Survey and Reserach Report On The Grinnell/General Fire

Extinguisher Company Complex

1. Name and location of the property: The property known as the Grinnell/General Fire Extinguisher Company Complex is located at 1431 and 1433 West Morehead Street in Charlotte, NC. (UTM: 17 512140E 3898194N)

2. Name and address of the current owner of the property:

McCoy Holdings LLC

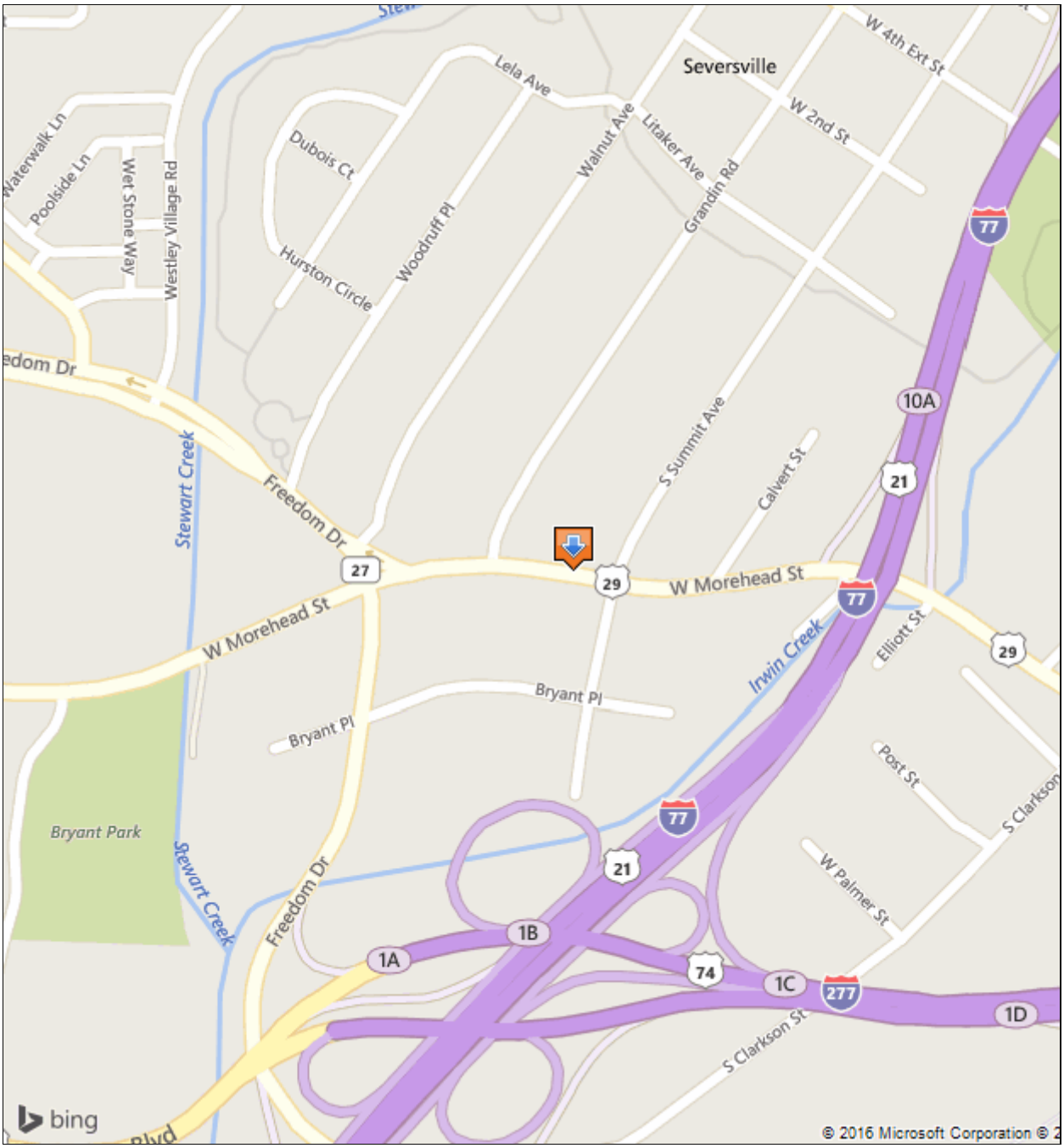
Edwin R. McCoy, III

521 Clanton Rd. Suite C

Charlotte, NC 28217-1360

3. Representative photographs of the property: This report contains representative photographs of the property.

4. A map depicting the location of the property: This report contains a map depicting the location of the property



5. Current deed book reference to the property: The current deed book reference to this property is Book 9849, page 242. The tax parcel numbers are: 06701203, 06701206, 0670206, and 06701207.

6. A brief historical sketch of the property: This report contains a brief historical sketch of the property prepared by Paula M. Stathakis.

7. A brief physical description of the property: This report contains a brief physical description of the property prepared by Frances Alexander and reviewed by Paula M. Stathakis and Stewart Gray.

8. Documentation of why and in what ways the property meets the criteria for designation set forth in N.C.G.S. 160A-400.5.

9. Ad Valorem Tax Appraisal: The Ad Valorem Tax value of the 4 acres of land and all improvements on the property is $380,860. The property is zoned I2.

Date of Preparation of this Report: October 1, 2001

Prepared By:

Paula M. Stathakis

2005 Ashland Avenue

Charlotte, N.C. 28205

Grinnell/General Fire Extinguisher Company Complex
Historical Context

Engineer and inventor Frederick Grinnell (1836-1905) founded The Grinnell/General Fire Extinguisher Company in 1892. Grinnell, a graduate of Rensselaer Polytechnic Institute, is best known for his significant innovations for automatic fire sprinkler systems, but he also worked as a construction engineer and manager for various railroad companies and built over 100 locomotives. In his career as an industrialist, Grinnell worked at a time in American history that nurtured industrial entrepreneurs. Grinnell's fame is largely associated with automatic fire sprinklers, but he arrived at that point by using his skills as an engineer, an innovator, and as a businessman.

