

NORTH CAROLINA STATE HISTORIC PRESERVATION OFFICE
Office of Archives and History
Department of Cultural Resources

NATIONAL REGISTER OF HISTORIC PLACES

Wright's Automatic Machinery Company

Durham, Durham County, DH1916, Listed 12/26/2012

Nomination by Cynthia de Miranda

Photographs by Cynthia de Miranda, March 2012



Façade and side view



Rear view

**United States Department of the Interior
National Park Service
National Register of Historic Places
Registration Form**

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Wright's Automatic Machinery Company
 other names/site number Wright Machinery Company, Wright's Automatic Tobacco Packing Machine Company

2. Location

street & number 915 Holloway Street n/a not for publication
 city or town Durham n/a vicinity
 state North Carolina code NC county Durham code 063 zip code 27701

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set for in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

 Signature of certifying official/Title Date
North Carolina Department of Cultural Resources
 State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. (See Continuation sheet for additional comments.)

 Signature of certifying official/Title Date
 State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is: <input type="checkbox"/> entered in the National Register. <input type="checkbox"/> See continuation sheet <input type="checkbox"/> determined eligible for the National Register. <input type="checkbox"/> See continuation sheet <input type="checkbox"/> determined not eligible for the National Register. <input type="checkbox"/> removed from the National Register. <input type="checkbox"/> other, (explain:) _____ _____ _____	Signature of the Keeper _____ _____ _____ _____	Date of Action _____ _____ _____ _____
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5. Classification

Ownership of Property
(Check as many boxes as apply)
 private
 public-local
 public-State
 public-Federal

Category of Property
(Check only one box)
 building(s)
 district
 site
 structure
 object

Number of Resources within Property
(Do not include previously listed resources in count.)

Contributing	Noncontributing	
1	1	buildings
0	0	sites
0	0	structures
0	0	objects
1	1	total

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)

n/a

Number of Contributing resources previously listed in the National Register

n/a

6. Function or Use

Historic Functions
(Enter categories from instructions)

INDUSTRY/PROCESSING/EXTRACTION:
manufacturing facility

Current Functions
(Enter categories from instructions)

COMMERCE/TRADE: warehouse
GOVERNMENT: correctional facility

7. Description

Architectural Classification
(Enter categories from instructions)

MODERN MOVEMENT

Materials
(Enter categories from instructions)

foundation BRICK
walls STUCCO, CONCRETE, BRICK
roof SYNTHETICS: Asphalt

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- A** owned by a religious institution or used for religious purposes.
- B** removed from its original location.
- C** a birthplace or grave.
- D** a cemetery.
- E** a reconstructed building, object, or structure.
- F** a commemorative property
- G** less than 50 years of age or achieved significance within the past 50 years.

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

Areas of Significance

(Enter categories from instructions)

MILITARY
INDUSTRY

Period of Significance

1942 to 1962

Significant Dates

1942

Significant Person

(Complete if Criterion B is marked)

n/a

Cultural Affiliation

n/a

Architect/Builder

Atwood and Weeks (architect)
C. C. Woods Construction Company (builder)

9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- Previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____

Primary location of additional data:

- State Historic Preservation Office
 - Other State Agency
 - Federal Agency
 - Local Government
 - University
 - Other
- Name of repository:
Personal Collection of Donald Yarboro, Durham, NC

Wright's Automatic Machinery Company
Name of Property

Durham County, NC
County and State

10. Geographical Data

Acreage of Property 2.17 acres

UTM References

(Place additional UTM references on a continuation sheet.)

A 17 590710 3985440
Zone Easting Northing
B _____

C _____
Zone Easting Northing
D _____

See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Cynthia de Miranda
organization MdM Historical Consultants, Inc. May 21, 2012
street & number P.O. Box 1399 telephone 919/906-3136
city or town Durham state NC zip code 27702

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location

A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional items

(Check with the SHPO or FPO for any additional items.)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name Yarboro & Hesse Warehouses, LLC (contact: Donald Yarboro)
street & number 921 Holloway Street telephone 919-688-3376
city or town Durham state NC zip code 27701

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listing. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 *et seq.*)

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P. O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20303.

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Durham County, NC

NARRATIVE DESCRIPTION

Wright's Automatic Machinery Company stands several blocks east of downtown Durham at 915 Holloway Street. A two-story masonry building occupies the northwest corner of Holloway and Calvin streets and a guardhouse stands sentry at the entrance to the parking lot behind the building, off Calvin Street. A high metal fence surrounds the parcel on its west, south, and east sides and also encloses the parking lot that occupies the parcel immediately to the north. The property is in a small light-industrial area flanked by city parks and surrounded by residential neighborhoods. Immediately south of Wright's Automatic Machinery Company is Long Meadow Park, which features open space, a playground, baseball fields, and a swimming pool; to the north is East End Park, which has basketball and tennis courts as well as baseball fields and open space. Goose Creek runs through both parks and forms the western property line of the parcel. The creek passes very close to the southwest corner of the building. The immediately surrounding residential blocks feature modest early twentieth-century housing with some later infill. A few blocks west is the Holloway Street Historic District (NR 1985, 2009). The Golden Belt Historic District (NR 1985, 2008) is several blocks south.

