

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

ORDER 4040.29

National Policy

Effective date: 11/29/2024

SUBJ: FAA Flight Program Standards for Commercial Aviation Services (CAS)

- 1. Purpose of This Order. In accordance with Title 41 of the Code of Federal Regulations (41 CFR) part 102-33.130, the Federal Aviation Administration (FAA) must establish flight program standards for commercial aviation services (CAS) and require compliance with these standards in agency contracts. This order sets forth the minimum standards for the vendor that performs CAS under contract for the FAA, as required by the applicable sections of 41 CFR part 102-33, subpart C. These standards address vendor management and administration; operations; maintenance; training; and safety. This order also describes how the FAA Flight Program demonstrates compliance with the applicable sections of 41 CFR part 102-33, subpart C, and ensures vendor compliance through coordination with the FAA Acquisitions Executive (FAE) and through processes to approve and audit vendors.
- **2. Audience.** This order applies to all FAA Lines of Business (LOB) and Staff Offices (SO) seeking to contract with a vendor for CAS and vendors providing CAS for the FAA.
- **3.** Where Can I Find This Order. You can find this order on the FAA website at http://www.faa.gov/regulations policies/orders notices.
- **4. Explanation of Policy Changes.** This order incorporates applicable content related to the operation of aircraft for the FAA and other CAS previously contained in FAA Order 4040.9E. This order establishes the minimum standards that vendors must meet in accordance with 41 CFR part 102-33 to provide FAA-funded CAS through a contract for FAA missions and functions.

5. References.

- **a.** 41 CFR Part 102-33, Management of Government Aircraft.
- **b.** Executive Order 13981, Protecting the United States from Certain Unmanned Aircraft Systems, issued January 2021.
- **c.** Public Law 118-31, National Defense Authorization Act of 2023, Sections 1821-1833, American Security Drone Act of 2023.
- **d.** Public Law 118-63, FAA Reauthorization Act of 2024, Section 936, Covered Drone Prohibition.

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- **e.** 14 CFR Chapter I, Federal Aviation Administration, Department of Transportation.
- **f.** 49 CFR Part 830, Notification and Reporting of Aircraft Accidents.
- **g.** FAA Order 4040.9 (as amended), FAA Flight Program.
- **h.** FAA Order 4040.27 (as amended), FAA Flight Program Standards for FAA Aircraft.
- **6. Definitions.** For the purposes of this order, the definitions in FAA Order 4040.9 (as amended) apply.
- 7. Authority. Title 41, part 102-33, prescribes the FAA Administrator's responsibilities for acquiring, managing, and disposing of government aircraft, which is defined as Federal aircraft and CAS used to accomplish FAA official business. Specifically, 102-33.130 requires the FAA to establish standards for CAS.
- a. Flight Program Operations. Under the authority delegated to the Flight Program Executive by the Administrator in FAA Order 4040.9 (as amended), the Flight Program Executive is responsible for establishing standards and procedures for the management, operations, maintenance, training, and safety of CAS conducting official FAA business to ensure aircraft are operated safely, effectively, and efficiently. As a service unit within the Air Traffic Organization, Flight Program Operations is the FAA office responsible for the management of CAS.
- **b.** Aviation Safety (AVS). The FAA AVS organization oversees and enforces safety standards for all segments of the aviation industry. AVS provides surveillance and oversight of certificate holders and operators to ensure compliance with 14 CFR through activities such as audits and evaluations. AVS has the responsibility and authority for the oversight of CAS operations to ensure compliance with 14 CFR as applicable to the operations conducted or service provided.
- **8. Applicability.** Except as prescribed in the following subparagraphs, this order establishes the standards for all CAS operated for the FAA, including CAS with unmanned aircraft systems (UAS). If unsure whether one of these exceptions applies, contact Flight Program Operations for a determination.
- **a. FAA Aircraft.** The standards in this order do not apply if the contract is for the following FAA aircraft, as defined in FAA Order 4040.9—
 - (1) For the lease or rental of the aircraft only and does not include a pilot; or
 - (2) For the rental of an aircraft and an instructor.

Note: Refer to FAA Order 4040.27 (as amended) for the standards for these operations.

b. UAS. The standards in this order do not apply to a vendor that operates UAS that are—

- (1) Not operated in the National Airspace System (NAS) (e.g., operated indoors, operated in a drone cage);
 - (2) Not required to be federally registered in accordance with 14 CFR;
 - (3) Non-FAA funded aviation activities operated at a FAA UAS Test Site; or
- (4) Operated in a controlled research or test environment in the NAS where there is a reasonable expectation that the UAS will be damaged or destroyed during flight. Associated test and calibration flights in preparation for such flights are not subject to the standards in this order. The requirements of 14 CFR and other applicable laws would still apply along with any applicable Agency procurement requirements in the Acquisition Management System (AMS).

Note: A controlled research or test environment, as described in this order, includes airports and other environments in the NAS designated for research and testing where procedures have been designed and implemented to maintain control of the test UAS.

c. FAA-Funded Grants. This order does not apply to FAA-funded grants because the applicable provisions of 41 CFR part 102-33 and FAA Order 4040.9 define CAS as services funded by contract for the exclusive use of the agency. When a grantee uses FAA-funded grant money to pay for aviation services, the aviation services are subject to the requirements, limitations, terms, and conditions applicable to the grant in question.

Note: Other FAA sponsored activities (including research) are subject to the standards in this order provided the funding results in the buying, renting, or leasing of aircraft to accomplish official FAA business and the aviation service is for the exclusive use of the FAA.

Note: A vendor may subcontract the service. The subcontracted vendor is not required to be an approved vendor and therefore is not subject to the vendor approval process in this order.

