

WHITE PAPER:

Contracting With and Between UAS Operators

A guide for companies seeking professional drone services and drone companies looking to safely and legally transact business



GLOBAL AEROSPACE



INSURE WITH CONFIDENCE

DENTONS

CONTRACTING WITH AND BETWEEN UAS OPERATORS

Introduction

The Unmanned Aircraft System (UAS) industry is evolving at a speed that is hard to keep up with, even for those intimately involved with it. It has been said that a “drone year” is the equivalent of one calendar month; such is the pace of change. New aircraft technology is influencing all areas of the UAS industry—from manufacturing techniques and materials to flight controllers and apps. Professional operators of drones face a vast array in choice of platform (aircraft) for their given role.

Additionally, payload technology is advancing (payload being the camera or other device attached to the aircraft that provides utility). Tasks that were hard to accomplish a year ago are possible now, with some of the biggest gains being seen in the agricultural industry.

This extraordinary revolution has taken place in an industry that, only a few years ago, had never been heard of or was dismissed as a fad. To a great extent, this growth has been fueled by the enthusiasm with which investors have supported drone start-up companies. An August 2015 report from the Teal Group estimates \$93 billion in worldwide Unmanned Aerial Vehicle production over the next 10 years¹.

In spite of this remarkable progress, we are also seeing signs of growing pains. Insurance carriers have seen insurance policies purchased a year ago not renew, for two primary reasons.

Firstly, the drone that promised so much last year is now redundant technology and resides on a shelf, never to be flown again. Similarly, some manufacturers have ceased research or production, having been too bullish with one application or operating platform. Secondly, many of the entry-grade units being purchased for as little as \$1,500 including camera, either failed to live up to their expected use or were damaged and are uneconomical or impossible to repair.

In this ever-changing environment, we are witnessing a growing number of enterprises choosing to outsource their drone operations. It is not only the pace of change that is influencing these decisions. Safety concerns and a lack of clear legislation are leading a large number to decide that the most effective way to use drones for their organization is to contract with professional operators.

In the first section of this paper we will provide a top 10 list to help companies currently assessing the use of a third-party drone service. Simply put, what are the essential items that should be considered when hiring an operator? Without apology, many of these items relate directly to operational safety.

Drone operators are overwhelmed with additional challenges such as the regulatory environment and the public’s pervasive perception of the dangers associated with the operation of drones. The second section of this paper will address the liabilities of drone manufacturers, operators and users to one another and to third parties. It

In this ever-changing environment, we are witnessing a growing number of enterprises choosing to outsource their drone operations.

¹Teal Group Corporation Market Study Press Release, August 2015

The variety of cameras, sensors and other payload items that will perform the application make picking a qualified operator a daunting task.

will also address how they can protect themselves during this period of extraordinary development, especially when interacting with others in the industry.

Section 1 – How to choose the right operator

1. The best system for the job

The choice of systems available can be mind-boggling. It is estimated that there are 800-plus manufacturers of small UAS in the world today. Coupled with that, the variety of cameras, sensors and other payload items available makes picking a qualified operator a daunting task.

So how do you select the most appropriate drone operator to accomplish your particular requirements?

- (i) Define your mission: What data are you looking for and how do you need it presented?
- (ii) Age of equipment: Payload technology is developing at a breathtaking speed; ensure your provider has the latest and greatest.
- (iii) Number of drones and sensors / cameras: Not only does this give you comfort that a back-up system may be there if the primary fails; it also indicates the experience of the operator and their level of investment.
- (iv) Know what is included in the contract: Will the data collected by the drone be presented in the raw or after it has been processed into a pack of information that you can use immediately?
- (v) Secure references: A long track record may be hard to achieve, but the presence of prior satisfied customers would be advantageous.
- (vi) Quality costs: As with many things in life, the best option may be one of the most expensive. The added benefits in relation to the safety around the operation and reputational protection will require greater investment.
- (vii) Call in the experts: Many businesses offer consultancy services to help you find the best partner.

2. Legality and legislation

At the time of writing this paper, the Federal Aviation Administration (FAA) is still drafting the final rules that will govern the use of small commercial UAS (the sub 55lb units operated within visual line of sight (VLOS) that will make up the bulk of the market in the next five years). In the meantime, operators are required to seek specific approval from the FAA to operate under section 333 of the 2012 FAA Modernization and Reform Act.

One of the most controversial features of the exemptions passed to date is the requirement for an FAA licensed pilot to operate the UAS at all times. The reason is clear—the FAA simply has no other congressional mandate for regulating our skies. This condition alone, however, makes the use of drones out of reach for most. With a final rule (anticipated by June 2016) that will most likely not contain as burdensome a requirement (if the February 2015 Notice of Proposed Rulemaking is accurate), it

CONTRACTING WITH AND BETWEEN UAS OPERATORS

is hard to justify the significant expense of training yourself, or a workforce, to pilot a manned aircraft simply to operate a \$1,500 quadcopter. Notwithstanding the 10/2015 fine of \$1.9 million levied against a drone operator, it is likely that many professional operators may not choose to go through the difficult hurdles for approval in the current regulatory environment.

