



CONCORD - WHEELER

563/603 Concord Avenue +
19 Wheeler St., Cambridge, MA

Special Permit Narrative
9 March 2012

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set prepared by:

AbodeZ Development

in association with:

Piatt Associates
Casner & Edwards
Hope Legal Law Offices
Stephenson Design Group
VHB
VS Land Data
Greenscape Inc.


AbodeZ

City of Cambridge, Massachusetts
Planning Board
City Hall Annex, 344 Broadway, Cambridge, MA 02139

a. SPECIAL PERMIT APPLICATION – COVER SHEET

To the Planning Board of the City of Cambridge:

The undersigned hereby petitions the Planning Board for one or more Special Permits in accordance with the requirements of the following Sections of the Zoning Ordinance:

1. 19.20 Project Review Special Permit
2. 6.44.1 (g) Setbacks for on grade parking
3. 20.95.34 Waiver of Yard Requirements
4. 20.95.1 Floor Area Ratio
5. 20.95.2(5) Height

Applicant: Abodez Acorn CW LLC c/o Hope Legal Law Offices

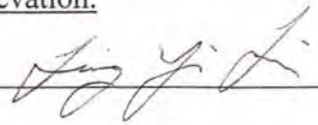
Address: 563/603 Concord Ave Lot 298 and 19 Wheeler Street Lot 297

Telephone: 617-945-8100 or 617-492-0220 FAX: _____

Location of Premises: 563/603 Concord Ave Lot 298 and 19 Wheeler Street Lot 297

Zoning District: Business A, Residence C-2B, Alewife Overlay District 5-Shopping Center, and Parkway Overlay District.

Submitted Materials: Aerial Photograph, Site Context Map, Bird's Eye Photograph, Existing Conditions Survey and Tree Survey, Existing Conditions Photographs, Site Plan, Utility Plan, Landscape Plan-Ground Floor, Landscape Plan-Roof, Floor Plans (Basement, 1st, 2nd, 3rd/4th, 5th, 6th), Bike Parking- Basement, Bike Parking- Ground Level, Street Elevation- Concord Ave., Street Elevation- Wheeler St., East Elevation, South & North Elevations, West Elevation, Perspective view from Southwest, Perspective view from Southeast, Sidewalk Section- Concord Ave., Sidewalk Section- Wheeler St., Shadow Studies (Equinox, Solstices), Photometric Plan, Setback Diagram- East Elevation, Setback Diagram-South Elevation, Setback Diagram-North Elevation, Setback Diagram-West Elevation.

Signature of Applicant: 

For the Planning Board, this application has been reviewed and is hereby certified complete by the Community Development Department:

Date **Signature of CDD Staff**

b. SPECIAL PERMIT APPLICATION – SUMMARY OF APPLICATION

<p>Project Name: Concord/Wheeler Development Address of Site: 563/603 Concord Avenue/19 Wheeler Street Applicant: Abodez Acorn CW LLC Planning Board Project Number: (CDD)</p>
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Hearing Timeline (CDD)

Application Date: _____

Planning Board 1st Hearing Date: _____ *

(PUD Development Proposal, other special permit)

Planning Board Preliminary Determination: _____ *

(PUD Development Proposal)

Second Submission Date: _____ *

(PUD Final Development Plan)

Planning Board 2nd Hearing Date: _____ *

(PUD Final Development Plan)

Final Planning Board Action Date: _____ *

(PUD Final Development Plan, other special permit)

Deadline for Filing Decision: _____ *

**Subject to extension by mutual agreement of the Applicant and the Planning Board*

Requested Relief: (include other boards and commissions)

- See special permits requested above, as more particularly described in the attached narrative.

Project Description

Brief Narrative: Special permit to allow construction of a mixed-use development consisting of 61 residential units and approximately 7,112sf of ground floor retail space and 77 parking spaces.

Project Size:

- Total GFA: 64,189 sf
- Non-residential uses GFA: 7,112sf
- Site Area (acres and SF): .67 acres, 29,034sf
- # of Parking Spaces: 77, (61 residential, 16 retail)

Proposed Uses:

- # of Dwelling Units: 61
- Other Uses: Non-residential (*see article 4.35*)
- Open Space (% of the site and SF) (20%), 5,875sf

Proposed Dimensions:

- Height: Range of Heights Maximum 73'
- FAR: 2.21

DIMENSIONAL FORM

Project Address: 563/603 Concord Ave., 19 Wheeler St.

Application Date: Feb. 5, 2012
Revised
March 9, 2012

	Existing	Allowed or Required (max/min)	Proposed	Permitted
Lot Area (sq ft)	29,034 sf	--	29,034 sf	
Lot Width (ft)	124.0 ft	--	124.0 ft	
Total Gross Floor Area (sq ft)	1,563 sf	66,052 sf, (75,488 sf max. in AOD-5 by Special Permit (a))	64,189 sf	
Residential Base	--	50,806 sf, (58,068 sf max. in AOD-5 by Special Permit (a))	43,905 sf	
Non-Residential Base	1,563 sf	--	7,112 sf	
Inclusionary Housing Bonus	--	15,242 sf, (17,420 sf max. in AOD-5 by Special Permit (a))	13,172 sf	
Total Floor Area Ratio	.054	2.275, (2.6 max. in AOD-5 by Special Permit) (a)	2.21	
Residential Base	--	1.75, (2.0 in AOD-5 by Special Permit)	2.0	
Non-Residential Base	--	1.25	1.25	
Inclusionary Housing Bonus	--	30%	30%	
Total Dwelling Units	none	62	61	
Base Units	--	48	47	
Inclusionary Bonus Units	--	14	14	
Base Lot Area / Unit (sq ft)	--	600 sf/unit	617 sf/unit	
Total Lot Area / Unit (sq ft)	--	462 sf/unit	475 sf/unit	
Building Height(s) (ft)	20.0'	45' in Res C-2B and B-A districts, (up to 85' in AOD-5 by Special Permit).	73.0'	
Front Yard Setback- South(ft)	45.7'	(b) 25' Commercial	25' Commercial 75.6' Residential	

DIMENSIONAL FORM

		44.9' Residential		
Front Yard Setback – East (ft)	40.6'	(c) 0' Commercial 56.8' Residential	10' Commercial 64.6' Residential	
Side Yard Setback – West (ft) <i>(Corner lot- no rear yard)</i>	31.5'	(d) 0' Commercial 46.5' Residential	55' Commercial, 25.4' Residential <i>(Special Permit)</i>	
Side Yard Setback-North (ft) <i>(Corner lot- no rear yard)</i>	129.5'	(d) 0' Commercial 22.7' Residential	73.3' Commercial 31.8' Residential	
Open Space (% of Lot Area)	.6%	15%	20%	
Private Open Space	178 sf	4,355 sf, (15%)	5,875 sf, (20%)	
Permeable Open Space	178 sf	(25%)	2,680 sf, (9%) <i>(Waiver)</i>	
Other Open Space (Specify)	--	--	--	
Off-Street Parking Spaces	53	61 residential 29 max. retail/ 14 min. retail (90 max. total, 75 min. total)	61 residential 16 retail (77 total)	
Bicycle Parking Spaces	0	33 total (31 residential 2 commercial)	74 total (62 indoors 12 outdoors)	
Loading Bays	0	0	0	

Use space below and/or attached pages for additional notes:

NOTES:

- (a) Maximum possible allowable area using FAR for 100% residential use, with 30% bonus for maximum FAR.
- (b) 25' min. front yard setback at Concord Ave for the Parkway Overlay District.
- (c) Greater of H+L/4 or 10' min. front yard setback on Wheeler Street for Residential Use in BA Zone (using required C2B dimensional requirements). No setback required for commercial use in BA Zone.
- (d) H+L/5 min. side yard setback for Residential Use in BA Zone, (using required C2B dimensional requirements). No side yard required for Commercial in BA Zone.

563/603 Concord Ave, 19 Wheeler St.
AMENDED NARRATIVE FOR SPECIAL PERMIT APPLICATION

03/09/2012

Prepared by Hope Legal Law Offices

A. General Narrative

The Applicant proposes to construct *Concord-Wheeler*, a mixed-use development sited on a 29,034 sf lot located at 563/603 Concord Avenue and 19 Wheeler Street (the “Site”). The site is in the Alewife Overlay, Parkway Overlay and Business A zoning district. Currently the site is occupied by a recently closed gasoline station, auto-repair shop and surface parking lot.

The Applicant proposes to demolish the existing structures on the lot (gasoline station, auto repair shop, and parking lot) to construct 61 residential apartment units on 5 levels above ground floor retail comprising of 7,112sf. The residences and compatible retail uses will be supported by a total of 77 parking spaces located both at grade and in a single-level underground parking garage. The Project will provide a variety of unit types: approximately 16% will be studios units, 43% will be one-bedroom units, 23% will be two-bedroom units, and 18% will be three-bedroom units.

