

NIH Policy Manual

26101-26-05 - Installation of Antennas On/Around NIH Buildings

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Transmittal Notice

1. **Explanation of Material Transmitted:** This chapter provides the policy and sets standard procedures governing the placement, installation and maintenance of commercial telecommunication service antennas on National Institutes of Health's (NIH) owned or controlled property (federal government buildings and land).

This policy designates the Center for Information Technology (CIT) to be the coordinator and centralized point-of-contact for antenna siting's of commercial wireless communications equipment at NIH in accordance with the guidance issued in the [General Services Administration \(GSA\) Bulletin FMR 2007-B2](#). This centralized function helps minimize the potential risk of performance degradation of electronic medical devices and other wireless equipment from electromagnetic interference (EMI).

Also, this policy maintains the roles the Office of Acquisitions (OA) in the Office of Facilities Development and Operations (ORFDO) and the Office of Research Services (ORS) play in the administrative review process, providing security, and coordinating the infrastructure requirements to support the installation of antennas. It also identifies the roles Institutes, Centers, and Offices (ICOs) and the ORFDO Real Estate Contracting Branch (RECB) play in the development, negotiations, approval, etc., of new or renewal of revocable license agreements in supporting the installation of antennas.

2. **Filing Instructions:**

Remove: NIH Manual Issuance 26101-26-05, dated 01/15/2014

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PLEASE NOTE: For information on:

- Content of this chapter, contact the issuing office listed above.
- NIH Manual System, contact the Division of Management Support, OMA, on 301-496-4606, or enter this URL: <https://oma.od.nih.gov/DMS/Pages/Manual-Chapters.aspx>.

A. Purpose

This policy provides the standard procedures for the placement and installation of commercial and telecommunication service antennas, including antennas required for the dedicated Distributed Antenna System, for the Institutes, Centers and Offices (ICOs) at the National Institutes of Health (NIH).

B. Scope

This policy applies to all NIH Institutes, Centers and Offices (ICOs).

C. Background

[Section 704\(c\) of the Telecommunications Act of 1996, Public Law 104-104](#), directs federal departments and agencies to make available “property, rights-of-way, and easements under their control for the placement of new telecommunications services” to allow commercial telecommunication providers to erect mobile service antennas on federal property to facilitate the build out of the United States’ wireless communications infrastructure.

In November 1999, NIH placed a moratorium on the placement and installation of new commercial antennas on NIH property due to concerns the new systems could potentially occupy frequencies and physical space needed by NIH for planned wireless communication equipment and infrastructure. Other concerns included the lack of a formalized mechanism to evaluate commercial antenna siting requests and concerns about electromagnetic interference (EMI) on specialized medical equipment prevalent at NIH. This policy establishes the procedures for processing requests for the placement and installation of antennas on NIH property.

As a result of the September 11, 2001 event, security concerns drastically reduced the potential availability of space to support antenna placements on NIH facilities.

D. Policy

The general policies for this program are:

1. NIH shall make antenna sites available on a fair, reasonable and non-discriminatory basis. The siting of service provider antennas will not be given priority over other

