

B-29 Hangar, Great Bend Municipal Airport

**Prepared for the City of Great Bend, Kansas
by
SUSAN JEZAK FORD
CITYSEARCH PRESERVATION
Architectural and Historical Research
3628 Holmes Street, Kansas City, MO 64109
816.531.2489. Fax763.431.2489. citysusan@gmail.com
January 28, 2015**

Introduction

The City of Great Bend, Kansas, proposed demolition of the B-29 hangar at the Great Bend Municipal Airport. The hangar (KHRI #009-96) has been determined eligible for listing in the National Register of Historic Places. Demolition would have an adverse effect on this historic resource. The city consulted with the Kansas State Historic Preservation Officer (SHPO) pursuant to the regulations 36 CFR Part 800.5(a)(1) implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f). The City of Great Bend, the Federal Aviation Administration and the Kansas SHPO signed a Memorandum of Agreement in April 2014 stating that a recordation report would be completed on the structure. Mitigation of the demolition also included nominations to the National Register of two extant World War II airport structures—one hangar and Norden bombsight storage vaults.

Susan Jezak Ford was chosen as the consultant to provide the required materials report. Ford received a signed contract in late 2014 from the City of Great Bend for the Recordation of Great Bend B-29 Bomber Hangar, and Nomination of the Great Bend Hangar and the Norden Bombsight Storage Vaults to the National Register of Historic Places. The following document is the result of a site visit in December 2014, in-depth research and photography of the B-29 hangar.

Despite diligent research, no blueprints or construction plans for the B-29 hangar were found. The Army Corps of Engineers used stock plans that were often updated and adapted to a specific use. The City of Great Bend has blueprints for another hangar, but not for this particular building.

Architectural Description

The B-29 Hangar at the Great Bend Municipal Airport, built in 1943, is a wood and concrete structure that has a north-south measurement of approximately 222 feet and an east-west measurement of approximately 123 feet. The rectangular round-top hangar has a large sliding door opening in its west façade. One-story sheds extend from the north and south elevations. A modern building is attached to the south elevation. The structure, originally clad in asphalt, was covered with metal siding shortly after World War II. The hangar sits on a concrete slab.

The hangar's **west façade** (Figures 7 & 8) faces the airport's runways. The building's central arched roof rises above a set of 10 sliding doors¹ suspended on an upper horizontal track that spans the center of the west façade. A portion of the metal siding covering the upper arched wall is missing to reveal the hangar's original asphalt siding. The center of the upper wall contains a boarded over cutout that once held the overhead tail door.² A projecting rectangular frame that held the mechanics for the overhead tail door surrounds the area. Each hanging west door has two vertical light panels topped by two square panels. Most of the panels are

¹ The doors are fixed in position so that they are no longer operable.

² This allowed the tall tail of the B-29 to enter the hangar.

filled with fiberglass. Doors three and eight have single entrance doors at ground level. A solid north endwall section provided a door pocket for the sliding doors. The sloping roofs of the one-story south and north sheds are visible from the west façade.

The **north elevation** (Figure 7) shows the exposed angled timbers covering the building's barrel vault roof. A one-story shed with a sloped roof spans the length of the elevation. The shed is clad in metal. Eight windows are located in the east portion of the shed and an entrance door is located between the third and fourth windows. A second entrance door and a large rolling door entrance are located on the west end of the shed. The elevation terminates on the west with the wood endwall storage, partially clad in metal. A block section, also clad in metal, tops the shed between the third window and the west doorway.

The **east elevation** (Figures 9 & 10) presents a solid metal-clad wall with doors and windows at ground level. The north portion of the wall contains a single doorway in the north shed, a window and a pair of sliding doors fronted by a concrete loading dock. The south portion of the wall contains a window, a garage door, a metal and glass doorway and a window in the south shed. A brick chimney is adjacent to the southeast corner of the building. The chimney has two holes in its north wall and metal rungs on the south wall. Two metal rails wrap around the upper portion of the chimney.

