

ADDRESS: 1615-31 N DELAWARE AVE

Name of Resource: Bradlee & Co. Empire Chain Works

Proposed Action: Designation

Property Owner: LMM Associates

Nominator: Keeping Society of Philadelphia

Staff Contact: Laura DiPasquale, laura.dipasquale@phila.gov

OVERVIEW: This nomination proposes to designate the property at 1615-31 N. Delaware Avenue as historic and list it on the Philadelphia Register of Historic Places. The nomination contends that the remaining portion of the Bradlee & Co.'s Empire Chain Works, constructed between 1905 and 1910, is significant under Criteria for Designation C and J. Under Criterion J, the nomination argues that the property is a "rare surviving industrial building at the Delaware River waterfront...that was associated with the maritime railroad and shipbuilding industries." Under Criterion C, the nomination contends that the one-story shed building is representative of low-slung masonry industrial buildings of pilaster construction that were once commonplace throughout the River Wards and the larger region.

STAFF RECOMMENDATION: The staff recommends that the nomination fails to demonstrate that the property at 1615-31 N. Delaware Avenue satisfies any Criteria for Designation.



**REPORT OF THE COMMITTEE ON HISTORIC DESIGNATION
PHILADELPHIA HISTORICAL COMMISSION**

**17 JUNE 2020, 9:30 A.M.
REMOTE MEETING ON WEBEX
EMILY COOPERMAN, CHAIR**

CALL TO ORDER

START TIME IN WEBEX RECORDING: 00:00:00

The Chair called the meeting to order at 9:34 a.m. The following Committee members joined her:

Committee Member	Present	Absent	Comment
Emily Cooperman, Ph.D., chair	X		
Suzanna Barucco	X		
Jeff Cohen, Ph.D.	X		
Bruce Lavery	X		
Elizabeth Milroy, Ph.D.	X		
Douglas Mooney	X		

* Owing to public health concerns surrounding the COVID-19 virus, all Committee members, staff, and public attendees participated in the meeting remotely via Cisco Webex video and audio conferencing software.

The following staff members were present:

- Jonathan Farnham, Executive Director
- Kim Chantry, Historic Preservation Planner II
- Laura DiPasquale, Historic Preservation Planner II
- Shannon Garrison, Historic Preservation Planner I
- Meredith Keller, Historic Preservation Planner II
- Allyson Mehley, Historic Preservation Planner II
- Leonard Reuter, Esq., Law Department
- Megan Schmitt, Historic Preservation Planner II

The following persons attended the online meeting:

- Bob Malin
- Jay Farrell
- Matt Taylor
- Susan Wetherill
- Michael Stepnowski
- Kevin Boyle
- Nancy Pontone
- Steve Spross
- Raquel Guzman
- J.M. Duffin
- Paul Steinke
- Robert Schwarz
- Tim Shaaban

- The one-story shed-roofed portion of the building appears to have been modified in some ways.

The Committee on Historic Designation concluded that:

- The former decorating plant of Gillinder & Sons Franklin Flint Glass Works represents the history of the glass industry in Philadelphia and of manufacturing in the Kensington neighborhood, satisfying Criterion J.

COMMITTEE ON HISTORIC DESIGNATION RECOMMENDATION: The Committee on Historic Designation voted to recommend that the nomination demonstrates that the property at 1700-06 N Howard Street satisfies Criterion for Designation J.

ITEM: 1700-06 N Howard St					
MOTION: Designate,					
MOVED BY: Barucco					
SECONDED BY: Lavery					
VOTE					
Committee Member	Yes	No	Abstain	Recuse	Absent
Emily Cooperman, chair	X				
Suzanna Barucco	X				
Jeff Cohen	X				
Bruce Lavery	X				
Elizabeth Milroy	X				
Douglas Mooney	X				
Total	6				

ADDRESS: 1615-31 N DELAWARE AVE

Name of Resource: Bradlee & Co. Empire Chain Works

Proposed Action: Designation

Property Owner: LMM Associates

Nominator: Keeping Society of Philadelphia

Staff Contact: Laura DiPasquale, laura.dipasquale@phila.gov

OVERVIEW: This nomination proposes to designate the property at 1615-31 N. Delaware Avenue as historic and list it on the Philadelphia Register of Historic Places. The nomination contends that the remaining portion of the Bradlee & Co.'s Empire Chain Works, constructed between 1905 and 1910, is significant under Criteria for Designation C and J. Under Criterion J, the nomination argues that the property is a "rare surviving industrial building at the Delaware River waterfront...that was associated with the maritime railroad and shipbuilding industries." Under Criterion C, the nomination contends that the one-story shed building is representative of low-slung masonry industrial buildings of pilaster construction that were once commonplace throughout the River Wards and the larger region.

STAFF RECOMMENDATION: The staff recommends that the nomination fails to demonstrate that the property at 1615-31 N. Delaware Avenue satisfies any Criteria for Designation.

START TIME IN WEBEX RECORDING: 01:12:35

PRESENTERS:

- Ms. DiPasquale presented the nomination to the Committee on Historic Designation.
- Attorney Ted Rausch and Nick Foreman represented the property owner and opposed the nomination.
- Oscar Beisert represented the nomination.

DISCUSSION:

- Mr. Rausch explained that the street-fronting walls along Delaware and Susquehanna Avenues are the only old portions of the building, while the remainder of the building is of newer construction, including the roof structure, interior floors, the southwest wall which contains bays of garage doors, and the southeast wall which is concrete block. Addressing condition, he noted that the northeast wall fronting Susquehanna Avenue is in particularly poor condition, has significant settling, is out of plumb, and in a few spots is tied back to the new structure.
 - Ms. Cooperman responded that the Committee on Historic Designation does not address condition.
 - Ms. Cooperman asked for the dates of the newer walls.
 - Ms. DiPasquale responded that Figure 18 of the nomination provides a better understanding of the wall that is not visible from the photograph shown in the presentation, but that the building historically was composed of three masonry walls, with the remainder of the building of frame construction. She noted that the building has been truncated.
- In regards to the Criteria cited in the nomination, Mr. Rausch observed that the Empire Chain Works does not appear to have been any more significant than any other industrial operation that operated in the city around the turn of the century.
- Mr. Farnham explained that the staff has recommended against the designation of the property because it feels that there is very little of the historic building remaining. Looking at historic images and renderings of the building, he explained, the historic building had a very different roofline with a clerestory, much of the southeastern portion of the building towards the river has been demolished, and what remains is a fragment of the historic building. The staff's concern is that there is not much left to represent the history that is documented in the nomination. The nomination may tell an interesting story, but the bricks and mortar does not.
- Mr. Beisert opined that the length of the wall along Susquehanna Avenue is striking. He noted that the building was historically used as a chain works, and the long, narrow length of the building in some ways resembles a rope walk, to which the chain works would be somewhat related. He acknowledged that a portion of the building has been demolished and that it was historically open to a yard. However, he opined, so many buildings have been lost along the waterfront, and this is a vestige of that maritime past.
- Ms. Milroy asked whether this building is being nominated as a surviving example of a building type that has largely disappeared. She questioned what changes have been made to the surviving two walls, noting that the photographs from 1955 and present day suggest that the two street-facing walls have not changed much in that time, but that there are no illustrations of what these facades looked like prior to 1950 when the chain works was still in operation.
 - Mr. Beisert responded that he was not able to find any earlier images of the building. He noted that the windows at the corner have been infilled, and that there was a two and a half story building, presumably a house, attached to the eastern wall fronting along Delaware Avenue that was used as an office. The house has been lost.

