floors should optimize interior daylighting needs and programmatic requirements. The Campus Master Plan envisions replacing existing large, blank façades with larger areas of glazing. Where possible, active interior spaces such as common areas, collaboration spaces, and social spaces should be highly transparent and expressed as architectural features in the design of the façade. Providing transparency in the design of interior spaces fosters a sense of belonging and encourages engagement and interaction.



Claire T. Carney Library, UMass Dartmouth



Example of biophilic design at Harvard's Smith Center



Welcoming and Inclusive Space

UMass Boston is committed to a vision of higher education, basic research, and community engagement as indispensable tools for forging a more democratic, inclusive, sustainable, and just Boston, Commonwealth, and beyond. As the most diverse research university in the Northeast, UMass Boston seeks to recruit and retain traditionally underrepresented students, faculty, and staff. These efforts seek to promote positive interactions and cultural awareness within the campus community and include cultural training programs, curricular initiatives that promote cultural diversity in the classroom, and co-curricular programming for students. The design of physical spaces on campus should reinforce these efforts and UMass Boston's diversity and inclusion initiatives.

While there are core components to designing diverse and inclusive spaces, each institution has its own culture, identity, history, and voice. Elements of space design such as transparency, flexibility, and scale can determine if a space feels welcoming or inclusive. Spaces should be designed for inclusivity through openness and transparency and should support a range of learning and living styles. Diverse scales and types of student-centered spaces, including cultural, religious, spiritual, club, and community gathering spaces, should foster inclusivity and ensure that all feel welcome. Throughout these spaces, elements such as symbols, cultural markers, images, representation, and naming should be carefully curated so that they reinforce UMass Boston's identity and awareness.

Well-being and Expression

Student space on campus, both interior and exterior, should incorporate areas for both meditative and activity-centered uses. The university should explore opportunities for biophilic design that would increase connectivity to the natural environment and provide health benefits for building occupants. Exterior spaces provide opportunities to connect with nature, escape and recharge, or gather. Interior student spaces provide opportunities for quiet study, individual reflection, collaboration, and social interaction at multiple scales.

Art on Campus

UMass Boston's Arts on the Point collection includes works by some of the most important sculptors of the 20th and 21st centuries. Sculptures are situated throughout the campus in a dynamic relationship to their environment. Sculptures are on long-term loans to the university, funded by private donors, and open to the public. UMass Boston should continue to identify opportunities to integrate art and sculpture into campus as an expression of the university's history and diverse culture.

Identity and Wayfinding

UMass Boston has a clear brand identity and graphic design guidelines. Translating this into a full signage palette that can be implemented across campus is an important next step in reinforcing the continuity of the UMass Boston brand and creating a welcoming campus. Incorporating various scales of signage that address the pedestrian and vehicular experience could range from more traditional banners on light poles to bold statement pieces that will enliven the campus and contribute to improved wayfinding. Specifically, wayfinding that provides visual connections between the gateways and the campus core, will help visitors navigate the topographic changes between the campus perimeter and central quad and will create a welcoming arrival experience.

In addition to exterior branding and wayfinding improvements, standardization of building environmental graphics and wayfinding is a priority for the campus. From arrival, a clear hierarchy of informational and directional sign types and messages will form a positive first impression, aid in navigation, and foster a sense of belonging. A new signage and wayfinding system incorporating universal design implemented throughout campus will contribute to an enhanced and equitable experience so that faculty, students, staff, and visitors are able to navigate buildings with confidence. Consistent messaging will make university spaces easier to access, identify spaces for collaboration and creative learning, and offer flexibility for classes and events.

Catwalks

During the planning process, the possibility of replacing the catwalks was carefully considered. The catwalks, although convenient, do not contribute to the significant space deficits identified by the space analysis. In addition, the design team identified several advantages to maintaining circulation at the plaza level. The new quad will be a transformational campus amenity - circulation at the plaza level will activate the quad, support well-being, and create community. The Campus Master Plan recommends increased transparency and active program spaces at the plaza level as a component of the heritage building renovations as well as new development.

Although the Campus Master Plan does not recommend that the catwalks be replaced, it does not preclude them from being provided in the long term. With its limited capital funding, the university may need to prioritize projects that more directly support student success and programmatic needs.

Storm Water

The university's Stormwater Management Plan (SWMP), completed in June of 2022, ensures compliance with the requirements of applicable permits and regulates UMass Boston's catch basins, drainage pipes, stormwater treatment facilities, campus roads and properties where stormwater runoff and pollutants are generated. The SWMP addresses a variety of issues that comply with regulatory requirements and help meet the university's sustainability goals. Public education and outreach, public involvement and participation, training, system documentation, and construction runoff and erosion are covered in the SWMP. The following SWMP objectives are directly related to the Campus Master Plan Update:

- **Post-Construction Stormwater Management in New Development and Redevelopment:** UMass Boston's objective for post-construction stormwater management is to reduce the discharge of stormwater pollutants to receiving water bodies. This will be accomplished by retaining or treating stormwater runoff after construction on new or redeveloped sites, and by ensuring proper maintenance of installed stormwater controls.
- **Target Properties for Stormwater Retrofits Description:** The SWMP states that by the end of Permit Year 6, UMass Boston will identify at least five (5) campus sites that could be modified or retrofitted with stormwater Best Management Practices (BMPs) to reduce the frequency, volume, and pollutant loads of stormwater discharges. In subsequent years, UMass Boston will identify additional sites that could be retrofitted to maintain a minimum of five (5) sites in the inventory.
- **Street Design and Parking Lot Guidelines Description:** UMass Boston will review campus road and parking lot design standards and other design guidelines that affect the creation of impervious cover. The assessment will help determine if changes can be made to support low-impact design options, such as permeable paving and minimizing impervious surfaces.

Stormwater management through environmental site design (ESD) is an opportunity to incorporate stormwater management with amenities that enhance the campus experience, improve ecological balance, and meet UMass Boston's sustainability goals. Stormwater engineering has many variables that make detailed design difficult during the planning stage. The university should pursue identifying and locating future BMPs to mitigate for impervious areas within university-owned roadways and campus circulation paths and/or locations within future development sites. The BMP locations identified should be considered in concert with proposed future development and redevelopment projects. Locations of stormwater BMP retrofits to mitigate existing campus impervious areas within development sites should take into account future development scenarios to minimize future re-work and maximize the benefit of the BMP retrofit application.

Examples of integrated stormwater management



Carbon Reduction

The Campus Master Plan proposes significant investments in reducing the carbon footprint of the campus. As sustainable technologies continue to develop, efficiencies increase and prices decrease. For example, the cost and availability of photovoltaics in recent years have shifted as they become more readily available and affordable to install. Some of the key, university-wide opportunities that reduce the carbon footprint of the campus include:

- Increasing building energy efficiency
- Electrification to replace fossil fuels particularly in heating and transportation
- Prioritizing renovations and strategically limiting demolition to reduce emissions and improve the campus's environmental footprint
- Achieving additional certifications for new building projects, including Well Certified or Certified Living Building in addition to the baseline of LEED Silver Certification and exploring opportunities for certification of major renovation projects
- Providing additional electrical vehicle (EV) parking facilities and increased bike and scooter parking.
- Replacing existing university fleet vehicles and shuttles with electric vehicles

UMass Boston has set a goal of carbon neutrality by 2050. The Energy and Carbon Master Plan (ECMP) provides a framework for UMB major investment in electrification, resilient and optimally cost effective infrastructure to meet this goal, Executive Order 594, and Executive Order 569. The framework identifies the following strategies:

- Prioritizes practical, cost-effective energy efficiency and deep energy retrofits for priority buildings
- Capitalizes on major renovations and end of asset life opportunities
- Standardizes low temperature hot water conversion