Post-bellum America is characterized by the themes of expansion and economic growth. These developments were driven largely by industrialization. After the war, old industries transformed into modern big businesses, and the development of the railroads and the expansion of markets, innovations and inventions, and the availability of a large labor pool stimulated their growth. Technological innovations led to the creation of larger machines that required larger factories, which in turn produced massive output, which led to greater incentives to explore new market possibilities and increased capitalization. Inventors such as Henry Bessemer, Alexander Graham Bell, Thomas A. Edison, and George Westinghouse forever changed business practice, particularly with regard to speed and production. Even lesser known inventors such as Christopher Sholes [typewriter], J.W. McGuffey [vacuum cleaner] and Frederick Grinnell made technological contributions that affected the business and manufacturing world in ways that are incalculable.

In the late 1860s, Frederick Grinnell was Treasurer for Corliss Steam Engine, Manager of Jersey City Locomotive, and Superintendent of the Works for the Providence Steam and Gas Pipe Company in Providence, Rhode Island. Providence Steam and Gas Pipe originally made water pipes and devices for using exhaust steam from Corliss engines. In 1869, thirty-three year old Frederick Grinnell purchased controlling interest in the company and became its president. It was also in this year that Grinnell was introduced to the complexities of fire protection equipment. James Francis, a hydraulics engineer in Lowell, Massachusetts contracted the Providence Steam and Gas Pipe Company to install the standard fire extinguishing apparatus of the day, perforated pipes, in the numerous and massive cotton mills of Lowell. The perforated pipe system was invented in 1806, and was widely regarded as both essential and inefficient. The pipes were not automated and the system caused water damage and depleted water supplies.

Fire was a huge concern for cotton mills because they were poorly ventilated and the air inside was thick with highly combustible cotton dust and lint. Mill owners did not circulate the air in their plants because they believed that changes in humidity would weaken the fibers. These practices combined to make a serious fire hazard as well as dangerous and unhealthy working conditions for mill operatives.

