

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

SENT TO D.C.
10-2-97

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Armour's Warehouse
other names/site number Hogan's North Elevator, Seneca Grain Elevator

2. Location

street & number Southwest corner William and Bridge Streets [] not for publication
city or town Seneca [] vicinity
state Illinois code IL county La Salle code 099 zip code 61360

3. State/Federal Agency Certification

As the designated authority under the National Preservation Act, as amended, I hereby certify that this nomination [] request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets [] does not meet the National Register criteria. I recommend that this property be considered significant [] nationally [] statewide locally. ([] See continuation sheet for additional comments.)

William L. Wheeler / SHP 9-30-97
Signature of certifying official/Title Date

Illinois Historic Preservation Agency
State of Federal agency and bureau

In my opinion, the property [] meets [] does not meet the National Register criteria. ([] See continuation sheet for additional comments.)

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

- entered in the National Register.
[] See continuation sheet.
- determined eligible for the National Register.
[] See continuation sheet.
- determined not eligible for the National Register.
- removed from the National Register.
- other, (explain) _____

Signature of the Keeper

Date of Action

_____	_____
_____	_____
_____	_____
_____	_____

Armour's Warehouse
Name of Property

La Salle County, Illinois
County and State

5. Classification

Ownership of Property

(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property

(Check only one box)

- building(s)
- district
- site
- structure
- object

Number of Resources within Property

(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
<u>2</u>	<u>1</u>	buildings
<u>0</u>	<u>0</u>	sites
<u>1</u>	<u>0</u>	structures
<u>0</u>	<u>0</u>	objects
<u>3</u>	<u>1</u>	Total

Name of related multiple property listing

(Enter "N/A" if property is not part of a multiple property listing.)

N/A

Number of contributing resources previously listed in the National Register

N/A

6. Function or Use

Historic Functions

(Enter categories from instructions)

AGRICULTURE/storage

Current Functions

(Enter categories from instructions)

VACANT/not in use

7. Description

Architectural Classification

(Enter categories from instructions)

Other: wooden grain elevator

Materials

(Enter categories from instructions)

foundation Limestone

walls Steel

Wood

roof Steel

other _____

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

Armour's Warehouse
Name of Property

La Salle County, Illinois
County and State

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

A Property is associated with events that have made a significant contribution to the broad patterns of our history.

B Property is associated with the lives of persons significant in our past.

C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

A owned by a religious institution or used for religious purposes.

B removed from its original location.

C a birthplace or grave.

D a cemetery.

E a reconstructed building, object, or structure.

F a commemorative property.

G less than 50 years of age or achieved significance within the past 50 years.

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

preliminary determination of individual listing (36 CFR 67) has been requested

previously listed in the National Register

previously determined eligible by the National Register

designated a National Historic Landmark

recorded by Historic American Buildings Survey

#

recorded by Historic American Engineering Record # IL-25

Areas of Significance

(Enter categories from instructions)

Transportation

Commerce

Engineering

Period of Significance

c. 1861-1947

Significant Date

c. 1861-62

1883

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

Unknown

Primary location of additional data:

State Historic Preservation Office

Other State agency

Federal agency

Local government

University

Other

Name of repository:

Armour's Warehouse
Name of Property

La Salle County, Illinois
County and State

10. Geographical Data

Acreage of Property 1.4

UTM References

(Place additional UTM references on a continuation sheet.)

1 [1] [6] [3] [6] [5] [1] [8] [0] [4] [5] [7] [4] [8] [1] [0]
Zone Easting Northing

2 []
Zone Easting Northing

3 []

4 []
[] See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Barbara J. Henning

organization Rivercrest Associates, Inc. date September 15, 1997

street & number 203 North 13th Street telephone 217/632-2614

city or town Petersburg state IL zip code 62675

Additional Documentation

Submit the following items with the complete form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location.

A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional items

(Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name Illinois Department of Natural Resources

street & number 524 S. 2nd St. telephone 217/524-3759

city or town Springfield state IL zip code 62701

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reduction Projects (1024-0018), Washington, DC 20503.

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Armour's Warehouse

In c. 1861-62,¹ Armour's Warehouse was constructed on the north bank of the Illinois and Michigan Canal, a National Historic Landmark Historic District. Dominating the site and overlooking downtown Seneca, the 65' high elevating warehouse or grain elevator rises four stories above a basement, is of post and beam construction, and has dimensions of 40' x 80'.² As a fire prevention measure sometime between 1924 and 1939, the walls and roof were sheathed with rusting corrugated metal siding over the original clapboard siding and wood shingle roofing. The Joliet limestone foundation walls are 2' thick and approximately 2 1/2' high. Generally rectangular in outline, the elevator is capped with a gabled roof along the highest central portion, with flanking lower shed-roofed wings, a characteristic shape for grain elevators. An abandoned railroad spur dating from 1883 runs along the north edge of the elevator, which has a c. 1940s corn crib connected to its dump shed. Three smaller buildings are located at the northeast corner of the property: an office with scale and two seed warehouses. The wood frame office, which was built by 1892, has been altered but the changes probably were made during the period of significance. One seed warehouse was built after 1947 and is therefore a noncontributing building, while the other probably dates from the c. 1940s decade. The elevator, office, and older seed warehouse are contributing elements on the property. Vacant since 1989, Armour's Warehouse retains its historic integrity, but is in deteriorating condition. While retaining significant features, the elevator has received alterations over the decades, including changes associated with the evolution of the grain trade such as the introduction of railroad service. The present owner, the Illinois Department of Natural Resources, plans to rehabilitate the property as an interpretive center for the Illinois and Michigan Canal.

Important aspects of the historic setting for the elevator remain. The canal still runs along the south edge of the property, and a working lumberyard with related sheds and storage is to the north and west of the property, as has been the case since at least 1898. Both elevator and lumber yard were placed there to take advantage of the canal as a transportation conduit. The main commercial street for Seneca is just east of the elevator, which occupies a site higher than its immediate surroundings.

¹Sources vary regarding when John Armour built his warehouse. Sanborn fire insurance maps give the 1861 date, but an 1886 county history is the source for the 1862 date. Armour purchased the property in 1860.

²Except where noted otherwise, much of the descriptive data was drawn from HAER No. IL-25, Armour's Warehouse, by Dawn Duensing, and verified on site in 1997.

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Armour's Warehouse

A National Park Service brochure succinctly outlines how Armour's Warehouse operated:

The operation of the grain elevator is straightforward: grain is delivered, dumped into hoppers, and raised by buckets on a conveyor belt. The grain is then distributed by chutes into storage bins, from which it was once emptied directly onto boats for transport along the canal. Railroads gradually replaced the canal for transporting the grain to market.

The leg, which is the device that actually elevates the grain, extends from foundation level to the headhouse loft. It consists of a continuous rubberized belt with 12" by 6" buckets at 14" centers. It is operated by an 18" pulley in the boot and a 36" pulley in the head. This system could lift 3,000 bushels an hour.³

Each of the four floors of the elevator served a functional purpose. The first story is the operating floor. Grain storage bins occupy the second story and the headhouse and headhouse loft are located on the third and fourth stories, respectively. The basement area, the pit, houses the boot at the base of each leg. The pit is 4' below the bottom of the joists and provides sufficient space for completing maintenance on the base pulley in the boot.

