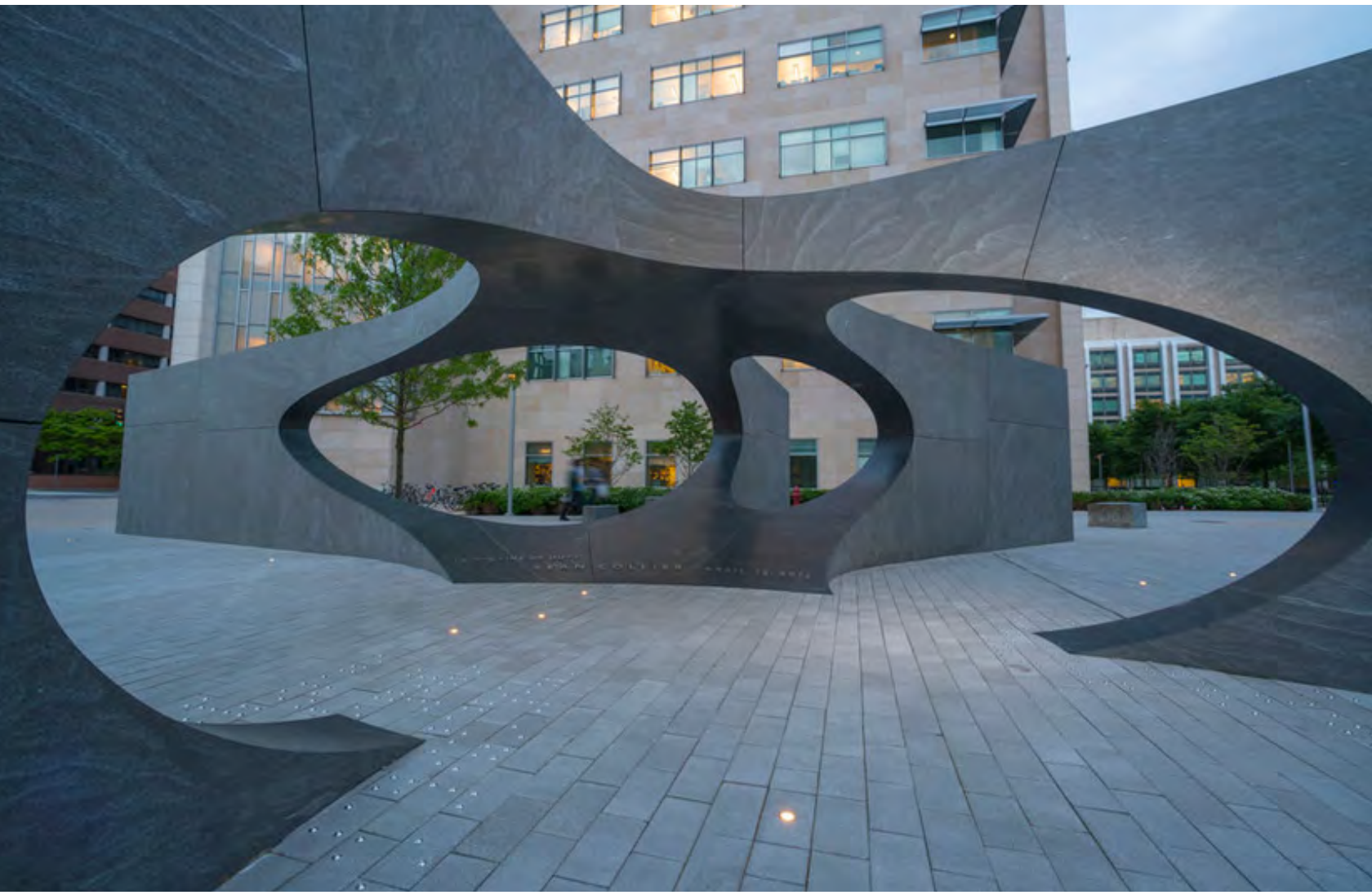
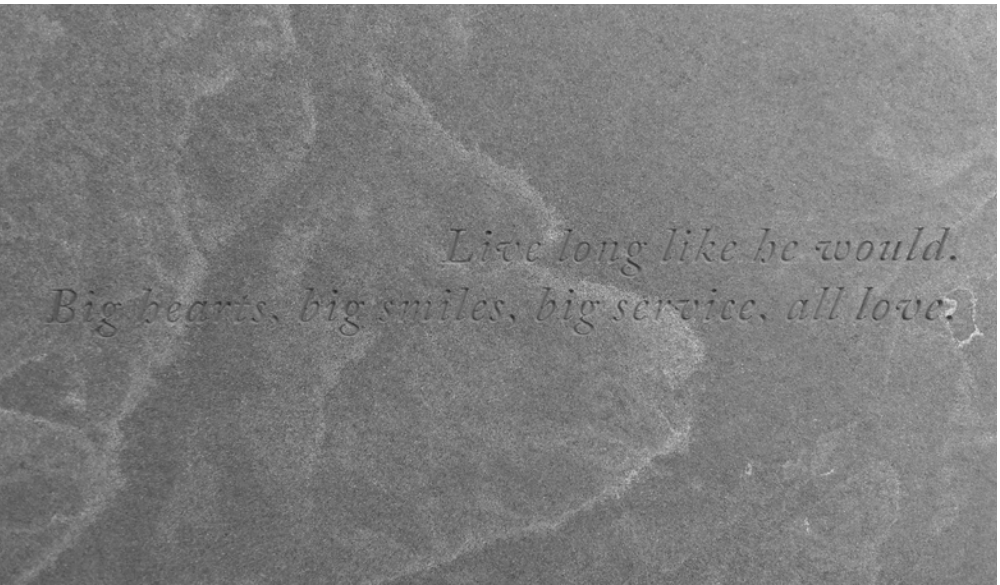
Town Gown Report to the City of Cambridge





2015

Massachusetts Institute of Technology

Town Gown Report to the City of Cambridge

2014-2015 Term (7/1/14 - 6/30/15)

Submitted December 18, 2015

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I. Existing Conditions

A. Faculty & Staff

	2011	2012	2013	2014	**2015**	**2025 (projected)**
Cambridge-based Staff						
Head Count	8,893	9,124	9,329	9,692	**10,039**	**10,000-11,000**
FTEs	7,483	7,707	7,954	8,294	**8,599**	
Post-Doctoral Staff [1]			1,402	1,421	**1,515**	
Cambridge-based Faculty						
Head Count	1,002	1,003	1,007	1,012	**1,004**	**~1,000**
FTEs	997	997	1,002	1,005	**999**	
Number of Cambridge Residents Employed at Cambridge Facilities	2,258	2,359	2,305	2,347	**2,391**	**~2,500**

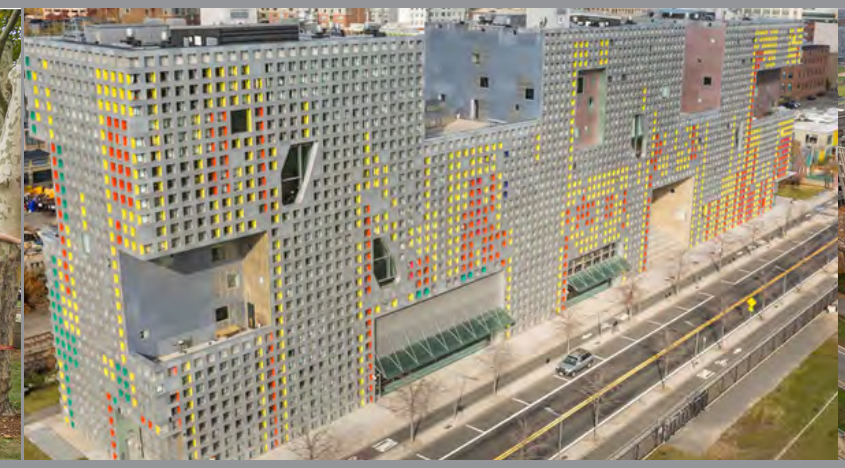
1 Post-Doctorals are classified as staff and included in the headcount for Cambridge-based Staff.

B. Student Body

	2011	2012	2013	2014	**2015**	**2025 (projected)**
Total Undergraduate Students	4,285	4,363	4,477	4,510	**4,476**	**4,500**
Day	4,285	4,363	4,477	4,510	**4,476**	
Evening	N/A	N/A	N/A	N/A	**N/A**	
Full Time	4,241	4,335	4,456	4,485	**4,442**	
Part Time	44	28	21	25	**34**	
Total Graduate Students[2]	6,040	6,259	6,431	6,528	**6,560**	**6,400-6,600**
Day	6,040	6,259	6,431	6,528	**6,560**	
Evening	N/A	N/A	N/A	NA	**N/A**	
Full Time	6,017	6,229	6,417	6,514	**6,509**	
Part Time	23	30	14	14	**51**	
Non-Degree Students	153	173	189[3]	182	**204**	
Day	153	173	189[3]	182	**204**	
Evening	N/A	N/A	N/A	N/A	**N/A**	
Total Students Attending Classes in Cambridge	10,478	10,795	11,097	11,220	**11,240**	**11,000-11,300**
Non-resident students not included	88	99	92	81	**79**	

2 There is not an overall plan to make changes to the graduate student population. Enrollment fluctuates depending on the inde pendent decisions of academic departments. These decisions are governed by a variety of factors including the availability of research funding and the ability of international students to obtain visas. International students account for approximately 42% of the graduate student population.

3 2013 numbers erroneously counted 163 students instead of 189.



C. Student Residences

	2011	2012	2013	2014	**2015**	**2025 (projected)**
Number of Undergraduate Students residing in Cambridge						
In Institute-approved housing (includes dormitories, fraternities, sororities and independent living groups)	3,410	3,503	3,589	3,577	**3,543**	**3,500-3,600**
In off-campus housing owned and managed by MIT	14	22	7	0	**0**	
In off-campus non-MIT housing	92	71	66	71	**77**	
Number of Graduate Students residing in Cambridge						
In Institute-approved housing (includes dormitories, fraternities, sororities and independent living groups)	2,286	2,352	2,392	2,430	**2,384**	**2,800-3,000**
In off-campus housing owned and managed by MIT	96	111	123	59	**44**	
In off-campus non-MIT housing	1,903	1,736	1,779	1,884	**1876**	
Student Parking						
Number of parking spaces maintained for undergraduate and graduate students (including resident and commuter parking)	1,103	1,103	1,103	1,103	**1,103**	

D. Facilities & Land Owned[4]

	2011	2012	2013	2014	**2015**	**2025 (projected)**
Acres						
Tax Exempt	160	161[5]	161	163	**163**	
Taxable	93	93	93	93	**95**	
Number of Buildings (academic)	110	110	109	111	**108**	
Dormitories						
Number of Buildings	28	28	28	28	**28**	
Number of Beds	5,491	5,940	5,940	5,800	**5,739**	
Size of Buildings (gross floor area)						
Institutional/Academic	6,766,465	6,800,368	6,808,234	6,811,817	**6,927,275**	
Student Activities/Athletic/Service	2,462,281	2,469,050	2,418,825	2,366,093	**2,195,897**	
Dormitory/Nontaxable Residential	2,919,890	2,924,151	2,921,880	2,921,880	**2,922,128**	
Commercial[6]	5,096,716	4,962,958	4,962,958	5,344,990	**5,356,423**	
Taxable Residential[7]	171	164	164	164	**164**	

Parking spaces maintained in Cambridge

Number of parking spaces maintained for students:	1,103
Number of parking spaces maintained for faculty, staff and visitors:	3,256

4 MIT and the City agreed that sub-area divisions are unnecessary in this section.
5 This figure was erroneously reported in last year's report as 160 rather than 161
6 MIT's commercial properties are measured by rentable square feet.
7 MIT's taxable residential properties are measured by rental units.

