U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

August 14, 2015

Exemption No. 12452
Regulatory Docket No. FAA–2015–0807

Mr. Michael W. Middleton
President
Mr. Marty J. Fisher
M3 Partners, LLC
PO Box 4055
Greenville, SC 29608

Dear Messrs. Middleton and Fisher:

This letter is to inform you that we have granted your request for exemption. It transmits our decision, explains its basis, and gives you the conditions and limitations of the exemption, including the date it ends.

By letter dated March 17, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of M3 Partners, LLC (hereinafter petitioner or operator) for an exemption. The petitioner requested to operate an unmanned aircraft system (UAS) to conduct aerial surveying.

See Appendix A for the petition submitted to the FAA describing the proposed operations and the regulations that the petitioner seeks an exemption.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner.

Airworthiness Certification

The UAS proposed by the petitioner is a DJI Phantom 2 Vision+.

The petitioner requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*. In accordance with the statutory criteria

provided in Section 333 of Public Law 112−95 in reference to 49 U.S.C. § 44704, and in consideration of the size, weight, speed, and limited operating area associated with the aircraft and its operation, the Secretary of Transportation has determined that this aircraft meets the conditions of Section 333. Therefore, the FAA finds that the requested relief from 14 CFR part 21, *Certification procedures for products and parts, Subpart H—Airworthiness Certificates*, and any associated noise certification and testing requirements of part 36, is not necessary.

The Basis for Our Decision

You have requested to use a UAS for aerial data collection[1]. The FAA has issued grants of exemption in circumstances similar in all material respects to those presented in your petition. In Grants of Exemption Nos. 11062 to Astraeus Aerial (*see* Docket No. FAA−2014−0352), 11109 to Clayco, Inc. (*see* Docket No. FAA−2014−0507), 11112 to VDOS Global, LLC (*see* Docket No. FAA−2014−0382), and 11213 to Aeryon Labs, Inc. (*see* Docket No. FAA−2014−0642), the FAA found that the enhanced safety achieved using an unmanned aircraft (UA) with the specifications described by the petitioner and carrying no passengers or crew, rather than a manned aircraft of significantly greater proportions, carrying crew in addition to flammable fuel, gives the FAA good cause to find that the UAS operation enabled by this exemption is in the public interest.

Having reviewed your reasons for requesting an exemption, I find that—

- They are similar in all material respects to relief previously requested in Grant of Exemption Nos. 11062, 11109, 11112, and 11213;
- The reasons stated by the FAA for granting Exemption Nos. 11062, 11109, 11112, and 11213 also apply to the situation you present; and
- A grant of exemption is in the public interest.

Our Decision

In consideration of the foregoing, I find that a grant of exemption is in the public interest. Therefore, pursuant to the authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, M3 Partners, LLC is granted an exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

[1] Aerial data collection includes any remote sensing and measuring by an instrument(s) aboard the UA. Examples include imagery (photography, video, infrared, etc.), electronic measurement (precision surveying, RF analysis, etc.), chemical measurement (particulate measurement, etc.), or any other gathering of data by instruments aboard the UA.

Conditions and Limitations

In this grant of exemption, M3 Partners, LLC is hereafter referred to as the operator.

Failure to comply with any of the conditions and limitations of this grant of exemption will be grounds for the immediate suspension or rescission of this exemption.

1. Operations authorized by this grant of exemption are limited to the DJI Phantom 2 Vision+ when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.

2. Operations for the purpose of closed-set motion picture and television filming are not permitted.

3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the 87 knot speed restriction. In no case will the UA be operated at airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.

4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude must be reported in feet AGL.

5. The UA must be operated within visual line of sight (VLOS) of the PIC at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses, as specified on the PIC's FAA-issued airman medical certificate or U.S. driver's license.

6. All operations must utilize a visual observer (VO). The UA must be operated within the visual line of sight (VLOS) of the PIC and VO at all times. The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC must be able to communicate verbally at all times; electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the duration of the flight. The PIC must ensure that the VO can perform the duties required of the VO.

7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations in this exemption and the procedures outlined in the operating documents, the conditions and limitations herein take precedence and must be followed.

Otherwise, the operator must follow the procedures as outlined in its operating documents. The operator may update or revise its operating documents. It is the operator's responsibility to track such revisions and present updated and revised documents to the Administrator or any law enforcement official upon request. The operator must also present updated and revised documents if it petitions for extension or amendment to this grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted this exemption, then the operator must petition for an amendment to its grant of exemption. The FAA's UAS Integration Office (AFS−80) may be contacted if questions arise regarding updates or revisions to the operating documents.

8. Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g., replacement of a flight critical component, must undergo a functional test flight prior to conducting further operations under this exemption. Functional test flights may only be conducted by a PIC with a VO and must remain at least 500 feet from other people. The functional test flight must be conducted in such a manner so as to not pose an undue hazard to persons and property.

9. The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation.

10. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, e.g., inoperable components, items, or equipment. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight.

11. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components.

12. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.

13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal government. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.

14. The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be

operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. PIC qualification flight hours and currency must be logged in a manner consistent with 14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.

15. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.

16. The UA may not operate within 5 nautical miles of an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart, unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.

17. The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.

18. If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.

19. The PIC must abort the flight in the event of unpredicted obstacles or emergencies.

20. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater.

21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.

22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification

(N−Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.

23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.

24. The UA must remain clear and give way to all manned aviation operations and activities at all times.

25. The UAS may not be operated by the PIC from any moving device or vehicle.

26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
    a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
    b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

    The PIC, VO, operator trainees or essential persons are not considered nonparticipating persons under this exemption.

27. All operations shall be conducted over private or controlled-access property with permission from the property owner/controller or authorized representative. Permission from property owner/controller or authorized representative will be obtained for each flight to be conducted.

28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported to the FAA's UAS Integration Office (AFS−80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.ntsb.gov.

If this exemption permits operations for the purpose of closed-set motion picture and television filming and production, the following additional conditions and limitations apply.

29. The operator must have a motion picture and television operations manual (MPTOM) as documented in this grant of exemption.

30. At least 3 days before aerial filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local Flight Standards District Office (FSDO) with jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. The plan of activities must include at least the following:
    a. Dates and times for all flights;
    b. Name and phone number of the operator for the UAS aerial filming conducted under this grant of exemption;
    c. Name and phone number of the person responsible for the on-scene operation of the UAS;
    d. Make, model, and serial or N−Number of UAS to be used;
    e. Name and certificate number of UAS PICs involved in the aerial filming;
    f. A statement that the operator has obtained permission from property owners and/or local officials to conduct the filming production event; the list of those who gave permission must be made available to the inspector upon request;
    g. Signature of exemption holder or representative; and
    h. A description of the flight activity, including maps or diagrams of any area, city, town, county, and/or state over which filming will be conducted and the altitudes essential to accomplish the operation.

31. Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production, as specified in the exemption holder's MPTOM.

Unless otherwise specified in this grant of exemption, the UAS, the UAS PIC, and the UAS operations must comply with all applicable parts of 14 CFR including, but not limited to, parts 45, 47, 61, and 91.

This exemption terminates on August 31, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/
John S. Duncan
Director, Flight Standards Service

Enclosures

M3 PARTNERS

PO Box 4055, Greenville, SC 29608
864.492.1648

M3 Partners, LLC & White Top Unmanned Aircraft Systems (WT-UAS)

Petition for Exemption

Title 14 Code of Federal Regulations (14 CFR)

Section 333 FAA Modernization and Reform Act of 2012 (FMRA)

FAA-2007-0001

March 17, 2015

Submitted by:
Mr. Michael W. Middleton
President, M3 Partners, LLC
FAA Commercial Pilot Certificate xxx-xx-4625

Mr. Marty J. Fisher
Member, M3 Partners, LLC
FAA Commercial Pilot Certificate xxx-xx-2972

PETITION EXEMPTION REQUEST FROM M3 PARTNERS LLC, DOING BUSINESS AS WHITE TOP UNMANNED AIRCRAFT SYSTEMS (WT-UAS)

M3 Partners LLC (herein referred to as M3 and also doing business as (DBA) White Top Unmanned Aircraft Systems WT-UAS) is requesting exemption from the Federal Aviation Administration (FAA) of the following: part 21, subpart H; and Sections 45.23(b), 61.113(a) and (b), 91.7(a), 91.9(b)(2), 91.103(b), 91.109, 91.119, 91.121, 91.151(a), 91.203(a) and (b), 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) and (b) of Title 14, Code of Federal Regulations (14 CFR).

