STAFF RECOMMENDATION

C. Kelly

NCPC File No. 6911/5786

TURNER-FAIRBANK HIGHWAY RESEARCH CENTER
RENEWAL OF PERMIT FOR TELECOMMUNICATIONS TOWER AND INSTALLATION OF NEW WIRELESS ANTENNAS

6312 Georgetown Pike
McLean, Virginia

Submitted by the United States Postal Service

April 30, 2009

Abstract

The United States Postal Service has submitted an application to renew a permit for an existing telecommunications tower, and preliminary and final site plans for the installation of a new wireless link consisting of four panel antennas that will be mounted on the existing tower at the Turner-Fairbank Highway Research Center in McLean, Virginia. Also, proposed is one new equipment cabinet on the ground adjacent to the tower.

Commission Action Requested by Applicant

Approval of preliminary and final site development plans, pursuant to 40 U.S.C. § 8722(b)(1).

Executive Director's Recommendation

The Commission:

Approves the renewal of the permit for an existing communications tower, the preliminary and final site development plans for the installation of a wireless link consisting of four antennas on the existing tower, and the installation of a supporting equipment cabinet at the Turner-Fairbank Highway Research Center in McLean, Virginia for a period not to exceed five years, as shown on NCPC Map File No. 2201.00(38.30)42705.

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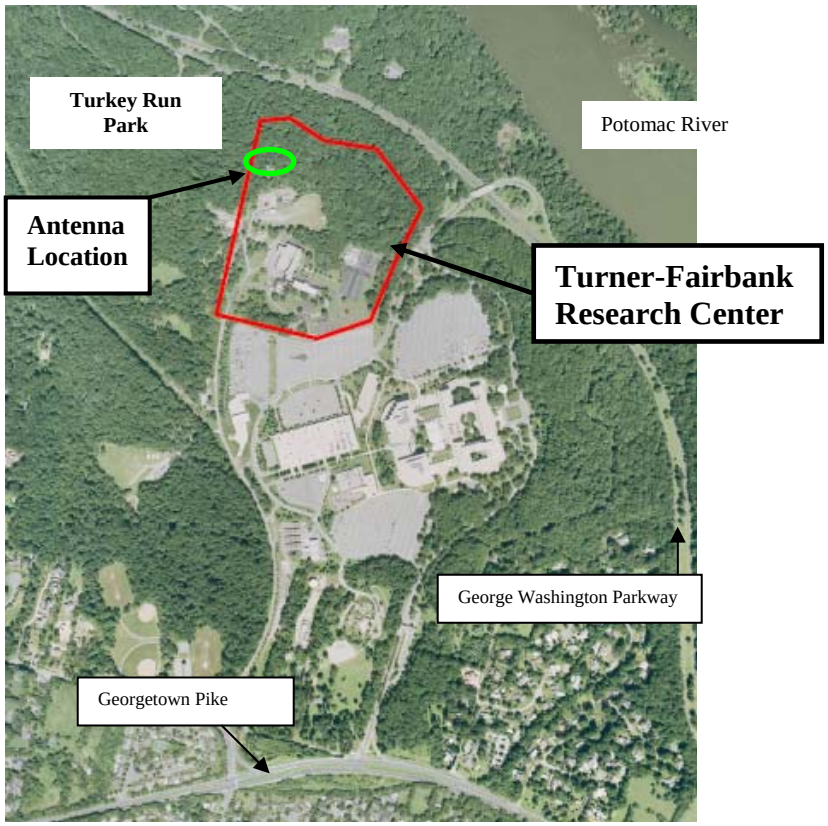
PROJECT DESCRIPTION

Site

VICINITY MAP



The Turner-Fairbank Highway Research Center (TFHRC) is located at 6312 Georgetown Pike in McLean, Virginia. The Research Center is bordered on the north by the George Washington Memorial Parkway, along the south and east by the Central Intelligence Agency (CIA) Headquarters, and on the west by parkland. TFHRC is accessed from the George Washington Memorial Parkway. The existing telecommunications tower is located in the northwest section of the Research Center.