- Ms. Cooperman noted that the historic atlas images in Figures 17 and 18 provide additional detail on what was happening along the interior of the parcel, which was all open frame structure.
 - Ms. Milroy responded that they do not indicate the appearance of the wall along Susquehanna Avenue.
 - Ms. Cooperman noted that these types of open-frame structures changed all the time. The lower portion of the building, the forging shed, had some solid walls, but was also largely open.
- Mr. Cohen opined that he values the nomination's description of the pilaster wall/pilaster screen wall construction as an early twentieth century feature.
- Mr. Lavery questioned whether there is any indication as to why this type of decoration would have been applied to what was essentially a structural wall of a three-sided brick shed that was used for manufacturing purposes. He noted that there was a railroad track that went into the site historically, which makes sense, but that it does seem that more effort was put into the Susquehanna Avenue façade than might have been called for. He noted that when he first saw the elevation, he thought perhaps there were openings that had been infilled, but that does not appear to have been the case, based on the 1922 Bromley atlas. He noted that he likes the comparison made in the nomination to other one-story structures, and explained that the Athenaeum has a pencil drawing by Matthias Baldwin of his workshop on Hamilton Street from 1834 which was about a two-block long, one-story brick structure that was similar to this building. He opined that this building is an unusual survivor and an unusual case.
 - Mr. Cohen responded that he is not sure how unusual it is for a building to have had brick pilasters such as these, noting that they are not so much Classicism as structural thickening for the wall where the beams for the roof are.
- Mr. Mooney explained that Criterion I would be applicable to this property as well. He noted that it is difficult from historic maps to track the full extent of impacts from prior development there, but it appears that throughout the late nineteenth and early twentieth centuries, there was significant open space or areas occupied by fairly light, frame buildings that have the potential to preserve archaeological resources below. He explained that the area around the mouth of Gunners Run was one of the earliest developed areas of Fishtown, dating back to the 1730s. Directly across Delaware Avenue from this site, AECOM for its I-95 Girard Avenue interchange investigations have documented a series of virtually intact archaeological sites, including eighteenth and nineteenth-century domestic residences and artifacts, as well as a series of Native American archaeological sites. One site that is directly across Delaware Avenue from this property contains an artifact that was carbon dated to 3500 B.C. and sites adjacent could date back to 7000 B.C. The area has extremely high potential for archaeological remains. Any open space preserved in this property could preserve significant archaeological finds.
 - Ms. Cooperman agreed that the area has high archaeological potential.
- Mr. Lavery opined that there are arguments for Criteria I and J, but questioned Criterion C, opining that it is difficult to identify the building as being of a particular architectural style.
- Ms. Milroy asked whether the addition of Criterion I requires that the nomination be amended.

- Ms. Cooperman responded that the Committee has recommended that a property satisfies Criterion I based on the expertise of the Committee in the past.

PUBLIC COMMENT:

- Ms. DiPasquale noted that local historian Ken Milano submitted a letter of support for the nomination.

COMMITTEE ON HISTORIC DESIGNATION FINDINGS & CONCLUSIONS:

The Committee on Historic Designation found that:

- The original Bradlee Empire Chain Works building featured three sides of masonry construction with an open southwestern elevation lined with a series of light frame structures.
- The original building has been significantly altered, and the two street-facing walls along Delaware and Susquehanna Avenues are all that remains of the historic building.
- The building reflects the maritime history of the Fishtown neighborhood of Philadelphia.
- The building is not of a particular architectural style.
- Owing to its open nature and the former light construction on the site, much of the property may have remained relatively undisturbed.
- The property is located around the historic Gunners Run, and extensive archaeological investigations have been done in the immediate vicinity as part of the I-95 project and have yielded significant archaeological finds.

The Committee on Historic Designation concluded that:

- The property has the potential to yield artifacts significant in history or prehistory, satisfying Criterion I.
- The property reflects the history of the community, satisfying Criterion J.

COMMITTEE ON HISTORIC DESIGNATION RECOMMENDATION: The Committee on Historic Designation voted to recommend that 1615-31 N Delaware Avenue satisfies Criteria for Designation I and J.

ITEM: 1615-31 N Delaware Ave MOTION: Designate, I and J MOVED BY: Milroy SECONDED BY: Lavery					
VOTE					
Committee Member	Yes	No	Abstain	Recuse	Absent
Emily Cooperman, chair	X				
Suzanna Barucco	X				
Jeff Cohen	X				
Bruce Lavery	X				
Elizabeth Milroy	X				
Douglas Mooney	X				
Total	6				

NOMINATION OF HISTORIC BUILDING, STRUCTURE, SITE, OR OBJECT
PHILADELPHIA REGISTER OF HISTORIC PLACES
PHILADELPHIA HISTORICAL COMMISSION

SUBMIT ALL ATTACHED MATERIALS ON PAPER AND IN ELECTRONIC FORM (CD, EMAIL, FLASH DRIVE)
ELECTRONIC FILES MUST BE WORD OR WORD COMPATIBLE

1. ADDRESS OF HISTORIC RESOURCE *(must comply with an Office of Property Assessment address)*

Street address: 1615-31 N Delaware Avenue

Postal code: 19125

2. NAME OF HISTORIC RESOURCE

Historic Name: Bradlee & Co.'s Empire Chain Works

Current/Common Name: _____

3. TYPE OF HISTORIC RESOURCE

☒ Building

☐ Structure

☐ Site

☐ Object

4. PROPERTY INFORMATION

Condition: ☐ excellent ☐ good ☒ fair ☐ poor ☐ ruins

Occupancy: ☐ occupied ☐ vacant ☐ under construction ☒ unknown

Current use: Commercial/industrial/storage

5. BOUNDARY DESCRIPTION

Please attach a narrative description and site/plot plan of the resource's boundaries.

6. DESCRIPTION

Please attach a narrative description and photographs of the resource's physical appearance, site, setting, and surroundings.

7. SIGNIFICANCE

Please attach a narrative Statement of Significance citing the Criteria for Designation the resource satisfies.

Period of Significance (from year to year): from c. 1905-10 to 1949

Date(s) of construction and/or alteration: c. 1905-10

Architect, engineer, and/or designer: Unknown

Builder, contractor, and/or artisan: Unknown

Original owner: Bradlee & Co.

Other significant persons: Unknown

CRITERIA FOR DESIGNATION:

The historic resource satisfies the following criteria for designation (check all that apply):

- ☐ (a) Has significant character, interest or value as part of the development, heritage or cultural characteristics of the City, Commonwealth or Nation or is associated with the life of a person significant in the past; or,
- ☐ (b) Is associated with an event of importance to the history of the City, Commonwealth or Nation; or,
- ☒ (c) Reflects the environment in an era characterized by a distinctive architectural style; or,
- ☐ (d) Embodies distinguishing characteristics of an architectural style or engineering specimen; or,
- ☐ (e) Is the work of a designer, architect, landscape architect or designer, or engineer whose work has significantly influenced the historical, architectural, economic, social, or cultural development of the City, Commonwealth or Nation; or,
- ☐ (f) Contains elements of design, detail, materials or craftsmanship which represent a significant innovation; or,
- ☐ (g) Is part of or related to a square, park or other distinctive area which should be preserved according to an historic, cultural or architectural motif; or,
- ☐ (h) Owing to its unique location or singular physical characteristic, represents an established and familiar visual feature of the neighborhood, community or City; or,
- ☐ (i) Has yielded, or may be likely to yield, information important in pre-history or history; or
- ☒ (j) Exemplifies the cultural, political, economic, social or historical heritage of the community.

8. MAJOR BIBLIOGRAPHICAL REFERENCES

Please attach a bibliography.

9. NOMINATOR

Organization Keeping Society of Philadelphia Date 10/2/2019

Name with Title Oscar Beisert, architectural historian Email keeper@keepingphiladelphia.org

Street Address 1315 Walnut Street, Suite 320 Telephone 717-602-5002

City, State, and Postal Code Philadelphia, PA 19107

Nominator ☐ is ☒ is not the property owner.

PHC USE ONLY

Date of Receipt: 10/2/2019

☒ Correct-Complete ☐ Incorrect-Incomplete Date: 5/14/2020

Date of Notice Issuance: 5/15/2020

Property Owner at Time of Notice:

Name: LMM Associates

Address: 1615 N Delaware Ave

City: Philadelphia State: PA Postal Code: 19125

Date(s) Reviewed by the Committee on Historic Designation: _____

Date(s) Reviewed by the Historical Commission: _____

Date of Final Action: _____

☐ Designated ☐ Rejected

12/7/18

NOMINATION

FOR THE

PHILADELPHIA REGISTER OF HISTORIC PLACES



Figure 1. Looking south. Source: Pictometry, Atlas, City of Philadelphia, 2019.