Currently, the locus has two vehicular access points on Concord Avenue and three additional vehicular access points on Wheeler Street. The proposed development will close three of the five access points improving vehicular access and pedestrian safety along the street for residents and abutters. The Project will additionally include 74 bicycle parking spaces (62 indoor & 12 outdoor) exceeding the Ordinance requirements.

Zoning Relief Requested:

The Applicant is requesting the following relief under the Ordinance in connection with the project.

- The proposed new construction and additional Gross Floor Area exceeds 20,000sf requiring a project review special permit pursuant to section 19.20.
- Special permit pursuant to Ordinance section 6.44.1 (g) of the Ordinance to allow on grade parking within 10 feet of that portion of a building wall containing windows of habitable or occupiable rooms at basement or first story & on grade driveway within 5’ of any side or rear property line.
- Special Permit pursuant to Ordinance section 20.95.34 to waive the North and West side yard setbacks and reduce the front yard set back requirement to 15’.
- Special Permit pursuant to Ordinance section 20.95.1 to increase Floor Area Ratio to 2.0 for residential uses and 1.25 for non-residential uses.
- Special Permit pursuant to Ordinance section 20.95.2(5) to increase the maximum building residential height to 73’.

Waiver:

- Reduction of the Permeable Area as of right pursuant to section 20.96.1 with certification to the Superintendent by the City Engineer that the lot and the development upon it meet the Department of Public Works standard for water quality management as further described in the section and consistent with the Alewife Area Stormwater Management Guidelines (*See Attached Certification*)

Zoning Requirements for Granting Requested Relief

The provisions of the Ordinance set forth below apply to the requested Special Permits for the project. Application of each provision of the Project follows the provision in italics.

A. Generally Applicable Criteria for Approval of a Special Permit

Pursuant to section 10.43 of the Ordinance, Special Permits will normally be granted where provisions of this Ordinance are met, except when particulars of the location or use, not generally true of the district or of the uses permitted in it, would cause granting of such permit to be to the detriment of the public good because:

- a) It appears that requirements of this Ordinance cannot or will not be met

With the requested Special Permits, the Project will meet all requirements of the Ordinance.

- b) Traffic generated and or patterns of access or egress would cause congestion, hazard or substantial change in established neighborhood character.

This Project is not located in an established Cambridge neighborhood. The Applicant has completed a detailed analysis of the traffic impacts associated with the Project as evidenced in the Transportation Impact Study (the "TIS") prepared by Vanasse Hangen Brustlin Inc. and submitted with this Application under separate cover.

The TIS was prepared in accordance with the City's guidelines for TIS, complies with the scoping determination dated January 8th 2012 and was certified by the Cambridge Traffic, Parking and Transportation Department on February 14, 2012.

The TIS identifies two (2) Pedestrian Level of Service (PLOS) Planning Board Special Permit Criteria exceedences for the Wheeler Street crosswalk at Concord Avenue [one (1) exceedence during the morning peak hour and one (1) exceedence during the evening peak hour]. The limited increase in vehicle volumes associated with the Project results in an average increase in pedestrian delay at this crosswalk of less than one second. Although the increase in delay is minimal, it changes the PLOS grade from PLOS (B) to PLOS (C). Despite the exceedences, the actual impact to Pedestrians is very limited.

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

The Project will not adversely affect continued operation or future development of adjacent uses and will enhance the growth of mixed use developments with residential housing and ground floor retail.

This proposed use is consistent with the stated goals of the Alewife Overlay District (AOD) to introduce residential housing and retail services enhancing the areas appeal for all persons who work, shop as well as live within the District.

The Project will also be a complimentary use to the existing adjacent uses by adding pedestrian shoppers to the Linear Retail shopping center and housing for employees of the office complexes within the district. Additionally this development will visually enhance the streetscape along Concord Avenue adding diversity to the existing red brick structures and surface parking lots that presently dominate the streetscape.

- d) Nuisance or hazard would be created to the detriment of the health, safety and/or welfare of the occupant of the proposed use or the Citizens of the City or

The Project will not create any nuisance or hazard to the detriment of the health, safety and or welfare of the occupants of the Project nor the citizens of the City. In fact, the Project includes demolition of a former gas station, auto-repair shop and surface parking lot. It will also increase pedestrian safety by closing existing curb cuts on Wheeler Street and Concord Avenue.

This Project is consistent with Cambridge's goals of health, safety and welfare as set forth in Section 19.30 (Citywide Urban Design Objectives) of the Ordinance to foster development which is responsive to the existing or anticipated patterns of development.

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

The Project will not impair the integrity of the district in which it is located or the adjacent Open Space district. The Project will not derogate from the intent and purpose of the Ordinance. When complete the Project will serve as a gateway to the growing residential neighborhood along the South corridor of Concord Avenue heading toward Belmont.

Additionally this Project furthers the design guidelines of the Concord-Alewife Study by breaking large open lot areas into smaller blocks and improving the transition to the existing residential housing development adjacent to the site. Also the exterior façade uses a variety of colors and materials, creating an architecturally diverse development.

Parkway Overlay District:

The purpose of the Parkway Overlay District (POD) is to create a collection of harmonious areas that enhance public safety by reducing visual confusion and encourage development which protects and promotes the use and enjoyment of public open spaces. This Project is consistent with the goals and objectives of the District because it protects the existing open space resources, brings new and diverse housing options to an area that can absorb additional heights and density, and increases pedestrian and vehicle safety by eliminating unnecessary curb cuts along Concord Avenue and Wheeler Street.

Alewife Overlay District 5 (Shopping Center District):

The Alewife Overlay District 5 (AOD-5) was created to change the existing base zoning by promoting future development that contains a mix of compatible uses, increasing opportunities for open and permeable spaces, and creating an identity for the District that parallels other urban centers throughout Cambridge. This Project conforms to the intent and purpose of the AOD-5.

The mixed used development will provide compatible ground floor retail along Concord Avenue enlivening the streetscape and promoting bicycle and pedestrian access to additional shopping and dining destinations. The Project's two front yards provide opportunities for street side planting of mature trees, shrubs and landscaping to transition from the Alewife Parkway thoroughfare. This new, largely transparent street-level façade will include active uses and residential entrances setback with ample green space.

The Applicant proposes to demolish the hard surface parking lot along Wheeler Street and install permeable surfaces where possible satisfying the Open Space requirements of the District. A large portion of the AOD-5 is impervious with high groundwater resulting in most rainwater running of into storm sewers without an opportunity to filter into the ground. This Project will comply with the Concord-Alewife Plan for storm water management and satisfy the Department of Public Works requirements and standards for water quality management.

The exterior design of the building provides a vibrant color pallet to break the massing of the development into visually distinct building elements. The Concord-Alewife study recommended varying the design of individual buildings creating an architecturally distinct district. The ground floor retail is designed to complement the residential building above while screening the limited surface parking. The limited surface parking will service the retail and residential uses. The majority of the parking for the residents will be hidden below grade, allowing more pedestrian-friendly uses to activate the public streetscapes of the project.

B. 20.95.1 Maximum Floor Area Ratio (FAR)

The AOD-5 permits an increase to the maximum FAR of the applicable base zoning district (Res C-2B & B-A) to 1.25 for non-residential uses and 2.0 for residential uses after issuance of a special permit from the Planning Board.

As listed in the dimensional form submitted with this application, the Project proposes a residential FAR of 2.0 and a non-residential FAR of 1.25 by grant of the requested special permit.

C. 20.95.2(5) Maximum Permitted Height.

The AOD-5 permits an increase of the maximum height to 55' for all uses. Additionally section 20.95.2(5) permits heights of 85' for residential uses provided the building floor plate above 55' is limited to 10,000 square feet or less and those portions of buildings above 55 feet are separated by at least 50' after issuance of a special permit from the Planning Board.

The Project satisfies the requirements of the preceding paragraph and proposes a maximum residential height of 73' and non-residential height that does not exceed the allowed height of the base zoning district (B-A).

D. 20.95.34 Waiver of Yard Requirements

The AOD permits a waiver of the side yard setback requirements of the applicable base or Overlay districts (Res C-2B, B-A & Parkway Overlay District) and a reduction of the front yard setback to 15' after issuance of a special permit from the Planning Board.

The Project requires the aforementioned side yard setback relief on the West and North property line and a front yard setback reduction along the East property line both above and below grade as required by section 5.31 footnote (k).

