



HARVARD UNIVERSITY

2015

# Town Gown Report

*for the*  
City of Cambridge

*Submitted by:*  
Harvard Planning & Project Management



**Cover Image:** Dunster House, by Peter Vanderwarker

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# I. EXISTING CONDITIONS

## A. FACULTY AND STAFF <sup>1</sup>

	2011	2012	2013	2014	2015
<b>Cambridge Based Staff</b>					
Head Count	11,644	11,854	12,173	12,358	12,343
FTEs	9,300	9,507	9,549	9,744	10,160
<b>Cambridge Based Faculty</b>					
Head Count	1,755	1,823	1,938	2,010	2,072
FTEs	1,605	1,660	1,749	1,778	1,836
<b>Number of Cambridge Residents Employed at Cambridge Facilities</b>	<b>3,897</b>	<b>3,903</b>	<b>4,039</b>	<b>4,088</b>	<b>3,982</b>
<b>Number of Cambridge Residents Employed at Boston Facilities</b>	<b>754</b>	<b>747</b>	<b>815</b>	<b>768</b>	<b>754</b>

### *Ten-year projection*

Harvard has not undertaken University-wide projections for faculty and staff counts.

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<sup>1</sup> Employment figures are as of May 30, 2015 and June 30, 2015 and includes TAs, graduate students, postdoctoral scholars, interns and other staff.

## B. STUDENTS AND POSTDOCTORAL SCHOLARS <sup>2</sup>

	2011	2012	2013	2014	2015
<b>Total Undergraduate Degree Students</b>	<b>7,255</b>	<b>7,245</b>	<b>7,256</b>	<b>7,265</b>	<b>7,237</b>
Day	6,641	6,657	6,659	6,671	6,636
Evening	[614]	[588]	[597]	[594]	[601]
Full Time	6,909 [276]	6,906 [254]	6,899 [248]	6,906 [247]	6,874 [244]
Part Time	346 [338]	339 [334]	357 [349]	359 [347]	363 [357]
<b>Total Graduate Degree Students</b>	<b>10,211</b>	<b>10,163</b>	<b>10,328</b>	<b>10,205</b>	<b>10,254</b>
Day	8,896	8,868	8,983	8,999	8,967
Evening	[1,315]	[1,295]	[1,281]	[1,206]	[1,287]
Full Time	8,868 [126]	8,823 [87]	9,139 [264]	9,128 [230]	9,131 [262]
Part Time	1,343 [189]	1,340 [1,208]	1,125 [1,017]	1,077 [976]	1,123 [1,025]
<b>Total Non-degree Students</b>	<b>6,354</b>	<b>6,350</b>	<b>6,675</b>	<b>6,887</b>	<b>7,336</b>
Day	322	313	274	331	362
Evening	[6,032]	[6,037]	[6,401]	[6,556]	[6,974]
<b>Total Number of Students in Cambridge</b>	<b>23,820</b>	<b>23,758</b>	<b>24,259</b>	<b>24,357</b>	<b>24,827</b>
<b>Total Number of Postdoctoral Scholars <sup>3</sup></b>	<b>969</b>	<b>1,012</b>	<b>1,030</b>	<b>990</b>	<b>1,063</b>

Numbers in brackets represent students at the Extension School and are a subset of the total number of Full and Part Time students indicated.

### *Ten-year projection*

As is the case with faculty and staff counts, Harvard has not undertaken University-wide projections of future student population.

<sup>2</sup> Counts as of October 15, 2014 for 2015. Includes all non-degree students enrolled in day or evening classes, such as persons taking classes at Harvard Extension School.

<sup>3</sup> Postdoctoral scholars are considered staff, therefore they are included in staff totals reported in Section A.

## C. STUDENT RESIDENCES

	2011	2012	2013	2014	2015
<b>Number of Undergraduate Students Residing in Cambridge</b>					
In dormitories	6,363	6,545	6,113 <sup>4</sup>	6,200	6,164
With cars garaged in Cambridge	12	15	8	7	10
In Harvard affiliate housing <sup>5</sup>	0	4	440	398	386
In non-affiliate housing	162	142	128	99	92
<b>Number of Graduate Students Residing in Cambridge</b>					
In dormitories	1,230	1,181	1,054	1,259	1,162
With cars garaged in Cambridge	177	172	134	117	152
In Harvard affiliate housing	1,731	1,625	1,574	1,551	1,437
In non-affiliate housing	3,447	3,437	3,749	3,476	3,767

### *Ten-year projection*

Harvard has not undertaken University-wide projections of future student residences.

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4 Beginning in 2013, the number of students residing in dormitories is reduced due to the construction of House Renewal projects that temporarily take some dormitory beds off-line.

5 Prior to 2012 this number was not available. Beginning in 2013, the number of undergraduate students residing in Harvard affiliate housing includes 10-20 DeWolfe Street and students temporarily residing in “swing housing” to accommodate the House Renewal program.

## D. FACILITIES AND LAND OWNED

	2011	2012	2013	2014	2015
Acres (Tax Exempt) <sup>6</sup>	202.68	190.4	190.4	190.4	192.7
Acres (Taxable) <sup>6</sup>	24.97	23.1	23.1	23.1	22.4
Number of Buildings	390	391	391	392 <sup>7</sup>	392
<b>Dormitories</b>					
Number of Buildings	74	74	74	74	75
Number of Beds	8,287	8,258	8,222	8,160	8,238
<b>Size of Buildings (GSF)</b>	<b>15.5M</b>	<b>15.9M</b> <sup>8</sup>	<b>15.9M</b>	<b>15.9M</b>	<b>16.0M</b> <sup>9</sup>
Assembly/ Museum	987,520	972,554	972,554	976,088	1,084,879 <sup>9</sup>
Athletic	210,780	210,780	210,780	210,780	210,780
Classroom	866,512	877,524	877,524	877,524	877,524
Commercial	282,045	282,045	185,453	185,453	185,453
Healthcare	77,155	77,155	77,155	77,155	77,155
Laboratory	2,546,699	2,587,479	2,587,479	2,587,479	2,587,479
Library	1,091,446	1,091,084	1,091,084	1,100,839 <sup>10</sup>	1,097,644
Office	2,871,984	3,096,323 <sup>8</sup>	3,121,737	3,085,661 <sup>11</sup>	3,087,995
Residential	5,663,194	5,606,735	5,766,765 <sup>12</sup>	5,766,765	5,772,934
Support	881,041	1,104,054	1,071,830	1,071,830	1,071,830

<sup>6</sup> Starting in 2012 the number reported for taxable and tax exempt land reflects a more accurate accounting of land that was partially taxable as of 7/1/2012.

<sup>7</sup> Increase in building count reflects 32 Quincy Street returning to service.

<sup>8</sup> Increase reflects the completion of Wasserstein Hall Caspersen Student Center and Clinical Wing and the Everett Street Garage in 2012.

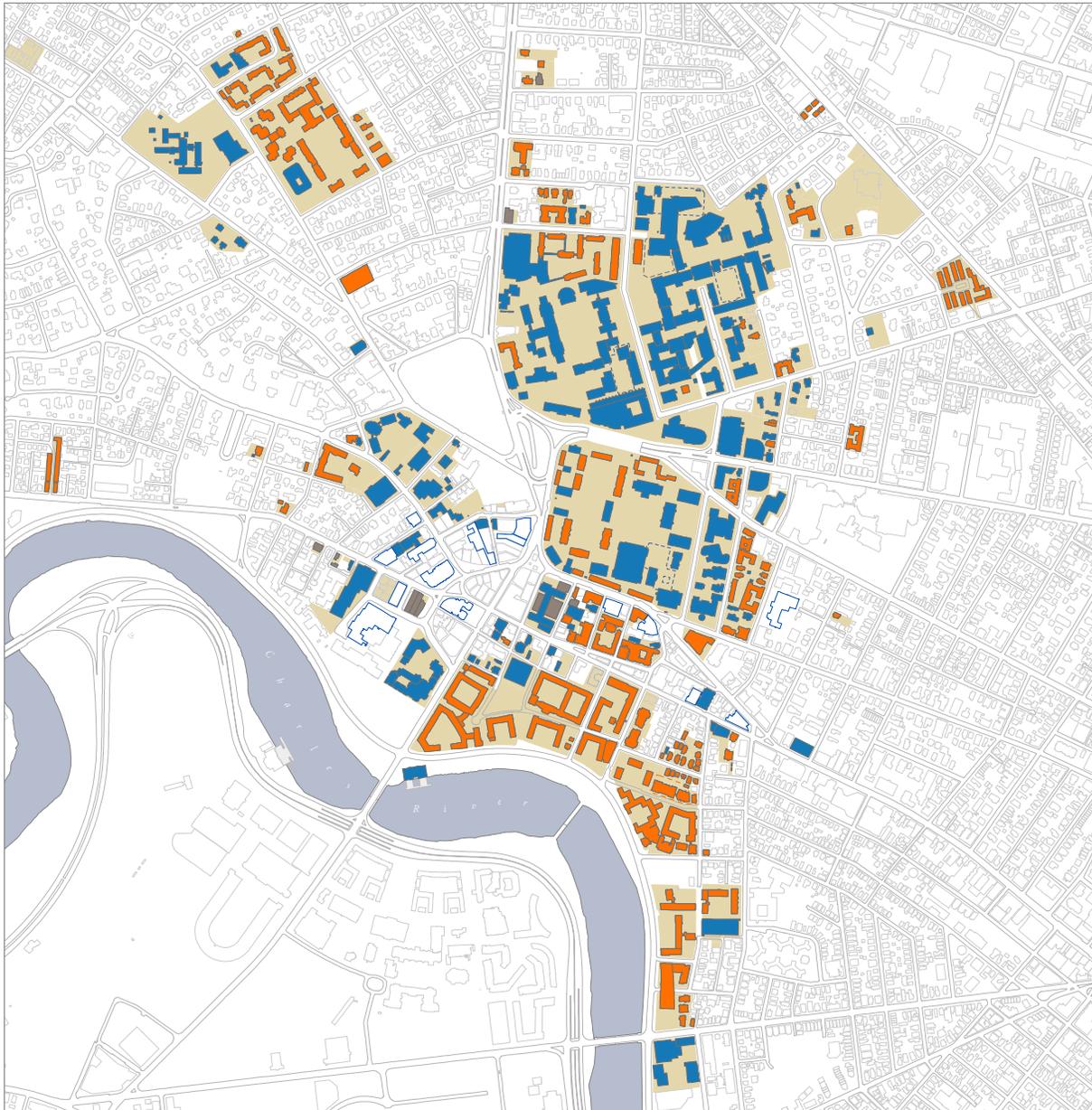
<sup>9</sup> Increase reflects new area of 32 Quincy Street.

<sup>10</sup> Increase reflects Tozzer Anthropology Building renovation and addition.

<sup>11</sup> Reduction reflects partial Pound Hall demolition.

<sup>12</sup> Change in area reflects the conversion of 1201 Massachusetts Avenue from hotel use to dormitory.

# Real Estate Owned and Leased by Harvard University



## Legend

### Buildings by Ownership Status and Primary Use <sup>(1)</sup>

- Harvard Owned - Institutional <sup>(2)</sup>
- Harvard Owned - Residential
- Harvard Owned - Other <sup>(3)</sup>
- Leased <sup>(4)</sup> - Institutional <sup>(5)</sup>

### Land Parcels

- Harvard Owned

## Notes:

1. Primary Use reflects predominant building use
2. The Rowland Institute located at 100 Edwin Land Boulevard is located outside the map coverage area
3. Includes real estate leased to third party
4. Buildings may be leased by Harvard in whole or in part
5. The following buildings leased by Harvard for institutional use are located outside the map coverage area:

155 Fawcett Street  
625 Massachusetts Avenue

## Parking Facilities

Harvard University owns and maintains 4,576 non-commercial parking spaces in the City of Cambridge. These spaces constitute the University's parking inventory and are used to support University operations and accommodate faculty, staff, student, and visitor parking. The inventory is updated and approved each December as part of Harvard's annual PTDM Progress Report.

