



2023

Town Gown Report to the City of Cambridge



Table of Contents

2023 Town Gown Report

MIT's 2023 Town Gown report provides updates on the Institute's planning and development activities. This year's report features an introduction to MIT's 18th President, Sally Kornbluth, and highlights the Institute's connection to the Charles River. Each activity reported in these pages serves to advance MIT's mission of teaching and research as the Institute strives to address local and global challenges that impact society and the planet.

The Cover

The Town Gown report cover depicts an iconic view of the Cambridge campus in the fall with the Maclaurin buildings (3, 4, and 10) and MIT's dome. Also shown in the photo is the Charles River, which MIT reveres and respects as an extension of the campus's front lawn and as a vital contributor to multiple academic, sporting, leisure, and community activities. The cover image is courtesy of Dominick Reuter.

Acknowledgements

The preparation of this report is led by the Office of Government and Community Relations in collaboration with the Office of the Vice President for Campus Services and Stewardship, Office of the Executive Vice President and Treasurer, Office of Campus Planning, Office of the Vice President for Finance, MIT Investment Management Company, Institutional Research, Institute's Community Equity Office, Office of Sustainability, Open Space Programming, Department of Facilities, and Division of Student Life.

| | |
|--------------------------------------------------|--------------------|
| MIT President Sally Kornbluth | 4 |
| MIT and the Charles River | 6 |
| Students, Faculty, and Staff | 8 |
| <i>Table: Student Body</i> | 10 |
| <i>Table: Faculty and Staff</i> | 10 |
| Housing | 12 |
| <i>Table: Student Residences</i> | 14 |
| <i>Table: Tax-Exempt vs. Taxable Housing</i> | 14 |
| Campus Planning | 16 |
| <i>Map: MIT Property in Cambridge</i> | 18 |
| <i>Map: Tree Locations</i> | 22 |
| <i>Map: Future Development Opportunities</i> | 29 |
| <i>Map: Cellular Antenna Installations</i> | 29 |
| <i>Map: Buildings and Occupied Spaces by Use</i> | 30 |
| <i>Table: Real Estate Leased</i> | 32 |
| <i>Table: Property Transfers</i> | 32 |
| <i>Table: Facilities and Land Owned</i> | 32 |
| Projects | 34 |
| <i>Map: Major Projects</i> | 34 |
| <i>Map: LEED-Certified Buildings</i> | 44 |
| Transportation | 46 |
| <i>Map: Shuttle Routes</i> | 48 |
| <i>Table: Shuttle Routes</i> | 50 |
| <i>Table: Commuting Mode of Choice</i> | 50 |
| <i>Table: Point of Origin</i> | 51 |
| <i>Map: Bicycle Infrastructure</i> | 52 |
| Sustainability and Resiliency Planning | 56 |
| <i>Map: Energy Efficiency Upgrade Projects</i> | 61 |
| Supporting Cambridge Students and Families | 62 |
| Economic Impact | 64 |
| <i>Table: Payments to the City of Cambridge</i> | 66 |



MIT President Sally Kornbluth



President Kornbluth is welcomed to MIT's campus. Image courtesy of Melanie Gonick.

The MIT community welcomed Sally Kornbluth as the Institute's 18th president in January 2023. In her previous role as provost of Duke University (2014 to 2022), she earned a reputation as a brilliant administrator, a creative problem-solver with a gift for collaboration, and a champion of faculty excellence and student wellbeing.

Kornbluth graduated from Williams College with a BA in political science and later, shifting focus, earned a BA in genetics at Cambridge University. She received her PhD in molecular oncology from Rockefeller University, and then completed postdoctoral training at the University of California, San Diego. A cell biologist, Kornbluth joined Duke as an assistant professor of pharmacology and cancer biology, and later as a full professor. Her research has

focused on the biological signals that tell a cell to start dividing or to self-destruct – processes that are key to understanding cancer as well as various degenerative disorders.

Her first role in Duke's administration was as vice dean for basic science at the Duke School of Medicine, a post she held until she became provost. As provost, her accomplishments included leading efforts to develop a pipeline of faculty from underrepresented groups, with an eye to make Duke more diverse and inclusive, and creating an Office for Faculty Advancement that, between 2018 and 2022, led to a 30% increase in the number of Black faculty.

With a natural inclination for direct engagement, President Kornbluth started her presidency with a [listening tour](#) to get to know the



President Kornbluth waves at graduation. Image courtesy of Gretchen Ertl.

Institute community and its challenges and opportunities. What she learned helped shape the priorities in her [inaugural address](#). Explaining that she was drawn to the Institute because of the extraordinary opportunity for impact, she identified bold objectives for MIT, in service to the world:

- To lead the development of solutions to dramatically accelerate progress against climate change
- To help to realize the societal benefits of AI and ensure that its power is harnessed for good
- To redefine the future of biomedicine by forging new links between engineering and life science.

A member of the National Academy of Medicine, the National Academy of Inventors, and the American Academy of Arts and Sciences, Kornbluth also received the Basic Science Research Mentoring Award from the Duke School of Medicine and the Distinguished Faculty Award from the Duke Medical Alumni Association.

Today, the problems before us – the problems of human society, and of its only planet so far – require that we harness our curiosity in exceptionally productive ways. The people of MIT have always wanted to know how things work, and how we can be part of big solutions. Now, it's imperative that we know – and that we help lead the world to action.

President Kornbluth, Inaugural Remarks, May 2023

To our neighbors in Cambridge and Boston, and to leaders across the Commonwealth: Let's find ways to support each other in this work, so we can move as fast as the moment demands!

President Kornbluth, Inaugural Remarks, May 2023

MIT and the Charles River

For MIT, the Charles River is more than a body of water to run along, sail in, or even measure with 'Smoots' across the bridge. In 1916, 55 years after the founding of its original campus in Boston's Back Bay neighborhood, MIT moved directly across the river to its current Cambridge campus between Central Square, Kendall Square, and the river's left bank.

The Charles River not only provides a stunning backdrop for the MIT campus but also serves as a living laboratory for research and a source of inspiration for the MIT community. As the Institute advances cutting-edge research in the fields of science and technology, its relationship with the Charles River remains a vital and cherished aspect of its heritage and vision for the future. With an entire stretch of campus extending along the riverbank, MIT is committed to providing public access, supporting river-focused community organizations, and pursuing aquatic educational programming.

Public Access

The Charles River is an integral feature of MIT's broader campus and a core part of its culture as a designated Sea Grant College. The river serves as a source of wonder and relaxation for both students and faculty, offering picturesque walking, bicycling, and jogging paths, opportunities for peaceful respite, and places where community members can unwind and connect with nature. Two MIT facilities make active use of the river – the Wood Sailing Pavilion and the Resch Boathouse – and MIT seeks ways in which these facilities can provide benefits for the larger community.

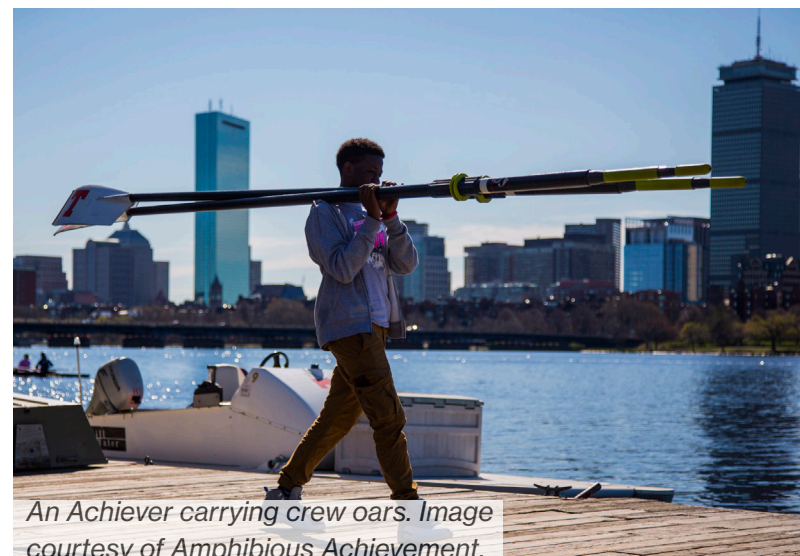
The Walter C. Wood Sailing Pavilion (Building 51) was built in 1935 and is the oldest university sailing pavilion in the world. It houses more than 100 sailboats and maintains a dedicated boat for the Environmental Protection Agency (EPA) and other environmental organizations to use for buoy maintenance and water sampling in the Charles River. The Pavilion also supports public access with accessible roof decks, water fountains, and bathroom facilities during open

hours. Every year, the Sailing Pavilion staff host and oversee collegiate, high school, and youth sailing competitions, including the Massachusetts High School State Sailing Championship sailing regatta. The Charles River Conservancy's floating wetland (installed as part of an ecological intervention strategy to reduce harmful algal blooms) is also stored behind the Pavilion's docks during the winter months.

Fully renovated in 2021, the Richard J. Resch Boathouse (Building W8) is home to the MIT Engineers men's and women's rowing teams. The Boathouse includes office areas, conference rooms, and workout facilities, along with an expanded spectator viewing area. Activities hosted at the Boathouse include the Boston Dragon Boat Festival.

Community Organizations

Many MIT students, faculty, and staff volunteer their private time with local community organizations that are dedicated to ensuring the Charles River remains beautiful and accessible. In the same spirit, the [MIT Community Service Fund](#) promotes volunteerism and supports non-profit organizations where members of the MIT community volunteer. For example, the Fund supported the launch of Mass Audubon's Magazine Beach Park Nature Center and continues to support its volunteer work. The Nature Center showcases seasonal, nature-themed exhibits on the ecology and wildlife of the Charles



An Achiever carrying crew oars. Image courtesy of Amphibious Achievement.

River watershed. Additionally, the Fund supports MIT volunteers working with the Charles River Conservancy, where they have performed vital park maintenance, implemented amphitheater revitalization and improvements, and supported the ecological health of these spaces through activities such as invasive species management.

Members of the MIT community also volunteer their time and innovative ideas to support the creative, experiential work of student groups such as [Amphibious Achievement](#). Amphibious Achievement, an athletic and academic mentorship program for metro-area high school students staffed by MIT student volunteers, combines rowing and swimming instruction with a focus on college-preparatory academics to expand higher education opportunities and instill confidence in the participants of the program, dubbed Achievers.

MIT also supports the mission of the Charles River Watershed Association through financial contributions, event participation, and student volunteer partnerships.

Educational Programming

The Charles River also plays a crucial role in various academic and research activities at MIT. Students and researchers have used the river's ecosystem to examine biodiversity, monitor pollution levels, and investigate the effects of climate change. This natural laboratory has afforded MIT a unique opportunity to contribute to our understanding of environmental science and conservation. Many organizations and groups on campus collaborate with local K-12 students to share programming related to the river.

Floating Wetland Educational Kits

[MIT Sea Grant](#) is a partnership between the Institute and National Oceanic and Atmospheric Administration (NOAA) as part of the National Sea Grant College program that promotes the conservation and sustainable development of marine resources through research, education, and outreach. Recently, MIT Sea Grant and the Charles River Conservancy partnered to create hands-on science kits, which Cam-

bridge Public Schools incorporated into all 6th grade classrooms in spring 2022. The kits helped students learn about the Charles River Floating Wetland, which reintroduces native plants to increase habitat diversity and support zooplankton, the tiny animals that graze on fast-growing algae in the river. The Floating Wetland is an ecological intervention that aims to restore balance in the Charles River. The kits have been a hit at Cambridge's STEAM It Up!, MIT Open Space Programming events, and the Cambridge Science Festival.



MIT student with a robot. Image courtesy of MIT Arcturus.

MIT Arcturus

[MIT Arcturus](#), MIT's autonomous robotics team, strives to give MIT undergraduates hands-on experience building and programming autonomous vehicles while sharing the magic of robots with the larger Cambridge community and creating technology that will benefit the environment and coastline. Now in its second year, Arcturus has become a staple of educational programming events around Cambridge. The MIT students mentored 30 middle-school students at MIT's annual SPARK event for 7th and 8th graders. The young learners at the event discovered how to make their own SeaPerches, which are remotely operated underwater vehicles. Arcturus also participated in Cambridge Science Festival 2022 and shared their autonomous surface vehicle with the broader community. Thanks to the proximity of the Charles River, Arcturus is able to demo their vehicles on the water, extending MIT's learning opportunities from inside buildings and labs to the real world and beyond.

Students, Faculty, and Staff

Student Population

MIT's undergraduate student population for FY2023 was 4,638 – an increase of just nine from the previous year. The Covid-19 pandemic is no longer affecting undergraduate enrollment figures.

Graduate student enrollment fluctuates based on independent decisions of academic departments. These determinations are governed by a variety of factors including the availability of research funding, the ability of international students to obtain visas, and, more recently, the impacts of the global pandemic. Since 2003, the average annual growth rate for graduate students has been 0.7%. After the Covid-19 disruptions resulted in a slight decline (0.8%) in the graduate student population, the growth rate recovered with a robust 5.3% increase in 2021, well over the trend line. Similar to the undergraduate population, the graduate student numbers are leveling off, with only a slight decline of 29 students (0.4%) compared with last year.

Faculty and Staff

MIT's faculty and staff employment is largely based on the needs and strategies developed at the local level rather than a centralized planning process at the Institute level.

Across the campus, more than 110 departments, laboratories, centers, and institutes (DLCIs) manage their own staffing in support of their objectives with funding that is assembled from a variety of sources. Staffing rates are subject to economic cycles, such as the recession more than a decade ago, during which the staff population dropped by more than 900 employees, not recovering its numbers until FY2015. Similarly, staff population growth stalled with the arrival of the pandemic and then dropped for three years in a row, resulting in a reduction of 1,202 employees between FY2020 and FY2022. This year, the number of employees began to recover, with an increase of 381 employees (4.0%) in FY2023. Of the 9,984 staff employees (including postdoctoral



MIT students sit in the Kendall/MIT Open Space. Image courtesy of Gretchen Ertl.



MIT students relax in Kresge Oval. Image courtesy of Gretchen Ertl.

employees) currently working at MIT, Cambridge residents make up 23% (2,331 employees).

Postdoctoral employees are staff who have completed their formal education but continue to gain research experience by working in academic laboratories, similar to medical doctors who undertake a residency program to specialize in a field of medicine. Hiring decisions for postdoctoral employees are made independently by academic departments, like decisions about graduate students, and these decisions are impacted by research funding, the ease or difficulty of obtaining an interna-

tional visa, health trends around the globe, and other factors. The number of postdoctoral employees increased this year by 30 (2.4%), bringing it up to 1,267, but overall, the number of postdoctoral employees has been trending down, declining at an annual rate of 2.1% after reaching a high point of more than 1,500 postdoctoral employees in 2015.

The number of faculty members grew by four for a total of 1,051 this year; this aligns with the recent trend at MIT for relatively flat faculty growth, averaging an increase of just 0.3% annually since 2010.

Student Body

| | 2019 | 2020 | 2021 | 2022 | 2023 | 2033 |
|------------------------------------------------------|--------|--------|--------|--------|---------------|---------------|
| Total Undergraduate Students | 4,550 | 4,516 | 4,360 | 4,629 | 4,638 | 4,700 |
| Day | 4,550 | 4,516 | 4,360 | 4,629 | 4,638 | |
| Evening | N/A | N/A | N/A | N/A | N/A | |
| Full Time | 4,506 | 4,487 | 4,234 | 4,579 | 4,582 | |
| Part Time | 44 | 29 | 126 | 50 | 56 | |
| Total Graduate Students | 6,742 | 6,780 | 6,729 | 7,083 | 7,054* | 7,100-7,300 |
| Day | 6,742 | 6,780 | 6,729 | 7,083 | 7,054 | |
| Evening | N/A | N/A | N/A | N/A | N/A | |
| Full Time | 6,740 | 6,774 | 6,713 | 7,080 | 6,979 | |
| Part Time | 2 | 6 | 16 | 3 | 75 | |
| Non-Degree Students | 195 | 159 | 121 | 164 | 134 | |
| Day | 195 | 159 | 121 | 164 | 134 | |
| Evening | N/A | N/A | N/A | N/A | N/A | |
| Total Students Attending Classes in Cambridge | 11,487 | 11,455 | 11,210 | 11,876 | 11,826 | 11,800-12,000 |
| Non-resident students not included | 87 | 65 | 44 | 58 | 32 | |
| Total Cambridge Undergraduate Applicants | | | | | 31 | |
| Cambridge Undergraduate Acceptances | | | 9 | 8 | 7 | |
| Overall Acceptance Rate | | | | | 4.80% | |

*International students account for 41% of the 2023 graduate student population.

