

Montgomery Ward & Company Northwestern Catalog House
(Montgomery Ward Store)
1400 University Ave. W.
Saint Paul
Ramsey County
Minnesota

HABS No. MN-157

HABS
MINN
62-SAIPA,
36-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Building Survey
National Park Service
Department of the Interior
Denver, Colorado 80225-0287

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HISTORIC AMERICAN BUILDING SURVEY

MONTGOMERY WARD & COMPANY NORTHWESTERN CATALOG HOUSE
(Montgomery Ward Store)

HABS No. MN-157

Location: 1400 University Ave. W., Saint Paul, Ramsey County, Minnesota.

Present Owner/
Occupant: Montgomery Ward & Company and Dalan/Jupiter, Inc.

Present Use: Retail store and warehouse.

Significance: As one of the first Montgomery Ward catalog houses built outside Chicago, the property represents a period of expansion and change in the history of the country's first mail-order house. Conceived as Ward's northwestern branch, the facility originally housed only a mail-order operation and its associated administrative offices. Soon after the branch was established, however, competition forced the company to move into the retail field. Ward's focus increasingly shifted to retail, and the property underwent substantial alterations to accommodate the change.

Montgomery Ward's decision to locate the branch in the Midway District of Saint Paul reflects that area's emergence as a commercial and industrial zone. The property immediately became a landmark, owing to its size as much as to the tower that rises from the Operations Building. The company boasted in 1921 that the 257' tower was the tallest reinforced concrete structure ever built.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: 1920-1921
2. Architect: Lockwood, Greene & Company, Chicago/New York

Lockwood Greene was known for designing and supervising the construction of large industrial plants. In 1918, acknowledging the lack of attention given to the architectural treatment of such structures, the company established an Architectural Department. Certain details found in Ward's Saint Paul buildings--the tower, the emphasized verticals in the buildings' elevation, and

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the decorative parapets--are evident in other plants designed by Lockwood Greene in the same time period.¹

3. Original owner and occupant: Montgomery Ward & Company, 1920-1995
4. Builder, contractor, suppliers:

Building contractor: Wells Bros. Construction Company, Chicago, Illinois
Excavating: J.L. Shiely Company, Saint Paul, Minnesota
Lumber and cement: Thompson Yards, Inc., Saint Paul, Minnesota
Structural steel: Saint Paul Foundry, Saint Paul, Minnesota
Marble and glazed tile: Drake Marble & Tile Company
Plastering: M.E. Smith, Minneapolis, Minnesota
Elevators: Otis Elevator Company, Chicago, Illinois
Spiral conveyors: Standard Conveyor Company, North Saint Paul, Minnesota
Plumbing, heating, sanitary equipment: Central Supply Company,
Minneapolis, Minnesota; and H. Kelly & Company, Minneapolis,
Minnesota
Plumbing fixtures: Crane-Ordway, Saint Paul, Minnesota
Faucets: Chicago Faucet Company, Chicago, Illinois
Sewage valves: Sloan Valves Company, Chicago, Illinois
Roof and pipe coverings: W.S. Nott Company, Minneapolis, Minnesota
Power plant equipment: Robinson Cary & Sands Company, Saint Paul,
Minnesota
Well: McCarthy Well Company, Saint Paul, Minnesota
Pneumatic message system: Perrine Store Service Company, Minneapolis,
Minnesota
Interior paint supplier: Elvgren Paint Supply Company, Saint Paul,
Minnesota
Interior decoration: Rosness & Sine, Saint Paul, Minnesota

¹ Samuel B. Lincoln, *Lockwood Greene: The History of an Engineering Business, 1832-1958* (Brattleboro, Vermont: The Stephen Greene Press, 1960), 366. For stylistic comparisons, see Stephenson Underwear Mills (South Bend), 405; Nashua Manufacturing Company's Jackson Mill, 423; U.S. Tire Plant (Indianapolis), 427; and Montgomery Ward Building (Saint Paul), 437. Nashua's Jackson Mill, built around 1919, employed gravity conveyors to move the cotton through its processing steps. The unrefined product was taken to the mill's top floor, where processing commenced. After each step, the cotton was delivered via conveyor to the floor below for the next phase. The finished cotton ended up on the first floor, ready for distribution. As discussed below, Lockwood Green employed a similar system to move stock through the Montgomery Ward warehouse.

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5. Original Plans and Construction: When completed in the early weeks of 1921, the Montgomery Ward facility consisted of two reinforced concrete sections: the Administration Building, which overlooks University Avenue to the north, and the Operations Building, situated about 80' to the south.

The three-story Administration Building presented a dignified and inviting facade to the busy street. Paved walks provided access to the three entrances, and wide steps led to each doorway. Columns and pilasters gave the building a mildly neo-classical look.

Although simpler in design, the Operations Building echoes the original classical detailing of the Administration Building. Its articulated skeletal structure continued the vertical emphasis established by columns and pilasters in the first building. The Operations Building is nine stories high with two parallel wings extending to the south, giving the building a "U" shape. Three train tracks run into the courtyard created by the wings; tracks also run along the east and west sides of the building. Single-story train sheds provide shelter for loading and unloading merchandise.