That said, if your chosen operator cannot produce a copy of their 333 exemption for commercial or business use, whether over private farmland or a remote building site, they are in breach of a Federal Aviation Regulation (FAR). Many companies advertise themselves as being FAA compliant and even declare the same on insurance applications. What some may not realize is that the FAA database is available for public viewing here: http://www.faa.gov/uas/legislative_programs/section_333/. Users can search this database for both exempted and pending or declined applicants.

Does an FAA approval mean the operator is good to go? Not necessarily.

Firstly, the approvals are specific to certain aircraft types and uses. Therefore, if an operator is approved for use of a DJI S1000 and turns up with a 3DR X8 in the trunk, any flight would be in direct violation of their approval. Likewise, an operator approved for real estate photography would not be able to legally scan your crops.

The approvals are very specific in terms of operational parameters as well. Requirements for safe distances to be maintained from airfields, people and urban areas are common. Check if the operation will violate any of those specifications.

Many industry observers and participants estimate that, as the FAA approves more and more operations, the number of operators pushing the scope of their approval will rise. Interpreting the approvals is not always straightforward. Be sure to check for a valid approval and that the content therein is being respected.

3. What type of system do you need and how safe is it?

A distinction needs to be drawn between the myriad of different operating systems. A farmer operating a 3lb foam wing, fully autonomous aircraft over private land represents a very different risk from a 25lb octocopter intended to be flown in close proximity to a crowd of people. While legislation may not distinguish between the two, the responsible operator should recognize the greater need for active risk mitigation for the latter. The inertia behind a 25lb unit falling from 200 feet could easily be enough to cause fatal injury.

Therefore, an assessment of the role to be performed and the relative risk to persons and property should be made.

4. Maintaining safe distance

The FAA exemptions largely require that “All flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures.”

This is open to interpretation for two reasons.

First, you could assume that separation can be vertical as well as horizontal (although to the author this makes little sense—500 feet vertical merely means it has further to fall in the event of a malfunction). If the maximum 400 foot above ground level (AGL) rule is being respected, it follows that there must be at least some horizontal separation.

A farmer operating a 3lb foam wing, fully autonomous aircraft over private land represents a very different risk from a 25lb octocopter intended to be flown in close proximity to a crowd of people.

Most specialist aviation insurers require some level of training and experience to be demonstrated prior to providing cover.

Second, the word “nonparticipating” could be interpreted to mean many things. Is a ticket-holding audience member being filmed at a rock concert a nonparticipating person?

A further ambiguity to this area of the exemptions comes from the provision that “Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production.” The means by which operators have assumed consent are varied and wide-ranging. Again, could the same audience member have given consent by merely purchasing a ticket?

The reality is that existing technology, especially in the area of aerial photography, is likely to produce poor results from 500 feet. You can probably assume that anyone advertising their ability to fly at public events will be skirting the law in at least one area.

A complementary and more effective requirement to this rule may be a self-imposed 200-foot horizontal separation together with a need for everyone within that range to be fully briefed on the drone operation and, where possible, to have signed a disclaimer around the use of the drone.

5. The operator

Close attention should be paid to the experience and training of the operator (the pilot). While drone types differ enormously, some level of training is appropriate for all. Many manufacturers will not allow their products to leave the factory without the operators having completed their specific training. Of course, the majority of units are available either online or through a dealer. This issue, coupled with no regulatory requirement for specific UAS training, can lead to very low standards of operational proficiency.

Most specialist aviation insurers require some level of training and experience to be demonstrated prior to providing insurance. Users of drone services should require this training as well. The majority of drones, especially rotor wing models, require significant hands-on operator control. While the level of autonomy will increase significantly in the future with new technology, current users should ensure the operators are proficient. Qualified operators should understand the systems and be trained to control them safely. Mere compliance with FAA requirements alone does not achieve those goals.

There is no excuse for a lack of training. In addition to the offerings of manufacturers, training schools are popping up around the US and internationally that offer training. Many offer online courses or full classroom and practical training, even at the site of the customer’s choosing.

The current 333 exemptions routinely require a visual observer (VO). So, if your UAS crew turns up single-handed, they are operating in breach of their exemption. The VO performs tasks such as looking out for other air traffic and helping the operator maintain the safe distances required.

6. Risk management

Risk management is an all-encompassing term and many of the strategies for effective risk management are touched upon throughout this paper. In the context of this section, risk management refers to the use of active technologies and other mitigating techniques to assist operators to fly safely.

