



CITY OF SOMERVILLE, MASSACHUSETTS
OFFICE OF STRATEGIC PLANNING & COMMUNITY DEVELOPMENT
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Case #: ZBA 2011-86

Date: April 12, 2012

Recommendation: Conditional Approval

PLANNING STAFF REPORT

Site: 114 Highland Avenue

Applicant Name: Sprint

Applicant Address: 9 Crosby Drive, Bedford, MA 01730

Property Owner Name: Somerville Housing Authority

Property Owner Address: 30 Memorial Road, Somerville, MA 02145

Agent Name: Richard Paciuto

Agent Address: 400 Trade Center, Suite 5900, Woburn, MA 01801

Alderman: Tom Taylor

Legal Notice: Applicant Sprint and Owner Somerville Housing Authority, seek Special Permit Approval under SZO §7.11.15.3 and SZO §14 for the installation (replacement) of a wireless communications facility consisting of six panel antennas and related equipment and cables. RC zone. Ward 3.

Zoning District/Ward: RC / Ward 3

Zoning Approval Sought: Special Permit (SZO §7.11.15.3 and SZO §14)

Date of Application: October 31, 2011

Dates of Public Hearing: Zoning Board of Appeals – **April 18, 2012**

I. PROJECT DESCRIPTION

1. Subject Property: The subject property is a 20,282 square foot parcel in an RC residential district with a seven story, 63 foot tall brick building. The Somerville Housing Authority owns the building. Sprint/Nextel currently has wireless equipment on the roof of the building consisting of façade mounted antennas on penthouses, equipment cabinets, and a GPS antenna. The installation occurred under Special Permit # ZBA 1998-38. The Applicant has received several revisions to the permit to add equipment over the last few years. The latest revision occurred in March of 2010.

2. Proposal: The Applicant, Sprint, is proposing to make the following changes to the existing wireless equipment. The six existing antennas will be swapped out with newer antennas.



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The proposed new antennas are all similar in size and appearance with the existing antennas. Three of the new antennas measure 7 inches in length by 8 inches in width by 72 inches in height and the other three antennas measure 7 inches in length by 11.8 inches in width by 72 inches in height. The antennas will be side-mounted to the existing penthouses, just as the existing antennas are currently mounted. All of the proposed new antennas will be below the height of the penthouse rooflines.

Two of the existing equipment cabinets (the BTS cabinet and battery cabinet) will be replaced with new models. The BTS cabinet will be 32 inches in length, 35.5 inches in width, and 72 inches in height and the battery cabinet will be 30 inches in length, 31 inches in width, and 60 inches in height.

Lastly, the Applicant will be installing nine new remote radio heads (RRHs), three per sector, in close proximity to the antennas and swapping out the existing GPS antenna with a new model that is 3.2 inches in diameter by 5 inches in height.

The antennas and the RRHs will be mounted to the existing penthouse walls on the rooftop of the building as the current antennas are and all elements will be painted to match the color of the surface to which they are affixed. The new equipment cabinets will be mounted to the existing steel equipment frame to which the existing cabinets are affixed.

3. Nature of Application: Under SZO §7.11.15.3 establishment of a wireless communications facility requires a Special Permit.

4. Surrounding Neighborhood: Much of the surrounding neighborhood contains primarily residential uses. The subject property is just 600 feet west of City Hall located in an RC district which runs along Highland Avenue containing mostly three- and multi-family dwellings, as well as some religious institutions and community uses. The First Church of Christ is located two doors down on the same side of Highland Avenue and the Highland Masonic Temple Association and the Somerville YMCA are directly across the street. There is an RA district directly behind the subject property which contains primarily single- and two-family dwellings. Most of the structures along Highland Avenue are between four and seven stories in height. In the RA districts just off of Highland Avenue, most of the structures are between 2½ and 3 stories.

5. Green Building Practices: None indicated.

6. Comments:

Fire Prevention: Has been contacted but has not yet provided comments.