Most of the **south elevation** is obstructed by a modern addition. A metal-clad block projecting from the east portion of the south wall likely contained the hangar's furnace or machine shop. The west wall of the block has a glass door leading to modern office space. The remainder of the hangar's south wall contains a sloped shed topped by an upper block matching the configuration of the north elevation. The south wall has likely been altered to accommodate the modern addition. A portion of the wall is concrete block; the remainder is hidden beneath new construction.

The **interior** of the hangar (Figures 11-15) consists of a central open area with north and south shed areas. The hangar is a strictly utilitarian design, built to house the B-29 bomber with a wingspan of 141 feet, a length of 99 feet and a height of 28 feet. The floor of the space is the hangar's original concrete. A north-south channel approximately three feet deep has been cut into the west portion of the floor.³ Six open Howe trusses of wood timbers support the arched, wood-clad roof. Modern lights hang from the trusses. The west wall is filled with the hangar's sliding doors that opened to allow the entry of aircraft. These doors and the overhead tail door are now partially covered with modern insulation. The lower portion of the east

³ This channel accommodated deliveries and production when the Marlette Coach Company used the building. According to city officials, the company moved into the hangar in the 1950s.

wall is wood. Wood beams rise in the upper portion to support the arched roof. The upper wall likely originally had windows but is now filled with insulation.

The interior's north shed and south sheds are each supported by four concrete arches. The north exterior walls, now covered with modern materials, were likely wood or composite between the concrete arches. The west four bays of the north shed are open to the interior of the hangar. A west entrance door accesses a room in the northeast shed, which has solid concrete walls. The south sheds have been altered by new construction. The central portion of the south wall now contains restrooms. The east portion contains office space with tile floors, sheetrock walls and suspended ceilings. It is likely that the upper blocks of the north and south sheds were originally filled with windows. The walls are currently covered with insulation.

The hangar is located on the north end of the Great Bend Municipal Airport, east of the airport's runways behind a modern storage building (Figure 1). The hangar is located at 38.351588 latitude and -98.853425 longitude. The former Army air field includes two hangars, six brick chimneys from previous hangars and two concrete Norden bombsight storage bunkers from World War II, as well as several modern buildings.



