

## PREPARING FOR WAR

[Anthony J. Goode](#) of Fitchburg, Massachusetts enlisted in the United States Army in Boston on 3 September 1942 as Regular Army recruit #11093126. As his stated preference was an assignment with the Army Air Force, he was given a series of test batteries and interviews to ascertain his job experience



Smyrna Air Field, Tennessee

and mental equipment. An important phase of the classification of recruits was the interview which uncovered such civilian experiences as skills derived from employment or hobbies and the extent and type of schooling. The objective was to establish

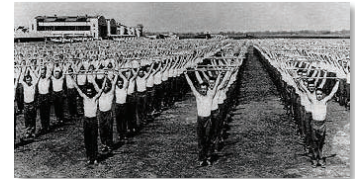
a relationship between civilian occupational experiences and a job specialty that would be most useful to the Army Air Force. After the interview a classifier reviewed the recruit's papers and made a recommended assignment



to a Military Operational Specialty (MOS). As a result of these tests and interviews he was sent to basic and preflight training center in Tennessee at the Smyrna Air Field just outside of Nashville.

*(NOTE - A more detailed description of pre-flight, navigator specialty and combat group training is given in [Appendix I](#)).*

**PREFLIGHT TRAINING** - The preflight training period consisted of military discipline and physical conditioning, supervised athletics and the complete processing of assigned students, as well as additional instruction and training as may be practicable to further qualify trainees



for instruction as pilots, bombardiers, or navigators. Over time there was a steady increase in the relative amount of time and recognition given to academic subjects, and this phase of the program became the paramount function of the preflight schools. Under the various preflight curricula, students spent four to five hours daily in academic training.

Military training doubtless suffered from this trend, but the development was a logical response to the increasingly technical nature of air combat. Many students entering preflight were so deficient in the fundamentals of mathematics and physics that considerable time had to be given to rudimentary drills, with emphasis upon problems related to performance of flying duties. Theory was reduced to a minimum, and matter inapplicable to aviation was progressively screened out of the courses. The distinguishing feature of the technical curriculum was greater emphasis upon mathematics, target identification, photography, and meteorology.

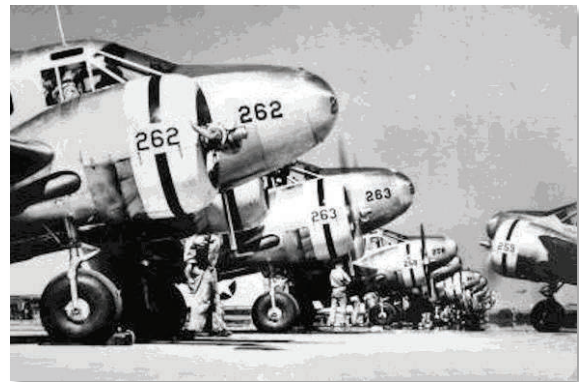
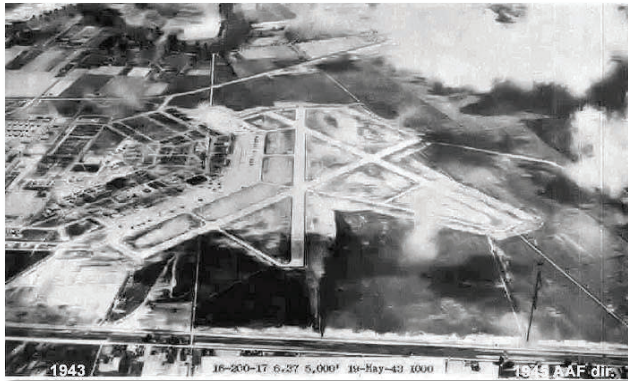
Since ability to use aeronautical maps and charts was basic to flying operations, an elementary course in that subject was also developed in the preflight schools. The course became increasingly practical as the

necessary materials were made available for teaching purposes; a large portion of the allotted hours was reserved for student exercises in simulated operational problems which required use of aeronautical charts. In addition, the subject of aircraft and naval vessel recognition slowly gained acceptance in recognition of its combat importance.

Significant time was allotted to basic military and officer training. One-half of this time was set aside for close order drill, ceremonies, and inspections; the remainder went to classroom or squadron instruction in customs and courtesies of the service, chemical warfare defense, small-arms familiarization, and related military subjects. The West Point code of cadet discipline and honor was regarded as the model for the preflight schools.