INTRODUCTION AND INTERESTS OF THE PETITIONER

M3 Partners, LLC is a South Carolina limited liability corporation. We are a Service Disabled Veteran Owned Minority Small Business (SDVOMSB) formed in 2012 for the purpose of helicopter/helipad safety design and assessment and aviation support services. M3 is owned and operated by former Presidential helicopter pilots and Helicopter Emergency Management Services (HEMS) pilots who have seen the need for increased safety in the realm of helipad location, design and maintenance. The two principal members of M3, Mr. Martin Fisher and Mr. Michael Middleton are both Marine Corps veterans with over 40 years of aviation experience in the piloting, operations, and maintenance of aircraft in the United States and abroad. Mr. Fisher and Mr. Middleton are both FAA commercially rated airplane and rotorcraft-helicopter pilots. Among their aviation credentials both have served as White House Helicopter Aircaft Commanders (WHHAC) while serving at Marine Helicopter Squadron One (HMX-1) in support fhe President of the United States. Their responsibilities included the safe and timely transportation of the President and the the coordination and safety of operations for HMX-1 missions domestically and internationally. Mr. Fisher and Mr. Middleton bring a wide array of knowledge and experience in the areas of operational planning, airspace coordination, and safety oversight that they are seeking to apply to the fledgling UAS sector.

The increase in helicopters, specifically HEMS and police helicopters throughout the country has translated into an increase in take-off and landings as well as patient transports to and from privately operated helipads. A business need for a more standardized helipad and Emergency Landing Zone verification system was realized. M3 Partners has been working with hospitals, HEMS operators and fire departments to maximize safety in and around hospital helipads. M3 has also worked with local EMS and Fire and Rescue departments in order to establish and utilize predetermined (audited and safety documented) Emergency Landing Zones. M3's proprietary Helipad Risk Register (HRR), procedures, and tools are assisting in standardizing and providing a quantitative non-subjective evaluation and remedy for many of the privately owned and operated helipads. These helipads will greatly reduce the risk associated with a pilot landing in an unfamiliar environment. Our requested use of UAS's will aid in the identifying and safely certifying ELZ and helipads for future HEMS and Police usage.

In the course of helipad work we have also routinely been asked to perform numerous real estate specific tasks. These requests have come from real estate and development professionals seeking someone with aviation experience that could operate a UAS in support of

their businesses. Upon a market analysis, we have determined that out aviation experience, operational planning, and flight safety knowledge positions us to provide these services if we are allowed to do so within the current regulations. We also feel that our experience places us in unique position to assist in setting the "standard" for the safe employment of UAS's at this initial stage of their inception for commercial use.

I. Helipad and Helicopter Interests of Petitioner:

Utilizing Turbine or piston helicopters to verify and land in ELZ is both costly and an ineffective use of assets. Operating turbine powered HEMS helicopters costs between $500 and $1500/hr. HEMS helicopters are also not be able to shoot video or photo's as the crew is focused on "eyes out". Commercial helicopter video services costs are $500 -1000/hr and require helicopters to fly low and hover at altitude's that would require the aircraft to operate inside the dangerous Height-Velocity curve of a helicopter.

Unmanned Aircraft Systems (UAS) will be able to safely video the landing zones and use that video to orient pilots and HEMS crews on the zones for future operations. UAS's will also be able to identify hazards to hospital helipads which currently have no FAA regulations for certifications. UAS's are able to safely identify approach and departure routes based on safe obstacle avoidance. UAS's will also be able to do this with little to no "noise pollution" to local residence, which is one of the chief complaints of residence who live close to hospital helipads.

II. Real Estate Interests of Petitioner:

M3 Partners LLC has been in discussion with real estate and videography companies to integrate UAS operations into private real estate development, survey, assessment and filming. M3 will utilize UAS's to bring a more accurate and truer picture in the development, selling and buying of private property. M3 can use the small size UAS's over private property to minimize any chance of damage to property or personnel. M3 will remain in the confines of specified and contracted private property to aid in the overall assessment of property. This enhanced look into property will benefit both the owner and potential buyer of properties as well as to give a more complete picture of the properties potential. This is currently done with large commercial property at great expense utilizing helicopters or fixed wing aircraft with multiple crewmembers, expensive cameras and both noise and fuel pollution.

M3 can bring this opportunity to smaller private properties with a safe and economically advantageous systematic approach. Utilizing small UAS's along with Pilot in Command and Visual Observer teams M3 will conduct safe, efficient, effective and revolutionary real estate services to companies and individuals. M3 will operate similar to an "On Demand" FAR Part 135 carrier utilizing a General Operations Manual, as well as a Maintenance and Safety system. M3 will function as an integrated team utilizing the safe employment of small UAS's in its commercial implementation.