**Figure 1. Aerial view of the Great Bend Municipal Airport.
(Google Maps, accessed 14 January 2015)**

B-29 Hangar, Great Bend, Kansas

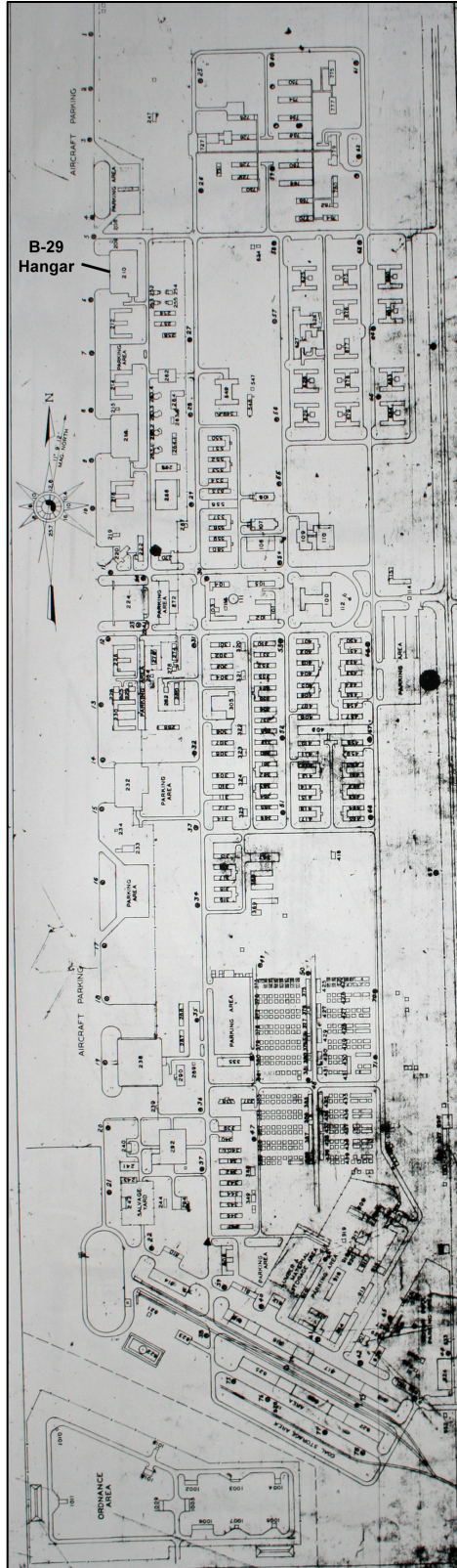


Figure 2. 1945 Great Bend Army Air Base station layout plan. Building “210 Squadron Hangar” is the B-29 hangar. (On file at the Barton County Historical Society.)

Condition

The B-29 hangar appears to be in fair condition as defined by the Kansas Historic Resources Inventory: the resource is structurally sound, but may have severe maintenance problems that could lead to more serious damage. The OBH-2⁴ hangar was built as a temporary structure that utilized materials deemed 'non-essential' for the war effort. As a result, it has not aged well. The building has been empty since the early 2000s, according to city officials. The northwest corner was severely damaged in a circa 2006 tornado. There are now large openings in roof and insulation hangs from the rafters. The hangar is slated for demolition.

History

On September 30, 1942, the Great Bend Chamber of Commerce received a message from Senator Arthur Capper: "Civil Aeronautics Administration has just allocated 1 million dollars for construction of air field at Great Bend."⁵ This was the first official information that an air base would be built at Great Bend, although government representatives had already been exploring the area for several weeks. The chosen site was five miles west of the town in four sections in Buffalo and Liberty townships.

By the time that Kansas World War II airfields were planned, wartime building resources were becoming scarce. Construction was usually of the most immediate and least expensive type. The utilitarian buildings were functional, efficient and constructed as often as possible of materials deemed non-critical to the war effort. The Army Corps of Engineers (Corps) oversaw all military construction. The Corps was a technical branch of the Army that specialized in construction and maintained a large and efficient field organization. The task of constructing buildings for the Air Corps was transferred to the Corps of Engineers in November 1940.⁶ The Great Bend Army Air Field reflected decisions made by the Corps to conserve materials in every way possible. Non-critical materials—wood, concrete, tarpaper—were substituted for critical materials whenever possible. Construction was limited to bare necessities.

The Great Bend base was originally activated to serve as a satellite base to the Smoky Hill Army Air Field in Salina, so early planned construction was limited.⁷

⁴ OBH-2 hangars were of wood construction, following the earlier OBH-1 hangars of steel construction. Pedrotty, Webster, Cohen, Chmiel, "Historical and architectural overview of military aircraft hangars." US Army Corps of Engineers online report, 1999, 4-12.

⁵ "An Air Field Here" *The Great Bend Tribune*, 30 September 1942, 1.

⁶ Susan Jezak Ford "World War II-Era Aviation-Related Facilities of Kansas" *National Register of Historic Places Multiple Property Documentation Form*, approved 25 September 2012, E13.

⁷ "U.S. Army and Air Force Wings Over Kansas" *Kansas Historical Quarterly*, Summer and Autumn 1959, (reprint) 20.

Essentials were completed first, with the first runway concrete poured in December 1942.⁸ Base construction proceeded quickly with non-essential wartime materials. In February 1943, most initial construction at the Great Bend field was completed. In that month, the field's mission changed. An expansion of the field's infrastructure was announced to prepare the base for a new assignment—training personnel for the new B-29 Very Heavy Bomber.⁹ Contracts for the were awarded to S. Patti Construction Co. and McDonald Construction Co., both of Kansas City, Missouri¹⁰ for approximately 145 new buildings that included barracks, administration buildings and a hospital.¹¹ New hangars were also built, designed especially for the B-29 Superfortress.