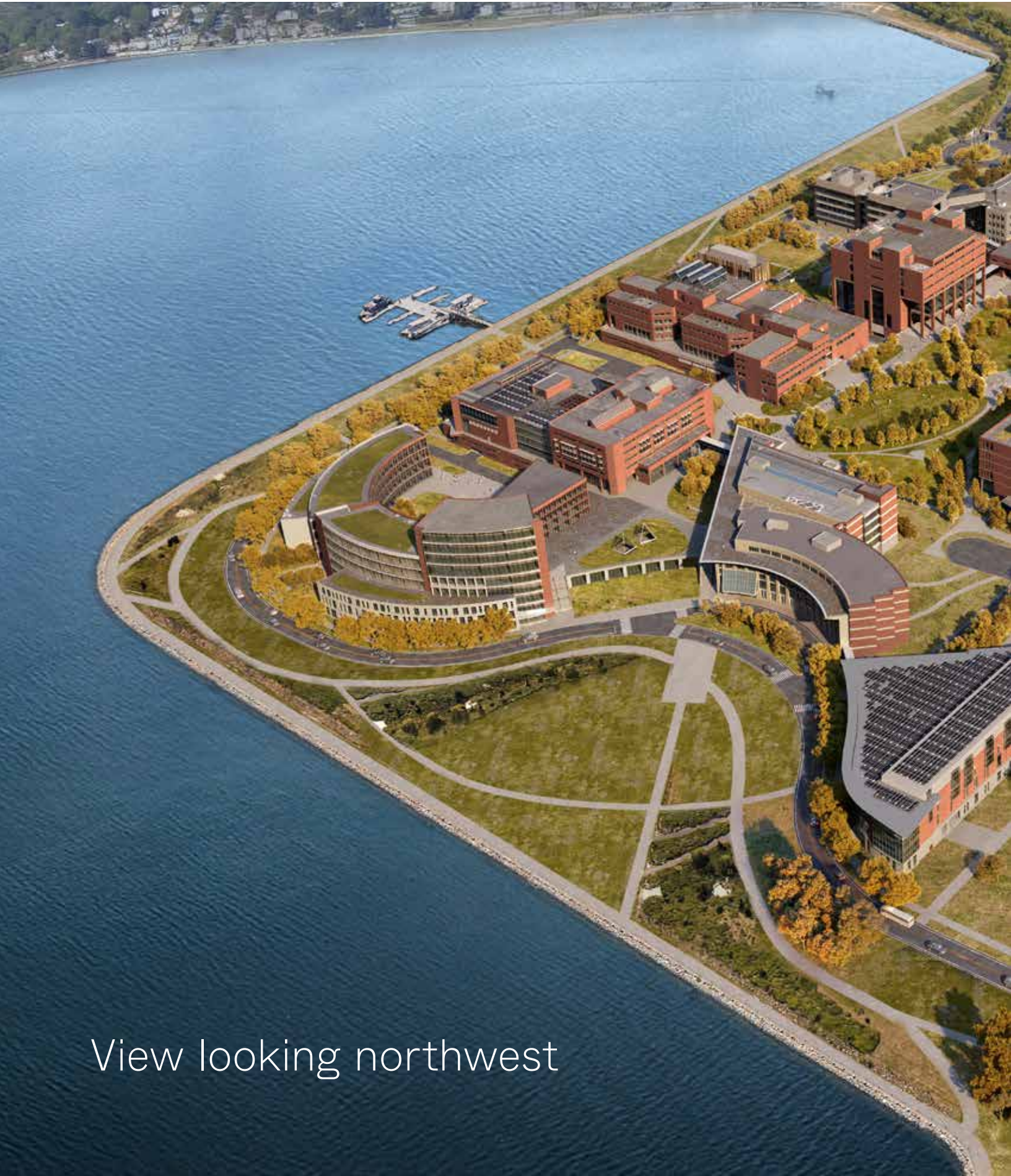
The ECMP Team worked together with key UMB stakeholders to define a framework in alignment with these guiding principles. This framework takes advantage of planned major renovations at Wheatley, McCormack, and Healey to incorporate energy efficiency and deep energy retrofits. Similarly, assets on Nantucket can take advantage of cost effective energy efficiency and VRF technologies during upcoming renovations. ISC, University Hall, Campus Center, and Clark are better suited for comprehensive energy projects. These projects focus initially on proper equipment operation and cost effective energy efficiency (building management system sequences/controls, air change rate reduction, LED conversation, lighting controls). At the end of major asset life, deep energy retrofits (air-side energy recovery) and targeted electrification (electric water heaters, electric kitchen equipment) are to be incorporated. Upcoming upgrades at the Central Utility Plant Salt Water Pumping Station can be expanded to incorporate cascading heat pump technology that uses seawater as a heat source. Note that this option is only achievable if the current seawater permit can be amended to allow for heating. Future upgrades are planned to expand electrified heating capacity utilizing air-source heat pumps. The framework is flexible to allow for overall conversion to a low temperature hot water system and incorporate new technologies.

Although most of the campus is outside of the flood zone, the Residence Hall (East and West) is estimated to have a risk of flooding by 2030; Central Utility Plant by 2050; the Historic Calf Pasture Pumping Station, Clark Athletic Center and Wheatley Hall by 2070. Exposure to heat is another key risk as no cooling systems are on optional standby power. Relocation of Central Utility Plant equipment, review of generator capacity for cooling, and hardening measures are recommended to combat these risks.



Opportunities for Renovation and New Construction





View looking northwest



| | Renovated GSF* | New Construction GSF | TOTAL GSF | TOTAL NASF** | Potential Programmatic Uses | |
|-------------------------------------|--|----------------------|----------------|------------------|-----------------------------|--|
| Heritage Building Renovation | | | | | | |
| 1 | Wheatley Hall | 268,500 | 16,000 | 284,500 | 157,000 | |
| 2 | McCormack Hall | 267,000 | 8,000 | 275,000 | 152,000 | |
| 3 | Healey Library | 337,500 | 15,000 | 352,500 | 194,000 | |
| 4 | Quinn Administration Center | 96,900 | | 96,900 | 54,000 | |
| 5 | Service and Supply | 74,300 | | 74,300 | 41,000 | |
| 6 | Clark Athletic Center | 126,430 | | 126,430 | 70,000 | |
| TOTAL | | 1,170,630 | 39,000 | 1,209,630 | 668,000 | |
| New Construction | | | | | | |
| A | Academic Building A | | 80,000 | 80,000 | 44,000 | |
| B | Academic/Recreation Building B | | 110,000 | 110,000 | 61,000 | |
| C | Academic Building C | | 120,000 | 120,000 | 66,000 | |
| D | Academic Building D | | 283,000 | 283,000 | 156,000 | |
| E | Academic Building E | | 72,000 | 72,000 | 40,000 | |
| F | Central Plant | | | | NA | |
| G | ISC Addition | | 38,000 | 38,000 | 21,000 | |
| H | Campus Support Building | | 10,000 | 10,000 | 6,000 | |
| I | Clark Athletic Center Addition | | 16,000 | 16,000 | 9,000 | |
| J | Multi-purpose Field and Structured Parking | | | | NA | |
| TOTAL | | | 729,000 | 729,000 | 403,000 | |

* Gross Square Feet (GSF)

**Net Assignable Square Feet (NASF) based on target efficiency of 55%.

Key

- Classrooms
- Class Labs, Open Labs, Research
- Student Space
- Workspace
- Library

UMass Boston | 2020-2025 Strategic Plan

Student Space

Workspace

Library

Rink

Opportunities for Renovation and New Construction

The Campus Master Plan focuses on creating an equitable student experience while also responding to the university's unmet needs for student space and learning environments through renovation, redevelopment, and new construction. The plan envisions near-term projects which could be completed within 10 years, as well as long-term initiatives which would occur beyond the 10-year planning horizon. In aggregate, the space assessment, completed as part of the planning process, identified 330,000 to 400,000 net square feet (NASF) or 600,000 to 725,000 gross square feet (GSF) of space needs campus-wide in the near- and mid-term. The proposed area of each renovation and new construction project included in the Campus Master Plan is represented in the table below. The total capacity exceeds the current space needs confirming that there is development capacity to support future growth.

Implementation will be achieved through a variety of strategies including renovation, efficient utilization of existing space, new construction, and creative partnerships. Campus investment in both renovation and new construction projects will be driven by pedagogical shifts in program or course-delivery methods, enrollment shifts, faculty/staff population, workplace strategies, research trends, external partnerships, and the age and condition of existing facilities. Qualitative drivers of alignment include:

- Places to collaborate, formally and informally, for faculty and students
- Communal spaces that support the holistic entirety of the student population—including commuters, non-traditional students, and marginalized communities
- Flexible and adaptable instructional space
- A range of study spaces across all buildings to create equitable learning and study opportunities for all students regardless of discipline
- Additional classrooms to accommodate class sections of 31-60
- Additional class laboratories to support Engineering, Chemistry, and emerging programs

- Shared, interdisciplinary project labs and maker spaces distributed throughout campus to support student exploration and experimentation
- Flexible work spaces designed for function rather than ownership, and rearranged to colocate departments
- Informal student spaces close to the instructional environment to facilitate interaction with faculty before and after classes

Proposed renovations and new construction support two major planning goals: creating a more welcoming campus arrival, and surrounding the new quad with active and transparent student space. The pedestrian axis along the southwest edge of the quad is reinforced by renovations proposed for Service and Supply, Quinn, Healey Library, McCormack Hall, and Wheatley Hall. The axis is reinforced over time by the development of Academic Building A and Academic Building D. Similarly, the northeast edge of the quad is activated by the SDQD renovation of Clark as well as future development of Academic/Recreation Building B and Academic Building C.

The Campus Master Plan prioritizes renovation of the heritage buildings as the next step in the campus transformation. Renovation of these buildings will provide a more equitable campus experience for students, faculty, and staff. Renovations should address programmatic needs, the deferred maintenance identified in Chapter 3, infrastructure improvements, and the recommendations of the Carbon and Energy Master Plan (CEMP).

