STAFF RECOMMENDATION

National Capital Planning Commission

Weil

NCPC File No. 6976

NASA GODDARD SPACE FLIGHT CENTER
VERIZON WIRELESS COMMUNICATIONS FACILITY

8800 Greenbelt Road
Greenbelt, Maryland

Submitted by the National Aeronautics and Space Administration

August 26, 2010

Abstract

The National Aeronautics and Space Administration has submitted preliminary and final site and building plans for a wireless communications facility at the Goddard Space Flight Center campus in Greenbelt, Maryland. The facility consists of one, 100-foot monopole with 15 transmitting and receiving antennas, one ancillary support shelter, and a perimeter security fence.

Commission Action Requested by Applicant

Approval of preliminary and final site and building plans pursuant to 40 U.S.C. § 8722(b)(1) and NCPC's *Guidelines and Submission Requirements for Antennas on Federal Property in the National Capital Region* adopted on January 7, 1988, as amended.

Executive Director's Recommendation

The Commission:

Approves the preliminary and final site and building plans for the installation of a wireless communications facility consisting of one, 100-foot monopole with 15 transmitting and receiving antennas, one ancillary support shelter, and a perimeter security fence on the Goddard Space Flight Center campus, as shown on NCPC Map File No. 3214.00(38.30)42856, for a period not to exceed five years.

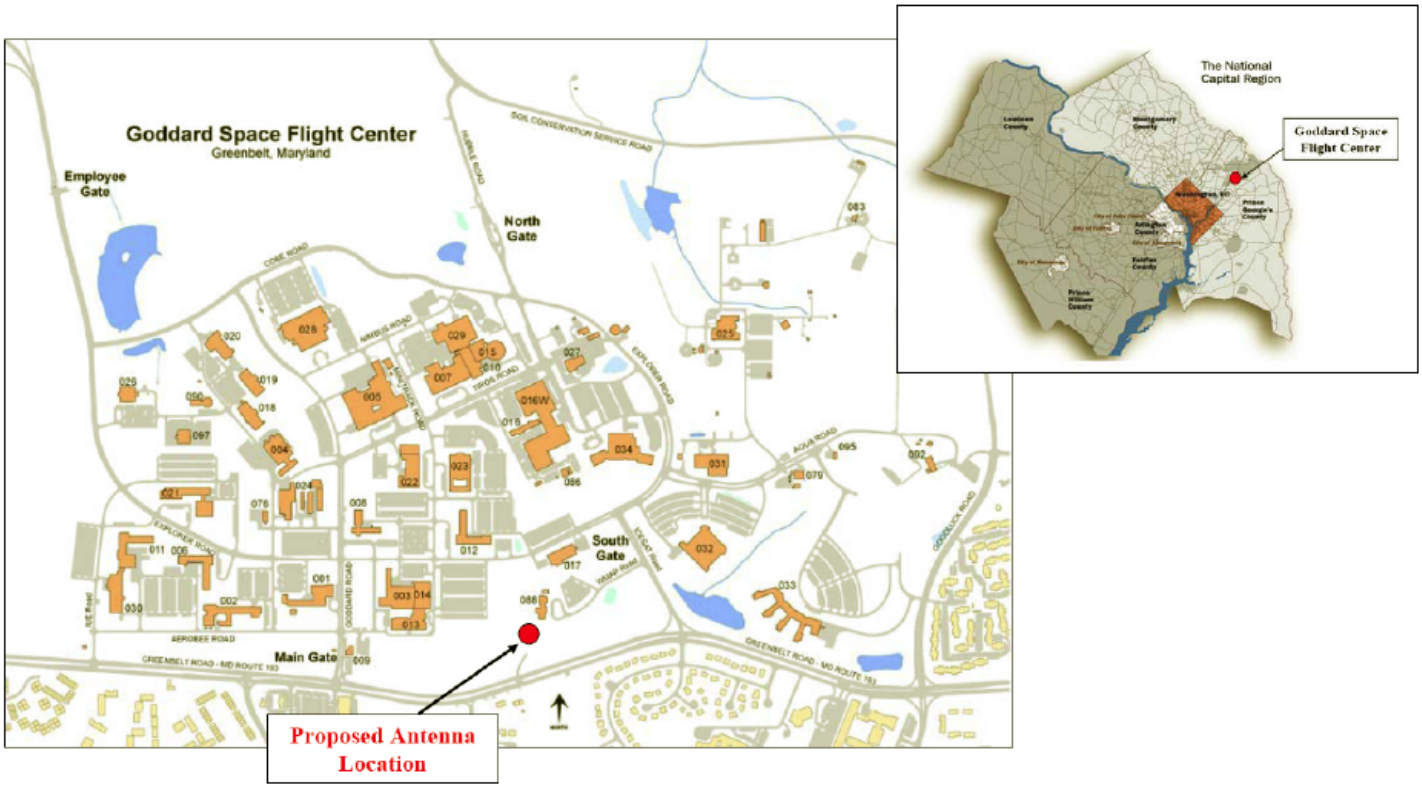
Supports continued implementation of the 2003 Goddard Space Flight Center Facilities Master Plan which calls for reinforcing the campus's southern wooded buffer zone by planting trees along the north side of the proposed wireless communications facility.

