UMass Boston Campus in 1974
Substructure and Legacy Infrastructure

• 1974 campus was designed for 10,000 students

• Campus fortress with Substructure parking garage beneath buildings

• Utilities suspended from ceiling of Substructure garage UL and LL

• Concrete issues began in 1980s

• Substructure closed in 2006

• Interim stabilization and shoring installed

• Critical decision point for campus: invest in repairing the existing infrastructure or reimagine a modern campus on Columbia Point
Campus Master Plan

- Adopted in 2007

- Flexible Framework for campus growth

- Elimination of Substructure and associated issues as an opportunity for new campus aesthetic and development

- New interior and exterior environments for teaching, research, student life, and student success

- Focused on better connecting campus to the environment and community

- Principles include sustainability and universal design
25-Year Campus Master Plan Implementation

Interim Substructure Stabilization (2011)

ISC (2015)

University Hall (2016)

Monan Park (2016)
25-Year Campus Master Plan Implementation

- Fox Point Dock (2017)
- Residence Hall (2018)
- West Garage (2018)
- UCRR (2018)

* This summer Residence Hall security desk upgrades will be undertaken. These physical changes to the entrances will be funded as part of the construction contingency and with no cost to the university. Work will begin after residents move out in May 2019.
Utility Corridor and Roadway Relocation (UCRR)

- Relocation of campus utilities from the Substructure to a new utility loop under campus roadways to reduce operational vulnerability and allow for the demolition of the Substructure and Science Center
- The two-way roadway has bike lanes, sidewalks, and tree lawns on each side
- Open spaces will be preserved for future campus uses
- Storm water management includes bio-retention areas that are part of the campus landscape and include native plantings
- Improved access from campus landscapes to HarborWalk
Utility Corridor and Roadway Relocation (UCRR)

- The project substantially complete with final hardscape and landscape work to be completed Spring 2019
- Key construction goals achieved include:
  - All utilities relocated from the Substructure to a new reliable and redundant campus loop
  - New two-way loop roads
  - Accessible access points to the Harborwalk
  - Campus Center Lawn
  - Sidewalks, bike lanes, tree lawns
Utility Corridor and Roadway Relocation Project

Utility Re-location

Utilities in Substructure

Utilities Re-located Under Roads
Utility Corridor and Roadway Relocation Project
Utility Infrastructure Upgrades
Utility Corridor and Roadway Relocation Project

4 pick-up and drop-off areas

BUSES ONLY
Utility Corridor and Roadway Relocation Project

Coming Soon: Beacons Walk
Critical Repair and Maintenance Projects

New Fence to Calf Pasture Pumping Station (2018)

Wheatley Exterior Ramp and Stair (2018)

Elevator Upgrades (2018)

Clark Gym Roof Replacement and Envelope Repairs (2018)
Critical Repair and Maintenance Projects

- Healey Roof Replacement and Building Envelope Repairs (2016)
Critical Repair and Deferred Maintenance

The Commonwealth and DCAMM have a new deferred maintenance funding request process:

• Campuses submit a prioritized list of projects to be partially funded by DCAMM

• UMass Boston’s list for the next five years totals $29.7M, 56% to be paid by DCAMM and 44% by the campus

• Projects include sprinkler installations and fire alarm upgrades, roof replacements, exterior door replacements, and HVAC, plumbing electrical systems repairs.

• Work to begin as early as FY19 and continue through FY23
## Critical Repair and Deferred Maintenance