E. 20.96.1 Reduction of Permeable Space Area Requirement

The AOD-5 requires that each lot provide the requisite amount of open and permeable space consistent with its goals of storm water management and retention listed in the Concord-Alewife Study. As shown on the utility plan provided with the application materials the site will have an improved storm water drainage system connecting to existing storm drain and increased permeable area.

The AOD-5 permits the permeable area and open space requirement to be reduced as of right with the certification of the Superintendent by the City Engineer that the lot and the development upon it meet the DPW standard for water quality management and the retention/detention of the difference between the 2 year 24-hour pre-construction runoff hydrograph and the post-construction 25-year 24 hour runoff hydrograph as outlined in the publication proposed Concord-Alewife Area Storm water management Guidelines

and upon a finding by the Planning Board that such reduction advances the relevant purposes of this section.

The Project implements stormwater Best Management Practices and other measures to minimize runoff and improve water quality. The stormwater management features for the site will include a subsurface detention system, water quality structures (e.g. hydrodynamic separators, catch basin insert filters), and “green” roof components that will provide stormwater treatment and storage. In addition to the introduction of water quality and quantity controls, there will be a reduction in pavement area and an increase of landscaping area provided throughout the Project Site.

The proposed stormwater management system will follow the City of Cambridge Department of Public Works Proposed Concord – Alewife Stormwater Management Guidelines and Massachusetts Department of Environmental Protection (DEP) Stormwater Standards. Per the Concord-Alewife Area Stormwater Management Guidelines, the Cambridge Department of Public Works (DPW) requires development/redevelopment projects to provide on-site detention storage for the difference between the 2-year, 24-hour pre-construction runoff hydrograph and the post construction 25-year, 24-hour runoff hydrograph, which will be attained on-site.

The Project will provide a substantial improvement in stormwater management conditions on site dramatically increasing permeable areas as well as improving the quality and quantity of stormwater introduced in the Municipal systems.

F. 19.20 Project Review Special Permit

In granting a Project Review Special Permit under Section 19.20 of the Ordinance, the Planning Board is required to make the following findings:

1. The project will have no substantial adverse impact on city traffic within the Study area as analyzed in the required traffic study.

As described in the TIS, no traffic related Planning Board Special Permit Criteria are exceeded, and the project will have no significant impact to traffic operations. Indeed, the elimination of three (3) existing curb-cuts on the Project site will enhance safety for vehicles and pedestrians along Concord Avenue and Wheeler Street.

The TIS identifies two (2) Pedestrian Level of Service (PLOS) Planning Board Special Permit Criteria exceedences for the Wheeler Street crosswalk at Concord Avenue [one (1) exceedence during the morning peak hour and one (1) exceedence during the evening peak hour]. The limited increase in vehicle volumes associated with the Project results in an average increase in pedestrian delay at this crosswalk by less than one second. Although the increase in delay is minimal, it changes the PLOS grade from PLOS (B) to PLOS (C). Despite the exceedences, the actual impact to pedestrians is very limited.

2. The Project is consistent with the urban design objectives of the city as set forth in Section 19.30 of the Ordinance.

As described below, the Project conforms with the Citywide Urban Design Objectives set forth in Section 19.30 of the Ordinance.

G. 19.30 Citywide Urban Design Objectives

1. Pursuant to Section 19.31 of the Ordinance, new projects should be responsive to the existing or anticipated pattern of development. Indicators include:

- a) Heights and setbacks provide suitable transition to abutting or nearby residential zoning districts that are generally developed to low scale residential uses.

The side abutter is a recently built residential condominium community creating some of the first housing in the mostly commercial portion of the AOD. The proposed mixed use Project is compatible with the developing residential character of the area and creates the appropriate transition from the Alewife Brook Parkway to the South Concord Avenue corridor. Additionally the Project keeps the retail activity facing the public way on Concord Avenue and provides screening with landscaping and trees along the property line separating the two parcels.

To mitigate any excess impact of the ground floor retail on the residential abutter special consideration was given to avoid excess light spillage for the surface parking along the property line. Also the mechanicals required for the retail will be designed to satisfy Cambridge's Noise Control Ordinance (Chapter 8.16).

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

The Project was designed to create a retail and residential streetscape along the Concord Avenue corridor of the AOD-5. As stated previously the Project will have ground floor retail setback at least 25ft along Concord Avenue lined with green open space and mature trees. There will be bicycle parking near the corner of Wheeler and Concord Avenue and concealed surface parking for automobiles along the Western edge of the property.

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

This Project was designed to fully conform to the design guidelines of the Concord-Alewife Plan orienting the retail towards Concord Avenue and providing landscaped setbacks adjacent to the existing side residential abutters. Additionally the Project balances the placement of green roofs and balconies to capture the natural amenity of the Fresh Pond Park while respecting the privacy of the neighboring residential community.

d) Where relevant, historical context are respected e.g. special consideration should be given to buildings or buildings that are preferably preserved on adjacent to the Site.

There are no neighboring historic buildings that are preferably preserved on or adjacent to the site.

2. Pursuant to Section 19.32 of the Ordinance, development should be pedestrian and bicycle-friendly, with a positive relationship to its surrounding. Indicators include (a) Ground floors, particularly where they face public streets, public parks, and publicly accessible pathways, consist of spaces that are actively inhabited by people, such as retail stores, consumer services businesses and restaurants where they are allowed, or general office, educational or residential uses and building lobbies. Windows and doors that normally serve such inhabited spaces are encouraged to be prominent aspect of the relevant building facades. Where a mix of activities are accommodated in the building, the more active uses are encouraged facing public street, parks and pathways.

The ground floor will contain retail uses permitted by section 4.35 of the Ordinance. These uses will be oriented towards public streets and away from existing residences. The Project will feature exterior and interior bicycle storage with the number of spaces exceeding the Ordinance requirement for bicycle parking.

In commercial districts, such active space consists of retail and consumer service stores and building lobbies that are oriented towards the street and encourage pedestrian activity on the sidewalk. However, in all cases such ground floor spaces should be occupied by uses (a) permitted in the zoning district within which the structure is located, and (c) compatible with the principal use for which the building is designed.

The ground floor will contain retail uses permitted by section 4.35 of the Ordinance within the District that are compatible with the neighboring residential environment.

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

The limited surface parking is shielded from the public view by appropriate screening and positioning to the sides of the property. The majority of the parking is below grade or covered. The Project will include dense landscaped screening and fencing for the surface parking spaces at the West and North portions of the lot.

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

The architectural treatment of the ground floor facing Concord Avenue and Wheeler Street is close to 50% glazed.

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

The building has been sited to encourage pedestrian access by providing both ADA accessible access to the retail and residential components of the project, as well as providing unobstructed pedestrian access along the majority of the retail frontage on Wheeler Street. By creating a more cohesive frontage with surface treatments that define pedestrian paths along both Wheeler Streets and Concord Avenue, pedestrians will be discouraged from travelling through the lot. There is an existing bus stop on site, and the site is within walking distance to the Alewife MBTA stop.

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

Pedestrians and bicyclists can access the site safely on ADA-compliant street crossings and sidewalks along the streets and within the site. Secured, covered bicycle parking is provided on the first floor and in the basement parking areas.

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

The Project complies with the policy objective 19.32.

3) Pursuant to Section 19.33 of the Ordinance, the building and site design should mitigate adverse environmental impacts of the development upon its neighbors. Indicators include:

a) Mechanical equipment that is carefully designed, well organized or visually screened from its surroundings and is acoustically buffered from neighbors. Consideration is given to the size, complexity and appearance of the equipment, its proximity to residential areas, and its impact on the existing streetscape and skyline. The extent to which screening can bring order, lessen negative impacts and enhance the overall appearance of the equipment should be taken into account.

The project is designed to minimize negative impacts on its surroundings and enhance the overall appearance of the existing streetscape and skyline. In fact the Project significantly improves the appearance of the Site by demolishing the existing building and surface parking lot. The required mechanicals for the retail spaces and residences will be incorporated and/or shielded from the public view. Rooftop mechanical equipment above the sixth floor will be set back from the roof edge so that it is shielded

from the public view. Mechanical equipment on the roof of the ground floor retail will be screened by a combination of walls, louvers and metal screening.

b) Trash that is handled to avoid impacts (noise, odor, and visual quality) on neighbors e.g. the use of trash compactors or containment of all trash storage and handling within a building is encouraged.

The trash/recycling storage and handling for the Project is contained within the building to avoid noise, odor and visual impacts. In compliance with the Ordinance, no refuse storage areas are located in the front yard setbacks.

c) Loading Docks that are located and designed to minimize impacts (visual and operational) on neighbors.

The project is a mixed use development that will have limited retail space. The Gross Floor Area of the retail (8,990sf) is below the 10,000sf threshold and the proposed land use category in Section 4.35 does not require a loading Dock (see Section 6.36.5 & 6.83).

d) Stormwater Best Management Practices and other measures to minimize runoff and improve water quality are implemented.