Housing

	Tax Exempt: MIT-Owned and Managed Housing	Tax Exempt: Other Housing	Taxable: MIT-Owned and Managed Housing[8]	Taxable: Other Housing (Univ. Park & 100 Mem. Dr. Ground Leases)
2011				
Number of Units	none	none	171	1,101
Number of Buildings	none	none	15	7
2012				
Number of Units	none	none	164	930[9]
Number of Buildings	none	none	15	7
2013				
Number of Units	none	none	164	930
Number of Buildings	none	none	15	7
2014				
Number of Units	none	none	164	930
Number of Buildings	none	none	13	7
2015				
Number of Units	none	none	164	930
Number of Buildings	none	none	13	7
2025(Projected)				
Number of Units	none	none	164	930
Number of Buildings	none	none	13	7

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

8 Occupied by both MIT and Non-MIT residents.

9 Change in the number of units from previous years is the result of a change in reporting methodology

E. Real Estate Leased

Use	Leased Location[10]	Square Feet[11]
Institutional/Academic	1 Cambridge Center	35,594
Institutional/Academic	7 Cambridge Center	231,028
Institutional/Academic	11 Cambridge Center	10,940
Institutional/Academic	300 Tech Square	6,451
Institutional/Academic	400 Tech Square	10,901
Institutional/Academic	500 Tech Square	93,108
Institutional/Academic	600 Tech Square	83,561
Institutional/Academic	700 Tech Square	8,876
Institutional/Academic	One Charles Street	36,228
Institutional/Academic	One Main Street	63,142
Institutional/Academic	One Rogers Street	24,046
Institutional/Academic	One Kendall, Building 300	22,506
Institutional/Academic	245 First Street	19,805
	TOTAL	646,186

F. Payments to City of Cambridge

	FY 11	FY 12	FY 13	FY 14	FY 15
Real Estate Taxes Paid[12]	$34,926,204	$36,524,580	$38,656,349	$41,878,455	$44,900,590*
Payment in Lieu of Taxes (PILOT)[13]	$1,744,179	$2,354,917	$2,210,567	$2,208,979	$2,019,677
Water & Sewer Fees Paid	$5,938,689	$5,997,575	$5,658,543	$5,993,315	$6,999,916
Other Fees & Permits Paid	$2,163,013	$1,218,687	$2,003,749	$6,042,590	$3,765,563
Total Payments**	$44,772,085	$46,095,759	$48,529,208	$56,123,339	$57,685,746

* MIT's FY 15 real estate tax payment represents 13.1% of the City's total tax revenue stream.

** MIT's Cambridge First Purchasing Program resulted in the additional investment of over $69.1 million in Cambridge businesses in FY 15. This program, together with taxes paid, payments in lieu of taxes, and municipal fees, brought MIT's 2015 direct economic contribution to the City to more than $125 million. This figure does not include MIT's indirect investment in Cambridge such as student spending and the salaries of nearly 2,400 residents employed by the Institute.

10 Leased by MIT from third-party landlords.
11 The square footage will, in most cases, only be a portion of the entire building.
12 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.
13 The amount of MIT's PILOT payment is governed by the 2004 agreement between MIT and the City of Cambridge.

G. Institutional Shuttle Information

Route Name	Vehicle Type and Capacity	Frequency of Operation	Weekday Hours of Operation	Weekend Hours of Operation
Tech Shuttle	Mid-size transit 30 seats, biodiesel	10 minute peak 20 minute offpeak	6:15AM-7:10PM	none
Boston Daytime Shuttle	Mid-size transit 30 seats, biodiesel	30 minute (Sept-May)	8:00AM-5:55PM	none
Saferide Cambridge East /Somerville	Mid-size transit 30 seats, biodiesel	30 minute peak 40 minute off peak	6:05PM-2:33AM	6:05PM-3:33AM
Saferide Cambridge West/Brookline	Mini-Bus 14 seats	30 minute peak 40 minute off peak	6:05PM-2:33AM	6:05PM-3:33AM
Saferide Boston East	Mid-size transit 30 seats, biodiesel	20 minute peak 30 minute off peak	6:00PM-2:26AM	6:00PM-3:26AM
Saferide Campus Route	Mid-size transit 30 seats, biodiesel	20 minute	6:00PM-2:38AM	6:00PM-3:38AM
Grocery Shuttle	Mid-size transit 30 seats, biodiesel	45 minute	none	11:30AM-4:30PM

Ridership Data

Route Name	Annual Ridership
Tech Shuttle	325,000
Combined Saferide Shuttles	235,000
Boston Daytime Shuttle	90,000
Grocery Shuttle	6,000
EZRide (Northwest Shuttle)[14]	275,000

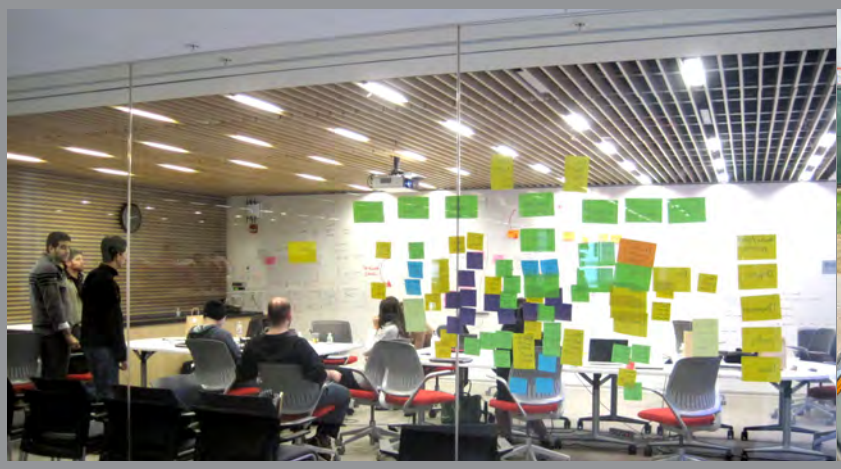
Shuttle Coordination Efforts

MIT's shuttle service is designed to ensure safety and meet the demands of faculty, staff, and student users. The Institute periodically adjusts its shuttle services to best serve the community. There is very little overlap of MIT shuttle service with other public or private shuttle services. The MIT northwest campus is serviced by the EZRide shuttle which is operated by the Charles River TMA (CRTMA).

The Parking and Transportation office in cooperation with the Graduate Student Council and Undergraduate Association also operates a Sunday afternoon Grocery Shuttle with service to Trader Joe's and Whole Foods Market from campus residences. This has resulted in better service with fewer vehicles on the road.

All MIT shuttles require riders to show their MIT ID.

14 Operated by CRTMA.



II. Future Plans Narrative

A. Moving Ideas into Action

In the Town Gown report each year, MIT takes the opportunity to highlight campus priorities that reflect the work of the Institute's faculty, students, and staff. These initiatives have an effect on how MIT organizes its space and operations, and how the Institute shapes its physical campus. This year's highlights include innovation-related activities, climate change and resiliency, and digital learning.

Advances in Innovation

The MIT Innovation Initiative (MITii) works with all five of the Institute's schools to educate the next generation of innovators, preparing them to move ideas to impact. In MIT's tradition of Mens et Manus, insights developed from the emerging science of innovation are combined with hands-on, global opportunities to help students build expertise in the innovation process. In establishing MITii in 2014, MIT President L. Rafael Reif framed the Institute's approach towards innovation:

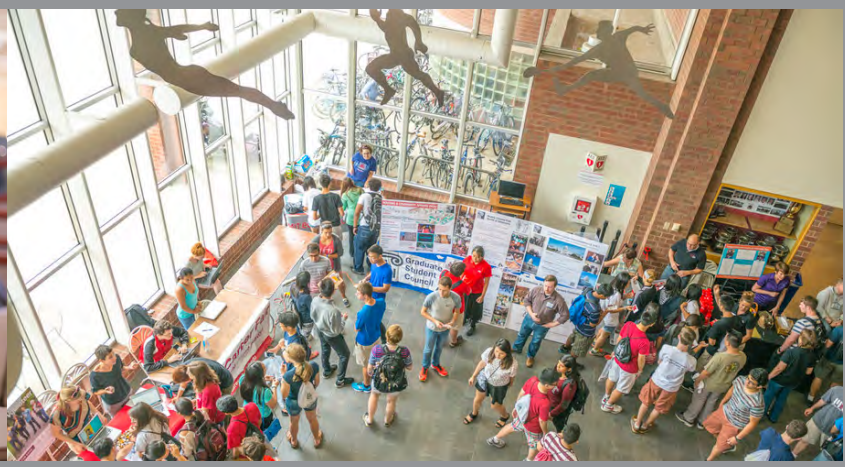
> *"Innovation is the art of transforming knowledge into progress and prosperity. We aim to elevate and accelerate that art form — and to make it a science — in service to the world."*
>
> *- L. Rafael Reif*

MIT recently established an Innovation Node in Hong Kong that will connect the MIT community with entrepreneurial and research activities in that area. With a focus on moving ideas more rapidly to market, MIT students, faculty, and researchers will collaborate with Hong Kong-based academicians, entrepreneurs, businesses, and MIT alumni in the region to advance research projects and provide real-world opportunities for students.

A pilot program in Mongolia will create a collaboration with Mongolian universities and colleges around faculty development, urban planning, and entrepreneurship with an aim to build relationships and identify areas for mutual opportunities in learning and research.

These programs reflect MIT's continuing desire to address global issues related to climate change, energy sources, water and food supply, health, computing, and other pressing challenges.

President Reif has identified that the speed of the delivery of real-world solutions has now become a critical element of the innovation process. In his 2015 Washington Post Op-Ed "A Better Way to Deliver Innovation to the World," President Reif describes how innovations based on existing technologies can move fairly readily to market, but that ideas based on new science can sometimes leave innovative solutions stranded. Reif argues that new-science innovators need a more systematic method to deliver their ideas to the world — from idea to invest-



ment, and from investment to impact. One approach is the establishment of "Innovation Orchards" which would, through a collaboration of academia and industry, combine physical space, mentorship, and funding to accelerate the process of turning new science into workable products.

On campus, MIT is in the process of developing an undergraduate minor in entrepreneurship and innovation, and is providing more international opportunities for students to learn how their innovations can solve global problems. From a physical standpoint, the Institute is reimagining an innovation-centric campus that merges classrooms with maker spaces, creates collaborative learning spaces in student communities, and employs state-of-the-art facilities to advance technological advances. For example, The MIT.nano project will deliver an unprecedented opportunity for the entire MIT community to manipulate matter on the atomic level and apply discoveries to global concerns.

Finally, a new Laboratory for Innovation, Science and Policy will gather investigators throughout the Institute to analyze the conditions that shape innovation outcomes. The development of new data, methods, and metrics for innovation science will translate into best practices for evidence-based research that will be shared with colleagues in business and academia, and with policy makers throughout the country and the world.

Climate & Resiliency

MIT recognizes that sustainability and climate leadership calls for a collaborative process that leverages the strength of a community of engaged stakeholders. This has been demonstrated on multiple fronts as the City of Cambridge – together with its higher education, industry and private sector partners – have come together around key areas, including: the Cambridge Compact for a Sustainable Future, the Net Zero Task Force, the Kendall Square Ecodistrict process, and various transportation, waste management, and climate vulnerability efforts. Collectively, these partnerships seek to enhance the quality of life in our broader community.