- 9. Standards for CAS. In accordance with 102-33.105(c), Flight Program Operations is establishing standards for providers (vendors) of CAS and further leverages the requirements in 102-33.160 through 102.33-185 as the basis for the minimum standards prescribed in this order. The FAA Flight Program demonstrates compliance with the applicable sections of 41 CFR part 102-33, subpart C, through the standards for CAS prescribed in this order.
- **a. FAA Policy.** To ensure CAS conducted for the FAA are operated safely and in compliance with 41 CFR part 102-33, FAA policy is to use vendors holding a certificate under 14 CFR parts 121, 135, 141, 142, or 145, to the extent that is practical for the service provided. This policy leverages the existing regulatory framework in those rule parts and the routine FAA surveillance and oversight required of a certificate holder.
- (1) Appendix A identifies the sections of 14 CFR parts 121, 135, 141, 142, and 145 applicable to CAS (except CAS with UAS). If use of a vendor that holds a FAA-issued certificate is not feasible, the standards in Appendix A leverage the requirements in 14 CFR for non-certificate holders that are applicable to the topic areas in paragraph 9.b. where possible and

identifies additional requirements to meet 41 CFR part 102-33 in the areas not covered by 14 CFR.

- (2) For CAS with UAS, FAA policy is necessarily different. Operations with UAS is an emerging industry with very few operators that are required to hold an operating certificate, which also means most UAS operators are not subject to routine FAA surveillance. As a result, the standards in Appendix B leverage the requirements for UAS in 14 CFR applicable to the topic areas in paragraph 9.b. where possible and identifies additional requirements to meet 41 CFR part 102-33 in the areas not covered by 14 CFR. The policy in this order applies to all CAS with UAS regardless of size, weight, or type of operations (unless specifically excluded in paragraph 8 of this order). UAS operations not covered by part 107 must abide by the applicable 14 CFR part for the operation.
- **b. Standards Coordination.** In coordination with the FAE, the Flight Program Executive ensures these standards are incorporated into Agency contracts, which includes procurement of services through the FAA's Purchase Card Program. Vendors performing CAS for the FAA must provide evidence of the following standards outlined in this order and further detailed in Appendix A and Appendix B, as applicable to the operation to be conducted or service provided:
 - Management/Administration
 - Operations
 - Maintenance
 - Training
 - Safety
 - Accident Reporting and Investigation

Note: The technical capabilities and requirements for the aircraft, operation or service are the responsibility of the sponsoring FAA office that is seeking CAS for a specific FAA mission.

- **c. Public Aircraft Operations.** The FAA may contract with a CAS vendor to conduct operations as a public aircraft operator under 49 U.S.C. 40102 and 49 U.S.C. 40125. Such operations must be authorized by the Flight Program Executive. Vendors authorized to conduct such operations should refer to AC 00-1.1B, Public Aircraft Operations- Manned and Unmanned.
- **10. Acquiring CAS.** Any FAA office seeking to contract for CAS must coordinate with the Contracting Officer and the Flight Program Executive, or their designees, to ensure the standards in this order are incorporated into the contract requirements, if applicable. If an FAA office is seeking to use the FAA's Purchase Card Program, coordination with Flight Program Operations is also required to ensure the vendor meets the applicable standards.

In accordance with Flight Program Operations policies, vendors seeking to provide CAS for the FAA must be approved and are required to present documentation (e.g., manual or system of manuals) to the FAA for review and validation that the standards have been met. If the service organization intends to use a vendor that is already approved, coordination with Flight Program Operations is still required.

a. Document Review. Flight Program Operations personnel review the documentation the vendor provides, as needed, to determine if it meets the minimum standards in this order. Flight Program Operations may leverage the surveillance and oversight work of AVS to support this review. FAA Flight Program review of vendor documentation must be coordinated through the Contracting Officer, where applicable, and the requiring service organization.

- **b.** Feedback. Feedback on the adequacy of the documentation in meeting the standards in this order is documented by Flight Program Operations personnel and communicated to the vendor in coordination with the Contracting Officer and service organization, if applicable. This communication may occur prior to or following contract award for CAS.
- **c. Vendor Approval.** Unless an onsite observation is required, a vendor is considered approved once Flight Program Operations validates that the standards in this order are met. An approved vendor may then perform CAS under contract for the FAA. The Flight Program Executive, in coordination with the FAE, or their designee, manages the list of approved vendors.
- (1) In coordination with Flight Program Operations, an on-site observation of a vendor by AVS is required for those that operate UAS. This observation is completed to affirm the vendor operates in accordance with its procedures and in accordance with applicable regulations and authorizations. The observation occurs following a determination that the documentation provided by the vendor meets the standards. Feedback to the vendor for the onsite observation is provided in coordination with the Contracting Officer and service organization, if applicable. Successful completion of this observation results in vendor approval for CAS with UAS.
- (2) A vendor that provides CAS will remain an approved vendor provided the vendor continues to perform under a CAS contract or procurement for the FAA and remains in good standing (i.e., performs operations in compliance with accepted manuals, contract requirements etc.). At the discretion of the Flight Program Executive, a vendor may be removed from its approved vendor status due to inactivity (i.e., no CAS contract for more than 12 consecutive months, non-compliance with accepted manuals, or breach of the contract terms and conditions).
- **d. Required Revision.** A manual revision by the vendor may be required in response to changes in regulations, changes to standards established in this order, a new or revised contract award, or changes to its operations. An FAA-required change to vendor policies or procedures is communicated to the vendor in accordance with acquisition and contracting procedures. For CAS with UAS, an observation may be required following a manual revision.
- 11. Vendor Oversight and Audit. A vendor performing CAS is subject to FAA oversight and an annual audit of its documentation and operation by the FAA. This review ensures the vendor continues to meet the standards prescribed in this order and the contract, if applicable. It also ensures the vendor operates in accordance with 14 CFR and applicable laws or authorizations.
- **a. Audits.** AVS is responsible for conducting routine audits of CAS vendors to ensure compliance with documented policies and procedures and the 14 CFR requirements applicable to the operation or service provided. These audits will be kept on file with Flight Program Operations for a period of three years.

b. Audit Results. AVS provides the results of the audit, or other relevant oversight activities, to the Flight Program Executive and the FAE, or their designees. This information is maintained in accordance with vendor recordkeeping requirements and established procedures.

