

STAFF RECOMMENDATION

Eugene Keller

NCPC File No. 6507



**HENRY A. WALLACE BELTSVILLE AGRICULTURAL RESEARCH CENTER,
REPLACEMENT OF SIX ANTENNAS AND NEW RADIO
EQUIPMENT CABINET
5601 Sunnyside Avenue
Beltsville, Prince George's County, Maryland**

Submitted by the U.S. Department of Agriculture

October 25, 2007

Abstract

The Henry A. Wallace Beltsville Agricultural Research Center is seeking approval for replacement of six new antennas, at the same location and height as the existing current Sprint PCS antennas. The Commission previously reviewed and approved the antennas in October 2004 for a period not to exceed five years. The new antennas would be located in the exact position on the Department of Agriculture water tower railing, as earlier approved. One new equipment cabinet is also established on the ground adjacent to the other electrical cabinets within a fenced equipment area, at the foot of the existing water tower.

Commission Action Requested by Applicant

Approval of preliminary and final building plans pursuant 40 U.S.C. § 8722(b)(1) and in accordance with the Guidelines and Submission Requirements for Antennas on Federal Property, approved by the Commission on January 7, 1988 and amended on August 2, 2001.

Executive Director's Recommendation

The Commission:

Approves the replacement of six antennas operated by Sprint PCS, for a period not to exceed five years and that will be affixed to the location of the previous Sprint antennas at the Henry A. Wallace Beltsville Agricultural Research Center, and includes the preliminary and final building plans for one new radio equipment cabinet, as shown on NCPC Map File No. 3121.10(38.30)-42402.

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PROJECT DESCRIPTION

Site

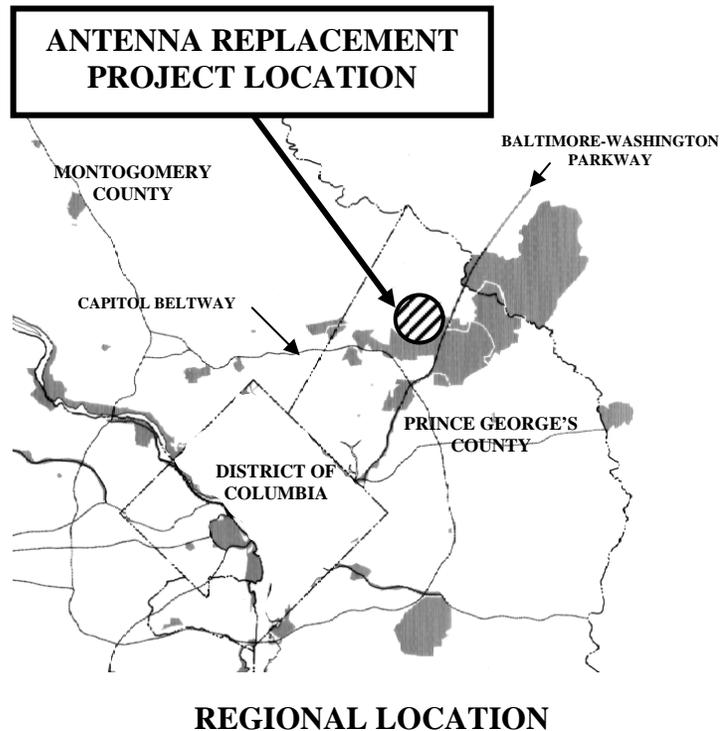
The Henry A. Wallace Beltsville Agricultural Research Center (BARC) occupies over 1000 acres immediately north and south of the Capitol Beltway in Prince George's County, Maryland. The immediate area of the existing water tower, on which the existing Sprint telecommunications antennas are located, is bounded by Baltimore-Washington Parkway on the east and Beaver Dam Road to the north. The water tower, known as structure 286 on the BARC inventory, is located in the east portion of the research complex and is 152 feet in height.

Background

The Commission previously reviewed and approved the Sprint antenna installation in October 2004 for a period not to exceed five years. According to the project submission materials, other antennas are located and operated by two additional telecommunications carriers (also approved in 2004) that include AT&T Wireless (Cingular) and T-Mobile Wireless. These elements are fully identified on the applicant's detailed drawings and analyzed by the RF emission analysis. However, only Sprint antennas are being replaced by the applicant's submission at this time.