### DCAMM CRITICAL REPAIR PROJECTS, FY19-FY23

<table>
<thead>
<tr>
<th>Building/Area</th>
<th>Project</th>
<th>5 Year Total DCAMM + University Projected Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus Center</td>
<td>Garage Concrete Repairs and Top Coating</td>
<td>$413,000</td>
</tr>
<tr>
<td>Campus-wide</td>
<td>Building Controls and Building Management System Upgrade</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Clark</td>
<td>Air Handling Unit Replacements</td>
<td>$790,000</td>
</tr>
<tr>
<td>Clark</td>
<td>Fire Protection Sprinkler Installation and Fire Alarm System Upgrade</td>
<td>$1,093,000</td>
</tr>
<tr>
<td>Clark</td>
<td>Hot and Chilled Water Circulating Pump Replacement</td>
<td>$175,000</td>
</tr>
<tr>
<td>Clark</td>
<td>Ice Rink Centrifugal Chiller Replacement</td>
<td>$300,000</td>
</tr>
<tr>
<td>Clark</td>
<td>Replace Exterior Doors</td>
<td>$210,000</td>
</tr>
<tr>
<td>Harborwalk</td>
<td>Pavement and Bollard Repairs</td>
<td>$500,000</td>
</tr>
<tr>
<td>Healey</td>
<td>Fire Protection Sprinkler Installation and Fire Alarm System Upgrade</td>
<td>$8,110,000</td>
</tr>
<tr>
<td>Healey</td>
<td>Primary Transformer Replacement</td>
<td>$2,025,000</td>
</tr>
<tr>
<td>Healey</td>
<td>Replace Air Handling Unit and Duct Work Repair in Healey Library</td>
<td>$828,000</td>
</tr>
<tr>
<td>Healey</td>
<td>Replace Exterior Doors</td>
<td>$120,000</td>
</tr>
<tr>
<td>McCormack</td>
<td>Hot Water System Storage Tank Replacement</td>
<td>$96,000</td>
</tr>
<tr>
<td>McCormack</td>
<td>Replace Exterior Doors</td>
<td>$600,000</td>
</tr>
<tr>
<td>McCormack</td>
<td>Stairwell Fan Coil Unit Replacement</td>
<td>$36,000</td>
</tr>
<tr>
<td>Quinn</td>
<td>Fire Protection Sprinkler Installation and Fire Alarm System Upgrade</td>
<td>$1,890,000</td>
</tr>
<tr>
<td>Quinn</td>
<td>Replace Exterior Doors</td>
<td>$250,000</td>
</tr>
<tr>
<td>Quinn</td>
<td>Roof Replacement</td>
<td>$1,573,000</td>
</tr>
<tr>
<td>Quinn</td>
<td>Secondary Transformer and Main Electrical Panel Replacement</td>
<td>$631,000</td>
</tr>
<tr>
<td>Saltwater Pump House</td>
<td>Discharge Line Cleaning and Manhole Installation</td>
<td>$100,000</td>
</tr>
<tr>
<td>Saltwater Pump House</td>
<td>Secondary Transformer Replacement</td>
<td>$200,000</td>
</tr>
<tr>
<td>Service &amp; Supply</td>
<td>Air Handling Unit and Circulating Pump Replacement</td>
<td>$397,000</td>
</tr>
<tr>
<td>Service &amp; Supply</td>
<td>Emergency Generator Replacement</td>
<td>$100,000</td>
</tr>
<tr>
<td>Service &amp; Supply</td>
<td>Fire Protection Sprinkler Installation and Fire Alarm System Upgrade</td>
<td>$1,135,000</td>
</tr>
<tr>
<td>Service &amp; Supply</td>
<td>Replace Exterior Doors</td>
<td>$120,000</td>
</tr>
<tr>
<td>Service &amp; Supply</td>
<td>Roof Replacement</td>
<td>$800,000</td>
</tr>
<tr>
<td>Utility Plant</td>
<td>Transformer Replacement</td>
<td>$167,000</td>
</tr>
<tr>
<td>Wheatley</td>
<td>Façade Repair and Repointing</td>
<td>$6,041,000</td>
</tr>
</tbody>
</table>

**Total:** $29,700,000
Ongoing and Upcoming Construction:

Vacating the Science Center and Preparing for Demolition
Vacating the Science Center: Infrastructure Hub, Data Center, and IT Staff Move

- The University’s data center, currently located in the Science Center, serves as a hub for the University’s centralized IT infrastructure hardware (Switches, Firewalls, APC units) and servers for a variety of end-users including IT, researchers/faculty, and departments.
- The data center relocation is an enabling project for SDQD.
- Current data center functions are to be split between a new on-campus location for IT infrastructure hardware and the co-location of servers to the main UMass data center in Shrewsbury.
- The new on-campus location for IT infrastructure, referred to as the IHUB, will be located on the Upper Level of Quinn in current telecommunications space.
- The award of a construction contract is underway. Construction work will start immediately upon contract award and will be completed in Fall 2019.
- 26 IT staff currently in Science Center, to move to Service and Supply as well as Healey Library.
Vacating the Science Center: CSM Machine Shop

• The College of Science and Mathematics machine shop, currently located in the Science Center, supports teaching and research by fabricating and repairing metal objects used in the lab or in the field.

