



1071

United States Department of Interior
National Park Service

National Register of Historic Places
Registration Form

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 Milwaukee Falls Lime Company
other names/site number N/A

2. Location

street & number	2020 Green Bay Road	N/A	not for publication
city or town	Grafton	N/A	vicinity
state Wisconsin	code WI	county Ozaukee County	code 089
			zip code 53024

3. State/Federal Agency Certification

As the designated authority under the National Historic 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.)

Signature of certifying official/Title

Date

State Historic Preservation Officer - Wisconsin

State or 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 commenting official/Title

Date

State or Federal agency and bureau

Milwaukee Falls Lime Company

Ozaukee County

Wisconsin

Name of Property

County and State

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.☐ See continuation sheet.☐ removed from the National Register.☐ other, (explain:)*Edson H. Beall*

1.27.12

for

Signature of the Keeper

Date of Action

5. Classification**Ownership of Property**
(check as many boxes as
as apply)

private

☒ public-local

☒ public-State

public-Federal

Category of Property
(Check only one box)

building(s)

district

structure

☒ site

object

Number of Resources within Property
(Do not include previously listed resources
in the count)

contributing	noncontributing
0	1 buildings
1	0 sites
8	2 structures
0	0 objects
9	3 total

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

N/A

Number of contributing resources**previously listed in the National Register**

0

6. Function or Use**Historic Functions**

(Enter categories from instructions)

INDUSTRY/PROCESSING/EXTRACTION/
processing site**Current Functions**

(Enter categories from instructions)

LANDSCAPE/park

7. Description**Architectural Classification**

(Enter categories from instructions)

No style

Materials

(Enter categories from instructions)

foundation: limestone, brick, concrete

walls: limestone, brick

roof: N/A

other: N/A

Narrative Description

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

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Milwaukee Falls Lime Company
Grafton, Ozaukee County, WI

Section 7 Page 1

Introduction

The Milwaukee Falls Lime Company is an approximately 19 acre site located largely within Lime Kiln Park in the Village of Grafton, Ozaukee County, Wisconsin. Constructed between 1890 and 1893, the property's extant historic resources represent the lime industry that was once crucial to the economic welfare of Grafton and Ozaukee County. The property has nine contributing resources, consisting of three limestone kilns, the ruins of the dam powerhouse/wheel pit, the ruins of two tramway piers, the ruins of two bridge piers, and a limestone quarry. Also within the boundaries are three noncontributing resources; all are related to or date to the site's current function as a park. Overall, the Milwaukee Falls Lime Company is in good condition and maintains six of the seven aspects of integrity. (Integrity of setting is diminished as the site is now part of a public recreational park space.)

Setting and Landscape Description

Located in an expanse of open space along the western bank of a bend of the Milwaukee River, the Milwaukee Falls Lime Company sits at the southern edge of the Village of Grafton. The property is bordered on the west by Green Bay Road, on the south by the southern expanse of Lime Kiln Park (established in 1972), on the east by the Milwaukee River, and on the north by a privately-owned residential property. Green Bay Road is a 2-lane, paved road with gravel shoulders. Lime Kiln Park is accessible by paved drives off of Green Bay Road that connect to paved parking lots at the northwestern and southwestern ends of the park. Paved drives and pedestrian paths run roughly along the southwest, southeast, and northeast perimeters; a gravel pedestrian path runs roughly parallel to Green Bay Road along the northwestern edge of the park. The Milwaukee Falls Lime Company's limestone quarry is located in the densely-wooded center of the park and is cordoned off by a chain-link fence. The lime kilns are located east of this at the western edge of the open lawn that runs to the edge of the Milwaukee River where the ruins of the dam power house are located. The ruins of two tramway piers are located northwest and immediately south of the kilns; the ruins of two bridge piers are located on each bank of the river south of the kilns. In addition to the Milwaukee Falls Lime Company structures, the park also contains Grafton's relocated Bridge Street Bridge and two picnic shelters with an indoor pavilion. Various trees and other plantings are located throughout the park's cultivated lawn space, as is a children's playground and a disc golf course. The playground and the disc course are not included in the resource count.

Lime Kilns (Contributing, 1892)

Constructed in 1892, the Milwaukee Falls Lime Company lime kilns are located approximately 600 feet west of where the Lime Kiln Dam crossed the Milwaukee River. (The dam has been removed.) The three kilns stand in a row along a northwest-southeast alignment and are the three southernmost kilns from the original six (later five) Milwaukee Falls Lime Company kilns. Each kiln measures approximately 18 feet by 20 feet at its base and is of limestone construction with squared stone quoins

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Milwaukee Falls Lime Company
Grafton, Ozaukee County, WI

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along each corner with a firebrick-lined interior shaft. In addition, each of the three kilns has two fireboxes (located at the base of the north and south sides) and one draw pit (located at the base of the west side); all fireboxes and draw pits are fully lined with firebrick and have rounded arch openings with firebrick surrounds.

The northernmost kiln is approximately 36 feet tall and has five wood board braces located at regular intervals on each side, beginning approximately just above the firebox openings. The center kiln is approximately 30 feet tall and has four wood board braces located at regular intervals on each side above the firebox openings. The southernmost kiln is approximately 24 feet tall and has three wood board braces located at regular intervals on each side.

The kilns are built into a slight rise so that the fireboxes on the north and south sides sit at a ground level that is several feet higher than the ground level on the west side where the draw pits are located. Between each kiln, earthen steps with wooden supports provide access from the lower west side to the higher level of the east side. A continuous concrete and limestone base surrounds the western side of each kiln; this was the original flooring of the ironclad kiln shed that provided shelter to the kiln workers during the company's operation (the remainder of this building is no longer extant). The ground between and along the east side of the kilns is covered in crushed limestone.

In 1971, the wooden bracing beams of each kiln were replaced in-kind and the crumbling masonry was tuckpointed. The wooden braces were replaced again in 2000, and additional repairs were made to the masonry around the fireboxes and draw pits.

Dam Powerhouse and Wheel Pit Ruin (Contributing, 1893)

Constructed in 1893, the Lime Kiln Dam was originally located across the Milwaukee River, approximately 600 feet east of the Milwaukee Falls Company lime kilns. The powerhouse was demolished sometime between 1957 and 1980, and the dam was removed in the winter of 2010. Still visible are parts of the concrete foundation of the dam powerhouse and the concrete walls of the wheel pit which was located over a 20 foot wide millrace just west of the dam itself.

Limestone Quarry (Contributing, circa 1890)

The original limestone quarry at this site is located approximately 150 feet west of the remaining lime kilns and was excavated c.1890. The quarry is 40 feet at its deepest and is currently surrounded by a length of chain-link and barbed-wire fencing to prevent park visitors from accessing the dangerous drop. The land surrounding the quarry is densely wooded with a small pond located near the southeast edge of the quarry.

