

# CAMBRIDGE DISCOVERY PARK

APPLICATION TO CAMBRIDGE PLANNING BOARD  
FOR MINOR AMENDMENT NO. 3 TO  
PLANNING BOARD MASTER PLAN SPECIAL PERMIT PB#198

AND FOR DESIGN REVIEW OF BUILDINGS 400 & 500 AND GARAGE B



20, 40, and 30 Acorn Park Drive, Cambridge, MA

## Volume I – Narrative Materials

July 30, 2014

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## Summary of Requested Approvals

BHX, LLC, as Trustee of Acorn Park Holdings Realty Trust (“Bulfinch”), is preparing to undertake another step in the phased redevelopment of Cambridge Discovery Park, the former Arthur D. Little Company campus in the northwest corner of Cambridge. Bulfinch now is seeking approvals for Buildings 400 & 500 and for Garage B.

For this project, Bulfinch is requesting a Minor Amendment to Master Plan Special Permit PB#198 (granted by the Planning Board on October 19, 2004), as amended by Minor Amendment No. 1 (granted by the Planning Board on March 1, 2005), and Minor Amendment No. 2 (granted by the Planning Board on October 20, 2009) (as amended, the “Cambridge Discovery Park Master Plan Special Permit”). This Minor Amendment is required to decouple Buildings 500 and 600, which are shown as a joined pair in the approved master plan, and to adjust the footprint of Building 500.

Bulfinch also is requesting Design Review of Buildings 400 & 500, and of Garage B, as required by Condition 2 of the Cambridge Discovery Park Master Plan Special Permit.

## Background and History

### *Arthur D. Little Company's Research Campus*

Beginning in 1952, and continuing for more than three decades thereafter, the former Arthur D. Little Company (“ADL”) built a sprawling, utilitarian, office and research campus along Acorn Park Drive. ADL constructed several buildings on the south side of Acorn Park Drive, immediately adjacent to the Little River. Those buildings were barely outside the subsequently-adopted Wetlands Protection Act’s 25-foot Riverfront Area. As such, they were much closer to the river than would now be acceptable from a planning or environmental standpoint. Among these was ADL’s tallest building, the six-story former Building 20.

ADL also leased adjacent land along the eastern side of Acorn Park Drive from the former Metropolitan District Commission (“MDC,” now part of the Department of Conservation and Recreation). With the MDC’s approval, ADL filled wetlands and built a parking lot with 454 surface parking spaces on this MDC land. By the mid-1990s, ADL’s campus had grown to eleven buildings containing approximately 416,000 square feet of gross floor area, with 1,052 surface parking spaces (including the 454 on MDC land).



Aerial view of former ADL Campus, circa 2000

In 1999, ADL sold its campus (including undeveloped land in Cambridge and Belmont), while remaining as the sole tenant. In November 2000, Bulfinch acquired the approximately 26.5-acre Cambridge portion of the former ADL property. At that time, ADL leased and occupied the entire campus.

Shortly thereafter, ADL suffered financial difficulties that resulted in the company filing for bankruptcy. In its bankruptcy proceedings, ADL voided its lease of the campus, leaving Bulfinch without a tenant. Two new companies emerged from ADL's ashes, TIAX, LLC and Nuvera Fuel Cells, Inc. For a few years, these companies remained as tenants, but, together, only occupied about half of the campus. Today, neither company remains at the campus.

### ***Developing a Shared Vision of the Future***

When Bulfinch acquired the property, the approximately 26.5-acre campus was zoned as Office 2. By right, the Cambridge Zoning Ordinance allowed a gross floor area of approximately 1,500,000 square feet (more than three times the approximately 416,000 square feet that Arthur D. Little Company had built). Many in the community felt that a tripling of the gross floor area at this location would have been excessive. Bulfinch, the Cambridge City Council, the Community Development Department, the Planning Board, and numerous other interested parties worked together collaboratively to develop a mutually-satisfactory downzoning proposal known as the Alewife Petition.

Many stakeholders wanted to see the surface parking area on the MDC land restored to natural conditions. Many stakeholders also wanted to see the area between Acorn Park Drive and the Little River—the so-called Little River Area—restored to natural conditions. There was widespread acknowledgement that, given the absence of public funding, the funds needed for these restoration efforts would need to be generated through private redevelopment of the campus. Eventually, a consensus vision emerged: the maximum allowed gross floor area for uses other than structured parking would be reduced to 916,000 square feet, and the developed footprint would be constrained to the area north and west of Acorn Park Drive. The Little River Area and MDC parking lot area would be restored to natural conditions. Finally, the maximum number of parking spaces allowed or required (for any mixture of uses) was set at 1,052, the historic number of spaces on ADL's campus and the MDC land. After a public hearing, the Planning Board unanimously recommended adoption of the Alewife Petition. On September 24, 2001, the City Council unanimously enacted the Alewife Petition as Section 17.40 of the Zoning Ordinance.<sup>1</sup>

The Special District 4 rezoning established a process for the phased redevelopment of the former Arthur D. Little Company campus. Under this process, increases in the total amount of gross floor area are coupled with specific milestones for the restoration and preservation of certain natural areas. In Phase One, the gross floor area can be increased from the approximately 416,000 square feet present in 2001 to as much as 666,000 square feet, plus up

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<sup>1</sup> CZO § 17.40 created two new special districts, Special District 4 encompassing Bulfinch's 26.5-acre property, and Special District 4A encompassing several neighboring properties between Cambridge Discovery Park and the Concord Turnpike.



to 250,000 square feet of structured parking.<sup>2</sup> During this initial phase, Bulfinch was required to develop and obtain Planning Board approval of a plan to restore to natural conditions the former MDC parking lot area and the Little River Area, such that at least ninety percent of these areas would consist of Green Area Open Space.

In Phase Two, the gross floor area may be increased to as much as 850,000 square feet of gross floor area, plus up to 400,000 square feet of structured parking. During this phase, Bulfinch would be required to restore the former MDC parking lot area, to demolish five of the buildings formerly located in the Little River Area, and to restore to natural conditions at least fifty percent of the Little River Area. In fact, Bulfinch fully restored the former MDC parking lot area to natural conditions in conjunction with the construction of the first new building, Building 100, for Smithsonian Astrophysical Observatory. Building 100 opened in late 2005. Bulfinch also demolished all of the former Arthur D. Little Company buildings in the Little River Area sooner than expected and has restored that area to natural conditions. In conjunction with the construction of Building 200/300, Bulfinch also demolished the remaining former Arthur D. Little Company buildings north and west of Acorn Park Drive. Thus, while Cambridge Discovery Park currently remains within Phase One of the Special District 4 redevelopment process, all of the Phase Two milestones have been met.

In Phase Three, Bulfinch may increase the total gross floor area to as much as 900,000 square feet, plus up to 400,000 square feet of structured parking. Also in this phase, Bulfinch would be required to complete the restoration of the Little River Area, had it not already done so.

### ***Implementation of the Shared Vision Begins***

After ADL's collapse, Bulfinch actively sought new tenants for Cambridge Discovery Park. In 2004, Bulfinch signed up the Smithsonian Astrophysical Observatory ("Smithsonian") as the first new tenant. Smithsonian wanted to stay in Cambridge while consolidating several scattered facilities into a purpose-built building to satisfy its particular needs. With a tenant on board, Bulfinch proceeded with implementation of the shared vision codified in Section 17.40 of the Zoning Ordinance.

On August 26, 2004, Bulfinch filed its Cambridge Discovery Park Master Plan Special Permit application with the Planning Board. The application was accompanied by seven volumes of supporting materials including a Flood Storage Report, Drainage Report, and Flood Storage Plan set, all prepared by the BSC Group; Graphics and Renderings prepared by ADD Inc; and a Transportation Impact Study prepared by Vanasse & Associates, Inc. Bulfinch sought several forms of zoning review and relief for the master plan:

- A Project Review Special Permit under Section 19.20 of the Zoning Ordinance,
- A Flood Plain Overlay District special permit under Section 20.73 of the Zoning Ordinance,

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<sup>2</sup> The separate gross floor area limits for structured parking were established in recognition that the high water table and low topography at Cambridge Discovery Park preclude the construction of underground parking.

- Special District 4 yard reduction under Section 17.42.2 of the Zoning Ordinance,
- Special District 4 building height increase (to 80 feet) under Section 17.42.3 of the Zoning Ordinance; and
- Parkway Overlay District Design Review.

On September 21, 2004, the Planning Board held a public hearing on the application. Thereafter, Bulfinch submitted a Supplemental Filing responding to questions raised by the Planning Board. On October 19, 2004, the Planning Board voted to grant the requested zoning reviews and relief. That decision also granted specific approval and design review approval of a new Building 100 (the Smithsonian’s new home) and of Garage A.

On February 25, 2005, after Smithsonian fell short on funding for its Giant Magellan Telescope (GMT) project, Bulfinch requested a Minor Amendment to the decision, to defer construction of the GMT annex to Building 100. Bulfinch also sought permission to defer construction of Garage A until the total gross floor area (excluding parking) at Cambridge Discovery Park exceeded 526,000 square feet. On March 1, 2005, the Planning Board granted the requested Minor Amendment No. 1. Construction of the GMT annex remains deferred unless and until the Smithsonian obtains funding for its GMT project. Construction of Building 100 was completed in late 2005.

In 2009, Bulfinch’s ongoing efforts to attract new tenants to Cambridge Discovery Park were again rewarded. Forrester Research decided to consolidate its scattered Cambridge offices into a new, build-to-suit headquarters. On October 20, 2009, the Planning Board granted Minor Amendment No. 2 for the Forrester Research project, which fixed the locations of conjoined Buildings 200 and 300, shifted the location of a proposed internal connection between Acorn Park Drive and the internal roadway (known as Discovery Way) from between Building 200 and 300 to between Buildings 100 and 200, and allowed up to 731 parking spaces in Garage A and on grade.

