

~~MINNEAPOLIS ST. PAUL INTERNATIONAL AIRPORT~~

HABS No. MN-158-B

WOLD-CHAMBERLAIN FIELD,
NORTHWEST MUNICIPAL HANGAR
6201 34th Avenue South
Minneapolis
Hennepin County
Minnesota

HABS
MINN
27-MINAP,
35B-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
United States Department of the Interior
National Park Service
Great Lakes Systems Office
1709 Jackson Street
Omaha, Nebraska 68102-2571

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HISTORIC AMERICAN BUILDINGS SURVEY

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Location: 6201 34th Avenue South
Minneapolis, Hennepin County, Minnesota

UTM: 15:482510:4970660
Quad: St. Paul West, Minn., 1:24,000

Construction Dates: 1939-1944

Architect: Larsen and McLaren, Minneapolis

Present Owner: Metropolitan Airports Commission
6040 28th Avenue South, Minneapolis, Minnesota

Present Use: Storage

Significance: The Northwest Municipal Hangar is a product of the expansion period of the commercial aviation industry. Throughout the 1930s, larger aircraft were increasingly required to meet the demands of the growing passenger services offered by airlines. Sufficient hangar space at airports became an important means of attracting or maintaining the presence of airlines. While private organizations erected the first hangars at the Minneapolis airport, this hangar was built for Northwest Airlines with combined funds from the city of Minneapolis and from federal Public Works Administration grants.

Project Information: The Original Wold-Chamberlain Terminal Historic District was identified by Hess, Roise and Company during an historic/architectural survey of the Minneapolis-St. Paul International Airport. The Federal Aviation Administration and the State Historic Preservation Office concurred that the district was eligible for the National Register of Historic Places. The survey was completed during preparation of the airport's long-term comprehensive plan. The plan found no feasible or prudent alternative to avoid the demolition of some or all of the properties in the historic district to accommodate necessary growth at the land-locked airport. To carry out its responsibilities under Section 106 of the National Historic Preservation Act of 1966, the Federal Aviation

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Administration entered into a Programmatic Agreement with the Advisory Council on Historic Preservation, the Minnesota State Historic Preservation Officer, and the Metropolitan Airports Commission (MAC), with a number of concurring parties. The agreement contained two provisions related to the historic district. MAC agreed to offer the Smithsonian Institution and the Minnesota Historical Society the opportunity to select architectural elements or historical objects from any of the contributing structures in the historic district for curation and display. Both organizations declined the offer. The agreement also stipulated that the historic district be documented to the standards of the Historic American Buildings Survey. MAC retained Hess, Roise and Company to prepare this report to comply with that stipulation. Mark Ryan oversaw the project for MAC. Charlene Roise served as principal investigator for Hess Roise. Cynthia de Miranda was senior historian with primary responsibility for writing and managing the report's production. Denis Gardner was research historian for the project. Ann Gaasch provided clerical assistance.

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PHYSICAL DESCRIPTION

The Northwest Municipal Hangar at Wold-Chamberlain Field sits on the east side of the north terminus of 34th Avenue, which runs between the upper ends of the airfield's two northwest-southeast runways. The gabled ends of the steel-framed hangar face the airfield to the east and 34th Avenue to the west. Flat-roofed, brick office additions wrap around the south and west sides of the building, obscuring most of the hangar structure on those sides.¹

The airfield offers the best view of the hangar section and the original part of the brick office block. Slender brick towers mark the corners of the hangar; each is adjacent to a fixed, metal-clad panel that borders the hangar door. The sliding, double-leaf hangar door, which dominates the east facade, consists of six 23'-0"-high panels. Each panel is positioned between one of three parallel overhead tracks and three metal rails embedded in the concrete floor of the building. When the door is open, three panels are stored at either end of the entry, behind the fixed panels at the north and south ends of the hangar's east wall. The steel-framed door panels have metal siding with a ribbon of translucent windows that cuts across the upper third. The roof's gable end, clad in corrugated metal siding, surmounts the doorway. Cut into the gable, directly above the center of the door, is a square notch that provides additional clearance for today's larger aircraft. All the metal cladding on this facade is painted white.