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Tramway Pier Ruins (Contributing, 1892)

The ruins of two tramway piers remain at the site as evidence of the tramway system that transported limestone from the quarry to the top of the kilns. Built in 1892, the tramway piers are of concrete and masonry (brick and stone) construction. The northern tramway pier is located in the wooded area northwest of the northernmost kiln and just east of the chain-link fence that borders the quarry. This pier is approximately six feet tall with a wide stepped base. It is of brick and stone construction with a concrete overlay that is severely cracked and eroded. The second tramway pier is located immediately south of and in alignment with the southernmost lime kiln. The foundation of this structure is of limestone construction while the remainder is of reinforced concrete construction. The metal rods protruding from the top of this structure reach different heights, indicating the angle at which the rail line rose to meet the top of the kilns.

Bridge Pier Ruins (Contributing, circa 1893)

The ruins of two bridge piers are located on each side of the Milwaukee River south of the quarry and kilns. Built c.1893, both piers are of reinforced concrete construction. The northern bridge pier is located on the northern bank of the river, about 315 feet south of the southern tramway pier. Three metal rods protrude from the top of this pier. The southern bridge pier is located in the Milwaukee River near the south bank. The majority of this pier appears to be sunken into the river so that only a portion of it is visible.

Noncontributing Resources

The Milwaukee Falls Lime Company property includes three noncontributing resources: 1 picnic shelter, 1 indoor pavilion with attached picnic shelter, and 1 steel overhead truss bridge. Each of these resources was built or relocated to the property after its conversion to Lime Kiln Park; because they are not associated with the Milwaukee Falls Lime Company, these resources are considered to be noncontributing. The indoor pavilion with attached picnic shelter, the Robert P. Zaun Pavilion, is comprised of an open-air covered shelter with concrete slab foundation and an adjacent indoor pavilion. This shelter is located at the corner of Green Bay Road and the park's northern entry drive. The second picnic shelter is located immediately east of the southern tramway pier; it is octagonal in shape and is an open-air covered shelter with a concrete slab foundation. Constructed in 1888, the Bridge Street Bridge is a steel overhead Pratt truss bridge; it was relocated from its original location on Grafton's Bridge Street over the Milwaukee River to Lime Kiln Park in September of 1996. The bridge is located north of the northern lime kiln.

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Inventory of Resources

The Milwaukee Falls Lime Company site includes 9 contributing resources (comprised of 8 structures and 1 site) and 3 noncontributing resources (comprised of 1 building and 2 structures), as shown below:

Contributing

Buildings: N/A

Sites: 1 limestone quarry (1890)

Structures: 3 lime kilns (1892)

2 tramway piers (1892)

2 bridge piers (c.1893)

1 dam powerhouse/wheel pit ruin (1893)

Objects: N/A

Total resources: 9

Noncontributing

Buildings: 1 Robert P. Zaun Pavilion (post-1972)

Sites: N/A

Structures: 1 octagonal picnic shelter (post-1972)

1 Bridge Street Bridge (1888, relocated 1996)

Objects: N/A

Total resources: 3

Conclusion

Overall, the kilns of the Milwaukee Falls Lime Company are in good condition and the overall site portrays the interrelationship of the various components of a lime production facility. The lime kilns, the centerpiece of the site, individually maintain the same overall appearance as is visible in historic photographs. Although integrity of setting is diminished since the site has become a public park and several of the resources from the historic period have been lost, the open nature of the site has not changed and the relationship between the extant contributing resources is clear. Over one hundred years after the establishment of the Milwaukee Falls Lime Company, the property's remaining resources continue to reflect the large-scale lime production operation for which the company was well known.

Milwaukee Falls Lime Company
Name of Property

Ozaukee County
County and State

Wisconsin

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for the 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.

Areas of Significance

(Enter categories from instructions)

Industry

Period of Significance

1890 – 1926

Significant Dates

1890, 1892, 1893

Significant Person

(Complete if Criterion B is marked)

N/A

Cultural Affiliation

N/A

Architect/Builder

Milwaukee Falls Lime Company

Narrative Statement of Significance

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

Milwaukee Falls Lime Company

Ozaukee County

Wisconsin

Name of Property

County and State

9. Major Bibliographic References

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

Previous Documentation on File (National Park Service):

- ☐ 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
 - ☒ Other
- Name of repository:
Ozaukee County Historical Society

10. Geographical Data

Acreeage of Property: Approximately 18.92 acres

UTM References (Place additional UTM references on a continuation sheet.)

1 16 422559 4795069
 Zone Easting Northing

2 16 422654 4795211
 Zone Easting Northing

3 16 422656 4795148
 Zone Easting Northing

4 16 422529 4794993
 Zone Easting Northing

[X] 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 Gail Klein, Architectural Historian
 organization Great Lakes Archaeological Research Center, Inc
 street & number PO Box 511549
 city or town Milwaukee

date February 4, 2011
 telephone 414-481-2093
 state WI zip code 53203

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Name of Property

Ozaukee County
County and State

Wisconsin

Additional Documentation

Submit the following items with the completed 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/title

organization

street & number

city or town

state

date

telephone

zip code

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 Reductions Projects, (1024-0018), Washington, DC 20503.

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Milwaukee Falls Lime Company
Grafton, Ozaukee County, WI

Section 8 Page 1

Introduction

Established in 1890, the Milwaukee Falls Lime Company was a major industry in the Village of Grafton and was well-respected within the Wisconsin lime industry as being a model of efficient production.¹ With six (later five) lime kilns, limestone quarries, a collection of associated outbuildings and tramways, and a dam on the Milwaukee River that provided power to the operation, the company manufactured lime between 1890 and 1926 (the property's period of significance). Because of the local significance of the lime industry in Grafton, the Milwaukee Falls Lime Company, the village's only remaining evidence of this industry (and the best-preserved example in Ozaukee County), is eligible for listing in the National Register of Historic Places under *Criterion A: Industry*.

History of Lime Production in Wisconsin

Historically, limestone is the most commonly quarried stone in Wisconsin. To a limited extent, Wisconsin's limestone was used in building construction, but due to the natural irregularities in the state's limestone deposits, its main use was in the production of lime. Lime was used to make whitewash, plaster, and mortar for buildings, to fertilize soil, and to treat animal hides and leather.² In Wisconsin, the majority of limestone quarried for the production of lime contained varying levels of magnesium carbonate; when fired, this limestone produced a much softer lime that could be prepared into a much more durable building mortar.³ Wisconsin's earliest efforts at lime manufacture consisted of burning heaps of limestone and wood together until lime formed among the ashes. Early settlers often used this process on a small scale to produce lime for mortar and whitewash.

