

STAFF RECOMMENDATION

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NCPC File No. 6871



U.S. COAST GUARD TELECOMMUNICATION AND INFORMATION SYSTEMS COMMAND REPLACEMENT OF MARITIME SEARCH AND RESCUE COMMUNICATIONS SYSTEM AND SUPPORTING EQUIPMENT

7372 Telegraph Road
Fairfax County, Virginia

Submitted by the United States Coast Guard

September 25, 2008

Abstract

The United States Coast Guard is seeking approval for one Rescue 21 top-mounted Direction Finder (DF) antenna and three side-mounted antennas that will be installed on an existing communications tower at the U.S. Coast Guard Telecommunication and Information Systems Command, in Fairfax County, Virginia. One new equipment shelter, one propane tank, and an emergency backup generator are also proposed, as supporting equipment, on the ground adjacent to the communications tower.

Commission Action Requested by Applicant

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

Executive Director's Recommendation

The Commission:

Approves the installation of one Rescue 21 top-mounted Direction Finder (DF) antenna and three side-mounted antennas on an existing communications tower and the installation of supporting equipment at the United States Coast Guard Station - Telecommunication and Information Systems Command, Fairfax County, Virginia for a period not to exceed ten years, as shown on NCPC Map File No. 2204.21(38.30)42616.

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PROJECT DESCRIPTION

Site

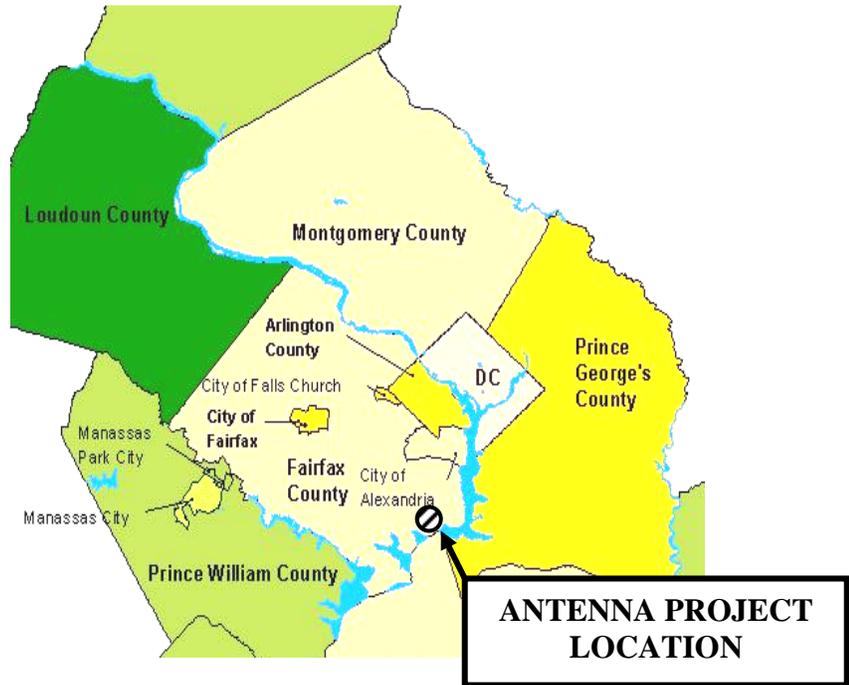
The United States Coast Guard Station is home to the Telecommunication and Information Systems Command (TISCOM) and the Navigation Center (NAVCEN). The Coast Guard Station occupies over 200 acres at 7323 Telegraph Road in Fairfax County, Virginia, north of Fort Belvoir. The communications tower is located in the east portion of the U.S. Coast Guard land.

Background

The communications tower for which the proposed antennas will be affixed to was erected in 1985 by the Federal Bureau of Investigation (FBI).

In March 2007, NCPC reviewed multiple renewals for antennas at TISCOM as delegated actions. One renewal consisted of an INMARSAT Standard B radome with enclosed dish antenna installed on a 20-foot-high tower adjacent to the west side of Building L04. Also renewed at this time were five antennas on two towers. The existing installation consisted of a 70-foot-high tower, Z01, located northeast of Building L08, with three whip antennas for VHF and UHF, and a 30-foot-high tower, Z07, attached to the southeast corner of Building L08, with a twin-boom satellite antenna installed on top. The antennas and towers were approved for a period not to exceed five years.

