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**Drones & Design/Construction Professionals:  
Opportunities & Obligations**  
*Severson & Werson<sup>iii</sup>*  
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Drones – otherwise known as Unmanned Aerial Vehicles (UAVs) or Unmanned Aircraft Systems (UASs) —have now transitioned from the toys of hobbyists and Christmas mornings to full-fledged and sanctioned tools of commerce and industry. In June 2016, the Federal Aviation Administration truly made it so with its announcement of its new Unmanned Aircraft System Rules. (See <https://www.faa.gov/uas/>.) Those rules became effective August 29, 2016. With the promise of even more and far reaching authorizations and regulations of UAVs by the FAA, the commercial reality and opportunity of UAVs cannot be ignored.

While there are numerous potential uses and impacts of UAVs, nowhere is the potential use and application of UAVs simultaneously more at the day-to-day grassroots level as well as far-reaching practice evolution than for design and construction professionals. It runs the entire project lifecycle from site characterization and planning to construction observation and final inspections and as-built records. It also runs the spectrum of disciplines from geotechnical engineers to civil engineers and land surveyors to architects to construction managers and everything in between.

However, UAVs present much more in terms of both in opportunity and challenge than just being a nifty new toy and tool. Beyond even the required Federal licensing, the varied application opportunities, and even the corresponding insurance protections for the UAVs and their operation is the impact on the professional practice implicating and corresponding impacts on corresponding scopes of work the professional standard of care.

**Drones or Unmanned Air Vehicles**

According to Federal regulation, “The term “unmanned aircraft system” means an unmanned aircraft and associated elements (including communication links and the components that control the unmanned aircraft) that are required for the pilot in command to operate safely and efficiently in the national airspace system.” (FAA Reauthorization and Modernization Act of 2012.) The new Federal Rules cover such unmanned aircraft up to 55 pounds in weight. Such aircraft may be used for either data collection or payload delivery.

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### **The Design & Construction Applications**

As with any new technology, the potential uses and impacts is limited only by the creative of the professionals implementing it. However, the potential literally span and exceed the entire project lifecycle and apply to multiple professional disciplines, contractors, and owner/operators. Already, the AIA, ACEC, CMA, AGC, and drone enthusiasts are using and promoting the use of UAVs for: site evaluation and reconnaissance, surveying, topography, site line evaluations, evaluation of existing improvements, construction monitoring and observation, final inspections, verification of as-built conditions, and monitoring for operation and maintenance.

### **The Federal Rules—Today and Tomorrow**

The FAA claims authority over “everything that flies”. During the several years as its UAS Rules were in preparation, the FAA issued approximately 5,300 special use permits to commercial drone operators. Many others were likely operating without authorization. Effective August 28, 2016, unless the operator can secure a Rule 333 public interest exemption demonstrating both a public interest necessity and equivalent safety controls, all non-recreational drone operators must be at least 16 years old, pass a Federal aeronautics test every two years, and pass a TSA background check. Even with that license in place, drone operation is limited to daylight operation unless the drone is equipped with operational lights which can be seen from at least three miles away. The Rules also reduce the operating height to 400 feet from the ground unless it is within 400 feet of a taller building or tower. Perhaps most significantly from an operational standpoint, the drone may only be operated within line-of-sight of operator or observer in direct communication with operator. Even with these restrictions, the number of license applications is expected to be overwhelming. Penalties for unlicensed or improper operation may apply to both the operator and drone owner.

The greatest impact of FAA UAS Rules may yet be to come. The FAA suggested it will extend the potential uses and impacts. Among the potential expansions of such rules would be rules of “out-of-sight” operation, operation at greater heights, and nighttime operation. Each would obviously have expanded opportunities and applications.

Finally, even though the FAA claims its rules control and supersede any State or local regulations, while waiting for the Federal Rules, 31 States established their own laws covering drones. Even though some are duplicative of the FAA rules and therefore likely superseded, some cover “different” subjects and therefore could apply as well. For example, thirteen establish criminal penalties for “misuse” and twelve establish “privacy protections”.

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### **Insurance**

As both a “vehicle” and professional information gathering tool, UAVs carry a number of insurance concerns and needs. As with any vehicle, there should be coverage both for operational liability as well as potential damage to the drone and the equipment itself. Many general liability policies would exclude liability coverage and a special liability policy would be required. Similarly, to the extent the collected information becomes a part of or influences design deliverables or services, professionals should confirm that such information is covered by applicable liability coverage. Finally, as an information gathering tool, drones can have implications for both privacy concerns and copyright violations. Such issues may be covered by general liability insurance, but that coverage should be confirmed. Ultimately, UAV or drone ownership and operation may have implications for vehicle insurance, professional liability insurance, general liability insurance, and special coverages such as cyber insurance. Accordingly, implementation of drones into a professional practice warrants an early evaluation with a knowledgeable insurance broker.

