
**APPLICATION FOR SPECIAL PERMIT
For a
WIRELESS COMMUNICATION FACILITY**

**T-Mobile Northeast LLC
15 Commerce Way, Suite B
Norton, MA 02766**

**c/o Ricardo M. Sousa, Esq.
Prince Lobel Tye LLP
100 Cambridge Street, Suite 2200
Boston, MA 02114**

Applicant

**Property Location:
14 Arrow Street
Cambridge, MA
Map 133, Lot 23**

**Prepared by: Anne K. Reynolds, Esq.
Prince Lobel Tye LLP
100 Cambridge Street, Suite 2200
Boston, MA 02114
Telephone: (617) 456-8135
Facsimile: (617) 456-8100**

July 17, 2015

BZA APPLICATION FORM

GENERAL INFORMATION

The undersigned hereby petitions the Board of Zoning Appeal for the following:

Special Permit: X Variance: _____ Appeal: _____

PETITIONER: T-Mobile Northeast LLC

PETITIONER'S ADDRESS: c/o Anne K. Reynolds, Esq., Prince Lobel Tye LLP, 100 Cambridge Street, Suite 2200, Boston, MA 02114

LOCATION OF PROPERTY: 14 Arrow Street

TYPE OF OCCUPANCY: Office and Telecommunications ZONING DISTRICT: Office-3 (O-3) and Harvard Square Overlay District

REASON FOR PETITION:

- | | |
|--|--|
| <input type="checkbox"/> Additions | <input type="checkbox"/> New Structure |
| <input type="checkbox"/> Change in Use/Occupancy | <input type="checkbox"/> Parking |
| <input type="checkbox"/> Conversion to Addi'l Dwelling Unit's | <input type="checkbox"/> Sign |
| <input type="checkbox"/> Dormer | <input type="checkbox"/> Subdivision |
| <input checked="" type="checkbox"/> Other: <u>Request for Special Permit for the modification of a wireless telecommunications facility.</u> | |

DESCRIPTION OF PETITIONER'S PROPOSAL:

The Petitioner seeks to modify its existing wireless communications facility at the Property by adding three (3) new panel antennas and three (3) Remote Radio Head (RRH) units, together with supporting equipment. The antennas and supporting equipment will be facade mounted on the existing Smoke Stack at the Property and will be painted to match its facade. Please see the plans submitted herewith, which more particularly describe the proposed modification.

SECTIONS OF ZONING ORDINANCE CITED:

- Article 4.00 Section 4.32 (G)(1) (Telecommunications Facility)
- Article 4.40 Section 4.40 (Footnote 49) (Telecommunications Facility)
- Article 10.00 Section 10.40 (Special Permit)

Applicants for a Variance must complete Pages 1-5
Applicants for a Special Permit must complete Pages 1-4 and 6
Applicants for an Appeal to the BZA of a Zoning determination by the Inspectional Services Department must attach a statement concerning the reasons for the appeal

Original Signature(s): 
(Petitioner(s)/Owner)
Anne K. Reynolds, Esq., Attorney for the Applicant
(Print Name)

Address: 100 Cambridge Street, Suite 2200
Boston, MA 02108

Tel. No.: 617-456-8135

E-Mail Address: areynolds@princelobel.com

Date: July 14th 2015



July 17, 2015

City of Cambridge
Board of Zoning Appeals
831 Massachusetts Avenue
Cambridge, MA

Re: Application for Special Permit
Property Address: 14 Arrow Street
Assessor's Map 133, Lot 23 (the "Property")
Applicant: T-Mobile Northeast LLC (the "Applicant")

Dear Honorable Members of the Board of Zoning Appeals:

This firm represents the Applicant in connection with an application for a special permit from the City of Cambridge Board of Zoning Appeals (the "Board") to modify its existing telecommunications facility (the "Existing Facility") on the Property. The Property is located in the O-3 (Office 3) zoning district and the Harvard Square Overlay District. Pursuant to Article 4, Section 4.32(g), footnote 49 of the City of Cambridge Zoning Ordinance (the "Ordinance"), the use of the Property for a wireless telecommunications facility is permitted by special permit. The Applicant's proposal satisfies the requirements for the grant of a special permit pursuant to Article 10-40 of the Ordinance.

The Applicant seeks to modify its existing wireless communications facility by adding three (3) new panel antennas and three (3) Remote Radio Head ("RRH") Units, all to be located on the façade of the existing smoke stack on the rooftop of the building (the "Smoke Stack"), together with supporting equipment (the "Proposed Facility"). The Applicants facilities are shown on the plans attached hereto, and incorporated herein by reference (the "Plans").