On 7 January 1943 Cadet [Anthony J. Goode](#) was assigned to the Army Air Corps navigator training school at Selman Field in Monroe, Louisiana.

**NAVIGATOR TRAINING - SELMAN FIELD** - Construction of the base began on 15 June 1942 with the base being activated that day in a paper status. Construction was rapid given the emergency wartime conditions and within three months the post was to be in full operation. The airfield consisted of four concrete runways, taxiways with the runways laid out on an "A" layout, with one extended length main runway, and two short secondary runways connected to an extended, large aircraft parking apron capable of parking several hundred aircraft in an overlapping squares, or "star" layout with a series of taxiways.



In addition to the airfield, the building of a large support base with several hundred buildings, numerous streets, a utility network, was carried out with barracks, various administrative buildings, maintenance shops and hangars.

Selman Field was the largest navigation school in the United States in its time and the nation's only complete navigation course—from start to finish—during World War II. The vast majority of aircraft flown at Selman AAF were Beech C-45 Expeditors, also known as the AT-7. Of the hundreds of fields that were operated by the Army Air Forces, it was only at Selman that a cadet could get his entire training—pre-flight and advanced—and wind up with a commission and navigators wings without ever leaving the field.



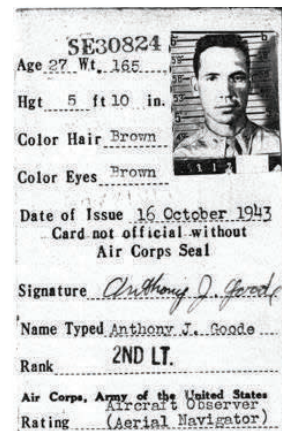
The Army Air Corps Navigator curriculum consisted of teaching young men how to "get 'em there and get 'em back." The cadet had to know all aspects of navigation in order to determine where he was, where he wanted to go and when he would get there. The science of navigation offered four methods of accomplishing this. The first is pilotage or navigating by landmarks, using maps and



charts. The second is dead reckoning, which consist of keeping track of how far you have gone and in what direction since you started, using instruments which measure various aspects of the plane in motion, such as speed, deviation, wind drift and so on. The third method is radio navigation which consists of "riding the beam" from one station to another until you progress to where you want to go. The final way to navigate is by celestial bodies. These are immutable, but you must be able to identify them in their different configurations in all quarters of the heavens at all times of the night and day. Armed with the best knowledge and training possible. The navigation cadets graduated and became members of combat crews.



2<sup>nd</sup> Lt. Anthony J. Goode received his commission and Navigator's Wings on 16 October 1943. He was assigned to a combat group in the 13<sup>th</sup> Army Air Force and would now learn the ropes of operating in a long range B-24J Liberator Bomber as part of highly trained crew. Stateside advanced active training would be completed over the next twenty weeks at practice bombing sites in Pueblo, Colorado and at the B-17/B-24 advanced pilot training Bombardment Airbase back at Smyrna Airfield in Tennessee.





## B-24 LIBERATOR

The B-24 Liberator was produced in larger numbers than any other American aircraft during World War II. The B-24J Liberator was an upgrade of the workhorse B-24D that had been in service in the European and Asia Pacific Theaters of Operation since 1942. The "D" was the first B-24 to be qualified for combat. Under the original Production Pool plan, Consolidated/San Diego was the prime manufacturer, supplying components to Fort Worth and Douglas/Tulsa for assembly. In May, 1942 the first of 2738 B-24D's rolled off the assembly lines.



Due to rapidly changing needs, especially for defensive machine guns, there were many variations within the B-24D model, these differences identified by "production blocks" (e.g B-24D-70-CO). Various ventral gun systems were tried, including a totally unworkable, Bendix turret theoretically aimed with a periscope. Another, familiar problem was inadequate firepower in the nose. In the "D" two cheek guns were added, but didn't work out so well.

Specs for late model B-24D:

- Four Pratt & Whitney R-1830-43 fourteen-cylinder radial engines, rated at 1200 hp.
- Performance: Maximum speed 303 mph at 25,000 feet.
- Service ceiling: 32,000 feet.
- Range: 2300 miles with 5000 pounds of bombs. Maximum range 3500 miles.
- Fuel capacity: 3614 US gallons.
- Dimensions: Wingspan 110 feet 0 inches, length 66 feet 4 inches, height 17 feet 11 inches, wing area 1048 square feet.
- Weights: 32,605 pounds empty, 55,000 pounds gross, Maximum takeoff weight 64,000 pounds.
- Armament: Bomb bay could accommodate up to eight 1600-pound bombs.
- The late model "D"s included eleven .50 caliber machine guns: three in the nose, two in the belly turret, two in a tail turret, two in a dorsal turret (just aft of the cockpit), and two in the waist

A few non-numerous production variants included: the B-24E - produced at Willow Run, similar to the "D" model; C-109 - a tanker conversion of the B-24E, capable of carrying 2,900 gallons of fuel, used over "the Hump" (the Himalayan Mountain Range) from India to China and the B-24G - North American's model, all equipped with the nose turret.