By 1850, in response to increasing settlement, the manufacture of lime had become a prominent industry in Wisconsin and commercial lime kilns had been established in regions of the state where vast limestone deposits were found. Commercial production sites generally used chimney-like vertical-shaft kilns of masonry construction with cast iron fire grates and doors; these kilns were usually fueled by local hardwood. The kilns generally were located adjacent to a supplying quarry and not far from rail or shipping routes.⁴ By the last quarter of the nineteenth century, limestone quarries were utilizing steam-powered and compressed-air drills, channelers, and saws to cut the stone into moveable pieces.⁵ Once reduced in size, the limestone rubble was hauled to the top of the kilns via an

¹ Ernest Robertson Buckley, *On the Building and Ornamental Stones of Wisconsin* (Madison, WI: Wisconsin Geological and Natural History Survey, 1898), 329.

² Carl Harms, *History of Lime Kiln Park*, Village of Grafton, WI.

<http://www.village.grafton.wi.us/DocumentView.aspx?DID=604> (accessed May 14, 2010).

³ Barbara Wyatt, ed. *Cultural Resource Management in Wisconsin* (Madison, WI: State Historical Society of Wisconsin, 1986), 2-9.

⁴ *Ibid.*, 2-9 to 2-10.

⁵ *Ibid.*, 2-2.

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Milwaukee Falls Lime Company
Grafton, Ozaukee County, WI

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inclined tramway or narrow-gauge railway; at sites where several kilns stood in a row, the track often ran across the tops of the entire group. After it was dropped into the top of each kiln, the limestone was converted to lime by the heat from two or more fireboxes located in the walls near the kiln floor; the calcination process (the burning of limestone to form lime) generally took between 4 and 24 hours. The finished lime was removed from the cooling chamber at the bottom of the kiln and would be stored in bags or barrels elsewhere on site or shipped out to its intended destination.⁶ At many of the larger sites, lime kilns operated around the clock as workers loaded the raw limestone and removed the finished lime at prescribed intervals. The kilns were also operated year-round; for this reason, the lower portion of the kilns (where workmen stoked the fires and removed finished lime) was often enclosed in a long shed to provide shelter from inclement weather.⁷

Most commercial lime manufacturers in the nineteenth and early twentieth centuries operated four to five kilns per site. Typical kilns measured between 25 and 50 feet in height and 15 to 30 feet per side, often tapering toward the top. Some kilns were set into hillsides with earthen pathways leading to the top of the hill where the limestone would be fed into the kiln. Commercial kiln sites often included a combination of storage sheds, rock crushing machinery, offices, waste piles, rail sheds, company housing, and – at more extensive sites – a hydrating plant that would add water to the crushed lime to make it easier and safer to ship. Around the turn of the century, mechanical kilns were developed, although the older vertical shaft kilns continued to be used into the twentieth century.⁸

Wisconsin's commercial lime manufacturers were located primarily in the eastern parts of the state, with the densest concentration located in Waukesha County. By 1850, ten commercial lime companies operated in Wisconsin; by 1892, forty companies were actively producing lime. At the industry's peak in 1911, Wisconsin boasted 51 lime companies. At the turn of the century, Wisconsin's densest lime production was located in the Racine, Waukesha, Sheboygan, and Milwaukee areas, and later in more northern areas of the state. By 1901, Wisconsin produced the seventh largest amount of lime in the United States; between 1907 and 1914, it ranked as the third largest producer.⁹ By the 1920s, lime production in the state had begun to decline as high quality cement mortars became readily available, and the Great Depression's impact on the construction industry meant that the demand for lime would continue to drop.¹⁰ Although new uses for lime emerged in the 1940s (paper, glass, steel, and various chemical industries began to use large amounts of lime), Wisconsin lime, once prized for its high magnesium content, was not suitable for use in many of these products. By 1940, only 11 lime

⁶ Ibid., 2-9 to 2-10.

⁷ Ibid., 2-10.

⁸ Ibid., 2-7 to 2-10.

⁹ Ibid., 2-11.

¹⁰ Ralph L. Zaun, "Grafton Lime Kiln Ruins as a Historical Site" (paper presented at Ozaukee County Historical Society meeting, Waubesa Public School, Waubesa, WI, September 16, 1963), np.

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Milwaukee Falls Lime Company
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producers remained in the state.¹¹

Timothy Higgins constructed Ozaukee County's first commercial lime kiln in 1846. Larger-scale operations were established in 1874 by the Ormsby Lime Company (located at the southern edge of the Grafton village limits), in 1885 by the Anschuetz Stone Company (along present-day STH 57), in 1890 by the Milwaukee Falls Lime Company, and in 1901 by the Lake Shore Stone Company (located in present-day Harrington Beach State Park). The growth of the county's lime industry meant that by the turn of the century, Ozaukee County boasted a dozen active lime kilns with the largest operations located in the Grafton-Cedarburg area. For these communities, in particular, the lime industry was a vital key to economic development. Lime production remained economically important to the Grafton area from the first commercial operation in 1846 to the disintegration of the industry in the 1920s.¹²

History of the Milwaukee Falls Lime Company

Eugene Scranton Turner and Charles F. Mintzlaff established the Milwaukee Falls Lime Company on September 9, 1890. In a series of purchases between 1889 and 1895, Turner acquired the land at the southern edge of the Village of Grafton that would comprise the company's seat of operations. The property was located near the Chicago, Milwaukee & St. Paul Railroad on both sides of a sharp bend of the Milwaukee River; one parcel of this land contained the early lime kiln built in 1846 by Timothy Higgins.¹³ Early accounts indicate that in 1890, the company began excavating four quarries in the area: three on the west bank of the river and one on the east bank. It was not until 1892, however, that five additional kilns were constructed in line with the first. Just two years later, the explosion of an oil tank on site damaged the masonry of the kilns and ignited the wood braces and supports; the kilns were quickly repaired and brought back to top working condition. In 1893, a dam (later known as the Lime Kiln Dam) with a powerhouse was constructed across the Milwaukee River to provide power to an air compressing engine that operated the drills in the quarry. In June of 1894, Turner officially deeded the acreage he had accumulated to the Milwaukee Falls Lime Company which had been established four years earlier and had already been operating for much of this time. In 1895, G.A. Mace was brought into the operation as the manager and stockholder.¹⁴

Along with the lime kilns, quarries, and dam, a series of additional buildings and structures were needed to facilitate the company's operations and to maximize the efficiency of the workers and machines. These included an ironclad kiln shed, a cooperage (located about 135 feet northwest of the kilns for fire safety), a stable, a lime house, and a stone grinder (see Figure 1; none of these resources

¹¹ Wyatt, *Cultural Resource Management*, 2-11.

¹² Zaun, "Grafton Lime Kiln Ruins," np.

¹³ Buckley, *On the Building*, 329.