- authorized uses of NIH buildings or land.
2. All requests for placement of telecommunications antenna equipment on NIH property or buildings shall be coordinated with the Center for Information Technology (CIT), Office of IT Services Management, Facilities Infrastructure Services (FIS), the primary point of contact on NIH campuses.
 3. All requests for the siting of telecommunications service antennas will follow a uniform application and review process.
 4. Service providers shall pay NIH and/or bear the expense for services and resources, or third- party services, provided as part of the site request review process.
 5. Service providers in negotiation with NIH will pay all reasonable costs incurred as a result of use and/or modification of NIH facilities (e.g., power, damage to NIH property, etc.).
 6. All NIH owned and controlled property is subject to the wireless equipment procedures outlined in this policy. The [General Services Administration \(GSA\) Bulletin FMR 2007- B2](#) provides federal guidelines for placement of commercial antennas on federal Property.
 7. All antenna sites shall comply with all local, regional and federal laws and guidelines, including, but not limited to, environmental and historic preservation requirements.
 8. A clear and concise description of the work to be performed must be submitted at the time of the original request to install and/or modify, an existing roof mounted communication system.
 9. All work performed must adhere to the description submitted under the request. NIH will establish access requirements to include limiting the number of personnel authorized access.
 10. All company representatives or technicians requiring access to NIH rooftops *must* undergo a background investigation *prior* to receiving approval to access NIH buildings. The level of investigation, and any restrictions on access, will be determined solely by NIH.
 11. All company representatives and technicians *must* be accompanied by a NIH guard *and* a CIT representative while on NIH grounds to perform the agreed upon work.
 12. The company or commercial entity performing the agreed upon work will be responsible for all reasonable costs associated with security measures including, but not limited to:
 - a. any expenses arising from background checks;
 - b. any expenses for escort services while company representatives or technicians are on NIH property performing designated work;
 - c. costs for any rework, testing and/or maintenance;
 - d. any other security or other costs, associated with the Terms of Agreement for performing the work; and
 - e. specific mechanisms determined at the time an agreement to install an antenna is approved and executed.
 13. NIH reserves the right to require each licensee to fund, through a third-party, any studies, analysis, reports, etc., required by NIH to include, but not limited to, license compliance, mounting or erection details, interference of NIH frequencies and/or

equipment.

14. License agreements are revocable at the sole discretion of NIH.
15. RECB is designated to develop, negotiate and approve all license agreements in coordination with CIT and other stakeholders.

E. Responsibilities

1. Center for Information Technology (CIT) will:

- a. coordinate and oversee the process for placement of telecommunication antennas;
- b. establish and maintain guidelines for the installation, operations and/or maintenance of commercial wireless communications at NIH facilities. (See Appendix 2, CIT Standard Operating Procedure for Rooftop/In-Building Communications Equipment Installation);
- c. initiate and coordinate the review process for proposals to install telecommunication antennas;
- d. inform ORFDO Division of Facilities Planning (DFP) of potential tower antenna sites on NIH owned or controlled property;
- e. coordinate license agreements for communication approval, or denial, of proposals for antenna site installation with ORFDO RECB. If the request is approved, CIT will participate in the negotiation and execution of the Terms of Agreement;
- f. submit antenna installation documents (drawings, specifications and installation details, etc.) to ORFDO, Division of Technical Resources (DTR) for review and approval;
- g. assist ORFDO in monitoring the compliance of wireless communications systems in accordance to the Terms of Agreement, applicable federal, state and local regulations, policies and practices;
- h. coordinate with ORS Division of Occupational Health and Safety (DOHS) to examine the feasibility of implementing antenna-site requests related to the potential impact(s) on the surrounding environment and community;
- i. be responsible for supporting the negotiations of the Terms of Agreement to site antennas and related equipment; and
- j. coordinate and conduct final inspections of the contractor's work and address testing and retesting requirements related to new installations and/or changes to existing systems.

2. Office of the General Counsel (OGC)

OGC is responsible for advising NIH on legal issues relating to the installation of telecommunications antennas on NIH property and on any legal action regarding compliance to the Terms of Agreement with the service provider.

