

THE PUSEY & JONES CO.

Statement of Significance

When Lobdell moved to south Wilmington the company's foundry and other buildings were leased to the Pusey & Jones Co. located immediately west of the Lobdell facilities. Significant as an example of the iron-shipbuilders and machine manufacturers that once dominated the Wilmington Waterfront Analysis Area during the late nineteenth and early twentieth centuries, the Pusey & Jones Co. buildings are eligible for inclusion on the National Register of Historic Places under Criterion A, buildings associated with events contributing to broad patterns of history. Composed of fourteen buildings spread across nearly 15-1/2 acres along the north shore of the Christina River (see Figure 29, p. 160), the Pusey & Jones buildings document the evolution of a small machine shop in the early nineteenth century into a large shipbuilding and machine manufacturer participating in international markets during the first half of this century. Originally founded in the 1840s, Pusey & Jones illustrates the evolution of the waterfront from mixed commercial and manufacturing uses to an industrial corridor occupied by large manufacturing firms. The surviving Pusey & Jones buildings relate most strongly to the late nineteenth and early twentieth century, a period when the firm manufactured iron-ships and mill machinery for national and foreign consumption.

The Pusey & Jones Co. buildings stand within the borders of the Waterfront Analysis Area, an area described by the Delaware Comprehensive Historic Preservation Plan as forming part of the Urban Geographic Zone (Zone V; see Figure 4, p. 9). Although the Urban Zone delineates land within the city's corporate limits, the Waterfront Analysis Area more properly constitutes a portion of the Coastal Geographic Zone (Zone IV). Composed of land surrounding major and minor streams in Delaware meandering into the Delaware River and Bay, the Coastal Zone once sustained a rich and diverse ecological habitat. The zone's marshes and waterways provided havens for turtles, muskrat, wood ducks, great blue herons, ospreys, turkey vultures and bald eagles as well as many types of fish. A wide variety of flora, including arrowarum, spatterdock, water-willow, smartweed, and red and white oak, found an inviting habitat in the zone. The southern and eastern sections of Wilmington, where development occurred less intensively, may still serve as home for some of these plants and animals. Soils throughout the Coastal Zone range from tidal marshlands to moderately well-drained and medium-textured loam. Landfill and other development activities has obscured most of the shoreline that greeted Wilmington's first colonial settlers. Composed of areas roughly bordering the Christina and Brandywine Rivers in Wilmington, the Waterfront Analysis Area forms a discrete

geographical unit defined by the City of Wilmington's Office of Planning.¹⁰⁶

The Pusey & Jones Co. buildings relate to the historic theme Manufacturing during the period of Urbanization and Early Suburbanization (1880-1940 +/-) according to the Delaware Comprehensive Historic Preservation Plan (6E). Manufacturing describes enterprises involved in the mechanical or chemical transformation of organic or inorganic materials into new products typically housed in plants, factories or mills using power driven machinery and/or handling equipment.¹⁰⁷ Continued industrial expansion and growth characterized the first few decades of the period of Urbanization and Early Suburbanization. Although a great diversity of manufacturing establishments existed throughout the city the Waterfront Analysis Area reflected land use patterns begun during the previous era of Industrialization and Early Urbanization (1830-1880 +/-).

The growth of machine shops, shipbuilding firms (both wooden and iron), railcar manufactories, and other rail-related industries along the north shore of the Christina started in earnest with the construction of the Philadelphia, Wilmington & Baltimore Railroad (PW&B) through the zone in 1837. Supplying access to outlying sources of raw materials and distant markets the railroad created a manufacturing corridor along its route. Harlan & Hollingsworth (see Complex #8) began constructing railcars in 1836 at the corner of Front and Tatnall Streets. Harlan & Hollingsworth later acquired land in the Waterfront Area between Tatnall and Madison Street and became the largest single employer in Wilmington by 1880. The Lobdell Car Wheel, Tire and Machine Co. (see documentation earlier in this section) began casting car wheels in 1831 on land later purchased by Pusey & Jones. Other firms starting during this period include the Jackson & Sharp Delaware Car Shops, the Diamond State Iron Co. rolling mill, and the Edwin Horner car spring factory. By 1880 establishments involved in the manufacture of wooden and iron ships led city manufacturers in total number of employees with railcar manufacture and foundry and machine-makers third and fourth. The AMTRAK Northeast Corridor Viaduct, the modern successor of the PW&B right-of-way, forms the current western boundary of the Waterfront Area.

