Secret Base:
Santa Maria Airfield during World War II

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During World War II, many European nations remained neutral in the struggle between the Axis countries, led by Germany, Italy, and Japan, and the Allies, led by Britain, the Soviet Union, and the United States. Among the neutral countries were Sweden, Switzerland, Ireland, Spain, and Portugal. Portugal included the Azores Islands, 1,000 miles west of the Iberian Peninsula in the middle of the Atlantic Ocean. Both the Allies and the Axis nations craved bases in the Azores, but since Portugal was neutral, so were the Azores.

Britain and the United States had two good reasons for wanting to build bases in the Azores. From a base in the middle of the Atlantic, they could conduct a more effective campaign against the lingering threat of German submarines, which had sunk enormous tonnage of Allied shipping. Another reason was to facilitate the movement of Allied troops, equipment, and supplies by land and sea across the ocean to the Mediterranean Theater of Operations.

Despite official Portuguese neutrality, an old treaty between Britain and Portugal opened the door for the British to develop an air base on Terceira Island, originally called Lagens Field, but later designated Lajes. In late 1943, Royal Air Force engineers prepared two 6,000-foot runways there, for American use, and both runways were lengthened by American construction personnel in 1944. Lagens served as a staging and refueling point for aircraft enroute between the United States and the European-African-Middle Eastern Theaters of Operation, and also the China-Burma-India Theater.[1]

By the second half of 1944, the Portuguese had more reasons to allow the construction of Allied airfields in the Azores. British and American forces, after first driving German and Italian forces out of North Africa, captured Sicily and moved into southern Italy. From there they advanced steadily up the Italian peninsula. On June 4, 1944, they entered Rome. Allied victory seemed only a matter of time, especially after Allied forces landed successfully two days later in Normandy in German-occupied France. In August, free French and American forces invaded southern France, where German forces were forced to retreat, and Allied forces entered Paris by the end of that month.

The United States also planned to develop another major air base on Santa Maria, the most southeastern island of the Azores, after extensive diplomatic negotiations with the Portuguese. To disguise possible violation of Portuguese neutrality, the United States War Department worked with Pan American Airways, a private civilian American international airline, which had already developed transatlantic service before the outbreak of World War II. The operation, classified as top secret, was called "Project III." As early as June 1944, Pan American and U.S. Army personnel conducted an initial survey of the island and set up a temporary unpaved runway that required constant maintenance. U.S. military personnel were ordered to wear civilian clothes rather than their uniforms, so that they would appear to be Pan American Airways personnel, and equipment was marked with Pan American insignia even when it belonged to the War Department.

On August 3, 1944, the first U.S. military personnel arrived on Santa Maria Island. Led by Brigadier General A. D. Smith, they included four officers and twenty-one enlisted men. Along with civilian employees of Pan American Airways, they set up a temporary camp, with tents, and installed weather and communication facilities. Jeeps and trailers transported water from Vila Do Porto, a port town a few miles from the airfield site. On August 8, less than a week later, twin-engine C-47s began shuttle flights between Lagens Field on Terceira Island and Santa Maria. The Pan American disguise was not completely deceptive, since Pan American Airways personnel were indeed on the island, and the company hired hundreds of civilian workers, many from the Azores, for the initial Santa Maria airfield construction.

Large numbers of military personnel and equipment and supplies arrived by liberty ship at Vila do Porto in mid-September. At first base personnel were mostly civilian workers from two construction companies: W. C. Shepard of Atlanta, Georgia, and W. A. Hart of Fort Lauderdale, Florida. Records show that during the opening phase, there were 267 civilians, 11 officers, and 124 enlisted men, about half of them members of the 786th Military Police Detachment. Lt. Col. Russell W. Gray commanded the temporary camp, with 45 pyramidal tents for military personnel. Nine other tents sheltered administrative offices, mess facilities, and supplies. Civilian workers lived in similar temporary shelters, at first. By the end of September, the airfield area contained a total of about 125 pyramidal tents, plus two hospital ward tents, and mess tents. Despite their temporary nature, the tents were wired for electric lights.

