

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 (Former) Carolina Transfer and Storage Company Building

other names/site number _____

2. Location

street & number 1230 West Morehead Street N/A not for publication

city or town Charlotte N/A vicinity

state North Carolina code NC county Mecklenburg code 119 zip code 28208

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 forth 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.)

Jeffrey Crow SHPO 10/21/99
Signature of certifying official/Title Date

State of 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 commenting official/Title Date

State or Federal agency and bureau _____

4. National Park Service Certification

I hereby certify that the property is:

- entered in the National Register.
 See continuation sheet.
- determined eligible for the National Register
 See continuation sheet.
- determined not eligible for the National Register.
- removed from the National Register.
- other, (explain:) _____

Signature of the Keeper

Date of Action

_____	_____
_____	_____
_____	_____
_____	_____

(Former)

Carolina Transfer and Storage Co. Building Mecklenburg County, N.C.

Name of Property

County and State

5. Classification

Ownership of Property (Check as many boxes as apply)

Category of Property (Check only one box)

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

- private, public-local, public-State, public-Federal

- building(s), district, site, structure, object

Table with 2 columns: Contributing, Noncontributing. Rows for buildings, sites, structures, objects, Total.

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

Number of contributing resources previously listed in the National Register

N/A

0

6. Function or Use

Historic Functions (Enter categories from instructions)

Current Functions (Enter categories from instructions)

COMMERCE/TRADE/warehouse

COMMERCE/TRADE/business

7. Description

Architectural Classification (Enter categories from instructions)

Materials (Enter categories from instructions)

Early Twentieth Century

other: utilitarian

foundation Concrete

walls Brick

Concrete

roof Asphalt

other

Narrative Description

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

Please see continuation sheets.

Name of Property

County and State

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.)

- Property is associated with events that have made a significant contribution to the broad patterns of our history.
Property is associated with the lives of persons significant in our past.
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.
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:

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

Areas of Significance

(Enter categories from instructions)

- ARCHITECTURE
COMMERCE
ENGINEERING

Period of Significance

1927-1948

Significant Dates

1927

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

Barnes, G.T., engineer

Narrative Statement of Significance

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

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:

(Former)
Carolina Transfer and Storage Company Building Mecklenburg Co., N.C.
Name of Property County and State

10. Geographical Data

Acreeage of Property 1.088

UTM References

(Place additional UTM references on a continuation sheet.)

1

17	5	12	5	80
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Zone Easting Northing

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Zone Easting Northing

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4

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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 Frances Alexander and Richard Mattson
organization Mattson, Alexander & Associates, Inc. date June 15, 1998
street & number 2228 Winter Street telephone (704) 569-8130
city or town Charlotte state N.C. zip code 28205

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 Mr. Michael O'Brien, Neighboring Concepts, Inc.
street & number 1230 West Morehead Street telephone (704) 374-0916
city or town Charlotte state N.C. zip code 28208

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 listings. 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 20503.

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**(Former) Carolina Transfer and Storage Company Building
Charlotte, Mecklenburg County, N.C.**

7. Narrative Description

Constructed in 1927, the (Former) Carolina Transfer and Storage Company Building is located at 1230 West Morehead Street, southwest of downtown Charlotte. The building occupies an irregularly shaped lot that was laid out with orientations to both the former Piedmont and Northern Railway (on the east side) and West Morehead Street (on the south side). Calvert Street, a dead-end side street, runs along the west side of the building. Because of the easy access to the railway and highway connections, the West Morehead corridor developed into an industrial and warehousing district between the 1920s and 1950s with residential neighborhoods, notably Wesley Heights (N.R. 1995), to the north. Industrial, warehousing, and commercial properties still line West Morehead Street and the nearby side streets.