New development sites identified in the plan support the need for additional space while reinforcing campus open spaces and improving connectivity. The Campus Master Plan considers the recommended capacity of each development site in order to leverage the limited land area. In aggregate, the proposed development sites exceed the recommended growth identified in the space analysis. The additional capacity provides flexibility in implementation and the ability to expand beyond current projections. The Calf Pasture Development provides an opportunity for additional growth adjacent to campus. New construction should be integrated with the recommendations of the Energy Master Plan and per EO 594, can not be tied to the existing central plant.



Heritage Building Renovations

UMass Boston's original buildings share a similar architectural aesthetic of brick Brutalism typical of the 1970s time period in which they were constructed. The university should seek to preserve and celebrate this history and character as much as possible, but should also seek to ensure these buildings meet the evolving needs of a modern university's students, faculty, and staff. Proposed renovations and additions have an opportunity to honor the aesthetic of the original buildings while introducing transparency and new materials. The use of increased glazing, metal panels, screens, and accent colors should be considered to create a successful blend of new, dynamic forms set against the backdrop of the original Brutalist brick architecture. Additions and significant exterior renovations to existing buildings should:

- Increase transparency, particularly on the ground floor, to provide a lighter, brighter, and more vibrant campus environment
- Mitigate the interior-focused qualities of the original buildings while preserving a sense of their structural expression and form
- Incorporate compatible accent materials and colors to accentuate new construction and differentiate it from the historic original buildings
- Reinforce campus continuity by utilizing new construction materials that are similar to or compatible with existing brick and other materials already in place

The Campus Master Plan suggests renovations to each of the heritage buildings that will improve learning space, student space, study space, and workspace. These buildings have the potential provide state of the art learning environments to support student success in alignment with the strategic plan.

In addition to meeting programmatic needs, the heritage buildings provide an important opportunity at a campus scale. Increasing transparency and incorporating plaza level active program areas such as collaboration space, social space, and study space will visually connect indoor and outdoor areas and will help activate the new quad.



Harvard Smith Campus Center
Hopkins Architects and Bruner/Cott



Claire T. Carney Library, UMass Dartmouth
designLab

Re-envision Classrooms



Wheatley Hall Classroom



Active Learning Environment

Re-envision Class Labs



Healey Library Class Lab



University of Delaware, Interdisciplinary Science and Engineering Lab

Transform the Library into a Learning Hub



Healey Library



Hayden Library, Arizona State University

Provide Study Spaces and Open Labs throughout Campus



Healey Library



Hayden Library, Arizona State University

Create Welcoming Circulation



Wheatley Hall



Edward St. John Learning And Teaching Center,
University of Maryland

Increase Transparency



Wheatley Hall



Claire T. Carney Library, UMass Dartmouth

Wheatley Hall

Renovated Area: 268,500 GSF

Infill Construction: 16,000 GSF

Building Program: Classrooms, class labs, open labs, research labs, student space, workspace

The Campus Master Plan recommends a phased renovation of Wheatley Hall to facilitate incremental funding and to mitigate disruption when areas are offline during construction. The initial phase would focus on the renovation of the plaza level (Level 01) and portions of Level 02 to provide much-needed student space, improve learning environments, and clarify major circulation. In conjunction with renovating the first two floors, the plan recommends infilling the existing structure with glazed program space and introducing additional windows in existing masonry walls. The planning team used Wheatley Hall as a prototype to further explore potential heritage building renovation opportunities. Conceptual design recommendations are documented in the *Wheatley as a Prototype* section in this document.

Based on the remediation completed with the SDQD project, the two levels below Level 01, the upper basement (UL) and the lower basement (LL), are expected to remain vacant with the exception of a connection to the relocated Central Shipping and Receiving area and possible boat storage for Marine Operations.

McCormack Hall

Renovated Area: 266,100 GSF

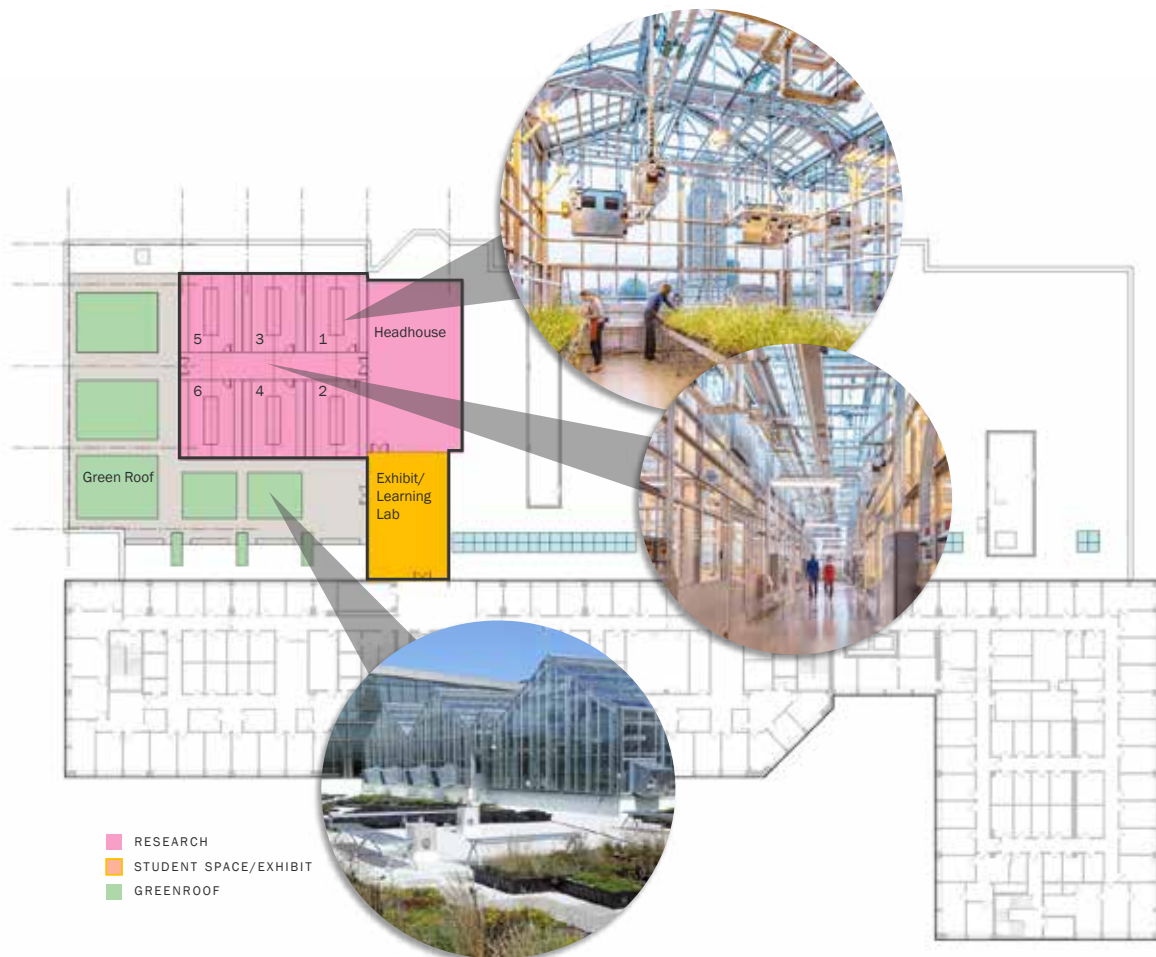
New Construction: 8,000 GSF Rooftop Greenhouse

Building Program: Classrooms, class labs, open labs, research labs, student space, workspace, greenhouse

Similar to the recommendations for Wheatley Hall, the Campus Master Plan recommends a phased renovation of McCormack Hall with the initial phase focused on the plaza level, Level 01, and portions of Level 02. The plan envisions adding significant transparency to the ground floor of the wing closest to Wheatley Hall. Active uses such as collaboration space, maker space, study space, or a dining venue would create a student amenity facing the quad and along the axis which connects West Garage to the Campus Center. The renovation should also consider additional transparency on upper floors by strategically replacing existing exterior masonry with windows to provide additional daylight and increased views. The underutilized recreation center on the building's ground floor has a large structural span and double-height space which could support future large active-learning classrooms if recreation facilities are relocated to a new facility. Based on the remediation completed with the SDQD project, the upper basement (UL) and the lower basement (LL), are expected to remain vacant with the exception of a connection to the relocated Central Shipping and Receiving area.



The Campus Master Plan suggests the roof area of Level 04 as the preferred location of a new greenhouse. Pending structural verification, the roof offers an unshaded area with elevator access to the relocated Central Shipping and Receiving, adjacency to faculty offices, space for a small exhibit area, and the potential for controlled outdoor growing areas.



