USDI/NPS NRHP Registration Form (Rev. 8-86)
United States Department of the Interior, National Park Service
National Register of Historic Places Registration Form

1. NAME OF PROPERTY

Historic Name: City of Milwaukee (Car Ferry)

Other Name/Site Number: S.S. City of Milwaukee

2. LOCATION

Street & Number: Marine Terminal Railyard, East Slip Not for publication:____

City/Town: Elberta Vicinity:____

State: MI County: Benzie Code: 019 Zip Code: 49628

3. CLASSIFICATION

Ownership of Property		Category of Property	
Private:	X	Building(s):	___
Public-local:	___	District:	___
Public-State:	___	Site:	___
Public-Federal:	___	Structure:	X
		Object:	___

Number of Resources within Property

Contributing	Noncontributing	
_____	_____	buildings
_____	_____	sites
1	_____	structures
_____	_____	objects
1	_____	Total

Number of Contributing Resources Previously Listed in the National Register: 0

Name of related multiple property listing:_____

4. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act of 1986, 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.

_____ _____
Signature of Certifying Official Date

_____
State or Federal Agency and Bureau

In my opinion, the property ____ meets ____ does not meet the National Register criteria.

_____ _____
Signature of Commenting or Other Official Date

_____
State or Federal Agency and Bureau

5. NATIONAL PARK SERVICE CERTIFICATION

I, hereby certify that this property is:

____ Entered in the National Register _____
____ Determined eligible for the _____
National Register
____ Determined not eligible for the _____
National Register
____ Removed from the National Register _____
____ Other (explain): _____

_____ _____
Signature of Keeper Date of Action

6. FUNCTION OR USE

Historic:	Transportation Transportation	Sub:	Water-Related Rail-Related
Current:	Work in Progress	Sub:	

7. DESCRIPTION

Architectural Classification:	Materials:	
N/A	Foundation:	Steel
	Walls:	Steel
	Roof:	Steel
	Other Description:	N/A

Describe Present and Historic Physical Appearance.

Description

The Great Lakes Train Ferry City of Milwaukee, currently moored at the Arbor Railroad Terminal in Elberta, Michigan, is a steel-hulled vessel with a steel superstructure. A dominant feature of the vessel is the large four-track enclosed car deck which will hold 22 modern-size freight cars. City of Milwaukee is being prepared for museum use. She is nearly all original with only a few minor changes. She is in excellent condition.

CITY OF MILWAUKEE (as built)

The City of Milwaukee (official number 230448) was built in 1931 by Manitowoc Shipbuilding Company, at Manitowoc, Wisconsin (Hull No. 261). She is a steam, twin screw propelled train ferry. The two engines are triple expansion (20 1/2" + 34" + 56" x 36"), which combined to make 2700 H.P. There are four Scotch boilers 14' 6" x 12', 185 lb. pressure. The hull is riveted steel. Since train ferries required a flat car deck, they were built with essentially no sheer and their ice breaking bow could not have much flare. They are relatively shallow draft boats, with the hull designed and reinforced for ice breaking. The vessel is divided into eight compartments by seven watertight bulkheads. Beginning forward is the forepeak and chain locker, followed by holds #1 and #2. These both could hold ballast water and feed

water for the boilers when operating in ice. The boiler room is next, with the fuel bunkers. The engine room follows. Hold #3 is divided into two levels with the top level containing ten cabins for 20 unlicensed crew members. Aboard a car ferry, this cabin area is called "the flicker." The lower level of hold #3 contains the sewage tank and the propeller shafts. Hold #4 also is divided into two levels with the upper level holding fresh water tanks and the lower level housing only the propeller shaft and ballast water. The afterpeak contains the seagate hoist engine, two steering engines, and two deck capstan engines. The car deck is above the engine deck. The car deck is enclosed by the hull sides, but totally open in one "room" or space. The deck contains four, generally parallel sets of track, which run fore and aft. Two feet outside of each rail is another rail--called a dead rail--to which the freight cars are attached by a system of jacks, turnbuckles, and chains. One long flight of stairs leads up to the cabin deck. At the stern is the seagate which swings upward by chains. The car deck can accommodate 22 modern freight cars.