- **c. Routine Surveillance.** For CAS that include a contract with an entity or operator that holds a certificate issued by the FAA, routine surveillance activities conducted in accordance with AVS oversight responsibilities may be used to supplement the audits required by this section.
- **12.** Compliance with Contract Terms. Oversight of vendor contract performance, terms, and conditions is vested with the FAE, or their designee. This order does not affect the authority of the FAE, or their designee, to administer contracts, including to monitor and enforce compliance with contract terms.
- **13. Management and Administrative Standards.** Pursuant to 102-33.160, CAS vendors must have a documented management structure responsible for the administration, operation, safety, training, maintenance, and financial needs of the operation. In addition, the vendor must have documentation describing the roles, responsibilities, and authorities of the vendor's flight program personnel. Review Appendix A and Appendix B to determine the applicable management and administrative standards for the CAS sought.
- **14. Operations Standards.** Pursuant to 102-33.165, the vendor's operations policies and procedures must be documented and minimally contain the standards identified in this section, as applicable to the operation and service provided. If the vendor is conducting operations in accordance with 14 CFR parts 121, 135, or 141, the vendor's operational policies and procedures must be in accordance with the higher or more restrictive standards. Review Appendix A and Appendix B to determine the applicable operations standards for the CAS sought.
- **15. Maintenance Standards.** Pursuant to 102-33.170, the vendor's maintenance policies and procedures must be documented and minimally contain the standards identified in this section, as applicable to the operation and service provided. If the vendor is conducting operations or providing services in accordance with 14 CFR parts 121, 135, 141, or 145, the vendor's maintenance policies and procedures must be in accordance with the higher or more restrictive standards. Review Appendix A and Appendix B to determine the applicable maintenance standards for the CAS sought.
- **16. Training Standards.** Pursuant to 102-33.175, the vendor must have a structured program to train personnel initially and on a recurrent basis in their roles, responsibilities, authorities, and in the operational skills and procedures relevant to the types of operations that the vendor conducts. Personnel may include managers, pilots, remote pilots, visual observers, other crewmembers, flight safety personnel, maintenance personnel, administrative personnel, and dispatchers. Review Appendix A and Appendix B to determine the applicable training standards for the CAS sought.
- **17. Safety Standards.** Pursuant to 102-33.180, the vendor must have a Safety Management System (SMS) that complies with FAA Advisory Circular 120-92 (as amended), Safety Management Systems for Aviation Service Providers, or an acceptable equivalent. Review Appendix A and Appendix B to determine the applicable safety standards for the CAS sought.

18. Accident and Incident Reporting Standards. Pursuant to 102-33.185, the vendor's policies and procedures must include what personnel should do in response to an aircraft accident or incident and their responsibilities for participating in an investigation. The policies and procedures must also include required training for personnel who may participate in an investigation and required notifications to the National Transportation Safety Board (NTSB), as defined in 49 CFR 830.5. Review Appendix A and Appendix B to determine the applicable accident and incident reporting standards for the CAS sought.

Note: Flight Program Operations is responsible for reporting accidents and incidents to the NTSB and to the U.S. General Services Administration (GSA) and may report incidents or accidents that occur with CAS operations in support of FAA missions in accordance with 102-33.445 and 102-33.450.

19. Federal Aviation Interactive Reporting Systems (FAIRS) Reporting. FAIRS is a management information system operated by the GSA to collect, maintain, analyze, and report information on Federal aircraft inventories and cost and usage of Federal aircraft and CAS aircraft (and related services). Flight Program Operations has the authority and responsibility to report to FAIRS for the FAA and establishes policies for FAIRS reporting of CAS and related services in accordance with 102-33.155 and the schedule in 102-33.405(b).

Cost and utilization data on CAS aircraft and related services must be reported in FAIRS in accordance with 102-33.390, 102-33.425, 102-33.435, and 102-33.440. FAA LOBs and SOs that contract for CAS must provide quarterly cost and utilization data to Flight Program Operations, upon request. Flight Program Operations requests the data at the end of each fiscal quarter to align with the reporting schedule outlined in 102-33.405(b) (December 31, March 31, June 30, and September 30). Specifically, the costs and flying hours of each CAS aircraft hired must be reported.

Note: Per 102-33.20, reporting of UAS costs and flight hours is only required if the accumulated costs for acquisition and operations meets the agency's threshold for capitalization, and the UAS has a useful life of two years or more. Coordination with the Flight Program Executive and the FAE, or their designee, is required to determine if the costs meet these criteria and do not require reporting.

Randa Hoyes

Randa A. Hayes Vice President, Flight Program Operations, AJF-0 FAA Flight Program Executive

Appendix A. FAA Flight Program Standards for CAS (Except UAS)

- 1. Applicability. In accordance with 41 CFR 102-33.105(c), Flight Program Operations is establishing standards for providers (vendors) of CAS and further leverages the requirements in 102-33.160 through 102.33-185 as the basis for the minimum standards prescribed in this order. In coordination with the FAE, the Flight Program Executive ensures these standards are incorporated into Agency contracts to demonstrate compliance with part 102-33.
 - **a. Standards.** Appendix A applies to all CAS, except CAS performed with UAS. For CAS with UAS, see Appendix B.
 - **b.** Evidence of Standards. Vendors performing CAS for the FAA must provide evidence of the standards outlined in this appendix, as applicable to the operation to be conducted or service provided.
- 2. Management and Administrative Standards. Vendors must have a documented management structure responsible for the administration, operation, safety, training, maintenance, and financial needs of the operation. In addition, the vendor must have documentation describing the roles, responsibilities, and authorities of the vendor's flight program personnel. Vendors must also have policy and procedure documents that ensure crew members are provided with current operations policies and procedures, crew qualification requirements, maintenance procedures and standards, and safety procedures. Finally, vendors are responsible for maintaining records related to the aviation service provided.

For non-certificated operators or service providers, the vendor must have a recordkeeping system for all operations conducted or services provided for the FAA. The system must minimally document the following crew, aircraft, maintenance, and flight log information, as applicable to the service provided—

- Crew position(s) held.
- Crew training received (i.e., initial, recurrent, differences) and currency.
- FAA certificate(s) held as applicable to the operation or service provided.
- The aircraft registration, make, model, and FAA type certificate, if applicable.
- An aircraft manifest to include passenger information (i.e., name, contact information), flight times, and route information. This information must be kept for two years from the date of the flight.
- Aircraft weight and balance for the origin of each flight. For cargo flights, a cargo manifest must also be kept. These records are required to be kept for 30 days from the date of the flight.
- Aircraft discrepancies and scheduled/unscheduled maintenance for each aircraft.