Faculty and Staff

| | 2019 | 2020 | 2021 | 2022 | 2023 | 2033 |
|-----------------------------------------------------------------------|--------|--------|--------|-------|--------------|---------------|
| Cambridge-based Staff | | | | | | |
| Head Count | 10,813 | 10,805 | 10,225 | 9,603 | 9,984 | 10,000-11,000 |
| FTEs | 9,217 | 9,198 | 8,802 | 8,346 | 8,680 | |
| Postdoctoral Staff* | 1,434 | 1,452 | 1,279 | 1,237 | 1,267 | |
| Cambridge-based Faculty | | | | | | |
| Head Count | 1,037 | 1,050 | 1,040 | 1,047 | 1,051 | 1,100 |
| FTEs | 1,028 | 1,041 | 1,031 | 1,039 | 1,042 | |
| Number of Cambridge Residents Employed at Cambridge Facilities | 2,560 | 2,524 | 2,190 | 2,313 | 2,331 | 2,500-2,750 |

*Postdoctoral employees are included in the head count and FTEs for Cambridge-based staff.

Belonging, Achievement, and Composition

The [Institute Community and Equity Office](#) (ICEO) leads MIT's efforts to promote equity, appreciate and respect differences in thought and approach, and nurture an environment that unites the community in service to the Institute's mission. The ICEO also acts as a steward and advocate for the Institute's shared values: excellence and curiosity, openness and respect, and belonging and community.

MIT has prioritized the concepts of belonging, achievement, and composition because they reflect how the Institute thinks about its sense of community and shared values more accurately than the more common framework of diversity, equity, and inclusion. Accordingly, these are the Institute's three strategic priorities:

- **Belonging:** Cultivate a community in which people feel connected to each other, share a sense of purpose, and support each individual's freedom to be themselves and respectfully express their views.
- **Achievement:** Make equity central to how opportunities are presented and assessments are conducted for all members of the community while ensuring the highest standards of excellence.
- **Composition:** Serve as a magnet for a wide range of talented people. The composition of our community, and of our leadership, should reflect a commitment to diversity.



Crosswalk of 77 Massachusetts Avenue. Image courtesy of Gretchen Ertl.

Strategic Action Plan

MIT's 2022 [Strategic Action Plan for Belonging, Achievement, and Composition](#) provides a detailed framework to work toward the Institute's goals. Recognizing both the need for shared progress and the reality of MIT's decentralized structure and culture, the Institute's academic, research, and administrative units are creating localized action plans in each topical area.

Diversity Dashboard

In order to provide open access to data, MIT launched a [Diversity Dashboard](#) to promote the exploration of facts and trends related to the gender and race/ethnicity of the MIT community.

Programs and Services

In support of the entire MIT community, a range of programs and services are offered and highlighted in ICEO's monthly newsletter.

Vice President for Equity and Inclusion

After the recent departure of MIT's Institute Community and Equity Officer, a search is underway for a new leader at the vice presidential level to help our community come together to face challenges around inclusion, belonging, and free expression.

Housing

Undergraduate Housing

In FY2023, MIT housed 93% of its full-time undergraduates in MIT-approved housing, primarily in on-campus residence halls but also in fraternities, sororities, and independent living groups (FSILGs) in Cambridge, Brookline, and Boston. MIT's housing policies include making four years of housing available to all undergraduates and requiring all first-year students to live on campus. The City of Boston's 2022 Student Housing Report noted that 51.5% of all full-time undergraduate students in the Boston area are housed by their schools; of the 24 reporting institutions, MIT's percentage was calculated to be the highest (92.8%), with the next highest calculated at 77%.

Recent and upcoming undergraduate housing projects include Burton-Conner House (Building W51), which reopened in the fall of 2022 with 388 student beds after a major renovation, and an extensive two-year renovation of the East Campus Residence Hall (Buildings 62 and 64) which began this past summer. A continuing sequence of undergraduate residence hall renovations is anticipated over the next decade.



Graduate Tower at Site 4. Image courtesy of Gretchen Ertl.

Graduate Housing

The housing needs of the graduate student population have been studied extensively over the last decade. MIT's Graduate Housing Working Group (GHWG), composed of student leaders, Heads of House, and Institute leaders, is continuing this work.

One of the key recommendations from the earlier GHWG reports was the addition of 500-1,100 new beds for graduate students. MIT responded by making a commitment, as part of the 2017 Volpe zoning agreement, to deliver a total of 950 new or converted beds of graduate student housing. To complete this ambitious goal, MIT has taken the following steps:

- At 70 Amherst Street (Building E2), 135 beds were converted to graduate student use in 2017, and an additional 15 graduate student beds for graduate resident advisers were created or converted in other undergraduate facilities.
- The Graduate Tower at Site 4 (Building E37) opened in 2021 with 454 new units. With the demolition of the Eastgate Apartments (Building E55) in 2023, the net gain is 250 graduate student beds.
- In 2022, construction started on the West Campus Graduate Student Dormitory, now called Graduate Junction (Buildings W87 and W88), which will deliver approximately 676 new beds in 2024.

By the fall of 2024, MIT will have delivered more than 1,075 new beds for graduate housing, exceeding its commitment by more than 100 beds. These additional beds will allow 47% of the projected graduate student population to live in MIT housing.

Housing rates at MIT are formulated in consultation with the GHWG, and MIT's goal is to provide an array of quality housing options at below market rates so that students can make choices that fit their individual circumstances. As graduate students navigate their MIT experience, the Division of Student Life (DSL)



First-year students participate in Water Wars. Image courtesy of Kate Lu/The Tech.

and the Office of the Vice Chancellor (OVC) work closely together to provide support. The support options include need-blind and supplemental need-based financial assistance and grants, including support for graduate students with children, short-term emergency hardship funding, and long-term financial hardship funding. Under some circumstances, this funding may be used for housing costs.

As part of an ongoing effort to improve the on-campus graduate residential system, MIT has been working with Heads of House and student leaders to enhance graduate housing processes and technology. Last year, MIT deployed the StarRez platform, which has increased the convenience of housing selection, enhanced housing management tools, and promoted system efficiencies. In conjunction with housing technology improvements, MIT updated its graduate housing allocation process to a self-selection model whereby prospective residents of graduate housing view and select an available unit in one easy-to-navigate online process.

This year, MIT adjusted its housing renewal policies to allow most graduate residents to renew their on-campus housing for the duration of their academic program. Offering more renewable license agreements will bring greater housing stability to students, address current vacancy challenges with an eye toward capac-

ity increases in 2024, and help align timing of license agreements with academic program lengths.

As previously reported, MIT has made other management improvements intended to make the best use of existing resources while responding to and accommodating graduate student needs. These improvements include:

- Setting on-campus rental periods in closer alignment with off-campus housing market practices for greater convenience and improved choices
- Improving communication and simplifying the housing selection process, resulting in more beds being committed to graduate students sooner in the process, reducing uncertainty and improving the student experience
- Permitting roommates to sign up for housing as a group
- Allowing couples in buildings previously reserved for single students, and opening one-bedroom units for single residents in previously family-only buildings

Graduate Junction will further diversify MIT's housing portfolio, providing an alternative to living off campus while offering the convenience and independence of apartment-style living close to campus resources for students and graduate student families.

Student Residences

| | 2019 | 2020 | 2021 | 2022 | 2023 | 2033 |
|-----------------------------------------------------|-------|-------|-------|-------|--------------|-------------|
| Undergraduate Students Residing in Cambridge | | | | | | |
| In Institute-approved housing | 3,626 | 3,591 | 767 | 3,690 | 3,763 | 3,600-3,700 |
| In off-campus housing owned & managed by MIT | 0 | 0 | 0 | 0 | 0 | |
| In off-campus non-MIT Housing | 159 | 126 | 217 | 202 | 153 | |
| Graduate Students Residing in Cambridge | | | | | | |
| In Institute-approved housing | 2,348 | 2,446 | 1,412 | 2,106 | 2,362 | 3,200-3,500 |
| In off-campus housing owned & managed by MIT | 32 | 38 | 29 | 25 | 45 | |
| In off-campus non-MIT Housing | 2,415 | 2,422 | 2,303 | 2,811 | 2,646 | |

Housing

| | Tax Exempt | | Taxable | |
|-------------|-------------------------------|---------------|--------------------------------|---------------|
| | MIT-Owned and Managed Housing | Other Housing | MIT-Owned and Managed Housing* | Other Housing |
| 2019 | | | | |
| Units | 0 | 0 | 163 | 939 |
| Buildings | 0 | 0 | 11 | 7 |
| 2020 | | | | |
| Units | 0 | 0 | 163 | 939 |
| Buildings | 0 | 0 | 11 | 7 |
| 2021 | | | | |
| Units | 0 | 0 | 163 | 939 |
| Buildings | 0 | 0 | 11 | 7 |
| 2022 | | | | |
| Units | 0 | 0 | 463 | 938 |
| Buildings | 0 | 0 | 12 | 7 |
| 2023 | | | | |
| Units | 0 | 0 | 163 | 1,238 |
| Buildings | 0 | 0 | 11 | 8 |
| 2033 | | | | |
| Units | 0 | 0 | 163 | 1,238 |
| Buildings | 0 | 0 | 11 | 8 |

*Occupied by both MIT and non-MIT residents.

MIT and Community Housing

Like every employer in Greater Boston, MIT is impacted by high housing costs. The housing shortage imposes a burden on existing and prospective employees at all levels of the Institute, from service and professional staff to academic employees including faculty and postdoctoral researchers. High housing costs can create transportation and quality-of-life issues, as employees find they must search farther from campus to find suitable housing they can afford.

To assist with the high cost of housing, MIT provides a flexible, tax-efficient, low-interest mortgage program for its faculty. The program has proven to be an important recruiting and retention tool and is similar to programs offered by peer institutions. Since 2005, MIT's program enrolled approximately 95% of eligible faculty, and more than 1,300 faculty members have participated. An important goal of the program is to give faculty flexibility in choosing where they would like to live in the region.

MIT is taking major steps to build housing that will be available to all families in Cambridge and the region, including its own employees. Currently, MIT's plans include building up to 1,700 units of housing in Kendall Square and at the Volpe site, of which approximately 330 will be affordable units.

The first of these efforts is now available for rent. 165 Main Street is a 300-unit apartment building with 54 affordable units, nine middle-income units, and 36 innovation units (studios that incorporate circadian lighting and wi-fi thermostats for improved comfort and energy efficiency). There are also smaller efforts on a neighborhood scale, such as the renovation of the triple-decker house at 882 Main Street, now completed, that provides three affordable family units in Lafayette Square.

In addition, MIT will contribute approximately \$66 million to the Cambridge Affordable Housing Trust during the course of the Kendall Square and Volpe projects.



882 Main Street on the corner of Main Street and Sidney Street in Lafayette Square. Image courtesy of Studio Troika and Aponte Development.

Campus Planning

Continuing to Renew Vassar Street

MIT continues to strengthen Vassar Street as the central spine for the campus with the goal of making it more resilient and attractive for all and better connected to adjacent Cambridge neighborhoods. Step by step, this effort is improving the public realm while also enhancing core campus activities, including research, teaching, and residential life.

Completed renewal projects along Vassar Street (moving from east to west) include:

- Extension of cycle tracks on Vassar Street to the intersection with Main Street
- Updated Central Utilities Plant on Albany Street (Building 42C)
- Vassar Street tree planting program (east of Massachusetts Avenue)
- New Vassar Residence Hall for undergraduates (Building W46) and renewed Vassar Street streetscape in this area

Additional renewal projects underway or planned along Vassar Street (moving from east to west) include:

- MIT Stephen A. Schwarzman College of Computing (Building 45, construction to be completed in 2023)
- Phased replacement of original street light fixtures along Vassar Street with more energy-efficient LED technology (in planning)
- Metropolitan Storage Warehouse renovation (Building W41, in construction)
- Extension of cycle tracks on Vassar Street to the intersection with Massachusetts Avenue (in construction)
- Graduate Junction Residence Hall (Building W87 and W88, in construction)
- Grand Junction Multi-use Path (in design)



New Vassar exterior. Image courtesy of Gretchen Ertl.

Public Improvements along Vassar Street

Each of these Vassar Street projects is making important contributions to the public realm. In combination, the completed Central Utilities Plant upgrade and the soon-to-be completed MIT Schwarzman College of Computing are transforming a narrow asphalt path into an attractive landscaped walkway from Albany to Vassar Streets, crossing the railroad tracks at three different points. The walkway incorporates public art, light-colored pedestrian paving, enhanced lighting, outdoor seating, and green infrastructure, including new tree plantings, to cool this important pedestrian corridor and manage stormwater run-off.

MIT has reestablished the structural soil and planted 36 trees on Vassar Street from Massachusetts Avenue to Main Street. This effort is now concluding with the planting of additional street trees on Vassar Street at Schwarzman College.

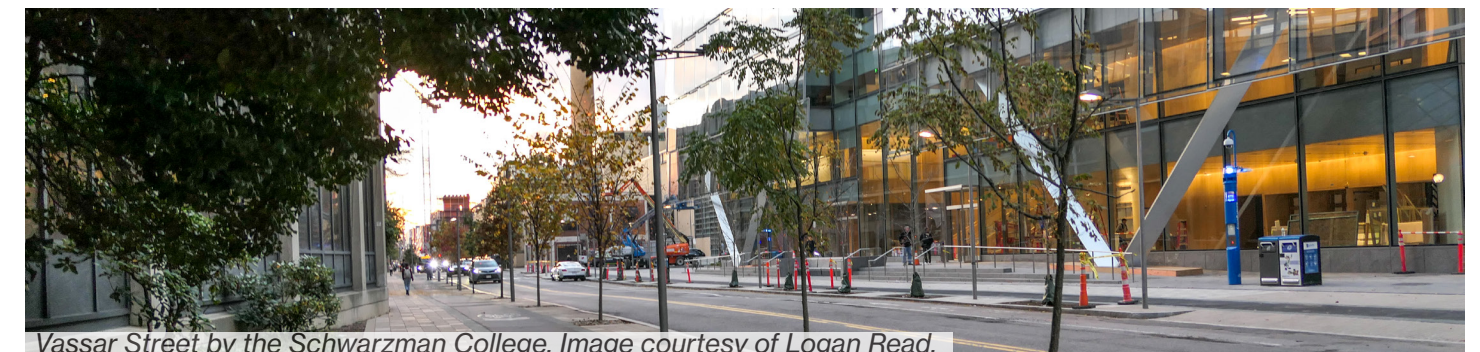
The Grand Junction Multi-use Path will enliven the railroad corridor while providing service vehicle access to MIT buildings and east-west bicycle and pedestrian access from East Cambridge toward Memorial Drive. MIT has contributed \$1 million for the design and construction of the Path and is coordinating closely with the City of Cambridge design team. Having committed an additional \$8 million for construction, MIT will also provide an easement through its property in the Grand Junction corridor from Main Street to Pacific Street.

The adaptive re-use of the Metropolitan Storage Warehouse (Met Warehouse) for the School of Architecture and Planning will bring new life to this historic structure, dramatically uplifting this section of Vassar Street and

providing a striking home for the Morningside Academy for Design. As part of this project, MIT has proposed public realm improvements on Vassar Street, including removing the obsolete 400 linear-foot warehouse loading zone and investing in widening the narrow existing City sidewalk, planting trees, and installing new streetlights, benches, and bike parking.

