

**Exhibit: Description of Modification and Antenna Sketches**

Rockwell Collins, Inc. (Rockwell Collins) respectfully requests a modification of its experimental license (WI2XZE), used to communicate command and control messages to unmanned aerial vehicles (“UAVs”) flying below 400 feet for beyond visual line of sight (“BVLOS”) research flights.. Rockwell’s modification seeks to add four new antenna locations to its approved license for additional testing.

**Antenna Descriptions and Sketches**

Rockwell Collins seeks to add four new locations to its license—two more in Illinois, and two more in Iowa. Two of the antennas will be mounted using cells on wheels (“COWs”); the other two will be mounted on existing towers.

*Iowa locations, Cells on Wheels*

For the two new mobile locations, the antennas will be mounted using COWs, as depicted here:



- The Green Castle Airport COW, which will be located at NL 41-45-14.26, WL 91-43-11.04, will be 50 feet tall, or 15.2 meters, from the ground to the tip of the antenna.
- The Iowa City Airport COW, which will be located at NL 41- 38-18.97, WL 91-32-26.02, will also be 20 feet tall, or 6.1 meters, from the ground to the tip of the antenna.

*Illinois locations*

For the two fixed Illinois locations, the antennas will be mounted on the existing Ameren Energy Antenna Towers, as depicted:



- The Newton Power Plant antenna will be mounted on an existing tower, located at NL 38- 56-43, WL 88-16-48, at 315.9 feet, or 96.3 meters, from the ground to the tip of the antenna.
- The Casey Substation will be mounted on an existing tower, located at NL 39-16-07.67, WL 88-04-54.36, at 179.8 feet, or 54.8 meters, from the ground to the tip of the antenna.

For the two fixed locations in Illinois, UAS aircraft will fly between the two towers, which are approximately 25 miles apart.