Precipitated by a number of economic factors heavy industries along the waterfront areas began to experience periods of decline at the start of the twentieth century. The rise of corporate capitalism, characterized by nation-wide conglomerates capable of supplying access to vast amounts of capital and material resources, combined with shifting market demands and the international depression of

¹⁰⁶ Ames, et al., pp. 31-36.

¹⁰⁷ Ibid., pp. 26, 36-37.

the 1930s to create obstacles for many Wilmington firms. The Diamond State Iron Co., competing against the steel trust, closed its doors in 1904. Some Wilmington firms were acquired by national corporations. Jackson & Sharp became part of the American Car & Foundry Co. located in St. Louis in 1901. In 1912 the Eastern Malleable Iron Co., a metal castings manufacturer with factories throughout the northern United States, acquired the Wilmington Malleable Iron Co. (see Complex #6). Other firms attempted to shift production in order to ameliorate the effects of changing markets. Harlan & Hollingsworth, faced with stiff competition from larger shipbuilding firms, upgraded facilities and shifted railcar production to the manufacture of all-steel cars. Pusey & Jones, one of the city's largest manufacturers of iron ships, began to emphasize the production of paper, rubber, and flour mill machinery, a decision that allowed the firm to survive past the Second World War. The Pusey & Jones Co., one of Wilmington's largest employers in the late nineteenth century, reflects the history of growth, physical expansion and entrenchment that describes the history of Wilmington's waterfront industries during the period of Urbanization and Early Suburbanization (1880-1940 +/-).

In 1848, John Jones, a foreman at J. Morton Poole & Co.'s Machine Works (see Complex #8), joined Joshua L. Pusey, foreman at the Harlan, Hollingsworth & Co. plant (see Complex #7) and opened a machine shop in a building formerly used by the Wilmington Whaling Company near the foot of Poplar Street on the North shore of the Christina River. Edward Betts and Joshua Seal, iron founders, joined the firm in 1851 and the firm became known as Betts, Pusey, Jones & Seal. Betts and Seal left the firm in 1859, replaced by Alfred Betts, who subsequently left the next year. The firm then became known as Pusey, Jones & Co. at which time it occupied most of the two blocks between Walnut and Lombard streets bordered by the Philadelphia, Wilmington and Baltimore Railroad and the Christina River.¹⁰⁸

At first general machinists, the firm built its first iron-hulled sailing ship in 1854 with the commissioning of the "Mahlon Betts." Shipbuilding quickly formed the majority of Pusey & Jones' trade. Starting with only ten employees in 1848, by 1860 200 men worked in the Pusey & Jones shipyards while another 75 men toiled in the steam engine manufactory and machine shops. Plant equipment included 39 lathes, ten planers, eight punches, nine drillers and four shears. Nearly 1700 tons of bar iron, plate iron and iron castings were used by Pusey & Jones to manufacture a steam sawmill, stationary steam engines, stationary boilers, marine boilers, and

¹⁰⁸ Fiftieth Anniversary of the Founding of the Pusey & Jones Company (Wilmington: The John M. Rogers Press, 1898), p. 8; The Pusey And Jones Corporation, A Hundred Years A-Building (Wilmington: 1948), p. 5.

five iron steamboats valued at nearly \$400,000. Four of these steamships, three side-wheelers and a single screw-propeller ship, were delivered to steamship lines in Peru, Bolivia and Brazil. A fifth ship, the side-wheeler "Rosa," saw service on the Savannah River. Six boilers were exported to West Indies republics. Between 1860 and 1879 Pusey & Jones built many stern-wheel, side-wheel and twin-screw steamers for South American and Caribbean shipping lines, often delivering the ships under their own power.¹⁰⁹