Directly above the pit is the operating floor, which has a ceiling height of 10' to the bottom of the beams supporting the bins. Posts along the perimeter are 12" x 12", interior posts 14" x 12". All the beams are 12" x 12", with the east-west beams sitting in mortises. Knee braces are 5" x 6" and set at 45 degree angles with mortise and tenon joints. The operating floor was where power from the steam engine came in to run the pulleys for the legs. Another operation on this floor was opening the boot gates to allow grain to move from the dump hoppers into the boots. In addition, gates could be opened in the bottom of each bin, allowing the grain to be loaded onto the canal boats. Spiral conveyors were used to move the grain horizontally.

Located at the second story, the 17 grain bins are 24' deep and constructed with vertical studs and ordinary wood planks. Most bins fit within a 10' x 10' bay, but larger two-bay-by-two-bay bins are located in the center of the elevator. A catwalk and a manlift provide access to the bins. The manner of bin construction defines grain elevator types, and Armour's Warehouse is an

³National Park Service, Seneca Grain Elevator, brochure for Illinois and Michigan National Heritage Corridor, undated.

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Armour's Warehouse

example of a studded elevator. The internal grain bins consist of vertical members (studs) which are planked over on the inside with boards to form bins. Studded construction for grain bins is related to other balloon-frame construction techniques developed in the 19th century.

The headhouse level contains wood chutes for directing grain into the bins and also the lower drive tension pulley. The generally 9"x 6" rope chases, which protect the drive ropes as they pass through the bin level, are also at the headhouse level. The rope power transmission from the operating floor remains only for the original east leg. Power for the elevators would now be provided by electric motors and belt drives located at the head pulleys. The headhouse loft has a wooden head for each leg and also head pulley axles. They are mounted in pillow blocks on 4" x 6" supports mortised into posts. Each wooden head has a 10" cast iron turn-head spout, the means for directing grain into numbered chutes which, in turn, dump it into one of the 17 corresponding bins. A staircase at the east end of the building allows access to the headhouse loft from the operating floor.

Based on Sanborn Map Company maps, it appears the present corrugated metal sheathing was applied after 1924 and before 1939. Original construction materials, which remain in place, consisted of clapboard siding and wood shingle for the roof. Clapboard was used virtually throughout, except where the siding follows the roofline, which has flush tongue and groove siding.

A power plant, removed after a dust explosion around 1980, was located at the east end of the building. The elevating mechanism was initially powered by a steam engine using coal and corn cobs for fuel, according to the 1892 Sanborn map. After 1913 and by 1924, the power plant was converted to electricity, according to information on Sanborn maps. After the conversion to electricity, each leg was driven by an electric motor which was placed in the headhouse loft. None of the equipment, smokestack, or the enclosure for the power plant remain.

The remaining machinery and equipment in Armour's Warehouse dated from the late 19th century, for most of it can be identified in an 1897 catalog of the Weller Manufacturing Company of Chicago. These apparently included conveyor belts, pulleys, turn-head spouts, and a railroad car puller. An Excelsior Oat Clipper and Separator and a Victor Corn Sheller and Cleaner are known to have been in the facility. According to the Sanborn map for 1907, there were two cleaners, one clipper and a sheller on the property. Most of the equipment appears to have been removed over the years. The massive pulley system that delivered power to move the grain and the prominent system of studded bins that defines the grain elevator, however, remain.

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Armour's Warehouse

Some window openings were part of the grain handling process. On the south side facing the canal, three small windows (2'4" x 1'10") at the operating floor level were aligned with the turnhead spouts to accommodate grain chutes to the canal. Larger windows may have also been used for chutes. Based on historic photos and previous investigations of the property, the original windows had 6/6 lights and double-hung sashes. All window openings currently have protective wood panels covering them. On the narrower east and west facades there are four window openings, two at the headhouse loft level and two at or near bin level. The north and south facades had four regularly spaced window openings at the headhouse level.

The south or canal side facade has six covered over window openings which are regularly spaced at the operating room level. In addition, three openings at the stone foundation level are now covered over with protective panels or enclosed with concrete and brick.

All four facades have some form of door. Two openings provided access to the dumpshed on the north side of the elevator. Two large sliding doors on steel runners open onto the canal on the south facade. The east facade has one door, and the west has two.

Now in extremely deteriorated condition and with half of a roof, a 10'x80' dumpshed runs the length of the north facade. On the east end of the dumpshed, an earthen ramp with concrete piers and sides provided access to farmers with wagons of grain to unload into one of the three dump stations. The dump floor is framed with 6" x 8" posts and beams with 2" x 6" joists running east-west.

The corn crib portion of the elevator was an integral part of the elevator's function, providing a continuous corridor for grain handling. Farmers drove their wagons up the east entry ramp and into the dumpshed, unloaded their grain, then proceeded through the enclosed passageway, through the corn crib, and down the other ramp. They also unloaded their wagons at the corn crib. A large gabled cupola straddles the ridgeline of the rectangular 60' x 30' crib. The cupola has replacement asbestos siding but the corn crib exhibits its original horizontal 4" wood slats which provided air circulation for proper corn storage. Large wood sliding doors are mounted on a metal top-mounted track at the west end. The building is roofed with standing seam metal roofing and has a poured concrete foundation. Constructed after 1939 since it does not appear on the Sanborn map for that year, the corn crib replaced an earlier grain storage facility shown in a 1912 photograph. Sanborn maps beginning in 1892 consistently include a corn crib or corn cribs located west of the elevator.

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Armour's Warehouse

Certain alterations reflect changing grain handling activities, the most notable of which was the introduction of rail transport facilities. In 1882, Seneca became the terminal point on the Kankakee and Seneca Railroad. The following year the railroad obtained right-of-way land from the elevator owner and a railroad siding was installed north of the elevator. Other railroad-related changes include the addition of the dumpshed, railroad shed, and scale house (now in ruins) to the elevator at the tracks as well as a car puller in the elevator. Occupying the northeast corner of the elevator, the car puller moved railway cars into proper position for loading. Using the car puller, several grain cars could easily be positioned and loaded without needing a locomotive to move them. Located in the outer wall of the dump shed, a double sheave frame (shown on page 71 of the Weller Manufacturing Co. Catalogue No. 14) is the only remaining evidence of the car puller.

The diminishing role of the canal is reflected in other changes to the site. The canal side channel or inlet shown on Sanborn maps was located just west of the elevator and has been filled. Some filling had occurred by 1913, if Sanborn maps are accurate. Filling was complete by 1924, an indication of the diminishing importance of the canal as a transportation corridor. The function of the inlet off of the canal is not clear. It may have been a turning basin, provided better canal access to the lumber yard west of the elevator, offered a means to transfer goods from the canal to the railroad siding, or served as a public loading dock.

Over the years, some ancillary buildings have been removed from the property, including a coal shed which was north of the railroad siding, a coal/hay shed south of the office, a series of corn cribs, a seed warehouse, and a dust vault north of the power plant. The wood loading platform on the canal side of the elevator has also been removed.

Another alteration was the partitioning of several bins. Armour's Warehouse began with fourteen bins, which were divided by plank walls. Later, two bins in the center and one bin at the south wall of the elevator were partitioned. Two of these bins were divided using crib wall construction, that is, stacked 2" x 4"s, and the other was divided using studded or plank wall construction. The flat bottoms of some bins were modified to have inclined floors. Finally, a large chute was added to the north facade which allowed direct loading from the headhouse loft into railroad cars.

In addition to the elevator, three small buildings occupy the site: a combined office and scale house, contributing, (c. 1880s), a small seed warehouse, contributing, (c. 1940s), and a larger

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Armour's Warehouse

seed warehouse, noncontributing (c. 1950s). Shown on a 1913 photograph, the office is a small one-story frame, gable-front building with a standing seam metal roof. The original clapboard has been covered with stucco, and the false front or raised parapet has been modified from a horizontal extension to a low-pitched gabled one. Original features include the side brick chimney, and deteriorated molded lintels on large 2/2 windows. Farmers arriving with grain had their wagons weighed at the office. They then proceeded to the elevator to unload the wagons, which were weighed empty to determine the amount of grain brought to the elevator. At some point, a three-sided front bay was added to the office, and the remains of the scale is not original. The major modifications probably were made during the period of significance for the property.