## Housing *(This table does not include information about dormitories.)*

	2011	2012	2013	2014	2015
<b>Affiliate Housing - Tax Exempt</b>					
Number of Units:	1,047	1,043	1,043	1,037	1,037
Number of Buildings:	12	12	12	12	12
<b>Affiliate Housing - Taxable</b>					
Number of Units:	890	891	892	892	892
Number of Buildings:	54	55	55	55	55
<b>Other Housing - Tax Exempt</b>					
Number of Units:	None	None	None	None	None
Number of Buildings:	None	None	None	None	None
<b>Other Housing - Taxable</b>					
Number of Units:	None	None	None	None	None
Number of Buildings:	None	None	None	None	None

## 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

## E. REAL ESTATE LEASED

Real Estate Leased by Harvard	Sq Feet	Tenant	Use
One Bow Street	23,490	FAS/JCHS	Office
One Brattle Square	40,599	HKS/DCE/FAS	Office
One Story Street	6,125	DCE	Classroom
10 Ware Street	1,738	HUIT	Office
104 Mt. Auburn Street	24,638	FAS	Office
114 Mt. Auburn Street	65,107	CADM, HKS	Office Healthcare
125 Mt. Auburn Street	36,564	HLS	Office
1100 Massachusetts Avenue	17,989	DCE	Office
1280 Massachusetts Avenue	10,125	FAS	Office
1408-1414 Massachusetts Avenue	50,000	FAS	Office
1430 Massachusetts Avenue	3,102	FAS	Office
155 Fawcett Street	37,500	FAS/ART	Warehouse
20 University Road	21,550	GSE	Office
25 Mt. Auburn Street	7,732	LASPAU	Office
44 Brattle Street	3,258	FAS	Office
50 Church Street	29,385	GSE/HUIT	Office
625 Massachusetts Avenue	41,141	FAS	Office
<b>TOTAL</b>	<b>420,043</b>		

## F. PAYMENTS TO CITY OF CAMBRIDGE

	2011	2012	2013	2014	2015
<b>Total Payments</b>	<b>\$15,987,554</b>	<b>\$14,216,649</b>	<b>\$14,120,766</b>	<b>\$14,023,666</b>	<b>\$15,266,613</b>
Real Estate Taxes Paid	\$5,165,704	\$5,336,783	\$5,662,893	\$5,829,731	\$5,582,340
Payment in Lieu of Taxes (PILOT)	\$2,709,788	\$2,783,151	\$2,845,406	\$2,968,227	\$3,646,380
Water & Sewer Fees Paid	\$5,564,756	\$5,174,472	\$4,919,274	\$4,623,286	\$5,425,369 <sup>13</sup>
Other Fees & Permits Paid	\$2,547,306	\$922,243	\$693,193	\$602,422	\$612,524

### *Ten-year projection:*

In 2005 Harvard University and the City of Cambridge renewed the PILOT agreement for a fifty-year period with annual escalators.

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<sup>13</sup> Increase includes abatements that expired in FY15.

## G. INSTITUTIONAL SHUTTLE INFORMATION

The Harvard Shuttle, operated by Harvard Transit, offers a number of safe, reliable and convenient shuttle options across Harvard's Cambridge and Allston campuses. Harvard Transit continually tracks ridership on all of its routes in order to maximize efficiency and align ridership with the size of shuttle vehicles used, and the frequency of service during different times of the day.

Harvard's Shuttle fleet includes seven 35-foot buses and five 29-foot buses, each with a capacity of 37 passengers. During the academic year, two buses provide service for the River Houses area; three buses serve the Radcliffe Quad area; and two buses operate between Cambridge and Allston. A new shuttle service between Harvard Square and Barry's Corner in Allston began operation in December. In the summer, limited weekday Shuttle service is provided on the Allston Express route. Additionally, Harvard Transit's Van fleet includes five, ten-seat passenger vans equipped with two wheelchair spaces. On weekdays, two of the vans run from 7:30 am–7:00 pm; on weekends the vans run from 12:00 pm–7:00 pm. These vans provide service to individuals with mobility impairments or medical conditions on an as-needed basis. On weeknights, an evening van service is designed to transport faculty, staff and students safely around campus as a supplement to the shuttle bus system. The service operates between 7:00 pm and 3:00 am, seven days a week throughout the academic year and 7:00 pm–12:30 am during the summer.

All of the shuttle vehicles operate on B-20 biodiesel. Using biodiesel is considered a best practice in the industry and has reduced emissions by 15 percent. On an annual basis, emissions are reduced by approximately 96,725 lbs per bus fleet and 43,091 lbs per van fleet. In addition, Shuttle schedules are very precise and do not allow for more than three minutes of idling, less than the five minutes allowed by anti-idling regulations. Harvard Transit keeps the fleet on a 7–10 year life cycle to ensure that the best technology available is being used and practices proactive maintenance on all vehicles.

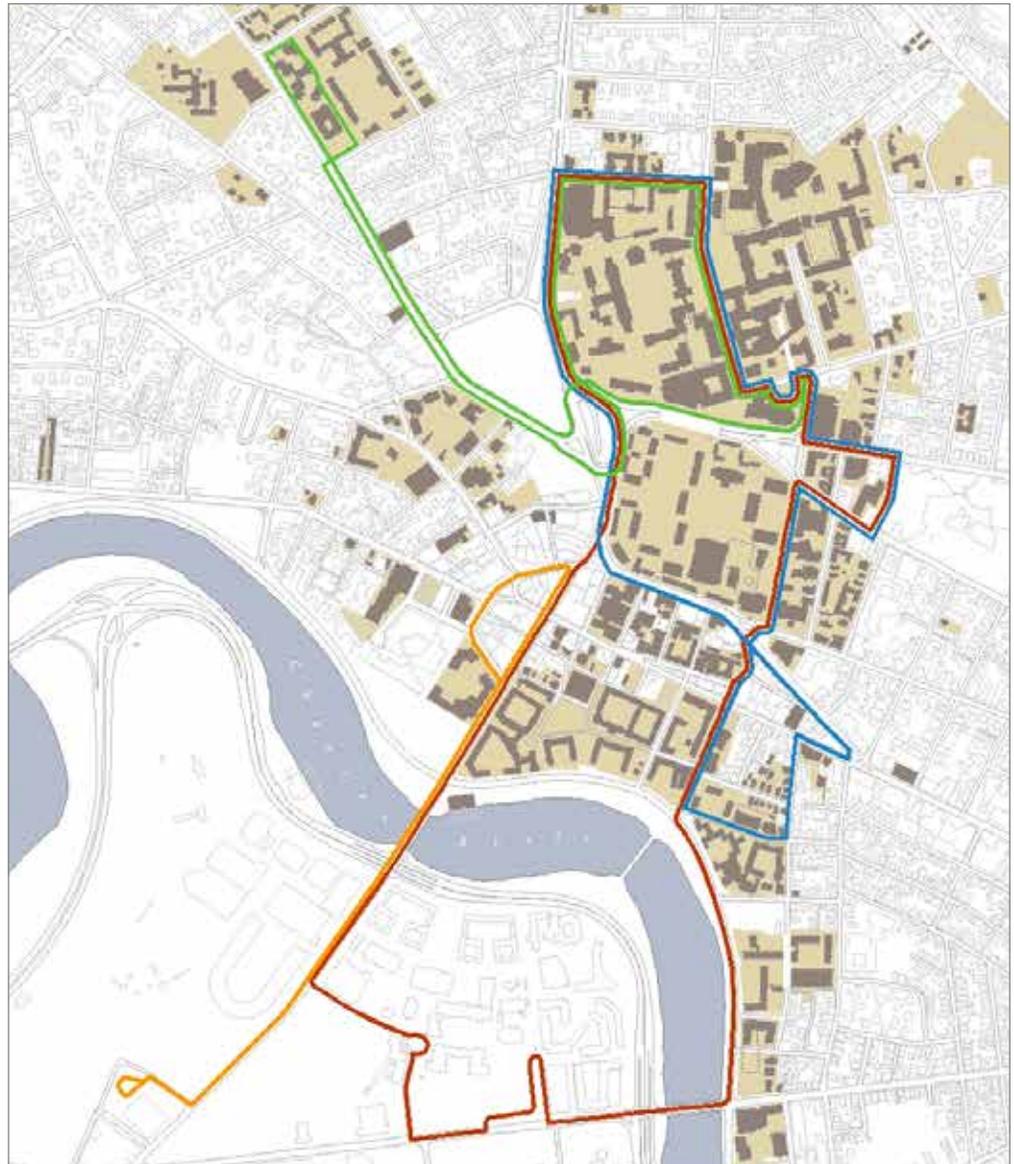
### **Ridership data and efforts both to coordinate shuttle system with other institutions and to streamline shuttle services.**

Total passenger ridership for all Harvard shuttle routes in FY2015 was 877,200. Harvard Transit collaborates with the Cambridge Traffic, Parking and Transportation Department in planning University shuttle routes. Harvard also works closely with the Cambridge Department of Public Works during construction and events that may require re-routing of Harvard Shuttles.

Harvard has developed a productive working relationship with the Cambridge Police Department in dealing with the safety needs of the streets that we share and have been partners in mitigating issues such as over-crowding caused by tourist buses on Massachusetts Avenue.

The University also partners with the MASCO shuttle bus, providing financial support for this system, and sharing ShuttleTracker technology (which shows the real-time location of buses on routes). This coordination has reduced service overlap within Cambridge and eliminates the need for a dedicated Harvard shuttle traveling to the Medical Area in Boston. The M2 Cambridge-Harvard Shuttle primarily serves Harvard University Longwood students, faculty and staff. The shuttle is available to others, including members of the public, with the pre-purchase of a ticket (see: [www.masco.org/directions/m2-cambridge-harvard-shuttle](http://www.masco.org/directions/m2-cambridge-harvard-shuttle)).

*Harvard Campus Shuttle Routes*



**Legend**

-  Mather Express
-  Quad Express
-  Allston Campus Express
-  Barry's Corner

**Notes:**

This map shows the three principal academic year day-time shuttle bus routes. Harvard also runs evening and weekend shuttle services that cover these same routes but on a different schedule.

