

Surface Safety Portfolio



Approach Runway Verification (ARV)

Background A safe and efficient National Airspace System (NAS) begins and ends on the airport surface. Separation services that are provided by Air Traffic Controllers (ATC) in the sky, are also paramount on runways, taxiways, and other airport surface movement areas. Giving ATC the tools necessary to improve their situational awareness on the surface is key for the future of surface safety.

Approach Runway Verification (ARV) is a function embedded within the software of the Standard Terminal Automation Replacement System (STARS). STARS is the primary display used by ATC in airport towers across the country.

ARV will provide ATC both visual and audible alerts if an aircraft on arrival is lined up with the wrong runway, a closed runway, a taxiway, or even the wrong airport. Each airport environment can be uniquely adapted such that these alerts trigger based on the uniqueness of their surface configuration and airport arrival routes.

Current State of ARV As of August 29, 2024, ARV is monitoring 45 airports (i.e., Air Traffic Control Towers). This is the first time in the NAS that ATC will be able to receive “WRONG SURFACE” or “CLOSED RUNWAY” alerts on their primary display. So far, the capability has been demonstrated with great success.

What's Next The ARV team is working towards providing ARV monitoring to over 50 airports by the end of fiscal year 2024. The objective is for ARV to be available for all terminal and tower facilities with STARS (or over 400 air traffic control facilities). At these ARV facilities, ATC will be able to issue timely maneuvering instructions to pilots long before they could potentially touch down on the wrong surface.

Summation The FAA is dedicated to continually evaluating and improving upon safety. With ARV, ATC will have another tool in their toolbox to enhance their surface situational awareness. ARV is not the final and only endeavor the FAA is pursuing to address such a critical operational need. ARV, along with the Surface Awareness Initiative, and the Runway Incursion Device, are a few examples of the FAA's commitment to always advancing the safety of the NAS.

