To:
Strand Associates, Inc.
Engineers

DETERMINATION OF ELIGIBILITY - STOUGHTON POWER PLANT NO. 1

Submitted by:
John N. Vogel
Consulting Historian
18 August 1988

Summary

Documentation for Determination of Eligibility
for:

Project I.D. 5998-02-15
4th Street Bridge Replacement
City of Stoughton, Dane County
Stoughton City Power Plant No. 1

Name:	Stoughton City Power Plant No. 1
Location:	601 S. 4th Street Stoughton, WI West 75' of Lot 15, West 75' of the first 3 feet of adjoining Lot 14, Block 35, Original Plat, City of Stoughton, County of Dane. UTM Reference: 16/318990/4753410
Date of Construction:	1906
Present Owner:	Wisconsin Edison Co./Peter Burno
Present Use:	Hydro-electric power generation
Significance:	Stoughton City Power Plant No. 1 is eligible for the National Register for its local significance under Criterion A. As the earliest remaining component of Stoughton's municipally owned utility system, and the only component located within the city limits, it best embodies the effort that the community made to provide its citizens with electricity at the turn of the century, and with that the dramatic enhancement in the quality of life that electrical service brought.
Historian:	John N. Vogel
Comments:	Because of the proposed area of impact for this bridge replacement project, a DOE was required only for the power

plant itself. Associated with the plant's technological operation are a dam, a head race, and a tail race. The dam is 200' feet away from the project area and will not be affected. The head race, however, is one body of water that the new bridge will be spanning.

Thought to be originally constructed of fieldstone, an argument could have been made for the significance of the head race as a component of the historic landscape. But when Mr. Burno bought Plant No. 1, he reinforced the head race walls by covering them with a type of spray concrete. As such the integrity of the head race has been compromised to the point that it has lost any of the historical or architectural significance that it may have had.

NPS Form 10-900
(Rev. 8/86)
Wisconsin Word Processor Format (1331D)
(Approved 3/87)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in Guidelines for Completing National Register Forms (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries. Use letter quality printer in 12 pitch, using an 85 space line and a 10 space left margin. Use only archival paper (20 pound, acid free paper with a 2% alkaline reserve).

1. Name of Property

historic name: Stoughton City Power Plant No. 1

other names/site number: N/A

2. Location

street & number: 601 South 4th Street — N/A not for publication

city, town: Stoughton — N/A vicinity

state: Wisconsin — code: WI — county: Dane — code: 025 — zip code: 53589

3. Classification

Ownership of Property	Category of Property	No. of Resources within Property	
		contributing	noncontributing
X private	X building(s)	1	____ buildings
___ public-local	___ district	____	____ sites
___ public-State	___ site	____	____ structures
___ public-Federal	___ structure	____	____ objects
	___ object	1	0 Total

Name of related multiple property listing:

N/A

No. of contributing resources previously listed in the National Register: N/A

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this ___nomination X 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 X meets ___does not meet the National Register criteria. ___See continuation sheet.

James L. Wenning — 9/26/88

Signature of certifying official — Date

FEDERAL HIGHWAY ADMINISTRATION

State or Federal agency and bureau

In my opinion, the property X meets ___does not meet the National Register criteria. ___See continuation sheet.

[signature] — 11/14/88

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
___ 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

6. Functions or Use

Historic Functions (enter categories from instructions)	Current Functions (enter categories from instructions)
Industry/energy facility	Industry/energy facility

7. Description

Architectural Classification (enter categories from instructions)	Materials (enter categories from instructions)	
Other: Hydroelectric power house	foundation	Concrete
	walls	Brick
	roof	Asphalt
	other	Wood

Describe present and historic physical appearance.

Stoughton City Power Plant No. 1 is located on the northeast corner of South 4th Street and the Yahara River. Erected in 1906[1], it is a one story, industrial brick building, positioned on an east/west axis.