Route Name	Description	Frequency	Hours of Operation
<b>Weekday Service - Morning</b>			
Radcliffe Quad (Stadium)	Quad, Square, River Houses, Allston Campus	30 minutes	5:30 am to 7:15 am
<b>Quad, Square, River Houses, Allston</b>			
Mather Express	River Houses through Square to Kirkland St.	10 minutes	7:30 am to 4:30 pm
Quad Express	Quad, Square, to Kirkland St.	10 minutes	7:30 am to 5:00 pm
Allston Campus Express	Allston Campus, Square, Mass. Ave., Oxford St., Square, Allston Campus	15 minutes	7:00 am to 4:00 pm
Barry's Corner (AM)	Square, JFK St., North Harvard St., Barry's Corner	20 minutes	7:00 am to 10:00 am
<b>Weekday Service - Evenings</b>			
Extended Overnight	River Houses through Square, up Garden St. to Kirkland St. to River Houses	30 minutes	7:30 pm to 4:00 am
Radcliffe Quad-Yard Express	Quad, Square, Quad (up Garden St.)	25 minutes	4:15 pm to 1:00 am
River Houses A, B, & C	River Houses through Square, up Garden St., to Kirkland St., to River Houses	35 minutes	4:15 pm to 1:00 am
Allston Campus Express	Allston Campus, Square, Mass. Ave., Oxford St., Square, Allston Campus	15 minutes	4:00 pm to 12:30 am
Barry's Corner (PM)	Square, JFK St., North Harvard St., Barry's Corner	20 minutes	4:30 pm to 7:30 pm
<b>Weekend Service</b>			
Crimson Campus Cruiser	River Houses through Square, up Garden St. to Kirkland St. to River Houses	35 minutes	8:30 am to 4:30 pm
1636'er	River Houses through Square, up Garden St., to Kirkland St., to River Houses	20 minutes	4:00 pm to 1:00 am
Allston Campus Weekend Express	Allston campus, Square, Quad, Square, Allston Campus	30 minutes	5:00 pm to 8:00 pm
Extended Overnight	River Houses thru Square, up Garden St., to Kirkland St., to River Houses	30 minutes	12:00 am to 5:00 am

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## II. FUTURE PLANS

Harvard's planning and development activities continue to be informed by several key programmatic drivers. Current objectives within these drivers will influence how the University will meet its diverse facility and space needs over the coming years.

### *Supporting Academic Programs and Research*

Harvard is strengthening its core academic and research mission through projects that support cross-disciplinary research, respond to changing pedagogies and technological innovations, and foster collaborative teaching and learning. Harvard will continue to upgrade, and in some cases re-invent, existing facilities and spaces to respond to the evolving landscape of higher education.

#### **Flexible Learning Spaces**

The Faculty of Art and Sciences recently transformed a former common area at the Northwest Building into a new teaching and learning space. The new space provides flexibility to support different instruction styles and features video capability, rolling white boards, and moveable tables and chairs. The perimeter of the space is still utilized as a common area, resulting in a “town square as learning space.”



## *Housing Harvard's Affiliates*

Ranging from dormitories to fully furnished apartments, the University's housing portfolio contains over 13,000 beds in 8,000 units. Harvard is continuing the system-wide renewal of its undergraduate houses and making ongoing improvements to the affiliate housing portfolio.



Photo: David Kurris

### **Cronkhite Center Renovations**

Recently Harvard University Housing completed renovations at Cronkhite Center for graduate student housing. The project included upgrades to individual student rooms and significant renovations of the Center's shared facilities and common areas, including shared kitchens and bathrooms, dining areas, and lounges.

## *Enhancing the Campus Experience*

Recognizing that the quality of campus life is greatly enhanced by its landscape, common spaces, and cultural amenities, Harvard continues to make significant investments that enrich the lives of students, affiliates and visitors to its campus.

### **Johnson–Kulukundis Family Gallery**

The recently expanded and renovated Johnson–Kulukundis Family Gallery, located in Byerly Hall at the Radcliffe Yard, is part of a broader effort to foster the arts at the Radcliffe Institute for Advanced Study. The gallery, which is free and open to the public, is envisioned as an arts laboratory showcasing the work of artists and scholars across a variety of media.

The gallery's first exhibit (right) was a multimedia and multisensory installation by the Japanese consortium of artists and computer engineers known as teamLab.



*Innaugural exhibit, "What a Loving and Beautiful World" by teamLab*

*Promoting  
Campus-Wide  
Sustainability*

Harvard is continually identifying opportunities to make its facilities, programs and operations more sustainable. In the face of continued climate change, the University recognizes the increasing importance of planning for resiliency in its development activities.

**Renewable Energy at Harvard Law School**

Harvard continues to invest in renewable energy on its campus. Most recently, Harvard Law School installed a 97.6 kW solar array on the roof of Wasserstein Hall, the first renewable project for the School. The installation of the solar panels atop the building is the latest step toward optimal operation of the LEED Gold structure that was completed in 2011.



Photo: Select Energy Development

*Improving Campus  
Infrastructure*

Harvard continues to make major investments in critical campus infrastructure to support campus development and to make its infrastructure systems more energy efficient and sustainable.

**Blackstone Steam Plant**

Harvard Engineering & Utilities has completed the multi-year implementation of a cogeneration project at the Blackstone Steam Plant. Blackstone generates steam heat for 85% of the campus, produces electric power which is distributed across the University, and operates almost entirely on natural



gas. The plant now generates more than 12.5 mega-watts of electricity as a by-product of steam production. Conversion of the plant to natural gas and cogeneration have reduced campus emissions by 30,000 MTCDE.

## A. CAPITAL PROJECTS

*Projects  
Recently  
Completed*

### **Longfellow Hall** (Renovation and Addition)



<b>Architect:</b>	Baker Design Group
<b>Total Square Feet:</b>	14,250 GSF renovation, 4,600 GSF addition
<b>Programmatic Driver:</b>	Improve building infrastructure and accessibility, relocation of academic programs
<b>Green Attributes:</b>	Targeting LEED Gold

The Harvard Graduate School of Education (HGSE) has completed the partial renovation and addition to Longfellow Hall located at 13 Appian Way. The project included upgrading the mechanical, electrical, plumbing, and life safety systems for much of the 1929 building and making significant accessibility improvements. A key component of the project was the addition of a new penthouse space to provide expanded program area. The new penthouse addition was designed to complement the building's architecture and the character of neighboring buildings in Radcliffe Yard.

The project has enabled the HGSE to relocate some of its research and administrative programs formerly housed in leased space to Longfellow Hall, advancing the School's goal of creating a more cohesive campus along Appian Way.

## Dunster House - *House Renewal* (Renovation)



Photo: Peter Vanderwerker

<b>Architect:</b>	KieranTimberlake
<b>Total Square Feet:</b>	183,000 GSF
<b>Programmatic Driver:</b>	Renew undergraduate House life
<b>Green Attributes:</b>	Targeting LEED Gold

Dunster House, the first full House renovation project in the House Renewal program, recently completed construction. The Dunster renewal reflects many of the design principles tested in the first two projects, Stone Hall and McKinlock Hall.

The exterior of this neo-Georgian building was carefully restored while the interior was reconfigured and reinvigorated. Dunster has new and expanded social and common spaces, including a technologically equipped “smart” seminar room, an art studio, music-practice spaces, and a lounge opening to the courtyard. Spaces for recreation, fitness, and exercise were created by converting existing squash courts to the new uses. New horizontal corridors and three new elevators improve circulation and access, allowing students to move across the building without requiring that they exit into the courtyard and then re-enter the building. The renovation also meets modern accessibility and egress codes and eliminates overcrowding and privacy issues. The historical feel and character of the House has been preserved in traditional spaces such as the library, dining hall and junior common room. Construction on the project completed in summer 2015.

Renewal prioritized energy efficiency and water conservation, with the expectation that Dunster will be a LEED Gold certified building. A water retention system was installed, while better-insulated walls and windows have the dual benefit of reducing energy use and improving student comfort.

## Dunster House

The renewal of Dunster House represented the first renewal project to undertake a complete House, with its substantial residential spaces, many traditional historic rooms, and array of common spaces supporting the social and academic life of the House.



### Residential Spaces

The renewal of Dunster House provided updated student residential spaces organized in tutor communities. New room configurations led to the creation of updated living spaces, new common spaces and study nooks.



### Dining Hall

The Dunster House dining hall features tall wood-paneled walls, an intricately carved mantel piece, three-tiered brass chandeliers, and arched French doors. This historic space underwent significant upgrades to improve temperature control and lighting and was carefully restored.



### Library

Dunster House's Library is located at the center of the second story overlooking the landscaped courtyard and the Charles River. This historic room, which is a study space for the House, features woodwork that references mid-eighteenth century Georgian elements. As part of the renewal project, particular care was taken to restore this room.



### Lower Level Common Areas

On the building's lower levels, the former double height squash courts have been transformed into a series of common spaces for the Dunster House community. The lower level includes areas for fitness, music practice, art, seminars, and recreation.

All photos: Peter Vanderwerker

## House Renewal

The long-planned system-wide effort to renew Harvard's undergraduate Houses is well underway. The House system forms one of the most distinctive and important features of a Harvard College education. In the late 1920's, President A. Lawrence Lowell envisioned a House system that would serve students of different backgrounds, resulting in learning that extended beyond the classroom. Today, more than 98 percent of Harvard College students live on campus. First-year students live in freshman dorms, located in and around Harvard Yard. The overwhelming majority of sophomores, juniors, and seniors live in one of twelve undergraduate Houses, which are located alongside the Charles River or at the Radcliffe Quad, along Garden Street.



The House Renewal program's first focus is on the original neo-Georgian Houses along the Charles River, most of which were constructed in the 1920s and 30s and have been little upgraded since. The Houses were also built at a time when building standards and the needs of the student body were very different. A comprehensive physical assessment of the Houses indicated that they have been well-maintained over the years, but require significant renovation. The intent of the House Renewal program is to preserve the historic character of these buildings and to sustain President Lowell's original vision of the Houses, while simultaneously transforming them to support a twenty first-century intergenerational learning community that meets the needs of today's students.

Construction on the first three House Renewal test projects, Stone Hall, McKinlock Hall, and Dunster House was completed in the past three summers. Winthrop House will begin its formal renewal in June 2016, and Lowell House will follow. The pace and sequence of House Renewal is subject to periodic review.

*Projects  
Currently in  
Construction*

**Harvard Kennedy School**  
(New Construction)



<b>Architect:</b>	Robert A.M. Stern Architects
<b>Total Square Feet:</b>	91,000 GSF new construction, 7,000 GSF renovation
<b>Programmatic Driver:</b>	Foster interaction and collaboration; improve physical campus and facility functionality
<b>Green Attributes:</b>	Targeting LEED Gold

The Harvard Kennedy School (HKS) began construction this summer on a significant new addition that will transform the School’s Cambridge campus. The project will provide additional and improved teaching and study space, and create a physical environment that supports greater collaboration and active learning. Physically, the project will create a more cohesive campus, improve the central courtyard as a campus amenity, and enhance circulation and pedestrian connections to Harvard Square and the Charles River.

The project, which was approved by the Cambridge Planning Board and Board of Zoning Appeal, includes infill construction at the perimeter of the campus, maintaining an open landscaped courtyard at its center. New construction will connect the campus’ four existing buildings, adding approximately 91,000 gross square feet of new indoor space in four additions:

- the “Gateway Building,” a two-level addition connecting the existing Taubman Building and Belfer Building at the 3rd and 4th Floors, will contain faculty offices, meeting and collaboration space, and a new student lounge. A two-story opening beneath this addition will create a significantly improved and welcoming pedestrian access point to the HKS campus from Eliot Street;

- the “West Pavilion,” a four-level addition connecting the existing Taubman Building with the Rubenstein Building, will contain classrooms, meeting spaces, faculty offices, and building support spaces. This addition will also create a new pedestrian access point to the campus from the JFK Park pedestrian connector;
- the “South Pavilion,” a four-level addition connecting the existing Littauer Building and the proposed “West Pavilion.” This addition will contain classrooms, meeting spaces, a new campus kitchen and dining facilities, and building support space; and
- a “Winter Garden,” a glass-enclosed atrium abutting the new South Building which will serve as a year-round multi-functional space for dining, meetings and events.

In addition to construction of new infill buildings and Winter Garden, the project will raise the level of the central courtyard to generally align with the grade level of adjacent streets at key pedestrian access points (at Eliot Street beneath the proposed Gateway Building and at the west side from the JFK Park pedestrian connector). The raised courtyard will preserve the central campus green space while creating a new lower level that contains a below-grade loading facility, additional program space including a classroom and building mechanical space.

