

Jackson Street Shops,
Machine Shop
Jackson Street, Pennsylvania Avenue
St. Paul
Ramsey County
Minnesota

HABS No. MN-67-B

HABS
MINN,
62-SAIPA,
17-B-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
Rocky Mountain Regional Office
Department of the Interior
P.O. Box 25287
Denver, Colorado 80225

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HISTORIC AMERICAN BUILDINGS SURVEY

JACKSON STREET SHOPS,
MACHINE SHOP

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Location: Jackson Street and Pennsylvania Avenue, Saint Paul, Ramsey County, Minnesota

USGS St. Paul East Quadrangle, Universal Transverse Mercator Coordinates: Zone 15; 491920.4878640; 492560.4878640; 492560.4878540; 492300.4878540; 492140.4878400; 491920.4878400

Present Owner: Burlington Northern Railroad Company
176 East Fifth Street
Saint Paul, Minnesota 55164

Present Occupant: Unoccupied

Significance: Of the significance are the events leading to the development of railroading in Minnesota and the Northwest; the development of the surrounding residential neighborhoods, Swede's Hollow, Frogtown, the North End, Railroad Island and Thomas-Dale; the career of James J. Hill; and the development of Saint Paul as a regional rail and trade center. In addition, the shops are among the few survivors of 19th century limestone construction in Minnesota.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: The original Machine Shop was built in 1882.
2. Original and subsequent owners: The Machine Shop, as a portion of the whole Jackson Street Shop complex, was originally built for, and owned by the St. Paul, Minneapolis and Manitoba Railway in 1882.

Reorganization of the St. Paul and Pacific Railway took place in 1879 by James J. Hill and his associates as the St. Paul, Minneapolis and Manitoba Railway.

In 1890 reorganization occurred once again, resulting in the formation of the Great Northern Railway.

JACKSON STREET SHOPS,
MACHINE SHOP
HABS No. MN-67-B (Page 2)

In 1970, the Great Northern and Northern Pacific railways merged into a new corporation known as Burlington Northern Railroad Company.

3. Original plans and construction: No original plans exist. However, plans for the Machine Shop for 1950-64 are on file at Burlington Northern Railroad Company, 176 East Fifth Street, St. Paul, Minnesota 55164.
4. Alterations and additions: The City of Saint Paul Building Permits indicate in 1907 J. Peter Co. requested a permit for new roofing, tar and gravel.

1929 also produced a building permit for the reduction of masonry openings while installing smaller windows.

The final building permit documents an estimated cost of \$175.00 to add insulation dated May 2, 1938.

On April 12, 1950, an additional post was removed and a floor elevator installed.

On August 18, 1950, the sliding door detail was altered.

May 15, 1951 the wheel chutes and angle hangers were demolished.

August 16, 1951 witnessed the removal of one shower stall and the installation of a toilet stall.

August 23, 1951 brought a change of run in the sewer line and added water connections.

By 1956, the Sanborn 1926 Insurance Map documented a reduction in the size of the boiler room wing from 36' to 12'. This was probably carried out in October 12, 1951.

January 1964 the doors on the east side of the building were removed and replaced with the glass block and ventilation sash.

B. Historical Context:

On May 23, 1879, James J. Hill, one of the most renowned railroad magnates in the country at the time, and his associates acquired the newly formed Saint Paul, Minneapolis and Manitoba Railway Company. (Martin, p. 150) To facilitate the operational base of the St. Paul and Pacific Railroad, the major buildings of the Jackson Street Shops, including the Machine Shop, were built in the 1880's. Hill immediately extended his line and by 1882 it reached 1,028 miles.

JACKSON STREET SHOPS,
MACHINE SHOP
HABS No. MN-67-B (Page 3)

By January 6, 1893, the final spike was driven near Scenic, Washington, completing the transcontinental project. (Great Northern, p. 3) In 1907, Mr. Hill left the railway's presidency to become chairman of the board. He retired in 1912 from the chairmanship and active direction of the railroad system he had created.

From the President's File 10505, on May 18, 1937, repairs for the Machine Shop roof are given as \$14,155, almost equally divided between materials and labor.

On May 19, 1937, W. P. Kenney, president, gives C. O. Jenks the approval to begin repair work on the skylights as there would be "considerable risk" involved if postponed.

In an April 17, 1949 letter to Mr. W. B. Irwin, assistant to the Vice President, a suggestion is made to upgrade the Machine Shop with new machinery that will permit the elimination of the necessity of working overtime, seven days a week, and occasionally three shifts a day for the past several years. At present, a five-day work week is confronting the company aiming for the same production output without additional men or overtime. At this time, nearly all the diesel wheel work was being done at the Machine Shop. Concern is over the production of freight car wheels through these shops being greatly reduced and, therefore, it will be necessary to increase the production at the other wheel shops to take care of freight car, engine tender wheels, etc.