Business development teams will effort and seek potential projects then work directly with the flight department. Pilot in Command and Director of Safety will obtain, assess and plan a project. This integrated approach will do so in a documented, verifiable and safety conscious

manner. M3 PIC's will all be FAA Commercially rated pilots working in conjunction with Visual Observers to operate small UAS's. Pre-project planning will be discussed with business development and flight operations teams. Preflight assessment culminating in a mission briefing package, will be done by experienced pilots acting as PIC's to add another layer of safety implementation. Final risk assessments will be signed off by a Director of Safety to verify compliance with company safety procedures as well as local, state and federal regulations. All flights will have two members in order to insure the safe outcome of each project. This integrated and layered approach exemplifies M3 Partners goal to only employ UAS's in a responsible and safe manner. Please see the provided "M3 Partners UAS General Operations Manual" for further details and more in-depth implementation information.

III. Conclusion Interests of Petitioner:

We believe the ability to operate UAS's in support of these business ideas will not only help economic growth in the forms of jobs but will increase the safety and awareness in the helicopter, HEMS, and real estate industries within the United States. The HEMS industry has been under scrutiny for years and this is another step that industry and government can take in order to affect a safer flying environment. The Real Estate industry will benefit through a more thorough "showing" process. Informed buyers will be more likely to target their time and resources to homes and real estate that is more closely to their liking. Video obtained through UAS flights will create a more informed buyer, one who will be able to directed their time and efforts. There is also the potential for environmental savings by avoiding pitfalls early on in the real estate development process that the use of UAS's can aid in. The use of UAS's can assist both developers and authorities having jurisdiction better understand the environmental and physical impacts of real estate development projects.

As set forth in this Petition, M3 seeks to operate its Phantom 2+ UAS for the special purpose of aerial surveying, enhancing an established business model with increased safety and efficiency utilizing the highest standards of operations and safety in the states of North Carolina, South Carolina, Georgia, Tennessee, and Virginia.

UAS BACKGROUND INFORMATION

DJI Phantom 2 Vision+ V3.0DJI Phantom 2 Vision+ V3.0Unmanned information is provided for supplemental information. This UAS model will be our primary UAS vehicle to fulfill the commercial needs requested in this petition.

General Features

- Ready to Fly, Multifunctional Quad-rotor System
- Customized H3-2D and H3-3D Gimbal Support
- Precision Flight and Stable Hovering
- 25min Flight Time & Smart Battery
- Auto Return-to-Home & Landing
- Advanced Power Management
- Intelligent Orientation Control (IOC)
- Easy Battery Replacement
- Self-tightening Propeller
- Video Downlink Support
- CAN-Bus Expansion Module

Aircraft

- Weight (Battery & Propellers Included) 1000g
- Hover Accuracy (Ready To Fly)

    - Vertical: 0.8m;
    - Horizontal: 2.5m
- Max Yaw Angular Velocity 200°/s
- Max Tilt Angle 35°
- Max Ascent / Descent Speed
- Ascent: 6m/s; Descent: 2m/s
- Max Flight Speed 15m/s(Not Recommended)
- Diagonal Length 350mm
- Flight Time 25mins
- Take-Off Weight ≤1300g
- Operating Temperature -10°C ~ 50°C

Battery

- Supported Battery DJI Smart Battery
- 3S LiPo
- Capacity 5200mAh, 11.1V
- Charging Environment Range 0°C to 40°C
- Discharging Environment Range -20°C to 50°C

Remote Control & Operating Frequency

- 2.4GHz Remote Control
- Communication Distance (Open Area) 1000m
- Receiver Sensitivity (1%Per) -97dBm
- Working Current/Voltage 120 mA@3.7V
- Built-In Lipo Battery Working Current/Capacity 3.7V, 2000mAh

BASIS FOR PETITION

Petitioner, M3 Partners, LLC pursuant to the provisions of the Federal Aviation Regulations (14 C.F.R. § 11.61) and the FAA Modernization and Reform Act of 2012, Section 333, Special Rules for Certain Unmanned UAS Systems, hereby petitions the Administrator for an exemption from the requirements of 14 C.F.R. part 21, subpart H; and Sections 45.23(b), 91.7(a), 91.9(b)(2), 91.103(b), 91.109, 91.119, 91.121, 91.151(a), 91.203(a) and (b), 91.405(a), 91.407(a)(1), 91.409(a)(2), and 91.417(a) and (b) of Title 14, Code of Federal Regulations (14 CFR).

In the alternative, and in accordance with Federal Aviation Regulation ("FAR") Section 21.16, entitled Special Conditions (14 C.F.R. § 21.16), M3 respectfully requests that the Administrator prescribe special conditions for the intended operation of the UAS that contain such safety standards as the Administrator finds necessary to establish a level of safety equivalent to that established by the restricted category airworthiness certification standards specified in 14 C.F.R. § 21.185. In the alternative, M3 seeks an exemption from the requirement to have a certificate of airworthiness issued for its Phantom 2+ UAS, as otherwise contemplated by 14 C.F.R. Part 21.