### ***Where We Are Today***

Bulfinch has removed the surface parking lot from the adjacent Department of Conservation and Recreation land, and has restored that area to natural conditions. With DCR’s approval, Bulfinch created a pedestrian / bicycle path across that area, providing a connection from Cambridge Discovery Park to the MBTA Alewife station. At DCR’s request, Bulfinch also created a small parking lot on DCR’s land with approximately two dozen spaces for visitors to the Alewife Reservation who need a place to park while bird watching, canoeing or kayaking on the Little River, or otherwise enjoying the Reservation.<sup>3</sup>

The Little River area has been fully restored to natural conditions. That area now includes an open meadow area and a pond, which receives and treats stormwater from the developed

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<sup>3</sup> These spaces are outside Special District 4, and do not count toward the 1,052 parking spaces allowed within Special District 4 by Section 17.43.1 of the Zoning Ordinance. There is no on-street parking along Acorn Park Drive.

area on the north side of Acorn Park Drive. A smaller pond created just west of Building 100 similarly receives and treats stormwater from that area.

Arthur D. Little Company operated a private, underground, sewer pumping station in the Little River Area, near the edge of the Little River. Bulfinch built a replacement pumping station, located closer to Acorn Park Drive. Bulfinch has agreed to transfer ownership of the new pumping station to the Cambridge Department of Public Works during the next few years.

Bulfinch has worked with an affiliate of Criterion Development Partners, the developer of the 227-unit Vox on Two residential project (formerly known as the Residences at Alewife) on the site of the former Faces discotheque, to coordinate utility infrastructure and pedestrian access. Wastewater from that project will discharge to the City's sewer system via the new pumping station at Cambridge Discovery Park. A pedestrian / bicycle easement allows Vox on Two residents to cross Cambridge Discovery Park to the public sidewalks along Acorn Park Drive, from which they can access the Alewife MBTA station via the path across the DCR land.

Today, Bulfinch has constructed three of the six buildings for which the Planning Board gave conceptual approval in the Cambridge Discovery Park Master Plan Special Permit. Building 100 remains Smithsonian's Cambridge home. Forrester Research occupies Building 200/300. Parking Garage A also has been built. Recently, Bulfinch filed an Application to Cambridge Planning Board for Major Amendment No. 1 to Planning Board Master Plan Special Permit PB#198, for a Parkway Overlay District Special Permit, and for design Review of Building 600. That application, for the proposed construction of Building 600 as an approximately 82,000 square foot hotel, rather than as the originally-proposed approximately 120,000 square foot office / laboratory building, is pending before the Planning Board. This application, for design review of Buildings 400 & 500 and Garage B, encompasses the remaining master plan elements.

## **Master Plan Special Permit Criteria for Amendments to Master Plan**

Bulfinch is seeking a minor amendment to the Cambridge Discovery Park Master Plan Special Permit, to decouple Buildings 500 and 600, and to modify the footprint of Building 500. This request is similar the previously-requested Minor Amendment No. 2, which the Planning Board approved in October 2009. In that instance, Bulfinch decoupled proposed Building 200 from Building 100 (which had been constructed in 2004 for the Smithsonian Astrophysical Observatory) and decoupled proposed Buildings 300 and 400; moving proposed Buildings 200 and 300 toward each other to create Building 200/300 as the new Cambridge home of Forrester Research.

As described in Bulfinch's original application for the Cambridge Discovery Park Master Plan Special Permit:

The evolving Master Plan for Cambridge Discovery Park envisions that as many as six new occupied buildings will be built, most likely grouped in pairs, separated by access drives between Acorn Park Drive to the south and an internal circulation roadway between the new buildings and the two new parking garages to the north. Starting at the west, Building 100 will be constructed first, for the Smithsonian. ... This proposed layout and sequence may change over time, depending on future tenant needs. For example, if a future tenant were to require a larger, single-occupant building, such a building might be constructed in the area where Buildings 300 and 400 currently are envisioned. If such a tenant were to materialize in the near future, such a building could precede the construction of Building 200.

Application at 20. The Planning Board's special permit decision expressly recognized that the master plan would evolve over time in response to future tenant demands:

This Decision approves the Master Plan with general size, massing, and locations of buildings and uses established at a conceptual level as described in the application documents. As a prerequisite to the issuance of a Building Permit, each new building shall be subject to design review by the Planning Board to determine conformance with the Design Guidelines, attached as Appendix II to this Decision, and the conditions of this permit.

Cambridge Discovery Park Master Plan Special Permit, Condition No. 2 (emphasis added). To that end, the special permit incorporates the Zoning Ordinance's PUD amendment process for future changes to the Master Plan:

Changes to the master Plan that do not constitute a substantial deviation from the overall project concept approved in this Decision, as determined by the Planning Board with guidance from Section 12.37 of the Zoning Ordinance, may be allowed as a Minor Amendment to this Decision at a regularly scheduled Planning Board meeting, upon an affirmative vote of five members of the [Planning] Board; unless otherwise indicated in this Decision, all other changes shall be considered a Major Amendment to this

Special Permit, subject to the requirements of Section 10.40 for the issuance of a new special permit.

Cambridge Discovery Park Master Plan Special Permit, Condition No. 11. The referenced Section 12.37.2 of the Zoning Ordinance defines minor amendments:

Minor amendments are changes which do not alter the concept of the [Special Permit Master Plan] in terms of density, floor area ratio, land usage, height, provision of open space, or the physical relationship of elements of the development. Minor amendments shall include, but not be limited to, small changes in the location of buildings, open space, or parking; or realignment of minor streets.

As discussed below, this project does not alter the concept of the Cambridge Discovery Park Master Plan with respect to any of the criteria identified in Special Permit PB#198 or in the language of Section 12.37.2 of the Zoning Ordinance incorporated by reference into that decision.

***The Building 500 changes are below the Minor Amendment thresholds***

The Building 500 changes do not alter the concept of the Master Plan in terms of density. The density limits allowed under the Cambridge Discovery Park Master Plan will remain unchanged, *i.e.*, up to 819,916 square feet of gross floor area and 390,000 square feet of parking garages on the North Parcel (between north and west of Acorn Park Drive).

The Building 500 changes will not alter the concept of the Master Plan in terms of floor area ratio (“FAR”). Section 17.42.11 of the Zoning Ordinance provides that, “There shall be no maximum FAR limit on any lot within the Special District 4.” The Master Plan Special Permit includes a dimensional table showing that the maximum FAR for the overall master plan could be up to 0.71 (excluding structured parking from gross floor area calculations per Section 17.40 of the Zoning Ordinance). This project maintains this overall FAR limit and fulfills the objectives of the Master Plan.

The Building 500 changes will not alter the concept of the Master Plan in terms of land usage. The Master Plan envisioned a campus with office, research and development, and life sciences as the principal tenant uses, augmented by accessory uses such as a cafe, day care facilities, and a health club. The principal uses of Building 500 will be office and research uses. Depending on tenant demand, accessory uses may include a cafeteria or other supporting uses consistent with the Master Plan.

The Building 500 changes will not alter the concept of the Master Plan in terms of building height. The Master Plan Special Permit authorizes an increased building height of eighty-five (85) feet for buildings other than parking garages (which are limited to sixty (60) feet), as provided for in Section 17.42.3 of the Zoning Ordinance.<sup>4</sup> The Special Permit clarifies that

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<sup>4</sup> Within the Parkway Overlay District, lower building heights apply as specified in Section 20.64.2 apply. Building 500 Project does not extend into the Parkway Overlay District.

“the final height of buildings, consistent with applicable provisions of the Zoning Ordinance, will be measured from final grades that will be altered and raised by the use of fill in order to ensure that the first occupied floor of future buildings will be above the established 100-year flood elevation.” Cambridge Discovery Park Master Plan Special Permit at 18. Building 500 will feature building base planters and graded landscaping like those of Buildings 100 and 200/300. As with those buildings, the first floor will be set at elevation 10.8. The height of Building 500 will not exceed eighty-five (85) feet, as measured under the Zoning Ordinance, consistent with the Master Plan.

The Building 500 changes will not alter the concept of the Master Plan in terms of the provision of open space. The Cambridge Discovery Park Master Plan calls for all of the former ADL Buildings in the Little River Area to be removed, and for that area to be restored to natural conditions. That process was completed five years ago. The master plan also calls for the former parking lot on the adjacent MDC Lot to be removed and that area restored to natural conditions. The restoration of the MDC Lot to open space was completed in conjunction with the construction of Building 100, years ahead of schedule. North and west of Acorn Park Drive, open space will be provided in approximately the same amount as shown on the 2004 Conceptual Illustration Scenario, as modified by Minor Amendment No. 2.

The Building 500 changes will not alter the concept of the Master Plan in terms of the physical relationship of elements of the development. The Cambridge Discovery Park Master Plan Special Permit established a three-phase process for the replacement over time of all of the former ADL buildings and surface parking lots on the North Parcel with as many as six new buildings with heights of up to 85 feet, and two parking garages, all served by a new, internal roadway, with all development kept away from the Little River. The master plan calls for “a much more dynamic interaction between the built and unbuilt environment than is typical elsewhere in the City [in that] the District will present an urban edge against a natural environment, a sharper contrast than appears elsewhere in the City and one that should be appropriately and creatively treated and celebrated.” Cambridge Discovery Park Special Permit at page 35 (Design Guidelines). The Building 200/300 Project maintained the urban edge along the north side of Acorn Park Drive, with its dynamic interaction between the North Parcel and the Little River Area. Building 500 (and Building 400) will continue this urban edge eastward to and around the corner of Acorn Park Drive. Building 500 will largely overlap its footprint as shown on the 2004 Conceptual Illustration Scenario. The Cambridge Discovery Park Master Plan Special Permit anticipated that the number and location of connections between the new, internal roadway and Acorn Park Drive might differ from what was shown on the 2004 Conceptual Illustration Scenario, with Condition No. 1(iv) providing that there must be “at least two, but not more than four,” such connections. The Building 200/300 Project shifted the roadway connection from between Buildings 200 and 300 to between Buildings 100 and 200 to accommodate Forrester’s needs; the overall number of connections remained at three. The Building 500 changes will not modify the new internal roadway location established by Minor Amendment No. 2.

