

COMPLEX #11
THE LOBDELL CAR WHEEL, TIRE & MACHINE CO.

Statement of Significance

Significant as an example of the metal processing and rail-related manufacturing establishments that once dominated Wilmington's riverfronts the Lobdell Car Wheel, Tire and Machine Co. foundry building (N-12476.05; see Figure 29, p. 160), erected in 1836, is eligible for inclusion on the National Register of Historic Places under Criterion A, buildings associated with events contributing to broad patterns of history. Currently surrounded by buildings related to the Pusey & Jones Company (see further documentation in this section) on the east side of Lombard Street, one-half block north of the north shore of the Christina River, the foundry participated in the Lobdell Co.'s rise to one of the nation's foremost manufacturers of chilled cast-iron railroad car wheels during the mid-nineteenth century. Located in Wilmington's Waterfront Analysis Area, a corridor dominated by industrial concerns since the construction of the railroad through the Area, the Lobdell foundry documents the resulting rise of industry along the Christina waterfront throughout the nineteenth century.

The Wilmington Waterfront Analysis Area lays within the Urban Geographic Zone (Zone V; see Figure 4, p. 9), an area bounded by the City of Wilmington's corporate limits as defined by the Delaware Comprehensive Historic Preservation Plan. Although situated within the Urban Zone, the Waterfront Analysis Area actually forms part of the Coastal Geographic Zone (Zone IV). The Coastal Zone contains land surrounding major and minor streams flowing into the Delaware River and Bay and once supported a wide array of flora and fauna. The Coastal Zone's marshes and waterways sustained turtles, muskrat, wood ducks, great blue herons, ospreys, turkey vultures and bald eagles in addition to many species of fish. A lush vegetative cover, including arrowarum, spatterdock, water-willow, smartweed, and red and white oak offered a safe haven for wildlife. Some of these plants and animals may survive in eastern and southern Wilmington where less-intensive development has occurred. A range of moderately well-drained and medium-textured loam to tidal wetlands characterize the soils of the Coastal Zone. Most of the city's colonial shoreline has not survived due to extensive landfilling and other development activities. The Waterfront Analysis Area roughly delineates land bordering the Christina and Brandywine Rivers in Wilmington and defines a discrete geographical area established by the City of Wilmington's Office of Planning.⁹⁷

The Lobdell Car Wheel, Tire and Machine Co. foundry relates to the

⁹⁷ Ames, et al., pp. 31-36.

