



CAMBRIDGE



E STREETS

If streets and sidewalks are to unify rather than divide, Cambridge and MIT must work together to develop a more comprehensive approach to infrastructure and street improvements.



Streets and sidewalks are fundamental to our perception of the identity of places and communities – public or private, open or closed. When streets and sidewalks are incoherent or are encroached upon by private and corporate space, the public realm is eroded.

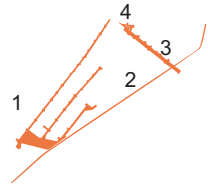
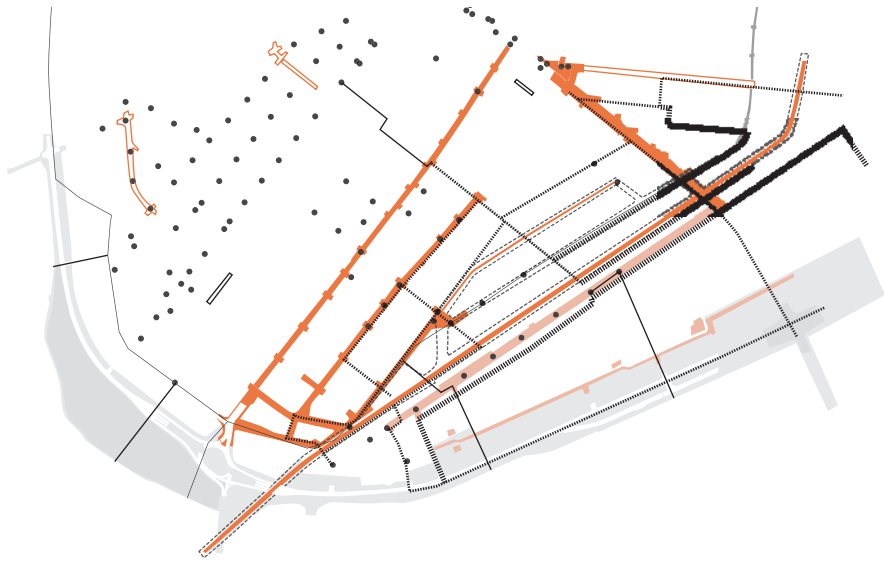
The quality of the streets, sidewalks, and pedestrian paths in the neighborhood around Fort Washington is extremely varied. While some streets and sidewalks are well-designed and well-tended, others are narrow, crumbling, and neglected. Roads are spatially-fragmented, changing their character (materials, lighting, trees, width, and quality) frequently – sometimes as often as ten times within a single block. Taken together, this inconsistency and lack of maintenance – notably worse than elsewhere within Cambridge – contribute to the perception that the neighborhood is unworthy of attention, just another run-down, ex-industrial junkyard.

The sad state of the streets is compounded by the manner in which neighborhood infrastructure changes and improvements are planned, managed, and implemented. City-initiated street improvement and repair projects introduce new surfaces on some streets, but not others. Private developments bring with them new types of paving materials and lighting, implicitly claiming their surrounding sidewalks as semi-private or corporate space. MIT's streetscape improvements have had a similar effect, separating the Institute from the surrounding neighborhood by visually reinforcing the edge between the two.

Cambridgeport's Changing Streets

The next two years will witness an unusual amount of street and infrastructure improvement projects both in the Cambridgeport neighborhood and in MIT's campus and surroundings. The opportunity for both stakeholders to coordinate their activities to improve and unify their shared environment around the Ft. Washington area is unprecedented. Now, perhaps more than ever, is a great window of opportunity to shape the character of the "edge" district.

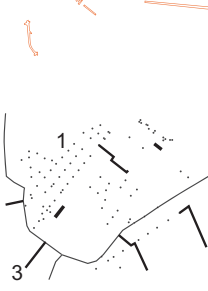
The Cambridge Department of Public Works has planned a number of road resurfacing projects and storm water and sewage system improvements that should impact the area. Local streets and sidewalks could also be affected by some of Cambridge's planned major public space improvement projects. In addition to the plans of the city, the public realm within the Fort Washington area could be impacted by the Boston Redevelopment Authority's Charles River improvement project, any of the potential urban ring alignments currently under consideration, and MIT's plans to upgrade its utilities and repave Vassar Street and Amherst Alley.