Healey Library

Renovated Area: 337,500 GSF

New Construction: 15,000 GSF Plaza Level 01 Infill

Building Program: Stacks, study areas, student space, classrooms, class labs, open labs, workspace

Similar to Wheatley and McCormack Halls, the plan recommends a phased renovation of Healey Library. The space analysis suggests a surplus of space in the library. The existing steel mezzanines should be used for stacks and print-material storage since headroom is not adequate for other uses. Additionally, mezzanine structures could be selectively removed on floors where they are not required for storage. Learning spaces and other occupied spaces located below the plaza level on LL and UL could be relocated to upper floors with access to natural light and views. If structural capacity is adequate, the lower levels could be utilized for remote storage. These shifts could enable Healey's transformation into a Knowledge Hub supporting student success by collocating academic success, testing, and student services. Relocating these units to the Library would provide more student space in the Campus Center.

As with Wheatley and McCormack Halls, the Library renovation should consider strategically replacing existing exterior masonry with windows on upper floors to provide additional daylight and increased views. The Campus Master Plan also proposes enclosing the open structure on Levels 01 and 02 to provide dynamic study and collaboration space with frontage on the quad and tremendous views to the water. The structured plaza southwest of Healey Library also offers an opportunity for outside study areas overlooking the water. Proposed landscape improvements include campus standard pavers, raised planters, site lighting and furnishings, and a grand stair and accessible ramp down to street level with a connection to the HarborWalk.

Quinn Administration Building

Renovated Area: 96,900 GSF

Building Program: Classrooms, class labs, open labs, research labs, student space, workspace

The Quinn Administration Building offers an exciting opportunity to improve campus connections to the West Garage and the ISC. The REAB project included the renovation of the upper basement (UL) of Quinn to house the Manning College of Nursing and Health Sciences. The investment in these renovations should be leveraged when considering opportunities to support growth in nursing and health sciences. Additional renovation efforts should include relocating Campus Police to enable the creation of a welcoming entrance at the plaza level. The proposed plaza-level entrance lobby and public circulation would continue through Service and Supply and connect to a proposed vertical transition to street level on the site of the existing loading and facilities surface lot (Academic Building A).

In addition to providing a better connection to the West Garage, system upgrades, envelope improvements, and restroom renovations should be completed as part of a major renovation.

Service and Supply

Renovated Area: 74,300 GSF

Building Program: Classrooms, open lab/machine shop, student space, workspace

Similar to Quinn, the renovation of Service and Supply will provide an improved connection between West Garage and the plaza level of the quad. The recommended relocation of Central Receiving and much of the facilities maintenance program would provide an opportunity to renovate Service and Supply as academic and administrative space. Located between Quinn and the future Academic Building A, Service and Supply high bay spaces and courtyard could be leveraged to accommodate programmatic adjacencies. As with other heritage buildings, system upgrades, envelope improvements, and restroom renovations should be completed as part of a major renovation.

Clark Athletic Center Renovation and Addition

Renovated Area: 104,400 GSF

New Construction: 16,000 GSF

Building Program: Ice rink, gymnasium, locker rooms, athletic support space, workspace, student space

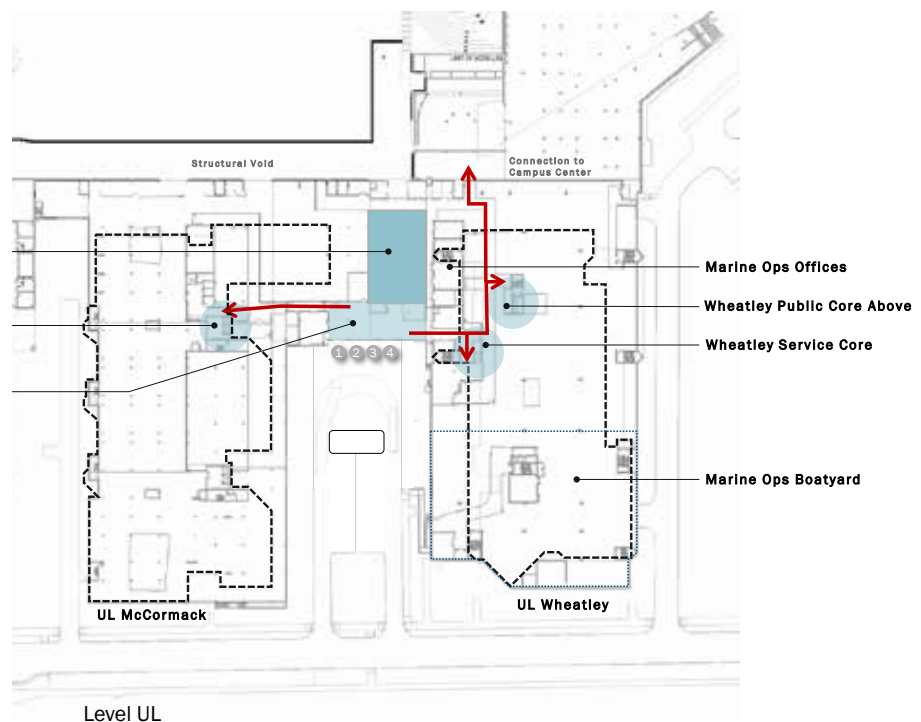
The Clark Athletic Center benefited from a major renovation in 2012 which provided upgrades to the gymnasium including a new maple hardwood floor and upgraded bleachers, entryways, and specialty lighting and audiovisual systems. As part of the SDQD project, the Clark Athletic Center swimming pool wing was demolished and the primary campus entrance was reconfigured. In addition to the SDQD modifications, the university has initiated renovation that will address deficiencies related to Title IX.

The Campus Master Plan recommends building on these improvements with an addition to the northeast face of the gymnasium. The addition could provide a dynamic and transparent entrance facing Beacons Walk and the new transit hub. A new ground floor entrance and public space could link directly to the gym. A vertical connection could connect to the existing corridor along the southeast face of the gym. The upper floor, with opportunities to overlook the gym, is envisioned as coaches' offices and a recruiting center. The plan anticipates further renovations to Clark which could support a future bridge connection to Academic/Recreation Building B, expected to provide additional recreation and athletic space.



Central Receiving and Facilities

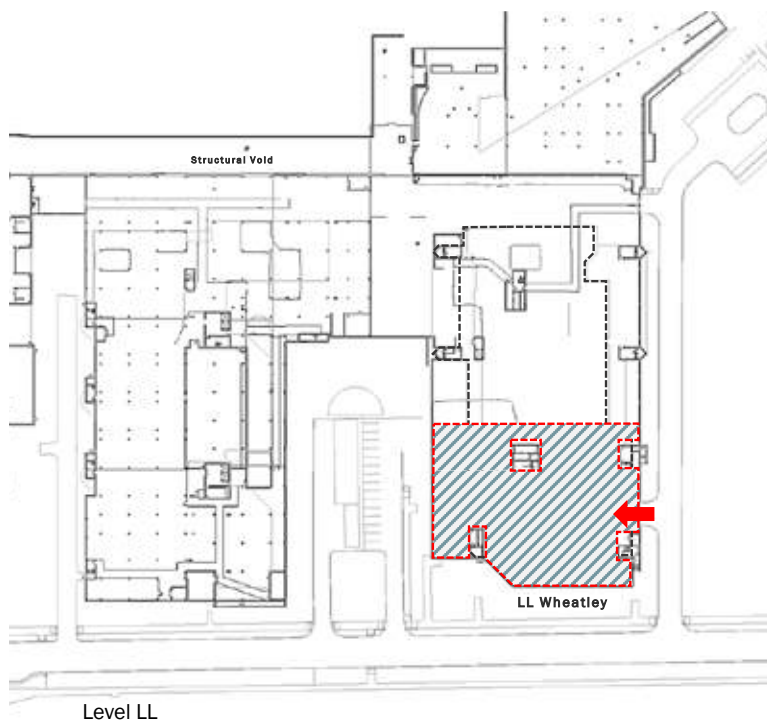
In order to maintain maximum flexibility, the Campus Master Plan identifies development sites that minimize the need for enabling projects. However, Academic Building A—on the site of the Service and Supply Building—will require the relocation of Central Receiving to the existing loading dock between Wheatley Hall and McCormack Hall. The existing space on the upper basement (UL) could house shipping and receiving, the campus post office, trades, central storage, duplicating, and the Marine Operations Offices. Existing circulation would provide access to vertical cores in both McCormack and Wheatley. Truck turning radii should be further studied to determine the modification required in the existing short-term parking area.





Marine Operations Boatyard

The Campus Master Plan recommends that the lower basement (LL) of Wheatley be considered as the location of the Marine Operations Boatyard. This location offers proximity to the dock and the ability to provide secure and protected storage for boats, trailers, and other equipment. Vehicle access is available through the original parking entrance. Limited area may be available for larger boats adjacent to Central Receiving loading docks. Marine Operations offices are proposed on the upper basement (UL) adjacent to the proposed Central Receiving and Facilities. Additional study is required to determine if remediation completed with the SDQD project would be adequate to allow the space to be used for all spaces included in the Marine Operations program.