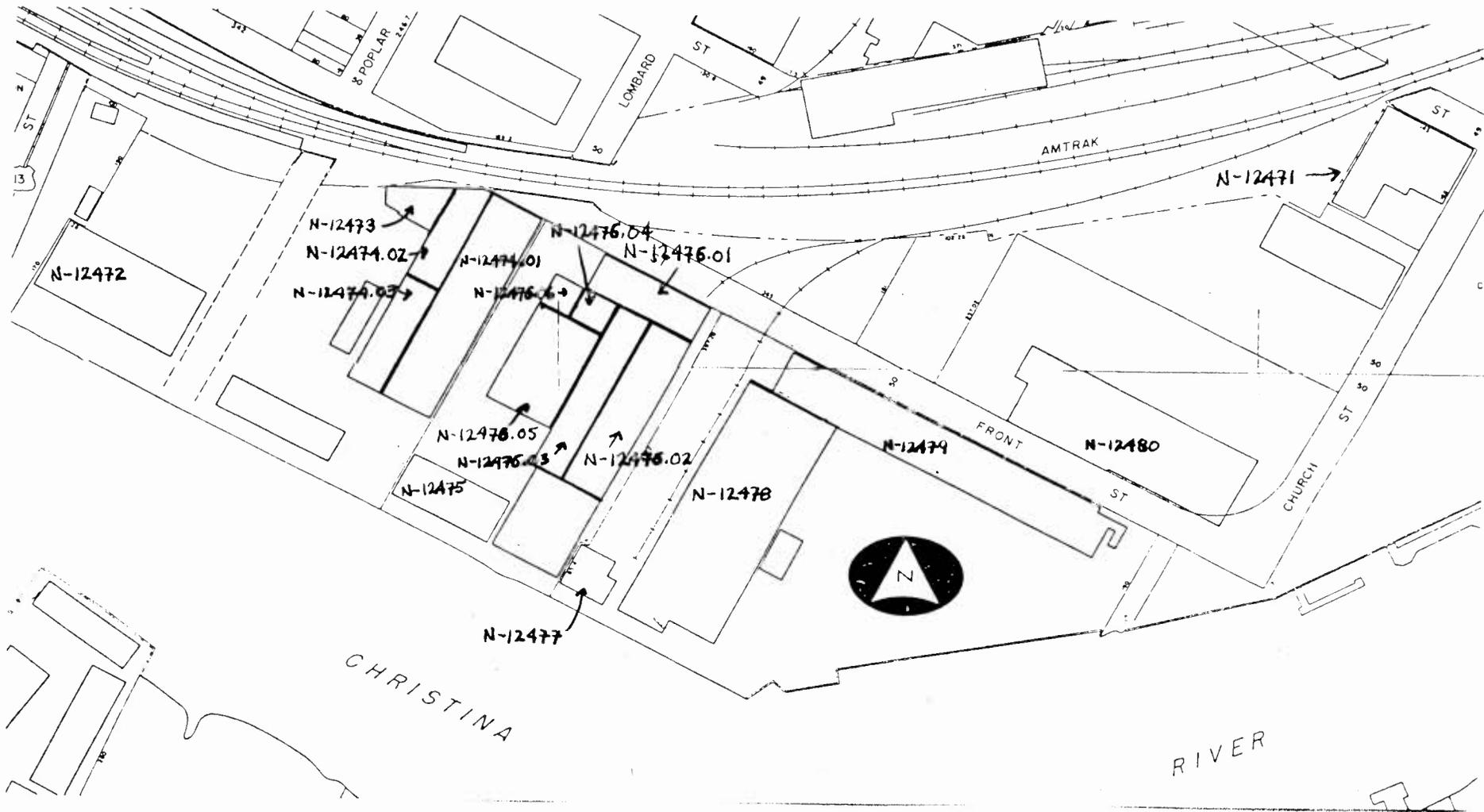


Figure 29: Site Plan of Complex #11
The Lobdell Car Wheel, Tire and Machine Co. and the Pusey & Jones Co.

historic theme 6D in the Delaware Comprehensive Historic Preservation Plan (Manufacturing, 1830-1880 +/-: Industrialization and Early Urbanization). Manufacturing describes enterprises typically housed in plants, factories or mills using power driven machinery and/or handling equipment in the mechanical or chemical transformation of inorganic or organic materials into new products. Characterized by the building of the railroad and the resulting profound changes wrought across Wilmington's Christina riverfront, the period of Industrialization and Early Urbanization (1830-1880 +/-) witnessed the establishment of a wide variety of manufacturing concerns. Along the riverfront these firms came to be dominated by the railroad and its related industries, such as car, wheel and axle manufacture and railroad tool and machine making in addition to shipbuilding. The construction of the Philadelphia, Wilmington and Baltimore Railroad (PW&B) in 1837 spurred industrial growth by providing access to distant raw materials and to western and southern markets while simultaneously supplying a market for local manufactured goods. Situated along the current AMTRAK Northeast Corridor mainline viaduct that forms much of the western boundary of the Waterfront Analysis Area, the PW&B created a prime industrial zone between the Christina River and the railroad tracks.⁹⁸

Even before completion of the PW&B tracks to Philadelphia in 1838, railroad-related industries had begun to settle along Wilmington's riverfront, beginning a trend that would continue throughout the nineteenth century. The predecessor of Harlan & Hollingsworth (see Complex #7) built the first railcar in Wilmington in 1836 at the corner of Front and Tatnall Street. A locomotive and car wheel spring manufactory opened at the intersection of Eighth Street with the PW&B tracks in 1844 operated by Edwin J. Horner. The Diamond State Iron Company started a rolling mill and foundry near the current Fourth Street Bridge producing a variety of railroad-related items including splice bars, track fastenings, and track spikes and bolts, eventually spreading across both sides of the Christina. Jackson & Sharp opened the Delaware Car Works on the south side of the Brandywine in 1863 directly across the tracks from Horner's spring manufactory. Jackson & Sharp eventually became one of the largest manufacturers of railcars in the country and constructed the first narrow gauge railcars in the world for the Denver and Rio Grande Railroad. By 1853, 675 people were employed by Wilmington railcar and rolled-iron and steel manufacturers.⁹⁹