The second phase of Project III construction began on October 5, when new personnel arrived, including eight officers, 133 enlisted men, and 235 civilians. Civilians still greatly outnumbered military personnel. Twenty-six of the newly arriving military personnel belonged to the Army Airways Communications System. Members of the U.S. Army Corps of Engineers handled most construction projects, managing heavy equipment and maintaining the base, while Air Transport Command personnel guarded the airfield, set up communications, and operated aircraft. Project III demanded enormous engineering efforts, because Santa Maria Island consisted mostly of volcanic lava formations. Portuguese workers hired by Pan American Airways and American military engineers used nearly two million pounds of dynamite to blast the airfield site level so that the future runways would be level. The construction demanded movement of heavy construction equipment and supplies to the island by ships that arrived off Vila do Porto, the major port on the island. Engineers and other construction workers also had to build a good road between the city and the airfield site.[2]

On October 17, 1944, the American airfield at Santa Maria was activated, with Lt. Col. Russell Gray, who had commanded the temporary camp, as the commander. By the end of October, there were 282 military personnel there, along with 1,459 civilian Americans, and 1,256 Portuguese laborers, the latter hired by Pan American Airways. Some of the Portuguese came from Sao Miguel Island, the largest of the Azores islands, between Terceira and Santa Maria. Among the Army Air Forces units stationed on Santa Maria Island were the 1390th and the 1391st Army Air Forces Base Units. The 1391st had been activated on August 1, 1944, with assignment to the North Atlantic Division of the Air Transport Command.

Keeping the military nature of the base secret was difficult. Mail and baggage was inspected, with strict censorship of as many as 800 letters a day. Portuguese natives were not fooled when they saw American military personnel wearing khaki shirts showing marks where chevrons and insignia had been. Many of the American civilian workers became discipline problems, partly because they had not been carefully selected, and partly because they were eager to imbibe in the alcoholic beverages available on the island, including wine and brandy. Beer was not available to them. The prison stockade was enlarged twice to accommodate the large number of unruly civilians. Many of the men had come from industrial areas in the United States where the best workers not already in military service had already been hired in domestic war industries. Some of them had prison records, and volunteered for the project to get out of the country, according to J. H. Crooks, who served as Chief of Personnel for the Project, and managed the American civilians on the airfield site. He had to deal with payroll delays, which caused some of the men to consider a strike during October 1944. The worst of the trouble makers were shipped home.

Native Portuguese workers at Santa Maria proved invaluable for the completion of the project. In November, there were 1,256 of them. That number would later rise to approximately 1,700. According to reports of the time, the Portuguese workers were diligent and conscientious, and although there was some friction over timekeeping errors and wages, it never erupted into serious difficulty. Some of the Portuguese workers already lived on Santa Maria Island, but others came from other islands in the Azores, particularly Sao Miguel, not far north of Santa Maria. Sao Miguel, the largest of the Azores, located between Terceira and Santa Maria, had an important port that maintained communications with Vila do Porto.

The 296th Port Company managed the unloading of the ships that arrived at Vila do Porto. During October 1944, seven liberty ships arrived at the port. Despite their flat-bottomed shallow draft, they still had to anchor in relatively deep water off the rocky coast and transfer supplies to barges, which carried the cargo to the docks. High winds and rough surf sometimes hindered the sea deliveries. For example, a storm on November 17 caused four of the barges to break from their moorings and one

[1] Harry R. Fletcher, Air Force Bases, volume II, Air Bases Outside the United States (Washington, DC: Office of Air Force History, 1993.

[2] Interview with Col. Malcom K. Moore, Project Engineer, by 1391st Army Air Forces Base Unit historian, 27 April 1945.

was lost at sea. Other barges were severely damaged by the storm. Stormy weather that month also forced the S. S. Banvard ship around near Terceira Island, and its cargo had to be salvaged before it could be shipped on to Vila do Porto. The accident caused a delay of 30 days.

To reduce the vulnerability of the barges, workers constructed a marine railway at Vila do Porto which allowed the barges to reach the shore out of the reach of storms. Much of the aviation fuel destined for the Santa Maria airfield was delivered by barges in 55-gallon drums. To facilitate the delivery of this fuel, a submarine pipeline was constructed. The fuel was pumped to a large fuel tank farm, at first with four million gallon storage capacity, but later enlarged to be able to store six million gallons.
The cargo did not all arrive by sea. Large numbers of cargo planes carried additional equipment and supplies from Lagens on Terceira Island to Santa Maria's airfield, where an operations officer patrolled the runways to keep away wandering livestock that might interfere with the incoming airplanes.

