

# Special Edition

# MIT Faculty Newsletter

<http://web.mit.edu/fnl>

**in this special issue** we focus on MIT 2030 and the up-zoning petition submitted by MITIMCo (MIT Investment Management Company) to the City of Cambridge. Many of the articles are reprints from past issues of the *Faculty Newsletter*. New material includes our editorial and an "Interview with MIT 2030 Task Force Chair Tom Kochan," below.



Honoring Vera Kistiakowsky (p. 14)

## Concerns Over the Lack of Graduate Student Housing in the MIT 2030 Plan

Brian Spatocco

Reprinted from the MIT Faculty Newsletter, Vol. XXIV No. 5, May/June 2012.

### Introduction

**PROMPTED AND MOTIVATED** by the recent remarks of our President-Elect Rafael Reif when he noted, "A time of transition should also be a time for reflection – a time to assess where we are and where we are going," I write today to discuss a very serious external threat to the way our Institute does business and how our community lives. Specifically, during my two years of service as the Graduate Student Council's (GSC) Housing and Community Affairs (HCA) co-chair and a member of the Kendall Square Advisory Committee, I have developed significant concerns regarding the availability and accessibility of housing in surrounding regions as well as

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## Interview with MIT 2030 Task Force Chair Tom Kochan

**THE FOLLOWING INTERVIEW** between the Faculty Newsletter (FNL) and Tom Kochan (TK), the Chair of the Task Force on Community Engagement in 2030 Planning, was held on January 17, 2013. [See page 24 of this issue for the complete report of the Task Force.]

**FNL:** *Maybe we could start with you giving a brief background on the formation of the Task Force and its role as you see it.*

**TK:** When the new provost took office, he was clearly concerned that the faculty not had a voice in the Kendall Square development process, and particularly that the voice of the experts on the faculty who work on these issues professionally hadn't been heard. And so our primary role was to provide advice to the provost on whether to move forward with the rezon-

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### Editorial

## MITIMCo Petition Goes Forward Without Faculty Assessment Places Commercial Real Estate Before Housing and Research Needs

**AS OF THIS WRITING MITIMCO** (MIT Investment Management Company) has made two presentations of its revised up-zoning petition for the east end of the campus, one to the Cambridge Planning Board on January 15, and the other to the Ordinance Committee of the Cambridge City Council on January 24. This explicit plan for major commercial construction on the MIT campus has never been presented, discussed or debated at a regular meeting of the MIT faculty.

The up-zoning petition for 26 acres of campus land is dominated by new construction of two very large commercial office buildings filling the open area between Main Street and Amherst Street, and a 300-foot tower with market rate residences across Main Street and Broadway, at the One Broadway site

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### Address

MIT Faculty Newsletter  
Bldg. 11-268  
Cambridge, MA 02139

### Website

<http://web.mit.edu/fnl>

**Telephone** 617-253-7303

**Fax** 617-253-0458

**E-mail** [fnl@mit.edu](mailto:fnl@mit.edu)

### Subscriptions

\$15/year on campus  
\$25/year off campus

Vol. XXV No. 3 January/February 2013

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**Photo credit:** Page 1: David Lewis. Pictured (l-r): Prof. Jonathan King, Prof. Edmund Bertschinger, Prof. of Physics Emerita Vera Kistiakowsky (holding framed forum poster), Prof. Mary-Lou Pardue, Prof. Lisa Steiner, Vera's daughter Prof. Karen Fischer of Brown University Geological Sciences (holding collage, gift of FNL Editorial Board). Page 3: David Lewis.

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**MITIMCo Petition Goes Forward**

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(NE corner of Broadway and 3rd Street). Of these more than 900,000 square feet of new construction, none is explicitly earmarked for graduate housing, postdoctoral or junior faculty housing, or instructional, research, or other academic needs. We are disappointed that MITIMCo has still failed to provide accurate images of their 3-D model to the faculty, and has not notified faculty of the public presentations.

Among the main positive impacts of the up-zoning petition would be an increased flow of rental/lease income to the MIT Corporation, estimated to be in the range of \$20-\$30 M/year, and increased street level landscaping.

Impacts that we view as negative include: a) Lack of housing to address the needs of some of the 4,000 graduate students forced to find housing off campus; b) increased pressure on those graduate students with respect to housing due to the influx of office workers housed in the new buildings; c) increased traffic in the area without any increase in street or T capacity; and d) loss of campus space and diminution of campus character and integrity as a leading academic institution, as the area is integrated into the Kendall Square commercial complex, as proposed by MITIMCo. These office structures will contrast negatively with the lower skyline of the MIT campus, shadowing nearby buildings and partially blocking the sky from the Koch/Biology/Stata quadrangle and Medical Center and Media Lab plazas. Though MITIMCo has focused on the benefits to the Kendall Square community, we feel that these commercial towers will undermine rather than enhance MIT as a university community.

No analysis has been presented of how the rental income might compensate for the loss of productivity as thousands of graduate students continue to commute, probably from longer distances, rather than being on or near site. As rents in the area increase – more than 7% last year –

graduate students are being forced to live farther and farther from campus or suffer a decreased standard of living. The pressure on graduate student housing has been clearly articulated by the students themselves, and this information filters out to those prospective students who come for interviews. To what extent will continuing to ignore graduate student needs increase the difficulty in recruiting the best students, compared to campuses like Stanford, Harvard, Princeton, and Rockefeller? These institutions provide for a larger fraction of graduate student housing needs and have recently added significant graduate student housing on their campuses.

For those of us who have seen the MITIMCo model (see below), it is clear why the administration has not yet

tional needs. For example, the model does not account for the opportunity costs of losing future federal and industrial grants, owing to the lack of research space and/or instructional space.

MIT faculty and graduate students are among the most important stakeholders in decisions on the development of our campus. To be excluded from examining and debating the proposal presented to the City undermines the faculty and graduate students' ability to fulfill their responsibilities as core members of the MIT community. We appreciate the work of the Provost's Task Force on Community Engagement in 2030 Planning on Development of MIT-Owned Property in Kendall Square. However, we note sadly that no significant "community engagement" process



**Photograph of MITIMCo Model of Proposed Kendall Square Construction Presented at City of Cambridge Planning Board Meeting on January 15**

acceded to a full presentation at a faculty meeting. The proposed commercial buildings are too large and too tall; they dwarf and shadow other campus buildings, undermining the integrity of this area of the campus.

The proposed office buildings largely reflect MITIMCo's interest in maximizing rental income stream. The rental sums are small compared with MIT's overall R&D budget (see "M.I.T. Numbers," back page). With 40-60-year leases, similar to the ones negotiated with Pfizer and Novartis, the ability to regain this valuable campus space will be sharply limited. The MITIMCo model appears to us to undervalue MIT's future research and instruc-

has been set in place. The 12-18 month housing needs assessment described by MIT Executive Vice President and Treasurer Israel Ruiz at that January 15 City of Cambridge Planning Board meeting will only yield feedback after construction decisions have been made.

The Faculty Policy Committee (FPC) currently reviews the agenda of faculty meetings. The FPC should insist that the MITIMCo petition be presented at a formal meeting of the faculty, with circulation of the details to all faculty, including financial expectations, in advance. Equal time needs to be provided for analysis, critiques, and alternative proposals at the meeting(s). ■

**Editorial Subcommittee**

## From The Faculty Chair Task Force on Community Engagement with 2030 Planning

Samuel M. Allen

*Reprinted from the MIT Faculty Newsletter, Vol. XXV No. 2, November/December 2012.*

**MY BIGGEST ASPIRATION** IN taking on the role of Chair of the Faculty has been to improve faculty/administration communication, collaboration, and trust. Whether justified or not, many faculty had told me they felt that important decisions were made by “the administration” before faculty had the opportunity to provide their perspective on the issues. Examples included initiating major international initiatives, launching MITx, and participation in the MIT 2030 planning process. A major faculty concern was the belief that faculty should have a say in decisions that would have a significant impact on how faculty members spend their working hours.

Over the past summer the new administration took a major step toward encouraging faculty engagement by announcing the formation of the Task Force on Community Engagement in 2030 Planning, a group of eight senior faculty with diverse perspectives, to consider and make recommendations on two topics. First, should MIT re-file its “up-zoning” petition with the City of Cambridge, seeking to increase the density of development around Kendall Square? Second, how should the MIT community provide input to long-range planning encompassing the entire campus?

What factors led to formation of the Task Force? From my direct experience, I can identify a few:

1. Several lively discussions at meetings of the Faculty Policy Committee during the 2011–12 academic year focused

attention on the fact that among our faculty there are numerous experts in urban design, city planning, and real estate, yet only Adele Santos, Dean of Architecture and Planning, had been included in the 2030 planning activities.

2. Significant attention over several years was given in the *Faculty Newsletter* to faculty concerns about the development of Kendall Square.
3. A plea was made at the May 2012 faculty meeting to broaden the discussion of Kendall Square development to include more faculty input.
4. A Faculty Forum held in July 2012 was devoted to Kendall Square planning and a number of colleagues expressed concerns about the very limited engagement with the planning process.

Would the Task Force have been formed without the faculty having spoken out? It seems unlikely. Would it have been formed without an attitude of respect toward the faculty on the part of the administration? Again, I doubt it.

The Task Force’s creation is a tangible sign that the administration values faculty engagement in decision-making. This is something that the faculty have long expected. Not too long ago, as part of my Conflict Resolution studies at UMass Boston, I had the occasion to review the 1988 report, “Report of the Committee on Reorganization and Closing of Academic Units: Learning from the ABS Experience.” [This report makes for very interesting reading, as it chronicles an especially low point in MIT administration/faculty relations. It is available at:

[orgchart.mit.edu/node/6/pnr](http://orgchart.mit.edu/node/6/pnr).] This report was prepared by an *ad hoc* faculty committee in response to the way in which the decision to close the Department of Applied Biological Sciences was implemented. I was struck with the current relevance of a portion of the report’s conclusion:

*“It is the view of this committee, and we believe of the faculty at large, that a key to the success of the Institute has been the maintenance of a system of shared governance. Few of the MIT faculty see themselves in an employee/employer relationship to the Administration. Rather, most feel that the Administration and faculty share a joint responsibility for sustaining the excellence of the Institute. They expect that, when important choices arise about mission or internal organization, they will naturally be involved in the process leading up to decisions and in the planning of implementation.”*

The administration’s recent decision to form the Task Force on Community Engagement with 2030 Planning is an affirmation of this principle of shared governance.

The Task Force completed its report [available at: [orgchart.mit.edu/node/6/pnr](http://orgchart.mit.edu/node/6/pnr)] on the up-zoning petition in mid-October, and I had the privilege to present the main findings of the report at the October faculty meeting. [The Task Force Chair, Tom Kochan, was out of town that day.] Faculty received copies of the report by e-mail shortly after the faculty meeting concluded. Quoting from the report:

*“The Task Force’s key finding was that the Kendall Square design proposed by MITIMCo [the MIT Investment*

Management Company] falls short of MIT level expectations, standards, and aspirations we have for the future of the campus. We can and must do better and we suggest options for improving the design. We believe these options can be considered and implemented in the design phase after the up-zoning petition is approved. For this reason, and because a number of City officials are anxious to receive MIT's petition, we support filing the petition now, provided that:

1. A comprehensive urban design plan for East Campus is developed in the post up-zoning stage but before any building starts. This has not been done yet and needs to be done as part of the planning for Kendall Square development.
2. Our faculty Task Force or a similar group participates directly in the development of the East Campus plan and Kendall Square project design.

3. The plan and design of Kendall Square is evaluated against a broader set of principles than just return on investment principles that reflect the things we value when designing academic space and spaces for student use.”

All of the feedback I've received on the contents of the report has been very positive. This includes faculty who had been most vocal in expressing concerns with the Kendall Square development process and several members of the *Faculty Newsletter's* Editorial Board.