The office is located at the northeast corner of the site. Just west of it and also facing William Street is a 30' x 27' seed warehouse of similarly small scale. The one-story frame building rests on concrete block piers, has a low-pitched gabled roof, and may date from the 1940s. Replacement siding has been applied, and, like the office, the building is in extremely deteriorated condition. Windows which flank the entry have been boarded over, as has a side window. The primary evidence of the building's function as a seed warehouse is the small metal elevating system which rises above the roofline. Tucked behind the office and seed warehouse is another seed warehouse which is less than fifty years of age. Predominantly concrete block, the one-story building is 40' x 71' and has an L-shape. There is a small wood loading dock on the east facade.

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Armour's Warehouse

Armour's Warehouse is the largest and oldest remaining grain elevator on the Illinois and Michigan Canal. Also known as Hogan's North Elevator and the Seneca Grain Elevator, the property is significant under Criterion A for commerce because of its direct association with grain handling, an important commercial enterprise in Seneca, La Salle County, Illinois. Built on the north bank of the canal and later obtaining railroad connections, the facility is also significant under Criterion A for transportation, for it illustrates the economic importance of the canal for transporting agricultural produce, the development of a market economy using regional transportation systems, and the subsequent role of the railroad in that economy. Grain elevators such as Armour's Warehouse served as storage facilities for grain brought by local farmers for shipment on the canal and, later, on the railroad. The Period of Significance for Criterion A is c. 1861-62 until 1947, the 50-year cut-off date. Also related to Criterion A is the property's 1883 Date of Significance, the year railroad access was obtained. Armour's Warehouse is also significant under Criterion C for engineering as a relatively unaltered representative example of a studded country elevator. As a formerly steam-powered grain elevator, the property illustrates the pivotal transition from marketing methods storing grain in sacks to accumulating large quantities of grain in bins. For Criterion C, the Period of Significance is c. 1861-62, the date of construction. Armour's Warehouse is locally significant for listing in the National Register of Historic Places.

CRITERION A: COMMERCE and TRANSPORTATION

Situated at the east edge of La Salle County, the community of Seneca owed its genesis and development to the construction of transportation systems. Jeremiah Crotty, who led settlement in the Seneca vicinity, came to the area as a contractor for the Illinois and Michigan Canal. The canal opened in 1848 and provided an immediate conduit to Chicago for grain produced in the Illinois River valley. Farmers shipped corn, wheat, oats, and livestock to Chicago using the canal. During the first season of canal operation, corn shipments to Chicago increased eightfold; St. Louis lost out to Chicago in this battle for economic supremacy.⁴ Grain storage facilities along the canal played a major role in the economic development of the region.

⁴*History of La Salle County, Illinois*, 2 vols. (Chicago: Inter-State Publishing Company, 1886), 2: 359-60 (hereafter Inter-State); John G. Clark, *The Grain Trade in the Old Northwest* (Urbana: University of Illinois Press, 1966), p. 88; William Cronon, *Nature's Metropolis. Chicago and the Great West* (New York: W.W. Norton & Co., 1991), p. 64.

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Armour's Warehouse

Listed in the National Register, the Illinois and Michigan Canal was the westernmost of a system of federally funded land grant canals, and the last to be completed. Construction began in 1836 on the canal, which extended southwesterly from Chicago for 101 miles. Delayed in its completion, the canal almost immediately had to compete with railroads for business. However, until after the Civil War, "the canal continued to be the most important single carrier of corn in the state." The canal transformed the regional economy, instantly extending Chicago's hinterland southward to the Mississippi River.⁵

Around 1850 Crotty settled near the canal and present-day Seneca, platting a community which he named after himself. In 1852 the Chicago, Rock Island & Pacific Railroad came through the area on a route which ran parallel to the canal. The railroad called its depot Seneca, and commercial development ensued around the canal and railroad.⁶

With a fertile hinterland and access to large scale grain terminals in Chicago, Seneca (along with other communities platted along the canal) was an obvious candidate for grain handling facilities. Town founder Jeremiah Crotty reportedly built the first elevator in the community for D.C. Underhill on the south side of the canal in 1857. John Armour followed suit in c. 1861-62, locating Armour's Warehouse on the north side of the canal. Armour's Warehouse, as it was referred to in early legal documents, is the sole historic grain elevator still standing in Seneca.⁷

Armour's Warehouse remained in the Armour family more than ten years, from c. 1861-62 until 1873. Upon John Armour's death, his brother James purchased the property in 1868 and operated it with a Mr. Bruce. In 1873 Nelson Rulison and Michael Byrne bought the facility. Byrne may have been a silent partner. Rulison, who piloted canal boats beginning in 1853 and was a leading grain merchant in nearby Ottawa and Seneca, ran the elevator for four years, then sold it to Guy Griswold who operated it until 1882. Rulison again ran the elevator, until 1886,

⁵Illinois and Michigan Canal, NRHP nomination, p. 7-1; Clark, p. 274, quoting; Cronon, pp. 64-5.

⁶Floyd Mansberger, Archaeological Investigations at Armour's Warehouse (Hogan's Grain Elevator), Seneca, La Salle County, Illinois. Report prepared for Illinois Department of Natural Resources, 1996, p. 5.

⁷Inter-State, 2: 360, 362.

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Armour's Warehouse

when he sold it as well as the elevator on the south side of the canal to Martin Hogan and Howard Neilson.⁸

Spanning more than 60 years between 1886 and 1949, the Hogan era marked a period of stable ownership for the facility. Hogan and Neilson were partners until 1906, then Hogan incorporated the M.J. Hogan Grain Company which operated the facility until 1949. Dunn Brothers Co-op, Inc. owned and operated the elevator from 1949 to 1985 when the State of Illinois purchased the property for rehabilitation and commemoration because of its rich associations with the Illinois and Michigan Canal. Plans are underway to rehabilitate the elevator for visitors as an interpretive vehicle for understanding the importance of the canal.

The various owners of the Seneca grain elevator were actively involved in the grain trade in communities other than Seneca along the canal, sometimes in partnership with one another. For example, John Armour and Martin Hogan were, at different times decades apart, partners with John Harrington in Marseilles, a canal town about five miles from Seneca. James Armour was partner with Mr. Bruce in the late 1860s, presumably the same Bruce who operated the 1857 Underhill elevator for a time with a Mr. Garden as Bruce and Garden. The Armours lived in Ottawa, as did Rulison from 1868 until 1873 when he moved to Seneca some twelve miles to the east. The various owners of Armour's Warehouse represented a continuum of regional grain dealers linked to the burgeoning grain trade in Chicago.⁹

Owners of Armour's Warehouse played a leading role in the county's grain trade. In 1877, "Mr. Griswold's house [in Seneca sent] as much if not more grain into the larger markets than any other single house along the canal, its contributions being something over 550,000 bushels." Garden and Bruce shipped around 400,000 bushels from their elevator on the south side of the canal that year. According to an 1877 account, Seneca was a leading shipping point in La Salle County along the Illinois and Michigan Canal. With 600,000 bushels of corn shipped on the

⁸Interstate, 2: 362, 375-6; Dawn Duensing, Armour's Warehouse. Historic American Engineering Record, HAER No. IL-25, 1987, pp. 2-3.