Shipbuilding remained the mainstay of Pusey & Jones' business throughout the late nineteenth century although machine manufacture acquired an increasingly larger share. New iron and brass foundries built in 1873 and 1883 proved "important adjuncts, with facilities for making all shapes required by modern steam machinery, however huge or complicated." In 1880 Pusey & Jones employed 750 men when operating at peak levels manufacturing ships and machinery worth \$480,000. In 1887 Pusey & Jones constructed the America's Cup defender "Volunteer." The 23-ton cable anchors used in the construction of the Brooklyn Bridge were forged at the Pusey & Jones plant during this period as well. The manufacture of iron ships, steam engines, boilers, paper and sugar machinery in 1891 required over 900 men. Over 275 iron and steel hulled ships had been constructed in the Pusey & Jones' ways by 1891. Government contracts accounted for much of their business. A revenue cutter and a hospital steamer were built in 1891. A new Pusey & Jones cotton compress capable of exerting 3,000 tons of pressure per bale and handling 100 bales per hour was advertised as the leading machine of its kind. By 1898, between 700 and 1,000 men were employed at the Pusey & Jones shipyards and machine manufacturing foundries. Wharfage along the riverfront amounted to over 1,400 feet wharf while four leg lifting shears with capacity of 100 tons dwarfed the main wharf.¹¹⁰

The demand for ships during the nineteenth century, especially during the Civil War, the 1890s and the First World War, spurred ship production at Pusey & Jones resulting in the transformation of its physical plant each time. Between 1861 and 1865, Pusey & Jones erected ten new buildings between Lombard Street and its western boundary halfway between Walnut and Poplar streets. These buildings consisted of an erecting shop, a blacksmith and steam hammer shop, a machine shop, a boiler house, a boiler-erecting

¹⁰⁹ Pusey And Jones, p. 14; U. S. Census, Manufacturing Schedules, 1860. Microfilm on file at EMHL.

¹¹⁰ Delaware's Industries, pp. 57-60; U. S. Census, Manufacturing Schedules, 1880. Microfilm on file at EMHL; Selma Thomas, editor, Delaware, An Inventory of Historic Engineering and Industrial Sites (Washington, D. C.: United States Department of Interior, 1975), p. 16; Board of Trade, p. 64.

shop, a brass foundry, boat shop, and ship joiner shop (see Figure 34, p. 174). By 1891 Pusey & Jones spread over eight acres of land along 1,200 feet of Christina riverfront having leased the former Lobdell properties. Nine hundred feet of rails surrounded ten buildings including a boiler house, smith and machine shops, pattern house and storage building for tools and products and two marine railways (see Figure 35, p. 175). The foundry processed 4.5 million tons of castings per year.¹¹¹

During the First World War, Pusey & Jones constructed 14 cargo vessels under the aegis of the Emergency Fleet Corporation, the highest production rate of the plant to that date. In addition, war production included "General Pershing" railroad engines, and boilers and marine engines for other ships. Physical plant construction during the First World War proved equally dramatic and many of the current buildings on the former Pusey & Jones site date to this period. Insurance maps reveal that the three former fabrication buildings currently occupied by the Industrial Metal Treating Corp. (N-12474.01), Tri-state Carpet (N-12474.02) and the Wilmington Opera Company (N-12474.03) were built in 1917. Most of the buildings in the block bounded by Lombard and Pine streets surrounding the Lobdell Car Wheel, Tire and Machine Co.'s foundry (N-12476.05), were constructed between 1917 and 1919. These buildings include a former boiler house (N-12476.06), a storage building (N-12476.04), foundries and machine shops (N-12476.01-.03), all currently occupied by the Carney Machinery Company, and another former machine shop occupied by the Overhead Door Co. of Greater Wilmington (N-12475).¹¹²

During this period shipbuilding firms had grown into large concerns often forming subsidiaries of national corporations. Able to furnish access to vast amounts of capital and material resources these corporations were well suited to supply a burgeoning demand and market for increasingly larger ships. Simultaneously these shipbuilders located along the deep water ports of the Delaware River where the river's depth and width allowed the construction and subsequent launching of larger vessels. The William Cramp and Sons Ship and Engine Building Co. in Philadelphia, the New York Shipbuilding Co. in Camden, New Jersey, and the Roach Shipbuilding Co. in Chester, Pennsylvania, possessed huge shipyards fronting along the Delaware capable of erecting immense iron-ships. Confronted with the growing limitations of the Christina River as a home to shipyards able to compete with the larger firms, Pusey & Jones began to develop the manufacture of paper, rubber and flour mill machinery as an adjunct to their shipbuilding endeavors. Shipbuilding at Pusey & Jones declined steadily throughout the

¹¹¹ Pusey and Jones, p. 7; Hexamer General Surveys, Nos. 545-546 (circa 1870).

¹¹² Pusey and Jones, p. 24; Sanborn (1956).