Trying to increase forward firepower, some 90th Bomb Group field engineers got the bright idea to install a cannibalized B-24 tail turret in the nose. It worked pretty well, and an Emerson A-15 twin-gun nose turret was standardized on B-24H's. The top and tail turrets were improved, and the camouflage paint was omitted late in the "D" series. 3,100 were produced, over half at Willow Run.

The B-24J was essentially the same as the B-24H; but early "J"s were equipped with the Convair (merged Consolidated/Vultee) A-6A nose turret, instead of the Emerson A-15 turret, due to a limited supply of the Emerson turrets. By early 1944, enough Emersons were available for all five factories. The B-24J was also

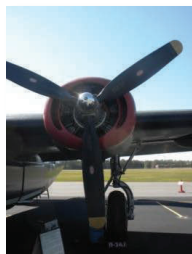
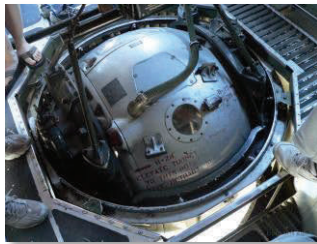
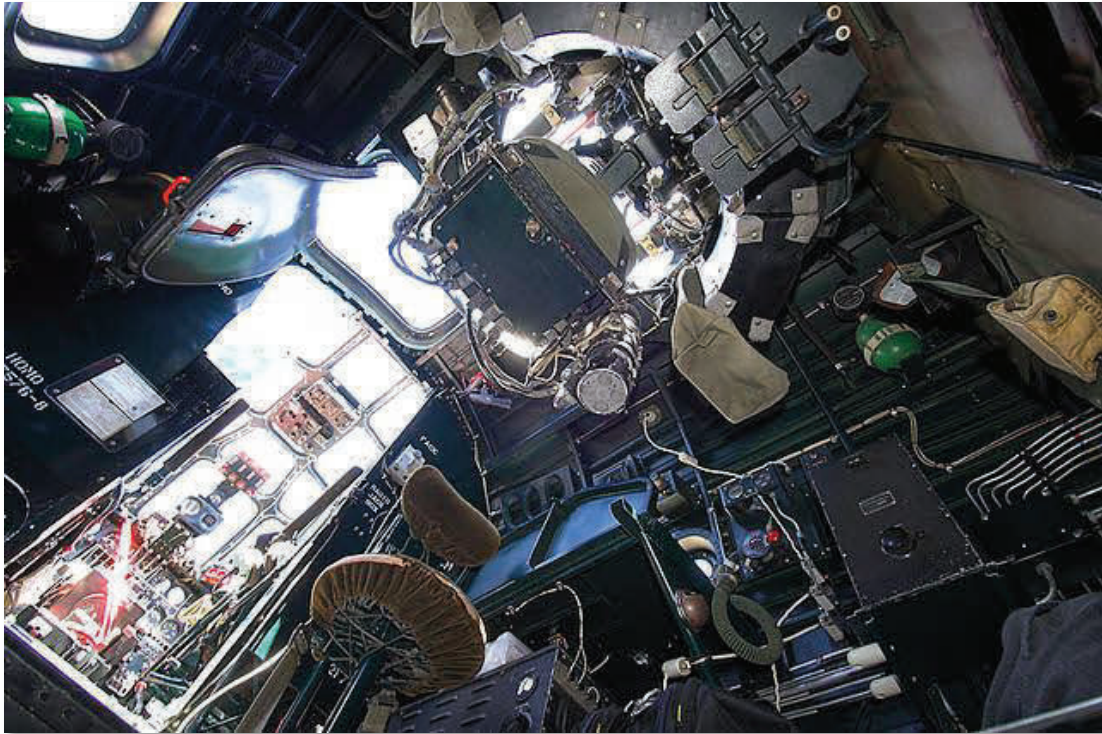
equipped with an improved C-1 automatic pilot, a new M-series bomb sight, an electronic control system for the turbosuperchargers, and a better fuel transfer system. Excessive weight was a real drawback of the B-24J; numerous additions totaling 8,000 pounds had been made since the B-24D, but using the same engine. Performance, fuel efficiency, and flight stability fell off because of this excess weight.

