CAMPUS CONTEXT

CAMPUS CONTEXT

Photo 4-1: Aerial View of McMillan Reservoir and Washington, DC (The Long Walk, pg. 28)

CAMPUS CONTEXT

(CONTINUED)

THE REGION

Howard University has three Campuses in the District of Columbia: West Campus, Central Campus and East Campus.

Central Campus has been located at its current location since 1867, when the Freedmen's Bureau purchased the first three acres. Later that year, Howard purchased an additional 150 acres, which includes much of the present Central Campus. This land was purchased from Mr. John A. Smith, and was originally part of 'Effingham Farm'. The West Campus was acquired in 1976, and is located at 2900 Van Ness Street in northwest DC, approximately 4 miles from the Central Campus. The East Campus is located at 1400 Shepherd Street in northeast DC, approximately 3 miles from the Central Campus.

The 118 acre Central Campus is located in northwest Washington, D.C., in Ward 1 within five miles of the Nation's Capitol. The northwestern quadrant is located north of the National Mall and west of North Capitol Street. It is the largest of the four quadrants of the city (NW, NE, SW and SE), and it includes the central business district, the Federal Triangle, and the museums along the northern side of the National Mall, as well as such neighborhoods as Petworth, Dupont Circle, LeDroit Park, Georgetown, Adams Morgan, Embassy Row, Glover Park, Tenleytown, Foggy Bottom, Cleveland Park, Columbia Heights, Mount Pleasant, the Palisades, Shepherd Park, Crestwood, Bloomingdale, and Friendship Heights.

The Northwest Quadrant contains many university Campuses, including American University, George Washington University, Georgetown University, Howard University, and the University of the District of Columbia.

The Verizon Center, home of the Washington Wizards, the Washington Capitals, and the Georgetown Hoyas as well as the venue for many concerts and other events, is located in Northwest, as are the National Cathedral, the White House, and Rock Creek Park.

Figure 4-1: Aerial View of Howard University showing the location of West, Central and East Campus

CAMPUS CONTEXT

NEIGHBORHOOD CONTEXT AND LAND USES

The Central Campus lies along Georgia Avenue, a prominent north-south artery connecting D.C. and Silver Spring, Maryland. Georgia Avenue along with Florida Avenue and U Street to the south of the Campus, all have commercial activity that provides retail, dining, and other services that can be utilized by students, faculty and visitors.

Howard University is directly flanked by the Washington Veteran Affairs Medical Center, Washington Hospital Center, Children's Hospital, and historic water reservoir property, but is primarily surrounded by historic neighborhoods – Park View, Columbia Heights, Pleasant Plains, Bloomingdale, LeDroit Park and U Street/Shaw.

The U Street/Shaw neighborhood was home to Duke Ellington and was considered to be the historic heart of the African American community. This neighborhood predates New York's Harlem and was the largest African American community until 1920. Civil War encampments in the area sheltered freedom seekers in the 1860s, and the mission churches they founded live on today. Howard University just north of this neighborhood began to attract the nation's black intellectual and artistic leadership in the 1870s. In the early 20th century it was home to businesses, theatres, clubs and the major social institutions of black Washington.

To the north of Campus are the communities of Columbia Heights and Pleasant Plains. Columbia Heights has seen tremendous residential and commercial redevelopment since the 1999 unveiling of the Columbia Heights Metro station and currently serves as an asset to Howard University..

The Pleasant Plains neighborhood also to the north and west of the central Campus is a residential community primarily of row homes complemented by commercial uses along Georgia Avenue.

Originally a huge estate owned by the Holmead family from the 1700's, this neighborhood stretched from 16th Street to the reservoir. In the 1860's, the area north of Florida Avenue, then outside the boundary of the city, was settled by freed African Americans coming north during the Civil war. The founding of Howard University, the National Association for the Relief of Destitute Colored Women and Children, Freedmen's Hospital and other historic sites grew out of this settlement. Also during this time, parts of the original Pleasant Plains estate were sold off to become Columbia Heights and Park View. Until the 1950's, Pleasant Plains was a segregated neighborhood. with some of the best educational, entertainment, recreational and business resources for African Americans.