*The Building 500 changes are allowed by minor amendment*

As noted above, Section 12.37.2 of the Zoning Ordinance, incorporated by reference into the Cambridge Discovery Park Master Plan Special Permit provides that, “Minor amendments shall include, but not be limited to, small changes in the location of buildings, open space, or parking; or realignment of minor streets.” The Building 500 changes decouple Building 500 from Building 600 and change the footprint of Building 500, but do not significantly shift Building 500’s center of mass. These adjustments are a de minimus change to the building’s location, and do not change its participation in the planned urban edge extending nearly 1,400 feet along the north side of Acorn Park Drive. There will be no changes to the internal roadway or to the approximately eight acres of new open space created in the Little River area and on the former MDC Lot.

The Special District 4 zoning and the Cambridge Discovery Park Master Plan Special Permit envisioned that the approximately 4.22-acre MDC Lot and the approximately 3.76-acre Little River Area would be restored to natural conditions during a later stage of the redevelopment of Cambridge Discovery Park. Today, all of this restoration work has been completed; the amount of open space created in these areas will not be changed.

The Building 500 changes will not alter the Cambridge Discovery Park Master Plan Special Permit’s final parking configuration; almost all surface parking spaces still will be relocated into Garage A and Garage B.

For all the reasons set forth above, the Building 500 changes do not exceed any of the limitations on minor amendments to the Cambridge Discovery Park Master Plan.

*The Building 500 changes do not require a major amendment to the master plan*

The Building 500 changes clearly are not a major amendment to the Master Plan. Section 12.37.3 of the Zoning Ordinance defines major amendments as:

“Major amendments represent substantial deviations from the [Special Permit Master Plan] concept approved by the Planning Board. Major amendments shall include, but not be limited to, large changes in floor space, mix of uses, density, lot coverage, height, setbacks, lot sizes, open space; changes in the location of buildings, open space, or parking; or changes in the circulation system.”

As discussed above, the Building 500 changes will not involve any changes to the overall floor space, mix of uses, density, height, lot sizes, or open space.

The Building 500 changes will not result in large changes in lot coverage. The 2004 conceptual Master Plan anticipated that, at full buildout, approximately 10 acres of the 26.5 acre property would be covered with up to 819,916 square feet of gross floor area in new buildings, two parking garages, access drives, sidewalks, landscaping, and related improvements, with the majority (approximately 16.5 acres) of the property as open space (and the adjacent 4.22-acre MDC Lot restored to open space). The Building 500 changes maintain these lot coverage goals. Within the North Parcel, the master plan envisions

building footprints totaling approximately 149,000 square feet, two parking garages with a combined footprint of approximately 64,600 feet, and approximately 2.5 acres of hardscape (internal roadways, sidewalks, and loading area access). The Building 500 changes will result in similar building and garage footprints.

The Building 500 changes will not result in large changes in setbacks. The Master Plan calls for a minimum front yard setback of at least forty (40) feet from the centerline of Acorn Park Drive. Cambridge Discovery Park Master Plan Special Permit, Condition 1(iii). The east and south sides of Buildings 500 will be set back 40 feet from the centerline of Acorn Park Drive.

The Building 500 changes will not result in large changes to the locations of buildings. The location of Building 500 will remain generally as shown on the 2004 Conceptual Illustration Scenario. As shown on the illustration above, the revised location of Building 500 substantially overlaps its footprint as shown on the original Master Plan.

The Building 500 changes will not result in large changes in parking. There will be no change to the locations of parking at full buildout. All of the 1,052 former surface parking spaces will be eliminated and almost all of them will be relocated to within Garages A and B, with a few surface, handicapped-reserved spaces in the campus's interior.

The Building 500 changes will not result in large changes in the circulation system. The internal circulation system will continue to function as revised by Minor Amendment No. 2, starting west of Building 100, arcing behind Building 200/300, before reconnecting to Acorn Park Drive between Buildings 400 and 500.

For all of these reasons, the Building 500 changes **do not** constitute a Major Amendment to the Master Plan.



## Design Review of Buildings 400 & 500 and Garage B

Condition 2 of the Cambridge Discovery Park Master Plan Special Permit establishes the design review process for future buildings.<sup>5</sup> It states that in granting that Master Plan Special Permit, the Planning Board

approves the Master Plan with general size, massing, and locations of buildings and uses established at a conceptual level as described in the application documents. As a prerequisite to the issuance of a building permit, each new building shall be subject to design review by the Planning Board to determine conformance to the Design Guidelines, attached as Appendix II to this decision, and the conditions of this permit.

...

Design approval shall be granted by the Planning Board for development consistent with the Design Guidelines, the conditions of this Decision, and the applicable requirements of the Zoning Ordinance.

### ***Compliance with the Cambridge Discovery Park Master Plan Special Permit Design Guidelines***

The Cambridge Discovery Park Master Plan Design Guidelines recognize that Special District 4 is unlike any other area of the City. The area's proximity to the Alewife Reservation and historical pattern of development adjacent to the Little River present unique challenges, and require particular solutions. The transformation of the former ADL campus into Cambridge Discovery Park is reclaiming an urban wild. In doing so, Cambridge Discovery Park presents a much more dynamic interaction between the built and unbuilt environments than is typical elsewhere in the City. This urban edge should be celebrated, and treated appropriately and creatively. The susceptibility of the site to flooding, from upstream stormwater flows and from back flows caused by downstream obstructions, requires compensatory flood storage capacity. The requirement that first floor elevations of all occupied buildings must be kept above FEMA's calculated 100-year flood elevation presents additional design challenges and opportunities. The Cambridge Discovery Park Master Plan Design Guidelines provide a framework within which these issues can be addressed in an aesthetically and functionally-appropriate manner that responds to Special District 4's unique characteristics. The Guidelines' criteria are discussed below with respect to each of Building 400, Building 500, and Garage B.

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<sup>5</sup> Condition 3 of the Cambridge Discovery Park Master Plan Special Permit approved the design of Building 100 and Garage A, and associated site improvements.

## ***Building 400 Design Details***

### **a. Open space and circulation design**

#### **1. Open Space**

The creation and restoration of open space areas has been accelerated far beyond what is required by the Special District 4 zoning. The adjacent DCR land is fully restored to natural conditions, several years ahead of schedule. The Special District 4 zoning requires that the demolition of buildings in the Little River Area must begin when the total gross floor area (excluding parking garages) exceeds 660,000 square feet, and must be completed before the total gross floor area (excluding parking) exceeds 850,000 square feet. Today, although the redeveloped campus's gross floor area (excluding parking) is only approximately 363,248 square feet<sup>6</sup>, all of Arthur D. Little Company's former buildings have been removed from the Little River Area. The Special District 4 zoning requires that fifty percent of the Little River Area must be restored to urban wild natural conditions when the total gross floor area (excluding parking) exceeds 660,000 square feet. That restoration was fully completed in conjunction with construction of Building 200/300 for Forrester Research, well in advance of the timeframe required under the Special District 4 zoning.

The Design Guidelines call for private development bordering public open space and public thoroughfares to have direct access to the public space, and to present inviting elevations and imagery. Building 400 will have a central entrance facing east to Discovery Way, the internal roadway looping from Acorn Park Drive through the campus. From the entrance to Building 400, tenants and visitors will be able to look northward to the campus's landscaped interior or south and southeast toward the restored Little River Area.

#### **2. Transit Shuttle**

The Design Guidelines call for efforts to increase the usage of the nearby Alewife MBTA station, including the provision of a shuttle between Cambridge Discovery Park and the station. Paul Revere Transportation operates a shuttle bus between 7:15 a.m. and 9:30 a.m. and between 4:15 p.m. and 8:00 p.m. on weekdays, *i.e.*, during peak periods. The shuttle circulates between Cambridge Discovery Park and the Alewife station. Tenants of Building 400 will be able to use the shuttle bus.

#### **3. Pedestrian and Bicycle Circulation**

In 2004, Bulfinch constructed a multi-use pedestrian and bicycle connection between Cambridge Discovery Park and the Alewife MBTA station. The Building 200/300 project shifted the lateral connection between Acorn Park Drive and the internal roadway, to between Buildings 100 and 200, and consolidated the loading areas for Buildings 200/300. This eliminated multiple conflicts among pedestrian/bicycle/vehicle/loading uses from the master plan's interior courtyard area.

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<sup>6</sup> This includes approximately 5,600 square feet of gross floor area allocated to the Giant Magellan Telescope Annex to Building 100, which has not yet been (and may never be) constructed.

The pedestrian / bicycle pathway across the adjacent, restored DCR land provides convenient pedestrian and bicycle access between Cambridge Discovery Park and the Alewife station. Sixty-six bicycle parking spaces currently are available on the campus, of which 46 are long-term spaces. Building 400 will include an additional 29 long-term bicycle spaces, to be located inside Garage B, and 6 short-term bicycle spaces, located near the primary entrance.

#### 4. Parking and Service Facilities

Bulfinch anticipates constructing Garage B in conjunction with the construction of Building 400. All parking for tenants of and visitors to Building 400 will be provided in Garage B. Building 400's loading bay will be in the building's northeast corner, near the loading area for Building 200/300.

### **b. Land use**

#### 5. Uses

The principal use of Building 400 is expected to be general office and research; both uses are allowed by right under the Zoning Ordinance and the Cambridge Master Plan Special Permit, and are anticipated by the Design Guidelines.

#### 6. Parking

The 454 surface parking spaces formerly located on the adjacent MDC Lot have been eliminated. Garage A provides approximately 652 structured parking spaces for Cambridge Discovery Park tenants and their visitors. Garage B, expected to be constructed in conjunction with Building 400, will provide 368 additional structured parking spaces. The remainder of the 1,052 parking spaces allowed by right at Cambridge Discovery Park will be provided as short-term surface parking spaces for passenger drop-off, deliveries, and related transient uses.