In the 1870s, Grinnell turned his attentions to the problems associated with perforated pipes, and received his first patent in 1878 for an improved sprinkling tube that would not clog. An automatic fire-extinguishing device, however, had been designed in 1864 in England, but was not mass-produced because of lack of consumer interest. An American businessman named Henry Parmelee of New Haven, Connecticut invented an automatic fire sprinkler to install in his factory, the Mathushek Piano Manufacturing Company. Parmelee received a patent for this sprinkler in 1874, and a second patent in 1875. It was the second model that was installed in cotton mills in New Bedford, Massachusetts, and was subsequently in such high demand that the Parmelee Sprinkler Company was formed and in 1875, contracted with Providence Steam and Gas Pipe to install the systems. Parmelee eventually received five patents for his sprinkler

models and Grinnell modified the later versions to make them more cost effective and more heat sensitive. By 1878, Grinnell and Parmelee made an agreement that Providence Steam and Gas Pipe would manufacture Parmelee sprinklers on a royalty basis.

The popularity of the Parmelee and Grinnell sprinklers was initially limited to the textile industry. Automatic sprinklers were considered such a novelty that many businessmen were not convinced of their necessity. Salesmen sometimes went to the length of constructing 20'x 30' buildings in which to perform live demonstrations of automatic sprinklers in action. Ultimately, news of successful fire extinguishments or the news of fire disasters, such as the New York Triangle Shirtwaist Fire of 1911, became the best endorsements for the installation of fire prevention equipment.

Grinnell patented the first "sensitive sprinkler" in 1881, and between 1882-1890 these sprinklers were installed in more than 10,000 buildings and were credited for extinguishing over 1000 fires. In 1883, Grinnell sold the rights to the new sprinkler to a British industrialist, Sir William Mather, whose firm, Mather and Platt, Ltd., manufactured the sprinkler for Europe, Australia, and India, where the sprinklers became known as "Grinnells" or as "Le Grinnell".

In 1892, Grinnell consolidated Providence Steam and Gas Pipe Company with the Neracher and Hill Sprinkler Company of Warren, Ohio and the Automatic Fire Alarm and Extinguisher Company of New York creating the General Fire Extinguisher Company. By 1906, the General Fire Extinguisher Company had branch offices in Warren, Ohio and Charlotte, North Carolina.

By the late nineteenth century, Charlotte developed into a place of economic opportunity: a stark contrast to its ante-bellum history as a town of little consequence. The post-war restoration and expansion of railroad lines made Charlotte a local marketing and distribution center, especially for cotton. Charlotte's growth was fueled by cotton, banking, and transportation. Healthy wholesale and retail markets rested on these three pillars. Several cotton mills were built on the outskirts of the city, but Charlotte was not a mill town. Local businessmen, with exuberant personalities such as Daniel Augustus Tompkins at their helm, touted the small city as a prime location for new and expanding businesses. Tompkins graduated from Rensselaer Polytechnic Institute in Civil Engineering, but by the time he settled in Charlotte he owned *The Charlotte Observer*, a firm that built and equipped cotton mills, and he enjoyed a career as a civic promoter and lecturer.

Like many New South boosters, Tompkins preached the gospel of industrial development and enterprise as the key to the region's salvation from its post-war economic malaise. He and others like him focused exclusively on the region's untapped advantages: cheap, non-union labor, the proximity of mills to cotton fields, and the eagerness of local business and government to co-operate with newcomers. And like other boosters, he quietly fretted about the meager sources of southern capital and looked to northern investment to feed the panacea that would result from industrial expansion.

According to Tompkins, Charlotte was the premier setting for all industries, especially those affiliated with textiles. His research concluded that:

> …within a radius of one hundred miles around Charlotte are nearly 300 cotton mills, operating more than 3,000,000 spindles and 85,000 looms, and having a capital of $100,000,000 which not only shows Charlotte is a manufacturing center, but the remarkable fact that one-half of the looms and spindles of the South are within one hundred miles of this city."