¹⁴ Zaun, "Grafton Lime Kiln Ruins," np.

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is extant). Also part of the company's early operation was a bridge that spanned the Milwaukee River south of the kilns; the bridge allowed the workers, draft animals, and wagons to access the quarry on the far side of the river. Early accounts state that this bridge was built too low as it was washed away by ice floes during a spring flood only a few years after its construction (piers on each river bank indicate the bridge's location).¹⁵ Another early change to the property occurred between 1904 and 1910 when the southernmost kiln (likely the kiln built by Timothy Higgins in 1846) was demolished to make room for a new stone grinder.¹⁶

Each building and structure at the Milwaukee Falls Lime Company site was an essential part of the lime production process. The process began in the quarries where limestone was cut and broken into moveable pieces using air hammers (air lines were run from the dam powerhouse to the quarries). From there, the stone was loaded into carts that were pulled along a narrow-gauge rail by horses and donkeys. This rail line led from the active quarry to the top of the kilns. The kilns were constructed in a stepped fashion (the southernmost kiln was the shortest, the northernmost the tallest) so that the elevated tramline ran at an incline across the top of each kiln. Initially, the tram carts were pulled up the incline by the horses or donkeys. Around the turn of the century, however, a hoist house was constructed over the tramline just south of the southernmost kiln; the hoist house contained an air-engine (also powered by the dam) that rotated a large drum to pull the carts up the incline and across the tops of the kilns where men on elevated walkways waited to dump their contents into the kiln shafts. A large part of the 600 foot wide open space between the dam powerhouse and the lime kilns was filled by tall stacks of cordwood used to fuel the kilns.¹⁷

Once the pieces of limestone were in the kilns, the air coming in through the base of each kiln provided oxygen to burn the cordwood in the kilns' fireboxes. The same air would also cool the lime as it fell to the draw pits at the bottom of the kilns, several feet below the fireboxes. Workers in the kiln shed that covered the west, north, and south sides of the kilns shoveled the solid lime from the draw pits into metal wheelbarrows where it was allowed to cool. The finished lime was packed into barrels that had been made at the company's cooperage and was loaded into boxcars that waited on a spur line of the Chicago, Milwaukee, and St. Paul Railroad to take the lime to Milwaukee, Chicago, or other destinations. An additional element of the company's operation was a large stone grinder that was used to crush limestone, primarily for use in road beds. Initially, the stone grinder was located in line with and just north of the northernmost lime kiln. Between 1904 and 1910 the stone grinder was

¹⁵ Alice J. Wendt. "Grafton Lime Kilns." Unpublished compilation of newspaper and courthouse records located at Ozaukee County Historical Society, Cedarburg, WI. Accessed February 8, 2011.

¹⁶ Sanborn Map Company. Village of Grafton, WI: 1894-1929. University of Wisconsin Libraries Map Collection, Milwaukee, WI.

¹⁷ Sanborn Map Company. Village of Grafton, WI: 1894-1929. University of Wisconsin Libraries Map Collection, Milwaukee, WI.

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relocated when the southernmost kiln was demolished and a new hoist house with a compression-powered stone crusher was erected in its place. The remaining elements of the original stone grinder were removed and the shed that had housed it was used for storage.¹⁸ Between 1901 and 1915, the dam (originally of timber and earthen construction) was rebuilt.¹⁹ The rebuilt dam was of concrete construction with earthen back fill and concrete foundation with a 60 foot spill way and concrete and limestone abutments.

When operating at full capacity, the Milwaukee Falls Lime Company shipped as many as five carloads (each carrying 15 to 20 tons of lime) per day.²⁰ A local newspaper account from this time recorded that "the Lime Kilns at the Falls are rushed with more orders than they can fill."²¹ The importance of the Milwaukee Falls Lime Company to Grafton and surrounding area is clear as newspaper reports throughout 1901 relate the scarcity of labor in their community as all available laborers were "at work in the Milwaukee Falls Quarries...[where] Mr. Mace has a gang of about 40 men at work there and mostly from this village."²²

Around the turn of the century, the Tews Lime and Cement Company purchased the Milwaukee Falls Lime Company, although the name of the company remained the same and operations were not affected. The "quality and quantity" of the company's lime continued to be celebrated throughout Wisconsin's lime industry.²³

During its peak years, the Milwaukee Falls Lime Company employed 40 to 50 men and operated day and night for maximum production. In the company's early days, the men were paid \$1.92 for each 12-hour day they worked. By WWI, the pay rate had risen to about 40 cents an hour.

As the country's need for the product dwindled after WWI, the lime production at the Milwaukee Falls Lime Company site decreased until 1926 when operations were ceased entirely.²⁴ By 1929, the lime house and stable had been razed. The kiln shed collapsed or was demolished between 1929 and 1937.²⁵

¹⁸ Ibid.

¹⁹ Railroad Commission of Wisconsin: Engineering Department, "Water Power Development Investigation of Lake Michigan Drainage Basin," July 1915.

²⁰ Zaun, "Grafton Lime Kiln Ruins," np.

²¹ Cedarburg, WI. *Cedarburg News*, September 30, 1894.

²² Cedarburg, WI. *Cedarburg News*, March 13, 1901.

²³ Cedarburg, WI. *Cedarburg News*, May 24, 1899.

²⁴ Alice J. Wendt. "Grafton Lime Kilns." Unpublished compilation of newspaper and courthouse records located at Ozaukee County Historical Society, Cedarburg, WI. Accessed February 8, 2011.

²⁵ Sanborn Map Company. Village of Grafton, WI: 1894-1929. University of Wisconsin Libraries Map Collection, Milwaukee, WI.

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Continuation Sheet

Milwaukee Falls Lime Company
Grafton, Ozaukee County, WI

Section 8 Page 6

The demolition of the dam power house occurred sometime between 1957 and 1980; in 1945, the dam headgate was washed away and the Village of Grafton filled the opening with broken slabs of concrete.²⁶ The date of demolition (or collapse) of the two northernmost lime kilns is unknown although aerial photographs from 1937 suggest that these kilns may have been partially collapsed by that time.²⁷ Although no evidence of the stable or lime house remains, visible markers of other non-extant structures can clearly be seen. The foundation of the dam powerhouse remains at the west bank of the river; the concrete and stone floor of the kiln shed is still visible along the west side of the remaining kilns; the piers that once supported a bridge across the river just south of the kilns remain on both banks; the base of two of the tramway piers remain north and south of the remaining kilns.