3. Office of Research Services (ORS)

- a. Prior to commencement of work, the Division of Personnel Security (DPS) is responsible for conducting background investigations, at the contractor's expense, of all contractor personnel requiring access to antenna sites on NIH property. The level(s) of the investigation will be determined solely by NIH.
 - b. After background investigations have been conducted and approved, the Division of Police (DP) will grant contractors access to roof areas.
 - c. DP will provide an NIH guard and a CIT representative/designee will accompany contractor personnel while work is being performed on communication systems on NIH property.
 - d. DOHS is responsible for reviewing vendor proposals to ensure equipment submitted for consideration fully addresses shielding, worker safety and compliance with the siting and signage recommendations of the Institute for Electrical and Electronics Engineers (IEEE).
 - e. The Division of Physical Security Management is responsible for determining the level of protection (LOP) for the selected antenna site and participates in the site survey and selection process.
- 4. Office of Research Facilities Development and Operations (ORFDO)**
- a. Will review existing policies, and develop new policies, as required in accordance with applicable federal, state and local regulations and guidelines, including those of the General Services Administration and the National Capital Planning Commission.
 - b. The Office of Acquisitions (OA) is responsible for coordination with the service provider to install, and/or maintain, the telecommunications antenna equipment and infrastructure.
 - c. The Division of Facilities Stewardship (DFS) is responsible for coordinating and facilitating the power and utility requirements with the vendor and will ensure utility requirements will not adversely impact NIH services.
 - d. The Division of Technical Resources (DTR) is responsible for reviewing the plans, specifications and related antenna installation details to ensure compliance with applicable codes and standards.
 - e. The Division of Facilities Planning (DFP), in coordination with ORS, is responsible for:
 - i. administering the proposal review process to ensure compliance with NIH, the General Services Administration, the National Capital Planning Commission, and other applicable guidelines.
 - ii. selection of space, and the review and approval of site plans, to improve areas impacted by the antenna installation.
 - iii. requesting and obtaining the National Capital Planning Commission's approval to install an antenna(s) consistent with the "Guidelines and Submission Requirements for Antennas on Federal Property in the National Capital Region," [Submission Guidelines Antennas](#) and all alterations of NIH property, as well as all submissions and coordination with review agencies.

- f. OA, RECB Contracting Officer is responsible for developing and coordinating commercial antenna agreement requirements in coordination with OGC and CIT.
 - g. RECB administers the revocable license and will seek opinions and guidance from the OGC.
 - h. RECB will develop, coordinate, seek approval or denial, maintain agreement documents and provide notification(s) to the service provider, in coordination with CIT.
 - i. Commercial approvals will be executed by the Director, ORFDO, or an authorized designee.
5. **Clinical Center, Biomedical Engineering and Instrumentation Program (CC-BEIP)**
- a. CC-BEIP is responsible for checking electromagnetic interference between communication systems and the operations of medical equipment and devices in the hospital.
6. **Institutes, Centers and Offices (ICOs) are responsible for:**
- a. referring all antenna related matters to CIT; and Immediately notifying CIT of any problems with antenna installation, service, contractor, etc., to NIH Service Desk at 301-496-4357; Attn: Office of IT Services Management, Facilities Infrastructure Services (FIS).

F. Procedures

1. **Property Availability** - NIH will make owned buildings available to the service provider pursuant to applicable federal regulations and policies. Upon the service provider's request, CIT will provide documentation of available property for potential siting of telecommunications service antennas. All commercial antennas shall be installed/maintained in accordance with the applicable federal, state and local laws and regulations. National and local security constraints may prohibit use of NIH property for the installation of antennas.
2. **Proposal** - Service providers requesting the placement and installation of telecommunications service antennas on NIH property must submit a detailed, written proposal to CIT for initial review. The proposal will include:
 - a. name, address and telephone number of service provider and authorized, or legal, representative for the project;
 - b. specific building name and address, or as appropriate, latitude and longitude or other site-specific property identifier;
 - c. type and size of equipment installation and support required for the service provider's proposed wireless site, including access to site, utility requirements, air conditioning, acreage of land or foot/pound capacity for rooftops, etc. In cases where the proposed site is to be located on an established building or wireless facility, any special modification requirements unique to the service provider's proposal must be clearly identified;

- d. Radio Frequency (RF) Exposure Report to verify compliance with Federal Communication Commission (FCC) and Occupational Safety and Health Administration (OSHA) guidelines;
- e. specific transmission frequency ranges and power levels/output at which the antenna user intends to broadcast; FCC license number (if a licensed facility) and summary of antenna specifications, including frequencies;
- f. proposed term of requirement;
- g. description of project or larger antenna installation program, if applicable;
- h. proposed method of achieving environmental and historic preservation compliance;
- i. proposed safety plan in compliance with IEEE signage recommendations;
- j. a mechanism for reimbursement and/or payment to NIH for any and all costs resulting from telecommunication antenna sites, to include, but not limited to, security escort services, studies, reports, etc.;
- k. evidence of public liability insurance coverage; and
- l. submission of requested construction drawings (i.e., structural and/or load drawings detailing plans for equipment and infrastructure implementation, including all building requirements, modifications and additions). Drawings shall be submitted in the latest AutoCAD version (such as .dwg) and hard copies as specified by NIH.

