IOWA DEPARTMENT OF PUBLIC SAFETY

AIRCRAFT OPERATIONS DIVISION

REQUEST FOR BID

POLICE AIRPLANE SPECIFICATIONS

I. INTRODUCTION

The following specifications are intended to describe the type, size, quantity, quality, and performance capabilities of new police patrol airplane to be operated in law enforcement operations by the Iowa Department of Public Safety (IADPS). Bids will be considered based on the purchase cost and according to compliance with specifications, all described herein. IADPS seeks a turn-key deliverable to include procurement of the base aircraft, procurement, completion, and full integration of the Airborne Law Enforcement equipment.

A. Quantity. One (1) Aircraft, Single engine land, all metal, fixed tricycle landing gear, 6-cylinder internal combustion ,normally aspirated, high performance, technologically advanced, 2026 model or later. Additional units may be purchased from a completed Master Agreement awarded from this solicitation.

B. Modifications. The model airplane offered for purchase must incorporate all modifications currently in effect for current production of that model at the time of request for bid response. Any anticipated modifications must be listed on the request for bid response along with estimated costs to accomplish the modification.

C. Certification. The airplane must have a standard airworthiness certificate issued by the Federal Aviation Administration at the time of vendor's request for bid response. All installed equipment and accessories must have Federal Aviation Administration approval and have no negative impact on the standard airworthiness certificate.

D. Airworthiness Directives. All current airworthiness directives must be complied with at the time of delivery. Any anticipated airworthiness directives must be listed on the request for bid response along with estimated costs associated with their compliance. Any recurring airworthiness directives shall be noted as to the efforts ongoing by the manufacturer to provide a remedy.

E. Empty Weight and Useful Load (Internal and External). All requests for bid response shall include the airplane's estimated empty weight and the estimated useful load based on the installation of all equipment as specified herein.

F. Basic Airplane. Any equipment, capabilities, or provisions provided on a basic equipped airplane of the make and model offered by the bidder shall be incorporated on the airplane offered for purchase without regard to whether or not the equipment, provision, or capability is specified herein.

G. Vendor Bid Requirement. Vendor shall provide a quotation on **each** piece of additional airframe equipment that is not included in the purchase price of a basic aircraft.

H. Vendor Requirements and Standards.

1. All equipment shall be new and not used, refurbished, and / or overhauled.

2. The vendor shall ensure that all work, installations, and necessary documentation are performed to current Federal Aviation Administration standards, maintaining the Standard Airworthiness Certificate of each airplane.

3. Vendor shall have completed or performed project management on at least three law enforcement equipped aircraft in the last five years. It is preferred that at least one is a similarly equipped law enforcement fixed wing aircraft. Vendor will submit a list of completed projects with response. If requested by IADPS, the bidder shall provide references and contact information.

4. The vendor or its sub-contractor aviation maintenance facility shall be designated a Federal Aviation Administration (FAA) repair station under Title 14 of the code of Federal Regulations (14 CFR). Vendor will submit a certificate number with response.

5. Vendor will submit a preliminary interconnect flow diagram (ICD) for all law enforcement mission components listed in section (VI.C).

II. **WARRANTY.**

1. The airplane and all additional airframe equipment provided by the airframe vendor shall have a warranty for the repair of the following:

   a) General Aircraft Components: Not less than (2) years and not less than1000 flight hours after acceptance by the Iowa Department of Public Safety from the awarded vendor.

   b) Standard Avionics Hardware: (2) years

2. Any warranty repairs shall be performed at Factory or Factory Authorized Repair Center. There shall be two (2) designated Factory Authorized Service centers and at least one (1) will be located in the State of Iowa.

3. If the Aircraft is grounded due to a warranty repair item and mission demands require immediate repair and return to service, the Iowa Department of Public Safety shall make necessary repairs by the most expeditious means available and shall be reimbursed by the awarded vendor.

4. Propeller: (3) year warranty against defects in workmanship during normal operating conditions.

5. Paint and Interior: (1) year warranty against defects in workmanship under normal operations.

III. **BID PRICE.**

The price bid for the airplane and components shall be the invoiced price for the airplane and components.

1. Vendor shall provide the following payment schedule:

   a) 40% of total contract value upon award.
   b) 40% upon delivery of base aircraft to completion center.
   c) 20% upon final delivery, acceptance, and commissioning.

IV. **PERFORMANCE SPECIFICATIONS.**

The following performance specifications are required for the variety of missions conducted in the Iowa Department of Public Safety airplanes:

A. Range. The airplane (as equipped at basic price) must have a maximum range of not less than 900 nautical miles.

B. Speeds. The airplane (as equipped at basic price) shall have a cruise true air speed of not less than 140 knots at 6,000 feet.

C. VSO shall not exceed 54 KCAS.

D. Weight. For purposes of this subparagraph, weight is based on a standard equipped airplane. The useful load of the airplane shall not be less than 900 pounds. The maximum gross weight shall be no less than 3,100 pounds.

E. Maximum Operating Altitude. Certified ceiling shall be 18,100 feet or greater

V. ENGINE

The airplane shall be equipped with the latest production version of engine capable of:

A. Takeoff power of at least 230 horsepower output at sea level.

B. The scheduled overhaul cycle of this engine shall not be less than 2000 hours under normal operating conditions.

C. The engine shall be capable of operation using 100LL fuel.

VI. PROPELLER SYSTEM

A. The propeller shall be a three-blade propeller composed of composite or metal material.

B. The propeller system shall be at a constant speed.

VII. COCKPIT / CABIN

A. The cabin shall be equipped with seating for the pilot, copilot, and not less than two (2) additional passenger seats.