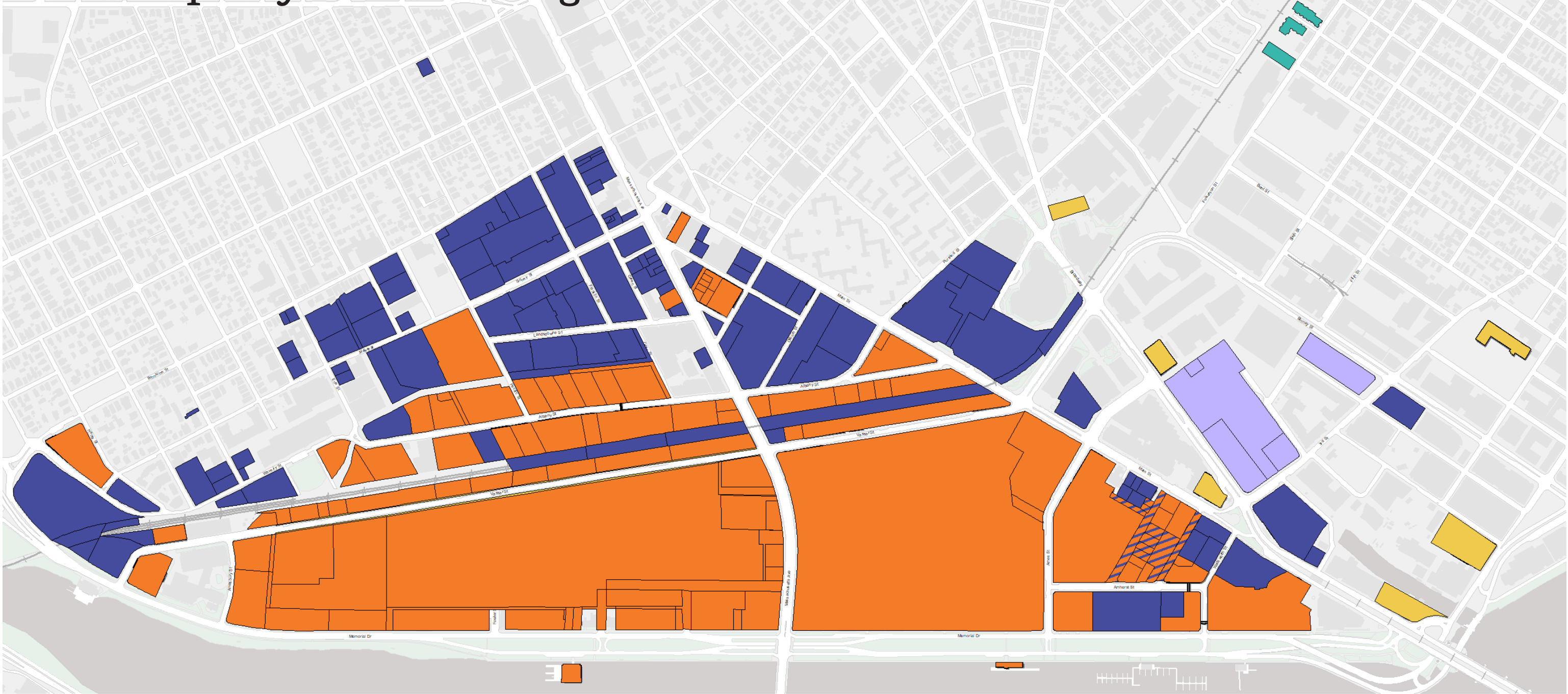
The New Vassar undergraduate residence project (Building W46) provided major improvements to the Vassar streetscape with creative architecture, public art, bike parking, and benches. Additionally, the landscape includes green infrastructure elements such as a rain garden, plantings, street trees, and open space trees that will capture and filter stormwater runoff. MIT installed light-colored paving and expanded the urban canopy, reducing heat island effects and creating outdoor space for social gatherings and improved access to campus. The area south of the Multi-use Path and the Grand Junction tracks was enlarged and transformed at the Pacific Street crossing into a lively urban plaza that improves the pedestrian environment and seamlessly connects cyclists to and from the Vassar Street cycle tracks.

The Graduate Junction (formerly known as the West Campus Graduate Student Dormitory) provides the location of a final node, at least for the near future, of a north-south connection from the Grand Junction Multi-use Path. Fort Washington Park lies to the north of the Path, and new access will be provided by a large landscaped public plaza and walkway currently in construction. This enhanced connection to the network of open spaces will bring pedestrians and cyclists into the western section of the MIT campus and provide further connections to the river for the Cambridgeport community.



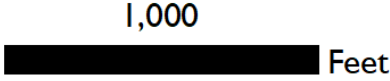
Vassar Street by the Schwarzman College. Image courtesy of Logan Read.

MIT Property in Cambridge



Data as of June 30, 2023

- Academic Plant
- Commercial Property
- Academic & Investment
- Academic Leased
- Commercial Property - Condominium Only
- Pending Acquisition



Planning for Open Space and Stewardship of the Tree Canopy

In addition to the completed Kendall/MIT Open Space and Vassar streetscape, improvements of the public realm – including the expansion of green space and the tree canopy – are taking place in (or are planned for) several other parts of the MIT campus.

The Outfinite Corridor

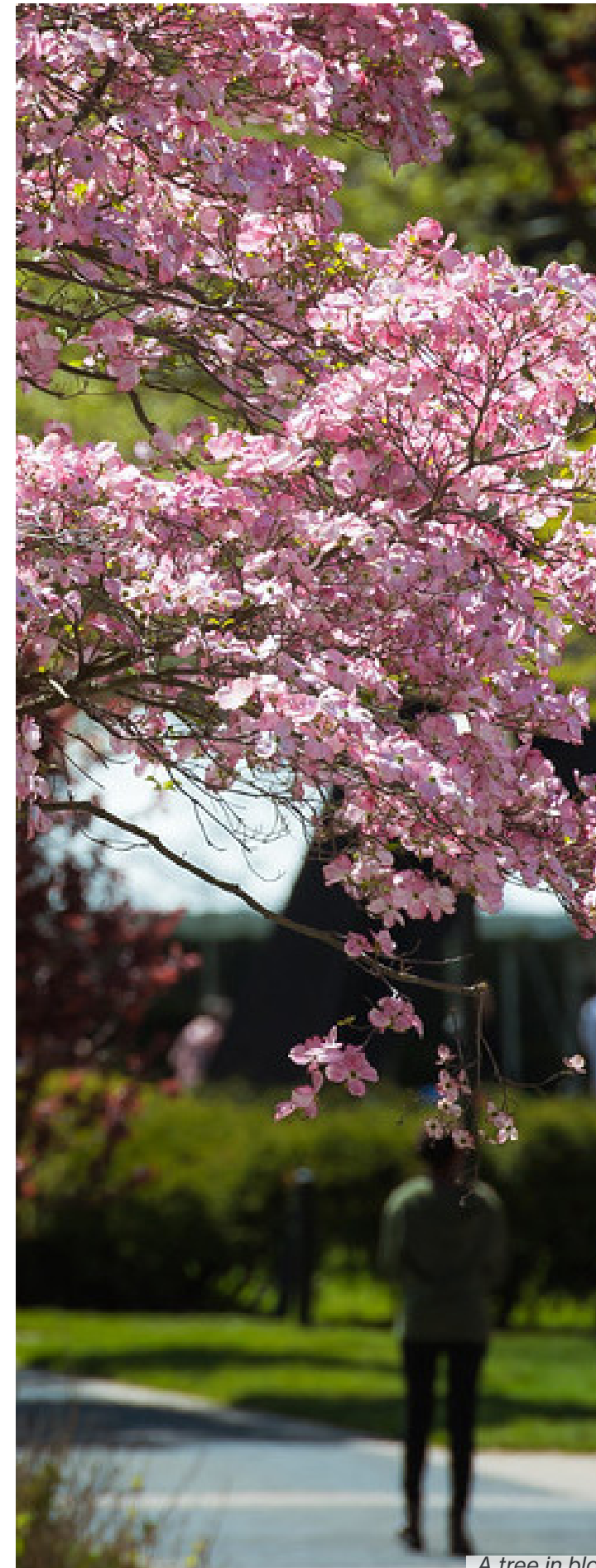
The Outfinite Corridor (as named by MIT students) along the exterior of the Lisa T. Su Building (Building 12, formerly MIT.nano) creates a vibrant and activated pedestrian spine for the main campus, replacing an asphalt service drive behind Building 13 with a barrier-free, accessible mixing zone which puts pedestrians first while also accommodating service and emergency vehicles in a “go-slow” environment. It establishes a cohesive, attractive, and durable materials palette for paving, lighting, and site furnishings. Key resiliency outcomes include stormwater management (for water quality and storage) and the reduction

of the heat island effect, achieved through the planting of more than 100 trees and the use of light-colored paving.

Construction of the corridor was extended to the Wright Brothers Wind Tunnel (Building 17) in 2018, and MIT hopes to continue it in future stages, maintaining a cohesive character using the same paving and other materials. Currently, a new section of the corridor is being constructed some distance away as part of the Music Building project. Two additional corridor entry points (Building 17 to Building 9/Massachusetts Avenue and Massachusetts Avenue to Building W20) are under consideration with the goal of bringing the Outfinite Corridor from Building 17 to W20 and beyond, where it will connect with the Music Building section. This planning is in a preliminary stage and will entail more MIT community engagement and coordination with the City on specific details. As envisioned, the corridor will connect the two sides of campus and create a more welcoming and accessible campus entry at Massachusetts Avenue.



The Outfinite Corridor. Image courtesy of Gretchen Ertl.



A tree in bloom near McDermott Court. Image courtesy of Gretchen Ertl.

Eastman and McDermott Courts

Another emerging open space opportunity is a phased revitalization of Eastman and McDermott Courts, located to the east of the Main Group buildings, encircled by Buildings 18, 54, 55, and the Hayden Library. The combined Eastman/McDermott Courts are one of three historically inventoried landscapes at MIT. The other two are Killian Court and the area around the MIT Chapel and Kresge Auditorium. A revitalization project here would be the first renewal of this open space area since its construction in the 1960s.

The overall charge is to re-envision the iconic modernist campus landscape to serve today's community, creating a space that is more welcoming, accessible, resilient, and reflective of MIT's spirit. The initial study will identify renewal priorities, develop an anticipated scope of work and phasing strategies for prioritizing investment, and create a concept design for the renovation of a core campus open space. Project planning is in the early stages and will include extensive MIT community engagement.

Tree Planting

Another excellent open space opportunity has come about through the work of MIT Grounds Services leaders, landscape architecture staff, and Bartlett Tree Experts, who have worked together to identify planting locations for 39 trees across campus. Given the challenges of finding new tree planting locations while negotiating MIT buildings, campus and public streets, walkways and plazas, underground utilities, existing trees, and open space program requirements for Institutional events and athletic fields, MIT is capitalizing on this opportunity now. The tree-planting project launched this fall.

Tree Locations



Data as of June 30, 2023

● Tree Locations





Tables in Hockfield Court. Image courtesy of Gretchen Ertl.

Current Planning

Reconfiguring Workspaces to Support Hybrid and Full-time Schedules

Like most post-pandemic businesses and organizations, MIT continues to navigate and provide support for hybrid and flexible work arrangements where possible. Students, faculty, and researchers who need laboratory space and equipment; student-supporting staff; and direct service staff (maintenance, custodial, food service, etc.) generally work on campus, but many administrative employees are working from home three or four days per week. These new habits of work are beginning to stabilize.

To continue adapting to hybrid models of work, MIT has explored the challenges and opportunities presented by the need to support our teams and use office space efficiently and effectively. Solutions to date have included designated areas for both heads-down work and collaboration, fewer permanent workspaces, and more reservation systems for a variety of private spaces (offices, huddle rooms, phone/Zoom booths) based on need.

The Institute continues to consider proposed projects for office improvements as they are presented. For example, MIT explored how conference rooms are utilized as part of the changing workplace. The need for improved AV solutions for hybrid meetings gave rise to a pilot program to expand access to reservation-based, AV-enabled conference rooms across the campus. These conference spaces were formerly assigned for exclusive use by a single unit and had limited AV capabilities. The conference room pilot program will be expanded for wider deployment.

Work groups continue to review their existing spaces in light of team members' schedules and needs, evaluating whether new styles of space designation would be effective. Changes have been incremental and have offered instructional experiences. All new programming and renovation efforts will incorporate these lessons.



Aerial view of Building 7. Image courtesy of Emily Dahl.

Main Group Reconfiguration

The impending relocation of School of Architecture and Planning personnel and functions to the renovated Metropolitan Warehouse provides an important opportunity for the reconfiguration of the Main Group buildings (Buildings 1 through 11), most of which date back to the early years of the campus. This project would allow for infrastructure system renewals, consolidation of uses that would benefit from greater proximity, and the expansion of growing programs for research and education.

High-Intensity Research

MIT has a number of academically valuable high-intensity research buildings north of the Main Group with aging infrastructure components that are no longer adequate to support ongoing research activity. The goal of the project would be to renew these core research buildings.

Student Life and Housing

The Institute is planning to continue the renewal of undergraduate and graduate student residences beyond the projects recently completed (New Vassar Residence Hall - Building W46, and Burton-Conner House - Building W51) and those that have just started or are underway (Graduate Junction - Buildings W87 and W88, and East Campus Residence Hall - Buildings 62 and 64). MIT is exploring the appropriate project sequence for older student residences on the west side of campus in need of renewal and the related opportunities to better meet the needs of students and continue enhancing this side of campus.



View of the Great Dome (Building 10). Image courtesy of Gretchen Ertl.

Capital Renewal

Stewardship of the MIT campus requires continued investment to preserve historic and iconic buildings and to renew systems that support the teaching, research, and student life mission of MIT. Many of the large building renovation projects initiated through the MIT 2030 capital plan have created modern spaces with the updated, energy-efficient systems needed to meet the challenging demands of contemporary research. Additionally, these projects have enhanced shared and residential spaces essential for the thousands of people who work, play, and live on campus.

This long-term effort continues to require careful planning of resources and attention to mitigation of construction disruption. The renewal program has high ambitions, and its teams will continue retiring deferred maintenance and helping MIT sustain its position as a global leader in teaching and research. Much of this work is carried out in targeted but critical projects. A few of the renewal projects initiated over the past year are highlighted here.

Deferred Maintenance

MIT continues to prioritize addressing deferred maintenance as an integral part of the overall capital program. As of the end of FY2023, our facility condition index (FCI, which reflects the ratio of deferred maintenance to replacement value for MIT buildings in Cambridge) has decreased steadily from 0.26 (FY2014) to 0.14 (FY2023), achieving the goal FCI ratio (0.15-0.18) that MIT hopes to maintain on a campus portfolio level. Maintaining this FCI range through proactive investments in the Institute's facilities will keep buildings in good condition while sustaining the operational continuity necessary to support MIT's mission.

Buildings E23 and E25 Façade Renewal

Constructed in 1981, the Health Services Building (E23) and the Whitaker College of Health Sciences and Technology building (E25) are five- and six-story buildings (respectively) serving academic, administrative, and MIT Medical activities. Connected by a five-story, sky-lit atrium, the building complex is roughly 250,000 square feet. The single-width brick veneer walls are tied back to stud walls, a typical construction method of its period. As time passes in the harsh New England climate, expansion joints become compressed, sealants age, and freeze-thaw cycles cause damage, requiring masonry façades such as this one to need renewal. Following the development of the Kendall Square parcels, MIT is now renewing the masonry elevations of the buildings fronting both the new open space afforded by the development projects and the courtyard embracing the Media Lab (Building E14). The renewal includes new expansion joints and sealants, new masonry anchorages and tie backs, the resetting of stones, and the repointing of brick. The masonry renewal is targeting a completion date in late 2023 or early 2024.



Work on Building E19 Façade. Image courtesy of Alex Campbell.

Building E19 Façade Renewal

The seven-story Horace Sayford Ford Building (E19) was constructed in 1927 and renovated in 1963. Now serving academic and administrative departments at MIT, the nearly 150,000-square-foot building was originally constructed as part of a three-building complex (now E17, E18, and E19) for the Daggett Chocolate Company. Designed by Boston architect Mark Linenthal, the fireproof, steel-reinforced concrete building has large window openings, brick spandrel panels, and a top-story addition. After an assessment that identified façade renewal needs, a plan was designed to repair the concrete frame and spandrel panels along with replacing selected windows, and construction is now underway. The partial and full-depth concrete renewal and masonry repairs will preserve the original industrial appearance of the building, while new windows will provide more comfortable and energy-efficient workspaces. The project is targeting completion in April 2024.