3. Proposal Review

a. Site Survey

Upon completion of an initial review, CIT will determine the completeness of the submitted request, and if the request is deemed sufficient, a site survey with the wireless telecommunications provider will be scheduled to determine whether the proposed site meets the service provider's requirements. If the proposed site meets the service provider's criteria, CIT will provide their determination, either approving or denying, the request to the service provider within sixty (60) business days after the site survey.

If the service provider's application is found deficient, NIH will notify the service provider and request supplemental information to identify:

- i. unique conditions;
- ii. property restrictions; and/or
- iii. other circumstances which may affect the timing or ultimate determination for site approval. If the siting request(s) is within the Washington, DC metropolitan area, the National Capital Planning Commission will also be consulted.

b. Point of Contact (POC):

To enable the service provider to plan for the potential use of the requested site, NIH's response will include the name and telephone number of the CIT point of contact responsible for coordinating the project.

c. Need for Additional Information

If additional information has been requested, NIH will review and respond to the service provider's supplemental response, in writing, within ten (10) business days of receipt. NIH's response will advise if other reviews and/or reporting requirements are needed to develop a license agreement prior to NIH's final determination, including, but not limited to: 1) an Environmental Assessment; 2) an Environmental Impact Statement; 3) public hearings (as part of the National Environmental Policy Act), and/or 4) any further review.

d. Final Decisions

Final decisions will be rendered by ORFDO Director, in writing, in coordination with CIT, within ten (10) business days after the completion of all required reviews, evaluations and/or assessments. If the service provider's request is denied, ORFDO will notify the service provider of such denial, in writing, and provide the rationale for such determination.

e. Formal Documentation

NIH retains sole discretion to approve, or deny, all site requests.

f. Negotiation of Terms of Agreement

If NIH approves the installation of an antenna, a revocable license agreement will be executed to document the terms, conditions and responsibilities of NIH and the telecommunications service antenna provider. The Terms of Agreement may include, but is not limited to:

1. any recurring fees (i.e., utilities, etc.) and non-recurring fees (including third- party RF testing and rooftop appraisals);
2. any special conditions required to protect NIH from any costs or liabilities arising from the service provider's use of NIH owned or controlled space (i.e., rooftop mounting standards, roof leaks, RF emissions standards, restrictions for sub-letting, public liability insurance);
3. access procedures to enter NIH facilities for implementation, maintenance and/or removal of the service provider's equipment; and
4. assurances of the timely removal, or transfer of ownership, of the service provider's equipment and/or structures by the service provider.

Following the execution of a license agreement with the service provider, ORFDO will coordinate site access for installation and/or maintenance of the telecommunication antenna site. NIH and the service provider will maintain regular communication throughout the Terms of Agreement.

g. Compliance with the Terms of the Agreement

To minimize the risk of EMI with the specialized medical and research equipment in NIH facilities, and to ensure the safety of NIH community, CIT will provide third-party contact information to the service provider in order to perform RF testing, at the service provider's expense, prior to the system being activated. RF testing will be performed to ensure the service provider is operating within the RF emissions standards, as identified in the Terms of Agreement. RF testing results will be provided to the CC-BEIP to review potential impact(s) to medical equipment.

CIT will regularly monitor the service provider's:

1. equipment and work performed at the site(s);
2. compliance with cost mechanisms and with the Terms of Agreement; and
3. will coordinate site compliance issues with DFP, technical compliance issues with ORFDO DTR and DFS, and license compliance issues with OA, with guidance from OGC.