Background

The Turner-Fairbank Highway Research Center (TFHRC) is owned and operated by the Federal Highway Administration (FHWA). The TFHRC is home to the FHWA's Office of Research, Development, and Technology. However, the United States Postal Service (USPS) leases and manages the existing tower from FHWA. The American Tower Corporation has leased the tower from the USPS. They have entered into an agreement with Cricket, a wireless phone provider, to install a wireless link on the tower. Verizon, Sprint, Nextel, T-Mobile, AT&T, Clearwire are other wireless providers that have antennas on the existing tower and support equipment shelters on the ground.

Prior Commission Actions

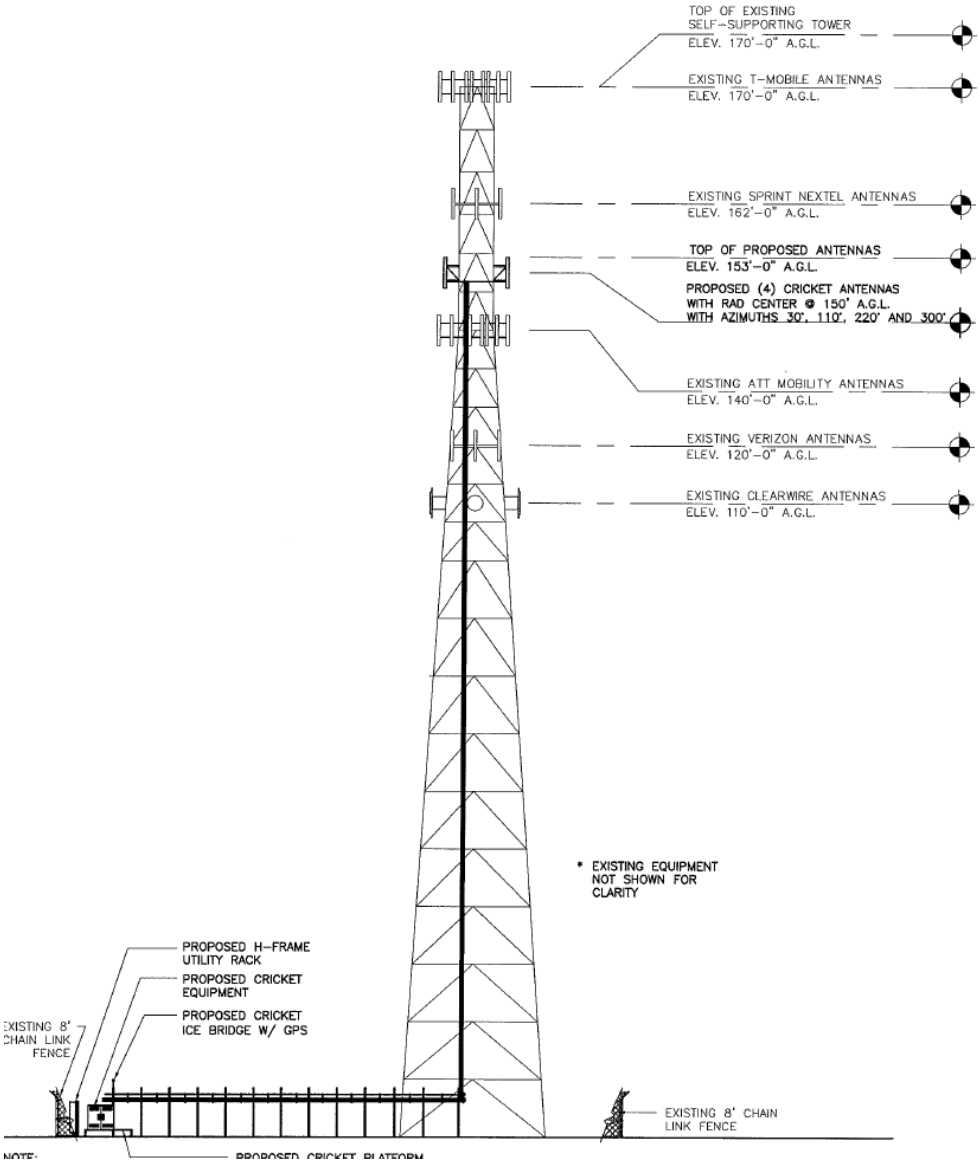
The existing telecommunications tower and five transmitting antennas were approved by the Commission at its July 9, 1998 meeting for a period not to exceed five years. The permit for the tower expired in 2003 and was not renewed; along with the proposed antennas, USPS is requesting renewal of the permit at this time.