The Projects implements stormwater Best Management Practices and other measures to minimize runoff and improve water quality. The stormwater management features for the site will include a subsurface detention system, water quality structures (e.g. hydrodynamic separators, catch basin insert filters), and “green” roof components that will provide stormwater treatment and storage. In addition to the introduction of water quality and quantity controls, there will be a reduction in paved area and an increase of landscaped area throughout the Project Site.

The proposed stormwater management system will follow the City of Cambridge Department of Public Works Proposed Concord – Alewife Stormwater Management Guidelines and Massachusetts Department of Environmental Protection (DEP) Storm water Standards. Per the Concord-Alewife Area Storm water Management Guidelines, the Cambridge Department of Public Works (DPW) requires development/redevelopment projects to provide on-site detention storage for the difference between the 2-year, 24-hour pre-construction runoff hydrograph and the post construction 25-year, 24-hour runoff hydrograph, which will be attained on-site.

The Project will provide a substantial improvement in stormwater management conditions on site dramatically increasing permeable areas as well as improving the quality and quantity of stormwater introduced in the Municipal systems.

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

The Project has incorporated Low Impact Development design features into overall Stormwater Management design of the site including an increase permeable surfaces and natural landscape features and grading.

f) The structure is designed and sited to minimize shadow impacts on neighboring lots, especially shadows that would have a significant impact on the use and enjoyment of adjacent open space and shadows that might impact the operation of a Registered Solar System as defined in Section 22.60 of the Ordinance.

The building is sited adjacent to the Fresh Pond Park along Concord Avenue and a residential abutter to the rear. The location of the building casts minimal shadows on the rear residential abutters.

g) Changes to the grade across the lot are designed in ways to minimize the need for structural retaining walls close to the property line.

The proposed site has been graded to match the existing grade at the curblines along both Concord Avenue and Wheeler Street maintaining a pedestrian path along the public way without the use of structural retaining walls. A series of wide steps combined with low planters provide an open and inviting feel leading up to the retail component of the project along Wheeler Street. The project has also been designed to match the grade along the existing property line to the north and to minimize the need for structural retaining walls along the property to the west.

h) Building Scale and wall treatment, including the provision of windows, are sensitive to existing residential uses on adjacent lots.

The Project is designed to be congruous with the side residential abutter by implementing dense plantings of shrubs and trees along the side property line, maintaining appropriate setbacks adjacent to residential uses, and limiting light spillage along the sensitive edges of the property.

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

Architectural lighting will be designed to shield lamps from view and minimize light pollution. Pedestrian lighting along the front and side yard areas and parking areas will provide safe lighting enhancing the visual landscape in the evenings.

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

The site is covered with existing structures and paved surfaces containing no trees within the property boundaries. The new tree species being proposed are consistent with Ordinance requirements. The Applicant has submitted plans to the City Arborist for review and approval.

4) Pursuant to Section 19.34 of the Ordinance, projects should not overburden the City infrastructure services, including roads, city water supply system and sewer system.

a) The building and site design are designed to make use of water-conserving plumbing and minimize the amount of stormwater run-off through the use of best management practices for stormwater management.

As described above, the Project's stormwater management system has been designed to incorporate best management practices and has been reviewed and approved by the Department of Public Works. Water-conserving plumbing fixtures will be used in keeping with industry standards, and as required to meet LEED standards.

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

Sanitary Sewer Service Infrastructure

Public infrastructure improvements and include a Sewer Holdback Tank for the building which will be remotely controlled by the City Sewer Department in the event of significant storms in order to mitigate combined sewer overflow conditions currently affecting the system.

The Project will provide a Sewer Holdback Tank as well as associated sewer infrastructure that will direct sanitary flows into the existing 24" sewer line located within Wheeler Street. The Cambridge DPW has confirmed that this connection will be acceptable for the project sewer discharge. The building will provide a sanitary sewer service that collects flows from the underground garage floor drains. All flows from the underground garage will be directed through an oil/water separator and any restaurant sewer discharge will be directed through a grease trap.

Water Service Infrastructure

The "Concord Avenue Waterline and Roadway Reconstruction" Project was recently completed by the City of Cambridge, which involved the improvements to the existing water infrastructure in Concord Avenue, providing increased capacity and pressures for the area.

The proposed domestic water will be supplied by a new 12" water main in Wheeler Street to be constructed as part of this project, and will be operated by the Cambridge Water Department. Per the Cambridge Water Department, the existing 12" water main in Wheeler Street is aged and in need of replacement. A connection to the existing water main will be made immediately north of the gate valve in Wheeler Street at the southeast corner of the Project, and the proposed 12" main will continue to the north and connect back to the existing 12" main at the northerly property line.

Flow tests conducted in September 2011 indicate sufficient system supply for the Project without need for alternative supply enhancement measures for domestic services. Per discussions with the Cambridge Water Department, the proposed new 12" water main in

Wheeler Street will have sufficient capacity for the project service connections for both fire and domestic service. Domestic service will be provided via a single 6" water service connection separated by water gate valves allowing for proper isolation.

c) Buildings are designed to use natural resources and energy resources efficiently in construction, maintenance, and long-term operation of the building, including supporting mechanical systems that reduce the need for mechanical equipment generally and its location on the roof of a building specifically. The buildings are sited on the lot to allow construction of adjacent lot to do the same. Compliance with the Leadership Energy and Environmental Design (LEED) certification standards and other evolving environmental efficiency standards are encouraged.

The building is being designed to conform to LEED Silver, Energy Star and IECC 2009 requirements. Please see an overview of the Project's LEED compliance in the attached LEED Checklist and Narrative.

5) Pursuant to Section 19.35 of the Ordinance, new construction should reinforce and enhance the complex urban aspects of Cambridge as it has developed historically. Indicators include

a) New Educational institutional construction that is focused with the existing campuses.

N/A to the Project.

b) Where institutional construction occurs in commercial areas, retail, consumer service enterprises, and other uses that are accessible to the general public are provided at the ground (or lower) floors of buildings. Where such uses are not suitable for programmatic reasons, institutional uses that encourage active pedestrian traffic to and from the site.

N/A to the Project

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

The Project will provide publically accessible daytime retail on the Ground Floor consistent Concord-Alewife plan recommendations and Urban Design objective of Section 19.30.

d) Historic structures and environments are preserved.

N/A to the Project

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

N/A to the Project

6) Pursuant to Section 19.36 of the Ordinance, expansion of the inventory of housing in the City is encouraged. Indicators include

a) Housing is a component of any large, multiple building commercial development. Where such development abuts residential zoning districts substantially developed to low-scale residential uses, placement of housing within the development such that it acts as a transition/buffer between uses within and without the development.

b) Where housing is constructed, providing affordable units exceeding that mandated by the Ordinance. Targeting larger family-sized middle income units is encouraged.

The Project is a mixed-use development adding 61 residential dwelling units to the housing inventory of the City. A range of unit types are provided, of which 23% will be two bedrooms, and 18% will be three bedrooms. The Project will include affordable units in compliance with the Ordinance.

7) Pursuant to Section 19.37 of the Ordinance, enhancement and expansion of open space amenities in the city should be incorporated into new development in the city. Indicators include:

a) On large-parcel commercial development, publicly beneficial open space is provided.

N/A to the Project

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

c) A wider range of open space activities than presently found abutting area is provided.

The Project enhances and expands open space amenities in the City by increasing the available open space at the site from .6% to 20%. Additionally the project improves the pedestrian streetscape by the addition of street tree plantings and improved access across Concord Avenue to the adjacent Fresh Pond Park. The green roofs and balconies will also provide outdoor areas for residents.

IV. CONCLUSION

As described above, the Project is appropriate for the site and surroundings providing additional housing and ground floor retail. The Project will further the goals of the Concord-Alewife Study by creating a transition into the developing residential neighborhood, increasing opportunities for pedestrian and bicycle access, and decreasing hard surface areas benefiting stormwater management. Accordingly, for the reason set forth in this application, the Applicant respectfully requests that the Board find

that the Project satisfies all applicable requirements of the Ordinance in connection with the granting of the requested Special Permits and Waivers.