BRADLEE & Co.'s

■

EMPIRE CHAIN WORKS OF PHILADELPHIA

■

BUILT 1905 - 10

■

1615-31 NORTH DELAWARE AVENUE

PHILADELPHIA, PENNSYLVANIA 19125-4318

Nomination to the Philadelphia Register of Historic Places, Fall 2019
Bradlee & Co.'s Empire Chain Works, 1615-31 N. Delaware Avenue, Philadelphia, Pennsylvania

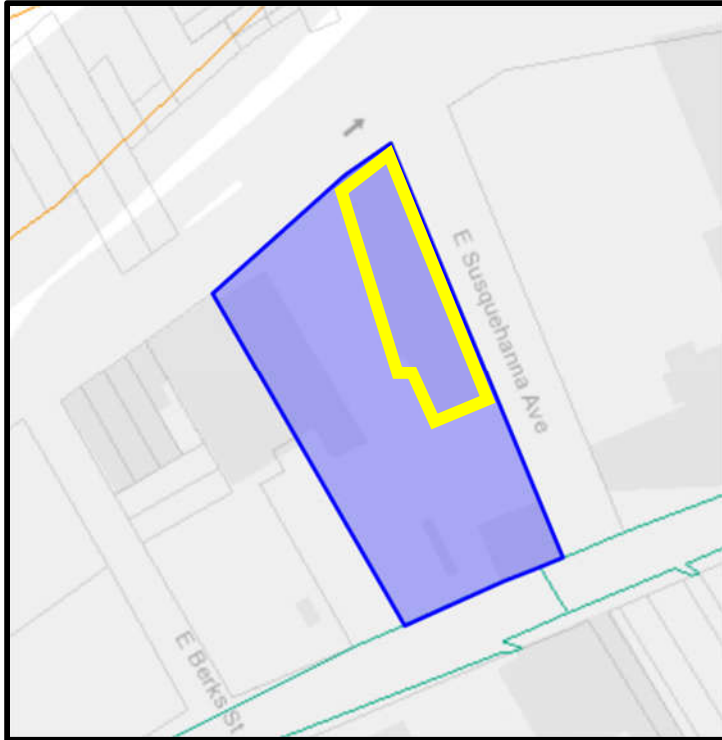


Figure 2. The boundary for the subject property is delineated in blue with the more specific boundary in yellow. Source: Philadelphia Water.

5. BOUNDARY DESCRIPTION

The boundary for the subject designation is as follows:

Beginning at a point on the southeasterly side of Delaware Avenue at the distance of one hundred forty feet, one and seven-eighths inches northeastwardly from the northeasterly side of Berks Street thence extending north fifty-six degrees forty minutes three seconds east along said side of Delaware Avenue four feet eleven and three-eighths inches to a point an angle in the said side of Delaware Avenue, thence extending north fifty degrees eleven minutes three seconds east still by said side of Delaware Avenue one hundred thirty-seven feet nine and one-quarter inches to a point another angle in the said side of Delaware Avenue thence extending north fifty-nine degrees five minutes forty-eight seconds east still by said side of Delaware Avenue thirty-one feet nine inches to a point on the southwesterly side of Susquehanna Avenue thence extending south twenty degrees fifty-one minutes twenty-seven seconds east along the said side of Susquehanna Avenue three hundred thirty-three feet eleven and three-eighths inches to a point on the northwesterly side of Beach Street, thence extending south sixty-nine degrees eight minutes thirty-three seconds west along said side of Beach Street one hundred twenty-six feet one inch to a point, thence extending north twenty-eight degrees fifty-eight minutes twenty-seven seconds west partly through a thirteenth inches party wall and partly through the center line of another thirteen inches party wall two hundred eighty-five feet five and three-eighths inches to the place of beginning.

Being known as 1615-31 N. Delaware Avenue, also known as 1615 N. Christopher Columbus Boulevard. Map Registry No. 017N080157. OPA/BRT Account No. 884587100.



Figure 3. View from North Delaware Avenue at Susquehanna Avenue of the Empire Chain Works. Source: Oscar Beisert, 2019.

6. PHYSICAL DESCRIPTION

Standing at the north corner of Delaware and Susquehanna Avenues, Bradlee & Co.'s Empire Chain Works at 1615-31 N. Delaware Avenue in the Fishtown neighborhood of the City of Philadelphia is a surviving industrial remnant of the largely lost Delaware River waterfront (Figure 1). Adjacent to the south and southwest are open yards that once served the subject building and its chain-making operations, as well another non-contributing building on the same property. Beyond to the southwest is an early house, built by Fishtown's Baker family, and another small garage building. The subject property is otherwise neighbored primarily by vacant lots and miscellaneous commercial buildings.

Originally extending to Beach Street, the subject building is a long (roughly 187 feet) and narrow (roughly 47 feet) one-story structure (Figures 1 and 3). It is built mostly of red brick although the non-historic rear wall (the southeast elevation) appears to be of some kind of masonry unit construction. Designed and built as what appears to be "pilaster construction," the primary (northwest) and side (northeast) elevations are the character-defining facades of the subject property (Figures 2-5).¹ The side (southwest) elevation is also comprised of original brick, and its apertures have been partly infilled (Figure 2). The primary (northwest) elevation is a narrow façade of three bays that are delineated by four brick piers, creating recessed brick walls with openings. The recessed bays are created by corbel tables flanked by pilasters. The northernmost bay and the middle bay appear to be of equal size, each of which feature two arched windows per bay that are infilled with non-historic masonry. The third, southwestern most bay is a recessed brick wall. The entire elevation features a cornice composed of four tiers of corbeled brickwork.

Like the primary (northwest) elevation, the side (northeast) elevation defines the building's physical envelope, including a front section and the rear section. Structurally connected to the primary (northwest) elevation, the front section features a low-hipped roof that terminates at the southeast in the form of a gable end. The front block is four bays in depth, delineated by five brick piers with individual corbeled tables that are flanked by pilasters. The two northern most feature recessed brick bays, each of which feature two arched windows per bay that are infilled

¹ Pilaster (or pier) construction is one that employs brick piers between each window bay, providing structural strength and often allowing greater door or window area.

by non-historic stucco. The third and fourth bays are largely comprised of a recessed brick wall that is formed by pilasters and corbeled brick brackets. The entire elevation sits beneath a cornice composed of four tiers of corbel table. The rear section of the building outlines the gable roof, appending the front section. This elevation is comprised of ten bays delineated by eleven brick piers and individual corbel tables that set off ten recessed wall areas, some of which have infilled openings. The entire elevation features a cornice composed of four tiers of corbeled brickwork.



Figure 4. Top left: The primary (northwest) elevation. Figure 5. Top right: Cornice details of the primary (northwest) elevation.



Figure 6. Bottom left: the north corner of the subject property showing the brickwork. Figure 7. Bottom right: The primary (northwest) and the side (southwest) elevations. Source: Oscar Beisert, 2019.



Figure 8. Top: The first two bays of the side (northeast) elevation. Source: Oscar Beisert, 2019.



Figure 9. Bottom: the side (northeast) elevation. Source: Oscar Beisert, 2019.