• The machine shop relocation is an enabling project for SDQD.

• The new location for the machine shop will be in the Service & Supply Building.

• Planning and design for the new machine shop is being performed by NBBJ, the designer for the SDQD project and construction work will be performed by Consigli, the REAB Construction Manager.
Renovations to Existing Academic Buildings (REAB)
Renovations to Existing Academic Buildings (REAB)

Project Goals
- Relocate academic programs out of Science Center before Spring Semester 2020
- Utilize campus space to highest and best use
- Meet current needs of departments, growth wherever possible

Project Constraints
- Budget: capital budget inflexible
- Scope: large infrastructure-intense programs in Science
- Space: limited vacant space available across campus
- Schedule: academic schedule inflexible
- Schedule: Science Center Demolition funded, planning underway
Renovations to Existing Academic Buildings

Project Team:

- University of Massachusetts Building Authority is managing the project on behalf of UMass Boston
  - Owner’s Project Manager: Hill International
  - Designer: Cannon Design
  - Construction Manager: Consigli Construction

- Phase 1: McCormack and Wheatley
- Phase 2: Healey and Quinn
- REAB is a collaboration between Master Planning, Academic Affairs, Stakeholder Departments, Facilities, OEHS, Human Resources
Renovations to Existing Academic Buildings

Project Schedule

- January 2019: Construction began in vacant areas of McCormack and Wheatley
- January/February 2019: relocations in McCormack, Wheatley, and Healey
- March 2019: Construction began in Healey
- May/June 2019: Occupants move out of Quinn, Quinn renovations begin
- August 2019: First waves of construction complete, including Healey and select areas of McCormack and Wheatley
- Summer 2019 through January 2020: Occupants move out of Science Center into new campus locations
Renovations to Existing Academic Buildings

- **Construction Impacts**
  - To report construction related issues/impacts/concerns, please contact Facilities Service Response via email at Facilities@umb.edu or by calling 617-287-5630. Facilities Department Project Management staff (Paul North/Ernie Taylor) are providing day-to-day coordination with the REAB project team.
  
  - Abatement work and the most disruptive demolition work has been performed after hours and generally try to end very noisy construction activities by 8:00 AM in areas where instruction could be impacted. The project budget and schedule does not allow having all noise generating work performed after hours.
  
  - Indoor Air Quality is monitored throughout the construction and inquiries or issues are addressed as they arise.
  
  - Contractor presence will be seen through to spring 2020 semester.
REAB – McCormack Level 1 Floor Plan

- Biology Teaching Labs
- Plaza level entrance
- New Restrooms and Classroom

SEE PARTIAL PLANS (N2200 SERIES) FOR SCOPE OF WORK
REAB – Wheatley Level 3 Floor Plan

Math Offices

Plaza side of building
REAB – Healey Level 11 Floor Plan

- Elevators
- Advancement Offices
Food Court Upgrades

• Overall refresh of the Campus Center Food Court Servery
  • Refresh/replace counters, signage, layout

• Goals:
  • Improve circulation
  • Improve use of the space
  • Improve aesthetics
  • Provide increased offerings and variety

• Estimated cost: $1.5 million (paid for by Sodexo investment)

• Anticipated to occur Summer 2021
Substructure, Science Center, Pool Demolition and Quadrangle Development (SDQD) Project
Substructure, Science Center, Pool Demolition and Quadrangle Development (SDQD) Project

Project Team

- University of Massachusetts Building Authority is managing the project on behalf of UMass Boston
  - Owner’s Project Manager: AECOM
    - Licensed Site Professional (environmental monitoring): Vertex
  - Designer: NBBJ
    - Structural Engineer: ARUP
    - Geo-technical Engineer: Haley and Aldrich
    - Civil Engineer: Nitsch
    - Landscape Architect: Michael Van Valkenburgh Associates
  - Construction Manager: Gilbane Building Company
Challenges and Goals

1. Science Center Programs to be relocated into existing buildings
2. Science Center, Pool, Garage & portions of the Plaza must be demolished
3. McCormack & Wheatley will have additional structural support added and repairs to LL/UL slabs
4. Need to provide on-campus parking, eliminate satellite parking shuttle & enable Bayside development
5. A better Campus focal point and gathering space
6. Replacement of catwalks is critical
Substructure, Science Center, Pool Demolition and Quadrangle Development (SDQD) Project