Wright's Automatic Machinery Company
1942
Contributing Building

The two-story masonry manufacturing plant is essentially a mid-twentieth-century mill building. The large, nearly square structure has a small original wing attached at the north end of the west elevation and each section has a very shallow-pitched gable roof. Viewed from the south, the building presents a broad, spare façade to Holloway Street. The brick exterior of the main building is covered with stucco and a wide ribbon of glass block underscored by a continuous concrete sill stretches across the facade at each story, evoking the Modern Movement without placing itself firmly within any specific modernist style. Four slightly recessed double-leaf entrances set into cast-concrete peaked surrounds interrupt the first-floor band of block at regular intervals. Multi-lite wood transoms top each pair of glass doors; each entrance is accessible by separate sets of concrete stairs terminating with unsheltered stoops. Concrete coping finishes a parapet wall that hides the shallow front-gabled roof. The stucco is painted white with a wide gray band between the horizontal sections of glass block. Gabled and flat-roofed roof-access structures with tin-clad doors stand on the main building; the wing features a brick-clad, flat-roofed access structure.

The front elevation of the rear wing, set well back from the façade of the main block and hidden from view by trees and vegetation along the creek, has paired sets of pivoting steel-sash windows with metal screens at the second story. Window openings at the ground floor are infilled with

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concrete block, as is a single-leaf entry at the east end, near the juncture with the main part of the building. All window openings have concrete sills. The wing has a very shallow gable with exposed purlin ends.

The long east elevation of the main block is divided into a dozen bays by metal downspouts extending from the metal gutter at the eave. At the ground floor, entrances matching those at the facade are in the third and tenth bays (moving left to right across the elevation); there is no other fenestration in the stuccoed walls at the east elevation ground floor. At the second story, huge panels of industrial steel sash windows fill bays seven through ten, as well as most of the sixth bay. Plywood covers the remaining window there, as well as at the first through fifth bays. The windows likely remain intact under the plywood; they are likewise covered at the interior, preventing confirmation. At the last two bays at the north end of the elevation, the original steel sash windows have been removed and replaced by stucco exterior with a small metal sliding window centered in each bay. The color scheme from the facade continues here: white walls with a wide gray band between the continuous concrete sill at the second-story windows and top of the doorway surrounds.

The rear of the building features loading docks, pedestrian entries, and a continuous elevation combining the main block and the wing. The shallow gabled roof of each section is visible; at the main building, a flat-roofed ridge is apparent at the center where the slopes would meet. At the ground floor, four entrances match the location and treatment of the entrances at the facade and constitute the only fenestration at that level. Doors have been replaced and transoms removed, and ramps rather than stoops approach the doors. At the second story, five bays of the main building have stuccoed walls with small sliding windows, matching the treatment of the two northernmost bays of the east elevation. Across the west half of the main building's rear elevation, the original glass block remains in a continuous and very wide ribbon. Exposed purlin ends are visible beneath the metal gutter; downspouts drain the gutter at the west end of the roof.

The gabled wing, while continuous with the rear elevation of the main building, is easily discernable due to its differing treatment. The brick wall is painted white but lacks both the stucco and the gray band seen at the main building. The rear wall of the brick-clad, flat-roofed roof-access structure is continuous with the brick rear wall of the wing, and an elevator door at the ground floor exterior opens directly to the loading dock. A personnel door with transom and two additional loading entrances with lift doors are to the west. A deep flat metal canopy shelters a concrete loading dock, which runs the width of the wing and extends past the west edge, where concrete steps lead down to grade. The second story features the same paired sets of pivoting steel-sash windows with concrete sills seen at the front of the wing; window openings in the last two bays at the ground floor are enclosed with plywood. The easternmost window is paired with a rectangular metal vent that is much smaller than the windows. Another rectangular

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metal vent pierces the top floor of the roof access structure. As at the main building, exposed purlin ends are visible behind metal coping. Metal coping also finishes the brick walls of the flat-roofed roof-access structure.

The west elevation of the wing follows the look of the other two wing elevations; as at the south-facing elevation, the ground floor window openings have been infilled with concrete block. A basement, present only under the wing, is accessible from this side by way of stairs leading below grade to personnel and equipment doors set into the basement level. A brick stack stands immediately west of the office wing, attached to the basement level with a metal duct. The exposed part of the main building has glass block at the second story with concrete-block filling window bays below. Metal drainpipes divide the exposed section into seven bays.

