NAMIC FACT SHEET
FAA's Announcement on Integration Pilot Program (IPP)

On May 9, 2018, the Federal Aviation Administration announced 10 pilot programs that they selected from a pool of 149 applicants to participate in the Drone Integrated Pilot Program (IPP). This program will be essentially "drone use laboratories" where local governments and business partners can operate drones outside the FAA rules to test commercial drone uses and gather data that the FAA can use to later make drone regulations. U.S. Transportation Secretary Elaine Chao said dozens more projects could be approved in coming months, either with new waivers or under existing rules.

- Interestingly, industry giant Amazon was selected for any of the pilot programs; nor was DJI, the drone manufacturer that dominates the drone market.

- DOT has also reportedly sent two rulemaking proposals to OMB. One would allow drones to fly over people while another proposal submitted would allow for remote identification and tracking of unmanned aircraft in flight. After both are formally proposed, it could take months before they are finalized.

RELEVANCE TO NAMIC MEMBERS – Property/casualty insurance companies have used drones for routine property inspections and in response to wide spread disaster analysis. Greater use of drones by insurers is limited by FAA rules that prohibit drone operations over people, beyond the visual line of sight (BVLOS) of the pilot, and at night. Many of the IPP approved projects will experiment with these areas and can lead to long awaited FAA rules enabling greater drone use by insurers.

- State Farm is the sole insurance participant in the IPP, in the Virginia approved project which will experiment and collect data on urban and rural drone operations and emergency management, presumably operating over people and BVLOS.

IPP ORJECTS APPROVED ON MAY 9, 2018

Choctaw Nation of Oklahoma, Durant, OK - This project focuses on agricultural, public safety and infrastructure inspections, with planned Beyond Visual Line of Sight (BVLOS) operations over people and nighttime operations. The Choctaw Nation application involves testing of the weather effects on drones, package delivery, herd management, utility and infrastructure inspection, public safety cases, and development of UTM. AirMap will be providing UTM services to enable UAS operations. Partnering with CNN and the Green Valley Farms Living Laboratory, they have an aggressive 90-day schedule for high-profile Extended Visual Line of Sight (EVLOS) and night operations. The data obtained from these operations

will be broadly applicable, and could extend to a wide range of operations and geographical locations.

City of San Diego, CA - This project focuses on border protection and package delivery of food, with a secondary focus on international commerce, Smart City/autonomous vehicle interoperability and surveillance. Using indoor testing facilities and various drone landing stations and ports, this project will employ a variety of available communications technologies, including 5G test networks and the 4G LTE cellular network and AT&T's national first responder network authority (FirstNet) , to provide solid data to improve UAS specific ID & Tracking systems, necessary for UAS integration into the National Airspace System. It will explore complex operations in public safety, package delivery, medical delivery, international commerce and border security, and smart cities/autonomous vehicles. AirMap will work with Matternet and UCSD Health for autonomous drone delivery of patient blood and pathology specimens.

Innovation and Entrepreneurship Investment Authority, Herndon, VA - This project seeks to facilitate package delivery in rural and urban settings. Its includes the use of enabling technologies such as detect and avoid, identification and tracking, radar systems, and mapping tools. The project is a partnership of the Virginia Tech UAS Test Site, NASA, Project Wing, Intel, AT&T, Airbus Aerial, State Farm, Dominion Energy, Sinclair Broadcast Group, and HAZON Solutions. Focusing on delivering packages, power-line inspections and emergency management operations, the data obtained is intended to provide significant, scalable benefits to the agency and industry.

Kansas Department of Transportation, Topeka, KS = This project involves a diversity of use cases, including package delivery, disaster response, agricultural surveying, and short line and nuclear power plant inspection. Kansas plans to test operations BVLOS, at night, and over human beings. Kansas was the first state in the nation to roll-out statewide UTM services, through a partnership with AirMap. Operations will use a range of technologies, such as detect and avoid, ADS-B, satellite communications and geo-fencing. The program will use existing in-state resources such as fiber optic networks and UAS Traffic Management (UTM). The awardee has a robust community involvement plan that supports the diverse operations that are planned.

Lee County Mosquito Control District, Ft. Myers, FL - This project focuses on low-altitude aerial applications to control/surveille the mosquito population using a 1500-lb. UAS. It will employ a broad range of current and future technologies that include ground-based detect and avoid radar systems that would integrate ADS-B, infrared imaging and satellite technology. The proposal includes night operations, BVLOS and operations over people.

Memphis-Shelby County Airport Authority, Memphis, TN - This project focuses on the inspection of FedEx aircraft and autonomous operations that support airport operations such as perimeter security surveillance and package delivery. Proposed operations include working with a UTM concept that would also work with manned air traffic. Teaming with FedEx, Agricenter International, project include drone operator 901Drones, supplier Express Drone Parts and drone component maker Intel, they will do surveillance and deliveries within the confines of the airport and the 4,500-acre Shelby Farms Park in Memphis.

North Carolina Department of Transportation, Raleigh, NC - This project will test localized package delivery within a defined airspace by establishing drone delivery stations in local communities, to enable small businesses to utilize this delivery platform for commercial purposes. They plan to operate over human beings, beyond visual line of sight and at night, and use a variety of technological tools to enable these advanced operations. Tools include ADS-B, detect and avoid technologies, UTM and radar technologies. The data collected from these diverse operations will significantly enhance safe UAS integration into the National Airspace System. Flirtey, Mattenet, and Zipline will work with AirMap to deconflict package delivery operations.

North Dakota Department of Transportation, Bismarck, ND - Focusing on UAS operations at night and Beyond Visual Line of Sight, this project will will enable a variety of private and public sector uses for UAS. including linear infrastructure inspections, crop health monitoring, media reporting and emergency response. Operations will be in multiple types of airspaces ranging from rural to urban areas. The North Dakota Department of Transportation will work with AirMap to provide UTM services to enable these operations and encourage the adoption of UAS across the state. The proposal will focus on data from four criteria: external systems, aircraft system technologies, training requirements, and processes and procedures.

The City of Reno, NV - This project will focus on time-sensitive delivery of life-saving medical equipment, such as medical defibrillators in emergency situations in both urban and rural environments. The Reno Police and Fire Departments have partnered with Flirtey, AirMap, an area tribal government, commercial partners and not-for-profit organizations to showcase package delivery operations in the airspace around the city. This project will build a nationwide scalable model for medical delivery operations and has several commercial medical partners. They intend to integrate radar and weather data in order to expand the UAS capability to a three-mile city radius.

University of Alaska-Fairbanks, Fairbanks, AK - This project's primary focus is pipeline inspection and surveying in remote areas and harsh climatic conditions, but it includes other types of operations in urban and rural areas, ranging from public safety to UAS detection. Using enabling technologies that include collision avoidance, detect and avoid day and night, ADS-B,

differential GPS, satellite services, infrared imaging and UTM, they plan operations in remote areas to provide a unique opportunity to evaluate data on several advanced technologies.