Ward Alderman: Alderman Taylor has been contacted, but has not provided comments.

DPW/Lights & Lines/Highway: Has been contacted but has not yet provided comments.

Wiring Inspector: Has been contacted but has not yet provided comments.



Existing Conditions



II. FINDINGS FOR SPECIAL PERMIT (SZO §5.1 and §14):

In order to grant a Special Permit, the SPGA must make certain findings and determinations as outlined in §5.1.4 of the SZO. This section of the report goes through §5.1.4 in detail.

1. Information Supplied: The Staff finds that the information provided by the Applicant conforms to the requirements of §5.1.2 of the SZO and allows for a comprehensive analysis of the project with respect to the required Special Permits.
2. Compliance with Standards: The Applicant must comply "with such criteria or standards as may be set forth in this Ordinance which refer to the granting of the requested special permit."

The Applicant seeks a Special Permit under §7.11.15.3 of the SZO which requires the Applicant to follow guidelines and procedures set forth in Article 14 for the, "regulation of wireless telecommunications facilities so as to allow and encourage such uses in the City with minimal harm to the public health, safety, and general welfare."

Staff finds that minimal harm would be imposed upon the health, safety and welfare of the surrounding neighborhood. Sprint is a FCC licensed company that is required to comply with all state and federal regulations.

Review Criteria for Telecommunications Facilities:

- a) *Height of proposed facility:* The base of the building to the top roof beam is 63 feet and the height to the top of the existing penthouses is 82 feet. This building is one of the tallest in the surrounding area. The proposed new antennas would not extend above the rooflines of the penthouses.
- b) *Proximity of facility to residential structures and residential zoning districts:* The building at 114 Highland Avenue is a 36 unit residential structure in the RC residential district. This location abuts an RA residential district but it is currently being used as a wireless telecommunication facility already and the Applicant has six antennas and associated equipment located there now.
- c) *Nature of uses on adjacent and nearby properties:* The site is located in a RC residential district. The surrounding area contains mostly three- and multi-family dwellings, as well as some religious institutions and community uses. There is an RA residential district directly behind the subject property which contains primarily single- and two-family dwellings. The proposed alterations to the wireless installation will not generate any objectionable odor, fumes, glare, smoke, or dust nor require additional lighting or signage. Noise from the equipment will be minimal and should not be heard beyond the confines of the property where it will be placed. No increased traffic or hindrance to pedestrian movements will result from the proposed installation either. Furthermore, in connection with its FCC license, Sprint is prohibited from interfering with radio or television transmissions.
- d) *Surrounding topography and prominence of proposed facility:* The building is the tallest in the surrounding area. Some of the structures across Highland Avenue are quite tall, but only about half the height of the subject building. The surrounding area is relatively flat and there are no other buildings of comparable height or prominence in the surrounding area. Though

the proposed rooftop antennas are visible from several vantage points, the proposal to match them to the color of the façade to which they will be affixed will reduce their prominence from the public way.