REGIONAL LOCATION



LOCATION OF THE COMMUNICATIONS TOWER WITHIN THE TISCOM COMPLEX



Proposal

The submission proposes one Rescue 21 top-mounted Direction Finder (DF) antenna and three side-mounted antennas that will be located on the existing 490-foot guyed communications tower, which is still owned by the FBI. The U.S. Coast Guard and the FBI

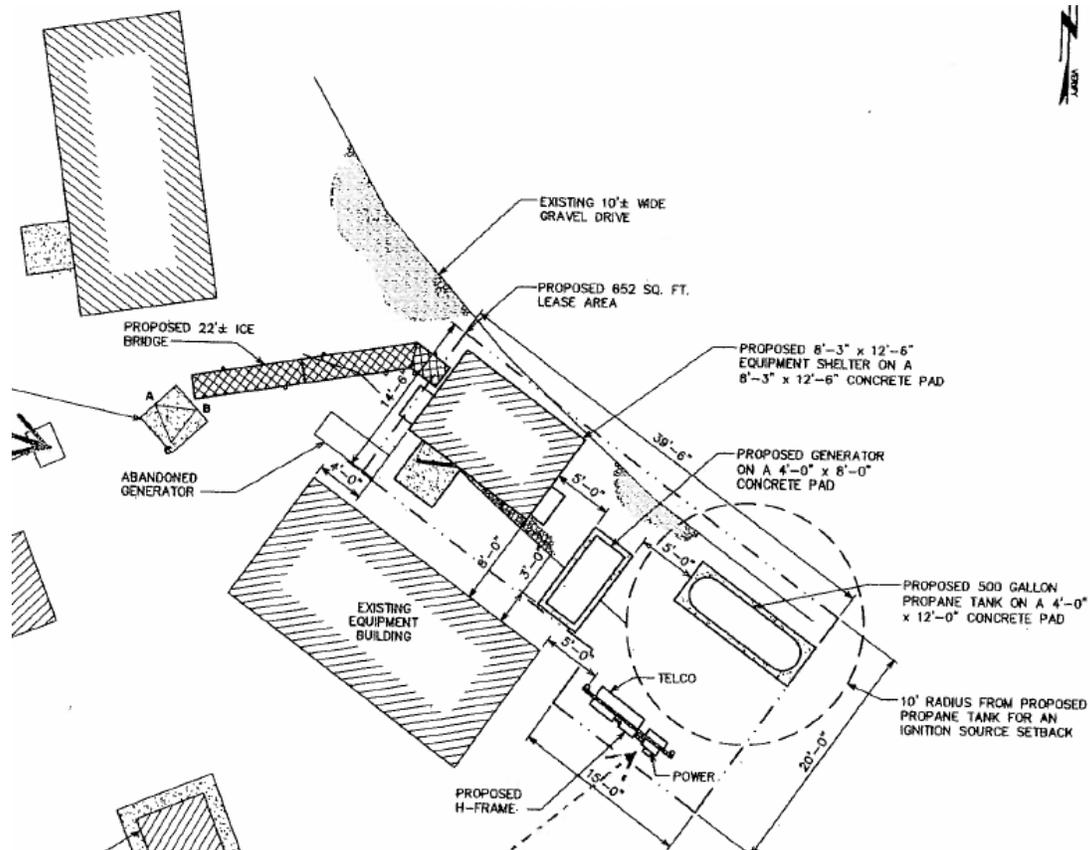
are currently undergoing discussions about transferring ownership of the tower to the U.S. Coast Guard. All FBI antennas have been removed from the tower. Other federal antennas will remain on the tower.

The new equipment is a result of U.S. Coast Guard's effort to modernize and replace their outdated maritime search and rescue communications system. The new equipment will serve to enhance coastal communications capability and reduce existing coverage gaps in VHF-FM marine communications used for U.S. Coast Guard operational missions. The new system, known as "Rescue 21" will be the maritime equivalent of a 9-1-1 communications system. The new system includes one Direction Finder Array, mounting height on the tower at 490 feet, one UHF Tx/RX antenna, mounting height at 475 feet, one VHF Rx antenna, mounting height at 449 feet, and one VHF Tx antenna, mounting height at 414 feet.

