



CITY OF CAMBRIDGE
COMMUNITY DEVELOPMENT DEPARTMENT

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To: Planning Board
From: CDD Staff
Date: July 2, 2014
Re: **Project Review – 180R Cambridgepark Drive**

Overview

The special permit application for development at 180R Cambridgepark Drive includes requests for several different types of special permits. This memo is intended to assist the Board's review by organizing aspects of the project into topics and presenting the criteria and guidelines that are most relevant to that topic.

We have also provided some comments within these review topics to inform the Board of issues that have been identified during staff review of the project and may warrant further discussion between the Board and the Applicant.

The memo contains the following sections:

1. Special Permits – A list of the requested special permits by section of the Zoning Ordinance.
2. Land Use – Issues related to the basic project proposal, including the types of land uses and density that are proposed.
3. Site Planning – Issues related to the positioning of the building and circulation within and throughout the site.
4. Building Design – Issues related to building massing, façade treatment and other architectural design considerations.
5. Transportation and Parking – Overview of the transportation impact analysis and requested modifications to parking requirements.
6. Engineering – Overview of the required findings related to flood hazard, stormwater management and other infrastructure issues.

As an appendix, a detailed list of applicable special permit criteria is provided along with the Concord-Alewife Design Guidelines, which are referenced throughout the document.

1. Special Permits

Special Permit Category	Requested Special Permits	Applicable Criteria
Alewife Overlay Districts (AOD) Special Permits (Section 20.90)	<ul style="list-style-type: none"> • FAR (maximum of 2.00) • Height (maximum of 105') • Reduction in required yard setbacks (min. 15' in front) • Pooled parking across lots • Waiver of Gross Floor Area for parking structures in a flood plain 	<ul style="list-style-type: none"> • Objectives of the Concord-Alewife Plan • Concord-Alewife Design Guidelines <i>(See appendix)</i>
Project Review Special Permit (Section 19.20)	<ul style="list-style-type: none"> • Project exceeding 50,000 sq. ft. of Gross Floor Area 	<ul style="list-style-type: none"> • Traffic impact indicators • Citywide Urban Design Objectives <i>(See appendix)</i>
Parking Modifications (Article 6.000)	<ul style="list-style-type: none"> • Reduction in required parking (from 1 space/unit to 0.75 space/unit) • Common driveway • Reduction in setback from property lines 	<ul style="list-style-type: none"> • Parking reduction criteria <i>(see appendix)</i> • Site design considerations <i>(based on general criteria – Section 10.43 – see appendix)</i>
Flood Plain Requirements (Section 20.70)	<ul style="list-style-type: none"> • Development in a flood hazard area (Zone A and AE) 	<ul style="list-style-type: none"> • Flood water impact criteria <i>(see appendix)</i>; also review by City Engineer and Conservation Commission
Parkway Overlay District (Section 20.60)	<ul style="list-style-type: none"> • Waiver of special dimensional requirements – height setbacks, facades, fencing 	<ul style="list-style-type: none"> • Objectives of Section 20.60 <i>(Note that the site does not have direct frontage on a parkway, though a small portion is technically within the Parkway Overlay District)</i>

2. Land Use

Use Types

Relevant Guidance:

- *Expansion of the inventory of housing in the city is encouraged. (Citywide Urban Design Guidelines)*
- *Support mixed-use development throughout the Study Area to create a vibrant urban environment. (Concord-Alewife Plan Goals)*
- *Encourage development of additional housing close to Alewife Station while continuing to support commercial development. (Concord Alewife Plan Goals: Triangle)*
- *Design residential development to include a range of units of various sizes and with various numbers of bedrooms, including three or more bedrooms, with the overall goal of providing dwelling units for families with school age children. (Concord-Alewife Design Guidelines)*

Comments:

Housing is an allowed use in the area and one that is supported by the Citywide Urban Design Guidelines and the Concord-Alewife Plan Goals. Because there is significant existing commercial space in the area, this residential project (along with others nearby) will support a more balanced live-work area.