CONTRACTING WITH AND BETWEEN UAS OPERATORS

Geo-fencing is one such technology. Parameters are set that prevent the drone from breaching certain predetermined physical boundaries. This could be in relation to local airports, densely populated areas or high-risk buildings, such as schools, hospitals and government buildings. The off-site risk manager has peace of mind knowing that no matter what the operator does, whether intentionally or accidentally, the drone will not go outside the established boundaries.

This technology will be especially useful to help prevent claims of invasion of privacy. So long as the drone is prevented from leaving the confines of a cell tower, for instance, the probability of an unintended over-flight of a residential neighborhood is greatly diminished.

Of similar use are electronic logbooks. With real-time telemetry flowing from the system (commonly referred to as a black box in airliner parlance) it is possible to know with pinpoint accuracy where a drone is at any given time.

Automated logbooks also help those contracting with drone operators to know exactly how many flight hours have been flown and precisely where the drone was at any point. This can help when evaluating data as well as value from the drone service. Even if a drone isn't fitted with this technology, ensure that the operator is keeping a log of every flight. This is considered good practice and will indicate the overall professionalism of the drone service provider.

Another customary measure in manned aviation is the use of a Standard Operating Procedure (SOP). This manual can either be in the form of an electronic or paper document that is followed for every flight. Covering aspects of a pre-flight inspection such as meteorology, environmental hazard spotting and crew health, an SOP can help prevent operators from flying in unsafe conditions. Similarly, establishing safe take-off and landing procedures and incorporating all elements of an FAA exemption can help ensure that all flights are conducted with safety assurance at their core.

Global Aerospace, in cooperation with the Unmanned Safety Institute, released an SOP in 2014 that is currently available to all Global Aerospace customers. It has been widely used as the basis for drone operators to develop their own SOPs.

One of the most exciting features of the UAS industry is the promise of what is to come. It is easy to see a situation in the near future where drones will be fully autonomous. With autonomy will likely come added safety assurance.

7. Maintenance

Routine maintenance is not mandated by the regulator. While the 333 approvals state that "the operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation" and that "the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight," this does not go as far as the required periodic inspections of manned aircraft. If you intend to truly evaluate a number of UAS operators, it is appropriate to ask about their maintenance regime.

Global Aerospace, in cooperation with the Unmanned Safety Institute, released an SOP in 2014 that is currently available to all Global Aerospace customers. It has been widely used as the basis for drone operators to develop their own SOPs.

Any industry in its infancy will tend to be focused on production and revenue and not the minutiae of contract language.

8. Indoor use

Indoor use is a rarely mentioned peril of the small UAS world. Indoor flights fall outside of FAA jurisdiction and, therefore, there is no legislation or guidance around how to operate safely in an enclosed setting.

Many professional UAS operators simply won't fly indoors for numerous reasons. Some issues linked to indoor use are: the signals between drone and ground station can fail, GPS location services are often impossible to obtain (upon which a great number of the fail-safe systems rely), safe landing areas can be hard to identify and flying in close proximity to persons is hard to prevent.

If your company is considering the use of a drone for an indoor event, ensure that physical barriers, such as netting, are in place to keep the drone and bystanders separated. Some in the industry insist that indoor operations are safe. However, the majority assert that the technology is simply too immature for reliable, safe operations.

9. Contractual language and appropriate insurance

Any industry in its infancy will tend to be focused on production and revenue and not the minutiae of contract language. This topic will be covered in greater depth in the second section of this paper. Ensuring that drone operators are held accountable for their actions should be part of any negotiation.

Those hiring UAS services should ensure that the drone operator accepts responsibility for accidental loss of the equipment as well as damage to any third-party property and physical injury. Insurance for the operator is available at a cost effective premium (considering the risk) for both equipment (aircraft and payload items) as well as the potential liability arising from loss of control and crash landing.

Typical liability limits purchased by operators are between \$1 million and \$5 million per occurrence with much higher limits being available to those who have demonstrated the appropriate risk mitigation strategies to insurers. If a drone operator cannot buy more than a few million dollars in limit, it may indicate the insurance market's misgivings about their operational standards.

10. Non-owned insurance

The final piece of advice for a company looking to hire a drone operator is to carry their own insurance protection, via a non-owned policy.

Non-owned insurance would provide coverage in the event the drone caused third-party damage and the hiring company was unable to recover the financial loss from the operator. Furthermore, a non-owned policy could afford financial protection in excess of the operator's limit, should that be exhausted.

This insurance can be purchased and, while it relies upon active risk management on behalf of the hiring company, it will act as the backstop in case of significant pecuniary loss.

Contact your insurance broker to learn more.

