NATIONAL SAFE SKIES ALLIANCE
Program for Applied Research in Airport Security
PARAS 0041 Request for Proposals

Project Title:	Security Considerations for Urban Air Mobility (UAM) Operations at Airports
Program Officer:	Jessica Grizzle 865-738-2080 Jessica.Grizzle@sskies.org
Fiscal Year:	2021
Contract Time:	12 Months
Funding Cap:	$200,000
RFP Close Date:	May 18, 2021
Authorization to Begin Work (estimated):	July 2021

BACKGROUND

Urban Air Mobility (UAM) is a rapidly growing operational concept of moving people and small cargo in an urban transportation system. The FAA states that UAM "will be composed of an ecosystem that considers the evolution and safety of the aircraft, the framework for operation, access to airspace, infrastructure development, and community engagement."[1]

As this new form of aviation takes shape, the framework for airport operations must consider how these emerging transport systems will impact operational security, and the associated regulatory considerations. Airport security considerations are an important part of planning, and must be proactively assessed as the direction of the technology and its uses becomes clearer.

OBJECTIVE

The objective of this research is to assist the aviation community in better understanding and planning for the potential security impacts of UAM operations at airports. The resulting document should include:

- Realistic models for operations, including:
  - Purpose (i.e., cargo only or passenger service)
  - Origin/Destination points (heliport to airport, heliport to heliport, etc.)
  - Common infrastructure considerations (e.g., airside/landside access points and service needs)
  - General aviation vs. commercial service airport considerations
- Security implications for each model, including:
  - Passenger, baggage, and cargo screening needs and associated considerations
  - Passenger, baggage, and cargo transfers between commercial or other UAM flights
  - Operator needs, including access to regulated areas
- Review of current regulatory applicability and outstanding questions
- Potential impacts of varying levels of autonomy (piloted vs. remotely piloted) on airport security, including cybersecurity
- Relevant examples and lessons learned, including international and non-aviation
- Recommendations for future research

[1] https://www.faa.gov/uas/advanced_operations/urban_air_mobility/

SPECIAL NOTES

- The scope of this research should not include FAA air traffic management concepts for UAM. The overarching principles and assumptions outlined in Version 1.0 of FAA's *UAM Concept of Operations*,[2] and any subsequent versions, should be assumed for this research effort.
- Targeted outreach and interviews can be utilized as part of this research effort. Broad airport surveys are not acceptable.
- Proposing teams should include appropriate interdisciplinary subject-matter expertise to effectively address the topic. Expertise in regulatory requirements, airport security and operations, and UAM technology is recommended.
- Proposers should be aware of related research projects, industry publications and white papers, research, and other relevant literature, documents, and initiatives, and include in the research plan their approach for considering these research efforts.
- Proposers are encouraged to ask questions regarding proposed scope and project panel intent. Questions should be directed to Jessica Grizzle, PARAS Program Manager.

RESEARCH PLAN

PARAS is seeking the insights of proposers on how best to achieve the research objective, and is asking proposers to develop and include a detailed research plan. Proposers are expected to describe research plans that can realistically be accomplished within the constraints of available funds and contract time. Proposals must present the proposers' current thinking in sufficient detail to demonstrate their understanding of the issues and the soundness of their approach to meeting the research objective. The work proposed must be divided into tasks, and work for each task must be described in detail.

DELIVERABLES

The research plan should include the following interim deliverables for PARAS approval, at a minimum:

1. Amplified work plan
2. Literature review
3. Interim report that describes work performed in the early tasks, research results to date, an annotated outline of the anticipated final deliverable, and an updated work plan for remaining tasks
4. Draft final deliverable

Additionally, the research plan should build in appropriate checkpoints with the PARAS panel, including at a minimum:

- Kick-off teleconference meeting to be held within 1 month of the contract effective date
- One face-to-face interim deliverable review meeting
- Web-enabled teleconferences tied to the panel review and PARAS approval of other interim deliverables as deemed appropriate

The final deliverables will include the proposed guidance document and a Microsoft PowerPoint presentation that summarizes the project results, which will be used in presentations to the industry.

Note: The contract time includes 1 week for PARAS review of the amplified work plan, 2 weeks for PARAS review of the interim report, 1 month for PARAS review and comment of the draft final deliverables, and 1 month for contractor preparation of the final deliverables. For budgeting purposes, proposers should assume that PARAS will provide access to web-enabled teleconference services. Proposers should assume that the face-to-face interim deliverable review meeting will be held in the Washington, DC area.

[2] Federal Aviation Administration. (2020). *Urban Air Mobility (UAM) Concept of Operations v1.0.* https://nari.arc.nasa.gov/sites/default/files/attachments/UAM_ConOps_v1.0.pdf

PROPOSAL

The essential features required in a proposal for research are detailed in the current document entitled *Guidance for Preparing Proposals*. Proposals must be prepared according to this document, and attention is directed specifically to Section V for mandatory requirements. **Proposals that do not conform to the mandatory requirements will be rejected.**

The total funds available are made known in this Project Statement, and line items of the budget will be examined to determine the reasonableness of the allocation of funds to the various tasks. **If the proposed total cost exceeds the funds available, the proposal will be rejected.**

All proposals become the property of National Safe Skies Alliance. Final disposition will be made according to the policies thereof, including the right to reject all proposals.

Proposals (1 PDF) are due not later than 5:00 p.m. EDT on May 18, 2021 and should be sent via email to Jessica.Grizzle@sskies.org or submitted through our website here. This is a firm deadline and extensions are not granted. In order to be considered for award, the electronic copy of the proposal, including the executed, unmodified Liability Statement must be received no later than the deadline shown, or the proposal will be rejected.

LIABILITY STATEMENT

The signature of an authorized representative of the proposer is required on the unaltered **Liability Statement** in order for PARAS to accept the organization's proposal for consideration. **Proposals submitted without this executed and unaltered statement by the proposal deadline will be summarily rejected.** An executed, unaltered statement indicates the organization's intent and ability to execute a contract that includes the provisions in the statement.

GENERAL NOTES

- According to the provisions of 49 CFR § 21, which relates to nondiscrimination in federally assisted programs, all parties are hereby notified that the contract entered into pursuant to this announcement will be awarded without discrimination on the grounds of race, color, religion, sex, national origin, or disability.
- The contract type is cost reimbursement with a "not-to-exceed" limiting amount.