For the unit mix, the application suggests that the project will contain a mix of units divided into 35% studios and micro-units and 65% one-bedroom, two-bedroom and three-bedroom units, some with dens. The number of three-bedroom units is not specified in the application.

One use that is currently lacking in the area is neighborhood-serving retail, which will become more important as the district becomes more residential. The Applicant has taken a step in a positive direction by proposing a small retail space at a corner. The Board might consider whether this will be suitable or if the project might adapt to provide retail space at other key locations in the future.

Scale of New Construction

Relevant Guidance:

- *New projects should be responsive to the existing or anticipated pattern of development. (Citywide Urban Design Guidelines)*
- *New construction should reinforce and enhance the complex urban aspects of Cambridge as it has developed historically. (Citywide Urban Design Guidelines)*
- *Encourage more transit-oriented development. Allow higher density and height to take advantage of proximity to Alewife Station. (Concord-Alewife Plan Goals: Triangle)*

Comments:

The proposed building meets the height and density limitations in AOD-6 (the “Triangle” subdistrict of the Alewife Overlay Districts), which were established to allow the type of development envisioned in

the Concord-Alewife Plan. The scale of development will be compatible with surrounding uses, which include large-scale office buildings and planned residential development at a similar scale. The site is located very close to Alewife Station and is planned to have direct pedestrian and bicycle connections, which makes it particularly fitting for a transit-oriented residential project.

3. Site Planning

Overall Circulation

Relevant Guidance:

- *Use site design that preserves future rights-of-way identified in the Circulation Concept Plan. (Concord-Alewife Design Guidelines)*
- *Improve existing streets to meet City standards, including streetscape improvements. (Concord-Alewife Design Guidelines)*

Comments:

The project is in a unique location within the “Triangle” subdistrict, in that it has no immediate access to Cambridgepark Drive but will have significant effects on future pedestrian, bicycle and vehicle circulation in the area. The access drive will separate the proposed building from existing residential and commercial buildings to the north and will connect with the access drive for the approved project at 130 Cambridgepark Drive, in turn connecting to Cambridgepark Drive. This, in addition to the creation of a pedestrian/bicycle easement on the east side of the site connecting to Cambridgepark Place, helps to complete an internal circulation “grid” as envisioned in the Concord-Alewife Plan.

Although the access road is expected to be private, for pedestrians and bicyclists it is likely to function as a key thoroughfare, especially if a future pedestrian/bicycle railroad crossing is built (see discussion below). The design of the access road should be considered with this in mind. The proposed layout shows a two-way drive with a sidewalk on only one side, which is interrupted in places by perpendicular parking spaces, curb cuts and a vehicular turn-around. If the road were designed using the City’s approach to street design, a 20-foot maximum width would be provided for two-way vehicular service, sidewalks would be provided on both sides of the street, and parking where it exists would be parallel. Shade trees and landscaping would be provided, as they are shown in the proposed plan. The sidewalk would be continued across the garage entry to benefit pedestrian circulation. Since vehicular access effectively dead-ends on the east side, a turn-around would still need to be provided, but the Board should consider how that element could be designed to take up less space on the site and provide more direct sidewalk connections.

Pedestrian and Bicycle Connections

Relevant Guidance:

- *Development should be pedestrian and bicycle-friendly, with a positive relationship to its surroundings. (Citywide Urban Design Guidelines)*

- *Strengthen bicycle and pedestrian links to adjacent areas. Provide links that strengthen physical and visual connections to open space resources. (Concord-Alewife Design Guidelines)*
- *Create a pleasant, walkable connection between Alewife Reservation and Fresh Pond Reservation consistent with the Alewife Reservation Master Plan and the Fresh Pond Master Plan (Concord-Alewife Plan Goals: Triangle)*
- *Create a pedestrian-friendly environment along Cambridgepark Drive. (Concord-Alewife Design Guidelines: Triangle)*
- *Provide pedestrian links that strengthen physical connections to Alewife Reservation, consistent with its master plan. (Concord-Alewife Design Guidelines: Triangle)*
- *Site new development to preserve right-of-way for future crossing of the railroad tracks to connect the Triangle and Quadrangle. (Concord-Alewife Design Guidelines: Triangle)*

