

Elbit Systems of America Request for FCC Experimental License

08 January 2016

Original Form 442 File Number: 0018-EX-PL-2016

Original Form 442 Confirmation Number: EL782420

Question 9: Statement of Environmental Impact

The Elbit Systems of America facility located at 4700 Marine Creek Parkway, Fort Worth, Texas, 76179. The building is a single-story structure, with multiple building additions, and is constructed of concrete block with a web girder and steel pan roof. The campus is located at the intersection of Interstate 820W and Marine Creek Parkway as shown in Figures 1 and 2 below. There are no immediate adjacent properties. The Tarrant County Community College campus buildings are located on the other side of Marine Creek parkway approximately .5 mile from the EFW main building. Residential areas are approximately .5 miles north of the ESA campus. The Meacham Airport is located approximately 2 miles from the ESA campus.

The antenna will be mounted on a sensor platform which will be located on the main building roof, elevated approximately 10 feet to transmit (see Figure 1 below). The radar equipment will be remotely controlled from inside the building. It is the policy of Elbit Systems of America that company personnel, customers, or members of the public are not subjected to RF power density levels that exceed the Maximum Permissible Exposure (MPE) limits as given in Part 1.1310 of the FCC Rules. Experimental testing will only be conducted with appropriate controls in place, and no personnel will be near the sensor platform during transmissions that will exceed the MPE levels. Elbit Systems of America will have an RF Safety Plan which describes the procedures and controls necessary to comply with MPE levels during operations and maintenance. Measurements will also be used to confirm that MPE levels are not exceeded.

Elbit Systems of America conducted a worst-case analysis of power density levels in the area surrounding the transmitting antenna based on the FCC's OET Bulletin Number 65¹. The applicable radar parameters and results are shown in Tables 1 and 2, respectively. The MPE limit is exceeded for areas within 5.3 and 11.8 feet for controlled and uncontrolled exposure limits, respectively. With the building height of approximately 24 feet, personnel on the ground will be beyond the distance where the power density exceeds the MPE limit. For personnel on the roof, the roof has controlled access; therefore, appropriate controls will be implemented for areas within 5.3 ft during test periods. Measurements will be made to confirm the emission levels.

¹ Cleveland, Robert F., et al., *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields*, Edition 97-01, OET BULLETIN 65, Washington D.C.: Federal Communications Commission, Office of Engineering and Technology, August 1997.

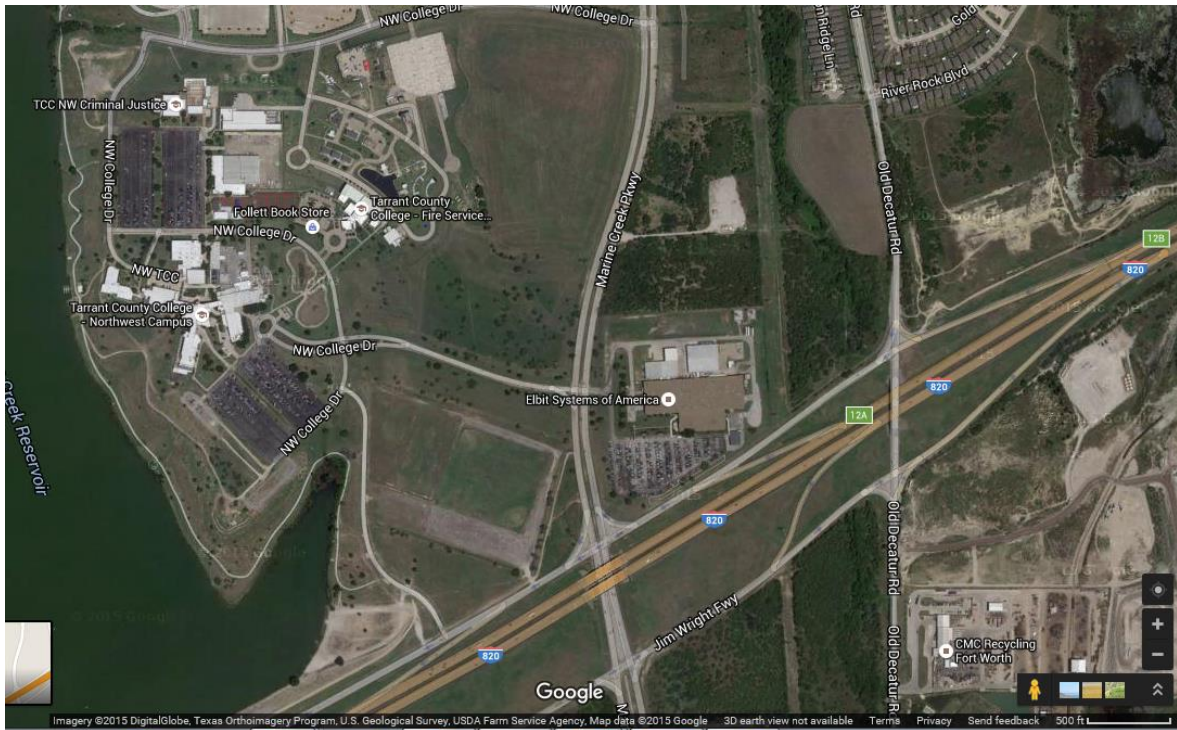


Figure 1 – Elbit Systems of America Campus – Fort Worth, Tx



Figure 2 – Elbit Systems of America Campus – Fort Worth, Tx



Figure 3 – Radar Mounting Structure – Fort Worth, Tx

Table 1 – Power Density Analysis

Parameter	Value
Operational frequency, MHz	10250
Transmitter output power (peak), W	10
Antenna gain (mainbeam), dBi	18
Ground reflection factor	1.6

Table 2 – Power Density Analysis Results

Parameter	Controlled	Uncontrolled
Maximum Permissible Exposure, mW/cm ²	5	1
Minimum required distance, meters	1.6	3.6
Minimum required distance, feet	5.3	11.8