The company records for General Fire Extinguisher do not indicate why Charlotte was chosen as a site for a branch office, but the city was clearly attractive from its position as an emerging southern commercial and manufacturing center in the heart of the region's textile corridor. By the time General Fire Extinguisher located to Charlotte in 1906, the county had 181 factories, 112 of them in Charlotte, with cotton manufacturing leading the way as the principal industry, accounting for 60% of the total manufacturing capital.

The General Fire Extinguisher Company, with offices originally located in the Realty Building on North Tryon Street and the plant in North Charlotte, relocated in 1929 to the West Morehead Street site. By the 1920s, West Morehead Street was the best location for large manufacturing and industrial concerns in Mecklenburg County. The city had divided into discreet sections of government, commerce, manufacturing, and residential suburbs. Downtown was plainly the locus of government, business and commercial offices. By 1920, eleven modest skyscrapers were built along Trade and Tryon Streets. The best location for heavy industry, manufacturing and warehouses was the newly developing corridor along West Morehead Street, served by the Piedmont and Northern Rail Road and connected by that rail line to the Southern Railway. In addition to railroad spur lines, West Morehead had room to grow on in the 1920s.

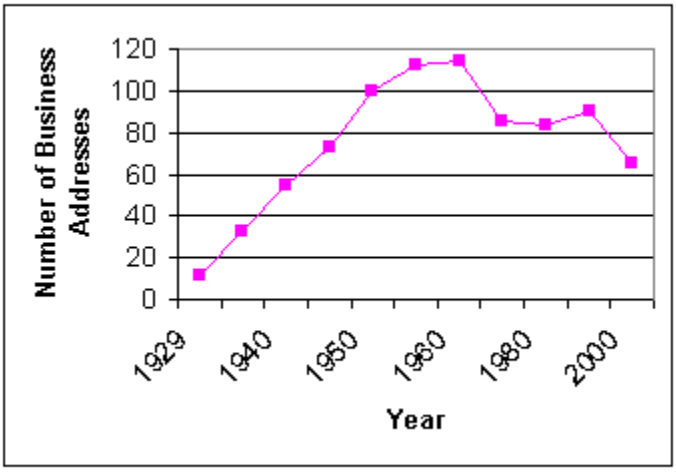
By 1930, the industrial sector along West Morehead began at the 800 block. East of that block were residential areas; several blocks of African-American houses giving way to white residences at the 100 block. West of the 800 block was a progression of factories and warehouses. Companies such as American Aniline Products, Bascom Weill Cotton Waste, Charlotte Beverage Wholesale, Carolina Transfer and Storage, International Harvester and various automobile accessories and parts manufacturers occupied the blocks up to the 1400 block of West Morehead Street. The General Fire Extinguisher Company and the Coca Cola Bottling Company took up most of the 1400 block. Within three blocks of the plant were two small restaurants (both for whites), a barber shop (for whites) and Pender's Grocery Store, suggesting that at least in the 1930s, the area was devoted to manufacturing, and workers had no need for eating houses, or other service vendors. The grocery store appears to have been a convenience, and otherwise seems out of place in the succession of large industrial structures that gradually developed on West Morehead Street. Through the 1930s, the extent of development on West Morehead did not stretch much beyond this block.

In 1940, the blocks of West Morehead close to the intersection with South Tryon were still partly residential, but small businesses had started to locate in the blocks near town. The manufacturing and industrial aspect of the street, built on the open areas to the west of the

Southern Railway crossing (between the 500 and 800 blocks) extended a few blocks past the General Fire Extinguisher Company to Wilkerson Boulevard. By the 1950s, there was significant growth along West Morehead Street, corresponding to the post-war boom years. By 1955, there were 112 business addresses listed for West Morehead Street; one hundred more than were there when General Fire Extinguisher relocated its offices there in 1929.

Very little can be gleaned about the workers who were lucky enough to have employment during the depression or who spent their careers at General Fire Extinguisher. Only a few employees can be traced though the City Directories, so it is impossible to gauge how many people may have been employed there or how close they lived to their job site, or how the work force was divided between whites and African-Americans, and during the Second World War, how many blue-collar employees might have been female. It is evident from City Directories that the company employed African-Americans, but it is not clear if they worked with the white employees or if the shop was segregated.