Comments:

The most significant priority for infrastructure planning on this site is providing a landing for a pedestrian/bicycle bridge connection over the railroad tracks. Since a design study for such a bridge has not yet been undertaken, staff has asked the Applicant to accommodate a number of potential options, including a stand-alone landing to the west of the site (between this building and 130 Cambridgepark Drive), a connection through the parking garage, and a connection adjacent to the building that would land toward the eastern side of the proposed building. Variations on all of those options are shown the Application. The Traffic, Parking and Transportation (TPT) Department and Environmental and Transportation Planning Division of CDD have reviewed the plans and have incorporated comments into the TPT analysis of the project. For the eastern side portion the building, there is some question of whether enough space is provided on the south side for a pedestrian/bicycle ramp, which would be required to accommodate the landing, without impeding the emergency access road.

It is important for the Board to consider not just the feasibility of the physical landing site but the way in which the location would connect pedestrians and bicyclists to destinations within the area, primarily the Alewife T station but also amenities such as the Belmont Path and Alewife Reservation. The site plan should provide more detail regarding the quality of the pedestrian/bicycle experience for people traveling from a potential bridge landing site to destinations along Cambridgepark Drive. Special attention should be given to showing how a connection from the eastern end of the site to the pedestrian/bicycle easement connecting to Cambridgepark Place would be implemented. Also, internal plans should show the placement and treatment of a public bicycle/pedestrian connection through the parking garage if that is ultimate choice for where to locate the landing.

Open Space

Relevant Guidance:

- *Enhancement and expansion of open space amenities in the city should be incorporated into new development in the city. (Citywide Urban Design Objectives)*

- *Encourage creation of some combination of large open spaces, smaller retention ponds, and neighborhood squares; use parks, street plantings, parking lots, and other open space to enhance stormwater retention and treatment. (Concord-Alewife Plan Goals)*
- *Design and locate lighting and signage in support of the district’s pedestrian-friendly quality. (Concord-Alewife Design Guidelines)*
- *Provide small setbacks (5 to 15 feet) from the right-of-way for café seating, benches, or small open spaces. (Concord-Alewife Design Guidelines: Triangle)*

Comments:

It is appropriate to consider opportunities for use of open spaces around the building given the expected number of future residents in the area and the number of people potentially circulating around the building. Small “pocket parks” could provide opportunities for passive or active use by residents and passersby. While there are many above-grade open space amenities provided for residents in the proposed building, the landscaped spaces provided at the ground level are relatively modest and do not include many activating elements such as seating, artistic or playful features or other attractions. Open space provided near future retail sites could also be designed to complement that activity.

Arrangement of Service Uses

Relevant Guidance:

- *The building and site design should mitigate adverse environmental impacts of a development upon its neighbors. (Citywide Urban Design Objectives)*
- *Screen service areas from major streets. (Concord-Alewife Design Guidelines)*

Comments:

Because the project uses large internal parking areas, all service functions can be accommodated internal to the structure where they will not impact pedestrians or neighbors.

4. Building Design

Building Position and Orientation

Relevant Guidance:

- *Break up large blocks into smaller blocks, of sizes similar to those in surrounding Cambridge neighborhoods, to improve circulation and be compatible with surrounding neighborhoods. (Concord-Alewife Design Guidelines)*
- *The reduction or waiver of yard requirements provides for more efficient development of land; encourages or facilitates a more logical pattern of buildings, streets, parks and open space; or enhances the urban, pedestrian character of the area as envisioned in the Concord-Alewife Plan. (Criteria for waiver of yard requirements, Alewife Overlay Districts)*

Comments:

Although there is no surrounding historical residential context with which to compare the proposed project, the proposed building forms a “block” approximately 750’ long and 150’ wide, comparable to block sizes in nearby neighborhoods such as North Cambridge. This size should allow for circulation patterns as envisioned in the Concord-Alewife Plan, with consideration of the site design issues noted further above. Because the south side of the building abuts an active railroad, setbacks are an issue mostly at the north, west and east where there will be pedestrian and bicycle traffic (although setbacks may be needed to accommodate a future bridge landing to the south of the building, as described in the TPT analysis). The zoning allows the Planning Board to waive the formula setback requirements, but in doing so the Planning Board should consider whether the setbacks provided will contribute to a more urban, pedestrian-oriented character, especially on the north, west and east sides.

