

UAS Integration at SAV – Phase 2

Abstract

Woolpert will provide UAS consulting services as directed by the Savannah-Hilton Head International Airport Authority (SAV). Woolpert will work with SAV and the FAA to support the integration of UAS technology and capability into regular SAV airport operations. Woolpert's initial support included the integration of UAS technologies at SAV for daytime perimeter surveillance and wildlife management operations (Phase 1). Ultimately, the full implementation program will include additional operations of UAS for situations such as irregular operations, disaster response/recovery operations, nighttime surveillance, airfield asset management, airfield safety inspections, construction observation operations, traffic monitoring and other tasks that are not traditionally supported by aerial operations (manned or unmanned).

Priorities for SAV during Phase 2 of the program are broken out into the two tasks below. Throughout Phase 2, Woolpert will be incorporating additional areas of flight from Phase 1, additional mission types and a deeper level of coordination with the local FAA Air Traffic Control Tower (ATCT) and other interested stakeholders, as appropriate, with the goal of advancing the UAS program at SAV, while supporting FAA's interests in capturing data and feedback on the integration process.

Prior to beginning the tasks identified in the following outline, Woolpert and SAV will establish a project plan in collaboration with SAV to ensure the project objectives are met. The plan will incorporate the UAS program stakeholder considerations, planned meeting and deliverable dates, technical details on the UAS and sensors to be utilized, design of efficient UAS flight missions, and data processing/analysis expectations.

1. Increased ATC Coordination & Additional Flight Permissions

- To operate UAS safely on surface areas and in the Class C controlled airspace over SAV, Woolpert will be required to coordinate directly with the local FAA SAV ATCT Manager to establish the necessary communication protocols and procedures. Woolpert will work with SAV and FAA SAV ATCT to establish a specific memorandum of agreement (MOA) between SAV ATCT and SAV, identifying flight areas, communication protocols, flight preparation, emergency procedures and UAS platform information. The goal of the project is to optimize UAS operations to support the mission areas that are approved by the SAV ATCT Manager. Additional information on the demonstration flight missions can be found in task 6 below.

Deliverable: Final approved MOA between SAV ATCT and SAV.

- Prior to demonstration flights at SAV, Woolpert will obtain necessary ATCT approval to conduct UAS flights on the airfield utilizing Woolpert-owned equipment. Woolpert will outline the FAA's performance based standards to operate UAS in the National Airspace System (NAS) requiring request for waiver. Woolpert, acting as SAV's agent, will prepare documentation and submittals to FAA for the Airspace Authorizations, Waivers, and if required by FAA or local agencies, other documentation to successfully obtain approvals. All flight missions will be prepared, overseen and under command of a Woolpert FAA Part 107 Pilot-in-Command (PIC).

Deliverable: Waivers and/or authorization applications submitted for conducting UAS operations at SAV:

- i. Airspace Waiver for identified SAV surface and Class C airspace limits
- ii. Beyond Visual Line of Sight (BVLOS)
- iii. Night-time operations

2. Update Concept of Operations (CONOPS), Policy & Governance Documentation

- Woolpert developed an initial CONOPS for the first phase of the project. Woolpert will create and make updates to necessary sections addressing new policy, procedures and authorizations based on the new missions being undertaken. Woolpert will be required to enhance the CONOPS to incorporate the greater challenges of expanding flight operations within close proximity to the active runways, integration with existing emergency/disaster response teams, operations at night and BVLOS. Additional collaboration is expected to be required with local stakeholders (i.e.: airport departments, CFR, Gulfstream, security and police)
- Woolpert will utilize the developed UAS operational plans specific to SAV to cross reference pertinent FAA, state and local policies to develop policy and governance documents defining the short and long-term protocols for SAV as it relates to the application of UAS technology.

Deliverable: Updated CONOPS document.

Level of Effort Estimate

| ROM Level of Effort Estimate | | | |
|--|----------|-----------------|------------|
| Task | Labor | Travel/Expenses | Task Total |
| 1. Planning - ATC Coordination | \$14,600 | \$3,525 | \$18,125 |
| 2. Concept of Operations (CONOPS) | \$11,400 | \$0 | \$11,400 |
| | \$26,000 | \$3,525 | \$29,525 |

Project Schedule Summary

| MONTH | NOV | DEC | JAN | FEB | MAR |
|---|-----|-----|-----|-----|-----|
| | | | | | |
| Planning with SAV & ATC | | | | | |
| Waiver Drafting, Policy Review and Risk Assessment | | | | | |
| CONOPS Development | | | | | |