⁹Inter-State, 2: 325-6, 362, 376, 823.

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canal, the community was second after Ottawa's 1,300,000 bushels. Seneca's 200,000 bushels of oats made it the leading oat shipping point in the county.¹⁰

In 1882, Seneca obtained a second rail connection when it became the terminal point for the apparently short-lived Kankakee and Seneca Railroad. According to an 1886 county history, the presence of two rail lines and the canal "enable[d] the merchants to pay high prices for grain, the result of which is that there is more grain shipped from Seneca than any other point in the county." By the 1880s, the annual shippage from Seneca averaged between 1,000,000 and 1,200,000 bushels.¹¹

The same year that the second railroad arrived, Graves and Johnson built the community's third elevator (not extant). Located near the Chicago, Rock Island & Pacific Railroad depot, the relatively small elevator had a 50,000 bushel capacity. In 1886, Armour's Warehouse had five dumps to accommodate farm wagons and a capacity of 100,000 bushels. By 1892, the elevator had a capacity of 130,000 bushels in its elevator and cribs.¹²

The decision of Graves and Johnson to build near the railroad in 1882--not the canal--reflected the diminishing importance of the Illinois and Michigan Canal. After 1882 total tonnage carried on the canal decreased. Enjoying rail connections in addition to canal access, Armour's Warehouse continued to function as a grain elevator long after the canal ceased operation around 1917.¹³

CRITERION C: ENGINEERING

One of the key changes in grain handling was the elimination of individual sacks of grain. Once the grain was out of sacks, it could be stored and handled more efficiently in greater quantities.

¹⁰*The Past & Present of la Salle County, Illinois* (Chicago: H.F. Kett & Co., 1877), p. 332, quoting; Elmer Baldwin, *History of La Salle County, Illinois* (Chicago: n.p., 1877).

¹¹Inter-State, pp.359, 361.

¹²Interstate, 2: 362; Sanborn Fire Insurance Map, Seneca, 1892.

¹³Illinois and Michigan Canal, NRHP Nomination, p. 8-2.

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Armour's Warehouse

Steam-powered grain elevators, such as the one built in Chicago in 1848, were a key feature in this change. Before the grain elevator, John Armour and his partners in 1851 "conducted their business in a primitive style, weighing the grain in sacks on a small scale, shelling the corn with a hand sheller, etc." The building they used for grain storage was so small that it was later turned into a boarding house.¹⁴

The steam-powered grain elevator was one of three key elements that transformed Chicago into the leading grain terminal of the Midwest in the antebellum period. The other two factors were the establishment of a grading system which treated grain as a commodity and thereby allowed grain from different owners to be mixed together and the establishment of a board of trade to impose standards and regulate grain handling.¹⁵

It is at least possible that Armour's Warehouse was initially constructed as a simple grain warehouse where sacked grain was stored, then was quickly converted to a more modern elevating warehouse. The lower portion of the building features hand hewn oak logs and softwoods fabricated using a vertical reciprocating saw. However, floor joists and the two-story monitor which contains the headhouse and elevating machinery were constructed using lumber cut with a circular saw. While the circular saw was available in the 1850s, it was not commonly in place until the late 1860s. However, it is also possible that, for whatever reason, the warehouse owner simply happened to obtain lumber cut using different saws.¹⁶

Regardless of the early construction history of the facility, it is the elevating warehouse's function as a country elevator that renders the property significant under Criterion C. As one of a series of such facilities along a transportation system, the country elevator was designed to receive and store grain for area farmers. The grain arrived in wagon lots but was shipped to the terminal elevator by barge or railroad car in larger units. In contrast, the terminal elevator, the other major functional type of elevator, received individual barge or railcar lots of grain from country elevators and transferred it in still larger units to barges, ships, or other railcar lots.

¹⁴Inter-State, 1: 823.

¹⁵Cronon, pp. 107-141.

¹⁶Mansberger, pp. 13-14.

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Armour's Warehouse

Terminal elevators are found at large transportation (especially railroad) centers such as Chicago. They occur at points of transfer from one method of transportation, such as the Illinois and Michigan Canal at its terminus, to another, such as railroads. Terminal elevators generally stored more than 100,000 bushels of grain, sometimes millions of bushels.¹⁷

Intended to serve a relatively limited area, country elevators had smaller storage capacities than terminal elevators. Many had total capacities of 25,000 to 35,000 bushels, but some, such as Armour's Warehouse, could accommodate more than 100,000 bushels of grain.¹⁸

A once common but now rare example of an antebellum wooden elevating warehouse, Armour's Warehouse was constructed with studded grain bins having vertical studs. Wood grain elevators are defined by how the bins were constructed, either studded or cribbed. Cribbed bins are made by stacking lumber one on top of another, that is, 2"x4" or larger planks laid flatwise. Studded elevators have bins fashioned from vertical members (studs) which are simply planked over on the inside with boards to form bins. Metal tie rods helped hold the bins together under the pressure of the grain they held. Armour's Warehouse has these studded bins with tie rods. The studded elevator was an earlier type of construction which cribbed bin construction gradually supplanted. According to a 1918 article, "In the early days of country elevator construction, most of the small houses were erected on what was known as the studded plan of construction, that is the bin walls were formed of 2"x4" s, placed vertical and held together by tie rods, plats and bands."¹⁹

The property exhibits other features typical of the country elevator, including a central (rather than extended conveyor) grain distributor system, wood construction, location adjacent to a transportation system, metal tie rods to strengthen multiple bins, and studded bin construction. Like other examples, the elevator is essentially rectangular and has a full-length cupola. Armour's Warehouse has or had still more features typical of wooden country elevators: receiving driveways, scales, wagon dumping devices, dump grates, separate office, and a

¹⁷Robert Frame, *Grain Elevators in Minnesota*, Multiple Property Documentation Form, 1989, p. E-4.

¹⁸Frame, p. E-7.

¹⁹Frame, pp. E-14-E-15, quoting 1918 edition of *Plans*.

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powerhouse. For fire protection, most wooden elevators were eventually sheathed in corrugated galvanized steel siding, as has Armour's Warehouse.²⁰

The manner of bin construction defines grain elevator types, and Armour's Warehouse is an example of a studded elevator. Studded construction for grain bins is related to other balloon-frame construction techniques developed in the 19th century.

No information has come to light regarding the design source for Armour's Warehouse. Certainly, John Armour, who had been in the grain business since at least 1851 and probably earlier, had knowledge of grain elevator design and construction. He may have obtained plans from a company specializing in elevators and other large scale agricultural processing or storage facilities. Elevator builders do not seem to have promoted distinctive building styles or patents on bin design, but they did urge grain dealers to employ professional design sources. Writing in 1885, Parry, Deal & Company of Peoria, Illinois, stated, "A professional elevator architect is supposed to have had experience and can save you something on first cost and often a mint of money in the long run."²¹ Other related businesses in Peoria included Saul Hagerty's millwright concern established in 1855. Hagerty built numerous mills and built (or rebuilt) 19 of Peoria's distilleries. W.W. Lind & Company (Lind had been Hagerty's partner) advertised in 1883:

Furnish plans and specifications for flour mills, elevators and distilleries of any style and capacity. Contracts made for furnishing all machinery and building the entire mill.²²

²⁰ Frame, pp. E-12, -14, -16, -17.

²¹ Frame, p. E-10, quoting Parry, Deal & Company, "Grain Elevators," [1885], p. 15.

²² Hagerty Brothers Company, History, 1860-1985. Pamphlet, no page numbers, quoting 1883 advertisement.