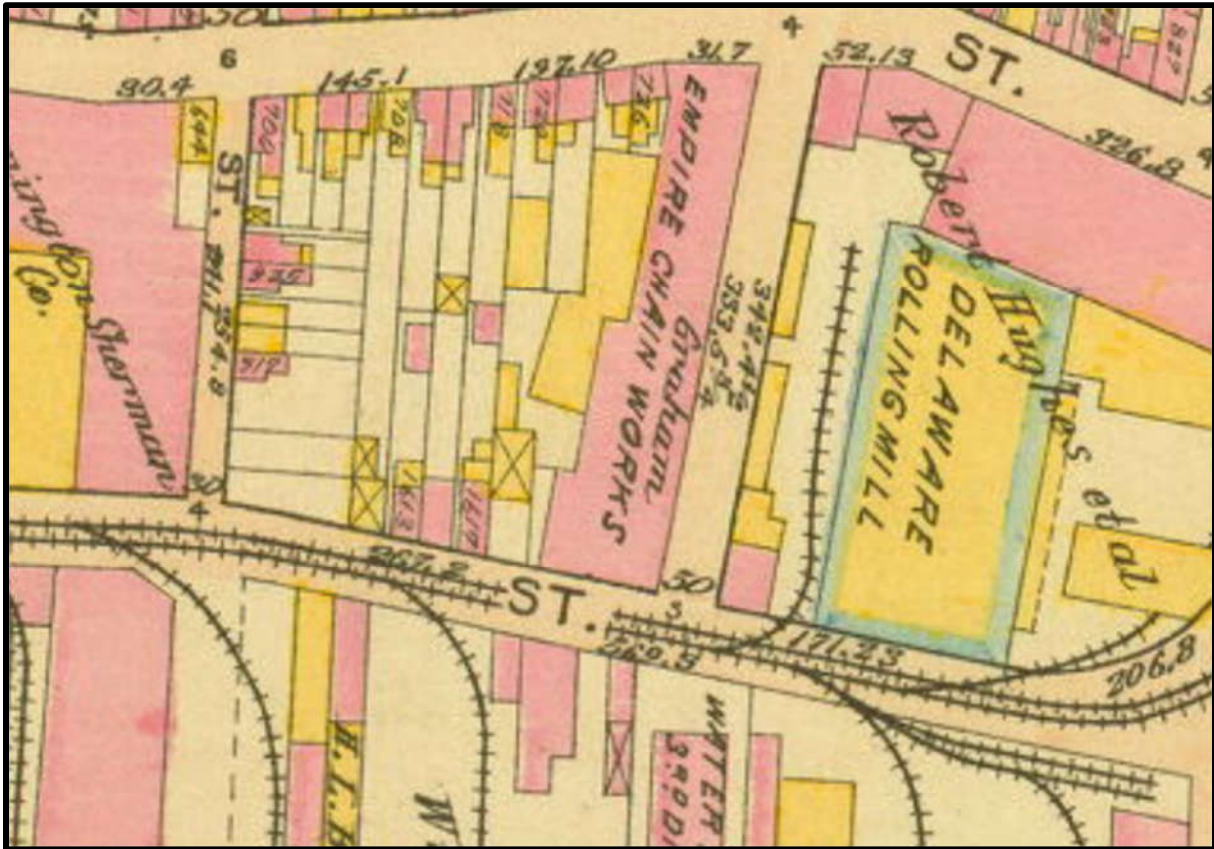


Figure 10. Atlas of the City of Philadelphia, 1895. (Philadelphia: G.W. Bromley and Co.) Source: Greater Philadelphia GeoHistory Network.

7. STATEMENT OF SIGNIFICANCE

The Empire Chain Works is a significant historic resource that merits designation by the Philadelphia Historical Commission and inclusion on the Philadelphia Register of Historic Places. The subject property satisfies the following Criteria for Designation, as enumerated in Section 14-1004 of the Philadelphia Code:

- (c) Reflects the environment in an era characterized by a distinctive architectural style; and
- (j) Exemplifies the cultural, political, economic, social or historical heritage of the community.

The period of significance dates from the time Warehouse A was constructed between 1905 and 1910 through the death of the last proprietor, Arthur Howell Gerhard, in 1949.

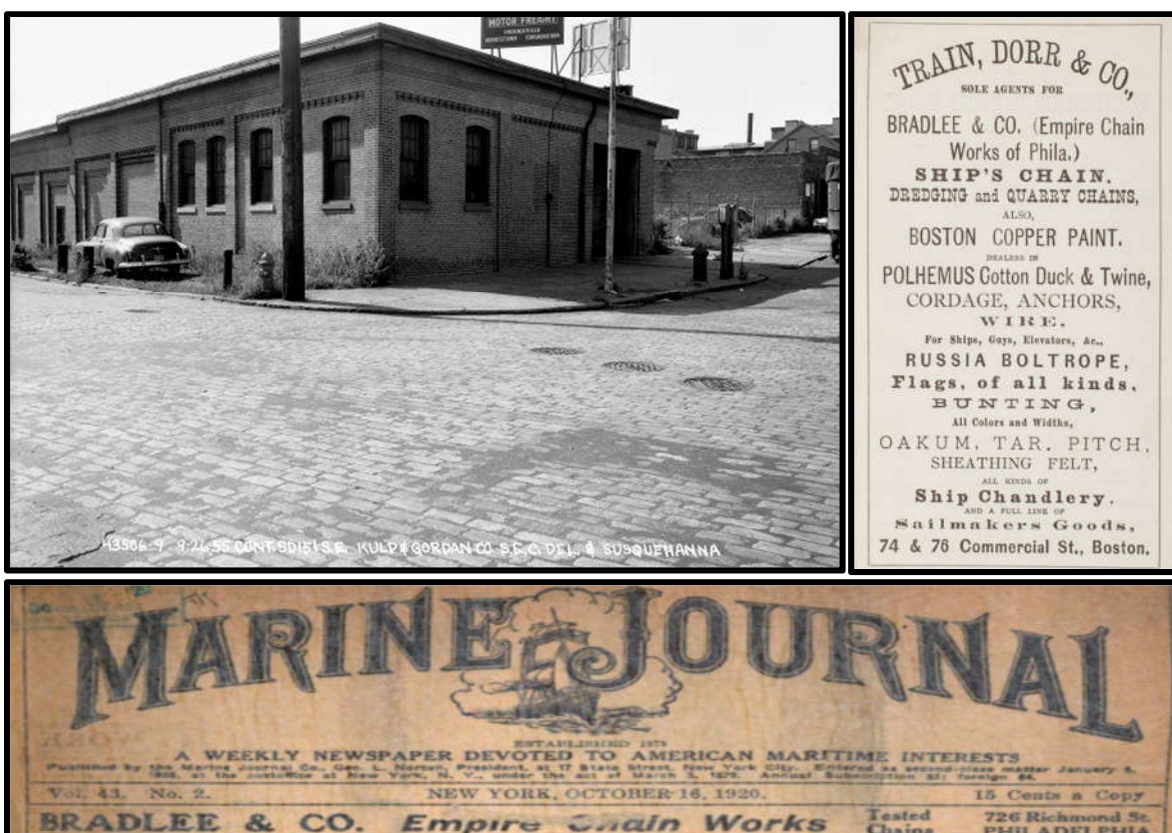


Figure 11. Top left: the subject property at Delaware and Susquehanna Avenues in 1955. Source: Phillyhistory.org. Empire Chain Works at Richmond Street and the Aramingo Canal, in its original location, in 1874. Source: Greater Philadelphia GeoHistory Network. Figure 12. Top right: An 1883 advertisement referencing Bradlee & Co.'s Empire Chain Works of Philadelphia. Source: Historic New England. Figure 13. Bottom: An Advertisement for Bradlee & Co.'s Empire Chain Works, published in the *Marine Journal*, in 1920. Source: *Marine Journal*. (New York: 16 October 1920), 1.

CRITERION J

Founded between 1871 and 1874 and operating as late as 1949, Bradlee & Co.'s Empire Chain Works is significant as a rare surviving industrial building at the Delaware River waterfront that represents a locally, nationally, and internationally recognized firm that manufactured superior products, including "tested chains" and "iron machinery"—specifically iron cable and chain—that was associated with the maritime railroad and shipbuilding industries.² As one ne of the two major chain manufacturers in Philadelphia, the firm was known as the "noteworthy manufactures of iron" chains, rope, and other equipment.³ The subject property was developed as manufactory of the Empire Chain Works between 1886 and 1910, the surviving components of which appear to have been largely built between 1905 and 1910.

² *Lloyd's Register of Shipping*. (London: 1906-07), 240.; and *Jahrbuch der Schiffbautechnischen Gesellschaft*. (Berlin: Zehnter Band, 1909), 162.; The rear portion of the subject property was built in 1886, which may or may not have included a portion of the subject building that survives at 1615-31 N. Delaware Avenue, as referenced in "Kensington Improvements," *Philadelphia Builders' Guide*. (Philadelphia: 15 March 1886), 110. The original portion of the Empire Chain Works was located at the rear of the subject property, as is shown in the 1889 and 1895 Atlases of the City of Philadelphia.

³ *Lloyd's Register of Shipping*. (London: 1906-07), 240.; and *Jahrbuch der Schiffbautechnischen Gesellschaft*. (Berlin: Zehnter Band, 1909), 162.

While the development of metal chain and wire rope as a mass produced material pre-dates the establishment of the company, the foundational period of Bradlee & Co.'s Empire Chain Works is no accident, as it coincides with the late-nineteenth century development of modern metal chain and iron rope forms and types that are still in use today.⁴ Around the turn of the twentieth century, the advent of machinery to test iron made the testing of products like iron chain a critical standard of the industry. Riehle Brothers Testing Machine Company's "Improved Lever Chain Testing Machine" was a product manufactured in Philadelphia "for applying tensile strain, bridge irons, wire or hemp rope, etc. etc." The illustrations of Riehle's machinery show it being used in a long building like the subject property, as Bradlee & Co. were listed as the only company in Philadelphia using their products (see Figure 22).⁵

Unlike its local competitor, the Frankford Chain Works, Bradlee & Co.'s Empire Chain Works was advantageously located in Fishtown near important industrial facilities including the Kensington Ship Yard, the pier of William Cramp & Sons' Ship & Engine Building Co. (located on Beach Street), one of the most important shipbuilders in the United States at the time, and the Neafie & Levy Ship & Engine Building Co.'s Penn Works (located between at Allen and Palmer Streets). The shipbuilding industry was extremely significant to the local economy, as well as the cultural and social lives of the community and chain was a crucial product for that industry. The significance of the Bradlee & Co.'s Empire Chain Works and its manufactory is related to the manufacture and operations of maritime railroads and ships. Employing nearly 200 people by the 1880s, the company had diversified to produce the following types of products including "coil chain; crane, cable, etc.; log, rafting, etc.; sling chains; swivel chains; stud chains; and eye bolts" by the 1890s through 1911.⁶ Given the information presented above, Bradlee & Co.'s Empire Chain Works at 1615-31 N. Delaware Avenue is a significant industrial building that exemplifies the cultural and economic heritage of Fishtown and Philadelphia's maritime community.