Rising from a concrete foundation, the walls of this building are of a cream colored brick. The north and south walls are adorned with four pilasters, thereby creating three recessed panels, while the east and west walls have three pilasters that create two recessed panels. A cornice, raised to the same plane as the pilasters, encompasses the building on the north, west and south sides. A gabled roof, apparent on the east side of the building, is hidden by an arched endwall on the west. The endwall arch is also raised to the plane of the pilasters and the cornice, and is topped with a diminutive round arch. Placed within the arch panel created between the arch and the cornice, then, is circular window set off by a red brick border, the rhythm of which is broken by a keystone, as well as similar stones every 90 degrees. Starting at the northeast corner of the building, concrete coping caps the cornice on the northside, the west endwall, and the cornice on the south side.

With the exception of the middle panel on the north side which contains a large, double leaf, arched door, all panels on the north, west and south sides contain windows. Each window, as well as the door, is flanked by red brick imposts upon which a springer rests. Rising from the springers are round archs with keystones. Each window unit has a concrete sill. The east wall is solid brick. The arch portions of these windows have all be bricked in. Current windows have twenty lights and are set in metal frames and muntins.

A small lien-to shed had been added onto the east side of the building by 1926.[2] It has since been removed.

The interior is one large room. It is used for equipment maintenance, and houses two S. Morgan Smith Turbines and generators. It has a dropped ceiling.

Notes

1. Interview with Peter Burno, Stoughton, WI, 9 August 1988.

2. 1926 Sanborn-Perris Map.

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties: ___nationally ___statewide X locally

Applicable National Register Criteria X A ___B ___C ___D

Criteria Considerations (Exceptions) ___A ___B ___C ___D ___E ___F ___G

Areas of Significance (enter categories from instructions)	Period of Significance	Significant Dates
Industry	1906-1938	1906
		1926

Cultural Affiliation: N/A

Significant Person: N/A

Architect/Builder: Unknown

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

Statement of Significance:

Stoughton Power Plant No. 1 is eligible for the National Register for its local significance under Criterion A. As the earliest remaining component of Stoughton's municipally owned utility system, and the only component located within the city limits, it best embodies the effort that the community made to provide its citizens with electricity at the turn of the century, and with that the dramatic enhancement in the quality of life that electrical service brought.

Historical Background:

Settlement in the Stoughton area pre-dated the founding of the city itself. Early settlers were largely Yankees or Scandinavian immigrants.[1] One such Yankee settler was Luke Stoughton. Arriving from his home in Vermont, he bought the 800 acre site upon which Stoughton would grow on 3 July 1847.[2] The site selected was about halfway between Janesville and Madison, in an area that was rapidly being settled by aspiring agriculturalists. The fledgling village's first industry was Stoughton's sawmill. built in 1847 on the Cat Fish (now Yahara) River.[3] The next industry was a gristmill built by DeWitt Davis in 1850. It had one run of stone and was a very successful business in an area where wheat was heavily raised.[4] Stoughton rapidly grew as an agricultural support center, its success as a village being virtually assured when Luke Stoughton enticed the railroad to pass through town in 1853.

Electing to pass through Stoughton, the railroad by-passed Dunkirk, another small village to the south. Dunkirk was settled by Josiah Lyon in the late 1840s. Jealous that Stoughton might surpass his small settlement, Lyon obtained a permit for a dam

X See continuation sheet

and gristmill on the Cat Fish River, and attempted to build his dam far enough upstream to create a reservoir that would rob Stoughton of his waterpower.[5] Dunkirk was destined to fail when the railroad by-passed the village. The road had asked Lyon to provide land for a depot. Feeling sure that the road would still elect to pass through his town, Lyon refused and insisted on the railroad buying the land. With an offer of free land from Stoughton, that is where the railroad went.[6]

Stoughton grew rapidly, due largely to the development and growth of the Mandt Wagon Works, as well as a heavy Norwegian immigration to the area throughout the last half of the 19th century.[7] By 1891 the city's population was about 3,000.[8] It reached 3,431 in 1900,[9] and 5,101 by 1920.[10]

As the city grew, municipal services had to be supplied to the citizens. One of the services that Stoughton elected to offer was electrical power. There were two electric light companies in Stoughton in 1892. The city bought them both out, thus creating one of the state's early municipally owned power systems.[11]

