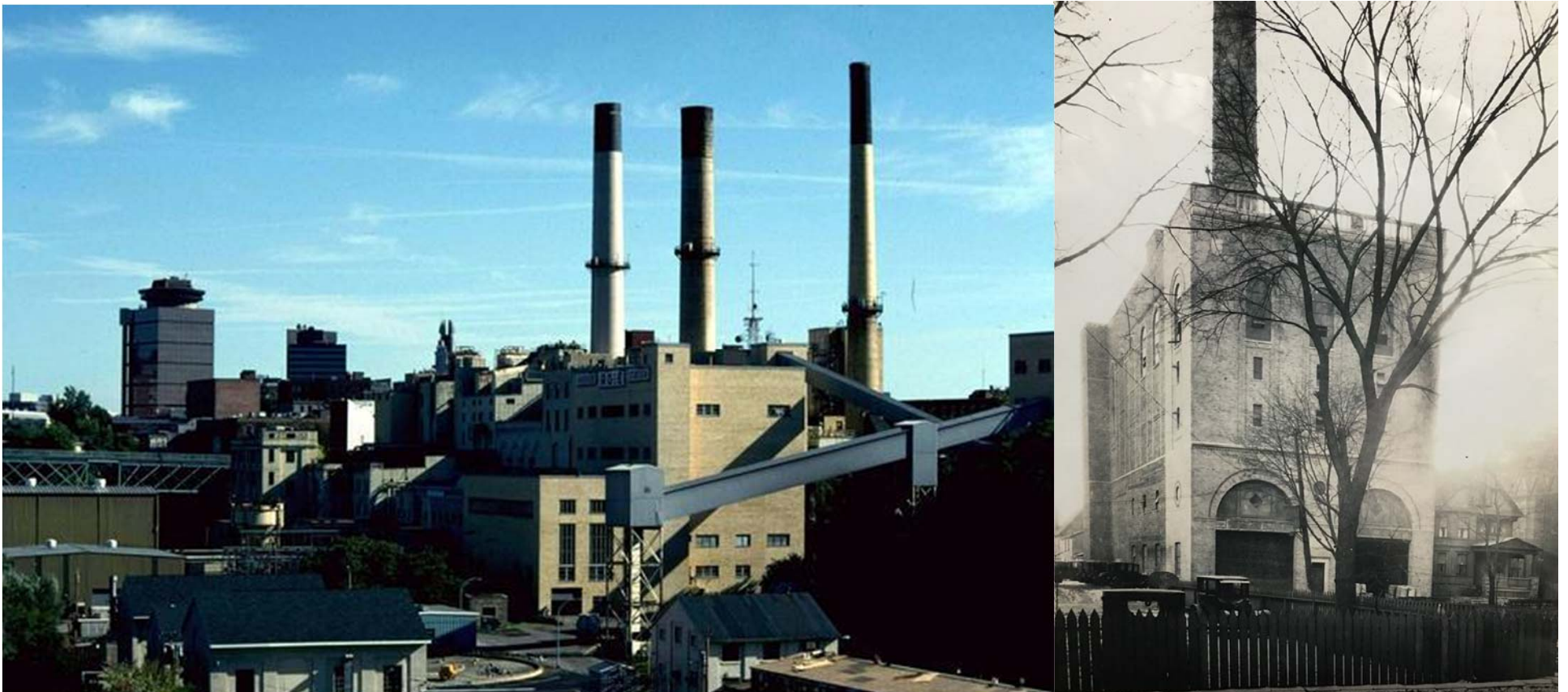


# Rochester's District Steam Heating System

Rochester's Rich History

Morris A. Pierce, PhD  
University of Rochester  
April 17, 2021



# Public Utilities in Rochester

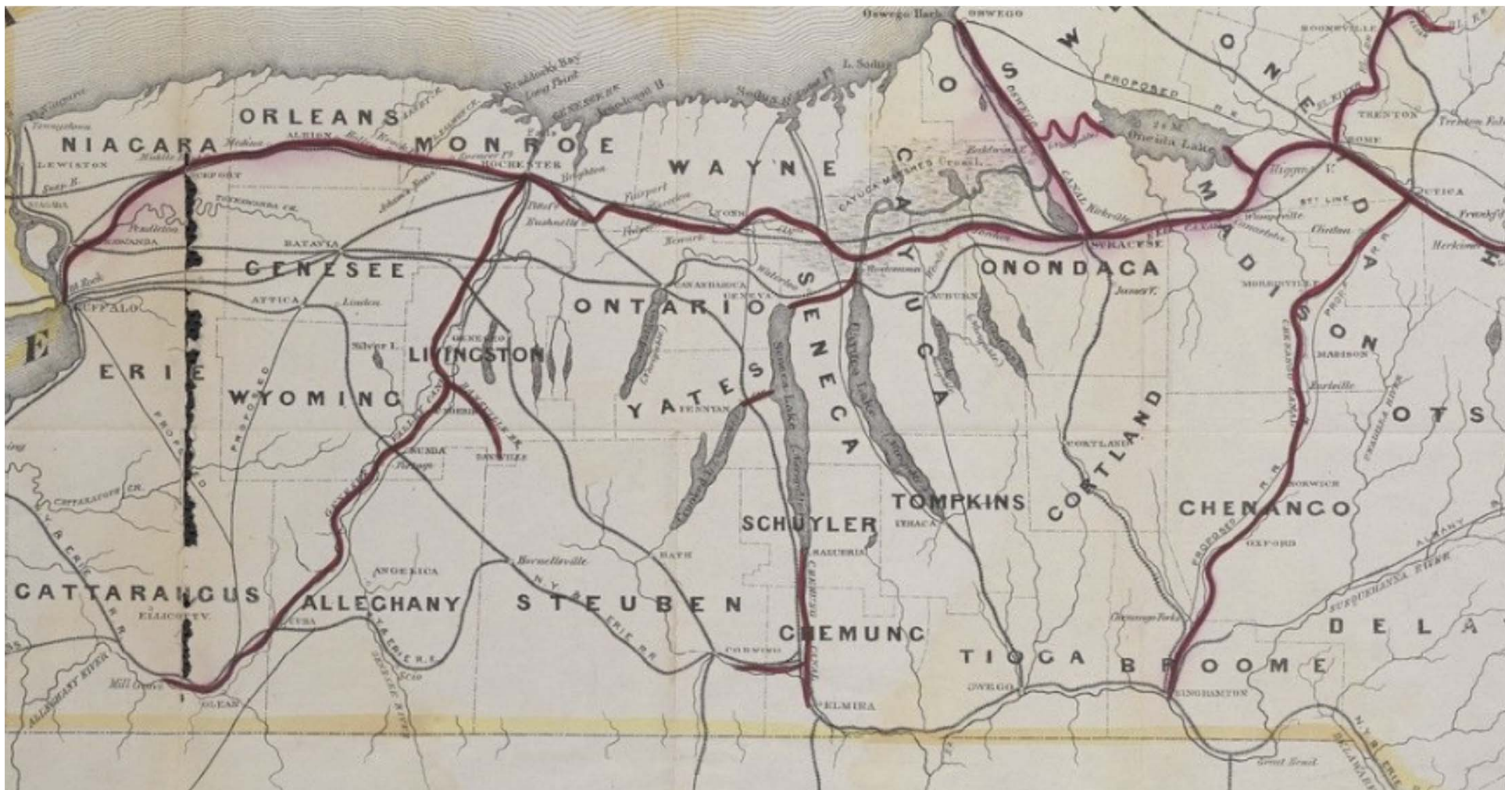
- A company began supplying gas manufactured from coal for illumination in December 1848.
- The Holly fire protection system began pumping Genesee River water to hydrants in the downtown area in February 1874.
- Water from Hemlock lake arrived in January 1876 for domestic use and fire protection outside the downtown area.
- Water from the two systems was also used to power elevators and other machinery.
- Telephone service was introduced in January 1879.
- Electric arc lights were demonstrated in December 1879 and the first of several electric companies was formed in 1880.

# Cooking and Heating

- Wood was the only fuel used until the late 1820s, when a small amount of coal brought by the Erie Canal was used for iron working.
- The Chemung, Chenango, and Genesee Valley Canals brought hope to delivering coal from Pennsylvania, but these waterways only had limited success with coal and in any event were shut down during the winter when coal was most needed.
- Coal deliveries by railroad were more reliable, but expensive, especially for small quantities.
- An ample supply of coal at a reasonable price only became available in the 1880s after the completion of the Rochester & Southern Railroad.

# Canals to Pennsylvania

- Chemung (1833), Chenango (1838), Genesee Valley (opened 1840, did not reach the Allegheny River until 1862)

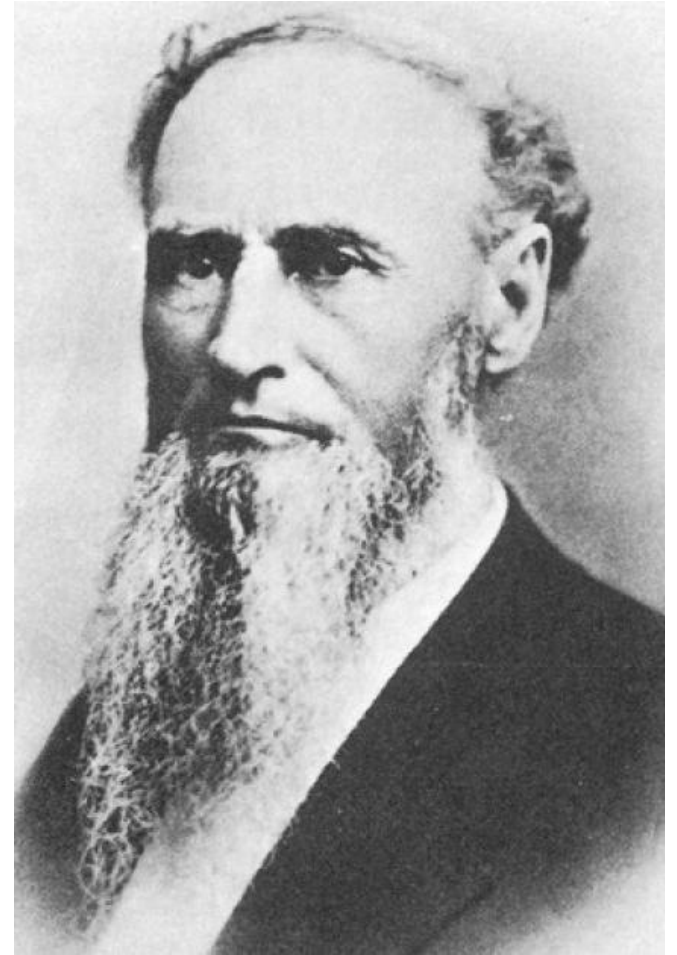


# Coal Appliances

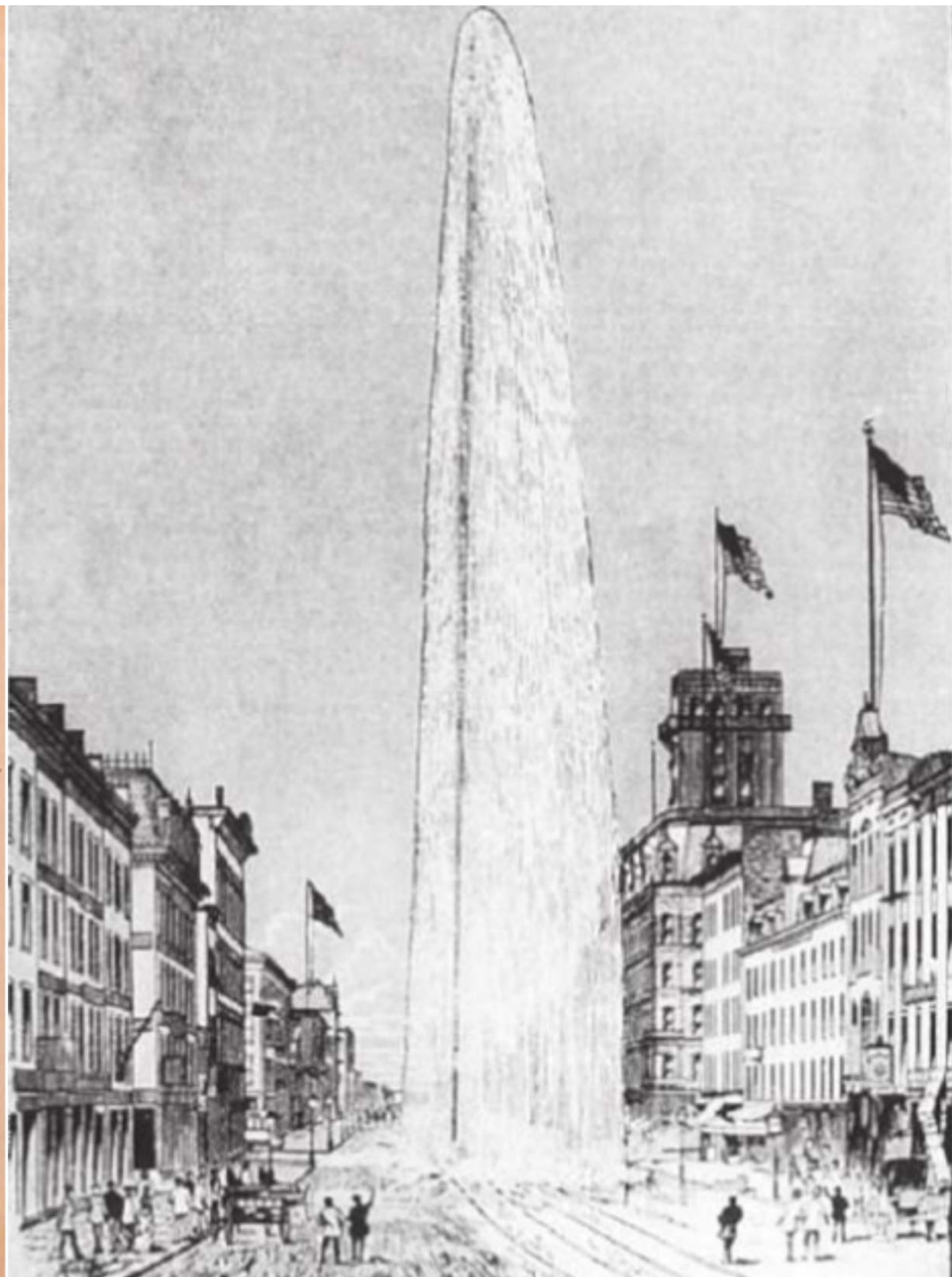
- Coal was initially used in freestanding stoves that were also used for cooking.
- Coal furnaces and boilers for houses and small businesses appeared in the 1860s, but were very labor intensive as automatic stokers and dampers were not introduced until the 20<sup>th</sup> Century.
- Businesses and rich households could hire someone to take care of the heating apparatus, but most households had to deal with the coal themselves.
- In addition to the hassle of delivering, storing and feeding the coal into the fire, it left a black residue on everything inside the house.
- 75 percent of homes still used wood or coal as their primary heating fuel in 1940.

# Birdsill Holly

- Prolific inventor who was invited to Lockport from Seneca Falls in 1859 to manage the new Holly Manufacturing Company.
- This firm produced a variety of metal goods including pumps, but a series of local fires led Holly to develop a fire protection system that pumped water under pressure to distributed fire hydrants.
- Holly patented his idea and the company installed more than a hundred Holly water works systems, including one that has provided fire protection in downtown Rochester since 1874.



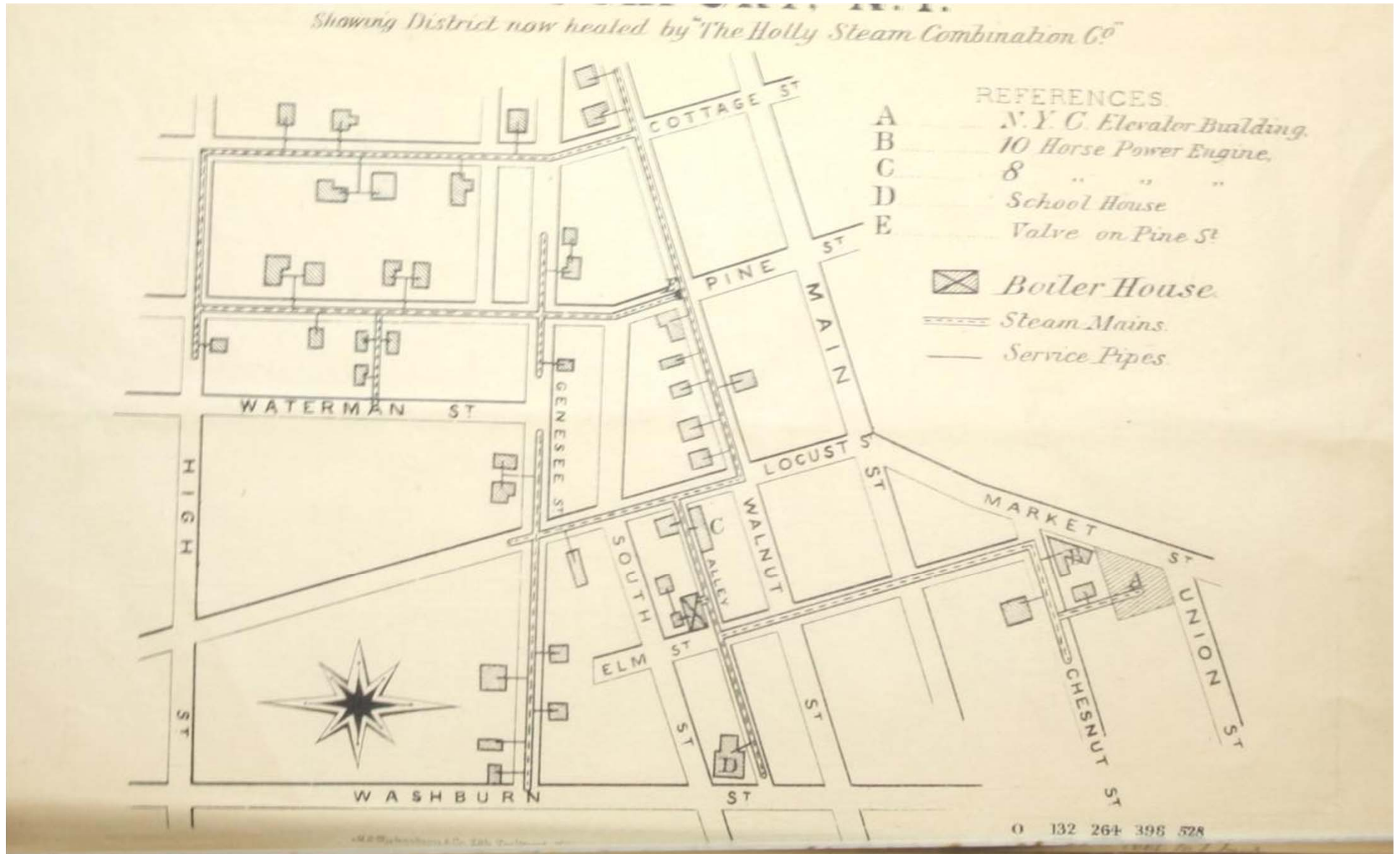
PROGRAMME OF PUBLIC EXHIBITION  
OF  
THE HOLLY SYSTEM  
**Water Works,**  
AT ROCHESTER, N. Y.  
TO TAKE PLACE  
WEDNESDAY, FEBRUARY 18th, 1874.  
EXPRESS PRINT, ROCHESTER, N. Y.



# Holly Steam System

- Holly's water system patents were litigated in several court cases, which the company's board grew tired of paying for.
- Holly then formed a new company to introduce his new system of distributing steam to individual buildings through underground pipes.
- The Holly Steam Combination Company installed a system in Lockport in 1877 that served 40 houses and several larger buildings.
- The idea was well received in other communities, which was aided by Holly prevailing in his patent disputes in 1878.

# Steam System in Lockport



# Holly Steam System

- Larger buildings had employed steam boilers since the early 19<sup>th</sup> Century to provide power for steam engines in addition to heating the building.
- Holly's steam system would replace these individual steam boilers with steam produced in a centralized boiler plant that would be delivered through underground pipes, eliminating not only the building boiler but the labor required to operate and maintain it.
- The larger plant could buy larger quantities of coal at a lower price and the operators could deliver steam to many buildings at a lower cost.
- Holly also designed his system to serve individual houses.

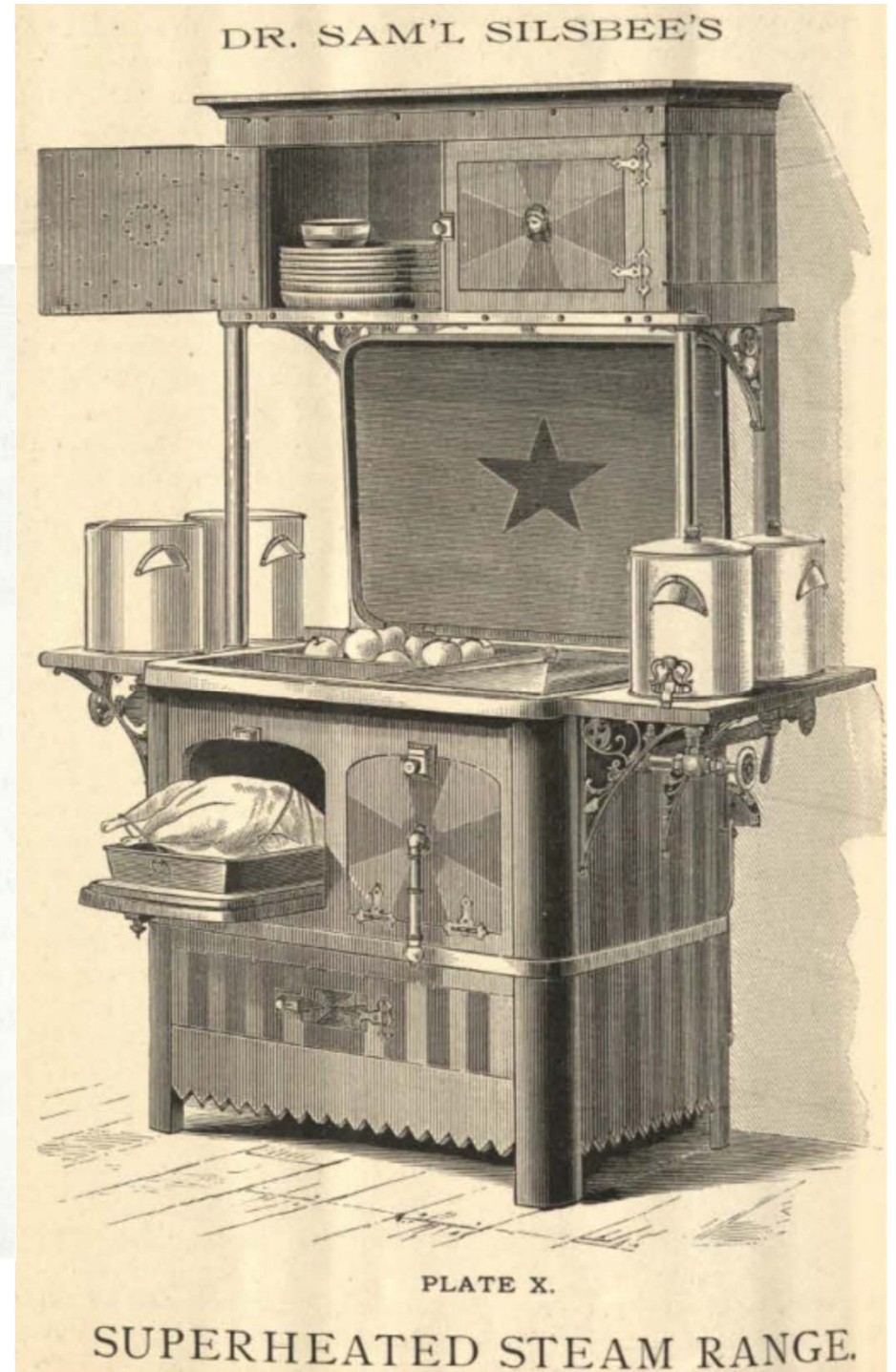
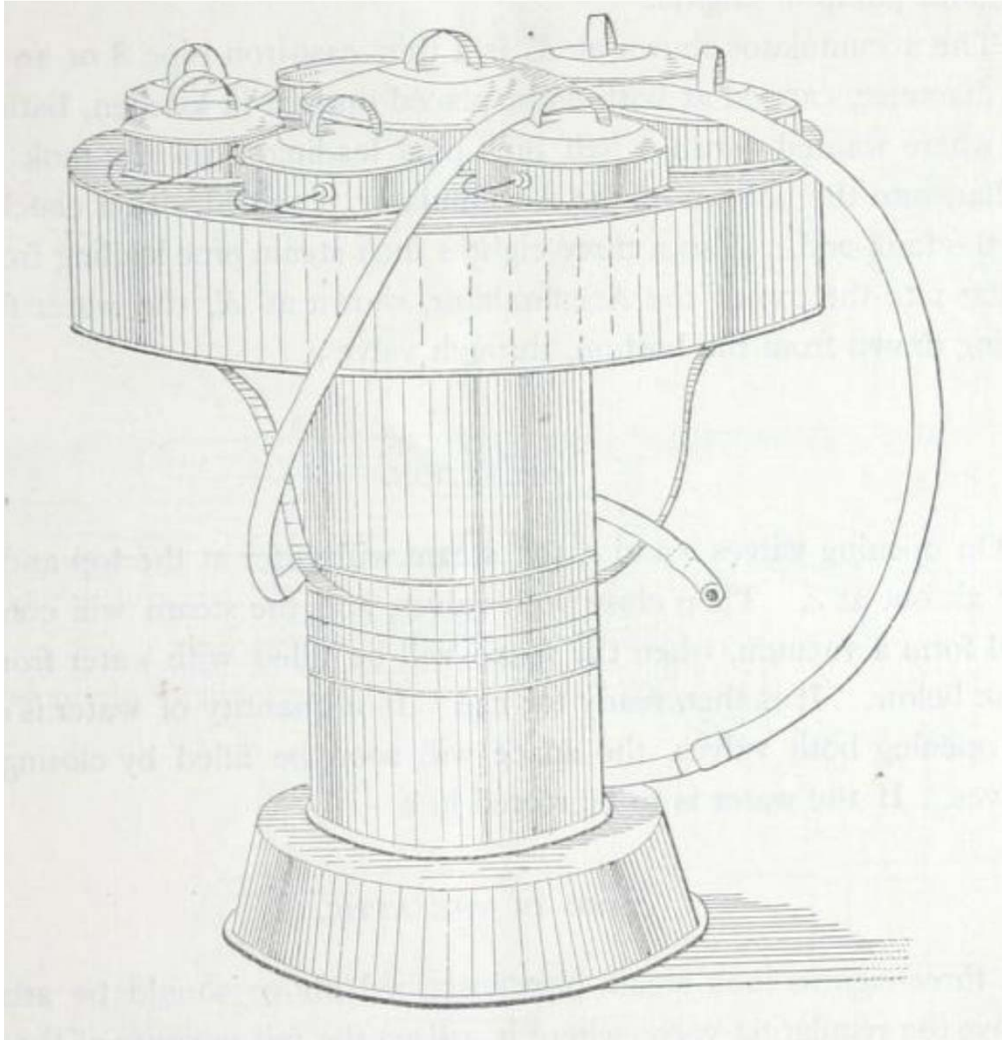
# Residential Steam Service

- Holly's ambitious scheme anticipated supplying steam to residential customers for space and domestic water heating in addition to cooking.
- He estimated that residences paid \$50 yearly for ten tons of coal and another \$65 each year to cost the cost of buying and operating a furnace.
- Steam from a Holly system would cost about \$60 per year, or slightly more than the cost of coal alone.