Building 34 Fire Alarm

The EG&G Education Center (Building 34) is one of five buildings designed by Skidmore, Owings & Merrill (now SOM) along the southern side of Vassar Street between Main Street and Massachusetts Avenue. The building was initially constructed in 1971 as a pedestrian bridge between Buildings 36 and 38, and the atrium lobby was added in 1982 along with classroom, lab, and lecture hall space. Responding to changes in building and accessibility codes as well as advances in fire alarm technology, MIT is now renewing the fire alarm system supporting the building. In addition to providing improved audible and visual alarm components that comply with the Americans with Disabilities Act, the new system responds to the ever-changing methods of academic instruction. Recent and ongoing renovations to major classrooms within the building require careful coordination of the new fire alarm system with the state-of-the-art audio-visual equipment that is now standard for classroom instruction; this integration process ensures adequate notification to classroom occupants. Currently underway, the installation of the new fire alarm system is anticipated to be completed in March 2024 ahead of the ongoing first-floor classroom renovation.

Building W34 Restroom Refresh

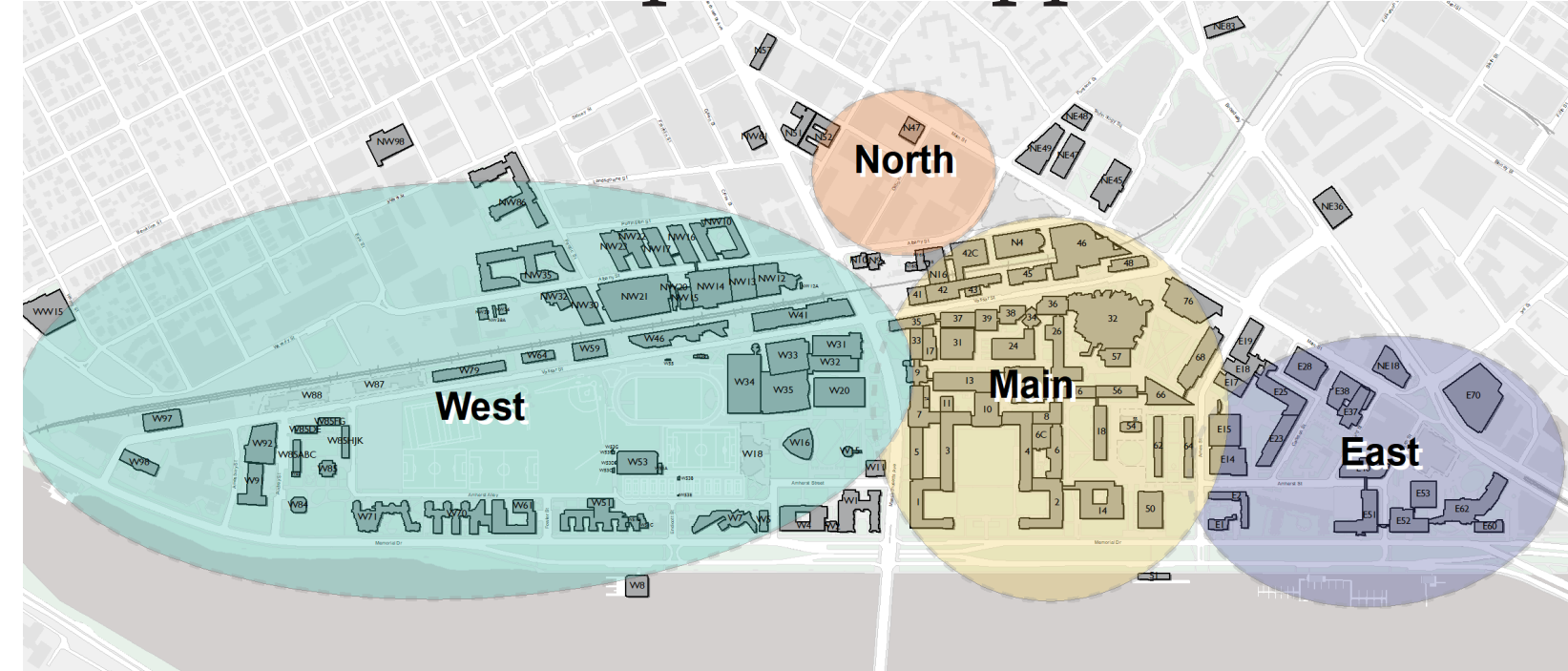
The 1979 Johnson Athletics Center (Building W34) is a two-story athletics facility which houses the ice rink, an indoor track, and tennis courts, and is used for both sporting events and recreation for the MIT and larger Cambridge communities. From October through March, visitors can catch a collegiate or club hockey game, and members can stop in for lessons or open skating; during the off-season, the building hosts several vibrant events like the Fall Career Fair and Annual MIT Hackathon. MIT is committed to improving the user experience, particularly in significant assembly spaces such as this one. Given the high level of activity in Building W34, the restrooms needed an upgrade. This was completed in 2023 and addressed years of wear and tear by refreshing the flooring and finishes while brightening the spaces with improved lighting. The project

also added amenities such as sanitary-product vending and baby-changing stations, and the water-conserving fixtures were upgraded throughout. Overall, these updated facilities create an improved visitor experience for all those coming to the Johnson Athletics Center.

Building E51 Elevator Renewal

Serving the Sloan School of Management; the School of Humanities, Arts, and Social Sciences; the Program in Science, Technology, and Society; Information Systems & Technology; and the Registrar's Office, the Jack C. Tang Center for Management Education (Building E51) was constructed for the National Research Corporation in 1944 in the mid-century modern style with striking white-glazed brick. The original building was designed by Perry, Shaw & Hepburn and was renovated in 1979. A three-story addition designed by Ellenzweig Associates was added to the building in 1995. Despite its size, the building is served by just two elevators, one of which dates to the 1979 renovation. Given the building's central role serving many departments, vertical access for passengers and materials handling is critical to maintaining operations. A full modernization of the older elevator cab and machine is underway and will be completed in November 2023.

Future Development Opportunities



Data as of June 30, 2023

Cellular Antenna Installations



Data as of June 30, 2023

 Cellular Antenna Locations



Student walking by the entrance of Johnson Athletics Center. Image courtesy of Jake Belcher.

Real Estate Leased

| Use | Leased Location* | Sq Ft** |
|------------------------------------------------------------------------|----------------------------------------------|----------------|
| Institutional/Academic | 255 Main Street | 35,594 |
| | 1 Kendall Square, Building 300 - 4th-5th Flr | 22,506 |
| | One Main Street - Suite 1250 | 31,836 |
| | One Main Street - Suite 900 | 31,571 |
| | 105 Broadway - 6th-7th Flr | 47,488 |
| | 196-198 Broadway | 10,132 |
| | 222 Third Street - Suite 300 | 2,584 |
| | 245 First Street - Suite 1500 | 19,805 |
| | 300 Technology Square - 2nd Floor | 6,451 |
| | 500 Technology Square | 93,108 |
| | 600 Technology Square, 2nd-4th Flr | 83,561 |
| | 600 Technology Square - 5th Floor | 25,346 |
| 700 Technology Square | 15,753 | |
| Total: | | 425,735 |
| *Leased by MIT from third-party landlords | | |
| **The square footage may only be for a portion of the entire building. | | |

Property Transfers

| | |
|------------------------------------------------------------------------|------|
| Cambridge properties purchased since filing previous Town Gown Report: | None |
| Cambridge properties sold since filing previous Town Gown Report: | None |
| Planned dispositions or acquisitions: | None |

Facilities and Land Owned

| | 2019 | 2020 | 2021 | 2022 | 2023 |
|----------------------------------|-----------|-----------|-----------|------------------|------------------|
| Acres | | | | | |
| Tax Exempt | 168 | 168 | 168 | 168 | 168 |
| Taxable | 90 | 90 | 91 | 91 | 91 |
| Number of Buildings | 115 | 115 | 118 | 116 [†] | 117 |
| Dormitories | | | | | |
| Number of Buildings | 28 | 28 | 30 | 29** | 29 |
| Number of Beds | 5,997 | 5,964 | 6,285* | 6,280 | 6,678**** |
| Size of buildings | | | | | |
| Institutional/Academic | 7,223,070 | 7,223,070 | 7,325,522 | 7,852,775 | 7,563,471 |
| Student Activities/Athletic | 2,063,599 | 2,063,599 | 2,166,267 | 2,166,267 | 2,103,771 |
| Dormitory/Nontaxable Residential | 2,882,602 | 2,894,036 | 3,484,978 | 3,304,698 | 3,309,996 |
| Commercial | 6,408,948 | 6,380,578 | 7,096,270 | 7,107,216 | 7,107,216 |
| Taxable Residential | 163 | 163 | 163 | 463*** | 163 |

*Reflects beds available. The actual number of beds utilized during the reporting period was 2,225 due to Covid-19

**Reflects removal of Eastgate Residence Hall

***Represents the addition of 165 Main Street

****Reflects addition of Burton Conner House undergraduate residence after renovation

[†] Due to a reporting error, the number of buildings was incorrectly listed in the 2022 Town Gown Report.



Wayfinding signage. Image courtesy of Gretchen Ertl.

Campus Wayfinding Signage

MIT's Campus Wayfinding Signage program is designed to make a complex campus more navigable in a way that takes cues from the major urban and geographic elements that define this area. A reflection of the unique spirit of MIT, the signage system marks campus gateways on a scale that is immediately visible and provides information along pedestrian routes. It serves Cambridge residents, people who work in Kendall Square, the MIT community, and any visitors who are unfamiliar with the campus.

For the first phase of the project, eight signs were installed in the Kendall/MIT Open Space over the past year, beginning with six pedestrian beacons – the workhorses of the system. This phase culminated with the completion of the new MTBA headhouse in Kendall Square and the installation of two large signs at the

site: a campus identifier and a campus directory, both of which display a campus map and a building directory.

The next phase of signage installation is now underway and will result in the addition of 19 more signs around campus: 13 pedestrian beacons, four campus directories, and two campus identifiers at main entry points along Massachusetts Avenue, one at Vassar Street and one at Memorial Drive. This installation phase will expand the signage program into the central, east, and west sections of campus and will also encompass the rollout of new building identifier signs. Located at primary building entrances, building identifier signs will appear first in the east district and at capital projects such as the new Music Building and the Schwarzman College. These building-mounted signs will aid navigation, provide the names and/or numbers of campus buildings, and make them immediately recognizable as "MIT."

Projects

Construction continues around campus and in Kendall Square on a number of academic, residential, and investment projects that support the Institute's mission and sustainability goals. The renovation of the East Campus undergraduate residence, which first opened in 1924, will

renew infrastructure and improve the student experience with new windows and refreshed shared living areas. Similarly, the Stratton Student Center is undergoing a renewal that emphasizes student well-being and health.

The Graduate Junction project will expand housing options for graduate students while strengthening connections with the surrounding neighborhood, and several other in-construction projects – the Music Building, the Metropolitan Warehouse, and the MIT Stephen A. Schwarzman College of Computing building – will provide students and faculty with new facilities that will enhance and advance academic programs and research. The renewal of the Green Building and the construction of its

new partner building (the Moghadam Building) will consolidate and accelerate MIT's efforts in climate research and environmental innovation.

Looking ahead, MIT is working with the City of Cambridge to develop a vibrant, mixed-use center adjacent to the new Volpe federal building. These current and future projects are designed to improve campus resiliency and infrastructure while enhancing public spaces for the MIT and broader communities.

Major Projects



Data as of June 30, 2023

■ Planning/Design
 ■ Construction
 ■ Completed



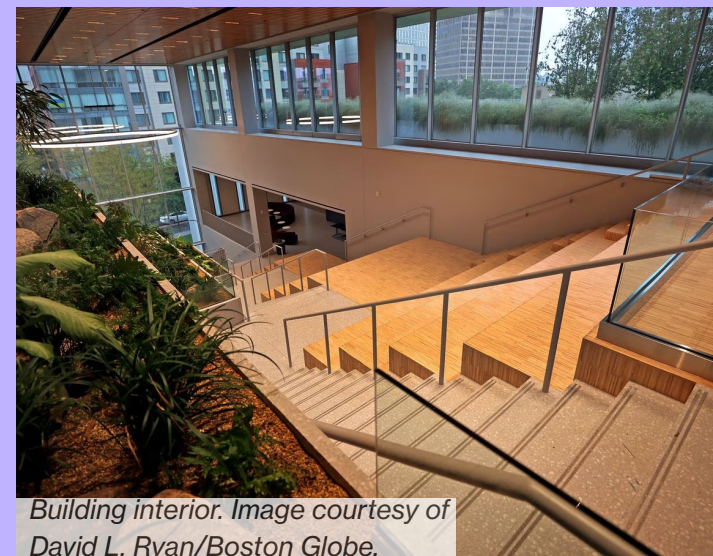
Completed Projects

Medium Temperature Hot Water (MTHW) Conversion

MIT completed two major utility projects toward the conversion of existing steam-based distribution systems into more efficient hot-water systems, a key initiative in the Institute's Fast Forward climate action plan. With this transition, MIT expects to enhance campus resiliency, increase reliability and safety, reduce heat energy losses, and lower greenhouse gas emissions. Elements of the project include adding two hot water distribution plants on campus – one housed in a rooftop addition on the Central Utilities Plant (Building 42) to serve the MIT Schwarzman College of Computing, the other in the basement of Building E40 with hot water distribution piping systems that serve several East Campus buildings.

Volpe Transportation Center

On behalf of the federal government, MIT completed the construction of the John A. Volpe National Transportation Systems Center this year, capped off with a ribbon cutting on September 19, 2023. The landscape-based art installation by Maya Lin is finished, and this portion of the Volpe site – which had been closed off to the community for decades – is now open for the public to use and enjoy. The Volpe staff has commenced moving into their new building, and the ten-acre Volpe Exchange Parcel is expected to be formally transferred to MIT in early 2024.



Building interior. Image courtesy of David L. Ryan/Boston Globe.

882 Main Street

To help provide additional affordable housing in Cambridge with much-needed family-sized units, MIT finished the complete renovation of the residential building at 882 Main Street in June 2023. The renovation included new unit layouts, fully upgraded electric and HVAC systems, and new appliances and finishes. The project was completed with Aponte Development, an MBE/WBE construction partner, and two of the three units have been leased to designated Cambridge families.



Ribbon cutting ceremony. Image courtesy of U.S. DOT Volpe Center.



Building exterior. Image courtesy of David L. Ryan/Boston Globe.

Under Construction

The Metropolitan Storage Warehouse (Building W41)

Originally designed by Peabody & Stearns, the Metropolitan Storage Warehouse (Met Warehouse) is one of the oldest buildings on the MIT campus and is listed on the State Register of Historic Places. Its massive structure consists of five connected buildings constructed between 1895 and 1923, and it resembles a medieval castle complete with a square brick tower and crenellated cornice.

MIT is renovating and adapting the Met Warehouse building to create a center of interdisciplinary design research and education with a new home for the School of Architecture and Planning (SA+P). The building will also house the new MIT Morningside Academy for Design (MIT MAD), which draws on multiple disciplines to foster design-enriched innovation while

empowering individuals and reshaping the way we learn. Elements of the building's renovation include a ground-floor makerspace, classrooms, faculty offices, areas for meetings and collaborative activities, and design studio space that will significantly increase MIT's capacity for arts and design programming.

The adaptive reuse plan is based around the five original buildings and involves partial removal of floors, columns, the roof, and the façade to make way for a series of insertions that will bring light and air deep into the heart of the structure. Strategically integrating the old with the new, the design strives to preserve the building's historic character while leveraging its existing spaces to serve the needs of current and future programming.

The architect for the project is Diller Scofidio + Renfro, and Shawmut Design and Construction is the construction manager. Construction is scheduled to be completed in 2025.



