

**County of Loudoun**  
**Department of Planning**  
**MEMORANDUM**

**DATE:** August 22, 2008  
**TO:** Stephen Gardner, Project Manager, Land Use Review  
**FROM:** Pat Giglio, Planner, Community Planning  
**SUBJECT:** SPEX 2007-0009 & CMPT 2007-0011, Nextel-Jakboub

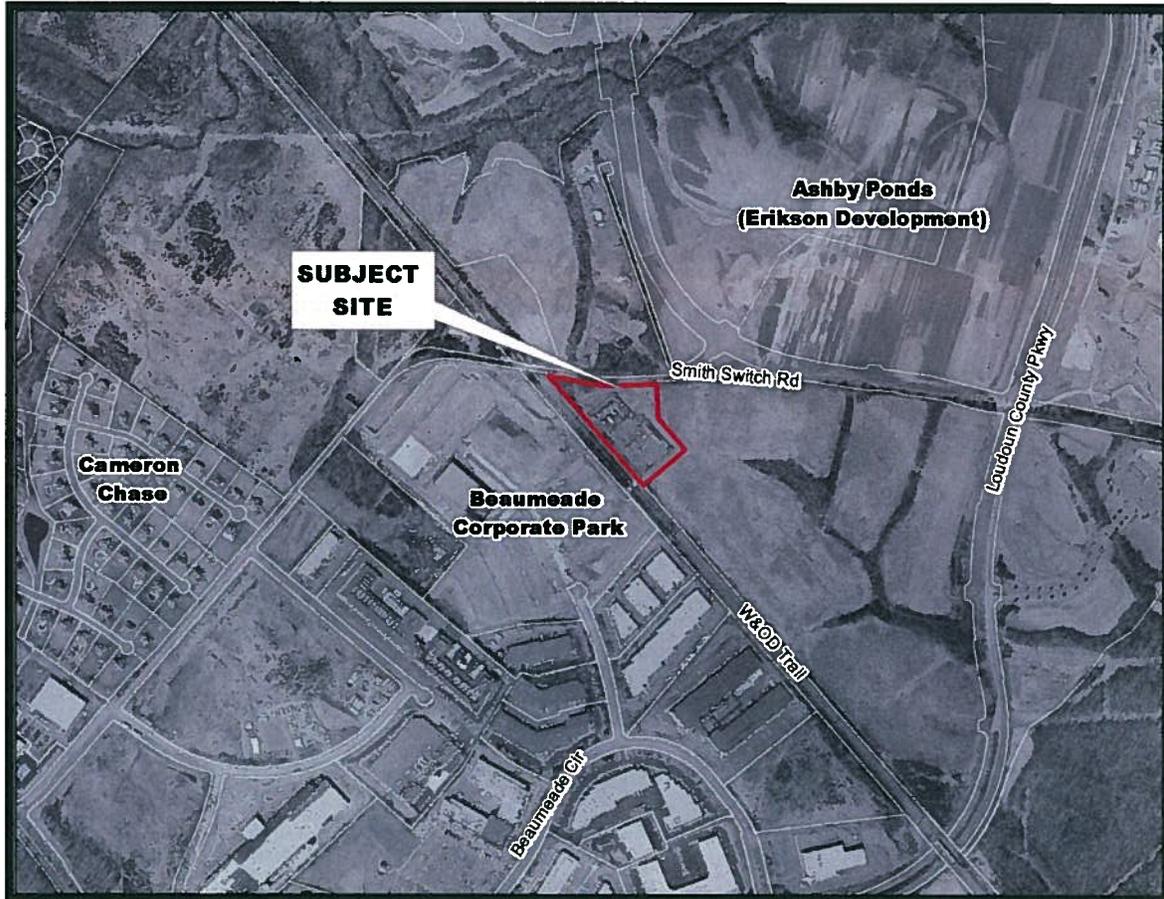
**BACKGROUND**

The applicant, Nextel Communications, is requesting a Special Exception and Commission Permit to construct a 130' monopole to accommodate a mobile telecommunication facility on a site located near the Washington and Old Dominion Regional Trail (W&OD Trail) and Smith Switch Road in Ashburn. The subject site is owned by the Virginia Electric and Power Company (VEPCO) and adjoins an existing electrical substation. The proposed mobile telecommunication facility will consist of a 130' monopole with an antennae array located near the top of the pole, and two additional antennae arrays further down the pole with space reserved for additional future antennae arrays. A single ground-mounted equipment shelter (12' x 20') and electrical generator will be located on a concrete slab near the base of the monopole within the fenced lease area. Additional areas for future ground-mounted telecommunication cabinets and equipment have been reserved within the lease area. A board on board fence will enclose the lease area that will be screened with a vegetative buffer.