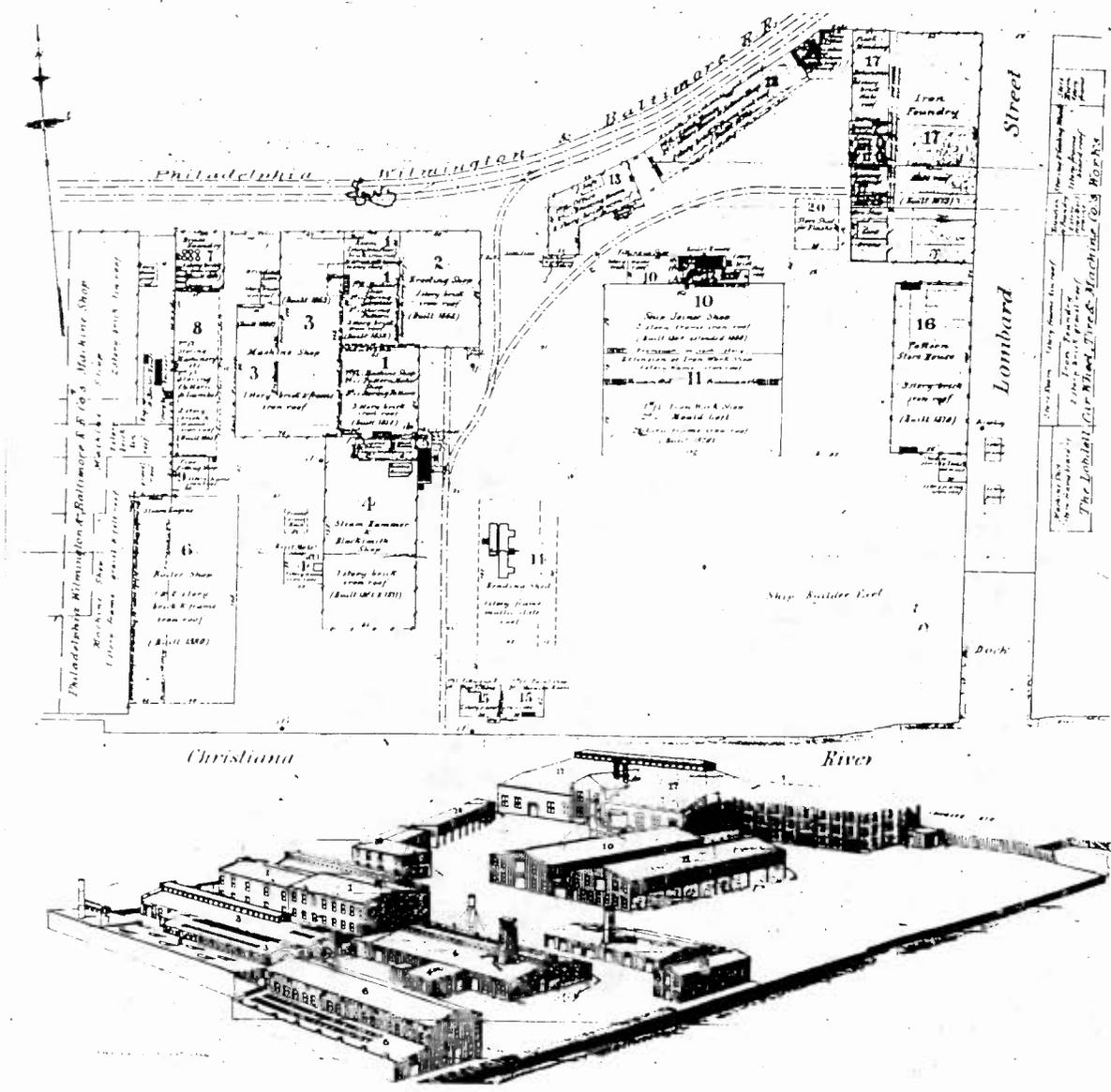


Figure 34: Detail of Pusey & Jones
 from Hexamer General Survey #1551
 (Reprinted courtesy of the Eleutherian Mills Historical Library)

