



Ruthanne Fuller
Mayor

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Barney S. Heath
Director

INTER-OFFICE CORRESPONDENCE

DATE: May 22, 2018

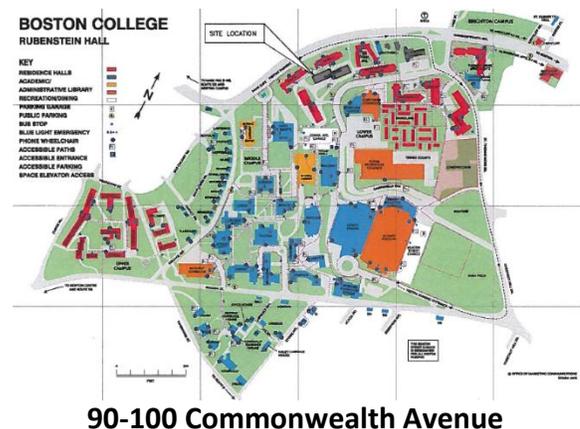
TO: John Lojek, Commissioner of Inspectional Services

FROM: Barney S. Heath, Director of Planning and Development
Jennifer Caira, Chief Planner for Current Planning
Neil Cronin, Senior Planner

SUBJECT: **Administrative Site Plan Review – §6.9.3 and §7.5.2
Boston College Campus 90-100 Commonwealth Avenue**

CC: Mayor Ruthanne Fuller
Jonathan Yeo, Chief Operating Officer
Ward 7 Councilor Marc Laredo
Ward 7 Lisle Baker
Ward 7 Rebecca Walker Grossman
Law Department

In accordance with §6.9.3 and §7.5.2 of the Newton Zoning Ordinance (the Ordinance), which require administrative site plan review for a non-profit educational use and wireless communication equipment, respectively, the Planning Department has reviewed the plans for the proposed wireless equipment at 90-100 Commonwealth Avenue (the Site), submitted on February 23, 2018



Background

The subject property consists of approximately 37 acres of land located in the Single Residence 1 (SR-1) zone in Chestnut Hill. The site, along with adjoining parcels to the east over the Newton-Boston boundary, help comprise the Boston College Campus. The SR-1 zone encompasses the immediate area, except for a Single Residence 1 zone to the northwest. The area consists predominantly of institutional and non-profit uses associated with Boston College, but there are single-family residences as well (**Attachments A & B**).

Project Overview

Boston College (the Petitioner) is seeking to install an outdoor distributed antenna system (oDAS), at Rubenstein and Carney Halls on site. The proposed system includes four façade-mounted antennae at Rubenstein Hall as well as two façade-mounted antennae and two roof-mounted antennae at Carney Hall, for a total of eight antennae on site. The system is designed to increase wireless data coverage to the campus only. AT&T will own and maintain the system, but other carriers will be allowed to co-locate.

Exterior-mounted wireless communication equipment requires a special permit in residence districts. However, the petitioner is seeking an administrative site plan review for a non-profit educational use under M.G.L. Ch. 40A §3 (Dover Amendment) in accordance with §7.5.2 of the Ordinance. The petition and plans are to be reviewed for compliance with the site plan review criteria found in §7.5.2 and the design and operating criteria for wireless communication equipment in §6.9.3.

I. SITE PLAN REVIEW CRITERIA

Per §7.5.2.C of the Ordinance, the Director of Planning and Development may consider this project in light of the following criteria:

1. Convenience and safety of vehicular and pedestrian movement within the site and in relation to adjacent streets, properties or improvements, including regulation of the number, design and location of access driveways and the location and design of handicapped parking. The sharing of access driveways by adjoining sites is to be encouraged wherever feasible.

The petitioner is not proposing any changes to vehicular or pedestrian movement.

2. Adequacy of the methods for disposal of sewage, refuse and other wastes and of the methods of regulating surface water drainage.

The petitioner is not proposing changes to the disposal of wastes or drainage.

3. Provision for off-street loading and unloading of vehicles incidental to the servicing of the buildings and related uses on the site.

The petitioner is not proposing any changes to the existing loading areas for service vehicles or deliveries to the site.