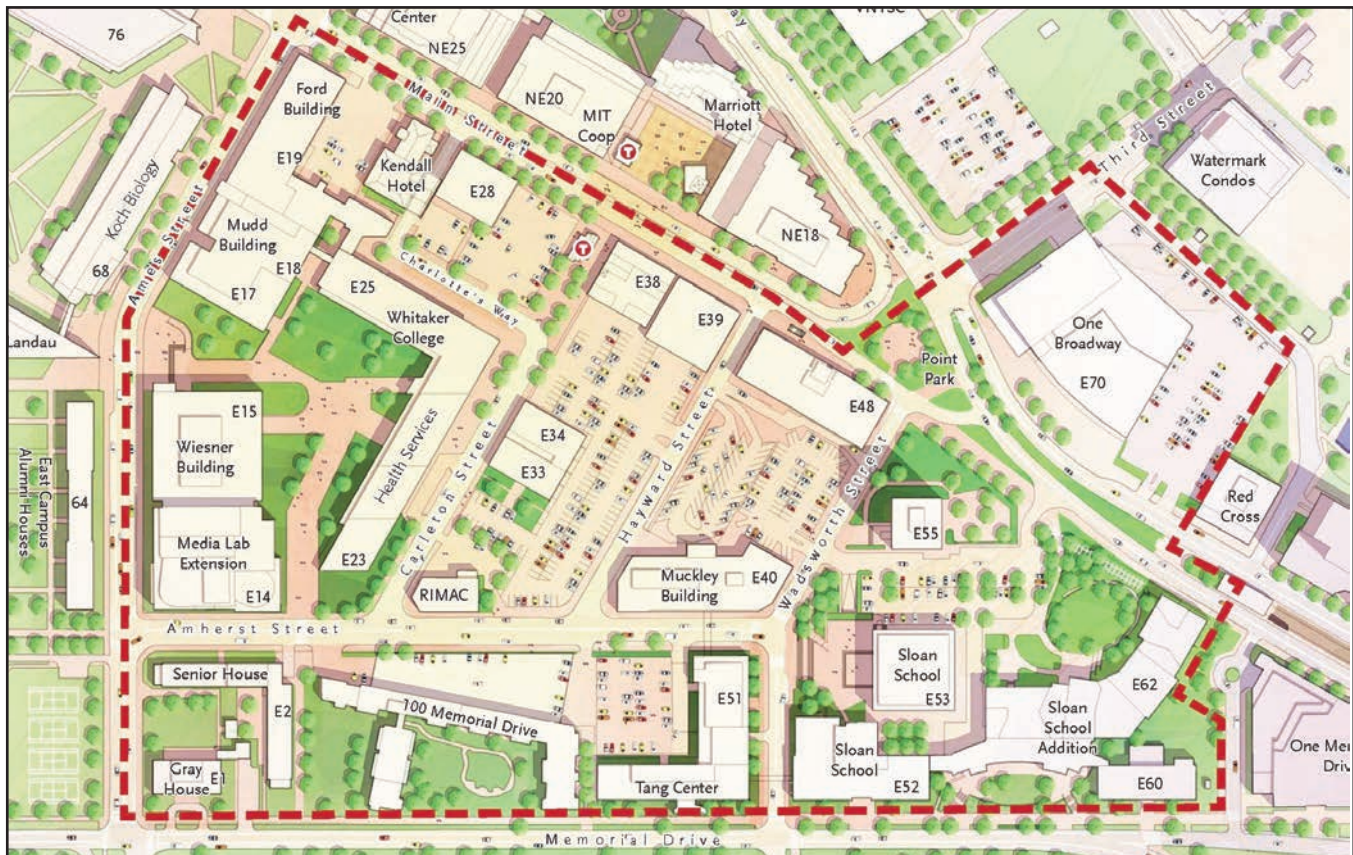
The Task Force is now engaged in weekly meetings, working with MITIMCo planners and members of the MIT administration, to discuss and evaluate revisions to the plan presented with the prior up-zoning petition, filed with the city in April 2011. Our aim is to develop a framework for a design that addresses the concerns of the Task Force, which when

complete will accompany a new up-zoning request. I am hopeful that this three-way collaborative process will result in a much-improved design for MIT's real estate east of Ames Street, which includes a dramatic and functional eastern gateway to the campus.

The Task Force will continue its efforts this fall, including making a recommendation about community engagement with planning for the entire MIT campus.

The Task Force's formation, breadth of faculty expertise and viewpoints, and progress to date bode well for serving as a model for future engagement of the community in MIT's decision-making processes. Much remains to be accomplished before I am willing to call this an unqualified success, but I am very hopeful. ■

**Samuel M. Allen** is a Professor in the Department of Materials Science and Engineering and Faculty Chair ([smallen@mit.edu](mailto:smallen@mit.edu)).



The area within the dashed lines comprises the portion of campus considered in the Institute's up-zoning petition that was submitted to the City of Cambridge in April 2011.

## Twenty to Thirty Questions About MIT 2030

Caroline A. Jones\*

offered to the MIT community by the SAPIens (an assemblage of architects, planners, and historians in SA+P – the School of Architecture and Planning)

*Reprinted from the MIT Faculty Newsletter, Vol. XXIV No. 2, November/December 2011.*

**MIT 2030 REPRESENTS A** bold beginning for a comprehensive plan that anticipates the renovation of MIT's aging facilities and produces a map of its future research priorities and expansion needs. As emphasized by its original authors, MIT 2030 "is a process, not a plan." A plan is now needed, one focused on the core educational priorities of the Institute rather than driven by real-estate development paradigms.

We advocate that the administration take full advantage of the professional and research expertise of its faculty, and open the MIT 2030 process to its community for wide-ranging input and needed modification. We know that this more transparent, collaborative, and open engagement works: such a process contributed to a smooth financial response to the world-wide economic crisis, and that kind of engagement will help convert the MIT 2030 "process" to a visionary plan.

The following questions purposefully do not add up to a single opinion, but weave together suggestions and concerns based on our research in design and planning. We urge consideration of community and housing issues, quality of life, and integration with regional plans that are not evident in the current MIT 2030 [[web.mit.edu/mit2030](http://web.mit.edu/mit2030)] and Kendall Square Initiative [[www.kendallsquareinitiative.org](http://www.kendallsquareinitiative.org)] Websites. We also advocate for an open and transparent process in formulating a viable plan for MIT's future.

1) MIT 2030 is insistently "not a plan, but a process," an appropriate demurral when

should be intelligently adventurous.

4) Can the need for housing in Cambridge

The MIT 2030 documentation is driven primarily by programmatic imperatives and economic considerations that can be captured *quantitatively*; how can MIT 2030 better reflect *qualities* and consider broader spatial constructs that address life at the Institute? How can MIT 2030 both address and build community, making MIT an even more desirable place to be?

research objectives, tools, and methods change as rapidly as they do on the edge of innovation. But not having a plan is not a long-term solution. How can the shifting projections of spatial needs become a flexible, achievable, visionary plan, with attention to views, perimeters, gateways, 24-hour life, and community?

2) The MIT 2030 documentation is driven primarily by programmatic imperatives and economic considerations that can be captured *quantitatively*; how can MIT 2030 better reflect *qualities* and consider broader spatial constructs that address life at the Institute? How can MIT 2030 both address and build community, making MIT an even more desirable place to be?

3) What does MIT want to be 20-30 years from now? What are the existing typologies of built and open space, and of landscape? How can we produce a long-range vision that does not simply see space as a "left-over" to be filled by more buildings, or raw material for real estate? MIT, of all places,

be incorporated into MIT 2030, in partnership with the state and city, to foster a dense residential development on the peripheries of MIT property? This would create a more diverse environment, supporting shops, eating places and a 24-hour life, which adding only academic space and more non-MIT research facilities cannot provide.

5) Image projection is one of MIT's major issues, which MIT 2030 could address. How can our physical structures and informational infrastructures better communicate the sense of the MIT spirit to our students, our local community, and the world? Can we partner with the City of Cambridge in its current study of Central Square, to address the fact that the approach to MIT along Mass. Ave. (from Lafayette Square) is the least successful part of this major thoroughfare?

6) The MIT 2030 flyover reflects MIT's historical orientation toward the Charles River. Can we turn 180 degrees and re-conceptualize MIT's orientation? How

might its 21st century development engage with the City of Cambridge, including our neighbors in public housing as well as commercial firms? Can we begin to clarify the difference between the historic core and the West side, between edges such as Memorial Drive or spines such as Vassar Street? Which areas/places are those of lively interaction and which are for nature and tranquility? How does technology and innovative construction factor into the open space and landscape design?

7) Where is *design* in the MIT 2030 plan? It seems that design is still considered a decoration to be applied in the final stages of individual buildings. By contrast, architects see design as a fundamental component of large-scale conceptualization: urban planning, relations to energy systems, coordination of green integument, and instigations of lasting cultural change. A bias for design would help the MIT 2030 plan become less bureaucratic and more visionary.

8) Should we accept MIT 2030's conception of the Institute as a series of separate buildings, or use the planning process to recall the genius of Bosworth's original and highly flexible idea? The original 1913 designs envisioned a grand interconnected structure conceived in opposition to the idea of the normative college campus (a stretch of land populated by independent buildings with separate functions). MIT's 1913 facility, the largest academic structure in the world when it was built, remained highly adaptive and flexible for half a century. Today's Biomedical labs are vastly different from Humanities buildings, but can the original flexibility be recaptured? As buildings become more and more specialized they will become more self-limiting.

9) Almost every building on campus is centered in on itself, and on its own internal corridors. How can we improve larger-scale continuities across the campus, across building lobbies, and courtyards? (Such continuities can concern themselves

with materials, vegetation, rainwater management, etc.) The purpose would be to think of the Institute as a set of dynamic functions and integrated spaces rather than fragmented ones, an integration that will not produce itself automatically.

Where is *design* in the MIT 2030 plan? It seems that design is still considered a decoration to be applied in the final stages of individual buildings. By contrast, architects see design as a fundamental component of large-scale conceptualization: urban planning, relations to energy systems, coordination of green integument, and instigations of lasting cultural change.

10) MIT encompasses both practical and symbolic spaces – how will MIT 2030 think through *both* of these imperatives? Unlike the traditional university, MIT has many courts (not a “quad”) and many spaces that exist at an unprecedented scale. This scale often dwarfs existing buildings – as in the West Campus area bounded by Saarinen, Aalto, and Holl structures (with the dorms stretching beyond to Sidney Street, etc.). Can we reconfigure the sport fields to integrate the structures that surround their chain link perimeter into a unified sub-campus environment, or even consume some of their space for social activity buildings? How can this otherwise featureless domain-in-between be given identity and symbolic meaning?

11) Will the current plan accommodate the tactical choices of the last five decades, in which buildings have been put here or there, each dedicated to a specific purpose (and each in a completely different design language)? Or, since specific purposes and even interdisciplinary groupings are doomed to become obsolete, can we use MIT 2030 to urge a rethinking of the building as a unit? The recently completed North Court is a promising beginning – can it be improved from a simple crossing of walkways and be reconceived as a quad conceptually enhancing Killian Court?

12) What would happen if we could imagine the MIT environment as a series of outside spaces reconfigured to link and integrate the separated buildings once again? Perhaps in some remedial way the space around and behind the Calder

could be redesigned so that the Killian, McDermott, and North Courts would constitute an inner spine that then could get linked to the new sites to the north. One thinks of Olmsted's famous conception of an “emerald necklace” for Boston. Adding a few trees here and there to the front of buildings is not enough; we need to understand how public space knits life, work, and learning together as interrelated activities. We can begin by valuing, enhancing, and structuring the interstitial public spaces that we have.

13) How might the “campus landscape” be creatively re-envisioned as an “urban ecosystem?” The MIT 2030 profile features an emergent Great Circle around the North Court with a strong emphasis on biological and allied sciences. How might this area of campus, and other areas, become “ecological laboratories” where experimentation extends beyond the walls of the buildings? The bioswale behind Stata might be a beginning, but how might MIT move toward dramatic instrumentation and experimentation in the campus as a living, learning laboratory?

14) The CSX railway corridor, which defines MIT's northern border, is both a barrier and a potential resource. How can the MIT property on the other side of the rail lines be woven into the rest of the

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**Twenty to Thirty Questions About MIT 2030**  
Jones, from preceding page

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campus, particularly for pedestrians? There is presently no access to those areas after Mass. Ave., yet there are gaps in the wall defined by Metropolitan Storage, West Garage, etc. MIT owns the air rights some eight meters above the rail corridor, which can yield a very large volume of floor space for campus and other expansion (as in the example of the Brain and Cognitive Science building) and change the form of both the campus and Massachusetts Avenue.

15) In a related question, how can the traditionally internal focus of MIT buildings and the “transportation” conception of the outdoor spaces (crosswalks, sidewalks, asphalt) be radically rethought? How can the planning process encourage the proliferation of external openings, buffer zones, and vital small businesses (cafes, galleries, bookstores) or even non-governmental and international organizations and not-for-profits that will mesh public and university spaces, contributing to the life of our wider community?

16) What can we do to integrate additional programs into the campus, in order to enliven its spaces when there are no classes or in the evening, and in doing so increase a sense of liveliness, safety, and security? Can spaces and zones for public/university partnerships be incorporated into the plan? Can MIT partner with the City or non-profit cultural groups to ensure that its peripheries and surrounding community areas become green, well-lit, and comfortable to be in at all hours?

17) MIT is neither a fully urban university nor a traditional campus built on the monastery model – how can its status as a sprawling institution with urban edges be leveraged to bring “contaminant urbanity” within reach of students and faculty? A different kind of investment and urban vision, not based on current real estate models, will be needed if MIT is to enable

more than a food court culture. (The vibrant restaurants that have grown up in the non-MIT-owned stretch of Main Street offer a living laboratory for this question to be tested.)

MIT is neither a fully urban university nor a traditional campus built on the monastery model – how can its status as a sprawling institution with urban edges be leveraged to bring “contaminant urbanity” within reach of students and faculty? A different kind of investment and urban vision, not based on current real estate models, will be needed if MIT is to enable more than a food court culture.

18) Can the MIT 2030 process serve to reopen questions with Boston, the Commonwealth of Massachusetts, and the federal government about the proposed Boston inner urban ring public transportation corridor (which would cross the river at the BU Bridge and connect the Green and Red Lines)? The CSX rail corridor (referenced above) is crucial to this circular route, and MIT must keep on advocating for this metropolitan expansion as part of its long-term plans. Unlike Harvard but more like Tufts, MIT has at least two main access points: Mass. Ave. and the Kendall “T.” Can MIT 2030 aggressively conceptualize the CSX rail corridor in order to rethink and reinvent these urban nodes?

19) Why are we not conceiving an internal circulation system for our increasingly sprawling campus, allowing the members of the community to traverse it more quickly? Can we investigate moving sidewalks? Shared bicycles? An internal taxi system with small electric cars in dedicated lanes across the courtyards? The Tech Shuttle does not seem to be serving these needs.

20) The retrofitting of our existing building stock will be a major challenge in

order to meet our own evolving sustainability standards. Can the MIT 2030 plan to cost, design, and sequence this be dynamically connected to the substantial cutting edge research being produced by our urbanists, engineers, and building

technologists around questions of sustainability?

