

*Missions for America  
Semper vigilans!  
Semper volans!*



Publication of the Thames River Composite  
Squadron

Connecticut Wing, Civil Air Patrol  
300 Tower Rd., Groton, CT.

Issue 18.18 Thanksgiving Edition  
26 November, 2024

Lt Col Stephen Rocketto Editor  
1<sup>st</sup> Lt David Pineau, Publisher  
Maj Roy Bourque, Paparazzo  
Capt Edward Miller, Features  
Maj Scott Farley, Roving Correspondent

### **CURRENT EVENTS**

#### *Supersonic Demonstrator*

Boom Supersonic is designing a supersonic airliner which they have named *Overture*. The one-third scale demonstrator, XB-1, *Baby Boom*, has completed its eight flight to test handling without use of the stability augmentation system.



Two more subsonic test flights are scheduled and the company expects to start supersonic flights before the year's end. The airliner, *Overture*, will be designed to cruise at Mach 1.7 and carry between 64 to 80 passengers over 4,000 miles.

#### *Hera Asteroid Probe & Planetary Defense*

Hera's mission is a test of the efficacy of using a spacecraft to deflect the course of an asteroid. The European Space Agency will steer Hera into the Didymos binary asteroid system and crash into Dimorphos, the smaller companion of Didymos.



*The Target*  
(Credit: NASA and Johns Hopkins)

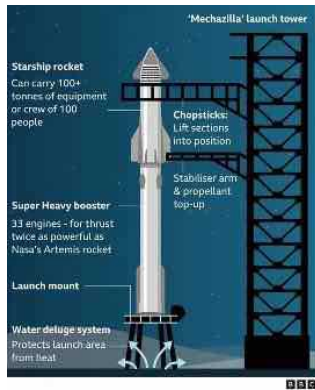
Didymos has a diameter of around 580 feet and has a mass of around 1.3 billion kilograms or 3 billion pounds which is close to that of the Great Pyramid of Giza. Arrival date is scheduled for late 2026.

In 2022, Dimorphos was struck by a NASA probe which ejected two million pounds of debris into space and left a considerable impact crater and reduced the orbital period of Dimorphos by 33 minutes.

The project is part of a "planetary defense" initiative which seeks to develop means of protecting the earth from asteroids or comets which could cause an impact hazard to earth.

#### *SpaceX Starship Test*

SpaceX launched a Starship rocket from Boca Chica, Texas on November 19<sup>th</sup>. The experiment is the 6<sup>th</sup> test of a fully reusable transport system designed for orbital, lunar and Mars missions. The vehicle consists of the second stage spacecraft lifted by first stage Super Heavy booster. The intent was to collect engineering and performance data on the flight and recovery system.



(Credits: BBC & Time)

For this stage of the experiment, the booster was to be recovered by the “chopsticks” on the launch tower and the spacecraft would impact into the Indian Ocean with no plan to recover it. Loss of communications with the launch tower computer forced the controllers to direct the booster to a soft touchdown off shore for recovery.

Elon Musk, founder and CEO of the private company, SpaceX was present accompanied by President-Elect Donald J. Trump. Responding to a question on X, Musk stated that the biggest technical challenge is developing an immediately reusable heat shield. The goal is “Being able to land the ship, refill propellant and launch right away with no refurbishment or laborious inspection, that is the acid test,”

## FEATURE ARTICLE

### *Presidential Fixed Wing Aircraft*

The history of Presidential aircrafts is interesting and little known. The Boeing 747, designated VC-25A, has been around since for 30 years and is a familiar sight on news broadcasts. But what other aircraft has been associated with sitting Presidents?