Anticipated Schedule Milestones

- Academic Year 2019-2020: new catwalks constructed
- January 2020: Science Center fully vacant
- January 2020: Abatement and interior demolition begin
- Summer 2020: catwalks complete
- Summer 2020: bulk demolition occurs
- Late Fall 2020: approximate completion of demolition activity
- Fall 2020 – December 2021: quad, new portions of plaza, and parking established
Existing Catwalk Circulation
Catwalk design arrived at through design process involving senior leadership

The construction of new catwalks will precede demolition to maintain an indoor circulation path across campus
Catwalk

New and existing catwalk at Healey
Catwalk

New catwalk between McCormack and Healey
Catwalk

Existing Catwalk Entrance to McCormack
Catwalk

New Catwalk Entrance to McCormack
Catwalk

New catwalk between Wheatley and McCormack
SDQD – Demolition and New Development

Required Demolition
SDQD – Extent of Project
SDQD – Preliminary Proposed Site Plan
SDQD – Current View
Landscape and Technical Objectives

- Universal accessibility and easy campus connections
- Space for informal recreation and intramural activities
- Variety of gathering spaces for large and small groups
- Planting inspired by coastal landscapes
- Collect and filter stormwater in the landscape
- Connect new car park and Beacon’s Walk at 24’ elevation to the plaza level at 49’ elevation
- Reuse existing landform and demolition material
- Work with existing structural system
- Select flexible materials to account for natural settlement
View of Existing Science Center and Plaza
Bird’s Eye View of New Quad, Plaza and Catwalks
Relocated soil from current mound and crushed building materials as fill beneath quad
Layer View of New Quad, Plaza and Catwalks
Substructure, Science Center, Pool Demolition and Quadrangle Development (SDQD) Budget

**SDQD BUDGET:**

Original Approved Project Budget*: $155,500,000

Science Center Relocation REAB Budget: ($41,000,000)

SDQD Budget $114,500,000

*Project Funding: $78,000,000 from the State & $77,500,000 from University and other sources*
Substructure, Science Center, Pool Demolition and Quadrangle Development (SDQD) Project

Draft Schedule

<table>
<thead>
<tr>
<th>SDQD PROJECT PHASES</th>
<th>FY 2018</th>
<th>FY 2019</th>
<th>FY 2020</th>
<th>FY 2021</th>
<th>FY 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESIGN</td>
<td>JASOND</td>
<td>JFMAJ</td>
<td>JASOND</td>
<td>JFMAJ</td>
<td>JASOND</td>
</tr>
<tr>
<td>Schematic Design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catwalk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substructure Repair</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demolition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quad/Parking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BID</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catwalk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substructure Repair</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demolition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quad/Parking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catwalk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substructure Repair</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demolition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quad/Parking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DECANT SCIENCE CENTER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupants Fully decanted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SDQD Completes December 2021

Science Decanted January 2020

DRAFT
Bayside Development
Bayside Development

• Bayside building demolished in 2016

• Bayside site remains campus parking for near team. Additional parking is included in the SDQD project. The university has engaged Walker Parking for a parking demand study to determine future need.

• In February 2019 Accordia Partners were designated to build a mixed use development on site, subject to contract

• Access and Due Diligence Agreement signed in April 2019 for Accordia to access the property and review property information

• Agreement to Lease anticipated to be signed May 2019

• $7M deposit to deposited into escrow; $3.5M to be available upon the signing of the Agreement to Lease, the remainder over the next several months at set points to be negotiated.
Bayside Development

- Deposit to be used on qualified capital investments
- Approval process for qualified capital investments being put in place with UMBA and the Board of Trustees
- Permitting process begins after Agreement to Lease is executed, anticipated to take 18-24 months
- Anticipating a mix of academic and life science focused space, residential, retail and other commercial use on the site
- Built-out Bayside could mimic Kendall Square
- University to undertake a consultation process to determine input for Accordia about the site
Calf Pasture Pumping Station

- University to explore potential private development of the site
- Vote to go to the Board of Trustees in June to have UMBA hire a consultant to assist in this process
Questions?

Additional questions or comments?

masterplan@umb.edu

Report Construction Related Issues:

Facilities Service Response

Facilities@umb.edu
617-287-5450
Service & Supply Building UL-01