Ground-Floor Façades

Relevant Guidance:

- *Street level facades should include active uses such as frequent residential entrances, with setbacks for stoops and porches; neighborhood-serving retail including shops, restaurants, cafes; services for the public or for commercial offices such as fitness centers, cafeterias, daycare centers; community spaces such as exhibition or meeting spaces; and commercial lobbies and front entrances. (Concord-Alewife Design Guidelines)*
- *Encourage awnings/ canopies to provide shelter and enliven ground-floor façades. (Concord-Alewife Design Guidelines)*
- *Design residential buildings with individual units and front doors facing street, including row house units on the lower levels of multi-family residences. (Concord-Alewife Design Guidelines)*

Comments:

The design of the proposed building is complicated by the necessity to provide flood hazard mitigation, which results in a wide parking deck at the ground level with most active uses, such as residential units, located above grade. The Applicant has made some effort to move parking to the rear of the site in order to front the building with lobby space and a small retail space at the eastern corner. Normally, residential unit entrances at the ground level would be preferred for a residential building, although that must be weighed against concerns about flood risk affecting residential units. The Board should carefully consider the pedestrian experience across the entire length of the building and consider other ways to activate that frontage. The quality of the materials, design and detail at the pedestrian level, including planted materials, should also be considered as ways to improved this pedestrian experience.

Building Massing

Relevant Guidance:

- *The building and site design should mitigate adverse environmental impacts of a development upon its neighbors. (Citywide Urban Design Guidelines)*

- *Use site design to minimize shadows on other buildings or on public streets, open spaces, parks, and plazas. (Concord-Alewife Design Guidelines)*
- *Create building height / façade setbacks between 85' and 105'. (Concord-Alewife Design Guidelines: Triangle)*

Comments:

There are few nearby buildings that would be impacted by the building's scale and massing. However, there are open spaces adjacent to the residential and office buildings to the north that could be affected. The graphic materials do not appear to study shadow impacts, which could be a concern for those open spaces.

The building has significant articulation and variation at the upper levels, which helps to lend it a more urban feel. However, the design goals are again complicated by the wide parking deck across the base of the building, which counteracts the appeal of that variation up-close. The architectural expression of the massing, such as vertical breaks in the façade, might also counteract the monolithic quality of the assemblage.

Architectural Character

Relevant Guidance:

- *Vary the design of individual buildings to create an architecturally diverse district. (Concord-Alewife Design Guidelines)*

Comments:

Most buildings in the area are relatively recently built and have a modern feel. The proposed building continues that trend while incorporating some different styles and treatments. In particular, the project addresses this guideline by treating the building as three attached sections – a smaller residential building to the east, parking garage in the center, larger residential building to the west – each with a somewhat different appearance. The smaller residential building has received a high level of attention to the design of the façade, providing a strong character at that end of the project. A similar level of attention to the façade of the larger residential building and increased attention to the character of the parking garage along the north side will improve the experience of the full project.

Above-Grade Structured Parking

There are particular criteria concerning the design of above-grade parking garages, which are applicable to both project approval in general and to approval of the waiver of GFA for above-grade parking.