This fall, MIT publicly released two significant documents that together outline a deeper commitment to combatting climate change globally. The reports also describe how MIT intends to address climate change locally by leveraging our campus as a test bed for solutions.

The MIT Plan for Action on Climate Change was released in October 2015, detailing steps the Institute will take to tackle this shared global challenge. The plan outlines a comprehensive strategy to address the disruption to our global climate and is deeply rooted in the ethos and purposeful leadership embodied by MIT. The plan reflects a nine-month campus-wide conversation on climate change, which engaged the MIT community through interactive events and online idea sharing. The plan calls upon a deepened understanding of climate change via scientific exploration, an expanded commitment to new research in energy technology and carbon reduction strategies, and the development of educational models to reach the next generation of MIT alum and decision-makers, public policy makers and the general public. At the local level, the plan outlines the development of a climate action plan that will address greenhouse gas reduction, mitigation, adaptation, and resiliency of the MIT campus. Of course, the impacts of climate change have no borders. A distinguishing feature of this report is the call

for a model of collaborative leadership that invites many different sectors to come together to identify solutions to these challenges.

MIT's Office of Sustainability (MITOS) published a document entitled *Sustainability Working Group Recommendations: An integrative vision for our buildings, stormwater, landscape and labs* that sets MIT on a path to align its campus operations along a core set of sustainability principles. This path will set a strong foundation for rigorous and innovative Institute-wide goal setting, measurement and verification, and implementation of strategies moving forward. MITOS is focused on facilitating a process to embed sustainability into all aspects of MIT's human, technological, and ecological systems. Over the next five years, MITOS will continue to launch and facilitate a series of working groups, committees and community input mechanisms tasked with redefining our campus systems to improve performance, reduce environmental and human health impacts, and to become the living lab outlined in the *The MIT Plan for Action on Climate Change*.

As individuals at MIT work to pioneer new technologies and apply policies to assist society in combatting climate change, the Institute understands its responsibility to improve the sustainability of our campus and to use it as a test bed for faculty, student and staff ideas. This commitment will manifest with new energy strategies that lead to emissions reductions, a robust integrated design process, an exploration of on-site renewable energy, and the emergence of an open source data platform. In time, the results of MIT's commitment to climate mitigation and adaptation will be interwoven through our capital planning, renewal and operational ecosystem.

Digital Learning

President Reif's Institute-wide Task Force on the Future of MIT Education concluded in 2014 with a series of 16 recommendations around a few themes: MIT will be more global, more flexible in its offerings, and more open to innovative methods of teaching and learning. One program that has been implemented as part of this initiative is the new Sloan School of Management MicroMaster's degree program in Supply Chain Management – one of Sloan's most popular programs. If students successfully complete a year of online classes, they can then come to the MIT campus for one semester to complete their degree programs and receive a certification. This new program allows more students an opportunity to receive an MIT education by reducing the residency requirement and making it more accessible to students from all around the world. The first students start this program in February 2016.

Ahaan Rungta was homeschooled with MITx & OpenCourseWare since age 5; he was accepted to MIT at age 15

Another work stream to emerge from the Task Force is the Ad HocTask Force on the Future of Libraries which is charged with looking at how the MIT libraries can evolve to advance the creation, dissemination and preservation of knowledge. The Task Force is also charged to serve as leaders in the reinvention of the research library. The task force is comprised of domain experts and members of the MIT community. Their work is due to be completed during the 2015-2016 academic year.

MIT 2030: MIT's Planning Framework

MIT 2030 continues to be the planning framework within which MIT considers future development. MIT 2030 is not a fixed plan. Rather, it's an ongoing process and a tool for envisioning – and inventing – a vibrant future for our physical campus and the nearby innovation cluster. Over the past year, most of MIT's campus planning has been focused on the integration of the Kendall Square Initiative within the campus and the Kendall Square neighborhood.

The MIT 2030 framework principles inform priorities and goals for that integration. The principles include:

- Pursue an overall development approach that integrates campus planning objectives and MIT real estate activity to continue creating and supporting an innovation ecosystem while fostering fruitful collaborations between MIT and its surrounding community; and
- Provide thoughtful guidance for the ongoing physical stewardship of the Institute to ensure the continuation and integrity of its mission. Align campus renewal priorities with current and future academic needs and opportunities;

In carrying out these objectives, MIT follows these general guidelines:

- Where possible, address facilities requirements through renewal and renovation;
- Accelerate systematic capital renewal programs (renewal of roofs, elevators, other systems); and
- Create flexible science and technology research space that responds to innovative academic and collaborative initiatives

The current effort to study West Campus is intended to create a long-range development framework to accommodate future academic and residential uses on the MIT campus west of Massachusetts Avenue. The long range planning goals are being balanced with the need to develop options for a number of immediate or short term needs including renewing and creating student housing, providing replacement parking and improving emerging open spaces.

B. Capital Planning, Renewal & Comprehensive Stewardship

MIT continues to invest in the renewal and stewardship of the physical assets of the campus. The renewal program blends academic program upgrades, building system renewals and sustainability enhancements and initiatives as integral parts of the investment in the future of MIT. The Institute is studying a renewal strategy for undergraduate and graduate housing which will result in an increase in student housing capacity. In addition, the staff and leadership of the Comprehensive Stewardship program is being merged with Repair and Maintenance to ensure that the higher standards of asset management are applied equally across the entire campus.

C. MIT Students, Faculty, and Staff

The number of undergraduates at MIT dropped by 524 over 25 years, reaching a low point of 4,109 in 2004. The restoration of the undergraduate population to a target of 4,500 students was effectively complete with a 2012-2013 undergraduate population of 4,477. The undergraduate population for 2014-2015 is 4,476.

The 2000-2010 decade featured a fairly stable number of graduate students at MIT, with enrollment hovering just below 6,000 students each year in this period. The graduate student population has been growing since, though at very modest rates. From 2013 to 2014, the population grew by 1.5%, and the growth from 2014 to 2015 was just 0.5%. The total graduate student population is contingent on a large number of factors, including research funding levels, international student access to visas, and overall economic conditions.

For more than 25 years, the number of tenured faculty members has remained stable at around 1,000. In 2014-2015, the staff population increased by about 3.5% to 10,039, of which 1,515 are postdoctoral scholars. Postdoctoral scholars are staff who typically serve short-term appointments that are tied directly to the availability of research funding.

D. Housing

Undergraduate Housing

MIT provides housing for its undergraduate students in 11 residence halls. Bexley Hall, formerly located on Massachusetts Avenue, was removed due to deteriorated conditions. A planning process will determine the future use of that parcel. In addition, students may choose to live in one of 36 residential fraternities, sororities, or independent living groups (FSILGs) in Boston and Cambridge. Housing is guaranteed for all four years of the undergraduate experience; therefore over 98% of MIT's approximate 4,500 undergraduates live in residence halls or FSILGs. The Institute is engaged in a comprehensive renewal of its residence halls and is examining new opportunities to update facilities and meet the learning and living needs of today's undergraduate population.

Graduate Housing

Graduate housing is provided in seven residence halls and apartment buildings on the MIT campus. Currently, MIT houses 37% of its total graduate student population. 56% of MIT's students who live in Cambridge are housed in graduate residences on campus. Since 1997, the number of MIT graduate students housed on campus has risen from 1,660 to over 2,400. During that time, MIT has invested significantly in the creation of a graduate resident community in the northwest sector of the campus through the creation and renovation of several residence halls.

In conjunction with the Kendall Square Initiative, and in response to the Graduate Student Housing Study recommendation to create 500-600 new beds, the Institute has proposed a new graduate student residence in the heart of Kendall Square. The new facility would provide 250 net new graduate student beds, after taking into account the replacement of beds at the aging Eastgate residence that is slated to be removed.

A second location for a new graduate student residence is being explored through an examination of the West Campus area in an effort to try to identify potential suitable sites.

E. Looking Ahead at MIT Planning & Development

Development Opportunities

Map 3 divides the campus into four sectors: West, North, Main, and East. MIT's campus planning efforts are guided by specific strategies in each sector. The focus in the West Campus area is in meeting short and long term campus life, academic, and service needs within the context of the neighboring residential uses. The North campus area has evolved in a manner that has allowed MIT to accommodate critical partnerships with industry. The presence of Novartis, Pfizer, and LabCentral so close to many of MIT's research centers will promote greater collaboration and an acceleration of innovation. A focus on the renewal of historic and iconic buildings in MIT's Main Campus — many of which are reaching 100 years of age — will support the leading-edge activities of MIT students and faculty in the next century. Recent examination of the East Campus sector has led to the advancement of the Kendall Square Initiative which will bring a blend of uses to the area including housing, lab and research space, retail, innovation space, and a dedicated facility for the MIT Museum.

West Campus

The West Campus sector makes up approximately half of MIT's 163 acre campus, and encompasses areas previously defined as the Far West, West and Northwest. MIT has recently taken a broader view of this area in an effort to better integrate its campus uses and develop a common vision for this sector. MIT has identified near-term needs in the West including parking, housing and academic/research space. The Institute also plans to articulate long-term visions for the enhancement of West Campus and establish a planning and urban design framework to inform siting and development decisions. Additionally, MIT's study of its West sector will inform transitions between the campus and our neighbors, and assess sustainability challenges and opportunities.

Currently, the Division of Student Life is the primary user of West Campus facilities. The athletic fields occupy much of the area between Amherst Alley and Vassar Street, with student housing wrapping around them and some graduate residences bordering the Cambridgeport neighborhood to the north. MIT recently relocated a variety of campus activities to the West Campus demonstrating that it is a viable location for many campus uses, including MIT Police in W89, administrative offices in W98, IS&T in W91 and W92, and the David H. Koch Childcare Center and Grounds Services group on Vassar Street. In order to further activate this sector, efforts are also underway to create new facilities in West Campus for the Theater Arts and Sea Grant programs, as well as the Department of Facilities administration. The Metropolitan Warehouse is also being studied for mixed use development including undergraduate student housing and maker spaces.

West Campus is perceived by many people as being far from the academic core. Therefore improving connections to Main Campus and establishing a clearer MIT identity in West Campus are important considerations for future development in this sector.

Mass Ave Corridor

Just to the south of the new Novartis buildings there are parcels on the east side of Massachusetts Avenue, stretching from Albany Street, across the railroad tracks to Vassar Street which are underutilized and could provide a site for a variety of academic uses, in close proximity to the core academic campus. The unique design of the new Novartis building will provide a great opportunity to extend the urban quality of Massachusetts Avenue, eventually closing

the gap on the street between Lafayette Square and the main block of MIT's historic campus. The frontage on several streets would allow for ground floor uses that would further contribute to the activation of the area.

Earlier this year, MIT announced the future relocation of the MIT Museum to Kendall Square as part of the Kendall Square Initiative. The Museum currently occupies prominent ground floor space fronting on Massachusetts Avenue at MIT Building N51. As plans for the use of this space develop, MIT will ensure that it remains active, engaging, and contributes positively to the public realm.

Further up Massachusetts Avenue towards Lafayette Square, MIT entered into an agreement with Forest City to redevelop part of the block between Blanche Street and Landsdowne Street. This agreement is resulting in the creation of an office/laboratory facility with ground floor retail at 300 Massachusetts Avenue.