Little decorative detailing graces the hangar's airfield side. A ridged metal stringcourse stretches across the towers and the east facade, just above the door opening. A second, identical course follows suit above, forming a cornice on the top edges of the brick side towers. The metal cornice on the gable roof of the hangar is of similar design.

The two-story administration block is connected to the south wall of the hangar, flush with the east facade. The 44'-0" x 78'-0" wing rises to the height of the hangar's lower metal beltcourse, and the brick-clad building's own metal cornice matches the beltcourse in both size and material. Six pairs of two-over-two, double-hung sash windows with horizontal muntins march across the first and second stories of the original office block. First- and second-story windows are aligned vertically and paired with corrugated metal spandrels. The area below the first-floor windows is recessed, giving the vertical brick sections between sets of windows the appearance of pilasters and accenting the vertical elements of the building. At the south end of the building sits a second-story window without a first-floor counterpart.

¹ This description is based on a site survey completed by the authors in March 1997 and on the drawings reproduced as HABS No. MN-158-B-10 through B-12.

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Originally, the brick administration section spanned only half the south facade of the hangar. In 1941, however, a two-story L-shaped addition extended the office block across the remaining portion of the south facade and along the entire west facade. Later additions continued the west facade of the addition beyond the original width of the hangar.

Architectural treatment in the additions differs from that of the original section. All additions are, however, nearly identical to each other. The brick-clad building sections are founded on concrete and have industrial steel-sash window bays with concrete sills. The additions are trimmed with the same metal cornice seen elsewhere on the hangar. Four sets of window bays fill the first and second stories of the 80'-2"-wide south facade, while fourteen sets occupy the west side of the building. Counting from the south corner of the west facade, the first ten pairs of 15'-wide window bays indicate the original width— about 191'—of this addition. The remaining portion lacks the metal cornice of the first addition.

Thirty-fourth Avenue once served as the street entrance to Wold-Chamberlain Field. Accordingly, the west side of the building holds both personnel and vehicle entrances. A poured concrete stoop leads to the main personnel door, which occupies the second window bay from the south end. This position allows direct access to either the south or west arm of the office block. The door is set into a small formal entrance with steel-sash transom and sidelights. The entire composition is framed by a stylized colonnade and entablature rendered in poured concrete: triangular-section concrete "columns" both support and divide a wide entablature ornamented only with flat coping. A course of header bricks runs across the top of the entry. The vehicle entrance, a simple lifting garage door, replaces the windows in the sixth bay from the south end, providing easy entry into the hangar or the shops once situated in that portion of the addition. Another small, unornamented personnel door was apparently added to the last bay of the first addition; the door cuts into the steel-sash window and interrupts the concrete sill. To accommodate the door, a portion of that window was infilled with glass block.

The four sets of window bays at the north end of the west facade are the later additions to the offices of the Northwest Municipal Hangar. If not for the lack of the metal cornice, the first two sections would blend perfectly with those of the earlier addition. The third bay is slightly wider, holding a metal personnel door in addition to the industrial steel-sash windows. The final section, while still two stories, is shorter than the rest of the office section. It also holds industrial steel-sash windows with concrete sills, but the windows are not aligned vertically as in the rest of the administrative portion of the hangar.

An original side elevation of the Northwest Municipal Hangar is exposed on the north side of the structure. The dominant feature is again fenestration: a large industrial steel-sash window fills most of the north wall. The lower metal stringcourse and the metal coping that tops the

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roof's parapet wall wrap around from the east facade. The remainder of the facade is clad in red brick below the stringcourse and corrugated metal above. The 29'-wide north end of the later two-story brick addition juts out beyond the hangar's north facade on its west end. Its simple brick facade has industrial steel-sash windows on the second floor and a lifting garage door at the west end.