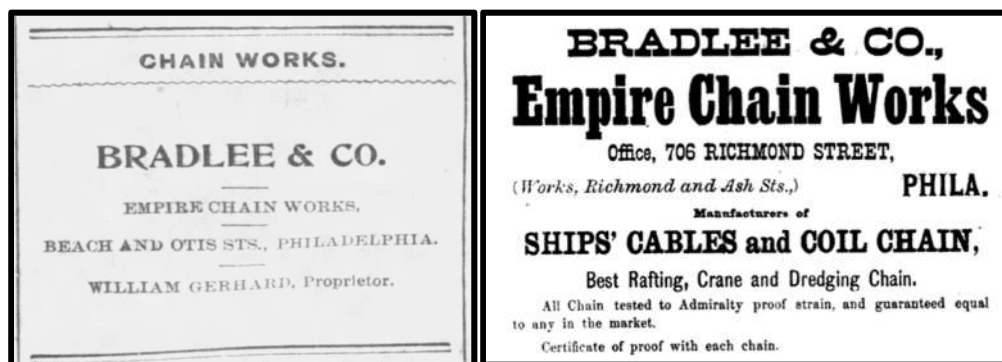


Figure 14. Left: An advertisement for Bradlee & Co.'s Empire Chain Works at Beach and Otis Streets in 1896, by which time it was owned by William Gerhard. Source: "Chain Works," *Lebanon Daily News*. (Lebanon: 29 July 1896), 12. Figure 15. Right: Advertisement for Bradlee & Co.'s Empire Chain Works, published in Poor's Manual of Railroads in 1875. Source: Google Books.

⁴ Sayenga, Donald. "Modern History of Wire Rope," www.atlantic-cable.com. Accessed 20 August 2019.

⁵ *Catalogue No. 3*. (Philadelphia: Riehle Bros. Testing Machine Co., 1897), 40.

⁶ *The Iron Age Manufacture's Index*. (New York: 1897), 14, 27, & 130.; *The Iron Age Manufacture's Index*. (New York: 1911), 37, 81-85, & 403.; and Sterling's Marine Catalog. (New York: Sterling Cooper Corp., 1922), 143-145.

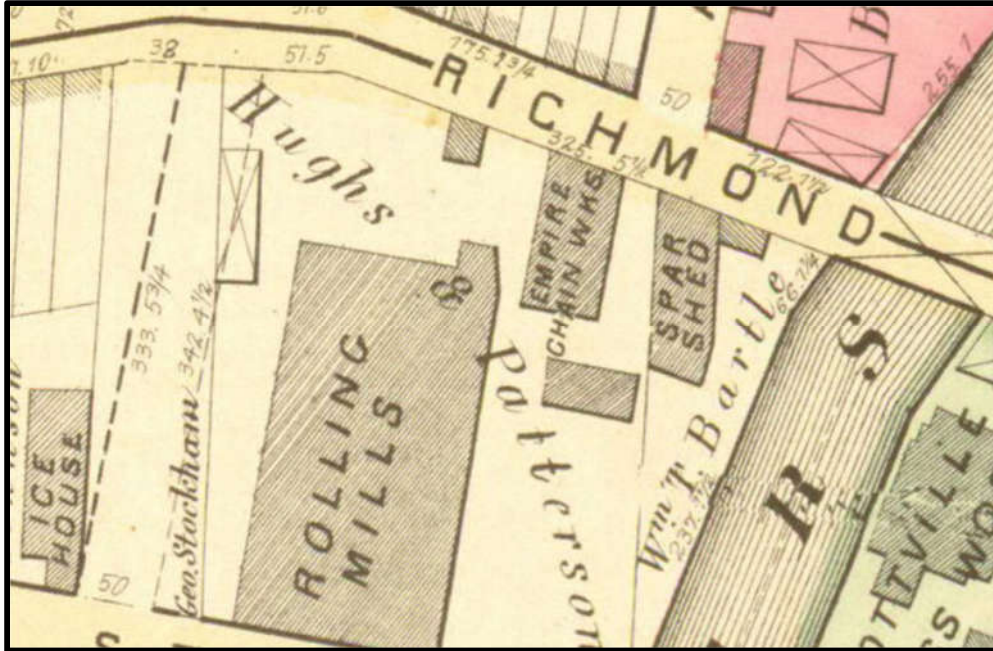


Figure 16. Empire Chain Works at Richmond Street and the Aramingo Canal, in its original location, in 1874.
Source: Greater Philadelphia GeoHistory Network.

HISTORIC CONTEXT: Bradlee & Co.’s Empire Chain Works was founded between 1871 and 1874 by Dudley Hall Bradlee (1848-1912), a graduate of Harvard University’s Class of 1871.⁷ The earliest known manufactory building of the company was located on Richmond Street (now Delaware Avenue) and Gunner’s Run (now Aramingo Avenue) adjacent to Hughes & Paterson, iron manufacturers at Richmond (now Delaware Avenue) and Otis Streets (now Susquehanna).⁸ The company produced “very heavy chains” that were “forged for marine railways and shipbuilders” and employed roughly 200 men by 1884.⁹ In 1886, Hughes & Paterson enlarged their works to the northeast for the construction of a puddle mill, compelling Bradlee & Co. to move to the southwest corner of Beach and Otis Streets (the southern end of the subject property). The new workshop was located at that corner, being 166 feet long by 61 feet wide.¹⁰

By the 1890s, Bradlee & Co.’s Empire Chain Works had been purchased by William Gerhard (1847-1914), who would soon bring his son, Arthur Howell Gerhard (1877-1949), into partnership.¹¹ In 1897, the firm was manufacturing the following chain products: “coil chain; crane, cable, etc.; log, rafting, etc.; sling chains; swivel chains; stud chains; and eye bolts,” which it would continue to produce until 1911.¹² It was around the time that the Gerhards purchased the business that the works was enlarged with the purchase of the property to the north to then-

⁷ *Second Report of the Secretary of Harvard College Class of 1871*. (Boston: Alfred Mudge & Son, June 1874), 7.

⁸ “Kensington Improvements,” *Philadelphia Builders’ Guide*. (Philadelphia: 15 March 1886), 110.

⁹ “Trade Jottings,” *The Philadelphia Inquirer*. (Philadelphia: 16 April 1881), 2.

¹⁰ “Kensington Improvements,” *Philadelphia Builders’ Guide*. (Philadelphia: 15 March 1886), 110.

¹¹ The son of Benjamin and Anna Gerhard, Lieut. William Gerhard (1847-1914) was married to Sally Lyle, a union that produced one son: Arthur Howell Gerhard (1877-1949). Source: Ancestry.com. *U.S., Find A Grave Index, 1600s-Current* [database on-line]. Provo, UT, USA: Ancestry.com Operations, Inc., 2012. The partnership was official by 1905, as referenced in *The Philadelphia Inquirer*, 21 May 1905, 2.

¹² *The Iron Age Manufacture’s Index*. (New York: 1897), 14, 27, & 130.; *The Iron Age Manufacture’s Index*. (New York: 1911), 37, 81-85, & 403.