The spar cabin deck contains six cabins for 11 crew members, galley, officer's mess, and passenger dining room. Forward is the main saloon with six passenger cabins alongside each flanking side. The forward cabin on each side has a fold-down "Pullman" berth, denoting the railroad influence of the vessel. Some cabins have traditional upper bunks. Forward of the saloon is the observation room with large windows looking out onto the foredeck. The original wicker furniture is present today, as are the original barrel back leather chairs and oak benches in the main saloon. Just off the main saloon is the Purser's Office and cabin, also cabin space for the steward, smoking room, and restrooms. There is extensive golden oak woodwork and paneling throughout the cabins, saloon, and observation area. It shows fine craftsmanship, but is simple and clean in its lines and patterns, reflecting the functional, honest "art and craft" style popular when the ship's plans were drafted in the 1920s. The oak woodwork appears throughout the ship, in the crews quarters, galley and pilot house, as well. Clerestory skylights adorned the main saloon, passenger dining room, and crew's cabin area hallway.

A unique feature of car ferries is an after pilothouse. Because a car ferry must dock stern first and precisely line up the car deck track with the track on the dock apron, the captain must be at the stern during docking. In the early years this required

the captain to stand atop a box car and signal the engine room via whistles; this was a cold and dangerous situation. The after pilothouse, with a wheel and telegraphs located at the rear of the spar deck, solved this problem. Deck machinery included a towing cable just forward of the after pilothouse and two steam deck winches, and anchor windlass for the anchor and mooring cables near the bow.

The texas deck has five cabins for the captain, mates, wheelsman, lookout, and watchman. Inside, a ladder leads up to the pilothouse. On the boat deck are two lifeboat stations with metal lifeboats. The pilothouse is tongue and groove oak paneling. A brass steam radiator is attached forward below the forward windows and serves as a heater and window defroster. A chart table is at the rear. The pilothouse contained no radio equipment when originally fitted out in 1931.

City of Milwaukee has two raked smoke stacks fore and aft, and two raked masts. The forecastle has a crows nest lookout with compass and binnacle.

Alterations

City of Milwaukee has had no major alterations nor major accidents requiring extensive repair. She is essentially as built in 1931. Most of the ship's equipment and furnishings are present. The ship's woodwork has its original finish, and is not painted over. The alterations that have occurred are minor and relate primarily to the upgrading of electrical and navigational equipment during her working life. Visually the greatest change has been the removal in 1960 of the skylight over the main saloon, and the addition of overhead lights.

Some galley countertops are covered with stainless steel; there is a new sink. The boilers were converted from coal- to oil-fired in 1947, and the coal bunkers adapted for oil storage. Landing booms were installed under bridge wings on spar deck. A steelhouse was constructed over the deck winches at an unknown date. A sprinkler system was installed over the car deck. A World War II Navy steam turbine direct current generator replaced the reciprocating generator in 1958. A surplus electrical distribution panel was also installed at this time. Radio equipment was added in 1940 and a ship-to-shore company phone in 1969. The steam whistle mounted on the forward smoke stack was replaced by the whistle from the passenger steamer Manitou,

because the captain liked the sound better. A cabin used as a gentlemen's smoking room was converted to a linen closet by removing one door and reducing the size of the windows.

Information about the Original Appearance and Alterations are from the Following Sources:

1. Construction Plans, Hull 261--City of Milwaukee, on file at Northwest Michigan Maritime Museum-Frankfort, Michigan--1931.

2. Construction Plans, Madison (sister ship), on file at Northwest Michigan Maritime Museum-Frankfort, Michigan.

3. "Oral History Interview with Capt. R.J. Martin,"--Capt. Martin was Master of City of Milwaukee for twenty years and served aboard for many previous years. He retired as Marine Superintendent of the Grand Trunk Railroad. On file at the Northwest Michigan Maritime Museum-Frankfort, Michigan.