A number of its residents are affiliated with Howard, either as students, alumni or employees. One of the major community anchors is the Banneker Recreation Center on Georgia Avenue, which reopened in July 2007 after a year of renovations. The adjacent Benjamin Banneker Academic High School has ranked among the 100 best public schools in the United States and is another important asset within the Howard University environment

The LeDroit Park neighborhood to the south of the central Campus was developed by Amzi Barber (Board of Trustees, Howard University) and Andrew Langdon in the 1870s. LeDroit Park, was one of the first suburbs of Washington and for many years one of Washington's finest. First as a gated, 'whites only' neighborhood, it was later the preeminent home to Washington's African American elite. Despite its history, LeDroit Park underwent a period of decline in the latter half of the 20th century. To help change this in 1997, Howard University formed a strategic alliance with the Federal National Mortgage Association (Fannie Mae) to revitalize the neighborhood. The University has rehabilitated or constructed forty residential structures designed to preserve the historic fabric of the neighborhood. One of the goals of the program is to make the housing available to a broad range of Howard University employees, municipal employees and community members.

The Bloomingdale neighborhood adjacent to Howard on the east is located just outside the original boundary of the City of Washington. The lands that comprise Bloomingdale were originally large estates and orchards and, just prior to its residential development, were utilized for a variety of light industry. Florida Avenue was the dividing line between paved, planned streets, laid out in the original city plan and the landowners of large country estates.

Most of the homes within Bloomingdale are row houses built at the turn of the last century (1900) and are designed in the Victorian style.

CAMPUS CONTEXT

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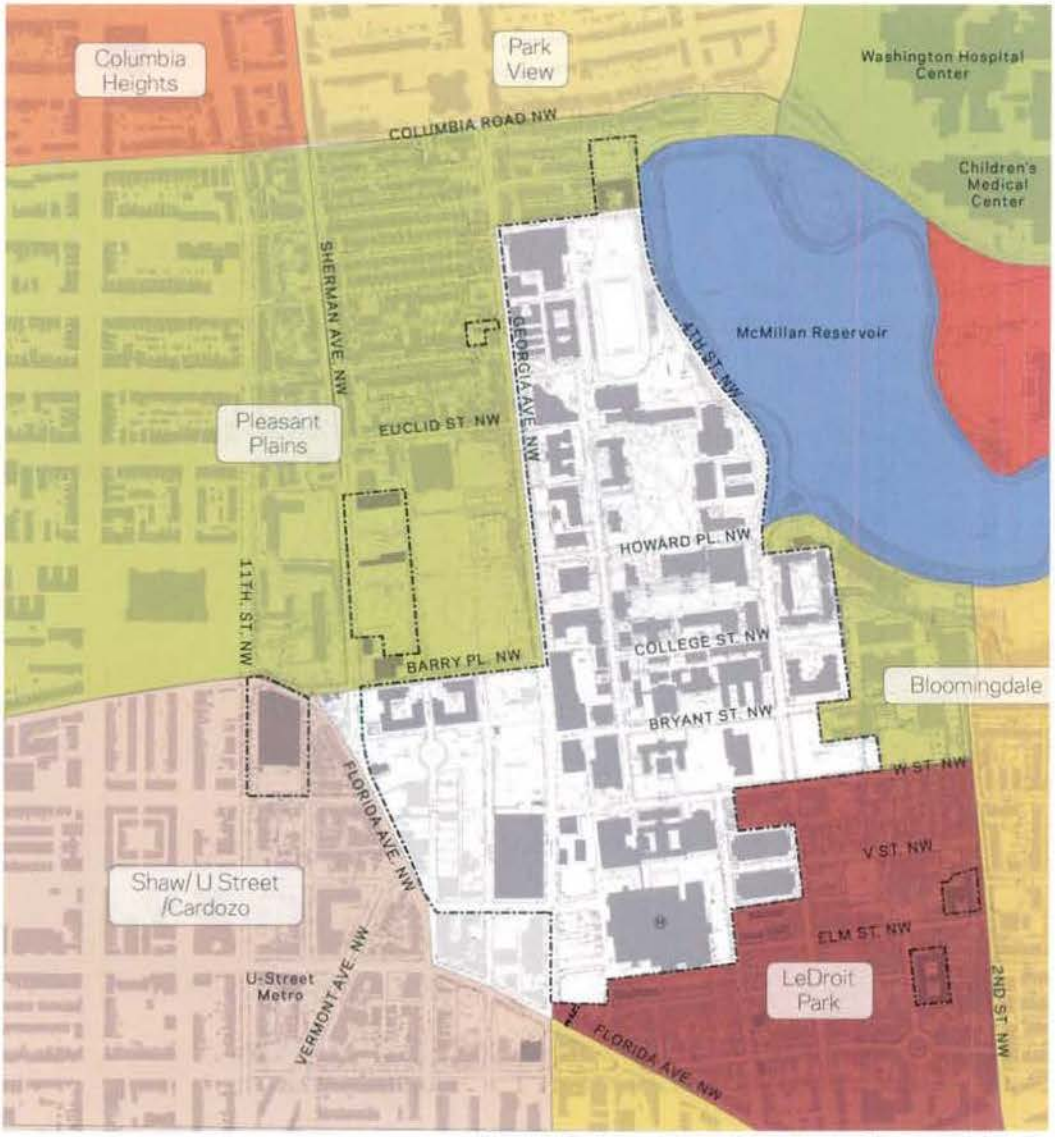