Richmond Street. The subject building was largely constructed during this period of the company's history, between 1905 and 1910.¹³

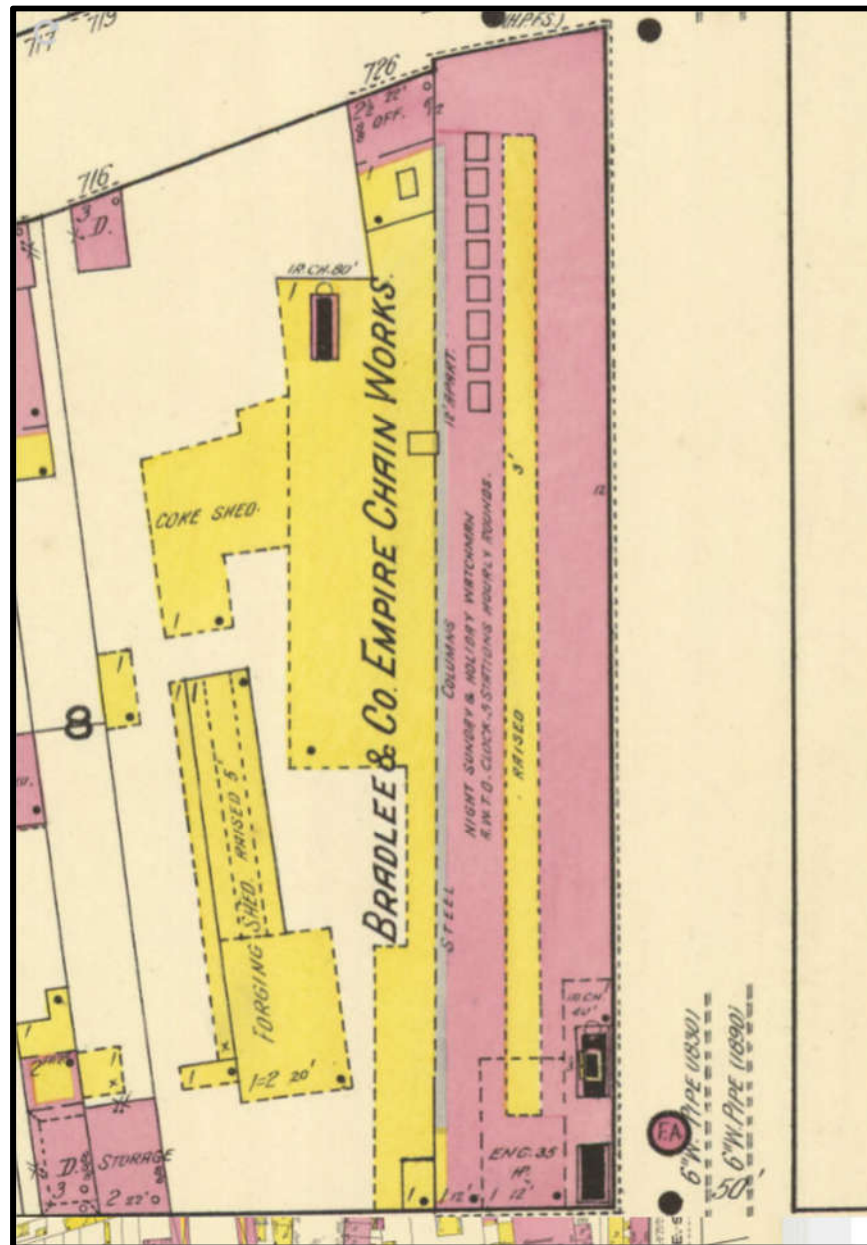


Figure 17. The 1922 Atlas of the City of Philadelphia, published by G.W. & Walter S. Bromley. Source: Greater Philadelphia GeoHistory Network.

Around the time the subject property was built as a modern enlargement to the manufactory, the company was internationally known as a manufacturer of iron chains with similarly placed firms around the world, including the Borsig Co. in Austria-Hungary, Germany, and Russia; the “Establishment of Alfred Maguin” at Charmes pre La Fere; and the firm of John Brown in

¹³ The subject building was not present and/or only partly extant in the 1905 Atlas of the City of Philadelphia but was entirely built by the 1910 Atlas of the City of Philadelphia.

England.¹⁴ In various trade journals and other reference materials, the company was compared to other firms on a national level for being the premier testers of anchors and chains: American Steel Casting Co. (anchors only), Chester, Pennsylvania; Baldt Anchor Co. (anchors only), Chester, Pennsylvania; Bradlee & Co., Philadelphia, Pennsylvania; Cape Ann Anchor Works, Gloucester, Massachusetts; J.B. Carr Co., Troy, New York; Columbus Chain Co., Columbus, Ohio; Frankford Chain Works, Philadelphia, Pennsylvania; Hayden-Corbetz & Co., Columbus, Ohio; Lebanon Chain Works, Lebanon, Pennsylvania; The Logan Iron and Steel Co., Burnham, Pennsylvania; J. McKay & Co.'s Iron City Chain Works, McKees Rocks, near Pittsburg, Pennsylvania; Monongahela Iron and Steel Co., Pittsburg, Pennsylvania; The Seaboard Steel Castings Co., Chester, Pennsylvania (anchors only); Seneca Chain Co., Kent, Ohio; West End Rolling Mills, Lebanon, Pennsylvania; Whitehall, Chain Works, Whitehill, Fieldsboro, New Jersey; and Woodhouse Chain Works, Trenton, New Jersey.¹⁵ The firm was still considered a leader in the chain business, as referenced in a *Handbook* on ship calculations, construction and operation published in 1917. They also advertised in publications like *The Iron Age* and *The Marine Journal* from the early 1900s through the 1920s.¹⁶

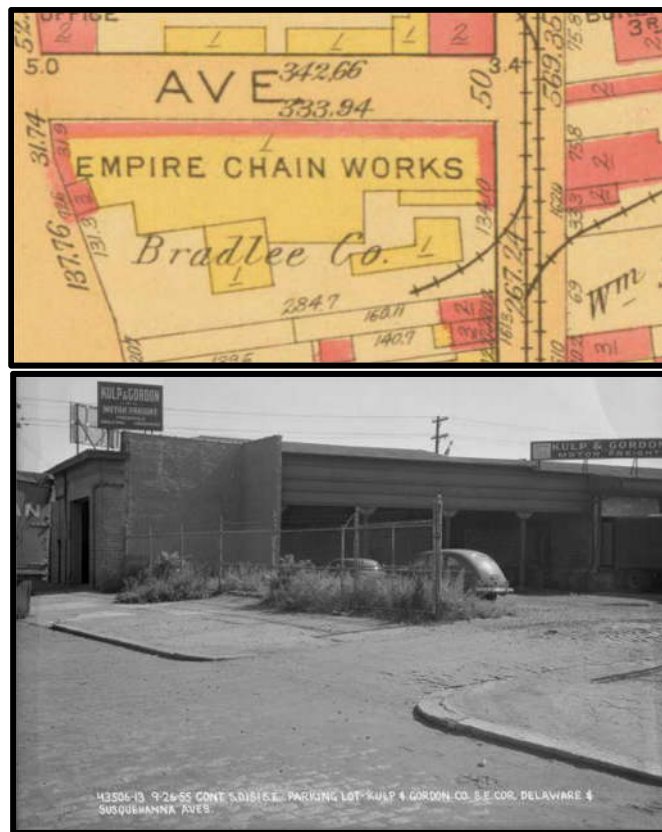


Figure 18. Left: The 1922 Atlas of the City of Philadelphia, published by G.W. & Walter S. Bromley. Source: Greater Philadelphia GeoHistory Network. Figure 19. Right: The southwest elevation and yard of the former Empire Chain Works in 1955.

¹⁴ *Jahrbuch der Schiffbautechnischen Gesellschaft*. (Berlin: Zehnter Band, 1909), 162.

¹⁵ *Lloyd's Register of Shipping*. (London: 1906-07), 240.

¹⁶ Hughes, Charles Haynes. *Handbook of Ship Calculations, Construction and Operation; A Book of Reference for Shipowners, Ship Officers, Ship and Engine Draughtsmen, Marine Engineers, and Others Engaged in the Building and Operating of Ships*. (New York: D. Appleton, 1917), 655-56.

