

## FCC Application for Experimental License

File Number: 0504-EX-CN-2019

SRC respectfully requests the Federal Communications Commission to grant us an Experimental License for an L1/L2 GPS re-radiating antenna system at our facilities located in Syracuse N.Y., Chantilly VA, and San Antonio TX.

These systems will permit design and development to occur with devices that have GPS antennas on them where outdoor testing is impractical. The GPS signal is not sufficiently strong enough to penetrate the windows and walls to reach the interior spaces of our laboratory facilities. Since work with laboratory test equipment is required, their use in an outdoor environment is not supportable for our programs. A GPS re-radiating system would permit design and development to occur with the minimum disruption of work and in all weather conditions.

SRC has three facilities making up our campuses that will require the use of a GPS re-radiating system. For each facility our plan is to install the outdoor antenna on the roof of the building, amplify, split the signal, and attenuate signals to service each indoor location. Each split signal path will be routed via a coaxial cable to supply the GPS signal to re-radiating antennas located in locations that are optimal for providing coverage and minimizing the possibility of harmful interference. The final output of the system will be attenuated to provide GPS coverage only over the required distance to comply with FCC and NTIA regulations.

Locations where the GPS re-radiators are to be installed are listed in the table below:

| Location                                        | Lat/Long                                  | Elevation (AMSL)       | Distance to Nearest Airport Runway |
|-------------------------------------------------|-------------------------------------------|------------------------|------------------------------------|
| <b>Syracuse, N.Y.<br/>(Building 1 Facility)</b> | Lat: 43° 07'51"N<br>Long: 76° 5'21"W      | 442 Ft<br>(134.7 M)    | 2.18 km                            |
| <b>Syracuse, N.Y.<br/>(Building 2 Facility)</b> | Lat: 43° 7'52"N<br>Long: 76° 5'20.5"W     | 415 Ft<br>(126.5 M)    | 2.07 km                            |
| <b>Syracuse N.Y.<br/>(Building 3 Facility)</b>  | Lat: 43° 7'47.50"N<br>Long: 76° 5'15.00"W | 421 Ft<br>(128.3 M)    | 2.06 km                            |
| <b>Syracuse N.Y.<br/>(Building 4 Facility)</b>  | Lat: 43° 07'44"N<br>Long: 76° 05' 03"W    | 414 Ft<br>(126.2 M)    | 2.19 km                            |
| <b>Chantilly VA</b>                             | Lat: 38°54'27.00"N<br>Long: 77°27'10.00"W | 376 Ft<br>(114.6 M)    | 2.08 km                            |
| <b>San Antonio TX</b>                           | Lat: 29°29'26.50"N<br>Long: 98°34'53.00"W | 1039 Ft<br>(423.672 M) | 10.71 Km                           |

To react to any possible interference the cease buzzer contacts for each location where the GPS re-radiators will be installed are listed in the table below.

| Location              | Cease Buzzer                    | Contact Number |
|-----------------------|---------------------------------|----------------|
| <b>Syracuse, N.Y.</b> | Mr. Bob de Cheleroy             | 315-452-8958   |
| <b>Chantilly VA</b>   | Mr. Mark Braunstein,<br>Manager | 703-961-5519   |
| <b>San Antonio TX</b> | Victor Vandenberg               | 210-249-9598   |