21) MIT has the top-ranked Urban Studies Program in the world; can this research capacity be better utilized for the conversion of MIT 2030 to a plan? How can MIT use the assets of its faculty and students to drive a more deliberative development process that avoids the classic town/gown problems? Is it time to have a strong urban designer come in, to give MIT 2030 a compelling visual narrative?

22) The challenge of improving the interface between the campus and the surrounding community once seemed to fall within the purview of the MIT Executive Vice President for the physical plant (who was given oversight of MIT real estate holdings). Is this charge now part of new EVP Israel Ruiz’s portfolio? Can the process for “moving to a plan” be clarified along with this new leadership? What has happened to the previous planning proposals (from current faculty such as Dennis Frenchman to outside architect Robert Venturi)? Can these proposals be shared with the community and opened to campus-wide debate and discussion?





The firm of Elkus Manfredi Architects' rendering of Kendall Square as presented to the City in March 2011 and illustrated on the MIT 2030 Website

23) Can the current plans for Kendall Square be reopened in light of MIT 2030? This major portal to the Institute sets up much bigger stakes than can be addressed by a few banners and signs. Kendall can be a laboratory for all the questions we have been asking: How can the Institute encourage a more porous and yeasty urban edge? How can MIT partner with the city to produce a destination that will allow students and faculty to engage with the community? How can we produce the circumstances for MIT culture (art, experiment, performance, science) to interface with small-scale entrepreneurial urbanity (coffeehouses, performance spaces, the Kendall Cinema)?

24) The Kendall Square plan as it stands does present a vision for this important gateway to the MIT campus. Can this plan be reconfigured to incorporate more than real estate and commercialism in its brief? A revised plan for Kendall Square should view architectural design as a tool that transforms space and environments

through unprecedented ideas. We note that the following words are missing from the current plan:

- civic
- public
- identity
- invention
- innovation
- transformation

How can the Kendall plan better confront the civic, public, and iconic missions of materializing the ambitions of a global institution?

25) Both Kendall and MIT 2030 suggest a process driven by development rather than well-informed planning; the model anticipates future revenues based on an unending stream of real estate partners. How can MIT better utilize its collective intelligence (economic and urbanist)? Planners can think through and visualize different economic contingencies, they can do time models based on good data already in

hand for the campus, city, region, and nation. Time taken now will save time wasted later, if these data can be tapped.

26) Discussions about an integrated campus life have long included debates about faculty housing (especially for young faculty), about daycare, about schools (possibly associated with MIT like the BU Academy), a viable faculty club, and so forth. How can MIT 2030 accommodate a vision for housing related to MIT? Without such a vision we risk being surrounded by high-end condominiums, service industries, and office space, with the campus a factory that produces workers for the companies around it. ■

\***Caroline A. Jones**, a Professor in the Department of Architecture ([cajones@mit.edu](mailto:cajones@mit.edu)), solicited a range of views from a collective called here the SAPIens: School of Architecture and Planning faculty Stanford Anderson, Julian Beinart, Eran Ben-Joseph, Alexander D'Hooghe, John Fernandez, Dennis Frenchman, David Hodes Friedman, Amy K. Glasmeier, Mark Jarzombek, Nasser Rabbat, Bish Sanyal, Nader Tehrani, Gediminas Urbonas, and Lawrence Vale.

## A Brief History of MIT's Land Acquisition Policies

*Reprinted from the MIT Faculty Newsletter, Vol. XXIV No. 2, November/December 2011.*

**IN 1912, FRANCIS HART**, the sixth treasurer of MIT, oversaw the purchase of 46 acres of land in Cambridge for the new campus. The purchase cost was \$775,000 or \$17,000 per acre. Shortly thereafter, Coleman du Pont, a member of the MIT Corporation, argued for additional land acquisitions and arranged for the acquisition of land west of Massachusetts Avenue for MIT's future growth. Additional land was purchased in the years that followed, for either immediate academic use or for investment use on an interim basis, awaiting the need for academic purposes.

These properties and others that followed were purchased with the intent of leasing them "as is" and if any improvements were made they would be covered by tenant leases. The intent was to have the lease income write down the capital cost of the property, so that when it came time to transfer it into the academic category its cost would be low. The funds used to make these purchases of property scheduled to be held for future academic expansion were held in Pool C, current invested funds, rather than endowment funds. Thereby enabling below market transfers of property to academic use when needed.

In addition, MIT solicited gifts of property from both the federal government and private companies, which were added to our land inventory without a capital cost. After WWII, the federal government transferred several buildings to MIT that had been acquired during wartime and were now surplus to the government's needs. In addition, the Nabisco Company gifted to MIT a property on Albany Street that allowed for the expansion of the Magnet and Fusion Laboratories. In similar fashion, the Atlantic Richfield Company donated land on Massachusetts Avenue to MIT for Institute purposes. Many of the tenants of these low cost real estate investments were MIT faculty startups who were able to afford the simple, low cost space as they struggled to get their companies going.

### A Long-Range Plan

In 1960, the Institute's Long Range

Planning Committee commissioned the newly established Planning Office to prepare a long-range plan for MIT, a plan that would deal not only with the then current building priorities, but would provide integrated strategies for the academic, residential, social, financial, and community relations needs of the Institute for the next 40 years. This time frame reflected the expected period of service for a newly tenured faculty member. A key component of that effort was a land acquisition plan identifying the area that MIT should acquire for its long-term institutional needs and would ultimately remove from the tax rolls. A parallel effort in this plan identified nearby areas where MIT could assist the City in rebuilding its then dismal economic base, and replenish and enhance the City's tax base. The Technology Square initiative was the first example of this policy. Simultaneous with MIT's planning efforts, the City of Cambridge Planning Board and its Citizen's Advisory Committee had undertaken a review of the City's plan and zoning ordinance. MIT, working closely with the City, was able to establish that the logical areas for MIT expansion would remain south of Main Street and Sidney Street, and that the Institute would seek to focus its efforts at economic renewal for the City north of Main Street and Sidney Street. This plan was enshrined in 1965 in the Planning Board's publication "Land Use Goals for the City of Cambridge," as well as later in the designation of an Institutional district for MIT in the Cambridge zoning ordinance.

### Kendall Square Urban Renewal Project

By 1965, the initial success of the Technology Square project attracted the attention of a team from NASA that was charged with establishing an electronics research center in the Boston area. Their interest in being close to MIT and other institutions led to a Cambridge proposal, backed by MIT, to initiate the Kendall Square Urban Renewal Project that would clear much of the antiquated industrial buildings in Kendall Square, provide a site for NASA's needs, and reserve a 13-acre area for private development. Their precarious financial condition in those days gave the City pause, until MIT agreed to utilize a special provision of the urban renewal law that enabled Cambridge to have the value of MIT land and buildings purchased with-

in a mile of the project area transferred to its account. Ultimately, this amounted to a sum of \$6.2 million in credits that the federal government awarded the City of Cambridge, and made it possible for Cambridge to undertake the project without financial risk. MIT, in turn, was required to commit itself to using the properties that had been certified for these credits for educational, research, and service purposes. MIT provided, as required by law, campus development plans for these properties, which were duly approved by the City Council in 1965 and 1967. While all of these MIT sites lay outside the official boundaries of the urban renewal project area, they did meet the federal requirements and they also lay within the area that had been established by the Cambridge Planning Board and MIT as the districts in which the Institute would concentrate its campus development.

Since MIT would have to assemble the remaining land to fulfill this plan on the open market, it was clear from the outset that the implementation of the land acquisition plan would take a long time; as much as 40 to 50 years. That projection has been painfully accurate.

The implementation of the plan was the responsibility of a real estate group in the MIT Treasurer's Office. From time to time its energies were diverted to tasks that included MIT's commitment to develop badly needed elderly housing for the Cambridge Housing Authority in 1971, and later for the completion of the land assembly required to rationalize the properties acquired from the Simplex Wire and Cable Company on which the University Park Project would be built. Notwithstanding those challenges, the Institute was fortunate to have as its Treasurer Glenn Strehle '58, who placed Phillip Trussell '56, an alumnus with deep loyalty to the Institute and considerable real estate experience, in charge of the Real Estate Office. As an MIT staff officer, Trussell worked in close cooperation with the Planning Office to implement the long-range Institute land assembly plan, as well as lead the development of the University Park project. This 20-year effort did not produce significant short-term gains but is now, with its combination of office, laboratory, retail space, and over 650 units of housing, an important source of the higher

returns reported by the management company's real estate group. University Park is also one of the City's major taxpayers.

#### **A Change in Focus**

The change in the Real Estate Office's focus begins with the change in leadership of the MIT Treasurer's Office in the late 1990s. When Allan Bufferd became Treasurer, the focus of the Institute's land acquisition program shifted from one whose primary goal was the assembling of land for future academic purposes, to one whose primary goal was the management and development of these properties to maximize the return on investment, until such time as it was needed for academic purposes. At that time it could be purchased by the academic budget at its market value. The argument for this shift in policy was, to some degree, based on the view that private real estate developers in the vicinity of the Institute were profiting from the economic stimulation provided by MIT faculty and students, and that MIT should also seek to enjoy the possibilities for significant returns in real estate development. In addition, the rising costs of land acquisition resulting in part from MIT's early initiatives in Tech Square and University Park and the growing success of developments in Kendall Square, suggested a different "more business-like" view of the management of MIT's land assets.

In a report prepared by the Planning Office in 1998, the issue was brought into sharp focus, when it pointed out the conflict between priorities for ensuring the continuity of the academic land reserve program and the pursuit of investment opportunities. The report stated that one of the results of this shift was that the Institute had failed to acquire some important properties that were key to its academic future, because the return on investment was not high enough to meet their benchmark for returns. The focus was now clearly on purchasing property for the investment portfolio, rather than the academic expansion portfolio. A number of recommendations were made to free the Treasurer to make land acquisitions for future academic needs, by providing a different financing mechanism that favored the needs of the academic land acquisition program. But, to date, this has not occurred.

#### **MIT Investment Management Company**

In the years that followed, Stephen Marsh became the Director of the MIT Real Estate Office and, with the establishment of the Investment Management Company in 2004, land acquisition and management policies took a very different turn. The former MIT staff members of the Treasurer's Office now became employees of a separate MIT Investment Management Company (MITIMCo). Their new levels of compensation were based on market standards for investment managers and their total compensation based on incentives for performance. While this arrangement has become a common practice for some universities whose endowment is principally in equities and other similar investments, it was new to MIT. A key result of this arrangement is that the investment real estate group's employees, whose incomes are based in part on performance, were encouraged to seek maximum return for any land resource under their supervision.

In addition, the new MIT administration, under President Hockfield, called for the acceleration of improvements to the environment in East Campus between the Sloan School and the Medical Department. A plan for this area had been prepared in 1998 consistent with MIT's long-range academic, service, and environmental goals, but it was awaiting the completion of key land purchases before going forward. It would have permitted the development of 600,000 to 800,000 sq. ft. of space for academic and research use and provided for over 115,000 sq. ft. in retail area. In addition, it provided for the development of 400 units of housing on the Sloan School campus and a new green court for East Campus.

As noted above, Mr. Marsh and his colleagues in the investment company have proposed to the City and the MIT community a new development plan for these properties that had heretofore been reserved for academic use. He submitted an amendment to the zoning ordinance that would allow the addition of approximately one million square feet of additional development. This development would be characterized by a series of separate buildings dominated by a 25-story office/laboratory tower for commercial clients to be located adjacent to the Kendall T Stop.

Since a substantial part of this area had been certified by MIT to the City of Cambridge and to the federal government for exclusive use as educational facilities as part of the underlying financing of the Kendall Square Urban Renewal area, Mr. Marsh was informed of the potential conflict between his proposal and the Institute's past commitments. The issue was raised of the prospective conflict between future academic space needs that required the transfer of investment land to the academic portfolio, and the reduced revenues to the City of Cambridge when the projected high tax valued real estate was removed from the tax roles in the future. MITIMCo's response was to claim that the current inventory of development rights for academic purposes would be preserved in the campus area in this proposal through a variety of mechanisms, primarily the demolition of existing buildings, possibly including the 270 apartments at 100 Memorial Drive, and through the development of high rise buildings. Since high rise buildings for academic and research purposes have proven to be problematic at MIT – as witnessed by the Earth Sciences Building – to depend on that type of solution for the future needs careful scrutiny.

More troubling, has been the view held by MIT's General Counsel that the Institute's commitments to use the properties that MIT had certified to the federal government and the Cambridge City Council for educational purposes was no longer in force, based on a letter from the deputy counsel of the regional office at HUD, a letter which indicated that the federal government had no mechanism to enforce this agreement, since the project had been closed out with the City of Cambridge in 1984. This view is troubling for at least two reasons. First, the government has in effect admitted that it did not perform its due diligence in ensuring that MIT was in compliance with its commitments when the project contract with Cambridge was closed out. Nor, in fact, did the City of Cambridge ensure that MIT was in compliance at that or any other time.

**O. R. Simha**  
Former MIT Planning Director

**Concerns Over Graduate Student Housing**  
Spatocco, from page 1

the higher order effects this will have on both the faculty and student communities at MIT.

To be very clear, our institute has shown significant commitment over the last decade with regards to its development of housing and support of our residential communities. In spite of these efforts, we now face unprecedented external market forces which have the power to irrevocably damage the ways and places in which we live. Thus, if we aim to be preemptive, rather than simply reactionary, in addressing the rapid changes that are increasingly taking place around us I propose here that we begin a collaborative conversation among students, faculty, staff, and administrators to set forth a vision for how our communities are defined and how to sustain our vibrant and invaluable residential community in an ever-changing housing market.