6678 B-24J's were produced. By late 1944, the Army foresaw a lessened demand for Liberators, and ordered that three of the plants be freed up for other purposes. Only Ford-Willow Run and Convair-San Diego continued turning out B-24's in 1945. Late in the B-24 program, attempts were made to trim its weight (in the Pacific, field engineers had been removing the belly turrets to save weight). The result was the B-24L, some 1,000 pounds lighter than the "J," of which 1667 were built, mostly at Willow Run.

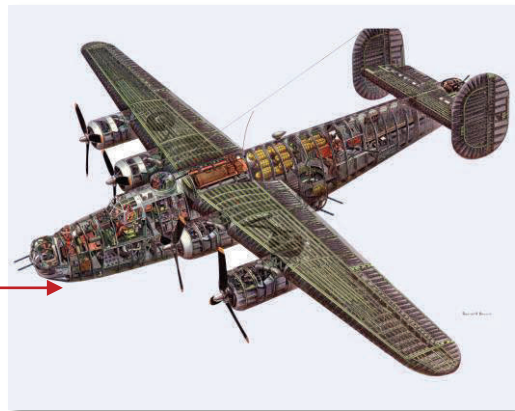
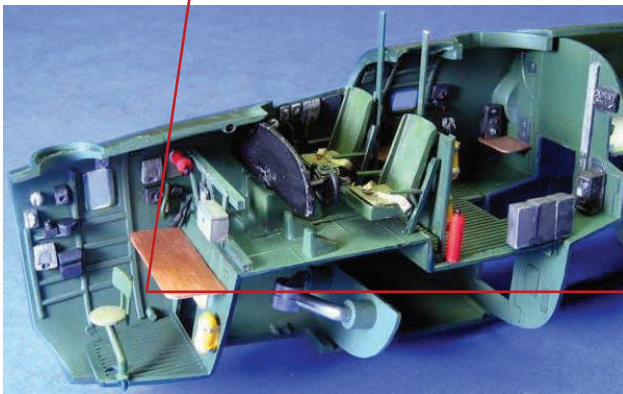
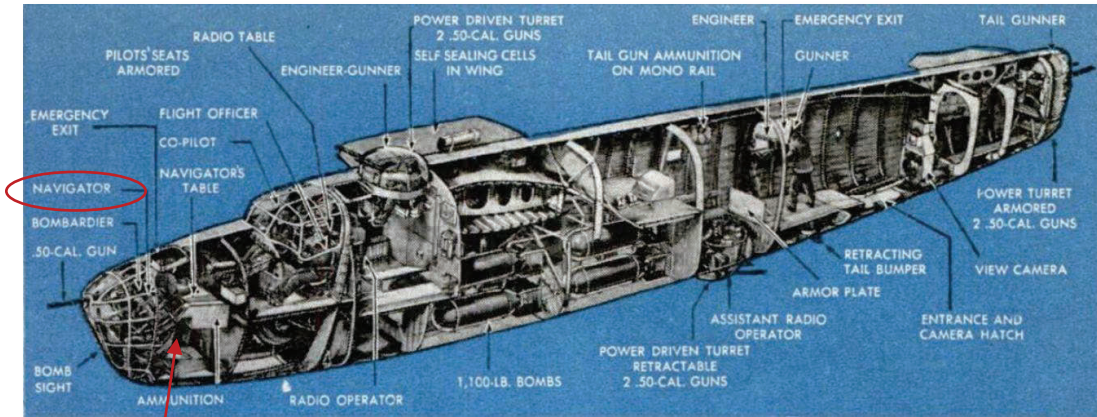
Specs of B-24J (key differences from B-24D in **boldface**)

- Four Pratt & Whitney **R-1830-65** fourteen-cylinder radial engines, rated at 1200 hp, **with GE turbosuperchargers**
- Performance: Maximum sustained speed **278 mph** at 25,000 feet.
- Service ceiling: **28,000 feet**.
- Range: **1700 miles** at all-up weight of 61,500 pounds.
- Fuel capacity: 3614 US gallons.
- Dimensions: Wingspan 110 feet 0 inches, length 64 feet 2 inches, height 18 feet 0 inches, wing area 1048 square feet.
- Weights: **38,000 pounds empty**, 55,000 pounds gross, Maximum takeoff weight **71,000 pounds**.
- Armament: Bomb bay could accommodate up to eight 1600-pound bombs.
- Eleven .50 caliber machine guns: three in the nose, two in the belly turret, two in a tail turret, two in a dorsal turret (just aft of the cockpit), and two in the waist