# Customer Reception

- A lady who has the steam radiators expressed special gratification with the Holly system from purely a housekeeper's standpoint.
- She says there is no coal dust, and her paint doesn't require half the attention it did when she had stoves in the house, while her furniture is always cleaner.
- Another suggestion, and an important one, is the fact that as at present conducted in Lockport, the Holly system is rather a luxury for the rich than a blessing for the poor, is certainly enjoyed by those who would otherwise have furnaces rather than by the workingman who only supports one small fire and can ill afford that.

# Steam Cooking



1878

ANNOUNCEMENT

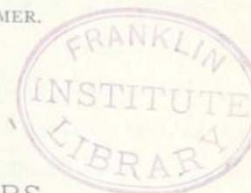
OF

The Holly Steam Combination Company

LIMITED,

OF LOCKPORT, N. Y.,

FOR SUPPLYING HEAT TO PRIVATE DWELLINGS AND PUBLIC BUILDINGS  
OF EVERY DESCRIPTION, FROM A CENTRAL POINT, THROUGH  
STREET MAINS AND LATERALS, AND TO MEASURE  
THE STEAM USED TO EACH CONSUMER.



---

BOARD OF DIRECTORS.

---

D. F. BISHOP, M. D., - - - - - *President.*  
SAMUEL ROGERS, - - - - - *Vice-President.*  
F. N. TREVOR, - - - - - *Secretary.*  
I. H. BABCOCK, - - - - - *Treasurer.*  
BIRDSILL HOLLY, B. D. HALL,  
M. M. SOUTHWORTH.

---

LOCKPORT, N. Y.:

PRESS OF UNION PRINTING AND PUBLISHING CO., 21 HODGE OPERA HOUSE.

1878

# New Holly Steam Systems

- Three new Holly steam companies started operating in 1878:
  - Auburn, New York
  - Detroit, Michigan
  - Springfield, Massachusetts
- Another system was installed at the National Home for Disabled Volunteer Soldiers in Dayton, Ohio

# October 1878

- The *Lockport Union* of October 14, 1878 says: "A delegation of citizens from Rochester arrived here on the noon train, for the purpose of inspecting and negotiating with the Holly steam heating company, with a view of introducing the system in their city."

March 28, 1879

TH 7641  
.H7  
Copy 1

U. S. G. & O. SURVEY  
LIBRARY AND ARCHIVE  
MAY 7 1880  
Acc. No.  
Class

# REPORT

UPON THE SYSTEM OF THE

HOLLY STEAM COMBINATION COMPANY LIMITED,

OF LOCKPORT, N. Y.,

FOR THE INTRODUCTION OF THE

## District System of Steam Heating

FOR

CITIES AND VILLAGES.

BY

GENERAL HERMAN HAUPT,

GRADUATE OF WEST POINT, CLASS OF 1835, AT AGE OF 18; ENTERED SERVICE OF PENN'A. AS ENGINEER STATE WORKS, 1838; PROFESSOR CIVIL ENGINEERING AND MATHEMATICS IN PENN'A. COLLEGE, 1840-1847; SUCCESSIVELY GENERAL SUP'T, CHIEF ENGINEER, AND DIRECTOR OF PENN'A. R. R. UNTIL 1856; AUTHOR OF GENERAL THEORY OF BRIDGES, 1852; THE FIRST ONE PUBLISHED GIVING RULES AND FORMULA FOR CALCULATING THE STRENGTH OF BRIDGES; CHIEF ENGINEER AND CONTRACTOR FOR HOOSAC TUNNEL, 1856-1862; CHIEF OF CONSTRUCTION AND OPERATION OF THE MILITARY RAILROADS OF THE U. S.; AUTHOR OF WORK ON MILITARY BRIDGES, 1863; GENERAL MANAGER OF THE LINE OF RAILROADS KNOWN AS THE PIEDMONT LINE, FROM RICHMOND, VA., TO ATLANTA, GA., 1872 TO 1876; CHIEF ENGINEER OF SEABOARD PIPE LINE, 1876 TO 1879.

### OFFICERS.

D. F. BISHOP, M. D., *President.*      B. D. HALL, *Secretary.*  
SAMUEL ROGERS, *Vice President.*      I. H. BABCOCK, *Treasurer.*  
BIRDSILL HOLLY, *Superintending Engineer.*

LOCKPORT, N. Y.:  
UNION PRINTING AND PUBLISHING COMPANY, JOHN HODGE, PRESIDENT.

1879.

# 1879

- The Rochester Steam Heating and Power Company was organized on April 5, 1879 with a capital of \$100,000.
- President - George C. Buell. Secretary - I. W. Butts. Treasurer - George E. Jennings. Trustees - George C. Buell, Patrick Barry, M. F. Reynolds, James E. Booth, Henry W. Craig, I. W. Butts, William S. Kimball, George E. Mumford.
- The company asked the Common Council for permission to lay pipes in the street, which was granted on May 21<sup>st</sup>
- The company did not build anything, but no reasons are known.

# 1879 Systems

- Steam Heating Companies:

- Milwaukee, Wisconsin
- Troy, New York
- Belleville, Illinois
- Dubuque, Iowa
- London, Ontario

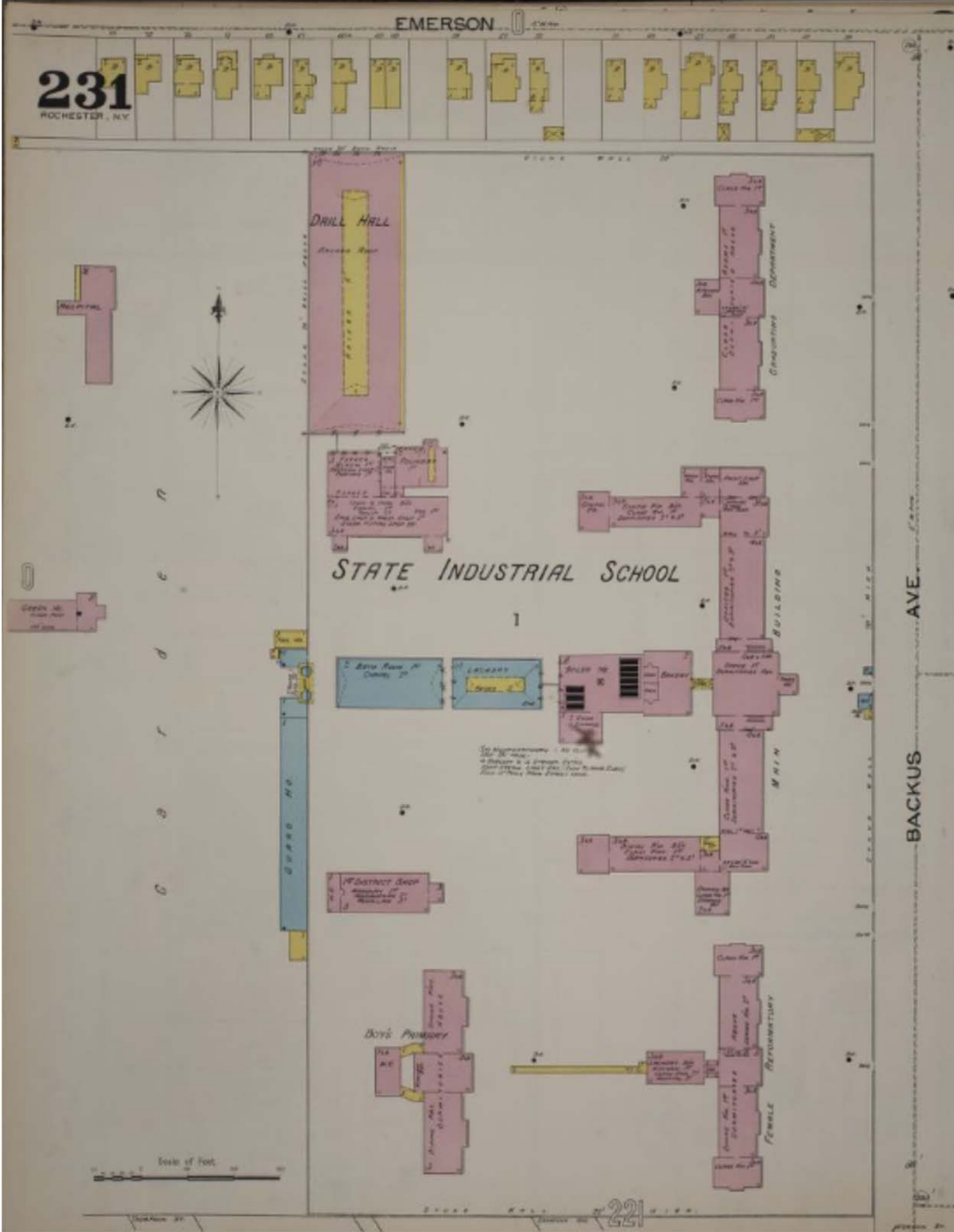
- Other systems

- Clifton Springs Sanitarium, Clifton Springs, New York
- Western House of Refuge, Rochester, New York
- Insane Asylum, Binghamton, New York
- Delaware, Lackawanna, & Western Railroad, Syracuse, New York
- A. T. Stewart, Garden City, New York

# Western House of Refuge

- Opened in 1849 for “the rehabilitation and moral improvement of unruly youth.”





# American District Steam Company

- The Holly Steam Combination Company had installed several other systems in 1880 and had built 19 systems by early 1881, when it was acquired by the American District Steam Company.
- This company had a capital stock of \$10,000,000, consisting of 100,000 shares at \$100 a share.
- President, Dr. D. F. Bishop; Vice-President, W. C. Andrews; Secretary, B. D. Hall ; Treasurer, J. H. Babcock.

# Superheated Water Company

- The first of Holly's several competitors appeared in late 1879.
- William E. Prall invented a system that distributed "superheated" water at about 400° to individual buildings, where it was flashed into steam to provide heating and power.
- Prall demonstrated his system to members of the American Society of Civil Engineers by serving them a meal cooked with superheated water, including baked bread and roasted meat.
- Prall did not secure financing until 1886, when telephone pioneer Theodore Newton Vail agreed to back him and build several systems.

# Rochester Superheated Water Company

- The Rochester Superheated Water Company was organized in October 1887
- filed in the county clerk's office yesterday. The object of the company is to supply heated water and steam for motive power, heating, cooking, and other like purposes.
- The capital stock was \$150,000 and the number of shares 1,500.
- The trustees for the first year were Theodore N. Vail of Boston, Richard A. Elmer of New York, Fred W. Kelsey of New Jersey and John W. Martin, Marsenus H. Briggs, A. G. Yates and John N. Beckley of Rochester.
- The Common Council granted permission to use the streets.

THE PRALL PATENTS

FOR

Central Station Heating <sup>AND</sup> Power Supply,

BY THE USE OF

SUPERHEATED WATER,

ARE OWNED BY THE

NATIONAL HEATING CO., OF 44 BROADWAY, NEW YORK.

THE LICENSE TO OPERATE THE SYSTEM FOR THE CITY OF

ROCHESTER, N. Y., HAS BEEN GRANTED TO THE

ROCHESTER SUPERHEATED WATER COMPANY,

A. G. YATES, PRESIDENT.

M. H. BRIGGS, SECRETARY AND TREASURER.

# Superheated Water

- In May 1889 the Rochester Superheated Water Company increased its capital stock from \$150,000 to \$250,000.
- Vail secured financing the installation of a system in Washington that was demonstrated in 1886 and a large system in Boston that began operating in January 1888.
- It soon had 70 customers signed up, all of whom expressed complete satisfaction with the service rendered to them.
- On November 9, 1889, after less than 2 years of operation, the plant and system shut down and went out of business.
- The cause of the failure was the complete disintegration of the open return line through corrosion.

No. 135

25 Shares

# Boston Heating Company.

Organized under the Laws of Massachusetts.

This is to certify, that Honorable Evelyn Ashley of London England is entitled to Twenty Five Shares of One Hundred Dollars each of the Capital Stock of the Boston Heating Company, transferable only on the Books of the Company, in person or by Attorney, on the surrender of this Certificate.

Boston, July 19<sup>th</sup> 1888.

Lester Seland

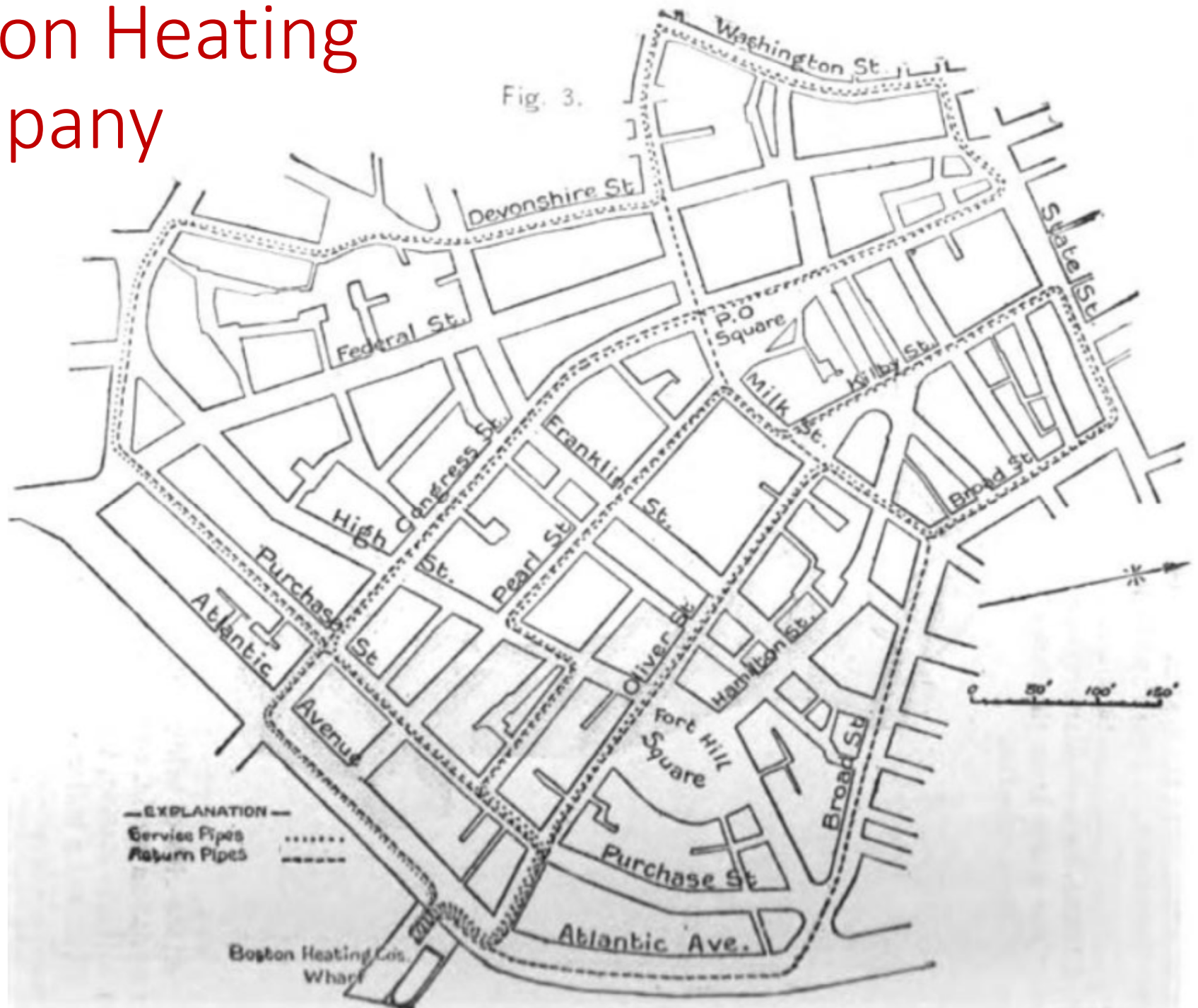
Treasurer

Wm. Richards

President.



# Boston Heating Company



# American District Steam Company

- In May 1888 this company asked for permission to lay pipes in the city's streets, which was granted.
- A local company will at once be formed and work begun as soon as possible.
- The stock of the company will be \$100,000, of which it is said \$30,000 has been already subscribed.
- A building for the headquarters of the company will be erected on the bank of the canal near the Bee Hive building.
- The company asked for a one-year extension which was granted but did not build anything for reasons unknown.

# Edison Electric Light

- The Edison Electric Illuminating Company of Rochester was formed in April 1886 and began operating the following year from a small steam-powered plant on Edison Street, near the site of the current War Memorial Building (Blue Cross Arena).
- This was the third electric company to operate in Rochester.
- Long-term RG&E employee Thomas H. Yawger began service with the Edison Illuminating Company of Rochester on December 1, 1888, as a helper.
- He wrote a 1936 article on the history of electricity in Rochester in which he said: “The exhaust steam was discharged into the air or as the temperature varied, was used to heat some of the adjacent buildings.”

# Exhaust Steam Heating

- Early steam engines used in electric light plants exhausted steam at atmospheric pressure with a temperature of around 212°
- This steam was very useful for heating buildings and was widely used for this purpose by early electric companies.
- Later systems were designed to use higher exhaust pressures that could send steam over longer distances.
- In Rochester the first Edison station supplied heating to adjacent buildings on the same block, but no evidence shows that it extended beyond that.
- This plant placed in reserve by 1900 and water power was also employed from the adjacent Carroll and Fitzhugh race.

# Edison plant (Station #1)



*Original Edison Electric Station which was located in the vicinity of the present War Memorial building.*

# Dynamo Room of Station #1 (1897)

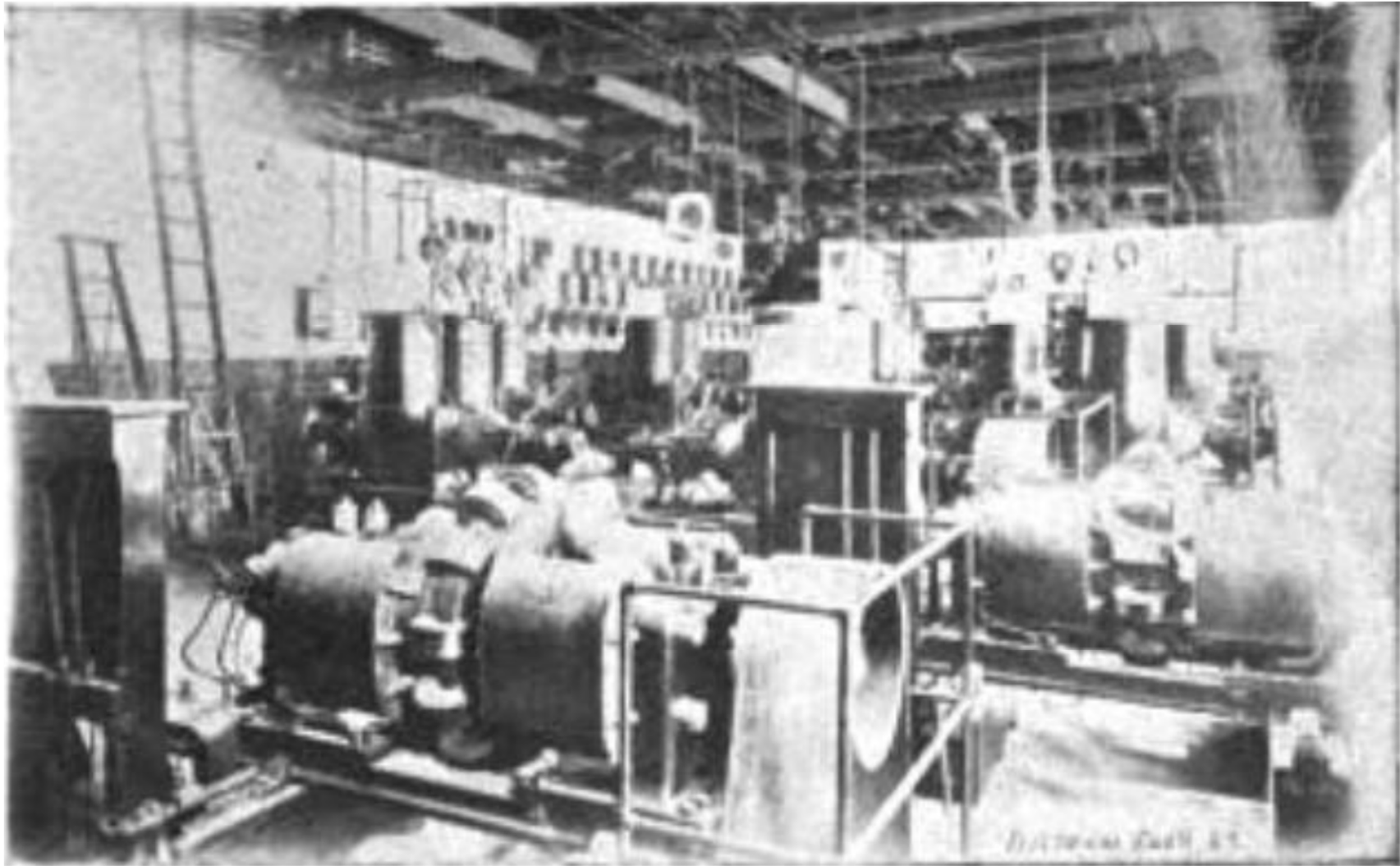
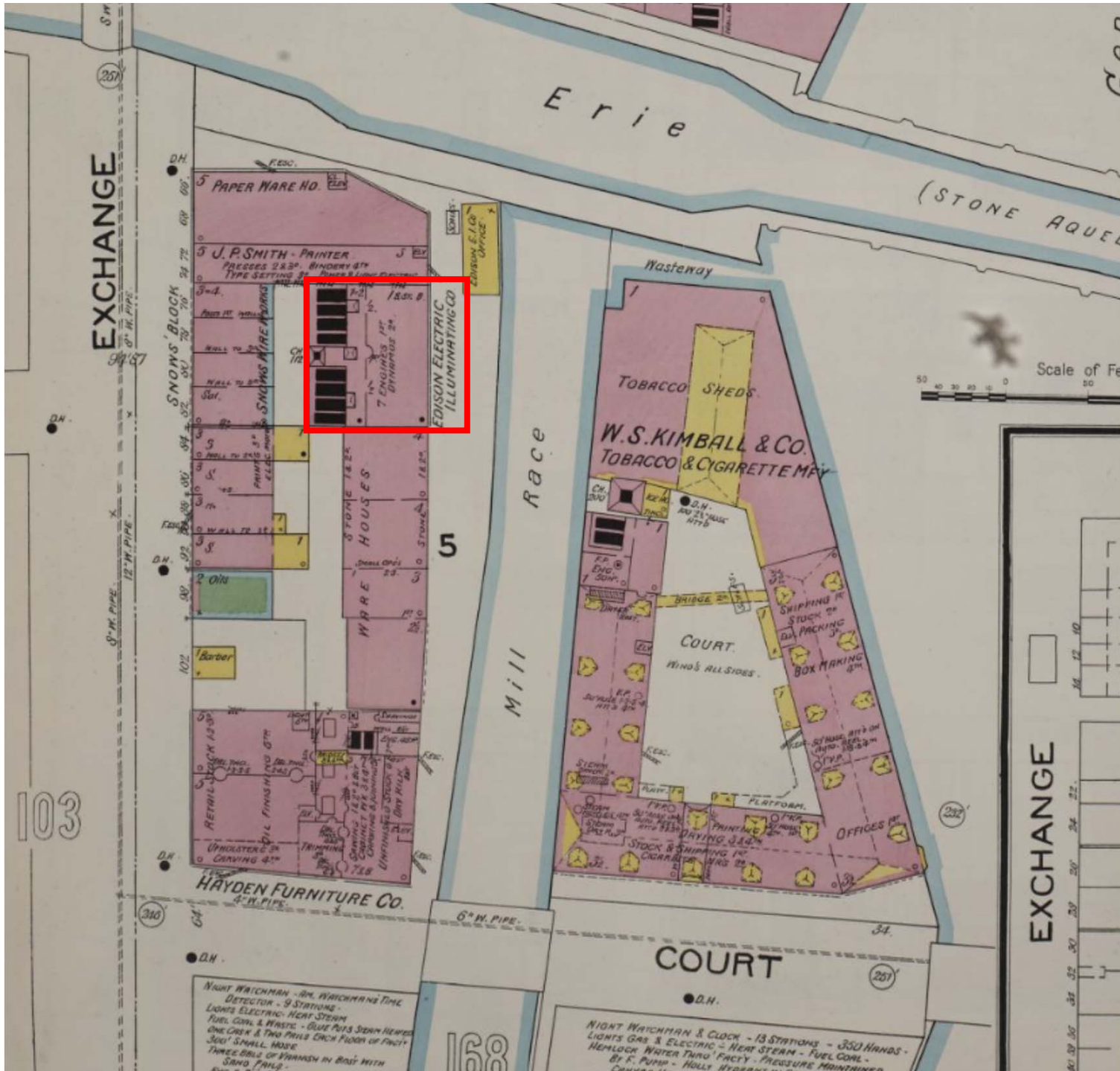


FIG. 1. - DYNAMO ROOM, NO. 1 STATION.

1888



1892

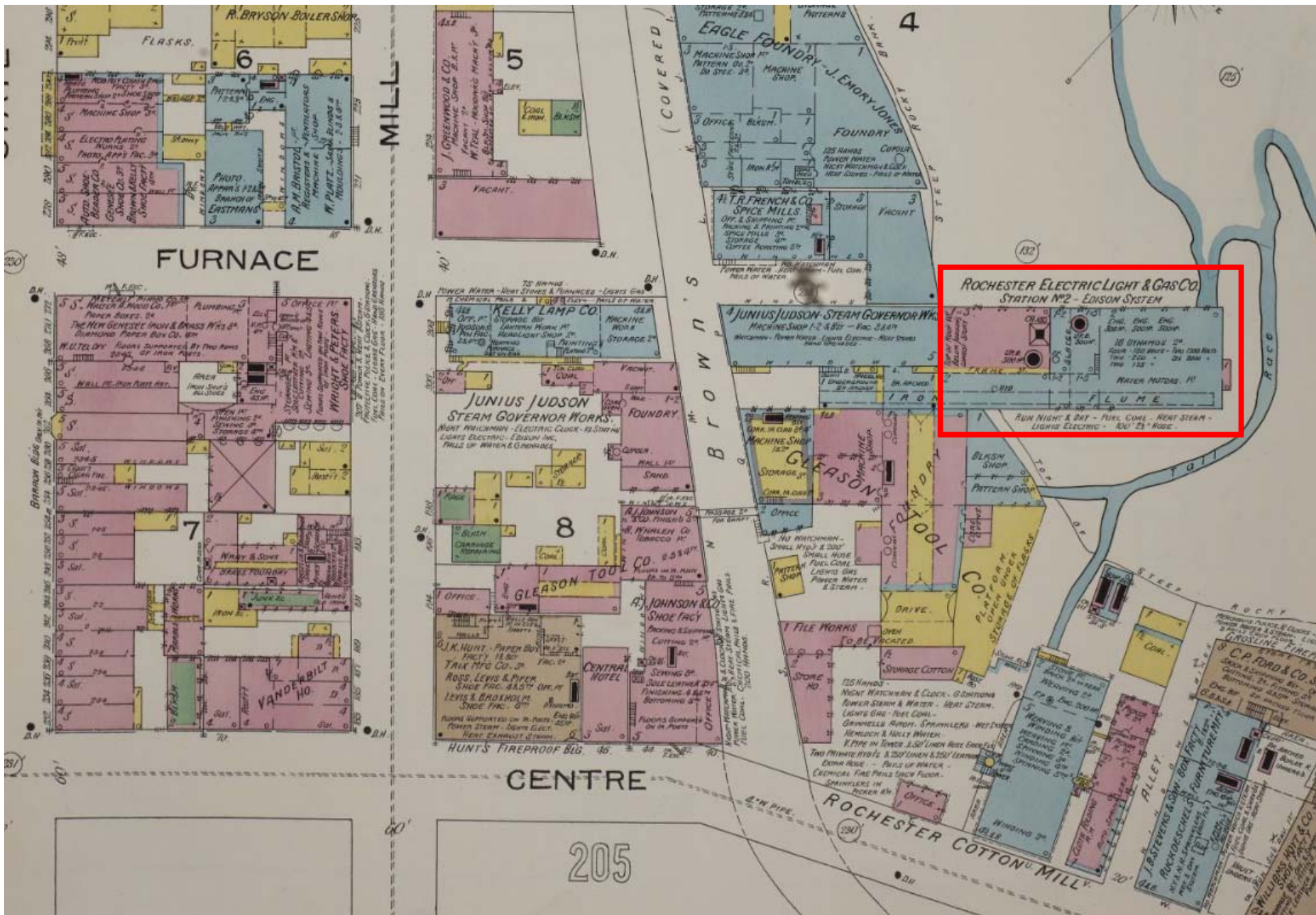


# Station #2

- Built in 1890 by the Edison Company to use both steam and water power.