The first runway at the site, constructed by the Portuguese, was replaced by one covered with steel matting in November, 1944. Initial plans for the Santa Maria Airfield included three asphalt runways, each 150 feet wide, bordered by 75-foot macadam shoulders, each runway designed for a 120,000 pound load. The main runway, which ran north and south, was 8,000 feet long, and replaced the pierced steel planking of the second temporary runway. The main runway was later widened to 200 feet. The other two runways, intersecting the main runway, one running NW-SE and one NE-SW, were each 6,000 feet long. After leveling in preparation for the runway construction, the surface was covered with six inches of crushed rock, topped with three inches of fine rock, and then covered with asphaltic concrete. [3]

The base needed not only runways but roads. Construction personnel built twelve miles of surfaced roadway within the base limits. Tar and crushed rock insured that the roads would not become mud pits during the rainy winter and spring, and good drainage ditches reduced the need to fill potholes.

The Northeast Sector, Air Communications Service, supervised the installation of communication equipment on Santa Maria. By the end of October, communications personnel had set up air-ground and homing equipment at the airfield, and the 801st Military Police Company guarded personnel and property on the sites. The number of military personnel on Santa Maria Island increased dramatically at the end of 1944 and early 1945. In November, there were 282, but by February, 1945, there were 607.

On December 11, American military personnel on Santa Maria began wearing their uniforms, and all efforts to hide the American military presence on the island were no longer necessary. Four days later, on December 15, Santa Maria Airfield was officially made an alternative to Lagens (Lajes) on Terceira. The construction was far from complete by the end of 1944.

Communications equipment for the airfield operations was one of the most important elements in the base construction, because the airplanes landing and taking off would need radio signals to assist in navigation and air traffic control. In late August, 1944, twenty-seven communication specialists arrived on Santa Maria. They helped engineers set up seven major installations. The largest project was a set of air/ground communication facilities that included radio transmitters and receivers, 114,000 feet of control cable, diesel power units, and a homing beacon, which was completed in October. Engineers erected seventeen 75-foot towers and obstruction lights on the transmitter site. By late January 1945, the system was 85 percent complete. Completion of the system had to await completion of the control tower in March. Direction-finding aids also had to wait until the runways had been completed.

In February, 1945, construction workers had begun building four 50-foot wide taxiways and 400,000 square yards of paved aprons. In addition to that, plans called for

[3] Historical Reports of the Project Engineer, 1391st Army Air Forces Base Unit, November and December 1944, and February and March 1945, and Historical Report, North Atlantic Wing, Air Transport Command, 1 October 1944-1 October 1945 (Air Force Historical Research Agency call number 303.01, Oct 1944-Oct 1945, vol. 1, IRIS number 00180737).

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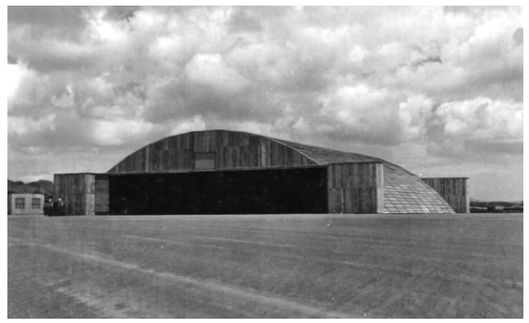
100,000 square yards more of unpaved aprons. Winter weather, including much rain, hindered the construction during both the winter and spring months. Meanwhile, runway construction continued, and some of it had to be re-accomplished because of the effects of running water on the newly prepared surfaces.

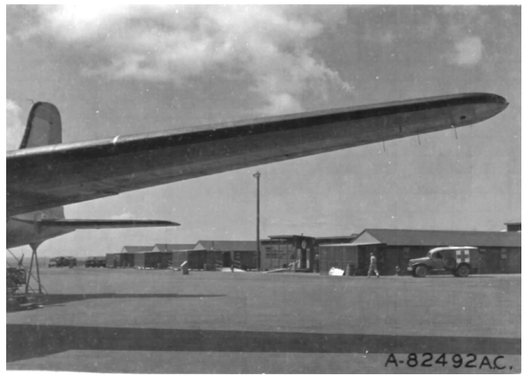
During most of the period of construction, water was trucked to the field from Vila do Porto. Engineers drilled wells to reduce dependence on the trucks and established a permanent water supply. They also built storage tanks to store the water, and pipelines so that it could be distributed on the base. Chlorination units insured that the water would be safe. Engineers also installed a sewage system, laying 37,000 linear feet of storage pipe.