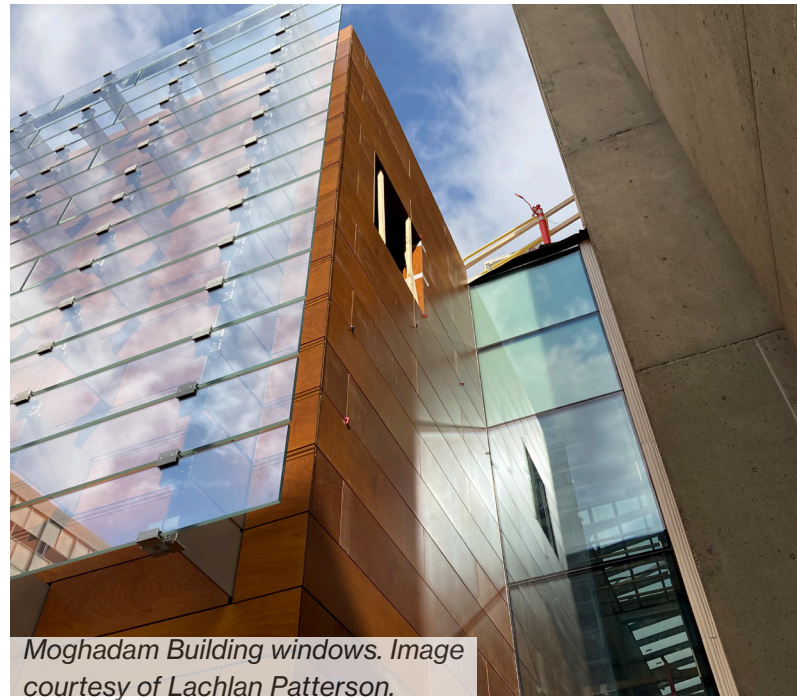
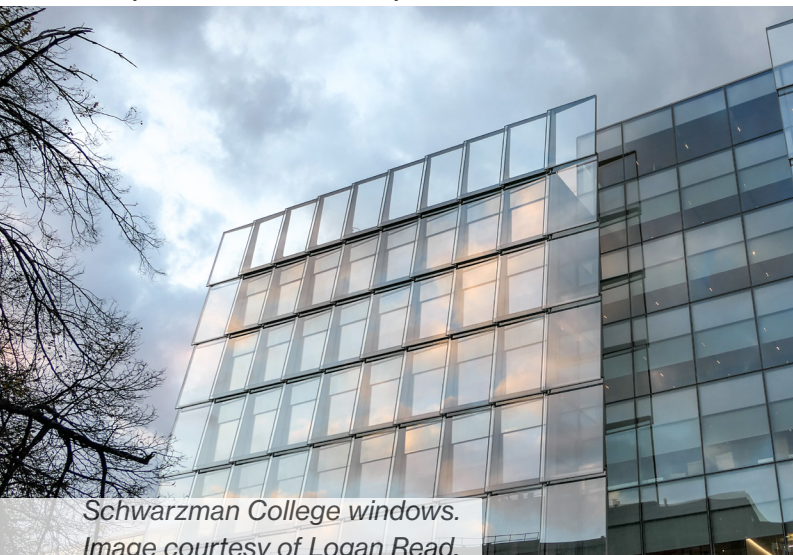
Rendering of the Metropolitan Storage Warehouse. Image courtesy of Diller Scofidio + Renfro (DS+R).

MIT Stephen A. Schwarzman College of Computing (Building 45)

Construction is substantially complete on Building 45, which will be the headquarters for the MIT Schwarzman College of Computing, established in 2019. Schwarzman College is a unique interdisciplinary organization that addresses the opportunities and challenges of the computing age – from hardware and software to algorithms and artificial intelligence – by transforming the capabilities of academia in three key areas: computing fields, computing across disciplines, and the social and ethical aspects of computing.

Centrally located at the former site of Building 44 on Vassar Street, Building 45 will provide state-of-the-art research and education space, including two laboratories designed for uses such as digital fabrication and robotics. Convening areas include a 250-seat lecture hall, spaces for project-based student work, and collaborative spaces to promote spontaneous dialogue. The building's shingled-glass façade and transparent elements will further encourage the campus community to engage and interact with Schwarzman College. Research spaces are concentrated on the building's middle floors, and the top floor includes an event space and outdoor terrace offering views of the campus and the Boston skyline.

The building is designed by Skidmore, Owings & Merrill LLP (now SOM), and Suffolk Construction is the construction manager. Work is expected to be completed in 2023.



Moghadam Building (55)

The Tina and Hamid Moghadam Building is being constructed adjacent to the Cecil and Ida Green Building (Building 54), where MIT's Department of Earth, Atmospheric and Planetary Sciences (EAPS) is headquartered. A partner project to Building 54's infrastructure project, the Moghadam Building will serve as an atrium gateway to the Institute's programs focused on Earth and environmental sciences as well as climate science.

The Moghadam Building project will yield about 11,900 square feet of additional space, providing new meeting places, classrooms, and study areas as well as a renovated primary lecture hall in Building 54. Together, the Moghadam and Green Buildings are expected to help EAPS attract and retain top faculty and students. The project's other ambitious objective is to enhance the research undertaken within the department by co-locating EAPS, the MIT-Woods Hole Oceanographic Institution (WHOI) Joint Program, and the MIT Environmental Solutions Initiative (ESI), creating a vital center for interdisciplinary research that affords greater opportunities for interaction.

Anmahian Winton Architects is the designer of Building 55, and Barr & Barr is the construction manager for the project. Construction is expected to be complete in 2023.

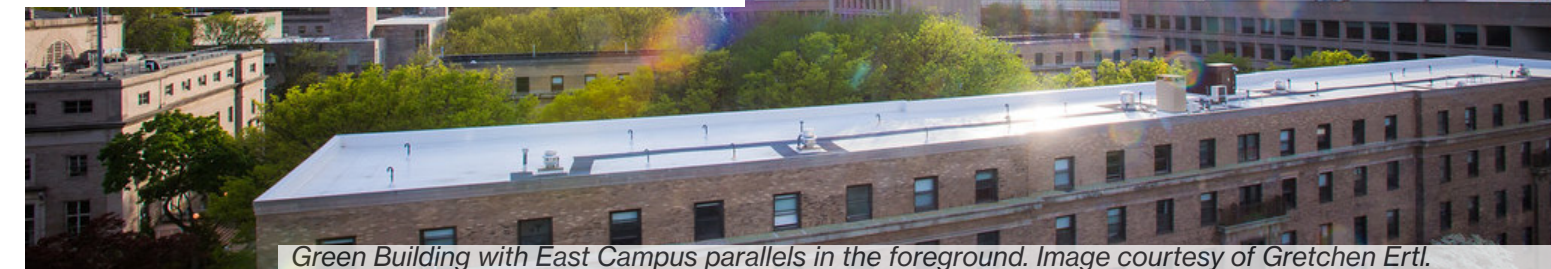
East Campus Residence (Buildings 62 & 64)

First opened in 1924, the East Campus undergraduate residence consists of two five-story buildings (known as "parallels") facing each other across a courtyard. The centrally located residence is home to approximately 380 undergraduate students living in ten culturally distinct communities (or "halls").

MIT's comprehensive renovation of East Campus will renew infrastructure, update life safety systems and accessibility, and improve the student resident experience. Mechanical, electrical, plumbing, fire protection, and technology systems will be updated or replaced, lounges and bathrooms will be upgraded, and kitchen areas will be enlarged and refreshed with new appliances. Accessibility improvements include new elevators located in new light-filled lobbies – one for each parallel – that will serve as main entrances. Improvements to the building envelopes will make them structurally sound and weathertight.

East Campus wall murals have been a tradition since the 1970s, and the renovation will add large, moveable wall panels to support student artwork. Additional project elements supporting artistic expression and student well-being include updated music and fitness rooms as well as the East Campus makerspace, which will be brought up from the basement to the ground floor to facilitate courtyard builds (students erect an expansive "Build" project during Residential Exploration week every September). The courtyard itself will undergo improvements such as surface upgrades and the creation of additional seating areas.

William Rawn Associates is the architect, and Consigli Construction is the construction manager. The project is scheduled to be completed in 2025.



Green Building renewal (54)

The Cecil and Ida Green Building, designed by I.M. Pei & Associates and completed in 1964, is a 22-story Brutalist concrete tower with 20 uniform floors above a double-height open entrance loggia. Currently, it is home to the Department of Earth, Atmospheric and Planetary Sciences, MIT's Environmental Solutions Initiative (ESI), and the MIT-Woods Hole Oceanographic Institution (WHOI) Joint Program.

The Building 54 infrastructure renewal project, now near completion, supports the ongoing and long-term research needs of these programs. It has improved the building envelope, upgraded electrical and mechanical systems, and ensured the building is accessible to the community. Additional elements of the project include renewing the concrete façade, replacing the roof, installing new main electrical substations, upgrading the restrooms and other building interiors, modernizing the elevators, and carrying out all code-required upgrades. The building's large radome (which protects the building's radar antenna) has been replaced, and its rooftop equipment layout and support have been redesigned.

The project team includes the design firm of Beyer Blinder Belle Architects & Planners LLP and Barr & Barr as the construction manager. Work is scheduled to be completed by the end of 2023.

The Music Building (W18)

The Institute is constructing a state-of-the-art Music Building to support the popular program's curricular requirements. Sited adjacent to Kresge Auditorium, the building consists of three complementary volumes that house music teaching, performance, rehearsal, and recording spaces as well as a large-scale, purpose-built performance hall. The brick-clad structures – the Performance Hall, the Music Studios, and the Music and Culture Space – are connected by a glass-walled lobby providing multiple entrance points. Each volume incorporates sound-insulating walls and world-class acoustical design. Below grade, a two-level garage will provide 143 parking spaces (a net gain of 52 spaces added to the campus inventory).

The building is sited within an illustrious architectural context that includes Eero Saarinen's Kresge Auditorium and MIT Chapel as well as Baker House (Building W7), designed by Alvar Aalto, and the Zesiger Sports and Fitness Center (Building W35), designed by Kevin Roche. In response, the new building's design incorporates strong geometric cubes of red brick connected by a curved metal roof that echoes the appearance of nearby Kresge. Its several entrances relate to the pedestrian walkways outside and invite people to pass through the airy, open lobby. The building will be set among a grove of trees that creates a campus green space, complementing the historic Kresge quadrangle.

Sejima and Nishizawa and Associates (SANAA) is the design architect, Perry Dean Rogers Partners Architects is the executive architect firm, and Lee Kennedy Company is the construction manager. Acoustical design is by Nagata Acoustics. Construction of the building began in summer 2021, with a target completion date of 2024.

200 Main Street (Kendall Site 2)

200 Main Street, located across from Galaxy Park and adjacent to the 238 Main Street building and the MIT Sloan School of Management, is the last major development project

in the Kendall Square Initiative. Following the demolition of the former Eastgate Tower and the removal of more than 20 existing cement foundation piles, the project team completed slurry wall foundations for the new structure and is advancing the construction of the below-grade garage.

Graduate Junction (Buildings W87-W88)

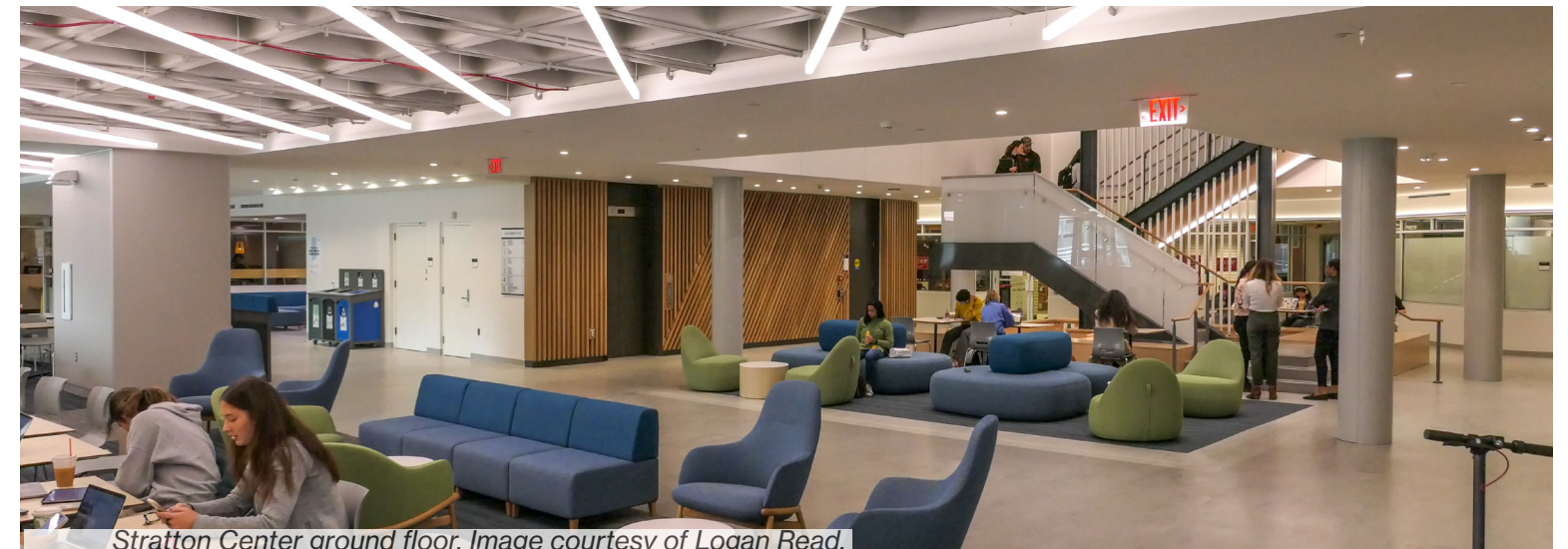
As mentioned earlier, construction of Graduate Junction (formerly known as the West Campus Graduate Student Dormitory) is currently underway. Its 676 new beds will fulfill part of MIT's Volpe zoning commitment to expand the stock of graduate student housing on campus.

Located adjacent to Simmons Hall on the former site of Building W89 and the West Lot parking area, Graduate Junction's pair of buildings frame a publicly accessible central plaza and green space gateway leading to the Fort Washington Historic District and Park. Housing options will include studios and one-, two-, and four-bedroom units. The residence will also provide lobbies, lounges, study spaces, a fitness center, and other resident amenities, including ample indoor bike storage. Outside, the buildings' façades consist of variegated brick and metal panels designed to echo Cambridgeport's history. Glass curtain walls and other transparent elements break up the structural mass and will reveal the activity within. The Central Plaza is designed to encourage varied, multi-season activities with outdoor seating, urban tree groves, and a raised platform surrounded by a lawn and plantings. A north-facing terrace and gardens will augment Graduate Junction's active outdoor life, and (as discussed earlier) the project is an opportunity to comprehensively rebuild and renew the streetscape with an extension of the separated bike lane, more street trees, and additional energy-efficient street lighting.

KieranTimberlake is the designer for the project, and John Moriarty & Associates is the construction manager. MIT is working with American Campus Communities, an experienced third-party campus housing developer, to develop and manage the residence. Construction is expected to be completed in 2024, and the project team is targeting LEED v4 Platinum certification.



Stratton Center second floor. Image courtesy of Logan Read.



Stratton Center ground floor. Image courtesy of Logan Read.

Stratton Student Center (Building W20)

Designed by Eduardo Catalano, then a professor of architecture at MIT, the Stratton Student Center opened in 1968; over the years, the needs of the student community evolved, and the building's infrastructure aged. MIT responded with a strategic improvement project – now nearly complete – to update key aspects of the infrastructure and strengthen the Student Center as a campus hub focused on well-being, performing arts and dance, healthy eating, and community, a place where students can relax and recharge.

The project – based on plans developed with input from the MIT community – includes a new Wellbeing Lab for students on the third floor and the enhancement of a “lounge network” to encourage informal gatherings and collabora-

tion on each floor of the building. This network includes a new flexible space on the first floor, a revitalized Stratton Lounge on the second floor, and repurposed space on the fourth floor. The fourth floor will also have two upgraded multipurpose rooms with sprung wood floors to accommodate dance and movement activities as well as community gatherings. Additional improvements include a new central stairway, new lighting and greenery throughout the building, enhanced dining options, and a range of refreshed offices and spaces that incorporate warmer materials and colors. Accessibility upgrades and improvements indoors and outside are also part of the project.

Gensler is the architect, and Elaine Construction Company is the construction manager. Partial re-opening of spaces in the Student Center began in September 2023 and will continue through the spring.