The railroad also had a direct impact on the city's physical development in addition to providing impetus to industrial growth along the riverfront. Repair shops servicing the PW&B's fleet were

⁹⁸ Ibid., pp. 26, 36-37; Seely, pp. 1-19.

⁹⁹ Hoffecker, p. 27.

located along Water Street and east of French Street between the tracks and the Christina as early as 1842. A second repair facility was constructed by the PW&B in 1880. This second complex operated in conjunction with first shop and occupied land stretching from the foot of Pine Street to the area of Fourth and Church streets. These facilities included a large engine house, blacksmith and boiler shops, and car construction shops. The physical separation of the two PW&B facilities helps indicate the density of buildings, primarily industrial enterprises, along the Waterfront Area by that date.

Jonathan Bonney and Charles Bush established the predecessor of the Lobdell Car Wheel, Tire and Machine Company in 1831. Bonney, a ironworker who previously labored at the Mount Savage Iron Works near Frostburg, Maryland, learned to cast iron railroad car wheels at the Baltimore & Ohio Railroad's foundry in 1828. After moving to Wilmington in 1830 Bonney met Bush, a wealthy local merchant, who joined with the newcomer to form the firm Bonney & Bush. The two men located their business at the corner of Second and Lombard Streets and by 1833 employed 15 men producing a custom line of machinery castings and ten car wheels per day. Annual production accounted for \$20,000 worth of iron castings.¹⁰⁰

Orphaned George C. Lobdell joined the firm in 1832 as an ironmaster's apprentice to his uncle Jonathan Bonney. Bonney died six years later and Lobdell, who had shown exceptional aptitude in his new field, took over management of the company. However before his passing Bonney received a patent for a new type of durable car wheel composed of a chilled-iron rim tread with soft flanges and hub suitable for machining. The new firm, Bush & Lobdell, manufactured the new car wheel cheaply and in sufficient quantities to allow them to capture a major portion of the burgeoning car-wheel market. The construction of the Philadelphia, Wilmington & Baltimore Railroad (PW&B) through the car wheel manufacturers' backyard in 1837 surely helped spur sales of the new chilled wheels. Production soon increased to 150 wheels per day. In 1850 Bush & Lobdell employed 68 men and manufactured \$90,000 worth of railroad wheels and various castings and machinery. Bush passed away in 1855 although Lobdell maintained the partnership with Bush's survivors until 1859. By 1860 the firm was the largest manufacturer of car wheels in the nation. The 1860 Census of manufactures describes 200 men casting 10,000 tons of pig iron into 30,000 car wheels worth \$500,000. Another 300 tons of castings and 1,000 tons of chilled iron were produced worth \$62,000.¹⁰¹

¹⁰⁰ Historic American Engineering Record, "Lobdell Car Wheel Company" (DE-15), pp. 2-3. Copy on file at CHAE; Secretary of the Treasury, p. 735.

¹⁰¹ "Lobdell," p. 3; U. S. Census, Manufacturing Schedules, 1850, 1860. Microfilm on file at EMHL.

In 1867 Lobdell incorporated the firm as the Lobdell Car Wheel, Tire and Machine Co. The plant then stretched across an area bounded by Third Street and the Christina between Pine and Lombard Streets. Lobdell added a brass foundry to his business by 1868. An insurance survey of the Lobdell property dated circa 1870 indicates 24 buildings of various sizes spread out on the property sliced by the railroad. The firm became the Lobdell Car Wheel Co. in 1871. By 1880 Lobdell spread across eight acres of land along the Christina riverfront and the PW&B tracks. Large wharves welcomed ships carrying iron and charcoal from Lobdell owned properties in North Carolina where two furnaces on Cripple Creek cast the cold-blast charcoal iron needed for casting chilled car wheels. Four hundred and fifty men manufactured 300 wheels per workday and 94,000 wheels per year. In addition to car wheels Lobdell also manufactured chilled iron rolls for paper and rubber-making machinery, and flour and rolling mills.¹⁰²