Industry

Hydro-electric power in Wisconsin dates back to 1882 when the first such power plant in the country was put into service in Appleton.[12] Power at that time was only produced as direct current (DC), however, so it could not be transmitted more than ten blocks or so. By the mid-1880s, however, George Westinghouse had perfected the concept of alternating current, and with it the ability to carry electricity many, many miles from the generating source. By 1890, Oconto, Kenosha and Whitewater all had alternating current (AC) systems.[13]

Stoughton's early system was DC, and was used largely to produce power for street lights.[14] The city did not own the utility long, electing to sell it to the Lyon family in Dunkirk. Lyon's tenure of ownership was not long. They sold it back to Stoughton before the turn of the century, when the family experienced some financial setbacks.[15] The city continued to grow, and in 1899 experienced a severe power shortage. To increase their generation capacity, Stoughton leased the Dunkirk dam and flour mill from the Lyon family, removed the milling machinery, and "belted a generator to the shaft."[16] The first Dunkirk generator was DC, however, and the power never even reached Stoughton. It was converted to AC late in the year.

By 1901, the city had sold the utility again. This time to the Stoughton Electric Light and Power Company. Capitalized at $10,000, its president was F.B. Hyland, a

X See continuation sheet

Stoughton resident and sometime physician. The secretary was Robe Dow, Jr., and the treasurer was Robe Dow, both local insurance agents.[17] The city purchased the utility back again by early 1906, this time for good. Despite city reacquisition, city residents were not pleased with the service it provided. People wanted 24 hour a day service, prompting the local paper to editorialize: "if municipal ownership means the same rate and the same service private ownership gave us, wherein lies the advantage."[18] The city finally agreed to increase the service when, in November, 1906, the city council approved a resolution calling for a 24 hour service, two month trial.[19]

Prior to the trial, the old power plant in the city burned down. The subject property, Stoughton Power Plant No. 1, was built in 1906 to replace it.[20] The new plant was equipped with two S. Morgan Smith vertical shaft hydraulic turbines set in line, one Fort Wayne Synchronous Generator and a Woodward Model D governor. The capacity of this plant was rated at 150 kw, although it likely never produced more than 90.[21] (Note for comparison sake, that many plants similar to this were built in Michigan's Upper Peninsula at the time. Due to river flow considerations they produced between 4,000 and 6,000 kw, and were considered small hydro-electric plants in the general sense.[22] Stoughton's Plant No. 1 is diminutive by comparison.)

With its new Plant No. 1, supplemented by the leased works at Dunkirk and a small steam powered generator located across the street at the Mandt wagon factory, Stoughton continued to meet its power needs until about 1916. In that year Stoughton Plant No. 3 was built at Stebbinsville. It was the first "modern" plant that the city had. It was modern in the sense that it had a high speed vertical shaft turbine directly driving a vertical shaft generator, a much more efficient type of operation.[23] (The machinery in Plant No. 1 and at Dunkirk had vertical turbines, the speed of which was "geared up" to drive a horizontal shaft generator.)

By 1916, "Hydro-mania" had swept across Wisconsin. It was motivated by the concept of free [water] power, the hydro-electrical development of Niagara Falls and many logging dams being abandoned in the northern part of the state.[24] 370 Wisconsin communities had electrical service by 1916. 120 of these towns were served by plants large enough to serve several communities. The remaining 250 were small, community oriented facilities. Of the 370, only 86 were owned by local units of government, as Stoughton's was.[25] Small companies, however, had a tough time of it. When given the opportunity to sell out, the opportunity that Samuel Insull gave many of them as he built his Wisconsin Power and Light Company, a company whose service area surrounded Stoughton, they jumped at it.[26] Still, Stoughton's utility flourished.