8. STATEMENT OF SIGNIFICANCE

Certifying official has considered the significance of this property in relation to other properties: Nationally: X Statewide: ___ Locally: ___

Applicable National Register Criteria: A X B ___ C X D ___ NHL 1,4

Criteria Considerations (Exceptions): A ___ B ___ C ___ D ___ E ___ F ___ G ___

NHL Criteria: 1, 4

Areas of Significance:	Period(s) of Significance:	Significant Date:
Maritime History	1931-1940	1931
Transportation	1931-1940	

NHL Theme(s): XII. Business
L. Shipping and Transportation

XIV. Transportation
B. Ships, Boats, Lighthouses and Other Structures

Significant Person(s): N/A

Cultural Affiliation: N/A

Architect/Builder: Manitowoc Shipbuilding Company, Manitowoc, Wisconsin

State Significance of Property, and Justify Criteria, Criteria Considerations, and Areas and Periods of Significance Noted Above.

Some have viewed the Great Lakes as a natural barrier to transportation. Still others have viewed this inland sea as a transportation network to be utilized. Whether barrier or network, it was still essential for the economic development of the upper midwest that railroad cargoes cross these waters. At first railroad cargoes were reloaded onto package freighters for forwarding to lake ports, there to be once again loaded aboard freight cars. Barges carried loaded train cars across the calm rivers that were part of the Lake system. On November 24, 1892, a bold experiment began at South Frankfort, Michigan, to

transport loaded freight cars across the open water of these Great Lakes. The effort required a specialized craft, able to load 24 train cars and to service on the often stormy and ice packed lakes. The experiment, a success, began a unique American maritime enterprise: the Great Lakes (Train) Car Ferry fleet. Eventually, 39 vessels were built for this service, which continues today. The Great Lakes Car Ferry fleet became the largest open lake train ferry system in the world. At its peak, it used 14 vessels to transport 14 full freight trains a day across Lake Michigan alone. [1] As many as 26 port cities around the Great Lakes were part of this rail link. [2] The greatest annual mileage of any ship in the world is bestowed to a Great Lakes ferry.

City of Milwaukee is the sole surviving example of a pre-1940, "classic" period Great Lakes Car Ferry. [3] City of Milwaukee is in excellent and nearly original condition with only minor changes. She embodies the distinctive characteristic of these specialized craft and possesses all the historic features associated with these vessels. City of Milwaukee was involved in crosslake train car ferry service all of her working life (1931-1982). She is closely associated with events that have made a significant contribution to the maritime history of the Great Lakes region. City of Milwaukee and her five sister ships were considered to be the aesthetic peak of car ferry design. [4] Built during the early days of the Depression, and because of declining cargo, she soon became the Grand Trunk's "spare boat." As such, she was frequently leased to other railroads and thus City of Milwaukee has a historic connection to each of the Great Lakes Car Ferry fleets. She is presently docked at the Marine Terminal Railyard of the Ann Arbor Railroad at Elberta, Michigan, where crosslake ferry service began nearly 100 years ago. Over the years she was frequently leased to the Ann Arbor Railroad and she was officially part of the Ann Arbor fleet during the last years of her working life. Because of her excellent, unaltered condition and her location at her historic site in the Elberta Marine Terminal Railyard (with her associated historic structures) she possesses a high degree of integrity in each aspect of design, location, setting, material, workmanship, and especially feeling.

The proceeding statement of significance is based on the more detailed statements that follow.

The Development of the American Steam Ferry

Ferries have been used to carry people, horses, and vehicles across narrow bodies of water since antiquity. In addition to a variety of hull designs, a succession of means of propulsion were used for ferries, ranging from pulling and sails to oars and paddles. The first ferry known to operate in America plied the Charles River between Chelsea and Charlestown, Massachusetts, in 1631. [5] Ferries remained little more than scarcely powered barges until the late 18th century, when two technological developments were introduced in the United States to produce the direct ancestor of the later ferries. The first was the adoption on American rivers of a broad, shallow draft, scow-formed hull with loading ramps. These hulls, developed in the Netherlands, proved capacious, and, because of the ramps at each end, easy to load and unload. Along with the development of these "double-end" ferries, Americans experimented with mechanical propulsion, including "horse ferries," vessels with horses below decks that turned gears to power paddlewheels. The development of marine steam technology provided the final element to produce the standard ferry in the United States. [6]

In 1809, Robert Fulton patented the double-ended steam ferry and built several for service across New York's Hudson and East Rivers. A grateful New York named the Manhattan boulevard joining the two ferry landings "Fulton Street" in his honor, a harbinger of the approbation accorded the new vessels, which spread throughout the country. [7] In time, four basic ferry types were developed in the United States:

1. the double-ended type;
2. the Western River, sternwheel and sidewheel shoal draft type;
3. car transfer ferries; and
4. the Great Lakes car ferry.