Through these initiatives, MIT hopes to continue the transformation of this section of Massachusetts Avenue into a vibrant and attractive corridor connecting the Institute to Lafayette Square and beyond.

Main Street Corridor

The 730-750 Main Street block is an optimal size for a research & development building. In addition, future redevelopment of this site would allow for the continuation of the emerging retail corridor along Main Street. The triangular-shaped 600 Main Street block is relatively close to the core campus. Its location and scale make it an attractive site for academic research or administrative uses. The site provides an opportunity to improve street frontage in an area with retail and restaurant space at Tech Square and new retail space included in the north building on the 610 Main Street site, now under construction.

North and Main Campus

The Institute is heavily engaged in the construction of MIT.nano, new utilities for MIT.nano, the renovation of Building 31, and the Building 2 Renovation for Math on the Main Campus. Building 2 will be completed this winter and will ease some of the congestion created with three large projects taking place so close to each other in one large block. The utility work should be completed in the next 6 months further reducing the disturbance area on the block.

The Central Utility Plant expansion is in design and is planned to be located on the parking lot next to the Albany Garage on Albany Street. The facility will be adjacent to the existing chiller plant and cooling towers and will have a section that spans the tracks connecting the utility plant facilities on either side of the railroad tracks. Upon completion, this utility work will position MIT to have reliable utility generation for the next 20-40 years.

The MIT Press Bookstore will be temporarily relocated from 292 Main Street to 301 Massachusets Avenue to accomodate the Kendall Square Initiative. Its promiximity to the MIT Museum is expected to increase visitor traffic to both locations. After the Kendall Square development is completed, both the MIT Press Bookstore and the MIT Museum will move into their new dedicated facilities in Kendall Square.

East Campus and Kendall Square

Following three years of community engagement with city officials and business and residential neighbors, including the Kendall Square (K2) planning process and two rounds of zoning petitions, the City Council approved new zoning for One Broadway and East Campus (PUD-5) in April 2013. The new zoning for PUD-5 retains the current allowed capacity for academic buildings in East Campus while permitting additional capacity for commercial development, including residential, retail, and office/lab uses. The new zoning also embraces the dimensional framework recommended through the K2 process, requires a minimum of 240 housing units, (with a mix of affordable, market-rate, and micro units), provides for innovation space, sets LEED v4 Gold as a standard for all commercial buildings, and establishes a community fund. The East Campus/Kendall Square Gateway area represents a tremendous opportunity to create a vibrant cluster of activity. The blending of an array of uses — including innovation space, housing, childcare, retail, commercial, and space for the MIT Museum — has the unique potential to convey MIT's and Kendall Square's unparalleled innovative energy. Development in this sector of the campus is expected to be an Institute focus for the next several years.

As with other parts of the campus, aging or obsolete buildings in the East Campus are subject to consideration for rehabilitation, expansion, or replacement. The first building in rehabilitation is Building E52, now called the Morris and Sophie Chang Building, occupied by the Department of Economics, Sloan School of Management and the MIT Faculty Club. This project started construction in fall 2013 and is scheduled to be completed by the end of 2015. In addition to a complete rehabilitation, the project includes an additional floor for expanded meeting and conference facilities supporting the entire MIT community.

F. Transportation

Bicycle Planning and Improvements

MIT is committed to providing amenities to support and encourage students, faculty, and staff to commute to campus by bicycle. The Institute maintains over 5,000 bike parking spaces across campus. Just within the past year, MIT created a total of 148 new and replacement bike parking spaces at existing high use locations as part of an ongoing program to meet demand. All bike racks have been located with a focus on providing secure, accessible, well-lit spaces close to building entrances and placed indoors or in covered areas where possible. MIT plans to continue to provide additional parking spaces and other bicycle infrastructure to meet the needs of our growing and enthusiastic cycling community.

MIT created a Bicycle Commuter Benefit Program in 2009 for full-time employees. The program provides a reimbursement of $20/month ($240/year) for the purchase, improvements, repair or storage of a bicycle used for commuting to MIT. Additionally, bicycle commuters who need to drive to campus a few times per month have the option of purchasing an occasional parking permit. Two-hundred cyclists took advantage of the program this year.

MIT released an updated version of the annual "Getting around MIT by Bicycle" map and information pamphlet (http://bit.ly/MIT-bike-brochure). The map provides information on bike lanes, bike parking areas, and bike repair stations. The brochure also educates the community on bike safety, etiquette, security, and communicates the need to "share the road" with pedestrians, vehicles, and other roadway users.

MIT is proud to sponsor four Hubway stations on campus. One is located near 77 Massachusetts Avenue and another is located on Vassar Street near the intersection with Main Street. These stations are some of the busiest in Cambridge, and MIT has worked with the City of Cambridge and the operator Motivate to expand them multiple times in the past few years, increasing the total number of docks at these two stations from 36 to 62. Additionally, MIT is sponsoring two new stations in the west portion of its campus that were installed in November 2015, adding 44 docks to the campus Hubway inventory for a total of 102 docks at MIT-sponsored stations. MIT has also participated in Hubway winter operations the past two years and will take part again this year.

In addition to sponsoring Hubway stations, MIT subsidizes annual Hubway memberships for all MIT students, staff, and faculty, offering memberships at $25/year (regularly $85/year). The subsidy has been very well received, with the number of MIT Hubway members increasing nearly 30% in just this past year from 1,400 to 1,800 participants.

MIT was recently recognized by the League of American Bicyclists for its bike infrastructure and programs with a Bicycle Friendly University Silver Award. The Institute also earned a first place award in the 2015 Mass Commuter Challenge for most bike commuter miles traveled. The Institute has won this award for four of the past five years.

Grand Junction Community Path

A proposed multi-use path along the Grand Junction Right of Way includes use of MIT property that is primarily a loading, construction and service corridor behind MIT's buildings for approximately 2,700 feet between Main Street and 230 Albany Street.

In October 2014, MIT completed and submitted a study to the City that evaluated the feasibility of having the multi-use path on its property. The study committee was comprised of City of Cambridge staff, advocacy groups and MIT staff, faculty, and students. The study concluded that while a multi-use trail could fit on MIT property along the Grand Junction, it relied on an easement concession from MassDOT west of Mass Ave., would be interrupted by a substantial series of MIT construction activities, and would have a few "pinch points" to work with existing conditions. Resolution of a number of operational issues and regional connections would be necessary for a successful path.

The Grand Junction corridor is an important spine that runs the length of MIT's campus. Current and potential uses of the space, as well as connections along and through it are an integral part of the West Campus Study that MIT is undertaking. MIT also considers the corridor in any development plans along the edges of the right of way.

G. Sustainability

The MIT Office of Sustainability, now in its second year, continues to refine its role and mission within the Institute. The Office has articulated a set of values and an organizational framework that reflect the ethos of MIT.

The values are:

- Applied Innovation: Pursue new strategies and solutions with tangible, scalable impacts;
- Collective Intelligence: Work across traditional boundaries and within networks to frame and solve problems;
- Civic Responsibility: Contribute to the mission of MIT by serving our campus, community, and the world; and
- Systems Thinking: View all stakeholders, resources and challenges as interrelated and mutually dependent.

Moreover, the Office has created a sustainability framework which has attempted to reflect the interests and concerns of the City of Cambridge and the broader community. This frames MIT's commitment to sustainability around a desire to seek solutions to common challenges at the individual and campus level while extending this approach to Cambridge, Boston, and beyond.

Looking Forward

MIT students, staff and faculty work collaboratively with a multitude of institutional and community-based partners and are working across disciplines and continents to study and discover innovative solutions to improve the well being of people and the environment.

MIT is poised to achieve the goals and objectives in the recently released *MIT Plan for Action on Climate Change* and the *Sustainability Working Group Recommendations*. The campus is now activated more than ever to work collectively to reimagine our operational systems as initially called for in the *Sustainability Working Group Recommendations,* while concurrently using our campus as a test bed for change as called for in the *Plan for Climate Action.*

Some highlights from the recommendations that set MIT on an aggressive course to advance our commitment to climate and sustainability leadership are:

- In its campus operations, MIT will pursue a coordinated suite of carbon-reduction strategies focused on power generation, distribution and demand management. MIT will reduce greenhouse gas emissions to 32% below 2014 levels by 2030.
- As a component of our capital renewal plan, the Institute will use natural gas as the primary fuel source in the Cogeneration Plant. Ultra-low-sulfur diesel will be used only in emergency situations and use of heavy fuel oil in campus power generation will be eliminated completely by 2019.
- MIT will deploy an open data platform for campus energy use to provide faculty, staff and students with a useful resource for research and intelligent decision-making. When implemented, this will institute a new regime by which to measure campus energy use and to share our findings through an open data platform.
- MIT will implement an integrated design process that embeds sustainability into the design, construction, and renovation of all new and existing MIT buildings - including their systems, materials, sites, and infrastructure - in order to meet LEED v4 Gold standard.
- Energy efficiency and carbon emission strategies will be prioritized in all new and existing MIT buildings based on a life-cycle approach to achieve our greenhouse gas commitment reduction goal.
- MIT will develop an ecological landscape and stormwater quality plan.
- The Institute will identify lab renovation projects and use them to pilot sustainable design and construction, in order to test strategies and technologies for wider implementation.

III. Relationship with Cambridge Public Schools

MIT is dedicated to an ongoing relationship with the Cambridge Public Schools (CPS) through a variety of academic enrichment initiatives and other resources serving many students throughout the City. The Institute shares excitement about STEM and learning with the CPS community. Examples of recent engagements include:

- MIT Edgerton Center welcomes hundreds of CPS elementary and upper school students to participate in three-hour, hands-on classes led by Center instructors and supported by MIT students on a variety of STEM topics such as "How to Build a Flashlight" and "Quizboards." The Center also provided LEGO biology sets and teacher training to CRLS, and an Edgerton Center advisor/Center for Environmental Health Sciences staff member sits on the Advisory Board of the Biotechnology Program at the Rindge School of Technical Arts.
- In partnership with Cambridge School Volunteers, the Institute participates in KeyPals and NetPals. These programs pair MIT staff and students with CPS 5th and 7th graders, respectively, for one-on-one communication via email, sharing of school assignments, and the introduction to careers in STEM.
- MIT's Center for Materials Science and Engineering (CMSE) "Science and Engineering Program for Middle School Students" is a one-week summer program for rising CPS 7th and 8th graders. Students are introduced to materials science and engineering through hands-on activities led by CMSE faculty, staff, and students. In addition, CPS educators participated in CMSE "Science Teacher Enrichment Program" and "Research Experience for Teachers Program."
- MIT academic enrichment programs that recently had CPS student representation include: Program for Research in Mathematics, Engineering and Science (PRIMES) Circle – a high school level after school program for studying math in greater depth with MIT professors and undergraduate students); Discovery UnliMITed – a program run by the MIT Society of Women Engineers introducing girls in grades 6 through 8 to the exciting world of STEM; Women's Technology Program – an intense engineering and computer science program for talented females entering their senior year of high school; and the Edgerton Center's Engineering Design Workshop – a summer workshop where high school students design, build, and test STEM projects.
- MIT Office of Engineering Outreach Programs (OEOP) provides science and engineering enrichment courses and mentoring to middle and high school students. Recently, all five OEOP programs had CPS participants.
- MIT also interacts with the CPS community through the Cambridge Science Festival, which attracts over 50,000 attendees annually. CPS staff serve on the Festival Advisory Board and the Festival Steering Committee, and CPS students participate in the Festival-run "Curiosity Challenge" and the "Science of Baseball" program. In addition, Cambridge Rindge and Latin students sit on the Festival's "Teen Advisory Board," have demonstrated their robots at the "Science Carnival Robot Zoo," and have fielded a team at the "MIT Science Trivia Challenge."
- The MIT Museum welcomes Cambridge families and students on a regular basis – including a free Sunday every month – and has hosted summer interns from CRLS in public programming and outreach. Museum-curated STEM events such as "Girls Days," "Second Fridays," and "Friday After Thanksgiving (F.A.T.) Chain Reaction" also engage the local community.
- The Institute is also committed to acting as a resource for Cambridge public and charter schools through in-kind facility use, modest donations for school field trips and science enrichment events. Additionally MIT staff and students volunteer at nonprofits serving youth and their families in Cambridge.
- The Summer Youth Employment Program provides work opportunities at MIT for Cambridge youth between the ages of 16 and 21. In partnership with the City's Office of Workforce Development Summer Jobs Campaign, this year's program ran from July 6 to August 28, and employed nine youth participants in the Department of Facilities, Information, Systems &Technology, Libraries, the Office of the Vice President of Finance, and Human Resources. The youth worked under the direct supervision and mentoring by MIT staff, and also participated in resume writing and diversity and inclusion workshops. In addition to gaining practical experience for a future career, the youth also explored possible career opportunities within the Institute during the academic year and beyond.

