

ARRIVAL OF C-17 AIRCRAFT CREATES DEMAND FOR A HANGAR OF SIGNIFICANT PROPORTIONS

The 911th Air Reserve Wing at the Pittsburgh Air Reserve Station required a new hangar in order to maintain its new aircraft. The space needed at the base had to offer new capabilities for the C-17s while also serving as a maintenance hub for the aircrews.



HANGAR DESIGN PROVIDES NECESSARY BEDDOWN ACCOMMODATIONS

The project was designed as a large two-bay hangar with a focus on corrosion control and fuel cell maintenance for the new aircraft.

PROJECT STATS

CLIENT

U.S. Army
Corps of Engineers,
Louisville District

LOCATION

Pittsburgh Air Reserve
Station, Pennsylvania

COMPLETION

May 2020

115.5K

SQUARE-FOOT
TWO-BAY HANGAR

\$45.9M

IN PROJECT COSTS

CHALLENGE

As aircraft evolve, expand and improve, accommodations must be made in order to provide the proper maintenance activities. This was the case with the 911th Air Reserve Wing at the Pittsburgh Air Reserve Station when the base needed to phase out the C-130 Hercules aircraft for the C-17 Globemaster III.

More modern and agile than the C-130, the C-17 can hold as much as 85 tons and has the ability to land on shorter, more narrow runways. These aircraft are often used for missions involving airlifts and equipment hauls.

With the conversion from the C-130 Hercules to the C-17 Globemaster III, which is double the size of its predecessor, the station needed more space that allows the aircrews to store and perform maintenance on the new, larger aircraft.

SOLUTION

In order to provide the necessary accommodations, the scope of the project was developed to include a 115,500-square-foot two-bay hangar for corrosion control and fuel cell maintenance of the C-17 aircraft. Burns & McDonnell was hired to provide design and construction phase services including master planning, site surveys, interior design, cost estimates and on-site inspections.





The corrosion control bay section of the hangar was designed and built to offer an environmentally controlled area to wash aircraft, provide corrosion treatment and repair, and perform aircraft maintenance painting as needed.

The fuel system bay portion of the hangar contains vapor exhaust and breathing air supply equipment to support on-aircraft inspections and repairs as well as a fuel cell wing pressurization system. Like the corrosion control bay, aircraft in the fuel system bay are positioned in a nose-in configuration with tug pull-through access.

The last third of the new hangar, which is over 28,000 square feet, houses maintenance shops, administrative areas, showers and lockers, equipment and engine storage space and paint rooms.

ADDITIONAL PROJECT FEATURES

- Breathing air and compressed air systems in each of the two bays.
- Furnishings, fixtures and equipment.
- Primary and secondary power distribution, backup power, interior grounding and lightning protection systems.
- Trench drains piped to an underground storage tank to contain fuel spills.

RESULTS

Breaking ground in November 2017, construction was completed in May 2020 and on June 4, 2020, crews towed the C-17 into the new two-bay hangar. The hangar allows the crew to store up to two C-17 aircraft at once, with proper space to perform necessary inspections and maintenance in a covered area away from the outside elements.

The new mission and arrival of the aircraft has helped secure the future of the base for decades to come.

