

STAFF RECOMMENDATION

Hart

NCPC File No. 2326



CHANCERY OF THE PEOPLE'S REPUBLIC OF CHINA ROOFTOP SATELLITE DISH

International Chancery Center, Connecticut Ave, NW and Van Ness Street, NW
Washington, D.C.

Submitted by the United States Department of State

September 12, 2008

Abstract

The Department of State has submitted preliminary and final building plans for a rooftop satellite dish at the Chancery of the People's Republic of China, located within the International Chancery Center in northwest Washington, D.C.

Commission Action Requested by Applicant

Approval of preliminary and final building plans pursuant to Section 4 of the International Center Act, Public Law 90-553.

Executive Director's Recommendation

The Commission:

Approves the preliminary and final building plans for a rooftop satellite dish at the Chancery of the People's Republic of China, International Chancery Center, Connecticut Ave, NW and Van Ness Street, NW, as shown on NCPC Map File No. 72.10(38.00)41340 for a period not to exceed 10 years.

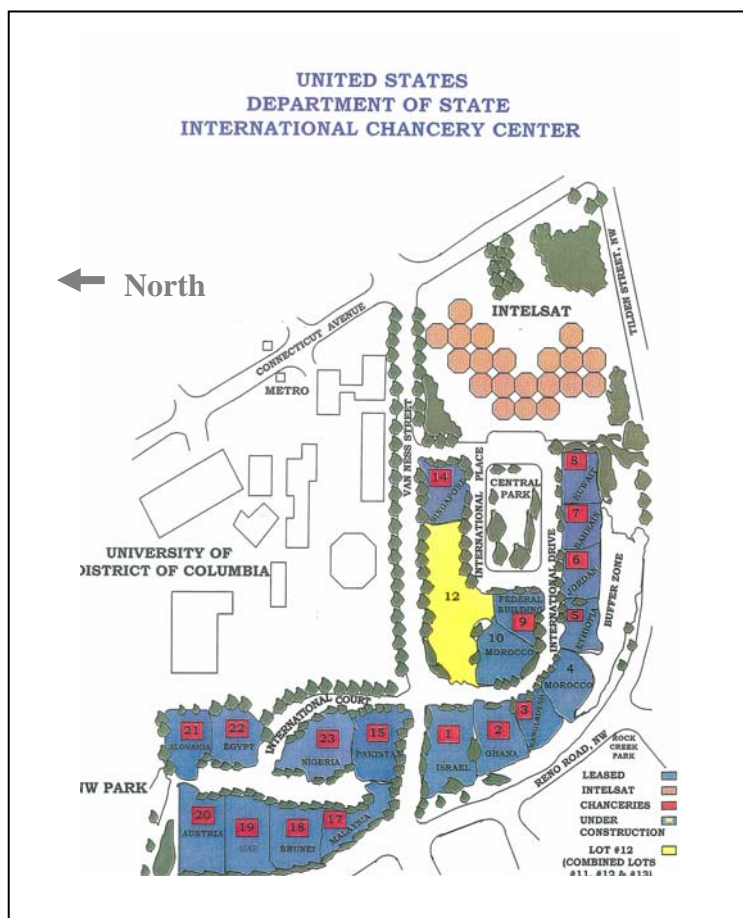
Recommends that the applicant place personnel warning signs on all doors leading to the Chancery roof, notifying all persons of potential exposure to microwave radio frequency transmissions.

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PROJECT DESCRIPTION

Site

The proposed satellite dish will be located on the roof of the newly constructed Chancery of the People’s Republic of China. This Chancery is located within the International Chancery Center, on Lot 12, see map below. This lot is bounded on the north by Van Ness Street, NW; on the south by International Place, NW, the existing Federal Office Building, and the site for the future embassy of Morocco; on the east by the Embassy of Singapore; and on the west by International Drive, NW.