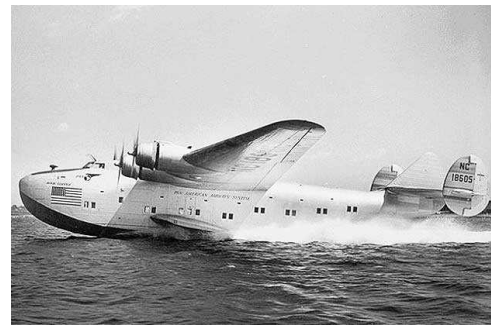
The first was an RD-2 Douglas Dolphin, It was purchased by the Navy for President Franklin D. Roosevelt but never used by him. It was fitted with a desk and a two-way radio.

### *Navy RD-2 at NACA Langley* (Credit: National Archives)



FDR was the first President to fly while in office and the flight was on a Pan American Boeing 314 flying boat, the *Dixie Clipper*. In 1943 he and his staff flew to Morocco to attend a meeting of the Allied leaders in Casablanca. The crew were from Pan American.

### *The Dixie Clipper*



At that time, a Consolidated Liberator Express was specifically outfitted for FDR. Designated C-87A, the aircraft was named *Guess Were II*.

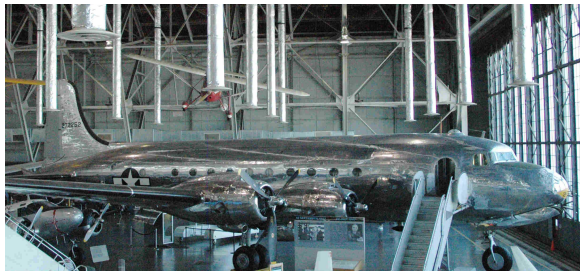
However, the Secret Service would not approve it due to the type's abysmal safety record, a tendency to blow up in flight, and it was never used by the President. However, they did allow his wife, Eleanor, to use it on a 1944 “Good Will” flight to Latin America. Hmmm!



*One of the six C-87A Liberator Express produced.*



Next, a Douglas DC-4 was modified for the President. A VC-54C Skymaster, was not only equipped with the usual conference and billeting facilities but also had a belly mounted elevator for lift the wheel-chair borne President. It was popularly known as *The Sacred Cow* and only used once by Roosevelt who flew to the Crimean city of Yalta to meet with Stalin and Churchill.



*Sacred Cow at the Air Force Museum. The belly mounted glass faced wheelchair lift is visible just under the wing.*

A Douglas DC-6, the Air Force VC-118 Liftmaster (VIP version of the Douglas DC-4) replaced the *Sacred Cow* in 1947. Harry S. Truman named it after his home town, *Independence*, and it had a striking blue and white paint job featuring a stylized eagle stretching from the nose to the tail.

Shortly thereafter, Truman used a Douglas VC-118 (VIP version of the DC-6) as a Presidential aircraft. The aircraft, named *Independence*, was equipped with the communications and creature comforts fitting for POTUS and had standard airline seating in the rear.



*A nice image of the stunning eagle motif on the Independence.*

During the administration of President Dwight D. Eisenhower, two Lockheed Constellations were

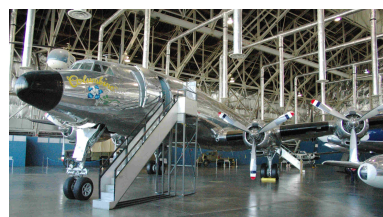
adopted as the presidential transports. They were named *Columbine* after the state flower of Colorado, Mamie Eisenhower's adopted home state. *Columbine II* was a VC-124A Lockheed Model 749 and the first aircraft to use Air Force One as a call-sign. It was also the only presidential aircraft sold to a private individual.



*Columbine II undergoing restoration at Marana, Arizona (Credit: Gregg T. Williams)*

The Air Force used it after *Columbine III* replaced it and then sold it to a private buyer. It changed hands several times and is currently under restoration in Bridgewater, Virginia.

*Columbine III* was a VC-124E based on the L-1049 Super Constellation. *Columbine I* had been his personal transport when he was in the army and it is now at the Pima Air and Space Museum.



*Columbine III at the Air Force Museum*

Ike also used an Aero Commander Super 680 to commute to his Gettysburg farm. The aircraft's original Air Force designation was L-26C but changed to U-4B when the "liaison" class name was retired. Eisenhower was the only president to hold a private pilot certificate and he occasionally handled the controls from the right seat.