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Armour's Warehouse

SECTION 9.

Much of the information in this nomination was taken from two previous studies by Dawn Duensing and Floyd Mansberger. Building descriptions were field-checked to the extent possible. The work of Duensing and Mansberger is gratefully acknowledged and appreciated.

- Armour's Warehouse. Historic Photographs (1912 and undated). Seneca Public Library.
- Baldwin, Elmer. *History of La Salle County, Illinois*. Chicago: n.p., 1877.
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- Dearborn Associates of Chicago. Feasibility Study, Seneca Grain Elevator on the Illinois and Michigan Canal, Seneca, Illinois. Report prepared for the Illinois Department of Conservation, 1992.
- Duensing, Dawn. Armour's Warehouse. Historic American Engineering Record, HAER No. IL-25. 1987.
- Frame, Robert. Grain Elevators in Minnesota, National Register of Historic Places Multiple Property Documentation Form, 1989.
- Hagerty Brothers Company, History, 1860-1985. Pamphlet.
- History of La Salle County, Illinois*, 2 vols. Chicago: Inter-State Publishing Company, 1886.
- Illinois and Michigan Canal, National Register of Historic Places Nomination. 1976.
- Mansberger, Floyd. Archaeological Investigations at Armour's Warehouse (Hogan's Grain Elevator), Seneca, La Salle County, Illinois. Report prepared for Illinois Department of Natural Resources, 1996.
- National Park Service, Seneca Grain Elevator. Brochure for Illinois Michigan National Heritage Corridor. Undated.
- The Past & Present of La Salle County, Illinois*. Chicago: H.F. Kett & Co., 1877.
- Sanborn Map Company. Maps, Seneca, Illinois. 1892, 1898, 1907, 1913, 1924, 1939.

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SECTION 10.

Verbal Boundary Description

The boundaries for the property are all of Block 3 of Armour's Addition to the original town of Crotty (now known as Seneca, Illinois), an unplatted parcel approximately 90' x 120' along the west edge of Block 3, and a 90' strip of land along the north side of the Illinois and Michigan Canal. The 90' strip runs the length of Block 3.

Boundary Justification

The boundary includes the grain elevator, office, two seed warehouses, and operating space (including the filled channel inlet just west of the end of Block 3) that have historically been part of the Armour's Warehouse complex and that maintain historic integrity.

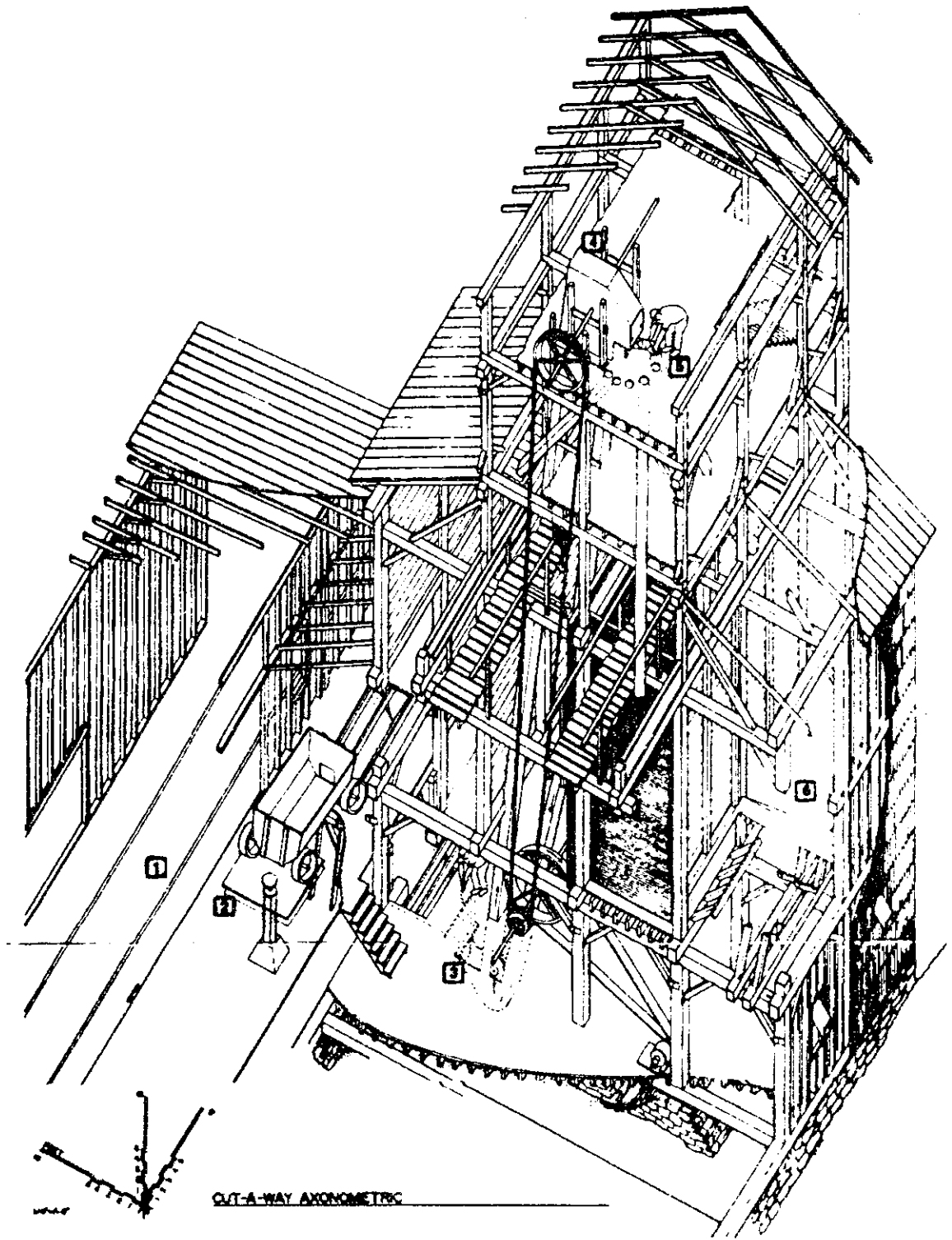
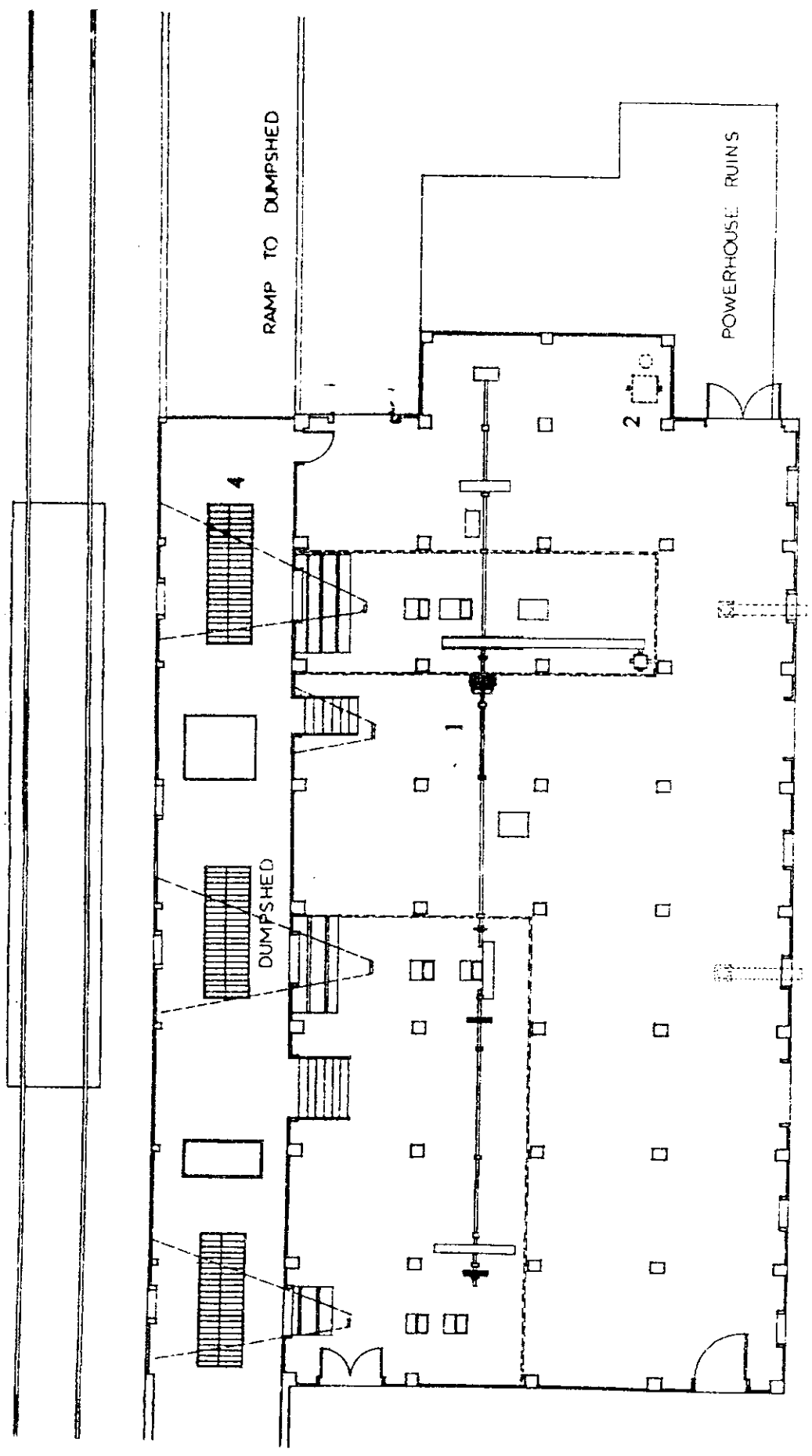