Below is an outline and description as to how M3 will responsibly and safely conduct UAS operations, based off the FAA Sep 2014 published guidelines.

I. Regarding UAS

1. *Describe how UAS will be operated safely to minimize risk to NAS, persons and property on the ground*.

    a. M3 will implement a tiered approval process before conducting any flights. Flights will be approved on an operations level (they must be able to be completed within the prescribed company General Operations Manual and they must fit into the Safety Guidelines set forth by company Safety Policy)

    b. M3 will operate a 2 person crew with Pilot in Command (PIC) as final operational control.

    c. Flights will file a Risk Assessment Matrix prior to operations.

        i. Weather will be obtained from an approved FAA weather forecasting agency

        ii. Flight path and plan will be digitally filed and briefed prior to flight

        iii. UAS limitations will be briefed prior to flight

        iv. Line of Sight limitations will be identified, mitigated and briefed

        v. Vehicle safety features (return to home) will be tested prior to flight

        vi. Emergency procedures and emergency action plans will be reviewed prior to approval

        vii. (Insert vehicle specs addendum here)

    d. Two tiered Operational control will be in place. Company Policy and Procedures and PIC final authority.

2. *Describe procedures you would implement to ensure UAS is in condition for safe flight.*

    a. M3 will comply with all manufacturers required and recommended maintenance procedures.

    b. M3 will implement a digital maintenance tracking system to monitor and record all maintenance action items.

    c. M3 will inspect the device in accordance to manufacture guidelines prior to each flight and post flight.

d. The PIC will perform a company “preflight” before each flight. The PIC will also conduct a UAS conformity check before conducting a flight operation

e. UAS flight manual and Maintenance and Inspection Manual added here

3. *Describe the RF spectrum used for UAS control*.

    a. Phantom 2 is already authorized for flight not interfering with FAA RF spectrum usage.

II. Regarding the UAS PIC

4. Describe the qualifications required to perform as Pilot In Command (PIC) (who is directly responsible for the operation of the UAS. What would be the roles and qualifications of Visual Observers (VO).

    a. All PIC’s are at a minimum FAA Commercial Instrument Rotorcraft rated PICs with a minimum of 1,500 flight hours.

    b. VO’s will have the same qualifications as PIC or will be an experienced UAS operator with a minimum of 50 flight hours controlling UAS. The VO’s primary role will be a “Second set” of eyes and safety observer for the PIC. VO’s will maintain sight of UAS as well as remain watchful for and hazards to UAS or personnel and property.

    c. All PIC’s and VO’s will operate with standard aviation terminology regarding communication to flight operations.

    d. All PIC’s and VO’s will log at least 1 flight within 30 days of pervious “flight for hire”.

    e. All PIC’s and VO’s will be required to pass an annual written and flight exam conducted by M3 Partners Chief Pilot.

    f. All PIC’s and VO’s flights will be logged digitally.

5. Medical standards of PIC

    a. All PIC’s will hold at a minimum a class 2 medical certificate.

    b. All M3 employee’s will participate in “Drug Free” work place and comply with all appropriate FAR’s pertaining to Drug and Alcohol use.

III. Regarding the Operations of UAS

6. Describe the intended and proposed UAS operations. How you intend to provide a level of safety equivalent to that provided by the rule from which exemption is sought. Address plans to define operations boarders and procedures to ensure public safety. (Describe in petition or Operations Manual)

a. M3 intends to utilize its UAS in the following procedures:

    i. Helipad assessment

    ii. Emergency Landing Zone certification

    Real Estate

b. M3 will utilize approved FAA VFR sectionals and airspace classifications. In addition M3 will utilize GPS locations and Fore Flight software to pinpoint exact location in the NAS

c. M3 will operate the UAS no higher than 400' AGL

d. M3 will operate the UAS on private property with the knowledge of said property owners

e. M3 will establish applicable NOTAMS with the local FSDO

f. M3 will display signage to provide warning of UAS in operation

g. M3 partners will utilize a VHF radio to monitor traffic as well as relay UAS specific operations during all operations

7. *Provide specific UAS operations limitations regarding: Altitude, speed, minimum flight visibility, cloud clearances.*

    a. M3 will operate only in VFR conditions as defined by the FAA

    b. M3 will operate within all airspace cloud clearances for the appropriate Class of airspace operating in (per FAR Part 91 cloud clearances)

    c. M3 will not operate above 400' AGL

    d. M3 will not operate the UAS greater than 30 knots

    e. M3 will not fly UAS over any persons below 150' AGL (with exception of PIC and VO)

