CITY OF CAMBRIDGE, MASSACHUSETTS

PLANNING BOARD

CITY HALL ANNEX, 344 BROADWAY, CAMBRIDGE, MA 02139

NOTICE OF DECISION

CASE #: 232

ADDRESS: 500 Main Street

APPLICANT/OWNER: Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA 02139

ZONING DISTRICT: Residence C-3B and MXR

APPLICATION DATE: November 1, 2007

PLANNING BOARD PUBLIC HEARING: November 27, 2007

PLANNING BOARD DECISION: December 18, 2007

FILING PLANNING BOARD DECISION: February 22, 2008

APPLICATION: Project Review Special Permit (section 19.20) to construct approximately 308,756 square feet of institutional laboratory with office, meeting and administrative space.

DECISION: GRANTED with conditions

Appeals, if any, shall be made pursuant to Section 17 of Massachusetts General Laws, Chapter 40A, and shall be filed within twenty (20) days after the filing of the above referenced decision with the City Clerk. Copies of the complete decision and final plans, if applicable, are on file with the Office of the Community Development Department and the City Clerk.

Authorized Representative to the Planning Board: Elizabeth M. Paden

For further information concerning this decision, please contact Liza Paden at 617 349 4647 or lpaden@cambridgema.gov.

Application

Special Permit application, with ownership certificate, dimensional form, photographs, supporting statement, LEED NC version 2.2 checklist, Traffic Impact Study, and Existing Tree Assessment and Arborist Letter, complete on November 1, 2007.

Plans, drawings and elevations of existing conditions, and building drawings, various elevations and floor plans dated 10/11/07 and 10/29/07.

Findings

After review of the application documents and other documents submitted to the Board, testimony taken at the public hearing, and review and consideration of the special permit application materials, and the general special permit criteria, the Board makes the following findings:

1. Conformance to the Traffic Impact Findings – Section 19.25.1

As no Traffic Study is required these findings are not required. Nevertheless, the Board finds that the project will have no substantial adverse impact on city traffic as determined by the traffic analysis undertaken by the applicant and the Board's past experience with such academic buildings on university campuses in the past.

2 Conformance to the Urban Design Findings – Section 19.25.1

The Board finds the project is consistent with the city's urban design objectives as set forth in more detail below.

3. Conformance with General Special Permit Criteria in Section 10.43:

A special permit will normally be granted where specific provisions of this Ordinance are met, except when the particulars of the location or use, not generally true of the district or of the uses permitted in it, would cause granting of such permit to be in the detriment of the public interest because:

a. It appears that the requirements of this Ordinance cannot or will not be met.

With the granting of the Project Review Special Permit, the Ordinance will be met.

b. The traffic generated or patterns of access or egress will cause congestion, hazard, or substantial change in established neighborhood character.

The Cancer Research Facility (CRF) does not exceed the Thresholds for Requiring a Traffic Study but a traffic impact analysis was prepared which demonstrated that there would not be substantial adverse impact on city traffic. The traffic generated and the patterns of access and egress from the project will not cause congestion, hazard or

substantial change in the established character. The overall MIT parking inventory will not change; the existing parking lot will be replaced with the CRF Building and those 203 parking spaces reassigned to other existing parking facilities on the MIT campus consistent with the threshold requirements of Table I of Section 19.23.

c. The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would be adversely affected by the nature of the proposed use.

The adjacent uses are institutional or commercial research and development uses; the CRF is a similar use.

d. Nuisance or hazard would be created to the detriment of the health, safety and/or welfare of the occupants of the proposed use or the citizens of City/

The new CRF will not create a nuisance or hazard and will comply with all applicable regulations for the use.

e. For other reasons, the proposed use would impair the integrity of the district or adjoining district, or otherwise derogate from the intent and purpose of this Ordinance.

The proposed CRF use is consistent with the uses permitted in the Residence C-3B district as well as the Mixed Use Residential Overlay District and is the type of use anticipated during the rezoning of this area to this new district in 2001.

f. The new use or building construction is consistent with the Urban Design Objectives set forth in Section 19.30.

Section 19.31: New projects should be responsive to the existing or anticipated pattern of development.

Indicators for this objective include:

(1) Heights and setbacks provide suitable transition to abutting or nearby residential zoning district that are generally developed to low scale residential uses.

While in a residential zoning district, the nearest residential neighborhood is more than a quarter of a mile away. The area is fully developed to commercial and institutional uses.

(2) New buildings are designed and oriented on the lot so as to be consistent with the established streetscape on those streets on which the project lot abuts. Streetscape is meant to refer to the pattern of building setbacks and height in relationship to public streets.

The CRF is designed to maintain a street wall height and character in keeping with the adjacent MIT buildings and commercial research and development buildings that are on Main Street.