Figure 1. Armour's Warehouse, La Salle County, Illinois. Cut-away Axonometric
Source: National Park Service, Seneca Grain Elevator. Brochure.

3 |



OPERATING FLOOR
SCALE 1/8"=1'-0"

Figure 2. Armour's Warehouse, La Salle County, Illinois. Operating Floor (first floor). Source: Dearborn Associates of Chicago, Feasibility Study, 1992.

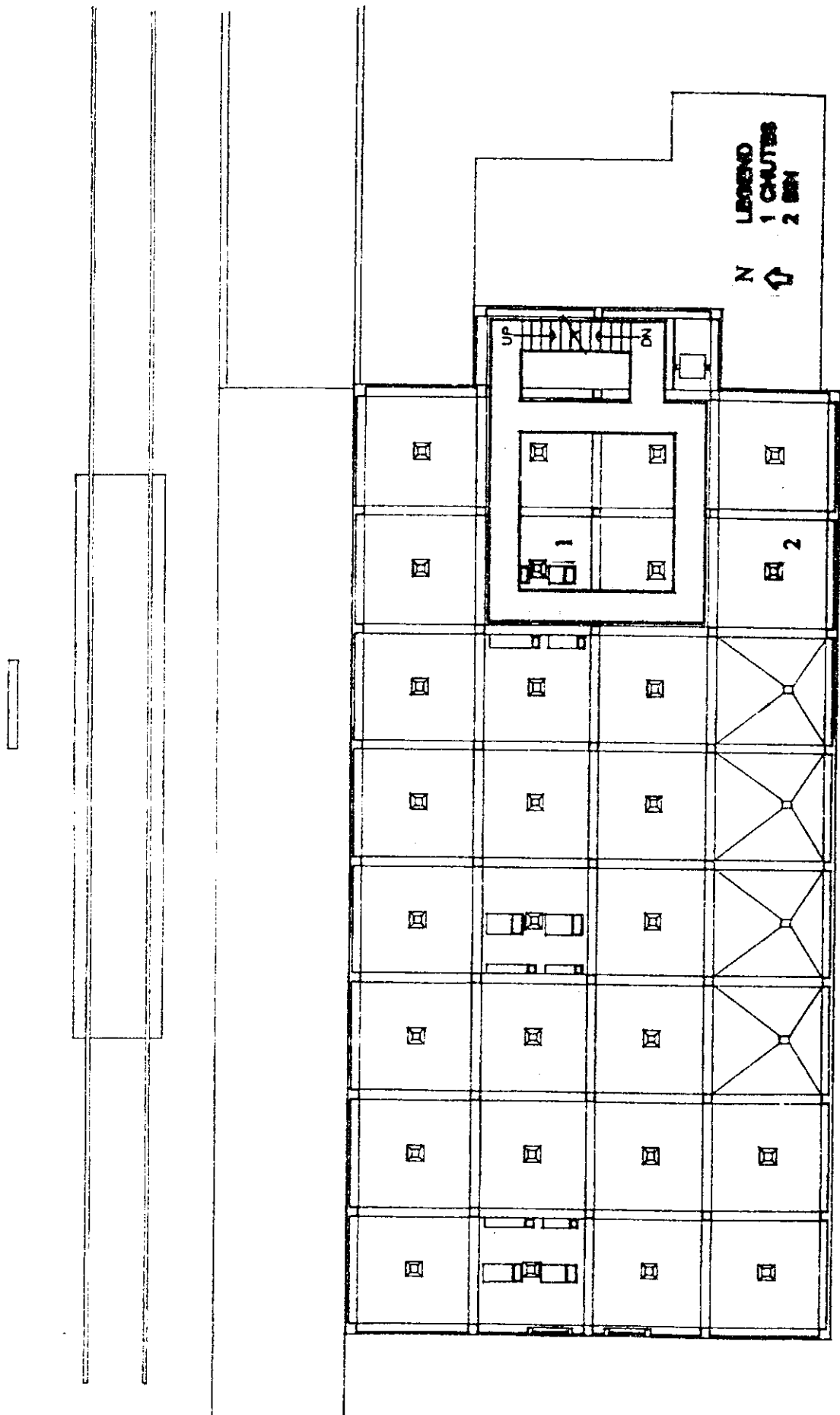


Figure 3. Armour's Warehouse, La Salle County, Illinois. Bin-Catwalk Floor (second floor).
 Source: Dearborn Associates of Chicago, Feasibility Study, 1992.