Despite Historic American Engineering Record documentation of the Lobdell Company that states the foundry was first erected in 1844, destroyed by fire in 1854 and subsequently rebuilt, other documentary material supports an earlier date of construction. An insurance survey published circa 1870 illustrates a two-story, brick foundry with one interior floor erected in 1836 on the east side of Lombard where the current arch-roofed building now stands (see Figure 30, p. 164). An 1874 survey of the adjacent Pusey & Jones property illustrates the same building and footprint still standing on the Lobdell site and refers to the circa 1870 Lobdell survey for further information (see Figure 31, p. 165). This building appears on an 1874 bird's eye view of Wilmington possessing a round-arched roof similar to the current building (see Figure 32, p. 166). Sixteen round-arch openings appear along the building's east elevation in the bird's eye view matching the number of openings presently infilled and covered by stucco. These relationships should indicate the present building was constructed in 1836.¹⁰³

Nonetheless, some ambiguity concerning the date of construction remains due to a Board of Trade publication depicting Lobdell's physical plant at various dates (see Figure 33, p. 167). The 1853 view (upper right corner) shows a building strikingly similar to the current building. Two earlier views of the plant do not illustrate a round-arched foundry however (center and upper left corner). An 1872 view depicts a round-arch building but four stories high (left center). The current building may reflect the

¹⁰² Richards, pp. 122-23; Hexamer General Surveys, Nos. 457-458 (circa 1870). Microfilm on file at EMHL.

¹⁰³ "Lobdell," p. 4; Hexamer General Surveys, Nos. 821-822 (November 1874). Microfilm on file at EMHL; Bailey & Co., "Wilmington, Del. 1874." On file at HSD.

Machine Company.