(3) In mixed-use projects, uses are to be located carefully to respect the context, e.g. retail should front onto a street, new housing should relate to any adjacent existing residential use, etc.

The CRF will provide active gallery space along the Main Street façade that will be accessible to visitors and occupants during normal business hours, and visually all of the time, through the use of a glass wall at the Main Street level. No retail is proposed in the building. The Planning Board encourages as much visual and actual interaction between the building and the public sidewalk as possible, consistent with the program contained in the building. The landscaping and seating proposed in front of the building, in addition to the gallery space, will create a pleasing pedestrian streetscape.

(4) Where relevant, historical context is respected, e.g. special consideration should be given to buildings on the site or neighboring buildings that are preferably preserved.

The new CRF is surrounded by newly constructed research and development buildings such as the Stata Center, Broad Institute and MIT's Koch Biology Building.

Section19.32: Development should be pedestrian and bicycle-friendly, with a positive relationship to its surroundings. Indicators include:

(1) Ground floors, particularly where they face public streets, public parks, and publicly accessible pathways, consist of spaces that are actively inhabited by people, such as retail stores, consumer service businesses and restaurants where they are allowed, or general office, educational or residential uses, and building lobbies. Windows and doors that normally were such inhabited spaces are encouraged to be a prominent aspect of the relevant building facades. Where a mix of activities is accommodated in a building, the more active uses are encouraged facing public streets, parks and pathways.

The city sidewalk will abut an appropriately urban landscaped front yard to the building and a ground level gallery and exhibition space on Main Street, which will also provide sheltered public passage during normal business hours along this portion of Main Street.

(2) Covered parking on the lower floors of a building and on-grade parking, particularly where located in front of a building, is discouraged where a building faces a public street or public park, and publicly accessible pathways.

No parking will be constructed on this site. Parking for this building will be provided by assignment within the existing MIT parking inventory at or near the site.

(3) Ground floors should be generously (25-50%) transparent. The greatest amount of glass would be expected for retail uses with lesser amounts for office, institutional or residential use.

The Main Street façade is almost 100% transparent, Ames Street façade is 33% transparent, the South Elevation is 76% transparent and the Vassar Street façade is 23% transparent.

(4) Entries to buildings are located so as to ensure safe pedestrian movement across streets, encourage walking as a preferred mode of travel within the city and to encourage the use of public transit for employment and other trips. Relating building entries as directly as possible to crosswalks and to pathways that lead to bus stops and transit stations is encouraged; siting buildings on a lot and developing site plans that reinforce expected pedestrian pathways over the lots and through the district is also encouraged.

The multiple CRF entrances provide easy access to the building from Kendall Square, along Ames and Vassar Streets. Providing access at each end of the building provides passersby with protection from extreme weather during normal business hours .

(5) Pedestrians and bicyclists are able to access the site safely and conveniently; bicyclists should have secure storage facilities conveniently located on-site and out of the weather. If bicycle parking is provided in a garage, special attention must be paid to providing safe access to the facilities from the outside.

Bicycle storage and shower facilities are located in the basement of the CRF and bicycle racks are placed outside near the ground floor entrances.

(6) Alternate means of serving this policy objective 19.32 through special building design, siting or site design can be anticipated where the building form or use is distinctive such as free standing parking structures, large institutional buildings such as churches and auditoriums, freestanding service buildings, power plants, athletic facilities, manufacturing plants, etc.

The CRF, by the nature of its program, is able to meet all of the objectives of Section 19.32. Nevertheless, on the larger scale, the building defines and provides an urban edge to the south side of Main Street. Where it meets Vassar Street it defines a new open space in conjunction with the Stata Center and to the rear serves as one side of a new academic pedestrian courtyard within the MIT campus.

Section19.33: The building and site design should mitigate adverse environmental impacts of a development upon its neighbors. Indicators include:

(1) Mechanical equipment that is carefully designed, well organized or visually screened from its surroundings and is acoustically buffered from neighbors. Consideration is given to the size, complexity and appearance of the equipment, its proximity to residential areas, and its impact on the existing streetscape and skyline

The extent to which screening can bring order, lessen negative visual impacts, and enhance the overall appearance of the equipment should be taken into account. More specifically:

(a) Reasonable attempts have been made to avoid exposing rooftop mechanical equipment to public view from city streets. Among the techniques that might be considered are the inclusion of screens or a parapet around the roof of the building to shield low ducts and other equipment on the roof from view.

The CRF encloses all of its roof top mechanicals in a penthouse incorporating a metal panel system as part of its perimeter.

(b) Treatment of the mechanical equipment (including design and massing of screening devices as well as exposed mechanical elements) that relates well to the overall design, massing, scale and character of the building.