If the vendor is a certificate holder under 14 CFR, the following regulations apply and otherwise meet the management and administrative standards of this order —

- **a.** Qualified Management Personnel and Manuals. Vendors certificated under 14 CFR part 119 and providing services as an air carrier or commercial operator as defined in 14 CFR 1.1 must have sufficient qualified management and technical personnel as required by part 119.
- i. A part 121 air carrier's approved system of manuals satisfies this requirement (121.135).
- ii. A part 135 air carrier or commercial operator's approved/accepted system of manuals satisfies this requirement (135.23, 135.77).
- **b.** Part 141 Management Personnel. Vendors providing pilot training services that hold a part 141 pilot school certificate must meet the personnel requirements of subpart B, Personnel, Aircraft, and Facilities Requirements.
- **c.** Part 142 Management Personnel. Vendors providing pilot training services that hold a part 142 training center certificate must meet the personnel requirements of subpart C, Personnel and Flight Training Requirements.
- **d.** Part 145 Management Personnel. Vendors providing maintenance services that hold a part 145 repair station certificate must meet the personnel requirements of subpart D, Personnel.
- **e.** Recordkeeping Requirements. A certificate holder must abide by the record keeping requirements of their 14 CFR part.
 - i. Part 121, subpart V, Records and Reports.
 - ii. Section 135.63, Recordkeeping Requirements.
 - iii. Part 141, subpart F, Records.
 - iv. Section 142.73, Recordkeeping Requirements.
 - v. Section 145.219, Recordkeeping.
- **3. Operations Standards.** Vendor operations policies and procedures must be documented and minimally contain the standards applicable to the flight operation and service provided.
- **a. FAA Flight Program Communication.** All vendors must have procedures for communication with the Flight Program Operations Operations Control Center (OCC) for incident/accident notification. Specific details for how to contact the Flight Program Operations OCC will be provided by the FAA (if applicable) and will need to be incorporated into company policies and procedures.
- **b.** Special Flight Rules Area (SFRA) and Flight Restricted Zone (FRZ). If a vendor will operate in the Washington, DC Metropolitan Area SFRA FRZ, the vendor must have general

flight operations policies that specify all flights will be conducted in accordance with part 93, subpart V. The SFRA FRZ prescribes specific security and flight restriction requirements for certain flight operations within the SFRA FRZ. Any vendor who operates in the SFRA FRZ must have an approved waiver unless otherwise authorized. Information on the operational requirements and waiver application for operating in the SFRA FRZ can be found at the FAA restricted airspace information website (https://www.faa.gov/newsroom/restricted-airspace-0).

- **c. Non-Certificate Holder Operations Standards.** If not a certificate holder under 14 CFR, the vendor must operate flights in accordance with the following standards and document the policies and procedures—
- i. **Operational Rules.** The vendor must operate flights in accordance with part 91 and any other 14 CFR operational rule part applicable to the operation or size of aircraft used.
- ii. Crew Qualification and Currency. The crew must be qualified and current in accordance with part 61 for the aircraft flown and the operation conducted.
- iii. **Preflight Planning/Risk Assessment**. The vendor must have procedures to implement a preflight planning operational risk assessment before each flight that includes weather requirements, crew rest, crew responsibilities, type of flight (low level, Instrument Flight Rules (IFR), night, etc.) crew makeup, operating limitations, airspace authorization/coordination, and Notice to Air Missions (NOTAM) issuance. This process should be accomplished in accordance with an FAA operations, flight dispatch, or flight following procedures/program.
- iv. **Flight Operations Procedures.** General flight operations procedures for preflight, takeoff, in-flight/normal, landing, abnormal, and emergency checklists and procedures must be documented for flight in accordance with manufacturer or operator procedures.
- v. Crew Fitness for Duty. The vendor must comply with company-established crew rest requirements and flight time and duty period limitations, as well as crew fitness for duty and compliance with applicable medical condition and alcohol or drug regulations.
- vi. **Crew Coordination.** The vendor must comply with crew resource management and crew coordination policies. This should address transfer of aircraft control procedures, crew positioning, and communications between all crewmembers.
- **d.** Certificate Holder Operations Standards. If the vendor is a certificate holder under 14 CFR, the following regulations apply to the operator and otherwise meet or exceed the operations standards in this order for the service provided. If the vendor is a passenger or cargo carrying operation, the vendor must maintain the applicable operations specification for the passenger or cargo operation—
- i. **Part 121 Operators.** Subpart M, Airman and Crewmember Requirements; Subpart O, Crewmember Qualifications; Subpart Q, Flight Time Limitations and Rest Requirements: Domestic Operations; Subpart R, Flight Time Limitations: Flag Operations; Subpart S, Flight Time Limitations: Supplemental Operations; Section 121.539, Operations Notices; Section 121.127, Flight Following System; Section 121.665, Load Manifest; Section 121.693, Load Manifest: All Certificate Holders; Subpart U, Dispatching and Flight Release

Rules; Subpart X, Emergency Medical Equipment and Training; Part 117, Flight and Duty Limitations and Rest Requirements Flightcrew members [passenger carrying operations].