The hangar's interior plan is open with a 23'-0" clearance from floor to ceiling, thanks to six roof trusses of built-up structural steel members. Steel I-beam columns support the trusses at either end. Access to the adjoining administration section and later office and shop wings is gained through doorways in the south and west interior walls of the hangar. Sliding and swinging fire doors guard the entrances. Utility pipes run along the south wall.

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HISTORY

Early Commercial Aviation Industry

Contracts from the United States Post Office were among the earliest opportunities for profitable commercial aviation. Combat and other demands of World War I had prompted the rapid development of aircraft in the late 1910s. The war's end in 1918 made available planes that had been developed and pilots who were trained for the war effort. The Post Office took advantage of this post-war surplus to establish a coast-to-coast airmail route from New York to San Francisco. Shorter "feeder" routes expanded the line into various regions by 1920. One such route carried mail between Chicago, which was a stop on the transcontinental route, and the Twin Cities. An 80'-0" x 90'-0" wood-frame hangar was erected for the feeder route at Speedway Field in Minneapolis, and service commenced in November 1920. The route proved costly: four pilots and eight aircraft were lost that winter. In March 1921, the Post Office, struggling to maintain the transcontinental route, eliminated all feeder routes, including the Minneapolis to Chicago arm.²

A few years later, Congress passed legislation that opened the airmail industry to private carriers. The Air Mail Act of 1925 enabled the Post Office to determine airmail routes and let contracts to carriers to operate the service. The first Twin Cities to Chicago contract under the new law was awarded to Charles Dickenson, who began delivering airmail in June 1926. The route was again plagued with difficulties—Dickenson lost money and planes and had trouble retaining pilots—and he notified the Post Office in August 1926 that he would surrender the route by September. Businessmen in St. Paul and Detroit immediately organized, seeing the available route as an opportunity to get involved in the industry. They quickly pooled enough capital to launch a new airline. In August 1926, twenty-nine stockholders incorporated Northwest Airways in Michigan with the intent of securing the contract route from St. Paul to Chicago. The new airline easily won the contract: it was the sole bidder for the troubled route.³

Facilities for A Growing Airline

Commercial airlines in the 1920s carried cargo more frequently than passengers. The country's extensive network of railroads offered convenient—and far more comfortable—service to

² Rosie Stein, "History [of] Northwest Airways, Inc." ca. 1944, Northwest Airlines Papers, Records of the Public Relations Department, Box 2, Minnesota Historical Society, St. Paul, 1-2; Noel E. Allard and Gerald N. Sandvick, *Minnesota Aviation History 1857-1945* (Chaska, Minn.: MAHB Publishing, 1993), 162.

³ Allard and Sandvick, 162-163; Stephen E. Mills, *More Than Meets the Sky* (Seattle: Superior Publishing Company, 1972), 14.

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travelers. The high quality of train travel extended to the buildings that marked the start and end of rail journeys. Train stations had evolved into substantial, architect-designed structures filled with amenities for travelers and visitors. For air passengers, meanwhile, wood hangars sometimes had attached lean-to sheds that served as primitive ticket offices and waiting rooms.⁴

Northwest Airways leased for \$200 a month the wood-frame airmail hangar built in 1920 at Speedway Field—which had been officially christened Wold-Chamberlain Field in 1923 (HABS No. MN-158). A pair of rented open-cockpit planes constituted the fleet for the new airline when it began flying the route from Minneapolis to St. Paul to Chicago in October 1926. The next month, three Stinson Detroiters were acquired by Northwest. The Detroiters featured enclosed cockpits, unusual for that era, and space for three passengers in addition to the mail.⁵