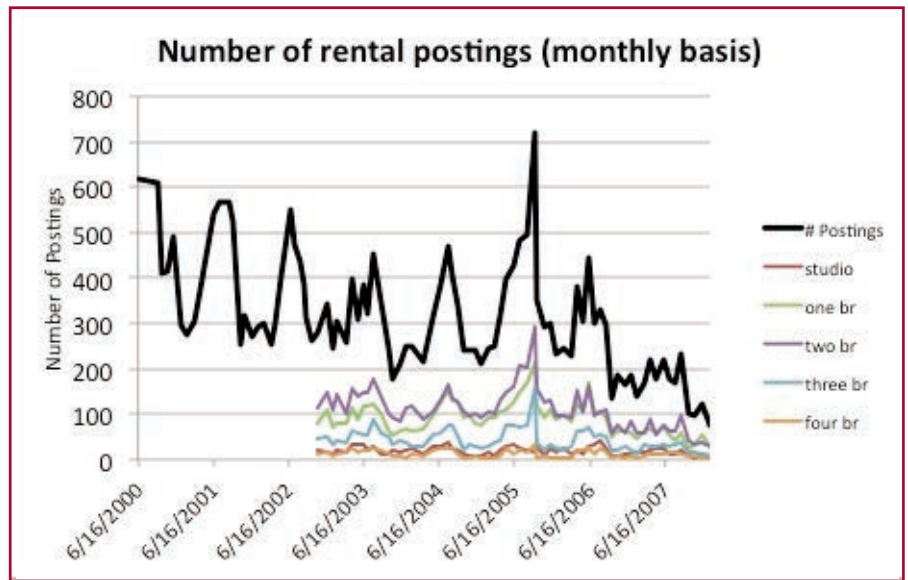
Although most of our statistics have come from studies of and on behalf of the graduate student community, I believe there exist far more commonalities between the faculty and graduate communities than we might otherwise acknowledge. For starters, approximately 62% of graduate students live off campus. This amounts to over 4,000 graduate students living primarily in the cities of Cambridge (59%), Boston (13%), and Somerville (11%) [percentages are of the total number of students who live off campus (4051). Numbers have an error of approximately +/- 2%] – the same neighborhoods in which a majority of faculty and staff currently reside. In addition to being neighbors, our demographics exist somewhere between undergraduates and faculty in terms of our international diversity (38% international), our marital statuses (31.6% with spouses or partners), and the number of households with dependents (~7% with dependents). In other words, we frequently reside where faculty live, with families, and in adjacent stations of life. Thus, I hope that some of my message may find resonance with

many among the faculty.

To get straight to the point: It is our belief that, if left unchecked, the Cambridge rental housing crisis will not only have a profound effect on the quality of life of our many off-campus MIT community members, but it may also markedly impact our ability to attract the talent as well as maintain the level of productivity which fuel our academic pur-

is poignantly demonstrated if we look at the aggregated listings of rentals in Cambridge and adjacent cities over the last seven years. The data, collected by the MIT Off-Campus Housing Office, shows a 75% decline in the average number of listings from a constant monthly sampling of the rental agencies in the area.

This trend is reinforced if we look at the rental vacancy rates in the regions sur-



suits. For these reasons, I propose that an honest and frank conversation begin now in order to equip us strategically to manage the exogenous market as well as guide our current and future campus (and abutting land) development in the best interests of our communities.

**Understanding Off-Campus Housing**

There are some who might cringe at my use of the word “crisis,” noting that the housing market is one which experiences different cycles and characteristic relaxation times than would the demand on other land resources for commercial or industrial uses. Though I would acknowledge that the housing market is indeed particularly complex and dependent on a number of inputs, I believe that all quantitative indicators available speak to an increasingly troubling trend: It is becoming nearly impossible to find, let alone afford, housing in the City of Cambridge. This issue of availability and affordability

rounding MIT. Specifically, over the last decade, we have witnessed one of the most precipitous declines in vacancy rates in the Northeast. While MIT and real estate developers have expanded enrollment and commercialized the lands encompassing MIT, respectively, the housing market lagged seriously behind. We are now faced with a situation in which demand is rapidly outpacing supply and those who we’ve spent so much time and money trying to attract to the City of Cambridge or MIT have little choice but to take up residence (and pay taxes) elsewhere. For comparison, the rental vacancy rates in Manhattan, and surrounding universities like Columbia and NYU, were hovering somewhere around 1.08% less than a year ago. In other words, it is likely just as hard now to find an apartment in Cambridge as it is in Manhattan.

Unsurprisingly, with decreasing supply often comes increasing prices. If we normalize back to 2007 we can see the diver-

gence between rent inflation in the immediate area (black and blue) and that of the surrounding three-state region of Boston-Brockton-Nashua as measured in the Bureau of Labor Statistics' CPI calculations (red).

If we then look at the real prices paid by graduate students as measured in the 2007 and 2011 Cost of Living (CoL) Surveys conducted by the Office of the Provost/Institutional Research and jointly funded by the Graduate Student Council and the Office of the Dean for Graduate Education, we can tease out specific increases experienced by various subgroups or for different types of housing.

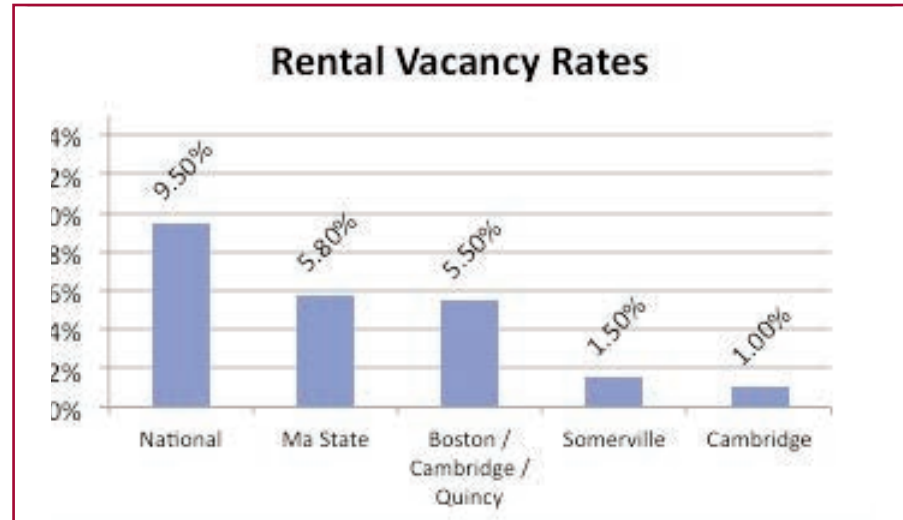
From this we can see that rents for Single Off-Campus graduate students have increased an average of 4.23% per year over the last four years. This is significantly higher than the ~1% increases measured by the CPI data. As our Cost of Living and Off-Campus data sets are the most updated and complete publicly available housing data (and inform our Stipend Recommendation processes), we can say with a high degree of confidence that the development and gentrification of Cambridge has resulted in an environment that is not hospitable to a large proportion of our community. Thus, the discussion around whether one should use the word "crisis" is really a distraction from the quantifiable reality: Our community is increasingly unable to live in the vibrant nexus of technology and entrepreneurship that we have developed for them.

#### Why should we care?

I would assert that living next to one's place of work is not simply a luxury, but critical to research productivity in many fields core to MIT's portfolio, such as the life sciences. To the first point, we know from numerous studies that graduate students not only work late, but also return home by foot and most frequently alone (approximately > 80% travel alone). The reason for this is that approximately 50% of graduates will depart from the lab after 7:00 PM, a time at which a vast majority of MBTA transportation options (Bus

Lines 64, 68, and 85) connecting the surrounding neighborhoods shut down. Put simply, the nature and expectations of many community members' jobs – working late hours in the lab, office, design studio, etc. – is one which is not at all accommodated by the 9-to-5 infrastructure built for the nonacademic

MIT's competitiveness in attracting the best and brightest graduate students. First, we have to recognize the evolving expectations for housing which students are now carrying into their graduate school selection. Residences like Simmons and Maseeh Hall are excellent examples of how our drive to provide elegant, conven-



world. As a result, the ability to live a walking distance from campus is important to the safety, well-being, and quality of life of the graduate and faculty community. In addition, the nature of research is changing to one in which research timelines are more fickle and demanding. If the NIH's expansion over the last decade is any indicator, we're likely conducting significantly more bio-related research at the Institute than we were several decades ago. With this fundamental shift in research focus has come a commensurate change in the way/times in which our population works. It is not unusual for graduates or young faculty to return to the lab after dinner repeatedly until sunrise in order to tend to some cell culture or growth. Thus we need to ask ourselves: Do we really expect these students and faculty to commute from Arlington or Watertown several times in a night or are we okay with the increasing number of futons we've begun to see in our labs and offices?

A final point worth mentioning is the effect that increasing housing prices and decreasing availabilities may have upon

ient, and fully equipped residences to undergraduates has grown in recent years, particularly in reference to the rest of our undergraduate housing portfolio. Similarly, we have recognized this trend and our recent graduate housing stock (SP, Ashdown, Warehouse) reflects this changing sentiment. Thus, prior to entering, graduates are being increasingly courted and coddled by their undergraduate institutions and as a result are unsurprisingly looking for more than a run-down two-bedroom shack in Watertown.

On top of this, we also have to be conscious of the fact that the graduate population, like that of the faculty, is increasingly international. For these groups, the ability to acquire either on-campus housing or nearby off-campus housing is of extremely high priority, particularly for those with no experience in our country, let alone the skills to apartment hunt in the surrounding cities. As a result, both our incoming domestic as well as international communities place extremely high value on the ability to live

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**Concerns Over Graduate Student Housing**  
Spatocco, from preceding page

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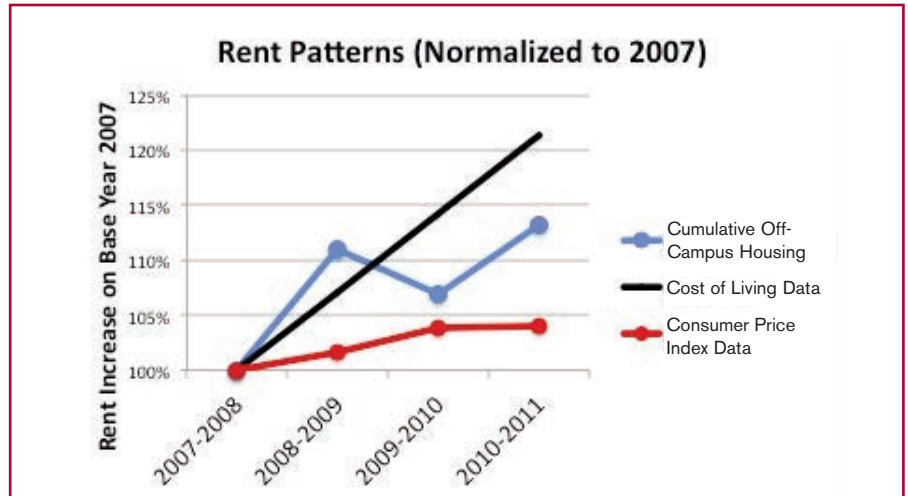
comfortably and close to campus. A laissez-faire approach to off-campus housing will not help and may jeopardize our ability to attract and retain the great minds that have built our reputation and will hopefully advance our mission in the future.

**Conclusion**

It would be uncharacteristic of the GSC to conclude this piece only having pointed to the problem and having made a couple of concerned remarks. Instead, I write this today as a call to action. With the MIT 2030 framework being opened to community input, an unprecedented degree of undergraduate-graduate-faculty communication, and the transition to a new administration at the Institute, I would like to end by calling upon the leaders of the student, faculty, staff, and administrators to begin candid and public discussions on what their vision for a residential community welcoming to the academic looks like and how we can work together to most effectively address the unprece-

dent external influences raised in this article. There is no better juncture than

actions to guide us in this uncertain and unkind market. Though this won't be



now to begin engaging both existing structures (e.g., ODGE/DSL, Institute Committees, Facilities) as well as potentially developing new bodies which further mobilize our members at a more grassroots level. Specifically, I propose the formation of a Student-Faculty-Administration working group whose charge would be to propose a vision for off-campus communities and outline

easy, no MIT-worthy challenge ever is. If, indeed, our greatest common strength is in our inspired experimentalism, then I see no reason why, in this case, we should shy away from the great living lab that is MIT. ■

**Brian Spatocco** is a third-year graduate student in Materials Science and is the President of the Graduate Student Council ([spatocco@mit.edu](mailto:spatocco@mit.edu)).

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## Opening Doors: Honoring Physics Professor Emerita Vera Kistiakowsky

**A FORUM HONORING** *MIT Faculty Newsletter* Founder and Physics Professor Emerita Vera Kistiakowsky was held on January 11, 2013. A physicist, teacher, mother, daughter, and moral leader, in addition to her long-time work at MIT, Prof. Kistiakowsky established the Status of Women project in the American Physical Society, and was a founder of American Women in Science.

Co-sponsored by the Technology and Culture Forum, the MIT Department of Physics, and the *Faculty Newsletter*, those offering praise and warm anecdotes included Prof. Edmund Bertschinger, Chair of the MIT Department of Physics, Vera's daughter Prof. Karen Fischer (Brown University Geological Sciences), Prof. Lisa Steiner and Prof. Mary-Lou Pardue from the MIT Department of Biology, and Prof. of

Biology and FNL Editorial Board Chair Jonathan King.