* * *

PROJECT DESCRIPTION

Site

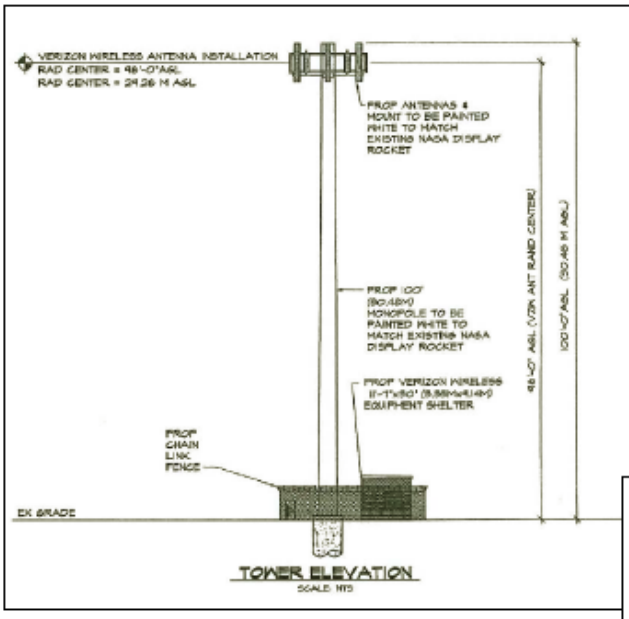
The Goddard Space Flight Center (GSFC) is located at 8800 Greenbelt Road in Prince George's County, Maryland, approximately 6.5 miles northeast of Washington, DC. The federal campus is bordered on the north by the City of Greenbelt and Soil Conservation Road; to the south by Greenbelt Road; to the east by Good Luck Road; and on the west by a residential neighborhood and Baltimore-Washington Parkway (MD 295). The communications facility is proposed to be located on the south side of the campus, close to the Visitor's Center and main entrance, as shown in the following graphic.



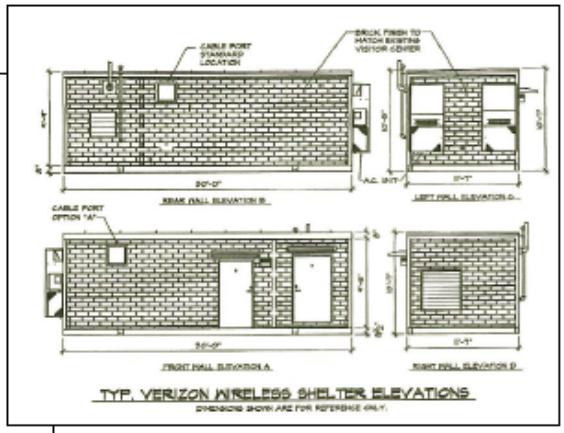
Proposal

The National Aeronautics and Space Administration (NASA) has submitted preliminary and final site and building plans to install a Verizon Wireless communications facility consisting of one, 100-foot monopole with 15 transmitting and receiving antennas, one ancillary support shelter, and a perimeter security fence, as shown in the following plans.

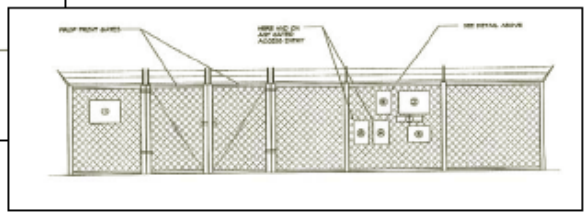
Monopole Details



Building Elevation

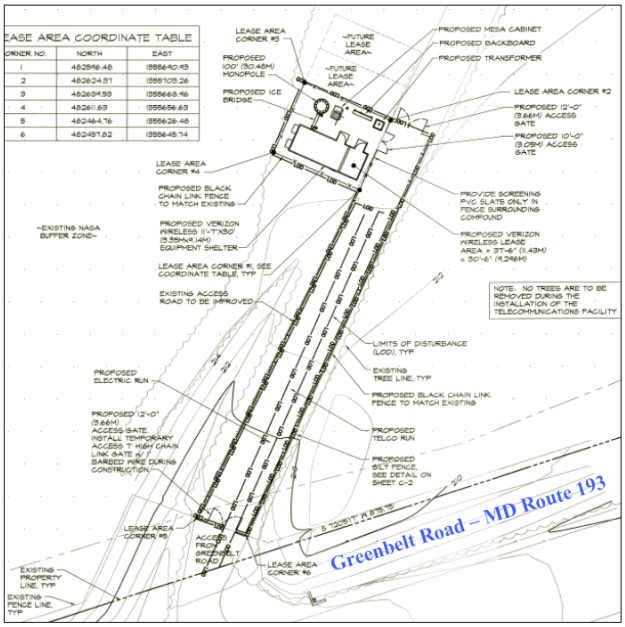


Security Fence

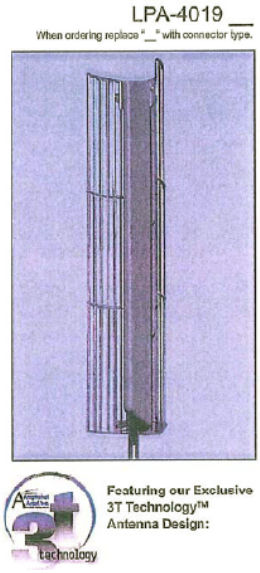


The communications facility would be directly accessible from Greenbelt Road (MD Route 193) by an unimproved, dead-end service road, as shown in the following plan. As such, Verizon maintenance vehicles will be able to conduct regular inspections and service visits to the facility without entering the Main Gate security inspections. The service road will be closed to the general public with a limited access gate.

