

Flight Guidelines for Rooftop PV Planning Survey

Flight Guidelines

MAPPING FLIGHT

Ground Sample Distance (GSD): 2 cm/pxr (0.8 in/px) Appox. altitude 91.4 m (300 ft.) AGL

Gimbal Pitch:

Nadir (straight down) -90 degrees from horizon

Overlap:

75% front overlap, 75% side overlap

Flight Area:

The flight path should cover the entire site with a grid flight pattern.



I UAS REQUIREMENTS

Flight Area:

Images must be JPEG and contain metadata (GPS, relative altitude, gimbal attitude, and timestamp)

Drone:

Capture images with a multi-copter UAS with gimbal mounted camera (e.g. DJI Phantom 4 Pro)

High-Resolution Camera:

5472×3648 pixel resolution minimum e.g. Phantom 4 Pro camera, Zenmuse X4S

Relative Position Accuracy:

Horizotal: 1.5 m, Vertical: 0.5 m

Absolute Position Accuracy:

Horizontal: 5 m, Vertical: N/A

ORBITAL FLIGHT

Altitude:

Appox. altitude should be 100 ft above the rooftop.

Gimbal Pitch:

Approx. 30 degrees facing toward the center of the site (do not include the sky in the view or images)

Flight Area:

Flight should be flown in a circle around entire perimeter of site; fly elliptically for longer rectangular buildings.





Sample Imagery from an Orbital Flight.