### **c. Elements of form**

#### 7. Height

The Design Guidelines acknowledge that the redevelopment of Cambridge Discovery Park generally requires a full height build-out of eighty-five feet. Building 400 will have a height of eighty-five feet.<sup>7</sup> As anticipated by the Design Guidelines, sloped areas and raised planters will be used to establish the first floor elevation of Building 400 above the 100-year flood plain.

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<sup>7</sup> As provided for in Section 5.23 of the Zoning Ordinance, this height measurement does not include chimneys, water towers, air conditioning equipment, elevator bulkheads, skylights, ventilators, and other necessary features appurtenant to buildings which are usually carried above roofs and not used for human occupancy. Any such elements have been designed in a coordinated, distinctive manner in concert with the upper floors of the building.

## 8. Scale

Building 400 has been designed to relate to human dimensions and to provide a sense of intimacy along the bordering public way and internal campus open space. The building will be clad in pre-cast concrete and metal panel, with extensive glazing. The precast facade elements used for Building 400 will differ from those used for Building 200/300, but will derive from the same family. On its Acorn Park side, the ground floor of Building 400 will be highly transparent, inviting occupants to look out toward the urban wilds, and providing animated interior views to pedestrians.



**View of Building 400 from Acorn Park Drive**

## 9. Massing

The precast elements of Building 400 will integrate the new building with Building 300 to the west, creating the feel of an urban campus, while preserving each building's distinct identity. Significant portions of the facades of the lower two floors of Building 100 are solid, due to the Smithsonian's particular needs (development and testing of telescope systems). By contrast, the facades on all floors of Building 200/300 feature large windows, bringing daylight into the occupied spaces, providing views of the adjacent public open spaces and urban wilds, and softening shadows. Building 400 will continue aesthetic glazing on all facades. Notches in three corners of Building 400's footprint will articulate the major wall planes, reducing the building's perceived mass. In keeping with the Design Guidelines, Building 400 will have a distinctive character, but has been designed in an architecturally compatible manner as the next step in the family of buildings that will comprise an integrated urban campus.

## 10. Setbacks

Section 17.42.2 of the Zoning Ordinance authorizes the Planning Board to waive all yard requirements in Special District 4 other than the front yard requirement in the Parkway Overlay District. Condition 1(iii) of the Cambridge Discovery Park Master Plan Special

Permit established the forty foot setback from the centerline of Acorn Park Drive, and certain setbacks for Garage A and Garage B, and provides for the setbacks of future buildings to be approved during the design review process. Building 400 will be set back at least forty feet from the centerline of Acorn Park Drive, as required by the Design Guidelines.

#### 11. Street Wall Patterning/Base, Middle and Top

The Design Guidelines call for buildings to have a tripartite architectural configuration of base, middle, and expressive top. The contours and exterior materials of Building 400 have been designed to modulate the building's massing both vertically and horizontally. The pre-cast facades transition to lighter materials (metal panel) as they wrap to the Discovery Way side, emphasizing the difference in character between the restored urban wild to the south and the redesigned internal courtyard to the north.



**View of Building 400 from Discovery Way**

Vertically, each building mass will be divided into the recommended tripartite configuration, with a strong base, middle, and top reading. The base is primarily pre-cast and glass. In some areas, the plane of the base facade is stepped back into the building, to provide shade for active interior uses and to extend the exterior terraces into the occupied first floor areas. Building 400 has been designed to respond to the existing context established by Buildings 100 and 200/300, while continuing the precedent of design that speaks to the innovation that will take place at Cambridge Discovery Park.



**View of Building 400 from Acorn Park Drive,  
with Building 200/300 and Building 100 to the west**

Rooftop mechanical equipment will be fully screened, as was done on Buildings 100 and 200/300. The screening also will be articulated, reaching the building face in some areas and set back in others, to provide a varied skyline.

#### 12. Silhouette

The Design Guidelines call for buildings to provide animated, varied silhouettes that create an appropriate identity and enrich views from the Alewife Reservation, nearby areas, and public ways. Building 400 will differ in form from Buildings 100 and 200/300, and, consequently, present a different silhouette to Acorn Park Drive. This silhouette will be animated by the top floor setbacks, and varied planes of the street walls (along Acorn Park Drive and along the internal roadway), and by the further articulation of the central core areas.

#### 13. Color

As recommended by the Design Guidelines, the precast elements, landscaping planters, stone walls, and other elements of the Building 400 Project will use warm and inviting colors that complement the Alewife Reservation's natural range.



### **Warm Palette of Natural Materials Used in Landscaping**

#### 14. Architectural Details

As recommended by the Design Guidelines, Building 400 will be faced with an ordered combination of appropriate materials, including precast concrete, stone, and glass. The east side entrance will feature a stylized awning, color coordinated with the building's other exterior elements. The north, south, and west ground floor walls will maximize visibility and transparency through the use of large areas of glass. All mechanical penthouse areas will be set back from the principal building facade. Those areas will be architecturally screened and integrated within the overall building form and individual elevations.

The signage for Building 400 will be consistent with that used for Buildings 100 and 200/300.

Interior lighting will use timers or occupancy sensors to ensure that non-safety lighting is turned off when not needed.

#### 15. Landscape Architectural Details

Acorn Park Drive's handsome, tree-lined appearance has been strengthened by the addition of new oak trees along the north side and additional plantings along the south side. Landscaping plantings for Building 400 will be drought tolerant, native species that do not require regular pruning or maintenance. New trees along the relocated connection between

Acorn Park Drive and Discovery Way will frame that view corridor. The vocabulary of stone-faced landscaping planters, low stone walls topped with seating, stone steps, and new, wider sidewalks with street trees that began with Building 100 and continued with Building 200/300 will be extended farther along Acorn Park Drive adjacent to Building 400.



**View of Building 400 from Acorn Park Drive,  
with Building 200/300 and Building 100 to the west**



## ***Building 500 Design Details***

### **a. Open space and circulation design**

#### 1. Open Space

As described above, the creation and restoration of open space areas has been accelerated far beyond what is required by the Special District 4 zoning. The Design Guidelines call for private development bordering public open space and public thoroughfares to have direct access to the public space, and to present inviting elevations and imagery. Building 500 will have a central entrance facing west to Discovery Way, the internal roadway looping from Acorn Park Drive through the campus. From the entrance to Building 500, tenants and visitors will be able to look northward to the campus's landscaped interior or south and southwest toward the restored Little River Area.

#### 2. Transit Shuttle

As discussed above, Paul Revere Transportation operates a shuttle bus serving the Cambridge Discovery Park campus during peak periods, circulating between Cambridge Discovery Park and the Alewife station. Tenants of Building 500 will be able to use the shuttle bus.

#### 3. Pedestrian and Bicycle Circulation

In 2004, Bulfinch constructed a multi-use pedestrian and bicycle connection between Cambridge Discovery Park and the Alewife MBTA station. The Building 200/300 project shifted the lateral connection between Acorn Park Drive and the internal roadway, to between Buildings 100 and 200, and consolidated the loading areas for Buildings 200/300. This eliminated multiple conflicts among pedestrian/bicycle/vehicle/loading uses from the master plan's interior courtyard area.

The pedestrian / bicycle pathway across the adjacent, restored DCR land provides convenient pedestrian and bicycle access between Cambridge Discovery Park and the Alewife station. Sixty-six bicycle parking spaces currently are available on the campus. Sixty-six bicycle parking spaces currently are available on the campus, of which 46 are long-term spaces. Building 500 will include an additional 40 long-term bicycle spaces, to be located inside Garage B, and 8 short-term bicycle spaces, located near the primary entrance.

#### 4. Parking and Service Facilities

Bulfinch anticipates constructing Garage B in conjunction with the construction of Building 500. All parking for tenants of and visitors to Building 500 will be provided in Garage B. Building 500's loading bays will be in the building's northeast corner.

### **b. Land use**

#### 1. Uses

The principal use of Building 500 is expected to be general office and research; both uses are allowed by right under the Zoning Ordinance and the Cambridge Master Plan Special Permit, and are anticipated by the Design Guidelines.

## 2. Parking

The 454 surface parking spaces formerly located on the adjacent MDC Lot have been eliminated. Garage A provides approximately 652 structured parking spaces for Cambridge Discovery Park tenants and their visitors. Garage B, expected to be constructed in conjunction with Building 500, will provide 368 additional structured parking spaces. The remainder of the 1,052 parking spaces allowed by right at Cambridge Discovery Park will be provided as short-term surface parking spaces for passenger drop-off, deliveries, and related transient uses.

### c. **Elements of form**

#### 1. Height

The Design Guidelines acknowledge that the redevelopment of Cambridge Discovery Park generally requires a full height build-out of eighty-five feet. Building 500 will have a height of eighty-five feet.<sup>8</sup> As anticipated by the Design Guidelines, sloped areas and raised planters will be used to establish the first floor elevation of Building 500 above the 100-year flood plain.

#### 2. Scale

Building 500 has been designed to relate to human dimensions and to provide a sense of intimacy along the bordering public way and internal campus open space. The building will be clad in pre-cast architectural concrete and metal panel, with extensive glazing. The precast facade elements used for Building 400 will differ from those used for Building 200/300 and Building 400, but will derive from the same family. On its Acorn Park sides, the ground floor of Building 500 will highly transparent, inviting occupants to look out toward the urban wilds, and providing animated interior views to pedestrians.

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<sup>8</sup> As noted above, this height measurement does not include chimneys, water towers, air conditioning equipment, elevator bulkheads, skylights, ventilator,s and other necessary features appurtenant to buildings which are usually carried above roofs and not used for human occupancy.