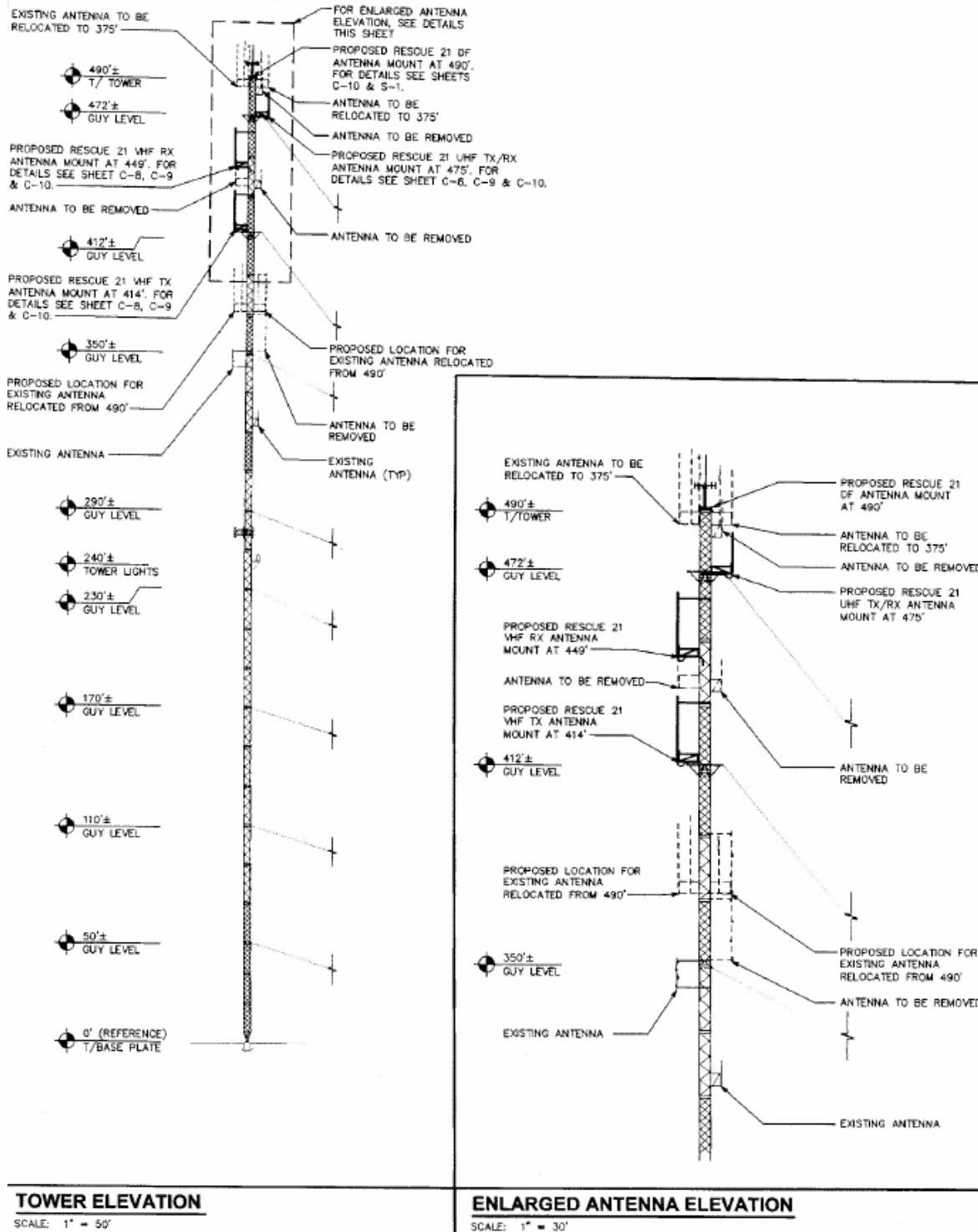
In order to install the new Rescue 21 system, outdated antennas will be removed. The U.S. Coast Guard has indicated that five antennas that are currently on the tower will be removed.

An 8-ft x 12-ft prefabricated equipment shelter, a 20 kW emergency backup generator and a 500 gallon propane tank will be installed on three concrete pads in the existing compound area. The tank will be strapped and anchored to prevent movement in the event of flooding. Approximately 180 feet of underground trenching for utilities and fiber optics will be constructed between the tower and the equipment shelter.