Northwest inaugurated passenger service in July 1927, after several months of successfully operating the mail route. The airline's first passengers included a St. Paul City Council member and a member of a city booster association. Such groups were eager to promote Northwest Airways, knowing it could help their own city prosper. Despite poor weather and a false start, the flight went well, departing from St. Paul and making scheduled stops in La Crosse and Milwaukee before landing in Chicago. By April 1929, over 9,000 passengers had flown on Northwest, and the airline had delivered all passengers and mail safely.⁶

St. Paul interests bought out the Detroit shareholders early in 1929, bringing the corporate headquarters to St. Paul from Detroit. The airline erected a combined hangar and administrative building at Holman Field on land leased from the city (HAER No. MN-37). When operations moved to the completed St. Paul building in 1930, only hangar and maintenance facilities remained at Wold-Chamberlain in Minneapolis, the airline's previous operations base.⁷

⁴ Allard and Sandvick, 162; Peter Guedes, ed., *Encyclopedia of Architectural Technology* (New York: McGraw-Hill Book Company, 1979), 69-70.

⁵ Allard and Sandvick, 131, 163-164; M. J. Hardy, "Northwest Orient: Formation through WWII," *Airline History* 45 (December 1976): 489.

⁶ Allard and Sandvick, 164.

⁷ David Galbraith, "The Aircraft History of Northwest Airlines," *American Aviation Historical Society Journal* 21 (Winter 1976): 241. For the history of the St. Paul hangar, see Jeffrey A. Hess, "Northwest Airways Hangar and Administration Building," HABS No. MN-37, 1989, Historic American Buildings Survey/Historic American Engineering Record Collection, Library of Congress, Washington, D.C.

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Both airports continued to grow throughout the 1930s, as did the airline, which reorganized as Northwest Airlines in 1934. Because Northwest continued to operate a few passenger flights from Minneapolis, Wold-Chamberlain's new Administration Building (HABS No. MN-158-B) provided a ticket counter and waiting room for Northwest passengers in 1930. The airline continued to improve its passenger travel service, purchasing Ford Trimotors that accommodated up to fourteen passengers and featured space for a flight attendant and a restroom.⁸

In 1937, with plans to expand its schedule of daily, round-trip flights to Chicago, Seattle, and Winnipeg, Northwest ordered several Sky Zephyrs—Lockheed's new Model 14 Super Electra. Late in the year, however, authorities at St. Paul's Holman Field announced plans for an aggressive, three-year improvement program that would require the suspension of all passenger traffic. Northwest turned to Wold-Chamberlain Field and began operating all of its Twin Cities passenger flights out of the Minneapolis airport. The airline did, however, keep its office and maintenance facilities at Holman.⁹

Wold-Chamberlain Field—and by extension, Minneapolis—now had Northwest by default. In order to maintain the airline's presence, however, the airport would have to provide appropriate facilities. Like many burgeoning airports, Wold-Chamberlain was experiencing a shortage of space. Park board Superintendent Theodore Wirth later stated that "inadequate hangar space for the growing activities at the airport became a factor most detrimental to inviting prospects towards possible progress and growth in business. The erection of larger and more modern hangars and machine shops became imperative and was contemplated and planned by the various tenants at the port—realization only awaiting the making of financial arrangements for their execution."¹⁰

When the Minneapolis Park Board took over management of Wold-Chamberlain in 1928, it had instituted a plan for airport development that involved renting lots around the perimeter of

⁸ Allard and Sandvick, 126, 166.

⁹ Hess, 7; Theodore Wirth, "Aviation—The Municipal Airport," in *Minneapolis Park System, 1883-1944: Retrospective Glimpses into the History of the Board of Park Commissioners of Minneapolis, Minnesota and the City's Park, Parkway, and Playground System*, (Minneapolis: Minneapolis Park Board, 1945), 306; Galbraith, 242; Tom Haberkorn, et. al., "Minneapolis-St. Paul Metropolitan Airports Commission History," typescript, copy in possession of Metropolitan Airports Commission, iv-11.

¹⁰ Wirth, 306.