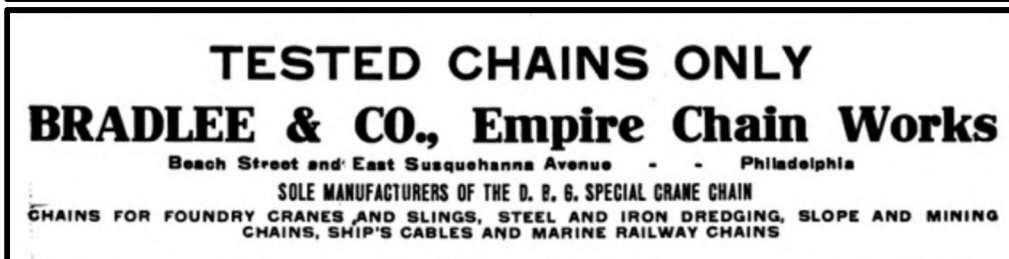
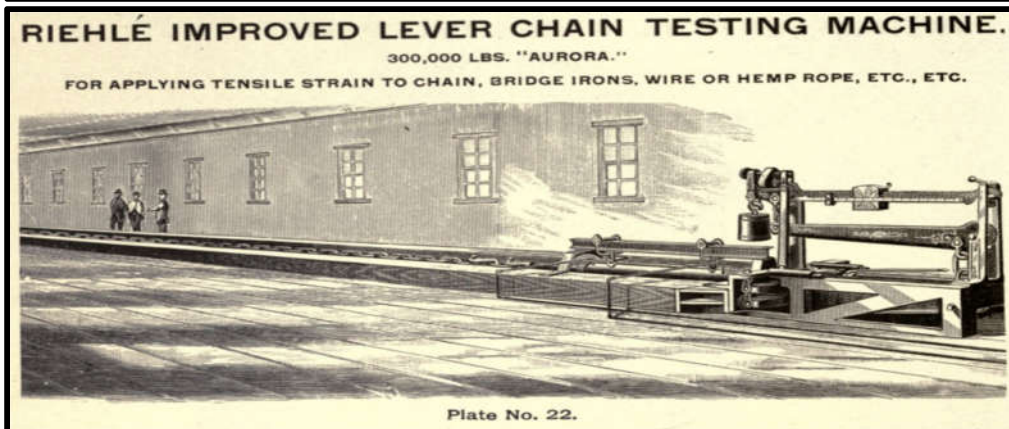


Figure 20. Top: Advertisement for “Riehle Improved Lever Chain Testing Machine,” “for applying tensile strain, bridge irons, wire or hemp rope, etc. etc.,” as published in *Riehle Bros. Testing Machine Co.’s Catalogue No. 3*, in 1897. Source: *Catalogue No. 3*. (Philadelphia: Riehle Bros. Testing Machine Co., 1897), 40. Figure 21. Center: Advertisement for Bradlee & Co.’s Empire Chain Works, then the “sole manufacturers of the D.B.G. Special Crane Chain,” etc. in 1909. Source: *The Iron Age*, December 1909, 92. Figure 22. Bottom: Advertisement for Bradlee & Co., then at 726 Richmond Street, producers of “Ships’ Cables – Marine Railway Chains – Steering and Sling Chains.” Source: *The Marine Journal*, 8 July 1922, 27.

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The former Bradlee & Co.’s Empire Chain Works building is an historic manufacturing shed building that represents an architectural style and type that once characterized the industrial built environment of Philadelphia. Specifically, low-slung industrial buildings of masonry construction, designed for specific manufacturing purposes, were once commonplace in Fishtown and throughout the River Wards, Philadelphia, and the larger region, despite being a

vanishing building type in the twenty-first century. As the increased specificity of machinery expanded in every field of industry, industrial facilities continued to be purpose-built and/or retrofitted to house machinery. In turn, industrial design and building construction evolved greatly in the nineteenth century to accommodate mechanization. In the mid-to-late nineteenth century, new manufacturing facilities of all sizes, including small shed buildings similar to the subject property, adopted a design and construction method referred to as “pilaster or pier construction [pilaster construction].”¹⁷ The pilaster construction method called for the employment of brick piers between each bay that contained an opening, which provided structural strength and greater door or window area. The pilasters created facades of recessed bays that required corbeled cornices within each bay. The unification of these characteristics created rhythmic, undulating masonry facades that culminated in a distinctive industrial or utilitarian aesthetic in buildings and structures that would otherwise be entirely mundane.

Like many other one-story industrial buildings of the period, the northwest and northeast elevations of the subject property feature facades that are distinctively articulated by the employment of brick pilasters and corbeled cornices which delineate numerous bays that once accommodated specific openings. The brick pilasters, and corbeled cornices were employed in the subject building as part of a larger trend of industrial architecture that came with the advent of heavy machinery and overall mechanization. The pilaster construction method ultimately enhanced “the visual impact of expanses of factory walls,” being heightened by the use of distinctive brickwork. The extension of Bradlee & Co.’s Empire Chain Works, and the creation of this building between 1905 and 1910 came at a time when “testing chain” had become a standard of the industry, requiring shops and production sheds to be linear to accommodate specific machinery, such as “Riehle’s Improved Lever Chain Testing Machine” (Figure 17).¹⁸ The subject building and many others like it were part of an architectural style and type in a period wherein architects, builders, engineers, and/or factory owners employed brickwork to obtain structural requirements, “the intrinsic characteristics” of which created a utilitarian aesthetic for industrial buildings.¹⁹

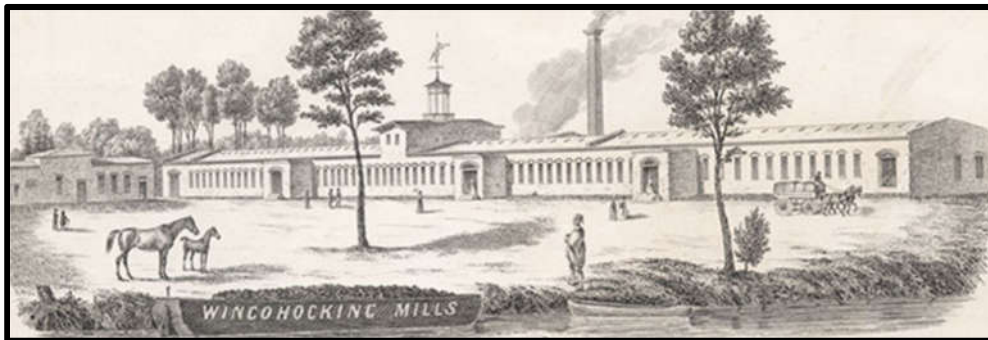
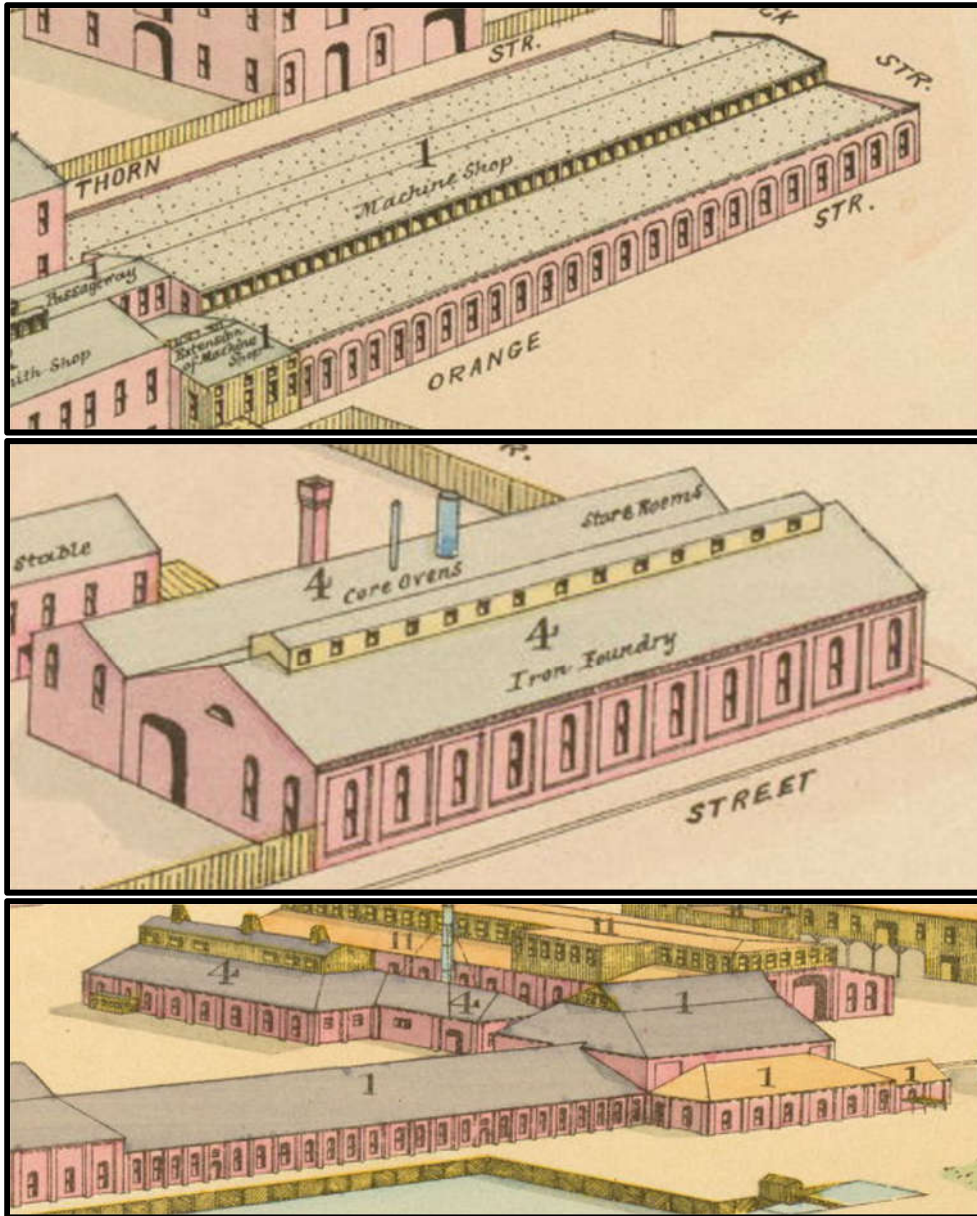


Figure 23 (above) and Figure 24. Composed largely of low, one-story production sheds, Garsed’s Wingohocking Mills at Frankford are early examples of the one-story building in the industrial landscape. Source: Castner Scrapbooks, V. 26., Free Library of Philadelphia.