- ii. **Part 135 Operators.** Subpart E, Flight Crewmember Requirements; Subpart F, Crewmember Flight Time and Duty Period Limitations and Rest Requirements; Section 135.63, Recordkeeping Requirements; Section 135.81, Informing Personnel of Operational Information and Appropriate changes; Section 135.83, Operating Information Required; Section 135.79, Flight Locating Requirements; Section 135.63(c), Load manifest/ W&B; Section 135.331, Crewmember Emergency Training; Section 135.421, Additional Maintenance Requirements; Section 135.427 Manual Requirements.
- iii. **Part 141 Pilot School.** Subpart B, Personnel, Aircraft, and Facilities, Requirements; Subpart E, Operating Rules.
- iv. **Part 142 Training Center.** Subpart C, Personnel and Flight Training Equipment Requirements; Subpart D, Operating Rules.
- **4. Maintenance Standards.** The vendor maintenance and aircraft policies and procedures must be documented and minimally contain the following standards as applicable to the operation and service provided. Any planned changes to aircraft used requires notification to the FAA in accordance with established procedures.
- **a. Aircraft Standards.** The aircraft must have a standard airworthiness certificate and registration appropriate for the operation conducted. The Flight Program Executive or their designee may approve the use of an aircraft with an experimental airworthiness certificate when the following conditions are met
 - i. The aircraft is used for research and development purposes only.
- ii. Use of an experimental aircraft is required (i.e., the FAA mission cannot be conducted in an aircraft with a standard airworthiness certificate).
 - iii. The aircraft used must be of an original type certificate design.
 - iv. Modifications cannot change the operating characteristics of the aircraft.
 - v. The aircraft and crew must comply with the conditions and limitations issued.
 - vi. A risk assessment must be conducted and appropriately documented.
- vii. For vendors that hold an operating certificate, the aircraft requirements of that rule part apply.
 - Part 121, subpart H, Aircraft requirements.
 - Part 135, section 135.25, Aircraft requirements.
 - Part 141, section 141.39, Aircraft.

- Part 142, section 142.11, Application for issuance or amendment.
- **b. Maintenance Standards.** A maintenance provider that holds a part 145 repair station certificate must meet all requirements of that part applicable to the services provided. For aircraft maintained in accordance with parts 121 (subpart L) or 135 (subpart J) or under an accepted aircraft maintenance and inspection program, the requirements of those rule parts and programs apply. For all other vendors, their maintenance policies and procedures must meet the following standards—
- i. A vendor must maintain any aircraft having a U.S. airworthiness certificate in accordance with parts 43 and 91 and the aircraft manufacturer's maintenance manual. Aircraft must comply with airworthiness directives and are encouraged to comply with manufacturer-issued service bulletins. Use of approved replacement parts is also required.
- ii. If the vendor's personnel will perform maintenance, they must be authorized and receive training to perform maintenance in accordance with part 43 if the maintenance is performed on an aircraft having a U.S. airworthiness certificate, the airframe, aircraft engines, propellers, appliances, or components parts of such aircraft. The vendor must have a quality control system and use approved replacement parts and properly control life-limited parts. All training must be recorded in the person's training record.
- iii. Procedures for recording and tracking maintenance actions, inspections, flight hours, cycles, and calendar times of life-limited parts.
 - iv. Procedures for operating aircraft with inoperable instruments or equipment.
- v. Procedures for returning an aircraft to service after maintenance, preventive maintenance, and alterations in accordance with part 43.
 - vi. Record and track duty time of maintenance personnel.
- vii. If authorized by the Flight Program Executive to use an aircraft with an experimental airworthiness certificate, the aircraft must be maintained by qualified maintenance personnel with work signed off by a mechanic that holds an airframe or powerplant rating. Adequate technical support, including appropriate engineering documentation and testing, for aircraft, powerplant, propeller, or appliance repairs, modifications, or equipment installations is expected along with a quality control system for acquiring replacement parts. All airworthiness directives must be complied with as they apply to the original type design of the airplane and compliance with manufacturer-issued service bulletins are encouraged.
- **5. Training Standards.** The vendor must have defined crew qualification policies and procedures which ensure each person serving as a pilot, mechanic, flight attendant, dispatcher, or other crewmember or required personnel are appropriately trained and qualified to conduct or support safe flight operations. For vendors that are not a certificate holder, the crew qualification policies and procedures must include—

a. Certification. A crewmember must meet the certification, qualification, and recency of experience requirements of 14 CFR to perform the role authorized by a certificate or rating. For example, a pilot must hold the certificate(s) and rating(s) issued under 14 CFR as applicable to the aircraft flown and operations conducted.

- **b. Initial Training.** Initial training must minimally include a person's role and responsibilities, operational requirements, vendor's operations procedures, maintenance procedures, and safety procedures applicable to the role as well as training to identify hazardous materials (if carrying items not controlled/owned by the vendor). Successful completion of this training must be documented in their training records.
- c. Recurrent Training. Vendors must provide recurrent training at least annually. In addition to the requirements in 14 CFR for a certificate holder to maintain recency of experience, a vendor's recurrent training should provide updates on their flight program or operation, refresh knowledge required for safe flight operations, and include changes to the regulatory or operational environment, a review of any company or relevant incidents/accidents applicable to FAA operations, and crew resource management. Successful completion of this training must be documented in individual training records.
- **d.** Certificate Holder Training Standards. If the vendor is a certificate holder under 14 CFR, the following regulations apply to the certificate holder and otherwise meet or exceed the training standards in this order.
 - Part 121, Subpart N, Training Program; Subpart O, Crewmember Qualifications;
 Subpart P, Aircraft Dispatcher Qualifications and Duty Time; Subpart Z, Hazardous Materials Training Program.
 - Part 135, Subpart E, Flight Crewmember Requirements; Subpart G, Crewmember Testing Requirements; Subpart H, Training; Subpart K, Hazardous Materials Training Program.
 - Part 141, Subpart B, Personnel, Aircraft, and Facilities Requirements; Subpart E, Operating Rules.
 - Part 142, Subpart C, Personnel and Flight Training Equipment Requirements.
 - Part 145, Section 145.163, Training Requirements.
- 6. Safety Standards. As a certificate holder, the vendor must have an approved Safety Management System (SMS) in accordance with 14 CFR part 5 if applicable to the operation conducted or service provided (e.g., part 121, part 135, part 145). If not required, FAA prefers that a vendor be a participant in the SMS Voluntary Program (SMSVP), which enables voluntary implementation of a SMS. If a vendor does not have an approved SMS or accepted voluntary SMS, the vendor must utilize a safety management program that includes policies and procedures built on the pillars of SMS as outlined in FAA Advisory Circular 120-92 (as amended), Safety Management Systems for Aviation Service Providers. The vendor's safety policies and procedures must minimally include—

a. Safety Policy. A safety policy which defines the methods, processes, and organizational structure needed to meet safety goals. This safety policy should be representative of the philosophy the vendor operates under, specific to the vendor, and should be signed by the company president or equivalent accountable executive.