Vera spoke briefly, recalling both the early days of the *Faculty Newsletter* and other MIT experiences, as well as personal memories of her life-long joy of mountain climbing. Prof. Kistiakowsky was presented with both a framed poster memorializing the event, and a collage of photographs and other memorabilia assembled by her friends and family. ■

## Graduate Student Association: Pressing Issues for Graduate Students

Soulaymane Kachani

*Reprinted from the MIT Faculty Newsletter, Vol. XIII No. 2, October/November 2000.*

**OVER THE PAST FIVE YEARS**, the cost of living for MIT students has increased dramatically. Stipends, however, have not. We are now in a situation where graduate students can barely break even at the end of each month, simply after paying for rent and feeding.

The Institute is being made aware of this problem. Recently, the MIT senior administration has been trying to address this issue. For example, the approval of construction for the NW30 and the Sydney-Pacific dormitories will remove some of the pressure on the tight Cambridge and Somerville housing markets and will provide nearly 900 graduate students opportunities for more affordable housing close to campus.

However, the financial loss of the current MIT housing system is a burden that the administration is no longer ready to carry. Executive Vice President Curry and Chancellor Bacow are working towards achieving self-sustainability of the housing system. The plan is to increase on-campus rents by as much as five percent a year for the next five years. Compounding this increase over the five years will constitute a significant chunk of the graduate students' stipend.

Then, there is the cost of feeding. The price of meals in the MIT dining system (Lobdell, Networks, and Walker) have reached levels higher than neighboring cafes and restaurants (Au Bon Pain,

Rebecca's, Thailand Cafe). Given that graduate students spend a large part of their time on campus, and dine in the nearest available facilities (i.e., the Lobdells and the Rebeccas), another significant part of the stipend is spent feeding on campus. Deducting the rent and the cost of meals leaves very little or nothing in terms of pocket money for purchasing study items (text books, stationery, etc.) and for entertainment.

Other schools similar to MIT, like Stanford and Northwestern, for example, offer significantly higher stipends not only to adequately cover for rent and feeding but also to leave behind more "pocket money" for students. This very stark contrast makes it harder for MIT to attract the best and brightest graduate students.

The MIT Graduate Student Council (GSC) is advocating an increase in stipend rates. As part of this increase, our number one priority is to achieve coverage of MIT health insurance for all graduate students. Other peer institutions already offer this benefit to their students. Up to 20-30 percent of research grants can help cover medical insurance and decrease the cost for MIT.

Medical insurance coverage and stipend increase are actively endorsed by Dr. Isaac M. Colbert, dean for Graduate Students, and Dr. Larry Benedict, dean for Student Life.

The current situation is critical and requires firm action. A lot of courage is required on the part of the faculty and the

senior administration to approve the above issues. This will prove your genuine concern for caring about the quality of life of graduate students. It will also ease the problems of recruiting talented students. Please help us achieve this goal.

Recently, the GSC passed a Funding Policy resolution and passed it on to the faculty. If approved by the faculty, this resolution will require graduate students who receive funding from a research advisor to meet with their advisor, once a term, before TA application deadlines, to discuss their funding situation. At the meeting, the advisor would complete a form indicating if he/she is/not going to fund the student for the following term or if he/she is not sure about it. This latter situation may occur when a faculty member is not sure of a funding source or when he/she is not totally satisfied with the performance of the student and requires some tasks to be accomplished before the term ends.

Several departments, like Material Sciences and Engineering and Mechanical Engineering require such meetings every semester. These meetings, in addition, pave the way for dialogue between the graduate students and their advisors about funding and other relevant issues. In case there is no funding available or there is a doubt, students can duly look for other research opportunities or apply for teaching assistantship positions in time.

Please help support this resolution as it will definitely contribute to a healthy research experience. ■

## Graduate Student Life, Research Productivity, and the MITIMCo Proposal

Jonathan King

Reprinted from the MIT Faculty Newsletter, Vol. XXV No. 2, November/December 2012.

### The value of a residential campus

**FEW FACULTY, STUDENTS, OR** administrators doubt the advantage of a residential campus over a commuter campus for undergraduate education. The ability of students-in-residence to continuously interact with each other, with their TAs, with grad students and faculty in UROP projects, provides a deeply enriched educational environment, compared to a dispersed commuting campus. This is even truer for graduate students. Particularly for those graduate students whose theses require hands-on work (e.g., in biology, chemistry, chemical engineering, and many other experimental disciplines), the interaction of students with each other, with postdoctoral fellows and research technicians, is absolutely critical for optimal research productivity. In addition, many graduate students have to be able to spend extended and irregular time with their experiments, unrelated to the rhythms of the conventional workday.

The MIT 2030 Task Force report notes the absence of housing needs or goals in the MIT 2030 plan, and calls for a study of housing needs of MIT graduate students, faculty and staff.

Many leading research universities house a significant fraction of their graduate students on campus. For some strong research universities, low graduate student residence numbers are misleading, as the campuses are surrounded by residential neighborhoods providing graduate

Graduate Students <sup>1</sup>	~6600
Living Off Campus <sup>2</sup>	~4000
Living In Cambridge <sup>2</sup>	~2400
Postdocs <sup>3</sup>	~1400

<sup>1</sup>Current academic year  
<sup>2</sup>Prior academic years  
<sup>3</sup>Residence data not available for postdoctoral fellows. Most presumably live off campus.

**Sources:** [web.mit.edu/facts/faqs.html](http://web.mit.edu/facts/faqs.html); <http://web.mit.edu/mitpostdocs/index.html>; [web.mit.edu/fnl/volume/245/spatocco.html](http://web.mit.edu/fnl/volume/245/spatocco.html).

student housing adjacent to campus. Though there are few studies on the relationship between graduate student residences and research productivity, there are very few full commuter campuses in the top tier of research universities.

### The graduate student housing dilemma

With limited on-campus graduate housing, more than half of MIT graduate students have to secure housing off campus. Unfortunately, the increased cost of housing in Cambridge is causing considerable distress for our graduate students. As described in the May/June issue of this *Newsletter* ["Concerns Over the Lack of Graduate Student Housing in the MIT 2030 Plan"], vacancy rates in Cambridge are around 1%, among the lowest in the nation. Given the commercial development in Cambridge, housing costs are very high and increasing signifi-

cantly faster than graduate student stipends. Graduate students cannot compete financially with employees of Novartis, Shire, Pfizer, Microsoft, or Google.

One consequence of this is that our students are being pushed further away from the campus, resulting in an ever increasing time spent commuting, and significantly decreasing their productive time on campus. In practice, many students are limited to housing that is near the Red Line or other public transit, with attendant higher rents. Furthermore, as many faculty know, commuting by car into and out of Cambridge, across the BU Bridge, through the Alewife Brook interchange, on McGrath Highway, or through Union Square, meets with increasing congestion. If the proposed developments in Kendall Square, Central Square, Alewife Brook, and North Point – on the order of 18,000,000 square feet – are built, the



number of auto trips/day into and out of Cambridge will increase by more than 50,000, with a similar increase in Red Line and bus trips. Given that the Red Line is already close to saturation point, and the critical road interchanges are already heavily congested, commuting to and from MIT is going to be more and more time consuming. Thus it is not practical for graduate students who have to spend considerable time with their experiments to try to lower their rents by living outside of Cambridge.

### **The solution is campus graduate student housing**

The solution – just as for undergraduates – is to build sufficient housing on the campus. Many of our nation’s leading research universities have followed this path.

President Vest’s administration listened to the housing concerns of graduate students [see: *MIT Faculty Newsletter*, Vol. 13 No. 2, “Pressing Issues for Graduate Students”] and launched an effort to increase on-campus graduate student housing to 50% of the need. This resulted in the renovation of 224 Albany Street into graduate housing and the construction of the Pacific Street housing. That was an important step in the right direction, but the initiative was not sustained under President Hockfield. That path should be pursued by building additional graduate student housing. Campus space to the northwest between Massachusetts Avenue and Main Street has already been leased for 40- and 60-year periods to Pfizer and Novartis. That leaves the MIT land between Main Street and Memorial Drive on the East Campus as the most natural area for new construction of graduate residences.

### **The MITIMCo proposal ignores graduate student housing needs and its relation to research productivity**

Unfortunately, MIT 2030 and the MITIMCo up-zoning proposal ignore this need. In particular, the MITIMCo proposal focuses on building commercial

In particular, the MITIMCo proposal focuses on building commercial offices on campus land, which will be leased for long terms as a source of income. No student housing has been included in any of the MITIMCo presentations to the Cambridge Planning Board. This lack of housing was sharply criticized at the Planning Board hearing by both representatives of the East Cambridge and Kendall Square communities, and by MIT’s Graduate Student Council.

offices on campus land, which will be leased for long terms as a source of income. No student housing has been included in any of the MITIMCo presentations to the Cambridge Planning Board. This lack of housing was sharply criticized at the Planning Board hearing by both representatives of the East Cambridge and Kendall Square communities, and by MIT’s Graduate Student Council. It is perhaps not surprising that real estate executives who have driven the MITIMCo proposal would be insensitive to issues like graduate student housing. In addition, there is an intrinsic conflict of interest with MITIMCo’s real estate managers receiving much larger bonuses from long-term commercial leases than from building affordable graduate student housing. These are among the many reasons MIT needs a standing Campus Planning Committee of faculty, administrators,

staff, and students, as suggested by the faculty MIT 2030 Task Force in their closing section.

The MIT 2030 plan focuses on the income generated from the commercial leases. But real estate profits can be realized in many venues in the Boston area,

elsewhere in the U.S., and abroad. Graduate student housing is only of use to MIT if it is on the campus or in close proximity. In addition, a significant fraction of MIT income – overhead on research grants – depends on graduate student productivity. Reducing the quality of life and productivity of a significant fraction of MIT’s graduate students has real costs, even though they may not be easy to assess. At a minimum, the MITIMCo up-zoning proposal should be put on hold until the Provost’s Task Force on Community Engagement in 2030 Planning has been digested by the faculty and graduate students, and the redesign called for has been assessed and adopted. ■

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**Jonathan King** is a Professor of Biology and Chair of the *MIT Faculty Newsletter* Editorial Board ([jaking@mit.edu](mailto:jaking@mit.edu)).

## MIT 2030: A Capital Planning Framework for the Future

Israel Ruiz  
Martin Schmidt

*Reprinted from the MIT Faculty Newsletter, Vol. XXIV No. 4, March/April 2012. [One graphic omitted due to space constraints.]*

**THE NOVEMBER/DECEMBER 2011** issue of the *Faculty Newsletter* (FNL) featured a number of articles about MIT 2030. We appreciate having this opportunity to reflect on the engagement that has occurred to date, and to renew our commitment to fully engage the MIT community in this ongoing conversation.

In listening to the comments and concerns of the community regarding MIT 2030, we have heard a couple of overarching themes that we wish to address. We agree that it is of the utmost importance to ensure that MIT will pass on an outstanding physical campus and surrounding environment to future generations, and in doing this we are mindful of two principles moving forward:

1. Ensuring that the academic needs of MIT remain at the forefront of planning priorities;
2. Engaging the campus community in MIT's planning efforts is critical to our long-term success.

MIT 2030 is intended to be a framework to assist the Institute in making thoughtful, well-informed choices about development and renewal in the years ahead for both the campus and the innovation district close by. It is intended to be flexible and responsive, to provide structure without limiting possibilities, and to accommodate new strategic initiatives, as yet unknown, that will need to be supported in the future.

While five projects have emerged as early areas of planning focus: nano materials, structures and systems (nMaSS), energy and environment, and the renovation of E52, Walker Memorial Hall and sections of Building 2 – this is only the

beginning of the many opportunities that can be addressed within the MIT 2030 framework.

These five initial priorities resulted from an extensive planning effort that began with an academic visioning process in 2008. It continued as we worked to translate the vision into the physical needs of the campus, assessing building conditions, and projecting space needs based on programmatic requirements and available campus capacity. During calendar year 2010, close to 50 discussions took place to engage the community about campus and Kendall Square planning efforts. These meetings involved Academic Council, an open faculty forum, numerous discussions with Deans and Department Heads across all five Schools, and planning sessions with School of Architecture and Planning faculty. All of MIT's senior leadership were engaged in the planning process. Moving forward, we see many opportunities to engage the faculty more broadly in refining and developing this framework, and we are committed to seeing that happen.

While MIT 2030 is all about looking forward, we believe that the instincts that drive it are as old as the Institute itself. MIT has long used its physical space not merely to allow for teaching and research, but also to inspire. The Great Dome is there for a reason: its architect, William Bosworth, wanted a focal point for the campus that would have us all setting our sights upward. Nearly 100 years after the dome went up, the glass walls in the Media Lab invite fascination, and the composition of the Koch Institute for Integrative Cancer Research – half life scientists and half engineers – is its own breathtaking statement about MIT's belief in the power of convergence. The campus has always been an inspiring place, and guided by MIT 2030, we will seek to keep it that way.

### Accelerating the Power of Innovation

The recent FNL articles may have suggested that MIT's academic campus and our investment properties are in competition, or that we may be losing sight of the primacy of our academic mission, but we believe that the two work together to enhance innovation and opportunity. The area around MIT is almost unique in having MIT as the center of gravity that attracts innovative talent and companies, from startups to established research enterprises, to the neighborhood. The lines between academic disciplines, between academic and industry research, are more porous than ever.