2<sup>nd</sup> Lt. Anthony J. Goode's office would be at the cramped navigator station in the nose of a B-24J Liberator Bomber facing backwards immediately behind the nose gunner, under the feet of the pilot and co-pilot, and straddling the head and shoulders of bombardier. Amidst the tangle of hydraulic lines and cables was a plywood table and mechanical course plotting tools. Above him was a small plexiglass dome just big enough for his head and shoulders giving him a 360 degree view of the sky for celestial navigation. The primary way in or out were through the wheel well immediately under the navigator table but only when the landing gear was extended. The observation dome could also be removed, albeit with some difficulty and was effective in water or belly landings when the wheel well was blocked or flooded. Trying to get through the emergency dome exit while donning a parachute was difficult at best if not impossible and there was the possibility of being hit by the B-24 tail.



Navigator's Table Looking Aft





Looking Forward From Under the Navigator's Table Towards the Bombardier Station and Downwards Through the Nose Gear Wheel Well to the Tarmac Below



Looking Up at the Overhead Navigation Dome



Looking Forward and Downwards to the Bombardier's Position and the Top Secret Norden Bombsight. The Nose Gunner Position Is Just Above the Bombardier Behind the Riveted Metal Bulkhead.

### **ADVANCED AND COMBAT CREW TRAINING -**

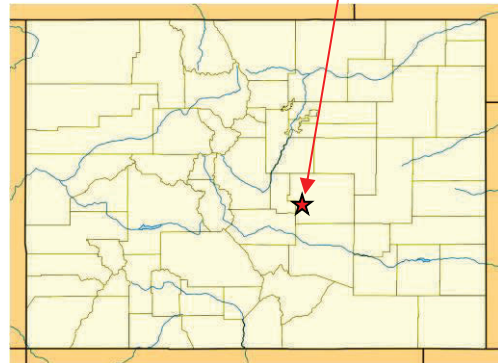
Built in 1941 as the **Pueblo Army Air Base**, it was used as an advanced flying school to train B-17 Flying Fortress and B-24 Liberator four engine heavy bomber crews. It was under the command of the United States Army Air Forces Second Air Force 360th Army Air Force Base Unit.

Diligent, thorough training of all unit personnel was critical in carrying out future missions under combat conditions. Formation flying was emphasized for pilots, and personnel assigned to all other combat crew positions were given the best training possible. Our combat crew training was concluded with a cross-country formation flight across the United States to Bermuda and back with 35 aircraft and crews.

Training as a crew was intense, flying night and day, all over the local region. Crews practice day and night landings in all weather conditions until they were fully proficient. Frequent long distance cross country trips were common testing the endurance of the crew given the inherent long range capabilities of the B-24. It was not uncommon to fly a course as far as Bermuda and back again to base.

Practice bombing runs with both live and dummy munitions were numerous and essential as that was the primary role of the aircraft. Experience with variations in altitude, visibility, temperatures and other weather conditions were the norm as were flying and landing with less than the full complement of operating engines. Accidents and breakdowns were not uncommon serving to keep the crew on their toes.

After five months the combat crew was ready and they would receive their deployment orders. For [2<sup>nd</sup> Lt. Anthony J. Goode](#) those orders came in early February 1944 and his crew was assigned to the Western South-Pacific as part of the 13<sup>th</sup> Air Force 72<sup>nd</sup> Bombardment Squadron (Heavy) in the 5<sup>th</sup> Bombardment Group. Their deployment to the "Jungle Air Force"<sup>1</sup> came just in time to be part of General Douglas MacArthur's thrust to retake control of the islands of the South Pacific as a staging point for retaking the Philippines.



---

<sup>1</sup> From 1942–1945, Thirteenth Air Force staged out of tropical jungles. Dubbed the "Jungle Air Force" because its squadrons were never based near cities or civilization, the 13th battled over millions of square miles of ocean and tropical islands on more than 40 remote islands including the Gilbert and Marshall Islands campaign; Mariana and Palau Islands campaign and the Philippines campaign (1944–45). The command's units participated in a total of five different operation areas and 13 campaigns.