- e) *Surrounding tree cover and foliage:* The building upon which the proposed antennas will sit is taller than all trees in the surrounding area and therefore no interference is anticipated with regard to the projection required for the antennas.
- f) *Design of tower, with particular reference to design characteristics that have the effect of reducing or eliminating visual obtrusiveness, as specified in Section 14.3:* The antennas will be installed onto the sides of the existing penthouses on the roof of the building and will be no higher than the existing antennas which do not protrude above the roofline of the penthouses. The antennas will also be painted to match the color of the penthouse walls to camouflage them. One of the antennas in the alpha sector is being proposed to be projected two feet off of the façade of the penthouse through the use of a standoff. Additionally, the new RRHs that are being installed are proposed to be located directly on the façades of each of the penthouses, approximately 12 feet above the top roof beam of the building. Planning Staff has concerns about the visual impacts of these elements and has proposed a condition that the Applicant simply façade mount the antenna in the alpha sector with no standoff and lower the RRHs on the façades of the penthouses below the 45 degree plane incline from the roof edge or submit to Planning Staff satisfactory documentation as to why these elements cannot be relocated from their currently proposed locations.
- g) *Location of tower, with particular reference to the existence of more suitable locations, as specified in Section 14.3:* The application is in compliance with this review criterion. The Applicant is proposing to locate the antennas on an existing wireless telecommunications facility within a residential district. The antennas will be painted the color of the penthouse walls to which they will be affixed for camouflage and they will not protrude over the roofline of the shelters, therefore not impacting the viewshed of the area.
- h) *Proposed ingress and egress:* There is existing access to the roof and equipment on the roof via the two penthouse stairwells in the building.
- i) *Distance from existing facilities:* The site is currently operating as a Sprint wireless facility and the proposed changes will allow for an update in equipment.
- j) *Availability of suitable existing towers, poles, other structures, or alternative technologies, as discussed in Section 14.5.2: Section 14.5.2 states that no new sites for telecommunications facilities shall be permitted unless the Applicant demonstrates that existing sites cannot meet the Applicant's need:* The site where the Applicant is proposing to install the six new antennas, two new cabinets, and other associated equipment is currently operating as a wireless telecommunications facility.

3. Consistency with Purposes: The Applicant has to ensure that the project "is consistent with (1) the general purposes of this Ordinance as set forth in Article 1, and (2) the purposes, provisions, and specific objectives applicable to the requested special permit which may be set forth elsewhere in this Ordinance, such as, but not limited to, those purposes at the beginning of the various Articles."

The Staff finds that the proposal, as conditioned, is consistent with the general purposes of the Ordinance as set forth under §1.2, which includes, but is not limited to promoting "the health, safety, and welfare of

the inhabitants of the City of Somerville; to protect health; to secure safety from fire, panic and other dangers; to conserve the value of land and buildings; to encourage the most appropriate use of land throughout the City; and to preserve and increase the amenities of the municipality.”

The proposal, as conditioned, is also consistent with those purpose established for the district (6.1.3. RC - Residence Districts), which is “To establish and preserve a district for multi-family residential and other compatible uses which are of particular use and convenience to the residents of the district. Allowing the Applicant to perform these equipment upgrades to the wireless facility is a convenience for residents of the district who use Sprint as a wireless network carrier. Staff finds the replacement of the antennas and associated equipment, as conditioned, will not negatively impact the surrounding uses in the area.

Furthermore, the Staff finds that the proposal, as conditioned, is consistent with the purposes set forth in Article 14 of the Zoning Ordinance as conditioned in this report, to:

- a) *Protect residential areas and land uses from potential adverse impacts of towers and antennas;*
- b) *Encourage the location of telecommunications facilities in non-residential areas;*
- c) *Minimize the total number of towers and antennas throughout the community;*
- d) *Strongly encourage the joint use of new and existing tower sites as a primary option rather than construction of additional single-use towers;*
- e) *Encourage users of towers and antennas to locate them in areas where the adverse impact on the community is minimal;*
- f) *Encourage users of towers and antennas to configure them in ways that minimize the adverse visual impact of the towers and antennas through careful design, siting, landscape screening, and innovative camouflaging techniques;*
- g) *Enhance the ability of the providers of telecommunications services to provide such services to the community quickly, effectively, and efficiently;*
- h) *Consider the public health and safety of communications facilities; and*
- i) *Avoid potential damage to adjacent properties from tower and antenna failure through sound engineering and careful siting of structures.*

4. Site and Area Compatibility: The Applicant has to ensure that the project "(i)s designed in a manner that is compatible with the characteristics of the built and unbuilt surrounding area, including land uses.”