**View of South Facade of Building 500 from Acorn Park Drive**



**View of East Facade of Building 500 from Acorn Park Drive**

### 3. Massing

The precast elements of Building 500 will integrate the new building with Building 400 to the west, creating the feel of an urban campus, while preserving each building's distinct identity. Significant portions of the facades of the lower two floors of Building 100 are solid, due to the Smithsonian's particular needs (development and testing of telescope systems). By contrast, the facades on all floors of Building 200/300 feature large windows, bringing daylight into the occupied spaces, providing views of the adjacent public open spaces and urban wilds, and softening shadows. As with Building 400, Building 500 will continue this aesthetic with extensive glazing on all facades. Articulation in Building 500's eastern and western facades, and the building's non-rectilinear footprint, will reduce the building's perceived mass. In keeping with the Design Guidelines, Building 500 will have a distinctive

character, but has been designed in an architecturally compatible manner as the next step in the family of buildings that will comprise an integrated urban campus.

#### 4. Setbacks

Section 17.42.2 of the Zoning Ordinance authorizes the Planning Board to waive all yard requirements in Special District 4 other than the front yard requirement in the Parkway Overlay District. Condition 1(iii) of the Cambridge Discovery Park Master Plan Special Permit established the forty foot setback from the centerline of Acorn Park Drive, and certain setbacks for Garage A and Garage B, and provides for the setbacks of future buildings to be approved during the design review process. Building 500 will be set back at least forty feet from the centerline of Acorn Park Drive, as required by the Design Guidelines.

#### 5. Street Wall Patterning/Base, Middle and Top

The Design Guidelines call for buildings to have a tripartite architectural configuration of base, middle, and expressive top. The contours and exterior materials of Building 500 have been designed to modulate the building's massing both vertically and horizontally. The glass and metal clad facade of Building 500's south side transitions to include greater use of architectural pre-cast concrete on the eastern facade, emphasizing the difference in character between the restored urban wild to the south and the redesigned internal courtyard to the north.



**View of Building 500 from Restored MDC Lot**

Vertically, each building mass will be divided into the recommended tripartite configuration, with a strong base, middle, and top reading. The base is primarily pre-cast and glass. In some areas, the plane of the base facade is stepped back into the building, to provide shade for active interior uses and to extend the exterior terraces into the occupied first floor areas.

The upper floors of the building masses feature much more glass, making them lighter in appearance. These areas will have a horizontal sunshade element on the South elevations, to control solar gain and glare within the upper floors while providing additional texture as the building meets the sky. In these ways, Building 500 has been designed to respond the existing context established by Buildings 100 and 200/300, while continuing the precedent of design that speaks to the innovation that will take place at Cambridge Discovery Park.



**View of Facade of Building 500 facing Discovery Way**

Rooftop mechanical equipment will be fully screened, as was done on Buildings 100 and 200/300. The screening also will be articulated, reaching the building face in some areas and set back in others, to provide a varied skyline.

#### 6. Silhouette

The Design Guidelines call for buildings to provide animated, varied silhouettes that create an appropriate identity and enrich views from the Alewife Reservation, nearby areas, and public ways. Building 500 will differ in form from that of Buildings 100 and 200/300, and, consequently, present a different silhouette to Acorn Park Drive. This silhouette will be animated by the top floor setbacks, and varied planes of the street walls (along Acorn Park Drive and along the internal roadway), and by the further articulation of the central core areas.

## 7. Color

As recommended by the Design Guidelines, the precast elements, landscaping planters, stone walls, and other elements of the Building 500 Project will use warm and inviting colors that complement the Alewife Reservation's natural range.



**Warm Palette of Natural Materials Used in Landscaping**

## 8. Architectural Details

As recommended by the Design Guidelines, Building 500 will be faced with an ordered combination of appropriate materials, including precast concrete, stone, and glass. The east side entrance will feature a stylized awning, color coordinated with the building's other exterior elements. The north, south, and west ground floor walls will maximize visibility and transparency through the use of large areas of glass. All mechanical penthouse areas will be set back from the principal building facade. Those areas will be architecturally screened and integrated within the overall building form and individual elevations.

The signage for Building 500 will be consistent with that used for Buildings 100 and 200/300.

Interior lighting will use timers or occupancy sensors to ensure that non-safety lighting is turned off when not needed.

## 9. Landscape Architectural Details

Acorn Park Drive's handsome, tree-lined appearance has been strengthened by the addition of new oak trees along the north side and additional plantings along the south side. Landscaping plantings for Building 500 will be drought tolerant, native species that do not require regular pruning or maintenance. New trees along the relocated connection between Acorn Park Drive and Discovery Way will frame that view corridor. The vocabulary of stone-faced landscaping planters, low stone walls topped with seating, stone steps, and new, wider sidewalks with street trees that began with Building 100 and continued with Building 200/300 will be extended around the corner of Acorn Park Drive to Building 500.

## ***Garage B Design Details***

### **a. Open space and circulation design**

#### 1. Open Space

As discussed above, the creation and restoration of open space areas has been accelerated far beyond what is required by the Special District 4 zoning. The Design Guidelines call for private development bordering public open space and public thoroughfares to have direct access to the public space, and to present inviting elevations and imagery. Garage B will be located in a “pocket” with the Martignetti bowling alley property to the west, Route 2 to the north, and future Building 600 to the east. As such, it will not border on public open spaces. Although it will be adjacent to a public thoroughfare, there will be no direct access from Garage B to Route 2. Rather, anyone driving to or from Garage B will use the internal roadway, Discovery Way, to access Acorn Park Drive and public streets beyond.

#### 2. Transit Shuttle

The Design Guidelines call for efforts to increase the usage of the nearby Alewife MBTA station, including the provision of a shuttle between Cambridge Discovery Park and the station. As discussed above, Paul Revere Transportation operates a shuttle bus between Cambridge Discovery Park and the Alewife station. The availability of this shuttle service is one of the measures designed to reduce the number of single-occupancy vehicles using Garage B.

#### 3. Pedestrian and Bicycle Circulation

Garage B will provide 24 covered, secure, long-term bicycle spaces for tenants of and visitors to Cambridge Discovery Park.

#### 4. Parking and Service Facilities

Garage B will provide 368 of the 1,052 parking spaces allowed by right at Cambridge Discovery Park. Garage B also will screen the loading area of future Building 600.

### **b. Land use**

#### 1. Uses

Garage B will provide 368 of the 1,052 parking spaces allowed by right at Cambridge Discovery Park and will provide covered, secure, long-term bicycle spaces for tenants of and visitors to Buildings 400, 500, and future Building 600.

#### 2. Parking

The 454 surface parking spaces formerly located on the adjacent MDC Lot have been eliminated. Garage A provides approximately 652 structured parking spaces for Cambridge Discovery Park tenants and their visitors. Garage B will provide 368 additional structured parking spaces. The remainder of the 1,052 parking spaces allowed by right at Cambridge Discovery Park will be provided as short-term surface parking spaces for passenger drop-off, deliveries, and related transient uses.



**c. Elements of form**

3. Height

As much of Garage B is within the Parkway Overlay District, this structure is subject to a maximum height of fifty-five feet, rather than the eighty-five foot height limitation applicable elsewhere in Cambridge Discovery Park.<sup>9</sup> Garage B will be fifty-five feet tall.

4. Scale

Garage B will be clad in pre-cast and metal materials, with extensive glazing of the stair/elevator tower at the southeast corner. With a height between those of the campus's office/research buildings and the Martignetti bowling alley building, Garage B will provide a visual transition between the center of the campus and its northern edge.

5. Massing

Garage B's precast elements will integrate those of future Building 600 to the east, helping to define the northern edge of the urban campus, while preserving each building's distinct identity.

The portions of Garage B within the Parkway Overlay District are subject to the three building facade design requirement of Section 20.64.3 of the Zoning Ordinance. The first of these requirements is that principal building entrances shall face the parkways and boulevards which define the district. In this instance, the principal entrance to Garage B is the two-lane vehicular entrance/exit. Because State Route 2 is a limited access highway, and because the Alewife MBTA station exit ramp is immediately adjacent to the north side of Garage B, it is impossible to provide vehicular access at this location. Accordingly, the 2004 Master Plan and the 2009 Master Plan minor amendment show the principal entrance to Garage B facing the campus's internal roadway, Discovery Way.

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<sup>9</sup> As provided for in Section 5.23 of the Zoning Ordinance, this height measurement does not include chimneys, water towers, air conditioning equipment, elevator bulkheads, skylights, ventilators, and other necessary features appurtenant to buildings which are usually carried above roofs and not used for human occupancy. Any such elements have been designed in a coordinated, distinctive manner in concert with the upper floors of the building.



**View of Garage B Entry**

The second Parkway Overlay District building facade requirement is that facades and rooflines be articulated and that expanses of unbroken wall planes be limited to thirty-five linear feet for facades facing public open spaces or roadways. The north facade of Garage B, facing State Route 2 will have extensive openings, *i.e.*, will not be unbroken, and will have protruding columns located approximately twenty-five feet apart on center. The final facade requirement is that ground floor levels include a minimum of thirty percent transparency. More than thirty percent of the ground floor of Garage B (and of each of the upper floors) facing State Route 2 will be open and transparent.



**View of Garage B from above Route 2**

6. Setbacks

Section 17.42.2 of the Zoning Ordinance authorizes the Planning Board to waive all yard requirements in Special District 4 other than the front yard requirement in the Parkway Overlay District. Condition 1(iii) of the Cambridge Discovery Park Master Plan Special Permit requires that Garage B must have an average setback from the westerly property line adjacent to it of at least twenty feet. Garage B complies with this requirement. That condition also provides that no setback from the Cambridge-Arlington municipal boundary along State Route 2 is required. In fact, Garage B will be set back from this municipal boundary.

7. Street Wall Patterning/Base, Middle and Top

The Design Guidelines call for buildings to have a tripartite architectural configuration of base, middle, and expressive top. Tripartite architecture is less applicable to parking structures than to occupied buildings. Nonetheless, Garage B will have a base, ground floor level with by vehicular and pedestrian entrances, and a top made more expressive through the use of parapet and canopy elements.