BIN-CATWALK
 SCALE 1/8"=1'-0"

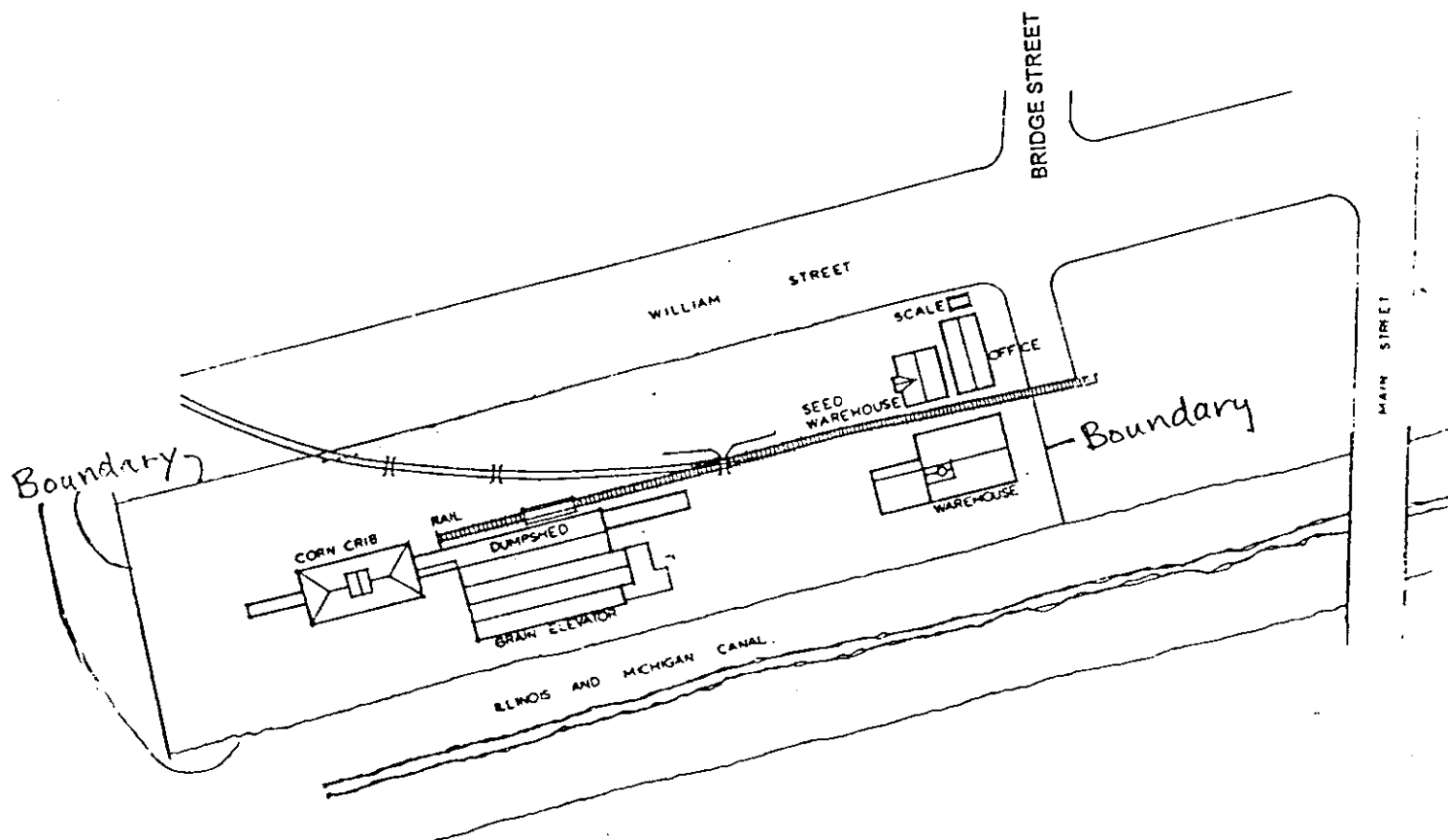
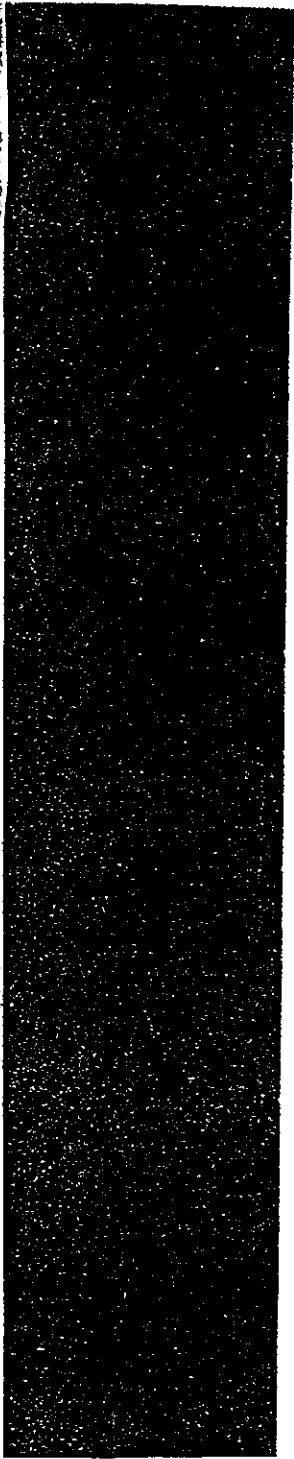
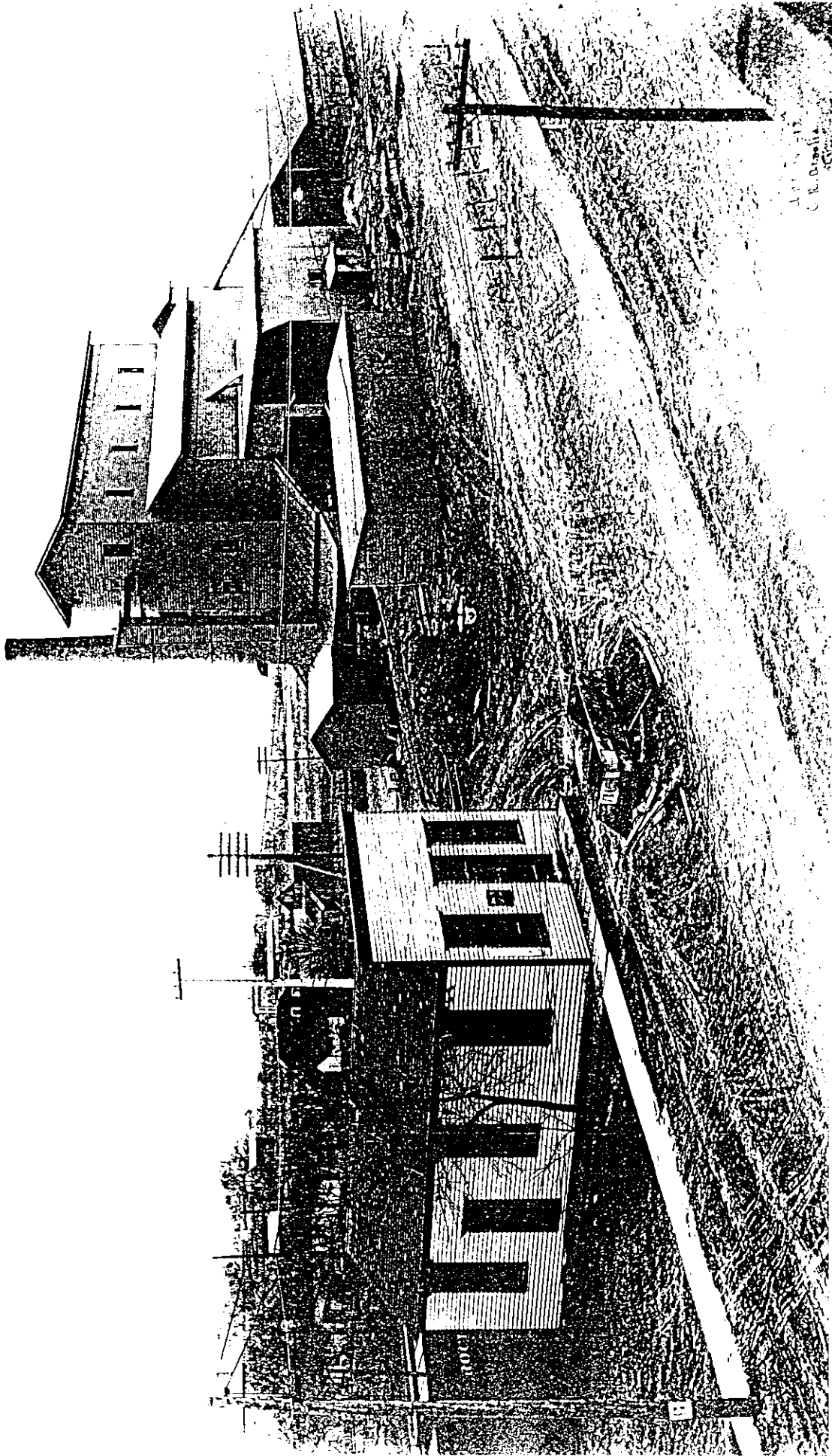


Figure 4. Armour's Warehouse, La Salle County, Illinois. Site Plan. Source: Dearborn Associates of Chicago, Feasibility Study, 1992.