The double-enders, the most common type, were employed on most harbor routes. Essentially American in design and development, "it is mainly of New York and San Francisco; it has evolved inevitably to meet the problems of the rapid transport of people and vehicles between congested areas separated by water." [8] Efficient "because it permits ... unloading the maximum quantity

of transportable matter in a minimum of time and ... take on board the same maximum quantity for a return trip without any preparations other than the reversal of the main engines ... ," the double-ended ferry was "a floating bridge." [9]

The Great Lakes car ferries, ship-formed screw propelled ships with flat sterns for loading, are entirely enclosed because of the ice and cold of winter and the vast expanses of open water on the inland seas in summer. These ferries, confined to the Great Lakes, an international body of water and the scene of considerable maritime activity, were essential for the operation of various railroad companies that linked lake ports. American railroads were the largest owners and operators of vessels in the world in the late 19th century and the first three decades of the 20th century. The transfer car ferries, of which the Great Lakes version was the largest and most unique type, were a significant part of their fleets. [10]

> The hull really is that of a self-propelled car float, single ended, with the sides extended to a heights of about 18' above the main strength deck and covered in, the so-called spar deck thus formed being used for the navigating bridge, passenger accommodations, d-tacks, boats, etc. Cars are loaded and removed from the aft end because the bow must be strong, re-enforced for ice work, and wave resisting ... [11]

The Great Lakes car ferries, dating to the last decades of the 19th century, proved a great success, and continue in operation to this day, the major changes being less emphasis on passenger accommodations and the shift from steam to diesel-powered propulsion.

Great Lakes Railroads and Car Ferries

Following the Civil War, railroads experienced a boom in the Great Lakes Region. Companies organized and built track to nearly every section of the region; to exploit its natural, industrial, and agricultural resources. While we might now perceive the Great Lakes as natural barriers, to the developing railroads the lakes were, in fact, an effective means to increase the companies transportation network. Maintenance of a steamship was no more expensive than for a steam locomotive, and construction of the steamship and port facilities was far cheaper than building track of a comparable distance. The water highway of

the Great Lakes provided an economic means to increase the area serviced by the railroad organization. The development of steamboat transportation on both the United States and Canadian sides of the Great Lakes has always been closely associated with railroad interest.

At first railroads relied upon package freighters to complete connections along this water network. These serviceable steamboats cruised the coast, stopping at each port to pick up and distribute freight and passengers. These boats played an important economic role by funneling freight and passengers to the railhead and by permitting freight and passengers to be distributed to a wide array of port cities.

There were two disadvantages to the rail-package or bulk freighter system: first, the labor needed to unload and load on each side of the lake; and second, ice.

The system was known as the "break bulk fleet." Cargo aboard train cars had to be taken apart, unloaded, and loaded aboard the package freighter. On the other side of the lake, the process had to be repeated. The process was not only, expensive, but resulted in delays and lost or damaged cargoes. It took no great insight to see how much better the system would work if the entire, fully loaded train car could be transported across the lake to continue on its way. [12]

In 1849, the first self-propelled train car ferry was built in Scotland, to transport train cars across the Firth of Forth. In 1858, the Buffalo and Lake Huron Railroad constructed International to ferry train cars across the Niagara River. Additional train ferry operations were instituted across the Detroit and St. Clair Rivers in the late 1860s and 1870s, by the predecessor of the Canadian National Railway. The type of craft developed for these river ferries were steam-powered, open deck barges with an overhead pilothouse. The success of these early river ferries was noticed by other railroads. They were copied at other locations on the connecting rivers of the Great Lakes system, by the Michigan Central, Pere Marquette, and Wabash Railroads. [13]