CONTRACTING WITH AND BETWEEN UAS OPERATORS

Section 2 – How those in the drone industry can protect themselves

1. Shifting and limiting liabilities through contract

Legal liabilities, whether you're the manufacturer, operator or user of a drone is an area which requires increasing focus as this burgeoning industry continues to grow exponentially. Remember, drones/UAS are aircraft operating in the federally controlled National Airspace System (NAS). This means that just like the manufacturer or pilot of a manned aircraft, the same potential liabilities exist for drone manufacturers/operators.

There will ultimately be a new section of the Federal Aviation Regulations applicable to drones, i.e. Part 107. However, the same basic regulatory and legal obligations will exist as already exist for all other aircraft. This includes not only the obligation to operate safely, but, when there is an incident or accident involving a drone, that it be reported to the National Transportation Safety Board, which has the statutory responsibility to investigate all accidents involving aircraft.

Before turning to what an operator should do if they have an accident, we will focus on a subject mentioned in Section 1(9) dealing with contractual language and risk management. Assume you're either the provider of inspection services using a drone or the purchaser of such services. If you're an operator, you have your exemption from the FAA under Section 333. In addition, you have secured insurance covering not only damage to or loss of your drone, but liability coverage affording protection to persons/companies for whom you are providing drone inspection services.

Alternatively, maybe you own a company and want to hire a drone operator to conduct certain aerial inspection services.

In either case, whether you're the purchaser of drone services or the provider of them, insurance is the first issue to address. However, of equal importance is the contract or agreement pursuant to which the drone services will be bought or sold. Just as you would have a written contract from any other provider of contract services, such an agreement is necessary to insure that indemnity, hold harmless, and other risk mitigation terms, conditions and requirements are properly addressed.

The first line of defense is to define the contractual relationship between the parties and properly allocate the risks and responsibilities. The ultimate safety net is having appropriate insurance.

It is important to understand the nature of the insurance that you should consider. Furthermore, it is helpful to understand the different types of legal liabilities that a drone manufacturer, drone operator or user/purchaser of drone services may incur, not only to one another, but to third parties as well.

With this in mind, let's examine the potential legal liabilities of a drone manufacturer, a drone operator and the user/purchaser of drone services.

2. Liability of drone manufacturer

It is well established that the manufacturer of a product owes certain duties to the user of the product. For example, a drone manufacturer owes certain duties to the drone service provider. These obligations can be generally stated as manufacturing and selling a product free of design or manufacturing defects. There exists the

The first line of defense is to define the contractual relationship between the parties and properly allocate the risks and responsibilities.

Since most purchases of drones are not done pursuant to a formal written contract, the legal obligation of the manufacturers and the purchaser are defined by the general principles of the law applicable to the sale and purchase.

continuing obligation on the part of all drone manufacturers to provide notice of defects it becomes aware of after selling its product. Thus, just like the auto manufacturer that owes a duty to manufacture a car free of defects, the drone manufacturer has a similar duty. Moreover, just like the car manufacturer that has an obligation to provide notice to purchasers regarding car defects, including possibly recalling them, drone manufacturers have similar obligations.

In addition, if a defect in a drone injures a third party, the manufacturer will have potential liability to them. Since most purchases of drones are not done pursuant to a formal written contract, the legal obligation of the manufacturers and the purchaser are defined by the general principles of the law applicable to the sale and purchase.

3. Liability of drone operator

Think of a drone operator like an airline that purchases an aircraft and provides air transportation services to people who buy a ticket. Drone operators buy unmanned aircraft systems/drones from manufacturers and provide data collection or other services to contracted customers. This latter group might include those who want to inspect industrial facilities, manage fields or crops, film movies or inspect railroad tracks or cell towers.

Drone operators, i.e., providers of drone services, owe the legal obligation to their customers to use due care and not act in a negligent manner.

Most transactions between the manufacturers of a drone and the purchaser will not involve a written contract. However, there should always be a contract between the provider of drone services and the purchaser of them. This is particularly true relative to those purchasers who are contracting for drone services where, while the risk of loss may be low, the consequences of a loss could be very serious. For example, take a chemical facility owner that hires a drone service to conduct inspections of its property, or a production company that hires a drone operator to provide aerial filming.

In the former case, a drone failure could result in the vehicle and its sensor package crashing into the facility, potentially rupturing a pipeline and causing a fire or explosion. In the latter example, even in a closed set scenario, the crashing of the drone with the camera could injure someone, damage property or shut down production.

These are exactly the type of risks for which insurance is required. These risks cry out for a written contract which, among other things, specifies the services being provided, the duties and obligations of the operator and, from the risk perspective, the obligation and responsibilities of both the provider of drone services, as well as the purchaser of those services. In addition, one of the factors an insurer will look for in providing drone insurance to an operator is whether or not there is a written contract between the provider/operator and the customer.