Figure 4-2: Surrounding Neighborhoods of Howard University

Park View, the name of the neighborhood on Howard's northern boundary, comes from its views east into the Campus of the Old Soldiers' Home. The Home's grounds were open to the public as a park until the 1960's. Those grounds were a designed urban landscape, including pedestrian paths and ponds, modeled along the principles of New York's Central Park in the 1880's.

The neighborhood is primarily residential and populated largely by middle-class African American families. The Georgia Avenue/Petworth Metro Station has led to a renewed interest in the neighborhood and has spurred development and the growth of business and services.

CAMPUS CONTEXT

Land uses within the Howard University Campus reflect the various functions of the University. At the north end of Campus, athletic functions are concentrated with the football stadium as its primary focus along 4th street. Moving south within the Campus, the primary academic functions (library, classrooms, student union, administration buildings, etc.) are concentrated around the historic main quad known as the Yard. The primary academic functions surrounding the quad are complemented farther south by a concentration of health sciences functions on Bryant and W Streets. The Colleges of Nursing and Allied Health, Dentistry, Medicine and the Louis Stokes Health Sciences Library are all located in this area.

Finally, the southernmost element of the Central Campus is the Howard University Hospital which fronts on the eastern side of Georgia Avenue.

Campus residential functions are currently located in a number of locations on both the east and west sides of Georgia Avenue as well as in more remote locations such as 16th street to the west and south in LeDroit Park. There is a distinct lack of continuity to the residential experience on Campus.

Photo 4-2: View of Greene Stadium

Photo 4-3: View of Stokes Library and School of Nursing

Photo 4-4: View of Slowe Hall

CAMPUS CONTEXT

(CONTINUED)