Staff finds the project and the way the equipment is designed to be compatible with the surrounding area and land uses. The proposed location of the antennas on the penthouse façades as conditioned would not have a negative effect on the surrounding neighborhood or detract from the appearance of the building due to the height of the building and the setback of the central penthouse and the proposed equipment cabinets. The antennas will be mounted on the existing penthouse walls on the rooftop and will be painted to match the color of the surfaces to which they are affixed. Planning Staff does have concerns about the visual impacts of the alpha sector antenna that will project two feet off of the penthouse façade and the proposed location of the new RRHs. In response to this, Planning Staff has proposed a condition that requires the Applicant to simply façade mount the antenna in the alpha sector with no standoff and lower the RRHs on

the façades of the penthouses below the 45 degree plane incline from the roof edge, or submit to Planning Staff satisfactory documentation as to why these elements cannot be relocated from their currently proposed locations. Photo simulations were also taken from a variety of locations in the neighborhood and they indicate there will be limited impact of the installation on the surrounding neighborhood.

5. Adverse Environmental Impacts: The proposed use, structure or activity will not constitute an adverse impact on the surrounding area resulting from: 1) excessive noise, level of illumination, glare, dust, smoke, or vibration which are higher than levels now experienced from uses permitted in the surrounding area; 2) emission of noxious or hazardous materials or substances; 3) pollution of water ways or ground water; or 4) transmission of signals that interfere with radio or television reception.

The proposed installation will not generate any glare, light, smoke, dust, or vibrations nor will it emit any noxious or hazardous materials or substances. Noise from the equipment will be minimal and should not be heard beyond the confines of the property where it will be placed. The proposed installation will be located on an existing building and therefore no pollution of waterways or ground water will occur. Additionally, the proposed installation will not be tied into any public sewer or private wastewater disposal system. In connection with its FCC license, Sprint is prohibited from interfering with radio or television transmissions and furthermore, these transmissions function at different frequencies than those licensed to Sprint for the proposed telecommunications equipment. Standard conditions direct compliance with Noise Control Ordinance and FCC Guidelines for Human Exposure to Electromagnetic Fields, and require regular reporting.

III. RECOMMENDATION

Special Permit under SZO §7.11.15.3 and §14

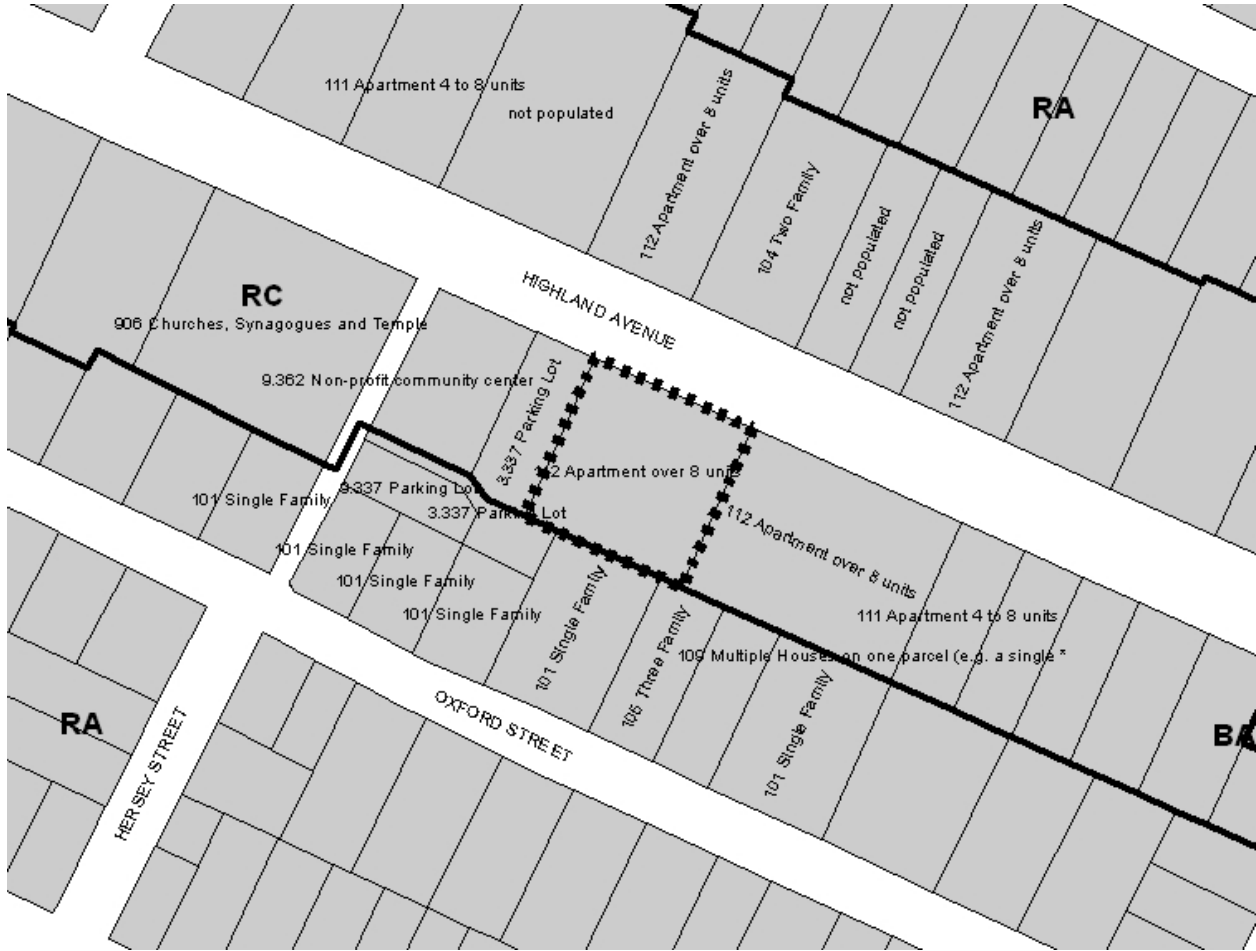
Based on the materials submitted by the Applicant, the above findings, and subject to the following conditions, the Planning Staff recommends **CONDITIONAL APPROVAL** of the requested **SPECIAL PERMIT**.