Level LL



Campus Arrival and Academic Building A





New Construction

Academic Building A

Academic Building A can accommodate 80,000 GSF in 5-stories. With a target efficiency of 55%, the building could house approximately 44,000 NASF of program space including classrooms, class labs, open labs, research labs, student space, and workspace.

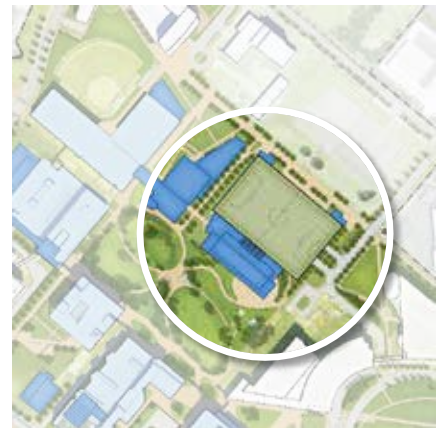
Located on the site of the existing facilities parking and loading dock access, Academic A plays a key role in creating a welcoming campus experience. The Campus Master Plan suggests that development of Building A include a grand stair providing a critical vertical connection from the West Garage and West Campus Drive up to the plaza level. Renovation of the Service and Supply Building is an anticipated component of development on this site.



Academic / Recreation Building B

Academic Building B can accommodate 110,000 GSF in 3-stories. With a target efficiency of 55%, the building could house approximately 61,000 NASF of program space including recreation space, classrooms, class labs, open labs, research labs, student space, and workspace.

The space analysis identified a significant need for additional recreation and athletic space. In response to the space analysis and in support of the strategic plan's focus on health and well-being, the Campus Master Plan identified the development site southeast of the Clark Athletic Center as the ideal location for the expansion of the university's recreation and well-being programs. Academic / Recreation Building B would ideally include a second two-court gymnasium as well as a fitness center and specialty spaces such as dance and weight rooms. The building could also incorporate academic and research spaces for related health science fields. A bridge connecting to the public area of Clark would allow the two facilities to be integrated programmatically as well as physically.



Academic Building C

Academic Building C can accommodate 120,000 GSF in 6-stories. With a target efficiency of 55%, the building could house approximately 66,000 NASF of program space including classrooms, class labs, open labs, research labs, student space, and workspace.

Academic Building C completes the northeast edge of the new quad. The Campus Master Plan suggests that the ground floor be set back along the quad to provide a protected walkway. The plan suggests that the sixth floor also be set back to reduce shading on the quad and provide access to a potential roof terrace or green roof. Academic Building C abuts the proposed parking structure and playing field, offering opportunities for spectator seating, viewing terraces, and direct access to parking.





Academic Building D

Academic Building D can accommodate 283,000 GSF in 9-stories. With a target efficiency of 55%, the building could house approximately 156,000 NASF of program space including classrooms, class labs, open labs, research labs, student space, and workspace.

The location of Academic Building D at the southeast edge of the campus, perhaps the most prominent development site identified in the Campus Master Plan, offers an opportunity for an iconic building overlooking Savin Hill Cove, Dorchester Bay, and Boston Harbor. High visibility from Campus Drive, I-93, Morrissey Boulevard, and the water creates an opportunity for a literal beacon announcing the presence and importance of UMass Boston in the region.

Academic Building D forms the terminus of the pedestrian axis that continues along the southwest side of the quad continuing to the West Garage. An extension of the plaza level would create a waterfront open space shared by entrances to Wheatley and the Campus Center. The Campus Master Plan suggests a footprint that forms an open space at grade adjacent to Wheatley. Occupied green roofs and possible upper floor terraces overlooking the water could support the university's health and well-being initiatives. Though limited by the Logan International Airport flight paths, the site could potentially support a nine-story building.



Academic E

Academic Building E can accommodate 72,000 GSF in 4-stories. With a target efficiency of 55%, the building could house approximately 40,000 NASF of program space including classrooms, class labs, open labs, research labs, student space, and workspace.

The site of Academic Building E offers the same prominence and visibility as that described for Academic Building D. Development on this site should be coordinated with Building D in both total area and phasing. The Campus Master Plan recommends that Building D precede Building E in order to complete the axial connection to the water, however phasing is intended to be flexible to best align with future programmatic needs. The boundary between the two projects may be adjusted to align with both programmatic needs and funding.



ISC Addition

The addition to the ISC can accommodate 38,000 GSF in a 5-story extension of the existing building. With a target efficiency of 55%, the building could house approximately 21,000 NASF of research focused program space including classrooms, class labs, open labs, research labs, and workspace.

The Campus Master Plan anticipates the existing drop-off circle would be removed and a second entrance placed at the link between the addition and the existing building. Existing circulation would extend through the addition to provide additional lab and office bays.



Campus Support Building

The Campus Support Building, located adjacent to the West Garage, can accommodate approximately 10,000 GSF in a single story. Additional area could be provided with a multi-story development. Proximity to the West Garage, athletic fields, and the campus edge offer opportunities for a variety of uses.





Multi-purpose Field and Structured Parking

The proposed multi-purpose field and structured parking project abuts Academic Building C and forms the southwest edge of Beacons Walk. The 4-bay parking structure is sized to accommodate an NCAA soccer and lacrosse field on the top deck. Parking capacity varies from 650 to 950 spaces depending on the number of levels required to meet parking demand. Vehicular access to parking would be from the south with pedestrian access along Beacons Walk.

Beacons Walk is envisioned as an active street with the potential for retail dining, sidewalk cafes, collaboration space, and other student focused uses. The Campus Master Plan recommends that the first bay of parking along Beacons Walk be reserved for transparent and active student centered space. Adjacent parking and proximity to student dining create the potential for a true campus experience for commuter students. Spectator seating integrated with Academic Building C could further enhance both recreation and athletic use of the playing field including revenue generating events. The prominent location of the playing field and its proximity to parking also offer opportunities for large outdoor events such as concerts and graduation.



3-Level 650 Space Structure



4-Level 950 Space Structure



Central Plant

In alignment with the recommendations of the Carbon and Energy Master Plan, the Campus Master Plan Update identifies a site southwest of Healey Library along University Drive as the location for expansion of the Central Plant. Adjacent to the existing central plant, this location meets the technical criteria for the proposed seawater heat pump system. This site originally incorporated a grand cascading stair connecting the plaza level to the water by passing below Healey. Although the stairs have since been removed, the site is still a prominent location, visible from the campus entry and part of the entry experience. It is also highly visible from surrounding buildings including the ISC, McCormack Hall, and Healey Library. The Campus Master Plan proposes to leverage this location by putting the new systems on display to provide a learning opportunity and promote the university’s investment in a sustainable and innovative infrastructure system.



South Chiller Plant, University of Virginia. Leers Weinzapfel Associates



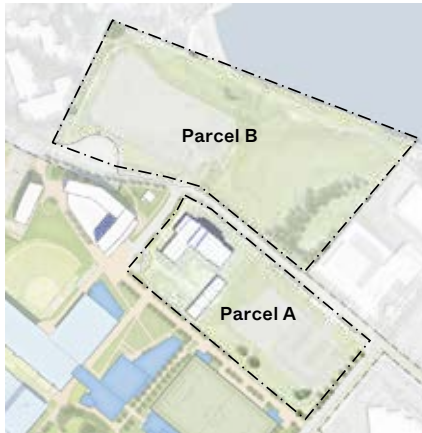
East Regional Chilled Water Plant, Ohio State University. Leers Weinzapfel Associates





Beacons Walk





Calf Pasture Development

The ten-acre UMass Boston-owned Calf Pasture development site presents an extraordinary opportunity to leverage the benefits of public private investment in a transit-oriented, mixed-use project. The site comprises two parcels bisected by Mt. Vernon Avenue:

- Bounded by Beacons Walk to the southwest and University Drive to the northeast, this parcel is 5.8 acres and includes the historic Calf Pasture Pumping Station. This site is embedded within the fabric of the academic core. It currently provides 100 surface parking spaces.
- Bounded by Mt. Vernon Avenue to the southwest and Dorchester Bay and the HarborWalk to the north, this 4.2 acre parcel is currently used as a surface parking lot.

The future uses in the Calf Pasture Pumping Station development should:

- Authentically connect and integrate private uses to our academic programs (e.g., Nursing and Health Sciences, Business and the like).
- Serve to promote economic social mobility within a framework of social justice and sustainable development.
- Be academic, researcher and learner focused.
- Improve the quality of campus life (e.g., additional housing, retail space, and spaces that support well-being).
- Engage our neighbors.
- Advance accessibility and inclusion.
- Be profitable, viable and sustainable.