### **Scope of Work and Standard of Care Implications and Strategies**

Most legal standards and professional service agreements define the professional standard of care as that “**ordinarily** provided by consultants practicing in the same or similar locality under the same or similar circumstances.” For general purposes, that represents the broad middle band of practitioners. At least one legal dictionary defines “ordinary” as “regular, customary and continuing, and not unusual or extraordinary.” Nowhere in that broad middle band or definition is the requirement that it be above the 50th percentile. Accordingly, the use of UAVs as a part of practice need not be used more than half the time before it can be argued that it is necessary to satisfy the applicable standard of care. It is reminiscent of similar issues associated with the introduction and evolution of CAD and BIM. In fact, in the hindsight of asserted claims, it is often suggested that it was within the standard of care well before it became the prevailing practice.

However, the standard of care exists only within the responsibilities established by the scope of work. Accordingly, a well-structured and limited scope of work can be the best approach to establish whether or not UAV information will be part of the services. The simplest and cleanest approach to doing so is an exclusion which disclaims it as part of the service or deliverables or listing as an additional service which implicitly accomplishes the same thing.

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In the absence of such an express statement, two particular clauses which may be appropriate to any scope of work may go a long ways towards containing the potential UAV obligations to any client. The first is to limit the obligations expressly set forth in the scope of work and thereby avoid implied extensions. It might provide:

*Consultant's services shall be limited to those expressly set forth above, and Consultant shall have no other obligations or responsibilities for the Project except as agreed to in writing or as provided in this Agreement.*

A more aggressive extension would be to expressly declare that the use of any technology or method is at the professional's "means & methods" for its own purposes and not part of the deliverable service. Such a clause might provide:

*As an independent contractor, Consultant shall be in control of the means and methods in which its services are delivered except as expressly set forth herein or as agreed in writing with Client. As such, any tools, technology, or systems used on the Project shall be solely at Consultant's discretion and solely for Consultant's benefit except as expressly provided herein.*

As part of that means and methods, professionals should also expressly establish their operational plan and process for the use of UAVs. Absent such an established plan, drones equipped with video cameras may easily capture far more information than could realistically be considered as a part of the services, but if it exists within the project database, the professional is technically "on notice" as to its content. Accordingly, the operational plan should be specific as to the operational frequency, routing, and recordkeeping. In particular, the preferred records should either be "focused" on particular areas of concern or relevance or "distant" for an overall project status identification. "Intermediate" images can be precarious in that they are most likely to include more information than can realistically be considered, but are nevertheless part of the record. In addition, there should be a specific plan for when and how to preserve either video or still images and which to discard as a part of that process. Generally, still images are the preference during the construction phase or at completion. Video images may be more justified in the pre-project assessment phase. Finally, if such records are to be shared with others, there should be a specific agreement and process for doing so with appropriate limitations and disclaimers.

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Finally, if the decision is made to include drone or UAV information in the process, the decision must be made whether to provide that service internally or whether to outsource it. As a starting point, performing such services should include an internal assessment and confirmation as to capacity, efficiency/effectiveness, revenue/profit, and insurance/liability. Similarly, if the decision is to outsource the service, it should only be done pursuant to a written agreement with appropriate verification as to insurance, indemnity, rights of direction and control, and rights in and archiving of content.

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<sup>i</sup> *Severson & Werson has provided legal services throughout California and the country for more than fifty years. The firm provides counseling and litigation support to all members of the construction process, including design professionals, construction managers, environmental professionals, owners, contractors, and insurance carriers.*

<sup>ii</sup> *David A. Ericksen is a principal shareholder in and immediate past President of the law firm of Severson & Werson in San Francisco, California, and leads the firm's Construction and Environmental Practices. For over twenty years, Mr. Ericksen has specialized in the representation of architects, engineers, construction managers, design-builders, and other construction professionals. Mr. Ericksen's expertise covers all aspects of such professional practice as lead litigation and trial counsel, as well as being an active resource for risk management, strategic planning, and transactional matters. He is a trusted and valued resource to design and construction professionals and their insurance carriers across the United States and beyond. He has been repeatedly recognized as an industry leader, including being named a Construction "Super Lawyer" for the last eleven years. He is a graduate of Boalt Hall School of Law, University of California, Berkeley, a former law clerk to the Washington State Supreme Court, and a member of and resource to numerous construction and environmentally-related professional organizations. Mr. Ericksen is a frequent speaker before construction professional organizations such as the AIA, SEA, ACEC, CSI and others, as well as providing in-house training seminars for firms.*