

## Board Report:

# Statewide Aviation System Plan Update, Logan Annual Aviation & Maritime STEM Expo, MassDOT Drone Operations Program Training for Bridge Inspection, Expansive FAA Beyond & Visual Line of Sight (BVLOS) Waiver Obtained for Rail Inspection

June 22, 2023

*Presented to:*

■ Board of Directors

*Presented by:*

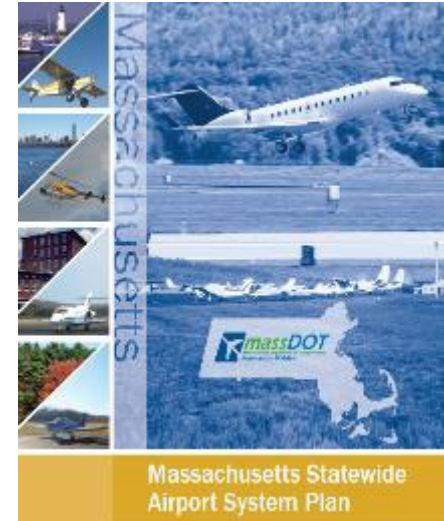
■ Aeronautics Division

➤ Dr. Jeff DeCarlo

# Statewide Aviation System Plan Update



- Aeronautics will update the 2010 Massachusetts Statewide Airport System Plan (MSASP) in early Summer. The study will take 18 months to complete and will focus on the airport system as a whole
- The MSASP will run parallel to and align with MassDOT's schedule for the 2050 Massachusetts Statewide Long Range Transportation Plan
- The study will envision the state's aviation role in a supportive multi-modal environment
- The MSASP will explore new and future NextGen technologies (e.g., UAS & AAM) and air transportation opportunities for the Commonwealth over the next 20+ years
- The Update will integrate aviation needs into broader transportation, land use, and environmental objectives for the Commonwealth and will guide future funding decisions for airport system priorities



# Logan Annual Aviation & Maritime STEM Expo

- MassDOT participated in the annual Aviation and Maritime STEM Expo held at Logan Airport on May 9th
- The event included over 1,000 middle and high school students and teachers from the Greater Boston area
- The education expo allows students to meet with experts in the aviation and maritime industries to encourage them to pursue careers in STEM and environmental sustainability
- Over 50 exhibitors representing various aspects of the transportation industry (including government and academia) served as the backdrop for the event held at the Delta Hangar
- Over 35 aircraft and additional pieces of equipment were on display to provide students with direct exposure to new technologies and opportunities for future high paying careers in the transportation industry



# MassDOT Drone Operations Program Training for Bridge Inspection



- MassDOT Drone Operations Program trains first Highway students to operate Small-UAS (sUAS) for Bridge Inspection
- Two Highway Bridge Inspectors passed MassDOT Remote Pilot in Charge (RPIC) check rides and FAA Part 107 Certification as Commercial Remote Pilots in Charge as part of a Beta program
- sUAS (uncrewed aerial systems) will complement bridge inspections improving data quality and will improve safety
- MassDOT Aeronautics sUAS Instructors provided hands on flight training with an emphasis on ground and air safety
- Feedback will improve and refine curriculum development with Endicott College and enable comprehensive sUAS training for all MassDOT personnel





# Obtained Expansive FAA Beyond Visual Line of Sight (BVLOS) Waiver for Rail Inspection



- MassDOT Aeronautics is collecting drone imagery of MBTA Commuter Rail network, on behalf of MBTA. Entire network has been imaged over the last several years (140 miles last year alone)
- Up to now, operations have required the drone pilot to see the drone (maintain “Visual Line of Sight”) throughout the flight. Only short sections of rail can be imaged during each flight
- MassDOT Aeronautics has been developing an approach where the pilot can fly the drones for much longer distances “Beyond Visual Line of Sight.” Greater lengths of rail can be imaged in one flight, leading to much more efficient and timely collection of data
- FAA granted MassDOT Aeronautics preliminary waivers to operate “BVLOS” for very short sections of rail in 2020, 2021, and 2022
- This past April, the FAA granted MassDOT Aeronautics a broad BVLOS waiver covering the entirety of rail across Massachusetts. This first-in-the-nation approach blends several approaches to maintain safe operations, and resulted from close collaboration between MassDOT Aeronautics and the FAA UAS Office