The (Former) Carolina Transfer and Storage Company Building has a utilitarian design that reflects its role as a warehousing facility geared to both rail and truck traffic. Its irregular dimensions conform to the shape of the lot, thus facilitating the transfer of goods on both the highway and railway elevations. Four stories high, the building was built with flat slab construction, and the reinforced concrete slab and piers, articulated on the exterior with red brick infill, made the building largely fire-proof. Constructed for warehouse use, the building has few windows, but steel sash windows are found on the upper floors of the front (West Morehead) and on the rear elevation. The flat roof is concealed behind a parapet which is slightly stepped on the front elevation. The concrete vertical piers have molded caps to suggest classical pilasters.

Typical of warehouse designs of the period, windows were generally eliminated from the side (east and west) elevations. The shorter east elevation (facing the Piedmont and Northern Railway line) has an elevated, inset loading platform reached by two large loading bays with roll-up steel doors. The longer west side facing Calvert Street has an inset, three bay truck loading dock at the south end of the elevation nearest West Morehead Street. Several first story windows along this elevation have been infilled with concrete block, but the two original doorways on the west side survive. The rear (north) elevation has a projecting stairwell and a projecting freight elevator shaft on the east and west sides. The windows on the first story have been infilled with concrete block, but the upper story steel sash windows and the rear loading door survive intact.

The former warehouse retains its architectural integrity with only a few alterations. On the first story of the West Morehead elevation, an inset truck loading bay originally occupied the three westernmost bays (the truck dock remains open on the west side facing Calvert Street). Probably during the 1960s, with increased traffic along Morehead Street, truck access on this elevation became more difficult, and these three bays facing the street were infilled with brick. Concurrently, first floor offices which occupied the

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easternmost bays of the facade were modestly renovated with a new brick veneer (to match the three western bays), a modern doorway, and arched, steel sash windows. The principal alterations to the interior are limited to these modern administrative offices.

The interior of the four story building is comprised primarily of open storage space. Each floor opens to the stair wells and large freight elevators, and heavy steel, sliding fire doors separate the storage areas from the elevators and stair wells. In keeping with its fireproof design, the interior is constructed almost exclusively of concrete and steel. The stairways are a solid unit of precast concrete with steel railings, and the freight elevators are steel. Each floor has a large room with a concrete floor and ceiling slabs and a series of concrete mushroom columns, the flared capitals of which press against square, concrete slabs. The slab and mushroom capital designs illustrate two of the early twentieth century improvements to flat slab construction. Both designs permitted the dispersal of ceiling loads which eliminated the need for ceiling girders and beams and reduced the number of columns required for structural support. The system, which maximized both vertical and horizontal space, was particularly well-suited for warehouse design. The east and west walls of the upper three floors are lined with rows of cold storage lockers with steel doors.

In addition to the (Former) Carolina Transfer and Storage Company Building, the parcel also contains a tall, metal sheathed, storage building (ca. 1965). The 1.088 parcel contains only the contributing warehouse building and the non-contributing metal storage building.

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8. Statement of Significance

Summary

Constructed in 1927, the (Former) Carolina Transfer and Storage Company Building is recommended for the National Register under Criterion A for commerce and under Criterion C for architecture and engineering. Under Criterion A, the four story, masonry building exemplifies the commercial storage warehouses built in Charlotte during the early twentieth century when the city emerged as a regional industrial, distribution, and commercial center. The growing commercial and manufacturing base of the city required a number of warehousing and storage facilities, sited with both rail and highway access and proximity to the center city. As a sign of its increasingly urban status, Charlotte supported eight storage companies and eleven transfer or moving companies by the late 1920s. General warehouses provided a variety of storage and shipping services, and as the 1928 Charlotte City Directory stated, the Carolina Transfer and Storage Company, was a "transfer, hauling, moving, and packing [company] and a bonded warehouse", serving an array of customers including residential clients, manufacturing firms, and commercial ventures. A Piedmont and Northern Railway spur line, which skirts the east elevation of the building, gave the warehouse connections with the cotton mills of western Mecklenburg and Gaston counties and the rail transfer yards of central Charlotte.