In 1944, the firm changed its name to The Grinnell Company. In 1968, the company was sold to ITT, and in 1976, the Fire Protection division was separated from Grinnell and sold to the Tyco Corporation. In 1999, the company left the West Morehead Street location and moved it offices to South Tryon Street and its supply center to Baxter Street. The late twentieth century ushered in a new age of development for industrial development and location in Charlotte and Mecklenburg County. During the 1960s, urban industrial locations languished as companies exploited sites on the city periphery that were easily accessible by interstate, rather than by rail. Between 1971 and 2000, the number of business addresses on West Morehead Street declined steadily. The 1961 *Charlotte City Directory* street listing for West Morehead Street is noteworthy because it shows, for the first time, a number of addresses listed as vacant. By 1980, there are only a few company names that are familiar from forty years before: Allied Van Lines, Crane Supply Company, Coca Cola, and ITT Grinnell.



Decline in the number of business addresses on West Morehead Street 1929-2000.

Decline in this former industrial corridor in Charlotte may be attributed to factors relating to economic change, technological innovation, changes in land use, and urban growth and infrastructure expansion. The construction of I-85 promoted the growth of manufacturing firms to the outskirts of the city, leaving the original locations to decay. The economy of Charlotte in the later twentieth century has also been less reliant on manufacturing. The Grinnell/General Fire Extinguisher Company Complex is among the few original buildings dating from Charlotte's formative period of early twentieth century growth still extant and intact.

Architectural Description

Office building and Manufacturing Building

The General Fire Extinguisher Company buildings at 1431 and 1433 West Morehead were constructed in 1929 and 1930. The two extant buildings of the original four are and office building that faces West Morehead Street and the former manufacturing plant that sits behind the office building and extends along the Piedmont and Northern Railroad line between West Morehead and Bryant Streets. The humidifier repair shop and a pipe shed have been demolished.

The office building was built in 1929 and is a two-story brick structure with a long, narrow plan. The site slopes north to south and there is a raised basement in the rear of the building. The façade and the west side elevation are divided into bays by brick pilasters with stylized concrete caps. The façade has an ornamented central entrance with wide concrete surrounds and reveals, restrained eclectic detailing, an incised name plate, and replacement, double leaf glass doors. The entrance is flanked by paired steel sash windows capped by flat arches. The stepped parapet hides the flat roof. In 1965, the rear was extended with a brick addition that repeats the brick pilasters on the west elevation. On the south (rear) elevation are steel sash windows and single leaf doors on the first and second stories.

The interior was divided into offices of varying size behind a small entrance vestibule. The vestibule retains its terra cotta tile floors and interior French doors, and directly opposite the entrance is an open staircase, with square paneled newels and square balusters, rising to the second floor. In recent decades, the interior was subdivided for additional offices, wood paneling was installed and a dropped acoustical tile ceiling was added. The electrical and mechanical systems were located in the basement.

With adaptive reuse, an addition, the equivalent of two bays in depth, extends the office building to the rear. The addition repeats the steel sash windows and pilasters found in the original building. A new entrance has been added in the center of the west elevation to allow access from the parking lot. The new entrance has two single leaf, metal sash doors that incorporate portions of the original windows as side lights and transoms, and a simple, suspended canopy covers the doorway. A single leaf door allows handicapped access, and double leaf doors open into the basement.

In the interior, the later partition walls have been removed, and the first and second floors have been reconfigured to create several large, open work areas. The original staircase remains in place, but a new enclosed stairwell with exterior access for the handicapped has been added to meet modern fire codes. In the center of the two floors are the new lobbies with freestanding blocks containing the restrooms and elevator shafts. A third stairwell has been added in the rear of the building. On the second floor, original wood and glass partition walls have been restored.