Relevant Guidance:

- *Parking below-grade is preferred. If above-grade parking is to be provided, design it so it is not visible from nearby residential neighborhood, from public streets, or from pathways; line above-ground structured parking with active uses (shops, cafes, lobbies) along important public ways; use*

parking structures to visually and acoustically screen the rest of the area from the railroad tracks. (Concord-Alewife Design Guidelines)

- *The facility is well designed, does not diminish the pedestrian-friendly quality of the area around it, and is otherwise consistent with the urban design objective of the Concord-Alewife Plan. (Criteria for approval of pooled parking in Alewife Overlay Districts)*
- *The additional bulk of building above grade is well designed and does not have an unreasonably negative impact on its abutters or the public realm. (Criteria for waiver of GFA for above-grade parking in Alewife Overlay Districts)*
- *The extent to which the construction of an above grade parking structure facilitates the creation of at grade soil permeability. (Criteria for waiver of GFA for above-grade parking in Alewife Overlay Districts)*

Comments:

The ways in which the parking structure impacts the pedestrian experience have already been mentioned and are worth careful consideration by the Board. Design treatments, such as the addition of a planted wall along the edge of the parking deck, or potentially a full green wall, will help to mitigate some of those impacts.

5. Transportation and Parking

For this project, the Planning Board must consider a number of transportation-related criteria. As in most cases, the Board is aided by a technical analysis provided by the Traffic, Parking and Transportation Department (TPT) in response to the project's transportation impact study (TIS) and other information provided by the Applicant. With reference to that analysis (but without repeating its content), we have attempted to organize the issues that the Board is asked to consider and the criteria to be applied.

Transportation Impact Indicators and Mitigation

Relevant Guidance:

- *The Planning Board shall grant the special permit only if it finds that the project will have no substantial adverse impact on city traffic within the study area as analyzed in the Traffic Study ...*
 - *In determining whether a proposal has substantial adverse impacts on city traffic the Planning Board shall apply the following indicators. [These indicators are summarized in the TPT memo]*
 - *In making its findings, however, the Planning Board shall consider the mitigation efforts proposed, their anticipated effectiveness, and other supplemental information that identifies circumstances or actions that will result in a reduction in adverse traffic impacts. Such efforts and actions may include, but are not limited to, transportation demand management plans; roadway, bicycle and pedestrian facilities improvements; measures to reduce traffic on residential streets; and measures undertaken to improve safety for pedestrians and*

vehicles, particularly at intersections identified in the Traffic Study as having a history of high crash rates.

Comments:

The analysis from TPT describes potential issues indicated by the project's TIS. The primary area of concern is the intersection of Alewife Brook Parkway at Rindge Ave and Cambridgepark Drive, where the TIS indicates reduced vehicular level of service (*i.e.*, potentially increase in delay and longer vehicle queuing) and an existing low pedestrian level of service (*i.e.*, long pedestrian wait times).

The recommended mitigation for these impacts is for the project to design and implement a raised bicycle track on a section of Cambridgepark Drive approaching Cambridgepark Place, which would improve conditions for bicyclists, and to fund the study of design concepts for the easternmost part of Cambridgepark Drive that could mitigate vehicle queuing and conflicts among vehicles, pedestrians and bicyclists.

In addition, the Board should consider how other issues discussed in this memo, including pedestrian and bicycle circulation on-site, the accommodation of a pedestrian/bicycle bridge landing (also discussed in the TPT analysis), and transportation demand management programs (discussed further below) may help to offset the anticipated transportation impacts.

It is the Board's role to consider whether the anticipated impacts, as indicated in the TIS and discussed in the TPT analysis, would be balanced by the recommended mitigation measures and/or other measures that might be suggested upon review and discussion between the Board and the Applicant.

Reduction, Sharing and Pooling of Parking

The overall parking strategy for the proposed project is to create a combined facility that will replace the existing office parking on the site and provide new parking for the proposed residential building with the ability to "share" some parking between those uses, allowing for efficient use of spaces at different peak times and avoid the construction of excess parking spaces. This objective is consistent with the Concord-Alewife Plan, but permitting such an arrangement requires a few interrelated special permits for which different criteria are applied:

- Reduction of required parking ratio for residential uses, which is necessary to allow unused residential parking spaces to be shared with other uses. *(Requires finding that the reduction will not cause excessive congestion, endanger public safety, substantially reduce parking available for other uses, or otherwise adversely impact the neighborhood, or that the lesser amount of parking will provide positive environmental or other benefits to the users of the lot or the neighborhood, including the provision of affordable housing. See attached criteria for reduction of required parking, Section 6.35.1.)*
- Allowance of pooled parking for multiple uses in a single facility. *(Authorized under the AOD regulations and subject to the Concord-Alewife Design Guidelines with respect to the location and design of the facility, discussed further above in this memo.)*