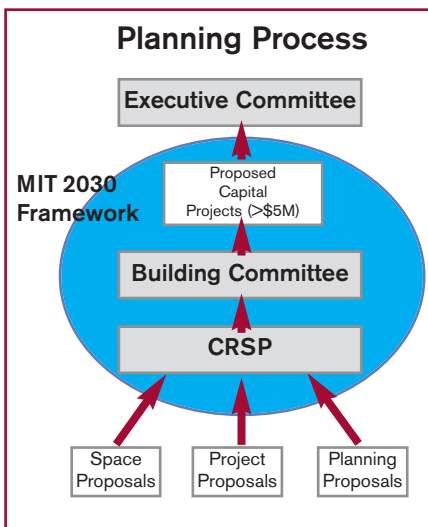
Four themes express the vision of MIT 2030. (Visit the MIT 2030 Website to learn more about these themes: [web.mit.edu/MIT2030/](http://web.mit.edu/MIT2030/).)

- Innovation and collaboration
- Renovation and renewal
- Sustainability
- Enhancement of living and learning

The theme of innovation and collaboration is the foundation of our campus planning, and continues MIT's longstanding relationship with industry, which has helped to transform Kendall Square and had a great impact on the Cambridge landscape with developments in Technology Square and University Park. Kendall Square has become a magnet for talented people and innovative companies who understand MIT and want to collaborate with us. The result is an innovation district able to accelerate the power of invention and innovation with an ecosystem of small inventive companies and larger research-intensive organizations that are perfectly aligned with our mission. Together, this ecosystem provides opportunities for advancing the mission

of MIT, entering into promising research collaborations, offering internship opportunities, and opening employment options for our graduating students.

It should be noted that all parcels that abut the campus under consideration for development, whether for academic or investment purposes, require the same oversight process through our governance structure. This includes review and endorsement by the Committee for the Review of Space Planning (CRSP), the Building Committee, and the Executive Committee, and this process is followed rigorously to ensure that academic interests are protected.



Working together with the Building Committee over these past decades, and with the oversight of MIT's leadership, we have been able to meet the needs of our faculty and students for the most advanced laboratory settings and research environments. Over the years and after careful analysis of available parcels and academic needs, we have been able to offer some land in close proximity to campus for development by industry over a well-defined timeframe, without seriously limiting opportunities to transfer leased property back to the academic plant when needed.

### Engaging Each Other in the Conversation

We share the belief that MIT 2030's success depends on it being a true collaboration between MIT's faculty and

administration. We also believe that student participation is critical.

As we work to keep pace with the Institute's evolving needs, the guiding principles that steered us through the recent financial crisis will continue to guide us here.

We personally know how well MIT does when we bring people together to solve problems, having served together as co-chairs of the Institute-wide Planning Task Force, formed in response to the financial crisis of 2008. The Task Force of over 200 members of the MIT community was dedicated to finding creative solutions to the problem of cutting spending. MIT met the challenge successfully because it relied on its collective wisdom, with the principles of transparency and inclusiveness assuring an open dialog.

In addition to the five initial areas of focus, we have begun planning for how to invest in capital renewal, and we look forward to engaging the community in this process. We will work to ensure that all areas of student life are considered, and that academic and student priorities are met. The Chancellor and the Dean for Student Life, as well as the academic and education deans, will be integral to this process that will allocate \$250M for accelerated capital renewal over the next three years, so that we may begin to address the overall deferred maintenance backlog. Moving forward, we want to renew and expand our commitment to ensuring that engagement occurs around specific charges and questions that are important to the Institute and its planning efforts, and that we all benefit by everyone's collective input, ingenuity, and creativity. As we work to create ongoing opportunities for greater input we will also find better ways to share the input we receive.

### MIT 2030: Moving Forward

In reading the recent FNL and editorials in *The Tech* we understand that our faculty and many of our students have a profound interest in MIT 2030, and we welcome the input and collaboration from all aspects of our community. Over the near term faculty and student input will be especially important as we begin

the planning process in the areas of teaching and learning, residential life and open space, and as we continue to work to revitalize Kendall Square.

The Working Group on the Future of Teaching and Learning Spaces at MIT, chaired by Professor John Brisson, has been convened to create a strategic plan for educational space needs at the Institute as envisioned by the faculty. In addition, Eric Grimson and Chris Colombo have initiated a study of future renovation needs for existing student housing, including related opportunities for informal learning and discovery.

We are also working with the Chair of the Faculty Samuel Allen to create opportunities to engage the Faculty Policy Committee and the broader faculty at monthly Institute faculty meetings or other venues. We will pursue opportunities for dialog at Deans and Department Head meetings, and will communicate about ongoing efforts through future issues of the *Faculty Newsletter* and increased coverage from the MIT News Office.

We will also work to engage students in these discussions. The editorial in the February 10 edition of *The Tech* urges students to take an active interest in 2030, and we echo that sentiment. We will work with the Chancellor and Deans for Graduate Education, Undergraduate Education, and Student Life, as well as student leadership to create opportunities for students to get involved.

In closing, we want to affirm our commitment to creating increased forums for open dialog and fruitful engagement with the MIT community about MIT 2030 concepts and future directions for our campus planning activities. We embrace the opportunities to draw upon the expertise of the faculty in the planning process and to incorporate student input in the design and character of our campus, and we look forward to continuing the conversation. ■

**Israel Ruiz** is Executive Vice President and Treasurer ([iruiz@mit.edu](mailto:iruiz@mit.edu));

**Martin Schmidt** is a Professor of Electrical Engineering and Computer Science and Associate Provost ([schmidt@mtl.mit.edu](mailto:schmidt@mtl.mit.edu)).

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Editorial

## Save MIT Campus Land for Academic, Not Commercial, Uses

Editorial Subcommittee

*Reprinted from the MIT Faculty Newsletter, Vol. XXIV No. 5, May/June 2012.*

**MIT IS MUCH MORE** than the sum of its classrooms, laboratories, dormitories, and recreational facilities. And yet this infrastructure of land and buildings is critical for our health. We have grave concerns over several aspects of the proposals from the MIT Investment Management Corporation (MITIMCo) for the predominantly commercial development of the east end of the MIT academic campus.

The MITIMCo proposal transfers unique remaining campus land resources – acquired for MIT’s future educational and research needs – to commercial applications for periods on the order of half a century. The land available for MIT academic expansion in the north campus between Massachusetts Avenue and Main Street has already been leased to commercial tenants for 40- and 60-year periods. The new proposal prepares the way to make comparable long-term leases on MIT’s precious remaining land resources on the east end of campus. Future development of educational, housing, recreation, and academic research facilities will be sharply constrained. This is the last remaining land available for campus-based uses. Implementation of MITIMCo’s plan has the potential to do serious and irreversible damage to MIT’s future educational and research missions.

We recognize that the MITIMCo development will generate substantial real estate investment returns to MIT’s endowment. However, returns on astute real estate

investment can be had all over the U.S. and in many cities outside the U.S. Land for MIT campus development in Cambridge is unique and irreplaceable. Using it solely to generate financial returns neglects the enormous opportunity cost incurred if we lose MIT’s options for future expansion and development of our current community learning and living centers. This seems to us to be fundamentally unsound.

Many of our concerns have been raised in the *Faculty Newsletter*, [web.mit.edu/fnl/](http://web.mit.edu/fnl/), with articles related to “MIT 2030” by knowledgeable faculty and staff in the November/December 2011 issue. A general response from the administration appeared in the March/April 2012 issue, but the following concerns are not directly addressed:

- The plan was developed without proper and critical input from MIT’s faculty, staff, and students. The process even failed to incorporate the advice and experience of MIT faculty who are national experts on urban development.
- The very serious housing needs of our graduate students, staff, postdoctoral fellows, and (especially younger) faculty have been given low priority. In fact, the initial plan included only 60 units of housing, ignoring the serious analysis and request from the Graduate Student Council (GSC) for substantial new housing, and earning the hostility of our East Cambridge neighbors. (See related article by the GSC president, page 10 [page 1 of current issue].)

- The proposal fails to seriously consider the impact of the resulting tens of thousands of increased daily auto and transit trips into and out of Kendall Square on the ability of MIT faculty, students, and staff to get to and from the Institute.

- The proposal may violate prior agreements between MIT, the City of Cambridge, and the federal government, risking substantial liability.

We fear that MITIMCo’s separation from responsibility for MIT’s educational and research integrity has contributed to the imbalanced proposal. We are also concerned that the substantial participation in plan development by individuals who may stand to gain directly in proportion to the size of the commercial development introduces conflict of interest issues, and departs from traditional MIT decision-making processes.

We believe the MIT Corporation should instruct MITIMCo to refrain from submitting the zoning petition they apparently plan to place before the Cambridge Planning Board until there has been a fuller and more careful further review by a faculty committee that includes DUSP representatives as well as student and staff constituencies. This will allow a more thorough, thoughtful, long-term plan for irreplaceable land resources that are crucial for MIT’s future. ■

Editorial Subcommittee (six members of which are Cambridge residents)

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**Interview with Tom Kochan**  
continued from page 1

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ing process for Kendall Square and to advise more generally how faculty input could be achieved in the MIT 2030 process.

**FNL:** *Do you think that this could have been handled more effectively from the beginning or do you believe that MITIMCo [MIT Investment Management Company] taking the lead was an appropriate way for MIT to approach this type of thing?*

**TK:** I think we all agree it would have been better for the faculty to be working with MITIMCo and other professionals on the staff right from the beginning, but that's not what happened. And so when we were asked to get involved, our approach was to review where we were and then to go from there. To start all over would have been a waste of resources because we have good professionals in MITIMCo and within the administration who had been working on this very intensively for quite a while, and we didn't want to throw out the good work that they had done, nor be limited to what they had done.

**FNL:** *Then when moving forward with additional projects or additional planning, would you recommend an Institute-wide Planning Committee or some similar structure?*

**TK:** That's the issue we're working on right now. We're thinking about what the right structure will be for faculty, students, and others in the community important to the planning process. Exactly what structure that will take is something that we'll report on sometime this term.

**FNL:** *Right now the administration makes all the final planning decisions. Do you think that might change in the future?*

**TK:** On issues like this, all committees are advisory to the provost and the president,

and that's appropriate. This is an MIT administrative strategy on how to use its resources to build the campus, design the campus and invest in properties close or far away from the campus. That should stay as a president, provost, and Corporation responsibility for this. The faculty's role should be to provide expert advice and to be taken seriously while bringing the community's voice to the process.

**FNL:** *So to what extent do you think the voices of the faculty and the community were heard in the MITIMCo planning process, and how does the Task Force plan to proceed in the future?*

**TK:** The first and most important thing was to solicit input in the Task Force deliberations, and we heard from many people who really care about these issues and who have expertise on housing, on transportation, on real estate, on the future of the campus. That was priority number one. Priority number two was making sure that our report was disseminated widely to the community and to again solicit comments, suggestions, reactions. OK, that we did. The Provost distributed the report as soon as he got it and had a chance to read and react to it. So that was very positive. We then talked with the Faculty Policy Committee [FPC] about it. It was also summarized at a faculty meeting, and we continue to meet with faculty members as we go along. So I think we've got to do many and varied things to get faculty input.

**FNL:** *What about using a faculty meeting in particular to solicit input?*

**TK:** We can use faculty meetings, but I'm acutely aware that it's very difficult to get a representative sample of faculty to come to faculty meetings, unless there's a crisis. We don't see this as a crisis, but we're going to continue to look for ways to get input – probably more discussion at faculty meetings, maybe some special

faculty forums as we've done in the past, and other ways that faculty can suggest.

**FNL:** *What about the sequence of events regarding MITIMCo presenting the up-zoning petition to the City of Cambridge?*

**TK:** The sequence was that we issued the report to the Provost in the first week of November. The Provost took about a week to absorb it and talk with his colleagues, and then was immediately back to us to say he agreed with our analysis and our recommendations and in fact wanted us to go beyond what we recommended, and to work with MITIMCo to see if there could be modifications of the draft petition that they had in place. And so then we did work with them pretty intensively for about a three-week time period, and they did make modifications right up until a few days before their submission of the petition. So MITIMCo responded to our report at the instruction or request of the Provost, and then they submitted it.

**FNL:** *But that was the second time MITIMCo presented their petition. Do you think there might have been a better way to handle things from the very beginning?*

**TK:** For me that's all water under the dam. That wasn't the deck of cards we were dealt in August when the Provost took office and formed the Task Force. We spent relatively little time looking back and saying what should have happened, because we didn't think we could change history.

**FNL:** *So from what you're saying now it seems like the Task Force negotiated with MITIMCo – and I'm using that word "negotiated" carefully – because my real question is does MIT work for MITIMCo or does MITIMCo work for MIT?*

**TK:** MITIMCo works for MIT. It reports to the upper administration through the Executive Vice President and Treasurer [Israel Ruiz]. And I really expect that to

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**Interview with Tom Kochan**  
continued from preceding page

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continue. MITIMCo doesn't operate independently. It may have had a different mandate in the past than it does now. Clearly, MITIMCo has a fiduciary responsibility to get the best rate of return they can on real estate investments. And it should be held accountable for that, but it also should be held accountable to meet the kind of criteria that we laid out in the Task Force report regarding academic space. I think everyone now understands that, and that's the way I think we're going forward, and I would say MITIMCo accepts that view of its role. I think the negotiations revolved around under what conditions would it make sense for MIT to put a petition before the City of Cambridge and we worked to find a solution that allowed us to go forward given the timeliness of the petition and the fact that the City of Cambridge really wanted MIT to come forward now with the petition for its own reasons, and we respected that. That was part of our consideration as well.

