

F-35A Training Basing

ENVIRONMENTAL IMPACT STATEMENT

AIR FORCE F-35A AIRCRAFT



This fact sheet is provided as part of the **F-35A Training Basing Environmental Impact Statement (EIS)**, which is currently underway to assess potential environmental impacts associated with establishing a Pilot Training Center with F-35A training aircraft at one or more existing Air Force or Air National Guard installations within the continental United States. Candidate installations include Boise Air Terminal Airport Air Guard Station (AGS), Idaho; Holloman Air Force Base (AFB), New Mexico; Luke AFB, Arizona; and Tucson International Airport AGS, Arizona. The Air Force is evaluating the establishment of facilities and aircraft specifically for training purposes in the F-35A Training Basing EIS.

A separate EIS is being prepared for Air Force installations that would base aircraft squadrons for operational purposes. That EIS is known as the F-35A Operational Basing EIS. Candidate installations include Hill AFB, Utah; Burlington AGS, Vermont; Shaw AFB, South Carolina; McEntire Joint National Guard Base, South Carolina; Jacksonville AGS, Florida; and Mountain Home AFB, Idaho.

MISSION

The U.S. Air Force F-35A aircraft is a cutting edge, fifth generation strike fighter. This conventional takeoff and landing version of the F-35 is designed primarily as a low-visibility, air-to-ground fighter, with air-to-air combat capability. The F-35A combines supersonic speed, the ability to carry weapons internally and turning agility of up to nine times the force of gravity.

During initial phases of an air campaign, the F-35A can perform stealthy strikes using an internal weapons load system that suppresses air defenses, hits heavily defended targets, and protects U.S. aircraft and ground forces from enemy ground attack. In later phases of a conflict, when stealth is not required, the F-35A can carry heavier external weapon loads.



The F-35A is intended to be the U.S. Air Force's premier strike aircraft through the first half of the 21st century, offering low visibility, close- and long-range air-to-ground and air-to-air capability, enhanced precision strike capability and sophisticated electronic warfare capabilities.

Officially named the F-35 Lightning II, the F-35 builds on all current-generation fighter aircraft to offer superior capabilities. The Joint Strike Fighter Program developed three versions of the F-35 Lightning II to meet the varying operational needs of the Air Force, U.S. Navy, U.S. Marine Corps and nine international partners. The Air Force version of the F-35 Lightning II is the F-35A.

FEATURES

Affordability

Joint development of the three F-35 variants takes advantage of economies of scale and allows an estimated 80 percent commonality in parts. The F-35A is designed to cost 40 to 50 percent less to operate and support than comparable current-generation aircraft.

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Low Visibility

A combination of attributes allows the F-35A to avoid, withstand and counter enemy threats:

- Countermeasures
- Advanced avionics to enhance the pilot's situational awareness
- Low-radar profile which allows weapons and fuel to be carried internally for maintaining low visibility
- Aircraft and weapons characteristics



FEATURES

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Supportability

The F-35A has a reduced logistics footprint making it significantly easier to deploy than current-generation fighter aircraft. It also has the ability to provide more combat power earlier in combat airspace. An Autonomic Logistics Information System transmits information about the aircraft to F-35 operators on a network, providing advanced capabilities to plan, maintain and sustain the aircraft's systems.

Weapons

The F-35A payload is markedly greater than those of current fighter aircraft. It is designed to carry the newest air-to-ground munitions and air-to-air weapons, such as an internal gun and missile. Integrated sensors are designed to enhance delivery of precision weapons to provide greater air dominance.

F-35 DEVELOPMENT

The F-35 Joint Strike Fighter Program emerged from the Pentagon's Joint Advanced Strike Technology Program created in 1993 to define and develop technology that would support the future development of tactical aircraft. This program merged several independent government projects working on next-generation strike aircraft, including the Navy Attack/Fighter-Experimental, Air Force Multi-Role Fighter and Marine Corps Common Affordable Lightweight Fighter projects. The goal was to build an affordable universal fighter that would meet the needs of all participants.

A 1994 Concept Exploration study found that a "tri-service family" of aircraft was the most affordable solution to the collective needs. This family entailed a single basic airframe design with three distinct variants: Conventional Take-Off and Landing for the Air Force (F-35A); Short Take-Off and Vertical Landing for the Marine Corps (F-35B); and a Carrier Variant for the Navy (F-35C). Next, major aircraft manufacturers participated in a concept definition and design competition from which two concepts were selected as finalists in 1996, and development and testing of three different configurations of demonstrator aircraft began. From this concept demonstration phase, a construction contract was awarded to Lockheed Martin in October 2001. A Pratt & Whitney engine is integrated into the F-35 aircraft design.

The Critical Design Review of the F-35A was completed in February 2006. The first flight of the F-35A took place on December 15, 2006. Low-rate initial production was approved in April 2007 with an order for two F-35A aircraft. The first F-35 production airframe entered service in 2008. The F-35A is scheduled for delivery beginning in 2013 and is intended to be the Air Force's premier strike aircraft through the first half of the 21st century.

The F-35A is more effective than existing fighter aircraft in air-to-ground combat, air-to-air combat, reconnaissance and suppression of air defenses, and has a better range while requiring less logistics support.

F-35A facts



Crew	One pilot
Engine	Pratt & Whitney F135 afterburning turbofan with 40,000 pounds of thrust
Speed	Maximum Mach 1.5
Combat Radius	Approximately 600 nautical miles
Armament	Primarily air-to-ground with air-to-air capability
Wing Span	35 feet
Fuselage and Tail	Approximately 51 feet long and 15 feet high
Weight	Maximum takeoff, 44,000 pounds; empty, approximately 29,300 pounds
Contractor	Lockheed Martin Corporation with partners Northrop Grumman and BAE Systems