Proposal

The submission identifies six new panel antennas, owned and operated by Sprint PCS that will be located on the existing water tower. Three of the proposed new panel antennas will measure 4.8 feet long by approximately 7 inches wide and 3.5 inches deep. Three of the other new antennas are 8 feet long by approximately 12 inches wide and 3 inches deep. Other carrier antennas are similar in dimensions, and are located above and below the new replacement antennas, and are situated on the tank wall and on the supporting tower legs. The replacement Sprint antennas will be painted the same color as the water tower which will blend them with the existing tank structure. The current Sprint antennas are mounted at the approximately 106-foot level of the tower and the new Sprint panels will be placed at the exact same location. All



elements can only be accessed by the tank tower ladder, which has its lowest portion barricaded, so that access can be achieved only by authorized personnel.

A required new equipment cabinet, approximately 8-feet high by 8 x 13 feet, containing electrical switchgear and other electrical components, will be connected to the replacement antennas by coaxial cable. The new structure will be aligned adjacent to an existing Sprint cabinet at the base of the water tower. The existing cabinets and the new Sprint cabinet will not be visible from outside of the installation area.



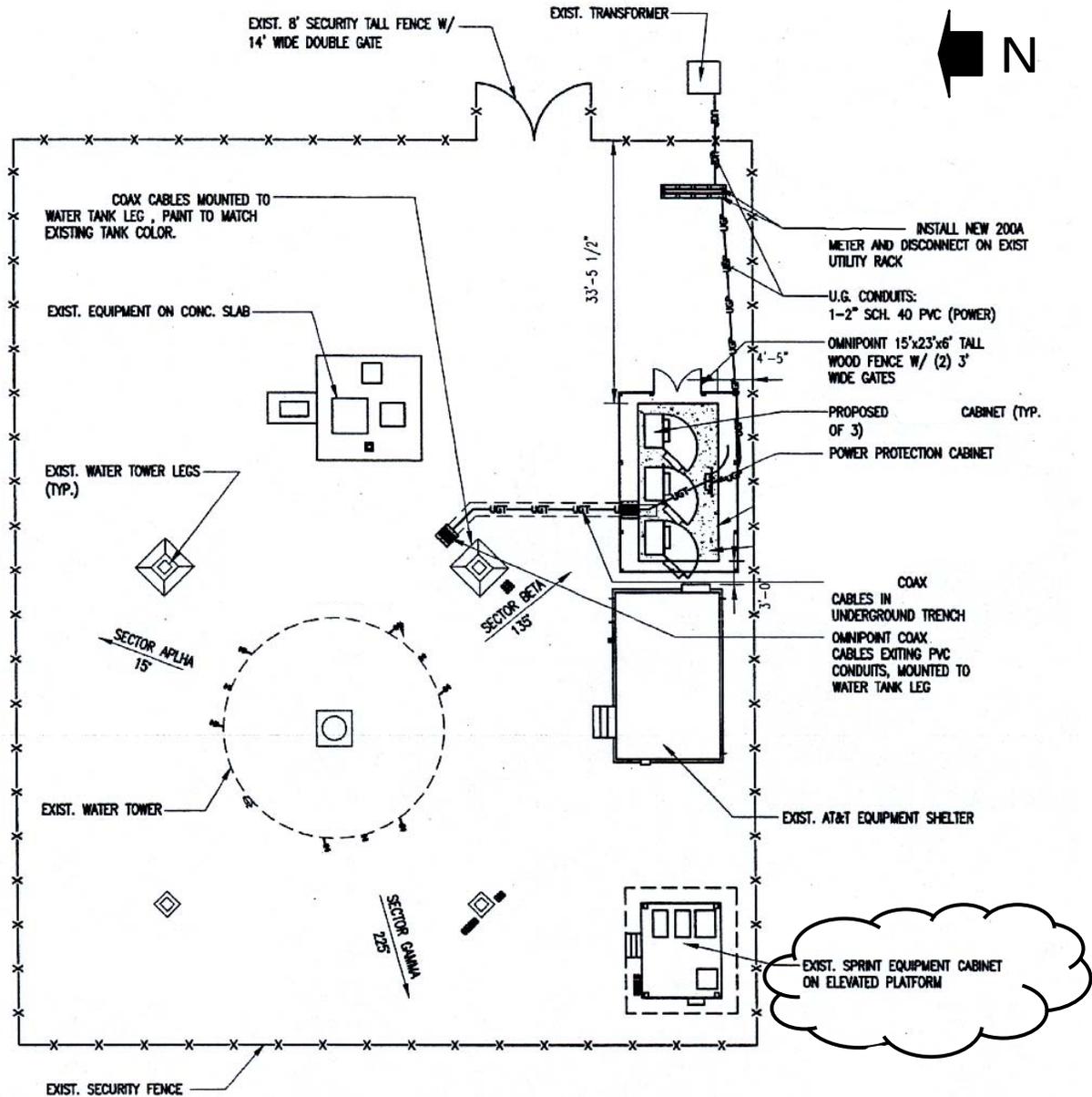
**AERIAL VIEW OF BELTSVILLE AGRICULTURAL RESEARCH CENTER
WATER TOWER LOCATION**