4. Screening of parking areas and structures on the site from adjoining premises or from the street by walls, fences, plantings or other means. Location of parking between any existing or proposed structures and the street shall be discouraged.

The petitioner is not proposing any changes to the parking areas on site.

5. Avoidance of major topographical changes; tree and soil removal shall be minimized, and any topographic changes shall be in keeping with the appearance of neighboring developed areas.

The petitioner is not proposing any changes to the topography of the site.

6. Location of utility service lines underground wherever possible. Consideration of site design, including the location and configuration of structures and the relationship of the site's structures to nearby structures in terms of major design elements including scale, materials, color, roof and cornice lines.

The façade mounted antennae at Rubenstein Hall will be installed approximately 70 feet above the ground. The antennae protrude from the facade approximately 15 inches, measuring four feet tall and eight inches deep. The antenna will be painted to match the color of the facade.

The facade-mounted antennae at Carney Hall will be installed approximately 51 feet above the ground, protruding 15 inches from the facade; the antennae measure 50 inches tall and seven inches deep. The antennae will be painted to match the stone façade. The roof-mounted antennae will be housed in a cannister which extends eight feet beyond the principal roof line and will be set back ten feet from the roof's edge. These measurements exceed the standards required by the Ordinance for roof-mounted equipment. For a complete analysis of the application regarding zoning, please see the Zoning Review Memorandum, dated April 25, 2018 (**Attachment C**). This cannister will be designed and painted to replicate the stone façade of the structure.

The Planning Department believes the proposed equipment will not affect the design of the structures due to their height. Additionally, the antennae will either be painted to match the color of the façade or housed in canisters to resemble a chimney.

7. Avoidance of the removal or disruption of historic resources on or off-site. Historical resources including designated historical structures or sites, historical architectural elements or archaeological sites.

The petition does not meet the minimum threshold for Newton Historical Commission review.

II. DESIGN AND OPERATING CRITERIA OF WIRELESS COMMUNICATION EQUIPMENT

Per §6.9.3 of the Ordinance, all wireless communication equipment must be designed and operated in accordance with the following criteria:

1. All equipment must be installed, erected, maintained and used in compliance with all applicable federal and state laws and regulations. All applicants seeking to construct or install wireless facilities must submit a report from a qualified engineer or appropriate professional certifying that the proposed equipment meets these requirements.

The petitioner submitted reports stating the proposed equipment complies with applicable federal as well as state laws and regulations (**Attachments D & E**).

2. Wireless equipment must be maintained in good and safe condition and comply with all applicable FCC standards, and be removed within 30 days when all use of such equipment ceases.

The petitioner states the equipment will be inspected one to two times per month during maintenance visits. Staff believes this inspection schedule will be sufficient to ensure the equipment is operating safely and any malfunctioning equipment will be removed within 30 days.

3. All wireless communication equipment shall be sited, screened and/or painted or otherwise colored or finished to blend in with the building or structure on which it is mounted, or in a manner which aesthetically minimizes the visibility of the devices.

The proposed oDAS system involves two types of antennae: façade-mounted and roof-mounted. The petitioner is proposing to paint the façade-mounted antennae to match the facades of the principal structures. The roof-mounted equipment atop Carney Hall will be housed in a cannister to resemble a chimney. The chimney will extend eight feet beyond the principal roofline of the structure and will be set back ten feet from the edge of the building; both measurements exceed the standards of the Ordinance. The Planning Department believes both types of antennae are treated appropriately to minimize their visibility.

4. Any fencing used to control access to wireless communication equipment shall be compatible with the visual character of the structures in the surrounding neighborhood to the extent possible.

The petitioner is not proposing to install any fencing in conjunction to the wireless equipment.

5. Equipment boxes for building-mounted wireless communication equipment must be either interior to the building on which it is located, completely camouflaged, and/or completely screened from view of the public way.

The proposed equipment at Rubenstein Hall will be wired into the building, connecting to an electrical closet on the sixth floor. The roof-mounted equipment at Carney Hall will be wired into an existing utility closet on the fourth floor.