4. Liability of purchasers of drone services

While not many people may realize it, an airline ticket is in fact a contract between the operator (i.e., airline) and the purchaser of the services (i.e., passenger).

The airline contracts to provide air transportation services and the passenger, essentially a passive participant in the transaction, agrees to pay for them. In many ways the purchaser of drone services is in the same position. Absent doing something

CONTRACTING WITH AND BETWEEN UAS OPERATORS

that interferes with the operation, the obligation of the purchaser is to pay the drone services provider. However, unlike the airline/passenger relationship where the airline's obligation is specified by tariffs, extensive federal regulation and intercontinental agreements, the relationship between drone operators and drone service providers is an area still in its early stages of development. When the small UAS regulations in Part 107 are ultimately enacted in 2016 or 2017, there will be some regulatory framework. However, even then, and certainly for the foreseeable future, the nature of the responsibility of the operator versus the purchaser will be defined by the existence and nature of the written contract between them.

The following section presents a sample contract which, subject to appropriate/desirable modifications, can be used by either a drone operator or the purchaser of drone services.

The nature of the responsibility of the operator v. the purchaser will be defined by the existence and nature of the written contract between them.

About Global Aerospace

Global Aerospace is a leading provider of aerospace insurance with a worldwide portfolio of clients who are engaged in every aspect of the aviation and space industries. Headquartered in London, we have offices in Canada, Cologne, Paris, Zurich and throughout the United States. Across the world we employ over 350 people. With experience dating back to the 1920s, the company's underwriting is backed by a pool of high quality insurance companies representing some of the most respected names in the business.
www.global-aero.com

Policies are issued by one or more member companies of the Global Aerospace Pool. American Alternative Insurance Corporation, Tokio Marine America Insurance Company, Mitsui Sumitomo Insurance Company of America, National Indemnity Company, National Indemnity Company of the South, Central States Indemnity Company of Omaha, American Commerce Insurance Company.

About Dentons

Dentons is a global law firm driven to provide a competitive edge in an increasingly complex and interconnected world. A top 20 firm on the Acritas 2015 Global Elite Brand Index, Dentons is committed to challenging the status quo in delivering consistent and uncompromising quality in new and inventive ways. Dentons' clients now benefit from 3,000 lawyers and professionals in more than 80 locations spanning 50-plus countries. With a legacy of legal experience that dates back to 1742 and builds on the strengths of our foundational firms - Salans, Fraser Milner Casgrain (FMC), SNR Denton and McKenna Long & Aldridge - the Firm serves the local, regional and global needs of private and public clients. www.dentons.com.

In 2015, the Firm announced its intention to combine with Chinese firm 大成. Upon launch later this year, the new firm will offer clients experience from more than 6,600 lawyers and professionals in more than 125 locations and 50-plus countries.



ABOUT THE AUTHORS



Chris Proudlove began his career in aviation insurance in 1990 and has been with Global Aerospace since 2005. Chris' current role is senior vice president, manager of the Northeast Regional Office and UAS Risks, based in Parsippany, NJ. In this role, Chris has led the development team for Global's Unmanned Aircraft System worldwide underwriting strategy and product development. As author of Global Aerospace's white paper on UAS risk management, panelist and presenter at numerous UAS conferences and contributor to dozens of articles, Chris is widely respected as an industry expert on UAS insurance, risk management and safety.



Mark Dombroff concentrates his practice on the aviation and transportation industry, including litigation, regulatory, FAA and DOT administrative and enforcement matters, security, National Transportation Safety Board (NTSB) investigations and employee related issues. Mark started his legal career as a Trial Attorney with the Office of the General Counsel of the FAA: He then moved to the Aviation Unit of the United States DOJ. Over his 15 year career with the DOJ, he represented the FAA, all of the military services, the National Weather Service, the Coast Guard, NASA and all other government related aviation activities. Since entering private practice, he has represented all aspects of the aviation industry including airlines, general/corporate aviation, manufacturers, MROS, airports, security companies and others.

Agreement for Drone Services

This Drone Services Agreement (“Agreement”) is made effective as of _____, 201_ (the “Effective Date”) by and between _____ (“Purchaser”), and _____ (“Operator”) a _____ corporation having its principal place of business at _____. Operator and Purchaser may be referred to herein each as a “Party” or, collectively, as the “Parties”.

Whereas, Purchaser is engaged in the business of providing insurance services to its customers;

Whereas, Purchaser will have need of inspection services flown by a UAS at times and places of its choosing,

Whereas, Operator desires to contract with Purchaser to provide UAS inspection services, including the aircraft, personnel and other equipment necessary to safely provide those services subject to and in accordance with such terms and conditions set forth herein.