I. Background

The Applicant is licensed by the Federal Communications Commission (the "FCC") to construct and operate a wireless telecommunications network in various markets throughout the country, including the Commonwealth of Massachusetts and in particular in the City of Cambridge. A copy of the Applicant's FCC license is attached hereto. The Applicant is in the process of designing and constructing a telecommunications system to serve all of the Commonwealth of Massachusetts. One of the key design objectives of its systems is to provide seamless coverage. Such a system requires a grid of radio transmitting and receiving links located approximately .5 to 2 miles apart, depending on the location of existing and proposed installations in the surrounding area, the existing use of the network and the existing topography. The radio transmitting and receiving facilities operate on a line-of-sight basis, requiring a clear

path from the facility to the user on the ground. This dynamic requires the antennas to be located in a location where the signal is not obstructed or degraded by other buildings or by topographical features such as hills.

II. The Facility

The Applicant proposes to install at the Property three (3) new panel antennas, three (3) RRH Units, together with supporting equipment. The proposed panel antennas, RRH units and coaxial cabling will be façade mounted to the Smoke Stack and painted to match. Three (3) of the proposed antennas will be mounted at a centerline height of 80 feet. Coaxial cabling will run from the BTS equipment to the antennas within a cable tray which will be painted to match the existing color of the building and Smoke Stack.

After installation, the Proposed Facility will be unmanned and will only require twice a month maintenance visits per carrier. The only utilities required to operate this Proposed Facility are standard 120-volt electrical power as well as telephone service. These are presently in place at the Property. The traffic generated by the Proposed Facility will be approximately two vehicle trips per month by maintenance personnel who will inspect the Proposed Facility to ensure it remains in good working order. The Proposed Facility will comply with all applicable local, state and federal safety codes.

III. Legal Arguments

A. The Applicant complies with the Wireless Communications provisions set for the in Section 4.32(g), footnote 49 of the Ordinance

Pursuant to Section 4.32(g) of the Ordinance the Applicant's proposed use for a wireless communications facility in the Office 3 zoning district and Harvard Square Overlay district is permitted by special permit. The Applicant's Proposed Facility further complies with the provisions set forth in Section 4.32(g), footnote 49 of the Ordinance:

- 1. The Board of Zoning Appeal shall consider the scope of or limitations imposed by any license secured from any state or federal agency having jurisdiction over such matters.**

Enclosed herewith is the Applicant's FCC license. The Applicant meets all requirements imposed by government authorities having jurisdiction over the proposed facility, including by the FCC to provide wireless communications in this market area.

The intent of the U.S. Congress, when it enacted the Telecommunications Act of 1996 ("TCA") was to institute a framework to promote competition and innovation within the telecommunications industry. Under its license from the FCC, T-Mobile is obligated to provide a reliable "product" (i.e. wireless communications service) to the population of the City of Cambridge. Likewise, consumer expectations for increasingly robust and reliable service requires competing

service providers (including T-Mobile) to identify and remedy existing gaps in reliable network coverage, or gaps that result from increasing subscriber voice and data traffic beyond the limits of existing network infrastructure. A carrier's failure to remedy network gaps in a timely fashion can result in a significant loss of subscribers to competing telecommunications carriers. As demonstrated in the Affidavit of Radio Frequency Expert provided by the Applicant and attached hereto, the Proposed Facility and corresponding relief requested are necessary to remedy a gap in reliable service coverage within T-Mobile's existing network infrastructure.

T-Mobile investigated alternative sites in and around the defined geographic area within which its engineers determined that a facility must be located to fill the gap in service coverage and to function effectively within its network of existing and planned facilities. This is an existing location that we are upgrading with new technology to provide the necessary coverage to the subject area of the City of Cambridge. Therefore, the Proposed Facility in the Office O-3 zoning district is necessary to close the coverage gap that is illustrated on the propagation maps submitted herewith. Consequently, T-Mobile is unable to close a gap in its wireless network without obtaining a Special Permit to modify its existing wireless facility in the O-3 zoning district.

- 2. The Board of Zoning Appeal shall consider the extent to which the visual impact of the various elements of the proposed facility is minimized: (1) through the use of existing mechanical elements on the building's roof or other features of the building as support and background, (2) through the use in materials that in texture and color blend with the materials to which the facilities are attached, or (3) other effective means to reduce the visual impact of the facility off the site.**

The visual impact of the Proposed Facility will be minimized by the use of the existing Smoke Stack on the building and by designing the Proposed Facility to blend with the existing characteristics of the building and the Smoke Stack. As noted on the Plans, all of the proposed antennas and supporting coaxial cabling will be camouflaged and painted to match the existing color and texture of the Smoke Stack. The existing BTS equipment cabinets are installed within the basement of the building and completely out of view.