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the field. Each lot measured approximately 150' x 200', and airlines or other business interests built their own facilities on the leased land. Building owners often subleased land and hangar space to others, and the occupation of hangars around Wold-Chamberlain changed frequently during this period.¹¹

With the closing of Holman Field to passenger traffic, the park board began to consider solutions to the problems of space at Wold-Chamberlain. In March 1939, the board formulated a plan that would allow the city to build a hangar specifically for Northwest Airlines, which again needed a larger hangar for its newest planes, twenty-one-passenger Douglas DC-3s with 95' wingspans. The board's proposed plan called for a \$140,000 hangar and attached office and shop building, financed with a combination of city funds and grant money from the Public Works Administration, a Depression-era relief program that provided work for the unemployed with civic improvement projects. The airline would pay off the cost of the hangar over twenty-one years in the form of monthly rental payments. Later that month, the board approved not only the financing plan for the Northwest hangar, but also a similar plan for Mid-Continent Airlines. This was the first time the city financed an airline's hangar; it may have been the first occurrence of such an arrangement in the Midwest.¹²

Building the Hangar

Construction began on Northwest's building in November 1939, just a week after the contract was awarded to Madsen Construction Company of Minneapolis. Work proceeded at a rapid pace; Northwest had acquired the DC-3s in March and had been servicing them without shelter due to the lack of a sufficiently large hangar. Trenches for the building's footings were dug in a single day and the concrete poured later the same week.¹³

The hangar was designed by the prominent Minneapolis architectural firm of Larsen and McLaren. Albert Larsen and Don McLaren had been in partnership since 1922 and had designed a number of elegant buildings in Minneapolis, including the Groveland Apartment Hotel and the downtown Baker Building. The firm went on to design many more structures for

¹¹ "Short History of the Minneapolis Municipal Airport (Wold-Chamberlain Field) and Memorandum of the Principal Official Transactions from Its Inception up to the Present Time," Wold Chamberlain Field, 1930, Minnesota State Archives, Minnesota Historical Society, St. Paul, 4-5.

¹² "Park Board to Consider New, Large Hangar: New Planes Prompt Proposal for Bigger Facility," *Minneapolis Journal*, March 9, 1939; Haberkorn, et. al., vii-7.

¹³ "Trenches for Hangar Footings Dug in Day," November 21, 1939, newspaper clipping in Wold-Chamberlain folder, Vertical Files, Minneapolis Collection, Minneapolis Public Library; Haberkorn, et. al., vii-7.

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downtown Minneapolis, including the Dayton's and Donaldson's department stores as well as buildings for the *Minneapolis Star* and the *Minneapolis Journal*. Larsen and McLaren also designed the Mid-Continent Airlines Hangar at Wold-Chamberlain in 1941 (demolished).¹⁴

Just before construction began, a Minneapolis newspaper ran a drawing of Larsen and McLaren's design for the Northwest hangar, which, according to the paper, would be "faced almost entirely with polished aluminum." The sketch showed an arched-roof hanger with a single-panel cantilever door. An adjacent, two-story administration and ticketing building had metal spandrels linking first- and second-floor windows. The design was apparently altered before construction, however, and the finished hangar sported neither the polished aluminum siding nor the rounded roof. Rather, the steel-framed building used a combination of brick and corrugated metal siding. The roof was a shallow-pitched gable, supported by trusses. Other details remained constant, including the cantilever door and the associated administration building.¹⁵

Northwest Airlines moved into the hangar in June 1940. In 1941 and 1942, the airline expanded the office and shop block to span the entire south and west sides of the hangar. A 28'-0" x 28'-0" boiler house, which also provided oil storage, was erected about 60' north of the northwest corner of the hangar. As the United States entered World War II, most of Wold-Chamberlain's commercial activity was temporarily eliminated. By October 1942, only military operations took place at the field. Northwest Airlines had cut its passenger service and began operating military transports (HABS No. MN-158-E), retaining the Northwest Municipal Hangar as a maintenance facility. Around 1944, a final 60'-0" addition to the brick building connected the boiler house to the shops along the west side of the hangar.¹⁶

¹⁴ Albert Oliver Larsen file, Architect's Files, Northwest Architectural Archives, University of Minnesota, Minneapolis, Minnesota. The archives are also home to the Larsen and McLaren Papers.