Cambridge major public space improvement projects:
(CDD Environmental & Transportation Planning)

- 1 Cambridgeport Roadways
- 2 Rail and Trail and cycle spur
- 3 Massachusetts Avenue south
- 4 Lafayette Square

City of Cambridge DPW
Current planned road resurfacing projects (4)



City of Cambridge DPW
Storm water and sewage system improvements

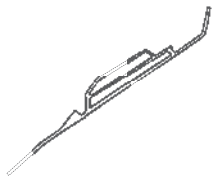
- 1 Shared manhole for repair or replacement
- 2 Alignment of major storm drain
- 3 Outfall



Boston Redevelopment Authority
Charles River improvement project

- 1 Magazine Beach
- 2 Massachusetts Avenue

Urban ring alignments under consideration



MIT Vassar Street West and Amherst Alley repaving projects



MIT current planned utility improvements



The interventions currently in pipeline, both for near and long term, fall into two primary categories:

>Major projects such as public realm improvement projects, traffic or engineering projects, or street and landscape works associated with major developments. Currently, several different bodies semi-independently pursue and coordinate projects in the area, each with multiple regions of overlap with one another's projects, as depicted in the map above.

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>Incremental change including rolling street and sidewalk repair work, pruning, and tree planting. These processes are largely managed by Cambridge's Department of Public Works, MIT's facilities departments, and private companies.

Cambridge also allows a high level of intervention in the public realm by individual landowners and small community groups. Homeowners can request tree planting, repairs and repaving and also have responsibilities towards the sidewalk adjoining their property, including shoveling snow and tending street trees. In addition, Cambridge policy allows residents to select the type of pavement outside their house during sidewalk upgrades.

Unfortunately, These individual decisions – made without reference to any sort of overarching structure or guidance – combine to generate a mismatched and incoherent streetscape, blurring the divide between public and private, and eroding the sense of public ownership of the streets.

>Small-scale interventions such as commemorative tree planting, changes to sidewalks and fences outside houses and offices, or naming intersections. These actions are usually initiated or carried out by individuals or small-scale institutions.

"It is the City's policy to replace existing sidewalks with the same material (concrete with concrete, brick with brick). However, during this project homeowners will have the option of replacing concrete sidewalks with brick."