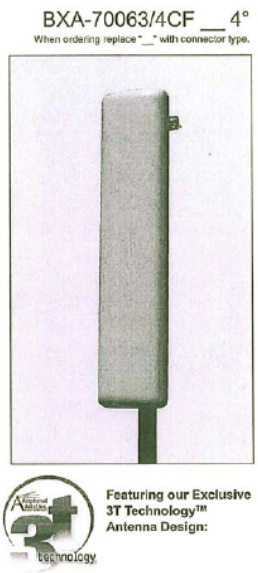
Site Plan



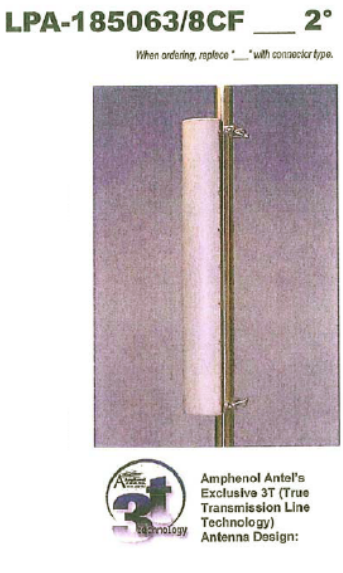
The proposed antennas will be mounted on the top of the monopole, with six antennas measuring approximately 94.50" x 21.25" x 13.65" in size, six antennas measuring approximately 47.2" x 6.6" x 5.8" in size, and three antennas measuring approximately 94.6" x ll.2" x 4.5" in size.



(6 antennas)



(3 antennas)



(6 antennas)

The antennas and mounting materials will be painted white to match the proposed monopole and nearby Visitor Center displays to help reduce the facility's on-campus visual impact. As specified in Verizon's FCC license for the facility, the transmitting frequencies for the antennas will be between the 696-960 MHz (cellular) and the 1850-1900 MHz (PCS) ranges to prevent interference with any AM and FM radio, televisions or other transmissions in the vicinity of the site.

Verizon Wireless will conduct regular periodic inspections of its facility to ensure its continued, safe operation. The proposed monopole and ground level equipment will be located within a locked fenced compound area. The leasing document currently being developed with NASA Goddard requires regular maintenance, including periodic painting and refurbishment, and/or replacement of damaged or worn out parts.

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.

Radiofrequency Radiation

In accordance with NCPC's submission regulations, NASA has submitted a radio-frequency safety report and information about radiation patterns for the proposed facility. The following excerpt is provided from the report certifying that the facility will comply with all federal and professional safety standards:

> **In summary, the proposed communications facility will comply with all applicable exposure limits and guidelines adopted by the FCC governing human exposure to radiofrequency electromagnetic fields (FCC Bulletin OET 65). Since the facility will comply with the regulations set forth by the FCC, it will also comply with the regulations of the Occupational Safety and Health Administration (OSHA).** Federal law (FCC Rule Title 47 CFR 1.1307 and 1.1310) sets the national standard for compliance with electromagnetic field safety. The FCC exposure limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI). **Thus, there is full compliance with the standards of the IRPA, FCC, IEEE, ANSI, and NCRP.**

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. The antennas will be located approximately 100 feet above the ground (96-foot centerline) so that no adverse emission levels will be encountered by the general public.

Additionally, the report draws the following conclusions in support of the safety of the facility as it relates electromagnetic exposure of telecommunications workers and the general public.

CONCLUSIONS:

1) **No harmful electromagnetic fields will exist at the base of the proposed facility, nor in any areas in close proximity to the proposed structure.**

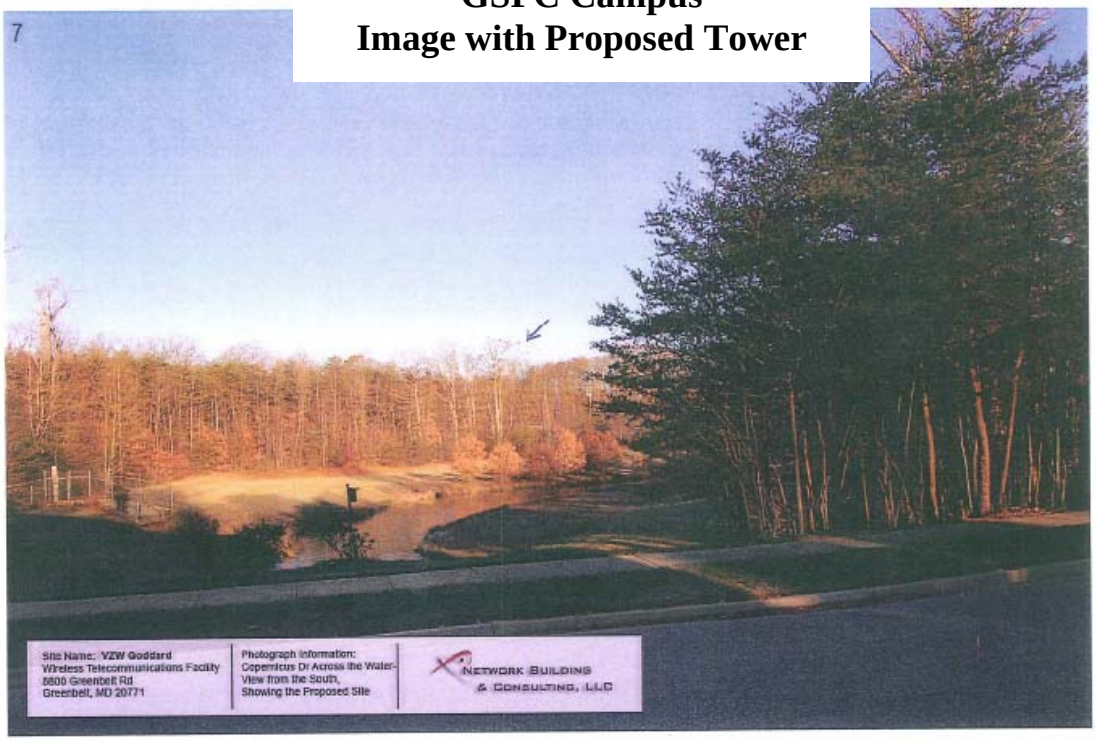
2) **Verizon Wireless takes appropriate measures to ensure that all telecommunications facilities (including this proposed facility) comply with applicable exposure limits and guidelines adopted by the FCC governing human exposure to radiofrequency electromagnetic fields (FCC Bulletin OET 65).**

