

Drones & the Construction Industry

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Since June 2016, the use of unmanned aircraft systems (UAS, or “drones”) for commercial purposes has been officially regulated by the Department of Transportation (DOT) and Federal Aviation Administration (FAA). In accordance with federal rules, UAS weighing less than 55 pounds can be legally flown within the parameters established by the FAA in Title 14 of the Code of Federal Regulations (14 CFR) part 107, Small Unmanned Aircraft Systems.

Since then, the use of drones in the construction industry has increased by leaps and bounds. The allure of drones is their ability to perform tasks and achieve results safer, faster, and cheaper than traditional methods.

Small, rotary-based, camera-mounted UAS provide a unique visual perspective and the ability to inspect conditions over wide or hard-to-reach areas without putting a person in danger or incurring more traditional, cost-prohibitive operational and ancillary costs. These craft can also document site conditions and monitor progress on construction projects; inspect external components of tall or difficult-to-reach structures such as buildings, roofs, cranes, bridges, scaffolds, etc.; document and/or investigate work site accidents; and, of course, they capture photographs for clients and potential customers, as well as marketing and PR purposes.

Despite their many uses and advantages, drones present risks of their own and must be used responsibly by experienced drone pilots familiar with both the equipment and airspace, as well as all local, state and Federal regulations. Contractors choosing to use UAS technology should establish best practices and enforce safety protocols to maximize a drone’s capabilities, while minimizing exposure from potential risks.

Specific Limitations Relevant To Contractors

The rules pertaining to small drones primarily regulate three key areas: (i) the UAS device; (ii) Operator qualifications; and (iii) in-flight operations.

Federal rules require a remote pilot in command, stipulating that UAS operator must either hold a remote pilot airman certificate or be under the direct supervision of a person who holds a certificate.

Significantly, FAA rules prohibit drone flight over people not “directly participating” in the flight operation unless they are under shelter or in a stationary vehicle. Only the remote pilot in command, the person operating the controls (if different), the visual observer, and any other person who is necessary for the safety of the operation, are considered to be “directly participating” in the operation. This requirement protects people on the ground who are likely unaware of the drone flying overhead and could be injured if control of the aircraft was lost.

Therefore, flying an UAS over an active, open construction site would most likely require the contractor to obtain a waiver from the FAA.

Avoiding Risk And Exposure For Drone Operations

UAS present most of the same risks as other forms of aircraft but on a smaller scale. The most likely losses include: (i) injury or damage due to collision or interference with another aircraft; (ii) injury or damage to people or property on the ground; (iii) damage to the unmanned aircraft; (iv) violation of another’s rights when flying over private property; and (v) unauthorized collection, use, or storage of data.

The insurance industry largely treats drones as “aircraft.” As such, they use the same parameters to assess risk and determine coverage. Standard commercial property and liability policies do not cover most aircraft exposure. Therefore, companies that own, lease, or rent UAS to conduct operations may have an uninsured liability issue, unless they have taken specific steps to cover this risk.

Avoid Claims By Implementing A Best Practices Policy

The FAA regulations provide only minimum standards, providing little to no guidance on flight planning, record keeping, and maintenance. As such, contractors should minimize their exposure to loss by implementing best practice guidelines. The following guidelines may help avoid claims:

- Perform routine maintenance and a pre-flight inspection before each flight.
- Prepare a mission flight plan which identifies: (i) the most ideal spot to launch; (ii) the optimal flight path to avoid pedestrians and obstacles; and (iii) the time required to complete the flight to ensure it is well within battery capacity.
- Consider and assess weather conditions before any flight, particularly wind and visibility issues such as, fog, rain or snow. If weather poses any concern, postpone the operation and wait until conditions improve.
- Utilize a visual observer (“spotter”). A spotter can help look for unexpected hazards (i.e. manned aircraft, birds, power lines) while also keeping an eye on the drone operator, who could be exposed to dangers while focused on the flight and aircraft.
- Maintain a flight log and record of all UAS operations. This is useful for determining when to perform scheduled maintenance on the UAS, but to also provide a defense against third-party claims.

Conclusion

Remarkable advances in UAS technology, together with the increased availability and affordability, nearly guarantees that these devices will be utilized in ever increasing numbers. Contractors wishing to take advantage of drones are encouraged to do so but, just as with any tool or piece of equipment, precautions must be taken in order to minimize risk and exposure.

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