The proposed mobile telecommunication facility is located on a 6.01-acre parcel at 21260 Smith Switch Road. The proposed mobile telecommunication facility is located on the south side of Smith Switch Road (Route 607) and north and east of the W&OD Trail. The subject site is bordered to the south by the existing VEPCO electrical substation and to the north by a vacant wooded parcel. The subject is currently zoned Planned Development-Industrial Park (PD-IP) under the Revised 1993 Loudoun County Zoning Ordinance. A site visit and review of County GIS records did not identify any environmental features on the subject site that would be impacted by the proposed construction.

In accordance with the Revised 1993 Zoning Ordinance, a Commission Permit is required when a public utility or public service facility is constructed. A Commission Permit is used to determine if the general location, character, and

extent of the proposed use is in substantial accord with the Comprehensive Plan. A Special Exception is also required for the proposed use within the zoning district.



### **COMPREHENSIVE PLAN CONFORMANCE**

The site is governed under the policies outlined in the Revised General Plan. The site is located in the Suburban Policy Area within the Ashburn Community. The Revised General Plan identifies the site as suitable for Business uses (Revised General Plan, Planned Land Use Map). The proposed use is specifically governed under the policies of the Strategic Land Use Plan for Telecommunications Facilities (Telecommunications Plan).

### **ANALYSIS**

#### **A. LAND USE**

##### **Location**

The Telecommunication Plan policies establish a hierarchy of preferred locations for new commercial public telecommunication facilities in the Suburban Policy

Area. The County's first preference for new telecommunication facilities are collocation on existing buildings, towers, monopoles, water tanks, overhead utility transmission line structures and other tall structures over 50 feet in height where possible to minimize the need for new structures (*Telecommunications Plan, Policy 1, p. 3*). Except for areas where towers or monopoles are permitted by right, an applicant for a new commercial telecommunication facility must demonstrate to the County that location on an existing tall structure greater than 50 feet in height is not feasible within a one-mile radius of the proposed site in the Suburban Policy Area (*Telecommunications Plan, Policy 5, p.4*). If it is determined that it is not feasible to locate on existing tall structures for physical, economic or technical reasons the County prefers that new towers or monopoles be located in planned industrial and employment areas where they are the most compatible with the surrounding land uses (*Telecommunications Plan, Policy 2, p. 3*).

The proposed site was selected by the applicant to reduce load at an existing telecommunication facility at 21593 Jesse Court approximately 1.5 miles east of the subject site and to provide improved wireless coverage along segments of Loudoun County Parkway and Smith Switch Road as well the surrounding area. While the construction of a new telecommunication facility may be justified to provide coverage to the area, the applicant has not demonstrated that telecommunication antennas could not be located on existing tall structures within the vicinity of the subject site, most notably the existing high tension utility transmission poles which are approximately 130 feet in height. Several existing high tension utility transmission poles within vicinity of the subject site have telecommunication antennas collocated on them presently.

***The County's first preference for new telecommunication facilities are collocation on existing utility transmission poles and other tall structures over 50 feet in height where possible to minimize the need for new structures. Staff finds that existing tall structures (i.e. existing high tension utility transmission poles) are located in proximity to the subject site and requests that the applicant provide additional information to demonstrate that collocation on these structures is not feasible.***

#### **Design and Visual Impact**

The Plan calls for design standards to mitigate the visual impacts of commercial public telecommunication facilities so as to "blend with the natural and built environment of the surrounding area" (*Telecommunications Plan, Policy 1, p.6*). The Plan directs that specific attention be paid to the setting, color, lighting, topography, materials, and architecture. Antennas and other telecommunication devices should be neutral in color to blend with the background, unless specifically required by the FAA to be painted or lighted otherwise (*Telecommunications Plan, Policy 2, p.6*). Accessory structures and equipment

buildings should also blend with the surrounding environment through the use of appropriate color, texture of materials, scale, landscaping and visual screening (*Telecommunications Plan, Policy 3, p.7*). The Plan also directs that tower and monopole sites should be designed and constructed to the minimum height necessary to accommodate at least three (3) providers and provide sufficient land area for additional equipment buildings unless doing so would create an unnecessary visual impact on the surrounding area (*Telecommunications Plan, Policy B-2, pg. 6*).