OWNERSHIP CERTIFICATE

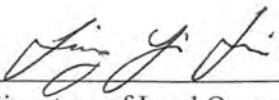
Project Address: 563 CONCORD AVE. / 19 WHEELER ST. **Application Date:** 2.6.2012

This form is to be completed by the property owner, signed, and submitted with the Special Permit Application:

I hereby authorize the following Applicant: ABODEZ
at the following address: 277 BROADWAY, CAMBRIDGE
to apply for a special permit for:
on premises located at: 563 CONCORD AVE. / 19 WHEELER ST.
for which the record title stands in the name of: ABODEZ ACORN CW LLC
whose address is: 277 BROADWAY, CAMBRIDGE

by a deed duly recorded in the:

Registry of Deeds of County: MIDDLESEX Book: 57858 Page: 120
OR Registry District of the Land Court, Certificate No.: Book: Page:

, LING YI LIN, AUTHORIZED SIGNATORY
Signature of Land Owner (If authorized Trustee, Officer or Agent, so identify)

To be completed by Notary Public:

Commonwealth of Massachusetts, County of MIDDLESEX

The above named LING YI LIN personally appeared before me,
on the month, day and year JAN 31, 2012 and made oath that the above statement is true.

Notary:  / LAUREN M. POMATHIE

My Commission expires: JANUARY 5, 2018

Concord-Wheeler LEED Design and Construction Initiatives

The proposed Concord Wheeler project is being designed in accordance with the following environmental and energy conservation standards:

- USGBC LEED Silver
- Energy Star's High Rise Program, (if program is extended into 2013)
- IECC 2009

The project site is ideally located close to existing urban infrastructure and public transportation lines. The site was previously a gas station and parking lot, which will require extensive environmental remediation and monitoring. The proposed building will be largely constructed of factory-built modular components, a construction system that has proven to be high-quality and energy-efficient while producing far less material waste than conventional stick-built construction methods. There will be many energy efficient features incorporated into the building's mechanical, electrical and plumbing systems.

We will be working with Advanced Building Analysis LLC, a LEED Green Rater and Energy Star Rater, to ensure LEED and Energy Star compliance. We will also be working with Fore Solutions/Thornton Thomasetti, who will do energy modeling for the project.

Following is a synopsis of the LEED compliance measures being used in the design and construction of the project. Refer also to the attached preliminary LEED Checklist. The checklist states that we may achieve Gold status, but we are conservatively targeting LEED Silver in our planning.

Innovation and Design Process (ID)

The project is being planned by LEED AP-credentialed professionals (Architectural, MEP, Civil and Construction). Numerous sustainable design charrettes will be built into the project schedule to ensure targeted standards are met at each stage of the design process. Factory-built modular construction satisfies the requirements for Innovative Design.

ID Point Strategy:

- 1.1 Preliminary Rating: We will schedule a meeting with Green Rater to discuss LEED Silver target, and review point strategy.
- 1.2 Energy Expertise for MID RISE: Our team will include a Green Rater and Energy Modeler familiar with LEED NC and Ashrae 90.1 2007, appendix G.
- 1.3 Professional Credentials: Our Green Rater is credentialed for LEED for Homes.

- 1.4 Design Charrette: We will hold a one-day Charrette during the Design Development phase of the project, to ensure that green design and building strategies are integrated across all disciplines.
- 1.5 Building Orientation for Solar Design: Due to site and zoning constraints, the building will not be oriented for maximum solar gain.
- 1.6 Trades Training for MID-RISE: We will hold a Trades Training seminar for Plumbing, Mechanical, Insulation and General Contractors.
- 2.1 Durability Planning: We will conduct a durability evaluation, develop strategies to address durability and moisture control issues, and incorporate these strategies into the construction documents and construction process.
- 2.2 Durability Management: The general contractor will inspect and track the work to ensure that it follows the requirements of the durability inspection checklist.
- 2.3 Third-Party Durability Management Verification: We do not plan to incorporate this into the project at this point in time.
- 3.1 Innovative or Regional Design, Innovation #1: Our intent is to achieve this credit by constructing the building of modular, factory-built components.

Location and Linkages (LL)

The site's location, proximity to transportation and existing infrastructure, and brownfield status earn high ratings for this LEED category. Close proximity to Fresh Pond Reservation satisfies the open space access component.

LL Point Strategy:

- 1.0 LEED ND (Neighborhood Development): We do not anticipate applying for LEED ND credits for this project.
- 2.0 Site Selection: The existing site is above the 100 year flood plain, has no threatened species habitat, is not within 100' of wetlands, is not public parkland, and has no unique or prime soils.
- 3.1 Edge Development: The site is bordered by over 25% developed land.
- 3.2 Infill Location: The site is bordered by over 75% developed land.
- 3.3 Brownfield Redevelopment: The site is a former gas station and will require remediation under an ASTM E1903-97 Phase II Site Assessment.
- 4.0 Existing Infrastructure: The site is located within 1/2 mile of existing water and sewer lines.

- 5.2 Extensive Community Resources for MID-RISE: The project will be located within 1/4 mile from 7 community resources, and within 1/2 mile of 11 community resources.
- 6.0 Access to Open Space: The project is within 1/2 mile of a community open space greater than 3/4 acres in size, (Fresh Pond Reservation).

Sustainable Sites (SS)

Sustainable site initiatives include draught-tolerant plantings, minimal turf grass, and a combination of green and high-albedo roofs. The existing site is nearly completely paved over, the proposed site will meet the requirements of the DPW's Concord-Alewife stormwater management guidelines. There will be 61 units on the site, which qualifies for LEED's "very high density" designation. There is a bus stop on site, and the Alewife T station is less than 1/2 mile away. There will be bike parking consisting of one space for every dwelling unit, as well as convenience parking for retail users.

SS Point Strategy:

- 1.1 Site Stewardship/Erosion Controls: The contractor will follow DPW guidelines to prevent erosion, control runoff, and protect existing watersheds from silt and sediment damage.
- 1.2 Minimize Disturbed Area: The building will have over 40 units per acre, to qualify for the MID-RISE points available in this category.
- 2.1 Invasive Plants: No invasive plant species will be introduced into this project.
- 2.2 Basic Landscaping Design: Turf grass will be drought-tolerant, will not be located in dense shade, and will not be placed on steeply sloped areas. Mulch will be added to amend soil as required, and compacted soil will be filled to at least 6" with screened loam.
- 2.3 Limit Conventional Turf: Less than 20% of the soft landscaped areas will be turfgrass.
- 2.4 Draught-Tolerant Plants: We intend to supply mainly draught-tolerant plants, but may not meet the 90% requirement to qualify for points in this category.
- 2.5 Reduce Overall Irrigation Demand: We intend to reduce overall irrigation demand, but cannot claim this credit in conjunction with SS credit 2.3.
- 3.1 Reduce Site Heat Island Effect: We are not claiming credits in this category.
- 3.2 Reduce Roof Heat Island Effect: We will be installing a combination of high-albedo and green roofs to satisfy this requirement.
- 4.1 Permeable Lot for MID-RISE: We are not claiming credits in this category.

- 4.2 Permanent Erosion Controls: Water runoff will be controlled through careful grading, sloped parking areas will drain into vegetated swales at the rear of the site. Surface water will be retained in underground detention basins along Concord Ave.
- 4.3 Stormwater Quality Controls for MID-RISE: We have designed our stormwater management system in accordance with Best Management Practices (BMPs) and standards established by the Cambridge Department of Public Works' Concord-Alewife Stormwater Management Guidelines.
- 5 Pest Control Alternatives: We are not claiming credits in this category.
- 6.3 Compact Development/Very High Density for MID-RISE: We are building the equivalent of 103.4 units per acre of land, (exclusive of required setback areas), which exceeds the LEED requirement of 60 units per acre for this category.
- 7.1 Alternative Transportation/Public Transit: The site is within 1/2 mile of transit providing 60 rides per weekday.
- 7.2 Alternative Transportation/Bicycle Storage: We are providing 62 secured, indoor spaces of bicycle parking, (over one per dwelling unit- twice the amount required by Zoning).
- 7.3 Alternative Transportation/Parking Capacity/LEVs: The parking garage will provide preferred parking for Low-Emitting Vehicles, (LEVs).

Water Efficiency (WE)

We propose to install WaterSense very low-flow plumbing fixtures and appliances in the project. We also will provide draught-tolerant native species, and a water-efficient drip irrigation system to establish planting areas.

WE Point Strategy:

- 1 Water Reuse for MID-RISE: We are not claiming credits in this category.
- 2.1 High Efficiency Irrigation: We propose to use drip irrigation on timers with moisture sensors and rain delay controls to qualify for 1.5 points in this category.
- 2.2 Reduce Overall Irrigation Demand by 45%: We plan to achieve this by installing draught-tolerant plantings which will require limited irrigation.
- 3.1 Indoor Water Use/High Efficiency Fixtures: Faucets and showers will use less than 2 GPM, toilets will be less than 1.3 GPF.
- 3.3 Water Efficient Appliances for MID-RISE: We will install Energy Star rated dishwashers to achieve this credit.

