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April 10, 2012

Chairwoman Norma Drummond and
Members of the Zoning Board of Appeals
Town of East Fishkill Town Hall
330 Route 376
Hopewell Junction, New York 12533

RE: Homeland Towers, LLC, proposed Wireless Telecommunications
Service Facility, 23 DORTANTRA DRIVE, EAST FISHKILL, HOPWELL JUNCTION, NEW YORK

Dear Chairwoman Drummond and Members of the Zoning Board of Appeals:

Your Board has requested that the undersigned, a New York State Licensed Professional Engineer specializing in radio frequency engineering, review portions of the application of Homeland Towers, LLC ("Homeland") to construct a wireless telecommunications facility located at 23 DORTANTRA DRIVE in Hopewell Junction. For this critical review, the undersigned as considered the following documents:

Application Package entitled Homeland Towers, LLC and Verizon Wireless Proposed Telecommunications Facility, Premises 23 DORTANTRA DRIVE EAST FISHKILL (Hopewell Junction), New York, prepared by Anthony F Morando, Esq., dated November 11, 2011

Exhibit C Hillside Lake Cell Site – Radio Frequency Analysis, prepared by Jonathan Edwards, Radio Frequency Design Engineer, Verizon Wireless ("Verizon"), dated November 15, 2011

Exhibit G Site Selection and Alternate Site Analysis, prepared Vincent L Xavier, Homeland Towers, LLC dated November 23, 2011

Exhibit D Antenna Site FCC RF Compliance Assessment and Report, prepared by Daniel J. Collins, Pinnacle Telecom Group dated October 26, 2011

Zoning Drawings, prepared by Tectonic engineering & Surveying Consultants, PC, October 25, 2011

Portions of the Code of The Town of East Fishkill dealing with commercial communications towers.

Homeland proposes to construct a 150 foot monopole to provide support for up to 7 (seven) wireless telecommunications carriers. As Homeland is not a carrier, it has included Verizon to support the need for the facility. Verizon has included in its Radio Frequency analysis a number of propagation and line of site plots to justify its need for the facility.

Exhibit C, Tab 1, Attachment 1 to the analysis "Hillside Lake – Existing Coverage @ -85 dBm" indicates by a computer simulation (model) the existing calculated coverage of the Verizon system. Although Verizon operates a number of systems in the area (Cellular, Personal Communications System and Long Term Evolution) it has not indicated which system is depicted. The areas depicted in white are those where the calculated level of coverage is below the stated design goal. An examination of this Attachment reveals a number of areas of coverage below the design threshold, mostly to west of the proposed site as well as portions of The Taconic State Parkway. In compliance with 194-80A(5) of the ordinance Verizon indicates all existing surrounding sites within 10 miles of the proposed site. Note that the location of all existing sites is compliant with good engineering and design of such systems as the sites are regularly spaced on a "regular reuse grid" with the site separation of approximately 3.5 miles

Exhibit C, Tab 2, Attachment 2 "Hillside Lake – Proposed Coverage @ -85 dBm" demonstrates with the model the proposed calculated coverage that would be provided by the proposed facility at 147 feet above ground. No alternate height analysis is included.

Exhibit C, Tab 3, Attachment 3 "Hillside Lake Existing and proposed Coverage @ -85 dBm" is a composite of the two previously noted coverage maps. Note in this attachment, the location of the proposed site with respect to the existing sites. The proposed Hillside Lake site is approximately 0.9 miles to the west south west of the existing Sylvan Lake site. This location is not in the ideal location with respect to the regular reuse grid. Quite frankly it is too close to the existing Sylvan Lake site. Verizon utilizes a modulation technique known as Code Division Multiple Access ("CDMA"). In such a technique, each cell transmits a "Pilot" frequency which synchronizes all of the surrounding sites. The literature (many papers authored by Verizon) note a condition known as "Pilot Pollution" which is a direct result of cells located too closely together. Pilot Pollution results in system interference, poor hand off and a loss of system capacity. Note also that the coverage provided by the site, especially for an antenna system mounted at nearly 150 feet above ground is somewhat challenged. Moreover the proposed site only provides approximately 20% new coverage (un-duplicated) and nearly 80% overlap with existing coverage provided by the Hopewell Junction, Freedom Plains HD 4 site and perhaps the Lagrange G1 sites. Such excessive overlap is an inefficient use of the radio spectrum. It is relevant to note that while some coverage overlap is required to accomplish seamless handoffs between cell sites, this overlap is generally designed to be approximately 10%.

Exhibit C, Tab 4, Attachment 4 “Hillside Lake Existing, Future and Proposed Coverage @ -85 dBm” is basically the same coverage indicated in Attachment 3 with the addition of a cell site at Fishkill Plains (a proposed site currently before your Board and one that the undersigned is currently evaluating), as well as a proposed cell site at Coughquag. Curiously, this Exhibit fails to indicate a cell site that is “proposed” according to the application for a cell site at the Fishkill Plains. The site that seems to be missing in this application is one that appears to be proposed at Lagrange 2. That site alone (Lagrange 2), which was not considered in the overlap noted above, provides significant coverage overlap with the Hillside Lake site proposed in this application

Tab 5 of the Radio Frequency analysis deal with line of sight plots so as to justify the height requested. Curiously, these line of sight plots do not consider an azimuth to the east nor do they appear to support the challenged coverage that this site to the west as well as the east.