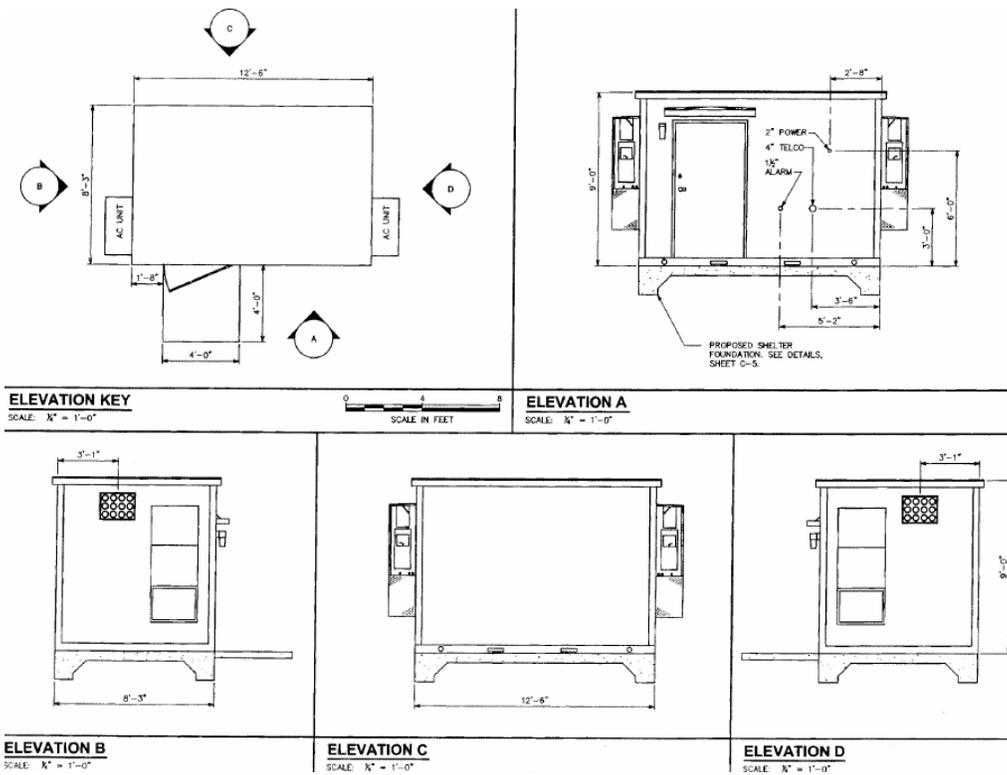
SITE PLAN



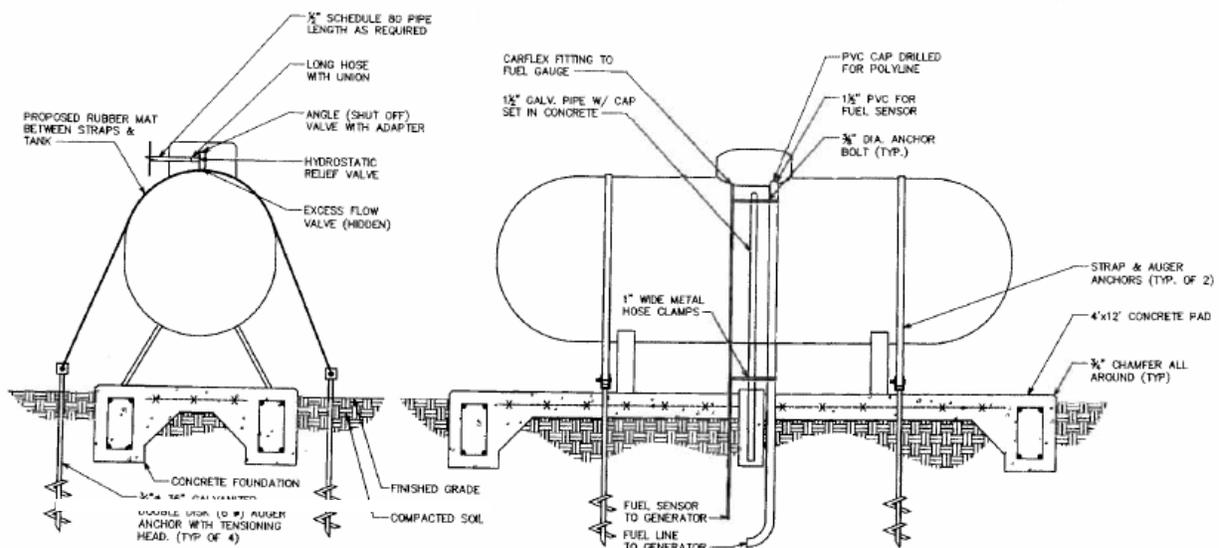
EXISTING TOWER PLAN INDICATING THE LOCATION OF PROPOSED ANTENNAS



ELEVATIONS OF PROPOSED EQUIPMENT SHELTER



ELEVATIONS OF PROPOSED PROPANE TANK



PROJECT ANALYSIS

Executive Summary

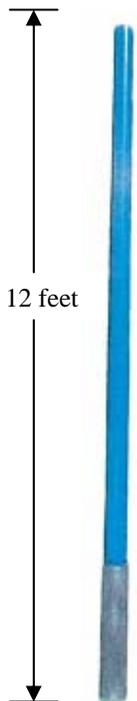