6. No part of any building-mounted wireless equipment shall be located over a public way.

The petitioner is not proposing to install any equipment over a public way.

7. The construction of wireless communication equipment shall avoid major topographic changes and shall minimize the removal of trees and soil for any topographic changes to be in keeping with the appearance of the neighboring properties.

The petitioner is not proposing any topographic changes in conjunction to the proposed wireless equipment.

8. The installation of wireless communication equipment shall avoid the removal or disruption of historic resources on and off the site.

The petition does not meet the minimum threshold for Newton Historical Commission review.

9. There shall be no illumination of the wireless communication equipment except as required by state and federal law.

The petitioner is not proposing to illuminate any of the wireless equipment.

10. Wireless communication equipment must be maintained and operated in way that meets the standards of any ordinance in the City pertaining to noise.

The petitioner states the wireless equipment will not produce any noise.

III. CONCLUSIONS AND RECOMMENDATIONS

The petitioner is not proposing any changes to the site which would alter the existing dimensional standards. The proposed roof-mounted equipment meets or exceeds the standards of the Ordinance. Additionally, both types of antennae will be treated to minimize their appearance and to blend in with the buildings' facades. The Boston College Neighborhood Council discussed this petition at its April 26, 2018 meeting and expressed concerns regarding the appearance of the cannister atop Carney Hall. The Neighborhood

Council felt the treatment of the cannister did not fit the design of the building, also noting that the cannister can be seen from a public way and is across the street from the Chestnut Hill Local Historic District. The petitioner submitted revised plans of this canister on May 10th which have been incorporated into this review. The revised plans show the cannister is to be painted to match the stone façade of the building. Staff consulted with the Senior Planner who staffs the Chestnut Hill Local Historic District and believes the revised treatment better fits the structure. The Planning Department supports the revised plans and does not have an objection to granting a Dover waiver for the equipment as proposed.

ATTACHMENTS:

ATTACHMENT A:	Zoning Map
ATTACHMENT B:	Land Use Map
ATTACHMENT C:	Zoning Review Memorandum, dated April 25, 2018
ATTACHMENT D:	Engineer Affidavit Carney Hall
ATTACHMENT E:	Engineer Affidavit Rubenstein Hall

MATERIALS REVIEWED:

The following review is based on plans and materials submitted to date as noted below.

- Administrative Site Plan Review Application, prepared by Edward Pare, attorney, dated 2/23/2018
- Letter of Authorization, signed by Jeanne Levesque, Director of Government Relations, Boston College, dated 10/25/2017
- FCC licenses
- Viewshed Analysis
- Revised Carney Hall Viewshed Analysis, submitted on May 10, 2018

Attachment A Zoning Map Commonwealth Ave., 90

*City of Newton,
Massachusetts*

Legend

-  Single Residence 1
-  Single Residence 2
-  Building Outlines
-  Surface Water
-  Property Boundaries