- **b.** Safety Risk Management. Safety risk management procedures to assess adequacy of existing risk controls and determine the need for new or revised risk controls based on acceptable risk. A daily risk assessment should be created and used by crewmembers to assess the hazards and risks associated with operations for that day. Similarly, a risk assessment should be required to evaluate any changes (other than administrative) to manuals, processes, or procedures.
- **c. Safety Assurance.** Safety assurance components to evaluate the effectiveness of risk control strategies and identify new hazards. Any time new risk controls are put in place, a process should be established to review these controls, their effectiveness, and whether any new hazards were unexpectedly created because of the control(s) being implemented.

Note: Safety risk management and safety assurance should operate in a circular mindset. When a change is made, the vendor should evaluate the results of that change (as explained above) and return to those changes to make sure they are working as expected or see if they need to be reevaluated/modified making sure the vendor did not discover any unintended consequences from those changes. This process should occur on a regular schedule (more frequently when it is new) to ensure proper monitoring of the changes and their outcomes.

- **d. Safety Promotion.** Safety promotion strategies to include training, communication, and other actions to create a positive safety culture. A positive safety culture should reflect how the vendor operates and encourage reporting to improve operational safety. Regular safety meetings and feedback to employee groups about reports received and actions taken are examples of safety promotion.
- **e. Safety Reporting.** Procedures for crew to submit safety reports relating to their operation internally for company review and externally through the NASA Aviation Safety Reporting System (ASRS) (https://asrs.arc.nasa.gov/). Providing multiple ways for crews to submit safety reports internally is encouraged and can result in increased reporting and improved operational safety.
- **f. Drug and Alcohol Testing.** Establish a company policy for drug and alcohol testing for all safety-sensitive personnel. Compliance with 14 CFR part 120, Drug Testing Program Requirements, is required if the vendor is a certificate holder under parts 121, 135, or 145.
- 7. Aircraft Accident and Incident Reporting Standards. Vendors must have standards and procedures for responding to an aircraft accident or incident and for participating in an investigation. The standards must also include required training for personnel who may participate in an investigation. The training must cover the required notifications to the National Transportation Safety Board (NTSB), as defined in 49 CFR 830.5, and company procedures for documenting the aircraft wreckage and any property damage following an incident/accident.

In addition to NTSB notification, vendors must have procedures for incident/accident notification to the Flight Program Operations OCC. Specific details for how to contact the Flight Program Operations OCC are provided by the FAA in connection with the acquisition process or following contract award and must be incorporated into company policies and procedures. In addition to Flight Program Operations OCC notification, a safety report must be submitted to the FAA Flight Program within 48 hours of the occurrence.

Appendix B. FAA Flight Program Standards for CAS Performed with UAS

- 1. Applicability. In accordance with 41 CFR 102-33.105(c), Flight Program Operations is establishing standards for providers (vendors) of CAS and further leverages the requirements in 102-33.160 through 102.33-185 as the basis for the minimum standards prescribed in this order. In coordination with the FAE, the Flight Program Executive ensures these standards are incorporated into Agency contracts to demonstrate compliance with part 102-33.
- **a. Standards.** Appendix B standards apply to all CAS performed with UAS. For all other CAS standards, see Appendix A.
- **b.** Evidence of Standards. Vendors performing CAS with UAS for the FAA must provide evidence of the standards outlined in this appendix, as applicable to the operation to be conducted or service provided.
- **2. Management and Administrative Standards.** Vendors must have a documented management structure responsible for the administration, operation, safety, training, maintenance, and financial needs of the operation. In addition, the vendor must have documentation describing the roles, responsibilities, and authorities of the vendor's flight program personnel.
- **a.** Policies and Procedures. Vendors must have policy and procedure documents that ensure crew members are provided with current operations policies and procedures, crew qualification requirements, maintenance procedures and standards, and safety procedures.
- **b.** Recordkeeping. Vendors must have a recordkeeping system for all operations conducted for the FAA. The system must minimally document the following crew, aircraft, maintenance, and flight log information, as applicable to the service provided
 - i. Crew position(s) held (i.e., remote pilot in command (RPIC), visual observer (VO)).
 - ii. Crew training received (i.e., initial, recurrent, differences) and recency of experience.
 - iii. FAA certificate(s) held as applicable to the operation.
- iv. The aircraft make, model, and FAA type certificate or airworthiness determination made, if applicable. The UAS country of origin must be documented along with security protocols in accordance with Executive Order 13981, the Drone Security Act of 2023, the FAA Reauthorization Act of 2024, and any other law passed that supersedes these requirements. Unmanned Aircraft Systems, the American Security Drone Act of 2023 (Public Law 118-31), the FAA Reauthorization Act of 2024, Section 936, Covered Drone Prohibition, and any subsequent Executive Ordre or law that supplement or supersedes these requirements.
- v. For each UAS, the current hardware and software configurations. This includes the aircraft and its associated systems to include the control station, launch/recovery equipment, datalink equipment, payload, and any other equipment required for safe flight.