Retail Update

Over the past year, Kendall Square has been enlivened with the opening of exciting new retail establishments that are inclusive and locally based. Ripple Café, a second location for the Dorchester-based coffee shop, opened at 314 Main Street, adjacent to the new MBTA headhouse in Kendall Square. In April, Row 34 opened in Kendall Square as a new location for the popular seafood and oyster bar, offering lunch and evening dining. Locke Bar & Kitchen opened at One Broadway and features elevated pub food with a large outdoor dining area. Answering the call from the community for a pharmacy, CVS opened their first Kendall Square location at 238 Main Street. The beloved Flat Top Johnny's pool hall will be reopening at 238 Main soon, along with Ping Pod, an autonomous 24-hour ping pong location. MIT is looking forward to welcoming additional new retail to Kendall Square in 2024.



Ripple Cafe exterior windows. Image courtesy of Steve Dunwell.

Construction Mitigation

The management of multiple ongoing construction projects requires extensive mitigation efforts to promote safe passage by vehicles, pedestrians, and bicycles. MIT continuously adjusts its project construction mitigation measures to better coordinate projects, including those along Vassar Street. The Institute works closely with City staff to develop construction mitigation plans for all projects to ensure that truck routes, location of access gates, and hours of construction operation have the least possible impact on neighbors. MIT provides periodic online updates on construction activities using the Department of Facilities website and coUrbanize platform, conducts frequent meetings with abutters, and provides detailed responses to all questions received via email. In addition, the Institute works closely with individual retailers that may be affected by the construction activities to make sure that their patrons know they are open for business. This includes helping tenants with additional signage and sending notices to tenant lists.

In Planning and Design

MechE Rooftop and Ziggurat (Building 1)

To expand the capacity of the Department of Mechanical Engineering (MechE), MIT is planning to create a dynamic hub for research and education by building a new structure across a portion of the Building 1 rooftop and renovating the ziggurat at the intersection of Buildings 1 and 3.

As designed, the joint addition and renovation will create a collaborative and communal MechE centerpiece for computing and interdisciplinary design, providing new office, laboratory, workshop, classroom, and gathering spaces. A rooftop terrace with sweeping views of the Charles River, the campus, and the Boston skyline will be an inviting location for meetings, events, and reflection. Inside, the design includes a light-filled atrium with conversation nooks, a gathering room large enough for 170 people, a mezzanine space, a private meeting room, and spaces that can be reconfigured to function in a variety of ways including as a workshop or lab. The completed project is expected to add approximately 6,720 square feet of usable space (including 5,020 square feet of interior space and 1,700 square feet of space for the rooftop terrace).

The designer is Annum Architects, a firm with expertise in historically significant buildings.

Volpe Redevelopment

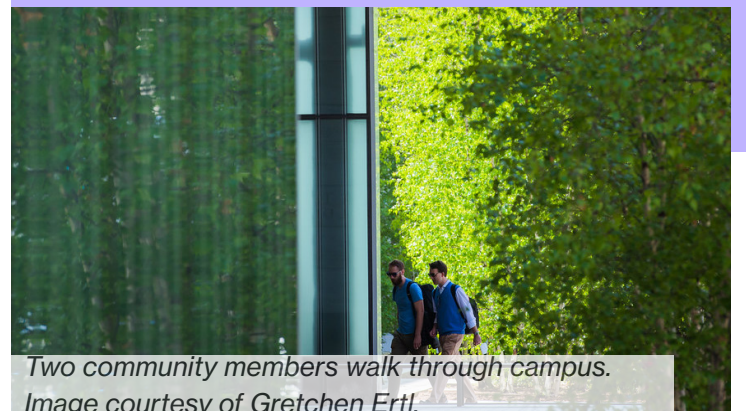
During the past year, MIT advanced the first phase of redevelopment at the Volpe site by completing the design of two commercial buildings and securing design review approval from the Cambridge Planning Board. Additionally, MIT made progress on the designs for the below-grade infrastructure and three of the four parks to be developed at the site. The Institute continues to work closely with City staff on the designs of adjacent city roadways and utility infrastructure and with Eversource on electrical transmission lines for the new substation.

Building Campus Sustainability

For all new construction and renovations, MIT requires an Integrated Design Process (IDP) with the goal of developing resilient, high-performance projects that reduce greenhouse gas (GHG) emissions, quantify life-cycle metrics, minimize resource consumption, and emphasize human and ecological health.

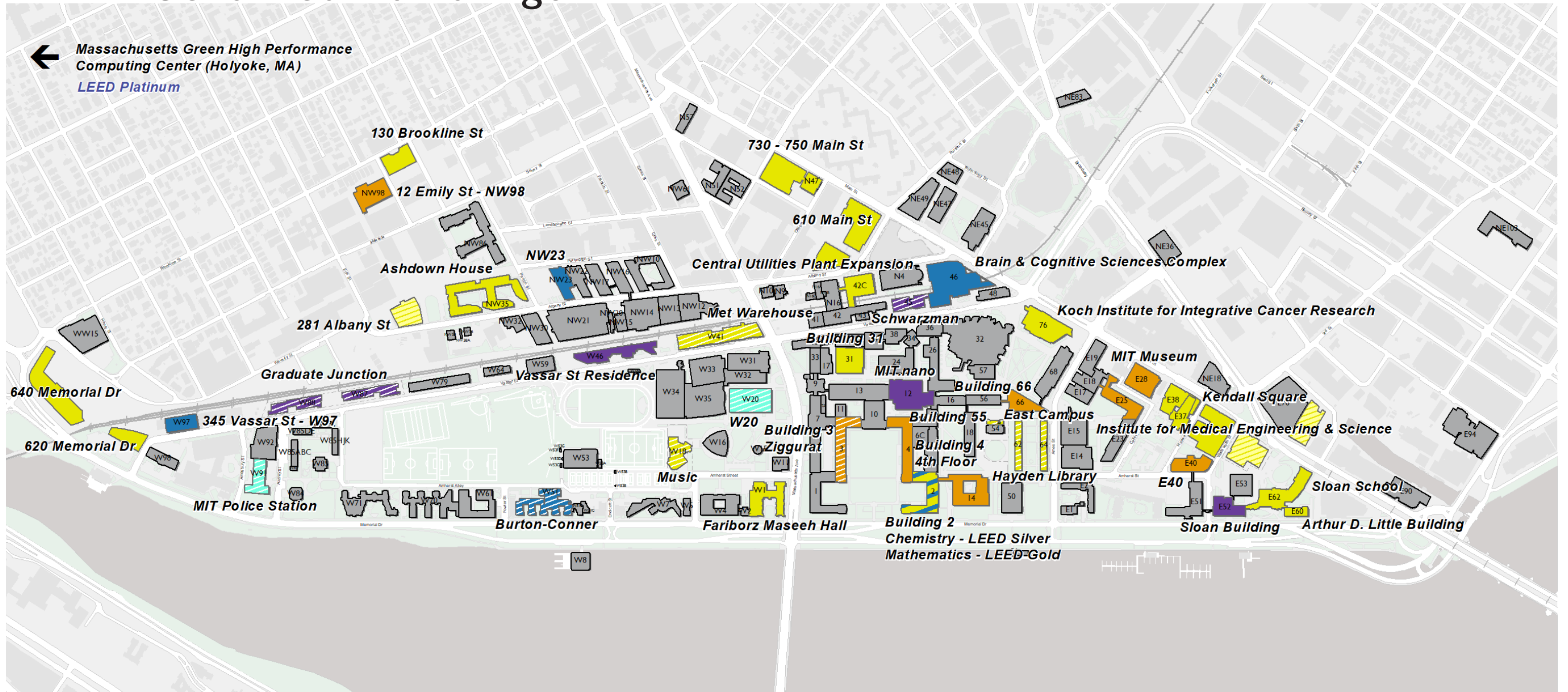
During the IDP, all major stakeholders collaborate to ensure that each project meets MIT's sustainability standards and earns (or exceeds) Gold certification in the Leadership in Energy and Environmental Design (LEED) v4 Rating System. Partial renovation and limited-scope projects use LEED v4 to evaluate performance options and are encouraged to seek certification if applicable. Strategies to reduce GHG emissions (both operational and embodied), energy consumption, and water use are explored, and opportunities to manage stormwater and reduce the risks of flooding and/or excessive heat are evaluated.

The sustainability aspects of MIT's construction and renovation projects range from building retrofits to right-sized HVAC equipment with heat recovery features, efficient lighting, low-flow water fixtures, and low-emitting materials. Other strategies include reflective roofs and solar photovoltaic systems as well as green infrastructure elements (such as green roofs, shade trees, green spaces, bioswales, and ground plantings) that contribute by cleaning the air, cooling the site, and/or filtering and managing stormwater runoff. More details about MIT's sustainability efforts can be found in the Sustainability and Resiliency Planning section of this report.



Two community members walk through campus. Image courtesy of Gretchen Ertl.

LEED-Certified Buildings



Data as of June 30, 2023

LEED Certified

- LEED Gold
- LEED Silver
- LEED Platinum

Planned LEED Certified

- Planned LEED Gold
- Planned LEED Silver
- Planned LEED Platinum

1,000

Feet



Transportation

MIT's transportation efforts are focused on supporting safe, sustainable practices for traveling to, from, and around the Cambridge campus. For example, MIT is moving ahead with plans to electrify its fleet of MIT-owned vehicles, including shuttle buses, vans, and grounds services equipment. Currently, four new electric campus shuttles are in development and are expected to begin circulating in early 2025, pending production timelines. For commuters with personal electric vehicles (EVs), MIT maintains 151 parking spaces on campus equipped for EV charging, distributed in garages and outside lots, and plans to add 209 more by 2026 (for a total of 360) as the demand grows.

Public Transportation

Like many employers, MIT continues to offer remote and hybrid options for employees while exploring ways to support new commuting patterns. MIT's Access MIT program for benefits-eligible employees launched in 2016 and continues to offer commuting incentives including fully-subsidized use of the MBTA subway and local bus systems for Cambridge campus faculty and staff. The program also includes a 60% subsidy for monthly commuter rail passes (student passes are subsidized by 50%) and a 50% subsidy for parking at MBTA stations (capped at \$100 per month). Commuters who use private transit where the MBTA is not available are reimbursed for up to 50% of their costs (capped at \$255/month).

Looking ahead, MIT has phased out the subsidized MBTA 5-Day Flex Pass for benefits-eligible Cambridge employees and is moving to a subsidized MBTA 10-Ride Pass, which may be better suited to hybrid schedules. The 10-Ride Pass provides 10 single-ride commuter rail tickets that can be used any time up to 90 days after purchase. Each pass is priced according to zone and is available for commuter rail zones 1A through 10. MIT employees can purchase up to three subsidized 10-Ride Passes per month.



Nighttime view of Kendall/MIT MBTA entrance. Image courtesy of Steve Dunwell.

Campus Parking

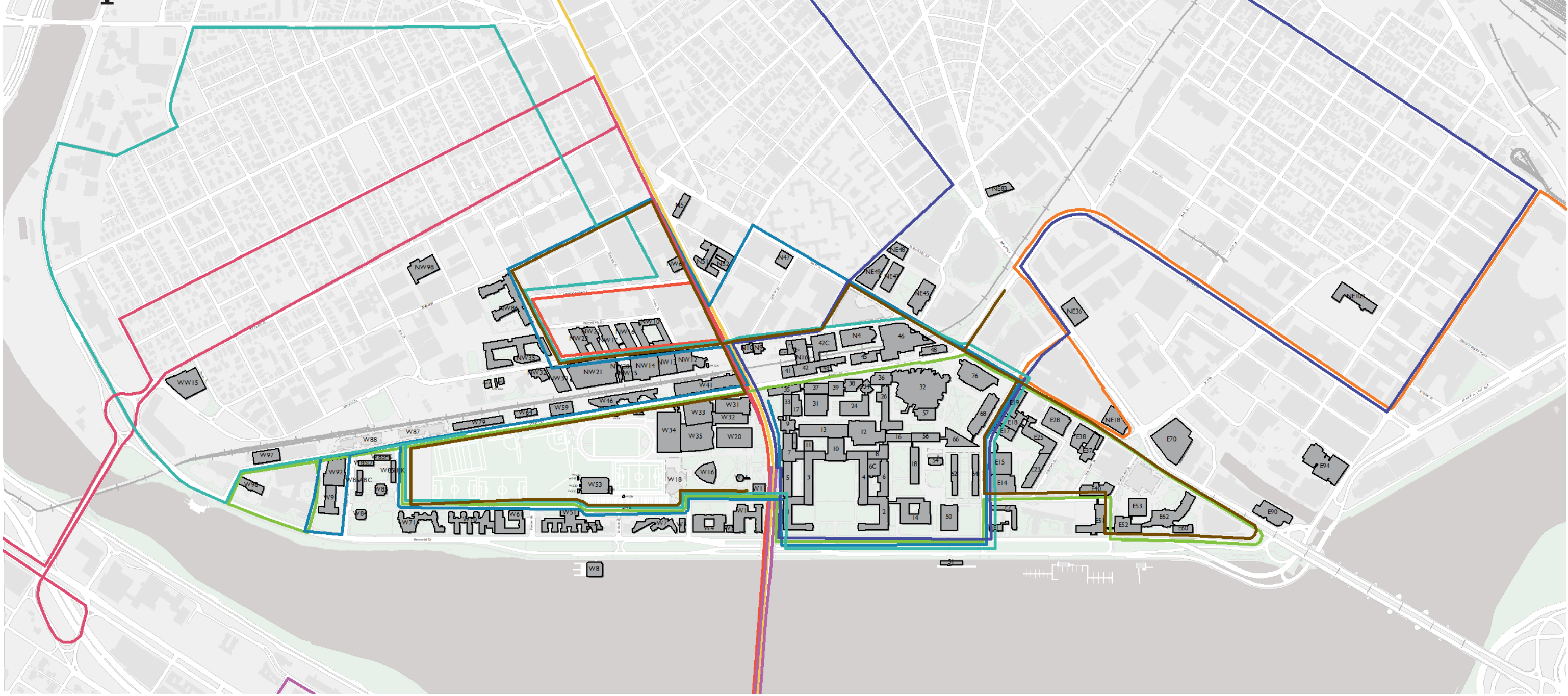
The Access MIT program also encourages sustainable transportation practices by supporting a flexible approach to on-campus parking for community members who need to drive to campus. To serve its students, faculty, and staff, MIT maintains a campus-wide inventory of parking spaces assigned to account holders based primarily on the campus area where they live or work. Faculty and staff who commute to campus by car are not required to make a monthly or annual financial commitment to a traditional parking pass. Instead, they participate in a pay-per-day system that gives them flexibility and helps reduce parking demand on campus. This system enables them to choose a different way to commute – such as subway, bus, on bike, or by foot – any day of the week without being charged for parking.

The \$11 daily parking charge remains unchanged this year. The number of parking accounts has increased slightly compared with last year (from 8,162 accounts in FY2022 to 8,640 accounts in FY2023), while parking lot occupancy rates declined slightly during the same time period (from 67% down to 65%). Parking lot improvements currently underway include a project to replace the gates at all gated lots and the installation of static license plate readers at garage gates to facilitate entry and exit while also ensuring the garages are used by account holders assigned to those areas. Ungated lots are patrolled by a mobile License Plate Reader (LPR) for the same purpose.

| | |
|-----------------------------------------------------------------------------|--------------|
| Number of parking spaces maintained for faculty, staff, and visitors | 2,520 |
| Number of student parking accounts issued* | 1,112 |

*Reporting on accounts rather than spaces allows MIT to more accurately reflect the number of students driving on or around campus.