The proposed telecommunication facility on the subject site will consist of a 130' monopole with an antennae array located near the top of the pole, and two additional antennae arrays further down the pole with space reserved for additional future antennae arrays. The proposed monopole and superstructure of the antennae arrays is constructed of galvanized metal and will be light grey in color. All the associated wiring and conduit for the antennas will be located on the interior of the pole. The proposed ground-mounted equipment will be screened by an 8 foot tall board on board fence which will enclose the lease area that will be screened by a Type 4 vegetative buffer.



View southwest , subject site in foreground with existing utility transmission poles and lines in background with collocated antennas on existing pole (center).

The applicant has provided photographs from a balloon test conducted to assess the visual impact of the proposed monopole on the surrounding landscape. The photographs are taken from various vantage points from the public right-of-ways and adjoining properties towards the subject site. The applicant has provided computer simulated color photographs depicting how the proposed monopole may appear from various vantage points. Based on the submitted drawings, photo-simulations, and a site visit to the area, the proposed visual impact created by the proposed 130-foot monopole and ground-mounted equipment will be nominal when compared to the existing visual impact created by the VEPCO electrical substation and the overhead utility transmission poles and lines.

The proposed 130-foot monopole and ground-mounted equipment are consistent in design, appearance and color with the industrial character of the existing VEPCO electrical substation and overhead utility transmission poles and lines. The proposed monopole will be approximately the same height as the existing 130' overhead utility transmission poles and lines adjoining the subject site. Staff recommends that the conditions of approval and general notes of the SPEX plat specify the color, texture, and materials of the proposed monopole and associated ground-mounted equipment shelters to ensure that the proposed construction blends with the existing character of the site and is consistent with the photo-simulations.

***Staff finds the design of the proposed telecommunication facility is in general conformance with Plan policies. Staff recommends that conditions of approval and the general notes of the SPEX plat specify the color, texture, and materials of the proposed monopole and ground-mounted equipment to ensure that the proposed facility blends with existing electric substation and industrial character of the area.***

***Plan policies call for telecommunication facilities to be designed and constructed at the minimum height necessary in order to mitigate any unnecessary visual impact on the surrounding area. Staff requests that the applicant provide commitments from prospective telecommunication providers for the three proposed antennae arrays and the additional locations (EL 110' AGL, 90' AGL and 80' AGL) remaining on the proposed monopole to justify the height of the proposed structure. Propagation studies should also be provided to illustrate the anticipated coverage of the proposed monopole at various heights in association with the existing/proposed network.***

## **B. SAFETY AND HEALTH POLICIES**

Plan policies state “an applicant or its successors shall remove all unused structures and facilities from a commercial public telecommunications site, including towers and monopoles, within 90 days of cessation of commercial public telecommunications use or the expiration of the lease, whichever occurs first, and the site should be restored as closely as possible to its original condition” (*Telecommunications Plan, Policy C2, p. 10*). The applicant has agreed to a condition of approval requiring removal of equipment following cessation of use.

***Staff recommends that a condition of approval be included to require removal of the facility following cessation of use.***

## **RECOMMENDATION**

Staff finds the location of the proposed telecommunication facility is in general conformance with Plan policies. However, Community Planning staff is not able to recommend approval of the Special Exception and Commission Permit request until such time as additional information to demonstrate that collocation of the proposed antennas on existing tall structure within the vicinity of the subject site is not feasible. Should it be found that collocation on existing tall structures in the vicinity of the subject site is not feasible and that construction of the proposed telecommunication facility is justified, staff requests that the applicant provide commitments pertaining to the color, texture, and materials of the proposed mono-pole and ground-mounted equipment to ensure that the proposed facility blends with the existing electric substation and industrial character of the area. Additionally, staff requests that the applicant provide commitments from future telecommunication providers to justify the height of the proposed structure and demonstrate the need for the facility. Propagation studies should also be provided to illustrate the anticipated coverage of the proposed monopole at various heights in association with the existing/proposed network. Staff also recommends the development of a condition of approval to ensure that the facility will be removed following cessation of use.

Staff would be happy to meet with the applicant to discuss any comments or questions.

CC: Julie Pastor, AICP, Director, Planning  
Cindy Keegan, AICP, Program Manager, Community Planning-via email