**View of Garage B South Elevation**

#### 8. Silhouette

The Design Guidelines call for buildings to provide animated, varied silhouettes that create an appropriate identity and enrich views from the Alewife Reservation, nearby areas, and public ways. The most visible facade of Garage B, the south facade facing the campus interior, will be the most animated. This facade will feature the interplay of strong horizontal floor lines and vertical columns, with a glass “tower” in the southwest corner protecting the elevators and stairs. Parapet and canopy elements will further break up the silhouette.

#### 9. Color

As recommended by the Design Guidelines, the precast elements, landscaping planters, stone walls, and other elements of Garage B will use warm and inviting colors that complement the Alewife Reservation’s natural range.

#### 10. Architectural Details

As recommended by the Design Guidelines, Garage B will be faced with an ordered combination of appropriate materials, including precast concrete, metal panels, and glass.

Garage B will have signage and lighting consistent with those used for Garage A.

#### 11. Landscape Architectural Details

Landscaping plantings for Garage B will be drought tolerant, native species that do not require regular pruning or maintenance. New trees will be planted along the westerly side of Garage B to screen and soften the view from the neighboring property and State Route 2.

## ***Compliance with other Master Plan Special Permit conditions***

### **a. Preliminary submission of building design**

Condition 2(ii) of the Cambridge Discovery Park Master Plan Special Permit encourages Bulfinch to present the design of any building, including any “green” building features to the Planning Board at an early schematic stage to permit adequate opportunity to refine and modify the design. Bulfinch remains committed to redeveloping Cambridge Discovery Park in an environmentally-friendly, energy-conscious manner. To that end, Bulfinch is committed to constructing Buildings 400 and 500 to meet at least the requirements of LEED Silver certification. Whether LEED Gold or Platinum can be achieved will depend on the tenant(s) selected for the buildings.

### **b. Interior courtyard concerns**

Condition 2(iii) of the Cambridge Discovery Park Master Plan Special Permit requires that future building proposals must address the Planning Board’s concerns, as set out in the special permit’s findings, that the Master Plan’s interior courtyard space was too heavily dominated by vehicular circulation and delivery functions, poorly defined as an urban space, and inadequate to the needs of pedestrians and bicyclists. In granting the Cambridge Discovery Park Master Plan Special Permit, the Planning Board had found that:

[T]he circulation within the interior courtyard space in the Master Plan (i.e. that entire irregular area contained by and located behind all of the buildings and parking garages that constitute the Master Plan) through which pedestrians and bicyclists will be passing, along with automobiles going to the various parking facilities and trucks heading to the several loading bays, is not resolved in a satisfactory way. The areas paved exclusively for vehicular traffic are too extensive and the green areas devoted to landscaping and pedestrian circulation too amorphous and “residual” in feeling rather than convincing the observer that they are consciously designed. The geometry of the spaces appears cluttered and awkward. More attention needs to be paid to the design of this space with consideration given to reducing the area devoted to vehicular paving, possible consolidation of loading facilities, design of more dual-use pedestrian/vehicle areas, etc.

Cambridge Discovery Park Master Plan Special Permit at 11. Condition 2(iii) of the Cambridge Discovery Park Master Plan Special Permit requires that:

In each instance that a building is presented to the Planning Board, after Building 100, the Permittee shall address the Board’s concern, as set forth in the Findings above, that the interior courtyard space in the Master Plan, as illustrated in the application documents, is too heavily dominated by vehicular circulation and delivery functions, poorly defined urban space, and inadequate to the needs of pedestrians and bicyclists who will be traversing it.

The conceptual Master Plan envisioned an internal roadway loop with three connections to Acorn Park Drive. The initial segment of this internal roadway was built in connection with

the Building 100 project. This segment starts just west of Building 100 and arcs behind Building 100, between the potential future Giant Magellan Telescope Annex site and Garage A. Originally, this roadway was to have continued eastward, with future Building 300/400 on its south side and Garage B and Building 500/600 to its north. Between future Buildings 200 and 300, the conceptual Master Plan showed a lateral roadway, connecting Acorn Park Drive to the internal roadway, to the east of Garage A. All of the proposed future buildings were to have loading dock access directly off this internal roadway. The Planning Board felt that this interior roadway layout and the associated vehicular circulation patterns warranted further thought.

Minor Amendment No. 2, for the Forrester Research Building 200/300 project, addressed these concerns in several ways. First, much of the conceptual Master Plan's interior courtyard conflict among passenger vehicles, pedestrians, bicyclists, and delivery vehicles arose from the intersection of the lateral connection from Acorn Park Drive to the internal roadway formerly proposed between future Buildings 200 and 300. Loading access for these buildings was to have been provided just west and east of this intersection. Garage A's entrance/exit drive would have intersected the internal roadway approximately opposite this location. Drivers going to or from Acorn Park Drive via the lateral connection would have perceived theirs as the primary travel path. Drivers traveling west along the internal roadway also would have perceived theirs as the primary travel path. This would have created conflicts at the intersection when drivers from several directions all perceived that they should have the right of way. The pedestrians experience in this area would have been interrupted by a series of street and loading bay access crossings in close proximity. Quite simply, too much would have been going on in too small a space.

Minor Amendment No. 2 detached conceptual Building 200 from Building 100 and moved it to the east, to join conceptual Building 300, which was shifted to the west. The lateral connection formerly shown between Buildings 200 and 300 now is located between Buildings 100 and 200. Staggering the two side intersections of lateral connections with the internal roadway eliminated the crossing conflict at Garage A. Loading bays for Buildings 200/300 are in the northeast corner of the building, away from the lateral connection. This loading area also will serve Building 400 if Forrester Research exercises its option for that building. Pedestrians traveling between Building 100 and Garage A now cross the internal roadway west of the garage driveway. Pedestrians traveling between Building 200/300 and Garage A also cross the internal roadway west of the garage driveway, to a large landscaped area, and then cross the single-lane access to the drop-off area.

The conceptual master plan did not include any passenger drop-off areas for the proposed buildings. The revised master plan includes a drop-off area serving Building 200/300. The proposed Building 600 hotel would have a dedicated drop-off area and a small, short-term surface parking area for guests arriving at and departing from the hotel.

### **c. Pedestrian access to Belmont**

Condition 2(iii) of the Cambridge Discovery Park Master Plan Special Permit also requires Bulfinch to report to the Planning Board on a periodic basis on "the opportunities for the provision of pedestrian access from Belmont to the site, either along Acorn Park Drive or

via the Concord Turnpike, preferably in cooperation with abutting and similarly impacted property owners.”

Bulfinch has granted to Criterion Development Partners, the developer of the adjacent 227-unit VOX on Two project (formerly known as the Residences at Alewife), an easement for pedestrian access from their property over a portion of Cambridge Discovery Park to Acorn Park Drive. This provides a safer, more pleasant pedestrian connection between VOX on Two and the Alewife Red Line station. Absent this easement, residents and guests of that project would need to use the sidewalks along the south side of the Concord Turnpike and the Alewife exit ramp.

Bulfinch has discussed with O’Neill Properties, the owner of the adjacent Belmont land, the possibility of providing sidewalks along the Belmont portion of Acorn Park Drive. While Acorn Park Drive is a public way in Cambridge, it becomes a private way at the Belmont line. Consequently, O’Neill Properties’ approval would be required for any new sidewalks along the Belmont portion of Acorn Park Drive. The existing pavement is adequate for two-way travel, but adding a sidewalk on either side would require the cutting of numerous trees, and would involve work within land subject to flooding, bordering vegetated wetlands, and other resource areas protected under the Wetlands Protection Act. O’Neill Properties has expressed interest in providing pedestrian access from its property through Cambridge Discovery Park to the Alewife MBTA station and beyond. However, any development of such a connection is on hold at least until appeals related to O’Neill Properties’ Belmont land are concluded and construction of that project begins.

#### **d. Efficient use of natural and energy resources**

Condition 2(v) of the Cambridge Discovery Park Master Plan Special Permit requires that:

Each time a building is initially presented to the Planning Board for design review, the Permittee shall summarize how construction in the Park to date has employed natural and energy resources efficiently in the construction, maintenance and long-term operation of buildings already constructed and report on how such efforts will be employed in the building currently under consideration. Reference to LEED or other equivalent standards is encouraged.

Building 100 was designed to meet the criteria for LEED Silver certification, although Bulfinch did not elect to go through the certification process. Measures undertaken to meet these criteria included:

- Site location near MBTA station and Minuteman mixed-use path;
- Water efficient landscaping;
- Water use reduction for building fixtures, *e.g.*, low-flow toilets and sinks;
- External sunshades built into design to reduce solar gain and cooling load;
- Building orientation to maximize south-facing glazing;

- Optimized energy performance;
- Construction waste management;
- Thermal comfort systems for building occupants;
- Daylight and views for 75% of occupied spaces; and
- On-site treatment of stormwater through the use of bioswales and detention ponds.

Forrester Research's Building 200/300 was certified as LEED Gold (Core and Shell) in June 2012 and LEED Platinum (Commercial Interiors) in August 2012. Measures undertaken to achieve these ratings included:

- Site location near MBTA station and Minuteman mixed-use path;
- Water efficient landscaping and no use of potable water for irrigation;
- 40% reduction in water use for building fixtures through the use of low volume toilets and urinals and low-flow faucets;
- Selection of refrigerants and HVAC refrigeration that minimize the emission of ozone-depleting compounds;
- Optimizing energy performance of lighting, HVAC, and tenant equipment and appliances to reduce energy consumption;
- Construction waste management (at least 75% of construction debris diverted from landfills through recycling or reuse);
- Use of building materials with recycled content or that have been extracted, harvested or recovered, as well as manufactured, locally;
- Certified wood;
- Use of low VOC-emitting adhesives, sealants, paints and coatings, flooring systems, furniture, and other building components;
- Thermal comfort systems for building occupants;
- Daylight and views for 75% of occupied spaces; and
- On-site treatment of stormwater through the use of bioswales and detention ponds.