- 3. Where it is proposed to erect such a facility in any residential zoning district, the extent to which there is a demonstrated public need for the facility at the proposed locations, the existence of alternative, functionally suitable sites in nonresidential locations, the character of the prevailing uses in the area, and the prevalence of other existing mechanical systems and equipment carried on or above the roof of nearby structures. The Board of Zoning Appeal shall grant a special permit to erect such a facility in a residential zoning district only upon a finding that nonresidential uses predominate in the vicinity of the proposed facility's location and that the telecommunications facility is not inconsistent with the character that does prevail in the surrounding neighborhood.**

Not Applicable. The Applicant proposes to install its facility within the Office 3 zoning district.

B. The Applicant complies with the Special Permit Criteria set forth in Section 10-43 of the Ordinance:

1. The requirements of the Ordinance can be met:

As provided above, the Applicant had met the requirements set forth in Section 4.32(g), footnote 49 of the Ordinance.

2. Traffic generated or patterns of access or egress would not cause congestion hazard, or substantial change in established neighborhood character for the following reasons:

The proposed installation will not obstruct existing rights-of-way or pedestrian access and will not change the daily conditions of access, egress, traffic, congestion hazard, or character of the neighborhood. The installation will not require the addition of any new parking or loading spaces that would necessitate the need to change the existing access, egress, traffic congestion hazard, or character of the neighborhood. The proposed installation will not change the current conditions or appearance surrounding the building. There will be no need for water, sewer, or other municipal services.

As mentioned above, once constructed, the facility will be unmanned and only require frequent visits by a technician, typically two times per month for routine diagnostics and/or maintenance, except in cases of emergency. These frequent visits will not result in any material increase in traffic or disruption to patterns of access or egress that will cause congestion hazards or cause a substantial change in the established neighborhood character. The Applicant's maintenance personnel will make use of the existing access roads and parking at the building.

3. The continued operation of or the development of adjacent uses as permitted in the Zoning Ordinance would not be adversely affected by the nature of the proposed use for the following reasons:

As described above, the addition of the proposed facility will produce a minimal change in the appearance of the Smoke Stack. The proposed facility will blend with the existing characteristics of the Site and the surrounding neighborhood. The proposed antennas and coaxial cabling will be painted to match the color of the existing building and Smoke Stack. Moreover, the proposed installation will not generate any obtrusive traffic, smoke, dust, heat, glare, discharge of noxious substances, nor will it pollute waterways or groundwater. Conversely, the surrounding properties and general public will benefit from the potential to enjoy improved wireless communication.

4. Nuisance or hazard would not 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 for the following reasons:

The operations of the proposed telecommunications facility will not adversely impact the health, safety, and the welfare of the residents of the City of Cambridge. On the contrary, the proposed use will both benefit the city and promote the safety and welfare of its residents, businesses and drivers by providing reliable state-of-the-art digital wireless voice and data services. Further, the site will improve the reliability of emergency communications with the police and fire departments by eliminating dropped or blocked calls due to inadequate signal strength or insufficient network capacity to handle call volume, particularly important during emergency situations.

The proposed facility will comply with all federal, state and local safety requirements including the standards established by the FCC, Federal Aviation Administration (FAA), the American Standards Institute (ANSI), and the Massachusetts Department of Public Health (MDPH).

Accordingly, the proposed facility will not adversely impact the health, safety and/or welfare of the neighborhood or the residents of the City of Cambridge.

5. For other reasons, the proposed installation will not impair the integrity of the district or adjoining district or otherwise derogate from the intent or purpose of this ordinance for the following reasons:

The proposed facility is designed to blend with the existing characteristics of the Site, reducing any visual impacts to the surrounding area. Accordingly, the proposed facility's design results in a minimal impact on the underlying and adjacent zoning districts and is consistent with the Ordinance's intention to allow for less intrusive wireless telecommunications facilities in all districts (Other than Open Space), including Office districts. As mentioned above, the proposed installation will not generate any traffic, smoke, dust, heat, glare, discharge or noxious substances, nor will it pollute waterways or groundwater.

6. The new use of the building construction is consistent with the Urban Design Objective set for tin Section 19.30 of the Ordinance:

Not Applicable. The Applicant is not proposing to construct a new building or structure.

IV. Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012

Although the City of Cambridge has provisions within the Ordinance that regulate the construction of wireless communication facilities, the standard of review for an application request involving the modification of an existing wireless communication facility on an

existing wireless tower or base station has been changed by the passage of an important provision of the Middle Class Tax Relief and Job Creation Act of 2012 (“TRA”). The TRA is a Federal Act that was signed into law on February 22, 2012. Section 6409 of the TRA requires a streamlined modification and collocation approval process to ensure timely deployment of wireless services.