3) **In cases where such compliance exists, the subject of electromagnetic field safety is preempted**. The Telecommunications Act of 1996 states that: "No state or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the [FCC's] regulations concerning such emissions." Telecommunications Act of 1996, § 332[c][7][B][iv].

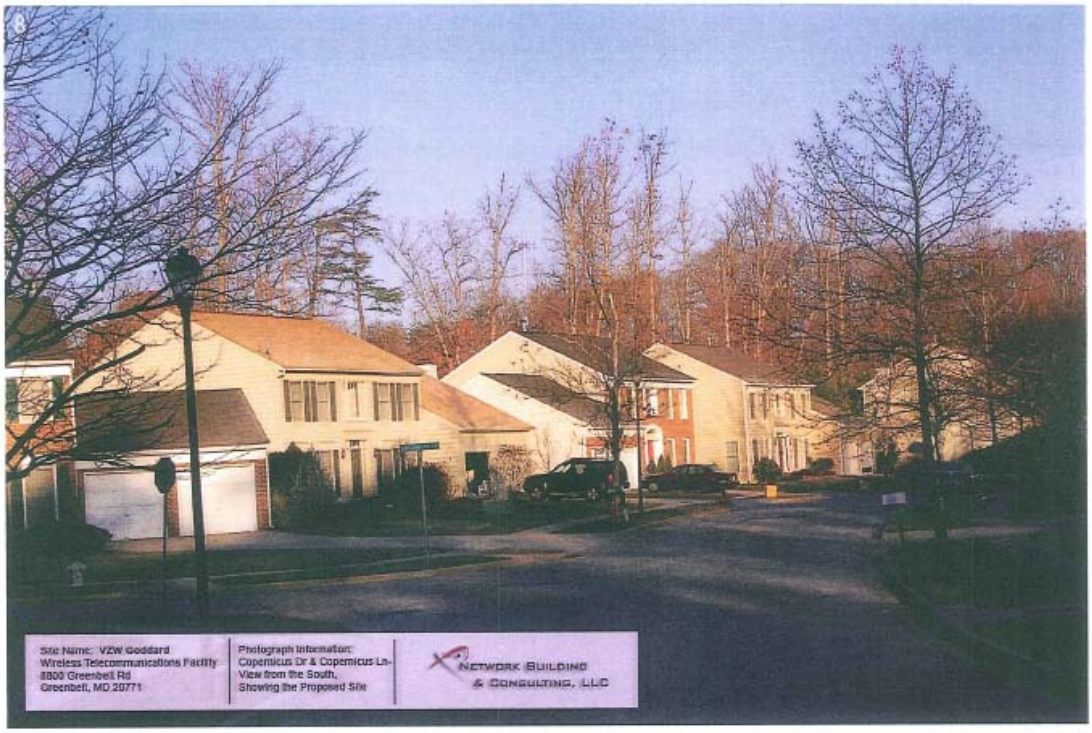
Viewshed Analysis

The proposed monopole will be located in a heavily wooded area which will conceal the entire ground-based compound area and most of the tower from views outside of the GSFC Campus, as shown in the following simulation photographs.