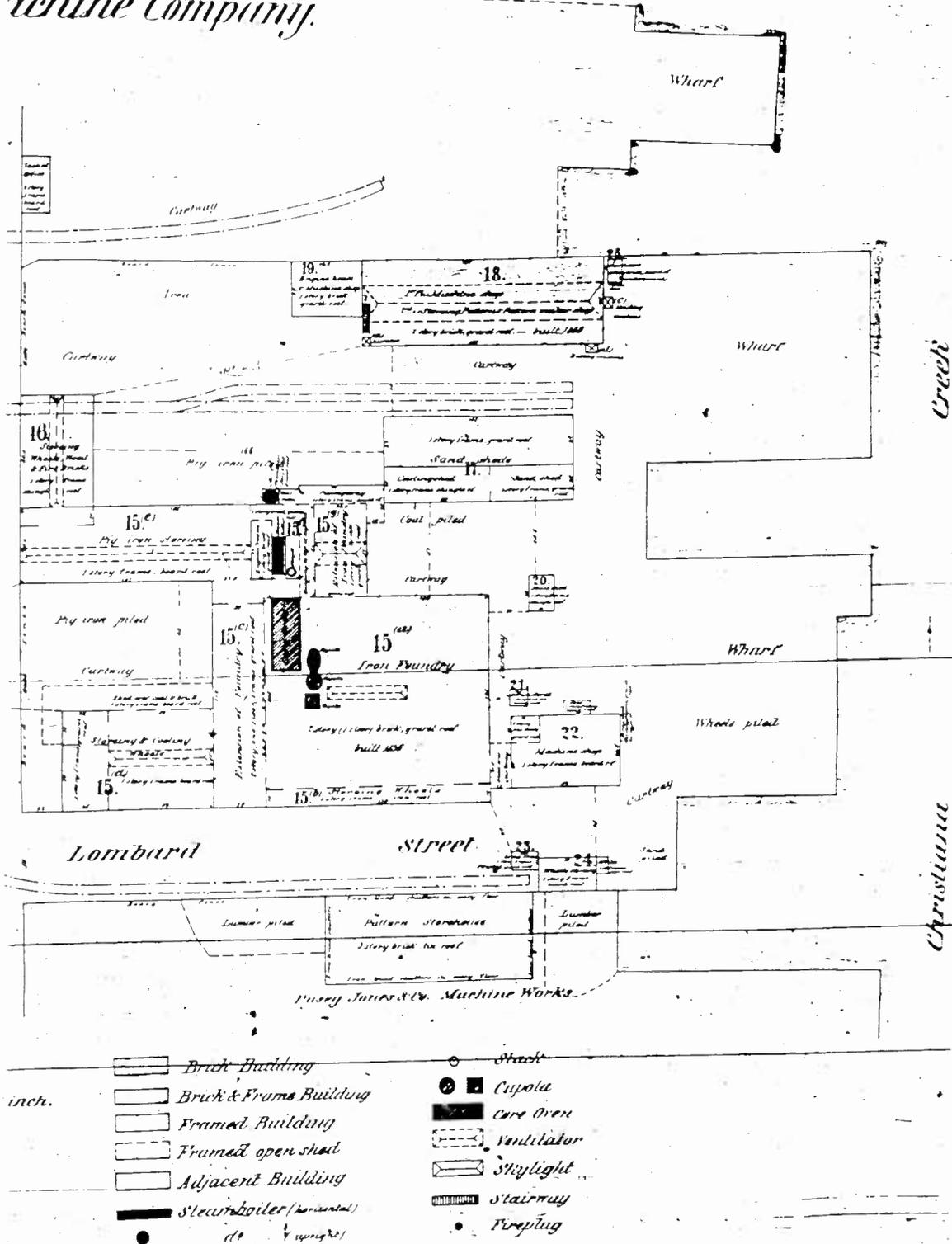