Therefore, in consideration of the mutual promises contained herein, the parties agree as follows:

1. NATURE AND TERM OF AGREEMENT.

a. Work. Purchaser wishes to hire the Operator to provide inspection services employing an unmanned aircraft system (“Services”). This Agreement assumes, unless specifically covered in the Order (as defined below), Operator will provide, as applicable at a time and place designated by Purchaser: (i) an unmanned aircraft; (ii) flight crew; (iii) appropriate sensor or camera capable of collecting the requested data from the inspection; (iv) all equipment or other personnel such as visual observers necessary to safely provide the Services in accordance with all applicable law; (v) all data obtained from the inspection, including but not limited to images and other electronic data.

b. Order. The Parties contemplate that Operator will issue a purchase, service or work order authorizing particular work (each an “Order”). The Order will set forth the details of the structure or area that is to be inspected and its location along with any special instructions and will indicate the information that Purchaser wishes to obtain. Each Order and the work to be performed thereunder shall be governed by the terms and conditions of this Agreement and all such Orders shall be for informational purposes only, to describe the particular work, and shall not modify or change any provision of this Agreement.

c. Order Review: Purchaser is not in the business of providing aviation services. As a result, Purchaser is relying on the specialized knowledge and expertise of Operator. It is incumbent upon Operator to immediately review any work requested in an Order and determine if the missions can be flown safely and in accordance with the law. If the missions cannot be so performed, Operator must notify Purchaser as soon as practicable to inform them of any such concerns. If any particular mission cannot be flown safely and in accordance with the law, then it shall not be flown.

2. INVOICES AND PAYMENT.

a. Payment. The price for the services is set forth in Schedule A. At the end of each calendar month, the Operator will provide an invoice listing each work order, along with the number of flights flown, the number of days spent on-site performing the work, and the names and positions of each member of the flight crew participating in the Services. Payment will be made 30 days from the date the invoice is received. All payments shall be in United States Dollars (USD).

b. Delay or Cancellation of Services. If the Operator determines that the work required by an Order cannot be completed within the time agreed in Schedule A, it is the duty of the Operator to notify Purchaser as soon as practicable of the delay. The Operator Agrees that Purchaser will not be obligated to pay Operator for any work performed after the time agreed in Schedule A has expired. In the event Purchaser cancels an Order before the work is completed, then Purchaser is only obligated to pay for the work performed up to the time the Order is cancelled.

3. **DELIVERY OF DATA AND DATA RIGHTS**: Operator agrees to provide Purchaser with all data obtained from the performance of the Services within the time set forth in Schedule A, unless a different time is contained in the Order and the parties have mutually agreed to the alteration. Operator warrants that it transfers all rights to any data obtained to Purchaser, including any copyright, when the data is delivered. In addition, Operator agrees that it will not retain any copies of the data and will not resell or provide any of the data to any other person or entity without the express written permission of Purchaser.

4. TERM AND TERMINATION.

a. Term. This Agreement shall commence on the Effective Date and, unless terminated pursuant to this section, shall terminate at the expiration of *one year* (the "Term") unless extended, in writing, by the Parties prior to termination; provided, however, that if any Work is then in progress pursuant to an Order, the term of this Agreement shall be extended to allow completion of such Work.

b. Termination for Cause. This Agreement may be terminated by notice in writing by Purchaser to Operator if Operator commits any material breach of the terms of this Agreement and does not take steps to cure within ten (10) days of written notice of such breach; or immediately if any of the following occur: (a) the Operator or its parent company seeks relief, or its creditors bring action against it or its direct or indirect parent, under any bankruptcy or insolvency law; (b) the Operator or its parent company makes an assignment for the benefit of creditors or other arrangement or composition under a law which prevents enforcement or collection of debts in full; (c) the Operator or its parent company becomes insolvent or is otherwise unable to pay its debts as they come due in the ordinary course of business; (d) the Operator or its parent company ceases or suspends operation of or sells a substantial portion of its business or any portion of its business relating to the performance of the Services; or (e) a trustee, liquidator or receiver is appointed over some or all of the assets of the Operator (or its direct or indirect parent) used in the performance of this Agreement.

c. Termination without cause. This Agreement may be terminated by either Party giving *thirty (30) days'* advance notice, in writing, of its intent to terminate to the other Party .

d. Survival. Despite completion of the Services or termination of this Agreement for any reason, all provisions in this Agreement containing representations, warranties, releases, defense obligations and indemnities, and all provisions relating to confidentiality, insurance, disclaimer of certain remedies, limitations of liability, dispute resolution and governing law, and all causes of action which arose prior to completion or termination, survive indefinitely until, by their respective terms, they are no longer operative or are otherwise limited by an applicable statute of limitations.