PROJECT ANALYSIS

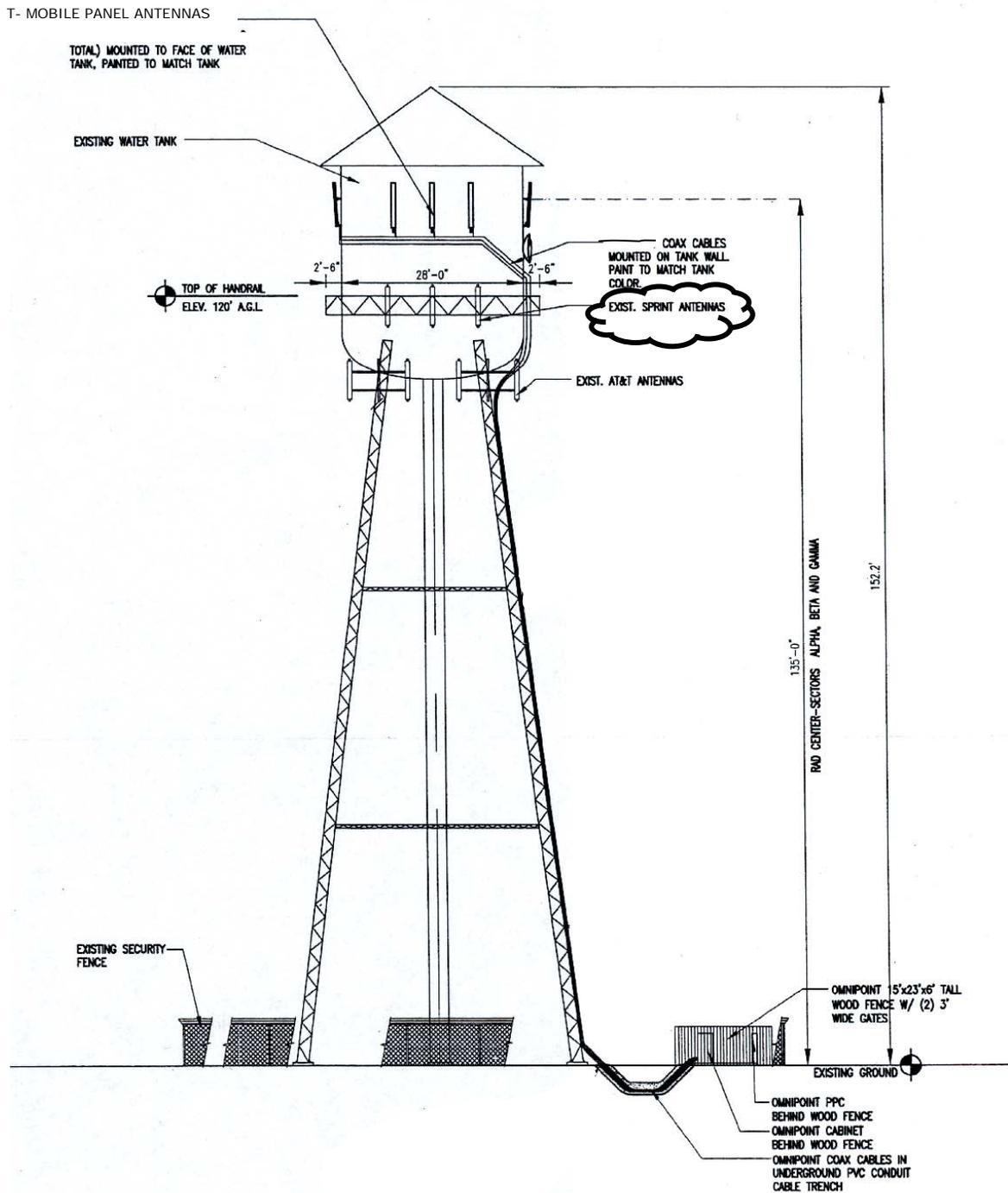
Executive Summary

The **staff recommends approval of the replacement antennas** for a period not to exceed five years. The replacement antennas are consistent with the Commission's Antenna Guidelines and with the Telecommunications Act of 1996 encouraging placement of commercial antennas on

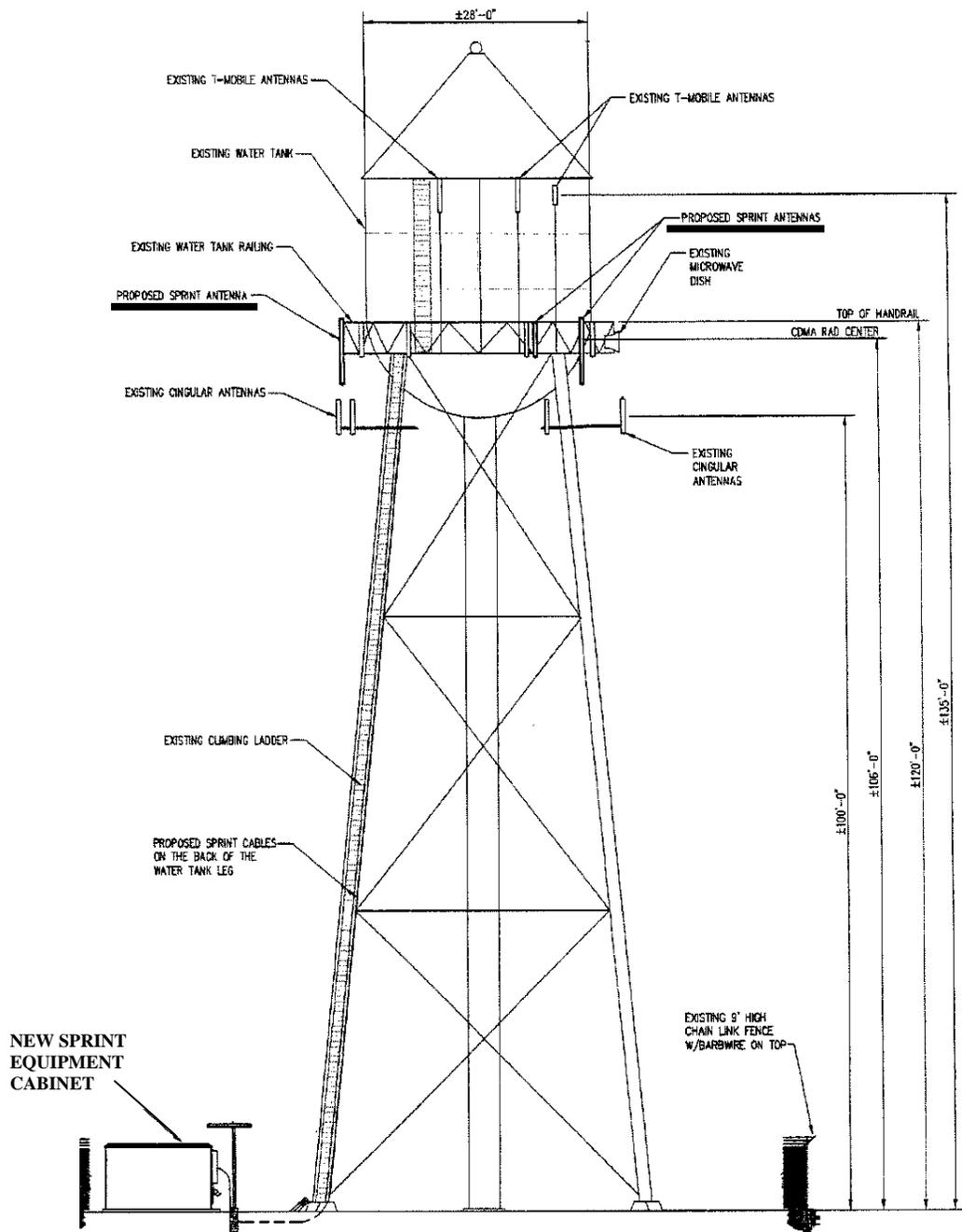
federal property. Furthermore the submission is consistent with the Commission's preference for collocation of antennas when possible. The antennas are exactly located where the existing Sprint antennas are situated, and the new equipment cabinet will be minimally visible and has no visual effect to the surrounding area beyond the fenced water tower base.