At the 1998 meeting, the Commission approved the installation of the telecommunications tower in a 22,500-square-foot undeveloped area in the northwest corner of the Center. The site development included the construction of a 170-foot high, triangular-shaped, antenna tower, three parking spaces, and eight concrete pads for equipment buildings and/or cabinets. The antenna tower is approximately 22 feet wide at its base and tapers to 13 feet wide at its highest point. Initially, five cellular carriers could attach approximately 80 panel antennas to the tower. Each carrier would

install its antennas at different heights and there was additional space for three cellular carriers. The tower complex is surrounded by an eight-foot-tall chain link fence.

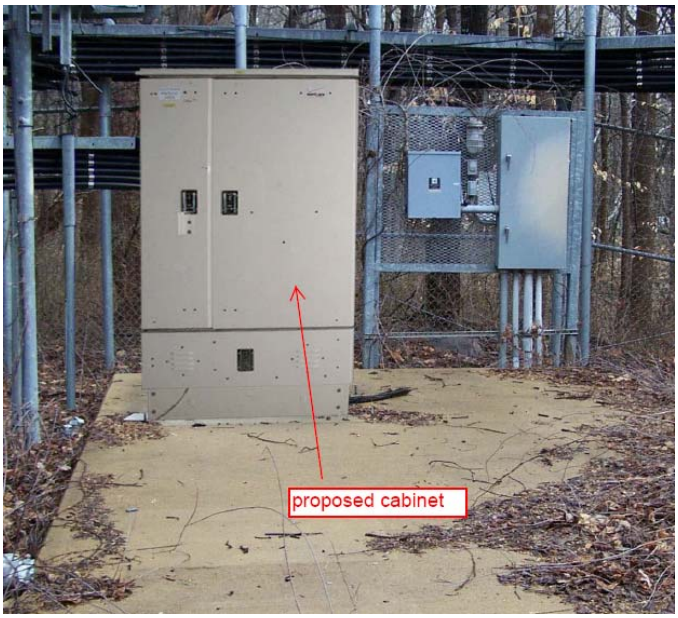
Proposal

The United States Postal Service (USPS) has submitted preliminary and final building plans for the installation of a wireless link consisting of four panel antennas that will be mounted on the existing 170-foot telecommunications tower at the Turner-Fairbank Highway Research Center in McLean, Virginia. The four new antennas will be mounted at 153 feet. The antennas measure 6.2 inches x 72 inches. Also proposed is the installation of a prefabricated equipment shelter on an existing concrete pad. The existing antennas and the proposed antennas are both transmitting and receiving antennas.



TOWER PLAN

EXISTING TOWER WITH PROPOSED ANTENNAS



PROPOSED EQUIPMENT CABINET IN EXISTING CONDITIONS

PROJECT ANALYSIS

Executive Summary

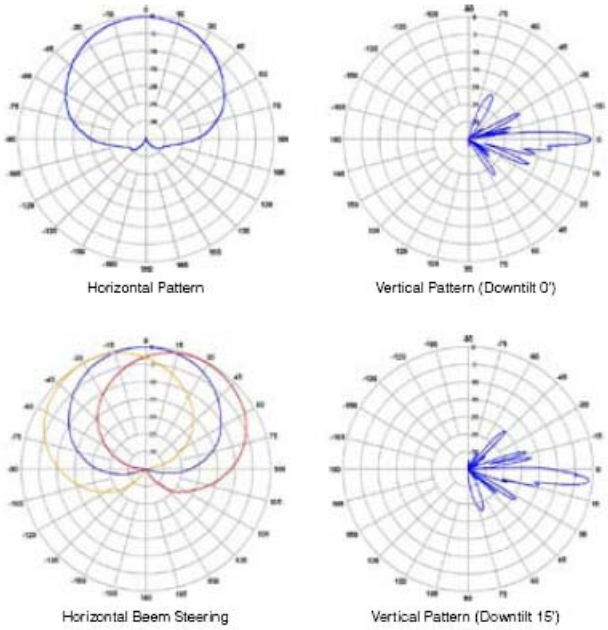
Staff finds that the proposed action meets the criteria of NCPC's Antenna Guidelines, and recommends approval of the proposed antenna installation, for a period not to exceed five years including approval of the supporting equipment necessary for the operation of the antennas.