- Allowance of a shared common driveway for accessing the site from Cambridgepark Drive. *(This is a simple approval conditioned upon recording of a mutual easement with the Registry of Deeds.)*

The TPT analysis discusses in more detail the rationale for the amount of parking proposed and the arrangements to provide for shared use, along with recommendations for how such a parking arrangement could be regulated within a special permit decision. Based on this information, the Board should consider whether the proposal will adequately manage the demand for parking as well as reviewing the parking facility design itself, which is discussed further above in this memo.

Transportation Demand Management

Relevant Guidance:

- *Reduce auto mode share within the Triangle. (Concord-Alewife Plan Goals: Triangle)*
- *A shared facility is established that aids in implementation of effective Transportation Demand Management measures to reduce dependence on the single occupancy automobile. (Criteria for waiver of GFA for above-grade parking in Alewife Overlay Districts)*

Comments:

The City now has a long history of requiring transportation demand management (TDM) programs for new development throughout the city, whether through the Parking and Transportation Demand Management (PTDM) Ordinance or through Planning Board special permit review. The recommendations in the TPT analysis are based on experience implementing and monitoring such programs to determine which are most effective at reducing automobile trip demand. Additional measures could be considered.

6. Engineering

Flood Hazard Mitigation

The Flood Plan Overlay District regulations require a special permit from the Planning Board for development that encroaches into a flood hazard area as designated by FEMA. The criteria for approval (attached in the appendix) are largely technical in nature and rely on a report by a certified engineer (which is provided in the Application, prepared by BSC Group) demonstrating how the project will maintain the water retention and discharge capacity of the site. The proposed project addresses such capacity issues through use of on-site water storage systems that will offset the loss of storage capacity created by the new structure in a way that does not restrict the normal flow of water through the site.

The Planning Board's Flood Plain Special Permit authority overlaps with the Cambridge Conservation Commission's authority to enforce the Wetlands Protection Act. For this reason, the Planning Board often shows deference to the findings of the Conservation Commission in making its Flood Plain Special Permit findings, sometimes including the Conservation Commission's Order of Conditions by reference as a condition of the special permit. The Conservation Commission has completed its review of this project and filed an Order of Conditions, which is provided to the Board.

The additional criteria for Planning Board approval relate to consistency with the planning and urban design goals for the area, which are discussed further above in this memo.

Stormwater Management

Relevant Guidance

- *Utilize low impact development principles in building and site design as a way to meet City, State, and Federal stormwater requirements. Examples of low impact development strategies include green roofs, bioswales, filter strips, and retention/detention ponds. For additional detail refer to the DPW Proposed Concord – Alewife Area Stormwater Management Guidelines. (Concord-Alewife Design Guidelines)*

Comments:

This is another technical topic for which the Planning Board often gives deference to the Department of Public Works (DPW), which applies strict standards on new development to improve stormwater retention and/or detention. For this project, a range of approaches are contemplated including native plantings, potential reuse of stormwater for irrigation, porous pavement, landscape islands, a vegetative upper level building courtyard, and underground stormwater detention systems. DPW has made an initial review of the project and will undertake additional review prior to building permit authorization, when the design is at a more detailed level. If the Planning Board has either general or specific technical concerns regarding stormwater management, DPW could be asked to comment or conditions could be incorporated into a special permit decision for further review by DPW.

Other Infrastructure

Relevant Guidance:

- *Projects should not overburden the city infrastructure services, including neighborhood roads, city water supply system and sewer system.*

Comments:

The Cambridge Department of Public Works (DPW) and Water Department (CWD) undertake review of all projects to determine whether there will be adequate City infrastructure to serve the proposed use. If system upgrades or other improvements are required to adequately serve the project, those may be required to be implemented by the developer. Although more detailed review often occurs after Planning Board review and prior to building permit authorization, the Board could consider conditions for further review by appropriate departments if there are any topics of particular concern.