8. *Provide the characteristics of area intended for operations.*

    a. M3 will operate the UAS in both "congested and non-congested" area's as defined by the FAA.

    b. The "Return to Home" feature of the UAS will be a safety feature utilized during all flight operations.

    c. The UAS will be operated on private property. M3 will ask all potential personnel in the area to remain at least 150' from UAS operations. Personnel may also remain behind a stationary object. Due to the lightweight and small

size of the UAS (less than 4 lbs) persons and property injury is unlikely but always remains a potential danger and will be mitigated through procedures, maintenance, and risk mitigation steps.

d. M3 will utilize GPS locations along with “Google Earth” to annotate potential aerial obstructions during preplanning operations.

9. *Petition should describe operations within close proximity of airports*

a. M3 may receive operation request to perform aerial UAS flights in close proximity to airports. In these cases M3 will coordinate with the appropriate airport personnel to include local FSDO’s to obtain clearance to do so. NOTAMS will be issued. M3 will adjust flight profiles to remain well outside airport flight paths to include remaining outside approach and departure corridors as well as operating below fixed wing and rotary wing operating altitudes.

b. M3 partners will also operate a hand held VHF radio to monitor traffic as well as relay UAS specific operations, locations and altitudes. At any time communication is lost between the PIC and airport authorities the flight will be terminated.

c. M3 Partners primary business model is assessing and surveying hospital helipads/heliports in order to provide the safest operating environment. The UAS will be able to identify and capture obstructions that are not easily recognizable from the ground or from satellite imagery. M3 will operate UAS’s on and above various Helipads, Heliports and helicopter landing zones. M3 will only operate with the permission of Helipad/Heliport managers with proper notification and approval disseminated and received prior to flights. NOTAMS will be issued along with communications with appropriate helicopter operators that utilize those Helipads/Heliports. M3 Partners will also be working with local governments to establish safe and acceptable “Emergency Landing Zones” for both routine HEMS flights and large scale disaster relief efforts.

10. *Provide data in how company plans on remaining VLOS with UAS*.

a. M3 will operate with a minimum two person flight team, a PIC and VO. Both members will maintain VLOS with UAS at all times. PIC will be responsible for UAS and remain in sight at all times, VO will act as a “second set of eyes” maintaining VLOS with UAS as well as “looking out” for potential hazards to flight. If at any time both personnel lose sight of UAS a “Return to Base” command will be initialed and the UAS will proceed to its predetermined rendezvous location.

11. *Provide Preflight safety risk assessment*.

    a. Risk Assessment Matrix (RAM) will be filled out and maintained electronically for all flights. RAM will be provided in Operations Manual

12. Provide local FSDO when flights require coordination with outside agencies

    a. M3 will notify and work with local FSDO any time a flight will operate in any airspace other than "Class G" Airspace as defined by FARs.

13. Must have Certificate of Authorization from FAA Air Traffic Organization prior to conducting operations in NAS.

    a. M3 will work on COA with local FSDO's upon FAA approval to operate UAS.

M3 REQUESTS REFLIEF FROM THE FOLLOWING REGULATIONS

Part 21 prescribes the procedural requirements for issuing and changing design approvals, productions approvals, airworthiness certificates, and airworthiness approvals.

- Section 45.23(b) prescribes that when marks include only the Roman capital letter "N" and the registration number is displayed on limited, restricted or light-sport category aircraft or experimental or provisionally certificated aircraft, the operator must also display on that aircraft near each entrance to the cabin, cockpit, or pilot station, in letters not less than 2 inches nor more than 6 inches high, the words "limited," "restricted," "light-sport," "experimental," or "provisional," as applicable.

  M3 Partners request relief from this regulation on the basis that the UAS is not of appropriate size to have 2 inch lettering on it that will enable it to be read unless UAS is stationary and on the ground. Marking for easy identification will be used in order to maintain visual contact.. M3 will mark UAS with registration number to the largest extent possible.

Section 91.7(a) prescribes that no person may operate a civil aircraft unless it is in an airworthy condition.

- Section 91.7(b) prescribes that the pilot in command of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight and that the PIC shall discontinue the flight when airworthy mechanical, electrical, or structural conditions occur.

  M3 Partners requests relief from this regulation on the basis that there is no FAA regulatory standard for determining the airworthiness of a UAS. M3 Partners will conduct preflight mission and maintenance inspection of UAS prior to any flight. Flights will be terminated and maintenance action initiated to troubleshoot and repair UAS if the PIC decides at any time the UAS in not in an safe for flight condition. Please refer to M3 Operations Manual for more specific policy and procedures.