IV. List of Projects

A. Completed in Reporting Period

Collier Memorial

A permanent memorial was erected to honor Officer Sean Collier, who was killed in active service to the MIT community in April 2013. The memorial was conceived and designed by J. Meejin Yoon, professor and head of the Department of Architecture at MIT, and was unveiled to the community at a ceremony attended by over 3,000 people on April 29, 2015.

Constructed from 32 blocks of polished, solid granite, the memorial is comprised of five archways surrounding a central keystone in the shape of a protective, yet open, hand. The memorial stands very near the site where Officer Collier lost his life, at the intersection of Vassar and Main Streets between the Stata Center and the David H. Koch Institute for Integrative Cancer Research. While the structure's open center creates a sheltered space for reflection and contemplation, the five "fingers" radiate outward and frame significant views.

MIT Chapel

The MIT Chapel renewal began in September 2014 and was completed and opened for services in February 2015. The building was designed by the Finnish American architect Eero Saarinen and is an iconic example of mid-twentieth century modern architecture. The non-denominational chapel was completed in 1955 and is on the Sate Register of Historic Places. The project was undertaken as part of an effort to strategically invest in the physical renewal of existing building systems, building envelope and life safety systems.

Building 66 – Chemical Engineering

Designed by I.M. Pei and built in 1976, Building 66 houses a majority of MIT's Department of Chemical Engineering faculty in 134,000 gross square feet. The renovation project made improvements to nearly 50% of the space in the building and provided upgrades to select components of the building infrastructure that aim to support the research and space needs of the Chemical Engineering Department over the next 15 to 20 years. The project scope included HVAC and fire alarm system upgrades, as well as selected upgrades to the sprinkler, electrical, plumbing, steam, and wastewater systems; building controls; and building envelope. Construction was completed in January 2015 and received LEED v4 Gold Certification.

Building 2 - Chemistry

Renovation of the Chemistry portion of Building 2 was part of an on-going effort to renew Main Group buildings for state-of-the-art education and research. The Chemistry renovation was completed last year. Construction continues in the Mathematics portion of the building and is expected to be complete by the end of 2015.

B. In Construction

MIT.nano

This new building, located in the interior of MIT's main campus block, will support materials research at the nanoscale and will accommodate top programmatic priorities expressed by the faculty in the School of Science and the School of Engineering. Enabling work is substantially complete, including demolition of Building 12. When completed, MIT.nano will be five stories and 216,000 gross square feet. Construction is projected to be completed by 2018. The project on track to achieve LEED v4 Gold certification.

E52 – The Morris and Sophie Chang Building

MIT is now renovating the building to accommodate a conference center, the Department of Economics, and other administrative units of the Sloan School of Management. Building E52 began construction in 2013 and is expected to be completed by the end of 2015. The building is on track to achieve LEED v4 Gold certification.

Building 2 – Mathematics Department

There is a pressing need to continue renewing the Main Group buildings for state-of-the-art education and research. In furtherance of this goal, construction continues in the portion of Building 2 housing MIT's Department of Mathematics. Construction is expected to be completed by the end of 2015 and the building will be fully open for use in the spring semester. The project is being completed using sustainable design and construction initiatives and is on track to achieve LEED v4 Gold certification.

Kresge Auditorium

Completed in 1955 and designed by architect Eero Saarinen, Kresge Auditorium is an internationally recognized icon of mid-century modern architecture. Kresge Auditorium is the largest auditorium facility on campus and seats 1,200 people. The building is a very heavily used Institute resource that also provides facilities for major Institute and student events, as well as the Music and Theater Arts Department academic program. The building infrastructure renewal highlights include a complete replacement of the mechanical systems, enlarged and upgraded restroom facilities, a new curtainwall assembly system that matches all original glazing profiles, new brick plazas, house lighting replacement, structural repairs and waterproofing. Project completion is scheduled for early 2016.

Rendering of the MIT.nano building, which is on track to achieve LEED v4 Gold certification.

Building 31

The Mechanical Engineering and Aeronautics and Astronautics Departments occupy Building 31. MIT has started the full renovation of the building, one of the highest ranked buildings for deferred maintenance. The scope includes reconstructing structural bays, creating new high bay area, and renewing offices, labs and common spaces. The net additional space is planned to be approximately 15,000 gross square feet. Project completion is scheduled for 2017.

Chilled Water

As part of the Central Utility Plant upgrades to support MIT's future growth, modifications are being made to the plant's chilled water systems and the chiller hall housing in Building N16 is being expanded. Upgrades include the replacement of five older cooling towers with three more efficient and quieter towers, and two new 2,500 ton chillers. The expansion was started in 2009 and is expected to be complete in 2016.

NW23 – 195 Albany Street

As part of an effort to better utilize some existing campus buildings and to activate the west portion of campus with new uses, Building NW23 is being renovated as office space for Campus Services, Campus Construction, Maintenance & Utilities and the Office of Campus Planning. The project is a full building renovation that includes installation of new windows and a new roof. The work also includes new, energy efficient mechanical and electrical systems, replacement of the existing entry curtainwall and new walkway, entry, seismic upgrades, elevator upgrades and stairs. Construction completion is expected in January 2016.

NW86 – 70 Sidney Pacific Street Graduate Dormitory

NW86 is a graduate residence with 681 beds opened in 2002. The initial installation of HVAC equipment was inadequate and therefore the existing system is being upgraded to positively pressurize the building and dehumidify supply air. The work scope includes installation of six new air handling units, new shafts for supply air ducts, re-insulation of chilled water distribution, rework of bathroom exhaust systems and rebalancing of the entire building. Work is being done in two phases to allow for ongoing partial occupancy. Project completion and full occupancy is expected by the fall 2016 semester.

By Others

300 Massachusetts Avenue (Forest City)

MIT and longtime development partner Forest City are collaborating to redevelop a portion of Massachusetts Avenue – part of the 300 Mass Ave block adjacent to MIT's Random Hall dormitory. This project involves the construction of a new mixed-use building designed to bring significant new retail vitality to the area and provide research space to enable further growth of the Cambridge Innovation Cluster. Completion and occupancy is anticipated in early 2016. The research and office portions of the building will be occupied by Takeda, a life science company that is currently in University Park at MIT and will be expanding its footprint to support a more extensive research program. The ground floor of the building includes 15,000 SF of retail, capable of supporting up to five retail operations. Retail broker Graffito SP is actively marketing this space and expects all 15,000 SF to be fully leased in 2016.

181 Massachusetts Avenue (Novartis)

Novartis Institutes for BioMedical Research leased a four-acre parcel of MIT land at 181 Massachusetts Avenue (corner of Albany Street) to augment the Novartis Cambridge Campus, where its global research headquarters are located. By expanding in proximity to MIT and other research institutions, Novartis will create an ideal environment for interdisciplinary collaboration, open communication, and exchange of knowledge. The Novartis Cambridge Campus serves as an important connection between Kendall and Central Squares. Its expansion will add vibrancy to the area with ample green space, pedestrian connections, and street-level retail space. The project encompasses the construction of two new buildings with 550,000 square feet of laboratory, office, and retail space, and the renovation of the parcel's remaining existing structure. Novartis is seeking LEED v4 Gold certification for the new buildings. Per MIT's lease requirements, the buildings Novartis is constructing will include retail space on Massachusetts Avenue, improving this important commercial corridor. Construction of the R&D space is scheduled for completion by the end of 2015. The retail space is expected to be leased and occupied in 2016.

Community Path (Cambridge Redevelopment Authority)

As part of MIT's Kendall Square PUD-5 zoning petition in 2013, MIT agreed to fund $500,000 for the construction of a community path between Binney Street and Main Street along Galileo Galilei Way. Construction commenced on the project earlier this year. The project is being managed by the Cambridge Redevelopment Authority and is scheduled to be completed in 2016.

C. In Planning & Design

Central Utility Plant (CUP) Upgrade

The CUP Project will upgrade the existing plant to provide the additional utilities necessary to support MIT's projected growth through 2030. Two new gas turbines will provide up to 44MW of power to the campus. The turbines will allow MIT buildings that are served by the CUP to be self-sufficient should there be an extended utility outage. Construction of a new cogeneration plant housing the turbines is planned to commence in March 2017, with the startup of the first gas turbine in 2019 and the second unit in early 2020. The existing gas turbine will be retired in 2020, after 24 years of operation. The new plant building will be located in the existing parking lot on Albany Street between the existing Plant and MIT's Albany Street parking garage. The building will serve as a new entrance to the MIT CUP. The architect for the building is Ellenzweig Associates, the firm that has led the architectural design for MIT's CUP for the past 20+ years.

Conceptual design for the Theater Arts renovation at 345 Vassar Street

Theater Arts – 345 Vassar Street

As part of enabling for Kendall Square development, and in an effort to consolidate MIT's Theater Arts activities and spaces, the department will be relocated to 345 Vassar Street, Building W97. The program will include rehearsal spaces, costume shop and storage, experimentation, performance space, and office and administrative space. Relocation of these activities, particularly the performance space, will help activate the west campus area. Planning for this move began in early 2015 and renovation is expected to be complete for occupancy by the Theater Arts department starting in the spring 2017 semester.

Metropolitan Storage – 134 Massachusetts Avenue

MIT is planning for the full renovation and conversion of the unique, historic Metropolitan Storage Warehouse into a mixed-use undergraduate residence that would include housing, dining, maker space, study space, and street-level public retail. The proposed development—which could house more than 400 students — would create a new hub for undergraduate residential life at the center of MIT's campus and would provide needed flexibility as the Institute enables a planned and thoughtful renewal of its student housing stock.

12 Emily Street

12 Emily Street was a research and development facility previously occupied for many years by several biotechnology and pharmaceutical companies, including Acceleron Parma, Inc., Aveo Pharmaceuticals, Inc., and Compucyte Corporation. The building is currently vacant. MIT is preparing to repurpose the building for Institute research programs being displaced from other campus locations. Renovation of the 32,000 square foot building is expected to start in 2016.

Kendall Square Initiative

The Kendall Square Initiative includes six buildings: three will house office and/or R&D uses, one will provide graduate student housing, one will house market rate and affordable housing, and one is proposed as a small retail building. Each building will include retail and/or actives uses on the ground floor. The Initiative also include a significant publicly-accessible open space south of Main Street, in addition to other landscape improvements throughout the district.