X See continuation sheet

In 1926, Stoughton bought the Dunkirk facility (Stoughton Plant No. 2) from the Lyon family and rebuilt it. At the same time, they replaced the machinery in Plant No. 1. The new turbines in Plant No. 1 were again S. Morgan Smith, but this time they were vertical shaft, propeller driven turbines, driving vertical shaft S. Morgan Smith generators. Two generators were placed in Plant No. 1 in 1926. One was rated at 48 kw and the other at 50kw.[27]

Stoughton continued to operate the utility until the mid-1970s. Money had been lost on the system for twenty years, but due to DNR regulations requiring that dams be renovated before sale, the city, deciding it did not want to renovate the dams at the power sites, elected to hang on to them. Negotiating a deal with the city in 1974, Peter Burno purchased Plants 2 and 3. He bought the machinery in Plant No. 1 in 1975, and bought the building and its operation in 1980. He operates the three plants as Wisconsin Edison Co.[28] Stoughton now buys all the power that Wisconsin Edison produces, and meets the balance of its needs with purchases from Wisconsin Power and Light Company.

Stoughton Plant No. 1 is significant, and thus eligible for the National Register, as a representative of the municipally owned system that provided so much to the quality of life to city's residents from the 1890s on. Built in 1906, it is the oldest remaining component of the city's old utility system. As well, it is the only component located within the city limits, thus creating a clear association with Plant No. 1, the utility, and they benefits it provided the young city in the early part of the century.

X See continuation sheet

Notes

1. Ferd Homme, Oak Opening: The Story of Stoughton, (Stoughton, WI: Stoughton Centennial Committee, 1975), p. 14.

2. Ibid., pp. 19-20.

3. Ibid., pp. 21-23.

4. Ibid., pp. 27-28.

5. Ibid., p. 25.

6. Ibid., pp. 29-30.

7. Ibid., pp. 43, 53.

8. Wisconsin State Gazetteer and Business Directory, (Chicago: R.L. Polk Co., 1891), p. 967.

9. Wisconsin State Gazetteer and Business Directory, (Chicago: R.L. Polk Co., 1901), p. 1030.

10. Wisconsin State Gazetteer and Business Directory, (Chicago: R.L. Polk Co., 1921), p. 1192.

11. Homme, Opening, p. 75.

12. Ellis L. Armstrong, ed., History of Public Works in the United States, 1776-1976, (Chicago: American Public Works Association, 1976), p. 346.

13. Forest McDonald, Let There Be Light: The Electrical Utility Industry in Wisconsin, 1881-1955, (Madison: The American History Research Center, 1957), p. 27.

14. Interview with Peter Burno, Stoughton, WI, 9 August 1988. Burno is the owner-operator of Wisconsin Edison, the utility that now operates the three former Stoughton plants. Burno is an accomplished engineer who owns companies dating to the nineteenth century that produce steam and boiler machinery. Additionally, he has personally designed, built and installed hydro-electric generating systems. He has been working in the field since 1948, has served as president of the National Association of Power

Engineers, and is one of 48 people voted life memberships in the American Society of Military Engineers. He researched the history of the Stoughton utilities when he bought them from the city in the mid-1970s, as he sought to determine if there had ever been an Edison company in Wisconsin and, thus, prevent him from using the Edison name in his company.

15. Ibid.

16. Ibid.

17. Wisconsin Gazetteer, 1901, p. 1030.

18. Stoughton Courier-Hub, 16 March 1906.

19. Stoughton Courier-Hub, 23 November 1906.

20. Burno, Interview.

21. Ibid.

22. Charles K. Hyde, The Upper Peninsula of Michigan: An Inventory of Historic Engineering and Industrial Sites, (Washington, D.C.: U.S. Department of the Interior, 1978), p. 82.

23. Ibid.

24. McDonald, Light, pp. 111-114.

25. Ibid., pp. 172-173.

26. Ibid., pp. 175, 230-232.

27. Ibid.

28. Ibid.

___ See continuation sheet

9. Major Bibliographical References

See continuation sheet

Previous documentation of file (NPS):
N/A preliminary determination of individual listing (36 CFR 67) has been requested
N/A previously listed in the National Register
N/A previously determined eligible by the National Register
N/A designated a National Historic Landmark
N/A recorded by Historic American Buildings Survey #_____
N/A recorded by Historic American Engineering Record #_____