The success of the river train ferries also did not escape the attention of the Detroit, Mackinac and Marquette Railroad. The railroad, which operated between Detroit and Marquette in the Upper Peninsula, had to ship freight across the Straits of

Mackinac. Although most of the cargo was unloaded and loaded aboard the package freighter Algomah, the railroad experimented with using Algomah to tow a barge equipped to carry four train cars. The arrangement was unsatisfactory. At this northern location, ice is present four months of the year. Because of wind conditions, wind-blown ice packs together to form deep concentrations. Towing a barge in these conditions was not practical.

The Company engaged well-known Great Lakes Naval Architect Frank E. Kirby to design a train ferry which could operate under the ice and sea conditions of the Straits of Mackinac. Using technical advice from L.R. Boynton, captain of the Algomah, Kirby designed an "ice-breaker" train car ferry. The wooden hull was sheathed with metal for protection from the ice. Like the river ferry, she had an open deck for the train cars which loaded at the bow end. She also had a raised pilot house. The hull was designed to raise up with the pressure of ice against her sides and a spoon shaped prow was designed to slide up on sheet ice and crush it. The unique feature of this ferry, which was named St. Ignace, was a bow propeller. Water churned up by the bow propeller broke up and eroded thick pack ice. St. Ignace began operation in the Spring of 1888 and was an unqualified success. [14]

In 1892, the Toledo, Ann Arbor, and North Michigan Railroad was extended to Frankfort and Betsie Bay. The Bay was recognized as one of the best harbors on Lake Michigan. James Ashley, president of the railroad, envisioned a train car ferry to carry cars across the lake. Ferrying loaded train cars across such a large expanse of water had never been attempted before and many experienced "Lakemen" did not believe it to be possible. A ship far different than the river or Straits ferries would be required. Any ship with a hole in her bow, large enough to drive a train car through, could not service even the routine waves that would be found in the middle of Lake Michigan.

Frank Kirby, successful designer of St. Ignace, was called upon to design this new type of train ferry. This new style of ferry had to be designed for longer voyages across the open and unprotected waters of often stormy Lake Michigan. The new ferry had an enclosed bow and side, and was loaded from the stern. She had a wood hull sheathed with steel to 4' above waterline, and was designed for ice breaking. Larger than St. Ignace, she could carry 24 cars. Above the car deck was a cabin and passenger

deck. The pilothouse was located forward on this deck. Since many ships already lay on the bottom of Lake Michigan, due to cargo shifting during a rough voyage, a technique to secure the train cars to the ship was an essential problem to be solved. An extra rail two feet outside the regular rail was installed and an ingenious system of jacks, clamps, chains, and turnbuckles that would fasten the train car securely to the ship. So certain were most people that the ferry would not work that shippers refused to entrust cargo to the ferry service for its inaugural trip. Finally, a coal shipper under contract to the railroad was persuaded to ship four carloads of coal on the first voyage. The first two train ferries, named in railroad fashion Ann Arbor No. 1 and Ann Arbor No. 2, were successful. Their design was soon copied in 1895 by the Pittsburgh, Shenago and Lake Erie Railroad. They were named Shenago No. 1 and Shenago No. 2. [15]

Management of the Pere Marquette Railroad watched the success of these early car ferries with great interest and considered a similar craft for the 60-mile Ludington-to-Manitowoc crossing. Their new ferry was designed by Robert Logan, and built by F.W. Wheeler and Company of West Bay City, Michigan, in 1896. Named Pere Marquette and made of steel, she was the prototype for all crosslake car ferries that would be built for the next 30 years.

Pere Marquette had many features that became standard. She had twin propellers, but no forward propeller like the Straits ferries. The forward propeller had not been satisfactory on crosslake car ferries and was eliminated. She had fore and aft stacks midships, a single deck of cabins above the car deck, and a pilothouse forward above the cabin deck. The unlicensed crew was housed below the car deck in an area where the electric lights flickered and which came to be called "the flicker." A saloon and a few of the cabins were available for passengers.