- vi. Aircraft registration, to include FAADroneZone registration.
- vii. Flight log information to include flight times and location of operation(s). This information must be kept for two years from the date of the operation(s).
- viii. Aircraft weight (and balance if applicable) if the weight of the UAS is variable depending upon mission configuration. This information must be kept for two years from the date of the operation(s).
- ix. Equipment or aircraft discrepancies/malfunctions that impact the ability to complete the operation.
 - x. Scheduled/unscheduled maintenance for each aircraft.
- **3. Operations Standards.** Vendor operations policies and procedures must be documented and minimally contain the standards applicable to the operation and service provided.
- **a.** Identify Operational Rules and Authorizations. Vendors operating UAS must have general flight operations policies that specify all flights will be conducted in accordance with part 107, or any other applicable 14 CFR operational rule part. If required, part 107 waivers, part 91 exemptions, and certificates of authorization (COAs) or other authorizations (e.g., via a low altitude authorization and notification capability (LAANC)) must be obtained prior to the conduct of flight operations.
- **b.** Crew Qualification and Currency. Management controls to ensure proper crew qualification and recency of experience operating the aircraft and for the desired missions. Minimum crew complement to conduct safe flight operations includes a RPIC and a VO unless otherwise authorized by the Flight Program Executive. Besides the RPIC, for airport operations a person (e.g., VO) must be assigned to monitor air traffic visually. Monitoring traffic may be assisted by electronic means.
- **c. FAA Flight Program Communication.** Vendors must have procedures for communication with the Flight Program Operations Operations Control Center (OCC) prior to flight operations, at the completion of flights, and for incident/accident notification. Specific details for how to contact the Flight Program Operations OCC are provided by the FAA in connection with the acquisition process or following contract award and must be incorporated into company policies and procedures.
- **d. Preflight Planning.** Vendors must have preflight planning policies that establish at a minimum:
 - i. Crew responsibilities.
 - ii. Operating limitations and weather requirements.
 - iii. NOTAM issuance, if applicable.

iv. Operational risk assessment procedures including human, aircraft, mission, and environmental factors.

- v. Land/property owner coordination procedures.
- vi. Aircraft performance in accordance with applicable operational rules (e.g., 107.49, 107.51, and part 107, subpart D) and UAS manufacturer specifications.
- **e.** Flight Operations Procedures. Vendors must have general flight operations procedures for preflight, launch/takeoff, in-flight/normal, landing/recovery, abnormal (if applicable), and emergency checklists and procedures, including:
 - i. Mitigation procedures for lost link.
 - ii. Flyaway.
 - iii. Emergency recovery procedures.
 - iv. Airspace encroachment by other aircraft.
 - v. Interference with crew.
 - vi. Fire (battery or other; ground and airborne).
- f. Special Flight Rules Area (SFRA) and Flight Restricted Zone (FRZ). Vendors must have general flight operations policies that specify all flights will be conducted in accordance with part 93, subpart V, if operations occur in the Washington DC SFRA FRZ. The SFRA FRZ prescribes specific security and flight restriction requirements for certain flight operations within the SFRA FRZ. Any vendor who operates in the SFRA FRZ must have an approved waiver unless otherwise authorized. Information on the operational requirements and waiver application for operating in the SFRA FRZ can be found at the FAA restricted airspace information website (https://www.faa.gov/newsroom/restricted-airspace-0).
- g. Crew Fitness for Duty. Vendors must have company-established crew rest requirements and flight time and duty period limitations as well as crew fitness for duty and compliance with applicable medical condition and alcohol or drug regulations (e.g., 107.17 and 107.27).
- **h.** Crew Coordination. Vendors must have crew resource management and crew coordination policies. This should address transfer of aircraft control procedures, crew positioning, and communications between the RPIC, VO, and other crew (e.g., a person manipulating the controls under the supervision of the RPIC).
- i. **Post-Flight Activities.** Vendors must have post-flight activities that minimally establish procedures for:
 - i. Post-flight inspection of UAS.
 - ii. Logging of flight information and any aircraft discrepancies.

4. Maintenance Standards. The vendor maintenance and aircraft policies and procedures must be documented and minimally contain the following standards as applicable to the operation and service provided:

- a. UAS Aircraft Standards. The UAS must meet the following criteria—
- i. If required to use a small UAS, the vendor must use aircraft that meet the definition of small unmanned aircraft and small UAS in accordance with 14 CFR part 1.
- ii. Aircraft and equipment requirements in accordance with part 107, or the operational rule part applicable to the operation.
- iii. Compliance with 14 CFR part 89 for remote identification of unmanned aircraft, when applicable.
- iv. Compliance with applicable registration and marking requirements in 14 CFR parts 45, 47, and 48.
- v. Compliance with Executive Order 13981, Protecting the United States from Certain Unmanned Aircraft Systems; the American Security Drone Act of 2023 (Public Law 118-31); the FAA Acquisition Management System Policy in Section 3.6.4.1; the Buy American Act; and any subsequent Executive Order or congressional direction.
- vi. Data security plan meeting U.S. Government standards for information security in accordance with FAA Order 1375.1, Data and Information Management Policy.

Note: Any planned change to the UAS operated requires notification to the FAA, then subsequent approval to ensure it meets the standards of this order (and the contract if applicable).

- **b. UAS Maintenance Standards.** The UAS vendor is responsible for maintenance of its aircraft and all associated systems to ensure the aircraft are in a condition for safe flight. The vendor maintenance policies and procedures must include at a minimum –
- i. Aircraft-specific maintenance requirements or requirements to maintain aircraft per the manufacturer's maintenance or owner's manual. If the UAS or component manufacturer does not provide scheduled maintenance instructions, scheduled maintenance protocols must be specified by the UAS service provider.
 - ii. Procedures for regular software updates for the aircraft and any associated systems.
 - iii. Procedures for the repair or replacement of propellers and batteries.
- iv. The qualifications and training required for persons to be authorized to perform maintenance and alterations. The vendor must ensure all persons performing maintenance or alterations on the UAS are qualified. The manufacturer of the UAS is automatically qualified and authorized to perform maintenance.

c. Maintenance Records. All maintenance or alterations performed to the UAS must be documented. The records must minimally include –

- i. If the vendor performs the maintenance, the records must include
 - A general description of the maintenance performed.
 - The completion date of the work.
 - The identification of the person performing the work.
 - The approval for the UAS to return to service.

Note: The vendor need not comply with the maintenance recordkeeping requirements for the removal and replacement of UAS components that are designed for toolless removal and installation if the vendor has procedures for ensuring these components are inspected for serviceability prior to being installed.