**FNL:** *One question that faculty are asking is why the seeming "rush to judgement?" What was the need to present the petition right now?*

**TK:** I think there are three reasons why now. The first is that the City of Cambridge really wanted MIT to come forward now. There's a deep interest in the Kendall Square redevelopment project and the City wants to work with MIT. So first it was demand driven by the City. Second, a lot of hard work had gone into this process already. We had an opportunity to modify both the substance of the proposal and the criteria by which it would be evaluated. And so we were satisfied with the response of the administration to the recommendations in our report and therefore we said under those conditions we should go forward. And then the third and maybe equally influen-

tial factor was that we have assurance that the faculty will play a key role in the critical design process that will occur once the petition has been approved. And we were reassured by people in the City and by the professionals who understand this process

**FNL:** *So accepting that we don't know how long such a study [of graduate student housing needs] will take, does that mean that the design and construction of the proposed large commercial buildings in the MITIMCo proposal will be delayed until this study is completed?*

**TK:** I think they will go on in parallel. How they play themselves out in terms of actual timing is yet to be determined. Housing is a campus-wide issue. It's not just a Kendall Square issue, and so if there's a report that comes out that says we need X more units for student housing, then the question is where? And that should be part of the overall 2030 process. Kendall Square is a part of that.

that it's that design process where the real specific planning decisions are made. And in fact we are right now working on how to design the specific part of the plan that relates to what we call the gateway area of the Kendall Square development.

**FNL:** *A key question in this development process is the issue of graduate student housing. For many years there have been concerns expressed by faculty and students about the need for additional housing on and/or off the campus. During the MITIMCo presentation at the Cambridge Planning Board last Tuesday, Israel Ruiz said that a 12-18 month committee process will be needed to assess the needs of graduate student housing at MIT. Given that the Task Force did its work in roughly three months, and that the MIT Graduate Student Council has done a thorough statistical analysis that we've published in the Newsletter, why would so much time be needed?*

**TK:** I don't know exactly how much time it will take. The key is to do it carefully and

whatever time it takes should be allocated. Housing needs to be looked at in the larger context of what are the overall needs of our graduate students and where does housing on or off campus fit? We have every assurance from the Provost

that this is going to be a serious study and will be taken seriously.

**FNL:** *So accepting that we don't know how long such a study will take, does that mean that the design and construction of the proposed large commercial buildings in the MITIMCo proposal will be delayed until this study is completed?*

**TK:** I think they will go on in parallel. How they play themselves out in terms of actual timing is yet to be determined. Housing is a campus-wide issue. It's not just a Kendall Square issue, and so if there's a report that comes out that says we need X more units for student housing, then the question is where? And that should be part of the overall 2030 process. Kendall Square is a part of that.

**FNL:** *My understanding is that the up-zoning petition is specific in certain areas such as location and height for future construction, but that it's fairly open in terms of exactly what's going to go to be built where. Isn't it going to be difficult to be actually*

*constructing things while the housing study is going on? What if the study finds that some of the land where commercial real estate is being built is needed for housing, for example?*

**TK:** That's why I said they will go in parallel. The design process is going to probably take as long as the study. I don't have a certain finish date in mind, but these design activities are not carried out overnight. They're pretty systematic and so they will have to consider what's the option for student housing, if any.

**FNL:** *The impression I got from the Planning Board meeting and from others as well is that the approval process might still take a while (it needs to be passed by the Cambridge City Council) and that there is still quite a bit of flexibility involved before construction decisions are finalized. What's your sense of that?*

**TK:** My sense is this is an evolving process and the Planning Board will weigh in and suggest some things that might be modified or they would like to see modified. And then the City Council can propose changes and then they can put in modifications as well. So I think all the way through the process, it's subject to change. How that plays out is anybody's guess.

**FNL:** *Several Cambridge residents spoke at the Planning Board meeting, and much of the concern expressed was related to building heights, location, signage, and the like. How aware do you think the faculty is of some of these more specific concerns?*

**TK:** We haven't gotten any specific input or critiques of the height of the buildings or the placement of the buildings because I don't think the faculty has engaged at that specific level. My sense is that once we start the design process and we illustrate with visual, physical mockups and invite people to look at them, then we will have lots of points of views expressed. There's a pretty standard set of protocols in the architec-

ture field, as I'm learning, and there are likely to be computer-generated and physically built models. And we will have an opportunity to look at what this might look like, and maybe move this building around over here and move that over there, and what would that do to the gateway. Right now what the re-zoning petition does is it to set a maximum on height and square footage and all of those broad parameters, and the way to think about this is what would be the upper limits literally of what could be done? And then once we have those, then we can think about what's the right configuration.

**FNL:** *What about the discussions concerning a physical gateway to the Institute?*

**TK:** My hope is that whatever we do we have a gateway that says you are now at MIT; that they're at a really innovative and important place and that it's a welcoming feeling. Those to me are critical features of the East Campus and of the gateway. That it's a portal to MIT that's really a learning portal, that people can understand the history of Kendall Square and how it was a vibrant manufacturing center a long time, and then evolved to a sort of abandoned set of warehouses and then how it's changed, has become an innovation center and a commercial center and an academic hub. That it shows that as we continue to co-evolve in creative ways, we always honor the history and the past.

**FNL:** *Finally, there's been some concern expressed by the administration about graduate students, or faculty members, or other MIT community members appearing at these public hearings. Any comment on that?*

**TK:** Well, first any faculty member or any member of the community should feel free to exercise his or her right to speak at a community event, because there is no single voice for MIT. Second, when doing so, I think there's a responsibility that when they're going to speak out that they

first are well informed on exactly what is going on here at MIT so that they're not speaking in a way that is uninformed. So I think there's a responsibility to be well informed, to talk with those of us who have been involved in the process because sometimes there's lots of informal and off-the-record conversations that have gone on and a lot of work that goes on behind the scenes that doesn't show up in the formal presentation but is really important. And we can share that information with people who really do want to get involved.

**FNL:** *Is there anything else you'd like to add before we finish?*

**TK:** I think this has been a really helpful experience both for the faculty and for the administration. This was the first major effort of the new administration to reach out to the faculty and ask can you provide us advice, can you do it on a timely basis, can you give us your honest and open views to be well informed by both experts and the faculty and a broad cross section of faculty in general? And I think it's worked, and I think it gives the President, the Provost, the Chancellor confidence in reaching out to faculty for this kind of thing in the future. I think it gives the Task Force and the faculty the sense that this is an administration that really wants this kind of input and that you can trust them to take it and then make good decisions. And so I hope that this was an example of faculty input, faculty governance, the respect for the administration to have to make decisions and do their job, and that we can go on from there.

**FNL:** *Thanks so much for doing this interview, Tom.*

**TK:** Thank you.

To contact Tom e-mail him at [tkochan@mit.edu](mailto:tkochan@mit.edu). To contact the full Task Force, e-mail them at: [2030\\_taskforce@mit.edu](mailto:2030_taskforce@mit.edu). ■

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## Report of the Task Force on Community Engagement in 2030 Planning on Development of MIT-Owned Property in Kendall Square

October 12, 2012

### Background

**THE TASK FORCE ON** Community Engagement in 2030 Planning, consisting of eight faculty members\* was appointed in August, 2012 by Provost Chris Kaiser and asked to provide guidance on upcoming decisions related to campus development within the context of the capital planning process known as MIT 2030. Specifically, the Task Force was charged with:

1. Providing advice regarding the development of MIT-owned property in Kendall Square.
2. Determining the most effective ways to engage the MIT community in the overall campus planning process going forward. [The full charge to the Task Force is provided in Appendix 1.]

At present, MIT faces a decision whether to move forward with submitting a rezoning petition to the City of Cambridge for formal approval, which would enable the Institute to proceed with further planning, design, and construction of a series of capital projects in Kendall Square expected to span roughly the next ten years. Specifically, the petition requests an “up-zoning” to increase the permitted density of development in the target area to allow taller buildings.

Because of timing considerations related to this decision, this report addresses the first part of our charge. Specifically, we offer our recommendations on the question of whether or not, or under what conditions, MIT should file the up-zoning petition with the City of Cambridge to allow development of Kendall Square to proceed.

Later this fall term, we intend to submit a follow-up report that addresses the second part of our charge.

### Process

The Task Force met weekly from early August through early October 2012. Meetings primarily involved interviews with stakeholders in the MIT 2030 process in general and in the Kendall Square development issues in particular. These stakeholders included individuals both within and outside of the MIT community. [A list of individuals interviewed is provided in Appendix 2.]

In addition, the Task Force reviewed MIT internal documents related to the development of MIT-owned property in Kendall Square and elsewhere on campus, as well as public documents related to development in relevant areas of Cambridge, in order to better understand the Institute’s campus planning process as well as its interaction with the City of Cambridge on these issues.

The Task Force focused primarily on an assessment of the current rezoning petition, involving the 26-acre MIT East Campus property in Kendall Square proposed for development by the MIT Investment Management Company (MITIMCo), a division of MIT that manages the Institute’s endowment and real estate investments. The petition seeks the City of Cambridge’s permission to allow MIT to add more total gross square footage, including taller building heights, than allowed under current zoning in this area of the campus. The design concept that accompanies the petition includes a set of illustrative building sites for commercial office/laboratory use, plus potential academic, retail and residential uses and other improvements.

### Findings

The following key findings about the up-zoning petition reflect our discussions with stakeholders and review of the data:

1. The MIT property that will be affected by the proposed up-zoning petition is first and foremost part of the MIT campus, as it lies within the area of Kendall Square south of Main Street that has traditionally defined one of the Institute’s East Campus boundaries. It is intimately tied to the Institute’s campus structure and patterns of movement extending from 77 Massachusetts Avenue to the Sloan School. This area of land is also the last piece of undeveloped, contiguous campus space lying between the Charles River, Main Street and Ames Street, with ready access to the MBTA Red Line, representing an extremely precious resource.
2. The planning and development process affecting this part of campus has become intertwined with MIT’s commercial real estate investment goals. MIT land development for investment purposes traditionally has taken place beyond the edge of what normally is considered to comprise the MIT campus, often a significant distance away from the center of campus activity. Such development seeks to maximize financial returns.
3. Setting aside the question of whether commercial development is appropriate at this location, financial return should not be the principal criterion of value creation and success for this area of campus. Equally important are criteria related to the 21st century image of MIT, creation of a significant eastern gateway to the campus, the enhancement of student life, and providing opportunities for future academic buildings and activities that we have yet to invent. We also believe these



latter considerations, which go to the heart of MIT's mission, will be more important to sustaining financial returns to the Institute in the long run.

4. The current rezoning plan (as outlined by MITIMCo) for development of the Kendall Square area falls short of the aspirations described above. The Task Force has concerns with the single diagram that MITIMCo has presented as its design proposal. We have been reassured by MITIMCo that its proposal is flexible and that, if the up-zoning is approved, MIT retains options to work with the city and surrounding neighborhoods to alter building heights, densities, and footprints (within the constraints of the zoning) to improve the project.

5. MIT needs to carefully consider the need for additional campus-serving housing, especially for graduate students. Concerns were raised with our Task Force that there is a need to expand graduate student housing either on campus or off campus in some affordable way. Certain Cambridge resident groups also have expressed concern for more housing in this area of the city. MITIMCo's current proposal includes provision for 120,000 square feet of new housing, tentatively targeted for a new building adjacent to One Broadway in Kendall Square. These will be primarily market priced units and not likely within the reach of graduate students (although Cambridge will require that 15% of the units be reserved for low and moderate income families). At this point our Task Force does not have sufficient information to judge whether more graduate student housing is needed on or off campus and, if so, how much. Nor have potential housing needs or goals been incorporated into the MIT 2030 planning process to date. Therefore, a study of housing needs of graduate students, faculty, and staff should be undertaken with involvement from these constituent groups as part of the MIT 2030 process. The study should consider the benefits and costs of Kendall Square and other on- or off-campus potential housing sites.

6. The likely traffic impacts of Kendall Square development need further analysis and discussion as well. We heard very different views on whether the Kendall Square development would affect future traffic flows in the surrounding areas. Again we do not have sufficient information to decide what the impacts on traffic, parking, use of public transportation, etc. will be and we worry that these issues have not yet been studied adequately – particularly from the student point of view – or integrated in the Kendall Square design/development process. MIT has ample faculty, student, and staff expertise to draw on to address these questions, and this analysis should be incorporated into a comprehensive planning process for East Campus.

7. The City of Cambridge Historical Commission has designated three buildings on the south side of Main Street as historical landmarks that must be preserved. This significantly constrains the design and development options for use of this space for ground floor retail, academic or commercial purposes and limits the opportunity to create a landmark gateway connecting Kendall Square to MIT. Creative options for preserving the historical importance and awareness of these sites in particular, and of Kendall Square more generally, need to be explored jointly by MIT and the City.

8. The City Manager and the Cambridge Planning Commission have expressed interest in receiving MIT's up-zoning petition soon and look forward to working closely with MIT in developing this area in ways that meet the mutual needs and interests of the City, the MIT community, area residents, and current and future commercial businesses that will enhance the area's reputation as a world-class hub of innovation.

#### **Conclusions and Recommendations**

Given these findings, we support moving forward with MIT's submission of the rezoning petition provided that:

1. A comprehensive urban design plan for East Campus is conducted and completed

after the petition is approved but before anything is built in the area covered by the petition. The plan needs to consider alternatives to the current MITIMCo diagram for commercial building sites, floor plates, program, heights, and scale of development, keeping in mind the findings described above.