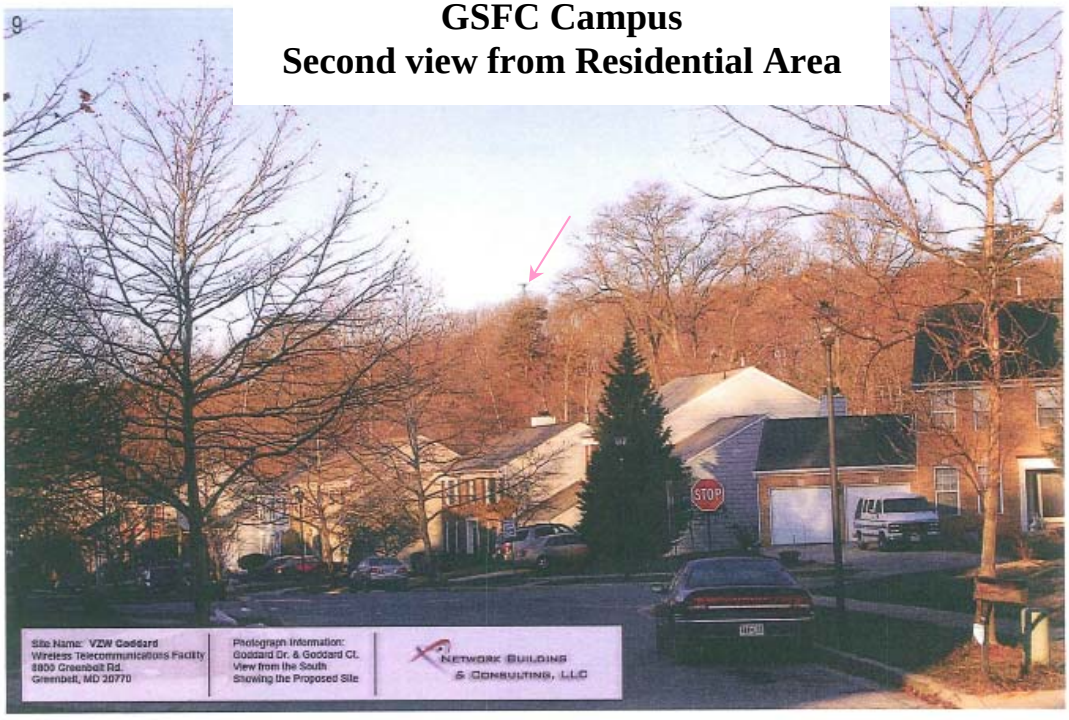
GSFC Campus
Image with Proposed Tower



GSFC Campus
View from residential area



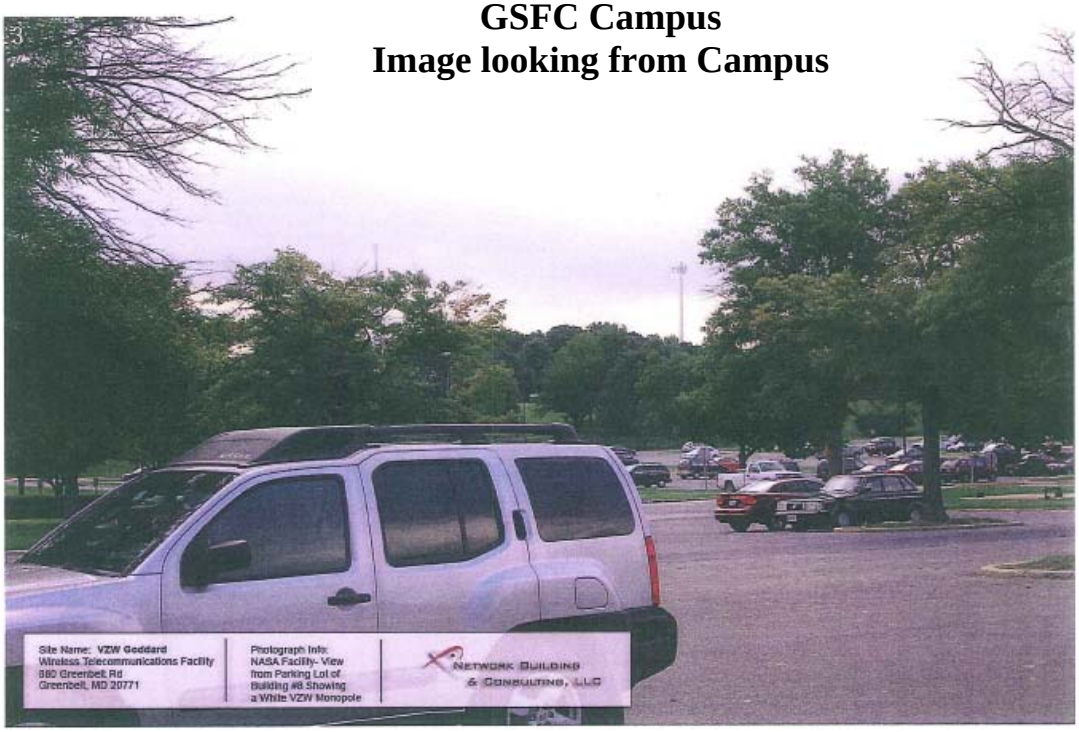
GSFC Campus
Second view from Residential Area



As previously mentioned, the entire monopole and all antennas will be painted white to match adjacent NASA Visitor Center displays, and the equipment shelter will be constructed using orange/red brick to match nearby NASA buildings. The following simulation photographs illustrate the visual impact of the facility on several on-campus perspectives.

GSFC Campus
Image with Proposed Tower

GSFC Campus
Image looking from Campus



GSFC Campus
Image looking from Campus

CONFORMANCE

Comprehensive Plan for the National Capital

Staff's review finds that the proposed telecommunications antennas comply with the goals and objectives of the Comprehensive Plan. The following policy from the Federal Environment Element, applies to this particular project.

> "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".

Staff has determined that the antenna installation would not have an effect on other federal facilities or federal interests.

Relevant Federal Facility Master Plan

The Commission approved 2003 campus master plan included a "Partnering / Outreach" (P+O) Zone, which is an area on campus that promotes partnering with outside organizations. The proposed Verizon Wireless communication facility is not inconsistent with the master plan as the project site is located adjacent to this zone, as indicated in the image below.