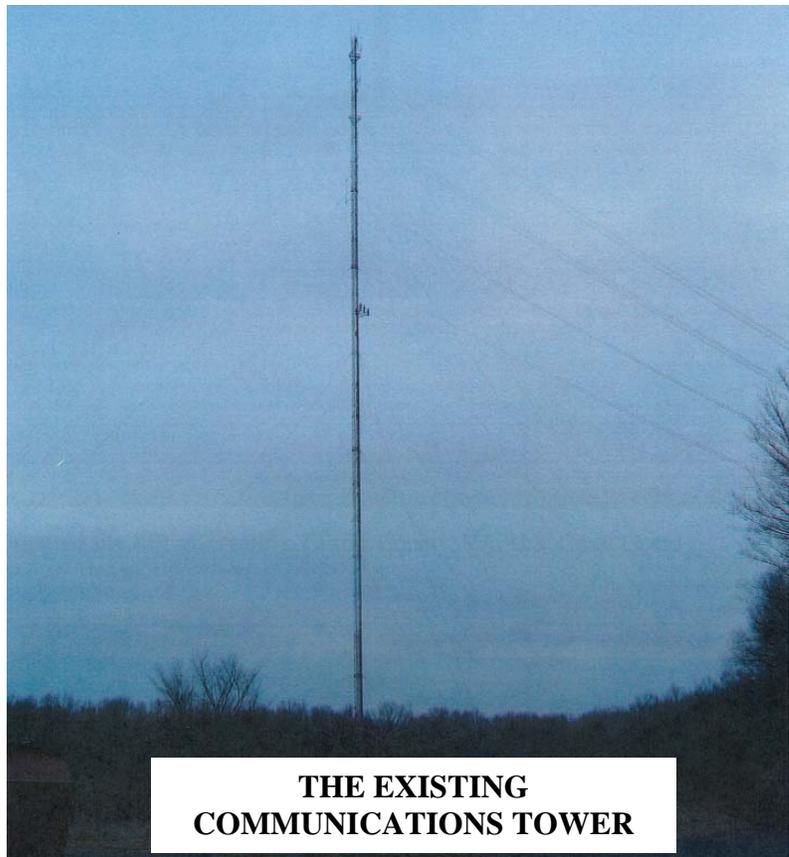
Staff finds that the proposed action meets the general criteria of Section 3 of the NCPC Antenna Guidelines, and recommends approval of the proposed antenna installation, for a period not to exceed ten years including approval of the supporting equipment necessary for the operation of the antennas.