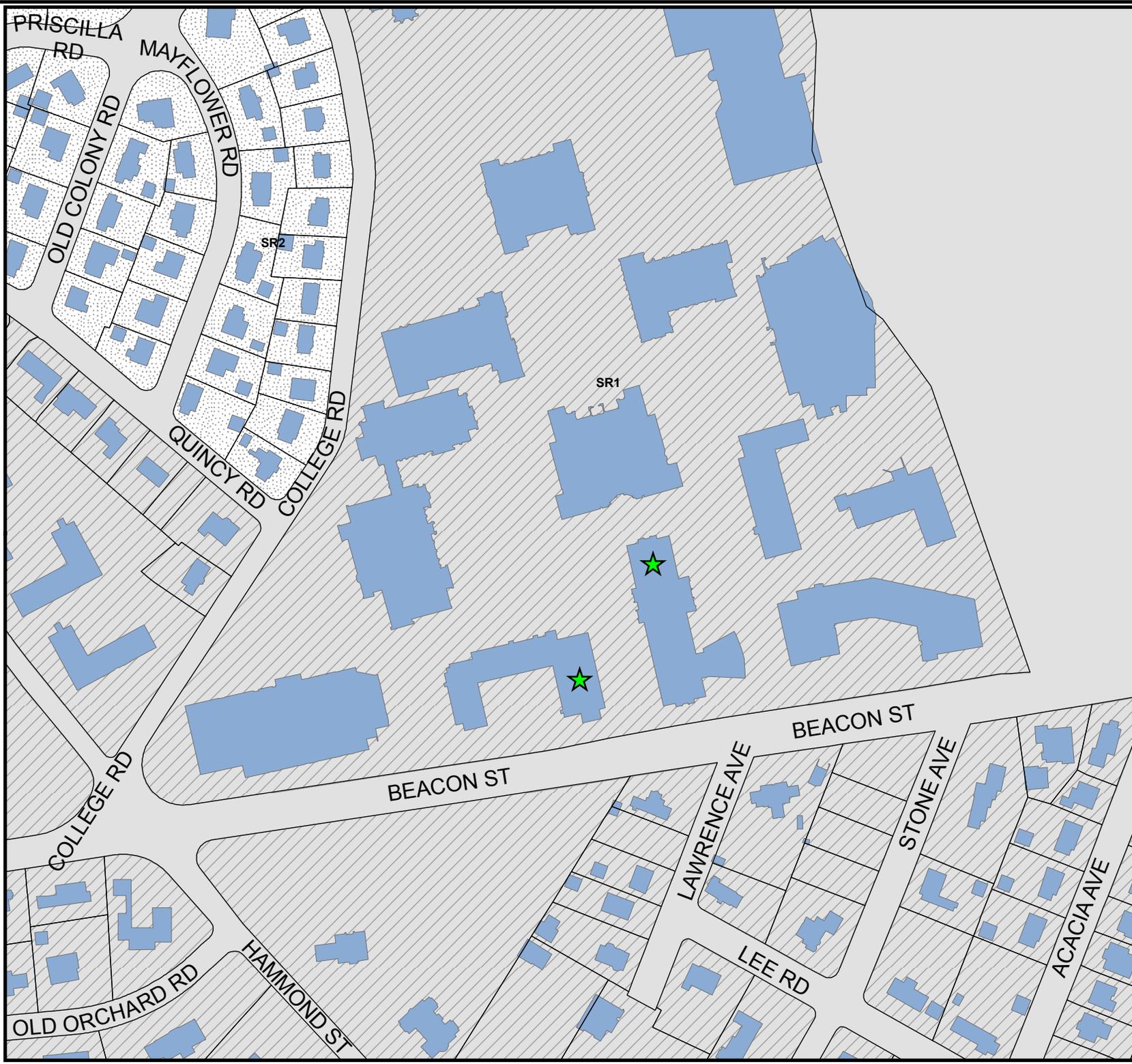


The information on this map is from the Newton Geographic Information System (GIS). The City of Newton cannot guarantee the accuracy of this information. Each user of this map is responsible for determining its suitability for his or her intended purpose. City departments will not necessarily approve applications based solely on GIS data.

CITY OF NEWTON, MASSACHUSETTS
Mayor - Ruthanne Fuller



Map Date: May 16, 2018



**Attachment B
Land Use Map
Commonwealth Ave., 90**

*City of Newton,
Massachusetts*

Legend

Land Use

Land Use

-  Single Family Residential
-  Private Educational
-  Nonprofit Organizations
-  Vacant Land
-  Building Outlines
-  Surface Water
-  Property Boundaries