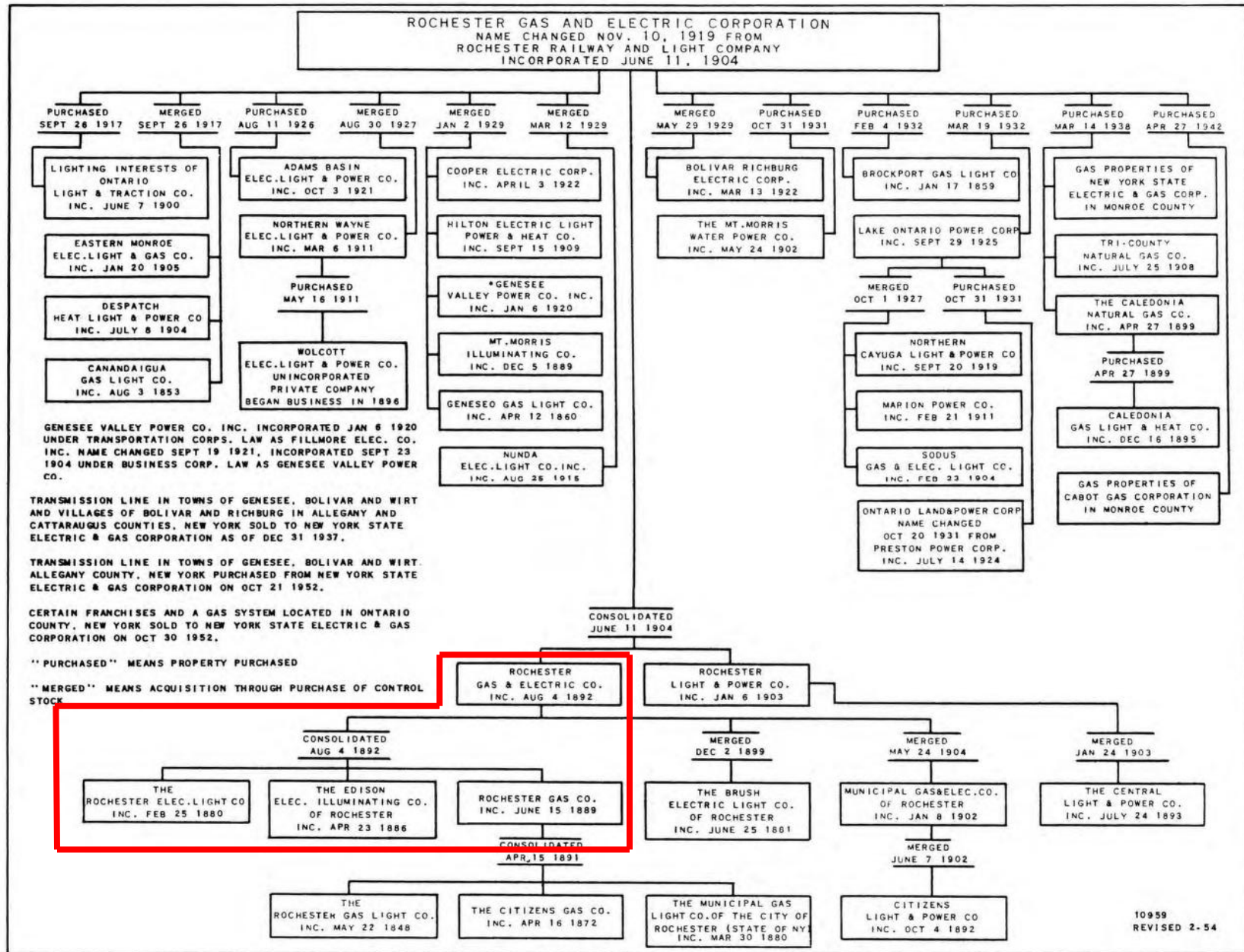
FIG. 2.— NO. 2 STATION, UPPER GENESSEE FALLS.



# Rochester Gas & Electric Company

- Formed on August 4, 1892 from three companies:
  - Edison Electric Illuminating Company of Rochester
  - Rochester Electric Light Company
  - Rochester Gas Company
- Officers:
  - President - J. Lee Judson
  - First Vice-President - William Runkle
  - Second Vice-President - Frederick Cook
  - Secretary - George C. Hollister
  - Treasurer - George W. Archer
  - Assistant Secretary and Treasurer - Harry G. Runkle

# 1892



# 1894 Steam Pipes in the Streets

- Permission Asked for Laying a New System of Pipes in the Streets.
- J. Lee Judson. George C. Hollister and other owners of property on Furnace street near State and Mill streets have obtained permission of the executive board to lay pipes through Mill and Furnace streets for the purpose of furnishing steam heat to their buildings in which various manufacturing enterprises are carried on.
- Rochester Gas & Electric was not interested in constructing the steam pipes but agreed to furnish the steam for heating.

# October 19, 1894

## NOW IT'S STEAM HEAT.

### Permission Asked for Laying a New System of Pipes in the Streets.

J. Lee Judson, George C. Hollister and other owners of property on Furnace street near State and Mill streets have obtained permission of the executive board to lay pipes through Mill and furnace streets for the purpose of furnishing steam heat to their buildings in which various manufacturing enterprises are carried on. The heat is to be furnished by the Rochester Gas and Electric Company.

They are to give a bond to the city for the protection of the city from any injury that may be done to the water mains now in those streets. Besides the Judson factory and the Briggs building which is now owned by Mr. Hollister, the Hayden building on State street will be a customer for this steam heat.

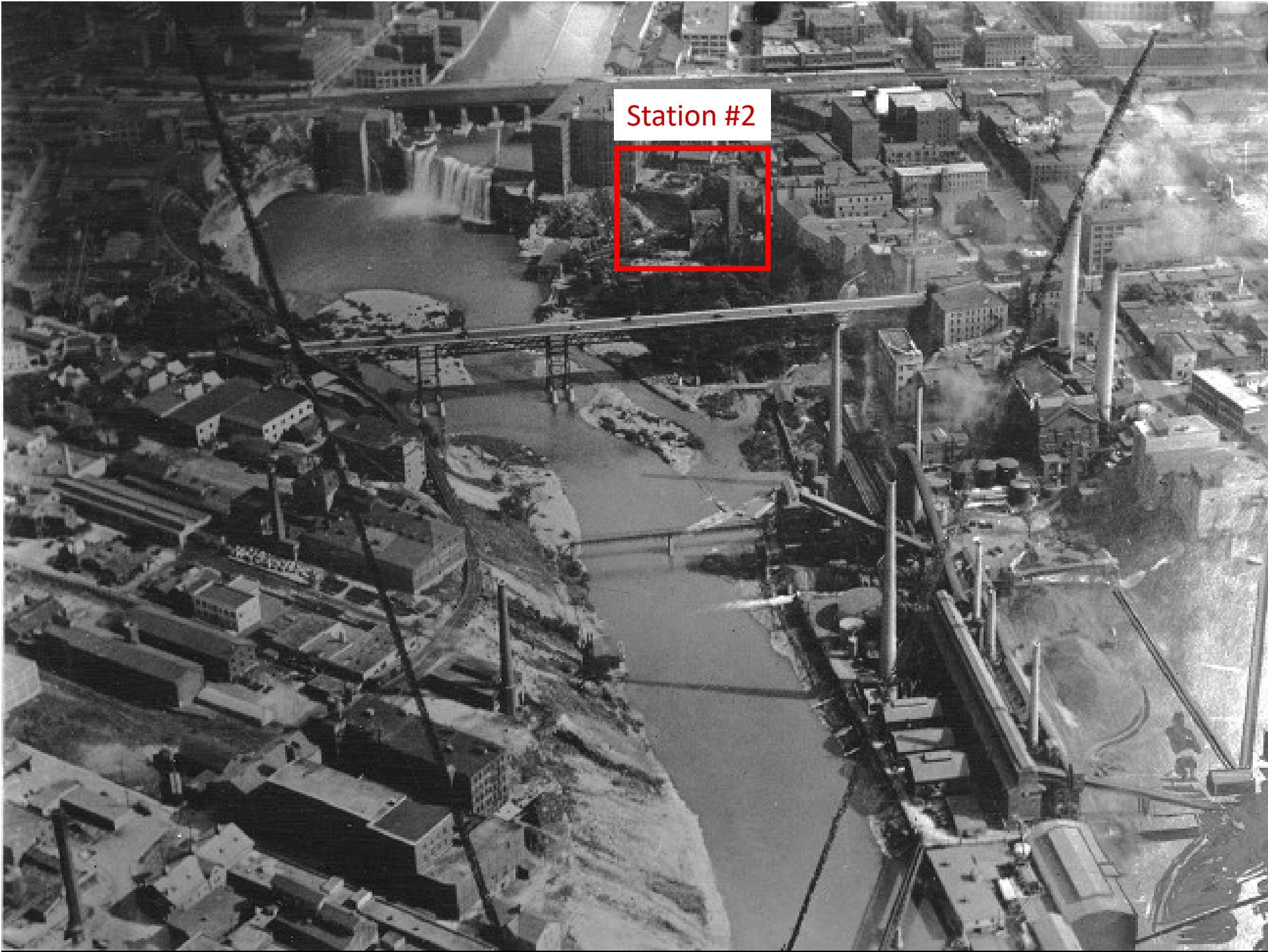
It is also understood that several other large manufacturers whose factories are located in this section of the city intend to have their buildings heated by the Gas and Electric Company. The plan is to use the steam heat for heating purposes and electricity for motive power. In this way the boilers now in these buildings and factories will be done away with, and steam heat and electricity will take the place of boilers and coal. Incidentally the smoke nuisance will be done away with to some extent.

It was at first reported that it was the Rochester Gas and Electric Company that had applied to the executive board for this permission, but Mr. Hollister, who is an officer of the company, said yesterday that the company was not the prime mover in the matter, and that it is not interested except as to the matter of furnishing the steam heat and electricity.

Mr. Judson is the president of the Rochester Gas and Electric Company, and his factory is to be heated by steam and operated by electricity under the new arrangement. A 10-inch pipe will be laid in the streets and the steam will be conveyed through this pipe from the plant of the company to the factories of the customers.



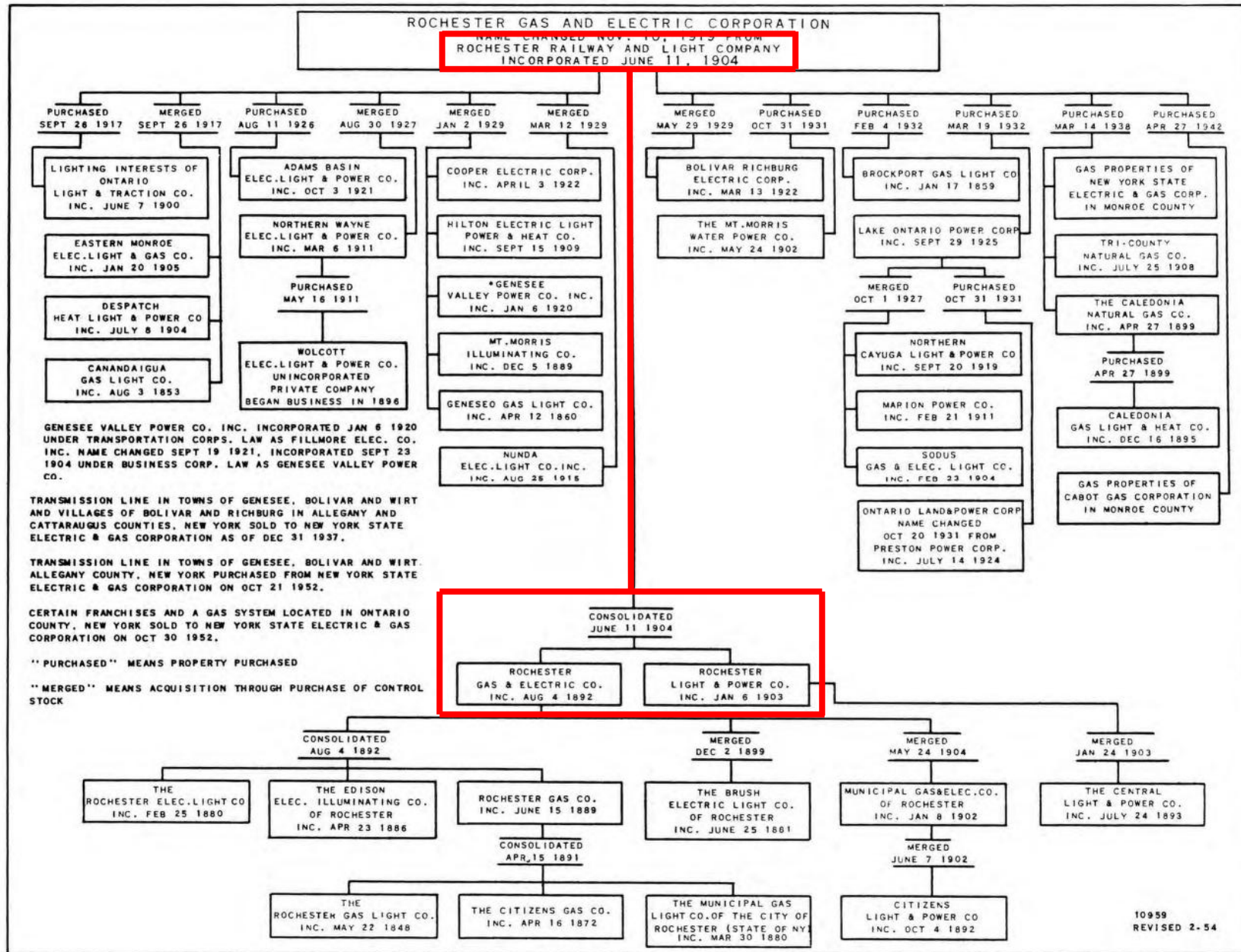
Station #2



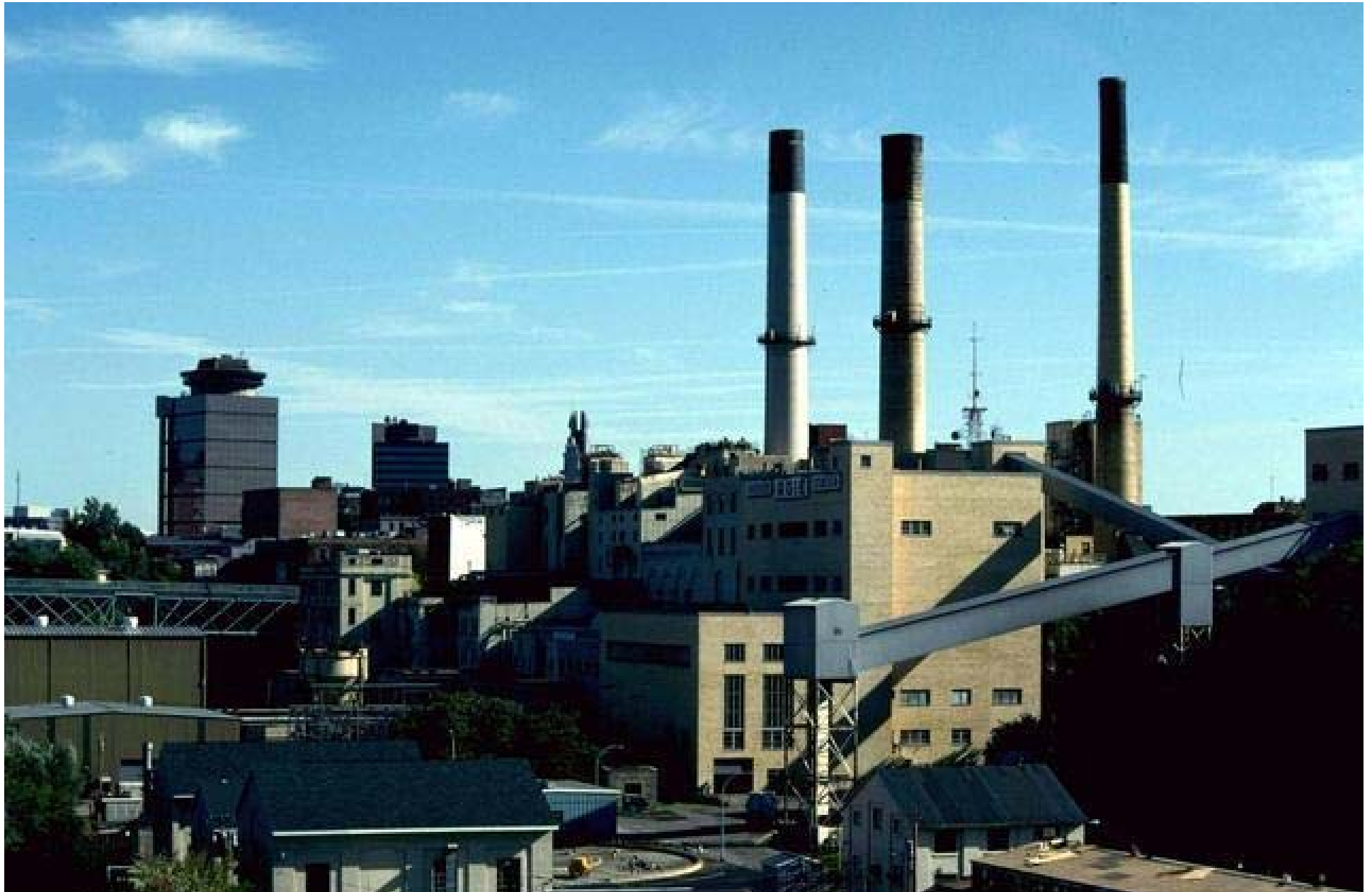
# Rochester Railway and Light Company

- Formed June 11, 1904 from:
  - Rochester Gas & Electric Company
  - Rochester Light & Power Company
  - Rochester Railway Company
- Owned all of the gas, electric and railway interests in Rochester
- Bought by the New York Central Railroad in 1906.