An April 1, 1943 article in *The Great Bend Tribune* stated that construction on the new buildings had begun.¹² This construction included the B-29 hangar, the subject of this report. B-29 hangars are noted in a *Tribune* article from April 15th: “New hangars of (a) different type construction than the one that is now completed, are being built.”¹³ By June, four new hangars had been built and field construction was nearly complete, thanks to the diligent efforts of a reduced work crew.¹⁴ The four fields near Salina provided the Army's first training of Very Heavy Bombardment groups during the fall of 1943. The B-29 program expanded to operations at 40 major airbases by the late spring of 1945.¹⁵

No blueprints or building plans were found for the hangar in city records, county records, the Kansas State Historical Society Archives, the National Archives or the Library of Congress. 1942 plans for a Squadron Hangar drawn by the U.S. Engineer Office in Tulsa, Oklahoma were found in Great Bend city records. The plans were likely for the first hangar built on the air field (Figure 3).¹⁶ An undated drawing for a “Revised Front Elevation” shows a likely representation of the hangar's west elevation after construction (Figure 4).

⁸ “Concrete Slab Poured For Army Air Base Runway” *The Great Bend Tribune*, 17 December 1942, 1.

⁹ “Heavy Bombardment Units At Great Bend” *The Hutchinson News*, 28 February 1943, 9. Great Bend was one of four Kansas air fields designated for B-29 training. Other Kansas bases were Smoky Hill AAF in Salina, Walker AAF near Hays and Pratt AAF

¹⁰ “New Area Engineer At Army Base Here” *The Great Bend Tribune*, 2 March 1943, 1.

¹¹ “Finishing Touch Is Being Put On Air Base Buildings” *The Great Bend Tribune*, 18 February 1943, 5.

¹² “Ahead On Expansion At Army Air Base” *The Great Bend Tribune*, 1 April 1943, 1.

¹³ “1,000 Employed On Army Base Projects” *The Great Bend Tribune*, 15 April 1943, 1.

¹⁴ “New Construction At Base Nears End” *The Great Bend Tribune*, 10 June 1943, 1.

¹⁵ Fine, Lenore and Jesse A. Remington, *The Corps of Engineers: Construction in the United States; The United States Army in World War II* (Washington, DC: Center of Military History United States Army 1972), 639.

¹⁶ This hangar still stands and is used by the Great Bend Municipal Airport.

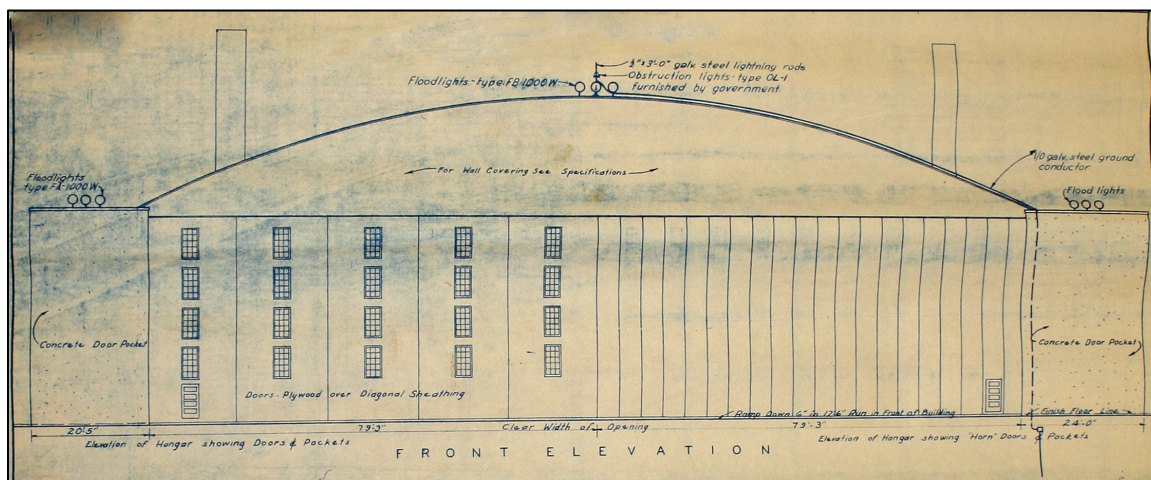


Figure 3. 1942 west elevation for a Squadron Hangar. (Great Bend city records.)