*Ike's U-4B at the Air Force Museum.*

1959 saw the introduction of jet aircraft into the presidential fleet. A Boeing 707-20 nicknamed “*Queenie*” or more formally a VC-137A, was outfitted and took Ike on a three week “good will” tour to 11 countries on three continents, hardly practical with the piston engined Connies.

The incoming President John F. Kennedy and his fashion conscious wife Jackie elected to rework the interior in blue and white and the pattern remains to this day.



*Queenie, a VC-137A with its original paint scheme.*



*VC-137B at Pima. This is one of the A models re-designated as a B model. Its serial number is one higher than Queenie's.*



*VC-137C arrives at the Air Force Museum (Credit: USAF)*

The VC-137C served eight Presidents from JFK to President William J. Clinton until replaced by the Boeing 747-200B, VC-25A in 1991 during the term of President George H.W. Bush.



*The VC-25A (Credit: Roman Gray, USMC)*

And the Boeing C-32, a modified 757 is used when the field is not adequate for the 747.



*Boeing C-32 (Credit: Sam Meyer)*

But along the way, a few other aircraft made their appearances as presidential transports. A Beech King Air 90, VC-6A, was used by President Lyndon B. Johnson to fly from Bergstrom AFB, the nearest field able to accommodate the 707, to his ranch near Stonewall, Texas. The aircraft became known as the “*Lady Bird Special*,” a play on the First Lady's childhood nickname.



*The Lady Bird Special (Credit USAFM)*

Presidents Johnson Nixon, Gerald R. Ford, Jr., James E. Carter, Jr., and Ronald all made use of a Lockheed Jetstar known to the Air Force as the VC-140B. Johnson referred to the aircraft as “*Air Force One Half*.”





*Jetstar at the Lyndon Johnson Museum  
(Credit: Nsdhapi5)*

A North American T-39A Sabreliner was also stationed at Bergstrom for Johnson's convenience.



*The Sabreliner used by President Johnson on display at the USAFM.*

Gulfstreams have ferried Presidents. The C-20B Gulfstream III and the C-20C Gulfstream IV replaced the Jetstars for short flights and for emergency evacuations.



*Presidential C-20B at the USAFM*

The C-37A is a modified Gulfstream IV



*C-40B, a 737-700 but no records of it ever carrying the President.*



*This DC-9-32, a VC-9C, also has served as a Presidential aircraft. (Credit: Aktig Ates)*

The most unusual presidential aircraft is Navy One, a Lockheed S-3D Viking. This is an anti-submarine aircraft in which President George W. Bush landed on the *USS Abraham Lincoln* in 2003. It is also known as the “Hoover” because its engines sound is akin to that made by a vacuum cleaner.



*Navy One trapping on the USS Abraham Lincoln*

*(Credit: Photographer's Mate Airman Gabriel Piper, USN)*

### *Some Additional Notes*

In 1974, Nelson Rockefeller served as Vice-President with Gerald Ford. At that time, Air Force Two was a Convair C-131 Samaritan. Rockefeller preferred using his private Gulfstream II. As a private aircraft, the Gulfstream used Executive Two as a call sign.

If the vice president's family members are aboard, but not the vice president himself/herself, the flight can optionally use the callsign Executive Two Foxtrot just like Executive One Foxtrot.

Air Force One will probably not travel alone to a presidential destination. A Boeing C-17 Globemaster III hauls the limousine, Marine One helicopter and the U.S. Secret Service vehicles as well as all the other accoutrements needed for the mission. If the trip is into a war zone, the Globemaster is fitted out with “comfort pallets”

providing the creature comforts needed and will not use normal call signs so as to not call attention to a priority target.

### *The Ferdinand Magellan*

One unusual mode of presidential transportation deserves mention. The Ferdinand Magellan, designated U.S. Car No. 1, Codename POTUS, was a converted Pullman car which served the Office of the President from 1943 to 1958.