In 2014, MIT launched the formal design process for all the buildings and the open space that compromise the project. The Institute selected five architectural design

firms and two landscape design firms to perform the work. Under the guidance of MIT's Dean of the School of Architecture and the Head of the Department of Architecture, the teams have developed unique contemporary designs that will add a new dimension to city's urban design context and the public realm. Each building has its own expression and concept that is reflective of its uses while ensuring that the buildings work together to create a complementary urban context.

The project will retain and incorporate the three historic buildings along Main Street: the Kendall Building (238 Main Street, E48); the J.L. Hammett Building (264 Main Street, E39) and the Suffolk Building (292 Main Street; E38). The ground floor retail in these buildings will be repositioned and the buildings will be modified to increase accessibility and porosity of retail and other active uses. The ground floors of existing buildings along Wadsworth Street, Hayward Street and Carleton Street will also be modified to include active uses as they integrate into the active ground floors of the proposed buildings.

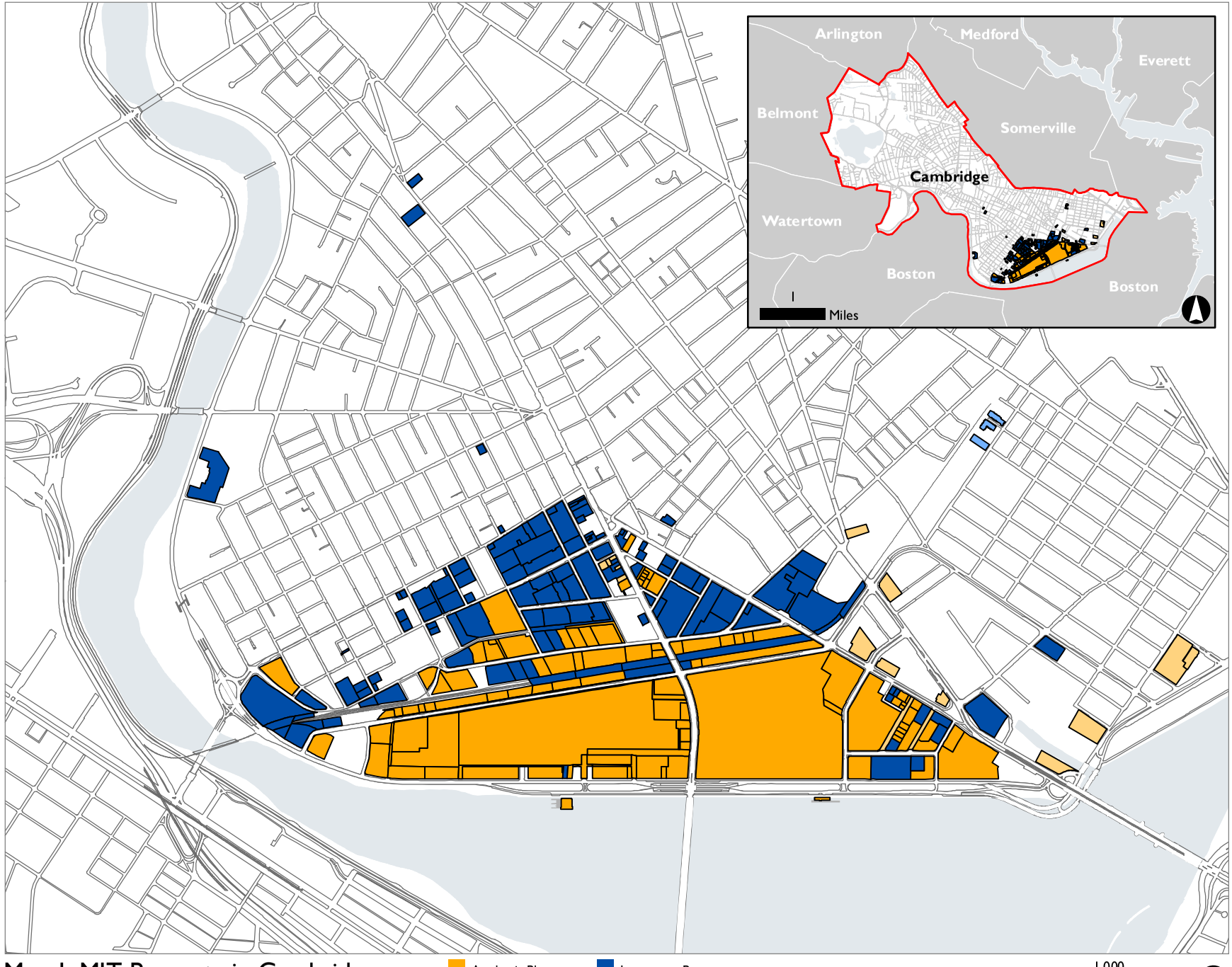
MIT believes that celebrating the three historic buildings and integrating their design with the proposed contemporary buildings serves as a physical expression of the evolution of Kendall Square from its early industrial roots to a center of innovation.

The landscape is designed to be a series of cohesive and pedestrian-oriented open spaces, connected by upgraded streetscapes to adjacent properties and neighborhoods. Each street leads into landscaped open spaces and extends access to areas that will promote greater public use. The open spaces are the connective tissue of the Kendall Square Initiative, connecting the MIT east and main campuses and connecting the campus and the community to the north.

In July 2015, the Institute submitted applications for PUD and Project Review special permits for entire development and expects to complete the review process in early 2016.

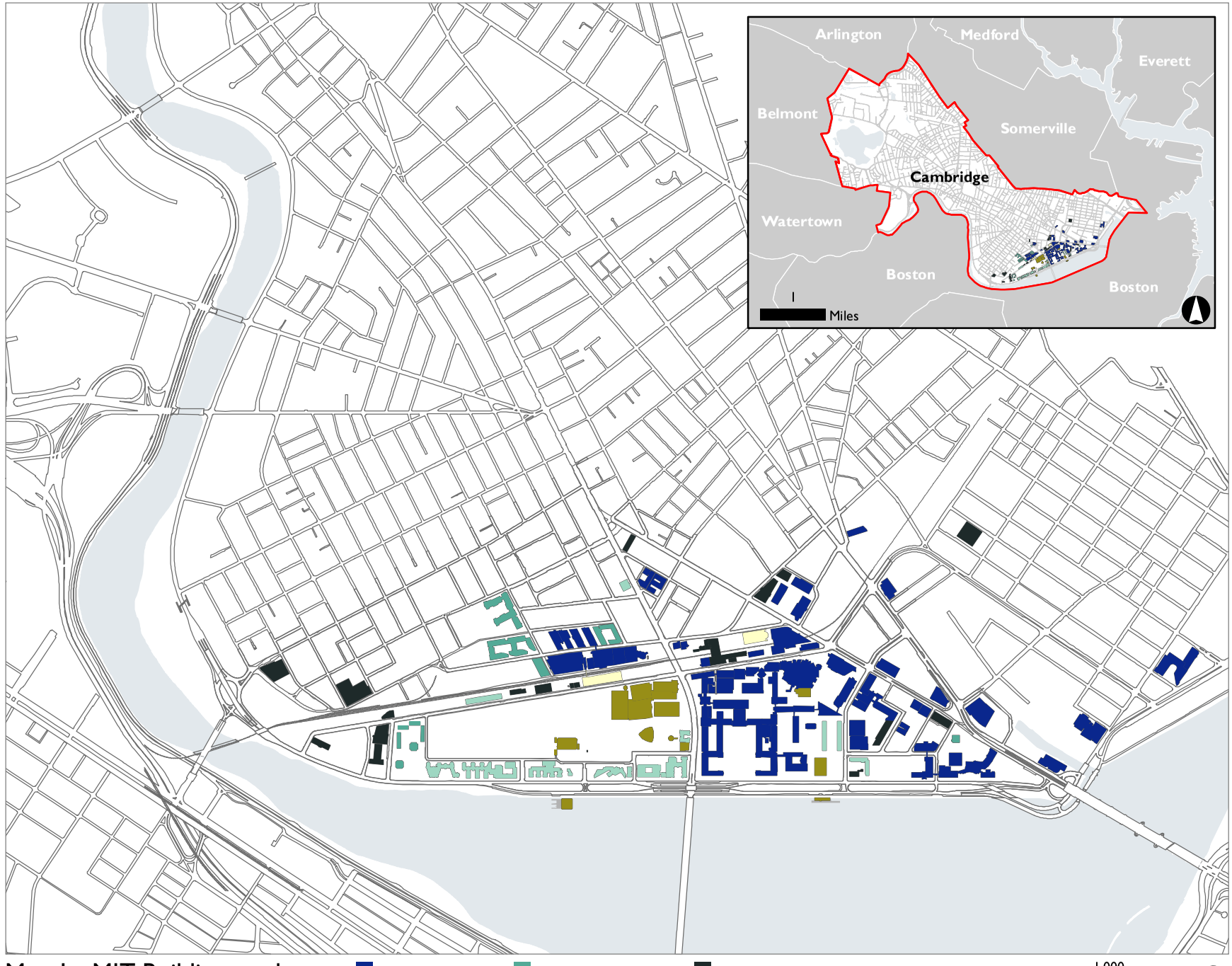
V. Mapping Requirements

Map 1: MIT Property in Cambridge
Map 1a: MIT Buildings by Use
Map 2: MIT Projects
Map 3: Future Development Opportunities
Map 4: MIT Shuttle Routes
Map 5: MIT LEED Certified Buildings
Map 6: MIT Energy Efficiency Upgrade Projects