Department of Public Works notification for Sparks Street project

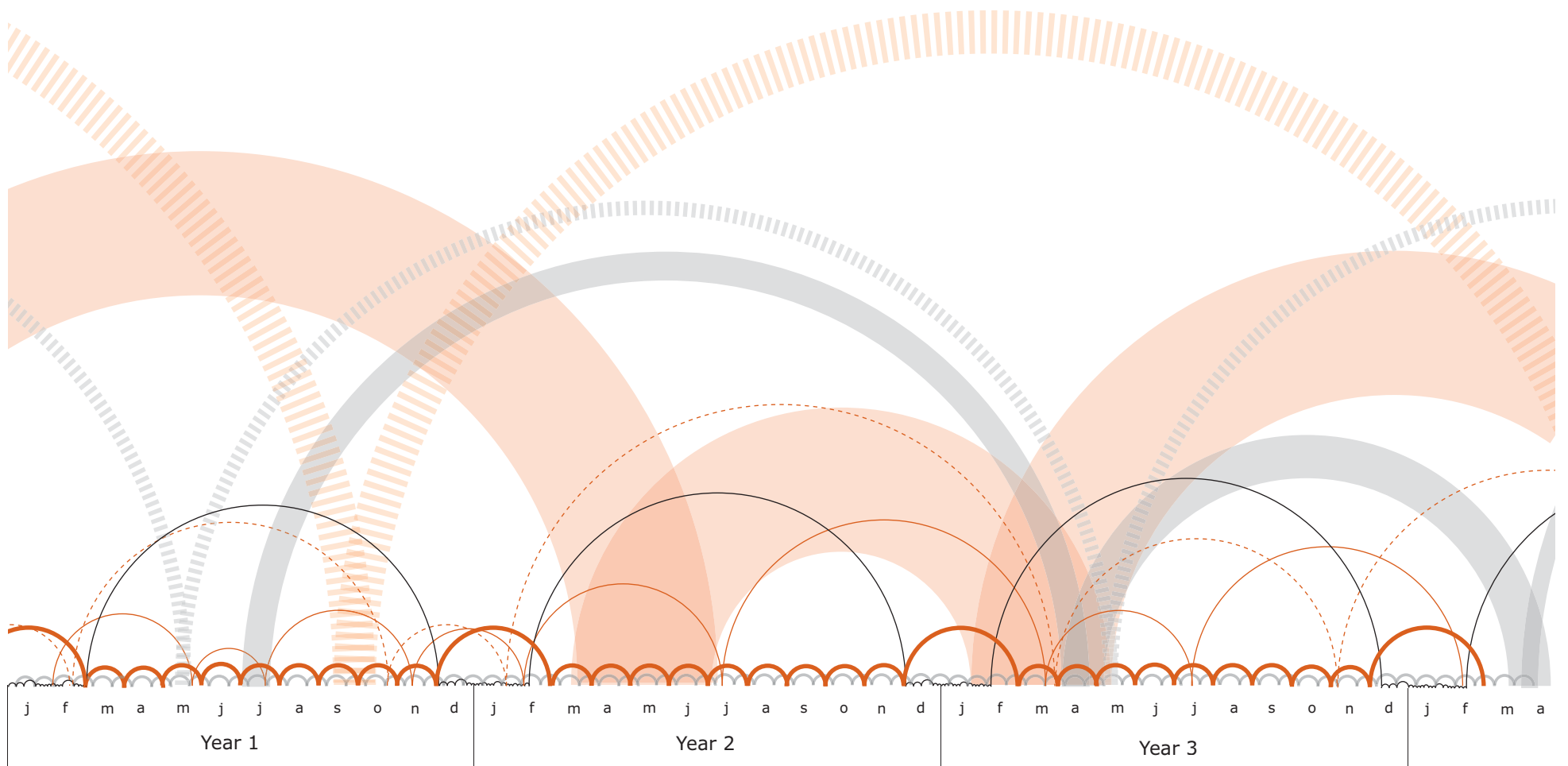
Individual claim of the sidewalk leads to a disjointed and alienating street environment...



The story of a street

The diagram shows the rhythms of interventions - planned and incremental - that happen to a typical Cambridge street over a 3 year period

-  **Street and sidewalk repair** (260 minor street repairs and 125 sidewalk repairs each year)
-  **Street resurfacing** (Around 40 larger areas of street surface replaced each year)
-  **Street light and furniture repair and replacement** (e.g., 744 news boxes installed/year)
-  **Street sweeping** (Each side of the street is swept once per month on separate days)
-  **Snow clearance** (Snow plowing by the Department of Public Works [100 plows])
-  **Gardening** (University Park, MIT and Lyme Properties - monthly work on outdoor areas)
-  **Street trees** (2-year pruning cycle in Cambridge's 13 districts and 300 new trees per year)
-  **Major public space improvement projects**
Currently six major projects in the planning or implementation stages in Cambridge. Cambridgeport Roadways project, Lafayette Square and Massachusetts Avenue South overlap with Sidney Street
-  **Storm drains improvement project**
Major program of common manhole and sewer outfall replacement



A Need for Coordination

As the diagram above illustrates, programs to maintain and improve the neighborhood public realm are abundant. Day to day changes Major projects tend to take place independently, with little coordination between multiple efforts related to the same streets and sidewalks. The look and feel of Cambridge streets are guided less by overall principles and plans than by decisions made on the ground by individual contractors or supervisors.

Sydney Street: A Probable Scenerio

Within Cambridge's uncoordinated system of street improvements, today's relatively unified Sydney Street ...



... might look like this in 10 years' time.



> Overhead utility lines stay where they are.