The service provider will not sublicense equipment or services without the express written approval of the NIH.

- h. Changes in company ownership will require an updated proposal submission and a new agreement may be required.
- i. At least thirty days prior to any modifications, the CIT Project Manager must review, and approve, any modification to equipment or work to be performed.

G. References

1. [The Telecommunications Act of 1996, Public Law 104-104, 110 Stat. 56](#)
2. [Siting Antennas on Federal Property, 41 C.F.R. Part 102-79, Subpart B](#)
3. [Notice, Placement of Commercial Antennas on Federal Property, 61 FR 14100 \(1996\)](#)
4. [Notice, Public Buildings and Space, 63 FR 10631 \(1998\)](#)
5. [General Services Administration \(FMR 2007-B2\) Placement of Commercial Antennas on Federal Property, March 14, 2007](#)
6. [National Capital Planning Commission Act of 1952 \(as amended\), Guidelines and Submission Requirements for Antennas on Federal Property in the National Capital Region](#)
7. [Institute for Electrical and Electronics Engineers \(IEEE\); Standards C95.2-1999 and C95.7-2005](#)
8. [NIH Manual Chapter 1743, Keeping and Destroying Records, Appendix 1, NIH Records Control Schedule](#)

Appendix 1: Definitions

1. **Agreement** - A properly executed and legally binding contract.

2. **License Agreement** - A contract which includes a license as an element.
3. **Telecommunications Antenna Site** - The location at which infrastructure and/or equipment associated with providing wireless communications service are installed.
4. **Electromagnetic Interference (EMI)** - Any electromagnetic disturbance that interrupts, obstructs or otherwise degrades or limits the effective performance of radio frequencies.
5. **Frequency** - Component of the radio spectrum created by electromagnetic waves moving through space at different speeds.
6. **Radio Frequency (RF)** - One type of electromagnetic energy, including radio waves and microwaves, used for providing telecommunications, broadcast and other services.

Appendix 2: Center for Information Technology (CIT), Standard Operating Procedure (SOP) for Rooftop/In Building Communications Equipment Installation



National Institutes of Health
Center for Information Technology
Division of Network Systems and
Telecommunications
Cable Management Branch (CMB)
Standard Operating Procedures (SOPs)



FINAL DRAFT

<u>SOP Number:</u>	FIS-2019-11-20
<u>SOP Name:</u>	Roof Top/In Building Communications Equipment Installation Request
<u>Owner:</u>	CIT/Office of IT Services Management, Facilities Infrastructure Services (FIS)
<u>Customer:</u>	Telecommunications Vendors and the NIH Community located at Bethesda Campus
<u>Antenna Requests:</u>	Forward to CITDNSTCMBMANGEMENT@mail.nih.gov CIT, Office of IT Services Management, Facilities Infrastructure Services (FIS) - Attn: Service Area Manager
<u>SOP Scope:</u>	To document the procedures for external vendors and the NIH community to request the installation of communication systems on the roof or inside NIH Buildings. This SOP will cover Initial Request and Notifications, CIT Internal Assessment, Coordination with the Office of Research Facilities Development



**National Institutes of Health
Center for Information Technology
Division of Network Systems and
Telecommunications
Cable Management Branch (CMB)
Standard Operating Procedures (SOPs)**



and Operations (ORFDO), Approval Authority, and Point of Contacts.

Appendix 2

1. The Office of IT Services Management, Facilities Infrastructure Services (FIS) receives the request and coordinates the assessment and approval process for vendors to install Roof-top or In-Building communications equipment, i.e. antennae, satellite disc, microwave systems and other types of equipment.
2. The Vendor Request package shall include but not be limited to the following:
 - a. Cover Letter
 - b. Site Plan
 - c. Site evaluation
 - d. System details
 - e. Single line diagram
 - f. License agreement (when applicable)
3. The FIS Chief sets up the initial meeting with the Requester (i.e. vendor) to review the request and discuss the scope of work.
4. The FIS Chief evaluates and validates the request prior to contacting the CIT Internal teams (see Exhibit 1- Point of Contacts). Any outstanding action items or concerns will be communicated to the Requester within ten business days.