From the north wall of the Operations Building rises a tower to a height of about 257' above the ground. Said at the time to be the tallest reinforced concrete structure in the country (and perhaps the world), the tower helped identify the building and made it an immediate landmark in the area.²

The Administration and Operations Buildings were connected by an enclosed, three-story walkway bridge that stretched between the structures. At grade level, an arched opening, flanked by two smaller portals, allowed cars and pedestrians traveling the length of the alley to pass beneath the bridge. A tunnel joined the buildings' basements.³

A boilerhouse, powerhouse, and smokestack were erected about 220' behind the original east wing of the Operations Building.

² *Saint Paul Pioneer Press*, 3 April 1921.

³ Blueprint of Montgomery Ward & Company facility, prepared in 1950 by Associated Factory Mutual Fire Insurance Company of Chicago, and stored in the files of the Maintenance Engineers at Montgomery Ward in Saint Paul.

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6. Alterations and additions: One addition to the rear of the Operations Building's east wing was completed in 1926. The original design anticipated growth, and this first addition followed 1920 plans for expansion. The section is identical in style, scale, and dimension to the first portion of the Operations Building. Its construction linked the boilerhouse and powerhouse to the rest of the structure.⁴

In late 1963, a three-story addition was built behind the west wing of the Operations Building. As with the east wing, an addition on the west had been anticipated in 1920. Unlike the east wing, however, the newest structure did not match the design or dimensions of the rest of the building.

A few months later, the Administration Building, more commonly known by this point as the Retail Store, was dramatically altered in a remodeling effort. Alternating panels of concrete and metal created a new, windowless facade for the upper two stories. On the ground level, large glass doorways were cut into the front, east, and west sides of the structure, while red brick sheathed the walls. A two-story addition filled the alley between the two older structures. The site was regraded to eliminate the need for entrance steps.

Ward's also erected an automotive store and service station in 1964, on the corner of University and Hamline Avenues. Like the Retail Store, the single-story, 46,000 square-foot auto shop is of a modern, suburban-mall design.⁵

That structure apparently replaced a gas and automobile maintenance station measuring 48'-0" x 115'-0", which had been built on the northwest corner of the lot in 1932. The entryway of the single-story, cast-concrete building jutted out from the north wall and was topped with a segmented arch parapet similar to that on the Administration Building. Other details also matched those of the earlier buildings. The station was demolished sometime after 1950.⁶

- B. Historical Context: In 1920, the Chicago-based Montgomery Ward & Company had been in business for nearly fifty years. Its mail-order venture had developed to such

⁴ *Saint Paul Pioneer Press*; 1950 Blueprint; Building Permit Card--1400 University Avenue West, Office of Licensing, Inspections, and Environmental Protection, Saint Paul, Minnesota.

⁵ Files, Maintenance Engineers Office, Montgomery Ward--Midway Store, Saint Paul, Minnesota.

⁶ Building permit; 1950 blueprint; Photograph of Montgomery Ward's Auto Accessories and Gasoline Station, maintained in the Audio-Visual Collection of the Minnesota Historical Society, Saint Paul, Minnesota.

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an extent that the company began establishing catalog houses outside its home base. Ward's selected Saint Paul as the site of its "Northwestern House" and commenced construction on seventeen acres immediately south of University Avenue in the Midway District.⁷

A more convenient location would have been difficult for Montgomery Ward to find. University Avenue, which runs from east to west, bisects the Midway and connects the downtowns of Saint Paul and Minneapolis. In 1890, University Avenue became host to the area's first interurban streetcar line, marking the beginning of the corridor's use as the main thoroughfare between the cities. This era ended with the construction of Interstate 94, one block to the south, in the 1960s. In the intervening years, industrial sites, shopping areas, and residential districts sprang up in the Midway area.⁸

Nine railroads passed through the area in the early twentieth century, an essential factor for Ward's freight-reliant business. Other businesses were also attracted by the Midway's railroads, paved roads, and streetcars, and by the proximity to both downtowns, stimulating a building boom in the area. In 1920, an estimated 66,000 people passed through the Midway daily.⁹

Soon after Montgomery Ward moved into Saint Paul, the company began to establish "outlet stores" at its various catalog houses in an effort to sell off overstocked merchandise more quickly. In 1923, the basement and western half of the Administration Building's first floor were converted into a store. Not long after, competition from Sears, Roebuck and Company and from growing chain stores forced Ward's to expand its retail venture. The Administration Building's interior was remodeled to house a full-fledged retail store, and the first two floors were devoted to that purpose. The third floor remained reserved for administrative offices.¹⁰

⁷ Frank Brown Latham, *1872-1972 A Century of Serving Consumers: The Story of Montgomery Ward* (Chicago: Montgomery Ward & Co., 1972), 65.

⁸ Kristy Aldrian and Steven Buetow, "Architecture by Bus," *Architecture Minnesota*, January/February 1992, 30.

⁹ *Ibid.*; *Saint Paul Pioneer Press*.