Armour's Warehouse
1913



United States Department of the Interior

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IN REPLY REFER TO

The Director of the National Park Service is pleased to announce actions on the following properties for the National Register of Historic Places.

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WEEKLY LIST OF ACTIONS TAKEN ON PROPERTIES: 11/03/97 THROUGH 11/07/97

KEY: State, County, Property Name, Address/Boundary, City, Vicinity, Reference Number, NHL, Action, Date, Multiple Name

ARIZONA, COCONINO COUNTY, Lee's Ferry and Lonely Dell Ranch, Confluence of Colorado and Paria Rs., near Utah and Arizona border, Marble Canyon vicinity, 97001234, LISTED, 11/04/97
FLORIDA, DADE COUNTY, Homestead Town Hall, 43 N. Krome Ave., Homestead, 97001327, LISTED, 11/07/97 (Homestead MPS)
FLORIDA, DUVAL COUNTY, Atlantic National Bank Annex, 118 W. Adams St., Jacksonville, 97001328, LISTED, 11/07/97 (Downtown Jacksonville MPS)
FLORIDA, MARTIN COUNTY, Martin County Court House, Old, 80 E. Ocean Blvd., Stuart, 97001329, LISTED, 11/07/97
GEORGIA, DODGE COUNTY, Williamson Mausoleum at Orphans Cemetery, Orphans Cemetery Rd., jct. of US 23 and US 341, Eastman vicinity, 97001331, LISTED, 11/07/97
GEORGIA, RICHMOND COUNTY, Liberty Methodist Church, 2040 Liberty Church Rd., Hephzibah, 97001330, LISTED, 11/07/97
ILLINOIS, CHAMPAIGN COUNTY, Bailey--Rug Building, 219-225 N. Neil St., Champaign, 97001337, LISTED, 11/07/97
ILLINOIS, CHAMPAIGN COUNTY, Building at 201 North Market Street, 201 N. Market St., Champaign, 97001335, LISTED, 11/07/97
ILLINOIS, CHAMPAIGN COUNTY, Building at 203-205 North Market Street, 203-205 N. Market St., Champaign, 97001336, LISTED, 11/07/97
ILLINOIS, JO DAVIESS COUNTY, Apple River Fort Site, 0.25 mi. ESE of jct. of Mrytle and Illinois Sts., Elizabeth vicinity, 97001332, LISTED, 11/07/97
ILLINOIS, JO DAVIESS COUNTY, White, W.E., Building, 100 N. Main St., Stockton, 97001339, LISTED, 11/07/97
ILLINOIS, LA SALLE COUNTY, Armour's Warehouse, Jct. of William and Bridge Sts., Seneca, 97001333, LISTED, 11/07/97
KENTUCKY, ADAIR COUNTY, Giles, Janice Holt and Henry, Log House, 302 Spout Springs Rd., Knifley vicinity, 97001237, LISTED, 11/06/97
KENTUCKY, BOURBON COUNTY, Snow Hill, 4100 Little Rock--Jackstown Rd., Little vicinity, 97001341, LISTED, 11/07/97
KENTUCKY, MAGOFFIN COUNTY, Salversville Bank, Jct. of W. Maple and N. Church Sts., Sayersville, 97001340, LISTED, 11/07/97
MISSISSIPPI, CHOCTAW COUNTY, Weir, Col. John, House, 102 Ann St., Weir, 97001378, LISTED, 11/07/97
MONTANA, LEWIS AND CLARK COUNTY, Wolf Creek Hotel, Jct. of Main St. and Bissonnett St., Wolf Creek, 97001381, LISTED, 11/07/97
NEW YORK, GENESEE COUNTY, LeRoy House and Union Free School, 23 E. Main St., Leroy, 97001388, LISTED, 11/07/97
NEW YORK, ONONDAGA COUNTY, Plymouth Congregational Church, 232 E. Onondaga St., Syracuse, 97001384, LISTED, 11/07/97
NEW YORK, OSWEGO COUNTY, Stillwater Bridge, Dam Rd. over Salmon R., Stillwater vicinity, 97001385, LISTED, 11/07/97
NEW YORK, SARATOGA COUNTY, Saratoga Reformed Church, Old, Jct. of Burgoyne and Pearl Sts., Schuylerville, 97001387, LISTED, 11/07/97
NEW YORK, TIOGA COUNTY, Waverly Junior and Senoir High School, 443 Pennsylvania Ave., Waverly, 97001389, LISTED, 11/07/97
OKLAHOMA, OSAGE COUNTY, Barnsdall Main Street Well Site, W of jct of OK 11 and Main St., Barnsdall, 97001153, LISTED, 10/01/97 (Energy-Related Properties in Northeastern Oklahoma MPS)
PENNSYLVANIA, LACKAWANNA COUNTY, Lackawanna County Courthouse and John Mitchell Monument, Bounded by Washington Ave., Linden St., Adams Ave., and Spruce St., Scranton, 97001257, LISTED, 11/05/97 (Anthracite--Related Resources of Northeastern Pennsylv MPS)
SOUTH DAKOTA, CODINGTON COUNTY, Citizens State Bank of Henry, Jct. of Main and 2nd Sts., Henry, 97001391, LISTED, 11/07/97
SOUTH DAKOTA, LAWRENCE COUNTY, Toomey House, 1011 Main St., Spearfish, 97001390, LISTED, 11/07/97
SOUTH DAKOTA, ROBERTS COUNTY, Stavig, Andrew and Mary, House, 112 First Ave. W, Sisseton, 97001392, LISTED, 11/07/97
VIRGINIA, FAUQUIER COUNTY, Burrland Farm Historic District, Burrland Ln., Middleburg vicinity, 97001406, LISTED, 11/07/97
VIRGINIA, FAUQUIER COUNTY, Number 18 School in Marshall, Jct. of VA 55 and VA 622, Marshall vicinity, 97001405, LISTED, 11/07/97
VIRGINIA, NORFOLK INDEPENDENT CITY, Poplar Hall, 400 Stuart Cir., Norfolk, 97001402, LISTED, 11/07/97
WASHINGTON, KING COUNTY, Thorton, William Harper, House, 17424 95th Ave, NE, Bothell, 97001408, LISTED, 11/07/97 (Bothell MPS)
WISCONSIN, LA CROSSE COUNTY, Cass and King Street Residential Historic District, Roughly bounded by State, S. 21st, and Madison Sts., and West Ave. S, La Crosse, 97001410, LISTED, 11/07/97
WYOMING, SWEETWATER COUNTY, Our Lady Sorrows Catholic Church, A at Broadway, Rock Springs, 97001326, LISTED, 11/06/97