2. This Task Force or a similarly constituted faculty group participates directly in the East Campus planning process and design of the Kendall Square project.

and

3. The work of preparing and deliberating a plan for East Campus, and subsequent development of the area, including Kendall Square, is guided by a set of design principles, described in the next section.

**Design Principles/Criteria.** Any development of the parcels under consideration in Kendall Square must honor the following principles/criteria for evaluating design options and decisions that involve MIT-owned property developed either for academic purposes or for commercial purposes (with the possibility that commercial may house some academic uses at some point in the future). Our sense is that MITIMCo currently evaluates development opportunities primarily against a return on investment (ROI) criterion. This is appropriate when property is solely for investment purposes, away from the core of the MIT campus. But Kendall Square, with its Red Line MBTA station, clearly has the potential to serve as a new gateway to MIT, similar to the function now served by 77 Mass. Ave. to the west. Equally important, much of the property that would be developed for commercial tenants could house MIT uses at some point in the future. Therefore, it is critical that these buildings and the space they create on the ground be considered first as a part of the campus designed to support our students, faculty and staff. To ensure this, we recommend the following princi-

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**Task Force Report**

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ples to guide decisions about development and design of this area:

- **There must be a gateway to MIT worthy of MIT and its aspirations, mission and standards of design excellence.** The gateway should not just be an entrance, but a physically prominent node of activity, equivalent to the function of MIT's Lobby 7, containing destinations relevant to the MIT community and helpful to visitors (e.g. an information office) linked to clearly recognizable spaces that support learning and research (e.g. laboratories, studios, classrooms, study and meeting spaces accessible to the public). It should connect MIT directly to Kendall Square with minimal physical barriers or gaps. The gateway should be welcoming to residents and visitors.

- **East Campus buildings and spaces must create and convey a campus feeling that serves the needs of the MIT community in ways that attract people to the area across the broad band of hours that typifies the rhythm of student, faculty, and staff life.** This means, for example, providing amenities and services for students, faculty, staff and residents, with a minimal corporate presence (on the campus side), and well-defined public space for people to gather, affordable places to eat, bicycle parking, and access, etc. To ensure this, the ground floor space on all buildings should be primarily reserved for inviting academic, student life, or retail uses, and not have a "gated," privatized character.

- **Any commercial space in Kendall Square should serve as an extension of the campus and not the other way around.** The businesses invited to locate there should complement and support the mission of MIT to promote innovation and start-ups and allow maximum access to students and faculty for research, class projects, and other mutual learning opportunities. Kendall Square should not just be a commercial

or corporate office location that happens to be adjacent to a university.

- **The portion of the development intended for commercial use should generate an appropriate financial return to warrant investment of MIT endowment funds.** However, given the location of this development on campus and the need to support academic and student life, it may not be reasonable to expect the same level of return as that from commercial property developed in sites removed from the campus. Alternatively, it would be appropriate for the Institute to consider investing a portion of the income from the Kendall commercial development into developing the campus spaces, facilities and academic environment planned for the area.
- **Design of commercial development should proceed only in the context of a comprehensive plan for the future of the East Campus, including its public realm, academic, student life, transport, and recreational functions, taking into account potential disposition of all property between Main Street and the Charles River.** It is not sufficient or prudent to design commercial buildings in the absence of a systematic analysis and clear understanding of how the remainder of the East Campus is intended to evolve. It is important that ample space for future academic expansion be reserved in the up-zoning petition. We have not studied this issue in sufficient depth to reach a conclusion about how much space at this point, and, therefore, it is another issue for further review and discussion in the post-up-zoning design phase and plan for East Campus.

**Flexibility: Envelope versus Constraints.** We have heard from the Cambridge City Manager, MITIMCo, and others that the up-zoning petition would create an "envelope" that would allow for considerable flexibility in design and development options going forward. The key con-

straints from the City of Cambridge's perspective would be limitations on building height, total square footage of new development, the need to retain three historical buildings, and provision of an appropriate amount of housing. Given these minimal constraints, we need assurance from MIT leadership that the principles listed above are acceptable and the path clear to consider design alternatives. Among the options that should be considered are:

- Less commercial development in the area shown as Site 3 on the MITIMCo plan, providing the potential to develop a significant gateway to the campus.
- A better defined campus space connecting to Eastgate and Sloan that is more closely associated with Main Street, so there can be sufficient interaction and permeability to support campus activity. This space should also facilitate interaction with the rest of the Institute, which is vital to achieving the goal of a "One MIT" campus culture.
- More space for academic development and student life.
- Reallocation of height and massing to the edges rather than heart of the campus area, or a smaller commercial project overall.
- Alternate sites for commercial office and housing development that reduce impact on the campus.

**Historic Preservation Options.** We commend the City and MIT for honoring the principle that the history and co-evolution of Kendall Square and the MIT campus be preserved, honored, and featured in the design of this site. At the same time, we are deeply concerned that simply preserving the three buildings on Main Street proposed as historic landmarks will substantially increase development costs and limit design options for the spaces these buildings now occupy. We believe that by

working together and in consultation with residents and the business community in the area, the historic preservation objectives can be met in creative ways while also opening up the space needed to create a world class gateway to the Institute. One way to do so would be to design and build a multi-media supported entrance and information center that provides a visual, interactive timeline of the past, current, and future contributions of this region to the advancement of knowledge, industry, and city life. We urge a joint Cambridge/MIT study be undertaken of creative options for meeting these objectives.

#### **Process moving forward**

We commend the Provost and President for creating this Task Force and providing the faculty an opportunity to weigh in on the Kendall Square proposal. As stated earlier, we believe that this Faculty Task Force, or a similarly constituted group that is broadly representative of the faculty and includes individuals with special expertise in design, planning and real estate economics, should continue into the post-up-zoning design stage of the Kendall Square development process to advise the Provost and President on the academic issues associated with campus design and planning.

We thank the MIT staff, faculty and students and Cambridge leaders who provided inputs to our work. We look forward to continuing to work together on future phases of this important opportunity.

We welcome comments from the MIT Community and Cambridge neighbors on this report and/or on our future work as we take up the second item in our charge from the Provost – considering the best way to engage the MIT Community in the ongoing development of the MIT 2030 vision and plan.

#### **Appendix 1**

Provost's Charge to the Task Force

*Dear Faculty Colleagues,*

*The capital planning framework known as*

*MIT 2030 was launched two years ago to guide the Institute in making decisions about campus renewal and development in the decades ahead, relying on the broad engagement of the campus community to help inform these decisions. In recent months the effort has begun to transition from planning to implementation, particularly for development of MIT-owned land in Kendall Square in ways that continue to revitalize this important area of Cambridge while best serving the long-range interests of the Institute. To ensure that we maintain constructive community engagement through the implementation process, I have appointed an ad hoc faculty committee, the Task Force on Community Engagement in 2030 Planning, which is charged with advising me about decisions related specifically to the development of MIT property in Kendall Square and about the most effective ways to engage the MIT community in the 2030 decision process generally, going forward. Members of the Task Force include Thomas Kochan (chair), Samuel Allen, Xavier de Souza Briggs, Peter Fisher, Dennis Frenchman, Lorna Gibson, William Wheaton, and Patrick Winston.*

*The Task Force will begin engaging with members of the faculty and other Institute stakeholders on these issues in the weeks and months ahead. I want to thank Professor Kochan and other members of the Task Force for their willingness to devote their time and effort to this process, and I look forward to our continuing discussions regarding MIT 2030.*

*Sincerely,*

*Chris A. Kaiser*

#### **Appendix 2**

Individuals interviewed by the Task Force

Chris Kaiser, Provost

Martin Schmidt, Associate Provost

Israel Ruiz, Executive Vice President and Treasurer

John Reed, Chairman of the MIT Corporation

Lawrence Fish, Member of the MIT Corporation

Steven Marsh, Managing Director, Real Estate, MITIMCo

Michael Owu, Director, Real Estate, MITIMCo

Patrick Rowe, Associate Director, Real Estate, MITIMCo

Sarah Gallop, Co-Director, Office of Government and Community Relations

Jonathan King, Professor, Biology

Edward Roberts, David Sarnoff Professor of Management of Technology

Nigel Wilson, Professor, Civil and Environmental Engineering

Frederick Salvucci, Senior Lecturer, Center for Transportation and Logistics

John Attanucci, Research Associate, Civil and Environmental Engineering

Pamela Delphenich, Director of Campus Planning and Design

Peter Roth, Lecturer, Center for Real Estate

O. Robert Simha, Research Affiliate, Urban Studies and Planning

Representatives of the Graduate Student Council

Representatives of the Undergraduate Association

Robert Healy, Cambridge City Manager

Timothy Rowe, CEO, Cambridge Innovation Center

Charles Sullivan, Executive Director, Cambridge Historical Commission

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#### **\*Task Force Members:**

Samuel Allen, Materials Science and Engineering;

Xavier de Souza Briggs, Urban Studies and Planning;

Peter Fisher, Physics;

Dennis Frenchman, Urban Studies and Planning, Center for Real Estate;

Lorna Gibson, Materials Science and Engineering;

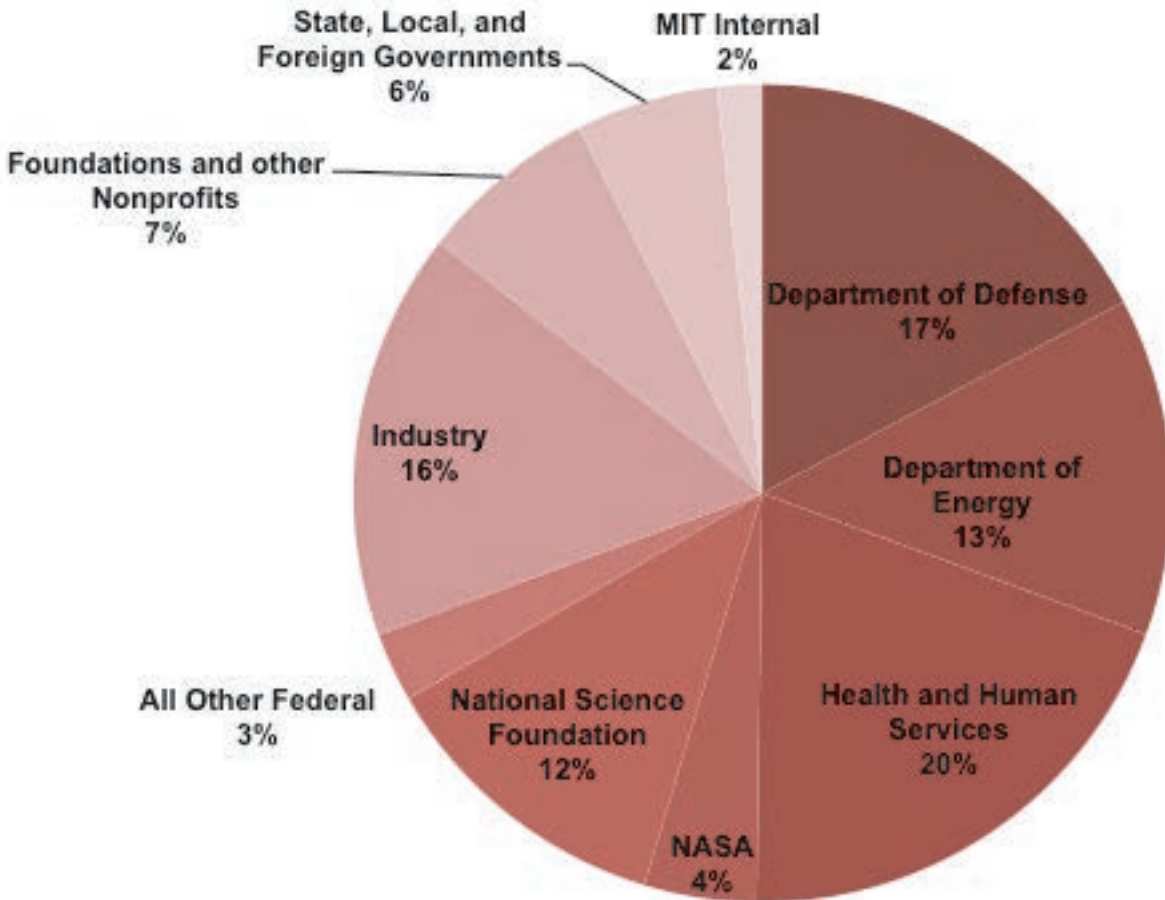
Thomas Kochan (chair), Management;

William Wheaton, Urban Studies and Planning, Economics, Center for Real Estate;

Patrick Winston, Electrical Engineering and Computer Science;

Staff to the Task Force: Douglas Pfeiffer

## M.I.T. Numbers Research Expenditures FY2012



MAJOR Sponsor General	MAJOR Sponsor	FY2012
Federal	Department of Defense	\$117,457,789
	Department of Energy	\$90,940,035
	Health and Human Services	\$133,687,332
	NASA	\$30,203,575
	National Science Foundation	\$81,487,208
	All Other Federal	\$18,806,804
	<b>Federal Total</b>	
Non-Federal	Industry	\$109,744,829
	Foundations and other Nonprofits	\$48,373,460
	State, Local, and Foreign Governments	\$38,272,515
	MIT Internal	\$12,105,763
<b>Non-Federal Total</b>		<b>\$208,496,567</b>
<b>Grand Total</b>		<b>\$681,079,310</b>

Source: Office of the Provost/Institutional Research