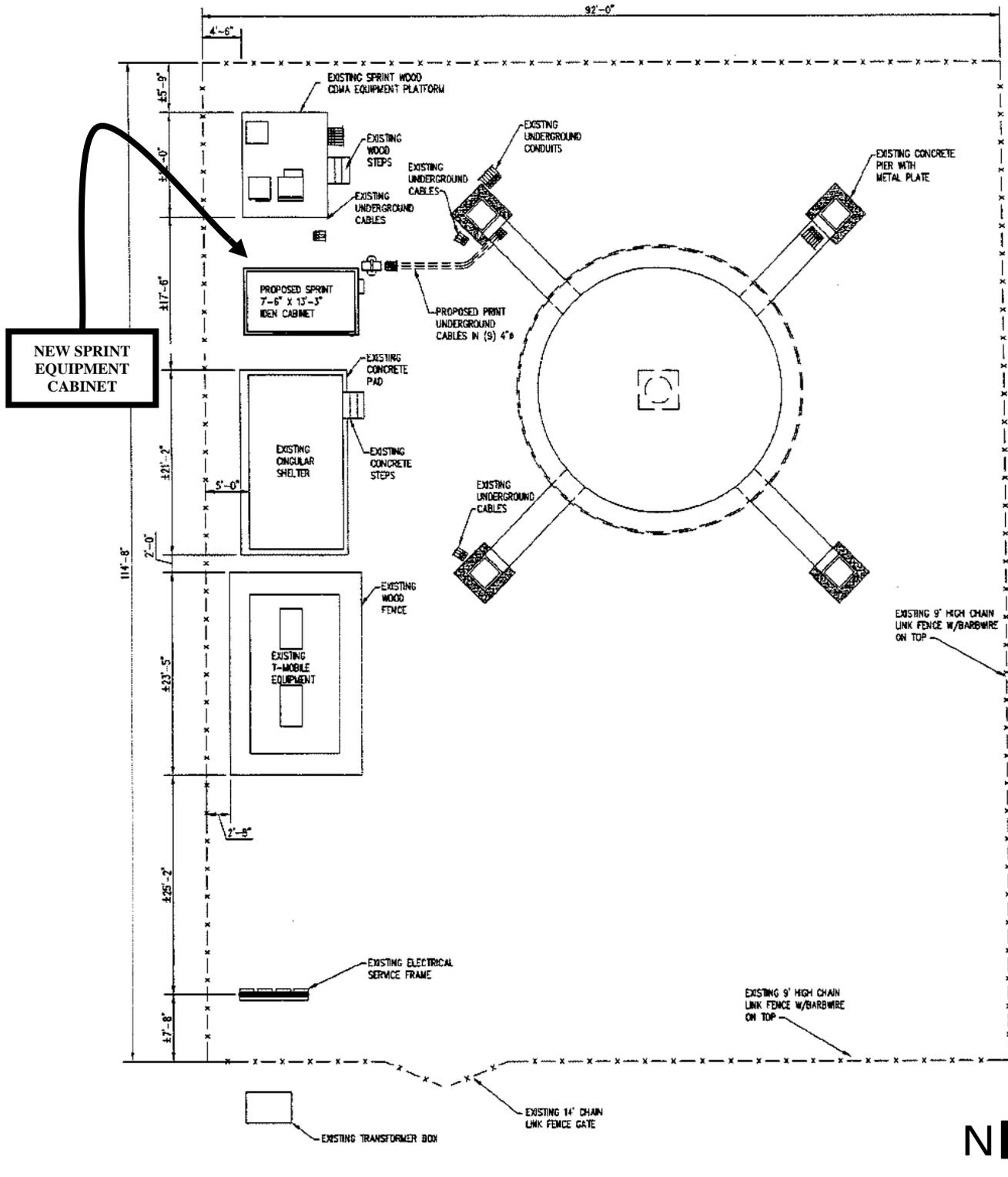
EXISTING WATER TOWER SITE PLAN INDICATING LOCATION OF EQUIPMENT CABINETS AND PERIMETER SECURITY FENCE