¹⁰ Latham, 64-69; Maintenance Engineers files.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural character: As originally built, the property had an overall utilitarian design with minor classical detailing. Decorative elements, though few, stylistically united the structures. The 1964 renovation gave the Administration Building a more modern, but less distinctive, look.
2. Condition of fabric: Poor. The 1964 remodeling obscured the Administration Building's original facade and, being of an incompatible design, destroyed the stylistic unity between the two buildings. The design's original symmetry was sacrificed with the uneven addition of wings and associated buildings, also completed in the early 1960s. Although the Operations Building still displays much of its original detailing, its physical integrity has been damaged by the additions and by other alterations. The most notable examples of original detail are visible on the tower.

B. Description of Exterior:

1. Overall dimensions: The Administration Building originally measured 586'-0" x 84'-0". The building has three stories and a basement.

The 1920 portion of the Operations Building is divided into East Section 1, 141'-0" x 221'-0", and West Section 1, 121'-0" x 221'-0". Both wings have nine stories and a basement. The tower, about 257' in height and 50'-0" square in plan, is part of the 1920 section. The train shed between the wings is 77'-0" x 381'-0"; train sheds along the east and west wings measure 24'-0" x 442'-0" and 24'-0" x 221'-0", respectively.

East Section 2, added to the southern end of East Section 1 in 1926, has dimensions identical to East Section 1. The 1964 addition to the south wall of West Section 1 is about 140' x 260' and only three stories in height.

The boilerhouse measures 50'-0" x 113'-0" and the powerhouse 48'-0" x 67'-0". The two single-story buildings are attached. They were built 221' behind East Section 1, allowing space for the later addition of East Section 2. The smokestack, which rises from the boilerhouse, is 200'-0" high with an interior diameter of about 14' at the base and 8' at the top.

2. Foundations: Reinforced concrete.

3. Walls: A central doorway, framed by secondary entrances on either end of the front facade, originally greeted employees and visitors to the Administration Building. Two lamps were fixed to the exterior wall, one on either side of the main entrance. The central pavilion projected 15' from the building's north face. Entrance bays on the east and west ends of the main facade also extended forward slightly, forming huge corner blocks that visually anchored the building. Pilasters, stretching from the first floor to the cornice, were spaced at regular intervals between the entryways. The doorways were accented with massive Doric columns that stood nearly the height of the building, supporting its cornice.

Windows were recessed between the pilasters. Spandrels separated the windows and were decorated with low relief rosettes laid over flat, vertical reeding. In the building's early years, the spandrels were painted dark green to blend with the windows, emphasizing the structure's verticality.

The building's flat roof was edged by a parapet, which rose into a segmented arch over the central doorway. Shallow-relief pilasters decorated the arch.

The Operations Building has a more utilitarian appearance. The sides and rear of the structure's exterior reflect its concrete framing. Multi-paned industrial sash windows fill large, rectangular spaces created by the intersecting columns and girders of the skeletal structure. The spandrels have recessed panels and, like those of the Administration Building, were originally painted green.

A few classically-inspired details are present in the Operations Building. Visually, the ninth floor of the building serves as an entablature, carried by piers extending from the first to the eighth floors. The roof's parapet forms a simple cornice while the ninth-floor windows play the role of a frieze. A wide architrave between the eighth and ninth floors finishes the effect.

The front facade echoes the Administration Building's main wall. The tower section is pronounced, like the central doorway of the smaller building, and corner blocks trimmed with pilasters emphasize the northeast and northwest corners of the building.

The lower portion of the tower is integrated into the building, and its north face displays one column of windows and spandrels, more narrow than those in the rest of the nine-story structure. Above the ninth floor, each of the

tower's four identical sides is visible. An observation deck encircles the shaft toward its top, dividing this upper portion into two slightly unequal sections. Below the deck, a single, multi-paned, vertical window punctuates each side of the tower. Observation deck balconies, which project slightly on each facade, rest upon pairs of scrolled brackets just above these windows.

Above the deck, the tower has one setback. A round-arched window flanked by coupled pilasters adorns each facade. An entablature with a wide fascia and projecting cornice caps the tower. Finally, a parapet finishes each wall with the same segmental arch seen in the Administration Building.

After construction, the concrete on both buildings was rubbed smooth with carborundum blocks and washed with cement to give the building a brilliant white appearance.

The west wing addition, completed in 1963, is of a design similar to the rest of the Operations Building. Its concrete frame is easily discernable, and the majority of the wall space is occupied by multi-pane, industrial-sash windows. However, the extension differs from the original wing in its height and dimensions, and it lacks the older portion's decorative detailing.

As noted above, the 1964 remodeling dramatically altered the Administration Building, now known as the Retail Store. Brick laid in stretcher bond currently sheathes the first floor of the building, while pre-cast concrete panels and massive sheets of corrugated metal cover the two upper stories. The building is surrounded by a paved sidewalk protected by a roof extending from the lower edge of the metal siding. This roof is supported by rectangular pillars.

The new facade totally obscures the original detailing and fenestration. The prominent center entryway was maintained, although its appearance has been changed entirely. As in the original facade, the central bay protrudes from the rest of the wall's face. In the modern version, however, only the two upper stories jut out, creating an overhang. The four central columns from the original design are replaced with rectangular, polished granite versions that support the overhang. An addition was made to the back of the structure to fully connect it to the warehouse portion.