X See continuation sheet

Primary location of additional data:
___ State Historic Preservation Office
___ Other State agency
___ Federal agency
___ Local government
___ University
X Other
Specify repository:
State Historical Society library

10. Geographical Data

Acreage of Property Less than one

UTM References:

	Zone	Easting	Northing
A	1/6	3/1/8/9/9/0	4/7/5/3/4/1/0
B	/	/ / / / /	/ / / / / /
C	/	/ / / / /	/ / / / / /
D	/	/ / / / /	/ / / / / /

___ See Continuation Sheet

Verbal Boundary Description

West 75' of Lot 15, West 75' of the first 3 feet of adjoining Lot 14, Block 35, Original Plat, City of Stoughton, County of Dane, State of Wisconsin.

___ See Continuation Sheet

Boundary Justification

Because significance is associated with the technological function the powerplant served, and is no way tied to the land itself, the boundary includes only the building and approximately 1 foot of land adjacent to each wall.

___ See Continuation Sheet

11. Form Prepared By

name/title John N. Vogel
organization Consulting Historian
street & number 301 N. 73rd Street
city or town Milwaukee
date 17 August 1988
telephone (414) 258-6598
state WI zip code 53213

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United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

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Major Bibliographical References:

Armstrong, Ellis L., ed. History of Public Works in the United States, 1776-1976. Chicago: American Public Works Association, 1976.

Burno, Peter. Stoughton, WI. Interview. 9 August 1988.

Homme, Ferd. Oak Opening: The Story of Stoughton. Stoughton, WI: Stoughton Centennial Committee, 1947.

Hyde, Charles K. The Upper Peninsula of Michigan: An Inventory of Historic Engineering and Industrial Sites. Washington, D.C.: U.S. Department of the Interior, 1978.

McDonald, Forest. Let There Be Light: The Electrical Utility Industry in Wisconsin, 1881-1955. Madison: The American History Research Center, 1957.

Stoughton Courrier-Hub. Stoughton, Wisconsin.

Wisconsin Gazetteer and Business Directory. Chicago: R.L. Polk Co., 1891, 1901, 1921.

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NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section number photographs Page 1

STOUGHTON CITY POWER PLANT NO. 1
601 S. 4th Street
Stoughton, Dane County
Photo by John N. Vogel
9 August 1988
View to East Southeast
Photo #1 of 5