The first shelters on the field had been tents, and the first barracks were constructed of plywood. Those were in turn replaced by steel barracks or Quonset huts that were 110 feet long and 20 feet wide. Engineers constructed a latrine adjoining each pair of barracks. On March 15, 1945, military personnel began moving into the barracks, and two mess halls opened, one seating 450 men, the other seating 700.[4] The headquarters building, consisting of several steel barracks joined in a "U" shape, had been constructed in January and February. A porch with tall pillars made the central part of the one-story building look as if it were two stories. Other nearby buildings included a post office, a finance building, and a Red Cross facility.

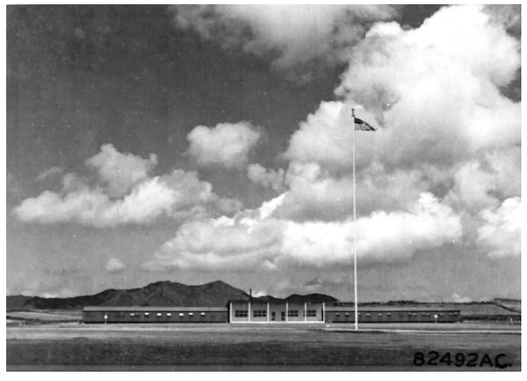
The Operations and Terminal Building was the largest facility on the new airfield. Covering an area of 53,168 feet, it included a control tower, which was completed on March 1, 1945. The building was constructed parallel to the main north-south runway. Other important airfield facilities included a large metal hangar, maintenance shops, and a warehouse. The shops and warehouse were identical 32 by 96-foot buildings, but nearby were smaller steel barracks converted into maintenance facilities.



[4] 1391st Army Air Forces Base Unit Project Engineer Historical Reports, and Historical Report, North Atlantic Wing, Air Transport Command, 1 October 1944-1 October 1945 (Air Force Historical Research Agency call number 303.01, Oct 1944-Oct 1945, vol. 1, IRIS number 00180737).



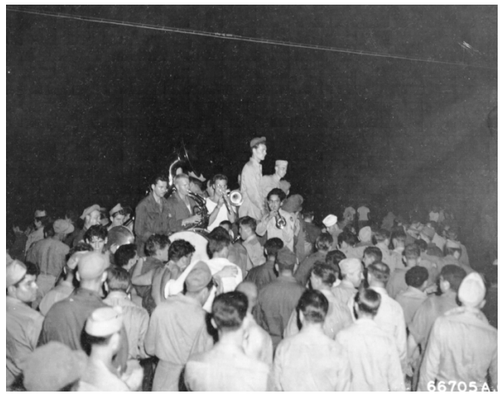
Other important buildings on the base included a chapel, a theater, a gymnasium, a post exchange (PX), and a service club. Constructed of wood and masonry, they were larger and better looking than most of the prefabricated base facilities.



By the end of the March, 1945, 6,000 feet of the 8,000 main runway was ready for use, and 5,500 feet of one of the secondary runways had been paved, although the third runway was still far behind the others. Taxiways by then were 55 percent complete, and aprons 20 percent finished. Concrete and asphalt eventually completely replaced the steel matting that had once covered the base runways. In April 1945 medical personnel moved into permanent buildings that had been constructed on a plateau overlooking the rest of the field. The medical facilities included an administration building with a clinic, a building for bath and disinfectant, another mess hall, a storage facility, another barracks, and a hospital. During the period February-May 1945, construction personnel worked on air evacuation buildings for troops that had been wounded or crippled. Most of the buildings were prefabricated steel, like other buildings on lower ground around the runways and taxiways.

On May 6, headquarters of the Central Atlantic Wing of the North Atlantic Division, Air Transport Command, moved from Lagens to Santa Maria. Santa Maria Airfield opened fully on May 15, 1945, and all the runways were complete by the end of the month. Construction of Santa Maria Airfield was officially completed on June 30, 1945. Santa Maria Airfield replaced Lagens as the main base for the air transportation of cargo and passengers through the Azores. Airplanes moved personnel and equipment from Terceira to Santa Maria in three phases. At first there were 15 landings per day, in May, then 31 landings per day in early June, and by the latter part of the month, more than 44 airplane landings per day.