B. The interior shall be of Federal Aviation Administration approved covering on all seats and back cushions (standard utility) with utility floor covering or coin mat at minimum.

C. Shoulder harnesses shall be provided for all seats.

D. The cabin shall be heated.

E. All passenger and / or crew doors, baggage doors shall be lockable with keyed entry into the aircraft on the pilot's door and baggage compartment.

F. The cabin design shall be such that the flight crew compartment and the passenger compartment are one continuous compartment (not structurally fully divided into two separate compartments).

G. The cockpit shall be equipped with CAS warnings including but not limited to: low engine oil pressure, electrical system voltage and amperage , low fuel level.

H. The cockpit shall be equipped with a magnetic compass.

VIII. ELECTRICAL SYSTEM

A. An aircraft type 28-volt direct current (DC) system shall be installed with sufficient capacity to continually and safely operate all equipment specified herein.

B. A standard aircraft type external power receptacle and associated wiring and hardware shall be installed to provide electrical power for ground operation of electrical equipment and to provide for starts using ground power units and / or battery carts.

C. The electrical system shall be capable of handling electrical loads associated with the simultaneous operation of the installed equipment.

D. The aircraft shall be equipped with a 95 amp or greater if needed to support equipment mission load.

IX. AIRFRAME EQUIPMENT

A. Basic Aircraft. The basic aircraft, as delivered from the manufacturer (prior to completion), shall be equipped as follows

1. Tricycle fixed landing gear.

2. High wing

3. Non-pressurized cabin.

4. Cabin Dimensions

    a) Seating capacity configuration of not less than 4 seating positions including pilot, co-pilot, and two passengers.
    b) Cabin width: 42 inches or greater.
    c) Cabin Height: 47 inches or greater.
    d) Cabin Length: 11ft. 2 inches or greater.

5. Engine indication oil pressure and temperature

6. Ammeter and Voltmeter

7. Fuel Quantity indications.

8. Fuel Flow indication.

9. Crew Alerting System (CAS)

10. Windscreen defrost

11. Tachometer

12. Hobb's meter.

13. Adjustable vents

14. Cabin heater

15. Cabin air conditioning option available

16. Insulation and soundproofing.

17. Epoxy corrosion treatment or like primer on exterior structures.

18. Tie down rings – left hand, right hand, and tail.

19. Gust lock for controls.

20. All inlet plugs, drain, plugs and blast covers.

21. Pitot tube covers.

22. Exterior paint and scheme:

    a) The airplane paint scheme shall be approved by IADPS
    b) Within 30 days of a purchase order issued by IADPS, the Bidder shall provide pictures or diagrams of the paint scheme to IADPS.
    c) Paint shall be of DuPont Imron or similar quality polyurethane paint approved by IADPS.

23. Interior styling color shall be grey or tan.

24. Exterior Lighting – navigation, wingtip strobe, taxi, take-off and tail. (ALL exterior lighting shall utilize LED technology) if available.

25. Interior Lighting – All interior lighting shall utilize LED technology if available.

26. Dual Flight Controls

27. ICS Plugs for every seat location in the cabin. Location shall be agreed upon by IADPS and installation vendor. All seats shall have plugs that accommodate 6-pin LEMO connector and dual plug connector.

B. Avionics (Minimum Requirements)

1. Electronic Flight Display - Garmin G1000 NXi or newer.

   a) One Primary Flight Display.
   b) One Multifunction Flight Display.

2. Synthetic Vision Technology (SVT)

3. Search and Rescue Capability/Option

4. Automatic Dependent Surveillance Broadcast (ADS-B) with Out and In functionality with single GTX 345 transponder. (or newer)

5. Garmin TAWS-B

6. Automatic Flight Control System – GFC 700 (or newer)

7. Garmin GDL 60 datalink

8. Backup Electronic Flight Information System (EFIS)

9. Artex ELT 1000 two-frequency with global positioning system (GPS) interface to broadcast location. (or newer)

C. Police Mission Equipment – Optional

1. If available, Bidder shall provide details of the installation of the equipment listed in this section. If the installation is outsourced, please provide secondary source(s) and costs.

   a) TDFM 9000 radio with all necessary antennas and equipment to operate on current Iowa Department of Public Safety ISICS Radio system.

   b) The bidder shall ensure that equipment requiring antenna(s) have those items properly installed to operate all the listed equipment herein. Each antenna shall be labeled as to its function and/or assigned piece of equipment.

X. DELIVERY AND RECEIVING

A. The fully complete aircraft shall be ready for final inspection and acceptance no later than twenty-four (24) months from the date of the award. The Bidder shall provide a schedule that includes an estimated availability date as part of the submission. Once the aircraft is available, the agency shall schedule and complete the final inspection prior to acceptance of the aircraft.

B. Upon acceptance, the Bidder shall provide the following:

1. Two (2) copies of the aircraft operator's and avionics manuals.

2. One (1) aircraft service manual.

3. One (1) set of aircraft logbooks.

4. Full executed bill of sale and FAA registration for the aircraft as configured and accepted.

5. Current weight and balance of the aircraft as fully configured and accepted, with the pilot, co-pilot, and a minimum of two (2) additional seats installed.

XI. TESTING, TRAINING & PERFORMANCE METRICS

A. The Bidder shall perform all safety inspections to meet FAA, ICAO, and DoD standards.

B. The Bidder shall ensure compliance with environmental regulatory standards, such as carbon emissions and noise levels.

C. The Bidder shall provide training by qualified instructors for operation, safety, and maintenance as requested by the agency.

D. The Bidder shall provide delivery milestone reporting as requested by the agency.