- Section 91.9(b)(2) prohibits operation of U.S.-registered civil aircraft unless there is available in the aircraft a current approved Airplane or Rotorcraft Flight Manual, approved manual material, markings, and placards, or any combination thereof.

  M3 Partners requests relief from this regulation since there will be no pilots or passengers on board UAS and given its minimal size. M3 believes an equivalent level of safety will be achieved with the intent of this regulation by maintaining a safety/flight manual with the UAS PIC and VO. M3 will use UAS operating manuals and any updates to satisfy the intent of this regulation.

- Section 91.103(b) prescribes that a pilot shall for any flight, become familiar with runway lengths at airports of intended use, and takeoff and landing distance information.

  M3 Partners requests relief from this regulation due to the nature of operating a UAS. Runways will not be used. M3 will conduct preflight planning using current satellite imagery such as “Google Earth” and current VFR Sectionals for the area and routing to be flown. M3 will also do a “walk through” of the area to be flown to verify obstacles and hazards that may exist. Please refer to M3 Operations Manual for more specific policy and procedures.

- Section 91.119 prescribes that, except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:

(a) Anywhere. An altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface.

(b) Over congested areas. Over any congested area of a city, town, or settlement, or over any open air assembly of persons, an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.

(c) Over other than congested areas. An altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

(d) Helicopters, powered parachutes, and weight-shift-control aircraft. If the operation is conducted without hazard to persons or property on the surface—

(1) A helicopter may be operated at less than the minimums prescribed in paragraph (b) or (c) of this section, provided each person operating the helicopter complies with any routes or altitudes specifically prescribed for helicopters by the FAA; and

(2) A powered parachute or weight-shift-control aircraft may be operated at less than the minimums prescribed in paragraph (c) of this section.

M3 Partners requests relief from this regulation as it would detrimentally prohibit the commercial use of flying UAS’s for M3 Partners intended commercial applications. Currently hospital helipad and Emergency LZ’s are operated to and from “congested areas”. FAA Helipad circulars (A/C150.2C) give recommended guidance to helipad

locations and flight paths but no regulation exist to enforce this and is “advisory” only. Helicopters routinely overfly homes, streets, parking lots business etc. on their approach and departure paths to a helipad or ELZ. M3 will be flying a small UAS (less than 3 pounds versus the 4,000 to 12,000 lb typical helicopter) on the same flight paths in order to verify hazards and risks associated with operating in and out of such pads. In order to locate and map hazards that are not on VFR Sectional or identifiable from satellite imagery, M3 PIC’s will have VHF radio’s and “monitor” 123.025 (as this is the common HEMS and “Helo Traffic Frequency) within the area it is working, in order to maintain Situational Awareness with operating helicopters in the area.M3 will need to fly in certain locations that are currently considered “Congested”. M3 will not operate UAS’s over or near open air assemblies or large gatherings of personel. M3 will cleary display area’s where operations will be conducted, and will not conduct operations within 150 or persons not involved in flight operations.

M3 Partners intended use for real estate assessments will be done over private property. Prior permission and risk mitigation as outlined earlier will be coordinated and consent granted with the property owner and other authorities having jurisdiction. M3 will mark the areas to be flown over and will not fly the UAS near individuals who are not involved with the flight survey. M3 will operate with two personnel (PIC and VO) which will enable M3 to “see and avoid” personnel and property hazards.

M3 will operate its UAS at an altitude of no more than 400 feet AGL. Please refer to M3 Operations Manual for more specific policy and procedures.

- Section 91.121 requires, in pertinent part, each person operating an aircraft to maintain cruising altitude by reference to an altimeter that is set “…to the elevation of the departure airport or an appropriate altimeter setting available before departure.”

  M3 Partners requests relief from this regulation due to the UAS’s ability to use barometric and GPS derived altitude. AGL altitude will be used and UAS will remain below 400’ AGL at all times.

- Section 91.151(a) prescribes that no person may begin a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed, (1) during the day, to fly after that for at least 30 minutes

  M3 Partners requests relief from this regulation due to the UAS’s ability to only fly for 20-25 minutes with available battery life. M3 will plan flights no longer than 15 minutes before returning to change batteries. Along with the “Return to Home” safety feature (which will automatically return the UAS to a predetermined safety landing area, we believe this will satisfy the “intent” of the regulation. The risk of fuel starvation (or total battery discharge) will be mitigated. The UAS also has warning displays to indicate battery “life”. M3 will only operate during day time hours (the hours between official sunrise and sunset) and only in VFR conditions as definedin FAR Part 91.