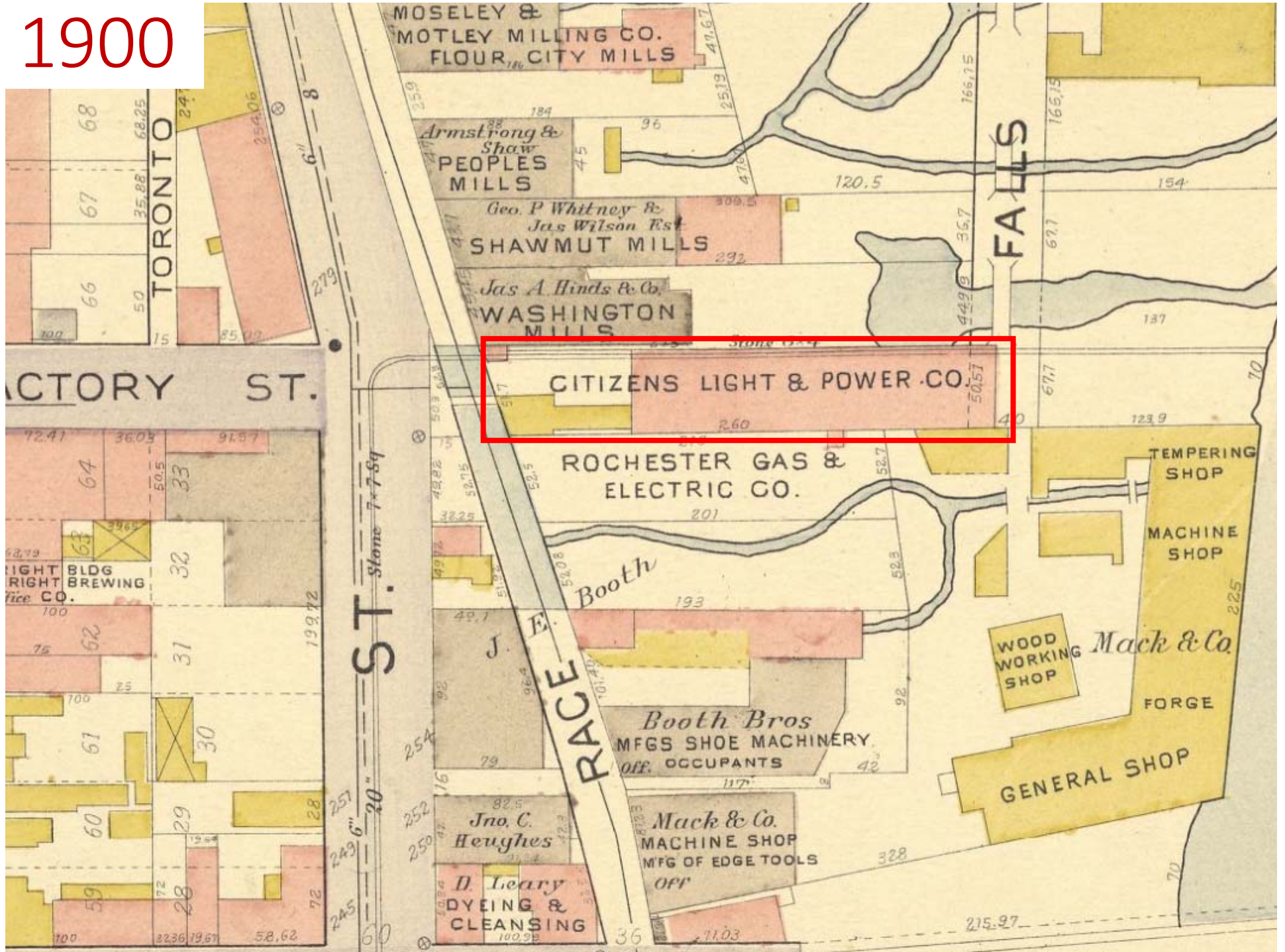
# 1904

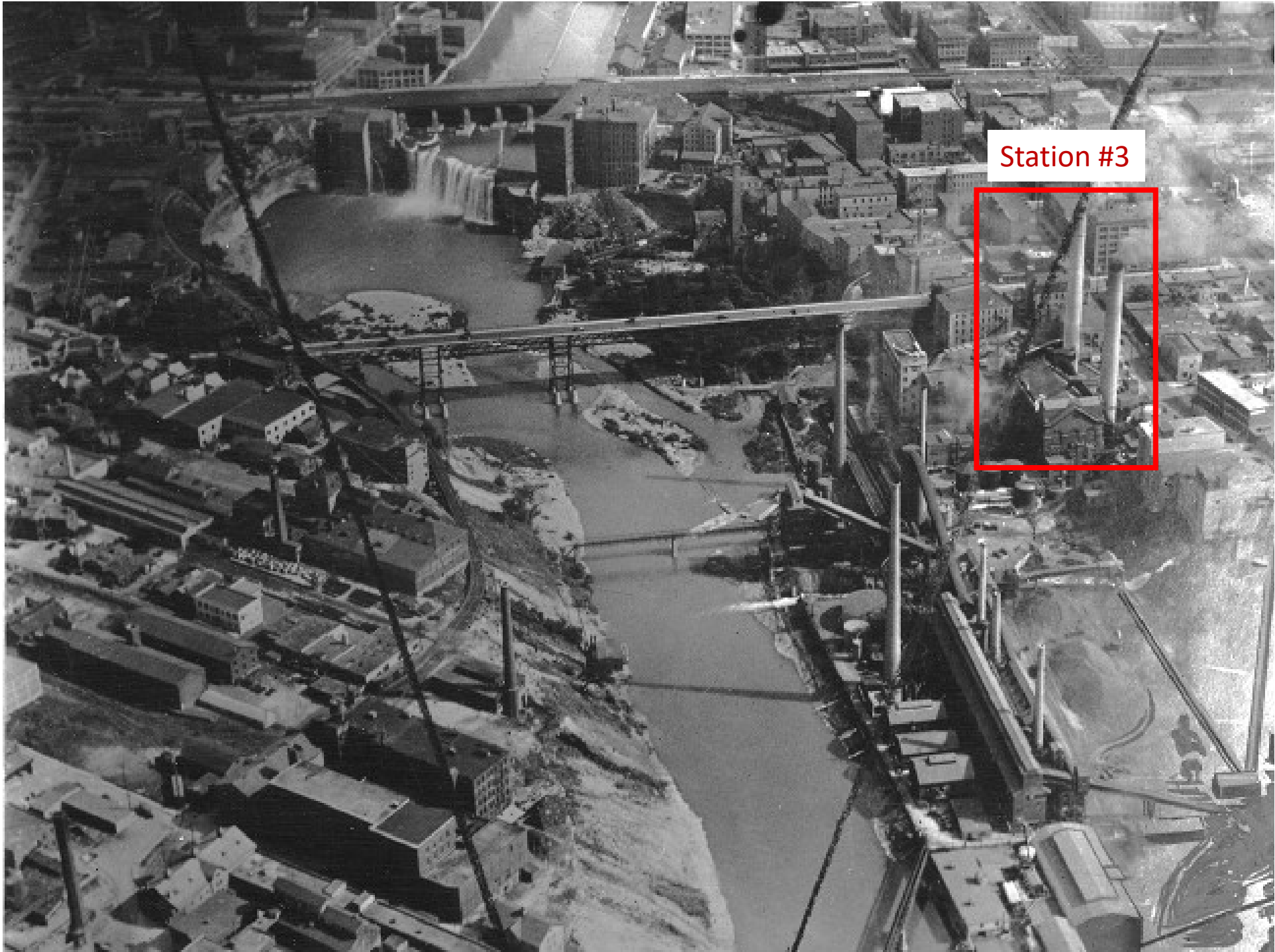


# Station No. 3 (built 1892)



1900

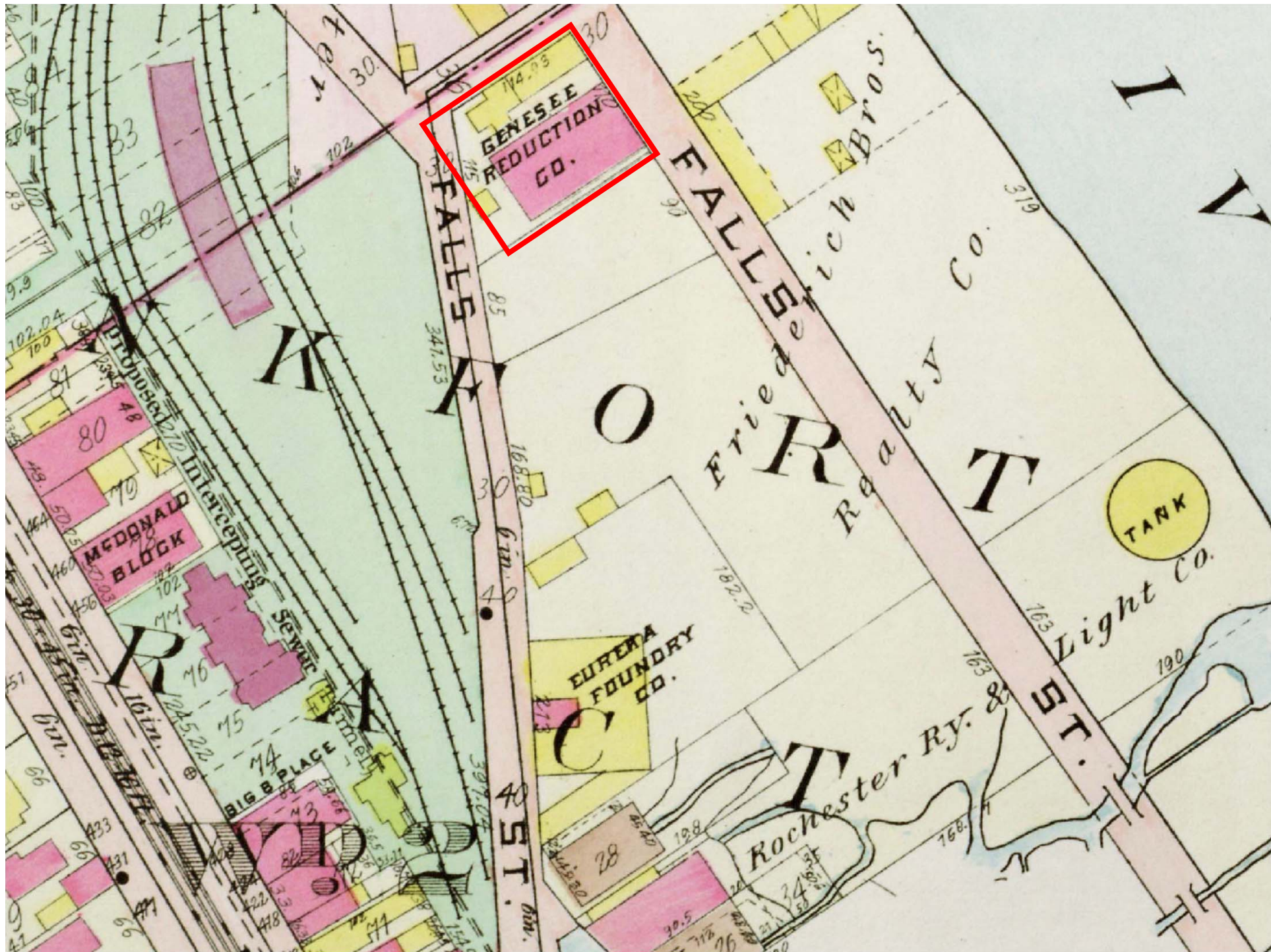




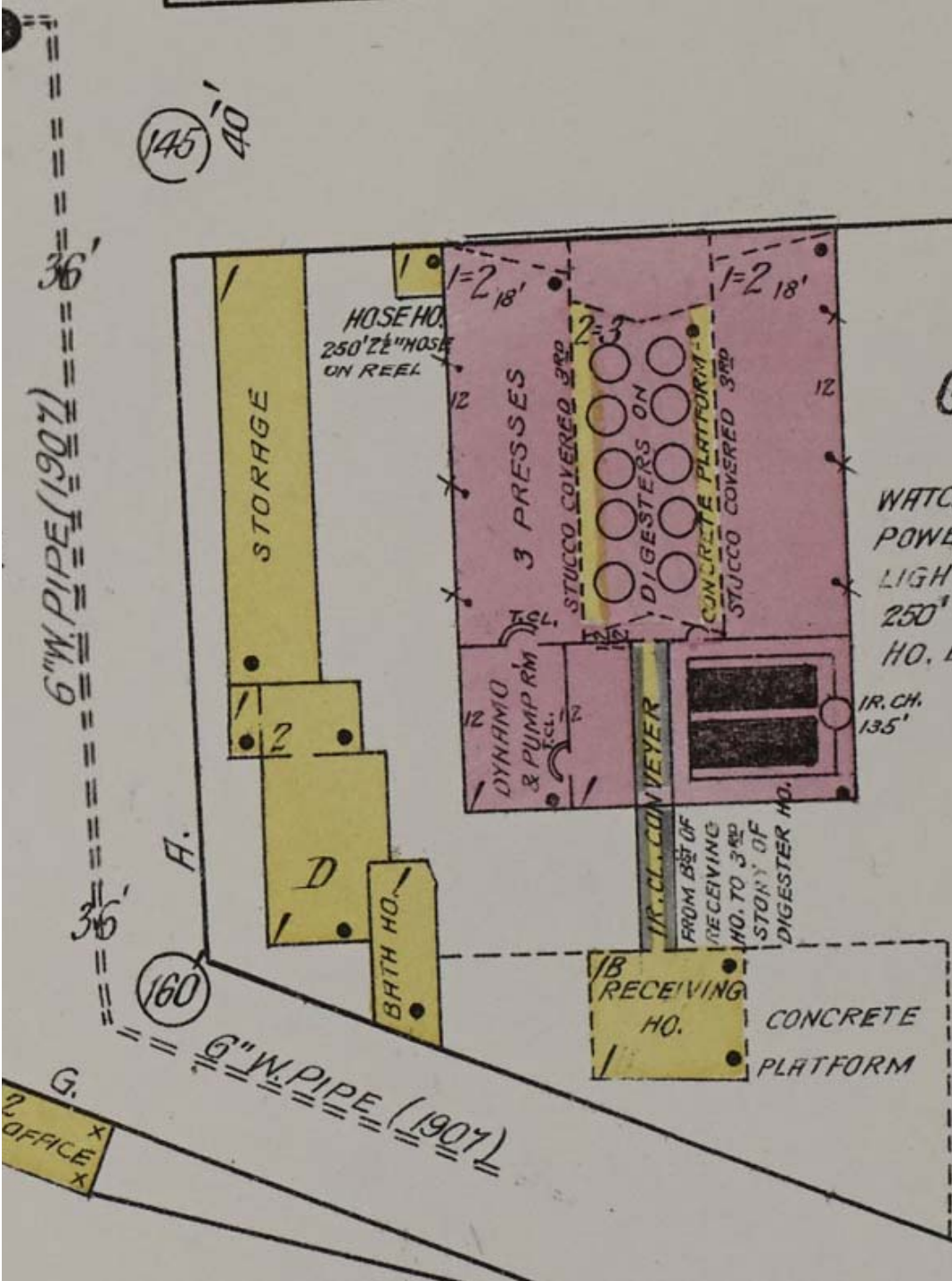
Station #3

# 1907 Steam to Garbage Reduction Plant

- The Railway & Light Company entered the steam business when they agreed to supply steam from Station #3 to the new Garbage Reduction Company's plant on the west side the river.



# FALLS



## GENESEE REDUCTION CO. GARBAGE DISPOSAL PLANT.

WATCHMAN IN PLANT & STABLE - NO CLOCK-  
POWER: STEAM, FROM ELEC. LIGHT STATION N<sup>o</sup> 3 -  
LIGHTS: ELEC. I.E.P. - 5 SMALL INSIDE HOSE CONNS  
250' 2 1/2" HOSE ON CART - ROOF OF DIGESTER  
HO. LEVEL WITH ROOF OF RECEIVING HO. -

3

145  
40

36'

6" W. PIPE (1907)

STORAGE

HOSE HO.  
250' 2 1/2" HOSE  
ON REEL

3 PRESSES

2-3  
DIGESTERS ON  
CONCRETE PLATFORM

DYNAMO  
& PUMP RM

IR. CL. CONVEYER

FROM BOT OF  
RECEIVING  
HO. TO 3<sup>rd</sup>  
STORY OF  
DIGESTER HO.

IR. CH.  
135'

A.

D

BATH HO.

1B  
RECEIVING  
HO.

CONCRETE  
PLATFORM

160

6" W. PIPE (1907)

G.

OFFICE

# 1909 Steam to Bausch & Lomb

- Electric utilities were eager to sell electricity to larger customers, but many of them had their own “isolated” plants that used cogeneration to produce steam and electricity.
- The solution in many cases was for the electric company to supply steam, which allowed customers to shut down their own plant.
- The Railway and Light Company agreed to supply steam to Bausch and Lomb from their adjacent gas works on the east side of the Genesee river, and the optical company agreed to shut down their plant and buy electricity as well.



# 1910 Litchfield Street Steam Plant

- The Rochester Railway and Light Company contracted to supply steam to Utz and Dunn shoe factory from a new plant on Litchfield street (Station No. 35)
- One features of the new station will be the utilization of exhaust steam, otherwise wasted, for heating purposes in adjacent plants.
- The adjacent carriage factory of James Cunningham Son & Company was also served by this plant.



# NDHA 1910

- The Railway & Light Company formed a steam department in 1910 and joined the National District Heating Association which had been founded the prior year to further the interests of district heating companies.
- Roger D. DeWolf of the company's engineering department was their representative to the NDHA.
- The following year DeWolf gave a presentation on "Preparation of a Rational Rate System."
- The NDHA's fifth annual conference was held in Rochester on May 26-28, 1914.

# 1912 DeWolf Elected NDHA President

- He was unable to attend the 1912 NDHA convention, but was elected president anyway.
- Roger Dennison De Wolf was born on April 25, 1879, in Toledo, Ohio.
- He died on February 2, 1946 at the age of 66 and was buried in Toledo.

## HONORED IN HIS ABSENCE

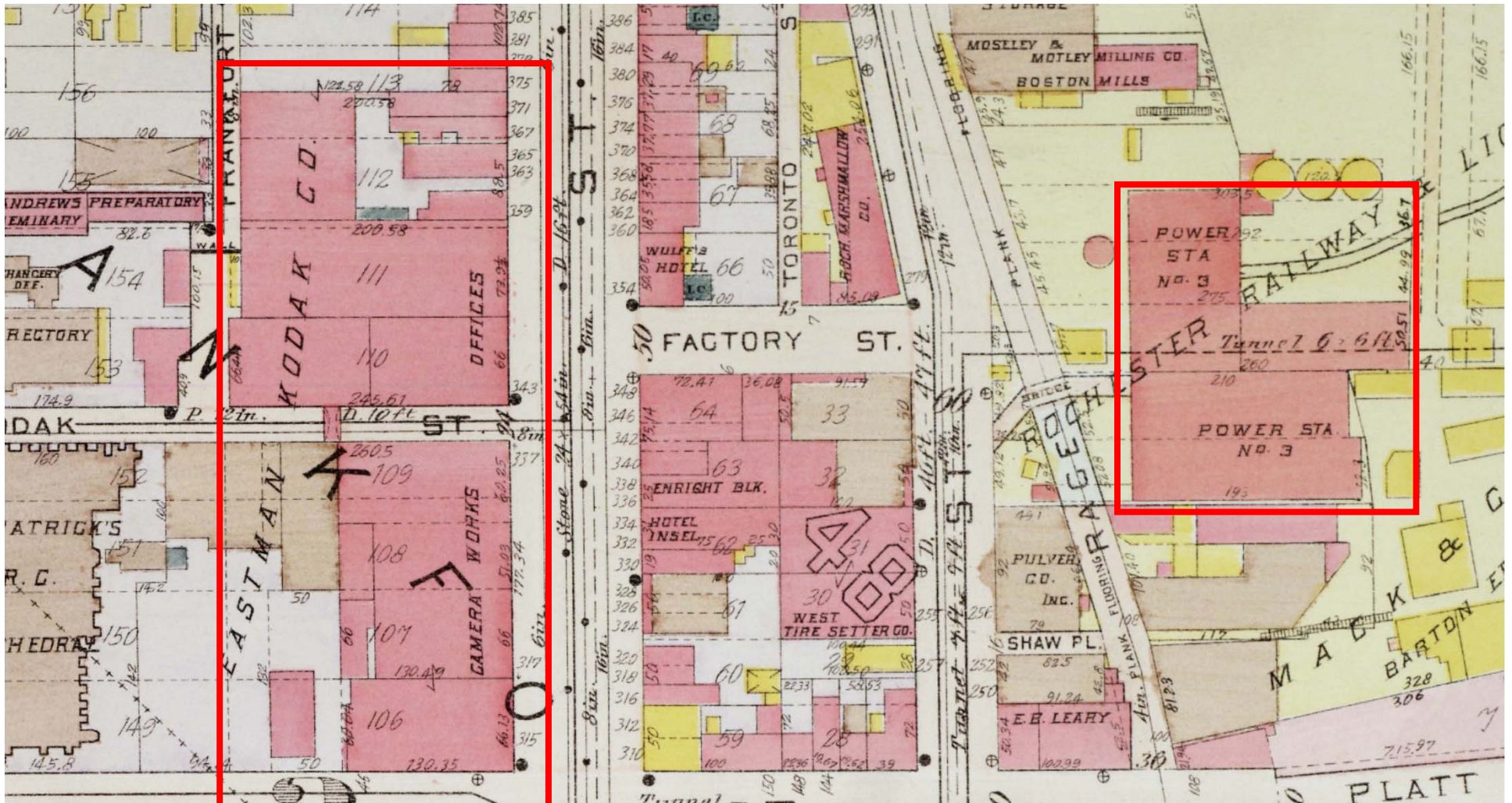
### R. D. DeWolf Elected President of Heating Association.

Roger D. DeWolf, who recently returned from the West was informed yesterday that he had been elected president of the National District Heating Association. The annual convention of the association was held at Detroit last week and delegates were present from all parts of the United States and Canada. The membership of the association is made up of the various associations of North America which do a general heating business and 75 per cent. of the associations are members.

Last year Mr. DeWolf was one of the vice-presidents of the association and chairman of the rate committee which had several important matters to solve. Mr. DeWolf did not attend the convention this year being in the West and his election came as a surprise.

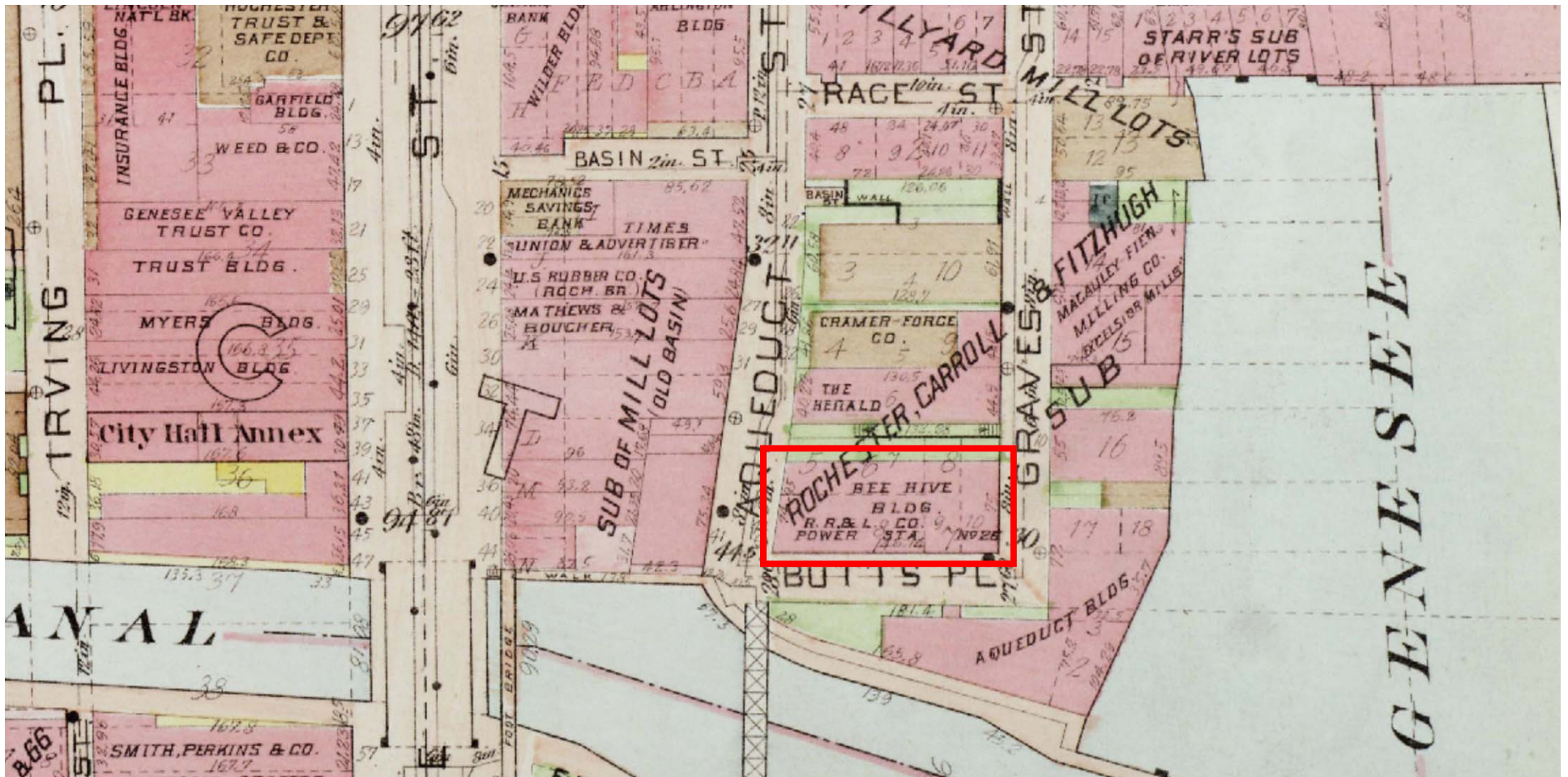
# 1912 Steam to Kodak State Street

- Steam service to the Kodak office building and plant on State street was begun in 1912.



# 1914 Beehive Building Steam Plant

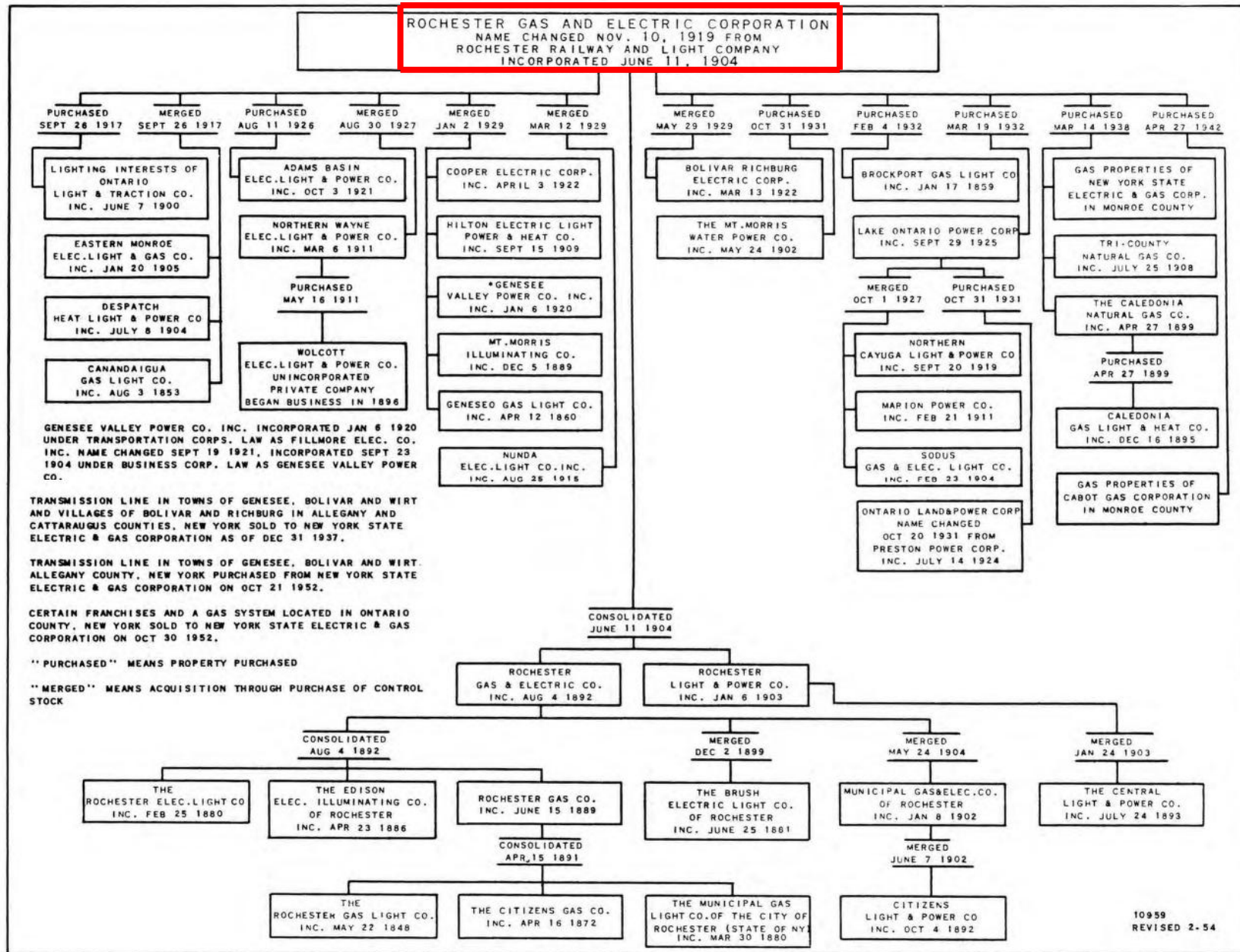
- A street permit was granted in 1914 allowing the company to install steam pipes from their Station #26 in the Beehive Building to serve nearby customer.



# Rochester Gas & Electric Corporation

- The Rochester Railway and Light Company was renamed pm November 10, 1919 as the street railway business had been transferred to the New York State Railways in 1909 and the name was no longer appropriate.

# 1919



# 1922 E.L. Wilder

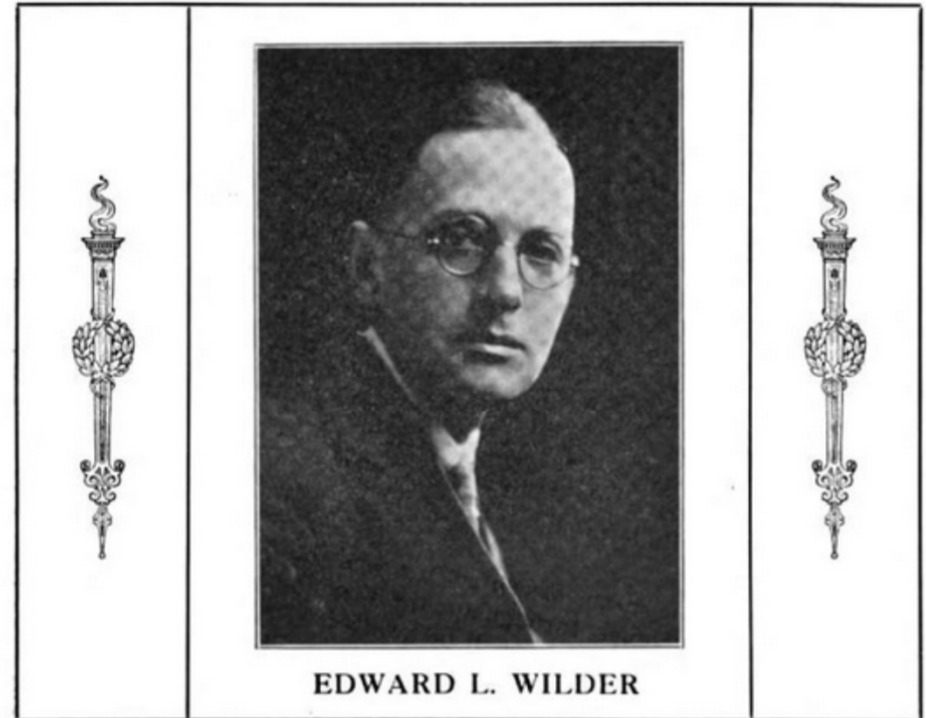
- Elected twelfth president of the National District Heating Association.

## The **BULLETIN** of the NATIONAL DISTRICT HEATING ASSOCIATION

VOL. VIII. No 1.

OCTOBER 15, 1922.

50c. PER YEAR



Edward L. Wilder, twelfth President of the National District Heating Association and President for 1922-1923, was born at Hoosick Falls, New York. He graduated from Williams College in 1899 with the degree of A. B. and after his graduation he entered Cornell and graduated from there in 1902 with the degree of M. E. having specialized in electricity. From 1902 to 1910 he was with the Westinghouse Electric & Manufacturing Company at their East Pittsburgh plant. Mr. Wilder entered as an apprentice and took a position in their Engineering Department shortly after entering. He worked in their Railway Engineering Division and also in their Research Laboratory. In 1910 Mr. Wilder came to the Rochester Gas & Electric Corporation as an Engineer in their Engineering Department and where he has handled a variety of work, both electrical and mechanical and

# 1922 "Our Steam Business,"

- About fourteen years ago the Company started to sell steam for industrial and heating purposes on a small scale.
- The company had 16 steam customers in 1911 and 84 in 1921.
- Over one hundred steam customers requiring over six miles of steam piping and using about 550,000,000 pounds of steam yearly.
- These consumers principally include manufacturing plants and offices located in the vicinity of the Company's three plants known as Stations 3, 26, and 35, located at Mill and Factory, Graves and Aqueduct, and Litchfield Streets, respectively.

# 1924 East Avenue Heating Plant Bought

## **East Avenue Heating Plant Sold to Lighting Company by Chapman Estate for \$125,000**

The heating plant of the East Avenue building has been sold by the Eugene J. Chapman estate to the Rochester Gas and Electric Corporation, for a consideration of \$125,000. The agreement of sale was closed yesterday afternoon, with Herman Russell, vice-president and general manager, and Charles L. Cadle, assistant general manager, looking after the interests of the corporation. The Chapman estate was represented by Charles H. Moore, vice-president and trust officer for the Union Trust Company, co-executor with Mrs. Fannie Chapman, widow of Mr. Chapman.

The deal for the heating plant in Euclid street has been the subject of negotiations for several weeks. Among the real estate men involved is Eugene C. Roeser, who made the sale of the Cutler holdings to Frederick Brown, of New York, for a consideration of approximately \$3,000,000 and handled a number of the resales by Mr. Brown, which netted the New York real estate operator and his associates a profit of approximately \$1,000,000.

The legal matters with reference to the sale of the heating plant were

heating plant in Lawn street, in conjunction with the office building and salesrooms which the Rochester Gas and Electric Corporation will erect in East avenue, adjoining The Sagamore to the west.