4. Structural systems: Cast-in-place reinforced concrete with mushroom columns.

5. Openings:

- a. Doorways and doors: Originally in the Administration Building, colossal Doric columns stood in pairs on either side of the main entrance, dwarfing the doors. The entablature over the columns displayed the company's name in script. Secondary entrances, one on either end of the main facade, were simplified versions of the main portal, with only one multi-storied column on either side of the doors.

The new entrance, created in the 1964 remodeling, consists of glass doors set into a glass wall. As in the original configuration, there are two secondary entrances on the building's north side. These entrances, also of glass set into glass walls, are not in the same location as the originals. Since the site was regraded, the doors now provide access at street level, and the steps leading to the original doorway are gone. Entryways have been added on the east and west facades as well.

Entrances in the Operations Building are primarily garage doors at loading docks, which accommodated the deliveries and shipping activities that were the heart of the business at the time of construction.

- b. Windows: Almost half of the Administration Building's original wall surface contained large, multi-paned windows. This amount yielded a ratio of one square foot of glass to each 5.5 square feet of floor space.¹¹ The current facade of the Administration Building is windowless.

Rectangular, multi-paned windows also make up a substantial portion of the wall surface in the Operations Building. The tower had arched windows above the viewing deck and long, vertical windows cut into the midsection of its shaft.

6. Roof: Both buildings and the tower feature a flat roof bordered by parapets.

¹¹ *Saint Paul Pioneer Press.*

C. Description of Interior:

1. Floor plans: The Administration Building was built to accommodate offices as well as a kitchen and cafeteria for all of Montgomery Ward's Saint Paul employees. The cafeteria, a huge hall that could also be used for meetings, lectures, or social events, took up the eastern half of the third floor. Directly above, on the third floor mezzanine, was the kitchen, equipped with electric dumbwaiters on the north and south walls to send prepared food to the cafeteria and to retrieve soiled dishes for cleaning.

The Operations Building, erected to house the mail order operation, was designed to expedite the flow of inventory into and out of the structure. Deliveries were received at loading docks on the outside of the "U"-shaped warehouse. Each floor handled a different type of product: footwear and hosiery went to the fourth floor, while hardware, garden tools, and farm equipment were all sent to the seventh. The second floor was the packaging room, and all smaller orders were ultimately delivered to that floor by way of spiral chutes. When ready for shipping, the packages were placed on a mechanized belt conveyor that ran from the second to the first floor. Orders were then loaded onto trains waiting in the train shed located in the courtyard between the parallel wings. Estimates from 1920 predicted the plant would handle 12,000 orders for 30,000 packages each day.¹²

2. Stairways, elevators, and conveyors: Stairways, all of concrete, were situated next to exterior walls and were enclosed by concrete walls and fireproof doors, eliminating the need for exterior fire escapes.

The Administration Building was originally fitted with one elevator at the rear of the building, although provisions were made for another. In later years, when it had been converted into a retail facility, escalators were added.

In the Operations Building, three freight elevators in each wing hoisted merchandise to the appropriate story. These elevators were equipped with micro-leveling devices to enable the car to land flush with the floor. The building also had two passenger elevators, one of which ran to the observation deck near the top of the tower. The central tower section of the building housed another freight elevator.

¹² *Saint Paul Pioneer Press.*

Spiral conveyor chutes were placed throughout the Operations Building to increase efficiency. The chutes ran from the ninth floor to the packing room on the second floor. Some were divided into three channels, and items were sent down separate runways depending upon whether they were single- or multiple-item orders. Mechanized conveyor belts ran down the length of the wing into the chutes (sometimes above the heads of the workers), saving the mail-order clerks from continually walking back and forth to deliver an order. This system also apparently saved money during construction: each chute was half the cost of one elevator. Although not used after the mail-order operation ceased in the 1980s, the chutes were not removed from the building.

3. Flooring: Tile covered the floors in the kitchen, and cove molding finished the corners where floors met the walls. Other spaces in the building had concrete flooring.
4. Wall finish and ceiling finish: In the bathrooms, glazed tile was used on the lower 4'-6" of the walls, with enamel above. Elsewhere, the plastered walls and concrete ceiling surfaces were painted white.
5. Mechanical equipment:
 - a. Heating: The buildings were originally supplied with steam heat generated by three 355-horsepower boilers in the power plant. Two boilers possessed Riley four-retort mechanical stokers, the most modern type available at the time. The third boiler was equipped with a Hawley down-draft furnace, enabling it to burn trash produced by the warehouse. In the buildings, all the radiators were hung from the walls with "E-Z Radiator Hangers," manufactured by the Healy-Ruff Company of Minneapolis.
 - b. Lighting: Light fixtures were originally incandescent bulbs with metal shades that hung from the ceiling. Fluorescent tubes were eventually installed.
 - c. Plumbing: The company's water was supplied by a well located on the lot. The well ran to a depth of 1,185' below grade, 225' below sea level. A pipe in the well reached below the hard, surface water to tap the soft water from the sandstone stratum. It was estimated that the well could produce 2,000 gallons of water per minute, although, in 1921, only 500 gallons per minute were required.

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An automatic sprinkler system was installed in the building. A 115,000-gallon water tank, housed in the midsection of the Operations Building tower, held the water for the system. The system's pump could distribute 1,500 gallons of water per minute.