The architectural language of the penthouse material, color and articulation is in keeping with the overall design of the building.

(c) Placement of mechanical equipment at locations on the site other than on the rooftop (such as in the basement), which reduces the bulk of elements located on the roof; however, at-grade locations external to the building should not be viewed as desirable alternatives.

The mechanical systems serving the building are located both in the basement and within the screened penthouse spaces.

(d) Tall elements, such as chimneys and air exhaust stacks, which are typically carried above screening devices for functioning reasons, are carefully designed as features of the building and are arranged in an orderly manner to reduce their visual impact, reflect the location of the equipment they serve, and provide an organized visual element above the roof of the penthouse.

The exhaust stacks are enclosed within a metal panel system and organized in an orderly manner, which is in keeping with the other areas of the building.

(e) All aspects of the mechanical equipment in the penthouse has been compressed into as little space as possible to reduce the footprint of the penthouse and lessen its visual impact on the building, the neighborhood and views and vistas.

The mechanical equipment has been located within the penthouse.

(2) Trash that is handled to avoid impacts on neighbors is encouraged.

Materials handling is primarily managed below ground and is served by a pedestrian and vehicle access tunnel originating in the Stata Center basement. CO_2 gas storage and other infrequent deliveries occur at grade. The CO_2 gas is stored in a screened enclosure at the southwest corner of the building and reached by the service drive from Ames Street.

(3) Loading docks that are located and designed to minimize impacts.

Loading docks servicing the new CRF are underground and part of the materials handling component of the building program.

(4) Storm water Best Management Practices and other measures to minimize and improve water quality are implemented.

The site will be designed to meet the provisions of the Department of Environment Protection Stormwater Management Policy for a redevelopment project. Proposed stormwater management strategies for the CRF building and site improvement will mitigate the stormwater runoff as required by the City of Cambridge and the Commonwealth of Massachusetts.

This includes the use of Best Management Practices (BMP) including deep sum/hooded catch basins, stormwater treatment units to remove total suspended solids (TSS), an underground detention system to control peak rates of runoff and a separate rainwater retention tank for landscape irrigation.

In addition to the structured BMPs proposed, the site will provide a natural landscape of lawns, paths and plantings replacing the existing impervious parking lot.

(5) Landscaped areas and required Green Area Open Space, in addition to serving as visual amenities, are employed to reduce the rate and volume of stormwater runoff compared to pre-development conditions.

The landscaped areas will replace the existing impervious parking lot and significantly reduce the amount of surface runoff.

(6) The structure is designed and sited to minimize shadow impacts on neighboring lots, especially shadows that would have significant impact on the use and enjoyment of open space.

The new CRF has been sited along the northern edge of Main Street, permitting the creation of the courtyard to the south with maximum sun exposure. The building setback from Main Street will allow sunlight to reach the streetscape in many conditions.

(7) Changes in grade across the lot are designed in ways that minimize the need for structural retaining walls close to property lines.

There are not significant grade changes on this site.

(9) Building scale and wall treatment, including the provisions of windows, are sensitive to existing residential uses on adjacent lots.

The architectural treatment of wall surfaces and openings is designed to both reduce the scale of the building and correspond to the nature and scale of the surrounding non-residential buildings.

(10) Outdoor lighting is designed to provide minimum lighting and necessary to ensure adequate safety, night vision, and comfort, while minimizing light pollution.

The lighting design maintains the existing Main Street roadway and intersection lighting with slightly different lighting at the intersection corners. The placement of the roadway fixtures may be adjusted to coordinate with the new tree spacing.

The landscaped pathway lights around the new building and through the courtyard will be a simple post top light to provide lighting at the pedestrian scale without glare. The seating area along the courtyard side will be marked with a different post top light fixture.

(11) The creation of a Tree Protection Plan that identifies important trees on the site, encourages their protection, or provides for adequate replacement of trees lost to development on the site.

A licensed arborist has surveyed the existing trees on and adjacent to the site. There are 12 existing trees of significance as defined in the Cambridge Tree Ordinance that will be removed from the site. All of these are suitable for transplantation and MIT is seeking alternate campus locations for them. The

replacement trees planned for the site will more than replace the caliper of the trees being removed. In addition MIT is proposing to replace the failing Bradford Callery Pear street trees on Main Street.

Section19.34: Projects should not overburden the City infrastructure services, including neighborhood roads, city water supply system and sewer system. Indicators include:

(1) The building and site design are designed to make use of water conserving plumbing and minimize the amount of water run off through the use of BMPs for stormwater management.

The new CRF will use low flow and low water plumbing fixtures.