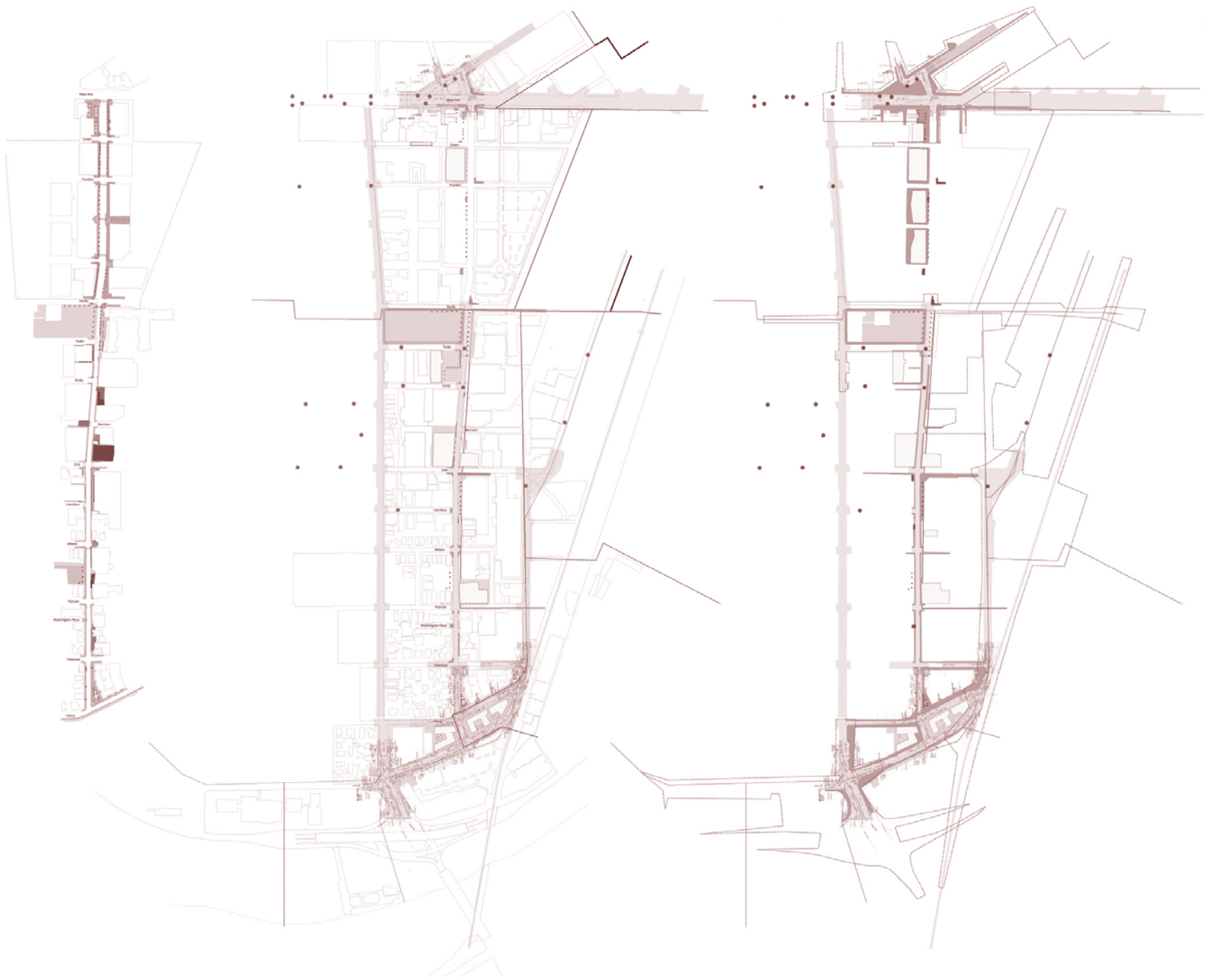
In this potential future, redevelopment on one side of the street has brought with it new street surfaces and changes to building facades. The other side of the street has been patched over in asphalt following repairs to underground utilities. The street has been wired for additional cable or internet infrastructure, leaving additional swaths of patchy asphalt. Companies have planted trees in front of their buildings, cutting off the uniquely-clear views down Sidney Street to Massachusetts Avenue.