¹⁷ Gordon, Robert B. and Malone, Patrick M. *The Texture of Industry: An Archaeological View of the Industrialization of North America*. (Oxford University Press, 1997), 32.

¹⁸ *Riehle Bros. Testing Machine Co.’s Catalogue No. 3*. in 1897. Source: *Catalogue No. 3*. (Philadelphia: Riehle Bros. Testing Machine Co., 1897), 40.

¹⁹ Bradley, Betsy Hunter. *The Works: The Industrial Architecture of the United States*. (New York: Oxford University Press, 1999), 232-234.



Production sheds and machine shops built using the pilaster construction method. Top: Illustrated in 1877, the Machine Shop of J. Morton Poole & Co., Machine Works, at Dock Street between Thorn and Orange in Wilmington, Delaware, showing the use of pilaster construction through the appearance of the side walls of the one-story shed. Source: Plate 1157, Hexamer General Surveys, Volume 13, Free Library of Philadelphia. Middle: Illustrated in 1877, the Iron Foundry of Robert Wetherill's Engine and Machine Works is, like the subject property, a low, one-story building with distinctive bays at the side elevation, created by brick piers and what appear to be corbeled cornices, features of the pilaster construction method. Source: Plate 1126, Hexamer General Surveys, Volume 12, Free Library of Philadelphia. Bottom: Illustrated in 1890, the River Iron Works of John H. Dialogue in Camden, New Jersey featured numerous low buildings built upon similar architectural lines as the subject property. The low-slung components of the buildings labeled one ("1") feature pilasters that place each opening within its own bay. Source: Hexamer General Surveys, Volume 12, Free Library of Philadelphia.

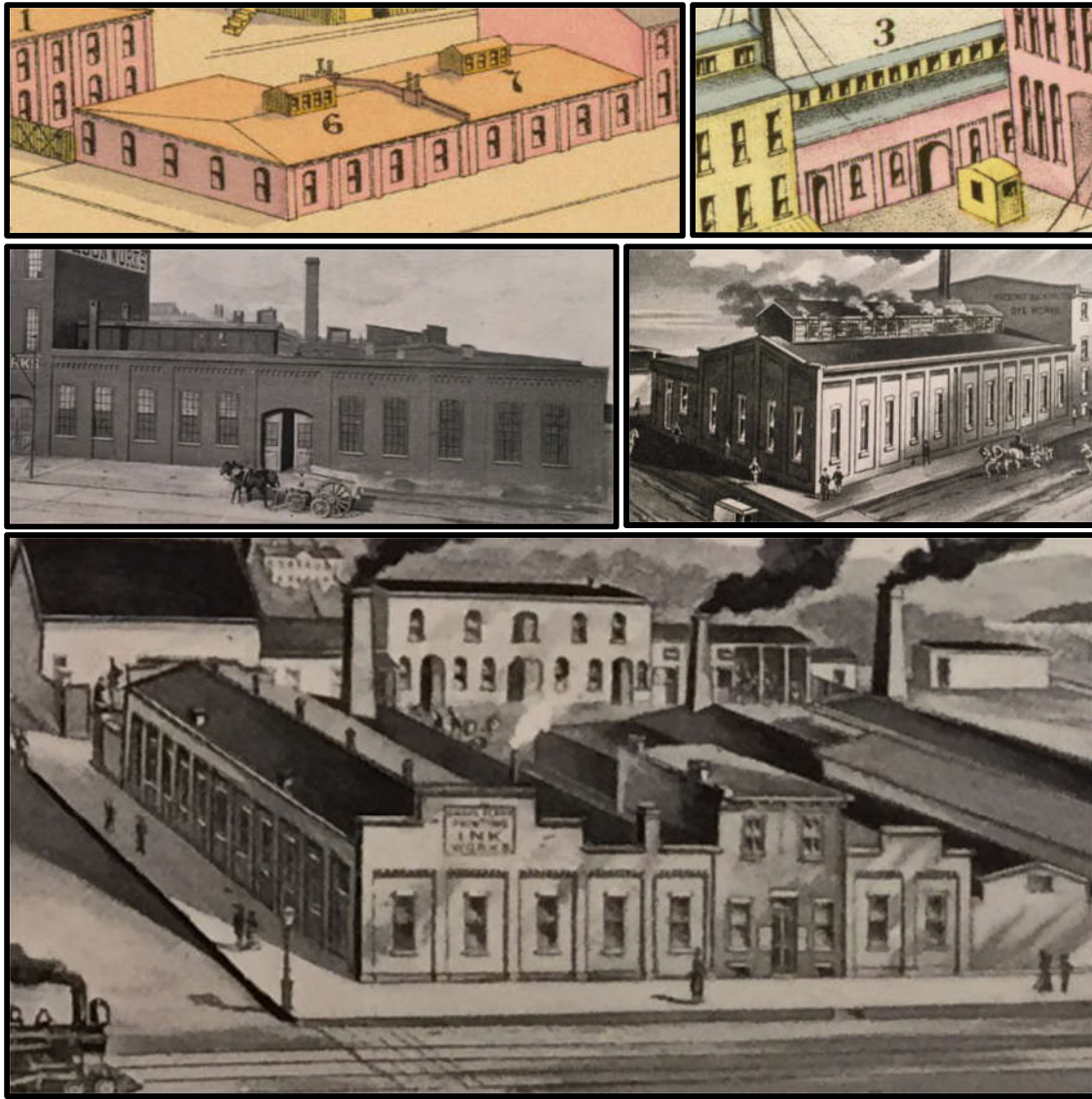


Figure 25. Top left: Illustrated in 1892, this image shows a one-story brick industrial shops/sheds of Hughes and Paterson's at Richmond and Balls Streets in Fishtown. These buildings appear to be of the pilaster construction method like the subject property. Source: Hexamer General Surveys, Greater Philadelphia GeoHistory Network. Top right: Illustrated in 1890, this image shows the one-story component of a machine shop in South Philadelphia. This building component is constructed of what appears to be the pilaster method, no doubt employed to support the machinery. Source: Hexamer General Surveys, Greater Philadelphia GeoHistory Network. Middle left: The one-story component of the Kessler Wagon Works at E. Girard Avenue and Norris Street in Fishtown, being buildings that appear to be constructed of the pilaster construction method. Source: Engelhardt, George Washington, *Philadelphia Pennsylvania, The Book of Its Bourse & Co-operating Bodies*. (Philadelphia: Lippincott Press, 1898-99). Bottom right: Frederick Buckhalter's Dye Works at Front and Clearfield Streets, established in 1883, appearing to be built using the pilaster construction method. Source: Engelhardt, George Washington, *Philadelphia Pennsylvania, The Book of Its Bourse & Co-operating Bodies*. (Philadelphia: Lippincott Press, 1898-99). Bottom: C.E. Robinson & Bro., Gray's Ferry Printing Ink Works, which has at least two buildings constructed of the pilaster method. Source: Engelhardt, George Washington, *Philadelphia Pennsylvania, The Book of Its Bourse & Co-operating Bodies*. (Philadelphia: Lippincott Press, 1898-99).

8. BIBLIOGRAPHY

This nomination was completed by the Keeping Society of Philadelphia with Oscar Beisert, Architectural Historian and Historic Preservationist, as the primary author with assistance from Kelly E. Wiles, Architectural Historian, and J.M. Duffin, Archivist and Historian. The following sites were used to create the nomination: Google Books, Greater Philadelphia GeoHistory Network, Newspapers.com, and Proquest Historical Newspapers.

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