In particular, Section 6409 of the TRA mandates that State and local governments must approve an eligible facilities request¹ for the modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station. The approval cannot be discretionary if the proposed modification does not *substantially* change the physical dimensions of such tower or base station.

Further, the Federal Communications Commission (“FCC”) under the Nationwide Collocation Agreement defines a substantial change as “the mounting of the proposed antenna would involve adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet” or “the mounting of a proposed antenna on the tower that would increase the existing height of the tower by more than 10%...”

Because the Proposed Facility is not increasing the overall height of the Existing Facility it is our understanding that the City of Cambridge, acting through the Board or the Building Department, has the right to authorize the construction of the Proposed Facility with the issuance of a Building Permit, pursuant to this eligible facilities request. Moreover, to the extent that the Bylaws require that the proposed modification request be subjected to a review by the Board, that review is preempted by the TRA. As such, the Applicant requests that the Board determine that the construction of the Proposed Facility may be authorized by the issuance of a Building Permit and to the extent necessary the Applicant reserves its rights to request the same and reserves its rights under the TRA.

V. Summary

The Applicant hereby requests that the Board determine that the City of Cambridge has the right to authorize the construction of the Proposed Facility through the issuance of a Building Permit or, in the alternative, that they have satisfied the requirements for the grant of a Special

¹ The TRA defines “eligible facilities request” as any request for modification of an existing wireless tower or base station that involves:

- Collocation of new transmission equipment;
- Removal of transmission equipment; or
- Replacement of transmission equipment.

In the *Nationwide Programmatic Agreement for the Collocation of Wireless Antennas (2001)*, the Federal Communications Commission (“FCC”) defines “collocation” as the “mounting or installation of antennas on an existing tower, building or structure for the purpose of transmitting and/or receiving radio frequency signals for communications purposes.”

Permit and to further determine that the Proposed Facility will not have any adverse effect on the neighborhood within which the Property is located in particular, and the City of Cambridge as a whole. The findings are made in view of the particular characteristics of the Property and of the Applicant's proposed siting and equipment, as detailed above. This Property is the most appropriate location for the installation and operation of the wireless communications facility.

For the foregoing reasons the Applicant respectfully requests that the Board determine that the City of Cambridge has the right to authorize the construction of the Proposed Facility through the issuance of a Building Permit or grant the foregoing zoning relief in the form of a Special Permit and such other relief as the Board deems necessary to allow the installation and operation of the Applicant's proposed facility.

Sincerely,

A handwritten signature in cursive script that reads "Anne K. Reynolds".

Anne K. Reynolds, Esq.



CAMBRIDGE HISTORICAL COMMISSION

831 Massachusetts Avenue, 2nd Fl., Cambridge, Massachusetts 02139
Telephone: 617 349 4683 Fax: 617 349 3116 TTY: 617 349 6112
E-mail: histcomm@cambridgema.gov URL: http://www.cambridgema.gov/historic

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William G. Barry, Jr., Robert G. Crocker, Chandra Harrington, Jo M. Solet, *Members*
Shary Page Berg, Joseph V. Ferrara, Susannah Barton Tobin, *Alternates*

CERTIFICATE OF NONAPPLICABILITY

Property: 14 Arrow Street
Applicant: Juliet Green, Tr of BBC Trust
Attention: Anne K. Reynolds, Esq.

The Cambridge Historical Commission hereby certifies, pursuant to Chapter 2.78, Article III of the Code of the City of Cambridge and order establishing the Harvard Square Conservation District, that the work described below does not involve any activity requiring issuance of a Certificate of Appropriateness or Hardship:

Modify existing wireless communication equipment by adding 3 new panel antennas and 3 remote radio head units, all to be located on smoke stack with supporting equipment. Work to be carried out as shown on plans submitted. All improvements shall be carried out as shown on the plans and specifications submitted by the applicant, except as modified above. Approved plans and specifications are incorporated by reference into this certificate.

This certificate is granted upon the condition that the work authorized herein is commenced within six months after the date of issuance. If the work authorized by this certificate is not commenced within six months after the date of issuance or if such work is suspended in significant part for a period of one year after the time the work is commenced, such certificate shall expire and be of no further effect; provided that, for cause, one or more extensions of time for periods not exceeding six months each may be allowed in writing by the Chair.

Case Number: 3461 Date of Certificate: 7/9/2015

Attest: A true and correct copy of decision filed with the offices of the City Clerk and the Cambridge Historical Commission on 7/9/2015.

By Charles M. Sullivan/slc, Executive Director.

Twenty days have elapsed since the filing of this decision.
No appeal has been filed _____. Appeal has been filed _____.