5. **INDEPENDENT RELATIONSHIP**. This Agreement does not create, and Operator and Purchaser stipulate and agree that the said Agreement shall not be construed to create, any agency relationship, employer/employee relationship or master/servant relationship by or between any of the agents and/or employees of Purchaser and the agents and/or employees of Operator. To the contrary, Purchaser in the course and scope of activities in furnishing Orders under this Agreement is contemplated to be and stipulated to be independent of Operator for any and all purposes. Each Party has the respective full power and authority to select the means, methods, and manner for performance under this Agreement. Neither Party shall have any power or authority to bind the other.

6. OPERATOR REPRESENTATIONS AND WARRANTIES.

a. Authorization. Operator has full corporate or company power and authority to enter into and perform this Agreement, and has taken all actions necessary to authorize its performance under this Agreement.

b. Airworthiness. The Operator is responsible for the airworthiness of its aircraft and warrants, that at a minimum, all aircraft are maintained and operated in accordance with:

- i. All applicable manuals inclusive but not limited to the manufacturers and Operators maintenance manuals;
- ii. Mandatory Advisory Circulars or other Airworthiness Directives issued by the FAA; and
- iii. The manufacturer's airworthiness limitations;
- iv. Manufacturer or FAA mandated inspection schedules, overhaul schedules, and calendar retirement dates; and
- v. Service Bulletins.

c. Crew Qualifications. The Operator warrants that all crew, including pilot in command, visual observer, sensor or payload operator, or other persons necessary for the safe operation of the flight have the qualifications, experience, licenses and certificates required by applicable regulations and that all have the necessary skill required to perform their duties.

d. Operational Procedures and Operations Manual: Operator warrants that its Service are provided pursuant to an Operations Manual, that the Operations Manual addresses the subjects set forth in Schedule B, that it is sufficient to perform the Services safely and comply with all applicable federal, state, and local laws.

7. PURCHASER REPRESENTATIONS AND WARRANTIES.

a. Authorization. Purchaser has full corporate power and authority to enter into and perform this Agreement, and has taken all actions necessary to authorize its execution and performance of Services under this Agreement.

8. INDEMNITIES; LIMITATION OF LIABILITY.

a. **Defense and Indemnity.** Operator shall indemnify, defend, and hold harmless Purchaser, its affiliates, and their respective directors, officers, employees, operators and agents, from and against any and all claims, demands, complaints or actions (“claims”) of third parties (including employees of the parties or government agencies) arising from or relating to the Services (including but not limited to claims for personal injury, death, property damage or damage to the environment), to the extent caused or arising out of the willful misconduct, breach of this agreement, or violation of law of or by the Operator. The claims covered hereunder include all settlements, losses, liabilities, judgments, court costs, reasonable attorney’s fees, fines, penalties and other litigation costs and expenses arising from or related to such claims.

b. **Limitation of Liability; Waiver of Consequential Damages.** In no event shall either party have any liability to Operator for any lost profits, loss of use, costs of procurement of substitute equipment or services, or delays, or for any indirect, special, incidental, exemplary, consequential or punitive damages or penalties, however caused, and whether in contract, tort, or under any other theory or combined theories of liability.

10. **INSURANCE.** Operator shall maintain insurance in the amounts specified below and shall have Purchaser named as an additional insured on these policies for any occurrence arising out of the Agreement or any Services provided by Operator, in the form of a Certificate of Insurance issued to Purchaser from the underwriting insurance company, with respect to the following coverages:

General Liability	[]
Automotive	[INSERT LIMITS]]
Worker’s Compensation/	[]
Employer’s Liability	[]

11. **COMPLIANCE WITH APPLICABLE LAW:** All the provisions of this Agreement shall be expressly subject to all of the applicable laws, orders, rules, and regulations of any governmental body or agency having jurisdiction over the operations, and all Services and conduct contemplated hereunder shall be conducted in conformity therewith. Operator shall also obtain all applicable approvals of any government agency whose authorization or approval is required for the Work.

12. AIRCRAFT OPERATION:

a. No guidelines or requirements specified in this Agreement are to be construed as authority to operate aircraft or conduct operations in other than strict compliance with the regulations of the country in which an aircraft is registered or operated.

b. The Operator holds a valid Exemption, Operating Certificate, or other necessary authorizations issued by the Federal Aviation Administration required to conduct specific operations. When providing service to Purchaser, the Operator will operate in accordance with the rules and regulations contained in the Federal Aviation Regulations and the Exemption.

c. The Operator will notify Purchaser in the event that the Federal Aviation Administration or other regulatory body with jurisdiction over it takes any action against the Operator’s Exemption, Operating Certificate, or other authority to offer these Services.

d. It is the sole obligation of the operator to report any accidents, incidents, or other reportable mishaps to the appropriate governmental agency, including but not limited to the FAA and NTSB.

e. Any reports made under section 12(d) arising out of any Services provided to Purchaser must also be provided to Purchaser as soon as practicable.