The manufacturing building, built in 1930, illustrates several structural innovations and design trends characteristic of early twentieth century factory construction. The tall, one story building has brick walls, a steel framing system, comprised of I-beam piers and heavy Pratt roof trusses, almost contiguous banks of large steel sash windows, and large sawtooth skylights. The sawtooth monitors give the end elevations their distinctive M-shaped profile as well as providing light to the wide interior space. With no architectural ornamentation, the building, which has a long, wide, rectangular floor plan, illustrates a concern with maximizing production efficiency and the elimination of unnecessary elements. This would have been in accord to the principles of Scientific Management as established by Frederick W. Taylor, efficiency guru of the early twentieth century. A rail shed abutted the north elevation of the manufacturing building, allowing a spur line to enter the shed for easy loading and unloading in all types of weather. An open shed extended the rail shed to the west, but was later enclosed with concrete block walls. A recessed truck loading dock is in the center of the long south elevation, which opens to Bryant Street.

The manufacturing building has a vast interior that was broken only by a row of I-beam supports and a recessed loading dock in the middle of the south wall. An office and restroom block is in the corner formed by the dock and the south wall. The office has tongue and groove walls and divided light windows looking out on the factory floor. A separate pedestrian entrance led from Bryant Street to the office. The roof trusses are exposed, and there is a tongue and groove wooden ceiling. At the northwest corner is the boiler room, which is separated from the main production room by a metal clad fire door. A series of double leaf, tongue and groove doors in the north wall opened into the rail shed, which was equipped with a traveling crane for moving the heavy steel components onto the rail cars.

The building has undergone a certified rehabilitation that has required minor alterations for reuse as offices. The exterior is largely unchanged. A metal frame canopy covers two former loading doors in the east and west elevations have been fitted with simple, metal sash doors, and the west entrance. The recessed loading dock has been equipped with a ramp for handicapped access. In the rail sheds, the later concrete block walls have been removed, and the north elevation of the two sheds have been fitted with glass walls. The interior has been divided into three large rooms, but the sense of immense space is maintained by the use of glass walls and doors. The two modern office rooms have low, removable partition walls that terminate well below the roof trusses. Along the north wall, the double leaf wooden doors and the fire door have been fixed into place, with glass door replacements. On the interior, a second floor has been added to the tall rail shed, and staircases provide access from the first floor of the manufacturing building to this addition. The Grinnell/General Fire Extinguisher Company Complex retains its architectural integrity, and the 2.942 acre property includes the office building and the former factory.

Architectural Description prepared by Frances Alexander, 2-08-01. Reviewed by Paula Stathakis and Stewart Gray.

Rensselaer Polytechnic Institute Alumni News:

http://www.rpi.edu/dept/NewsComm/sub/fame/inductees/frederickgrinnell.html

Jerome S. Pepi, *The Early History of Grinnell Corporation and the Fire Sprinkler Industry*, (January 25, 1996), *p. 1. http://*www.tyco-gem.com/rnd/res/ehistgnl.

Ibid., p. 2.

Ibid., p. 3.

5 *Ibid.*

[6] *Ibid*., p. 4.

Carolyn Frances Hoffman, "The Development of Town and Country: Charlotte and Mecklenburg County, North Carolina, 1850-1880" (Ph.D. dissertation, University of Maryland, 1988), p. 181.

David R. Goldfield, *Cotton Fields and Skyscrapers. Southern City and Region, 1607-1980,* (Baton Rouge: Louisiana State University Press, 1982), pp. 121-3.

Daniel Augustus Tompkins, *The History of Mecklenburg County and the City of Charlotte From 1740-1903*, (Charlotte: Observer Printing House, 1903), p. 183.

Ibid.

Charlotte City Directory, 1911.

Thomas Hanchett, *Sorting Out the New South City. Race, Class, and Urban Development in Charlotte, 1875-1975,* (Chapel Hill: University of North Carolina Press, 1998), pp. 183-203.

Frances Alexander, National Register of Historic Places Registration, (Former) Grinnell/General Fire Extinguisher Company Complex, 2-08-01.

Charlotte City Directory, 1934.

Charlotte City Directory, 1940.

Charlotte City Directory, 1955.

Charlotte City Directory, 1934.

Charlotte City Directory, 1961, 1970, 1980.