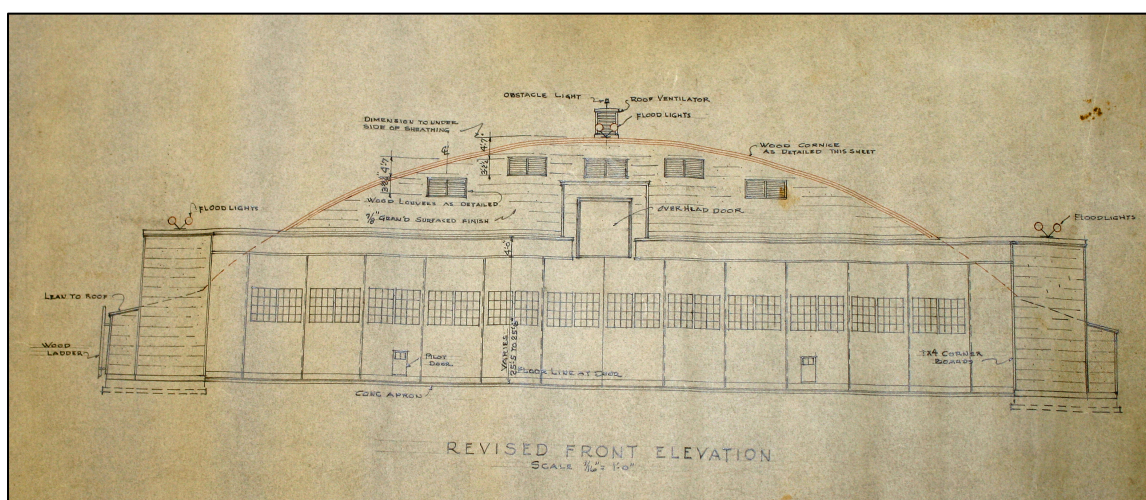


Figure 4. Undated elevation for a "Revised Front Elevation." (Great Bend city records.)

The B-29 hangar played an important role in preparing flight and maintenance crews for the Pacific front. The first B-29 arrived in Great Bend in April 1944.¹⁷ During 1944 and 1945, the primary mission of the Great Bend Air Field was to serve as a combat training base under the B-29 Superfortress project, preparing the B-29 aircraft and their crews for the Pacific front.¹⁸ The base served as a staging area, where air crews would practice flying the massive airships and maintenance crews would learn the mechanics of the airplanes. It was common for a new maintenance team to move to Great Bend while another group was already in training there. This allowed the new echelon to receive on-the-job training that would enable them to

¹⁷ Crocker Snow, "Log Book: A Pilot's Life," in *Great Bend Army Air Field 1942-1946* by Karen Neuforth (Barton County Historical Society, 2011), 28.

¹⁸ Air Force Historical Research Agency records, "Great Bend Base History", September 1944, 1187. (CDB2229 on file at Barton County Historical Society.)

maintain their aircraft when it arrived on the base.¹⁹ It is likely that much of this training took place in the B-29 hangars. Great Bend also became one of the first redeployment installations in the country. During early 1945, European theater echelons were trained in B-29 maintenance before departing for the Pacific.²⁰



**Figure 5. Undated photograph of the B-29 hangar during World War II.
(Barton County Historical Society records.)**

Activity at the Great Bend Air Field decreased dramatically during mid-1945. No new trainees were assigned to the base. During the summer of 1945, the base's primary mission was to discharge or transfer qualified soldiers. The base was officially placed on standby on December 31, 1945 and buildings were inactivated.²¹ The field was declared surplus in June 1946 and the city of Great Bend was granted a permit to acquire it.²² The air field was deeded to City of Great Bend via three Quitclaim Deeds in December 1947, October 1948 and June 1949.²³

The Great Bend Air Field had five hangars in 1945, according to a station layout plan dated March 15, 1945. According to city records, the southernmost hangar burned in the 1950s. A second hangar south of the airport's main hangar burned in the 1990s and a hangar just south of the B-29 hangar was torn down around 2005.

¹⁹ "U.S. Army and Air Force Wings Over Kansas", 23.