The Carolina Transfer and Storage Company was built to face West Morehead Street, which developed as a gateway to downtown Charlotte and an industrial corridor after the construction of nearby Wilkinson Boulevard, the first highway in North Carolina. West Morehead provided a direct route between downtown Charlotte and Wilkinson Boulevard, and the (Former) Carolina Transfer and Storage Company Building was one of the earliest properties constructed along the new industrial strip. From its strategic location on West Morehead, the transfer company offered motor trucks easy access both to the business district of the center city and to the new east-west highway, which, like the Piedmont and Northern Railway, linked Charlotte and the booming textile center of Gastonia. The importance of easy loading and access to major rail and highway routes to such warehousing and transfer facilities is underscored by the design of the building. The plan of the warehouse conformed to its roughly triangular site, defined by West Morehead and the Piedmont and Northern spur line, and the building incorporated truck and rail loading bays on three sides, allowing the company to offer its customers both forms of transportation. The former transfer company building survives as one of the best preserved commercial or industrial properties within the West Morehead Street industrial corridor.

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Charlotte, Mecklenburg County, N.C.**

The (Former) Carolina Transfer and Storage Company Building is also eligible under Criterion C for architecture and engineering. This well-preserved, multiple story loft building was designed with a utilitarian appearance, its reinforced concrete, flat slab construction articulated on the exterior with brick infill between the concrete grid. Typical of warehouses of the period, steel sash factory windows were limited to the front and rear elevations. In its use of flat slab construction, the former warehouse exemplifies the innovations in structural engineering and factory design that transformed industrial construction during the first decades of the twentieth century. Technological advances, particularly in the reinforcing systems used in concrete construction, made factories and warehouses largely fireproof, as well as offering numerous structural advantages over either heavy timber mill construction or steel framing. Of particular importance in factory and warehouse design, the great strength of reinforced concrete reduced the number of vertical members needed for structural support, and even multiple story factories or warehouses could be built with open interiors, unbroken by numerous piers, and flexible plans, both of which greatly increased the storage capacity of warehouses.

In addition to its use of flat slab construction, the Carolina Transfer and Storage Company warehouse also employed two of the principal refinements or innovations in flat slab construction, the mushroom column and the drop slab system. Developed in 1907 and 1908 by C.A.P. Turner, a Minneapolis engineer, the mushroom column, named for its flared capital, resulted from Turner's experiments in column and slab framing. Turner devised a concrete reinforcing system, using the mushroom column, which eliminated the need for girders, and his 1908 patent was the first sophisticated reinforcing technique for an all-concrete, girderless construction. The Turner slab and mushroom column system quickly became the standard for concrete construction although experimentation in concrete construction continued, and other engineers developed variations on the Turner system. One refinement, known as the drop slab system, was developed in 1911 by Chicago engineers, Condron and Sinks, for a Sears and Roebuck Company warehouse. Their drop slab system gave the mushroom column a conical flare and introduced a small, square, concrete pad, or drop slab, which was placed between the flared capital and the underside of the floor slab. The added, concentrated support of the drop slab enabled the flat slab to absorb the particularly heavy floor loads of warehouses without the need for girders or additional vertical piers. As reflected in the design of the Carolina Transfer and Storage Company, these structural and fireproofing innovations in factory and warehouse design were quickly adopted and disseminated nation-wide by the 1920s. The (Former) Carolina Transfer and Storage Building has undergone few alterations and survives as a well-preserved example of early twentieth century warehouse design.

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Charlotte, Mecklenburg County, N.C.**

Historical Background and Commerce Context

Sited within the industrial corridor of West Morehead Street along the Piedmont and Northern Railway, the (Former) Carolina Transfer and Storage Company Building serves as a tangible reminder of the diverse commercial, industrial, and warehousing operations which made Charlotte a flourishing New South city by the early twentieth century. With the end of the Civil War, and the subsequent reconstruction and expansion of the rail network, regional leaders throughout the South envisioned a new order based on industrialization, specifically cotton production, and urban growth to replace the agrarian society of the past. Embracing the New South ethos wholeheartedly, civic leaders campaigned vigorously for the construction of cotton mills, which by World War I numbered over 300 within a 100-mile radius of Charlotte (Woodward 1951: 31; Lefler and Newsome 1954: 474-489). Charlotte, and Mecklenburg County, became the center of the Southern textile manufacturing industry, and by the 1920s the Piedmont region of North and South Carolina had surpassed New England as the leading textile producer in the world (Mitchell and Mitchell 1930; *Charlotte Observer*, 28 October 1928). Textiles, in turn, attracted other industries to Charlotte, and by the 1920s, the city could boast that its 141 factories manufactured eighty-one different products (Hanchett 1993: 202). With industrialization, the population of Charlotte soared from 7,000 in 1880 to over 82,000 in 1929, becoming the largest city in the two Carolinas (Sixteenth Census 1940).