Buildings 400 and 500 will incorporate a variety of environmental and energy-conservation measures, including:

- Site location near MBTA station and Minuteman mixed-use path;
- Water efficient landscaping and no use of potable water for irrigation;
- Reduction in water use for building fixtures through the use of low volume toilets and urinals;



- Selection of refrigerants and HVAC refrigeration that minimize the emission of ozone-depleting compounds;
- Optimizing energy performance of lighting, HVAC, and tenant equipment and appliances to reduce energy consumption;
- Construction waste management (at least 75% of construction debris diverted from landfills through recycling or reuse);
- Use of building materials with recycled content or that have been extracted, harvested or recovered, as well as manufactured, locally;
- Use of low VOC-emitting adhesives, sealants, paints and coatings, flooring systems, furniture, and other building components;
- Thermal comfort systems for building occupants;
- Daylight and views for 75% of occupied spaces; and
- On-site treatment of stormwater through the use of bioswales and detention ponds.

Finalization of the full portfolio of environmental and energy-conservation measures to be incorporated into Buildings 400 and 500 will occur after tenants have been selected. Several members of the architectural/design team are LEED Accredited Professionals, including the permitting attorney.

#### **e. City Noise Ordinance**

Condition 12 of the Cambridge Discovery Park Master Plan Special Permit requires that all authorized development must conform to the requirements of the City of Cambridge Noise Control Ordinance, Chapter 8.16 of the Cambridge Municipal Code. Chapter 8.16 establishes maximum noise levels during the daytime and at other times, as measured from lot lines. Buildings 400 and 500 will comply with these limits.

## Discussion of Flood Plain and Floodway Issues

Condition 8 to the Cambridge Discovery Park Master Plan Special Permit requires that there shall be no net loss of flood storage capacity within the Master Plan area at any stage of the construction. Most of Cambridge Discovery Park is in an area that the United States Department of Homeland Security's Federal Emergency Management Agency (FEMA) has designated as being within the 100-year flood plain. Large portions of the campus also are within FEMA's regulatory floodway.<sup>10</sup> Additionally, much of the development footprint is on bordering land subject to flooding, protected under the Massachusetts Wetlands Protection Act (WPA). Portions also are within the WPA's 100-foot buffer zone. Consequently, the redevelopment of Cambridge Discovery Park also requires a Flood Plain Overlay District special permit from the Planning Board (for activity within the flood plain) and an Order of Conditions from the Cambridge Conservation Commission (for activity within regulated resource areas).

Section 20.72 of the Zoning Ordinance defines the Cambridge Flood Plain Overlay District as all special flood hazard areas designated as Zone A and AE on the Middlesex County Flood Insurance Rate Maps (FIRMs) issued by FEMA, dated June 4, 2010.<sup>11</sup> The Flood Plain Overlay District's exact boundaries are defined by the special flood hazard area, which is the area subject to flooding by the 1% annual chance flood, also known as the "100-year flood" or "base flood" area. Section 20.73 provides that, "No structure or building shall be erected, constructed, expanded, substantially improved, or moved and no earth or other materials shall be dumped, filled, excavated, transferred or otherwise altered in the Flood Plain Overlay District unless a special permit is granted by the Planning Board." The Cambridge Discovery Park Master Plan Special Permit includes a Flood Plain Overlay District special permit for the overall project.

In October 2004, the Cambridge Conservation Commission issued Order of Conditions No. 123-180 for the multi-year, phased redevelopment of Cambridge Discovery Park. That Order established flood storage and impervious area banking mechanisms for the entire redevelopment project. These mechanisms recognize that the redevelopment will occur in several phases, and that the footprints and corresponding flood storage volumes of buildings being removed and constructed in any particular phase may not match. Thus, as the former ADL buildings were removed, the flood storage volumes they displaced—up to the FEMA 100-year flood elevation—were "banked." Similarly, the impervious areas of these buildings' footprints were banked as the buildings were removed. These banked flood storage volumes and impervious area remain available for Bulfinch to reuse in connection with corresponding or later construction activities. Under the Order, Bulfinch must maintain a "positive balance" for each incremental foot of flood elevation at all times; flood storage capacity

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<sup>10</sup> The regulatory floodway is the channel of a river or other watercourse and the adjacent land areas that must be reserved to receive the base flood without cumulatively increasing the water surface elevation by more than a designated amount.

<sup>11</sup> In 2004, when the Planning Board granted the Cambridge Discovery Park Master Plan Special Permit, the applicable FEMA FIRM was dated July 5, 1982. The change in reference FIRM is of no effect for Cambridge Discovery Park; the development footprint is entirely within 100-year flood plain on either map.

cannot be borrowed from future phases. A similar requirement applies with respect to impervious area. Upon completion, the overall project will result in net gains of flood storage capacity and a net increase in pervious surface area, as compared to the former ADL campus. This banking mechanism is consistent with Cambridge Discovery Park Master Plan Special Permit Condition 8, which provides that, “Any surplus flood storage capacity created by an earlier phase of development may be carried forward and credited to the flood storage capacity required for a subsequent phase of development under the Master Plan.”

Condition 44 of the Order requires that a Notice of Intent (NOI) be filed for each subsequent phase of the redevelopment, to amend the original Order. Each NOI must include an updated Flood Storage Table, stamped by a Massachusetts registered professional engineer, to update the changes to the flood plain at each phase of redevelopment. Each phase must show no net loss of flood storage capacity at each incremental foot up to the FEMA 100-year flood elevation, as compared to the original pre-October 2004 conditions. Condition 48 of the original Order imposes similar requirements with respect to pervious area, and requires that each NOI also must include an updated Pervious Surface Area Table, stamped by a Massachusetts registered professional engineer, to update the changes to the pervious area at each phase of redevelopment. Each phase must show no net loss of pervious area, as compared to the original pre-October 2004 conditions. Notices of Intent with updated flood storage and pervious surface area tables were filed for Building 200/300 and the Building 600 hotel.<sup>12</sup> A similar notice of intent will be prepared and filed for the Building 400 & 500 and Garage B project.

Additionally, the plans for each new building are reviewed by the City Engineer, to ensure that adequate flood storage capacity is provided, and that flood waters will be able to flow freely into and out of the flood storage areas.

In 2004, when Bulfinch applied for the Cambridge Discovery Park Master Plan Special Permit, FEMA was in the process of conducting a flood study for Middlesex County. In anticipation of FEMA’s eventual revision of the Cambridge-area FIRMs, Bulfinch asked FEMA’s consultant for a worst-case estimate of the 100-year flood elevation for the new map and was told that 10.8 feet national Geodetic Vertical Datum of 1929 (NGVD29) was the outside case.<sup>13</sup> Bulfinch then designed and constructed Building 100 with a first floor elevation of 10.8 feet. Ultimately, FEMA’s new FIRM lowered the 100-year flood elevation from 8.2 feet NGVD29 to 6.8 feet NAVD88 (equivalent to 7.6 feet NGVD29).

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<sup>12</sup> A group of Cambridge residents appealed the Amended Order of Conditions for the Building 600 hotel, based on their concerns about the floodway, asking the Massachusetts Department of Environmental Protection to delay all activity at Cambridge Discovery Park until the residents decide that the City has adequately studied climate change. On June 27, 2014, DEP’s Northeast Regional Office issued a Superseding Amended Order of Conditions which states that, “MassDEP has determined that the proposed [Building 600] project meets the performance standards of the Wetlands Protection Act, 310 CMR 10.00.” DEP’s cover letter to the appellants states, in part, that “As this project complies with the performance standards found at [310 CMR] 10.57, there is no regulatory mechanism to delay issuance of this Superseding Amended Order [pending completion of the City of Cambridge’s climate change vulnerability assessment].”

<sup>13</sup> The prior FEMA maps were based on the National Geodetic Vertical Datum of 1929 (NGVD29). FEMA subsequently switched to using the North American Vertical Datum of 1988 (NAVD88); the 2010 FEMA map for Middlesex County uses NAVD88. In the Cambridge area, the elevation of any particular point under the current FEMA NAVD88 datum is approximately 0.8’ less than under the previous NGVD29 datum.

Nonetheless, Bulfinch decided that all occupied buildings at Cambridge Discovery Park will be built with first floor elevations at 10.8 feet NGVD29 (equivalent to 10 feet NAVD88). This means that every occupied building will have approximately three feet of flood storage volume above the calculated 100-year flood level, and be able to withstand flooding conditions more extreme (and rarer) than the 100-year base flood.

The new FIRM also widened the floodway in the area of Cambridge Discovery Park (and in many locations elsewhere in Cambridge). The 2010 FIRM is based on flood modeling with the former Arthur D. Little Company buildings still in place (as they were when FEMA's consultant collected topography and building data to build the model). With those buildings now gone and all development located north of Acorn Park Drive, flood waters will have to travel farther before encountering any buildings. The former ADL buildings had first floor elevations below the 100-year flood elevation and required sandbagging and other active protective measures during severe storms. Thus, during flooding conditions, the former ADL buildings displaced flood waters by preventing water from occupying the building spaces. By contrast, the new Cambridge Discovery Park buildings sit atop storage chambers into and from which the flood waters will flow freely. Bulfinch and its consultants have provided FEMA with improved topographical modeling of the Cambridge Discovery Park area, and with details of the flood storage systems incorporated into existing buildings and that will be included in future occupied buildings. They worked with FEMA for over two years, and provided FEMA with several rounds of flood modeling by AECOM.<sup>14</sup> Based on this information, FEMA issued a Conditional Letter of Map Revision (CLOMR) for the further development of Cambridge Discovery Park based on the conceptual master plan configuration with Garage B and Buildings 400, 500, and 600. Thus, FEMA has determined that buildout of the remaining elements of the Cambridge Discovery Park Master Plan will not have an adverse effect on the regulatory floodway. Upon completion of the multi-year, phased redevelopment of Cambridge Discovery Park, FEMA will issue a Letter of Map Amendment reflecting the final building locations and footprints.