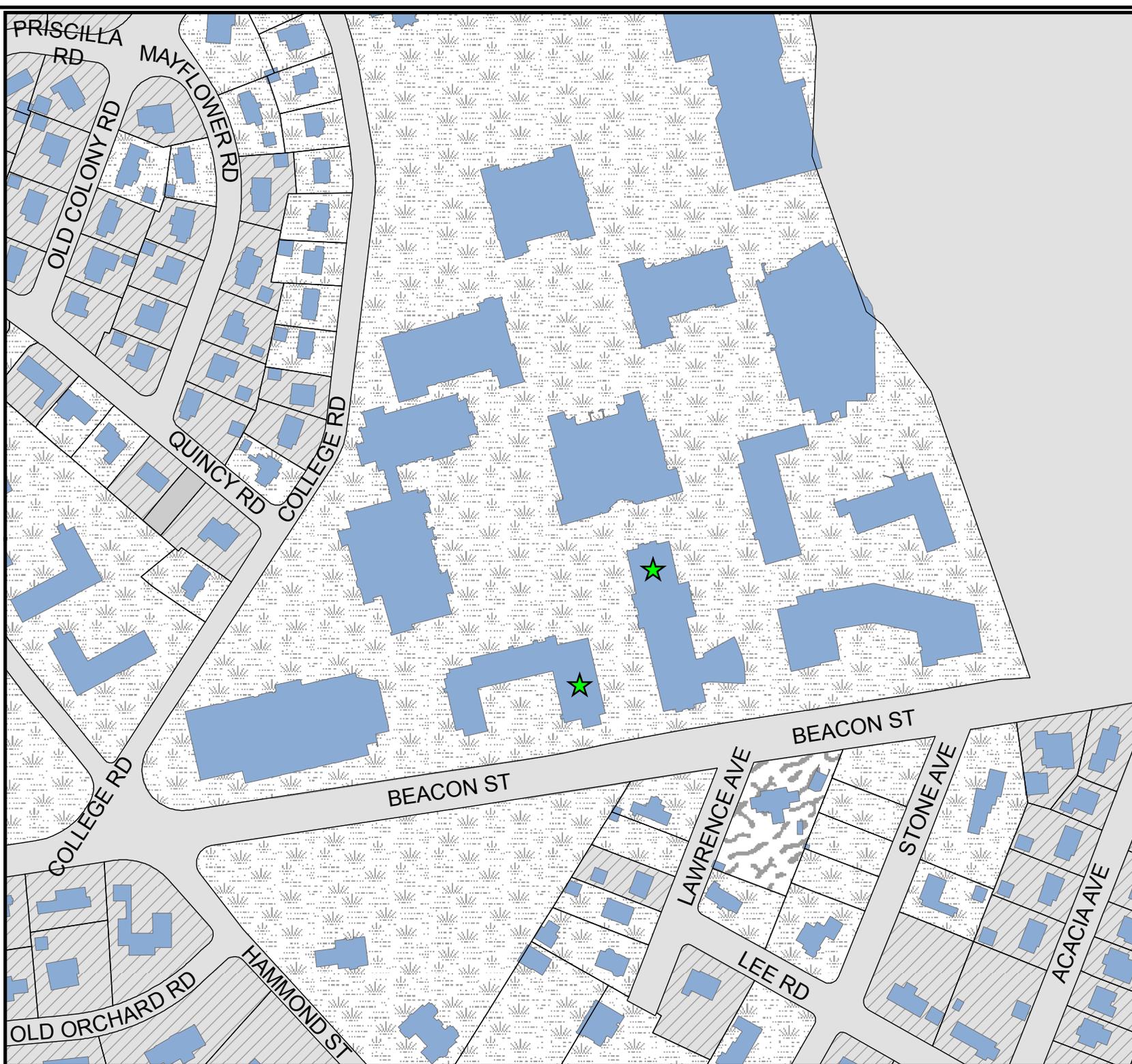


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CITY OF NEWTON, MASSACHUSETTS
Mayor - Ruthanne Fuller

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Feet

Map Date: May 16, 2018





Ruthanne Fuller
Mayor

Attachment C

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Barney S. Heath
Director

ZONING REVIEW MEMORANDUM
Administrative Site Plan Review

Date: April 25, 2018

To: John Lojek, Commissioner of Inspectional Services

From: Jane Santosuosso, Chief Zoning Code Official
Jennifer Caira, Chief Planner for Current Planning

Cc: Joseph Herlihy, Boston College, Applicant
New Cingular Wireless PCS, LLC (AT&T), Applicant
Edward D. Pare, Jr. Attorney, Brown Rudnick LLP
Barney S. Heath, Director of Planning and Development
Ouida Young, Acting City Solicitor

RE: Site Plan Review to construct building mounted wireless facilities on Carney Hall and Rubenstein Hall

Applicant: Boston College	
Site: 90-100 and 140 Commonwealth Avenue	SBL: 63009 0002, 63009 0002A
Zoning: SR1	Lot Area: 37 acres
Current use: Non-profit educational use	Proposed use: No change

BACKGROUND:

Boston College, with AT&T, proposes to construct an outdoor distributed antenna system (oDAS) on Carney Hall and Rubenstein Hall. The proposed oDAS system is a neutral host system primarily designed to provide enhanced and more robust wireless data coverage to the Boston College campus.