Although cotton and textile production formed the economic mainstay of Charlotte during the early twentieth century, other industrial operations were drawn to the city with its good rail system, expanding work force, plentiful and inexpensive power, and dynamic economy. Machine shops, pump and elevator manufacturers, foundries, engineering firms, mattress factories, and cotton oil processors were just some of the industries which followed in the wake of the textile boom. By the early twentieth century, the city supported a diversified industrial base, an extensive rail network, and a true urban infrastructure complete with banking, insurance, and commercial services. Tobacco magnate, J.B. Duke, and his Southern Power Company (later Duke Power Company) expanded aggressively, supplying both industrial and residential clients with inexpensive electricity. With a robust industrial economy and urban prosperity came a strong commercial base, one which served large areas of the industrialized Piedmont as well as local consumers. As the Charlotte Chamber of Commerce boasted in a 1928 advertisement, Charlotte served as a regional commercial center with a 150-mile trading radius and more than 4,500,000 consumers (Charlotte City Directory 1928).

Because of its inland location, the economic success of Charlotte had been wholly dependent upon good rail transportation. Sustaining little damage during the Civil War, Charlotte had been quick to recover and even expand its rail network, and by 1875,

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six railroads were routed through the city, giving Charlotte more rail connections than any other city between Washington, D.C. and Atlanta (Hanchett 1993: 72). Charlotte benefited from continued rail expansion and consolidation throughout the late nineteenth century, which created both the powerful Southern Railway system, with its connections to New Orleans and Baltimore, and the smaller, but strategic, Piedmont and Northern Railway, an interurban line built to link parts of the industrial Piedmont, with Charlotte as its terminus (Fetters and Swanson 1974: 12; Hanchett 1993: 74). An important aspect of the regional transportation system, the Piedmont and Northern served both passengers and freight on its 150-mile route, generating so much traffic that its motto, "A Mill to the Mile", was accurate for much of its length (Glass 1992: 57-58).

With the increase in manufacturing and trade, auxiliary operations quickly followed to serve these expanding sectors as well as a growing population and an increasingly specialized urban economy. Principal among these secondary operations were the large warehouse and storage companies that provided varying degrees of service to a diverse, urban clientele. Some storage companies offered only warehousing with no moving or transfer services while transfer companies were often simply shipping companies. Still other warehousing operations, like cold storage facilities for perishable goods, were erected to serve specialized needs. The Carolina Transfer and Storage Company, as the name suggests, offered both general storage and moving and hauling services; the company provided moving and storage for residential clients, merchandise storage for stores and commercial ventures, and general warehousing facilities for manufacturers. As a sign of the growing urban status of Charlotte, by the late 1920s, the city supported eight storage warehouses and eleven transfer and moving companies (Charlotte City Directory 1928).

The Carolina Transfer and Storage Company had been formed by Charlottean, W.D. Wilkinson, as a general warehousing facility, providing transfer, hauling, moving, and packing services. By the 1920s, Wilkinson, with several other family members, owned and operated a number of interrelated business ventures from an office on East Trade Street in downtown Charlotte. Wilkinson's Carolina Company appears in the 1928 city directory as a real estate, rental, construction, and road paving enterprise, while his Interurban Land and Investment Company appears to have sold industrial real estate along the Piedmont and Northern Railway. Wilkinson was also president of an insurance business, the Carolina Indemnity Company, and was an officer in a second land development company. Only the transfer and storage company survived the Depression of the 1930s. By 1940, the Carolina Company and the Interurban Land and Investment Company were both out of business, but Carolina Transfer and Storage had become a member of the national moving company, Allied Van Lines. The Wilkinson

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family continued to operate the transfer and storage company until the early 1990s (Charlotte City Directories, 1928, 1930, 1940, 1950, 1960, 1970).