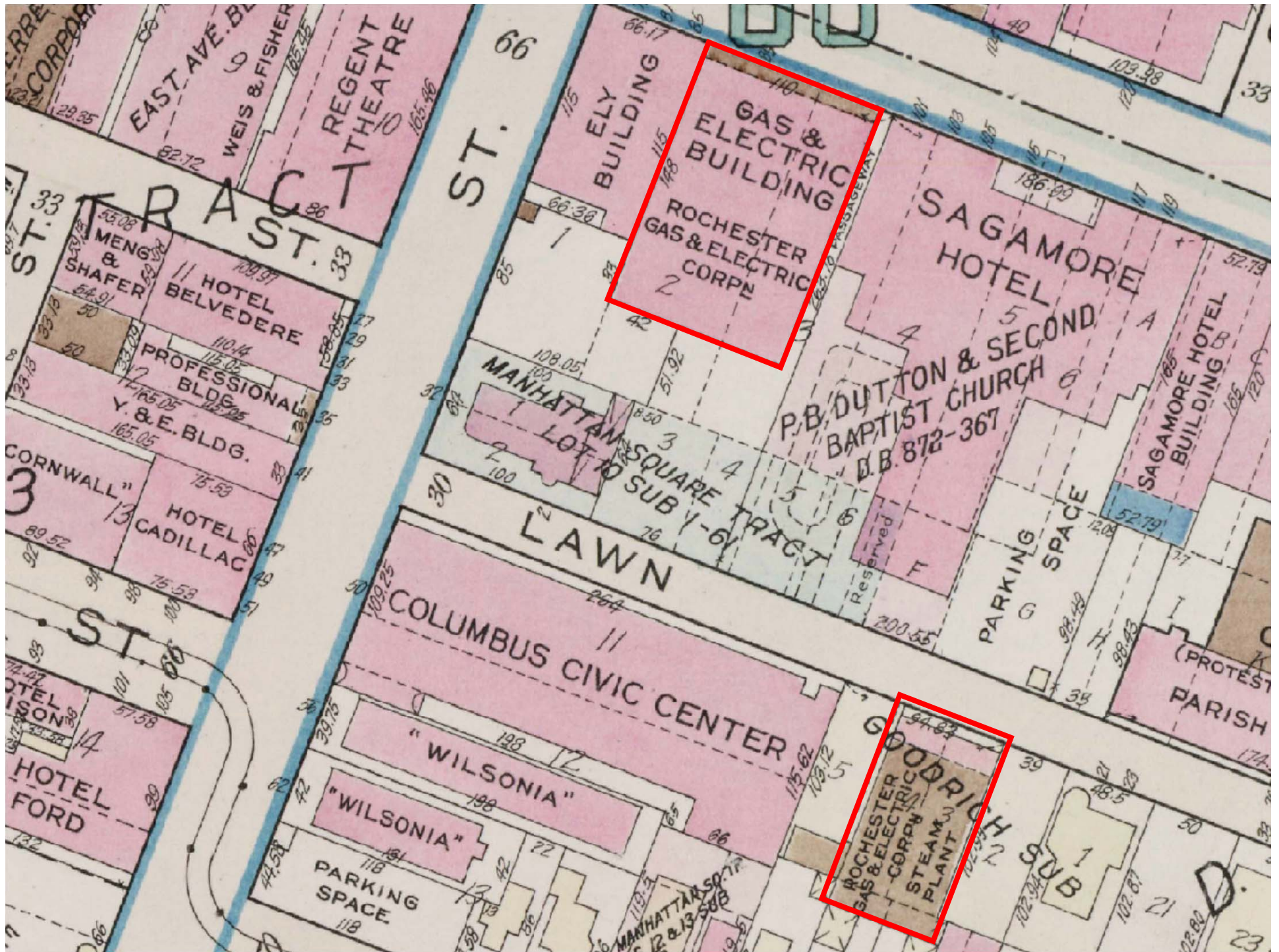
Mr. Cadle pointed out that the gas and electric company has undertaken to supply steam to the Baptist Temple, the Knights of Columbus building, the Stebbins building at the northeast corner of East avenue and Gibbs street, and since these buildings are progressing much more rapidly than the project of the corporation, it was felt that a temporary expedient was necessary so as not to inconvenience the property owners who are depending on the corporation to furnish heat. Accordingly the company purchased the heating plant of the East Avenue building, which will amply take care of the buildings which look to the corporation for their supply of steam. Later when the larger plant is constructed a plan for correlating the two plants will be devised.

The delay in the construction of the office building of the Rochester Gas and Electric Corporation is due to the ex-

# 1925 Lawn Street Plant (Station No. 8)

- The company built a new steam plant on Lawn Street to supply customers in the downtown area.
- The new plant opened in was built close to the company's new office building at 89 East Avenue.





**GAS & ELECTRIC BUILDING**  
ROCHESTER GAS & ELECTRIC CORPN

ROCHESTER GAS & ELECTRIC CORPN STEAM PLANT

REGENT THEATRE

EAST AVE. BL  
WEIS & FISHER

HOTEL BELVEDERE

PROFESSIONAL BLDG.  
Y. & E. BLDG.

HOTEL CADILLAC

HOTEL FORD

HOTEL ISON

MANHATTAN SQUARE TRACT  
LOT 10 SUB 1-6

COLUMBUS CIVIC CENTER  
"WILSONIA"

"WILSONIA"

PARKING SPACE

SAGAMORE HOTEL

P.B. DUTTON & SECOND BAPTIST CHURCH  
B.B. 872-367

SAGAMORE HOTEL BUILDING

(PROTESTANT) PARISH

PARKING SPACE

MANHATTAN SUB 1

MANHATTAN SUB 1

PARKING SPACE

MANHATTAN SUB 1

ST. 33

ST. 66

ST. 25

TRACT

LAWN

MANHATTAN SUB 1

PARKING SPACE

MANHATTAN SUB 1

# 1926 Steam Franchise

- Prior to 1926 a street-crossing permit was obtained from the city for each new seam line.
- In 1926 RG&E applied for a franchise from the Common Council, which was granted for 25 years.
- The franchise was renewed for another 25 years in 1946.

# 1926 Lincoln Park Station No. 9

- RG&E built another new steam plant on Mt. Read Boulevard to serve industrial customers in the the Lincoln Park area.
- In the Lincoln Park district a group of varied industries use large amounts of process and heating steam.
- A plant is located nearby for the purpose of supplying steam service and to generate electricity.
- The initial installation was placed in operation in November 1927.
- It consists of two 9580-sq. ft. Bigelow Hornsby boilers burning powdered coal.
- A 3000-kw. extraction non-condensing turbine was installed and placed in operation as soon as the load justified it., which was in January, 1929.

## PROGRESS IN THE STEAM DEPARTMENT

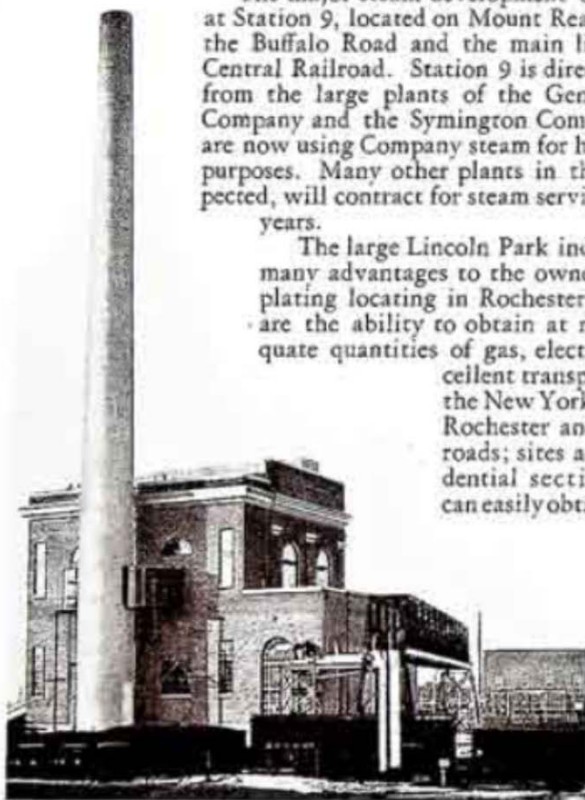
THE year 1927 was one of marked progress in the Steam Department. During that period a new steam plant, Station 9, was constructed and placed in operation at Lincoln Park; an additional boiler was installed at Station 8 to handle increased loads; a steam line was constructed from Station 8 to serve the Exchange and Broad Street section and numerous other extensions were made. The beginning of 1928 found the Company in excellent condition to serve its 321 steam consumers, 63 of whom were added during the year, and to easily handle many others who will come on its lines during the next year or two.

### STATION 9

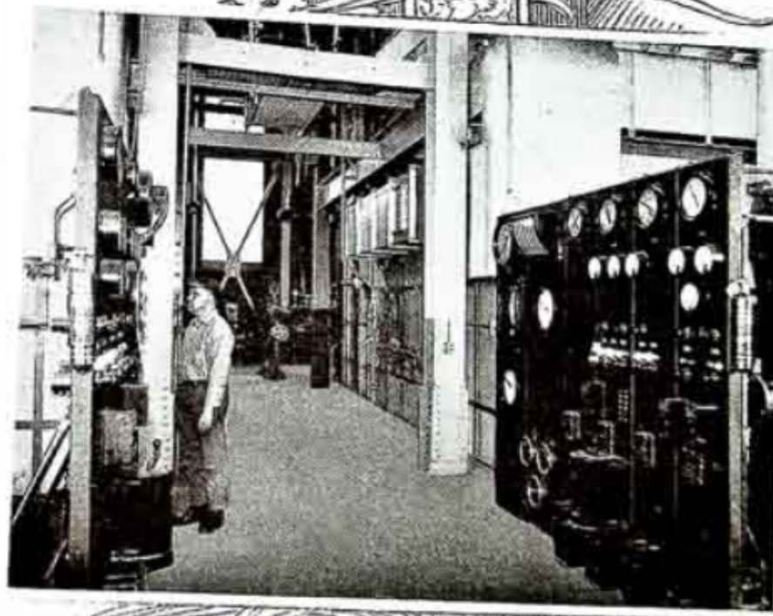
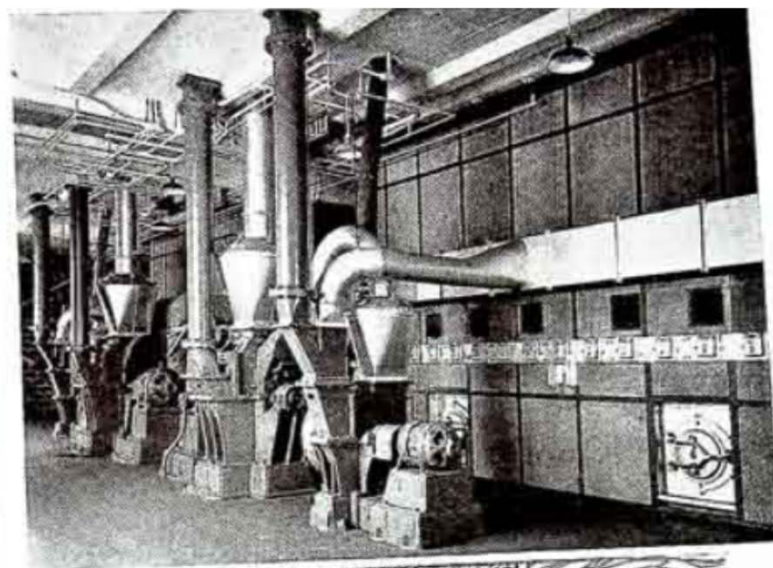
The major steam development of the year was that at Station 9, located on Mount Read Boulevard between the Buffalo Road and the main line of the New York Central Railroad. Station 9 is directly across the tracks from the large plants of the General Railway Signal Company and the Symington Company, both of which are now using Company steam for heating and industrial purposes. Many other plants in this vicinity, it is expected, will contract for steam service during the coming years.

The large Lincoln Park industrial district offers many advantages to the owners of plants contemplating locating in Rochester, chief among which are the ability to obtain at reasonable rates adequate quantities of gas, electricity and steam; excellent transportation facilities on the New York Central and Buffalo, Rochester and Pittsburgh Railroads; sites adjacent to good residential sections where workers can easily obtain housing facilities;

and the fact that this district is being featured by the New Industries Bureau of the Rochester Chamber of Commerce which is prepared to offer expert engineering advice and material assistance to prospective newcomers.



Station 9, Steam Heating Plant, built last year, to serve the Lincoln Park industrial district.



Top, mill floor at Station 9; in the foreground is a 2,400 and an 8,000 pound per hour coal pulverizer used in firing boiler number 1. Bottom, aisle between boilers on operating floor, Station 9, showing control panels and meter boards.



*The Lincoln Park Building, better known as Station #9, where steam is generated for industrial use*

# 1930 Stecher Heating Plant

- RG&E bought the plant of the Stecher Lithographic Company at Goodman Street and College Avenue.
- Named Station No. 11.
- This plant was taken out of service in 1955 when steam lines were extended down University Avenue.

1930

The **BULLETIN** of the  
NATIONAL DISTRICT HEATING  
ASSOCIATION

VOL. XV. No. 4.

JULY 15, 1930

50c. PER YEAR

*Our President*

Landis Shaw Smith, the new President of the Association, was born in Philadelphia in 1895.

His father was Chief Engineer of the Philadelphia Filtration Plant and other local improvement works.

Mr. Smith was educated in the Philadelphia schools and took a three year Co-operative Course at Mechanics Institute in Rochester and worked a similar period with the Northeast Electric Company and Hooker Electro-Chemical Company after which he spent one and one-half years at University of Michigan taking the Electrical Engineering Course.

He then served six months with the University of Michigan Units in Ambulance Corps in Allenton, Pa., and was transferred to the Air Service, spending eighteen months at eight different fields in the United States, mostly at Mt. Clemens, Michigan as pilot instructor and as aerial gunnery instructor. After the War terminated Mr. Smith worked in Detroit at the Ford Motor Company and Pierce Arrow Sales & Service Agency.

Since 1920 Mr. Smith has been employed by the Rochester Gas & Electric Corporation in the Industrial Sales Department. For one and one-half years he had charge of industrial gas sales and service and the balance of the time has been in charge of district steam sales and service; also handling part of the refrigeration and ventilating work for the company.

Mr. Smith belongs to the Rochester Engineering Society and has held various committee positions; also a member of the Chamber of Commerce, Opportune Club, Genesee Valley Hiking Club, Isaac Walton League and Boy Scouts of America.

He is married and has three children and together with his family spends part of the time on a farm which he owns. It is possible that his farm work will be somewhat interfered with by his duties as President of the National District Heating Association.

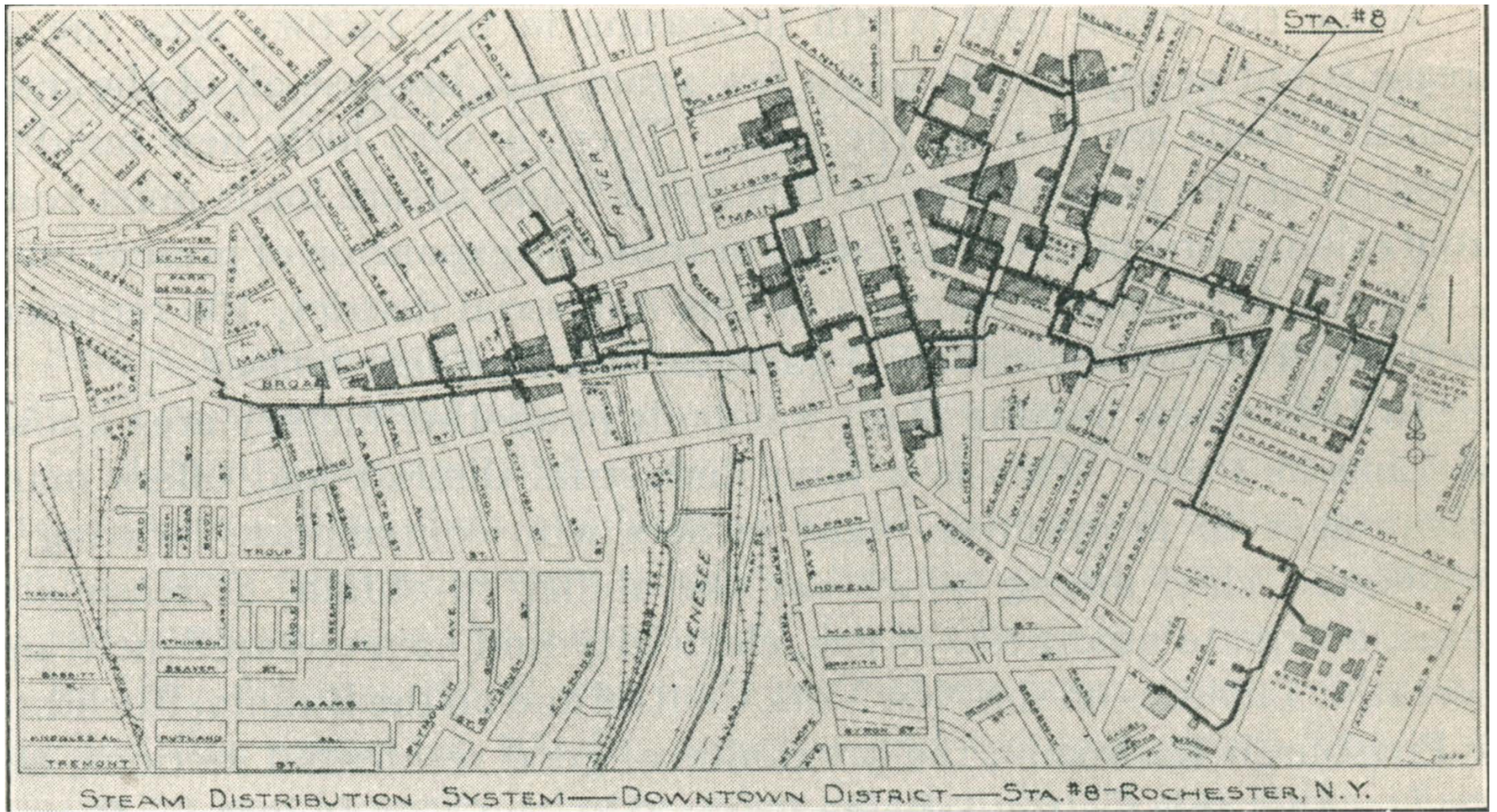


LANDIS SHAW SMITH, Engineer,  
Industrial Sales Department, Rochester Gas & Electric Corporation,  
Rochester, New York, and President, National District Heating Association,  
1930-1931

# 1932 System Description

- From the 1932 *Handbook of the National District Heating Association*
- The Rochester Gas and Electric Corporation operates three separate systems in the city of Rochester, one serving the commercial district and the other two serving industrial districts.
- This company serves a total of approximately 315 consumers with 81,094 ft. of steam mains in the distribution system and 18,063 ft. of return mains.
- The steam sold in 1930 totaled 1,349,230,000 lbs.

# 1930 Lawn Street System Map





# 1932 Lawn Street Map

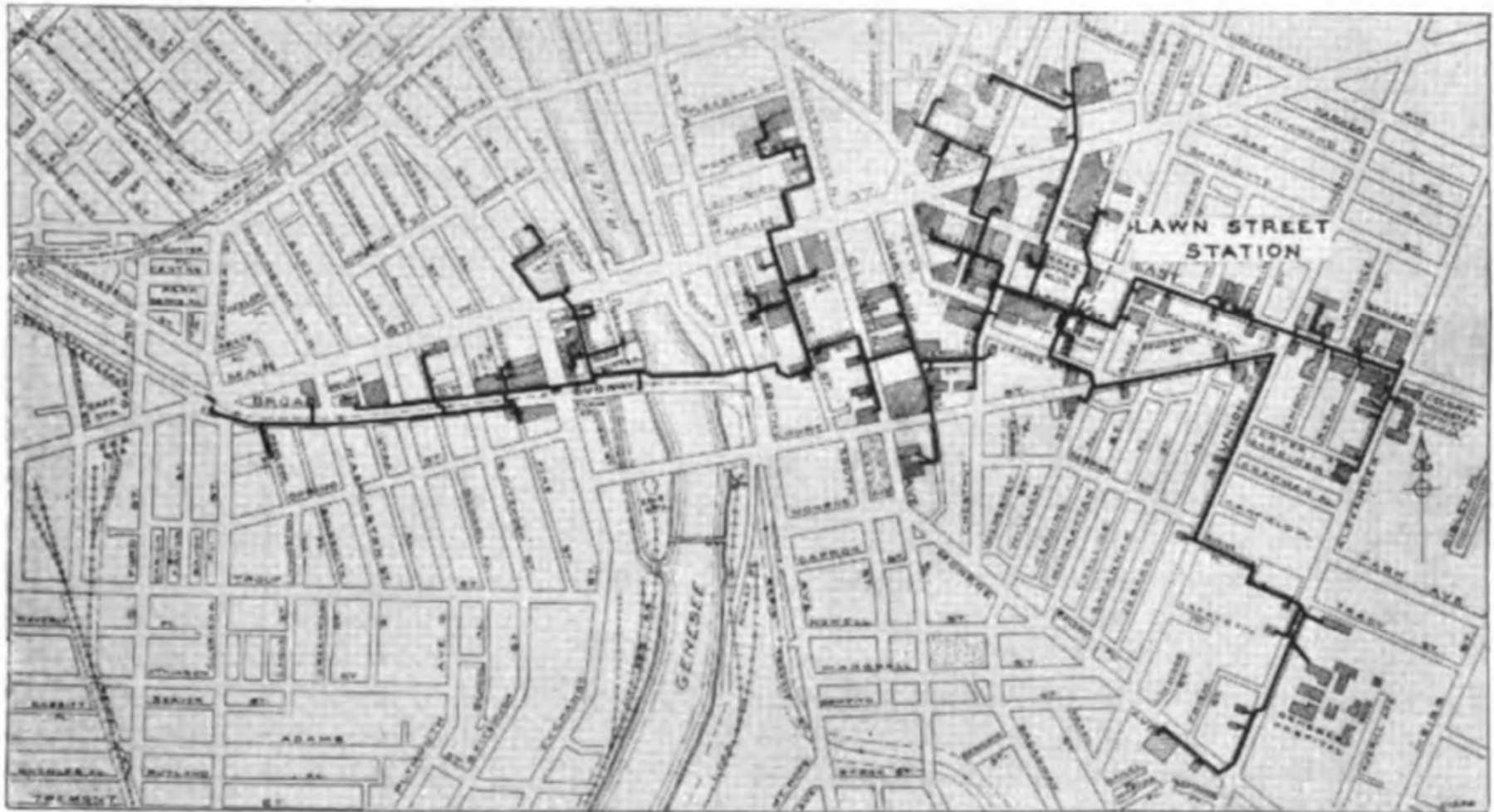


FIG. 111.—Location of Lawn Street Station of the Rochester Gas and Electric Corporation with Reference to the District Served.

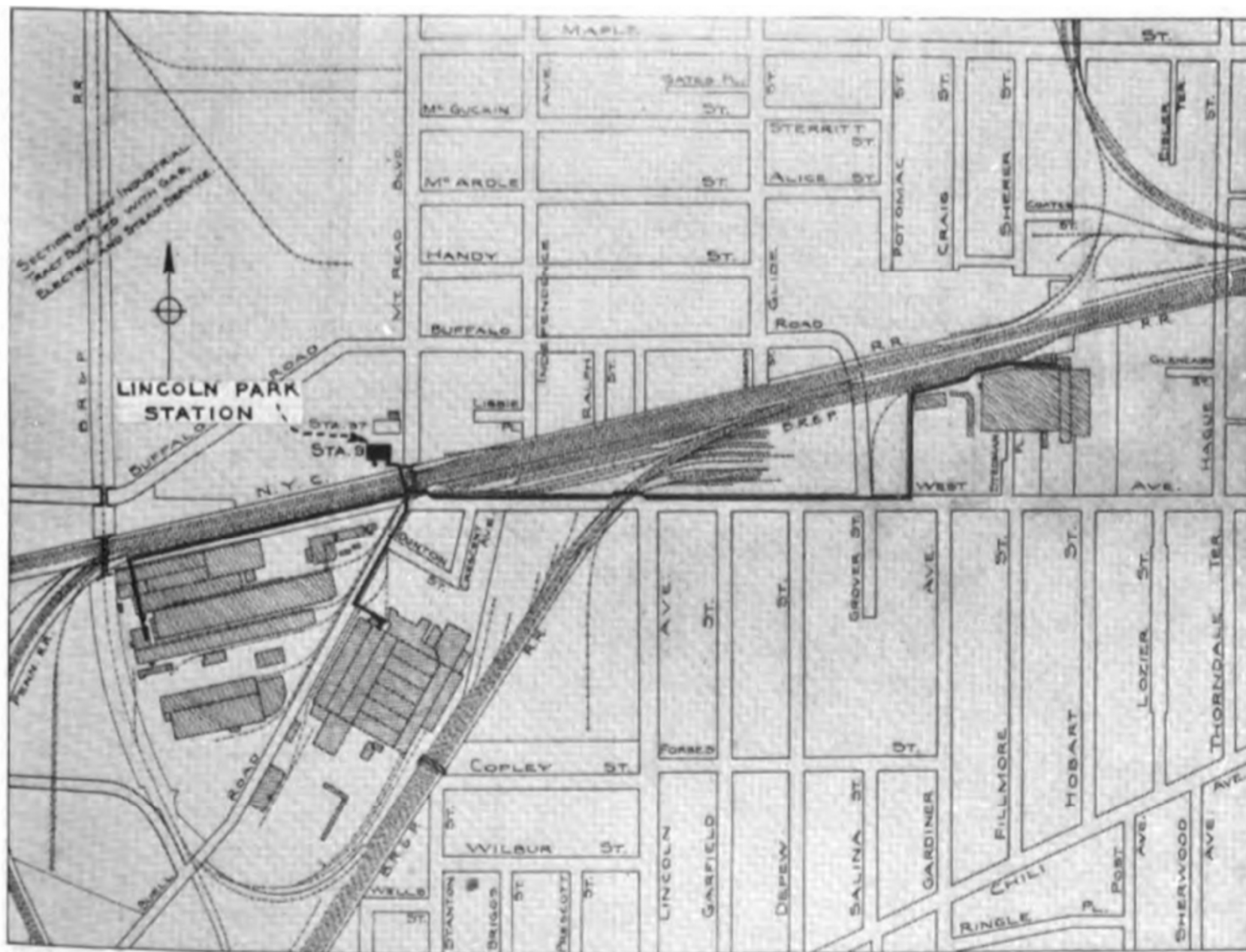


FIG. 112.—Location of the Lincoln Park Station of the Rochester Gas and Electric Corporation with Reference to the District Served.

# 1934 NDHA Annual Convention Held in Rochester

## Welcome to Rochester N. D. H. A.

We wish the National District Heating Association success in its deliberation during its convention now in session. The rapidly growing popularity of district steam heating and its importance in the business life of so many of our cities makes the solution of your problems a matter of great importance.

We also trust that your visit in Rochester will be the source of pleasant memories.

### SPECIAL "ON WINGS OF SONG" RADIO PROGRAM

Tonight on Station WHAM — 7:00 to 7:30 P. M. Special historical drama on the birth of District Heating. Program will be broadcast from the large studio in the Eastman Theatre, 50 Swan Street. You are invited — Obtain a free ticket at the convention registration desk on the Sagamore roof.

*The dollar you spend for  
electricity today buys 80%  
more than the dollar you  
spend for other commodities  
that enter into the cost of  
living.*



1943

*The* **BULLETIN** of the  
NATIONAL DISTRICT HEATING ASSOCIATION

Volume XXVIII

July, 1943

Number 4

*Our New President*

JULIUS J. SCHENK

Mr. Schenk was born in the Town of Irondequoit, N. Y. He graduated from the parochial grammar and high schools in Rochester and attended the Rochester Athenaeum and Mechanics Institute where he took the evening course in Mechanical Engineering.