- Section 91.203(a) prohibits, in pertinent part, any person from operating a civil aircraft unless it has within it (1) an appropriate and current airworthiness certificate; and (2) an effective U.S. registration certificate issued to its owner or, for operation within the United States, the second copy of the Aircraft registration Application as provided for in 47.31(c).

- Section 91.203(b) prescribes, in pertinent part, that no person may operate a civil aircraft unless the airworthiness certificate or a special flight authorization issued under 91.715 is displayed at the cabin or cockpit entrance so that it is legible to passengers or crew.

  M3 understands that this regulation does not pertain to its UAS operations based on recent decisions and that relief is not necessary

- Section 91.405(a) requires, in pertinent part, that an aircraft operator or owner shall have that aircraft inspected as prescribed in subpart E of the same part and shall, between required inspections, except as provided in paragraph (c) of the same section, have discrepancies repaired as prescribed in part 43 of the chapter.

- Section 91.407(a)(1) prohibits, in pertinent part, any person from operating an aircraft that has undergone maintenance, preventive maintenance, rebuilding, or alteration unless it has been approved for return to service by a person authorized under § 43.7 of the same chapter.

- Section 91.409(a)(2) prescribes, in pertinent part, that no person may operate an aircraft unless, within the preceding 12 calendar months, it has had an inspection for the issuance of an airworthiness certificate in accordance with part 21 of this chapter.

- Section 91.417(a) and (b) prescribes, in pertinent part, that—

  (a) Each registered owner or operator shall keep the following records for the periods specified in paragraph (b) of this section:

  (1) Records of the maintenance, preventive maintenance, and alteration and records of the 100-hour, annual, progressive, and other required or approved inspections, as appropriate, for each aircraft (including the airframe) and each engine, propeller, rotor, and appliance of an aircraft. The records must include—

  (i) A description (or reference to data acceptable to the Administrator) of the work performed; and

  (ii) The date of completion of the work performed; and

  (iii) The signature, and certificate number of the person approving the aircraft for return to service.

  (2) Records containing the following information:

(i) The total time in service of the airframe, each engine, each propeller, and each rotor.

(ii) The current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance.

(iii) The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis.

(iv) The current inspection status of the aircraft, including the time since the last inspection required by the inspection program under which the aircraft and its appliances are maintained.

(v) The current status of applicable airworthiness directives (AD) and safety directives including, for each, the method of compliance, the AD or safety directive number and revision date. If the AD or safety directive involves recurring action, the time and date when the next action is required.

(vi) Copies of the forms prescribed by 43.9(d) of this chapter for each major alteration to the airframe and currently installed engines, rotors, propellers, and appliances.

(b) The owner or operator shall retain the following records for the periods prescribed:

(1) The records specified in paragraph (a)(1) of this section shall be retained until the work is repeated or superseded by other work or for 1 year after the work is performed.

(2) The records specified in paragraph (a)(2) of this section shall be retained and transferred with the aircraft at the time the aircraft is sold.

(3) A list of defects furnished to a registered owner or operator under 43.11 of this chapter shall be retained until the defects are repaired and the aircraft is approved for return to service.

M3 request relief from these regulations with stipulation that M3 will operate and maintain UAS in compliance with manufactures operating instructions and M3 General Operations Manual guidelines. M3 General Operations Manual outlines the company policy to track and verify maintenance on the UAS's, comply with pertinent FAA regulations and aviation industry "best practices" in order to operate safely and successfully.

CONCLUSION

In conclusion M3 Partners, LLC wishes to conduct UAS operations for the commercial purpose of Helipad and Emergency Landing Zone “safety assessments” as well as private Real Estate assessments.

M3 Partners, LLC is a company with extensive civilian and military aviation knowledge and over 40 years of experience working within the NAS structure.

All PIC’s and company mechanics currently hold FAA certifications and work on a daily basis within the FAR’s that govern commercial flight and maintenance. Our management team has held numerous aviation department positions within the civilian and military aviation sectors to include departments of operations, maintenance, safety, standardization, and check pilot certifications.

We have worked extensively to bring a robust safety management system (SMS), proven aviation operations procedures, and risk mitigation steps into our proposed operations.

We strive to conduct UAS operations in a safe, legal and responsible manner.

It is our sincere belief that our extensive knowledge and experience will allow M3 Partners, LLC to operate UAS’s safely, legally, and responsibly and serve as a model for future UAS commercial operations.