Wilkinson built his new storage building along newly opened West Morehead Street, which connected downtown Charlotte with Wilkinson Boulevard, recently completed as the first state highway in North Carolina. With these transportation connections, West Morehead quickly became prime industrial real estate. As the growing and dynamic economy was becoming both increasingly diverse and specialized, the city center was emerging as primarily a commercial and financial center. Manufacturing concerns and warehousing facilities began moving away from downtown to sites along the principal rail lines, creating spoke-like and *de facto* industrial zones radiating out from the city core. This pattern first appeared locally in the 1890s south of downtown in the suburb of Dilworth, where factories lined the frontage property between South Boulevard and the Southern Railway, but the emergence of solidly industrial areas occurred along the other rail corridors of Charlotte. At first, streetcar service was required for this outward movement, and residents began moving to newly established suburbs as the Southern Power Company and other private enterprises established streetcar lines to the new neighborhoods and businesses. However, the introduction of automotive travel, and freight shipments by truck, ended the need for streetcar service, and this centrifugal pattern accelerated. By the 1920s, industry was searching for outlying sites which offered both rail and highway access.

One such industrial corridor developed during the 1920s along West Morehead Street, which followed a southwesterly route from downtown Charlotte and connected with Wilkinson Boulevard. The new highway linked Charlotte and Gastonia by car and truck just as the Piedmont and Northern had provided a rail line between Charlotte and the mill towns of neighboring Gaston County. With both rail and highway connections and proximity to the Piedmont and Northern's Mint Street yards and freight station, West Morehead became a desirable location for industry, and a number of light industrial, warehousing, and commercial enterprises had been built along the new route by the end of the 1920s (Hanchett 1993: 16; Fetters and Swanson 1974: 69). The (Former) Carolina Transfer and Storage Company Building was one of the earliest properties constructed along this industrial corridor (Sanborn Map Company, 1929).

As a link between the central business district and Wilkinson Boulevard, West Morehead Street was especially well-suited for manufacturing firms and warehousing facilities because of changes in transportation technology. Prior to World War I, freight moved almost exclusively by rail, but by the 1920s, motor trucks began to play an important role in moving merchandise and manufactured goods. Consequently, by the 1920s, most factories and warehouses, like the Carolina Transfer and Storage Company, incorporated truck loading bays within their designs, and older industrial facilities underwent remodeling to accommodate the new mode of shipping. The

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Carolina Transfer and Storage Company warehouse had truck bays along both its west elevation (facing Calvert Street) and its south elevation along West Morehead (now infilled along the south elevation), and a rail loading dock on the east elevation facing a Piedmont and Northern spur line.

West Morehead had been a minor street on the edge of downtown Charlotte until local developer, E.C. Griffith, extended the street across Irwin Creek in 1927. In 1921, Griffith's Charlotte Investment Company had platted a residential neighborhood, Wesley Heights (N.R. 1995), on a hill west of the city center. Sales in the new subdivision had been active despite the absence of trolley service, and the construction of the new highway nearby and the popularity of Wesley Heights prompted Griffith to extend West Morehead across the creek. In the following years, several residential streets within Wesley Heights were completed through to West Morehead Street (Gatza 1995).

Perhaps through his interests in the Piedmont and Northern Railway, Wilkinson anticipated the western extension of West Morehead Street because by October 1926, his Carolina Company had secured a building permit to erect a warehouse on a West Morehead site with a rail siding on the Piedmont and Northern. G.T. Barnes, house engineer for the Carolina Company, designed the four story, fire-proof, reinforced concrete building which was estimated to cost \$150,000 (Charlotte Building Permit No. 7193, 5 October 1926). When completed in 1927, the new warehouse had a slightly triangular shaped plan to fit its site (and thereby maximize use of the parcel), and a freestanding garage for trucks (replaced ca. 1965), stood to the rear (Sanborn Map Company 1929).