The first phase of the project, which is nearing completion, includes demolition of the former central courtyard area, and foundation work for the below grade loading facility and new infill buildings. The project is expected to be completed in winter of 2017 with an official opening in early 2018.



## 9 Ash Street (Renovation)



<b>Architect:</b>	Thomas Pfifer and Partners
<b>Total Square Feet:</b>	1,200 GSF (Renovation)
<b>Programmatic Driver:</b>	Restore historic house
<b>Green Attributes:</b>	Improved energy efficiency

The Harvard Graduate School of Design (GSD) has nearly completed its renovation of 9 Ash Street, a small, one-story, single family house, designed by renowned modernist architect Philip Johnson. When Johnson was a student at the GSD in the early 1940s, he purchased this empty plot of land, which eventually became the site of the first house he designed and built, and was ultimately submitted as his graduate thesis. Johnson's design was comprised of two parts: a rectangular house with a courtyard enclosed by a high perimeter fence that corresponded in height to the house's walls. The main door opens from the street into the private courtyard which is separated from the interior with a glass and steel facade. Johnson lived in the house while he continued his studies at the GSD.

The GSD initially undertook careful historic documentation on the building as well as repair and stabilization work, which was a much more extensive undertaking than initial assessments indicated. More recently the GSD undertook a more extensive project to restore the building's original appearance and architectural integrity while improving its durability and functionality. The project included in-kind replacement of the wooden "Weldtex" panels that constitute the structure's walls and privacy fence, and which had experienced significant water damage. The project scope also included reuse of all of the original bluestone paving stones in the courtyard alongside new landscaping elements, as well as reuse of some original millwork storage elements. The original clear glass wall overlooking the courtyard was also maintained in place. The project was undertaken in consultation with the Cambridge Historical Commission.

## Richard A. and Susan F. Smith Campus Center - Facade Restoration (Renovation)



<b>Architect:</b>	Bruner/Cott
<b>Total Square Feet:</b>	N/A (building exterior)
<b>Programmatic Driver:</b>	Building repair and maintenance
<b>Green Attributes:</b>	Improved energy efficiency

Harvard University is undertaking a comprehensive building envelope repair project at the Richard A. and Susan F. Smith Campus Center (the former Holyoke Center). This project is planned to coincide with the campus center renovation project described on the following page.

The scope of the facade restoration project addresses long-term maintenance issues of the concrete and glass exterior while also restoring the visual quality of the original elevations with their colorful accents and tonal variation. The project includes the repair of cracked and spalling concrete and damaged precast concrete. It calls for the cleaning of the concrete and the aluminum spandrels and fins, and sealant replacements. The window repairs will include the replacement of solar films, the restoration of original architect Josep Lluís Sert's colored 'scale bars', and replacement of failed translucent panels.

The project has received approval from the Cambridge Historical Commission. Construction on the facade restoration began in August 2015 and is anticipated to be completed in fall 2018.

**Richard A. and Susan F. Smith Campus Center  
(Renovation)**



**Architect:** Hopkins Architects (Design)  
Bruner/Cott (Executive Architect)

**Total Square Feet:** 95,000 GSF renovation, 2,943 GSF net new addition

**Programmatic Driver:** Interior Common Spaces

**Green Attributes:** Targeting LEED Gold

Planning is proceeding for the Smith Campus Center (SCC) which will create a campus center that builds community with an emphasis on connectivity, transparency, and engagement with Harvard Square. The project, located primarily on the two lower floors of the building, aims to provide flexible, accessible and sustainable spaces that permit a wide range of uses such as eating, gathering, meeting, studying, performing and exhibiting the arts. The heart of the SCC will include a large, open plan interior “living room,” as a companion to the exterior “living room” of Harvard Yard. It will also establish a welcoming and vibrant entrance to Harvard University for visitors, current and prospective Harvard affiliates, and the Cambridge community. The project will maintain food services throughout the first floor of the building. The project calls for a transformational improvement of the public realm with enhanced amenities and unique spaces that do not exist elsewhere in Harvard Square.

To achieve this vision for the campus center, Harvard will renovate and selectively reconstruct portions of the building. The proposed design respects original architect Josep Lluís Sert’s planning and design principles relating to connectivity, scale, massing, light, façade and roofscape. The project recently received approvals from the Cambridge Historical Commission, Harvard Square Advisory Committee, and Board of Zoning Appeal. Construction on campus center renovation will begin in spring 2016 and is anticipated to be completed in fall 2018.

**Winthrop House – *House Renewal***  
(Renovation)



<b>Architect:</b>	Beyer Blinder Belle
<b>Total Square Feet:</b>	180,000 GSF
<b>Programmatic Driver:</b>	Renew undergraduate House life
<b>Green Attributes:</b>	Targeting LEED Gold

Harvard is planning the renewal and expansion of Winthrop House, the second full House to be renovated as part of Harvard’s House Renewal program. Located between Mill Street and Memorial Drive, Standish Hall and Gore Hall were originally constructed in 1916 as freshman dormitories; later, they were programmatically unified to become Winthrop House in 1931.

Consistent with recent House renewal projects, Harvard envisions undertaking a comprehensive renovation project which will focus on restoring the buildings’ historic character while updating them to contemporary requirements. The project calls for the preservation and rehabilitation of the two adjacent wood-frame buildings, 101 and 111 Plympton Streets, as part of Winthrop House. This project also includes a proposal to construct a new east wing for Gore Hall. A five-story wing is proposed for the corner of Mill and Plympton Streets in addition to a low rise extension that would provide a connection to 111 Plympton Street. The proposed addition would provide much needed residential and common space for this undergraduate residence. The new addition has been carefully designed to ensure that its massing, materials and overall expression are sympathetic to its context within the Harvard Houses National Register Historic District. The proposal for the new addition to Gore Hall requires approval from the Board of Zoning Appeal.

The renewal of Standish and Gore Halls entailed preliminary envelope work undertaken in summer 2015. The project will formally commence in June 2016 and substantial completion at Standish and Gore Halls is anticipated in August 2017. The east addition is expected to be completed by August 2018.

**Lowell House – *House Renewal***  
(Renovation)



<b>Architect:</b>	KieranTimberlake
<b>Total Square Feet:</b>	218,000 GSF
<b>Programmatic Driver:</b>	Renew undergraduate House life
<b>Green Attributes:</b>	Targeting LEED Gold

Harvard is now planning for the renewal of Lowell House, an undergraduate dormitory built in 1930 as one of the first two purpose-built Harvard Houses. Sitting in the center of the River House district, Lowell House is widely recognized by its distinctive bell tower, and is noteworthy for its two landscaped courtyards, both fully enclosed by the dormitory's brick neo-Georgian structure.

Consistent with the other House Renewal projects, the intent will be to respect the historic building and House culture while upgrading it to support a twenty-first century living and learning environment. The project is anticipated to begin construction in 2017.

## Cabot Science Library (Renovation)



<b>Architect:</b>	Mack Scogin and Merrill Elam
<b>Total Square Feet:</b>	28,500 GSF (Renovation)
<b>Programmatic Driver:</b>	Transform existing spaces in the Harvard Science Center into a collaborative learning environment
<b>Green Attributes:</b>	Targeting LEED Gold

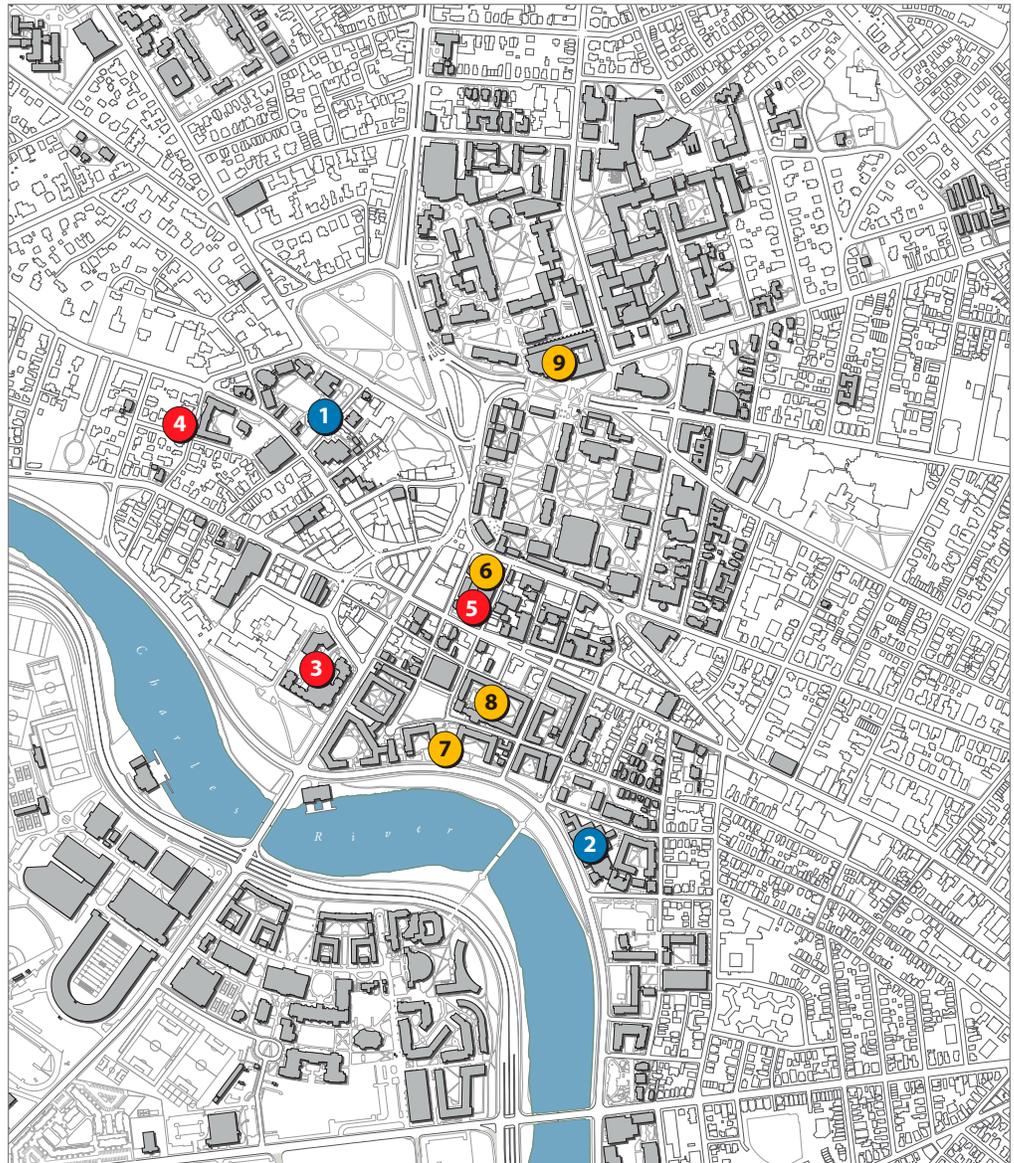
The Faculty of Arts and Sciences is continuing planning for the redesign of key public spaces on the main floor of the Harvard Science Center. The project leverages and enhances the building's function as a campus crossroads of undergraduate life, and responds to changing learning activities, collaborative work patterns, and related social interactions of today's students. The project will also transform the Cabot Science Library from a traditional collections-based library into an innovative digital teaching and learning hub for all disciplines.