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 to the surrounding area

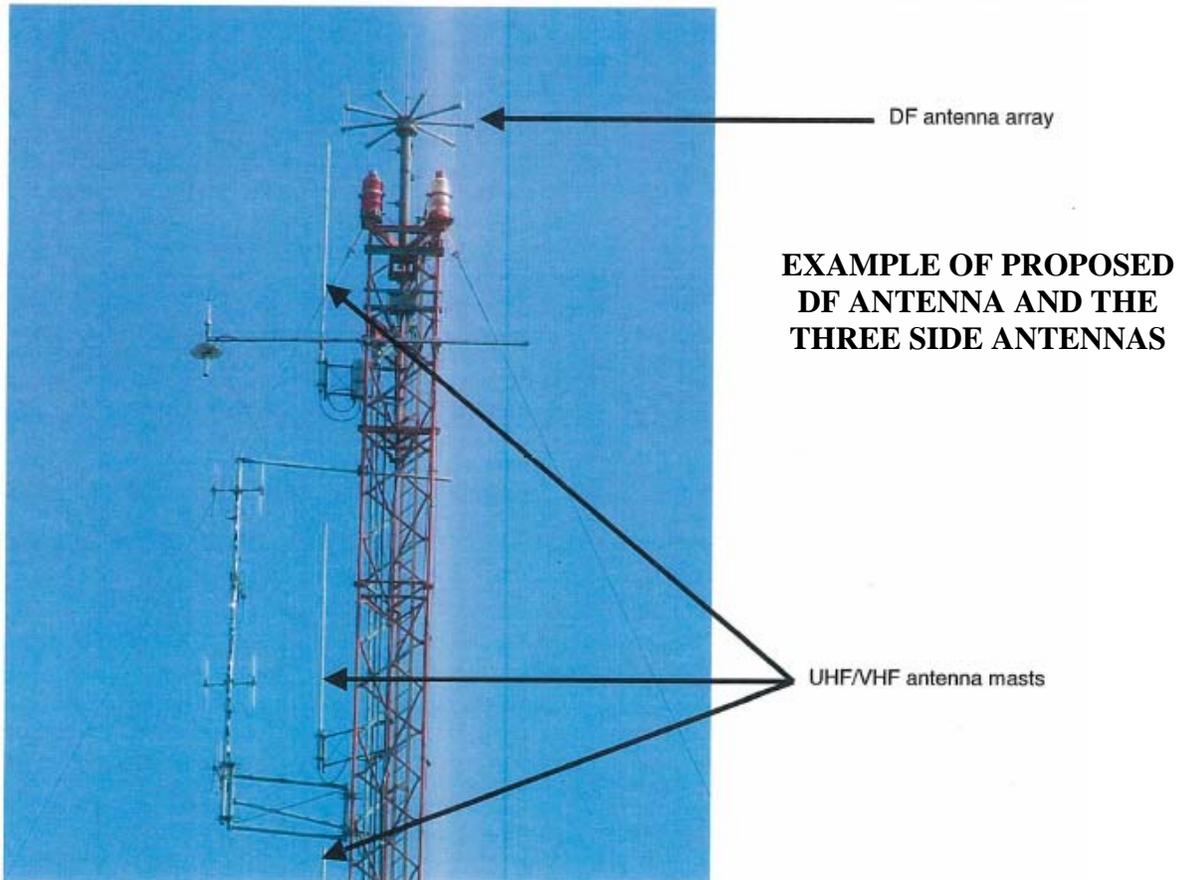
Radiofrequency Radiation Analysis

The U.S. Coast Guard has submitted information about the antennas, consistent with the Commission's applicable Guidelines and Submission Requirements for Antennas. Only one new equipment structure is proposed on the ground surface of the tower base adjacent to the other equipment shelters. None of the proposed equipment structures will emit radio signals.

Documents show 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 replacement antennas are highly directional and will radiate most of the power towards the horizon rather than towards the ground. Since all replacement antennas are located higher than 410 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.



EXAMPLE OF THE UHF Tx/RX ANTENNA



CONFORMANCE

Comprehensive Plan for the National Capital

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

Utilize advances in technology, such as fiber optics, cooperative antenna technologies, and teleports; and monitor changes in standards and guidelines for the installations of antennas

The Coast Guard is utilizing advances in technology by updating and replacing its out dated maritime search and rescue communications system. The Coast Guard has indicated that they will perform periodic upkeep of the antennas installations to ensure their continued safe operation.

Master Plan

The Commission approved a master plan for TISCOM in 1997. The antennas are not inconsistent with the master plan, which identifies the communications tower.

National Environmental Policy Act

The U.S. Coast Guard has found that the action can be categorically excluded under the National Environmental Policy Act (NEPA) by U.S. Coast Guard Categorical Exclusion #2f, an acquisition of real property through transfer of administrative control from another Federal agency to the Coast Guard where title to the property remains with the United States, and #2q, minor renovations and additions to buildings, roads, airfields, grounds, equipment, and other facilities that do not result in a change in the functional use of the real property. As a result of the project being located outside the District of Columbia, NCPC does not have independent NEPA responsibility for the action.

National Historic Preservation Act

The U.S. Coast Guard has determined that the project will not affect any buildings listed on the Register of Historic Places. Foundation excavations and ground work will be closely monitored by staff for evidence of artifacts. If artifacts are found, the Virginia State Historic Preservation Officer will be notified and any adverse effect will be mitigated. The Virginia Department of Historic Resources has concurred with the Coast Guard that the action will not have an adverse effect. As a result of the location of the project outside of the District of Columbia, NCPC does not have independent Section 106 responsibility.