The recommendation is based upon a technical analysis by Planning Staff of the application material based upon the required findings of the Somerville Zoning Ordinance, and is based only upon information submitted prior to the public hearing. This report may be revised or updated with new recommendations, findings and/or conditions based upon additional information provided to the Planning Staff during the public hearing process.

#	Condition	Timeframe for Compliance	Verified (initial)	Notes								
1	<p>Approval for the installation (replacement) of a wireless communications facility under SZO §7.11.15.3 and SZO §14 consisting of six panel antennas and related equipment and cables. This approval is based upon the following application materials and the plans submitted by the Applicant:</p> <table border="1"> <thead> <tr> <th>Date (Stamp Date)</th> <th>Submission</th> </tr> </thead> <tbody> <tr> <td>(October 31, 2011)</td> <td>Initial application, submitted to the City Clerk's Office</td> </tr> <tr> <td>(March 13, 2012)</td> <td>Photo Simulations</td> </tr> <tr> <td>October 26, 2011 (March 13, 2012)</td> <td>Title Sheet, Plot Plan, Rooftop Plan & Equipment Platform Layout, Elevations, Antenna Scenario, and Equipment Details (T-1, C-1, A-1, A-2, A-3, and A-4)</td> </tr> </tbody> </table> <p>Any changes to the approved site plan, photograph simulations, and/or elevations that are not <i>de minimis</i> must receive SPGA approval.</p>	Date (Stamp Date)	Submission	(October 31, 2011)	Initial application, submitted to the City Clerk's Office	(March 13, 2012)	Photo Simulations	October 26, 2011 (March 13, 2012)	Title Sheet, Plot Plan, Rooftop Plan & Equipment Platform Layout, Elevations, Antenna Scenario, and Equipment Details (T-1, C-1, A-1, A-2, A-3, and A-4)	BP / Final Sign Off	ISD / PIng.	
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2	<p><i>Compliance with Noise Control Ordinance.</i> Prior to the issuance of a Certificate of Use and Occupancy Permit for the installation of the wireless telecommunications facility, the Applicant shall submit to the Inspectional Services Department, with a copy to the Zoning Board of Appeals, a sound level measurement certified as accurate by a professional acoustician and shall perform such sound level measurements six months after issuance of the certificate of occupancy, with subsequent sound level measurements annually on or before the anniversary date of the original six month measurement to document that all of the Applicant's installed equipment complies and continues to comply with the decibel level standards established by the City of Somerville, Noise Control Ordinance.</p>	Continuous	ISD									