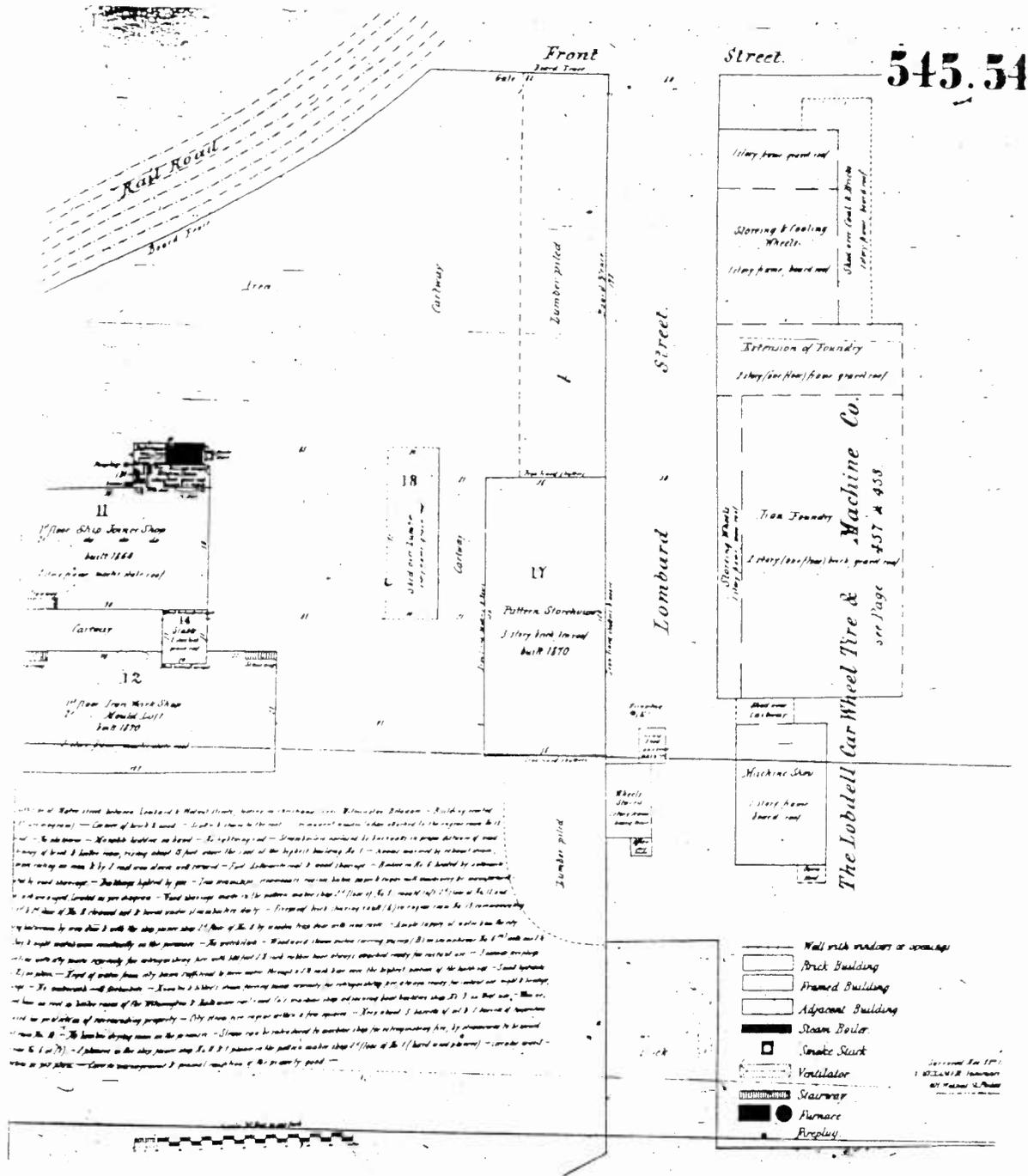