CIT Internal Assessment

1. The FIS Chief coordinates the meeting(s) with the CIT Internal Teams to fully review the assessment topics and potential impacts. Those required at the initial assessment meeting will include:
 - a. FIS Chief
 - b. FIS Technical Leads and Project Manager
 - c. Two –Way Radio Services Section Chief and Technical Group
2. The Assessment Meeting include the following items:
 - a. Revocable license agreements. Previous agreements to be converted to a revocable license agreement or terminated for the convenience of the Government.
 - b. Design and Engineering requirements
 - c. Radio Frequency analysis which includes interference with NIH equipment, medical equipment or other wireless carrier equipment
 - d. Controlled property availability or building access requirements

3. The responsible teams work directly with the current NIH vendors/carriers to review potential interference, if needed.
4. The vendor must submit a survey to DOHS to address:
 - a. The precautions that will be taken by the antenna installer to limit radio-frequency exposure to the general public and NIH employees.
 - i. Detailed information on the following safety elements are to be included;
 1. Distance
 2. Shielding
 3. Separation from occupied spaces and/or egress routes
 4. Proximity of antenna to existing equipment
 - ii. Protected occupational exposure limits per distance from source using FCC OET Bulletin 65 – Evaluating Compliance with FCC Guidelines for Human Exposure to Radio-frequency Electromagnetic Fields <http://www.fcc.gov/encyclopedia/oet-bulletins-line> occupational exposure limits.
 - b. Antenna Characteristics
 - i. Antenna type
 - ii. Frequency
 - iii. Power
5. Meeting attendees provide feedback and specific concerns to the FIS Chief.
6. The FIS Service Area Manager will evaluate and validate the request prior to contacting the ORFDO. Any outstanding action items or concerns will be communicated to the Requester.
7. Upon completion of the analysis of the assessment topics and appropriate team approval is secured the FIS Service Area Manager will brief the Office of IT Services Management Director or Deputy Director for CIT preliminary approval.
8. Once approved by CIT, the FIS Service Area Manager will forward the completed package to the ORFDO for review and final NIH approval.

Coordination with the Office of Research Facilities Development and Operations (ORFDO) and the Office of Research Services (ORS)

1. The Directors of the Office of Research Facilities Development and Operations (ORFDO) and the Office of Research Services (ORS) will assign the appropriate Point of Contacts, i.e. Office of Acquisitions (OA), Division of Facilities Planning (DFP), Division of Environmental Protection (DEP), Division of Technical Resources (DTR), Division of Design and Construction Management (DDCM), Division of the Fire Marshal (DFM), and the Division of Occupational Health and Safety (DOHS).
2. ORFDO review/discussion items will include:
 - a. Revocable License Agreements and NIH controlled property (OA)
 - b. National Capital Planning Commission (NCPC) reviews and approvals (DFP)
 - c. Environmental Protection requirements (DEP)
 - d. Structural/Electrical Engineering requirements/concerns (DTR)

- e. Building/Facilities Management coordination (See Facility Manager Listing <http://orf.od.nih.gov/PropertyManagement/FacilityManagement.htm>) (Division of Facilities Operations and Maintenance (DFOM))
- 3. ORS review/discussion items will include:
 - a. Fire and life safety concerns (DFM)
 - b. Equipment shielding, worker safety and compliance with the Institute for Electrical and Electronics Engineers (DOHS)
 - c. Access requirements and restrictions (DP and DPS)
- 4. The FIS Service Area Manager will request that all ORF and ORS concerns, impacts or requirements be submitted in writing.

Approval Process

If a request is approved, ORFDO designate will send notification (in writing) to the Requester that the request has been approved with a copy to the FIS Service Area Manager.

Denial Process

If a request is denied, ORFDO designate will send notification (in writing) to the Requester that the request has been denied with a copy to the FIS Service Area Manager.