The cumulative result? An uneven, ugly roadway that reinforces visitors' negative impressions of the Fort Washington neighborhood.



Cambridgeport's patchwork streetscape: the physical form of the streets often changes randomly within single segments of blocks.

- > Redevelopment on one side of the street brings with it new street surfaces and changed facades.
- > The other side of the street is patched over in asphalt following repairs to underground utilities.
- > Companies plant trees at one point, cutting off the long views down Sidney street to Mass Ave.
- > The street is wired for cable, resulting in more patchy asphalt along the roadway.



The Sidney Street of today

Sidney Street is one of the major Cambridgeport streets running from Massachusetts Avenue to the river. Over recent years, a series of major interventions to the public realm associated with new developments have resulted in concentrated areas of change. At the south end of the street a relatively new high-density housing development brought distinct changes to the residential neighborhood and its streetscape. More extensive were the changes brought by the University Park development with an entirely new street design and appearance within a very limited area.

Meanwhile, in the middle portion of Sidney Street, the month by month minor repair work carried out by the Department of Public Works, residents and business owners brought piecemeal, incremental change quite unlike the changes at both ends of the street.

Sans change to Cambridge policies... Sidney Street of 2015

Developments at the ends of the street continue to intensify through the end of this decade, with the development of Lafayette Square and the extension of Waverly Street. These projects continue independently without any coordination, due to inability to foresee the unifying potential of Sidney Street. In the middle of the street, new business developments and homeowners will continue to exert their own local interventions in the public realm, while the city pursues uncoordinated infrastructure projects.

Proposed adjustments to management process implemented...

Alternative potential for Sidney Street, 2015
 This image portrays a plan to synthesize interventions along Sidney Street intelligently through coordinated planning and a cohesive framework of design guidelines which affect the entire length of the street. New developments and public projects will be required to coordinate their streetscape improvements and integrate with the normal maintenance cycles of the street.



Sidney Street at Massachusetts Avenue where University Park sits today, circa 1982.