The west elevation of the main building features the same treatment seen at the front: continuous glass-block windows at the second floor, stucco covering the brick between the bands of windows, and continuous windows interrupted by two sets of paired glass doors in peaked cast stone surrounds. The ground-floor windows have been infilled with concrete block, and the gray painted horizontal accent is missing. The multi-lite transoms are also infilled with plywood at each entrance. Concrete stoops lead to both entrances; the stoop for the north entrance is shared by the entrance to the wing and fits into the corner formed by the junction of the wing with the main block. A small electrical substation is positioned immediately west of the building and several feet south of the south wall of the wing. A freestanding, L-shaped concrete-block wall forms the south and west sides of the substation yard.

The building interior is largely open, a necessary arrangement to accommodate the manufacture of various machines and to provide the potential for flexible floor plans. At each story, rolled steel I-beam columns riveted to rolled steel girders support the floor or roof above. Floors are wood with a thick sub-floor to support the heavy load of so much machinery. In a few spots at the ground floor, a small concrete pad with a deep concrete footing replaces the wood floor, providing a place to set up a testing station that would not be affected by vibrations originating from elsewhere in the building. The tongue-and-groove subfloor of the second story serves as the ground-floor ceiling, while the second-floor space has a beadboard ceiling.

A pair of load-bearing brick fire walls, spaced roughly twenty feet apart, run down the center of the building from north to south, creating a central service core through the building from front to back. Housed in this space are bathroom facilities, a lunch room, the original first-aid room—still completely outfitted—and elevators and stairwells. Additionally, the large freight elevator remains in the wing and several staircases remain at the perimeter of the building. Staircases are wood with chamfered newels and balusters and metal rails.

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Two later test-room enclosures likely date to the 1950s or the 1960s, offering a more controlled environment for testing the precision motors, gears, and brakes produced in the plant at that time. Both enclosures are less than full height. The enclosure at the north end features plywood walls and ceilings with fixed-sash windows and single-leaf hollow-core and glass doors. The second enclosure, near the southwest corner, features a dramatic arched double-leaf door that was installed after 2003. One of the concrete testing pads is inside this room. West of the north enclosure is a later, roofless, chain-link enclosure that post-dates the period of significance.

Historic photos show that the building was little changed during the period of significance. Photographic evidence shows that the industrial sash windows at the second story of the northeast corner of the building remained in place at least until 1980. Other window removals and coverings may have dated to that period as well. The building changed ownership in 1986, which may have prompted some alterations.

At the interior, the dates of changes are generally not known but likely post-date the period of significance. The original construction date of the testing rooms is not known, and the rooms have seen some changes, but their presence reflects a use that falls within the period of significance. Linoleum and carpeting at the second story are likely not original, but their date is unknown. An office upfit for a police substation in the east half of the first floor was done in 2009 but did not remove or alter any original features. The metal fence was installed in recent years, replacing the original chain-link fence that surrounded the property.

Changes to the building, then, are minor and a number are reversible. The industrial steel sash windows at the south end of the east elevation's second story likely remain under the exterior and interior cladding. The office upfit at the ground floor did not remove any original fabric and could be completely removed. Other window removals are at the rear of the building and not in a highly visible location. The building retains its original industrial character and much of its interior open space, which was essential to its intended manufacturing function.

Guardhouse

2008

Noncontributing Building

This small, double pyramidal-roof guardhouse stands just north of the east end of the rear elevation of Wright's Automatic Machinery Company. The building has cementitious "weatherboard" siding and corner boards, double-hung wood windows with transoms, and a partially glazed personnel door at its west end. A vehicle gate opens into the parking lot behind the building, and the guardhouse is situated to service the gate. The lower half of the east edge of the roof is clipped to accommodate the fence; it is finished with vertical cementitious siding.

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The guardhouse is a replica of the original wood guardhouse, rebuilt based on photographic documentation. The original had been replaced sometime in the 1960s or 1970s with a flat-roofed, metal building of a similar size. The replacement was removed from the site in 2008 to make way for the replica. The replica stands on the location of the original and the replacement guardhouse.

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SUMMARY OF SIGNIFICANCE

Wright's Automatic Machinery Company at 915 Holloway Street in Durham, North Carolina, is a 1942 industrial building that represents the collaboration between the federal government and private industry to outfit the American military in World War II. The Defense Plant Corporation erected the building for use by Wright's Automatic Machinery Company. Working as a subcontractor to Sperry Corporation subsidiary Ford Instrument Company, Wright's Automatic Machinery Company built gunfire control equipment for the United States Navy in this plant. After the war, the company continued to build precision instruments here for the U. S. military and later for the National Aeronautics and Space Administration. In so doing, Wright's Automatic Machinery Company transitioned from tobacco-related manufacturing to high-tech industrial production, a change that Durham's local economy would undergo as a whole throughout the middle and late twentieth century. The building meets National Register Criterion A in the areas of Military and Industry and is locally significant. The building has seen few permanent alterations since the close of the period of significance and retains integrity of location, setting, design, materials, workmanship, feeling, and association. The period of significance is 1942 through 1962. Although manufacturing continued at this property into the early twenty-first century, the post-1962 use is not of exceptional significance.