In 1961, the Village of Grafton acquired the site, paying \$6,000 annually over ten years to the Tews Lime and Cement Company. In 1963 repairs were made to the Lime Kiln Dam to prevent further damage. For most of the 1960s and 1970s, the village used the site as a garbage dump. In this way, the northernmost quarry was completely filled in and was later paved over to become an open lawn and a parking area. There are no visual remains of the former quarry, and it is not included in the resource count. The second quarry has not been filled in; it is just to the west of the remaining kilns adjacent to a small spring-fed pond. The three remaining kilns stood neglected until 1970 when the village put forward a proposal to demolish them. The proposed demolition spurred the formation of the Lime Kiln Preservation Society who, along with the local Jaycees, organized the kilns' first large-scale restoration. In 1971, the wooden bracing beams were replaced and the crumbling masonry was tuckpointed. The site of the Milwaukee Falls Lime Company became a public park in 1972; at that time, a chain link fence was erected around the remaining quarry and limestone cliffs.²⁸ In the 1980s, an archery range was set up in the quarry; this space also served as a target range for the Grafton Police Department. The second major kiln restoration began in 2000 when the wooden braces were replaced again, repairs were made to the masonry around the fireboxes and draw pits, and a drainage system was put in place so that water could be drained away from the masonry structures to prevent further damage. In the winter of 2010, the Lime Kiln Dam was removed.

As of March 2011, no archaeological investigations relating to the site's industrial history have been done at this location. However, remains related to the lime industry at the site may be present.

²⁶ Wisconsin Department of Natural Resources, Lime Kiln Dam report, February 20, 1982.

²⁷ Wisconsin Historic Aerial Image Finder, University of Wisconsin, <http://maps.sco.wisc.edu/WHAIFinder/#> (Accessed February 8, 2011).

²⁸ Ibid.

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Continuation Sheet

Milwaukee Falls Lime Company
Grafton, Ozaukee County, WI

Section 8 Page 7

Comparative Analysis

The parameters of this analysis consist of previously surveyed and inventoried lime kilns and lime production sites in Ozaukee County as recorded in the Wisconsin Historic Preservation Database (WHPD).

<u>Property</u>	<u>Address</u>	<u>Construction Date</u>	<u>Condition/Integrity</u>	<u>NR Listed</u>
Milwaukee Falls Lime Company (WHPD# 13146)	2020 S. Green Bay Rd. Grafton, Ozaukee County	1890 - 1893	Good/High	No
Unnamed lime kiln (WHPD# 13278)	CTH D (S side of E end) Belgium, Ozaukee County	Unknown	Unknown/Low	No
Unnamed lime kiln (WHPD# 13791)	STH 84 (N side) Fredonia, Ozaukee County	Unknown	Poor/Unknown	No

The Milwaukee Falls Lime Company site is the most complete lime production site currently recorded in Ozaukee County. Although of similar size and construction as the Milwaukee Falls Lime Company kilns, the unnamed lime kiln in Belgium (located within Harrington Beach State Park) has been converted for use as an observatory, and the adjacent limestone quarry has been filled to create a recreational lake. Because of these changes in function, the Belgium lime kiln site possesses a low degree of integrity. The unnamed lime kiln in Fredonia is no more than a ruin and has no associated resources on record; as such, the condition of the Fredonia kiln is considered very poor. This comparative analysis of Ozaukee County's extant lime kiln sites reveals that the Milwaukee Falls Lime Company is the county's best recorded example of a late nineteenth-/early twentieth-century lime production site.

Conclusion

Between 1890 and 1926, the Milwaukee Falls Lime Company was the leading producer in Ozaukee County's lime industry. For the last fifty years, local residents have recognized the site of the Milwaukee Falls Lime Company as the "largest and most imposing" remnant of an extinct industry that was once the backbone of Grafton's economy.²⁹ Today, the Milwaukee Falls Lime Company is the only remaining evidence of Grafton's once thriving and well-respected lime industry. As such, the Milwaukee Falls Lime Company holds local significance under National Register *Criterion A* in the area of *Industry* for its association with the history of lime production in Grafton and Ozaukee County.

²⁹ Zaun, "Grafton Lime Kiln Ruins," np.

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Continuation Sheet

Section 9 Page 1

Milwaukee Falls Lime Company
Grafton, Ozaukee County, WI

Bibliography

Buckley, Ernest Robertson. *On the Building and Ornamental Stones of Wisconsin*. Madison, WI: Wisconsin Geological and Natural History Survey, 1898.

Cedarburg News. Cedarburg, WI. September 30, 1894.

Cedarburg News. Cedarburg, WI. May 24, 1899.

Cedarburg News. Cedarburg, WI. March 13, 1901.

Harms, Carl. "History of Lime Kiln Park." Village of Grafton, WI.
<http://www.village.grafton.wi.us/DocumentView.aspx?DID=604> (Accessed May 14, 2010).

Railroad Commission of Wisconsin: Engineering Department, "Water Power Development Investigation of Lake Michigan Drainage Basin," July 1915.

Sanborn Map Company. Village of Grafton, WI: 1894 – 1929. University of Wisconsin Libraries Map Collection, Milwaukee, WI.

Smith, Leonard S. "The Water Powers of Wisconsin." In *Wisconsin Geological and Natural History Survey Bulletin*, Issue 20. Madison, WI: State of Wisconsin, 1908.

Wendt, Alice J. "Grafton Lime Kilns." Unpublished compilation of newspaper and courthouse records located at Ozaukee County Historical Society, Cedarburg, WI. Accessed February 8, 2011.

Wisconsin Department of Natural Resources, Lime Kiln Dam report, February 20, 1982.

Wisconsin Historic Aerial Image Finder. University of Wisconsin.
<http://maps.sco.wisc.edu/WHAIFinder/#> (Accessed February 8, 2011).

Wyatt, Barbara, ed. *Cultural Resource Management in Wisconsin*. State Historical Society of Wisconsin, 1986.

Wyatt, Barbara. National Register of Historic Places nomination form: "Lime Kilns of Waukesha County Thematic Group." December 1984.

Zaun, Ralph, L. "Grafton Lime Kiln Ruins as a Historical Site." Paper presented at Ozaukee County Historical Society meeting, Waubeka Public School, Waubeka, WI, September 16, 1963.

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National Park Service

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Continuation Sheet

Section 10 Page 1

Milwaukee Falls Lime Company
Grafton, Ozaukee County, WI

Verbal Boundary Description:

The boundary of the Milwaukee Falls Lime Company is an irregular polygon. The property is roughly bounded by Green Bay Road to the west, the existing Lime Kiln Park tax parcel line on the north, and by the Milwaukee River to the east. The eastern historic boundary line spans across the Milwaukee River at one point to include the ruin of a bridge pier located on the southeast side of the river, as shown on the attached map. Due to the absence of any convenient visual or legal markers, the southern boundary line is defined by two distinct "corner" points along the east and west tax parcel lines; the southern boundary connects these two points and is located just west of the chain link fence surrounding the quarry (see boundary map, Figure 3).