He is known as 'Duke' to his associates in the Rochester Gas and Electric Corporation in which he has been connected with steam generation and distribution work for 27 years.

Starting as clerk and timekeeper at Station No. 3, the largest power generating plant of the Rochester system, he has served in various capacities. In 1922 he was advanced to be Assistant Engineer in the Steam Generating Department. In 1925 he was placed in charge of Construction and Operation of the new underground steam distribution system installed in the downtown or business section of Rochester, and also of the industrial system built outside the central area. Mr. Schenk in 1926 was made Superintendent of the Steam Distribution Department, and was given supervision over construction, and operation and maintenance of the steam distribution system, including metering, billing and other activities.

For 7 years he served on the N. D. H. A. Meters and Accessories Committee, being its Chairman for 4 of these years. For 8 years he served as a member of the Distribution Committee and for 2 years on the Executive Committee, while holding in succession the offices of Third Vice-President and First Vice-President.

He and Mrs. Schenk and their three children live in Forest Hills, a suburban community outside of Rochester. He has been active in local government, having served 8 years as a member of Town Board of the Town of Gates, and is a past president of the Justices and Magistrates Association of Monroe County, New York.



J. J. SCHENK  
New President of National District Heating Association.

# 1943 District Heating in Paris

- At the 1943 NDHA Annual Convention, Philippe L. Schereschewsky, manager of the district heating system in Paris, presented a description of that system.
- While it was being planned in the early 1930s, he visited similar systems in the United States, including Rochester.
- “I am specially glad to mention here the system in Rochester, N. Y., where I was very kindly welcomed when visiting the U.S.A.”

# 1946 Stations 3 and 8 Interconnected

- The loads on the downtown system that relied on Station No. 8 were growing rapidly, but there was no room to expand the plant.
- There were also growing concerns about the delivery of coal by trucks into the busy downtown area as well as smoke produced by the coal-fired boilers at Station No. 8.
- RG&E decided to build a high-pressure steam line from the larger Station No. 3 to provide the majority of steam for the downtown system, allowing the smaller Station No. 8 to become a peaking and backup plant for the downtown area.
- In 1946 a 650 psi, 10-inch steam transmission main about one mile long was installed between the two stations.



*A smokey city—a downtown birds-eye glimpse of Rochester taken in the 1930's on a cold January day*

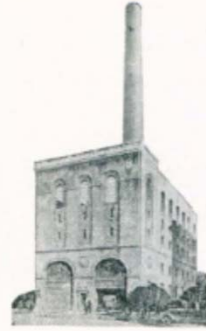


*Twenty years later, with 95% of central downtown buildings heated with RG&E steam*

1948

## Centennial Celebration in Rochester

LANDIS SHAW SMITH



This year the Rochester Gas and Electric Corporation of Rochester, N. Y. is celebrating its 100th birthday and formal exercises will commemorate the event in October and November.

The Rochester Gas Light Company was incorporated in May 1848, and the first street lights were turned on in December of that year. The original gas plant was located on Mumford, now Andrews, Street, on the site which is now occupied by the R. G. & E. Service Building.

The gas light era continued for more than 60 years, although electric illumination began to displace it along in the 1880s. The first electric lights were exhibited in the city in January 1879 and the newspapers were quite excited about this marvelous new lighting medium.

In 1880 leading citizens organized the Rochester Electric Light Company and at one time there were as many as 9 different electric and gas companies operating in the area. In the interests of economy and efficiency, mergers were effected and out of these grew, in 1919, the present Rochester Gas and Electric Corporation. It is a far cry from the early days of three flickering gas street lights to the present area served by the company, which includes 8 counties, 2 cities, 65 towns, and 165 villages and hamlets.

Today the R. G. & E. has an investment in property, plant and equipment of \$102,800,000 and is serving 160,000 customers. During all

these years the company has taken an active part in the development, growth and prosperity of the communities it serves and it begins its second century of service with the determination to continue and expand that same policy.

The company has one of the most modern gas manufacturing plants in the country and supplements its output with large purchases of natural gas from the Texas fields. The R. G. & E. is completing construction of a new electric generating station on the Lake shore, which will add more than 50,000 horsepower to its present generating capacity.

The company is third in the list of the pioneers of the district heating industry, having started service in 1889. It now serves 400 steam customers, including many of Rochester's nationally known commercial and industrial concerns, from four district steam plants. It is the fifth largest steam service system in this country due to its large industrial loads.

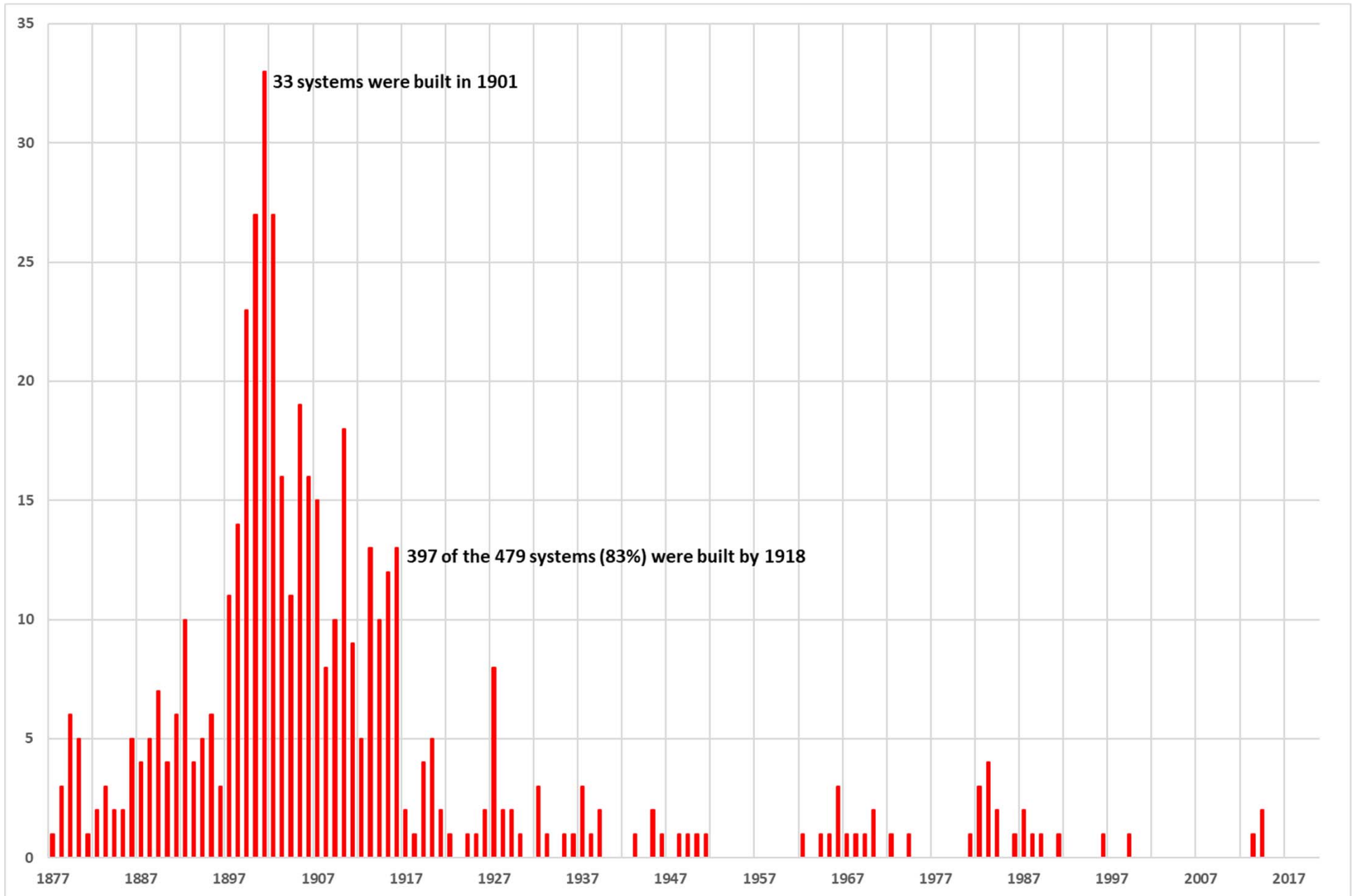
Present head of the R. G. & E. is Alexander M. Beebe who rose from the ranks to the top position in the local utility. Of 15 directors, 12 are Rochester men, leaders in local industry and community life. Herman Russell is chairman of the Board of Directors following his retirement after 19 years as president and more than 40 years of service with the company.

The company has more than 2,500 employees of whom more than 125 have been with the company for more than 35 years. Its welfare and pension system is regarded as one of the best in the country and has been copied by many other utilities and industries. It maintains a Home Service Department for the purpose of helping the homemaker to get the greatest possible benefit out of the gas and electric service she uses and to be able to operate her appliances more efficiently. It also maintains an Industrial Department for helping local industries with their problems concerning use of electric, gas or steam service. Likewise, the Farm Service Department helps farmers to make farming more productive and prosperous through wider and better use of electricity.

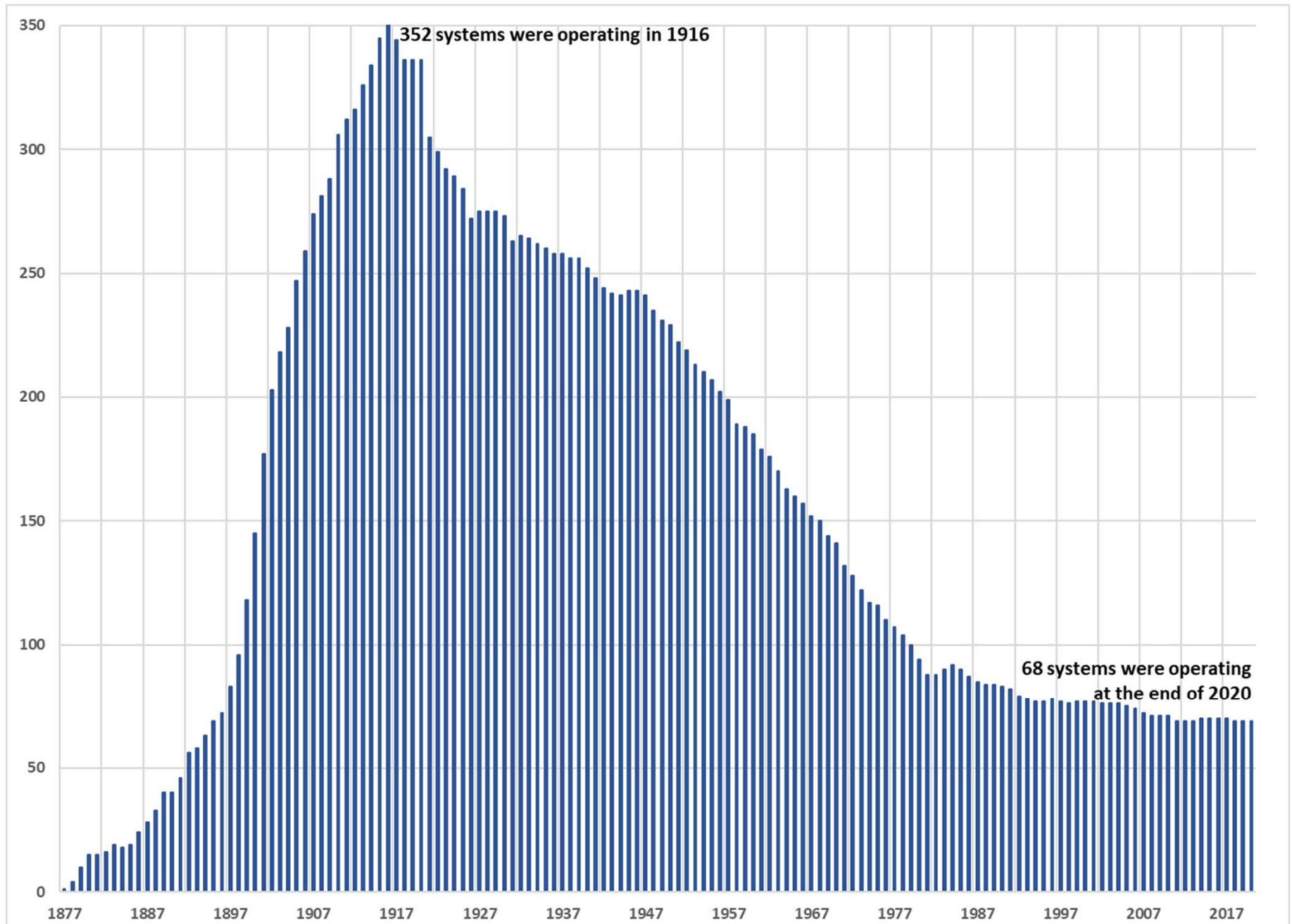
# 1948 RG&E Centennial

- “The company is third in the list of the pioneers of the district heating industry, having started service in 1889.
- It now serves 400 steam customers, including many of Rochester's nationally known commercial and industrial concerns, from four district steam plants.
- It is the fifth largest steam service system due to its large industrial loads.”
- In reality, 40 district heating systems had been built by 1889, and 70 by 1894 when district steam service actually began in Rochester.

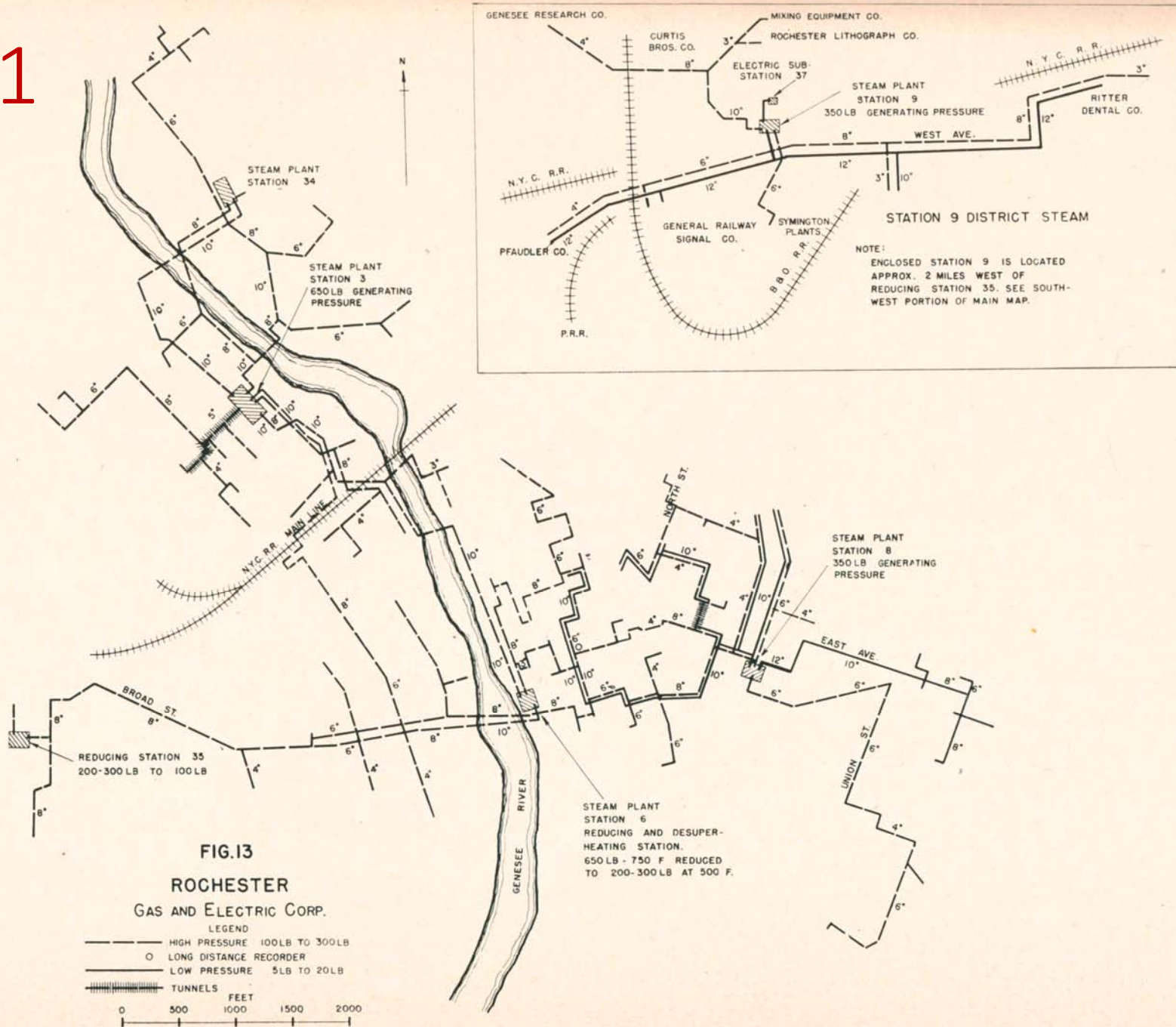
# Commercial District Heating Systems Built Each Year



# Commercial District Heating Systems Operating Each Year



1951



# 1965 Fourth Largest System

- RG&E overtook Indianapolis to become the fourth largest district heating system in the country, behind New York City, Detroit and Philadelphia.
- Rochester held this spot until 1969, when Boston captured fourth place.
- An ambitious Urban Renewal Project in the downtown area demolished many buildings that were RG&E steam customers, and new buildings were not as inclined to take steam service.

1969

## URBAN DEVELOPMENT PROJECT AT ROCHESTER, NEW YORK

**HENRY A. MacGREGOR**

**Office Supervisor**

**Steam Distribution Department**

About five years ago the City of Rochester embarked upon an ambitious rehabilitation program encompassing the very center of the City, through which flows the Genesee River. This project was called the "Genesee Crossroads Urban Development Program."

For several blocks along both sides of the river and extending both east and west from this area, there were dozens of small, dilapidated buildings which were from 60 to 100 years old. These had been an eyesore for many years and most were beyond any practicable possibility of repair.

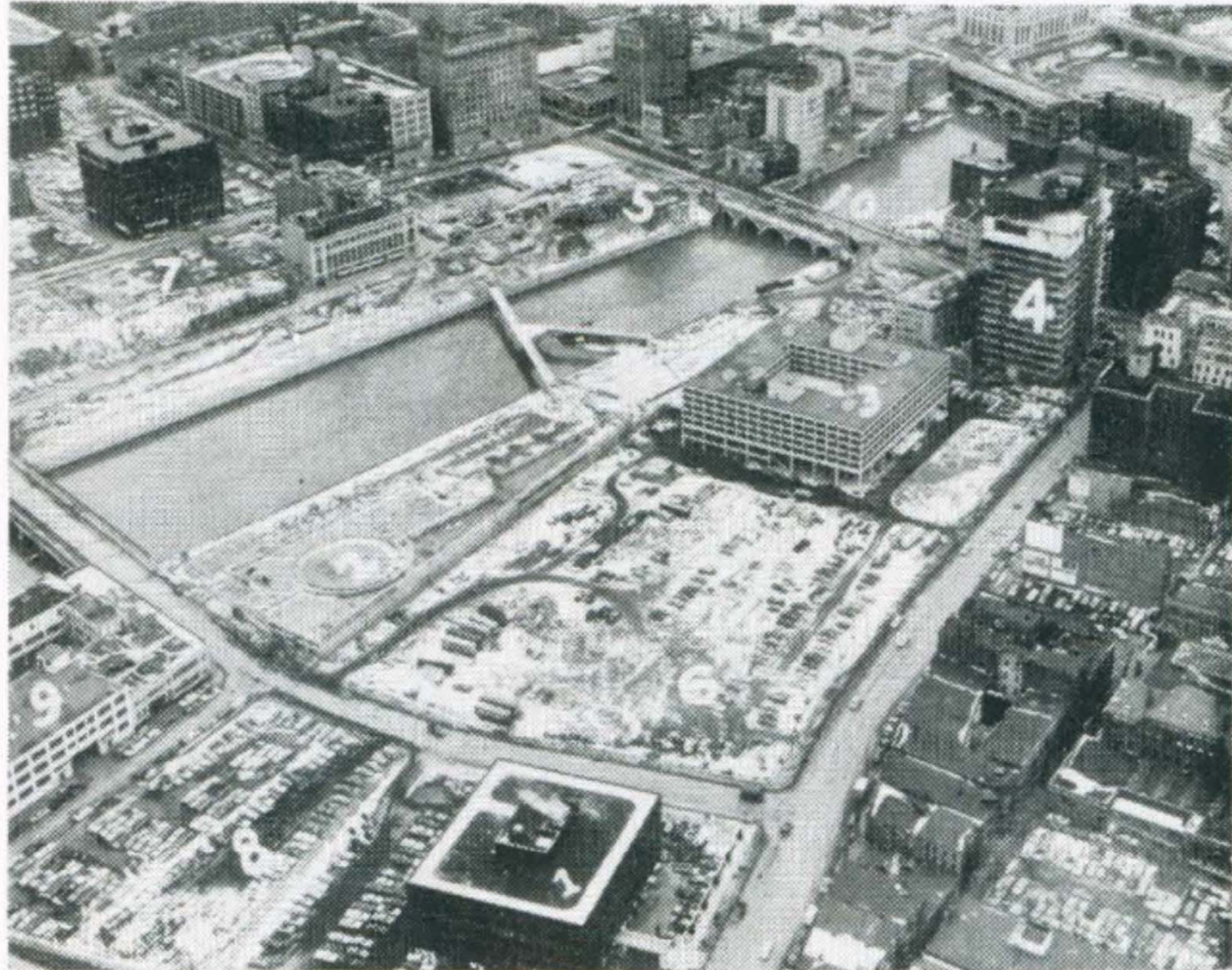


FIG. 1 — Old buildings on west side of Genesee River and on north side of Main St. crossing river, torn down in 1966-67 for urban development program.

3. A pedestrian bridge across the river and midway between East Main St. and Andrews St., would take off from the garage street level, as two separate walk-ways that converge into one walk, midway across the river and continue as such to the east bank of the river.

Both of these projects at this writing are 75 per cent complete.

4. Also west of the river and on the east side of State St., backing up to the City Garage, the Federal Government has planned to erect an office building. The land has been purchased and cleared but at present is just a large, empty lot. Federal funds have been appropriated but are still unavailable.
5. A Grenadier Motel, with 400 guest rooms and a banquet hall that will accommodate 1,500 people, adjacent to the prospective Federal Building and facing on State St. This building is about 75 per cent complete and they are hoping to open sometime in May.
6. A "Crossroads" office building with floor area of 200,000 sq ft and on a plot bounded by Main, State, and Corinthian Sts. This building is to be 18 stories high and is possibly 60 per cent complete.
7. On a piece of land adjacent to the west side of the river and facing on Main St., the State Government has expressed a desire to erect an office building where all State Offices can be housed in one building. At present this is only in the talking stage.
8. On the east bank of the river and encompassing the block skirted by East Main. St. Paul. and Mortimore

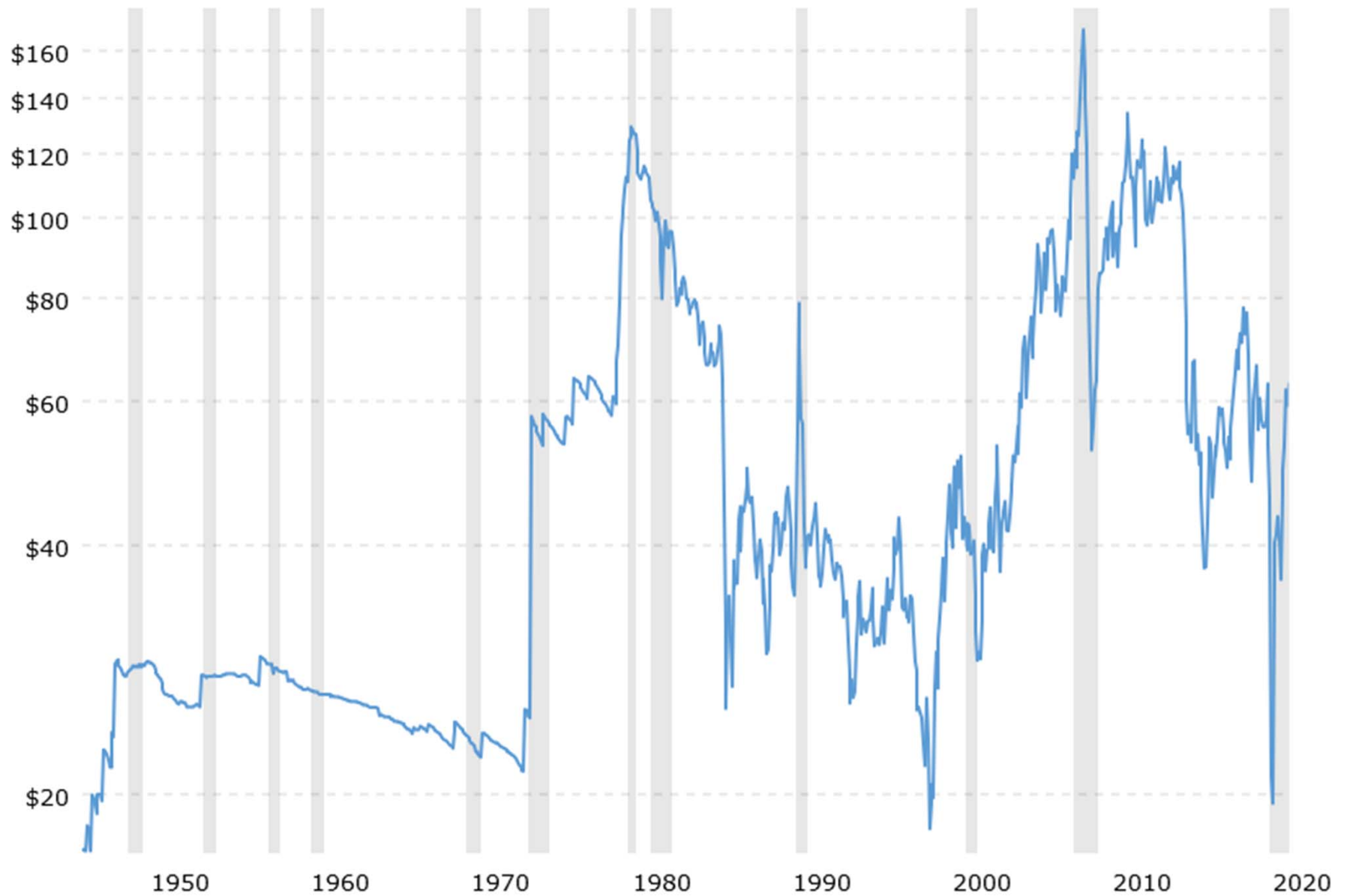


**FIG. 3 — Panoramic view of Genesee Crossroads Urban Development during construction: 1. I.B.M. Building; 2. City underground parking garage; 3. Grenadier Motel; 4. Crossroads Office Building; 5. Holiday Inn; 6. Federal Building site; 7. High-rise apartment site; 8. Available (no plans); 9. R. G. & E. Steam Distribution Department Operation Building; 10. Main St. Bridge.**

# Hard Times for Steam Systems

- In addition to urban renewal, RG&E's system and many others were greatly impacted by outside events, especially the 1970 Clean Air Act Amendments that resulted in strict rules on combustion of coal and other fuels.
- RG&E spent large amounts of money to convert to gas and oil fuels.
- And then in 1973 the first of two oil shocks caused the price of oil to skyrocket.