In 1920, there had been only one industrial operation, a foundry, located along West Morehead, but with its new connections, sales and construction both along the new thoroughfare and within Wesley Heights were brisk between 1927 and 1930. Several of the new properties had been built by the Wilkinsons' Carolina Company including the Mecklenburg Oil Company, which stood behind Carolina Transfer on a site also bounded by Calvert Street and the Piedmont and Northern. Other companies built stores, filling stations, automobile showrooms, and by 1929, a branch of the Crane Corporation had also built a large warehouse along West Morehead. The following year, the Art Deco Charlotte Coca-Cola Bottling Company (N.R. 1997) facility had opened across the street, and another national company, the Grinnell Company, soon built a substantial facility west of the Coca-Cola bottling works. By the early 1930s, West Morehead had become one of the principal manufacturing zones in Charlotte (*Charlotte City Directories* 1920, 1929).

West Morehead continued to attract industrial and warehousing facilities until the 1950s and early 1960s, but the construction of Interstate Highway 85 to the north and

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east reoriented much of the industrial geography of the city after the early 1960s. Some of the original occupants along West Morehead, like Carolina Transfer and Storage and the nearby Charlotte Coca-Cola Bottling Company, continued to operate in their West Morehead locations until the 1980s and early 1990s, but other properties became vacant or underused. In recent years, however, there has been a renewed interest in the area because of the easy access provided by Interstate Highway 77 (adjacent to the Carolina Transfer and Storage Building) and because of increased commercial development in downtown Charlotte, particularly on the south and west sides near the new football stadium, which has an entrance along Morehead Street.

The Carolina Transfer and Storage Company continued in operation until the early 1990s when building obsolescence and spatial needs forced the company to sell the property. The current owners acquired the property in 1997 with plans to rehabilitate the building for office use.

Architectural and Engineering Context

The (Former) Carolina Transfer and Storage Company Building is also eligible under Criterion C for architecture and engineering. Advertised in the 1928 city directory as the "South's Most Modern Fireproof Warehouse", the four story loft building, with its reinforced concrete, flat slab construction articulated on the exterior, exemplifies the innovations in structural engineering and factory design which transformed industrial construction during the first decades of the twentieth century. Technological advances, particularly in the reinforcing systems used in concrete construction, made factories and warehouses largely fireproof, as well as offering numerous structural advantages over either heavy timber mill construction or steel framing. Although unreinforced concrete had long been known for its great compressive strength, and had been used for simple vertical piers, in its reinforced state, the material could withstand tensile stresses as well, making reinforced concrete feasible for horizontal members such as foundations, floor slabs, and girders. Of particular importance in factory and warehouse design, its great strength reduced the number of vertical members needed for structural support, and even multiple story factories could be built with open interiors unbroken by numerous piers, and with flexible plans, which greatly increased the storage capacity of warehouses (Alexander 1991: 108-109).

By the 1920s, tall lofts had begun falling out of favor for manufacturing purposes as sprawling, one story factory complexes better accommodated the new straight-line production methods with their emphasis on efficiency and rationalization of layout. However, multiple story construction remained both highly efficient and economical for warehouse design. The strength of the reinforced concrete framing permitted even the upper stories to hold heavy loads, while making the interior plan versatile. In addition, the vertical loft design made economical and profitable use of expensive rail frontage

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property which the contemporary sprawling one story, multiple building industrial properties did not.

In addition to its use of flat slab construction, the Carolina Transfer and Storage Company warehouse also employed what is regarded as one of the principal refinements or innovations in flat slab construction, the mushroom column. Developed in 1907 and 1908 by C.A.P. Turner, a Minneapolis engineer, the mushroom column, named for its flared capital, resulted from Turner's experiments in column and slab framing. Turner devised a concrete reinforcing system, using the mushroom column, which eliminated the need for girders, and his 1908 patent was the first sophisticated reinforcing technique for an all-concrete, girderless construction. In contrast to simple slab and beam construction, the mushroom column formed a rigid, continuous unit with the floor slab, and the flare of the mushroom cap spread the load across a larger area and eliminated the need for girders and beams, resulting in more economical construction and an increase in interior space (Condit 1968: 243; Nichols 1923: 99-104).