HISTORICAL CONTEXT

Early Company History

Wright's Automatic Machinery Company was a late nineteenth-century business established by Richard Harvey Wright, one of Durham's most active early industrialists. Wright worked with the Duke family as one of the partners in the W. Duke Sons and Company and encouraged the Dukes to use the cigarette-rolling Bonsack machine. The machine gave W. Duke Sons and Company an edge over local rival Blackwell and other smoking tobacco manufacturers.¹

Wright sold his share of the Dukes' business in 1885 but his interest in automation continued. In 1888, he procured rights to sell the Bonsack cigarette machine in China, Japan, the Philippines, India, and Africa. Wright was travelling the world for this work when he came across mechanically-wrapped tobacco packets in London in the 1890s. The tidy packages compelled him to immediately seek out the Rose brothers of Gainsborough, England, makers of the machine that automatically wrapped tobacco. Just as quickly, Wright acquired the sole rights to

¹ Samuel A'Court Ashe, Stephen B. Weeks, and Charles L Van Noppen, eds., *Biographical History of North Carolina*, 8 vols. (Greensboro, NC: Charles L. Van Noppen, (1905-1917), 8:306-307; *Wright's Automatic Machinery Company, Durham, North Carolina: 50th Anniversary 1893-1943* (N.p., [1943]), in the Pamphlet Collection, Duke University Library.

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sell, manufacture, lease, and "otherwise handle" the Rose Tobacco Packer in the United States, Canada, and Cuba.²

Upon returning to Durham, Wright established Wright's Automatic Tobacco Packing Machine Company in 1893. While Wright sold the Rose Tobacco Packer domestically and the Bonsack machine abroad, his company designed new packaging, labeling, and stamping machinery for tobacco products. The Rose brothers produced the new machines, as did machine shops in Baltimore, Philadelphia, Winston-Salem, and other cities. In 1924, the company branched out, inventing a machine to produce tea bags, previously made by hand.³

Wright died in 1929, and the business was taken over by his nephews Thomas D. Wright and Richard H. Wright II. The younger Wrights, who had worked with the company before their uncle's death, purchased the Yarborough Hosiery Mill after that company went into receivership in 1930. The 1925 building (not extant) stood on the west side of Calvin Street a little north of its corner with Holloway Street. The company equipped the large frame building as a machine shop to build experimental packaging equipment. Eventually, they started building their machines on site. By now, the company produced machines for packaging tobacco, food, tea, liquor, and hosiery; the name was, at some point, changed to Wright's Automatic Machinery Company to reflect its increasing diversity of products. The business apparently did not suffer greatly during the 1930s but continued building a growing variety of packaging equipment. Wright's Automatic, as it was informally known, began making machines to weigh tobacco in preparation for packaging, to tie bags, and to produce stamps and labels for packaging.⁴

Wright's Automatic During World War II

The business of Wright's Automatic shifted abruptly in 1941. Early in the year, as the country prepared for war, company officials courted a number of northeastern corporations for government defense work. They connected with Sperry Corporation chief Captain Thomas Doe, a native North Carolinian. The Sperry Corporation, based in New York, had started out in World War I producing gyroscopes for navigation in airplanes and warships. By World War II, the company and its subsidiaries were adapting gyroscopes for anti-aircraft guns: The gyroscopes corrected gunners' aim by anticipating the lead needed to hit a moving plane. Doe decided to test the small southern company's capabilities and, in May 1941, Wright's Automatic produced some

² *Wright's...50th Anniversary* brochure.

³ *Ibid.*

⁴ *Wright's...50th Anniversary* brochure; "Yarborough Mills/Wright Machinery Company," Open Durham, viewed online at <http://www.opendurham.org/buildings/yarbrough-mills-wright-machinery-company?full>, accessed on March 3, 2012; W. J. Berry Receiver to Wright's Automatic Tob. Co., August 14, 1930, Deed Book 101, page 675, Durham County Register of Deeds, Durham.

