The Vertical Flight Heritage Sites Program
NASA Langley Research Center
Hampton, Virginia
Remarks by Mike Hirschberg, AHS International

Thank you, Administrator Bolden, all of our honored speakers here today, and that you all for coming today to help us honor this site.

Normally when a NASA Administrator talks about "vertical flight," it's rockets, so we appreciate your support of rotary wing vertical flight.

The American Helicopter Society International is the world's premier professional vertical flight technical society. We bring together industry, academia and governments to tackle the toughest challenges in vertical flight. AHS was founded in 1943 in Stratford, CT -- just a few weeks after Sikorsky received its first quantity order for the XR-4 helicopter, the first American Helicopter to go into production and the aircraft featured on the cover of today's program.

For more than 70 years, AHS has been the primary forum for interchange of information on vertical flight technology. From advocating for vertical flight research and development, to developing our next generation of engineers and scientists, to initiatives to reduce accidents and community noise, AHS helps lead the way.

The AHS International Vertical Flight Heritage Sites Program is intended to recognize and help preserve sites of the most noteworthy and significant contributions made in both the theory and practice of helicopter and other vertical flight technology. AHS hopes to promote to the public, the rich history of the worldwide vertical flight community through this program.

We started the Heritage Sites Program in 2013 with the recognition of the Franklin Institute in Philadelphia – the site of the original 1937 Rotary Wing Aircraft Meeting – the world's very first technical conference on rotorcraft. By the way, this is the same site where, Dr. George Lewis in 1938 and Dr. Henry Reid (1939) chaired research sessions, as Mr. Bowles just mentioned.

Last year in Montreal, Quebec, we recognized the site of the development and production of the Pratt & Whitney Canada PT6 engine, one of the first production helicopter turboshaft engines. The PT6 family has since become one of the most prolific powerplants in the vertical flight industry and is still in production today, more than 50 years after it was developed.

Knowing that our 71st Annual Forum would be held in nearby Virginia Beach and with this year being the 100th anniversary of the N.A.C.A., the members of the AHS History Committee thought we should recognize the incredible legacy of contributions to vertical flight that were made here at the Langley Research Center. AHS has long supported NASA's rotorcraft and vertical flight development efforts, and advocated strongly on behalf of the people, facilities and research efforts that have contributed so much to our nation's capabilities and our technical understand of rotorcraft phenomena.

So. Why did we select the Langley as our fourth Vertical Flight Heritage Site?

The Langley Research Center has had a distinguished history in powered lift technology development over the past 95 years. This research has formed the foundation of knowledge for the vertical flight community worldwide. From aerodynamics to structures, aeromechanics, powered lift, acoustics, materials, stability & control, structural dynamics and human factors, Langley has led significant advancements in vertical lift technologies. For nearly a century, the Center has contributed to the understanding, design, analysis, and flight test development of experimental and production vertical flight aircraft configurations.

Beginning with Technical Note 4 in 1920, "The Problem of the Helicopter," the Center quickly rose to international leadership in fundamental aerodynamic research.

Importantly, the Center led development of the N.A.C.A. airfoils, which facilitated efficient rotor blade designs. Langley also had a key role during the 1920s in disseminating European rotary wing research in the form of Technical Notes.

With the development of the first successful rotary wing aircraft, the Autogiro, the Center began to undertake rotorcraft flight test programs and became an important intermediary between the military and industry. Principal flight test and aerodynamic evaluation of Army Autogiros occurred at Langley between 1935 and 1938 featuring intensive studies into the problems of ground resonance.

By 1938, the N.A.C.A. had published 11 technical reports, 10 technical notes, 14 technical memorandums, and four aircraft circulars dealing directly with rotating-wing aircraft.

During World War II, Langley supported the Army's fundamental aerodynamic and structural studies of the first generation of military helicopters.

In fact, Langley was the War Department's and Navy Department's sole aerodynamic investigator in rotary wing aircraft between 1935 and 1945. The Army Air Forces conducted flight testing, but they relied entirely on Langley for both wind tunnel testing and flight evaluation during the autogiro era. During World War II, Langley was still the only US government organization undertaking fundamental aerodynamic investigation on military rotorcraft.

Obviously, as fascinating as this early foundational history is, the Center continued to make incredible contributions to rotorcraft and fixed wing V/STOL aircraft, with a few milestones highlighted in your brochure.

Suffice to say in summary, that the research in experimental and theoretical aerodynamics, the Collaborative Research with the US Army, the structural testing with the Landing and Impact Research facility (LandIR), tiltrotor aeroelastic and acoustic evaluations, and so much more, make the Langley Research Center highly deserving of recognition as a Vertical Flight Heritage Site.

Here is where it all happened, with world-class facilities and world-class researchers, who continue today to conduct impactful, groundbreaking – and even ground impacting – research, and we hope will continue to lead the nation in vertical flight research in the decades to come.

Now, allow me to read the citation for the award:

> Since its establishment in 1917 as the Langley Memorial Aeronautical Laboratory, the Langley Research Center has performed groundbreaking research to advance the state of the art in vertical flight. The Center's research has contributed significantly to understanding vertical flight aerodynamic and dynamic principles, design requirements, and handling qualities through analysis, wind tunnel testing and experimental flight research.
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> Research at Langley has been key to the development and maturation of many novel configurations and has paved the way for the growth of today's global vertical flight industry.

To the men and women of the Langley Research Center, past and present, thank you for all you have done – and continue to do every day – to advance the state of the art of vertical flight technology.