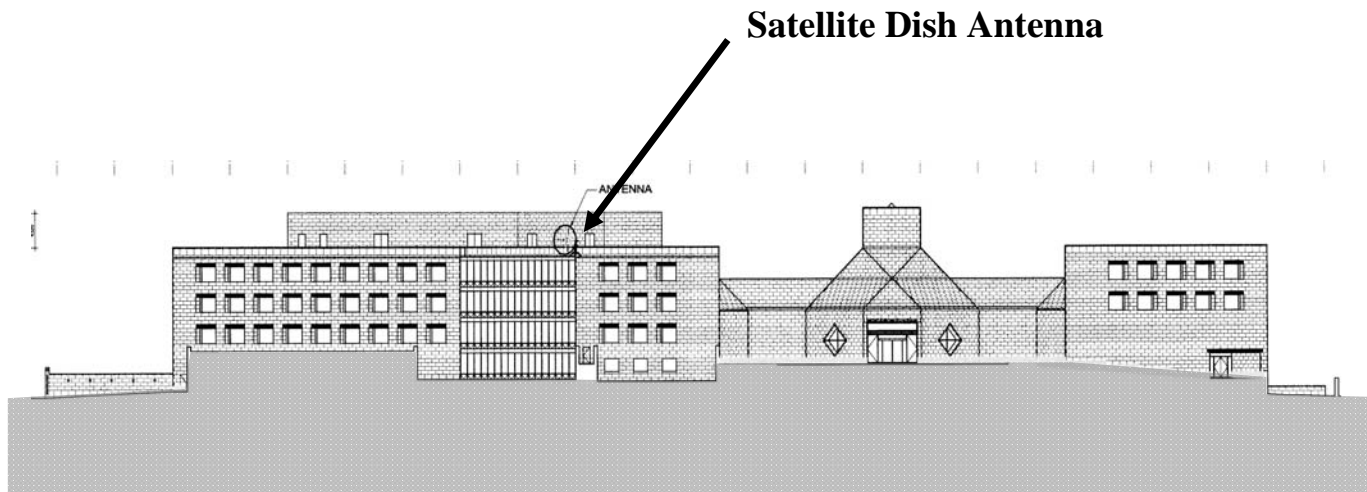
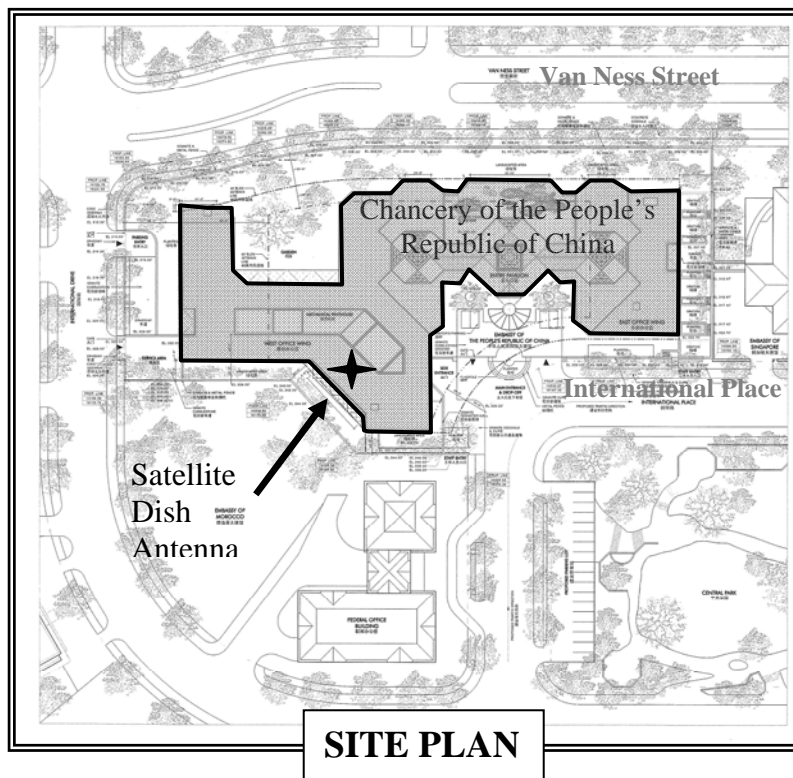


Background

In April 2004, the Commission approved the final site and building plans for the Chancery and in December 2006 approved the landscape plan for a parking area adjacent to the International Chancery Center’s Central Park in 2006. The Chancery was completed in 2008 and an official opening was held in July 2008.