Energy and Atmosphere (EA)

Our mechanical engineers will design the mechanical systems for optimum efficiency. Dwelling units will be supplied with hydronic heating from efficient tankless gas water heaters, with short insulated piping runs to a fan-coil unit. Cooling will be provided by small condensers on the roof, supplying environmentally appropriate refrigerant to the same fan-coil unit. Units will have individual temperature controls for heating and cooling.

EA Point Strategy:

- 1.1 Optimize Energy Performance/Minimum Energy Performance: Concord-Wheeler will meet all prerequisites in this category. Energy savings are expected to be greater than the 15% threshold above ASHRAE 90.1-2007 standards. Continuous exterior insulation will ensure thermal bridging is minimized between interior and exterior.
- 1.2 Testing and Verification: The project will be tested according to EPA and Energy Star guidelines.
- 1.3 Optimize Energy Performance: Overall energy performance is expected to exceed ASHRAE 90.1-2007 standards by a minimum of 15%. This will be confirmed with air leakage tests performed by Energy Star HERS Raters.
 - Windows will have a U-value of 0.35 or better, in accordance with Energy Star requirements.
 - Duct leakage to be less than 4 cfm/100 sf.
 - Hot water pipes will be insulated to R-4.
 - Ducts will be insulated to R-6
 - Air conditioners will be SEER 13 or better, with HSPF higher than 8.2.
 - Boilers will be a minimum of 85% efficient.
 - Light fixtures will be Energy Star approved.
- 7 Efficient Hot Water Distribution System and Pipe Insulation: We are proposing to use a compact design for the hot water distribution system, with pipes insulated to a minimum R-value of 4.
- 11 Residential Refrigerant Management: The refrigerant system will be certified for proper installation and charging, no HCFC refrigerants will be used in the residential units.

Materials and Resources (MR)

The proposed offsite modular construction will provide efficiency of framing, detailed framing documents, and a dramatic reduction of onsite material waste.

MR Point Strategy:

- 1.1 Framing Waste Order Factor: Factory-built construction ensures that framing waste will be lower than 10% of total framing materials. Waste lumber is recycled into other products.

- 1.2 Detailed Framing Documents: Shop drawings for modular components typically show every board used to complete the project, including all miscellaneous blocking and bracing.
- 1.5 Off Site Fabrication: Modular construction earns all credits in this category.
- 2 Environmentally Preferable Products: Although it is our intent to use environmentally preferable and recycled products where possible, we are not claiming any credits in this category.
- 3.1 Waste Management/Construction Waste Management: The General Contractor will investigate local options for waste diversion and document the rate of waste diversion for the project.
- 3.2 Construction Waste Reduction: Modular construction will minimize on site waste disposal, the actual credits for this category will be dependent on amount of waste reduced. We plan to take advantage of these credits but cannot predict the amount until construction.

Indoor Environmental Quality (EQ)

Indoor air quality will be assured through the use of heat recovery ventilators in every dwelling unit. All combustion appliances will be direct venting. Each unit will have individual thermostat controls and will be compartmentalized with respect to other units. The contractor will provide a pre-occupancy mechanical system flush prior to occupancy. The building will be constructed to be radon-resistant.

EQ Point Strategy:

- 2 Basic Combustion Venting for MID-RISE: We will meet all requirements in this category. There will be no unvented combustion appliances. There will be carbon monoxide detectors in each unit. There will be no fireplaces. Space heating and water heating will be designed with closed-combustion systems.
- 3 Moisture Control: We are not claiming any credits in this category.
- 4 Outdoor Air Ventilation: The project is being designed to meet ASHRAE 62.2 standards for ventilation, with fresh outdoor air being supplied to each dwelling unit, (30 cfm/1 bedroom units, 45 cfm/2-3 bedroom units).
- 5 Local Exhaust: We will provide exhaust fans in kitchens and bathrooms, ducted to the outdoors in compliance with ASHRAE 62.2. Bathroom fans will be Energy Star compliant, or an HRV will be installed in the line. All bathrooms and kitchens will meet ASHRAE 62.1-2007 air flow requirements. We do not propose to use enhanced local exhaust or third party testing at this time.

- 6 Distribution of Space Heating and Cooling: We will provide room-by room load calculations. Return air will be provided at a rate of 1 sq. inch per CFM of supply air. Supply air flow rates will be tested and confirmed for each room.
- 7 Air Filtering: The project will be furnished with MERV-10 air filters, (LEED "better").
- 8 Indoor Contaminant Control: Ductwork will be sealed during construction to prevent contaminants from entering the system. We will determine if a preoccupancy flush can be accommodated in the construction schedule, but are not yet claiming credit for this in our calculations.
- 9 Radon Protection: We will provide radon protection as required if radon is detected in levels that require remediation. We are not yet claiming credit for this category.
- 10 Garage Pollutant Protection: There will be no HVAC ducts within the garage. All penetrations between the garage and first floor will be sealed and firestopped. Spaces adjacent to the garage will be sealed, weatherstripped and provided with carbon monoxide detectors. There will be a vestibule at the garage elevator, and doors will be self-closing. The garage will be furnished with a mechanical exhaust system controlled by carbon monoxide detectors.
- 11 Environmental Tobacco Smoke Control: We propose to meet all requirements in part (a), Environmental Smoke Reduction. Smoking will be prohibited in common areas, exterior smoking areas will be greater than 25' from air intakes and windows, smoking will be prohibited within 25' of air intakes and windows. These prohibitions will be communicated through individual lease agreements and building signage.
- 12 Compartmentalization of Units: All units will be air sealed and weather-stripped at all windows and doors. Units will be blower door tested in accordance with Energy Star standards for high-rise residential construction.

Awareness and Education (AE)

The contractor will provide enhanced training to the building occupants, and educate the building manager in operation of mechanical, electrical and plumbing systems to ensure future efficient operation.

AE Point Strategy:

- 1 Awareness and Education/Education of the Homeowner or Tenant: Tenants will be given a basic operations manual, and will be instructed on the efficient use of heating, cooling, hot water and ventilation systems.
- 2 Education of the Building Manager: The building manager will be given all LEED documentation, test results and operating manuals for the building. The manager will be extensively trained in

the efficient operation and maintenance for all HVAC, irrigation, water heating and plumbing systems for the building.



for Homes

LEED for Homes Mid-rise Pilot Simplified Project Checklist

Builder Name:	Bald Hill Builders
Project Team Leader (if different):	Phil Terzis, AbodeZ Development
Home Address (Street/City/State):	603Concord Ave., Cambridge, MA

Project Description:

Adjusted Certification Thresholds

Building type: **Mid-rise multi-family** # of stories: **6** Certified: **35.0** Gold: **65.0**
 # of units: **61** Avg. Home Size Adjustment: **-10** Silver: **50.0** Platinum: **80.0**

Project Point Total	Final Credit Category Total Points				
Prelim: 66 + 7.5 maybe pts	Final: 51	ID: 4	SS: 17	EA: 17	EQ: 8.5
Certification Level		LL: 9	WE: 5.5	MR: 4	AE: 1
Prelim: Gold	Final: Gold				

date last updated :
last updated by :

