**LOA Interview Questions for Facilities (07/28/2021)**

**Background**

Urban Air Mobility (UAM) represents the next generation of on-demand air taxi and regional air mobility, passenger, and cargo transportation services within and around a metropolitan environment. UAM aircraft are expected to be fully electric or hybrid Vertical takeoff/landing (VTOL) or Short Takeoff and Landing (STOL) aircraft with high degrees of automation including being fully autonomous and self-piloted. Although initial UAM operations are envisioned to operate within the same parameters as helicopters, using existing routes, procedures, and infrastructure, the operational complexity of managing airspace is anticipated to increase exponentially beyond existing operational activities as frequency and density of on demand UAM operations increases.

Air Traffic Services has tasked MITRE to assess the UAM operational concepts impact on the provision of air traffic services to identify potential gaps and barriers. As part of this assessment, MITRE is doing an analysis of the Letters of Agreement (LOAs) that have been developed to support helicopter operations. It will allow standardized guidance recommendations development to help facilities approve UAM operations at their facilities in the near-term. MITRE would like to conduct interviews with selected facilities with charted helicopter routes and/or high volume of helicopter operations to gather information on the considerations for the development of the LOAs. Additionally, we would like to obtain the facilities’ perspectives on additional considerations for enabling near-term UAM operations.

Our MITRE team would like to query facility staff personnel who are normally involved in the development and execution of LOAs to leverage their local knowledge of helicopter processes and operational procedures. Information provided by facility staff personnel is to help inform the strategy for UAM integration into the NAS. We would like to send an initial list of questions prior to the virtual meetings (90 minutes).

Below is a list of questions that our team proposes to ask facility staff personnel. They are categorized by those that are applicable to all facilities and questions for specific facilities.

The interview question categories are grouped as follows:

**Questions applicable to all facilities**

* Helicopter Operations
* LOA Process
* Considerations
* Mitigations

**Questions for specific facilities**

* Location specific questions (e.g., NY Airports on SFRA)

**Pre-interview data request via email (response can be provided via email or during interviews):**

1. What is the daily volume of helicopter operations at your facility? Who are the operators?

2. How many LOAs do you have with helicopter operators? Is the FAA Repository updated with the latest LOAs?

3. Do you provide guidance on helicopter operations in the facility SOP?

4. Does your facility have a dedicated control position to manage helicopters?

**Interview Questions**

T**he following questions are applicable to all facilities:**

**Helicopter Operations**

1 For **facilities with charted helicopter routes:**

* Does your facility use the helicopter route chart?
* Do you also use a non-charted helicopter route structure?
* Would the helicopter route chart be improved with routing changes? If changes were made, what advantages would be gained?

2. For **facilities with a dedicated helicopter control position to manage helicopters:**

* What factors led to your decision to create a dedicated Helicopter Position?
* What is the benefit of having this position?
* How often is the position open? Daily? What times of day?
* What’s the impact if the facility is unable to open the position?

3. Describe the interaction between the Tower, TRACON or other adjacent facilities as helicopters transition between facilities.

**LOA Process**

1. Who initiated the requests for these LOAs? Facility or Operators? What are the drivers (reasons) for establishing the LOA?
2. What is the level of effort involved in the development of an LOA?
3. Who do you coordinate with? Service Center, District, HQ, Airport Authority, other operators?

4. When briefing a new LOA, how much time is required to brief the facility?

**Considerations**

1. What were the considerations: runway use, traffic flow, or traffic density?
2. Were obstacles and terrain a consideration?
3. What directives were applicable (JO 7110.65, JO 7210.3, CFRs)?
4. Which parties were included in procedure development and at what phases?
5. Did expected volume or frequency of proposed operations impact procedure development?
6. Were there environmental or community considerations?

Specifically, did helicopter noise concerns factor into helicopter structure?

1. What concepts or procedures to reduce coordination and communication for ATC specialists were considered?
2. When would you consider a single LOA vs. multiple party LOA?
3. What type of services do you provide to VFR helicopters in your airspace?

**Mitigations**

1. What types of communication options were considered? How were these selected?
2. Was surveillance a requirement or non-impact?
3. When would a SRM be required?
4. Were specific points of origin or points of departure considered in routes and vertical restrictions?
5. If you used coded routes for helicopters, what advantages do they provide for controller and operator understanding?

**Facility-Specific Questions**

**NYC**

1. What interaction do controllers have with helicopters operating in the New York SFRA Cutout?
2. How do aircraft transition in and out of the SFRA Cutout?
3. What effect does the SFRA Cutout have on controllers?
4. Describe interaction between the EWR/LGA/JFK Towers and N90 as helicopters transition between facilities.