The petitioner proposes to install four panel antennas on Carney Hall. Two panel antennas will be mounted on the facades of the existing mechanical penthouse on the roof of the building. Two additional panel antennas will be concealed within one proposed fiberglass canister mounted on the roof of the building. The façade mounted antennas will be mounted at a height of 54.9 feet and will not exceed the height of the existing penthouse. The canister antennas will be located at a height of 55.6 feet, with the top of the canister extending to a height of 59.3 feet, which is 10 feet above the main roof. Proposed equipment will be installed within the existing mechanical penthouse.

The petitioner also proposes to install four panel antennas on the four facades of the existing mechanical penthouse on the roof of Rubenstein Hall. The façade mounted antennas will be mounted at a height of 72.1 feet and will not exceed the height of the existing penthouse. The proposed equipment will be installed within the existing mechanical penthouse.

The following review is based on plans and materials submitted to date as noted below.

- Administrative Site Plan Review Application, prepared by Edward Pare, attorney, dated 2/23/2018

ADMINISTRATIVE DETERMINATIONS:

1. Boston College is subject to the administrative site plan review procedure per Section 7.5.2 of the Newton Zoning Ordinance. As the proposed wireless equipment is intended to provide enhanced coverage for the Boston College campus and is not intended to the benefit of the general public, the proposed application is subject to the administrative site plan review procedures. This procedure governs the review of uses protected under MGL Chapter 40A, Section 3, also known as the “Dover Amendment”.
2. Section 6.9.5.C requires a special permit for façade-mounted wireless equipment located in a Single-Residence 1 zoning district. The petitioner proposes to construct two panel antennas on the facades of the existing mechanical penthouse of Carney Hall, and four panel antennas on the four facades of the existing mechanical penthouse of Rubenstein Hall. The petitioner requires either a special permit from the City Council, or a “Dover Waiver” from the Commissioner of Inspectional Services to allow for façade-mounted wireless facilities in an SR1 zoning district.
3. Section 6.9.5.B requires a special permit for roof-mounted wireless communication equipment on a non-residential building in a Single-Residence 1 zoning district. The petitioner proposes to construct two panel antennas to be concealed within one proposed fiberglass canister mounted on the roof of Carney Hall. The petitioner requires either special permit from the City Council, or a “Dover Waiver” from the Commissioner of Inspectional Services to allow for roof-mounted wireless facilities in the SR1 zoning district.
4. The proposed roof-mounted equipment at Carney Hall will be concealed in a cannister extending 10 feet above the main roof line, but does not exceed the height of the existing penthouse. Per section 6.9.4.D, roof-mounted equipment may not extend 12 feet above the roof, or 20% of he building height (in this case 11.75 feet), whichever is greater. The proposed cannister does not exceed the allowable height of 12 feet and does not require relief.

This same section requires that the equipment be set back six inches for every foot of equipment height. The proposed equipment is ten feet from the edge of the building, where only five feet is required. No relief is required.