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large aluminum housings for Sperry Corporation subsidiary Ford Instrument Company. Ford Instrument Company designed gunfire-control systems that combined a number of coordinated components to improve aim from moving and rolling warships and, later, aircraft. When Wright's Automatic successfully produced the relatively simple aluminum housings for Ford Instrument Company, more complicated orders quickly followed. In a matter of months, all work at Wright's Automatic would be under defense subcontracts, building the complicated gunfire-control systems for the U. S. Navy.⁵

In late 1941, the Defense Plant Corporation (DPC) erected a new plant for Wright's Automatic to execute that work. The DPC had been created in 1940 by the Reconstruction Finance Corporation (RFC), an independent federal agency established during the Great Depression to make loans to banks, railroads, and other businesses. The DPC, in turn, built and equipped industrial facilities for private companies working with federal agencies administering war programs. The DPC, with Wright's Automatic as its designated agent, contracted with Durham architects Atwood and Weeks and contractor C. C. Woods Construction Company to build a plant in Durham. Atwood and Weeks was a Durham-based firm established in 1931; the firm had been busy in Durham throughout the Depression, designing the Post Office and Federal Courthouse on E. Chapel Hill Street and the Armory on Foster Street, both in downtown Durham.⁶

Construction likely began in September 1941, just after the DPC acquired a vacant portion of the property owned by Wright's Automatic at the corner of Holloway and Calvin streets. The construction contracts called for a building costing \$462,415.45, exclusive of the \$18,496.62 architect's fee to design the building and supervise construction and the \$16,707.20 contractor's fee to erect it. The building would be 106,000 square feet, contained in a two-story masonry building. Wright's Automatic would lease the building from the DPC with an option to purchase the property. The plant was ready by the first weekend in April of 1942 and work began immediately, despite the fact that it was Easter.⁷

⁵ *Durham Sun*, April 16, 1943; "The Little Top that Aims a Gun," *Popular Science* 147 (July 1945): 86-93; A. Ben Clymer, "The Mechanical and Analog Computers of Hannibal Ford and William Newell," *Annals of the History of Computing* 15 (1993): 19-34; *Wright News*, December 15, 1961.

⁶ Introduction to the Records of the Reconstruction Finance Corporation: Defense Plant Corporation, Record Group 234.5.2, National Archives, viewed online at <http://www.archives.gov/research/guide-fed-records/groups/234.html> on April 1, 2012; North Carolina Architects and Builders, <http://ncarchitects.lib.ncsu.edu/people/P000500>, viewed April 6, 2012; "Downtown Durham Historic District," National Register of Historic Places Nomination, N.C. Office of Archives and History, Raleigh, N.C., 1977.

⁷ Wright's Automatic Tobacco Packing Corp to Defense Plant Corp, September 12, 1941, Deed book 143, page 206, Durham County Register of Deeds, Durham; Defense Plant Corporation's contracts with Atwood and Weeks and C. C. Woods Construction Company, both dated September 15, 1941, are in Folders D-5 and D-6 in box 2 of 3, 1987 Accession to Richard H. Wright Collection, Duke University, Rare Book, Manuscript, and Special Collections Library, Durham; Reconstruction Finance Corporation to Wrights Automatic Mch. Co, 29 October 1946, Deed

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The plant was a product of its time and the requirements and anticipated ramifications of World War II. Each floor of the two-story building included two open workspaces flanking a central service core delineated by concrete-block walls faced with brick. The openness of the space allowed for changes to the layout of the work rooms, depending on the evolving needs of the military. The first-floor core could double as a bomb shelter. The guard house immediately north of the plant—the only point of entry into the small fenced compound—controlled access to the building twenty-four hours a day.⁸

The new building represented roughly a doubling of Wright's Automatic operational space; the company also needed to expand its workforce to meet what would be unprecedented demand. According to newspaper reports, some "highly trained workers" apparently moved to Durham from elsewhere—perhaps New York, where Sperry Corporation and Ford Instrument Company were located, or Detroit, where machinists already had skills that Wright's Automatic could use. Only essential, war-related construction was allowed at the time, and Durham received special permission to build "several hundred new dwelling units" to house the influx of workers. Wright's Automatic also hired locals with no relevant experience: students, sales clerks, housewives. For the first time, and under the direction of new general manager Leonard L. McClintock, Wright's Automatic hired women. By 1943, a quarter of the growing workforce at Wright's Automatic was female and McClintock expected this to go as high as half of the workforce by 1945. Wartime employment peaked at Wright's Automatic at 1,200 workers, up from roughly 150 before the war. The plant ran two ten-hour shifts; some departments worked seven days a week. However, since Wright's Automatic's own existing workforce had no experience in the specific equipment to be manufactured, all workers first needed training.⁹

In a massive collaborative effort, the United States Office of Education, the War Manpower Commission, the North Carolina State Board of Education, the Durham office of the United States Employment Bureau, and the Durham City School system "whipped together what is known as Vocational Education for War Production Workers," as the *Durham Morning Herald* reported. The program offered courses to qualified students and workers in machine shop procedure, using machine shops at American Tobacco and Liggett and Myers for the training. Machine shop classes were also conducted at the National Youth Administration residence center

Book 167, page 220, Durham County Register of Deeds, Durham; James Slaughter, Wright's Automatic employee 1941-1982, personal interview with the author, April 3, 2012.