Max Pts **Project Points**
Preliminary **Final**

Innovation and Design Process (ID)		(No Minimum Points Required)		Max	Y/Pts	Maybe	No	Y/Pts	
1. Integrated Project Planning	1.1	Preliminary Rating		Prereq					
	1.2	Energy Expertise for MID-RISE		Prereq					
	1.3	Professional Credentialed with Respect to LEED for Homes		1	1	0		1	
	1.4	Design Charrette		1	1	0		1	
	1.5	Building Orientation for Solar Design		1	0	0		0	
	1.6	Trades Training for MID-RISE		1	1	0		1	
2. Durability Management Process	2.1	Durability Planning		Prereq					
	2.2	Durability Management		Prereq					
	2.3	Third-Party Durability Management Verification		3	0	0		0	
3. Innovative or Regional Design	<input checked="" type="checkbox"/> 3.1	Innovation #1 _____		1	1	0		1	
	<input checked="" type="checkbox"/> 3.2	Innovation #2 _____		1	0	0		0	
	<input checked="" type="checkbox"/> 3.3	Innovation #3 _____		1	0	0		0	
	<input checked="" type="checkbox"/> 3.4	Innovation #4 _____		1	0	0		0	
<i>Sub-Total for ID Category:</i>				11	4	0	0	4	
Location and Linkages (LL)		(No Minimum Points Required)		OR	Max	Y/Pts	Maybe	No	Y/Pts
1. LEED ND	1	LEED for Neighborhood Development	LL2-6		10	0	0		0
2. Site Selection	<input checked="" type="checkbox"/> 2	Site Selection			2	2	0		2
3. Preferred Locations	3.1	Edge Development			1	1	0		1
	3.2	Infill	LL 3.1		2	2	0		2
	3.3	Brownfield Redevelopment for MID-RISE			1	1	0		1
4. Infrastructure	4	Existing Infrastructure			1	1	0		1
5. Community Resources/ Transit	5.1	Basic Community Resources for MID-RISE			1	0	0		0
	5.2	Extensive Community Resources for MID-RISE	LL 5.1, 5.3		2	2	0		2
	5.3	Outstanding Community Resources for MID-RISE	LL 5.1, 5.2		3	0	3		0
6. Access to Open Space	6	Access to Open Space			1	1	0		1
<i>Sub-Total for LL Category:</i>				10	9	3	0	9	
Sustainable Sites (SS)		(Minimum of 5 SS Points Required)		OR	Max	Y/Pts	Maybe	No	Y/Pts
1. Site Stewardship	1.1	Erosion Controls During Construction		Prerequisite					
	1.2	Minimize Disturbed Area of Site for MID-RISE		1	1	0			1
2. Landscaping	<input checked="" type="checkbox"/> 2.1	No Invasive Plants		Prerequisite					
	<input checked="" type="checkbox"/> 2.2	Basic Landscape Design	SS 2.5	1	1	0			1
	<input checked="" type="checkbox"/> 2.3	Limit Conventional Turf for MID-RISE	SS 2.5	2	2	0			2
	<input checked="" type="checkbox"/> 2.4	Drought Tolerant Plants for MID-RISE	SS 2.5	1	0	1			0
	<input checked="" type="checkbox"/> 2.5	Reduce Overall Irrigation Demand by at Least 20% for MID-RISE		3	3	0			3
3. Local Heat Island Effects	<input checked="" type="checkbox"/> 3.1	Reduce Site Heat Island Effects for MID-RISE		1	1	0			0
	<input checked="" type="checkbox"/> 3.2	Reduce Roof Heat Island Effects for MID-RISE		1	1	0			1
4. Surface Water Management	<input checked="" type="checkbox"/> 4.1	Permeable Lot for MID-RISE		2	0	0			0
	4.2	Permanent Erosion Controls		1	1	0			1
	<input checked="" type="checkbox"/> 4.3	Stormwater Quality Control for MID-RISE		2	2	0			2
5. Nontoxic Pest Control	5	Pest Control Alternatives		2	0	1			0
6. Compact Development	6.1	Moderate Density for MID-RISE		2	0	0			0
	6.2	High Density for MID-RISE	SS 6.1, 6.3	3	0	0			0
	6.3	Very High Density for MID-RISE	SS 6.1, 6.2	4	4	0			4
7. Alternative Transportation	7.1	Public Transit for MID-RISE		2	2	0			2
	7.2	Bicycle Storage for MID-RISE		1	1	0			1
	7.3	Parking Capacity/Low-Emitting Vehicles for MID-RISE		1	1	0			1
<i>Sub-Total for SS Category:</i>				22	18	2	0	17	

LEED for Homes Mid-rise Pilot Simplified Project Checklist (continued)

						Max Pts	Project Points				
							Y/Pts	Maybe	No	Y/Pts	
						OR	Y/Pts	Maybe	No	Y/Pts	
Water Efficiency (WE) (Minimum of 3 WE Points Required)						OR	Max	Y/Pts	Maybe	No	Y/Pts
1. Water Reuse	<input checked="" type="checkbox"/>	1	Water Reuse for MID-RISE			5	0	1		0	
2. Irrigation System	<input checked="" type="checkbox"/>	2.1	High Efficiency Irrigation System for MID-RISE	WE 2.2		2	1.5	0		1.5	
	<input checked="" type="checkbox"/>	2.2	Reduce Overall Irrigation Demand by at Least 45% for MID-RISE			2	0	0		0.5	
3. Indoor Water Use		3.1	High-Efficiency Fixtures and Fittings			3	3	0		3	
		3.2	Very High Efficiency Fixtures and Fittings			6	0	0		0	
		3.3	Water Efficient Appliances for MID-RISE			2	1	0		1	
<i>Sub-Total for WE Category:</i>						15	5.5	1		5.5	
Energy and Atmosphere (EA) (Minimum of 0 EA Points Required)						OR	Max	Y/Pts	Maybe	No	Y/Pts
1. Optimize Energy Performance		1.1	Minimum Energy Performance for MID-RISE			Prereq					
		1.2	Testing and Verification for MID-RISE			Prereq					
		1.3	Optimize Energy Performance for MID-RISE			34	10	0		15	
7. Water Heating	<input checked="" type="checkbox"/>	7.1	Efficient Hot Water Distribution			2	2	0		0	
		7.2	Pipe Insulation			1	1	0		1	
11. Residential Refrigerant Management		11.1	Refrigerant Charge Test			Prereq					
		11.2	Appropriate HVAC Refrigerants			1	1	0		1	
<i>Sub-Total for EA Category:</i>						38	14	0		17	
Materials and Resources (MR) (Minimum of 2 MR Points Required)						OR	Max	Y/Pts	Maybe	No	Y/Pts
1. Material-Efficient Framing		1.1	Framing Order Waste Factor Limit			Prereq					
		1.2	Detailed Framing Documents	MR 1.5		1	1	0		1	
		1.3	Detailed Cut List and Lumber Order	MR 1.5		1	0	0		0	
		1.4	Framing Efficiencies	MR 1.5		3	0	0		0	
		1.5	Off-site Fabrication			4	4	0		4	
2. Environmentally Preferable Products	<input checked="" type="checkbox"/>	2.1	FSC Certified Tropical Wood			Prereq					
	<input checked="" type="checkbox"/>	2.2	Environmentally Preferable Products			8	0	0		0	
3. Waste Management		3.1	Construction Waste Management Planning			Prereq					
		3.2	Construction Waste Reduction			3	0	1.5		0	
<i>Sub-Total for MR Category:</i>						16	4	1.5		4	
Indoor Environmental Quality (EQ) (Minimum of 6 EQ Points Required)						OR	Max	Y/Pts	Maybe	No	Y/Pts
2. Combustion Venting		2	Basic Combustion Venting Measures			Prereq					
3. Moisture Control		3	Moisture Load Control			1	0	0		0	
4. Outdoor Air Ventilation	<input checked="" type="checkbox"/>	4.1	Basic Outdoor Air Ventilation for MID-RISE			Prereq					
		4.2	Enhanced Outdoor Air Ventilation for MID-RISE			2	0	0		0	
		4.3	Third-Party Performance Testing for MID-RISE			1	0	0		0	
5. Local Exhaust	<input checked="" type="checkbox"/>	5.1	Basic Local Exhaust			Prerequisite					
		5.2	Enhanced Local Exhaust			1	0	0		0	
		5.3	Third-Party Performance Testing			1	0	0		0	
6. Distribution of Space Heating and Cooling	<input checked="" type="checkbox"/>	6.1	Room-by-Room Load Calculations			Prereq					
		6.2	Return Air Flow / Room by Room Controls			1	1	0		1	
		6.3	Third-Party Performance Test / Multiple Zones			2	2	0		2	
7. Air Filtering		7.1	Good Filters			Prereq					
		7.2	Better Filters	EQ 7.3		1	1	0		1	
		7.3	Best Filters			2	0	0		0	
8. Contaminant Control	<input checked="" type="checkbox"/>	8.1	Indoor Contaminant Control during Construction			1	0	0		0	
		8.2	Indoor Contaminant Control for MID-RISE			2	0	0		0	
	<input checked="" type="checkbox"/>	8.3	Preoccupancy Flush			1	1	0		1	
9. Radon Protection	<input checked="" type="checkbox"/>	9.1	Radon-Resistant Construction in High-Risk Areas			Prereq					
	<input checked="" type="checkbox"/>	9.2	Radon-Resistant Construction in Moderate-Risk Areas			1	1	0		0	
10. Garage Pollutant Protection		10.1	No HVAC in Garage for MID-RISE			Prereq					
		10.2	Minimize Pollutants from Garage for MID-RISE	EQ 10.3		2	2	0		2	
		10.3	Detached Garage or No Garage for MID-RISE			3	0	0		0	
11. ETS Control		11	Environmental Tobacco Smoke Reduction for MID-RISE			1	0.5	0		0.5	
12. Compartmentalization of Units		12.1	Compartmentalization of Units			Prereq					
		12.2	Enhanced Compartmentalization of Units			1	1	0		1	
<i>Sub-Total for EQ Category:</i>						21	9.5	0		8.5	
Awareness and Education (AE) (Minimum of 0 AE Points Required)						OR	Max	Y/Pts	Maybe	No	Y/Pts
1. Education of the Homeowner or Tenant	<input checked="" type="checkbox"/>	1.1	Basic Operations Training			Prereq					
	<input checked="" type="checkbox"/>	1.2	Enhanced Training			1	1	0		0	
		1.3	Public Awareness			1	0	0		0	
2. Education of Building Manager	<input checked="" type="checkbox"/>	2	Education of Building Manager			1	1	0		1	
<i>Sub-Total for AE Category:</i>						3	2	0		1	

CONCORD & WHEELER MIXED USE DEVELOPMENT

WATER SERVICE INFRASTRUCTURE NARRATIVE

Water service for existing site which was utilized as an automotive service station was provided by a 1" domestic service only from the 16" water main in Concord Avenue. The "Concord Avenue Waterline and Roadway Reconstruction" Project was recently completed, which involved the improvements to the existing water infrastructure in Concord Avenue, providing increased capacity and pressures for the area. In preparation of the proposed redevelopment of the Project, in September of 2011 the existing 1" domestic service was cut and capped at the main prior to the final pavement overlay on Concord Avenue, eliminating the need for future cutting of the recently paved Concord Avenue.

