

Circular Proposal 39-640

Although opinion in the AAF placed special stress on strategic bombardment as the prime mission of an air force, the dominant view in the War Department General Staff was officially stated as late as October 1938 in these terms: "the Infantry Division continues to be the basic combat element by which battles are won, the necessary enemy field forces destroyed, and captured territory held." It followed that the primary function of Army aviation was the support of ground forces in battle. And from this emphasis came the influences which gave shape to the A-20, the A-26, and the more famous B-25 and B-26, all of them designed basically for a supporting mission.

The medium bomber, considered to be a "pure bombardment type," was intended to operate at medium altitudes of 8,000 to 14,000 feet and primarily against depots, fortified positions, railroad yards, and other such targets along or behind the battle line. Carrying a heavier bomb load and enjoying the advantage of greater range, the mediums could supplement the work of light bombers and might assist the long-range heavy bombers against the nearer targets in a strategic bombardment effort.

In March 1939, the Army Air Corps issued Circular Proposal 39-640 seeking a twin-engine medium bomber. Also in March of 1939, the month that saw the release of Circular Proposal 39-640, the GHQ Air Force became under control of the Chief of the Air Corps rather than the Army Chief of Staff.²⁸ The Air Corps had achieved greater levels of autonomy yet sought complete independence.

The proposal's specific requirements included a maximum speed greater than 300 miles per hour (mph) with 350 mph desired, a bomb load of 3,000 pounds, range over 2000 miles, a service ceiling of at least 20,000 feet, and defensive armament of at least four .30 caliber machine guns. With particular emphasis on speed, the proposal envisioned a bomber that could fly nearly as fast as contemporary fighter aircraft, but with a bomb capacity that rivaled existing heavy bombers. The aircraft's range, however, would be significantly less than that of long-range heavy bombers.

The Glenn L. Martin Company's proposal, later named the B-26 Marauder, earned first place in the resulting competition. The Air Corps ordered both the B-26 and the second place competitor, which became the North American B-25 Mitchell, into production that September. Although the initial contract purchased only 201 Marauders and 184 Mitchells, medium bombers later accounted for a significant portion of the American air inventory. In total, the United States accepted 5,157 Marauders and 9,816 Mitchells with peak inventories of 1,931 and 2,656 of each aircraft respectively.

The B-26 and B-25 became the primary American medium bombers of WWII. The underlying need for these aircraft, in fact, stemmed from the growing security challenge across the Atlantic Ocean.

The call for a new medium bomber was an early part of the American rearmament program in direct response to German aggression in Europe. Germany's annexation of much of Czechoslovakia in 1938, along with troubling reports from America's ambassador to Berlin, convinced President Franklin Roosevelt that war in Europe was inevitable. He concluded America needed to arm quickly and airpower would play a leading role in defense against Germany. In a White House meeting on 14 November 1938, Roosevelt directed a massive expansion of airpower in which the Air Corps alone required a strength of 20,000 aircraft backed by an annual productive capacity of 24,000 units. The 20,000 aircraft target represented a nearly nine-fold increase in the Air Corps' authorized strength set just two years prior at 2,320 aircraft.

While Roosevelt placed specific emphasis on the need for long-range aircraft for defense of the entire western hemisphere, the pursuit of medium bombers reflected other environmental and organizational factors. While Germany had invested in medium bombardment, the necessity of this aircraft type was very much up for debate in the United States.

The concept of medium bombardment remained ill-defined and lacked widespread support. During the inter-war years, bomber classifications changed significantly due to technological advances and changes in doctrine. In the 1920s, the Air Corps classified bombardment aircraft as either light or heavy. Light bombers were primarily single engine models designed to carry fragmentation bombs and small demolition charges while multi-engine heavy bombers would carry much larger bomb loads for greater distances. In 1927, many in the Air Corps sought to develop specialized bombers for day and night operations with day bombers optimized for short-range missions and night bombers flying longer distances into the enemy homeland. The War Department, however, resisted this specialization and insisted on development of all-purpose models.

In 1930, the Air Corps Tactical School (ACTS) reiterated the need for two types of bombers, yet rather than night or day classification, argued again for light and heavy bomber types based on bomb load capacity. Light and heavy bombers would carry 1,200 or 2,000-pound bomb loads respectively. The term "medium bomber" had yet to make an appearance. The first successful four-engine bomber, however, redefined what the Air Corps saw as a true heavy bomber, essentially creating a middle ground for a medium bomber.

The Air Board of 1939 offered a limited explanation for the concept of medium bombers. Appointed by the Chief of the Air Corps in March of 1939, the same month of Circular Proposal 39-640, the Air Board classified bombardment aircraft as heavy, medium or light. It defined the medium bomber as "a somewhat lighter, more readily procurable and cheaper airplane designed to meet many of our requirements for bombardment not necessitating the extreme range of our heavy bomber." By its specifications, medium bombers required the same 2,000-pound minimum bomb load as the heavy bomber but with only half the heavy's 2,000 miles radius of action.

Nearly two years after procurement began for America's WWII medium bombers, the utility of this aircraft type was still largely undefined. Air Corps leaders believed airpower's greatest utility was its ability to bypass surface forces and conduct strategic bombing of the enemy homeland. Army leadership in the War Department regarded airpower primarily as an auxiliary to ground forces. The War Department favored two-engine bombers and fought the Air Corps' emphasis on the larger four engine aircraft.

The desire for rapid expansion and the need to increase industrial production capacity also played a significant role in the competition to build the next medium bomber. These factors influenced the Air Corps' procurement method, the selection of the B-26 and the decision to build two medium bombers.

The medium bomber was either a compromise by the Air Corps or an outright victory for War Department leaders. In addition to the aircraft's desired capabilities, however, production demands also played a significant role. The 1939 Air Board's description of the medium bomber as a "cheaper and more readily procurable airplane" than its heavy counterpart offers insight into additional reasoning behind the development of medium bombers.

The competition from Circular Proposal 39-640 introduced a new "abbreviated" procurement method later known as "off the shelf procurement." Under this method, the Air Corps evaluated aircraft proposals and then initiated full production contracts "off the drawing board." Under previous methods, manufacturers provided prototypes for in-depth testing before issuance of production contracts. While this method became commonplace to shorten procurement timelines, the B-26 and B-25 were the first aircraft procured without a prototype.

The Martin Model 179, which later became the B-26, earned first place in the medium bomber competition by a wide margin. Its score of 813.6 points topped North American's second place NA-62 by 140 points. As the second place design, the North American NA-62, later named the B-25 Mitchell, also earned a

production contract. Both planes were twin-engine all-metal midwing monoplanes.

By 1943 the Army decided to reduce to one medium bomber type in each of the theatres primarily to simplify logistics. While the B-26 had made significant contributions, the B-25 offered multiple advantages in the Pacific. First, the Mitchell had proved easier to maintain and had sustained a higher sortie rate than the Marauder. Although the Fifth AF had grown from 404 combat aircraft in September 1942 to 537 in January 1943, only approximately 350 were operational at any given time.

Having faced continual shortages of both planes and parts, they opted for simpler logistics and a more reliable aircraft. Additionally, the B-25 was better suited for operations from the austere airfields of the Pacific. The Mitchell had a shorter take-off roll and greater propeller to ground clearance making it a better fit for compacted soil and steel mat runways. Because the Mitchell's initial development proved much less problematic than that of the Marauder, the AAF had sufficient B-25s to allow standardization.

SOURCE:

Global Security

<https://www.globalsecurity.org/military/systems/aircraft/bomber-39-640.htm>