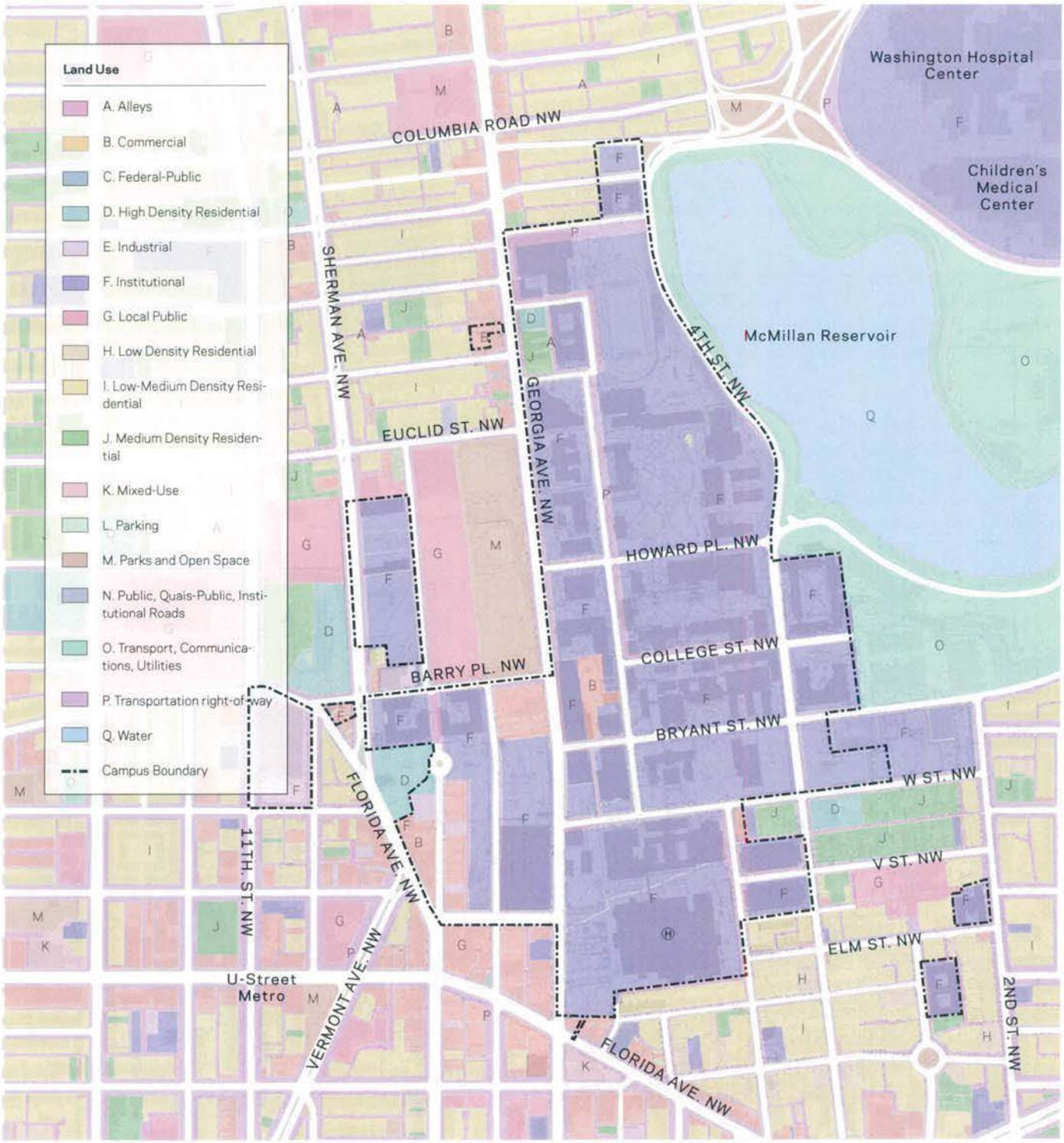

Figure 4-3: Howard University Land Use Diagram

CAMPUS CONTEXT

NEIGHBORHOOD HISTORY AND HISTORIC CHARACTERISTICS

The development of Georgia Avenue north of Florida Avenue (the original city boundary) to New Hampshire Avenue began with rows of single-family dwellings that were erected in the latter part of the 19th century and the early 20th century. Among the row were interspersed apartment buildings and commercial structures that served the surrounding residential neighborhoods.

The presence of Howard University propelled residential development in the area. The earliest neighborhood established adjacent to the University was Howardtown which was founded in 1870 on land located just south of the University.

The Campus is bounded by historic neighborhoods and several individual historic properties. The McMillan Reservoir Historic District borders the Campus to the northeast, the LeDroit Park Historic District abuts the Campus to the south, and the Greater Fourteenth Street Historic District is located a few blocks southwest of the Campus. The three districts that surround Howard's Central Campus are listed in both the National Register of Historic Places (NR) and the DC Inventory of Historic Sites (DC Inventory).

Residential neighborhoods like LeDroit Park that were established in the 1870's and 1880's, were initially exclusive, whites-only enclaves, however by the turn of the 20th century, black ownership had increased and throughout the teens and 1920's, LeDroit Park in particular became a premier residential neighborhood for Washington's African American leaders, intellectuals, and artists.

Today, LeDroit Park is a designated DC Inventory and National Registry historic district. Howard University owns several properties within or just adjacent to the LeDroit Park Historic District. The most significant of these is the Mary Church Terrell House at 326 T Street, NW. Built around 1888, the Terrell House is both a contributing building within the LeDroit Park Historic District and a National Historic Landmark property, recognized for its association with suffragist and early civil rights activist, Mary Church Terrell and her husband Robert H. Terrell, the first black municipal judge in the District of Columbia. In 2004, a Save America's Treasures grant was awarded to Howard University and its partners to preserve the house.