Exhibit C, Tab 6 is the “Health and Safety Report” demonstrating compliance with the guidelines of FCC Bulletin OET-65 with respect to human exposure to radio frequency energy. This report has been done, generally, in accordance with the requirements of Bulletin OET-65 and it indicates compliance with OET-65. Please note also that the analysis was done with all possible co-locators on the monopole resulting in a truly worst case analysis. The only area that may need further work is consideration of the expected exposure at 16 feet above ground (equivalent to the second story of nearby homes) as a result of the close proximity of those homes and the ensuing terrain between the homes and the monopole.

Exhibit G “Site Selection and Alternate Site Analysis” discusses the process and results of the search for and evaluation of either co-location sites as well as “New Tower Sites.” In addition to the discussion, the Exhibit includes a somewhat difficult to read map of the area indicating sites evaluated. Missing in this Exhibit and a requirement for critical review of the proposal would be the “search ring” that was prepared by Verizon Engineering. Such a presentation of a map of reasonable detail would note a circle “ring” that the engineers from Verizon prepared to indicate an area where the engineers believed a site would be needed to not only fill gaps in coverage, but meet with the good engineering practice of system design. Note, for example, that in the Fishkill Plains application before your Board, Verizon has included such a search ring of approximately 1.5 miles in radius. It is impossible to determine from Exhibit A of Exhibit G, the somewhat difficult to read map, where such a ring might be or even what the scale of the map might be. There may be a scale on that map, but the undersigned cannot determine one from the copy included in his package. The list of three sites in the Alternate Candidates for Shared Use can be mostly ignored because of non-availability (3) or poor location (2). The current Sylvan Lake site (1) might be questioned as to why Verizon cannot improve the coverage from that sight by perhaps increasing the height of the structure. While it is impossible to determine the height of the existing structure, a review of aerial photographs of the site indicates a relatively short monopole that possibly could be extended to provide some of the coverage relief it seeks.

The list of Alternate Candidates Evaluated for new Towers requires a somewhat closer examination. It would be most helpful to ascertain why certain sites were rejected by the RF engineer. Specifically of available sites, site 6 and site 10 require more information why they were rejected. Note that both sites are somewhat west of the existing Sylvan Lake site and might provide less duplicative coverage. Note also that as site 10 is in the I-2 zone, it would appear that a structure of 150 feet would be permitted.

The Board should also note that while the need for this site is claimed to be for a number of areas, it appears by the coverage demonstrated in the existing system the most relief needed is along portions of The Taconic State Parkway. Note too, that sites 7 and 9 with their close proximity to the Parkway are indicated as sites where, according to Exhibit G, wireless telecommunications facilities are not permitted within zoning district. While this engineer is not totally familiar with the Code of The Town of Fishkill with respect to the siting of wireless telecommunications structures, he can find no prohibition on the location of such a site at the preceding two noted locations. That so noted, sites 7 and 9 could, very well, with proper design meet the parkway coverage requirements

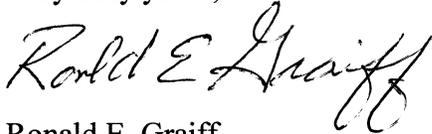
FINDING: Verizon has reasonably demonstrated that it has a gap in coverage in the general area of The Taconic State Parkway. Verizon has not demonstrated, however, that the site proposed is *unique* in its ability to provide coverage relief. Issues associated with the spacing with existing sites, the inefficient use of new radio frequency coverage and the consideration that must be given to another application before your Board lead to this finding. The undersigned is not familiar with the location of the different land use zones within the Town. It is noted, however, that there are a number of zones within the Town where towers of up to 150 feet and up to 195 feet above ground may be permitted. Moreover, no Verizon generated search ring has been included with the application. Finally, with the existing application for the site at Fishkill Plains also before your Board, it is the opinion of the undersigned that, if possible, these two applications be "joined" as mutually exclusive. A correctly located site in either application may negate the need for the other or significantly reduce of either site's height above ground. Specific review and findings with respect to the Fishkill Plains site will be presented in another report to your Board.

Verizon or Homeland Towers, as the case may be, should be requested to provide additional information with respect to: (1) alternate sites rejected by Verizon engineering and their possible coverage; (2) a Verizon engineering dated search ring demonstrating its judgment on possible site locations; (3) possible modification to an existing site; (4) alternate means, especially the use of two sites dismissed by the applicants, or technology that may be utilized to provide the Parkway coverage relief; (5) demonstration that 150 feet above ground is the minimum height necessary to provide the relief it seeks (not just the need of Homeland Towers to have a 7 carrier pole); (6) alternate means, should the structure be approved, to ameliorate the visual impact of the antennas, i.e. close mounted antennas; (7) demonstration how, should the structure be approved as proposed, all of the necessary transmission lines required for 7 (seven) carriers could be placed within

the pole without external mounting; and (8) a revised radio frequency exposure report considering the resultant levels of energy at 16 feet above the ground.

This review is based on the information presented and to the best of the undersigned's knowledge and belief that the information contained therein is true, accurate and complete. Should your Board have any additional questions, please feel free to contact the undersigned.

Very truly yours,

A handwritten signature in cursive script that reads "Ronald E. Graiff". The signature is written in black ink and is positioned above the printed name.

Ronald E. Graiff