A system of pneumatic sewage ejectors, which automatically raised sewage and drainage from the basements, were installed throughout the buildings.

6. Original Furnishings: No information is available about the original office furnishings.

The kitchen was originally equipped with dishwashers, a potato paring machine, and three large gas ranges. Fans facilitated ventilation in the windowless room, and eight skylights provided natural light.

The bathrooms were designed with all the latest sanitary advancements. Sinks and toilets of glazed china were hung from the walls. The company selected "mixing" faucets so that employees could wash in warm water, rather than hot or cold. Liquid soap was piped into the bathrooms.

The Operations Building was equipped with a pneumatic messaging system, another device installed to increase efficiency. Messages, placed in a sealable cylinder, were sent through large pipes which ran across ceilings and through floors, ultimately reaching the basement where the system's routing center was situated. From there, an operator dispatched the memo to its destination through another set of tubes. Compressed air propelled the cylinders inside the pipes. With this system, a message could reach its destination in less than a minute.

D. Site

1. Historic landscape design: The buildings were erected towards the front of a seventeen-acre parcel on the south side of University Avenue between Hamline Avenue and Pascal Street. The northernmost portion of the lot was landscaped, with a semi-circular drive leading from the avenue to the central doorway of the Administration Building. Paved sidewalks bordered the drive, while an additional paved walk extended from the main entrance to the street. Yet another straight sidewalk edged University Avenue. A line of small shrubs obscured the basement windows on the Administration Building's front

facade, and more shrubs ornamented the flat front lawn. The park-like landscaping was typical of large commercial buildings in this portion of the Midway District at the time of the property's development. In the 1920s, Ward's hosted "Play Days" on its lawn for children.¹³ This area is now a paved parking lot.

The midsection of the parcel was occupied almost entirely by the huge Operations Building, while the rear portion accommodated the railroad tracks.

2. Outbuildings: In 1920, Montgomery Ward & Company built a boilerhouse and power plant behind the east wing, near the southeast corner of the lot. The boilerhouse stack is constructed of radial brick tile. The structures were connected to the Operations Building by the 1926 wing addition.

An automotive building, erected in 1963, sits to the east of the Retail Store, toward the northeast corner of the lot. The long, shallow structure has a single story and 46,000 square feet of interior space. The walls of the building's westernmost quarter are mainly large panels of glass, topped by a protruding face of concrete sheets, similar to those sheathing the upper stories of the Retail Store. The structure's remaining section has eighteen garage bays, sealed with lifting doors. The wall space between the paneled doors is brick veneer. A metal fillet tops the walls, and a corrugated metal fascia and narrow metal cornice finishes the flat-roofed structure.

PART III. SOURCES OF INFORMATION

- A. Architectural Drawings: A fire insurance blueprint from 1950 shows the original buildings, the 1926 addition to the Operations Building, and the 1932 gas station. The drawing also shows cross-sections of the buildings, revealing the contents of each floor. Prepared by the Associated Factory Mutual Fire Insurance Company of Chicago, the drawing is now in the possession of Montgomery Ward's Maintenance Engineers at the Midway location in Saint Paul.
- B. Early Views: The Minnesota Historical Society has a collection of photographs of the Montgomery Ward & Company building in the Midway District of Saint Paul dating from the 1920s to the 1960s. The photographs are part of the society's Audio-Visual Collection in the Reference Library.

¹³ From photograph entitled "Play Days at Montgomery Ward," maintained in the Audio-Visual Collection of the Minnesota Historical Society, Saint Paul, Minnesota.

C. Bibliography:

1. Published Sources:

Aldrian, Kristy, and Steven Buetow. "Architecture by Bus." *Architecture Minnesota* 18 (January /February 1992): 30-35.

Baymiller, Joanna. "University Avenue Toots its Horn." *Architecture Minnesota* 3 (May/June 1977): 18-21.

Gebhard, David, and Tom Martinson. *A Guide to the Architecture of Minnesota*. Minneapolis: University of Minnesota Press, 1977.

Latham, Frank B. *1872-1972 A Century of Serving Consumers: The Story of Montgomery Ward*. Chicago: Montgomery Ward & Co., 1972.

Lincoln, Samuel B. *Lockwood Greene: The History of an Engineering Business 1832-1958*. Brattleboro, Vermont: The Stephen Greene Press, 1960.

Roscoe, Robert. "Wards and Sears: Two Towers of Two Cities." *Preservation Matters* 9 (January 1993): 4-5.

Saint Paul Pioneer Press, 3 April 1921.

Westbrook, Nicholas. *A Guide to the Industrial Archaeology of the Twin Cities*. Saint Paul: Society for Industrial Archaeology, 1983.

2. Unpublished Sources:

Blueprints, 1920 and 1924. Montgomery Ward & Company Construction Department, Chicago, Illinois.

Building Permits--1400 University Avenue West. Building Permit Files. Office of Licensing, Inspections, and Environmental Protection, Saint Paul, Minnesota.

Files. Maintenance Engineers Office. Montgomery Ward & Company--Midway Store, Saint Paul, Minnesota.

Murphy, Patricia, and Greg Carstens. "Krank Building, 1885 West University Avenue, Saint Paul, Minnesota." 1982 National Register of Historic Places Nomination Form.