- ii. Maintenance performed by the UAS manufacturer must be recorded by the vendor and the record must include
 - A general description of the work performed by the UAS manufacturer.
 - The completion date of the work.
 - A reference to the receipt provided by the UAS manufacturer.
 - The approval for return to service of the UAS from the vendor.
- **5. Training Standards.** The vendor must have a structured program to train personnel, initially and on a recurrent basis, in their roles, responsibilities, authorities, and in the operational skills relevant to the types of operations that the vendor conducts. The vendor must have defined crew qualification policies and procedures which ensure each person serving as managers, pilots, remote pilots, visual observers, other crewmembers, flight safety personnel, maintenance personnel, administrative personnel, and dispatchers are appropriately trained and qualified to conduct or support safe flight operations. Specifically, the following must be included in policies and procedures for appropriate personnel.
- **a.** Remote Pilot Certificate. For operations under part 107, all remote pilots must hold a remote pilot certificate with a small UAS rating and be current in accordance with that part. If applicable to the operation conducted, the pilot must also meet all other qualification requirements identified in additional authorizations or other applicable 14 CFR rule part.
- **b. Initial Training.** Initial training must minimally include operational requirements, vendor's operations procedures, maintenance procedures, safety procedures, aeronautical decision making, crew resource management, knowledge of how to obtain airspace

authorizations, and training on each aircraft/payload the crew member will operate. If conducting operations at airports, crew should demonstrate understanding of all airspace classes, airspace requirements relative to UAS flight operations, and standard radio phraseology used on air traffic frequencies.

- **c. Annual Training.** Vendors must provide annual recurrent training. It should provide updates on their flight program, refresh knowledge required for safe flight operations, include changes to the UAS regulatory environment, a review of any company or relevant incidents/accidents applicable to FAA operations, aeronautical decision making, and crew resource management.
- **d. Differences Training.** Vendors must provide differences training for any major changes to their operations manual or any new aircraft/payload. Differences training may be warranted for any upgrades to ground support equipment, aircraft model, software, operational procedures, or types of operation.
- **6. Safety Standards.** The FAA prefers that a vendor be a participant in the Safety Management System Voluntary Program (SMSVP), which enables voluntary implementation of a SMS. UAS operators under part 107 are eligible to participate in this program. If not in the SMSVP, the vendor must utilize a safety management program that includes policies and procedures built on the pillars of a SMS as outlined in FAA Advisory Circular 120-92 (as amended), Safety Management Systems for Aviation Service Providers. The vendor's safety policies and procedures must minimally include –
- **a. Safety Policy.** Safety policy which defines the methods, processes, and organizational structure needed to meet safety goals. This safety policy should be representative of the philosophy the vendor operates under, specific to the vendor, and should be signed by the company president or equivalent accountable executive.
- **b.** Safety Risk Management. Safety risk management procedures to assess adequacy of existing risk controls and determine the need for new or revised risk controls based on acceptable risk. A daily risk assessment should be created and used by crewmembers to assess the hazards and risks associated with operations for that day. Similarly, corporately a risk assessment should be required to evaluate any changes (other than administrative) to manuals, processes, or procedures.
- **c. Safety Assurance.** Safety assurance components to evaluate the effectiveness of risk control strategies and identify new hazards. Any time new risk controls are put in place, a process should be established to review these controls, their effectiveness and whether any new hazards were unexpectedly created because of the control(s) being implemented.

Note: Safety risk management and safety assurance should operate in a circular mindset. When a change is made, the vendor should evaluate the results of that change (as explained above) and return to those changes to make sure they are working as expected or determine if they need to be reevaluated/modified making sure the vendor did not discover any unintended consequences from those changes. This process should occur on a regular schedule (more frequently when it is new) to ensure proper monitoring of the changes and their outcomes.

d. Safety Promotion. Safety promotion strategies to include training, communication, and other actions to create a positive safety culture. A positive safety culture should reflect how the vendor operates and encourage reporting to improve operational safety. Regular safety meetings and feedback to employee groups about reports received and actions taken are examples of safety promotion.

- e. Safety Reporting. Procedures for crew to submit safety reports relating to their operation internally for company review and externally through the NASA Aviation Safety Reporting System (ASRS) (reference: https://narwhal.arc.nasa.gov/asrs_ers/uas.html). Providing multiple ways for crews to submit safety reports internally is encouraged and can result in increased reporting and improved operational safety.
- **f. Drug and Alcohol Testing.** Establish a company policy for drug and alcohol testing for all personnel that will be acting as crew for UAS operations.
- 7. UAS Aircraft Accident and Incident Reporting Standards. Vendors must have standards and procedures for responding to an aircraft accident or incident and participating in an investigation. The standards must also include required training for personnel who may participate in an investigation. The training must cover the required notifications to the National Transportation Safety Board (NTSB), as defined in 49 CFR 830.5, and company procedures for documenting the aircraft wreckage and any property damage following an incident/accident.

In addition to NTSB notification, UAS vendors must have procedures for incident/accident notification to the Flight Program Operations OCC. Specific details for how to contact the Flight Program Operations OCC are provided by the FAA in connection with the acquisition process or following contract award and must be incorporated into company policies and procedures. In addition to Flight Program Operations OCC notification, the vendor must submit a safety report to the FAA Flight Program within 48 hours of the occurrence. Flight Program Operations OCC incident/accident notification of occurrence is required for the events listed below —

- Events in accordance with §107.9(a) or (b).
- Collision inflight with aircraft or structure.
- Flight control system malfunction or failure.
- Inability of a crew member to perform normal duties because of injury or illness.
- Failure of the UAS to include propulsion failure or fire.

Appendix C. Directive Feedback Information

Directive Feedback Information

Please submit any written comments or recommendation for improving this directive or suggest new items or subjects to be added to it. Also, if you find an error, please tell us about it.

Subject: <u>FAA Order 4040.29</u>, <u>FAA Flight Program Standards for Commercial Aviation Services</u> (CAS)

To: Directive Management Officer, 9-AJF-PolicyandCommunications@faa.gov. (Please mark all appropriate line items) An error (procedural or typographical) has been noted in paragraph on page П Recommend paragraph on page be changed as follows: (attach separate sheet if necessary) In a future change to this order, please include coverage on the following subject: (briefly describe what you want added.) Other comments: I would like to discuss the above. Please contact me. Submitted by: _____ Date: ____ Telephone Number: _____ Routing Symbol: _____

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