In a letter dated May 10, 1951, J. M. Budd writes to F. J. Garin concerning AFE #76069 for transferring two traveling cranes from machine shop to the car shop. This request was approved May 11, 1951.

October 12, 1951 was the date a letter from the President's File that noted the Authorization for Expenditure (AFE) that was authorized to provide wheel storage platforms, make considerable changes in water lines, sewer lines, air and acetylene lines, build three scrap bins, reinforce roof supports on this Machine Shop, take care of necessary wiring, remove old transfer table, office toilet room, brick smoke stack, old power plant building and old fire pumps and piping. The purpose of the letter was to request additional expenditures for an overrun of \$12,175.00 resulting in the increased cost of material and labor.

The President's File GE No. 91106 documents the purchase and installation of new dual end drive journal timing and axle lathe for the Machine Shop at \$52,000.00.

The President's File also noted on November 1, 1956 application was made for a sprinkler system.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural Character: The Machine Shop is one building in a cluster of century-old limestone buildings known as the Jackson Street Shops. The Machine Shop, specifically, is a rectangular building with a small wing extending off the west side of the building. This is a rare example of 19th century "machine shop" architecture in Minnesota.
2. Condition of the fabric: The Machine Shop has been vacant for quite a while; thus, vandalism has occurred. Most of the windows are broken. The roof is in need of repair. Interior walls require patching. The floor also has missing portions, which would require patching, but structurally, the building is sound.

B. Description of Exterior:

1. Overall dimensions: The one-story building measures 112' X 290' for the main portion of the building, while the small wing measures 80' X 40'.
2. Walls: The main portion of the Machine Shop is constructed of Plattville limestone laid in random ashlar. The only exception is the west wing where brick was used to close off the altered wing.
3. Structural system, framing: Exterior walls of the building are limestone, load-bearing. Interior posts are 12" X 12". The gable roof is of post and beam construction.
4. Openings:
 - a. Doorways and doors: The five doorways are 12'0" X 16'-0" with stone segmental arches above. The doors themselves are of wood and slide horizontally.

JACKSON STREET SHOPS,
MACHINE SHOP
HABS No. MN-67-B (Page 5)

b. Windows: The original windows were triple-hung 6/6/6 light sash with the limestone segmental arches above each opening as in the doorways. The windows on the west wall remain although nearly all are broken. The windows on the east wall are all sized down to a horizontal band of three double hung 1/1 units on the top and bottom of glass block (18 blocks X 10 blocks). The remaining windows on the north and south sides of the building are combinations of the original style and those altered with glass blocks.

5. Roof:

- a. Shape, covering: The roof has a low pitch gable shape, over the main portion and west wing of the Machine Shop. Currently, both are badly deteriorated.
- b. Eaves: The soffit and fascia are of wood.
- c. Projections: There is a total of twenty (20) skylights on the main portion of the roof; ten on the east side and ten on the west side of the roof. There are also numerous metal vents as well as a metal chimney over the west wing.

C. Description of Interior:

1. Floor plan: The plan of this building is mostly an open plan. The only exception is the west wing which housed the boiler room. Along the north end of the building an office space has been created as well as an adjoining area once used as a tin shop.
2. Flooring: The flooring throughout the whole Machine Shop is poured concrete.
3. Wall and ceiling finish:
- a. The walls vary in finish from the exposed limestone of the exterior walls to the brick which was used for interior dividing walls.
- b. The ceiling consists of open beam construction, supported by 12" X 12" posts spaced 20'-3" apart.
4. Mechanical equipment:
- a. Lighting: Ceiling mounted lights are the source of lighting throughout the Machine Shop. The main portion of the building has seven rows of 10 lights per row.

- b. Plumbing: Plumbing is located in the restroom off the office, consisting of four toilets. A sprinkler system has been installed in the building.

PART III. SOURCES OF INFORMATION

A. Original Architectural Drawings: The original drawings have been lost. However, drawings showing later additions and alterations to the building are on file at the Burlington Northern Railroad Company, 176 East Fifth Street, St. Paul, Minnesota 55164.

B. Bibliography:

1. Drawings:

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JACKSON STREET SHOPS,
MACHINE SHOP
HABS No. MN-67-B (Page 7)

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PART IV. PROJECT INFORMATION

This project was prepared as a class project for Architecture 5142, Historic Building Research and Documentation, a class offered in the School of Architecture and Landscape Architecture at the University of Minnesota, Minneapolis, Minnesota. The class project was prepared under the direction of Professor Foster W. Dunwiddie and was funded by a grant from the State Historic Preservation Office of the Minnesota Historical Society, Saint Paul, Minnesota. Historical data was compiled and measured drawings prepared by Ragnhild Hald and Joyce Wearda, University of Minnesota, March, 1985.