⁸ Slaughter interview; Donald Yarboro, current owner and son of William W. Yarboro, Wright's Automatic employee from 1942-1976, personal interview with the author March 7, 2012.

⁹ "Rapid Advance in World of Business Marks McClintock," undated newspaper clipping (likely the *Durham Sun* April 16, 1943) from Army-Navy "E" Award press scrapbook, in the personal collection of Donald Yarboro; Anderson, 328; *Wright's...50th Anniversary* brochure; Slaughter interview; *Durham Morning Herald*, February 27, 1966; *Wright News* (December 15, 1961); *Durham Morning Herald*, December 15, 1961; and *Durham Morning Herald*, April 17, 1943.

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(the former Civilian Conservation Corps camp) on East Club Boulevard, and Duke University offered night classes in engineering drawing "for war workers." Similar training was available at North Carolina State College (now North Carolina State University) in Raleigh. Wright's Automatic added another twelve to twenty hours of training before new workers could begin at the plant.¹⁰

The training was demonstrably successful. In 1943, just over a year after switching industries, significantly expanding its workforce, and training or retraining that entire workforce, Wright's Automatic was awarded the prestigious U. S. Army-Navy "E" award for excellence in war equipment production. Throughout the war, approximately five percent of plants engaged in war production earned the "E" award. At the April presentation of the award at the Armory on Foster Street, local newspaper coverage was extensive and the ceremony itself was nationally broadcast on the radio.¹¹

The new plant for Wright's Automatic is possibly the only intact World War II-era building in Durham. Erwin Mills on Ninth Street also had a government contract during the war, likely producing sheets and tents for the military. The demand was so great that the mill added a third shift, but the work was housed in Erwin Mills' existing building. Another substantial war-related construction project in Durham was the 1942 Streamline bus depot at E. Main and Queen streets (not extant), built to receive soldiers in Durham on their way to training at Camp Butner in northern Durham County. Child-care centers were set up throughout the city of Durham with federal funding, due to the number of housewives entering the workforce to replace conscripts sent to war, but the facilities were housed in existing school buildings. Likewise, the four United Service Organizations (USO) clubs established in Durham at the time. The location of the housing built for the influx of highly trained workers at Wright's Automatic has not been identified.¹²

Postwar Period and the Space Age

After the war, the RFC established an Office of Defense Plants to liquidate DPC assets. The office declared the plant at Holloway Street surplus property and sold it to Wright's Automatic on November 15, 1946, for \$479,496.11.¹³

¹⁰ *Durham Morning Herald*, April 17, 1943; *Wright News* December 15, 1961; "Rapid Advance" newspaper clipping.

¹¹ *Wright's Automatic...50th Anniversary* brochure; "Army-Navy "E" Award," in the Navy Department Library, viewed online at http://www.history.navy.mil/library/online/e_award.htm#circ, accessed on March 3, 2012.

¹² Anderson, 323-324, 349, 328; Jim Wise, "Architecture," in *Brighter Leaves: Celebrating the Arts in Durham, North Carolina* (Durham: Historic Preservation Society of Durham, 2008), 63.

¹³ Introduction to the Records of the Reconstruction Finance Corporation: Defense Plant Corporation, Record Group 234.5.2, National Archives, viewed online at <http://www.archives.gov/research/guide-fed-records/groups/234.html>

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Throughout the war, Wright's Automatic had established itself as a reliable manufacturer in the growing field of defense technology, as evidenced by Sperry Corporation's purchase of a half-interest in the company in 1945. Sperry Corporation purchased the remaining half in 1949, and the Durham company became the Wright Machinery Division of Sperry Rand Corporation. As a Sperry Rand Corporation division, Wright Machinery continued getting defense industry contracts. Wright Machinery also returned, in part, to its packaging roots, with the thought of cushioning itself financially and protecting its workforce from the ups-and-downs of contract work. While the company went on designing and producing equipment to weigh and package pharmaceuticals, potato chips, cereal, crackers, cookies, and other foods, that work would remain subsidiary to the military contracts. In the years after the war, about fifteen to twenty percent of the company's work was related to product packaging.¹⁴