13. **NOTICES.** All notices required or permitted under this Agreement shall be in writing and shall be deemed delivered when delivered in person or deposited in the mail, postage prepaid, to the addresses indicated on the signature page.

14. **DRUG AND ALCOHOL POLICY:** Unless further restricted by local regulatory authorities, Operator agrees and warrants that no person will act as a crewmember (Pilot In Command, Visual Observer, Payload Operator, Sensor Operator, or other person necessary for the safe operation of the aircraft) or perform maintenance on an aircraft when:

a. Affected by or under the influence of alcohol, but in no case within 8 hours after the consumption of any alcoholic beverage.

b. While using any drug that adversely affects the person’s ability to perform required duties.

15. DISPUTES AND APPLICABLE LAW.

a. With regard to disputes between the Parties, the responsible business persons representing each Party will negotiate in good faith to attempt to resolve such dispute.

b. Exclusive jurisdiction for any disputes under this Agreement shall be a court of competent jurisdiction sitting in [Insert], and the Parties consent to personal jurisdiction for such purposes. This Agreement including any Schedules shall be governed by, construed, and enforced in accordance with the laws of the State of [Insert], exclusive of the choice of law or conflict of laws provisions thereof.

c. In the event Purchaser brings an action in connection with this Agreement, and Purchaser is the prevailing party, Purchaser shall be entitled to recover its costs and actual attorneys' fees.

16. MISCELLANEOUS.

- a. Neither Party may assign any of its rights or obligations hereunder, whether by operation of law or otherwise, without the prior express written consent of the other Party.
- b. Except as otherwise set forth herein, no failure to exercise, or delay in exercising, any rights, remedy, power or privilege arising from this Agreement will operate or be construed as a waiver thereof. Waiver by either Party of any default of the other will not operate to excuse the defaulting party from further compliance with this Agreement, nor will any single or partial exercise of any right, remedy, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, remedy, power or privilege.
- c. This Agreement may be modified or amended if the amendment is made in writing and is signed by both Parties.
- d. If any term, provision, or covenant of this Agreement is held by a court of competent jurisdiction to be invalid or unenforceable, the remainder of this Agreement shall remain in full force and effect and shall in no way be affected, and such invalid or unenforceable term, provision, or covenant shall be deemed modified to the minimum extent necessary to make it consistent with applicable law.
- e. This Agreement may be executed in any number of counterparts, each of which will be deemed an original of this Agreement, and which together will constitute one and the same instrument.
- f. This Agreement, including attached Schedules, represents the complete and exclusive agreement between the Parties regarding the subject matter of this Agreement, and supersedes all oral and written communications, negotiations, representations or agreements in relation to that subject matter made or entered into before the Effective Date.

[Signature page to follow.]

PURCHASER

BY: _____

NAME: _____

TITLE: _____

DATE: _____

OPERATOR:

BY: _____

NAME: _____

TITLE: _____

DATE: _____

DRONE SERVICES AGREEMENT

SCHEDULE A

Amount of Work to Be Performed: The Parties Agree that Purchaser may issue up to ____ Orders for Services during the term of this Agreement.

Timing of Performance of Services: Operator Agrees that it will complete all necessary inspection work within ____ days of the receipt of an Order. This includes the delivery of all requested data and information to Purchaser in a useable format.

Costs of Services: The Parties Agree that all work performed pursuant to an Order will be paid based on the following rates:

- \$____ per flight mission
- \$____ per day required to be spent on-site
- \$____ approved transportation costs

SCHEDULE B

OPERATIONS MANUAL MINIMUM REQUIREMENTS

- A. Procedures and checklist information for pre-flight, in flight, post flight, emergency procedures, and limitations.
- B. Information on aircraft systems and performance.
- C. A pre-flight briefing that includes mission planning and the following considerations:
 - 1) Mission overview
 - 2) Hazards unique to the mission being flown
 - 3) Weather (current and forecast ceiling, visibility, and winds)
 - 4) Mission altitude and operating area
 - 5) Lost Link, divert, and flight termination procedures
 - 6) Identification of any public or residential areas near flight path and associated privacy concerns
 - 7) Flight time and fuel/battery requirements
 - 8) Fuel reserves/minimum voltage requirements
 - 9) Frequencies to be used for communications
 - 10) COA Requirements
 - 11) Emergency procedures including contingences for lost link or fly-away
- D. Information on aircraft and other system maintenance
- E. Normal Flight Operations
- F. Abnormal Operations and Emergency Procedures
- G. Accident and Incident Reporting
- H. Required Recordkeeping
- I. Communications Plans and Procedures