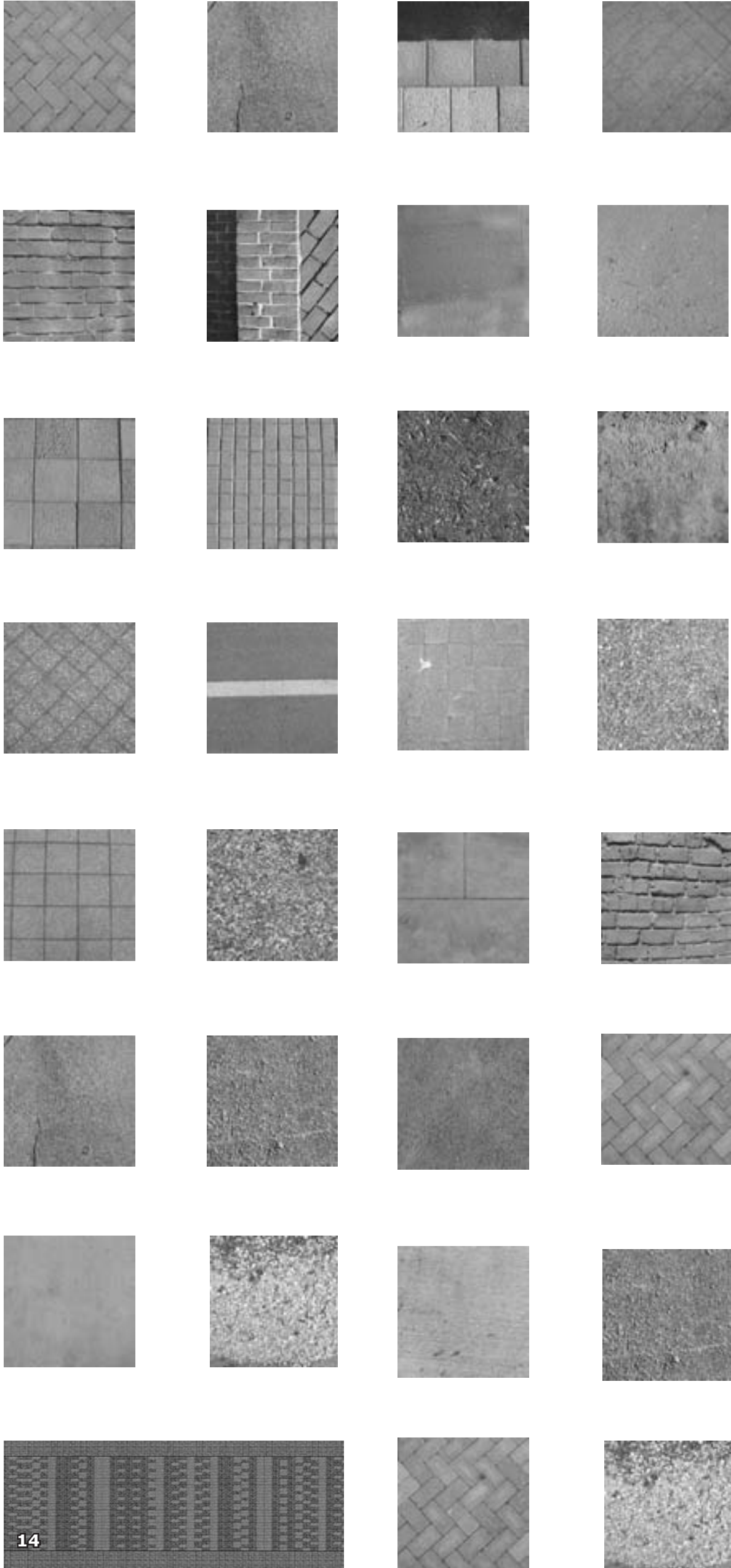


Sidney Street at Massachusetts Avenue today. View towards Lafayette Square.

Principal guidelines

The Fort Washington neighborhood needs a public realm that is

- > **A coherent background** united by materials and design treatments
- > **Truly public** and inviting to all, not just the residents of the buildings that abut it
- > **Connected** forming a network that facilitates and encourages movement
- > **Durable** constructed to withstand the test of time and constant use
- > **Generous** with ample room for pedestrians, bicyclists, and automobiles

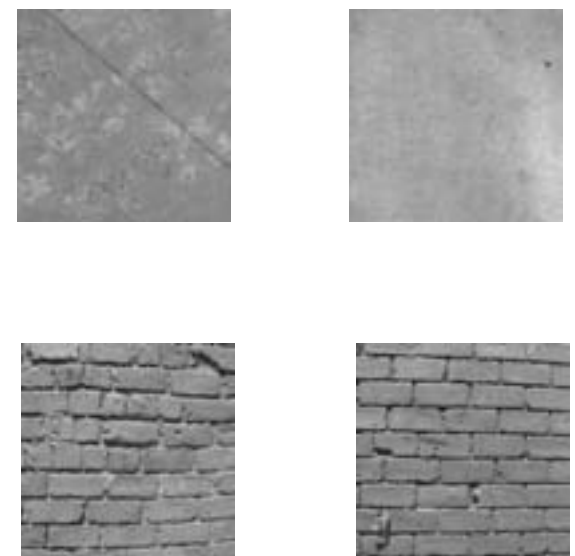


Recommendations for MIT

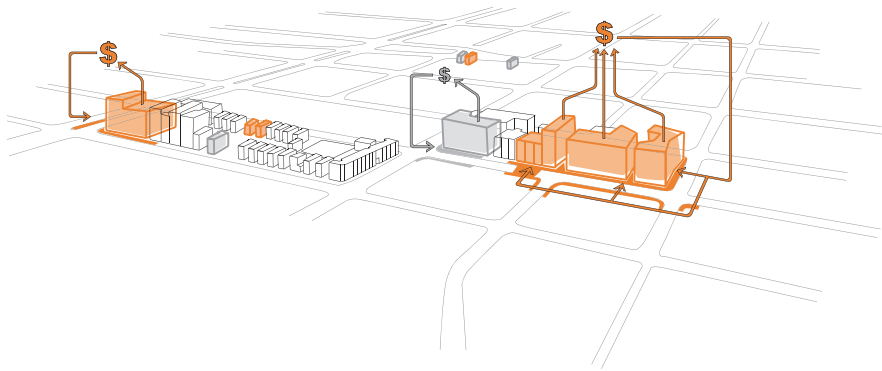
To enhance the form and function of the Fort Washington neighborhood public realm, we recommend that MIT carry out the following tasks:

> **Coordinate with Cambridge** Coordinate Institute streetscape and infrastructure upgrades with the Cambridge Community Development Dept. and Dept. of Public Works This coordination could take a number of forms, ranging from stronger channels of communication to jointly-planned or jointly-funded public realm improvement projects.

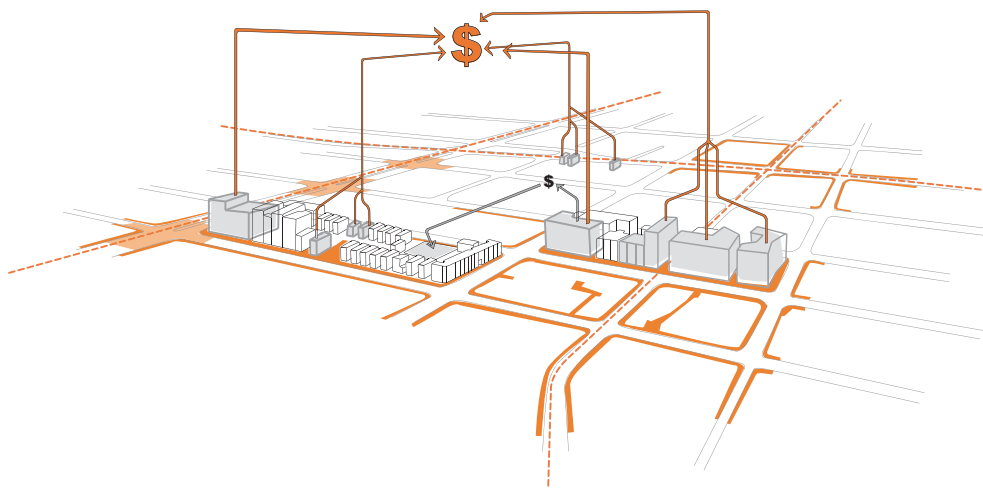
> **Connectedness** Design to de-emphasize the transition between City and Institute When upgrading the public realm around MIT, incorporate street trees and furnishings that blend with the surrounding Cambridge design aesthetic. Avoid contemporary design elements – such as the streetslights that were recently installed on Vassar Street – that are out of keeping with their neighboring context.



The MIT campus contains a total of 62 paving surfaces



By combining individual revenue sources for street improvements to fund public realm projects, Cambridge yields both a larger funding pool and a more consistent streetscape



Recommendations for Cambridge

To enhance the form and function of the Fort Washington neighborhood public realm, we recommend that the City of Cambridge carry out the following tasks:

>Develop a coordinated strategy for infrastructure improvement (Need more here)
This strategy would emphasize the importance of integrating new interventions within the existing street fabric.

>Create area guidelines The focus of these guidelines would be a strategy for creating a consistent and coherent public realm. Specific statements within this strategy would describe the intended character of an area and outline intentions for its improvement (addressing such things as material specifications, planting, lights and street furniture). This strategy is not intended to enforce bland uniformity, but rather to create local guidelines that improve the Cambridgeport streetscape holistically rather than piecemeal.

>Create detailed layout guidelines Such guidelines might include rules controlling the minimum amount of surface that could be replaced at one time, mandating consistency in lighting or street furniture design and placement, or providing guidance in dealing with difficult edges and junctions.

>Consider the use of a centralized mechanism for funding street improvements Collecting contributions from new developments centrally and using this single pot to fund street projects throughout the area could be a way to accelerate positive change, benefit a wider community and prevent the further fragmentation of public space caused by localized corporate street redesign.