¹⁵ "Work to Start on New Airport Building," November 19, 1939, newspaper clipping from Wold-Chamberlain folder, Vertical Files, Minneapolis Collection, Minneapolis Public Library.

¹⁶ "Metropolitan Airports Financial and Statistical History Exhibit," Manuscripts Collection, Minnesota Historical Society, St. Paul; Allard and Sandvick, 131.

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CHANGES TO THE HANGAR

The post-war years saw a number of tenants in the hangar, including North Central Airlines in the 1950s, the Federal Aviation Administration in the 1960s, and Mesaba Airlines in the 1980s. Throughout the jet age, however, the hangar underwent only one major alteration: replacement of the cantilever hangar door. Multi-panel sliding doors—with an overhead center notch for extra clearance—were installed at an undetermined date; they remain today. The building is currently used to store maintenance and other vehicles for the airport.¹⁷

¹⁷ Allard and Sandvick, 131; "Airport Basic Research: 'Nose' Hangars for Semi-Enclosure," *Architectural Record*, April 1947, 120.

SOURCES OF INFORMATION

Manuscript Sources

Haberkorn, Tom, et. al. "Minneapolis-St. Paul Metropolitan Airports Commission History." Typescript. Copy in possession of Metropolitan Airports Commission, Minneapolis.

Hess, Jeffrey A. "Northwest Airways Hangar and Administration Building." HABS No. MN-37, 1989. Historic American Buildings Survey/Historic American Engineering Record Collection, Library of Congress, Washington, D.C.

"Metropolitan Airports Financial and Statistical History Exhibit." Manuscripts Collection, Minnesota Historical Society, St. Paul.

"Short History of the Minneapolis Municipal Airport (Wold-Chamberlain Field) and Memorandum of the Principal Official Transactions from Its Inception up to the Present Time," Wold Chamberlain Field, 1930. Minnesota State Archives, Minnesota Historical Society, St. Paul.

Stein, Rosie. "History [of] Northwest Airways, Inc." ca. 1944. Northwest Airlines Papers, Records of the Public Relations Department, Box 2. Minnesota Historical Society, St. Paul.

Published Sources

Allard, Noel E., and Gerald N. Sandvick. *Minnesota Aviation History 1857-1945*. Chaska, Minn.: MAHB Publishing, 1993.

"Airport Basic Research: 'Nose' Hangars for Semi-Enclosure." *Architectural Record*, April 1947, 120.

Galbraith, David. "The Aircraft History of Northwest Airlines." *American Aviation Historical Society Journal* 21 (Winter 1976): 241-256.

Guedes, Peter, ed. *Encyclopedia of Architectural Technology*. New York: McGraw-Hill Book Company, 1979.

Hardy, M.J. "Northwest Orient: Formation through WWII." *Airline History* 45 (December 1976): 489-492.

Mills, Stephen E. *More Than Meets the Sky*. Seattle: Superior Publishing Company, 1972.

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Wirth, Theodore. "Aviation—The Municipal Airport." In *Minneapolis Park System, 1883-1944: Retrospective Glimpses into the History of the Board of Park Commissioners of Minneapolis, Minnesota and the City's Park, Parkway, and Playground System*. Minneapolis: Minneapolis Park Board, 1945.

Archival Collections

Minneapolis Collection, Minneapolis Public Library.

Minnesota State Archives, Minnesota Historical Society, St. Paul.

Northwest Architectural Archives, University of Minnesota, Minneapolis.

Northwest Airlines Papers, Minnesota Historical Society, St. Paul.