New social areas, study spaces, and food services on the main floor of the building will create an environment that fosters collaboration among students, faculty, and others utilizing the Science Center. The reimagined library will incorporate several innovative features including a "mobile discovery bar" where building users can try out new technologies. The renovated library space will also include group study rooms, media studios, a large classroom, and collections in mathematics and sciences.

Physically, the renovated spaces will have greater openness and transparency, visually connecting to the building exterior and the adjacent Plaza space. The Science Center and Cabot Library project is expected to begin construction in the summer of 2016 with completion anticipated in 2017.

# 1. PROJECT MAP

*Projects Completed,  
in Construction,  
and in Planning*



**● Recently Completed**      **● Currently in Construction**      **● In Planning**

- 1. Longfellow Hall
- 2. Dunster House

- 3. Harvard Kennedy School
- 4. 9 Ash Street
- 5. Smith Campus Center (Facade restoration)

- 6. Smith Campus Center
- 7. Winthrop House
- 8. Lowell House
- 9. Cabot Science Library

## 2. PROJECT LIST

Project	Programmatic Goal	Green Attributes
<b>Recently Completed</b>		
1. Longfellow Hall	Improve building infrastructure and accessibility, relocate academic programs	Targeting LEED Gold
2. Dunster House	Renew undergraduate House life	LEED registered; targeting Gold Recycle demolition and construction debris, building and material reuse Use of recycled and regional materials, including certified lumber Low VOC emitting adhesives, sealants, paints, wood and agrifiber products Low lighting power density Regenerative drive elevators Reduction in use of potable water and rainwater harvesting Reduced storm water run-off Ventilation system with heat recovery to reduce energy consumption 24/7 building management system to respond immediately to changing weather and occupancy Water efficient plantings Low-flow/dual-flush plumbing fixtures Ceiling fans and natural ventilation in lieu of air conditioning Enhanced commissioning, measurement and verification of systems
<b>Currently in Construction</b>		
3. Harvard Kennedy School	Foster interaction and collaboration; improve physical campus and facility function	Water use reduction (35%) Optimize energy performance Enhanced commissioning Construction waste management, divert 75% from landfill Low VOC emitting adhesives, sealants, paints, coatings and flooring systems Daylighting of 75% of spaces
4. 9 Ash Street	Restore historic house	Improved energy efficiency
5. Smith Campus Center (Facade restoration)	Building repair and maintenance	Improved energy efficiency
<b>In Planning</b>		
6. Smith Campus Center	Foster collegial interaction; improve physical campus and facility function	Targeting LEED Gold
7. Winthrop House	Renew undergraduate House life	Targeting LEED Gold
8. Lowell House	Renew undergraduate House life	Targeting LEED Gold
9. Cabot Science Library	Transform existing science library and adjacent space into collaborative learning environment	Targeting LEED Gold

## B. TRANSPORTATION

### *Transportation Demand Management*

Harvard University remains a leader among Cambridge's large employers for consistently reducing its exceptionally low Single Occupancy Vehicle (SOV) rate. According to the latest PTDM survey results, Harvard's SOV rate has continued to remain low and is now at 14.7% for Cambridge-based employees and graduate students. Harvard's proactive Transportation Demand Management programs and incentives offered by the CommuterChoice Program continue to provide the incentive necessary to encourage commuters to leave their cars at home. CommuterChoice Program offerings include: MBTA monthly pass subsidy and pre-tax savings.

### *CommuterChoice Program*

- 50% MBTA monthly pass subsidy and pre-tax savings.
- 50-75% Carpool and vanpool subsidy and partner matching.
- Preferential parking for carpools and low-emission vehicles.
- Emergency Ride Home Program for green commuters.
- Discounted annual Zipcar membership.
- Discounted annual Hubway membership.
- Bicycle Commuter Benefit.

#### **Highlights from the past year include:**

- Sold an average of 7,400 subsidized MBTA monthly passes each month.
- Nearly 350 bicyclists were reimbursed over \$50,000 for bike commuting expenses.
- Increased number of Zipcars on campus to 48, an annual increase of 18 cars.

Harvard's Parking and Transportation Demand Management (PTDM) Plan, approved by the City of Cambridge in 2003, provides a baseline assessment of Harvard's parking supply and management of vehicle trips through the transportation demand measures and strategies offered by the CommuterChoice Program.

### *Parking and Transportation Demand Management Plan*

The PTDM Plan describes the transportation services and financial incentives that Harvard offers its students, staff, and other affiliates. Harvard's PTDM programs, which are administered by CommuterChoice, are having a direct positive effect on greenhouse gas emissions by reducing employee and student automobile trips to campus.

A copy of Harvard University's PTDM Plan is available at: <http://home.hppm.harvard.edu/pages/reports>. Harvard submits annual PTDM updates which are on file with the City's Community Development Department.

Cycling is recognized as an integral component of the University's transportation system and is part of Harvard's commitment to building a healthy, more sustainable campus. The University continues to make significant investments in new bicycle facilities on campus and in the collaborative planning and implementation of local and regional cycling initiatives.

### **New Bicycle Facilities**

Over the past several years Harvard has made considerable improvements and enhancements to bike facilities on the Cambridge campus. Recent investments include:

- **Sheltered bike parking:** In recent years, Harvard has created new bike parking facilities across its campus which provide more than 400 sheltered parking spaces.
- **Bike rack improvements:** Bike racks at several locations on the Cambridge campus have been upgraded or replaced. Most recently, the Faculty of Arts and Sciences installed 108 new racks at five locations, which reflect the City of Cambridge standards for bicycle parking.
- **Bicycle repair stations:** This year, two additional stations were installed at Lowell and Dunster Houses and several stations received upgraded bike pumps. There are now a total of eight repair stations on the Cambridge campus.

An interactive map of all existing bike facilities on Harvard's Cambridge campus is available on the CommuterChoice website ([www.commuterchoice.harvard.edu](http://www.commuterchoice.harvard.edu)). The map provides locational information on bike routes, parking areas, and key attributes such as rack type and whether parking is sheltered.

### **Bike Sharing Programs**

Harvard's Cambridge campus is served by several bike sharing programs which provide cycling transportation alternatives without owning a bicycle. These programs include:

#### **Hubway**

Harvard continues to collaborate closely with the cities of Cambridge and Boston to support the regional bike-sharing program, Hubway, around its main campuses. The University supports seven Cambridge stations, at Peabody Terrace, the River Houses, the Kennedy School, the Law School, the School of Engineering and Applied Sciences, Gund Hall and the Radcliffe Quad.

The Hubway station at Memorial Drive (River Houses) has been temporarily relocated to Grant/DeWolfe St. to facilitate a utility construction project. Harvard, the City of Cambridge and Hubway are currently working with the Massachusetts Department of Conservation Resources to move the station to the corner of DeWolfe/Cowperthwaite adjacent to Dunster House. The Harvard Kennedy School Hubway station was moved from Eliot St. to the school's entrance along JFK Street due to the current campus expansion project. The station is anticipated to be returned to its former location upon completion of the project.

Hubway provides an alternative to driving between the Cambridge, Allston, and Longwood campuses, enhances transit options for areas of the Harvard campus not as well served by existing transit facilities, and improves connections between existing

public and private transit modes. The system also contributes to the University's sustainability goals by reducing inter- and intra-campus vehicle trips. Harvard's support for Hubway includes offering its affiliates a 40% discount on annual membership. As of September 2015, Harvard had over 1,000 active Hubway members.

### **CrimsonBikes**

This student-initiated bike sharing program had its inception in 2009. Since that time, it has evolved to become Harvard's first campus-wide bike share network, utilizing multiple checkout stations throughout campus that are supported by a website which monitors reservations at any time of day.

### **Departmental Bike Program**

CommuterChoice offers a subsidy to University departments for the purchase of one or more bicycles to support department members' travel around campus. The program also assists with purchasing bike accessories, coordinating regular maintenance, registering bikes with the Harvard University Police Department (HUPD), and establishing departmental bike monitoring systems.

### **CommuterChoice Cycling Initiatives**

The University's CommuterChoice Program also sponsors several initiatives that promote cycling at Harvard. These efforts include:

- **Bike Week** – During Bike Week activities in 2015, 207 Harvard cyclists rode 4,708 miles as part of the Mass Commute Challenge, which encourages bike commuting during the week. Other events included the CommuterChoice Bike Breakfast, which attracted over 250 cyclists and featured free bike safety checks, a raffle for cycling equipment, and giveaways including Hubway memberships.
- **LOOK Campaign** – This initiative, launched in Spring 2014 by HUPD and the Harvard Transportation Department, works to remind motorists, bicyclists and pedestrians to be alert and aware of their surroundings. As part of promotional events held during the Spring and Fall, 100 free helmet certificates were distributed to bicyclists, and side mirror stickers designed to combat “dooring” and increase awareness of cyclists were distributed to motorists throughout the Harvard community.
- **Bicycle Safety and Repair** – CommuterChoice offers reimbursement to employees for expenses associated with taking bicycle safety or repair classes at local bike shops. It also encourages affiliates to participate in classes held through the City of Cambridge focused on urban cycling, bike repair and maintenance techniques, and women-powered cycling.
- **Discounted Helmets** – Through funding from the Boston Public Health Commission, Harvard offers \$10.00 helmets for sale at the CommuterChoice office. Over 1,000 of these helmets have been sold over the past three years.
- **Bike Benefit Program** – This initiative, established in 2013, provides a benefit of up to \$240/year for the purchase, repair, maintenance or storage of a bicycle for eligible employees. The benefit has proven to be extremely popular, with 349 bicyclists being reimbursed over \$53,000 in 2014.

## **Planning for Cycling Networks**

Harvard continues to support the improvement and growth of local and regional bike networks that connect the campus with the City of Cambridge and the greater Boston area. These efforts include:

- Examining Harvard's existing bicycle network on the central campus and identifying areas for potential improvements.
- Collaborating with the City of Cambridge on municipal bicycle planning initiatives.
- Working with the City of Boston on the installation of bike lanes on Allston roadways to connect the Allston and Cambridge campuses and extend the bike network to the south and west.
- Advocating for the inclusion of new bike lanes on the river bridges that connect Boston and Cambridge as part of planning for MassDOT bridge renovation projects.
- Working with MassDOT to plan for new bike facilities as part of the Allston Interchange project.

## C. ANTENNA INSTALLATIONS

Harvard, like all institutions of higher education in the 21st century, must continue to provide and upgrade the technological infrastructure that supports its teaching and research mission. The increasing use of wireless, web-based, and remote platforms for instruction and collaborative research across the University has led to growing demand for cellular and wireless services, and the need for improved coverage, signal strength and capacity.

Because cellular and wireless services are provided by individual service providers, each with their own communication networks and technologies, there is an ongoing need to improve coverage and expand capacity across multiple carriers. This has resulted in a growing number of antenna installations required to meet the communication needs of cellular and wireless users who are served by different carriers.

### *Distributed Antenna System (DAS)*

Harvard continues to implement its neutral host Distributed Antenna System or DAS that will enable the University to not only provide better coverage within its buildings and immediately surrounding campus areas, but also to coordinate antenna installations and system improvements among multiple service providers.

The DAS establishes a network of strategically located antenna nodes that are connected to a common signal source which accommodates multiple service providers. Each antenna node or “host site” distributes carrier signals to clusters of campus buildings, providing high quality micro level coverage to the University’s end users. To date Harvard has completed four DAS installations, with a site at the Science Center currently under construction.

The DAS network provides the ability to limit exterior equipment installations to a smaller number of campus nodes that can serve multiple carriers. This significantly reduces the number of antenna installations that would typically be required to provide high-quality coverage across multiple wireless communications providers’ systems.