In the immediate post-war period, Wright Machinery's main business involved a variety of U. S. military subcontracts. Working with Westinghouse, Douglas Aircraft, and offshoots of Sperry Rand Corporation and Ford Instrument Company, Wright Machinery produced other vital components for U. S. Army and Air Force missiles, including the Bomarc, the Nike-Hercules, and the Jupiter. Wright Machinery built brake assemblies for Sargeant missiles and performed machining and assembly on casting for the firing sets and wiring harnesses. In 1960, Wright Machinery secured a contract directly with the U. S. Air Force for producing precision motors, work which led to subcontracts for components for a variety of National Aeronautics and Space Administration (NASA) spacecraft, including the Saturn rockets developed in the late 1950s and used in the Apollo moon missions in the late 1960s and early 1970s. Wright Machinery also produced precision motors for Westinghouse radar systems installed in military planes used in the Vietnam War. Employment at the plant doubled between 1964 and 1966, rising from 350 to over 700; officials projected Wright Machinery would employ 850 by 1967. In 1967, Westinghouse selected Wright Machinery as the company's "Supplier of the Month," and a Westinghouse purchasing agent, in presenting the award, reported that "Westinghouse has long been associated with Wright and considered Wright and Durham as an important partner in meeting our contractual obligations....Your equipment is used in our antenna systems and is playing an important part in our national defense program, particularly in Southeast Asia at the present time." While this award came after the close of the period of significance, it resulted from the established and successful working relationship between Wright Machinery and Westinghouse.¹⁵

on April 1, 2012; Defense Plant Corp, et al, to Wright's Automatic Mch. Co. November 26, 1946, Deed Book 167, page 218, Durham County Register of Deeds, Durham.

¹⁴ *Wright News* (September 15, 1961); *Durham Morning Herald*, November 10, 1963.

¹⁵ *Wright News*, April 24, 1959; July 14, 1960; March 30, 1962; and June 23, 1967; Yarboro interview; Slaughter interview; *Durham Sun*, June 23, 1967; *Durham Morning Herald*, Feb 27 1966; Jim Wise, "The Wright Stuff," undated *Durham Herald Sun* clipping in the collection of Donald Yarboro.

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Wright Machinery's dual-track business continued until the mid-1980s, when Wright Machinery's packaging division was sold to a Texas-based company. However, the company continued building precision components for a number of NASA projects. Sperry Rand Corporation had been designing motors for the mechanical arm used in the Space Shuttle program since 1972; by the time the arm was in use in space, in the mid-1980s, it used fifty-seven motors built by Wright Machinery. The company also made components for the Hubble Space Telescope and the International Space Station, among many other projects for NASA.¹⁶

In switching from designing and manufacturing packaging machinery to the manufacture of gunfire control systems in 1941, the company shifted into technology work, beginning with the analog computers that corrected aim on warships. At the time, the industrial economy of Durham itself was, unbeknownst to most, soon to enter its waning years. As the textile mills and cigarette factories of the late nineteenth and early and mid-twentieth centuries ran into labor strife and, in the case of tobacco, image problems, those industries suffered and withered locally. In the meantime, Durham would turn to medicine and technology as its new economic base. Wright's Automatic Machinery Company's early entry into the technology field put it ahead of the curve in Durham.

In 1986, the Wright Machinery division was acquired by Honeywell in a merger and, in 1996, sold to Tecstar Electro Systems, which was later purchased by Firstmark Aerospace. Tecstar Electro Systems sold the building to the current owner in 2003, but leased some space for a few years to continue manufacturing at the site. The building now houses a Durham Police substation in the east half of the ground floor and a storage business at the remaining ground floor and at the second story.¹⁷

¹⁶ Slaughter interview; *Durham Morning Herald*, April 13, 1984; "Former Wright's Automatic Machinery Company," Durham Landmark Designation Report (LD05-02), 2005.

¹⁷ Firstmark Aerospace history, viewed on the company's website at <http://www.firstmarkaerospace.com/about.asp> on April 6, 2012.

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Wright's Automatic Machinery Company Collection. Personal collection of Donald Yarboro, Durham.

"Rapid Advance in World of Business Marks McClintock" Undated newspaper clipping (likely the *Durham Sun* April 16, 1943). Army-Navy "E" Award press scrapbook. Personal collection of Donald Yarboro.

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James Slaughter. Wright's Automatic Machinery Company employee 1941-1982. Personal interview by the author on April 3, 2012.

Donald Yarboro. Current owner and son of William W. Yarboro, Wright's Automatic Machinery Company employee from 1942-1976. Personal interview by the author on March 7, 2012.

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Verbal Boundary Description

The boundary is shown by the bold line on the accompanying tax map at a scale of 1 inch equals 181 feet.

Boundary Justification

The boundary as drawn includes the parcel historically associated with the plant built for use by Wright's Automatic Machinery Company in 1942.