City of Milwaukee is a direct descendent of this 1896 car ferry. Although this class of ship continued to be refined and improved, the basic design was in place. There are far more similarities between Pere Marquette of 1896, and City of Milwaukee of 1931 than there are differences. [16]

The evolution of these train car ferries continued in the following manner: In 1900 triple expansion steam engines became the standard propulsion system, when Robert Logan designed four additional ferries for the Pere Marquette Railroad. In 1910, with Ann Arbor No. 5, a hinged sea gate across the stern (to

prevent seas from boarding) became a standard. All of the older boats in service were eventually retrofitted with sea gates. Length of the car ferries also increased.

In 1923, the Pere Marquette Railroad ordered two additional ferries from the Manitowoc Shipbuilding Company, Pere Marquette No. 21 and Pere Marquette No. 22. The new boats followed the standard characteristics, but as Hilton states in The Great Lakes Car Ferries,

> "The design, which had been worked out by the Manitowoc Shipbuilding staff, was an extremely successful one, and was duplicated with only minor changes in four other Lake Michigan car ferries: Ann Arbor No. 7 (1925), Grand Rapids (1926), Madison (1927), and City of Milwaukee (1931). In addition, these ships probably represented the aesthetic peak of car ferry design. Because of the necessity of having a virtually flat car deck, car ferries must be built with essentially no sheer, and their ice-breaking bow cannot be designed with much flare. These limitations on their design prevent a car ferry from having the grace of the best designed ships of other types. However, all art is properly judged relative to the limitations of the art form, and within the restrictions imposed by the requirements of a car ferry, these six ships as they were built were handsomely proportioned, majestic, and impressive. [17]

In 1929, the Pere Marquette again placed orders for two new ferries. The new ferries, City of Flint and City of Saginaw, were equipped with turbo electric propulsion and were a departure from traditional design.

Some rail lines encouraged passenger and automobile business, others did not. Thus, the ships varied on the amount of cabin accommodations for passengers. Pere Marquette No. 17 and Pere Marquette No. 18 had extensive passenger accommodations, yet most ferries had about a dozen cabins for passengers, along with a saloon or lounge.

The Great Lake train ferry fleet compiled an enviable safety record and most trips were routine, even though the ships operated under the most treacherous weather conditions. Most operational difficulties were encountered during the winter

months while the rest of the Great Lakes fleet was laid up for winter. From the very beginning, the ferries were required to continue to work through the winter to complete the rail cargo connections. Winter weather conditions greatly increased the hazards of operation and the degree of skill and endurance required of the master and crew. This northern fresh water sea is frequently choked with ice and the crosslake train ferries were designed to be the best ice breakers on the lakes. Fog, storms, and ice combined to make car ferry operation the most hazardous on the lakes.

Strandings were a common problem, as were getting stuck in thick ice. Even loading was a potential hazard and more than once, a ferry capsized at her berth. Three car ferries sank at sea with heavy loss of life and on several occasions tragedies were just barely avoided by determination or just good luck. These sea worthy ice breakers were frequently ships of mercy performing many rescue missions. They provided assistance to all types of ships in distress, searched for shipwreck survivors, broke out ice-bound freighters and transported emergency supplies to ice-bound communities. The maritime history of car ferry operation is a rich heritage of seamanship and service.

One of the car ferries to be lost at sea was Manistique Marquette & Northern No. 1 in 1903. She was purchased and renamed Milwaukee by the Grand Trunk Railroad in 1908, and ran between Milwaukee, Wisconsin, and Grand Haven, Michigan. Milwaukee disappeared in a storm with all 53 persons on board in October 1929.