### *Minimizing Visual Impacts*

Where exterior antenna and equipment installations are required, Harvard and its DAS consultants have worked to minimize their visual impacts to the greatest extent possible. As a general rule, Harvard has sought to exclude antenna installations from its most architecturally significant and iconic campus buildings. Where possible, existing building elements are used to conceal or minimize the visibility of exterior equipment. This can include mounting antennas against mechanical penthouses, chimneys, vents or other existing rooftop elements. For such installations, equipment is typically painted to match the background location as closely as possible.

In some instances, antennas and other required equipment utilize a “stealth” treatment that camouflages the equipment to better visually blend in with its surroundings. This can include



creating the appearance of brick or other desired background material on antenna panels; creating false chimneys, vents or other roof top elements that simulate those already present on the building to enclose equipment; or screening the equipment in visual extensions of existing mechanical penthouses.

In meeting its regulatory obligations for antenna installations, Harvard and its consultants work with City of Cambridge planning and design staff to review proposed installations to identify appropriate locations and visual treatment options. Where applicable, installations proposed within historic districts or neighborhood conservation districts are reviewed with the staff of the Cambridge Historical Commission.

## D. SUSTAINABILITY

### Modeling a Sustainable Campus

Harvard recognizes that the challenges of climate change and environmental degradation pose a serious threat to the future and, increasingly, to our present. These global problems require a clear and visionary response from organizations, governments, and businesses.

The University's sustainability commitment aims to transform Harvard into a healthy, thriving community that contributes positive social, economic, and environmental benefits. Students and faculty are encouraged to collaborate in using the campus as a "living laboratory" to understand real-world energy and sustainability challenges, and then pilot new solutions that can be widely replicated.

Harvard's five-year Sustainability Plan, adopted in 2014, was developed by the Office for Sustainability (OFS) in partnership with faculty, students, and staff to align the University around a holistic vision and five-year roadmap for enhancing the well-being of the community by building and operating a more sustainable campus. The Plan is organized around five core topics (energy and emissions, campus operations, nature and ecosystems, health and well-being, and culture and learning) and sets clear goals, standards and commitments for moving forward.



### Research without Boundaries

Harvard continues to build on its well-established climate and energy related research and teaching initiatives. Across its academic disciplines, the University supports research at the vanguard of energy and climate science—whether in engineering, law, public health, policy, design, and business. Harvard researchers are advancing the latest developments in renewable energy technology, designing cutting edge solutions for climate resilience, bridging the connection between climate change and human health impacts, and partnering with government officials here and across the globe to build climate-friendly policies and legal frameworks. These efforts include the following programs and research initiatives:

- The **Harvard University Center for the Environment (HUCE)** encourages research and education about the environment and its interactions with human society. Through grants and fellowships, HUCE supports environmental research at every level, from undergraduates through senior faculty members. HUCE sponsored symposia, public lectures, and informal student convocations connect people with an interest in the environment.

- The **Center for Health and the Global Environment** at the T.H. Chan School of Public Health researches and communicates the connections between human health and our environment, and works to accelerate the changes needed to ensure a healthy, sustainable, and prosperous future.
- The **Center for Green Buildings and Cities** at the Harvard Graduate School of Design is driving the development of higher-performance buildings and new design strategies for sustainable building and planning.
- Harvard Law School's **Environmental Law Program and Environmental Law & Policy Clinic** assist governments and non-governmental organizations and create international partnerships to overcome legal obstacles to reducing greenhouse gas emissions and incentivizing new technologies. These programs also support the efforts of New England municipalities (including Boston and Cambridge) to adapt to climate change and improve resiliency.
- The **Business and Environment Initiative** at Harvard Business School deepens business leaders' understanding of today's complex environmental challenges so they can be prepared to assist in developing effective solutions.

#### RESEARCH HIGHLIGHT

A team of Harvard scientists and engineers has demonstrated a rechargeable “flow battery” that could make storage of electricity from intermittent energy sources like solar and wind safe and cost-effective for both residential and commercial use. The new research builds on earlier work by members of the same team that could enable cheaper and more reliable electricity storage at the grid level.



### Tackling Climate Change

Universities are uniquely equipped to shape the ideas and innovations that will lead the transition to a low-carbon future. Harvard is taking action on climate change on a number of platforms — through faculty and student research that occurs across disciplines and throughout the world; through teaching and learning, by providing our students with the tools to confront this issue for generations to come; and on our campus, by modeling an institutional pathway to a healthier, more sustainable community. Highlights from the past year include:

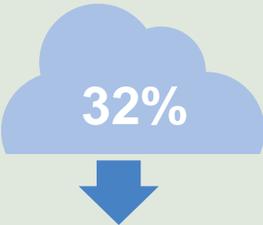
- The new **Harvard Global Institute** presented its first grant of \$3.75 million to support a multidisciplinary, collaborative project to investigate climate, energy, and sustainable development in China.
- Seven research projects supported by President Drew Faust's **Climate Change Solutions Fund** were announced by the Vice Provost for Research in the program's inaugural funding round. The \$20 million fund was created in 2014 to hasten the transition from carbon-based energy systems to renewable energy sources.
- The **Harvard Medical School** and the **Harvard T.H. Chan School of Public Health** were among 70 medical, public health, and nursing colleges and schools that committed to a White House initiative to ensure the next generation of health professionals are prepared to effectively address the health impacts of climate change.

## Reduction in Greenhouse Gas Emissions

While Harvard's primary role is to address global challenges through research and teaching, the University also has a responsibility to translate research into action. Harvard is using its campus as a living laboratory for piloting and implementing solutions that strengthen resiliency and lead to aggressive reductions in greenhouse gas pollution.

In 2008, Harvard announced its most ambitious sustainability commitment to date: a science-based goal to reduce greenhouse gas emissions 30% by 2016, based on a 2006 baseline and including growth. Harvard was one of the first universities to adopt a globally-recognized best practice for emissions accounting, which considers the impact from all properties within the University's operational control in North America.

A campus-wide campaign to reduce greenhouse gas emissions, combined with the regional electric grid becoming less carbon-intensive, has already resulted in a 21 percent reduction from 2006 levels, even after accounting for increases in square footage and the energy intensity of existing space. Excluding growth, Harvard has achieved a 32% reduction.



## Energy Efficiency First

Harvard has pursued an energy-efficiency-first strategy in achieving emissions reductions. In total, more than 1,300 energy efficiency measures have been implemented across the University's building. The \$12 million Green Revolving Fund has supported hundreds of projects since 2002, providing departments with access to capital for smart, cost-effective projects.

These measures have resulted in a 17 percent reduction in University-wide energy consumption in its baseline buildings (those in place in Fiscal Year 2006) and a two percent reduction when including growth and renovations of existing space on-campus. In addition, Harvard has pioneered and tested a wide variety of alternative energy and building efficiency technologies, including geothermal, solar hot water, chilled beams, and winter-free cooling, which are all actively used throughout campus to help reduce energy demand for heating and cooling.

## Green Buildings

In 2014, Harvard revised its University-wide *Green Building Standards* (first adopted in 2009) to reflect the latest in high-performance, energy efficient design and construction. The new standards target LEED version 4 Gold in addition to critical reviews of the possibility for achieving net zero energy buildings. As of November 15, 2015 Harvard had achieved 104 LEED certified projects across the campus, (71 of which are in Cambridge), and encompassing over two million square feet of space.



Photo: Kennedy & Vidulich Architects

*The Tozzer Anthropology Building, a certified LEED Gold building, features passive lighting and cooling, and an energy recovery system.*

*“As a preeminent leader in higher education, research and the development of the leaders of tomorrow, Harvard is a proving ground for new ideas, the fact that the institution pursues and embraces LEED demonstrates their commitment to sustainability in all of their endeavors.”*

–Rick Fedrizzi, CEO and founder, USGBC

### Infrastructure Upgrades



Harvard’s Blackstone Steam Plant and chilled water plants have been upgraded to improve efficiency and reduce emissions. Switching from oil to natural gas resulted in the largest reduction of emissions on campus. The fuel switch and an expansion of the plant’s previous cogeneration system, is estimated to reduce emissions by approximately 30,000 MTCDE.

### Renewable Energy

The University continues to invest in renewable energy, through purchasing agreements and installations on Harvard buildings. In 2009, Harvard was one of the first universities to enter into a long-term power purchasing agreement (PPA), contracting for 12 megawatts of clean energy from the Stetson II wind farm in Maine. In addition, more than one megawatt of solar energy has been installed on campus to date.

### Planning for Resiliency

Harvard has been actively preparing its campus to be more resilient to the impacts of climate change, already being felt. The University’s faculty and operational teams are each partnering with officials from the cities of Cambridge and Boston to better understand and plan for the impacts that heat waves, extreme weather events, and sea level rise will have on the region. As part of its risk management, sustainability, and emergency planning efforts, the University is also developing climate preparedness standards for construction and renovation, as well as a University-wide climate preparedness plan.



Photo: Lorin Granger

Installation of solar panels at Harvard Law School.

### Best Practices in Sustainable Operations

Harvard continues to model best practices in sustainable campus operations to conserve resources, reduce pollution, and enhance personal well-being.

**Waste Reduction:** The University’s aggressive waste reduction campaigns focus on reuse first, and then recycling and composting. Waste has dropped 27% per capita since Fiscal Year 2006 and the campus’ recycling rate is now 51%. The University



collected 413 tons of materials for reuse and donation to local and international groups. In 2014, Harvard rolled out composting in all freshman dormitories in Harvard Yard as the result of a student-led initiative.



**Transportation:** Over 87% of Harvard’s commuters use an alternative transportation option. On campus, all Harvard University Police Department patrol vehicles are fuel-efficient Ford Fusion hybrids, there are 14 electric vehicle charging stations, across campus, and the University continues to support 12 Hubway stations. In 2014, Harvard became one of 12 universities in the country to be recognized as a Gold-level Bicycle Friendly University by the League of American Cyclists.

**Water:** Water use campus-wide is down 21% from Fiscal Year 2006, that’s enough water to fill Blodgett Pool 196 times! Recent renovation project including House Renewal and 32 Quincy Street have incorporated rainwater recapture tanks that store and reuse runoff water for toilets and irrigation.

#### FOOD FOR FREE

In 2015, Harvard launched a partnership with the Cambridge-based Food for Free nonprofit to donate nearly 2,000 pounds of nutritious meals from its dining halls as part of an effort to address chronic hunger among neighbors in Cambridge and Boston. It is a model that is replicable and it is hoped that the pilot program with Harvard will both feed families and raise awareness at other institutions of higher learning and organizations in Cambridge.

**Green Cleaning:** Green Seal certified green cleaning services are used on more than 13 million square feet of campus space.

**Organic Landscaping:** Organic landscaping practices are in use on over 90 acres of campus landscape, including Harvard Yard, and the University continues its strong commitment to incorporate sustainability goals into facility, district, and campus planning activities.

**Behavior Change:** Over 4,000 employees have been engaged in more than 230 offices recognized through the University’s Green Office Program. 40 students are hired every year to manage peer-to-peer outreach and education campaigns in dorms and living spaces, including all Harvard University Housing properties. More than 290 student, staff and faculty campus innovators have been recognized at Harvard’s Green Carpet Awards since 2010.

### Enhancing the Well-Being of the Campus Community

Harvard is committed to enhancing the health, productivity, and quality of life of our community through the design and maintenance of the built environment and the development of cutting-edge well-being programs.



**Identification of Health Risks:** Harvard is working to identify and reduce chemicals of concern on campus to eliminate potential health risks to vulnerable populations. For example, the 2014 update of Harvard’s *Green Building Standards* included requirements for the disclosure of health and environmental impacts of products that are used on campus in order to better identify potential health risks.