Saint Paul--Montgomery Ward. Audio-Visual Collection. Reference Library, Minnesota Historical Society, Saint Paul, Minnesota.

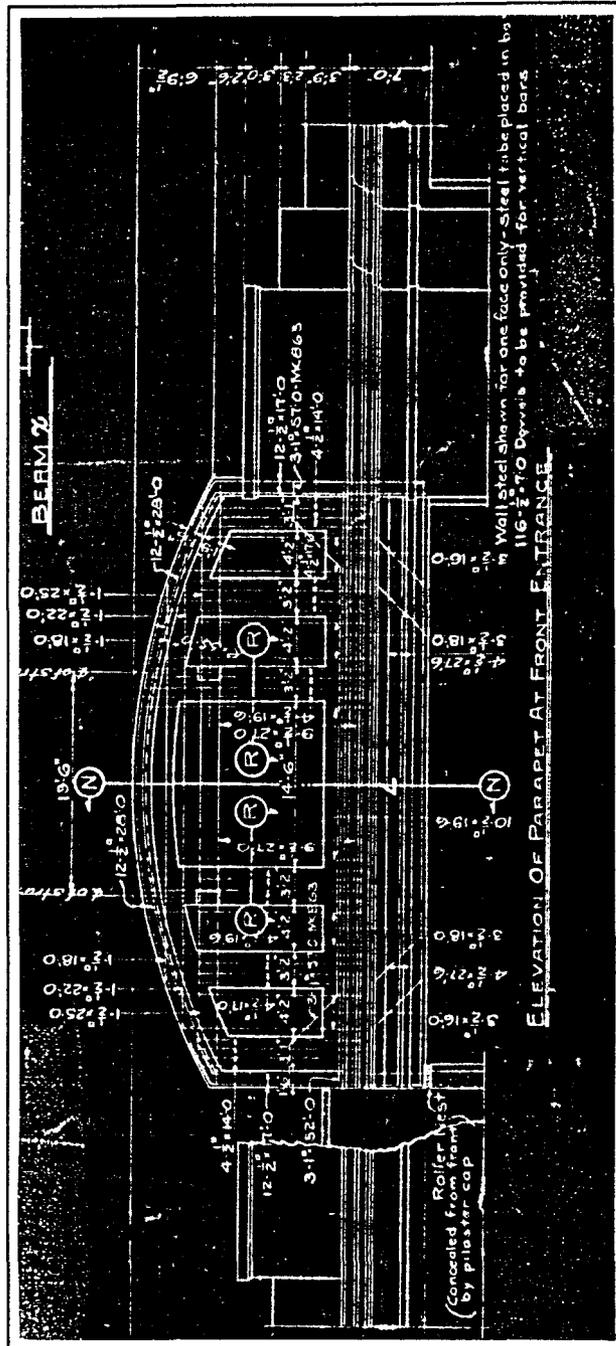
- D. Likely Sources Not Yet Investigated: An archive of Montgomery Ward's catalogs is housed at the University of Wyoming in Laramie. Curator Rick Ewig can be reached at 307-776-6385.

PART IV. PROJECT INFORMATION

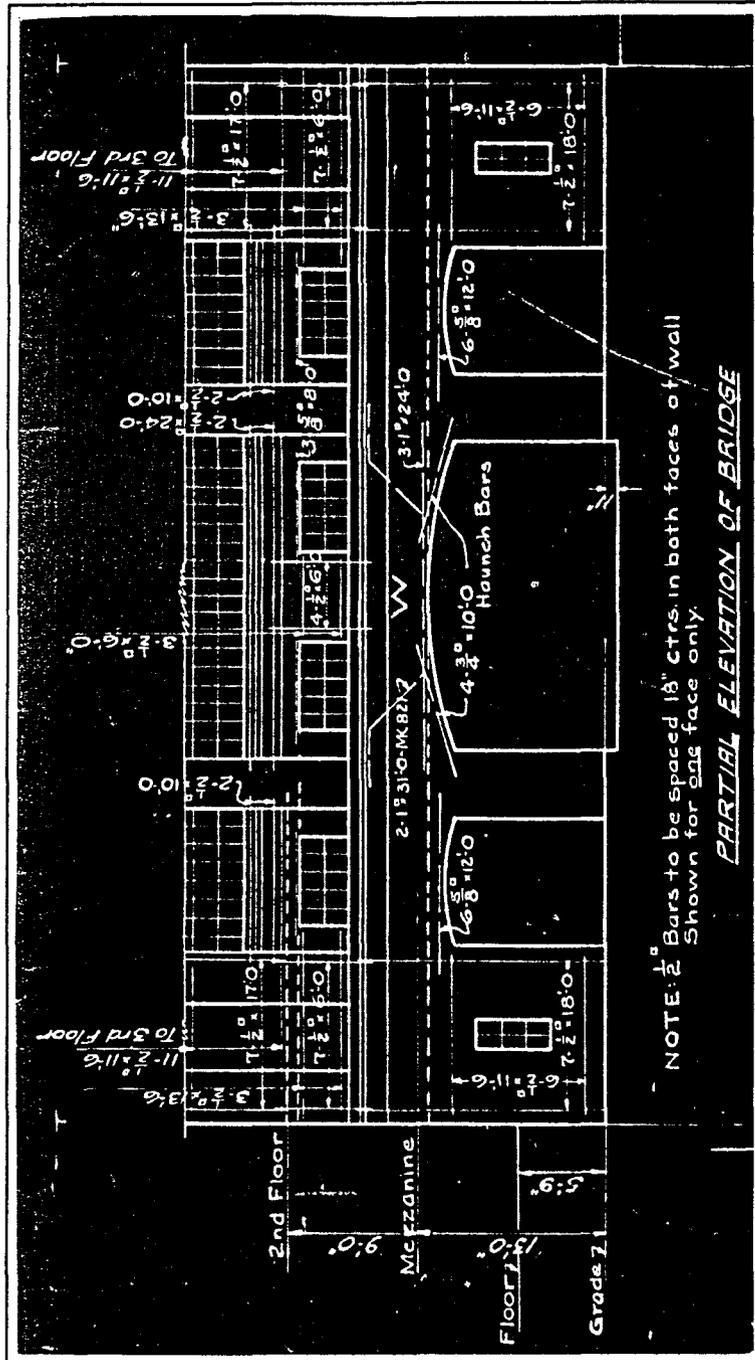
Montgomery Ward is demolishing its 1920 structure and erecting a new retail store at the southeast corner of the lot. The remainder of the property is being converted into a multiple-vendor commercial site by Dalan/Jupiter, Inc. of Chicago.