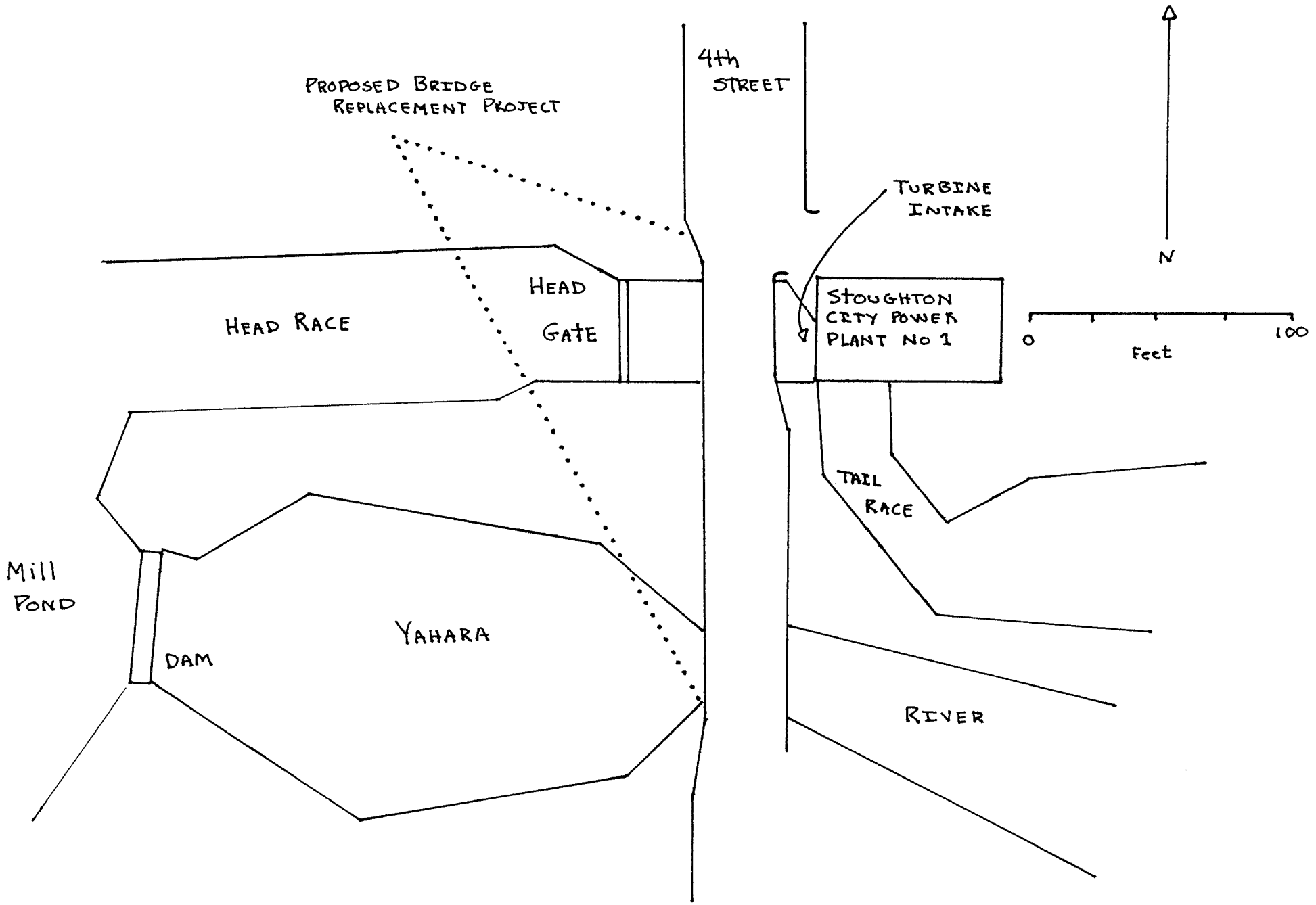
STOUGHTON CITY POWER PLANT NO. 1
601 S. 4th Street
Stoughton, Dane County
Photo by John N. Vogel
9 August 1988
View to West Southwest
Photo #2 of 5

STOUGHTON CITY POWER PLANT NO. 1
601 S. 4th Street
Stoughton, Dane County
Photo by John N. Vogel
9 August 1988
View to South
Photo #3 of 5

STOUGHTON CITY POWER PLANT NO. 1
601 S. 4th Street
Stoughton, Dane County
Photo by John N. Vogel
9 August 1988
View to North
Photo #4 of 5

STOUGHTON CITY POWER PLANT NO. 1
601 S. 4th Street
Stoughton, Dane County
Photo by John N. Vogel
9 August 1988
View of generator
Photo #5 of 5

___ See continuation Sheet


PROPOSED BRIDGE
REPLACEMENT PROJECT
4th
STREET
TURBINE
INTAKE
N
HEAD
GATE
HEAD RACE
STOUGHTON
CITY POWER
PLANT No 1
0
100
Feet
TAIL
RACE
Mill
POND
YAHARA
DAM
RIVER

SKETCH MAP

Appendix 1:
Updated Photo Documentation
October/November 2016

Stoughton City Power Plant No.1
515 S. Fourth Street
City of Stoughton
Dane County, WI

Photographed by Gail Klein
October 18 and November 13, 2016

Photo 1 of 8
West elevation, looking east

Photo 2 of 8
West and north elevations, looking southeast

Photo 3 of 8
North elevation, looking south

Photo 4 of 8
West and south elevations, looking northeast

Photo 5 of 8
South and east elevations, looking northwest

Photo 6 of 8
Interior, west end

Photo 7 of 8
Interior, east end

Photo 8 of 8
Interior, basement

Photo 1 of 8

Photo 2 of 8

Photo 3 of 8

Photo 4 of 8

Photo 5 of 8

Photo 6 of 8

Photo 7 of 8

Photo 8 of 8