Boundary Justification:

The boundaries of the nominated area are the legal bounds of the tax parcel on the east, west, and north sides with an addition across the Milwaukee River to include the southern bridge pier ruin, as described in the Verbal Boundary Description. The southern boundary line does not coincide with the existing tax parcel as the park land west of the limestone quarry was not historically associated with the production facilities of the Milwaukee Falls Lime Company. The historic boundary has been delineated to encompass all of the former industrial site including those sites, structures, and ruins that have historically been part of the Milwaukee Falls Lime Company. Within the boundary are a large part of city-owned Lime Kiln Park, a non-contributing relocated metal truss bridge, a playground, a disc golf course, and two recently constructed park shelters and buildings.

Additional UTM points:

5	16	422417	4794964
	Zone	Easting	Northing

6	16	422219	4795087
	Zone	Easting	Northing

United States Department of the Interior
National Park Service

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Continuation Sheet

Section Photos Page 1

Milwaukee Falls Lime Company
Grafton, Ozaukee County, WI

Name of Property:	Milwaukee Falls Lime Company
City or Vicinity:	Village of Grafton
County:	Ozaukee County
State:	WI
Name of Photographer:	Gail R. Klein
Date of Photographs:	May 17, 2010 and February 8, 2011
Location of Original Digital Files:	Great Lakes Archaeological Research Center, Inc. 1408 N. 5 th St., Milwaukee, WI 53203

Photo 1 of 11

East and north facades of lime kilns and southern tramway pier, camera facing southeast.

Photo 2 of 11

West and south facades of lime kilns and southern tramway pier, camera facing northeast.

Photo 3 of 11

West facades of lime kilns, camera facing southeast.

Photo 4 of 11

North façade of northern lime kiln, camera facing south.

Photo 5 of 11

Fire pit on northern side of northern lime kiln, camera facing south.

Photo 6 of 11

Northern tramway pier, camera facing west.

Photo 7 of 11

Former site of Lime Kiln Dam with powerhouse ruin, camera facing east.

Photo 8 of 11

Remains of dam powerhouse and wheel pit, camera facing east.

Photo 9 of 11

Quarry, camera facing east.

Photo 10 of 11

Northern tramway pier, camera facing south.

Photo 11 of 11

Southern tramway pier, camera facing south.

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National Park Service

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Continuation Sheet

Section Figures Page 1

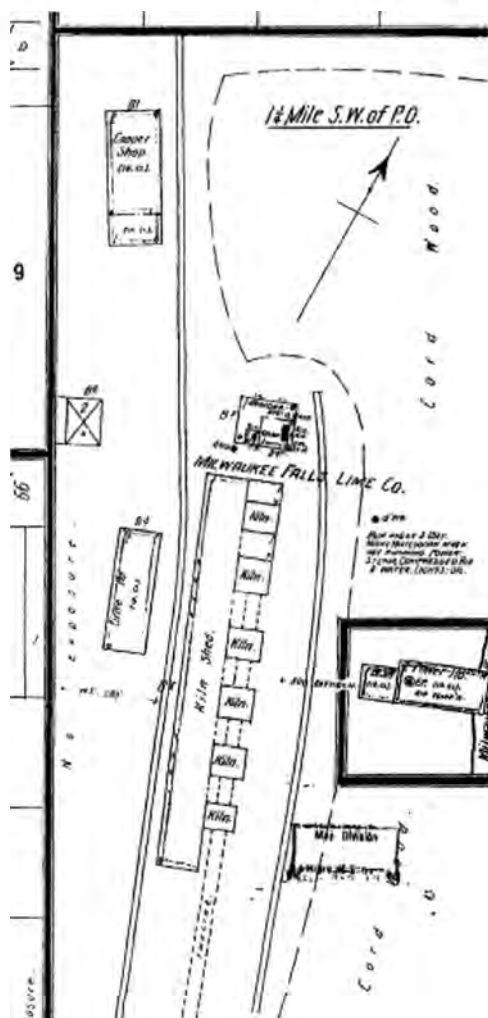
Milwaukee Falls Lime Company
Grafton, Ozaukee County, WI

Figure Index

- Figure 1: Sanborn Fire Insurance Map of Milwaukee Falls Lime Company, March 1904.
Figure 2: Sanborn Fire Insurance Map of Milwaukee Falls Lime Company, October 1910.
Figure 3: Sketch map of Milwaukee Falls Lime Company nominated area, February 2011.
Figure 4: Milwaukee Falls Lime Company, c.1900. Photographer unknown.

Figure 1 of 4

Sanborn Fire Insurance Map of Milwaukee Falls Lime Company, March 1904.



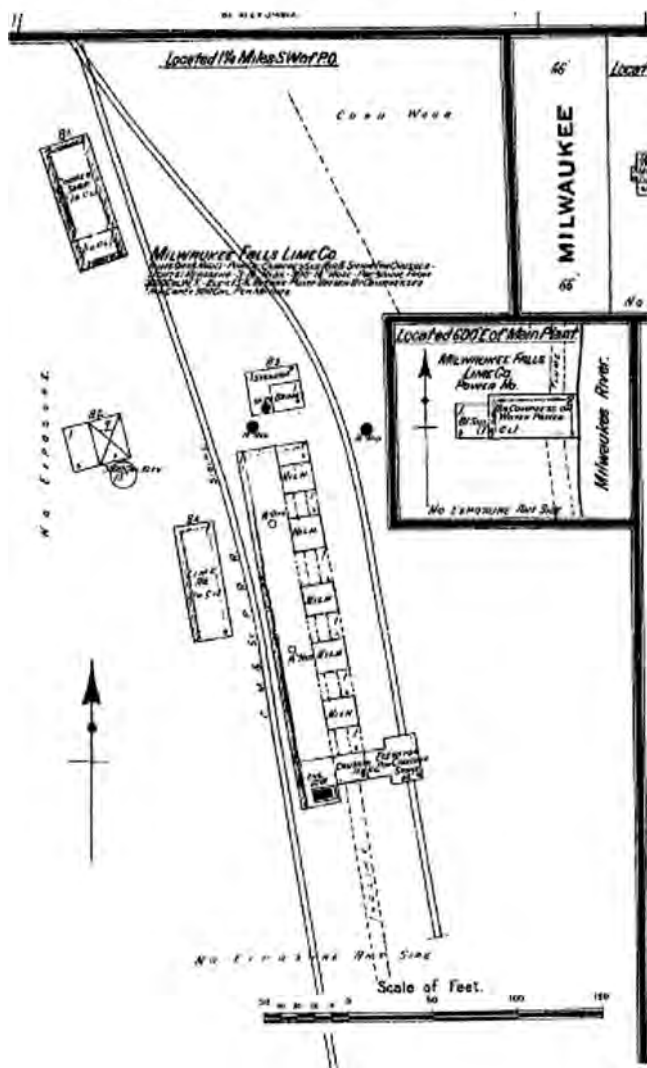
United States Department of the Interior
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Continuation Sheet

Section Figures Page 2

Milwaukee Falls Lime Company
Grafton, Ozaukee County, WI

Figure 2 of 4
Sanborn Fire Insurance Map of Milwaukee Falls Lime Company, October 1910.