GSFC Campus
Development Zones

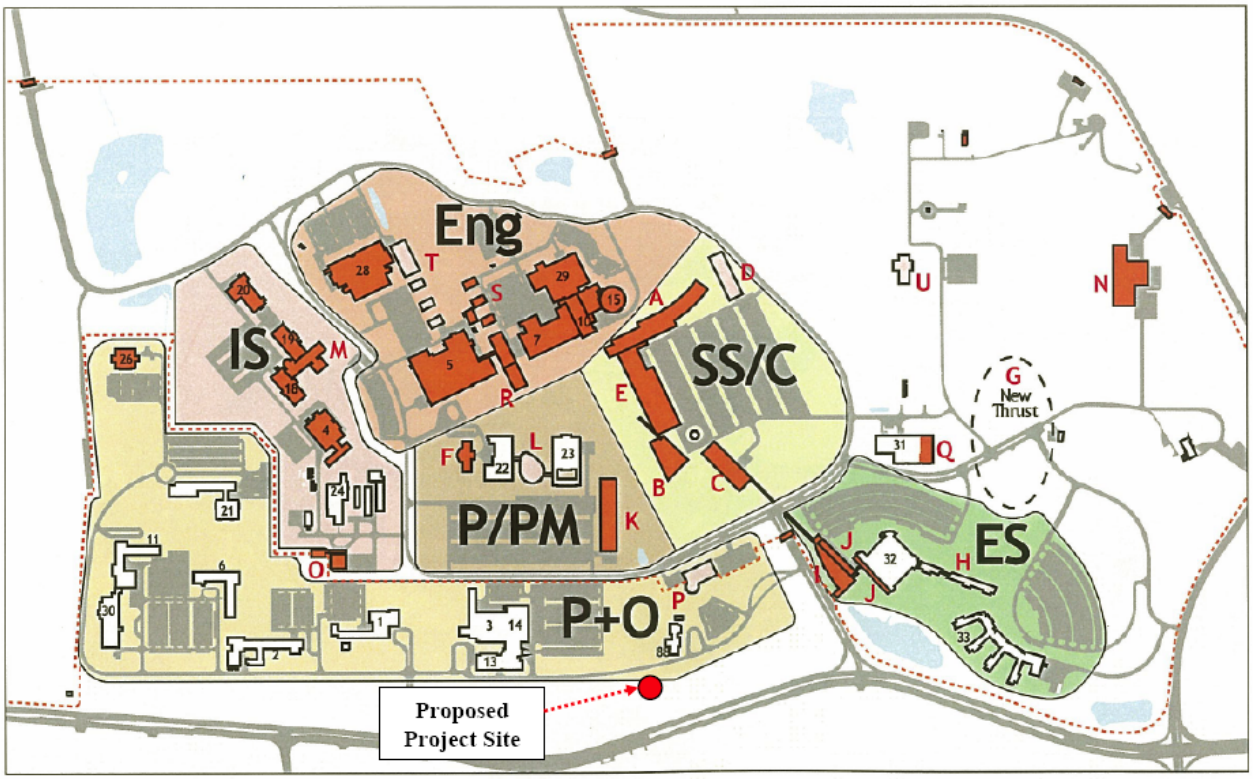
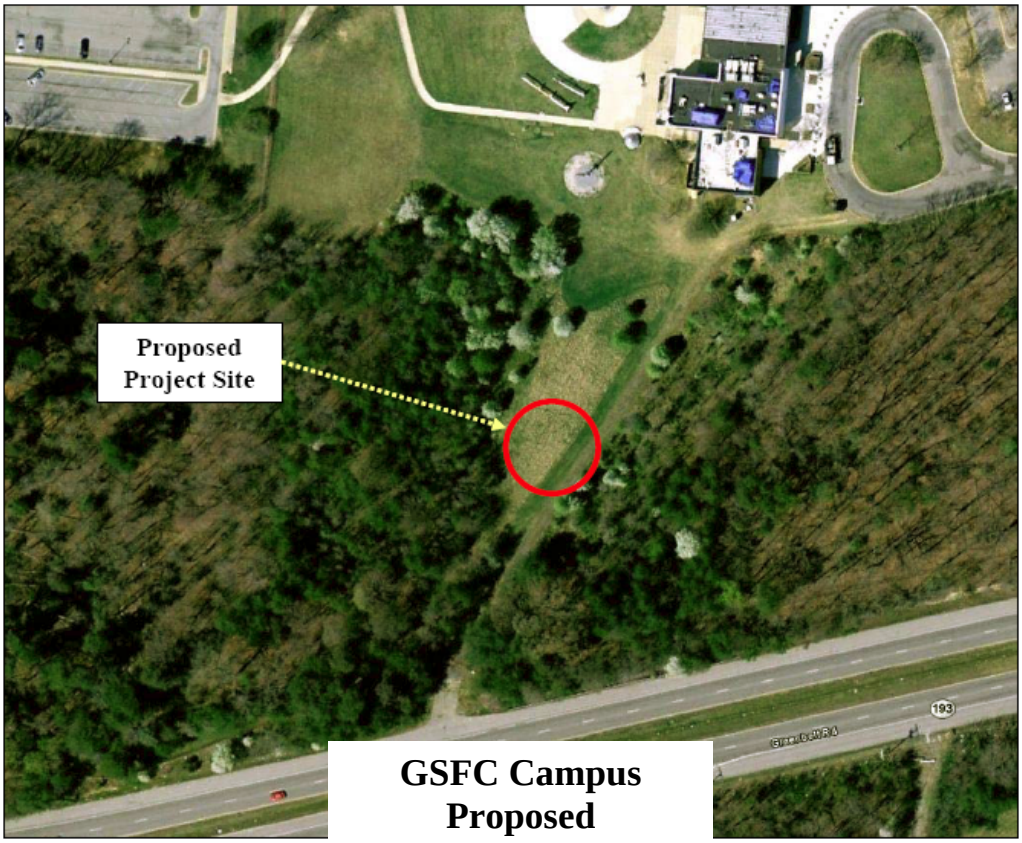