The Saint Paul City Council conditioned project approval on the completion of a Level III HABS documentation. Charles Koosman, of Koosman Project Management Services in Minneapolis, coordinated the documentation, which will be voluntarily submitted to HABS/HAER.

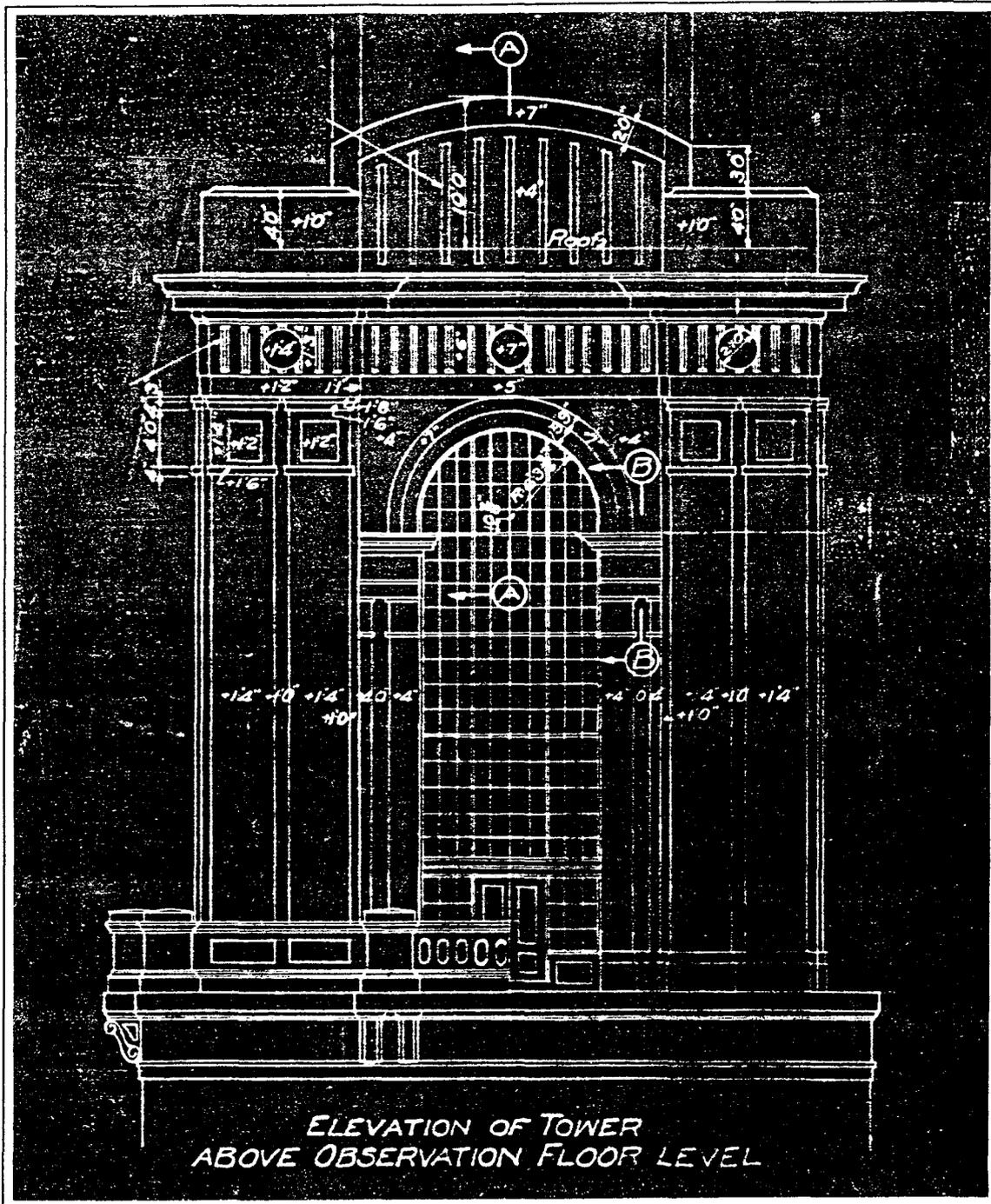
This report was prepared by Cynthia de Miranda and Charlene Roise of Hess, Roise and Company, 405 Cedar Avenue South, Suite 200, Minneapolis, Minnesota 55454.