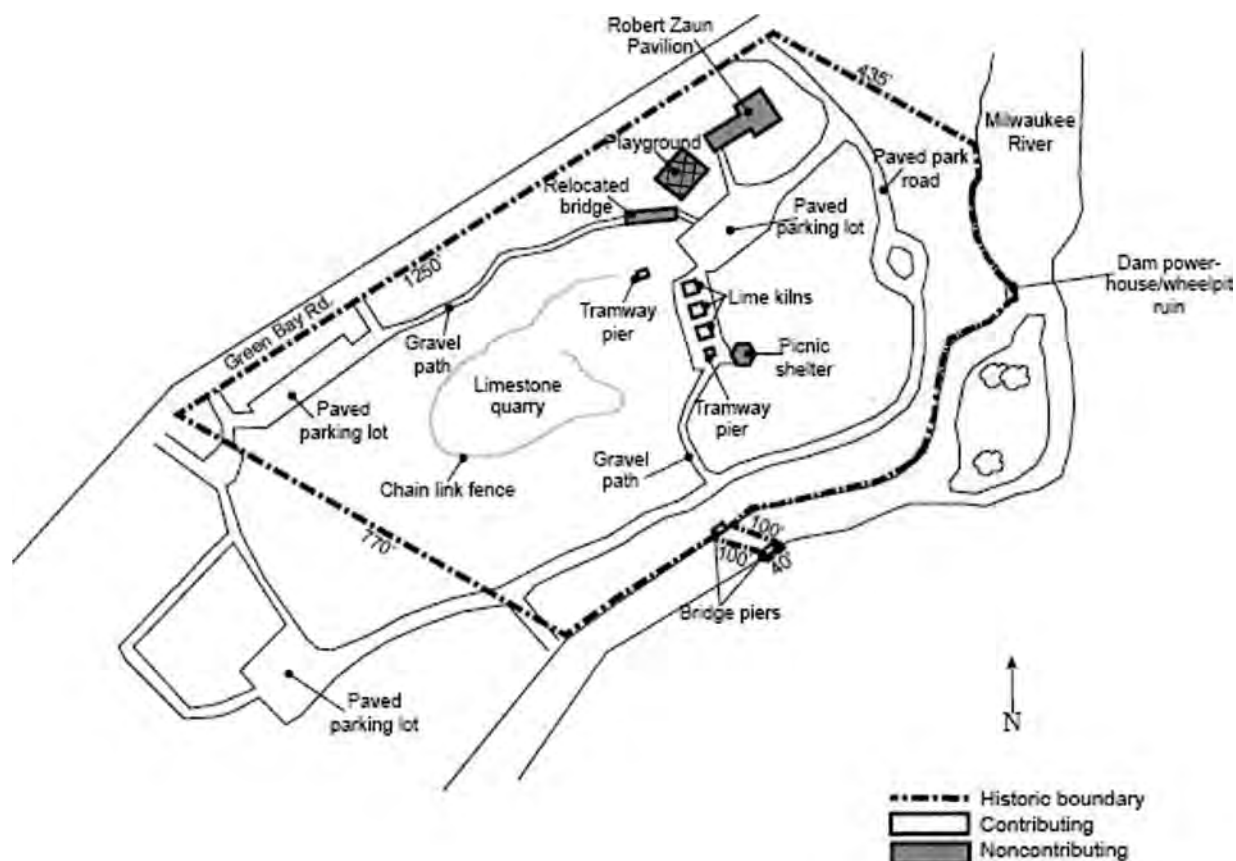
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Continuation Sheet

Section Figures Page 3

Milwaukee Falls Lime Company
Grafton, Ozaukee County, WI

Figure 3 of 4
Sketch map of Milwaukee Falls Lime Company nominated area, February 2011.



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Continuation Sheet

Section **Figures** Page 4

Milwaukee Falls Lime Company
Grafton, Ozaukee County, WI

Figure 4 of 4
Milwaukee Falls Lime Company, c.1900. Photographer unknown.



UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY Milwaukee Falls Lime Company
NAME:

MULTIPLE
NAME:

STATE & COUNTY: WISCONSIN, Ozaukee

DATE RECEIVED: 12/16/11 DATE OF PENDING LIST: 1/11/12
DATE OF 16TH DAY: 1/26/12 DATE OF 45TH DAY: 1/31/12
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 11001071

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N
OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N
REQUEST: N SAMPLE: N SLR DRAFT: N NATIONAL: N

COMMENT WAIVER: N

☒ ACCEPT ☐ RETURN ☐ REJECT 1.27.12 DATE

ABSTRACT/SUMMARY COMMENTS:

Entered in
The National Register
of
Historic Places

RECOM./CRITERIA _____

REVIEWER _____ DISCIPLINE _____

TELEPHONE _____ DATE _____

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.



Milwaukee Falls Lime Company

Ozaukee County, WI

photo 1 of 11

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Milwaukee Falls Lime Company
Ozaukee County, WI
Photo 2 of 11

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Milwaukee Falls Lime Company
Ozaukee County, WI
photo 3 of 11

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Walsgreens 02967 <> 02/11/11



CRAFTON
LIMEKILNS

Milwaukee Falls Lime Company
Ozaukee County, WI
Photo 4 of 11

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Walgreens 02967 <> 02/11/11



Milwaukee Falls Lime Company
Ozaukee County, WI
Photo 5 of 11

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Milwaukee Fallsy Lime Company
Ozaukee County, WI
Photo 6 of 11

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Milwaukee Falls Lime Company
Ozaukee County, WI
Photo 7 of 11

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Milwaukee Falls Lime Company
Ozaukee County, WI
photo 8 of 11

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Milwaukee Falls Lime Company
Ozaukee County, WI
Photo 9 of 11