The physical form of the Calf Pasture Pumping Station development should:

- Connect spaces and functions to campus life.
- Embody exemplary environmental sustainability and climate readiness.
- Create a handsome, welcoming entry to campus.
- Link our open spaces to the Bay (acknowledging and honoring our unique maritime context).
- Highlight the iconic architecture of the Pumping Station.
- Support accessibility and inclusion.

The future Calf Pasture development integrates potential residential, academic, and private sector uses with the adjacent campus and neighbors on Columbia Point. The vision for both parcels suggests mixed-use development.

At the northwest corner of Parcel A, the vacant Calf Pasture Pumping Station, in the process of being listed on the National Register of Historic Places as well as on an inventory of the state's most endangered historic properties, is envisioned as the centerpiece of the new development. Built in 1883, the Pumping Station was the first significant structure on the Columbia Point peninsula. A model for the creation of healthy urban living



Calf Pasture Pumping Station





Eddy Street Commons, Notre Dame

conditions at the time, the Pumping Station was the initial component of Boston's public sewer system. The Romanesque stone structure that remains on the campus today housed enormous mechanical pumps that were in operation until 1968. Adaptive reuse of the Pumping Station is an opportunity to create a public-facing amenity for the university. The size and volume of the Pumping Station combined with its prominent location adjacent to a potential transit hub providing seamless access to the MBTA's JFK-UMass Red Line station makes it an ideal candidate for a university Welcome Center.

Potential new residential buildings on Parcel A along Beacons Walk would create synergies with existing student housing, dining, athletic, and proposed recreation uses. Incorporating highly transparent active uses such as retail and dining at the ground floor would establish Beacons Walk as a vibrant and dynamic amenity for the campus, the new development, and the adjacent neighbors on the peninsula. A mixed-use building along University Drive North, could potentially provide space for academic colleges, research, and public-private partnerships. A shared parking structure between the buildings at mid-block could be topped with a landscaped plaza to provide shared outdoor space. Building forms and heights should be thoughtfully articulated to maximize shared views of the water and the adjacent campus.

Similar to Parcel A, Parcel B also offers opportunities for mixed-use, university-focused development. Parcel B could accommodate footprints suitable for housing as well as academic space organized around a central parking structure. Development should leverage opportunities to create connections between the existing residential plaza directly across University Drive North. The scale of buildings on Parcel B should be compatible with the adjacent Harbor Point residential community. Articulation of building forms and heights to equitably share views and water access will support the university's accessibility and inclusion goals.

Growth Beyond Columbia Point

The Campus Master Plan illustrates that the development capacity of the existing campus can support the growth required to meet the current space needs. However, location on the peninsula provides little opportunity for future expansion. Recognizing that land area and funding capacity may limit on-campus growth, the university should also explore options that provide flexibility in meeting programmatic needs through alternative means. In alignment with the Planning Principles, expansion beyond Columbia Point through collaborative strategies and partnerships could support community-university reciprocal engagement and integration of the campus with the larger community. Leased space, satellite locations, and potential partnerships with Dorchester Bay City, Moakley Park, and other off-campus opportunities in the Boston metropolitan area may provide unique avenues that support the university's mission, increase opportunities for experiential learning, and enhance community, workforce, and economic development in the region.

Nantucket Field Station

The Nantucket Field Station (NFS), a UMass Boston School for the Environment facility, is a 107-acre field site of pristine salt marsh and rolling uplands on Nantucket Harbor. The site includes a 40-acre salt marsh, 2,000 feet of sandy beach frontage, mowed fields, upland shrub habitat, and a large freshwater pond.

Mission

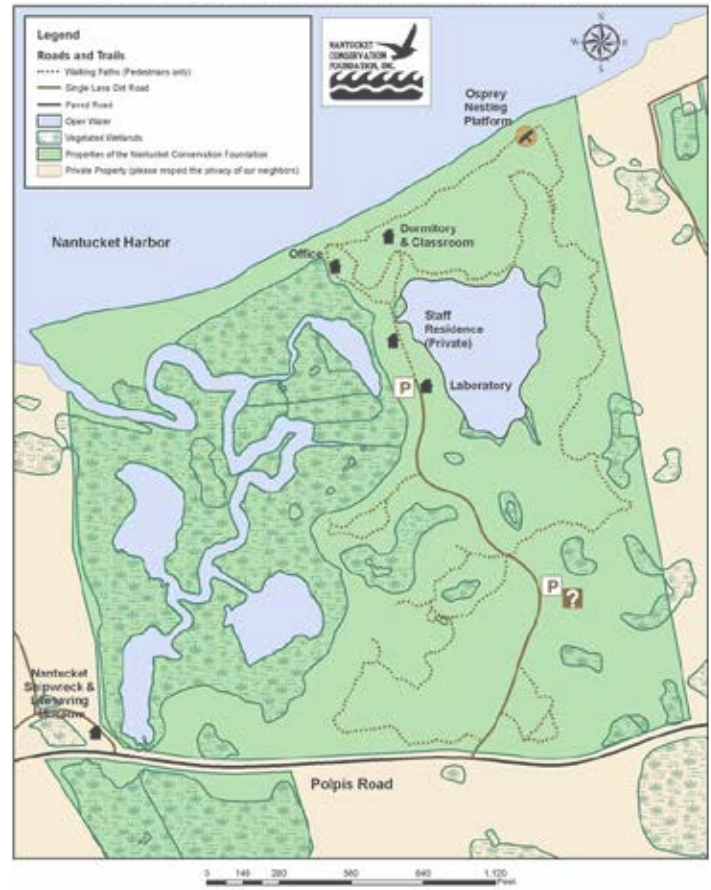
The mission of the UMass Boston NFS is to provide education, research, and community service opportunities in conjunction with UMass Boston students and faculty members, the University of Massachusetts system, the people of Nantucket, and other educational and research organizations both on and off Nantucket. In 2004, the Nantucket Conservation Foundation signed a purchase agreement with the Trustees of the University to purchase the field station, protecting the land and allowing UMass Boston to operate the facility in perpetuity.

Existing Conditions

Four buildings including a classroom, laboratory, workshop, and office currently occupy the site. A 1,200 sq. ft. laboratory provides workspace and bench space for visiting researchers. A two-story 2,200 sq. ft. building houses a workshop used for maintenance of the facility as well as boats, vehicles, motors, and scientific equipment and a residence for the NFS director. A 500 sq. ft. cabin houses the NFS office. A dormitory building with two bunkrooms providing a total of 14 beds provides overnight and long-term housing. The dormitory is located above a coastal bluff that is eroding at approximately one foot per year threatening the long-term sustainability of the location. Estimates indicate that the dormitory will need to be relocated within 10-15 years, but it will remain in use until that time.



UMass Boston Nantucket Field Station Property Map



Proposed Improvements

The Campus Master Plan Update incorporates the recommendations of the Nantucket Field Station Infrastructure Plan completed in 2021. The NFS Infrastructure Plan identified necessary “improvement” to meet the mutual goals of supporting the research and educational mission of the NFS.

Buildable area within the NFS property is limited by wetlands restrictions, severe coastal bluff erosion concerns, and Nantucket Conservation Foundation (NCF) restricted use areas. The proposed phased improvements occur within buildable zones and include enhancements to the on-site research and the educational housing capacity, relocation of the existing dormitory, and construction of a small visitor center.

Phase 1:

Addition of a 16-bed ADA accessible four-bedroom dormitory to support field research. Project would include an outdoor deck for boots and equipment, indoor sample preparation room, research and educational space, and a common eating area.

Phase 2:

Two 16-bed dormitories similar in design to Phase I, but without additional dining space.

Phase 3:

Relocation of the existing dormitory away from the bluff and renovation for use as a meeting facility and laboratory for sensor networks and other environmental studies.

Phase 4:

Construction of a small Public Information Center/Visitor Center where Nantucket residents and visitors to the island can learn more about activities of the UMass Boston NFS and the work of the Nantucket Conservation Foundation across the island.

Sustainable Strategies

The proposed development sites are in a resilient location on the property. The buildings are intended to incorporate net zero energy components that generate energy using clean renewable resources in a quantity equal to or greater than the total amount of energy consumed onsite. The buildings would be built with construction methods that account for waste and energy usage. Associated site improvements will minimize earthwork and additional impervious surfaces.

