

**7E7 WAP Testing
The Boeing Company
Near Paine Field, Everett, WA**

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by

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Why a Special Temporary Authority is Necessary

An STA is being requested to perform short duration testing with two high gain antennas that are not integrated with the WLAN radio.

Purpose of Operation

An STA is being requested to evaluate new equipment and antenna coverage area for possible use in the manufacturing process. The engineer wants to determine radio signal penetration and quality of service inside the aircraft that will also be inside the hanger and how much back lobe that will be present to the south and outside the building. Anticipated test time to require sixteen hours of measurements, spread over a six month period. The measurements are coordinated with Boeing Information Technology engineers.

No proprietary or classified programs/contracts

No proprietary or classified programs/contracts are connected with this project.

The following exhibits are separate document files. Refer to Exhibit 1. This is a quad map of the surrounding area. The address of the facility is:

THE BOEING COMPANY
Bldg. 40-26
3003 W. Casino Road
Everett (Snohomish County), WA 98204-1910

47-55-23 N
122-16-15 W
NAD83
The ground elevation is 561 feet.

Refer to Exhibit 2. This is the facility map showing the location of the building at the complex.

Refer to Exhibit 3. This is a drawing showing the location of the antenna.

Hanger Doors

The hanger doors will be open part of the time to facilitate aircraft transport.

Antennas

The experimental antennas will be located inside the building about 100 feet above the ground (same as the floor of the hanger, building 40-26) directly above the hanger door. The azimuth of the antennas are true north, pointing inward. There will be two experimental antennas.

Experimental antennas:

Mars MA-WA57-3X

5.15 - 5.875 GHz

16 dBi

3 dB Az - 25 degrees

3dB EI - 25 degrees

[<http://www.mars-antennas.com/ma_wa57_3x.htm>](http://www.mars-antennas.com/ma_wa57_3x.htm)

Telex 5815

5.725 to 5.825 GHz

14 dBi

30 degrees V and H

[<http://www.wlanantennas.com/yagi_antenna_5815.htm>](http://www.wlanantennas.com/yagi_antenna_5815.htm)

Radio, Frequency, Power and Emission

Cisco Aironet RM21/22 Series

Model: Air-RM22A-A-K9

FCC ID: LDK102053

5.725 to 5.825 GHz

Modulation: 802.11a; 20MWXX; OFDM

Radio Power Output: 17 dBm (50 mW)

16 dBi antenna provides maximum 2.51 watts ERP

14 dBi antenna provides maximum 1.58 watts ERP