Campus Shuttle Routes



Data as of June 30, 2023

- MIT Shuttle TECH
- M2 Shuttle
- Saferide Shuttle Cambridge East & Somerville
- Saferide Shuttle Campus Route
- Boston Daytime
- EZ Ride
- Saferide Shuttle Cambridge West & Brookline
- Saferide Shuttle Boston East
- Weekend Shuttle
- Costco Shuttle

1,500 Feet



MIT Shuttle Routes

| Route Name | Vehicle Type | Capacity | Frequency of Operation | | Weekday Hours of Operation | Weekend Hours of Operation |
|---------------------------------------------------------------------------|-----------------------------|----------|------------------------|----------|----------------------------|----------------------------|
| | | | Peak | Off Peak | | |
| Tech Shuttle | Mid-size transit, biodiesel | 30 seats | 10 min | 20 min | 6:15AM-11:00PM* | --- |
| Boston Daytime Shuttle (Sept-May) | Mid-size transit, biodiesel | 30 seats | 30 min | 30 min | 8:00AM-5:45PM* | --- |
| SafeRide Cambridge East & Somerville | Mid-size transit, biodiesel | 30 seats | 40 min | 30 min | 6:00PM-11:00PM | 6:00PM-11:00PM |
| SafeRide Cambridge West & Brookline | Mini-bus, gas | 14 seats | 40 min | 30 min | 6:00PM-11:00PM | 6:00PM-11:00PM |
| SafeRide Boston East | Mid-size transit, biodiesel | 30 seats | 20 min | 30 min | 6:00PM-1:00AM | 6:00PM-1:00AM |
| SafeRide Campus Route | Mid-size transit, biodiesel | 30 seats | 35 min | 35 min | 6:00PM-11:00PM | 6:00PM-11:00PM |
| EZRide by CRTMA | --- | --- | 30 min | 20 min | 6:30AM-7:38PM | --- |
| M2 Shuttle (Cambridge to Boston) | --- | --- | 30 min | 20 min | 6:50AM-10:45PM | --- |
| Trader Joe's/Whole Foods Shuttle | Mid-size transit, biodiesel | 30 seats | 45 min | 45 min | 11:30AM-4:30PM** | 11:30AM-4:30PM** |
| Costco/Target Shuttle | Mid-size transit, biodiesel | 30 seats | 60 min | 60 min | --- | 11:00AM-3:00PM*** |
| OnDemand Shuttle | Mini-bus, gas | 14 seats | On Demand | | 11:00PM-2:30AM | 11:00PM-3:30AM |
| Tech Shuttle + NW | Mid-size transit, biodiesel | 30 seats | 10 min | 20 min | 7:00am-4:00pm* | --- |
| *MIT Holidays excluded **Wednesdays only ***Three Sundays per month | | | | | | |

Commuting Mode of Choice

| | 2014 | 2016 | 2018 | 2021* | 2023 |
|----------------------------|------|------|------|-------|-----------------------------------------------------------------------------------------------------------------------------------|
| Drove Alone Entire Way | 21% | 18% | 18% | 21% | The most recent Commuting Mode of Choice survey was administered in fall 2023 and will be available in the 2024 Town Gown report. |
| Took Public Transportation | 39% | 42% | 43% | 31% | |
| Carpooled | 6% | 6% | 5% | 6% | |
| Bicycled | 15% | 16% | 16% | 22% | |
| Walked | 14% | 15% | 15% | 18% | |
| Other | 5% | 3% | 3% | 2% | |

*The 2021 data has been restated to reflect only those employees who physically commuted to campus. This does not reflect the 31.3% of respondents who worked or studied from home.

Point of Origin for Commuter Trips to Cambridge

| Home Location | Count | Percentage |
|------------------------------|---------------|------------|
| Cambridge | 2,331 | 21% |
| Boston | 1,478 | 13% |
| Somerville | 696 | 6% |
| Arlington | 389 | 4% |
| Brookline | 282 | 3% |
| Newton | 282 | 3% |
| Medford | 265 | 2% |
| Belmont | 248 | 2% |
| Lexington | 221 | 2% |
| Watertown | 172 | 2% |
| Quincy | 145 | 1% |
| Malden | 141 | 1% |
| North Of Boston | 849 | 8% |
| South Of Boston | 94 | 1% |
| West of Boston | 214 | 2% |
| Outside 128 | 1,735 | 16% |
| Outside 495 | 442 | 4% |
| Out of State - Connecticut | 33 | 0% |
| Out of State - Maine | 47 | 0% |
| Out of State - New Hampshire | 177 | 2% |
| Out of State - Rhode Island | 97 | 1% |
| Out of State - Vermont | 19 | 0% |
| Outside New England | 523 | 5% |
| Outside US | 153 | 1% |
| Unknown | 1 | 0% |
| Grand Total | 11,034 | |

Bicycle Infrastructure



Data as of June 30, 2023

- Outdoor bike racks
- ▲ Indoor bike racks
- Outdoor, covered bike racks
- B Bluebike Stations
- Major campus pathways
- Off-street bike routes
- On-street bike routes
- On-street planned bike routes



Biking

For students, faculty, and staff who commute regularly to campus by bicycle, the Institute continues to maintain more than 5,000 bike parking spaces across campus located in secure, accessible, well-lit spaces close to building entrances and placed indoors or in covered areas where possible. The ongoing Bicycle Commuter Benefit Program for benefits-eligible employees reimburses up to \$300 per year for the purchase, improvements, repair, or storage of a bicycle used for commuting to MIT. To increase flexibility, the program allows cyclists to claim a partial subsidy even if they participate in other MIT-subsidized parking or transit programs. MIT also has eight fix-it stations on campus to help cyclists maintain their bicycles. Each fix-it station is equipped with an air pump and basic hand tools such as screwdrivers, wrenches, and tire levers. MIT plans to continue providing additional bike parking spaces and other bicycle infrastructure to meet the needs of our growing and enthusiastic cycling community.

MIT's Commuter Connections web pages provide resources for cyclists on MIT's campus, including information on bike registration, safety, storage, and on-campus repair station locations as well as bicycle benefits and discounts. Additionally, the MIT Police maintain online information including tips for secure bicycle parking and storage along with fundamental rules of the road.

For community members who don't own a bike or who need one temporarily, MIT sponsors six Bluebikes stations with a total of 183 docks on campus. Two of the stations (one located on Massachusetts Avenue at Amherst Street, and the other at the corner of Vassar and Main Streets) have been in place since the bike-share program began in Cambridge in 2012 and are among the busiest in the Bluebikes system. MIT subsidizes annual Bluebikes participation for all eligible MIT students and employees, offering memberships at \$49/year (regularly \$129/year). Recently, MIT expanded the existing Bluebikes station at the Westgate low-rise residence by 27 docks, more than doubling the



Cyclist in front of Killian Court. Image courtesy of Gretchen Ertl.

station's capacity to 52 docks, in connection with the Graduate Junction student residence project.

In 2022, MIT was again awarded the designation of Silver-level Bicycle Friendly University (BFU) by the League of American Bicyclists for its excellent bike infrastructure and programs. MIT has been engaged with the League's BFU program since 2014.

The popularity of bicycles on campus is now matched by the popularity of scooters, skateboards, and other self-balancing personal transport devices, some with motors and some without. MIT has developed rules and guidelines for the safe operation, parking, and storage of these devices on campus. Plans are underway to launch a safety awareness campaign to share information and insights with the MIT community, and on-site guidance will be provided at busy campus locations through methods such as AV screens, posters, and A-frames.

Overall, MIT's transportation programs are designed to advance a culture of low-carbon commuting and create ongoing awareness and shared understanding of transportation choices and impacts, with the added benefits of reducing traffic congestion.



People gathered in Kendall/MIT Open Space. Image courtesy of MIT Image Library.

Sustainability and Resiliency Planning



MIT is making progress toward its goal to decarbonize the campus by 2050 – working collaboratively to reduce greenhouse gas emissions, advance resiliency and adaptation strategies, partner on climate justice projects, empower and engage the MIT community, and more. In FY2023, MIT reduced total campus emissions by 2.4% compared to FY2022; completed multiple building energy efficiency projects; advanced electric vehicle infrastructure for both commuter and fleet vehicles; furthered work toward a resiliency and adaptation roadmap; and set a series of goals to reduce the climate impacts associated with campus food, water, and waste – among other priority areas.

This work is guided by MIT's current climate action plan, [Fast Forward: MIT's Climate Action Plan for the Decade](#), and campus collaborators seek to leverage the MIT campus as a test bed for climate and sustainability solutions that can be scaled for city, state, national, and global initiatives.

MIT's Fast Forward climate commitments are organized into the following categories: mitigation and resiliency, electric vehicle infrastructure, greenhouse gas portfolio expansion, and climate leadership. A full listing of these commitments and their progress to date can also be seen on the [MIT Office of Sustainability \(MITOS\) website](#). Highlights of this work for 2023 are detailed in this section.

View of Building 10 from Killian Court. Image courtesy of Gretchen Ertl.

Working toward a Zero Carbon Campus

Greenhouse Gas Accounting and Measurement

In FY2023, MIT reduced its campus building-related emissions by 2.4% over the previous fiscal year, amounting to a 15% reduction from the 2014 baseline. The reduction was driven by MIT's updated cogeneration plant (this was its first year operating at full capacity) and several completed building energy efficiency projects.

To support its goal of campus decarbonization by 2050, MIT continues to lay the groundwork to accelerate its decarbonization efforts through additional novel approaches. In the near-term, the Institute continues progress toward its 2026 goal of a net-zero campus, leveraging its current solar power purchase agreement (PPA) to offset campus emissions and increase the clean energy capacity of the grid while working to enable additional renewable energy projects with similar goals.

Decreasing Building Energy Use

Large-scale building efficiency projects are essential to MIT's reduction in campus emissions. This past year, Building 46 – one of the top energy consumers on campus – underwent work in an effort to reduce its energy use by 35%, which will then reduce total campus emissions by 2%. The retrofit reached all 1,254 spaces in the lab and office building and optimized ventilation, converted fume hoods from constant volume to variable volume, and installed equipment to help the building systems run more efficiently.

New technologies are also being tested to support energy and emissions reductions in campus buildings. Recently, MIT researchers along with staff from the Department of Facilities and MITOS began piloting artificial intelligence systems that work with existing building management systems to support dynamic heating and cooling in efforts to lower energy use and emissions. Researchers established a framework to understand and predict optimal temperature setpoints (the temperature setting

which a thermostat will continuously maintain) at the room level and take into consideration internal factors like occupancy fluctuations or external factors such as forecasted weather or the carbon intensity of the grid. This allows the existing systems to heat and cool more efficiently without manual intervention.

Reducing Climate Impacts Related to Campus Food, Water, and Waste

In 2023, MIT adopted a set of climate impact goals and strategies to reduce emissions related to food, water, and waste systems by 2030. The goals are:

Food

- Target a 25% overall reduction in the greenhouse gas footprint of food purchases (compared to a baseline from the 2021-2022 academic year) and a goal of 0.5 ounces of beef per meal across MIT residential dining menus by 2030
- Recover all edible food waste in dining hall and retail operations, where feasible
- Support MIT's food service contractors in reaching established Climate Goals

Water

- Achieve a 10% reduction in water use compared to the 2019 baseline by 2030
- Update water reduction goal to align with the new metering program and proposed campus decarbonization plans

Waste

- Reduce trash by 30% compared to 2019 baseline trash (municipal solid waste) totals
- Improve accuracy of indicators for semi-annual tracking in an effort to reduce:
 - Percent of food scraps in trash
 - Percent of recycling in trash in selected locations
 - Percent of trash and recycling comprised of single use items
 - Percent of campus dorms and high food consumption spaces implementing MIT food scrap collection



Hayden Library. Image courtesy of Gretchen Ertl.

Expanding Scope 3 Data Collection and Visualization

As outlined in Fast Forward, MIT continues to evaluate and expand its greenhouse gas portfolio accounting to include relevant Scope 3 emissions categories (e.g., purchased goods and services, sponsored MIT travel, commuting). This past year, the Institute launched the MIT Business Travel Scope 3 Emissions Dashboard as a tool that allows users to understand the impact of air travel as a component of the Institute's Scope 3 emissions. The dashboard, accessible to the MIT community, shares visualizations specific to MIT-sponsored business travel including travel emissions by year, cost, and department. This dashboard is the first in a series of anticipated Scope 3 visualizations that will enable users to understand and reduce the scale of MIT's Scope 3 footprint.

Supporting Sustainable Food Systems

As part of efforts to decarbonize campus operations, MIT continues to focus on supporting sustainable and innovative campus food systems. MITOS and MIT Dining are working collaboratively with student groups, researchers, and peer institutions to understand what role the campus can play in creating a food system that operates with an eye toward its climate and community impact by rebalancing menus to feature more climate-friendly and culturally diverse foods, increasing access to healthy foods, and reducing waste. Students can participate in events designed to build skills, knowledge, and connections around plant-forward cooking, food security, culture, health, and ecosystems – including talks and demonstrations from researchers, farmers, and local chefs along with site visits around the Boston area.

Climate Resiliency

Resiliency and Adaptation Roadmap

In 2022, MIT advanced work to create a resiliency and adaptation roadmap. The goal of the roadmap is to provide a foundational strategy the Institute can use to account for a changing climate when planning for construction, renovation, space use, and the safety of our community in the years ahead. MIT engaged consultants Arup Engineering and Reed Hildebrand to provide a Phase 1 Resiliency Roadmap Gap Analysis, and the findings were delivered in 2023. Key insights from these findings will inform the Phase 2 Resiliency and Adaptation Roadmap and include:

1. Flood risk in today's climate and a future changing climate threaten MIT buildings and infrastructure in ways that could disrupt and damage core research, education activities, and campus operations.
2. MIT's development and visualization of the campus flood risk model in coordination with the City of Cambridge is enabling MIT to adapt to these flood risks in new construction and major renovation design initiated since 2020.
3. There is a need to prioritize and launch investments in adapting existing campus buildings, landscapes, and infrastructure to current and future projected flood risks.
4. New training programs in adapting to a changing climate and new hires with stormwater adaptation and resiliency planning expertise can raise awareness among the Department of Facilities and Environment, Health, and Safety (EHS) staff for integrating resiliency measures into current job functions.
5. Investments in the campus landscape and outdoor spaces can result in cooler spaces providing heat relief for the MIT community. Awareness-raising and cool spot programming during high heat events can provide our community with healthy ways to keep cool and maintain well-being during extreme temperatures.

Understanding Heat Risk on Campus

With heat waves becoming increasingly severe and frequent, posing a significant risk to people living in urban areas like Cambridge, MIT initiated a collaborative research project (MITOS working with the Urban Risk Lab) to map heat risk and distribution across campus to inform mitigation strategies and heat relief actions for extreme heat events. With support from faculty leadership and student researchers, this data collection effort will identify areas with high temperatures, aid the creation of interactive maps for the MIT community, and open opportunities for future research. The project will serve as a reference for external heat resilience plans and MIT's climate resiliency and adaptation roadmap.