The antennas will be located on an existing communications tower allowing for minimal visual impact, as well as limited environmental impact. The new supporting equipment will have limited visual effect on the surrounding area

The proposed antennas will provide service for Cricket's area-wide wireless network. Cricket proposes to use the existing structure to eliminate the need for a new communications structure.

EXISTING TOWER
(with proposed antennas digitally placed in)

RADIATION PATTERNS

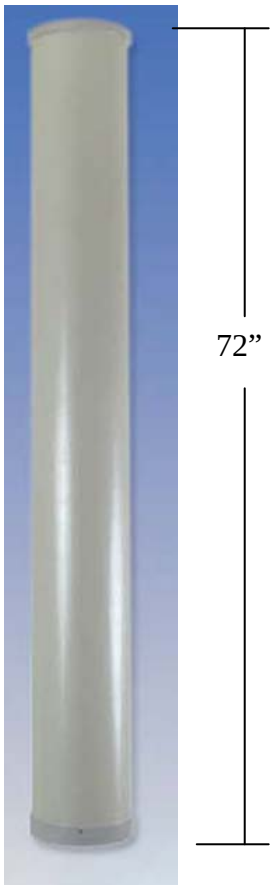


Radiofrequency Radiation Analysis

In accordance with NCPC's submission regulations, USPS has submitted information about radiation patterns for the proposed antennas and the existing antennas. The proposed new equipment cabinet is proposed on the ground surface of the tower base adjacent to the other equipment cabinets and will not emit radio signals.

The USPS submission documents show that the new antennas will not adversely affect human health and safety. The lack of potential hazards is partially attributed to the distance of the antennas above ground and that no similarly tall, habitable, structures are located in the vicinity of the

communications tower. Both the existing and new antennas are highly directional and will radiate most of the power towards the horizon rather than towards the ground. Since the antennas are located higher than 153 feet above the ground, no adverse emission levels will be encountered by the general public. The power densities of the proposed antennas do not significantly vary from the existing power output of other antennas currently placed on the communications tower. Cumulative RF effects are not significant and would not impact people on the ground.



Antenna Example

CONFORMANCE

Comprehensive Plan for the National Capital

Staff finds the telecommunications tower and proposed antennas comply with the goals and objectives of the Comprehensive Plan for the National Capital. The following polices adopted by the Commission in the Federal Environment Element indicate federal actions in the region should conform to the following policy:

> Evaluate the possibilities for joint-use of antennas and collocating antennas to reduce aesthetic impacts and limit the area of radiofrequency (RF) exposure. Federal agencies should also evaluate the cumulative effect of multiple transmitters at one location to ensure that the combined radiofrequency emissions continue to meet Federal Communications Commission guidelines.

Although, the telecommunications tower is partially visible from the nearby George Washington Memorial Parkway and from Glen Echo Park in Maryland, both of which are federally owned, the Section 106 process has determined that there is no adverse effect. Therefore, the proposed antenna tower is not inconsistent with the Comprehensive Plan’s polices relating to the protection of historic properties.

National Environmental Policy Act

The United States Postal Service has determined that the proposed antennas adhere to the conditions of their Categorical Exclusion 775.6(b)13 under its implementing procedures for the National Environmental Policy Act (NEPA), for acquisition, installation, operation, removal or disposal of communications systems, computers, and data processing equipment. As a result of the project location in the environs, NCPC does not have independent NEPA responsibility.

National Historic Preservation Act

The United States Postal Service has determined that the proposed antennas do not have an adverse affect on any building listed on the National Register of Historic Places. The Maryland State Historic Preservation Office concurred with the determination for historic resources located within Maryland. The Virginia State Historic Preservation Office concurred that undertaking will have no adverse effect on Virginia historic properties, specifically the George Washington

Memorial Parkway, provided that the original conditions for the tower are met, as stated in the June 16, 1998 letter from the Advisory Council on Historic Preservation: that all antenna installed on the tower are a neutral color and of non-reflective finish. For federal projects in the environs, NCPC does not have independent Section 106 responsibility.