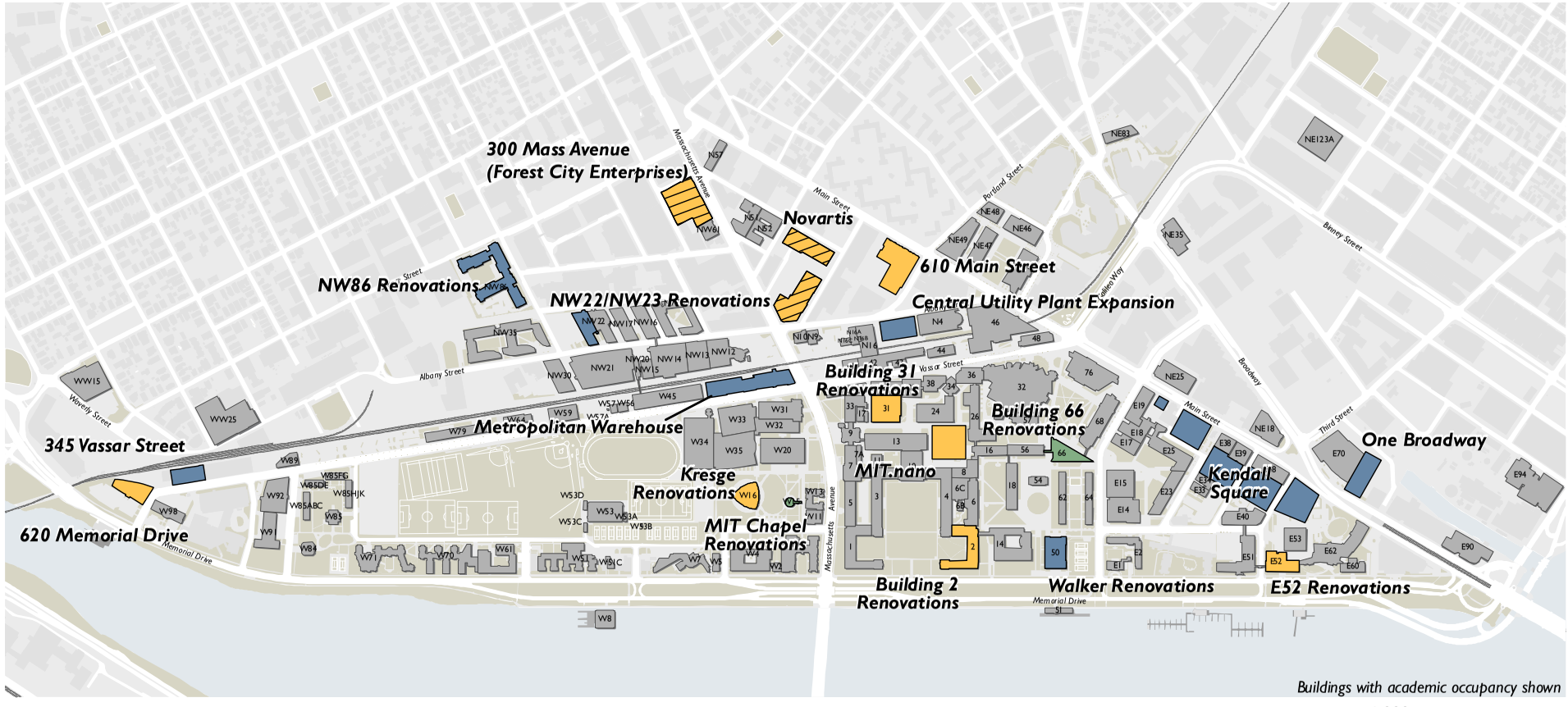
Map 1: MIT Property in Cambridge

December 2015 (Data as of June 30, 2015)



Map 1a: MIT Buildings and Occupied Spaces by Use

December 2015 (Data as of June 30, 2015)

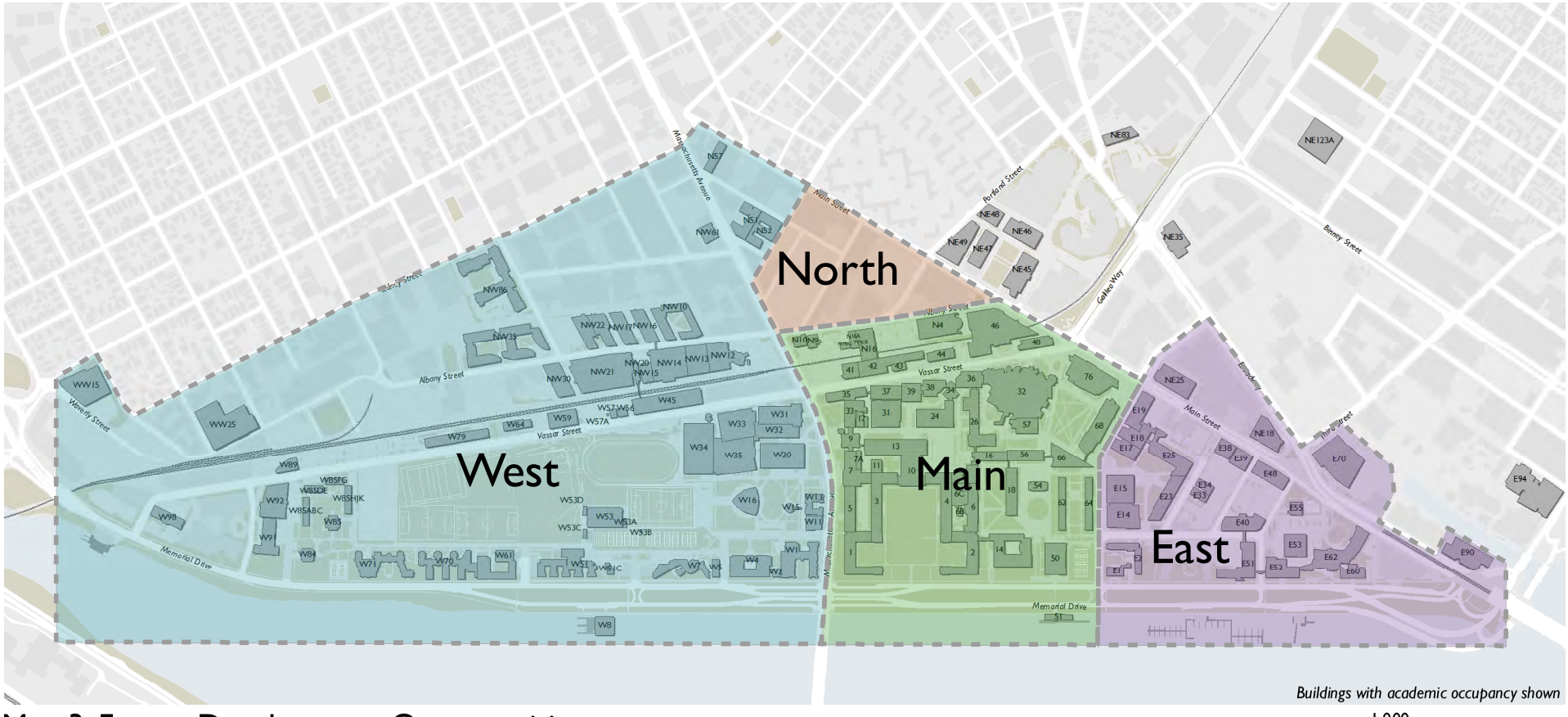


Map 2: MIT Major Projects

December 2015 (Data as of June 30, 2015)

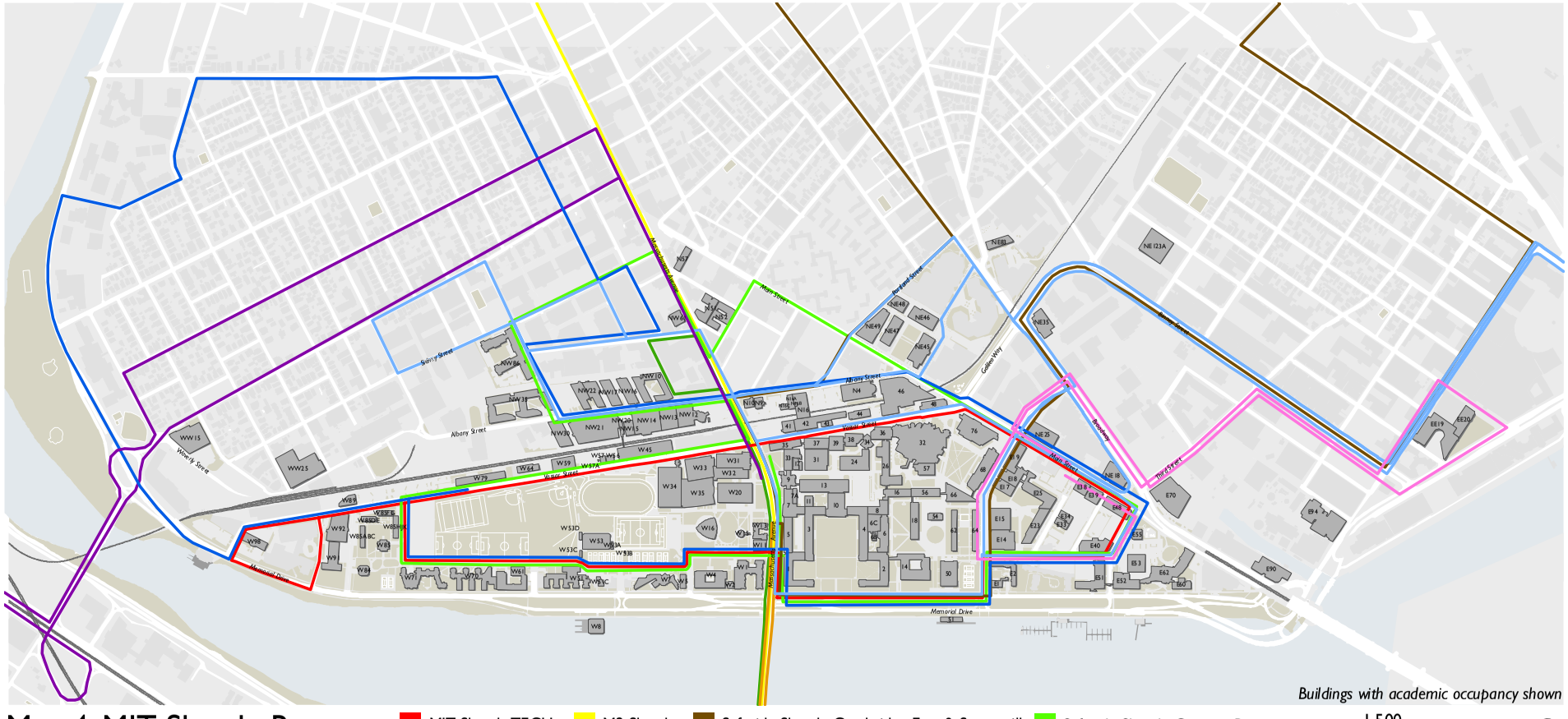
Planning/Design | Construction | Completed | Development By Others

1,000 Feet



Map 3: Future Development Opportunities

December 2015 (Data as of June 30, 2015)

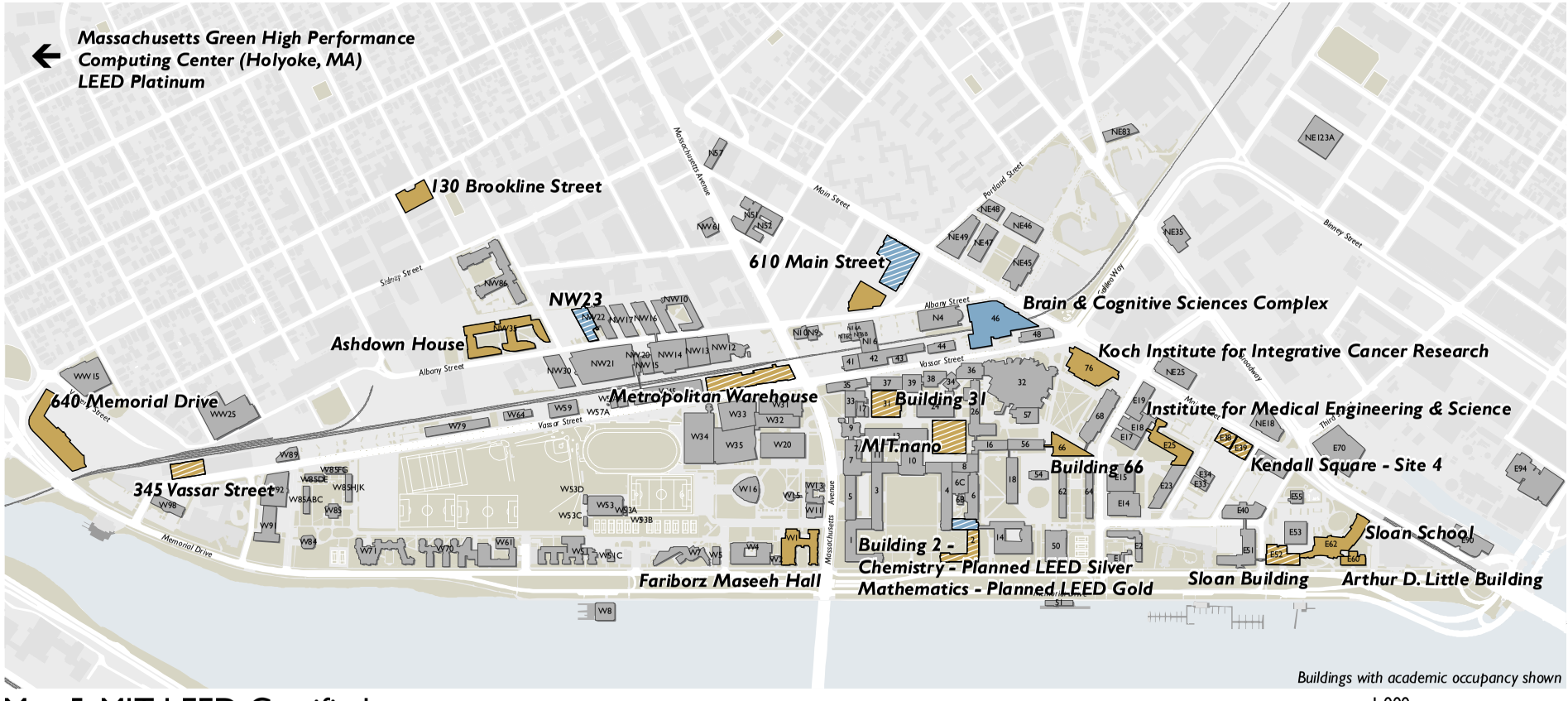


Map 4: MIT Shuttle Routes

December 2015 (Data as of June 30, 2015)