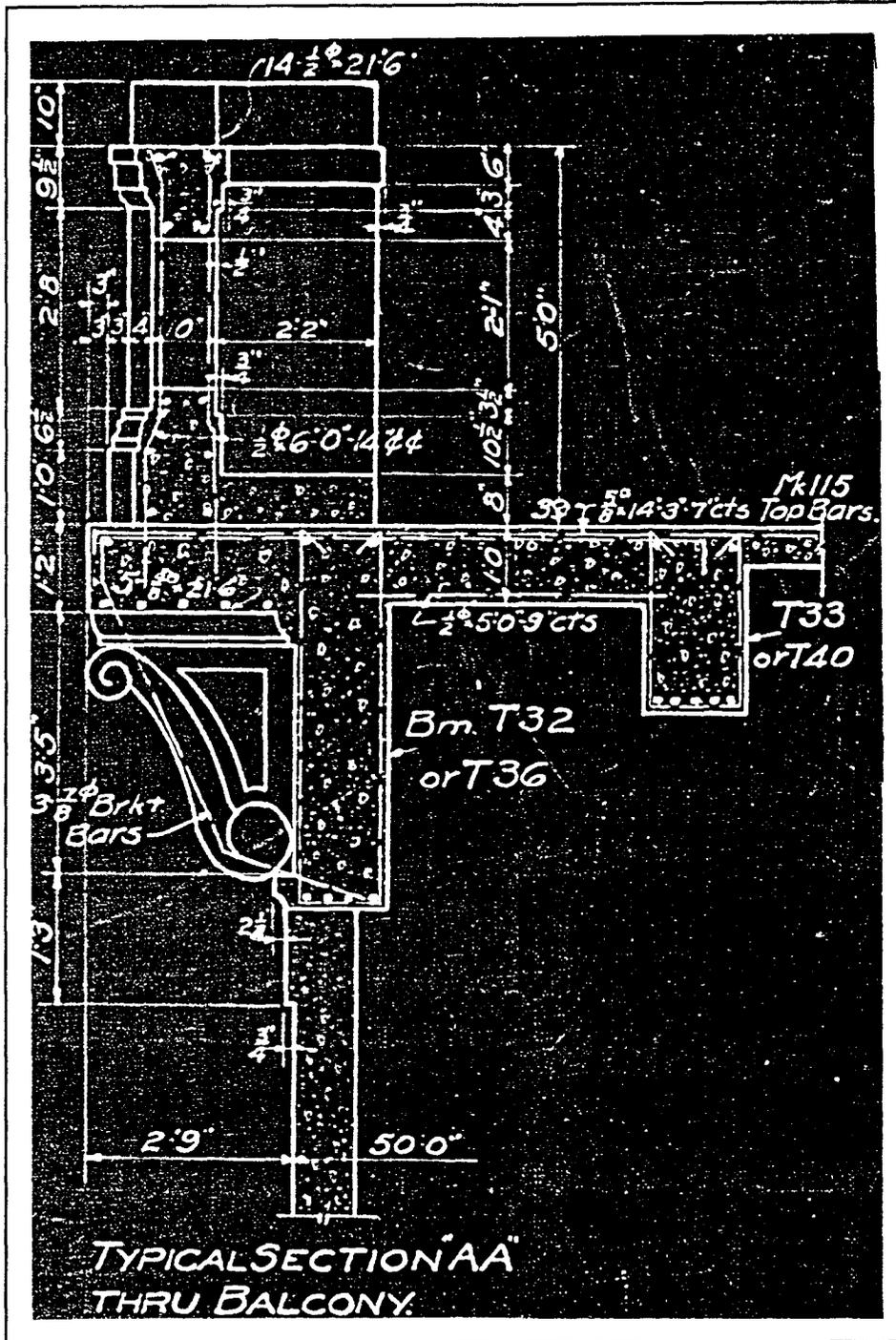
Elevation of Parapet at Front Entrance. Detail from "Roof Plan, Office Building, St. Paul Building. Montgomery Ward & Company Construction Department, 1920." Blueprint on linen.



Partial Elevation of Bridge. Detail from "Second Floor Plan, Office Building, St. Paul Building. Montgomery Ward & Company Construction Department, 1920." Blueprint on linen.



Elevation of Tower Above Observation Floor Level. Detail from "Tower, Elev. 458-478, St. Paul Building. Montgomery Ward & Company Construction Department, 1920." Blueprint on linen.



Balcony detail from "Tower, Elev. 426-443, St. Paul Building. Montgomery Ward & Company Construction Department, 1920." Blueprint on linen.