Figure 30: Detail of Lobbell Car Wheel from Hexamer General Survey #458 (Reprinted courtesy of the Eleutherian Mills Historical Library)



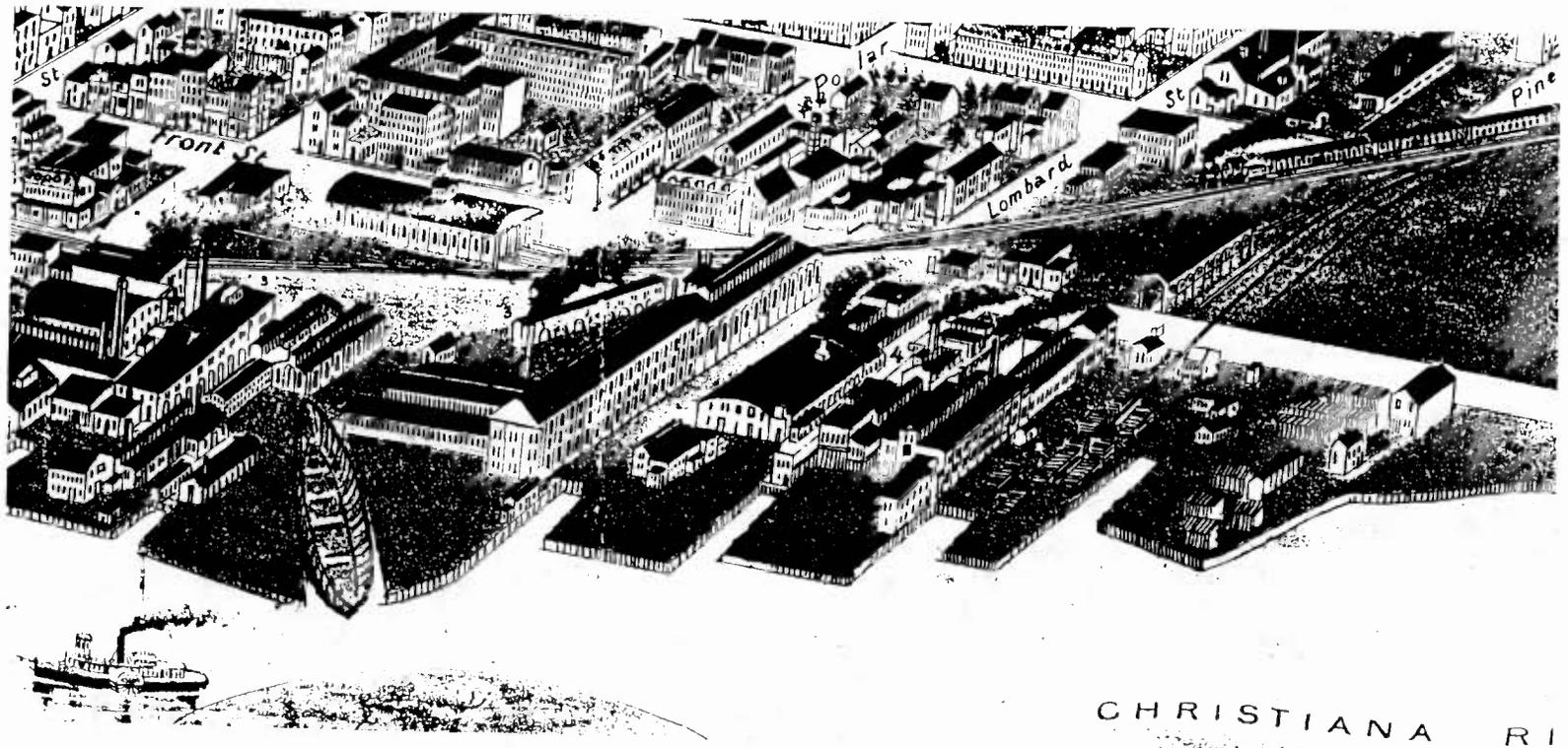


Figure 32: Detail of Lobdell Car Wheel's foundry
from H. H. Bailey & Co.'s "Wilmington, Del. 1874"
(Reprinted courtesy of the Historical Society of Delaware)