Construction and Career of the City of Milwaukee

The Grand Trunk immediately ordered a new ferry to replace the lost Milwaukee. The new ferry, to be named City of Milwaukee, was a duplicate to Grand Rapids and Madison, also operated by the Grand Trunk. She was the last of six ferries built to Manitowoc Car Ferry plans. [18]

City of Milwaukee was built in 1931 by the Manitowoc Shipbuilding Company for the Grand Trunk Railroad. She ran between Grand Haven and Milwaukee (and later Muskegon). With the decline of cargo as the Depression deepened, City of Milwaukee became the spare boat and was frequently leased out to other car ferry fleets when possible. In 1947, the coal-fired boilers were converted to oil. The Grand Trunk Western ceased car ferry

operation in 1978. City of Milwaukee was purchased by the State of Michigan for the Ann Arbor Railroad, and remained in service until 1982. [19]

Again the State of Michigan transferred ownership, this time to the City of Frankfort, which later turned over the ownership to the Society for the Preservation of the Steamship City of Milwaukee for a museum ship.

Endnotes

1. Arthur C. & Lucy F. Frederickson, Early History of the Ann Arbor Carferries (Jackson, Michigan: Robert Palmer, 1981) p. 39.

2. Project File, City of Milwaukee, Northwest Michigan Maritime Museum (Frankfort, Michigan) "List of Great Lakes Carferry Ports."

3. Ibid. "Inventory and Disposition of All Great Lakes Car Ferries."

4. George W. Hilton. The Great Lakes Car Ferries (Berkeley, California: Howell-North 1962) p. 139.

5. K. Jack Bauer, A Maritime History of the United States: The Role of America's Seas and Waterways (Columbia: University of South Carolina Press, 1988), pp. 29, 70.

6. Jean Baptiste Marestier, Memoir on Steamboats of the United States, translated by Sidney Withington (Mystic, Connecticut: The Marine Historical Association, 1957), pp. 22-24.

7. James Thomas Flexner, Steamboats Come True (Boston: Little, Brown and Company, 1978), p. 337.

8. A.C. Hardy, American Ship Types: A Review of the Work, Characteristics, and Construction of Ship Types Peculiar to the Waters of the North American Continent (New York: D. Van Nostrand Company, Inc., 1927), p. 114.

9. Ibid.

10. Ibid., p. 105.

11. Ibid., pp. 140-141.

12. Arthur C. and Lucy Frederickson. C & O Train and Auto Ferries (Ludington, Michigan: Lakeside Printing, 1965) pp. 1-31.

13. Hilton, op. cit., pp. 1-40.

14. Hilton, op. cit., pp. 55-56.

15. Frederickson 1981, op. cit., pp. 3-5.

16. Hilton, op. cit., pp. 114-117.

17. Ibid. P. 139.

18. Ibid. Pp. 179-180.

19. Steven D. Elve, Rails Across the Water (Rockford, Michigan: P.M. Service, 1984) pp. 104-106.

9. MAJOR BIBLIOGRAPHICAL REFERENCES

1. Blacklock, Allen B. History of Elberta Manistee, Michigan: West Graft, 1975.

2. Dorin, Patric C. Grand Trunk Western Burbank, California: Superior Publishing, 1977.

3. Elve, Steven D. Rails Across the Water Rockford, Michigan: P.M. Service, 1984.

4. Frederickson, Arthur C. and Lucy F. Frederickson. C & O Train and Auto Ferries Grand Rapids, Michigan: Lakeside Printing, 1965.

5. Frederickson, Arthur C. and Lucy F. Early History of the Ann Arbor Car Ferries Frankfort, Michigan: Patriot Publishing Co., 1982.

6. Hilton, George W. The Great Lake Car Ferries Berkeley, California: Howell-North, 1962.

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: #_____

Primary Location of Additional Data:
___ State Historic Preservation Office
___ Other State Agency
___ Federal Agency
___ Local Government
___ University
_X_ Other: Specify Repository: Northwest Michigan Maritime Museum

10. GEOGRAPHICAL DATA

Acreage of Property: Less than One (1)

UTM References: Zone Easting Northing

A 16 560490 491880

Verbal Boundary Description:

All the area encompassed within the extreme length and breadth of the vessel.

Boundary Justification:

The boundary includes the entire area of the vessel as she floats at her berth.

11. FORM PREPARED BY

Name/Title: William Herd, Historian

Organization: Northwest Michigan Maritime Museum Date: May 18, 1990

Street & Number: 2956 Glory Road Telephone: (616) 352-4470

City or Town: Frankfort State: MI ZIP: 49635