EXISTING WATER TOWER ELEVATION INDICATING LOCATION OF ALL TELECOMMUNICATIONS ANTENNAS



WATER TOWER ELEVATION INDICATING LOCATION OF NEW REPLACEMENT SPRINT ANTENNAS



PROPOSED WATER TOWER SITE PLAN INDICATING LOCATION OF NEW SPRINT EQUIPMENT CABINET

Staff highlights to the USDA that they are to be cognizant of the time sensitive renewal of approval for the AT&T and T-Mobile antennas on the tower, which is due for submission to NCPC by July 2009.

Radiofrequency Radiation Analysis

The USDA has submitted information about the replacement antennas, consistent with the Commission's applicable Guidelines and Submission Requirements for Antennas. Only one new structure is proposed on the ground surface of the tower base adjacent to the other equipment shelters. None of the existing cabinets or the proposed equipment structure emits RF levels. A radio frequency environmental study, conducted by telecommunications consultants, documents the new replacement antennas will not adversely affect human health and safety. Part of the lack of potential hazards is attributed to the distance of the antennas above ground and the lack of similarly tall, habitable, nearby structures anywhere in the vicinity of Beltsville water 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. The maximum effective high level emission from all panel antennas was identified at 2-4 feet from the panel surface. Since all replacement antennas are located at 106 feet above the ground, no adverse emission levels are encountered by the general public. The maximum power densities are well below the maximum permissible exposure standards established by the Federal Communications Commission. The power densities of the proposed antennas are not significantly in variance with the existing power output of other antennas currently placed on the water tower. Cumulative RF effects are not significant and would not impact people on the ground.

CONFORMANCE

Comprehensive Plan for the National Capital

Staff review finds the proposed replacement telecommunications antennas comply with the goals and objectives of the Plan. The following policies adopted by the Commission in the Federal Environment Element, in August 2004, indicate federal actions in the region should conform to the following policy:

58. 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. The Baltimore-Washington Parkway is not adversely affected because the telecommunications antennas are situated on an existing tall structure, and are colored identical to the water tank surface. Moreover, the tank tower is situated 375 feet from the Parkway travel lanes behind stands of tall trees that provide a heavy canopy cover during much of the year. Consequently, the tower is not visible to users driving on the Parkway much

of the time, except from an extreme distance. At that viewpoint, the panel antennas are not apparent from the overall form of the water tank itself.

Finally, the USDA submission materials clearly indicate that RF emissions do not radiate at any significant power level that would impact any electronic facilities or operations at the Goddard Space Flight Center. That facility is located 1.2 miles southeast of the tower in Greenbelt, Maryland, with the closest building being over 1.3 miles from the water tower site.

Master Plan

The Commission approved a revised master plan for BARC in June 1996. The antennas are not inconsistent with the master plan, which identifies the water tower land use for Research and Development.

National Environmental Policy Act

Pursuant to the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA), the Commission staff has reviewed the submission and has found the applicant specified that the proposal is consistent with the Commission's categorical exclusion provisions at Section 8 of the Commission's Environmental Procedures. The staff finds the Section 8 categorical exclusion applies to the proposal given that the submission conforms to the criteria of co-location of communication antennae on federal property consistent with the General Services Administration Bulletin FPMR D-242, *Placement of Commercial Antennas on Federal property*, and adheres to all NCPC requirements for antennas on federal property. The submitted RF evaluation for operation of the antennas confirms the elements coincide with all environmental impact criteria of the Federal Communications Commission.

National Historic Preservation Act

The Maryland Historical Trust concurred with the USDA finding of no adverse effect regarding all panel antennas located at the water tank on May 6, 2004.