# Crude Oil Prices



# 1973 Alvin B. Spetz



## Our New President

*Alvin B. Spetz was born, raised and attended public schools in the area of Jamestown, N. Y. After graduating from high school, he moved to Rochester, N. Y. and was employed as an apprentice machinist.*

*In 1939, he entered the United States Army, and was commissioned in 1942. He served with the famed Japanese-American 442nd Infantry Combat Team in Italy and France until 1946; and as a Captain, continued military service in New York and retired as Battalion Commander in 1963.*

*In 1945, he began his career with the Rochester Gas and Electric Corporation in the Steam Distribution Division, and transferred to the Commercial and Industrial Department in 1948 as a Gas and Electric Commercial Representative. In 1952 he joined the Steam Sales Division of that Department, where he is currently the Senior Representative. He has attended the Rochester Institute of Technology, in the interest of job improvement.*

*President Spetz has been a member of IDHA since 1958, and is a member of the Rochester Chapter, Building Owners and Managers Association International.*

*"Bud" and his wife, Judy, have resided in Gates, a suburb of Rochester, since 1951. They have three children: Lynn, Mark and Brady.*

# 1980 Robert Botsford

## ***OUR NEW PRESIDENT***

*Robert Botsford first worked for Rochester Gas and Electric Corporation as a Laboratory Technician while attending college. Upon graduation from Rochester Institute of Technology in 1957 he joined RG&E as a Test Engineer. After working as a Station Engineer and Assistant Superintendent at the Beebee Station, and as a Superintendent at Stations #8 and #9, Bob was promoted to Superintendent for the Steam Heating Systems in 1972, when he also received his M.B.A. from the University of Rochester. He now serves as Superintendent for Fossil, Hydro, and Steam Production.*

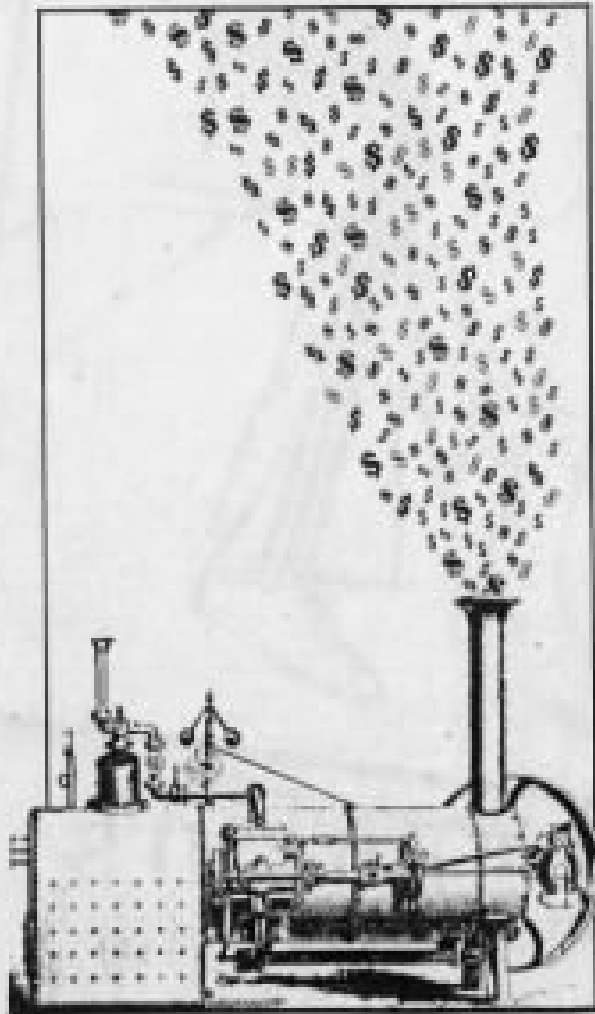
*Besides his active role in IDHA, Bob is a member of the New York Power Generation Committee and the Rochester Engineering Society. He is involved in his community, having served as a town councilman, and currently works with his community's United Way and United Community Chest Campaigns. Bob also participates actively in his church.*

*Bob and his wife Ann live in Ontario, New York with their four children.*



1980

# RG&E steam-heat business evaporating



Part of a series.

By JACKIE FARNAN

Last December the state Public Service Commission granted a 15 percent steam rate increase to Rochester Gas & Electric Corp.

Operators of steam-heated downtown buildings groaned. Steam rates had nearly doubled in five years.

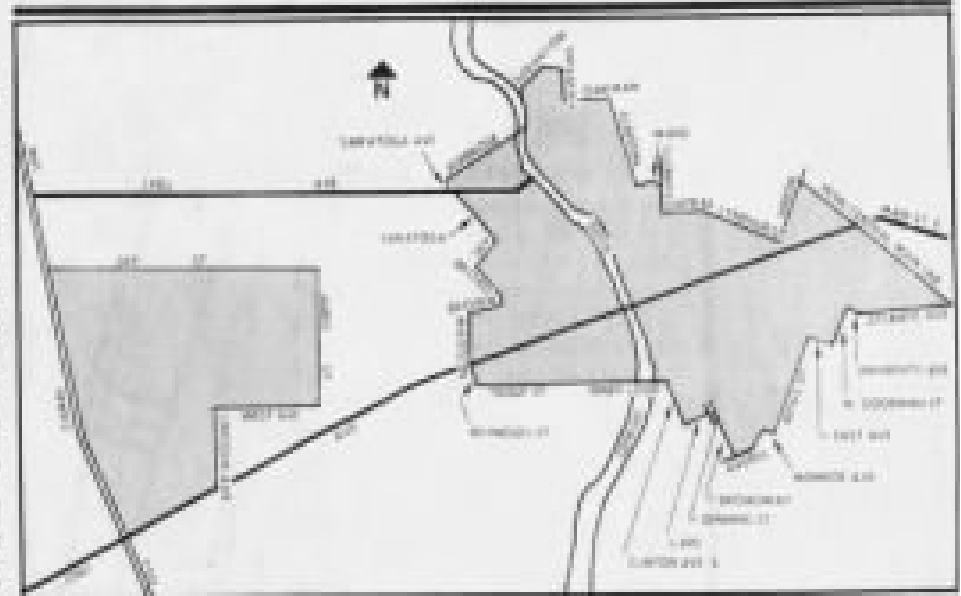
At the same time, the commission ordered RG&E to study the future of the system and report back to the commission by tomorrow.

Since 1963, RG&E has lost 50 percent of its steam customers. Last December, more than a third of the remaining 320 customers had talked to RG&E about the possibility of converting to natural gas. As of Friday, RG&E had 205 steam customers.

"The steam system seems to be in ever-increasing jeopardy," said the commission staff report on RG&E's steam rate increase.

During the late 1960s and early 1970s many former steam customers left the downtown area, accounting for part of the drop. High rates are now driving downtown building operators off the system.

Turn to PG&E, Page 48



Shaded sections show areas served by RG&E steam-heat

## Future may bring piped-in heat

By JACKIE FARNAN

Imagine Rochester 20 years from now. Glass towers glow in the sun, skyscrapers stand around Murray's feet, enclosed gardens grace the Flower City from January to December.

Underground, a mass of pipes and valves supplies all downtown buildings with cheap heat steam.

Modern prototypes of such systems are at work today in Denmark, Sweden and Germany. District heat systems provide 70 percent of Soviet urban heating

needs. And Japan has started developing such systems.

In a district heating system, steam or hot water is shared by many buildings through interlocking pipes. District heating works economically when the steam or hot water is a byproduct of any electric generation or other manufacturing process.

In some cities, steam or hot water is burned in a plant that burns city garbage.

But the United States is having trouble catching the wave of the future.

According to the U.S. Department of Housing and Urban Development, less than 1 percent of heat demand here is supplied by district heat. And that heat comes "primarily from old steam systems built early in the century, which are now marginally economic and often in disrepair."

Turn to PG&E, Page 48



From Page 1B

Since 1975, RG&E has lost 20 steam customers.

As customers leave the system, increasing maintenance costs plus a higher share of operating costs, creating a price incentive for customers to cut those who have left.

RG&E officials expect to ask the city to increase rates this year by another 10 percent increase in steam rates, said Marie Blumenthal, RG&E's vice president in charge of customer relations and public affairs.

The increased problems affect more people than building owners and RG&E.

OSR and county taxpayers are expected to pay more than \$1 million in steam bills to heat and cool the downtown City Center this year. That bill could be cut by about 40 percent if the city and county agreed an estimated \$2 million equity invested in upgrading all major residential boilers, said James Rice, who is in charge of county building operations.

Within the next six months, the county is expected to hire a consulting firm to study how to cut energy costs in the county's four office buildings and heated, underground garage.

The city could cut its \$205,000-a-year steam bill by one-third if it installed boilers in its 20 buildings, said A. Paul Friedrich, city property manager.

But if the city leaves the system, steam

costs for remaining customers could rise. In the city is looking for several reports on the steam system before it makes major changes, Friedrich said.

Meanwhile, owners of small downtown buildings say they are in a no-win situation: pay high RG&E steam rates or pay the high cost of converting to a private boiler.

Conversion often includes not only the cost of a boiler but also a \$10,000 a year salary of a boiler operator. "That would amount to no savings," said Dan Lynch, president of Speedy Cleaners, located at 128 Court St.

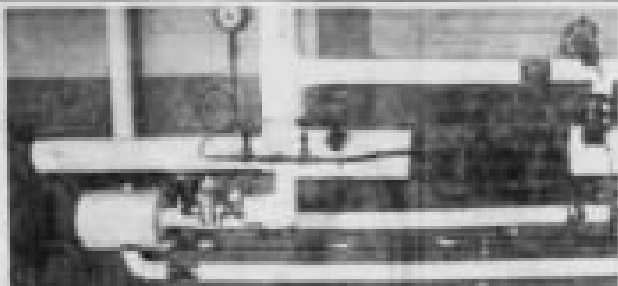
Speedy, who runs steam for heat as well as for his dry cleaning operation, paid a steam bill of \$60,000 last year. He is considering converting from RG&E steam to his own boiler.

Some downtown building owners say they don't have space for a boiler.

Others lament finding dependable RG&E steam for a boiler that could break down.

No individual boiler could be as reliable as RG&E's whole steam system, said Robert K. Lee, vice president and manager of the real estate management department of Lincoln First Bank of Rochester. "If there are problems at one plant they just short steam from another."

Lincoln First Tower needs dependable steam, Lee said, that a boiler breakdown at Lincoln Tower on a winter day would



Pipes at Kufash Co. churnal steam heat from RG&E

temperature in the tower could cause expensive problems.

Steam pipes are buried in some of the older buildings that line the side of the building. If emergency measures to drain them failed, damage to floors, ruptured pipes and interior water damage could tally a quarter of a million dollars in 24 hours, Lee said.

Some operators of downtown buildings, like Malvern Holdings Corp. and the Rochester School District, have enjoyed fuel cost savings because they converted to their own boilers.

But downtown business people will shake their heads. They say RG&E's central steam system should be able to produce steam less expensively than a whole city of privately owned boilers.

owned tapping up old pipes and paying for new ones.

• Federal orders to close the air.

An order by the Environmental Protection Agency required converting coal-fired steam plants to other fuels to prevent air quality. RG&E paid more than \$10 million to convert its three coal-fired steam plants — one built, one to be used and a third to be sold.

• Having gas and oil prices.

Right after RG&E completed its plant conversions in 1975, oil prices began to rise.

All of these costs have been reflected in higher rates, says RG&E.

RG&E has its own problems with the steam system. RG&E says it is only slightly profitable.

The state Public Service Commission, which sets limits on how much money RG&E can make, recognizes the problem. RG&E's operating costs have been as high as recent years. It hasn't been able to make as much money as the commission allows. The commission granted RG&E all of the 10 percent rate increase it requested last year.

As what will happen in Rochester's steam system?

• W&E is the steam system of downtown

buildings, says off the system to save money? That's one factor, says RG&E. Because many large customers like General Heating Co. Inc., General Hospital and Delta Products, Division of General Motors Corp., have said they intend to continue to buy large quantities of steam.


For a large operation, installing boilers is an expensive project similar to building a small steam plant, said Daniel W. Carlucci, manager of petroleum relations for Delta.

Setting large-volume customers in a non-economic venture for RG&E that serving small-volume customers. RG&E has to invest in nearly as much piping and equipment to sell much less steam to small customers, said RG&E customer Richard Post.

Will small downtown customers be driven off the ground by high prices, leaving only big volume buyers?

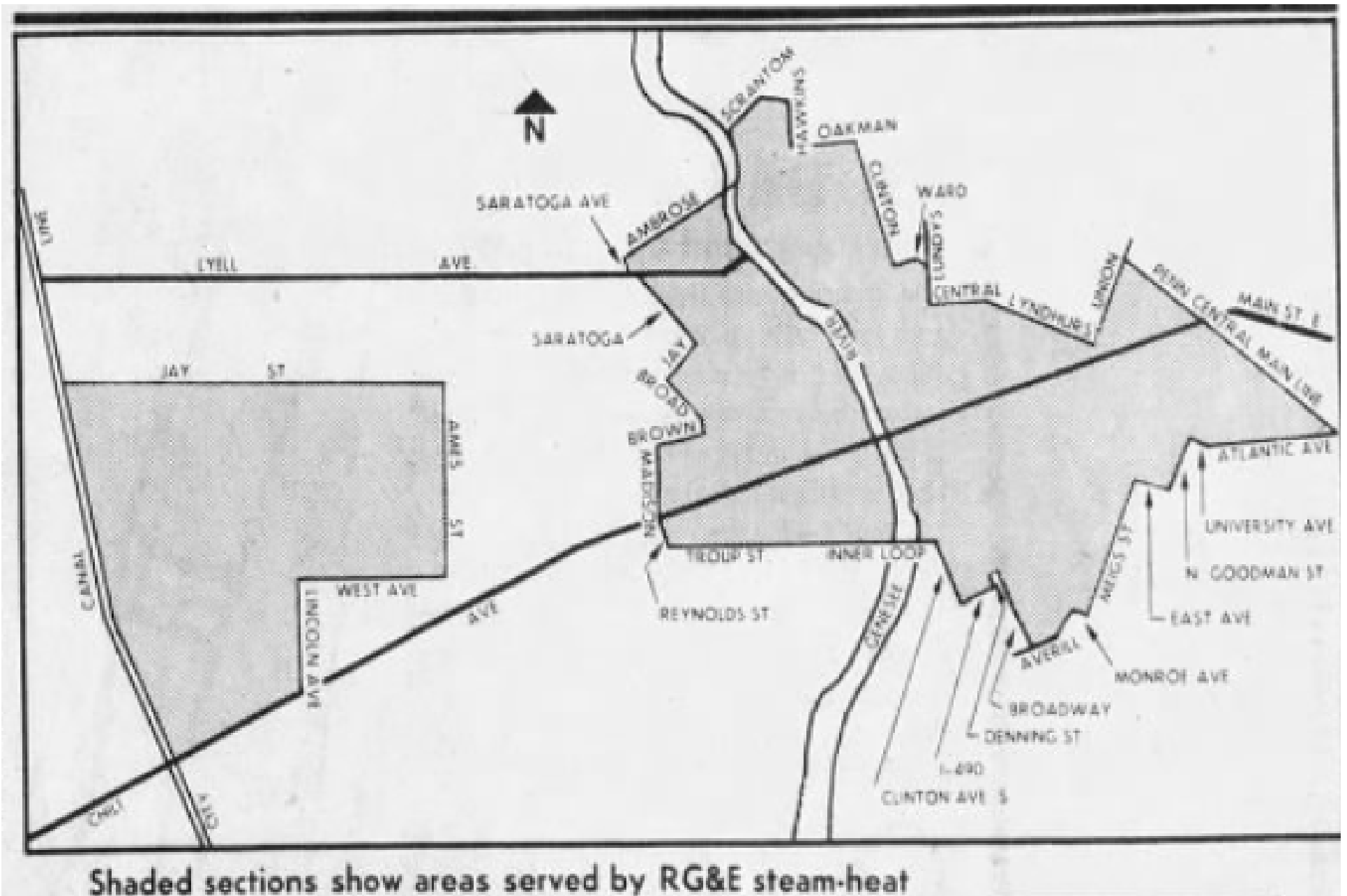
Perhaps not, RG&E says it wants to keep off of its steam customers. And city, county and federal officials are working on reports that say that would be a desirable steam system.

COMMISSION: Some studies will help the city decide whether to set positive to RG&E's steam system.



## Why Pay More?

# 1980 Steam Service Area



1984

# High costs force RG&E to quit steam business

Move leaves some firms  
in Rochester in the cold

**By Phil Ebersole**

*Democrat and Chronicle Business*

Rochester Gas and Electric Corp. plans to go out of the steam business by Oct. 1, 1985, — a move that could force downtown and westside Rochester businesses and agencies to spend millions of dollars for heating systems to replace RG&E steam.

Their alternative is to figure out a way to continue operating the steam system under other ownership than RG&E.

Such ideas have been discussed for years. But the New York Public Service Commission brought the issue to a head last week by giving RG&E 30 days to come up with a plan for abandoning the steam system by Oct. 1, 1985. The system was becoming too expensive for RG&E to maintain.

RG&E steam customers have until next

---

TURN TO PAGE 5A

# High costs force RG&E to give up the steam-heat business

FROM PAGE 1A

summer to figure out what they're going to do.

John Hellema, vice president-environment of Genesee Hospital, estimated the hospital would have to spend \$2.5 million for its own boiler system if RG&E steam service ceases.

"We obviously have other uses for that capital," he said. "We would much sooner stay with a centralized system and are not particularly interested in coming up with our own boiler plant."

The city government probably would have to spend about \$1.25 million to replace RG&E steam to heat the War Memorial, Public Safety Building and other downtown buildings, although presumably some of the cost of heating the Civic Center complex would be shared with the Monroe County government, said Jim Malone, the city's commissioner of environmental services.

RG&E steam also is used to heat Lincoln First Tower, Xerox Tower, Sibley's department store, the Delco Products plant and Rochester Community Savings Bank downtown offices.

A consulting firm, Resource Development Associates of Dayton, Ohio, is studying the feasibility of a districtwide steam heating system for downtown Rochester. Its president, William Hanselman, said a preliminary report would be ready "in a couple of months."

"Over the entire civilized world, central heating districts are considered the most efficient way to heat central cities," said David Thurston, a mechanical contractor who has long advocated such a system for Rochester.

He said a meeting of RG&E steam customers would be held on Aug. 8 at 3:30 p.m. at St. Luke's Episcopal Church, 17 S. Fitzhugh St.

David K. Laniak, RG&E vice president of corporate planning, said RG&E's current plan was simply to shut down the steam system by Oct. 1, 1985. However, he said, the utility is willing to listen to any proposal.

In the past, he said, various groups have said "if somebody could give us some money, we could make it work." Well, that is the nub of the problem. Where do you get money, except from customers?"

RG&E first started selling steam, a by-product of its electric generating plants, in 1893. Ninety-five percent of downtown businesses were heated with RG&E steam as recently as 1960. But the price of steam has been increasing since the mid-1970s. RG&E added its last new steam customer in 1976.

George Lappan, an RG&E spokesman, said steam prices have increased because:

- The price of fuel oil and natural gas, the fuels in RG&E's steam plants, have gone up.
- Urban renewal drove some RG&E steam customers out of business, leaving a smaller number to pay the fixed costs of the steam system.
- Energy conservation, by reducing use of

steam, had the same result.

• Price increases create their own vicious circle. Each increase drives away customers, leaving fewer to pay the fixed costs, which causes additional increases, and so on.

"We've been stating quite openly the steam system would have to go by the wayside," he said.

Laniak said RG&E never asked, in so many words, for permission to shut off the steam system. But in a study, he said, RG&E concluded most customers wouldn't find it worthwhile to keep on paying the rising cost of steam.

The PSC, after an investigation of the steam system, on July 11 ordered RG&E to plan its abandonment. The PSC also gave RG&E a \$2.6 million rate increase that will raise most steam customers' bills 23 percent to 29 percent.

Hanselman, the consultant, said Rochester has a high enough concentration of steam customers and cold enough winters to make a districtwide steam system feasible.

He said such a system would have co-generate electricity and steam for heat, as RG&E now does, and would have to use coal or solid waste for fuel.

The area served might be "more compact" than RG&E's service areas, he said. Some customers, who are on the end of long steam lines, might be too expensive to serve.

The new system might be owned by a users cooperative, he said, or an authority created by government. Another possibility would be to sell the system to a private company that specializes in operating steam systems.

James A. Sykes, spokesman for Lincoln First Banks Inc., said Lincoln would wait to see the results of Hanselman's study before

deciding what to do about Lincoln Tower.

Another possibility, he said, is to build a heating system jointly with Xerox Corp. and owners of other nearby buildings. There's plenty of time to decide before the 1985-86 heating season, he said.

Xerox Corp. spokesman Terry Dillman said Xerox is planning its own boiler system for Xerox Tower.

Others seem to have the same doubts. In recent years, Genesee Brewing Co., General Railway Signal Co., Rochester Instrument Systems and Fazash Construction Co. have disconnected from the RG&E steam system, Lappan said.

Those in the process of converting away from RG&E steam, he said, include Gannett Rochester Newspapers, Mixing Equipment Co., the Salvation Army and Christ Church.

## STEAM BUSINESS

As Rochester Gas and Electric Corp.'s steam prices have increased, its sales and number of customers have declined. The number of users is as of Dec. 31 of each year.

Year	Price <sup>1</sup>	Sales <sup>2</sup>	Users
1983	\$14.26	1,128,250	143
1982	\$12.74	1,803,506	208
1981	\$12.28	2,146,556	234
1980	\$ 9.77	2,413,879	271
1979	\$ 7.16	2,792,170	318
1978	\$ 6.45	2,963,500	339
1977	\$ 6.44	2,950,287	360
1976	\$ 5.84	3,147,359	380
1975	\$ 5.51	3,145,453	389
1974	\$ 4.51	3,622,422	401

<sup>1</sup> Average price per 1,000 lbs.

<sup>2</sup> In 1,000's of lbs.

Source of data: Rochester Gas and Electric annual reports

## Democrat and Chronicle

Volume 152, Number 170

The Democrat and Chronicle (USPS 153-100) is published Monday through Saturday. The Sunday Democrat and Chronicle (USPS 558310) is published every Sunday at 55 Exchange St., Rochester, New York, 14614.

### Subscriber Service

1. To start home delivery or change your subscription: Call 232-5550 between 9:30 AM and 8 PM on weekdays, and 8 AM and 4:30 PM on Saturdays.
2. To solve a delivery problem: First, call your carrier. If unsuccessful, call 232-5550 between 7:30 AM and 8 PM on weekdays, 8 AM and 4:30 PM on Saturdays, and 9 AM and 1 PM on Sundays. If 232-5550 is busy Sunday mornings, call 423-0620. If you notify us by 9:30 AM weekdays, 11:30 AM Saturday or Noon on Sunday about a missed delivery, and live in Rochester or vicinity, a make-up copy will be radio dispatched to you.  
If you need additional service assistance, call our service HOTLINE at 232-7100, ext. 3607, 3619 or 3545 between 8:30 and 5 PM weekdays, or write to Director of Circulation, Gannett Rochester Newspapers, 55 Exchange St., Rochester, NY 14614.
3. To discuss a computer generated subscription bill: Call 232-7100, and ask for Subscription Billing Department, between 8:30 AM and 4 PM Monday through Friday.

### Classified

To place classified ads, call 454-4200. Or call the nearest regional office: Brockport 637-3145; Canandaigua 924-5460. To cancel or correct your ad, call the customer service desk, 546-8150.

### News

If you have a news tip, call 232-7100 and ask for the Democrat and Chronicle metro editor. If you have entertainment news, call 232-7100 and ask for the Democrat and Chronicle People editor. For sports reports 24 hours a day, call the Democrat and Chronicle Sportline, 232-4921.

### Subscription rates:

By carrier: Weekdays, \$1.00 per week; Sundays, \$1.00; Weekdays and Sundays, \$2.00 per week; Saturday and Sunday, \$1.50 per week; Saturday only, 30c; Other single days, 30c.  
By meter route: Weekdays, \$2.00 per week; Sunday, \$1.00; Weekdays and Sundays, \$3.00 per week; Saturday and Sunday, \$1.50 per week; Single copy, 20c.  
By mail: First and second years, week-days \$20.00 for three months, \$1.00 per year; Sundays, \$6.50 for three months, \$6.00 per year; Saturday only, \$5.50 for three months, \$20 per year.  
Educator's rate: Newspapers for classroom use, call 232-7100 ext. 3622.

The Publisher reserves the right to change subscription rates during the term of a subscription upon thirty days' notice. This notice may be by mail to the subscriber, by notice contained in the newspaper itself, or otherwise. Subscription rate changes may be implemented by changing the duration of the subscription.

Second-class postage paid at Rochester, N.Y.  
POSTMASTER: Send address changes to Gannett Rochester Newspapers, 55 Exchange St., Rochester, N.Y. 14614



# STEAM BUSINESS

As Rochester Gas and Electric Corp.'s steam prices have increased, its sales and number of customers have declined. The number of users is as of Dec. 31 of each year.

<b>Year</b>	<b>Price<sup>1</sup></b>	<b>Sales<sup>2</sup></b>	<b>Users</b>
1983	\$14.28	1,128,250	143
1982	\$12.74	1,803,506	208
1981	\$12.28	2,146,556	234
1980	\$ 9.77	2,413,879	271
1979	\$ 7.16	2,792,170	318
1978	\$ 6.45	2,963,500	339
1977	\$ 6.44	2,950,287	360
1976	\$ 5.84	3,147,359	380
1975	\$ 5.51	3,145,453	389
1974	\$ 4.51	3,622,422	401

<sup>1</sup> Average price per 1,000 lbs.

<sup>2</sup> In 1,000s of lbs.

Source of data: Rochester Gas and Electric annual reports

1981

**ornl**

**ORNL/TM-7757**

**OAK  
RIDGE  
NATIONAL  
LABORATORY**

**UNION  
CARBIDE**

**Potential Opportunities for  
Revitalization of the  
Rochester, New York Steam  
District Heating System**

Robert E. Gant  
Michael A. Karnitz  
Carroll W. Easton  
Carl H. Thiele

# Cogeneration Development Corporation

- The Cogeneration Development Corporation was formed by Tom Casten and others in 1980 to develop new cogeneration and district heating systems.
- They built a new system in Trenton, New Jersey, and proposed to build a similar system in Rochester, but they could not reach agreement with RG&E on a price for heat from the existing Beebee Station.
- Casten later formed Trigen that bought and operated several district heating systems in the United States.