Proposal

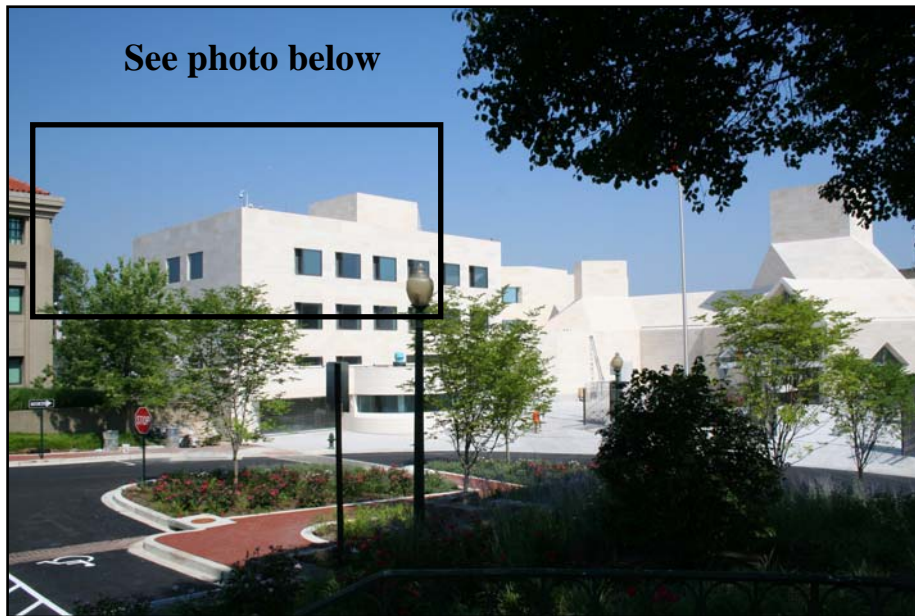
The Department of State proposes to allow the Chancery of the People’s Republic of China to place a 12-foot diameter satellite dish on the roof of the Chancery in order to send and receive transmissions via satellite. The dish will be located on the southern part of the western portion of the roof and will not be visible from International Place, or Van Ness Street, NW. It will be mounted on an 8-foot by 8-foot concrete pad. The incline angle of the dish is 27 degrees and will be mounted 12 feet from the edge of the roof near the penthouse. No other antennas are located on the roof.



**CHANCERY OF THE PEOPLE’S REPUBLIC OF CHINA—
SOUTH FAÇADE**

Satellite Dish Antenna Information – Intelsat 903

Frequency of transmission	6053 MHz
Transmitter power	10 watts
Transmitter antenna size	3.7 meters
Transmitter antenna beam width	0.86 degrees
Transmitter antenna elevation angle	27.55 degrees
Frequency band limits of transponder transmission	0.512 MHz
Spectral power density	-69 dBW/Hz



Front façade with mock-up of satellite dish. No part of dish can be seen.



Front façade detailed photo. Only a small portion of dish will be seen from International Place, NW. Portion of dish is highlighted inside circle.