**Healthy Purchasing:** In November 2015, Harvard became the first university to sign a national pledge stating a preference for purchasing chemical flame retardant-free furniture. OFS is partnering with Harvard capital project and planning teams, Strategic Procurement, and Environmental Health and Safety to identify and source chemical flame retardant-free furniture across the University.



**Personal Well Being:** The Healthy Harvard and Harvard on the Move initiatives provide well-being and active lifestyle guidance for students, faculty, and staff. More than 500 staff have participated in six-week Mindfulness at Work courses offered by the University.



**Food:** Harvard is developing Sustainable and Healthful Food Standards that support personal well-being, local communities, and contribute to the long-term health of the environment. The University supports two on-campus Farmers' Markets as well as four community gardens. Many research centers, student groups, and programs are operating across campus to study and address issues with the food system, nutrition, food law, policy, and innovation.

All of Harvard's 13 undergraduate dining halls have earned Green Restaurant Association 2 or 3-star certification for their ongoing efforts to operate efficiently and source sustainable products. In addition, Harvard students and staff maintain two community gardens in Cambridge, at the Harvard Divinity School and on Mt. Auburn Street, and chefs at the Harvard Faculty Club grow local food and herbs on site for use in meals prepared for their guests.

### Creating and Nurturing the Leaders of Tomorrow

Undergraduate and graduate schools are providing their students with a deeper understanding of the complexity of future climate challenges and providing them with the necessary tools to tackle the issue wherever their lives may lead.

Harvard's educational programs, with 243 courses across the University focusing on aspects of energy, environment, and sustainability, prepare future leaders with the insight and foresight to safeguard our environment and build a healthier, low carbon economy in the years and decades to come.

A secondary field in energy and environment, announced in 2014, provides undergraduate students with the tools to understand the scientific, technical, economic, political, legal, historical, and ethical dimensions of complex environmental problems.



#### STUDENT RESEARCH

Every year the Harvard Center for the Environment provides summer funds to undergraduate students who have an interest in working with faculty and their research groups on projects related to energy and the environment. In 2015, their research covered a wide range of topics — from growth limitation in New England's forests to housing and air pollution.

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### III. RELATIONSHIP WITH CAMBRIDGE PUBLIC SCHOOLS

Harvard University has dozens of programs available in Cambridge Public School (CPS) that range from curriculum based initiatives, developed in coordination with CPS leaders that engage entire grade levels, to individual internships. In addition to school-based programs, Harvard's commitment to the children and families of Cambridge extends to out-of-school time and includes being the largest provider of summer jobs for Cambridge teens with the Mayor's Summer Youth Employment Program.

#### **2015 Highlights of Harvard's Engagement with Cambridge Public Schools**

Harvard programs are available in every public school in Cambridge. The list below highlights the many programs that Harvard supports with CPS.

- **Support for CPS upper schools** – Harvard worked with CPS during the transition to the new upper school model and now every CPS middle school student participates in Harvard programs which include:

#### *Science and Engineering Showcase*

All CPS eighth-grade students participate in this annual event sponsored by Harvard's John A. Paulson School of Engineering and Applied Sciences. The eighth graders work on a science project for the semester with support from Harvard faculty, researchers and graduate students and the program culminates with a showcase event held on Harvard's campus in late May.

#### *Project TEACH*

This program supports CPS college awareness efforts by providing seventh-grade students with the opportunity to visit Harvard's campus where they learn about college and academic disciplines by interacting with Harvard college students and faculty.

#### *EcoMUVE*

This curriculum developed by the Harvard Graduate School of Education is utilized as part of the CPS sixth-grade science curriculum and uses immersive virtual environments to teach students about ecosystems and causal patterns.

#### *Peabody Museum*

Every CPS sixth-grade student visits the Peabody Museum of Archaeology and Ethnology as part of the students' study of early humans in their history curriculum.

- **Cambridge-Harvard Summer Academy** – Each summer, more than 300 students participate in the Academy, which is a partnership between Cambridge Rindge and Latin School (CRLS) and the Harvard Graduate School of Education. Funded by Harvard University, this program offers high school students remedial and enrichment classes led by teaching teams that include veteran teachers as

well as students from the Harvard Graduate School of Education Teacher Education Program.

- **Harvard Crimson Summer Academy** – This program has been bringing academically gifted, economically challenged students from Cambridge and Boston to Harvard since 2004. Funded entirely by the University, this program provides students with rigorous academic enrichment that helps them prepare for selective four-year colleges or universities after high school graduation. Starting in ninth grade, participating students spend three consecutive summers engaging in a mix of classes, projects, field trips, and cultural activities while living on the Harvard campus from Sunday night through Friday afternoon. Participants receive year-round mentoring from Harvard students, financial support in the form of a laptop computer, free tuition, a stipend to replace lost summer earnings and a \$3,000 scholarship to the college of their choice upon completing the program.
- **Harvard Museum of Natural History** – All CPS fourth-grade students visit the museum as part of the Earth's Changing Surface curriculum.
- **Cambridge students attending Harvard** – Harvard recognizes and values the strong students matriculating from CRLS and the Cambridge Public School system. During the past four years, 77 Cambridge residents were accepted at Harvard College, including 51 CRLS graduates. (For the students who will comprise the class of 2019 and received admission letters in April of 2015, 20 Cambridge residents were admitted; 11 of which are CRLS students.)
- **Student mentoring** – Each year, more than 6,000 program participants from Cambridge schools take part in approximately 100 mentoring and enrichment programs, visit the University's museums, and learn from Harvard educators.
- **CRLS Marine Science Internship Program** – Paul McGuinness, CRLS teacher and Harvard Graduate School of Education alum, started this program at Harvard in 2006 to place cohorts of advanced, capable and motivated students from CRLS into research labs at Harvard in the various fields of marine science. Participants gain hands-on experience in labs under the guidance and supervision of mentors who seek to inspire and assist the next generation of marine scientists.
- **Professional Development** – The Harvard Graduate School of Education works with the Superintendent of CPS to offer a variety of professional development opportunities for educators and school administrators.

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## IV. INSTITUTION SPECIFIC INFORMATION REQUESTS

### 1. Provide an update on plans for Harvard's Allston campus and any potential or anticipated impacts on the City of Cambridge.

Since the 2013 approval of Harvard's Institutional Master Plan (IMP) for Allston, the University has advanced several capital projects and planning initiatives. Much of the recent activity has been focused within the Harvard Business School campus and around Barry's Corner (at the intersection of Western Avenue and North Harvard Street).

#### *Projects Completed or Under Construction*

##### **Bright-Landry Hockey Center**

Harvard recently completed a project which created an infill arcade of approximately 18,300 square feet of space between the Bright-Landry Hockey Center and Gordon Indoor Track and also renovated spaces within the two facilities.

##### **Ruth Mulan Chu Chao Center** (Harvard Business School)

Construction is underway on the Chao Center, a new 75,000 square foot executive education facility. The building will include dining, meeting and classroom spaces as well as new outdoor landscaped courtyards and walkways.

##### **Continuum (Barry's Corner)**

Samuels and Associates is nearing completion of the Continuum development on land ground-leased from Harvard. The project includes 325 housing units, 13% of which are affordable, and ground floor retail.

##### **Charlesview Apartments**

Structural demolition has been completed and current work includes the removal of foundations. Site restoration will follow, including construction of a new street "Academic Way North."

#### *Projects in Planning*

##### **Science and Engineering Complex**

The University has started the permitting process for the Science and Engineering Complex. The project includes laboratory and teaching space for the School of Engineering and Applied Sciences, as well as a significant amount of flexible lab space dedicated to cross-faculty collaborations and experiments.

##### **Klarman Hall** (Harvard Business School)

Harvard began design and permitting for a new convening facility and academic building. The project, containing 105,000 square feet and which will be constructed in two phases, is currently envisioned to replace Burden Hall, just south of the existing building. Construction is expected to start in 2016.

### **Greenway**

Harvard is in conversations with the City of Boston and Allston neighborhood about planning for Rena Park, an early phase of the Greenway, a network of green spaces in Allston for the campus and community.

### **Harvard Stadium**

Harvard continues to examine options for the renovation and addition to Harvard Stadium. The project is in the early phases of design, but is envisioned to include new program space, improved accessibility for visitors with disabilities, renovated visitor amenities, and repairs and restoration of key components of the existing structure.

### ***Other Planning Activities***

#### **Expanded Shuttle Service**

With the occupancy of the Continuum development this fall, a new shuttle service between Barry's Corner and Harvard Square via North Harvard Street and JFK Street began operation in December. Initially, the service operates during the three hour morning and afternoon peak periods and will be expanded as demand warrants. The route uses existing stops along those streets with the addition of a new stop in Barry's Corner. Harvard will continue to coordinate the route plan with the City of Cambridge and review the need for other potential improvements.

In support of the Science and Engineering Complex, the existing Allston Express loop will be altered to incorporate a new stop on Academic Way, once this roadway is constructed between North Harvard Street and Western Avenue. This bus route will continue to travel along the same streets in Cambridge and utilize existing stops.

#### **Soldiers Field Road Crossing Study**

In coordination with the Department of Conservation and Recreation (DCR), and the City of Boston, Harvard has completed a study of pedestrian and bicycle crossings along Soldiers Field Road between Market Street and the Eliot Bridge. The study concluded that an at-grade crossing was feasible at the Everett Street intersection and that improvements could be made to the existing Telford Street pedestrian bridge to achieve ADA compliance and to increase safety and usability.

## **2. Describe and update on planning with the Massachusetts Department of Transportation for the I-90 Interchange Project, for commuter rail and for the West Station.**

- **MassDOT Allston I-90 Interchange Improvement Project** – MassDOT has assembled a task force consisting of residents, business owners, and other local and regional stakeholders with the goal to work through all details associated with the project. Harvard has a representative seat on the task force. The project is currently in the Concept Design stage. For additional information see: <http://www.massdot.state.ma.us/highway/HighlightedProjects/AllstonI90InterchangeImprovementProject.aspx>

- **Proposed West Station** – Harvard continues to support the construction of West Station as a new intermodal center along the Framingham-Worcester branch of the MBTA commuter rail system. Harvard and the Commonwealth of Massachusetts have entered into a non-binding letter of agreement that sets forth shared principles and objectives to advance the construction of West Station as the I-90 Interchange Improvement Project advances. MassDOT will permit and design the station as part of its Allston Interchange project which they estimate will begin construction in 2018 and will be ongoing until the end of 2020.

**3. What is Harvard’s strategy in selecting tenants for retail sites? How is retail used to enhance the urban experience? Provide information on vacancies and the vacancy rate in retail properties. Particular attention should be paid to a description of the uses on the ground floor of these sites, as they relate to community concerns about maintaining an active retail environment.**

Harvard shares the community’s interest in maintaining a unique retail environment in Harvard Square. When retail spaces become available, Harvard seeks tenants that will have active ground floor uses, offer goods or services that complement the retail mix in Harvard Square, and are compatible with other University uses in the building. Harvard’s ongoing commitment to maintaining a vibrant Harvard Square is illustrated by its leases with over 30 businesses in the Square, including long-time independent retailers such as the Grolier Poetry Book Shop, Leavitt & Peirce, and Harvard Bookstore.

Most of Harvard’s properties located in the commercial areas of Harvard Square (for example those across Massachusetts Avenue from Harvard Yard) contain ground floor retail uses. Harvard will continue to seek active retail or service uses on the ground floor of these buildings. Upon completion of the Smith Campus Center project, the building will provide a more engaging relationship to surrounding streets, and the retail strategy will prioritize active rather than passive ground level uses.