The car is 84 feet long, 15 feet tall and weighs 275,000 pounds, double its weight before conversion. It clad with 5/8 inch nickel-steel armor, and equipped with bullet-proof glass. The air conditioning was provided by fans driving air over blocks of ice.



Presidents Truman made heavy use of it for his "whistle stop" campaign against Thomas Dewey. Traveling 28,000 miles and giving around 350 speeches.



*Fake News? Disinformation?*

Eisenhower rarely used the train but last official use of the Ferdinand Magellan was in 1954 when Mamie Eisenhower traveled to Groton, Connecticut to christen the *U.S.S. Nautilus*.

The car now resides in the Gold Coast Railroad

Museum in Dade County Florida and has been designated a National Historic Landmark.

### NOTE ON THE AIM-120 AMRAAM

A faithful reader and old friend, Phil Kortesis dropped *The Coastwatcher* a note about his disappointment about not discussing the AIM-120 Advanced Medium-Range Air-to-Air Missile (AMRAAM) in the article on precision munitions.

Phil and his brothers Dino and Nikolas started rifle training with me when he was ten and earned the NRA Distinguished Expert Badge at 15.



*Philip on the range.*

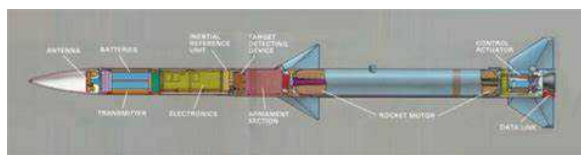
He holds a Bachelor's degree in electrical engineering from the University of Hartford and joined the workforce holding jobs with a number of aerospace firms starting with Hughes Aircraft in Colorado and Raytheon Missile Systems in Tucson, Arizona.

At Raytheon he was responsible for the Radar Transmitter, Electrical Conversion Units, Flex Harnessing, Interfacing, Power Distribution and Grounding) for the Advanced Medium Range Air to Air Missiles (AMRAAM).

He is retired but volunteers as a ham radio operator with the Office of Emergency Management and the American Red Cross. enjoys electronic designing, mostly troubleshooting and repair and assembling electronic gadgets and kits. Sounds like he is a likely CAP recruit.

Back to the AMRAAM. The AIM-120 is a beyond-visual-range air-to-air missile capable of all-weather day and night operations. The missile is fire-and-forget which enables the pilot of the launch aircraft to engage other targets immediately. Energy source is solid fuel and is capable of Mach 4 flight. In the terminal run-in to the target it uses inertial reference and an active

radar guidance system.



About two dozen aircraft have been downed by U.S. and foreign air forces using the AMRAAM. Unfortunately, one was “friendly fire” incidents.



*Fox Three (Credit: US Navy)*

The AIM-120 is now in service with 40 different nations. It is the followup to the AIM-7 Sparrow and has a kill probability rate of 59% according to an Australian analysis. The latest version in is the AIM-120D which has improved accuracy using GPS and hardware and software improvements.

## **THAMES RIVER COMPOSITE SQUADRON**

*Minutes*

*26 November, 2024*

Meeting Cancelled for Thanksgiving Holiday

### **A TRIBUTE TO TURKEY DAY**

Texas, Kentucky, and North Carolina have towns named Turkey. There is also a Pilgrim, Michigan, and Cranberry, Pennsylvania where they are likely still counting the ballots and let us not forget Yum Yum in Tennessee.

Abraham Lincoln, a Republican proclaimed the modern Thanksgiving set on the last Thursday in November in 1863 in the midst of the War Between the States. The “influencer” was Sarah Josepha Hale who wrote the nursery rhyme “Mary Had a Little Lamb” who had spent 40 years writing to politicians advocating an official holiday.

On October 31, 1939, Franklin D. Roosevelt, a Democrat proclaimed that the holiday would be set for the fourth Thursday in November, a marketing ploy to encourage spending at the tail end of the Great Depression.