fig. 7 Proposed land use

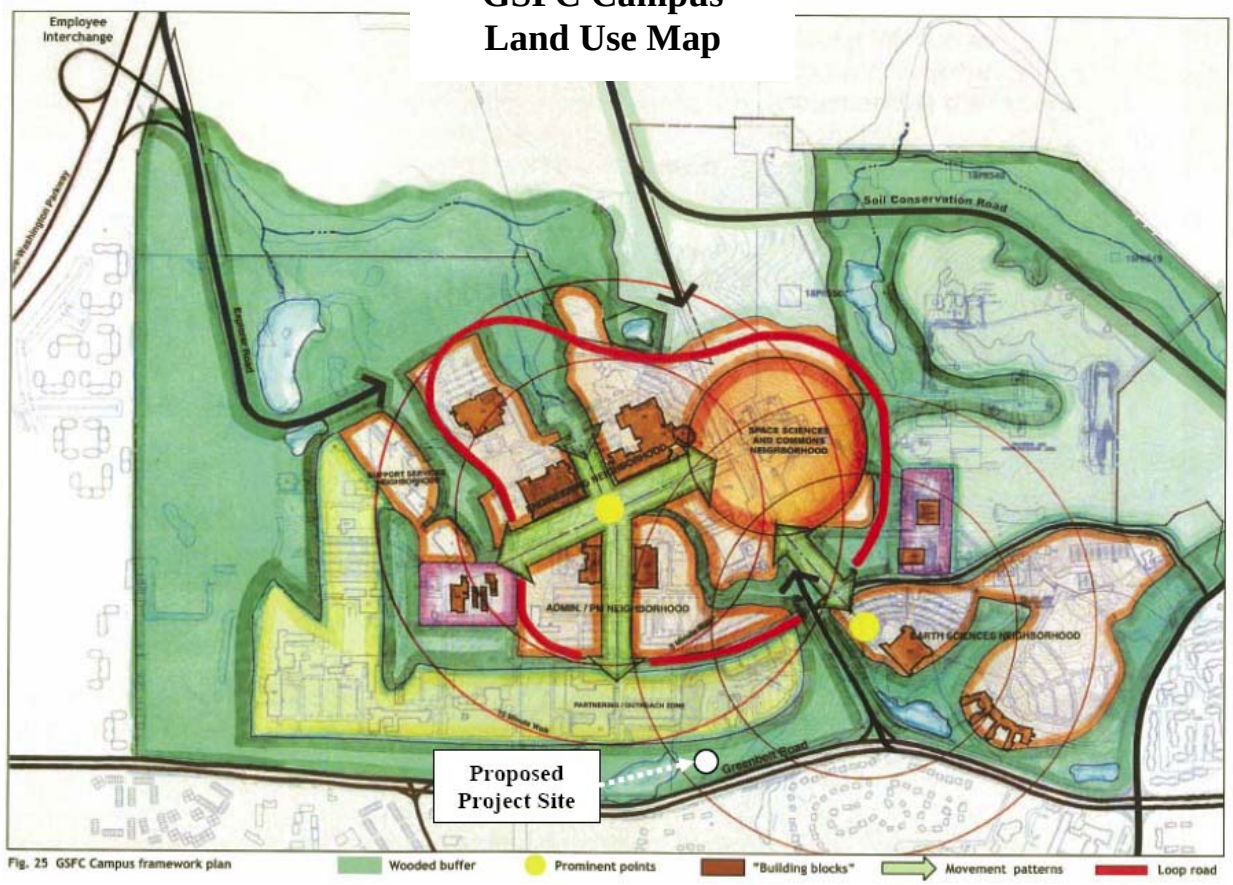
Additionally, the location will not interfere with the GSFC mission and is readily accessible by outside service vehicles via an existing limited-access gate and unimproved roadway. The site is also located in an area that would not require the removal of any existing trees as indicated by the following aerial photograph.



GSFC Campus
Proposed

Staff notes that the 2003 master plan includes "Open Space and Landscape – Campus Framework Guidance" to *Reinforce the wooded buffer zone that has for so long been a welcome respite in the increasingly dense suburban development along Greenbelt Road.* As such, NASA should continue to implement its future campus framework by planting trees in the open space along the north side of the proposed facility. This would shift the existing tree line northward toward the Visitor Center, and widen the wooded buffer along the south side of the GSFC Campus as indicated on the graphic below.

GSFC Campus
Land Use Map



National Environmental Policy Act (NEPA)

NASA required the completion of an environmental checklist by Verizon Wireless to help GSFC staff assess potential environmental impacts caused by the proposed facility. Based on the checklist, NASA made the determination that the project qualifies as a categorical exclusion pursuant to 14 CFR 1216.305(d)(7) which if for: *minor construction of new facilities.*

For federal projects in the environs, NCPC does not have an independent NEPA responsibility.

National Historic Preservation Act (NHPA)

The project was reviewed by the NASA Goddard Historic Preservation Officer (HPO) and a determination was made that the communications facility would have no adverse effect on the campus. Furthermore, the HPO concluded that there were no further considerations required by the Maryland State Historic Preservation Office (SHPO).

For federal projects in the environs, NCPC does not have independent Section 106 responsibility.

CONSULTATION

Prince George's County / City of Greenbelt, Maryland

The project proposal was submitted to the Prince George's County, Telecommunications Transmission Facility Coordination Committee and the City of Greenbelt, Maryland for their review, and both groups issued letters of endorsement for the project as evidenced through the following letters.