Gradually, the base became more military than civilian. In mid-May, when Santa Maria Airfield became operational, there were 1,026 American civilians and 1,282 Portuguese on the base, but military strength had increased to 130 officers and 1,445 enlisted personnel.[5] By the end of June 1945, there were only 328 Portuguese still on the site, and all but 27 of the American civilians had been sent back to the United States.[6] Military strength increased until in August, there were more than 1,500 enlisted men and officers.[7] However, the end of the war in Asia later that summer reduced the military personnel on the base, and the places of many of them were refilled by Portuguese workers. By the end of September, there were nearly a thousand of them. [8]



[5] 13-20 May 1945 activity report of ther 1391st Army Air Forces Base Unit.
[6] Statistical Control Report, 1391st Army Air Forces Base Unit, June-July 1945.
[7] Consolidated Strength Reports, 1391st Army Air Forces Base Unit, August-September 1945.

[8] Civilian Personnel Report to Historical Officer, 1391st Army Air Forces Base Unit, September 1945.

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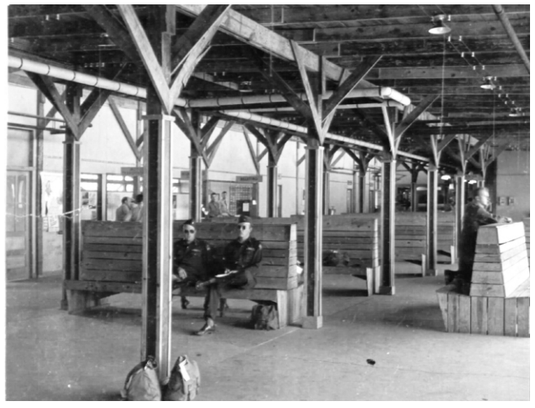
By the time Santa Maria Airfield was fully complete, Germany had surrendered. The war in Europe ended in early May, 1945, and the United States no longer needed to transport troops and equipment and supplies eastward across the Atlantic Ocean from America to Europe and the Mediterranean Theater of Operations. Nevertheless, the base was still very important to the United States to facilitate the air transportation of American troops westward across the Atlantic Ocean from Europe back to America. Within five months of full operation, Santa Maria Airfield experienced the landing of more than 7,000 C-54s, large four-engine transports, most loaded with American forces heading home from Europe. Within the first six months, more than 50,000 soldiers and 12,000 air evacuation patients passed through Santa Maria Airfield. The base also became the center of all regular air transport and cargo routes through the Azores.[9]



The 1391st Army Air Forces Base Unit at Santa Maria Airfield was reassigned from the Central Atlantic Wing of Air Transport Command to the Azores Base Command on February 19, 1946. On September 1, the unit moved from Santa Maria to Terceira, and was stationed at Lagens, which was later redesignated as Lages Field in 1950 and then as Lajes Field in 1953. Eventually, after most American forces in Europe had returned to the United States following the end of World War II, Santa Maria Airfield was no longer needed by American military forces, but during the decades of the Cold War, Lajes remained an important United States air base for the movement of military forces across the Atlantic Ocean between the United States and southern Europe, the Mediterranean Sea, and the Middle East. Santa Maria Airfield became a civilian airport, remaining tremendously useful, but not as much as a military base.

[9] North Atlantic Wing, Air Transport Command, Historical Report, 1 October 1944-1 October 1945, (Air Force Historical Research Agency Call number 303.01, vol. I; IRIS number 00180737), p. 101

Primary source: Historical Report, North Atlantic Wing, Air Transport Command, 1 October 1944-1 October 1945, Air Force Historical Research Agency call number 303.01, Oct 1944-Oct 1945, vol. I (IRIS number 00180737).

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Biography:
Dr. Daniel L. Haulman is Chief, Organizational History Division, at the Air Force Historical Research Agency, where he has worked since 1982. He has authored three books, including Air Force Aerial Victory Credits: World War I, World War II, Korea, and Vietnam; The United States Air Force and Humanitarian Airlift Operations, 1947-1994; and One Hundred Years of Flight: USAF Chronology of Significant Air and Space Events, 1903-2002.

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