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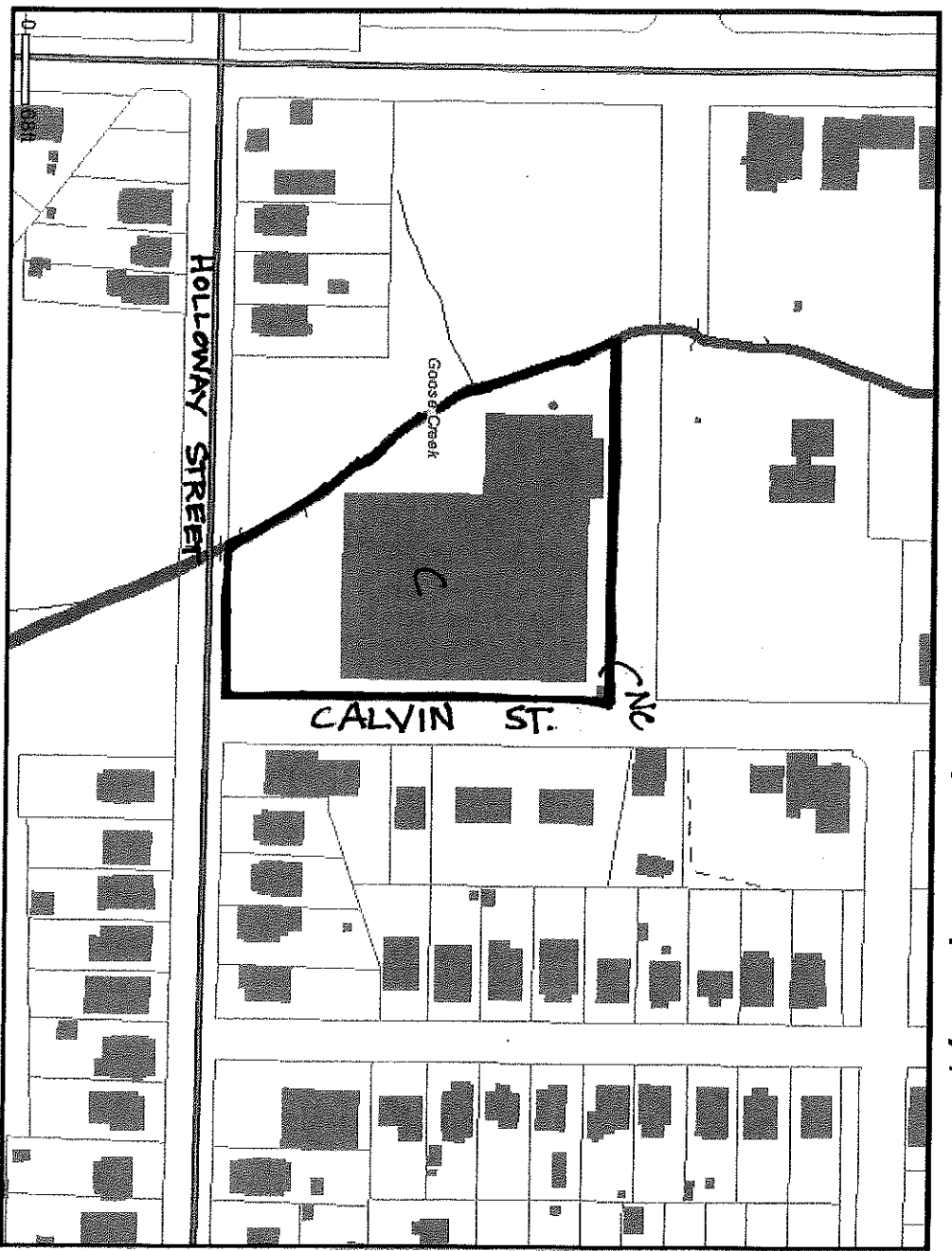
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Durham County, NC

Wright's Automatic Machinery Company
915 Holloway Street
Durham, Durham County, NC

All photographs were taken by Cynthia de Miranda in September 2011.
The digital files are at the State Historic Preservation Office in Raleigh, NC.

- Photo 1: Facade, view north
- Photo 2: East elevation, view southwest
- Photo 3: Rear elevation, view south
- Photo 4: Loading dock at rear, view southeast
- Photo 5: West elevation, view southeast
- Photo 6: South elevation of west wing, view northwest
- Photo 7: West elevation, view southeast
- Photo 8: Entrances at junction of west elevation and west wing, view northeast
- Photo 9: Interior, testing room at north end, view northwest
- Photo 10: Interior, first-aid room, view northeast
- Photo 11: Interior, stair, view southwest
- Photo 12: Interior, second floor, view southwest
- Photo 13: Guardhouse, view east

Wright's Automatic Machinery Company, Durham County



TAX MAP

915 Holloway Street
Durham, Durham Co.
North Carolina

1" = 181'

- C = Contri. loting
- NC = NonContri. loting
- NR Boundary

Friday, April 6 2012