THE PRINCE GEORGE'S COUNTY GOVERNMENT

Department of Environmental Resources

Charles W. Wilson
Director

February 18, 2010

Mr. Alan Binstock
GSFC Master Planner
NASA Goddard Space Flight Center
Code 221
Greenbelt, Maryland 20771

Dear Mr. Binstock:

This is a follow-up to our meeting of January 21, 2010 with you; Mr. Regan, NASA; Robert Hunnicutt, Columbia Telecommunications Corporation; and me regarding a proposal by Verizon to construct a new telecommunications monopole at the NASA Goddard Visitors Center. The National Capital Planning Commission has requested that the Goddard Space Flight Center (GSFC) obtain a Letter of Concurrence from the Price George's County Telecommunications Transmission Facility Coordination Committee (TTFCC). This is our Letter of Concurrence and recommendation for the proposed location of the monopole.

As you may know, the TTFCC normally does not review and recommend telecommunications facilities located on State and Federal properties. However, the TTFCC does encourage that we be notified of any proposed facilities to be located on State and Federal properties within the County in order to add to our data base, and make other carriers aware of the future potential for co-locating on these facilities.

In this case, we are very supportive of this proposal to provide increased availability of cellular phone access in the area for our citizens and travelers, to maximize the screening from the roadways and surrounding communities, and minimizing disturbance of the existing tree buffer located south of the Visitors Center. It is our understanding that GSFC has already performed a public outreach and notification to the surrounding communities. Also, you have agreed to notify County Council Member Ingrid M. Turner, District 4, of your proposal. Your process is consistent to the process that the TTFCC requires all private telecommunication carriers to follow with proposed new telecommunication facilities.

(*letter continued*)

In addition, I requested that the County's Telecommunication Facility Coordinator, Robert Hunnicutt, provide a recommendation for the proposed facility. This is the same type of recommendation done for privately proposed facilities throughout the County. The report reviews the technical rationale for the facility, site visit findings, consideration of alternative sites and techniques to mitigate the visual impacts, and makes conclusions and recommendations for the facility. Enclosed is a copy of that recommendation.

Sincerely,

Brad E. Wildesen, P.E.
Chairman
Telecommunications Transmission
Facility Coordination Committee
Prince George's County

Enclosure

cc: Robert Hunnicutt, Telecommunication Facility Coordinator
Columbia Telecommunications Corporation

CITY OF GREENBELT

25 CRESCENT ROAD, GREENBELT, MD. 20770-1886

June 18, 2010

Mr. Marcel Acosta, Executive Director
National Capital Planning Commission
401 9th Street, NW, Suite 500
Washington, DC 20004

CITY COUNCIL
Judith F. Davis, Mayor
Emmett V. Jordan, Mayor Pro Tem
Konrad E. Herling
Leta M. Mach
Silke I. Pope
Edward V.J. Putens
Rodney M. Roberts

Re: Goddard Space Flight Center Verizon Cell Tower Project

Dear Mr. Acosta:

First, the Greenbelt City Council would like to thank you for listening to the City's concerns, and not supporting the installation of a cell tower within the buffer area at Goddard Space Flight Center. With your support, a more suitable area for the Cell Tower was located, avoiding the loss of any trees.

Please accept this letter of concurrence from the City of Greenbelt City Council for the Verizon cell tower at NASA Goddard Space Flight Center. At the regular meeting of the Greenbelt City Council on June 7, 2010, representatives of NASA Goddard provided a revised plan for the cell tower. The revised plan shifted the location of the cell tower so that no trees will be removed.

The City of Greenbelt appreciates the opportunity provided to us by Goddard Space Flight Center and your staff at the National Capital Planning Commission to offer feedback on the proposed Verizon Cell Tower. We are pleased our concerns were taken seriously and that the team at NASA was able to find a suitable alternative.

Sincerely,

Judith F. Davis
Mayor

JFDrah
cc: City Council
Alan Binstock, Master Planner, Goddard Space Flight Center
Michael Weil, Urban Planner, National Capital Planning Commission
Michael McLaughlin, City Manager
Celia Craze, Director of Planning &Community Development
Amy Hofstra, Community Planner

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www.greenbeltmd.gov

Local Community Residents

Prior to project submission to NCPC, NASA Goddard and local community representatives met and collaborated on several occasions to inspect the proposed site, determine photo simulation locations, review project color and appearance options, review traffic access and safety considerations, and to answer concerns regarding radiofrequency interference with common consumer items such as television, radio, and garage doors.

In addition, GSFC Management reviewed the proposed project site with the Coordinating Council of Community Organizations (CCCO) in September 2007, at which four primary concerns were raised as follows:

1) Radiofrequency interference with homeowners' appliances,
2) Visual impacts to the surrounding community,
3) Facility appearance, and
4) Vehicular hazards from Verizon service vehicles turning onto Greenbelt Road (MD-193) from the campus service entrance.

GSFC responded to all of these concerns through the following corresponding actions:

1) An analysis was submitted to the CCCO by an independent engineering consultant in October 2007 that shows no adverse stray radiofrequency interference to nearby homeowners' appliances,
2) Additional photo simulations were provided at locations chosen by CCCO representatives,
3) An additional appearance option was presented with the monopole constructed as a tree (which was not ultimately selected by NASA GSFC management), and
4) Verizon communicated to the community that service inspections are relatively infrequent, with approximately one inspection each month.

Local community residents indicated that their concerns had been satisfied at a meeting with GSFC management on May 21, 2008.