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<sup>14</sup> FEMA hired ENSR International Corp. to prepare the Middlesex County Flood Insurance Study and create the flood models and the FIRM. In September 2005, AECOM acquired ENSR, which now operates as a subsidiary of AECOM.

## Dimensional Form – Building 400

**Project Address:** 40 Acorn Park Drive

**Application Date:** July 30, 2014

	Existing	Allowed or Required (max/min)	Proposed	Permitted
Lot Area (sq ft)	990,317 <sup>a</sup>	5,000	990,317 <sup>a</sup>	
Lot Width (ft)	>170	50	>170	
Total Gross Floor Area (sq ft)		819,916 <sup>b</sup>	96,000	
Residential Base				
Non-Residential Base				
Inclusionary Housing Bonus				
Total Floor Area Ratio		n/a <sup>c</sup>	.097	
Residential Base		n/a		
Non-Residential Base		n/a		
Inclusionary Housing Bonus		n/a		
Total Dwelling Units	0		0	
Base Units			n/a	
Inclusionary Bonus Units			n/a	
Base Lot Area/Unit (sq ft)			n/a	
Total Lot Area/Unit (sq ft)			n/a	
Building Height (ft)		65/85 ft. <sup>d</sup>	85 ft.	
Front Yard Setback (ft)		40 ft. <sup>e</sup>	40 ft.	
Side Yard Setback (ft)		n/a <sup>f</sup>	variable	
Side Yard Setback (ft)		n/a <sup>f</sup>	variable	
Rear Yard Setback (ft)		n/a <sup>f</sup>	variable	
Open Space (% of lot area)		n/a		
Private Open Space		n/a		
Permeable Open Space		n/a		
Other Open Space (Specify)		n/a		
Off-Street Parking Spaces		1 per 800 sf of general office <sup>g</sup>	706	
Long-Term Bicycle Parking		29	29	
Short-Term Bicycle Parking		8	8	
Loading Bays		1	1	

Notes to Dimensional Form – Building 400

- a Combined lot area of Cambridge Discovery Park parcels north and west of Acorn Park Drive.
- b The Special District 4 zoning allows up to 900,000 square feet of gross floor area, plus up to 400,000 square feet of structured parking. CZO § 17.42.11. The Cambridge Discovery Park Master Plan Special Permit authorizes up to 819, 916 square feet of gross floor area, plus up to 390,000 square feet of structured parking.
- c No maximum floor area ratio for any lot in Special District 4, per CZO § 17.42.11.
- d The maximum by right building height in Special District 4 is 65 feet, which was increased to 85 feet for nonresidential uses by the Cambridge Discovery Park Master Plan Special Permit, and which can be increased by special permit to 90 feet for residential uses. *See* CZO, § 7.42.3.
- e Measured from centerline of Acorn Park Drive, per Condition 1(iii) of Cambridge Discovery Park Master Plan Special Permit.
- f CZO § 17.42.2 authorizes the Planning Board to waive minimum yard requirements by special permit, other than the front yard requirement within the Parkway Overlay District. Condition 1(iii) of the Cambridge Discovery Park Master Plan Special Permit waives all yard requirements, other than the front yard requirement within the Parkway Overlay District and a 40 front yard requirement (measured from the street centerline) along Acorn Park Drive.
- g CZO § 17.43.1 provides that a maximum of 1,052 parking spaces is required for any combination of uses up to 900,000 square feet of gross floor area within Special District 4.

## Dimensional Form – Building 500

**Project Address:** 20 Acorn Park Drive

**Application Date:** July 30, 2014

	Existing	Allowed or Required (max/min)	Proposed	Permitted
Lot Area (sq ft)	990,317 <sup>a</sup>	5,000	990,317 <sup>a</sup>	
Lot Width (ft)	>170	50	>170	
Total Gross Floor Area (sq ft)		819,916 <sup>b</sup>	132,000	
Residential Base				
Non-Residential Base				
Inclusionary Housing Bonus			n/a	
Total Floor Area Ratio		n/a <sup>c</sup>	0.133	
Residential Base		n/a		
Non-Residential Base		n/a		
Inclusionary Housing Bonus		n/a	n/a	
Total Dwelling Units	0		0	
Base Units			n/a	
Inclusionary Bonus Units			n/a	
Base Lot Area/Unit (sq ft)			n/a	
Total Lot Area/Unit (sq ft)			n/a	
Building Height (ft)		65/85 ft. <sup>d</sup>	85	
Front Yard Setback (ft)		40 ft. <sup>e</sup>	40 ft.	
Side Yard Setback (ft)		n/a <sup>f</sup>	variable	
Side Yard Setback (ft)		n/a <sup>f</sup>	variable	
Rear Yard Setback (ft)		n/a <sup>f</sup>	n/a	
Open Space (% of lot area)		n/a		
Private Open Space		n/a		
Permeable Open Space		n/a		
Other Open Space (Specify)		n/a		
Off-Street Parking Spaces		1 per 800 sf of general office <sup>g</sup>	706	
Long-Term Bicycle Parking		40	40	
Short-Term Bicycle Parking		8	8	
Loading Bays		2	2	

Notes to Dimensional Form – Building 500

- a Combined lot area of Cambridge Discovery Park parcels north and west of Acorn Park Drive.
- b The Special District 4 zoning allows up to 900,000 square feet of gross floor area, plus up to 400,000 square feet of structured parking. CZO § 17.42.11. The Cambridge Discovery Park Master Plan Special Permit authorizes up to 819, 916 square feet of gross floor area, plus up to 390,000 square feet of structured parking.
- c No maximum floor area ratio for any lot in Special District 4, per CZO § 17.42.11.
- d The maximum by right building height in Special District 4 is 65 feet, which was increased to 85 feet for nonresidential uses by the Cambridge Discovery Park Master Plan Special Permit, and which can be increased by special permit to 90 feet for residential uses. *See* CZO, § 17.42.3.
- e Measured from centerline of Acorn Park Drive, per Condition 1(iii) of Cambridge Discovery Park Master Plan Special Permit.
- f CZO § 17.42.2 authorizes the Planning Board to waive minimum yard requirements by special permit, other than the front yard requirement within the Parkway Overlay District. Condition 1(iii) of the Cambridge Discovery Park Master Plan Special Permit waives all yard requirements, other than the front yard requirement within the Parkway Overlay District and a 40 front yard requirement (measured from the street centerline) along Acorn Park Drive.
- g CZO § 17.43.1 provides that a maximum of 1,052 parking spaces is required for any combination of uses up to 900,000 square feet of gross floor area within Special District 4.



## Dimensional Form – Existing plus Buildings 400 & 500 and Garage B

**Project Address:** 20, 30, and 410 Acorn Park Drive

**Application Date:** July 30, 2014

	Existing	Allowed or Required (max/min)	Proposed	Permitted
Lot Area (sq ft)	990,317 <sup>a</sup>	5,000	990,317 <sup>a</sup>	
Lot Width (ft)	>170	50	>170	
Total Gross Floor Area (sq ft)	363,248	819,916 <sup>b</sup>	591,248 <sup>c</sup>	
Residential Base	0			
Non-Residential Base	363,248 <sup>c</sup>		591,248 <sup>c</sup>	
Inclusionary Housing Bonus	n/a		n/a	
Total Floor Area Ratio	0.367	n/a <sup>d</sup>	0.597	
Residential Base		n/a		
Non-Residential Base		n/a		
Inclusionary Housing Bonus		n/a		
Total Dwelling Units	0		0	
Base Units			n/a	
Inclusionary Bonus Units			n/a	
Base Lot Area/Unit (sq ft)			n/a	
Total Lot Area/Unit (sq ft)			n/a	
Building Height (ft)	85	65/85 ft. <sup>e</sup>	85 ft.	
Front Yard Setback (ft)		40 ft. <sup>f</sup>	40 ft.	
Side Yard Setback (ft)		n/a <sup>g</sup>	various	
Side Yard Setback (ft)		n/a <sup>g</sup>	various	
Rear Yard Setback (ft)		n/a <sup>g</sup>	various	
Open Space (% of lot area)		n/a		
Private Open Space		n/a		
Permeable Open Space		n/a		
Other Open Space (Specify)		n/a		
Off-Street Parking Spaces	706	1,052 <sup>h</sup>	1,052	
Long-Term Bicycle Parking	46	115	≥115	
Short-Term Bicycle Parking	20	34	≥34	
Loading Bays	4	7	7	

Notes to Dimensional Form – Existing plus Buildings 400 & 500 and Garage B

- a Combined lot area of Cambridge Discovery Park parcels north and west of Acorn Park Drive.
- b The Special District 4 zoning allows up to 900,000 square feet of gross floor area, plus up to 400,000 square feet of structured parking. CZO § 17.42.11. The Cambridge Discovery Park Master Plan Special Permit authorizes up to 819, 916 square feet of gross floor area, plus up to 390,000 square feet of structured parking.
- c This includes approximately 5,600 square feet of gross floor area of Building 100 for the Giant Magellan Telescope Annex, which has not yet been built.
- d No maximum floor area ratio for any lot in Special District 4, per CZO § 17.42.11.
- e The maximum by right building height in Special District 4 is 65 feet, which was increased to 85 feet for nonresidential uses by the Cambridge Discovery Park Master Plan Special Permit, and which can be increased by special permit to 90 feet for residential uses. *See* CZO, § 17.42.3.
- f Measured from centerline of Acorn Park Drive, per Condition 1(iii) of Cambridge Discovery Park Master Plan Special Permit.
- g CZO § 17.42.2 authorizes the Planning Board to waive minimum yard requirements by special permit, other than the front yard requirement within the Parkway Overlay District. Condition 1(iii) of the Cambridge Discovery Park Master Plan Special Permit waives all yard requirements, other than the front yard requirement within the Parkway Overlay District and a 40 front yard requirement (measured from the street centerline) along Acorn Park Drive.
- h CZO § 17.43.1 provides that a maximum of 1,052 parking spaces is required for any combination of uses up to 900,000 square feet of gross floor area within Special District 4.