- MIT Shuttle TECH
- Boston Daytime
- Weekend Shuttle
- M2 Shuttle
- EZ Ride
- Kendall to Charles Park
- Saferide Shuttle Cambridge East & Somerville
- Saferide Shuttle Cambridge West & Brookline
- Saferide Shuttle Campus Route
- Saferide Shuttle Boston East

1,500 Feet



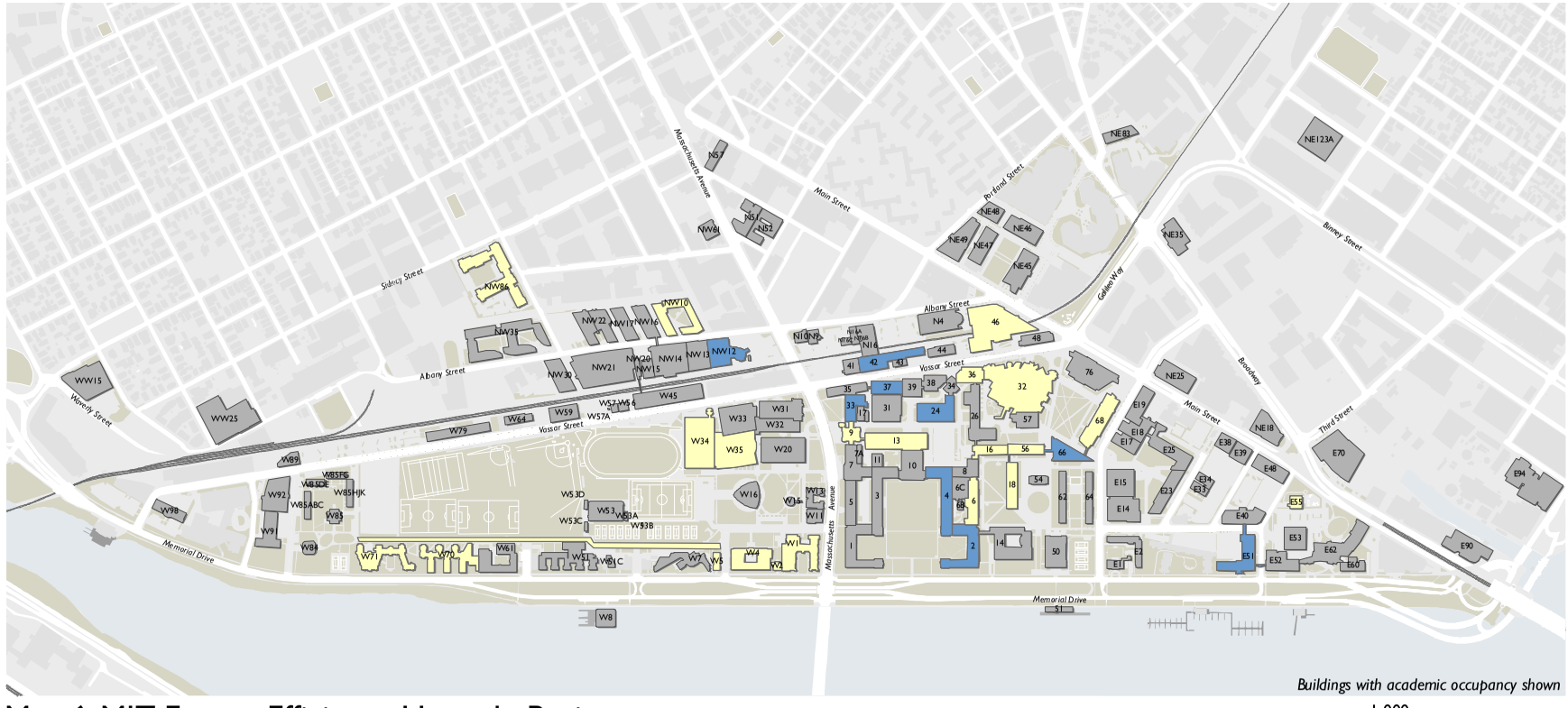
Map 5: MIT LEED Certified Buildings

December 2015 (Data as of June 30, 2015)

LEED Certified
LEED Gold
LEED Silver

Plannned LEED Certified
Planned LEED Gold
Planned LEED Silver

1,000 Feet



Map 6: MIT Energy Efficiency Upgrade Projects

December 2015 (Data as of June 30, 2015)

Buildings and Spaces with Energy Efficiency Upgrade Projects

Completed in 2014/2015

In Construction or Planned for 2015/2016

1,000 Feet

VI. Transportation Demand Management

A. Commuting Mode of Choice

Commuting Mode	2006	2008	2010	2012	2014
Drove alone entire way	26%	21%	20%	22%	21%
Took public transportation	37%	39%	42%	41%	39%
Carpooled	6%	7%	7%	6%	6%
Bicycled	12%	13%	14%	15%	15%
Walked	14%	16%	15%	13%	13%
Other	5%	4%	3%	3%	5%

B. Point of Origin for Commuter Trips to Cambridge

Home Location	Number of People working on the MIT Main Campus	Percentage
Cambridge	2,391	21.7%
Boston	1,518	13.7%
Somerville	839	7.6%
Arlington	411	3.7%
Brookline	350	3.2%
Newton	295	2.7%
Belmont	267	2.4%
Medford	247	2.2%
Lexington	234	2.1%
Quincy	215	1.9%
Watertown	205	1.9%
Malden	160	1.4%
Waltham	110	1.0%
Winchester	108	1.0%
Acton	75	0.7%
North Of Boston	666	6.0%
South of Boston	79	0.7%
West of Boston	134	1.2%

B. Point of Origin for Commuter Trips to Cambridge (continued)

Home Location	Number of People working on the MIT Main Campus	Percentage
Outside 128	1,599	14.5%
Outside 495	367	3.3%
Out of State - Connecticut	22	0.2%
Out of State - Maine	17	0.2%
Out of State - New Hampshire	121	1.1%
Out of State - Rhode Island	60	0.5%
Out of State - Vermont	5	0.0%
Outside New England	337	3.1%
Outside US	211	1.9%
Grand Total	11,043	100.0%

C. TDM Strategy Updates

Three Saferide routes were combined and rerouted to reduce redundancy and to better serve the off campus population.

1. The Cambridge East/Somerville route was formed from the Cambridge East Saferide route.
2. The Cambridge West/Brookline route was formed from the Cambridge West and Boston West routes.
3. The Campus route was formed from the Cambridge East and Cambridge West routes.

The number of on campus Electric Vehicle Charging spaces was expanded to 25 with the installation of 2 spaces in the Albany Garage and 2 spaces in the W92 Garage. The dispersion of EV spaces is: 8 spaces in East Campus, 9 spaces in Main Campus, 4 spaces in North Campus, 4 spaces in West Campus

The on campus Zipcar fleet was expanded to 24 vehicles with the addition of two spaces on Audrey Street, one space in the 44/46 Lot on Vassar Street and one additional space in the Hayward Lot. There are currently 6,300 active MIT Zipcar members.

We added 148 new bike parking spaces in four locations on campus. Two motor vehicle parking spaces were removed in the E62 garage to accommodate 36 bikes.

Three additional vRide vanpools were added, increasing the number to 6 Cambridge vans and resulting in 30 fewer daily vehicle trips to campus. There are 17 vans commuting to our Lexington campus. Currently, there are 143 MIT employees participating in our vRide vanpool program.

Awards Received

2014 ECO Award-Pinnacle Level
2014 Mass Commuter Challenge, First Place in Academic Large Category
2014 Bike Friendly University, Silver Award from the League of American Cyclists

VII. Institution Specific Information Requests

1. Provide updates on MIT plans to take to address housing needs, the timeline for action, and physical planning related to those actions. Please include a discussion of the effect of planned and needed dormitory improvements on availability of housing for undergraduate and graduate students. Section II D, Page 12

2. Review the expansion in enrollment of graduate students, visiting students, and post-doctoral fellows since 2008. Discuss the reasons for this increase in enrollment and discuss the prospects for further changes in enrollment in coming years. Section 11 C, Page 12

3. Provide an update on long term academic and non-academic planning for the main campus, with a particular focus on all potential locations for academic uses and plans for green space and edges along Massachusetts Avenue, particularly near the railroad crossing, edges adjacent to Area 4, and edges adjacent or near the Charles River. Section 11 E, Pages 13-14

4. Provide information on MIT's plans for ground floor retail along Main Street and in both Kendall Square and Central Square. What strategy does MIT follow in selecting tenants for retail sites? How is retail used to enhance the urban experience? Section 11 E, Page 14 and Section IV C, Pages 21-22

5. Provide an update for plans for vacant and underutilized MIT properties along Massachusetts Avenue. Section 11 E, Page 14

6. Discuss planning for bicycle facilities on campus, including Hubway stations. Section 11 E, Page 14

7. Provide an update on the feasibility study being conducted for a multi-use path along the Grand Junction railroad right-of-way. Section 11 E, Page 15

8. Report on planning for the West sector of campus, including the area adjacent to Fort Washington Park and MIT owned property in lower Cambridgeport. Section 11 E, Page 13

About the Cover Photo

The 2015 cover photo is an evening image of the Collier Memorial, situated on the corner of Vassar and Main Street in honor of Officer Sean Collier who was killed on April 18th 2013. Conceptualized by a committee of faculty, students, and staff, the Collier Memorial marks the site of tragedy with a timeless structure—translating the phrase "Collier Strong" into a space of community remembrance through a form that embodies the concept of strength through unity. Designed by Professor Meejin Yoon and engineered in collaboration with Professor John Ochsendorf, the memorial is composed of thirty-two solid blocks of granite that form a five-way stone vault. Each block supports the other to create a central, covered space for reflection. Inspired by the gesture of an open hand, the memorial's shallow stone vault is buttressed by five radial walls, which extend outward toward the campus. Members of the MIT and Cambridge communities came together to dedicate the memorial in April 2015.

Photography Credit

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