# 1984 Rochester District Heating Cooperative Formed

## FORMATION OF THE ROCHESTER DISTRICT HEATING COOPERATIVE

Armand A. Lartigue  
President--Rochester District Heating Cooperative  
David W. Wade, P.E.  
Resource Development Associates

### INTRODUCTION

On November 9, 1984, the Rochester District Heating Cooperative was incorporated in the State of New York, pursuant to Article 2 of the Cooperative Corporations Law. Its stated purposes, as outlined in the Certificate of Incorporation, are as follows:

To assist its members by performing services in connection with the acquisition of steam to be used or consumed by its members by owning, operating or managing a steam facility, including all real estate, fixtures, personal property used in connection therewith, to generate, transmit, distribute and furnish steam for the use of its members;

To the extent that the sale is permitted under Section 501(c)(12) of the Internal Revenue Service Code, to sell excess steam and/or electricity to third parties; and

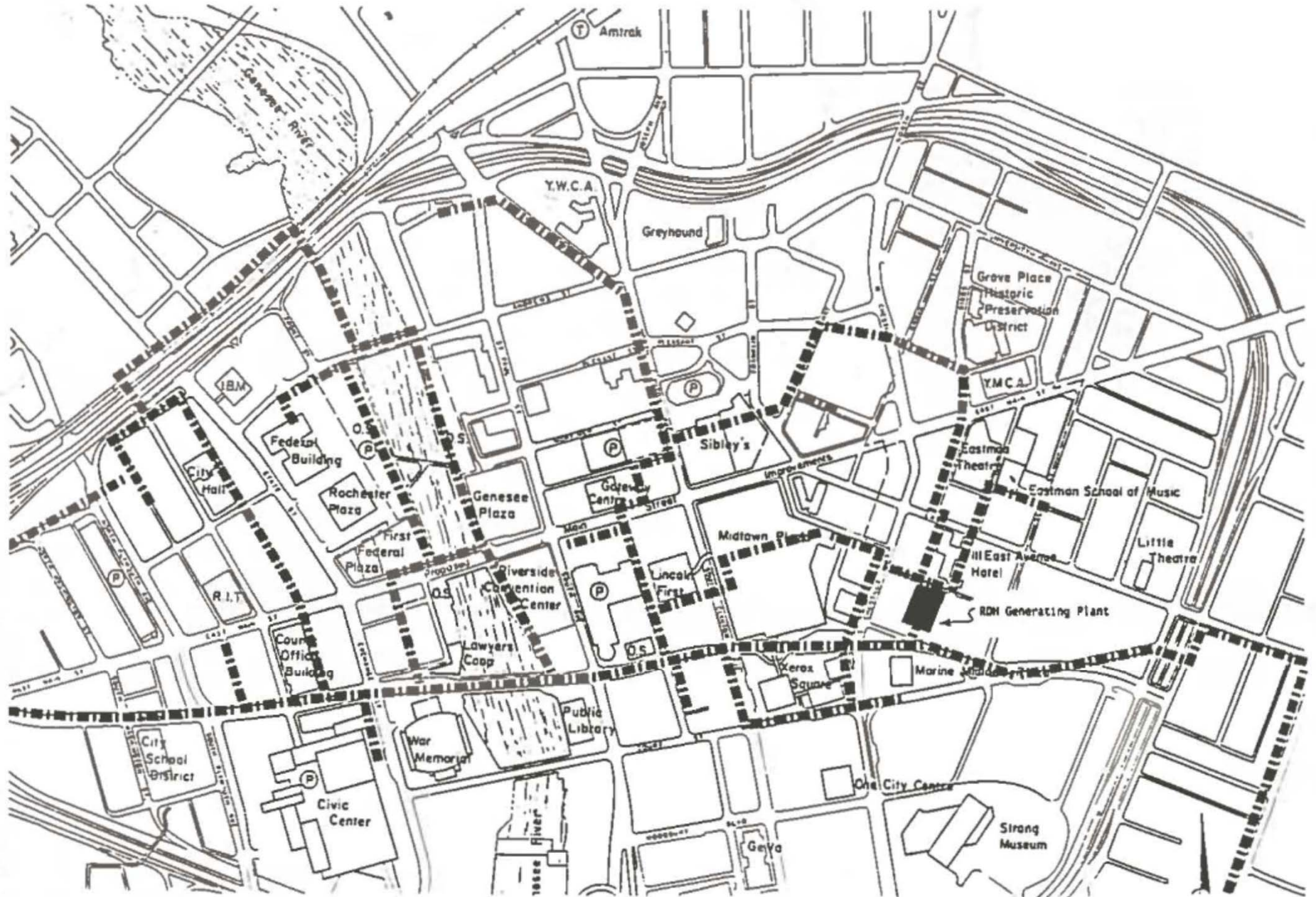
To do all things necessary and proper in the furtherance of, and in connection with the foregoing purposes to the fullest extent permitted by Section 4 of the Cooperative Corporations Law and by the Business Corporations Law.

Formation of the Cooperative was the result of the concerted efforts of major steam system customers, county, city and state agencies interested in continuing district heating service in Rochester. Through their efforts uninterrupted steam service will continue to customers when transfer of the District System takes place in October of 1985.

### HISTORY

The Rochester District Heating System has been operated by Rochester Gas and Electric Corporation since 1889, and was originally developed as an outgrowth of RG&E's expanding centralized electric system in downtown Rochester. The electricity and steam heat supplied by RG&E gradually replaced that produced on-site by existing buildings and industries in downtown and eventually became the accepted source of energy for newly constructed facilities.

1988



# District Heating & Cooling

Volume 74 Number 3

First Quarter 1989



## *Cooperation at the Cooperative*

Rebirth of the  
Rochester System

### **Also in this Issue**

Making the Move from District  
Heating to District Cooling

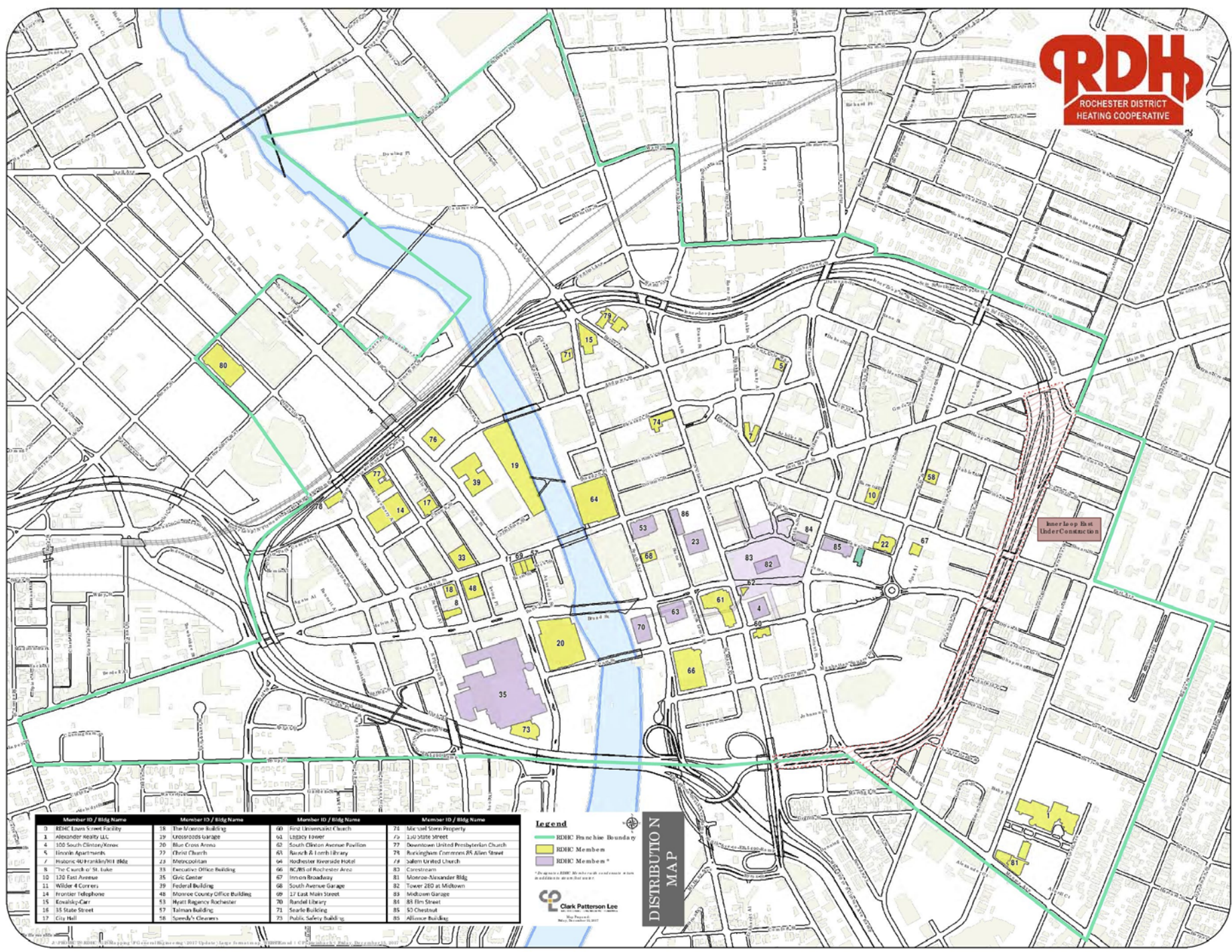
Is DHC the Answer to Our  
Global Energy Questions?

All New—R&D Column

*Plus*  
80th Annual Conference  
Program & Exhibitor  
Information



**Rochester District Heating Cooperative board members are an eclectic mix, representing the public and private interests of RDH members.** *Pictured in the steam plant with General Manager, Howard Cone, are left to right, Henry Manczyk, Director, Buildings and Equipment, County of Monroe; Darrell G. Hartline, Sr. Vice President for Finance, Genesee Hospital; John D. Hellems, Vice President, Genesee Hospital; Lawrence E. Davies, Vice President, Chase Lincoln First Bank; Paul E. Haney, First Deputy Director of Finance, County of Monroe; Armand A. Lartique, Manager, Site Services, Xerox Real Estate/ General Services Div.; Peter Gangloff, Vice President and Treasurer, Midtown Holdings Corp.; Edward F. Watson, Deputy Commissioner, Dept. of Environmental Services; Carl Van Ness, President, CAVCO Services, Inc.; Robert Renehan, Building Engineering Coordinator, Rochester Telephone Corporation; Michael A. Howard, Esquire, Boylan, Brown, Code, Fowler, Randall & Wilson.*



Member ID / Bldg Name	Member ID / Bldg Name	Member ID / Bldg Name	Member ID / Bldg Name
1 RHC Egan's Food Facility	16 The Monroe Building	61 First Unionbank Branch	71 May and Stone Property
2 Alexander Realty LLC	19 Crossroads Garage	62 LIBBY Tower	72 120 State Street
4 100 South Clinton/Knox	20 Blue Cross Arena	63 South Clinton Avenue Pavilion	73 Downtown United Presbyterian Church
5 Lincoln Apartments	23 First Church	65 Raab & Lomb Library	74 Buckingham Commons 85 Allen Street
7 Historic 400 Franklin Hill DMU	24 Metropolitan	66 Rochester Riverside Hotel	75 Salem United Church
8 The Church of St. Luke	33 Executive Office Building	66 BCBS of Rochester Area	83 Courtroom
10 120 East Avenue	35 Civic Center	67 Innon Broadway	81 Monroe-Alexander Bldg
11 Wilder 4 Corners	39 Federal Building	68 South Avenue Garage	82 Tower 200 at Midtown
14 Frontier Telephone	48 Monroe County Office Building	69 12 East Main Street	83 Midtown Garage
15 Kovalsky-Cler	53 Hyatt Regency Rochester	70 Randal Library	84 85 Elm Street
16 35 State Street	57 Talmay Building	71 Searle Building	85 53 Chestnut
17 City Hall	58 Specialty Cleaners	73 Public Safety Building	85 Alliance Building

**Legend**

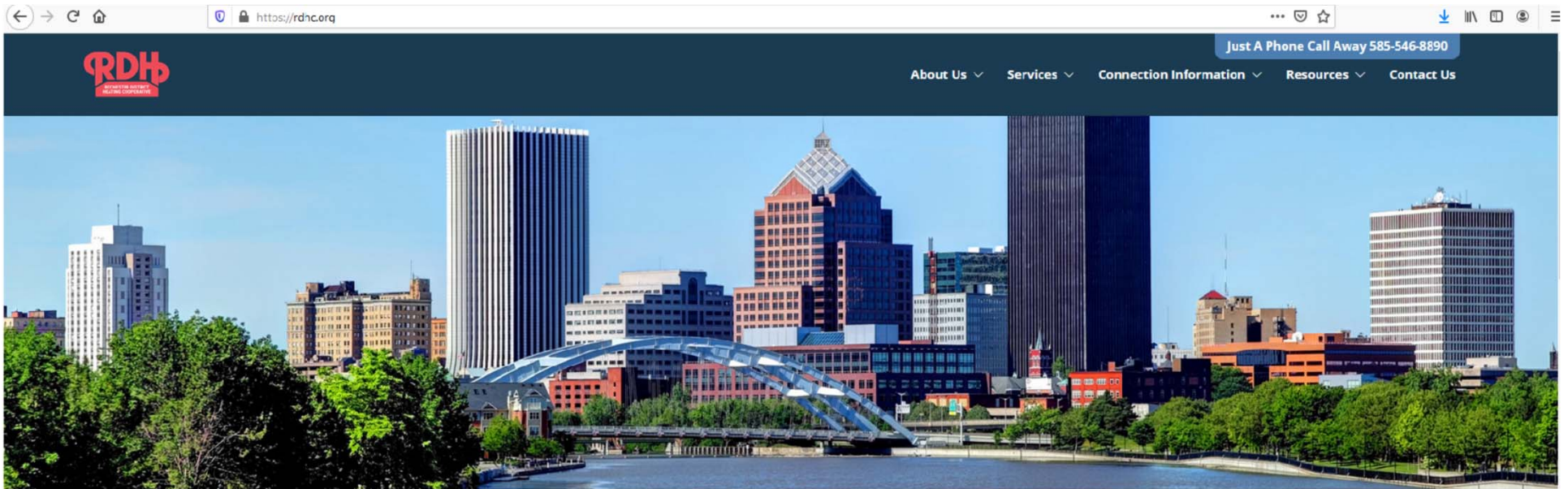
- RDHC Franchise Boundary
- RDHC Member
- RDHC Member\*

\*In yellow & purple buildings are not necessarily within membership as of the date of this map.

Clark Patterson Lee  
Map Date: 08/2017

DISTRIBUTION MAP

# RDHC.Org



## Transforming Energy in Downtown Rochester |

### Leading the way to an affordable and energy-efficient future.

Rochester District Heating Cooperative - or RDH - is the only customer-owned, nonprofit thermal energy cooperative in New York State, and provides reliable, cost-effective thermal energy to dozens of buildings in downtown Rochester, NY totaling more than 8.5 million square feet.

District energy systems employ technologies and equipment that are substantially more efficient than installing conventional boilers and heating plants within a building.

Our mission is to guide this unique community asset through the 21<sup>st</sup> century by upgrading the current infrastructure, investing in new technologies, and growing customer connections.

Please take a look around the site and then contact us. We can't wait to show you how choosing district thermal energy will lower your heating costs!



# Other Systems

- Several other district heating systems have been built to serve institutional and industrial campuses in the Rochester area.

# 1891 Kodak Park Power Plant

- Designed to provide heating, cooling, and power to Kodak Park.
- Another system was built in 1967 to serve Kodak's Elmgrove facility, now Rochester Technology Park.

# 1966 Aerial of Kodak Park



# 1904 UR Heating Plant

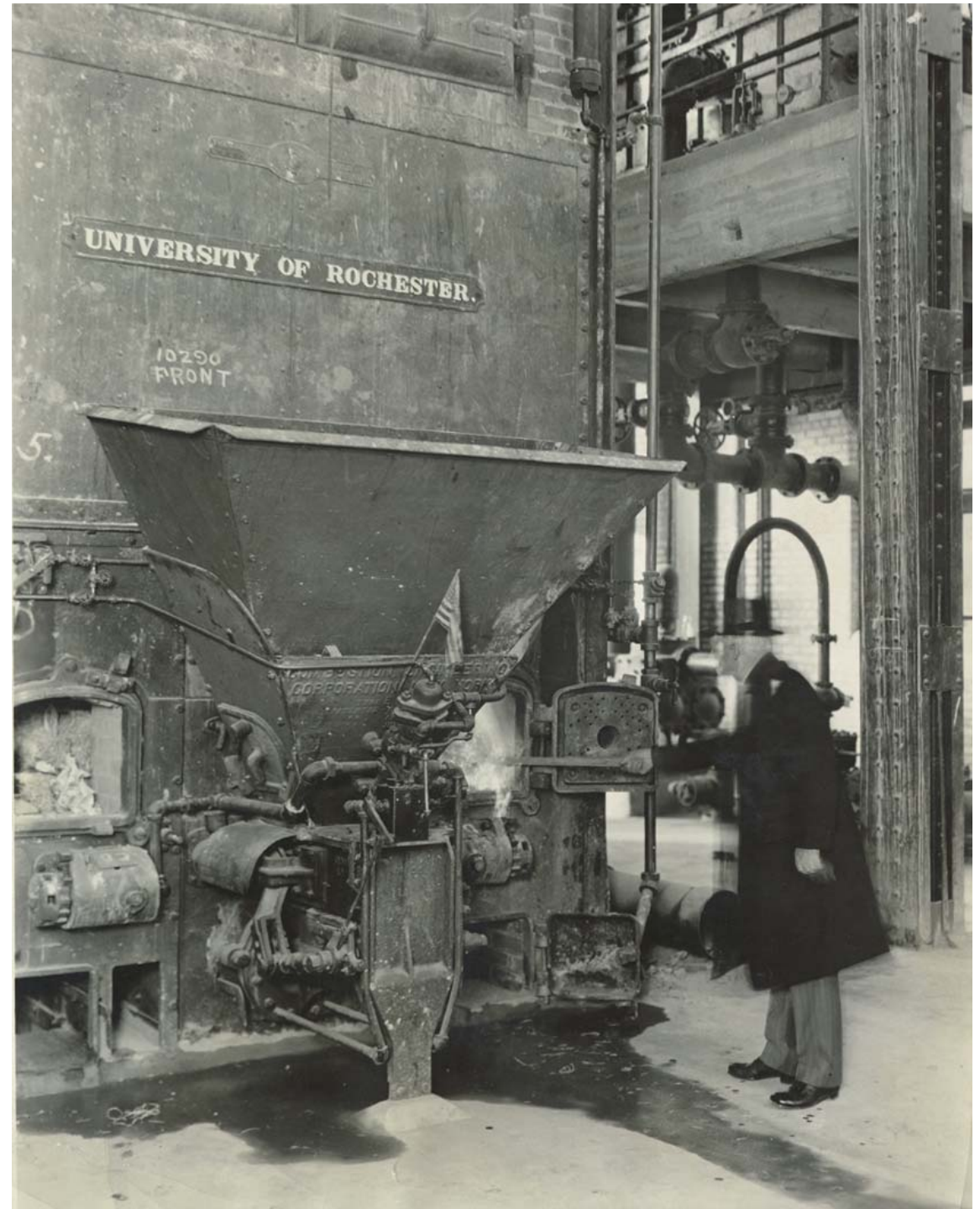
- A new heating plant was built to replace individual building boilers on the Prince Street Campus
- This plant was in use until 1955, when the College for Woman moved from Prince Street to River Campus.
- The Memorial Art Gallery and several dormitories remained in use on the campus and were connected to the Lawn Street steam system.



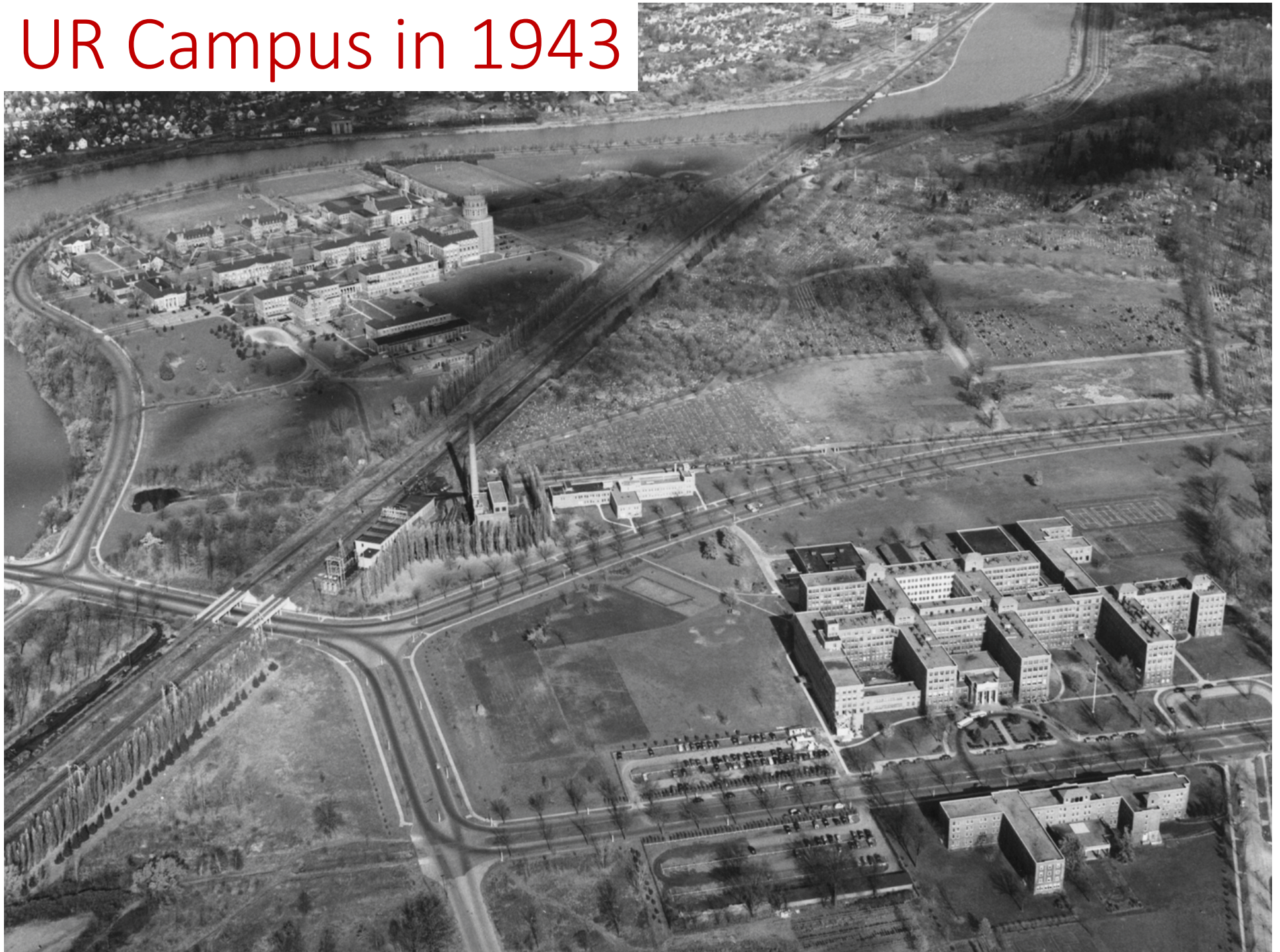


# 1924 New UR Heating Plant

- University of Rochester President Rush Rhees lighting the first boiler on November 10, 1924.
- This plant served the new UR Medical Center and River Campus.



# UR Campus in 1943



# 1930 Iola Campus Powerhouse

- Monroe County built a Community Home and Infirmary on East Henrietta Road in the early 1930s, which is now known as the Monroe Community Hospital.
- A new power plant was built on the east side of East Henrietta to serve the new hospital.
- This was later expanded to serve the new Monroe Community College and a new county jail south of the Erie Canal.
- The powerhouse was taken out of service in 2003 and replaced with two new cogeneration plants, one for the hospital and a second for the community college and jail.
- The plant itself is now part of the City Gate development.

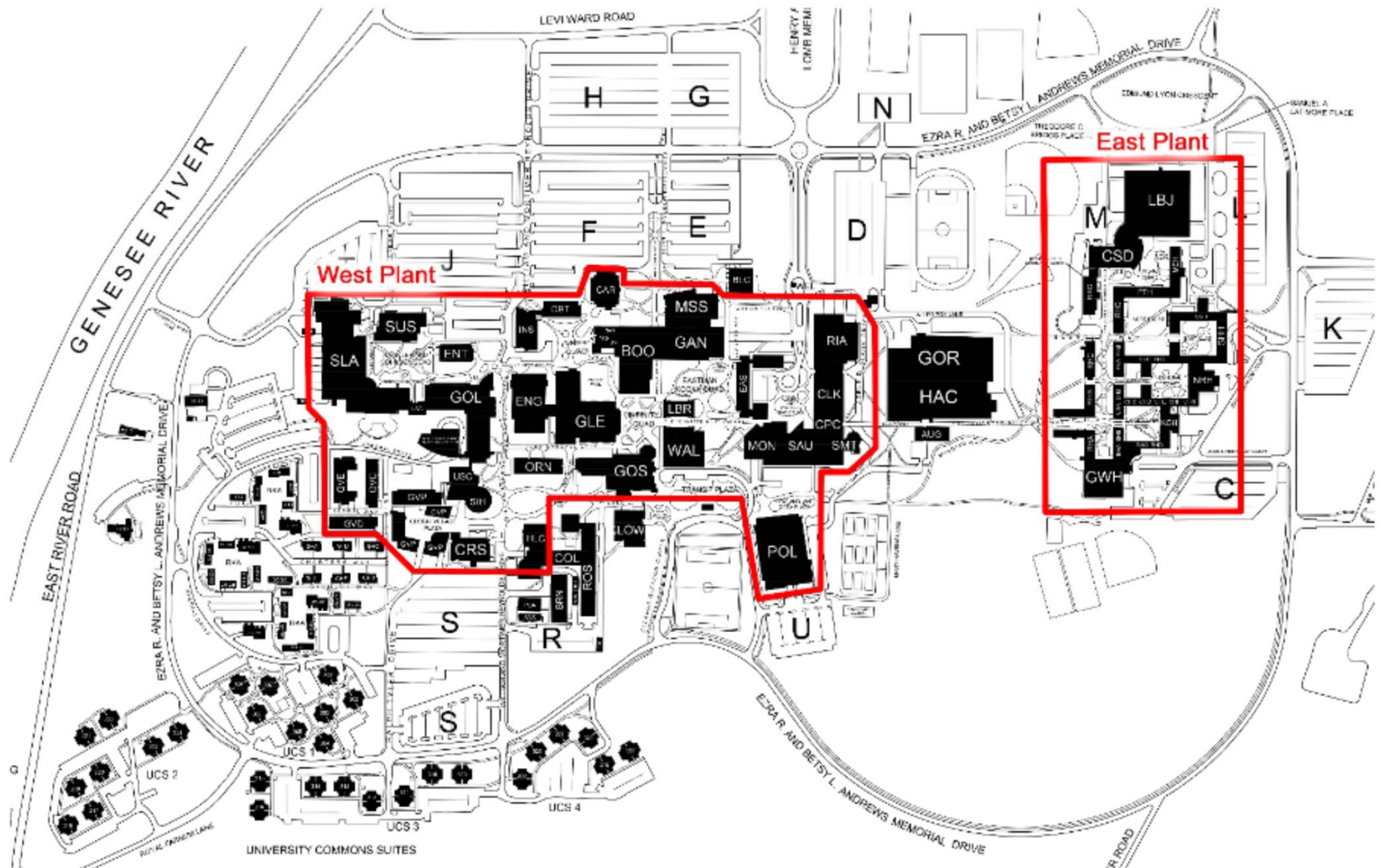
# 1930 Iola Campus Powerhouse



# 1968 RIT Heating Plant

- The Rochester Institute of Technology moved to a new campus in Henrietta in 1968.
- A high temperature hot water plant distribute 350°F water to the campus buildings.
- This plant was replaced in 2010 with two new hot water plants producing 240°F water.

## Appendix 1 – East and West Plant Loops



# Thanks!

- To Brandon Fess with the Local History and & Genealogy Division
- And to Sara Dougherty with the Maplewood Public Library

# History of Rochester District Steam System

[www.waterworkshistory.us/NY/Rochester/steam.htm](http://www.waterworkshistory.us/NY/Rochester/steam.htm)

A copy of this presentation will be added.

# History of District Heating

[www.waterworkshistory.us/DH/](http://www.waterworkshistory.us/DH/)

Feel free to contact me:

[m.pierce@rochester.edu](mailto:m.pierce@rochester.edu)