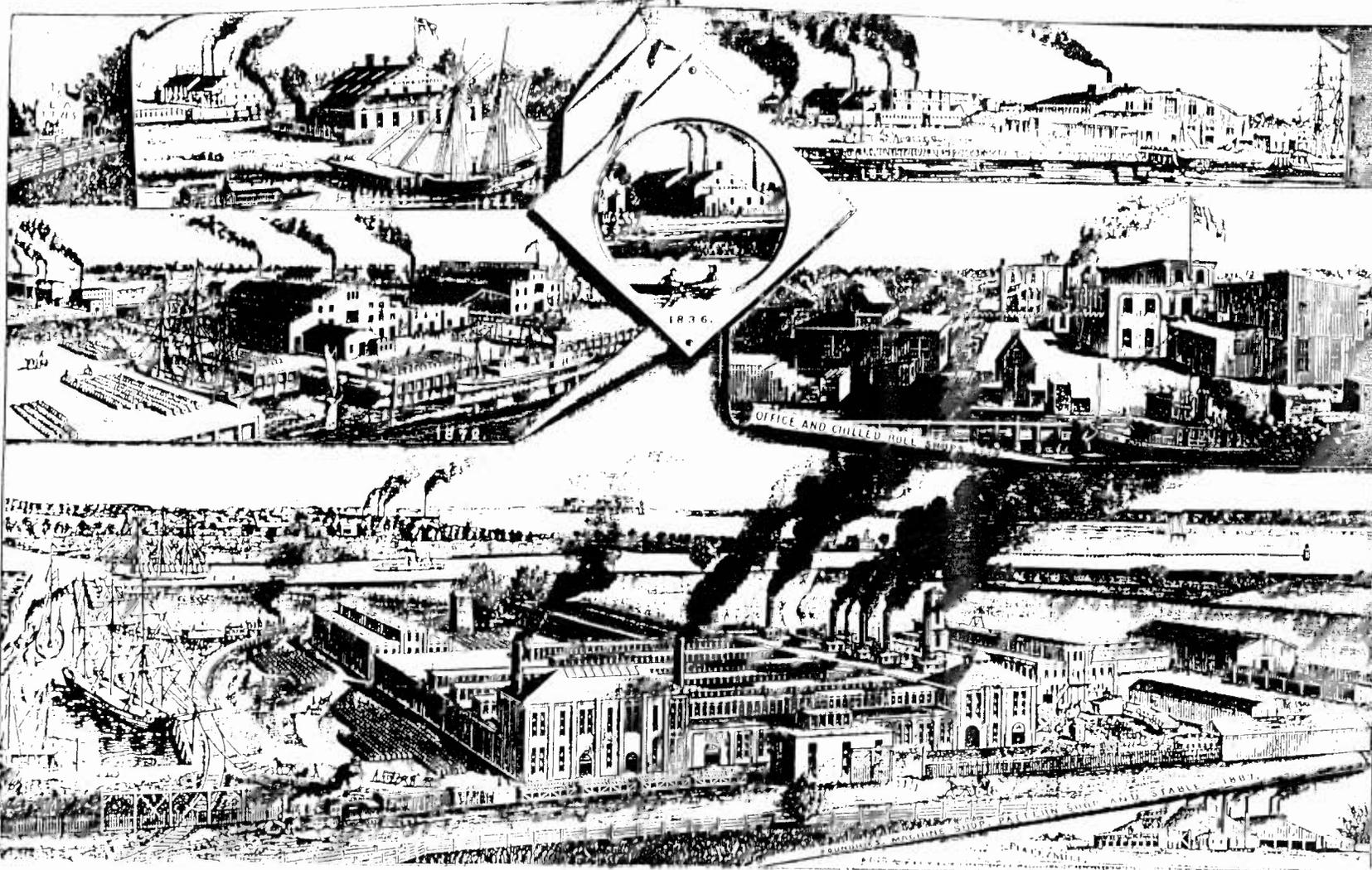


Figure 33: Detail of Lobdell Car Wheel
from Board of Trade's Industrial Wilmington, 1898
(Reprinted courtesy of the Historical Society of Delaware)

construction of a round-arch roof atop earlier walls around 1853. Conversely, if the date offered by the insurance survey proves appropriate, the current round-arch building on the east side of Lombard dates to 1836.¹⁰⁴

Lobdell erected an extensive foundry and machine making facility in south Wilmington in 1882 and slowly moved his entire operation to that location (lower portion of Figure 33). Lobdell continued to own the Christina River properties and leased the former foundry, now functioning as a pattern storage building, to Pusey & Jones until finally selling the properties to that firm in 1917. Machine tool manufacture increased in the early twentieth century especially after Lobdell acquired the Nazel Engineering and Machine Co. of Philadelphia. The Lobdell Car Wheel Co. manufactured wheels at its south Wilmington foundry until 1940 and sold the plant in 1946. In 1950 the former Lobdell foundry and associated buildings in south Wilmington were closed and sold at auction.¹⁰⁵

Related to the historic theme Manufacturing during the period of Industrialization and Early Urbanization (1830-1880 +/-) the Lobdell Car Wheel, Tire and Machine Co. foundry documents the growth of the rail-related manufacturing concerns along Wilmington's Christina River throughout the nineteenth century. With the introduction of the PW&B railroad through the Christina riverfront, a prime industrial corridor evolved bordering the river and railroad. Providing access to distant raw materials and markets, the railroad spurred the development of industry in Wilmington. The PW&B also consumed many of the products of Wilmington's manufacturers, including Lobdell's car wheels, Harlan & Hollingsworth's cars, Jackson & Sharp's cars, and Edwin Horner's car springs. Providing a specialized product to a new transportation technology Lobdell rose to become the largest producer of cast-iron cars wheels in the nation by 1860. Through successive expansion, Lobdell eventually outgrew its Christina riverfront location and moved to previously undeveloped land in southern Wilmington. These events reflect the growth of Wilmington's Waterfront Analysis Area as a center for manufacturing in the nineteenth century and as such the Lobdell Car Wheel, Tire and Machine Co. foundry is eligible for inclusion on the National Register of Historic Places under Criterion A, buildings associated with events contributing to broad patterns of history.

¹⁰⁴ Board of Trade, p. 68.

¹⁰⁵ "Lobdell," pp. 4-6; The Lobdell Company, Lobdell Products for the Paper and Allied Industries (Wilmington: n.d., c. 1936); The Lobdell Company, Lobdell Nazel Hammer Book (Wilmington: n.d., c. 1940).