Wheatley as a Prototype





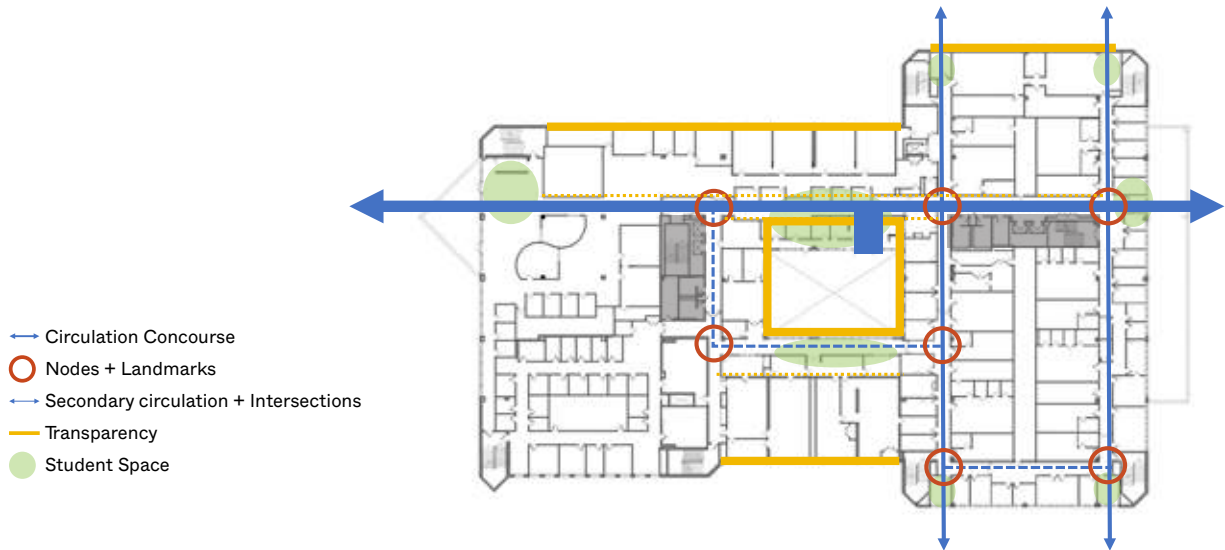
Wheatley as a Prototype

The disparity among buildings is perhaps most apparent in Wheatley Hall where current conditions impact productivity, restrict program and faculty growth and negatively impact the self-image of students, faculty, and staff. A major renovation of Wheatley Hall is not only an opportunity to significantly improve campus learning environments, but is also an opportunity to acknowledge the accomplishments of Phillis Wheatley, the first African American published poet.

Wheatley Hall houses over a third of the university's general-purpose classrooms, thus its condition impacts a large percentage of the campus community. Although the Renovation of Existing Academic Buildings (REAB) project addressed a portion of Wheatley's science labs, a long list of deferred maintenance projects remains. Interior finishes and furniture have never been updated, student space is minimal, and ambiguous circulation and signage prevent a sense of belonging. The renovation of Wheatley is an important action in our Energy and Carbon Master Plan by improving energy efficiency in all our heritage buildings as a cost-effective transition to zero emissions.

Using Wheatley as a prototype, the planning team explored opportunities to transform the heritage buildings through phased major renovation that would clarify circulation, provide enhanced student spaces, increase transparency and daylight, and facilitate flexible learning spaces to support multiple technologies and pedagogies.





The proposed renovation maintains the existing stairs, cores, and elevators, but reorganizes the interior circulation that connects them by creating a primary circulation concourse on the Plaza Level and on Levels 02-04. Envisioned as a generous circulation path terminated with daylight and student space, each concourse serves as an orienting element within the large building footprint. Nodes at intersections with secondary circulation mark connections to classrooms, labs, and offices.

The exterior structure at the Plaza Level and Level 02 is infilled with glass to enclose additional student space and classrooms and to provide visual connections between indoor and outdoor spaces. The Plaza Level places student space at the perimeter and proposes active learning classrooms and class labs with glazed partitions to capture borrowed light and to put learning on display.

The proposed renovation extends the existing open court on Level 03 to the Plaza level and encloses it with a rooftop skylight to create a central, multi-level, light-filled atrium space for student and faculty interaction. An open stair within the atrium would provide a clear and direct connection to all six floors, making student access to upper-floor faculty offices more welcoming.

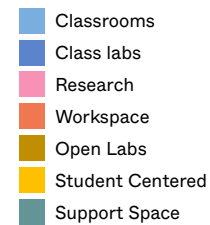
Administrative and faculty workspace is envisioned as a mix of traditional offices, open collaboration areas, huddle rooms, and social space designed around schedules, activities, and access rather than ownership. Activity-based workspaces will support collaboration and interdisciplinary interaction and will increase both flexibility and efficiency. Focused on student success, the proposed renovation creates an environment that removes barriers between faculty and students by providing an accessible, equitable, and inclusive faculty workspace.

Wheatley Program

Existing Space Allocation



Potential Space Allocation



- Need for more classrooms to accommodate class sections of 31-60
- Additional class laboratories are needed to service Engineering and Chemistry
- Shared, interdisciplinary project labs and maker spaces are needed throughout campus to support student exploration + experimentation
- Office spaces could be rearranged to better consolidate departments into single locations
- Telework and remote arrangements may alter use of workplace space in the future
- Students need informal spaces close to the instructional environment to meet with professors before/after classes



Proposed Plaza Level Collaboration Space, Cannon Design



Proposed Plaza Level Collaboration Space, Cannon Design



Proposed Active-Learning Classroom, Cannon Design

LEVEL 06

LEVEL 05

The atrium stair extends to Levels 05 and 06 to provide open circulation between floors. Activity based work areas include communal areas for collaboration, open work areas, huddle rooms, and meeting rooms.

LEVEL 04

The fourth floor provides active learning classrooms, class labs, and college/program hubs. Student space terminates corridors and overlooks the atrium.

LEVEL 03

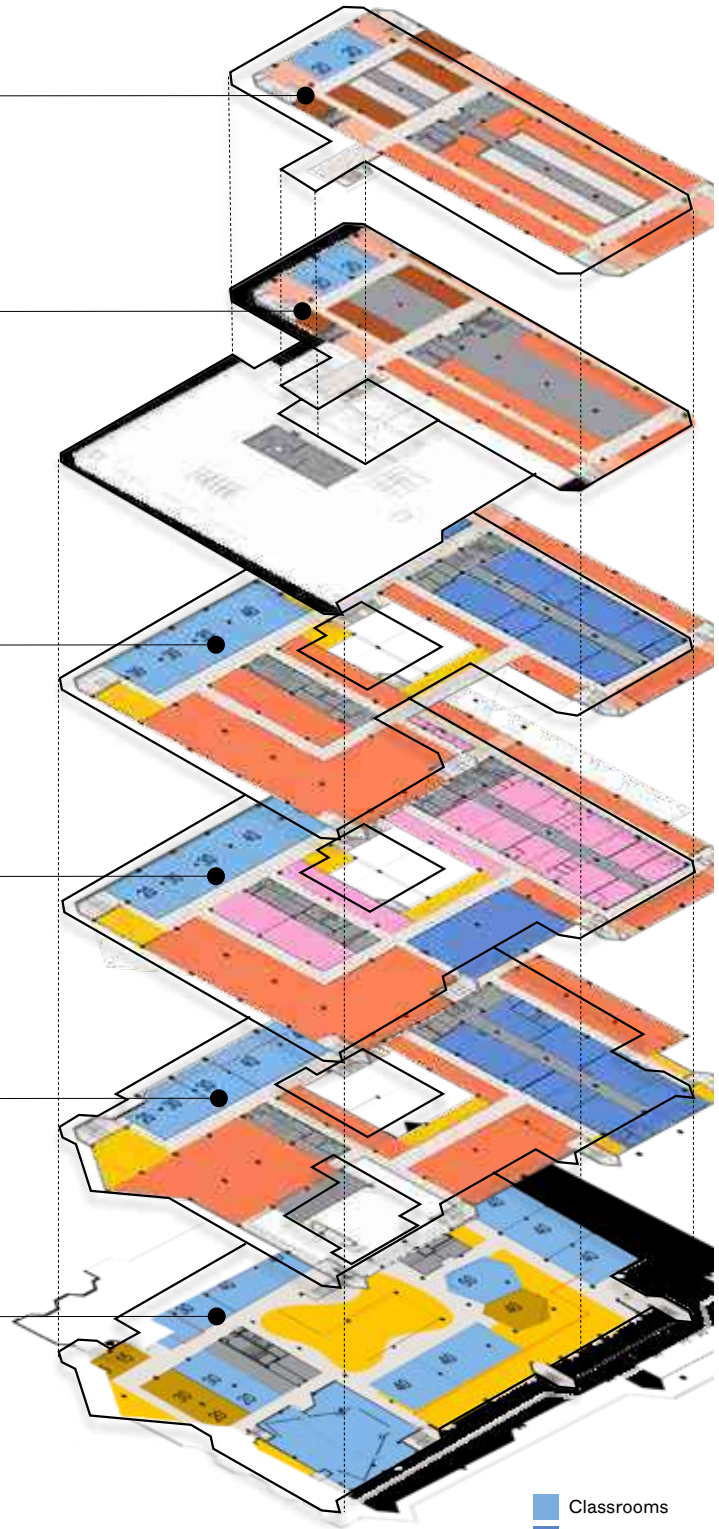
The third floor houses the research facilities, active learning classrooms and college/program hubs. A large double height class lab provides an opportunity for an engineering lab. Student space terminates corridors and overlooks the atrium.