²⁰ Ibid., 24.

²¹ Ibid., 24.

²² "Great Bend To Take Over Army Airport" *The Hutchinson News*, 15 June 1946, 8.

²³ US Army Corps of Engineers Kansas City District, *Preliminary Assessment Report/ Great Bend Army Airfield*, February 2008, 4-1. (On file at Barton County Historical Society.)

The Marlette Coach Company, a manufacturer of mobile homes, purchased the hangar from the city in the 1950s. The company altered the building to suit its needs, including creating a channel behind the west doors to allow the mobile homes to pass through the building. The hangar may have also received insulation, modern bathrooms and south office space during this time. Great Bend Industries, a hydraulics manufacturer, rented the hangar after the Marlette Company left the building, likely expanding the office space on the south side of the building. The hangar has been vacant since the early 2000s.



**Figure 6. The hangar in use by the Marlette Coach Company.
(Barton County Historical Society records.)**

Sources

"1,000 Employed On Army Base Projects." *The Great Bend Tribune*, 15 April 1943.

"Ahead On Expansion At Army Air Base." *The Great Bend Tribune*, 1 April 1943.

Air Force Historical Research Agency records. "Great Bend Base History", September 1944. (CDB2229 on file at Barton County Historical Society.)

"An Air Field Here." *The Great Bend Tribune*, 30 September 1942.

"Concrete Slab Poured For Army Air Base Runway." *The Great Bend Tribune*, 17 December 1942.

Fine, Lenore and Jesse A. Remington. *The Corps of Engineers: Construction in the United States; The United States Army in World War II*. Washington, DC: Center of Military History United States Army 1972.

"Finishing Touch Is Being Put On Air Base Buildings." *The Great Bend Tribune*, 18 February 1943.

Ford, Susan Jezak. "World War II-Era Aviation-Related Facilities of Kansas." *National Register of Historic Places Multiple Property Documentation Form*, approved 25 September 2012.

"Great Bend To Take Over Army Airport." *The Hutchinson News*, 15 June 1946.

"Heavy Bombardment Units At Great Bend." *The Hutchinson News*, 28 February 1943.

Miller, Martin (Great Bend Airport Manager). Interview with author. 4 December 2014.

Neuforth, Karen. *Great Bend Army Air Field 1942-1946* by Karen Neuforth. Barton County Historical Society, 2011.

"New Area Engineer At Army Base Here." *The Great Bend Tribune*, 2 March 1943.

"New Construction At Base Nears End." *The Great Bend Tribune*, 10 June 1943.

Pedrotty, Webster, Cohen, Chmiel. "Historical and architectural overview of military aircraft hangars." US Army Corps of Engineers online report, 1999.
https://fas.org/man/dod-101/usaf/docs/webster/webster98_ch1.pdf

"U.S. Army and Air Force Wings Over Kansas." *Kansas Historical Quarterly*, Summer and Autumn 1959, (reprint).

US Army Corps of Engineers Kansas City District. *Preliminary Assessment Report/
Great Bend Army Airfield*, February 2008. (On file at Barton County Historical
Society.)

Historic American Engineering Record Inventory 2015 Photographs



**Figure 7. SW view of NW elevation
(Historic American Engineering Record Inventory KS-09 photograph by Matthew Holtkamp.)**



**Figure 8. West elevation
(HAER KS-09 photograph by Matthew Holtkamp.)**



**Figure 9. SW view of NE elevation
(HAER KS-09 photograph by Matthew Holtkamp.)**



**Figure 10. East elevation
(HAER KS-09 photograph by Matthew Holtkamp.)**



**Figure 11. NW view of interior
(HAER KS-09 photograph by Matthew Holtkamp.)**



**Figure 12. NE view of interior
(HAER KS-09 photograph by Matthew Holtkamp.)**



**Figure 13. S view of interior
(HAER KS-09 photograph by Matthew Holtkamp.)**



**Figure 14. West view of interior
(HAER KS-09 photograph by Matthew Holtkamp.)**



**Figure 15. SW view of interior
(HAER KS-09 photograph by Matthew Holtkamp.)**