The Turner slab and mushroom column system quickly became the standard for concrete construction although experimentation in concrete construction continued, and other engineers developed variations on the Turner system. One refinement, known as the drop slab system, is reflected in the design of the Carolina Transfer and Storage Company warehouse. Developed by Chicago engineers, Condrion and Sinks, in 1911 for a Sears and Roebuck Company warehouse, the drop slab system gave the mushroom column a conical flare and introduced a small, square, concrete pad, or drop slab, which was placed between the flared capital and the underside of the floor slab. The added, concentrated support enabled the flat slab to absorb the particularly heavy floor loads found in warehouses (Condit 1973: 168). As reflected in the design of the Carolina Transfer and Storage Company, these structural and fireproofing innovations in factory and warehouse design were quickly adopted and disseminated nation-wide by the 1920s.

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9. Bibliographic References

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United States Department of the Interior
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Section number 9 Page 2

**(Former) Carolina Transfer and Storage Company Building
Charlotte, Mecklenburg County, N.C.**

Mattson, Alexander and Associates, Inc. *(Former) Charlotte Coca-Cola Bottling Company Building*. Nomination to the National Register of Historic Places, 1997.

Mattson, Alexander and Associates, Inc. *(Former) Parks-Cramer Company Complex*. Nomination to the National Register of Historic Places. 16 September 1993.

Mattson, Alexander and Associates, Inc. *(Former) Thrift Mill*. Nomination to the National Register of Historic Places. 10 March 1994.

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National Park Service

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Section number 10 Page 1

**(Former) Carolina Transfer and Storage Company Building
Charlotte, Mecklenburg County, N.C.**

10. Geographical Data

Verbal Boundary Description

The nominated property is lot 5, block 244 of Mecklenburg County Tax Map, Book 73, Page 24 in the city of Charlotte, North Carolina.

Boundary Justification

The property being nominated consists of the original 1.088 acre parcel on which the Carolina Transfer and Storage Company Building was constructed and which conforms to the current tax parcel. Two resources are found on this parcel. The warehouse is the single contributing resource, and one modern, metal building is the only non-contributing resource found on this tract.

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Section number photos Page 1

**(Former) Carolina Transfer and Storage Company Building
Charlotte, Mecklenburg County, N.C.**

The following information pertains to each of the photographs:

Name of Property: (Former) Carolina Transfer and Storage Company Building
Location: Charlotte, North Carolina
County: Mecklenburg
Name of Photographer: Mattson, Alexander and Associates, Inc.
Location of Negatives: Survey and Planning Branch
North Carolina Department of Cultural Resources
109 E. Jones Street
Raleigh, North Carolina 27601-2807
Date of Photographs: July 1998

Photographs:

- A. Front (South) and East Elevations, View Looking Northwest.
- B. Front (South) and West Elevations, View Looking Northeast.
- C. Rear (North) Elevation, View Looking East.
- D. Interior, Storage Room, Showing Mushroom Columns
- E. Interior, Freight Elevator and Steel Fire Door.
- F. Interior, Storage Room Showing Cold Storage Lockers.
- G. Interior, Stairwell.

R
 The Summit
 073-241-20 - Unit 1
 073-241-21 - Unit 2

BK. 71-02

PG. 23

PG. 22

PG. 20

PG. 17

PG. 18

PG. 13

* ASSESSED BY STATE

(Former) Carolina Transfer and
 Storage Company Building

* ASSESSED BY STATE

TAX LINE MAP	BOOK 73	PAGE 24
MECKLENBURG COUNTY, NORTH CAROLINA		
REVISED	5-11-98 NM	SCALE 1" = 100'