PROJECT ANALYSIS

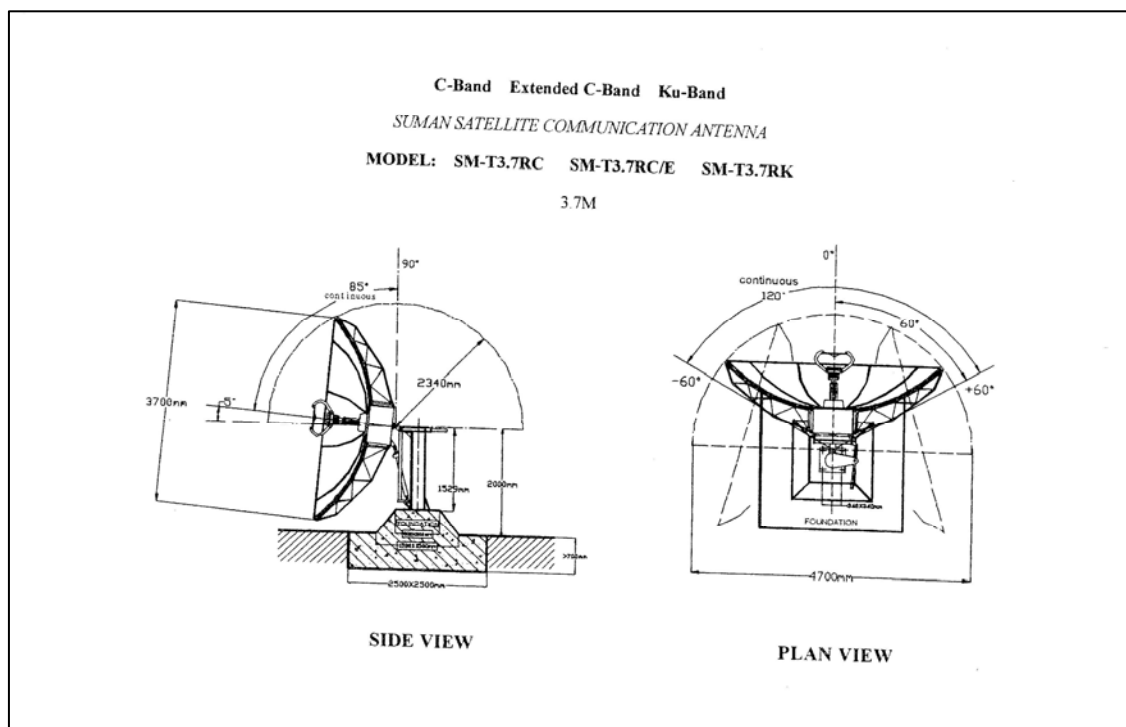
Executive Summary

Staff has reviewed this proposal and identified radio frequency transmission as the only federal interest issue. Staff recommends that because the satellite dish complies with the Commission guidelines, this proposal should be approved for installation. The following is an analysis of the radio frequency transmissions from the satellite dish to be installed.

Radio Frequency (RF) Evaluation

The new 3.7m antenna is an aperture or “dish” antenna. Aperture antennas include those used for such applications as satellite-earth stations and point-to-point microwave radio. These types of antennas have parabolic surfaces and many have circular cross sections. They are characterized by their high gain (power ratio), which results in the transmission of energy in a well-defined beam with little angular divergence. Systems using aperture antennas operate at microwave frequencies.

Microwaves are very short waves in the upper range of the radio spectrum used mostly for point-to-point communications systems handling all types of information, e.g., voice, data, facsimiles, and video, in either an analog or digital format.



The submitted satellite dish antenna would have power outputs in the range of 10 Watts. The role of the transmit amplifier associated with the antenna is to provide a sufficiently powerful signal that will reach an orbiting satellite and arrive back on earth to be reliably recovered by the receiver. The submitted satellite dish antenna utilizes a solid-state power amplifier (SSPA). An SSPA will typically be sealed against the elements and mounted outside, on the antenna. In the submitted project, no public access to the vicinity of the dish location or power amplifier can be

achieved. The amplifier operational characteristics meet all Federal Communication Commission (FCC) standards for this electronic component. Embassy personnel control all embassy roof access and access is limited to authorized persons only.

The project data indicates the Commission submission criteria have been accomplished and documented as required. As noted, no RF spillover would be present due to the inclined angle of the antenna toward the sky and the concentrated focus of the upward signal. Downlink signals are diverse and (with low power) much weaker, having no health hazard effect.

Staff review concludes that the submitted antenna installation complies with all Commission requirements regarding RF effects and that the proposed facilities protect the health and welfare of the public from potential adverse biological effects of the proposed transmitting antenna. Cumulative RF effects have been taken into consideration in the review of the new antenna proposal by staff. All significant contributions to the RF environment should be considered, not just those fields associated with one specific source. For purposes of such evaluation, 'significant' is defined in accordance with FCC guidance to mean considering any transmitter producing more than 5% of the applicable exposure limit (in terms of power density or the square of the electric or magnetic field strength) at any accessible locations. Because no other antenna exists near or adjacent to the roof location of the evaluated antenna, it was determined no cumulative RF effect occurs.

CONFORMANCE

International Chancery Center Master Plan

The proposal is consistent with the Master Plan and Development Controls for the International Chancery Center.

National Environmental Protection Act (NEPA)

Staff finds the proposed satellite dish installation acceptable and in conformance with current FCC requirements for the proposed use. Staff also finds the proposed satellite dish adheres to the Commission's exclusion requirement, number 20, for antennas installed on federal buildings.

National Historic Preservation Act (NHPA)

There are no historic properties located in the immediate vicinity. The U.S. Department of State has no further requirements under Section 106 of the National Historic Preservation Act. Staff concurs with this determination.

CONSULTATION

Coordinating Committee

The Coordinating Committee reviewed this item at its meeting on September 10, 2008 and forwarded the proposal to the Commission with the statement that the project has been

coordinated with all agencies participating. The agencies present at this meeting included: District of Columbia Office of Planning, District Department of Transportation, National Park Service, General Service Administration, NCPC and WMATA.

Commission of Fine Arts

The Commission of Fine Arts approved this proposal on August 27, 2008 by a delegated action. This approval was conditioned on the satellite dish being painted a color that matched the color of the penthouse. The U.S. Department of State has relayed this condition to the Chancery representatives.