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Milwaukee Falls Lime Company
Ozaukee County, WI
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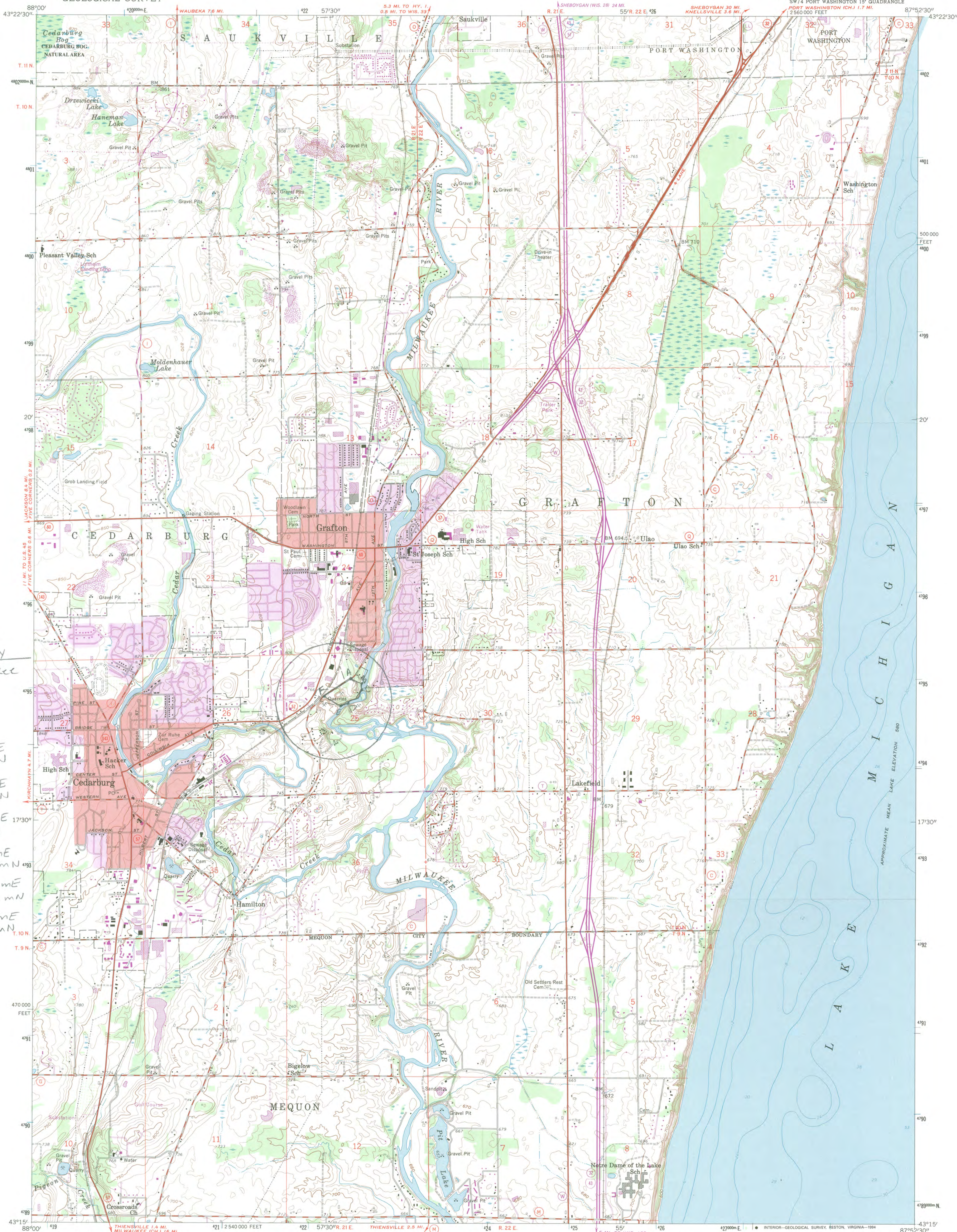
Milwaukee Falls Lime Company
Ozaukee County, WI
Photo 11 of 11

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Walgreens 02967 <> 02/11/11

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

CEDARBURG QUADRANGLE
WISCONSIN—OZAUKEE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
SW 1/4 PORT WASHINGTON 15' QUADRANGLE
PORT WASHINGTON (CH) 1.7 MI.
2560 000 FEET



Milwaukee Falls
Lime Company
Grafton, Ozaukee
County, WI

UTMS
A-16T422559 mE
4795069 mN
B-16T422654 mE
4795211 mN
C-16T422656 mE
4795148 mN
D-16T422529 mE
4794993 mN
E-16T422417 mE
4794964 mN
F-16T422219 mE
4795087 mN

Produced by the U. S. Geological Survey
Control by USGS and NOS/NOAA
Topography by photogrammetric methods from aerial photographs
taken 1955. Field checked 1959
Hydrography compiled from U. S. Lake Survey chart 74 (1957)
Projection and 10,000-foot grid ticks: Wisconsin coordinate
system, south zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid ticks, zone 16, shown in blue
1927 North American Datum (NAD 27)
North American Datum of 1983 (NAD 83) is shown by dashed corner ticks
The values of the shift between NAD 27 and NAD 83 for 7.5-minute
intersections are given in USGS Bulletin 1875
There may be private inholdings within the boundaries of
the National or State reservations shown on this map
Red tint indicates areas in which only landmark buildings are shown
Photosperspect from 1992 source; no major culture or drainage
changes observed. Boundaries and names revised 1994

Revisions shown in purple compiled from aerial photographs
taken 1971 and 1976. This information not field checked
Purple tint indicates extension of urban areas

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
AND WISCONSIN GEOLOGICAL SURVEY, MADISON, WISCONSIN 53706
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

SCALE 1:24,000

CONTOUR INTERVAL 10 FEET
SEA LEVEL DATUM OF 1929

DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS 578 FEET

QUADRANGLE LOCATION

1	2	3
4	5	6
7	8	9

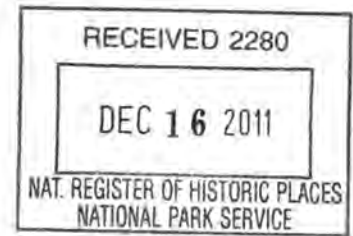
ROAD CLASSIFICATION

Primary highway, hard surface
Secondary highway, hard surface
Light-duty road, hard or improved surface
Unimproved road

1 Newburg
2 Port Washington West
3 Port Washington East
4 Five Corners
5
6 Menomonee Falls
7 Thiensville
8

CEDARBURG, WIS.
SW 1/4 PORT WASHINGTON 15' QUADRANGLE
43087-C8-TF-024

1959
PHOTOREVISED 1971 AND 1976
MINOR REVISION 1994
DMA 3470 IV SW—SERIES V861



TO: Keeper
National Register of Historic Places

FROM: Daina Penkiunas

SUBJECT: National Register Nomination

The following materials are submitted on this 12th day of December 2011,
for nomination of the Milwaukee Falls Lime Company to the National Register of
Historic Places:

1 Original National Register of Historic Places nomination form

Multiple Property Nomination form

11 Photograph(s)

1 CD with electronic images

1 Original USGS map(s)

4 Sketch map(s)/figure(s)/exhibit(s)

Piece(s) of correspondence

Other _____

COMMENTS:

Please insure that this nomination is reviewed

This property has been certified under 36 CFR 67

The enclosed owner objection(s) do _____ do not _____
constitute a majority of property owners.

Other: _____