LEVEL 02

The second floor provides active learning classrooms, class labs, and college/program hubs. The central atrium provides daylight to interior student space and workspace. Student space terminates corridors and overlooks the atrium.

PLAZA LEVEL

Glass walls infill to the line of existing structure to provide additional classrooms and student space. The atrium extends to the Plaza Level providing natural light to a central student space. Active learning classrooms and open labs surround the atrium.



- Classrooms
- Class labs
- Student space
- Open labs
- Research
- Workspace
- Communal area
- Meeting space





Level 05 Plan (Level 06 Similar)

- Classrooms
- Workspace
- Communal Area
- Meeting Space



Campus Master Plan Implementation Strategy





Implementation Strategy

The Campus Master Plan recommendations are bold and, while daunting, are not different in scale from the campus transformation achieved in the ten years following the 2009 Campus Master Plan. This last plan catalyzed 420,000 gross square feet of academic space, over 1,000 residential beds, 1,400 parking spaces, and a transformative campus quad. Like the 2009 plan, implementation of the current plan will occur over time as funding becomes available. The Campus Master Plan prioritizes the renovation of existing space, specifically the heritage buildings, to meet programmatic needs, improve adjacencies, address deferred maintenance, and increase efficiency.

The Campus Master Plan does not sequence projects but instead maintains flexible implementation by minimizing enabling projects. Development of Academic Building A, on the site of the Service and Supply Building, will require the relocation of Central Receiving to the existing loading dock between Wheatley Hall and McCormack Hall. With the exception of Academic Building A, renovation and new development can occur in any sequence that best aligns with immediate needs and available funding.

Master Plan Update Alignment with Planning Principles

| | 1 | 2 | 3 | 4 |
|---|---|--|---|--|
| | Create a welcoming, inclusive, and health promoting UMass Boston campus | Invest in a high-quality inclusive learning environment that supports the University's core values | Create a physical campus that supports community-university reciprocal engagement | Leverage assets and resources to support a sustainable, resilient, and nimble campus |
| Heritage Building Renovations Create equity for our human core | ✓ | ✓ | ✓ | ✓ |
| Healey Transformation to Learning Hub Support holistic student success | ✓ | ✓ | ✓ | ✓ |
| Service & Supply/Central Receiving Relocation Enable project supporting campus welcome | ✓ | ✓ | | ✓ |
| New Academic Buildings Provide world class teaching and research environment | ✓ | ✓ | ✓ | ✓ |
| New Mixed Use Building: Academic/Athletic/Recreation Develop a health promoting campus | ✓ | ✓ | ✓ | ✓ |
| Realign space in Campus Center Focus on co-curricular collaboration and student experience | ✓ | ✓ | ✓ | ✓ |
| Multi-purpose Field Empower well-being and equity | ✓ | | ✓ | |
| New Research Facilities Invest in facilities to support our grand scholarly challenges | ✓ | ✓ | ✓ | |
| Central Plant expansion and resiliency improvements Priorize sustainability and meet carbon reduction goals | ✓ | | | ✓ |
| Calf Pasture Development Leverage partnerships to create new community assets | | ✓ | ✓ | ✓ |



Based on the disparity in existing buildings, the Campus Master Plan recommends that renovation of the heritage buildings be a top priority in the near term. Sequencing and phasing of renovation should be based on both a qualitative and quantitative evaluation to determine scopes that are aligned with funding and that offer the most transformational improvements. The Planning Principles identified during the planning process will serve as the criteria against which each project is evaluated.

Recognizing that flexibility is key, the design team prepared multiple combinations of Phasing. One possible strategy would be to renovate the ground floor of Wheatley and McCormack first to provide active learning classrooms and increased student space. Creating transparency at the plaza level to activate the new quad would benefit the entire campus community. Although phased construction would increase overall costs, it would minimize disruption to ongoing campus activities that would result from taking an entire building offline. Upper floor renovations of heritage buildings, the relocation of central receiving, and the construction of the next new academic building could follow with an anticipated completion within the next ten years.

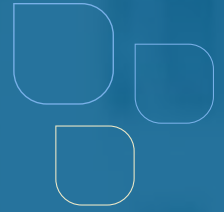
The Calf Pasture Development could provide an opportunity to provide academic or research space sooner than an on-campus development. Migration into a Calf Pasture academic building would decant on-campus space needs to allow for larger or non-phased capital renovations.

Possible Implementation Plan

| | |
|--|--|
| <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Near-Term 5 Years</p> | <ul style="list-style-type: none"> • Renovate Level 01 of Wheatley Hall and McCormack Hall to update classrooms and increase student space. Major exterior and infrastructure improvements deferred until capital renovation is funded. • Renovate Level 02 of Healey Library to provide a better arrival experience and increase student space. Major exterior and infrastructure improvements deferred until capital renovation is funded. • Relocate Central Receiving and select Service and Supply Building functions to the loading dock between McCormack Hall and Wheatley Hall. • Begin design of the Health Sciences Building and renovation of Quinn and the Service and Supply. |
| <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Mid-Term 10 Years</p> | <ul style="list-style-type: none"> • Construct Health Sciences Building and renovate Quinn and the Service and Supply Building. (Design completed in Near-Term, 2-year construction schedule anticipated). • Renovate Wheatley Hall in phases using the new Health Sciences Building as swing space. (Design phase concurrent with construction of the Health Sciences Building, 3-year phased construction schedule anticipated). • Renovate Healey Library in phases. (Design phase concurrent with construction of Wheatley Hall renovation, 2-year phased construction schedule anticipated). • Renovate McCormack Hall in phases. (Design phase concurrent with construction of Healey Library renovation, 2-year phased construction schedule anticipated). • Design and construct renovation and addition to Clark Athletic Center. • Design and construct Multi-purpose Field. • Design and construct Central Plant Expansion. • Begin design of the Academic/Recreation Building B. |
| <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Long-Term 10+ Years</p> | <ul style="list-style-type: none"> • Design and construct additional Academic Buildings. • Design and construct the ISC Addition. |



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STUDENT SUPPORT SERVICES



8.

A LIVING DOCUMENT: ADAPTING TO CHANGE

A Living Document: Adapting to Change

The Campus Master Plan Update is intended to be a living and flexible document that guides decision-making for the future of the physical campus. It builds upon UMass Boston's mission and strategic goals and supports the four cross-cutting commitments identified in *For the Times*: advancing the university's teaching, research, and service mission; fostering an antiracist and health-promoting institutional culture; collaborating with community partners; and modeling operational excellence.

The plan's vision for the future includes strategies and recommendations that reinforce the strengths of the campus and address challenges and opportunities to create a better physical environment for the entire campus community. The plan provides a coherent vision that will allow the university to react to challenging forces and respond to opportunities in the near- and long term. UMass Boston's future will be shaped by a variety of factors including student demographics and academic market demand, changes in technology, political priorities, the ability to secure funding, and the local and national economy. Partnership opportunities, course delivery methods, research initiatives, student life amenity and dining trends, housing demand, sports and recreation needs, and deferred maintenance priorities will also inform implementation decisions during the tenure of the Campus Master Plan Update. Furthermore, the COVID-19 pandemic has introduced additional uncertainty about the future of work and gathering that reinforces the need for flexibility to adapt to changes in society and higher education. As these forces spur change over the plan's planning horizon, the planning principles, concept plan, goals, vision, and strategies identified in the plan are designed to guide decisions in anticipation of change.

Continued investment in sound planning, deferred maintenance, renovation, and sustainable buildings and infrastructure will help UMass Boston adapt and thrive. The Campus Master Plan and the space assessment should be updated after five and ten years to acknowledge completed projects and to review and realign critical assumptions. In conjunction with regular updates, the university should consider a periodic assessment of the need for additional research space, residence hall beds, and campus parking. The university's five-year capital plan, updated annually, will outline funding priorities aligned with the university's strategic goals and the overall vision established through the planning process.



Acknowledgments

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Credits

General Resources:

Research Guides at University of Massachusetts Boston (libguides.com)

2009 Campus Master Plan

University Roots - UMass Boston (UMass Boston.edu)

Aerial view of UMass Boston's ColUMass Bostonia Point campus, circa 1979 - UMass Boston Historical Photographs - Open Archives at UMass Boston

UMass Boston Archives

Boston Historical Commission

Gaining Ground by N. Seasholes

Bachrach, Fabian, 1917-2010. Joseph P. Healey, ca. 1965. University Photograph Collection (RG 110_2). Special Collections and University Archives, University of Massachusetts Amherst Libraries

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FEMA Flood Map from www.FEMA.gov

cli-MATE: MRCC Application Tools Environment

Climate Ready Boston

historicboston.org



STUDIO ENÉE architects