**4. Discuss planning for bicycle facilities on campus, including Hubway stations.**

See Planning for Bicycle Facilities page 30.

**5. Provide more detail on the House Renewal Program, particularly where it involves converting graduate student housing, affiliate housing, or other facilities, including the Inn at Harvard, to temporary undergraduate housing. Discuss the long term plans for such temporary facilities, after the House Renewal Program is complete.**

Harvard is using existing University-owned buildings in and around Harvard Square to provide temporary accommodations to students displaced by House Renewal construction. The central hub of the “swing house” is 1201 Massachusetts Avenue, the former Inn at Harvard, which now accommodates the dining, meeting, social, academic, and a portion of the residential spaces for the House. The building at 1201 Massachusetts Avenue is particularly well suited to this role given its pre-existing layout as a hotel and its location adjacent to Harvard

Yard and close to the other Harvard Houses. Several Harvard-owned residential buildings in the area also supplement 1201 Massachusetts Avenue, providing residential space for displaced students: 8 Plympton Street, 1306 Massachusetts Avenue, 65 Mt. Auburn Street, 20-20A and 22-24 Prescott Street. The House Master's temporary accommodations are located at 8 Prescott Street. Together, these properties meet the program needs of all the Houses, even those with the largest student populations. During academic years when these buildings are not needed for swing use, they will be used as residences for other Harvard affiliates.

Harvard houses more than 98% of the undergraduate population on campus, promoting a residential campus as part of the core educational mission. In recent years Harvard has added nearly 1,000 beds in Cambridge and Boston, increasing the University's capacity to house 50% of the graduate, professional, and medical students.

This increased capacity will help to mitigate the temporary reduction of up to 240 beds available to graduate students during the House Renewal program. Upon completion of the House Renewal program, the five Harvard-owned residential buildings will continue their long-standing role in providing housing to Harvard's students, faculty, and staff. The long term use of 1201 Massachusetts Avenue has not yet been determined, but it is anticipated to remain in institutional use.

**6. Provide an update on the remediation efforts for the commercial parcel at Everett Street and Massachusetts Avenue, as well as Harvard's planning for the future use of that site.**

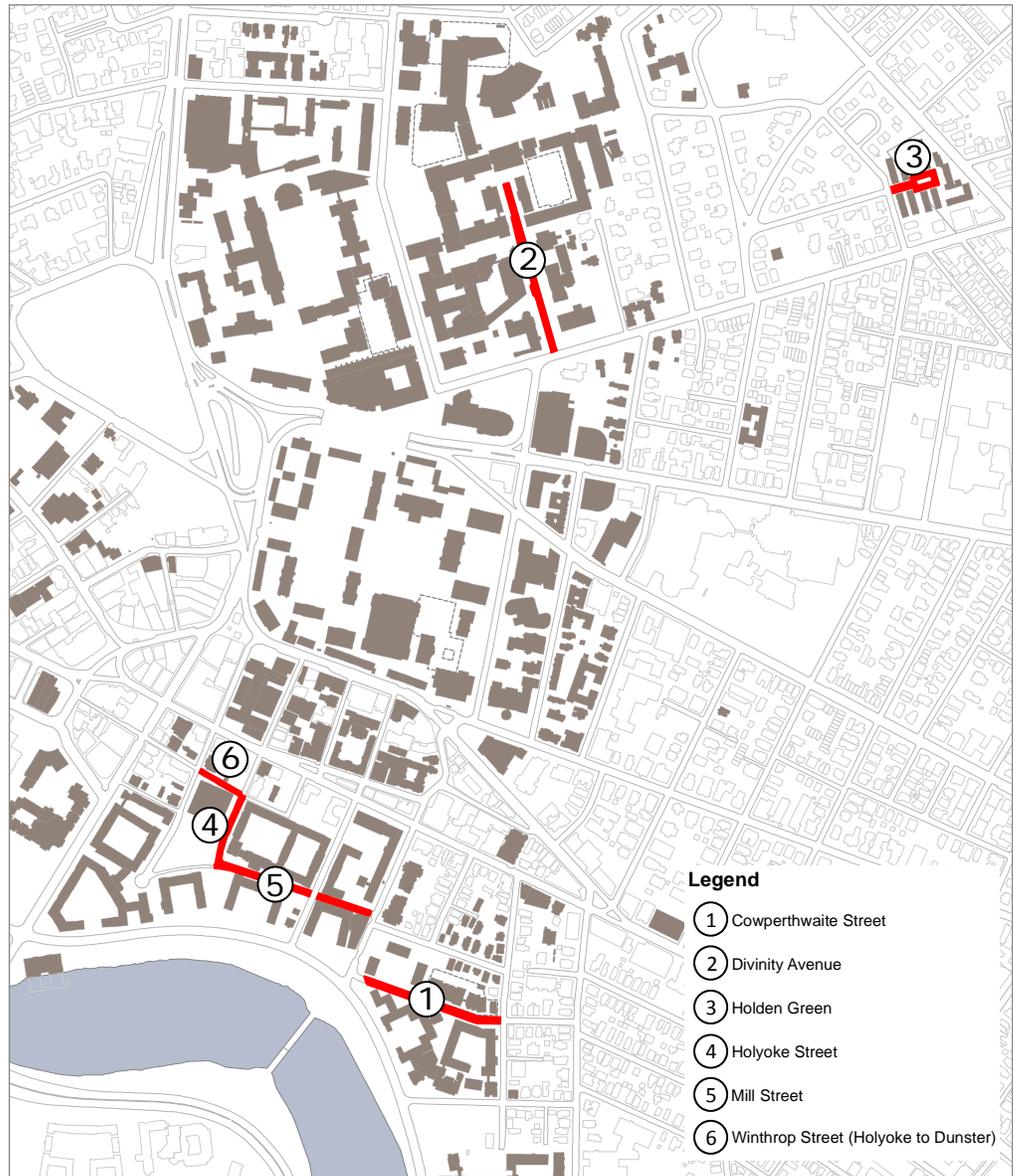
Harvard's remediation activities continue. As previously noted, this is an iterative process that involves testing and treatment cycles; therefore, it is not possible to provide a definitive time frame for achieving a permanent solution for the site. The remediation is complicated by the physical constraints of the current building slab and its relationship to the location of the primary source area.

As part of the remediation process, Harvard continues to evaluate the building's future. Due to the limitations that the building places on the remediation process and the fact that some of the building materials have been compromised by contamination, there is a strong possibility that the building will need to be demolished. If that occurs, Harvard understands the desire of the abutting neighborhoods to see retail as part of any future use on the site and, the University will engage with Agassiz-Baldwin, Neighborhood Nine, and the City of Cambridge on any plans. In the meantime, Harvard will continue to work to enliven the site; recent efforts have included installing colorful pictures that cover the entire window surface.

7. Provide a map of Harvard-owned streets and sidewalks, their condition, and any planned repairs or improvements. How does Harvard coordinate management of streets and sidewalks with the Cambridge Department of Public Works?

The map below highlights the Cambridge streets and sidewalks that are owned by Harvard University.

**Harvard-owned Streets**



### **Cowperthwaite Street**

Cowperthwaite Street is a one way private way connecting DeWolfe Street to Banks Street from west to east. Pedestrian improvements including new sidewalks and a raised crosswalk were added when 5 Cowperthwaite Street was built in 2007. As part of the Dunster House renewal, Harvard repaved the western half of Cowperthwaite Street in summer 2015, extending from DeWolfe Street up to the first pedestrian crossing near the 5 Cowperthwaite garage entry.

### **Divinity Avenue**

Divinity Avenue is located on Harvard's north campus beginning at Kirkland Street and continuing north until it reaches the University Herbaria. This street and its sidewalks are in excellent condition, having been repaved in 2014. Over the last several years Harvard has undertaken repairs and improvements to the street including the installation of new brick sidewalks, street trees and lighting.

### **Holden Green**

The entry drive into Harvard's affiliate apartment complex at Holden Green is a Harvard-owned private way with the same name. This cul-de-sac is fully surrounded by Harvard's residential buildings, and is located partially in Cambridge and partially in Somerville. As this street is in need of repairs, Harvard has plans to repave the street over the next several years. The sidewalks are in good condition.

### **Holyoke Street**

The portion of Holyoke Street between Winthrop Street and Mill Street is owned by Harvard University. This section of the street is one-way and in generally good condition. New sidewalks and curb cuts were installed at the intersection with South Street as part of the recent project reconfiguring the parking area adjacent to the Malkin Athletic Center. Additional improvements will be made when the Lowell House renewal project is undertaken.

### **Mill Street**

Mill Street is a one-directional private way located between Holyoke Street and Plympton Street. The streets and sidewalks are in good to fair condition. Harvard is exploring the idea of undertaking street and sidewalk improvements to Mill Street to address existing conditions and enhance pedestrian circulation in conjunction with the upcoming House Renewal projects at Winthrop and Lowell Houses as well as planned infrastructure upgrades.

### **Winthrop Street**

The portion of Winthrop Street between Holyoke Street and Dunster Street is owned by Harvard University. This one-directional private way is in excellent condition. In 2014 the University repaved the street and rebuilt the sidewalks, replacing concrete with brick paving. New lighting was also installed at that time.

Harvard Facilities Maintenance Operations performs maintenance, repairs and snow removal on Harvard-owned streets, or subcontracts out this work as necessary. Temporary street closures (for maintenance or other activities including Student Move-In/Out or Commencement events) are coordinated with the City of Cambridge DPW through the Harvard Parking Office.

More broadly, Harvard contributes to the ongoing maintenance and improvement of both private and public streets and sidewalks adjacent to Harvard properties across the Cambridge campus. As part of Harvard construction projects, adjacent streets and sidewalks are often improved. In addition Harvard has contributed financial support to recent Harvard Square infrastructure improvement projects undertaken by the City of Cambridge.

Harvard works closely with the DPW Commissioner and staff to coordinate on public realm improvement projects. When possible, Harvard provides the city's contractors with laydown areas to facilitate public realm construction projects. During winter snow events, Harvard makes off-street parking available to residents and has also provided space for the City to unload plowed snow.

**8. Discuss options for a program for occasional public tours of buildings of public and/or architectural interest, such as 9 Ash Street, the Philip Johnson House.**

The Harvard Information Center, in the Smith Campus Center provides free public tours of Harvard Yard year round. The tours are student led and provide a history of the University, information on campus buildings and landscape, and a unique view of the student's individual experience at Harvard.

Harvard also invites the public to tour recently completed renovation projects in campus buildings that have public programming. Most recently, in celebration of the public opening of the new Harvard Art Museums at 32 Quincy Street in fall 2014, the University extended free admission to the public and provided tours of the newly renovated and expanded facility. The Harvard Art Museums also offers architectural tours monthly as part of its Gallery Talks series. In addition, Cambridge residents are extended free admission to Harvard Art Museums at all times, and over 14,000 city residents have taken advantage of this benefit since it reopened.

Harvard also invites the public to visit significant new buildings on its campus which may have broad interest. For example the opening of Wasserstein Hall and Caspersen Student Center at Harvard Law School included a community open house featuring tours of the building.

The University also invites the public to tour other campus buildings as part of special events. This past summer, Harvard held a public open house celebrating the 100th anniversary of the founding of Harry Elkins Widener Memorial Library, which included tours of the building. Harvard will continue to invite the public to tour its buildings on such occasions.

The Philip Johnson House at 9 Ash Street is currently under renovation. Upon completion of the construction project, the Harvard Graduate School of Design will consider hosting a tour of the house that will be open to members of the public in limited numbers.



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