

PART 1: GENERAL

SCOPE OF WORK

- A. UNM or University of New Mexico Hospitals (UNMH) must approve the installation and location of all wireless hardware before placement. This includes approval of data and telecommunications equipment utilizing specified radio frequencies. UNMH Clinical Engineering must approve all RF devices in UNMH facilities. Please refer to the “Standard on the Deployment and Use of Wireless Internet Technologies at the University of New Mexico” document for specific technological guidelines.
- B. All Wireless Access Points (WAP’s) connected to or making use of UNM or UNM Hospitals’ network infrastructure shall be registered with the respective Information Technology Department. Such registrations shall indicate whether the device is a telecommunications device, wireless access point, or bridge.
- C. All access points shall operate in 802.11(ac) and/or (ax) "infrastructure" mode.
- D. As directed by UNM IT or UNMH IT channel/frequency allocation on WAP’s and devices shall be done so as to minimize interference with other wireless services on campus. In general, devices with the ability to automatically select the best channel shall be configured to use this feature. However, it may be necessary to consult with the Information Technology Department to determine what channels are available in a particular area.
- E. As directed by UNM IT or UNMH IT wireless devices shall be configured to make use of the minimum possible radio transmission power in order to achieve their objective and coverage area.
- F. All WAP’s used on campus shall conform to a set of minimum specifications as published from time to time by the Information Technology Department. These specifications are intended to maintain the security and interoperability of wireless devices on campus.
- G. The respective Director(s) of Information Technology must approve any exceptions to the general provisions set out above.
- H. For UNMH approval by the Clinical engineering department is required for use of RF systems. 802.11 (ac) and / or (ax) are allowed, any others will need to be approved to ensure no interference with medical systems.

1.02 RELATED SECTIONS

- A. Division 26, Electrical Division
- B. Division 27, Communicants Systems.
- C. Division 28, Electronic Safety and Security

PART 2 – PRODUCTS

2.01 WAP'S

- A. General: The products specified herein reflect the minimum acceptable standards of fabrication and manufacture. All materials supplied by the Contractor and specified herein are to be new unused, of first quality and in original packaging or shipping containers. The respective IT department for which the work is being done must approve any exceptions.
- B. New buildings and renovations will be treated differently than existing buildings. Special cases will be reviewed and approved by the respective UNM IT or UNMH IT.

2.02 RECOMMENDED WAP'S

- A. General: The University of New Mexico has current standardized on products and/or solutions for providing wireless LAN access. This section outlines those products and/or solutions.
- B. The WAP's is a single band lightweight access point (LWAP) with dual diversity antenna connectors for challenging RF environments. They offer the same versatility, high capacity, security, and enterprise-class features demanded by industrial wireless LAN customers.
- C. The Cisco Aironet 1500 Series Outdoor Access Point/Bridge (hereafter called the *access point/bridge*) is a wireless device designed for building-to-building wireless connectivity. Operating in the 2.4-GHz band (2.400 to 2.497 GHz), using the IEEE 802.11g standard, the access point/bridge delivers 1 to 54 Mbps data rates without the need for a license. The access point/bridge is a self-contained unit designed for indoor or outdoor installations, providing differing antenna gains as well as coverage patterns. It supports point-to-point and multipoint bridging configurations.

PART 3 – EXECUTION

3.01 GENERAL REQUIREMENTS

- A. The intention of this wireless specification guideline is to develop a set of standards for the deployment of wireless devices on campus. These standards will continue to evolve as the Wireless LAN products and standards evolve. This document will be updated periodically.
- B. Installation of new wireless devices shall not interfere with existing services in such a way that services are interrupted, not available, or not in compliance with University policies and standards.

3.02 ACCESS POINT INSTALLATION REQUIREMENTS

- A. Please refer to the specific installation addendums for each Access Point model.
 - 1. Cisco Aironet 1130
http://www.cisco.com/en/US/docs/wireless/access_point/1130/installation/guide/
 - 2. Cisco Aironet 1140
http://www.cisco.com/en/US/docs/wireless/access_point/1140/mounting/installation/guide/1140_upgrade_mounting_inst.html
 - 3. Cisco Aironet 1200
http://www.cisco.com/en/US/docs/wireless/access_point/1200/installation/guide/1200-TD-Book-Wrapper.html
 - 4. Cisco Aironet 1520
http://www.cisco.com/en/US/docs/wireless/access_point/1520/installation/guide/1520HIG_TD-Book-Wrapper.html

3.03 PORT WIRING FOR WIRELESS ACCESS POINTS

- A. Port wiring for WAP's will follow the universal wiring plan adopted by the UNM IT and UNMH IT Hospital with the following exceptions.
 - 1. Port shall be placed in the wall 3 to 6 inches above drop ceiling. Exceptions to be approved by UNM IT.
 - 2. UNM a minimum of two Cat 6 cables 23 AWG and approved network jacks is required for all WAP's.
2A UNMH UNM a minimum of two Cat 6 cables 23 AWG and approved network jacks is required for all WAP's.

- a. One will be utilized for network access and the other one will be used for serial port access for management.
 - b. UNMH uses the second as a backup cable.
3. Where drop ceiling does not exist consult the UNM IT or the UNMH IT for placement guidelines
4. Wireless port shall be no further than 3 feet away from any Wireless Device unless special provisions exist. In this case contact UNM ITS or UNMH IT.
5. If wireless device cannot be powered off the Ethernet switch, power will need to be included in the scope of work. For power guidelines for wireless devices contact UNM IT or the UNMH IT.

END SECTION