(2) The capacity and condition of drinking water and wastewater infrastructure systems are shown to be adequate, or the steps necessary to bring them up to an acceptable level are identified.

City infrastructure is adequate to serve the new facility.

(3) Buildings are designed to use natural resources and energy resources efficiently in construction, maintenance, and long-term operation of the building, including supporting mechanical systems that reduce the need for mechanical equipment generally and its location on the roof of a building specifically.

The new CRF will pursue a LEED Certification with the intention of achieving the Silver rating, which requires the incorporation of numerous energy conservation initiatives.

Section 19.35: New construction should reinforce and enhance the complex urban aspects of Cambridge as it has developed historically.

(1) New educational institutional construction that is focused within the existing campuses.

The CRF is constructed on existing MIT property. The new facility defines a new gateway to the campus from the public realm and anchors a new academic courtyard and public space.

(2) Where institutional construction occurs in commercial areas, retail, consumer service enterprises and other uses that are accessible to the general public are provided at ground levels.

The ground floor of the CRF will be an active interior gallery and exhibition site accessible to the public and available for use in bad weather to provide a sheltered walkway along Main Street. The building setback from Main Street will be designed to encourage the general public to sit and rest among landscaped seating. The entries

to the academic quadrangle behind the building will be designed to invite the public to leave the hubbub of Main Street and enjoy the more scholarly quiet of the interior open space.

(3) In large, multiple-building non-institutional development, a mix of uses, including publicly accessible retail activity, is provided where such uses are permitted and where the mix of uses extends the period of time the area remains active throughout the day.

The MIT CRF is not in this category as it is an institutional development but it does include publicly accessible landscaped courtyard space as well as the ground floor gallery space along Main Street.

(4) Historic structures and environments are preserved.

The CRF is to be constructed on an existing parking lot with no structures.

(5) Preservation or provision of facilities for start up companies and appropriately scaled manufacturing activities that provide a wide range of employment paths for Cambridge residents as a component of the development; however, activities heavily dependant on trucking for supply and distribution are not encouraged.

This is not applicable to the CRF project. The building is nevertheless one of the many facilities in Kendall Square and Cambridge that undertakes the basic research that ultimately leads to jobs for city and regional residents.

Section 19.36: *Expansion of the inventory of housing in the city is encouraged.*

The new CRF does not include housing.

Section 19.37: Enhancement and expansion of open space amenities in the city should be incorporated into new development in the city.

(1) On large- parcel commercial developments, publicly beneficial open space is provided.

Publicly beneficial open space is part of this design; the open space at the corner of Main and Ames Streets and Main and Vassar Streets become gateways to the MIT campus from the Kendall Square area. The interior courtyard will be further defined to provide a link from Kendall Square to the academic courtyard and to the existing campus open space beyond.

(2) Open space facilities are designed to enhance or expand existing facilities or to expand networks of pedestrian and bicycle movement within the vicinity of the development.

The new courtyard and related landscaped areas, accessible from all adjoining or nearby bikeways and pedestrian walkways, both enhance and expand those movements.

(3) A wider range of open space activities than presently found in the abutting area is provided.

The new courtyard and landscaped areas will provide for formal and informal activities, much more than the existing open on-grade parking lot does now.

Decision

Based on a review of the application documents, comments made at the public hearing, and based on the above findings, the Planning Board Grants the requested Special Permit for the Project Review Special Permit, Section 19.20, subject to the following conditions and limitations:

1. All use, building construction, and site plan development shall be in substantial conformance with the revised plans and application documents submitted to the Planning Board on October 29, 2007 as referenced above.

2. The project shall be subject to continuing design review by the Community Development Department (CDD). Before the issuance of the Building Permit for the project, the CDD shall certify to the Superintendent of Buildings the final plans submitted to secure the Building Permit are consistent with and meet all conditions of this Permit. Within six months of the issuance of the Building Permit for the building, the Permittee shall submit to the CDD for review and approval the detailed landscaping plan for the areas adjacent to the building presented to the Planning Board in schematic form during the approval process.

3. All authorized development shall conform to the requirements of the City of Cambridge "Noise Control Ordinance", Chapter 8.16 of the City Municipal Code.

Voting in the affirmative to GRANT the Special Permit were W. Tibbs, H. Russell, P. Winters, S. Winter, T. Anninger, and P. Singer, T. Cohen, Associate Members constituting at least two thirds of the members of the Planning Board necessary to grant a Special Permit.

For the Planning Board,

William Tibbs (emp)

William Tibbs, Chair

A copy of this decision #232 shall be filed with the office of the City Clerk. Appeals if any, shall be made pursuant to Section 17 of Massachusetts General Laws, Chapter 40A, and shall be filed within twenty (20) days after the filing of the above referenced decision with the City Clerk.