The proposed domestic and fire protection will be supplied by a new 12" water main in Wheeler Street to be constructed as part of this project, and will be operated by the Cambridge Water Department. Per the Cambridge Water Department, the existing 12" water main in Wheeler Street is aged and in need of replacement. A connection to the existing water main will be made immediately north of the gate valve in Wheeler Street at the southeast corner of the Project, and the proposed 12" main will continue to the north and connect back to the existing 12" main at the northerly property line. The existing 12" main will be properly cut, capped and abandoned in place in accordance with the Cambridge Water Regulations, and all services currently connected to the existing 12" main will be reconstructed connecting to the proposed 12" main. There is an existing fire hydrant directly adjacent to the Project at the northwest corner of Concord Avenue and Wheeler Street. The proposed domestic water demand is anticipated to be approximately 21,000 gpd and the maximum fire flow requirement will be 700 gpm driven by the subsurface parking fire flow requirement.

As part of a comprehensive design approach to this project, the water service for both fire and domestic will be sized to provide the demand for a future build out scenario for the potential future development of the adjacent property to the west. This adjacent property is currently not included in any plans for redevelopment, however in the interest of minimizing the potential for future pavement cutting of Concord Avenue which has a pavement cut moratorium; this project will be designed to accommodate future development for fire and domestic water service sizing. The assumptions for this future build out scenario are that the additional residential, retail and subsurface parking components would be similar in the mixed use distribution as currently proposed with this project in proportion to the overall project acreage, and thus not affect the maximum fire flow requirement which is driven by the subsurface parking requirement. As such, the maximum fire flow requirement would remain 700 gpm, and the current proposed 6" domestic service would adequately provide the increased domestic demand.

Flow tests conducted in September 2011, after the Concord Avenue water main work was completed, indicate sufficient system supply for the Project without needs for alternative supply enhancement measures for fire protection and domestic services. As such, a fire pump system

and a domestic water booster pump system will not be installed to supplement the buildings systems.

Per discussions with the Cambridge Water Department, the 12" water main in Wheeler Street has sufficient capacity for the project service connections for both fire and domestic service. Domestic service will be provided via a single 6" water service connection separated by water gate valves allowing for proper isolation. The fire service will be provided via a single 8" service connection.

CONCORD & WHEELER MIXED USE DEVELOPMENT

563 and 603 Concord Ave., 19 Wheeler St.

SEWER SERVICE INFRASTRUCTURE NARRATIVE

Overview

The Project Site is bounded by City of Cambridge sewer to the south with an 8" main in Concord Avenue, and to the east with a 24" main in Wheeler Street. The 24" main in Wheeler Street connects to a larger MWRA Sewer System north of the Project Site in Wheeler Street. The sewer system is currently a combined sewer overflow (CSO) system, and has been slated for improvements as part of the "Cambridge Park Drive Area Drainage Improvements and Stormwater Wetland Project" being constructed by the City of Cambridge. This project is a key component of the Alewife Sewer Separation Project that will separate the combined sanitary wastewater and stormwater infrastructure in the area as part of the Massachusetts Water Resources Authority's (MWRA) Long Term Combined Sewer Overflow Control Plan for the Alewife Brook. The current sewer and drain utilities in these neighborhoods were constructed many years ago, and during larger storm events the combined sewer system can become overwhelmed causing flooding of streets and surrounding properties, and combined sewer overflows (CSOs) can be released directly to the Alewife Brook.

The "Cambridge Park Drive Area Drainage Improvements and Stormwater Wetland Project" involves the construction of a new box culvert storm drain in Wheeler Street to convey the newly separated stormwater to a new treatment wetland in the Alewife Brook Reservation where pollutants found in stormwater will be treated by the wetland system before being discharged into the Little River.

Sanitary Sewer

Public infrastructure improvements and mitigation required by the Department of Public Works include a Sewer Holdback Tank for each building which will be remotely controlled by the City Sewer Department in the event of significant storms in order to mitigate combined sewer overflow conditions currently affecting the system.

The Project will provide a Sewer Holdback Tank as well as associated manholes and connecting pipes that direct sanitary flows into the existing 24" sewer line located within Wheeler Street. Each building will provide a sanitary sewer service that collects flows from the underground garage floor drains. All flows from the underground garage will be directed through an oil/water separator and into a pump, where said flows will be pumped to a manhole on-site. Flow will then be conveyed via gravity to the existing main in Wheeler Street. In addition, any restaurant sewer discharge will be directed through a grease trap, and then will confluence with the flows from the underground garage at the onsite manhole, discharging to the existing 24" main in Wheeler Street.

Stormwater

The existing abandoned fueling facility is made up of nearly all impervious surfaces (roof and pavement), and Stormwater runoff currently leaves the site untreated towards either Concord Avenue or Wheeler Street and enters the municipal system via catch basins.

The Project will provide a new stormwater management system that will include water quality and quantity controls, and will maintain the existing peak runoff rates to Concord Avenue and Wheeler Street. The proposed stormwater system has been divided into two parts for analysis. The southerly part of the stormwater system will connect to the existing municipal 24" storm drain system in the public sidewalk along the north side of Concord Ave directly adjacent to the Project Site and will avoid cutting into the newly constructed Concord Avenue. The northerly part of the Project Site will connect to the existing municipal 72" reinforced concrete pipe in Wheeler Street. The stormwater management system design and construction will also be coordinated with the proposed "Cambridge Park Drive Area Drainage Improvements and Stormwater Wetland Project", which is currently scheduled to commence construction in Spring 2012 with completion in Spring of 2013. The proposed Project has been designed to accommodate the proposed improvements in Wheeler Street as part of the "Cambridge Park Drive Area Drainage Improvements and Stormwater Wetland Project", but completion of this work is not required for the Project's connection into the Municipal system

The stormwater management features for the site will include a subsurface detention system, water quality structures (e.g. hydrodynamic separators, catch basin insert filters), and "green" roof components that will provide stormwater treatment and storage. In addition to the introduction of water quality and quantity controls, there will be a reduction in pavement area and an increase of landscaping area provided throughout the Project Site.

The proposed stormwater management system will follow the City of Cambridge Department of Public Works Proposed Concord – Alewife Stormwater Management Guidelines and Massachusetts Department of Environmental Protection (DEP) Storm water Standards. Per the Concord-Alewife Area Storm water Management Guidelines, the Cambridge Department of Public Works (DPW) requires development/redevelopment projects to provide on-site detention storage for the difference between the 2-year, 24-hour pre-construction runoff hydrograph and the post construction 25-year, 24-hour runoff hydrograph, which will be attained on-site.

The Project will provide a substantial improvement in stormwater management conditions on site dramatically increasing permeable areas as well as improving the quality and quantity of stormwater introduced in the Municipal systems.



February 7, 2012

Brian Murphy,
Assistant City Manager for Community Development,
Community Development Department,
344 Broadway,
Cambridge MA 02139

Re: Mixed Use Development at 603 Concord Avenue

Dear Brian,

Please be informed that the Engineering Department at the Department of Public Works has reviewed the concept proposed by the Stephenson Design Group for the proposed development at the above referenced site. The concept as proposed by the developer includes a sufficiency of stormwater storage facilities to meet the criteria laid down in the Concord/Alewife Zoning requirements (2006). The proposal submitted by the consultant includes a reduction in impervious area within the site, an underground stormwater tank and a green roof. While the drawings submitted thus far are conceptual, we have no reason to believe that the project won't be successful in meeting the stormwater requirements as specified. If there are concerns or questions please contact me at 617) 349 4845.

Sincerely,

Owen O' Riordan PE
City Engineer

cc Lisa Peterson, James Wilcox