5. Section 6.9.3 sets forth the design and operating criteria for wireless communication equipment.

6. Per section 6.9.3.A, all equipment must be installed, erected, maintained and used in compliance with all applicable federal and state laws and regulations. All applicants seeking to construct or install wireless facilities must submit a report from a qualified engineer or appropriate professional certifying that the proposed equipment meets these requirements.
7. Wireless equipment must be maintained in good and safe condition and comply with all applicable FCC standards, and be removed within 30 days when all use of such equipment ceases.
8. All wireless communication equipment shall be sited, screened and/or painted or otherwise colored or finished to blend in with the building or structure on which it is mounted, or in a manner which aesthetically minimizes the visibility of the devices. The petitioner proposes to blend the proposed equipment by utilizing materials consistent with existing façade of the building.
9. Any fencing used to control access to wireless communication equipment shall be compatible with the visual character of the structures in the surrounding neighborhood to the extent possible.
10. Equipment boxes for building-mounted wireless communication equipment must be either interior to the building on which it is located, completely camouflaged, and/or completely screened from view of the public way.
11. No part of any building-mounted wireless equipment shall be located over a public way.
12. The construction of wireless communication equipment shall avoid major topographic changes and shall minimize the removal of trees and soil for any topographic changes to be in keeping with the appearance of the neighboring properties. The petitioner states there will be no topographic changes to the site, nor any tree or soil removal.
13. The installation of wireless communication equipment shall avoid the removal or disruption of historic resources on and off the site. The petitioner states that the proposed equipment will not require removal or disruption of any historic resources.
14. There shall be no illumination of the wireless communication equipment except as required by state and federal law.
15. Wireless communication equipment must be maintained and operated in way that meets the standards of any ordinance in the City pertaining to noise.

Ordinance		Action Required
§7.5.2	Administrative Site Plan Review for a private non-profit educational use	§7.5.2

REPORT OF
RADIO FREQUENCY ENGINEER

The undersigned hereby states the following in support of the application by New Cingular Wireless PCS, LLC (“*AT&T*”) to install 4 panel antennas Façade mounted, attach GPS antennas, cables, and install electronic equipment and other appurtenances and associated equipment to the existing building and add fiber cable, coaxial cable, electronic equipment and other appurtenances as shown of the plans submitted with the application (the “Facility”) located at 90-100 Commonwealth Ave, Chestnut Hill Ma. 02467. (Assessor's Parcel ID SBL-63009 0002A), Chestnut Hill, Massachusetts (the “Site”).

1. I am a Radio Frequency Engineer employed by AT&T, with an office located at 550 Cochituate Road, Framingham, Massachusetts.
2. My primary responsibilities include radio frequency design and planning in the Commonwealth of Massachusetts, including the city known as the Chestnut Hill and surrounding communities.
3. As enabled under its Federal Communications Commission (“FCC”) License, AT&T seeks to design its wireless network to provide reliable and adequate wireless services to its customers, whether those customers on and the vicinity of the Boston College Campus. Providing reliable and adequate service to its customers in each context is critical for AT&T to provide the quality of wireless service that customers demand, and to meet the objectives of Congress that a robust, competitive and low cost wireless communications capacity be developed to serve the entire nation.
4. AT&T is also designing a new network to provide high speed data services commonly referred to as “long term evolution” service (“LTE”).
5. AT&T is using its best efforts, to the maximum extent possible, to install its wireless communications services facilities network utilizing existing structures to avoid the need to construct new tower sites.
6. I have thoroughly reviewed the radio frequency engineering studies, reports prepared by AT&T with respect to the Facility.
7. In order to build out its network and meet customer demand for voice and data services, as well as enhance its network to improve high speed data services, AT&T must have in place a system of low power 'cell sites' to serve portable wireless communication handsets and mobile telephones. A typical cell site, such as the one proposed, consists of antennas mounted to a building, tower, church or other structure. The antennas are connected to radio operating equipment housed at or near the structure.
8. To maintain effective, reliable and uninterrupted service, there must be a continuous series of cell sites located within close proximity to each other so as to overlap in a system comparable to a honeycomb pattern. If there is no cell site available to accept/receive the signal, network service to the mobile device, data service will terminate involuntarily. Accordingly, the overlap of coverage is necessary for the signal to transfer from one cell site to another cell site seamlessly and without involuntary termination.