Material Lifecycles

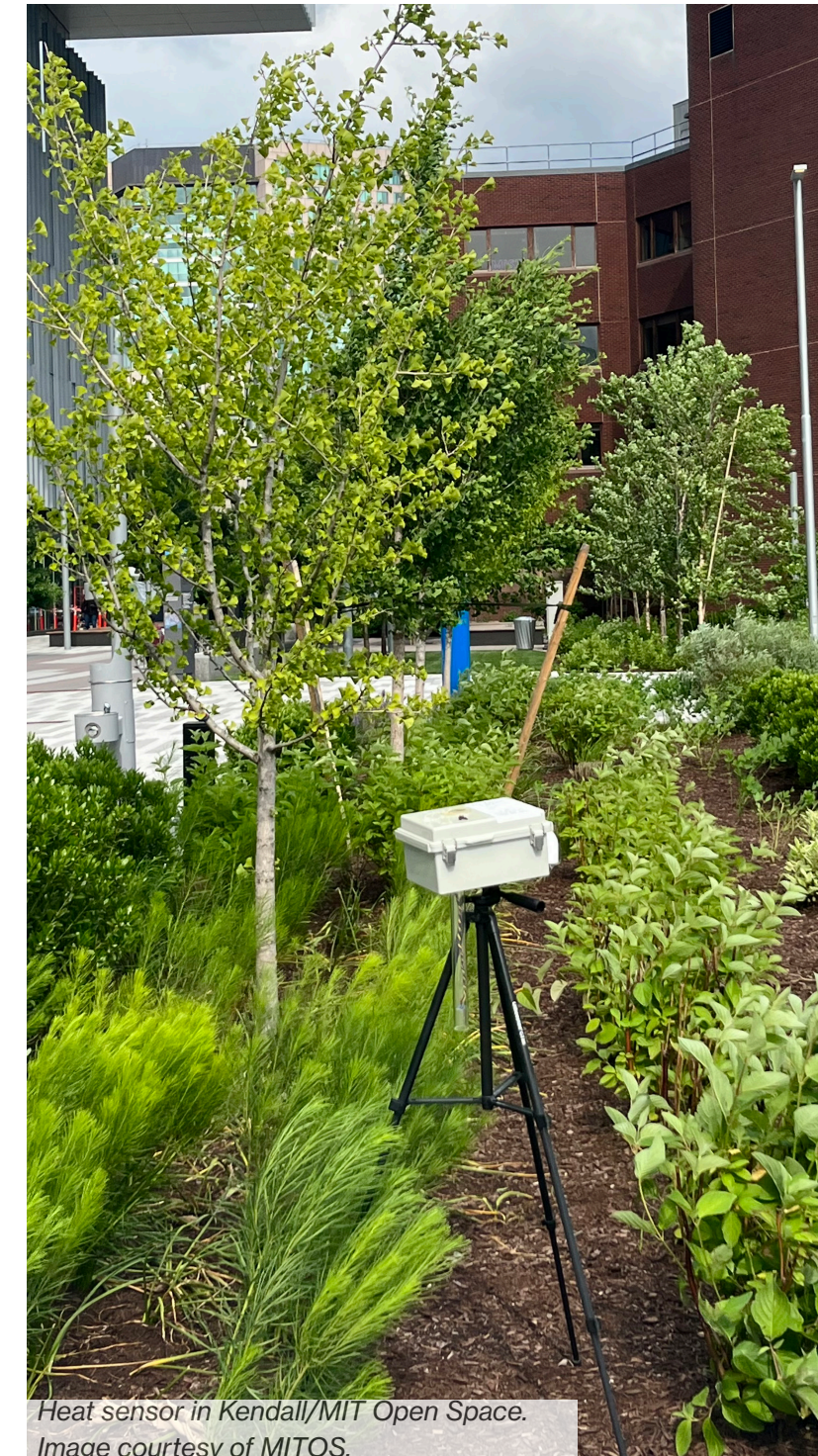
To reduce and eliminate waste on campus, MIT staff and researchers analyze the impact of the Institute's purchasing and waste systems and devise solutions to support reuse, reprocessing, and reduction of purchased goods on campus. "Design out waste" efforts have also been bolstered by the 2030 impact goal to reduce campus trash by 30% from a 2019 baseline. MIT works with the City of Cambridge Recycling Advisory Committee in these efforts.

Climate Justice

Recognizing the intersecting challenges of race, inequality, and climate change, MIT embedded a statement about the "imperative of justice" in its Fast Forward climate action plan. Since the plan was released, educational communities at MIT have created new initiatives and classes that directly address the imperative of justice in environmental programming. The Institute is also exploring how its sustainability efforts can play an impactful part in advancing the imperative of justice. .

This year, MIT students, faculty, and researchers worked to develop relationships with local community organizations and explore the connections between campus and community climate action. MIT has sought opportunities to partner and exchange knowledge and ideas,

from advancing sustainable food systems with Commonwealth Kitchen in Dorchester to exploring workforce development with PowerCorps Boston to forming a climate justice network with the Green Ribbon Commission. MIT also convened a "Climate Community Collaborative Symposium" that brought together higher education, civic, and tribal stakeholders, including the City of Cambridge, to catalyze partnerships for climate action in effective, just, and equitable ways.



Heat sensor in Kendall/MIT Open Space. Image courtesy of MITOS.



Empowering the MIT Community

To empower MIT community members to adopt and spearhead more sustainable practices, MIT launched the [Collaborative Climate Action Program at MIT](#). The program, led by MITOS, invites staff to foster sustainable practices through a wide range of guided actions, such as hosting sustainable events, engaging in purposeful purchasing, reducing the carbon footprint of food procurement, improving recycling practices, cultivating a strong culture of reuse, and creating local climate and sustainability action plans. Sustainable calls to action are shared every two weeks and followed by a drop-in meeting for participating staff to explore ideas, insights, and questions.

Looking Ahead

In the coming year, MIT will work to apply knowledge, empower people to act, and pioneer solutions to address climate and sustainability challenges, prioritizing projects that focus on campus decarbonization, renewable energy power purchase agreement options, laboratory sustainable practices, and more. The MIT Office of Sustainability will continue to serve as the organizational lead for MIT's campus climate commitments, focusing on the following priority projects:

- Launch a “Decarbonization by 2050” faculty committee that will tap the expertise of faculty and provide input into the campus planning process
- Evaluate current practices and develop a new Safe and Sustainable Labs Program that integrates and institutionalizes compliance, safety, and sustainability as a best practice
- Implement an impactful and broad Campus Climate Commitments Communications Plan
- Continue to provide leadership and creativity while implementing the Fast Forward climate action plan

MIT community members walking through campus. Image courtesy of MIT Image Library.

Energy Efficiency Upgrade Projects



Data as of June 30, 2023

Buildings and Spaces with Energy Efficiency Upgrade Projects

Teal: Completed in 2022/2023 Yellow: In Construction or Planned

Supporting Cambridge Students and Families

MIT extends its mission to advance knowledge through a variety of academic enrichment opportunities for Cambridge students and works closely with Cambridge Public Schools (CPS) to deepen engagement and participation. Departments, labs, centers, and institutes (DLCI) across MIT create programming to inspire K-12 student interest in science, technology, engineering, the arts, and math. The Institute actively works to increase awareness of these offerings to local schools and ensure equitable access to these opportunities.

MIT Impact Scholarships

The MIT Impact Scholarship celebrated its seventh year of awarding annual scholarships to ten students from Cambridge Rindge and Latin High School, Prospect Hill Academy, and Community Charter School of Cambridge based on how they have impacted the people and communities around them. Over the past seven years, scholarships in the amount of \$700,000 have been awarded to 70 Cambridge students. Currently, Cambridge Impact Scholars are studying at 30 higher education institutions across the United States.



MIT Impact Scholarship recipients. Image courtesy of Cambridge Public Schools.

MIT Full STEAM Ahead

[MIT Full STEAM Ahead](#) is an MIT PK-12 Action Group effort to support teaching and learning that was initially developed as a response to the need for online resources during the Covid-19 pandemic. Now in its third year, Full STEAM Ahead (FSA) has expanded to in-person student and educator workshops and programs. This summer, FSA welcomed five Cambridge educators to campus for a Full STEAM Ahead Educators Immersion Program, which is a two-week paid professional development program.

This multi-part program began with interactive STEAM workshops to encourage inquiry and engagement in classrooms. Using the lessons from the first part of the program, participants developed projects to implement in their classrooms this fall. They'll continue to receive support as they implement their projects throughout the fall and winter, with the MIT team providing necessary materials, classroom observations, and feedback.

The Tech Experience

The Tech Experience is a series of coordinated partnerships between MIT's Office of Government and Community Relations and CPS's technology department to match Cambridge students' STEAM interests with MIT resources to provide opportunities for collaboration. It also provides opportunities for educators to engage in guided networking and brainstorming around STEAM curriculum. Part of the series included Tinker 4 Change, an annual social justice hackathon for high school students which is planned and hosted by the Cambridge Rindge and Latin School Computer Science Club.

Over the past five years, the partnership has resulted in more than 15 collaborations reaching approximately 1,500 K-12 learners. Additionally, there have been more than ten educator professional development opportunities.

MIT Open Space Programming

The Kendall/MIT Open Space is filled with programming throughout the year, with many events geared toward families and young people in Cambridge. In the past year, [Open Space Programming](#) hosted nearly one hundred public events, collaborating closely with organizations in and around Cambridge, MIT, and Kendall Square. Events included lunchtime networking and food trucks, community gatherings, outdoor movies, LEAP Labs geared toward families and kids, and weekly game cart hours. These public programs ensure the open space meets its overarching objective – to provide an accessible, active, social, and welcoming space for the Cambridge, MIT, and Kendall Square communities.

Winter Family Day

With an estimated 1,500 attendees, one of the largest events Open Space Programming hosted during the reporting period was [Winter Family Day](#) in February. Families around Cambridge enjoyed a fun-filled day in the Kendall/MIT Open Space and MIT Welcome Center, with activities for attendees of all ages. The packed program schedule included food trucks, performances from Cambridge and MIT groups, hands-on STEAM activities, games, and free snacks for those who braved the chilly weather.



Participants at Winter Family Day. Image courtesy of Jake Belcher.

LEAP Labs

A creation of Open Space Programming, the LEAP (Learn, Explore, and Play) Lab series provides an opportunity for families and children to gather for playful connections and hands-on learning. LEAP Lab programs are held on Saturday mornings, and Open Space Programming hosted nine of these events during the reporting period. Topics included movement for families, kids' clothing and toy exchange, and crafting microbial ecosystems. Children's book readings were also popular. This year, attendees received free copies, enjoyed a read-aloud, and participated in art activities in connection with the following books: *I'm a Neutrino*; *Detector Dogs*, *Dynamite Dolphins*, and *More Animals with Super Sensory Powers*; and *Isabel and the Invisible World*.



Robot demo at Winter Family Day. Image courtesy of Jake Belcher.

Economic Impact

The Job Connector by MIT

Developed as part of MIT's Volpe zoning commitment, the [Job Connector by MIT](#) is now in its fourth year serving Cambridge residents as a free workforce development hub that provides comprehensive support to job seekers at all stages of their careers. Through personalized coaching and a variety of career development workshops, the Job Connector focuses on individuals and their specific circumstances to support their long-term goals.

In order to maintain strong ties with residents and connect with local job seekers, the Job Connector actively immerses itself in the Cambridge community. Outreach efforts include partnerships with local organizations, a monthly email newsletter, an active social media presence, and participation at community events. These activities help the Job Connector to bring its services to those who need them the most.



Job Connector staff with construction program participants. Image courtesy of Sarah Gallop.

Job Connector Client Journey

Since opening its doors in October 2019, the Job Connector has worked with approximately 730 Cambridge residents to help advance their careers.

When clients first walk through the Main Street doors or pick up the phone, Job Connector staff schedule an introductory meeting to learn about their career goals, past work experience, and education, and to identify appropriate training and job search opportunities. From resume and cover letter writing to networking and interview preparation, staff assist individuals at every stage of the job search process.

During the reporting period, the Job Connector worked with 145 Cambridge residents, 30 of whom quickly obtained employment. Other clients learned about additional training resources, employment leads, and specific career programs. All clients updated their personal career-related materials.

In June 2023, the Cambridge City Council unanimously resolved to recognize Job Connector staff for being “deeply committed to serving the Cambridge community” and the Job Connector itself for having “a significant impact on residents across our city allowing them to thrive and empower themselves.”

Programming

The Job Connector provides both professional development and industry-specific programs. This year, six programs served more than 70 residents and explored topics including the construction and trades-based industry, barriers to employment, job searching 101, career development skills, and financial literacy.

Introduction to Construction and the Building Trades

The second cohort of the fall 2022 Introduction to Construction and Building Trades program included seventeen Cambridge residents who learned the ins and outs of the high-growth



Job Connector staff at a community event. Image courtesy of the Job Connector.

construction and building trades sector. Industry experts provided first-hand information on topics such as local building trades unions, entrepreneurship within the field, construction management, real estate development, and more. The multi-week flagship Job Connector program is made possible through partnerships with the Greater Boston Building Trades Unions, CSL Construction, Turner Construction, local independent builders, McPhail Associates, and Cambridge City Councillors. Program graduates have gone on to participate in advanced training programs and join unions; two graduates now work for CSL Construction.

Other Programs

Throughout the year, the Job Connector office space at 792 Main Street is used to host various hiring fairs. In the spring, staff recruited throughout Cambridge for a local restaurant hiring fair and training opportunity. Restaurant partners included Locke Bar, Gufo, The Lexington, La Fabrica Central, Boston Marriott Cambridge, Za, and Formaggio Kitchen. Attendees were also able to train for a ChokeSaver certification - which provides an essential skill set for prospective employers. During tax season, the Job Connector and the Cambridge Economic Opportunity Committee (CEOC) teamed up to host tax preparation sessions for Cambridge residents.

Cambridge Outreach

In addition to hosting programs in the Main Street offices, the Job Connector team also

attends community events and supports programming developed by Cambridge nonprofits. Staff presented at several external workshops and, as an example, provided office space to the Community Safety Department and Friday Night Hype community organizations.

Community Events

Weekend events and block parties filled the summer months and were held in rain (frequently) or shine (rarely). Job Connector staff tabled and met with event attendees at four events over the summer months. These included the Putnam Green Community Block Party, East End House Block Party, Cambridge Jazz Festival, and Homeowners Rehab Inc.'s National Night Out. Like many MIT employees, Job Connector staff also participated in the Kendall Square Association's (KSA) Kendall Square Challenge.

Non-Profit Partnerships

With robust programs throughout the City, the Job Connector staff were invited to nonprofit programs and hiring fairs to provide information about their services and share workforce development knowledge. Staff gave a presentation and provided one-on-one consultations with attendees at InnerCity Weighlifting's professional development workshop. At Enroot's Career Day, staff worked with students to show how they can plan their career goals. The Job Connector collaborated with My Brother's Keeper Cambridge for a career development workshop during its Empowerment program.

Payments to the City of Cambridge

| | FY19 | FY20 | FY21 | FY22 | FY23 |
|------------------------------------|---------------------|---------------------|---------------------|----------------------|----------------------|
| Real Estate Taxes Paid* | \$60,291,173 | \$65,318,882 | \$70,355,886 | \$76,734,164 | \$83,932,146 |
| Payment in Lieu of Taxes (PILOT)** | \$2,150,218 | \$2,211,549 | \$2,232,696 | \$2,288,514 | \$2,345,727 |
| Water and Sewer Fees Paid | \$8,536,068 | \$7,812,810 | \$6,201,488 | \$8,319,592 | \$9,792,604 |
| Other Fees and Permits Paid | \$5,006,735 | \$8,242,958 | \$11,313,394 | \$16,321,388 | \$9,387,451 |
| Total Payments | \$75,984,194 | \$83,586,199 | \$90,103,464 | \$103,663,658 | \$105,457,928 |

*Includes real estate taxes paid by MIT, taxes paid on MIT-owned property through ground leases, and real estate taxes generated by Independent Living Groups.

**The amount of MIT's PILOT payment is governed by the 2004 agreement between MIT and the City of Cambridge.

As the #1 taxpayer in Cambridge, MIT's FY23 real estate tax payment represents **15.8%** of the City's total tax revenue stream.

Supplier Diversity at MIT

In 2020, then-President Rafael Reif committed MIT to increasing procurement from minority- and Black-owned businesses as part of [MIT's Strategic Action Plan for Belonging, Achievement, and Composition](#). To respond to this charge, the Office of the Vice President for Finance (VPF) has been actively working on a suite of tools and resources to increase the number of diverse suppliers at MIT, including:

- Supplier Search, a tool enabling MIT community members to easily identify local, small, and diverse businesses for their purchases;
- Procurement Services website, a new site providing detailed information to the MIT community on purchasing goods, services, and travel (the website will also house the Supplier Diversity Program, formerly the Small and Diverse Business Program); and
- Purchase with Purpose, a campaign focusing on educating, inspiring, and supporting on-campus purchasers to align their spending with MIT's goals for supplier diversity.

In addition to these tools and resources for the MIT community, the Supplier Diversity Program has focused on external engagement with suppliers and business groups by:

- Co-hosting on-campus vendor fairs, such as the City of Cambridge Economic Opportunity and Development Division's Supplier Diversity Fair;
- Conducting competitive bids focused on soliciting proposals from local, small, and diverse businesses, which included catering, office beverage services, packaged gas to support MIT's laboratories, and printing services; and
- Evaluating new memberships to increase outreach to the supplier communities.

VPF's Supplier Diversity Program actively participates in peer-learning circles to share best practices and new approaches. Program staff continue to work with local business development organizations to identify areas of opportunity and create bridges between the campus and the wider business community.



President Kornbluth experiences the BARBIS. Image courtesy of Ellen Patton.

In the tradition of MIT hacks, President Kornbluth walked into her office on the first day of Fall 2023 to find that a Barbie- and Doctor Who TARDIS-themed phone booth was waiting for her there. Dubbed the BARBIS, the immersive pink installation was presented by incoming first-year students in the Interphase EDGE/x program managed by the Office of Minority Education and MIT Edgerton Center. "This exemplifies the creativity, the innovation, and the technical know-how of MIT students, and I'm amazed they created this in their first hour [as undergraduates]," Kornbluth said.