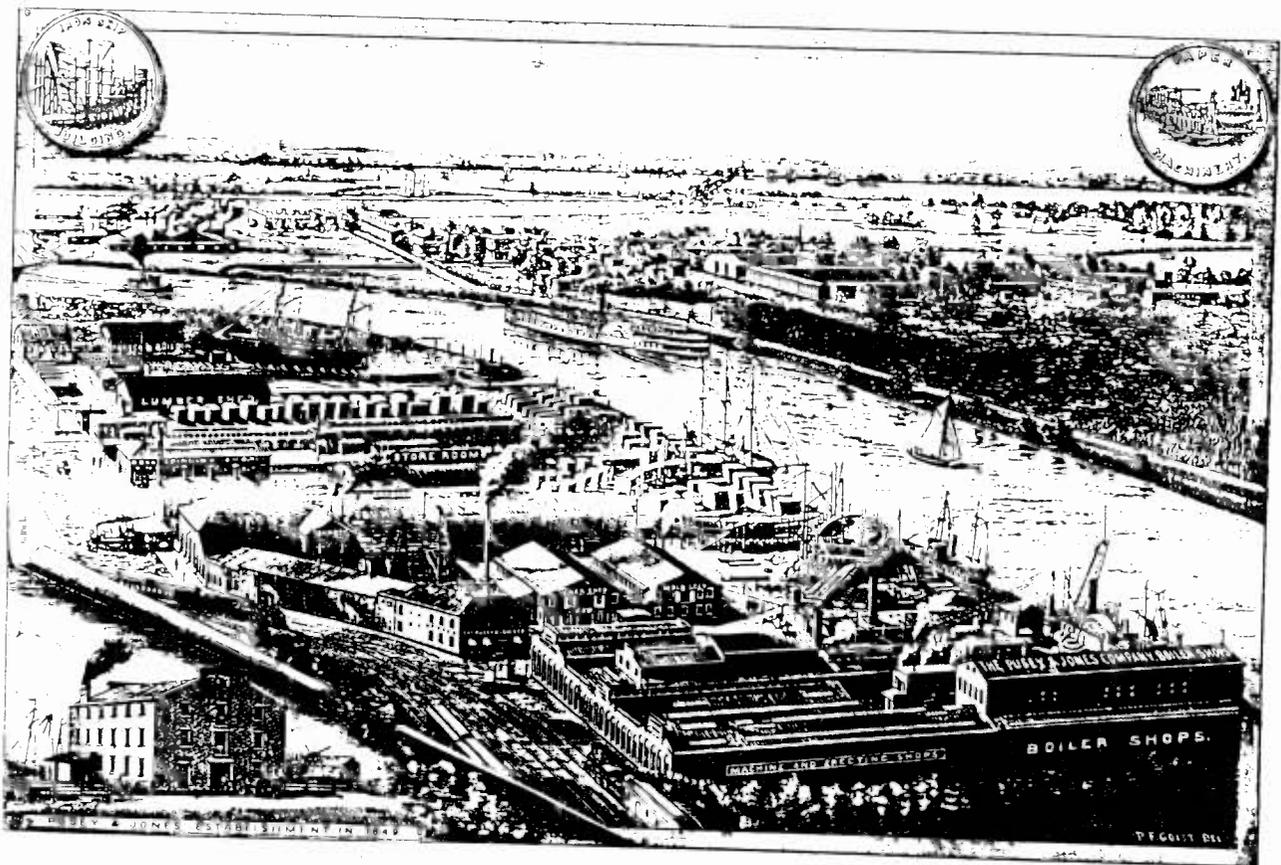


Figure 35: Detail of lithograph of Pusey & Jones from J. Thomas Scharf's History of Delaware, 1888 (Reprinted courtesy of the Office of Planning)

first half of the twentieth century and stopped completely after the Second World War.

A company history written in 1948 states the firm entered the paper-making machinery business in 1867. Although the firm had constructed paper machinery parts earlier, illustrated by the 1860 Census of Manufactures' listing of a fourdrinier machine among Pusey & Jones' products, this date offered by the company history probably indicates when the firm began actively pursuing the manufacture of paper-making machinery. William Luke, manager of the Rockland Paper Mills, approached Pusey & Jones concerning the manufacture of paper-making machinery to replace machines destroyed during a fire in 1867. The 86-inch wide fourdrinier built for the Rockland Mills was the largest of its day and began an association with paper machinery manufacturing that lasted into the mid-twentieth century. An early twentieth century chronicler of Delaware documented the shift in Pusey & Jones business focus when he described the firm as a large business known throughout the world "but of late years the company has made a great fame in paper-making machinery, its products in this line being unexcelled in the world."¹¹³