3	<p><i>Compliance with Federal Communications Commission Guidelines for Human Exposure to Electromagnetic Fields.</i> To ensure compliance with the standards established by the Federal Communications Commission Office of Engineering and Technology (“FCC”) in OET Bulletin 65 as adopted by Massachusetts Department of Public Health under 105 CMR 122.021, the Applicant shall perform measurements, within two (2) months of the date that the Applicant’s wireless telecommunications facility commences operation and at intervals of twelve (12) months thereafter, to establish that the Applicant’s wireless telecommunications facility complies and continues to comply with the FCC guidelines and applicable state regulations for human exposure to radio frequency electromagnetic fields for human exposure to radio frequency electromagnetic fields. The Applicant shall provide the results of such measurements with certification of compliance to the City of Somerville, Health Department, with a copy to the Zoning Board of Appeals.</p>	Continuous	BOH	
4	<p>Any antenna that is not operated continuously for a period of twelve (12) months shall be considered abandoned, and the owner of such antenna shall remove the same within ninety (90) days of notice from the City of Somerville informing the owner of such abandonment.</p>	Continuous	ISD	
5	<p>The Applicant shall façade mount to the penthouse all of the antennas in the alpha sector without using standoffs and lower the location of the RRHs on the façade of the penthouses below the 45 degree plane incline from the edge of the roof or submit satisfactory documentation to Planning Staff as to why these elements cannot be altered from their originally proposed locations.</p>	BP	Png.	
6	<p>The Applicant shall remove any of that carrier's unused or non-operating wireless equipment prior to installation.</p>	BP	Png.	
7	<p>The Applicant shall identify and inform Planning Staff of any non-operating wireless equipment from any carrier prior to installation.</p>	BP	Png.	
8	<p>The Applicant shall at his/her expense replace any existing equipment (including, but not limited to street sign poles, signs, traffic signal poles, traffic signal equipment, wheel chair ramps, granite curbing, etc) and the entire sidewalk immediately abutting the subject property if damaged as a result of construction activity. All new sidewalks and driveways must be constructed to DPW standard.</p>	Final Inspection	DPW	
9	<p>All construction materials and equipment must be stored onsite. If occupancy of the street layout is required, such occupancy must be in conformance with the requirements of the Manual on Uniform Traffic Control Devices and the prior approval of the Traffic and Parking Department must be obtained.</p>	During Construction	T&P	

10	The Applicant shall camouflage the antennas, RRHs, equipment cabinets, mounting hardware, and other related equipment and fixtures by painting them to match the surrounding materials and colors.	Final Sign Off	PIng.	
11	In accordance with the Structural Engineer's letter from August 9, 2011 the Applicant must supply ISD with documentation that the existing structural steel platform is sufficient to hold the proposed cabinets. If the platform is not sufficient and a new equipment cabinet location is needed, a revision to the Special Permit will be required.	BP	ISD / PIng.	
12	In accordance with the Structural Engineer's letter from August 9, 2011, if installation of the new mounts for the panel antennas will cause a change to the plans, a revision to the Special Permit will be required.	BP	ISD / PIng.	
13	The Applicant shall contact Planning Staff at least five working days in advance of a request for a final inspection by Inspectional Services to ensure the proposal was constructed in accordance with the plans and information submitted and the conditions attached to this approval.	Final Sign Off	PIng.	



114 Highland Avenue