9. A number of factors determine the distance between cell sites, including, but not limited to, topography, physical obstructions, foliage, antenna height, operating frequency and line-of-sight.
10. Based on the radio frequency studies, reports prepared in connection with this project, it is my professional assertion that there is inadequate network service available to AT&T customers within the Boston College Campus.
11. The Facility will enhance AT&T's ability to provide adequate coverage in the area and will increase its capacity to better serve the students and faculty around Rubenstein Hall and to individuals traveling through these areas.
12. The Facility will be in compliance with the FCC Guidelines for Evaluating the Environmental Effects of Radio Frequency Radiation.
13. The Facility will be installed, erected, maintained and used in compliance with all applicable Federal, State and local regulations, including, but not limited to: the radio frequency emissions regulations set forth in the federal Telecommunications Act of 1996, and applicable regulations administered by the Federal Aviation Administration, Massachusetts Aeronautics Commission and the FCC.
14. Based upon the best radio frequency technology available at this time, it is my professional opinion that the Facility is at the height that is needed to ensure adequate service to area residents and businesses within the geographic area described above.

Executed this 29th day of March, 2018.

Richard Kala _____

Richard Kala, RF ENGINEER, AT&T

REPORT OF
RADIO FREQUENCY ENGINEER

The undersigned hereby states the following in support of the application by New Cingular Wireless PCS, LLC (“*AT&T*”) to install 4 panel antennas 2 Façade mounted and 2 in a concealed in a cannister, attach GPS antennas, cables, and install electronic equipment and other appurtenances and associated equipment to the existing building and add fiber cable, coaxial cable, electronic equipment and other appurtenances as shown of the plans submitted with the application (the “Facility”) located at 140 Commonwealth Ave, Chestnut Hill Ma. 02467. (Assessor's Parcel ID SBL-63009 0002), Chestnut Hill, Massachusetts (the “Site”).

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3. As enabled under its Federal Communications Commission (“FCC”) License, AT&T seeks to design its wireless network to provide reliable and adequate wireless services to its customers, whether those customers on and the vicinity of the Boston College Campus. Providing reliable and adequate service to its customers in each context is critical for AT&T to provide the quality of wireless service that customers demand, and to meet the objectives of Congress that a robust, competitive and low cost wireless communications capacity be developed to serve the entire nation.
4. AT&T is also designing a new network to provide high speed data services commonly referred to as “long term evolution” service (“LTE”).
5. AT&T is using its best efforts, to the maximum extent possible, to install its wireless communications services facilities network utilizing existing structures to avoid the need to construct new tower sites.
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7. In order to build out its network and meet customer demand for voice and data services, as well as enhance its network to improve high speed data services, AT&T must have in place a system of low power 'cell sites' to serve portable wireless communication handsets and mobile telephones. A typical cell site, such as the one proposed, consists of antennas mounted to a building, tower, church or other structure. The antennas are connected to radio operating equipment housed at or near the structure.
8. To maintain effective, reliable and uninterrupted service, there must be a continuous series of cell sites located within close proximity to each other so as to overlap in a system comparable to a honeycomb pattern. If there is no cell site available to accept/receive the signal, network service to the mobile device, data service will terminate involuntarily. Accordingly, the overlap of coverage is necessary for the signal to transfer from one cell site to another cell site seamlessly and without involuntary termination.

9. A number of factors determine the distance between cell sites, including, but not limited to, topography, physical obstructions, foliage, antenna height, operating frequency and line-of-sight.
10. Based on the radio frequency studies, reports prepared in connection with this project, it is my professional assertion that there is inadequate network service available to AT&T customers within the Boston College Campus.
11. The Facility will enhance AT&T's ability to provide adequate coverage in the area and will increase its capacity to better serve the students and faculty around Carney Hall and to individuals traveling through these areas.
12. The Facility will be in compliance with the FCC Guidelines for Evaluating the Environmental Effects of Radio Frequency Radiation.
13. The Facility will be installed, erected, maintained and used in compliance with all applicable Federal, State and local regulations, including, but not limited to: the radio frequency emissions regulations set forth in the federal Telecommunications Act of 1996, and applicable regulations administered by the Federal Aviation Administration, Massachusetts Aeronautics Commission and the FCC.
14. Based upon the best radio frequency technology available at this time, it is my professional opinion that the Facility is at the height that is needed to ensure adequate service to area residents and businesses within the geographic area described above.

Executed this 29th day of March, 2018.

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Richard Kala, RF ENGINEER, AT&T