Successively larger and faster paper-making machines were built over the years. In 1887 the company constructed fourdriniers of 90, 92, 96, and 112-inch widths. The 112-inch machine built for the Hudson River Pulp & Paper Co. produced over 200 feet of paper per minute. Sales to foreign countries began in 1896 when paper manufacturers in Finland, Germany and Norway placed orders for machines. A Pusey & Jones machine manufactured a record 50 tons of newsprint per day in 1905. A 170-inch machine erected in 1908 for Edward Lloyd, Ltd., a English paper manufacturer, produced 600 feet of newsprint per minute. Wilmington paper-manufacturer Jessup & Moore ordered a 166-inch wide fourdrinier in 1926. A 242-inch wide machine was constructed in 1929. Other Pusey & Jones innovations included a high-speed catalog paper making machine in 1930, a machine capable of handling Southern Pine pulp in 1939 and a machine able to manufacture roofing-felt on a cylinder in 1940.

Pusey & Jones' growing paper-machinery business probably spurred construction of larger plant facilities during the 1930s. Determining precise dates of construction for buildings erected between the First and Second World Wars has proven difficult. However comparison of insurance maps reveals the construction of several buildings between 1914 and 1936. Pusey & Jones erected the Wilco Plumbing Supply building (N-12472), originally a joiner shop, on the west side Poplar Street during this period. A large storage shop joined the Wilco building at that date although it has since been demolished. The Floyd Dean Inc. building (N-12473), an irregularly-shaped, former office building, housed a storage

¹¹³ Pusey and Jones, pp. 16-24; Conrad, p. 371.

building. The three story building extending along the south side of Front street east of Pine Street, now owned by Steel Suppliers (N-12479), served as an office, fabricating shop and mold loft.¹¹⁴

The manufacture of paper-making machinery parts, determined an important adjunct to war production, continued throughout the Second World War augmenting the construction of large cargo vessels for the war effort. Operating under the direction of the United States Maritime Commission, Pusey & Jones erected ships larger than any launched previously in the Christina River. In February of 1941 the first sideways launching of a vessel along the east coast occurred when the 413 foot long C-1 Cargo ship "Marina" slid down Pusey & Jones' ways. Two twin-screw dredges were constructed during the war as well. In order to expedite the construction of cargo vessels, Pusey & Jones enclosed a covered shipway. This building (N-12478) now stands on the east end of the Pusey & Jones riverfront, six-stories high with glass curtain-walls and belongs to Steel Suppliers, Inc. Pusey & Jones probably constructed the one-story, ell-shaped paint shop (N-12477) southwest of the enclosed shipway, now occupied by the Custom Iron Shop, during the Second World War period as well. The large iron cutting and welding shed on the north side of Front Street was probably erected during the same period (N-12480).¹¹⁵

Related to the historic theme Manufacturing during the period of Urbanization and Early Suburbanization (1880-1940 +/-) the Pusey & Jones Co. shipbuilding and machine manufacturing buildings document the evolution of Wilmington's Waterfront Analysis Area as an industrial corridor during the nineteenth century. Following the completion of the Philadelphia, Wilmington and Baltimore Railroad through the riverfront zone in 1838 a wide array of industries began to locate in adjacent properties. Already home to wooden shipbuilding firms and commercial shipping companies during the early nineteenth century, the areas bordering the railroad afforded access to distant markets and raw materials and soon attracted iron and steel processors, iron shipbuilders, and railcar and railroad-related manufacturers. By the late nineteenth century these firms had acquired neighboring parcels of land and completely dominated the Christina riverfront. Changing economic demands at the turn of the century forced some of these firms into bankruptcy, while others developed new product lines. Founded in the 1840s as a small machine shop along the Christina riverfront Pusey & Jones grew into one of Wilmington's largest employers during the late nineteenth century. Concentrating production on the manufacture of iron ships in the mid-nineteenth century, changing market demands late in the century forced Pusey & Jones to shift their focus to the construction of paper, rubber and flour milling machinery.

¹¹⁴ Sanborn-Perris (1914); Franklin (1936).

¹¹⁵ Pusey and Jones, p. 26.

Significant as an example of these overall trends describing the historical development of the Wilmington Waterfront Analysis Area, the Pusey & Jones Co. buildings are eligible for inclusion on the National Register of Historic Places under Criterion A, buildings associated with events contributing to broad patterns of history.