Photo 4-5: Semi-detached houses located in the LeDroit Park neighborhood. Built in 1877 to the designs of architect James H. McGill, the brick, three-storied, Queen Anne-style homes are designated as contributing properties to the LeDroit Park Historic District, listed on the National Register of Historic Places in 1974

Photo 4-6: A Second Empire-style house located in the LeDroit Park neighborhood built in 1873 to the designs of architect James H. McGill; designated as a contributing property to the LeDroit Park Historic District, listed on the National Register of Historic Places in 1974.

CAMPUS CONTEXT

(CONTINUED)

LeDroit Park properties include the home of the District's first home rule mayor, Walter Washington (1915-2003) at 408-410 T Street, NW; The Chaplain's residence, (420 T Street, NW); and Lucy Diggs Slowe Hall (1919 3rd Street, NW). All of these properties are owned by Howard.

Howard University owns George Washington Carver Hall (211 Elm Street, NW), which stands just north of the LeDroit Park Historic District. The Washington Home and the Chaplain's residence are both historic buildings that contribute to the architectural and historical significance of the LeDroit Park Historic District.

Banneker Recreation Center (2500 Georgia Avenue) and its surrounding recreational fields stand directly west of the Central Campus across Georgia Avenue. The center and its surrounding land are also listed on the NR and in the DC Inventory.

Howard University is located within one of Washington, DC's most historic transportation and commercial corridors, the Seventh Street – Georgia Avenue corridor that extends from downtown DC to the Maryland line.

North of Florida Avenue, which served as the city's northern boundary until 1871, Georgia Avenue follows the route of an early 19th century turnpike that connected the District of Columbia to Maryland to the north. By the 1870's, horse-drawn streetcars plied Seventh Street up to Florida Avenue, providing transportation to and from DC's central business district.

The streetcar line was later converted to an electrified streetcar route and played a critical role in the development of residential subdivisions north of Florida Avenue, including Brightwood.

By the early 20th century, the turnpike had become a central arterial road in and out of the city, a commercial thoroughfare, and the spine for increasing residential development in the northern sections of the city.

Photo 4-7: Typical early 20th century row houses on west side of Georgia Avenue between Girard Street, NW and Gresham Place, NW (2800 block Georgia Avenue, west side). View looking south. (History Matters, LLC, October 2009.)

Photo 4-8: National Register- and DC Inventory-listed Banneker Recreation Center (2500 Georgia Avenue, NW) (History Matters, LLC, November 2009). (History Matters, LLC, November 2009.)

Photo 4-9: Mary Church Terrell House (326 T Street, NW) (History Matters, LLC, November 2009). (History Matters, LLC, November 2009.)

CAMPUS CONTEXT

Between the 1890's and 1920, due to restrictive segregationist policies African American residents of the District who previously had lived throughout the city, were forced to move to areas where they were permitted to own or rent housing. The Greater U Street area, the nearby Strivers' Section neighborhood, and other areas surrounding Howard University grew into neighborhoods primarily occupied by African Americans. U Street, NW and the intersection of U Street, 7th Street, Florida Avenue, and Georgia Avenue became the commercial, intellectual, and cultural center of Washington for African Americans. Howard University played a vital role in attracting the "best and brightest" to the area and fostering a vital cultural and business community.

During the 1920's and 1930's, as automobiles became the preferred mode of transportation in the city, several industrial, distribution, and commercial service operations located their facilities along the Georgia Avenue corridor near the intersection of Georgia and Florida Avenues. Already the site of street railway facilities from the late 19th century a number of large industrial facilities, most notably two commercial bakeries, established plants there in the first three decades of the 20th century.

In 1911, Washington's largest and most influential early twentieth century commercial bakery, the Corby Baking Company established and later enlarged its plant on the east side of Georgia Avenue between Bryant Street and College Street, NW (2301 Georgia Avenue, NW). In 1928, the American Storage and Transfer Company constructed a five-story, brick furniture storage warehouse on the east side of Georgia Avenue, near the north end of the Howard

Photo 4-11: Former Washington Railway & Electric Company Bus Garage. Built 1930, now Howard University Hospital Patient Accounts (History Matters, LLC, October 2009)

Photo 4-12: Former General Baking Company Building, Built 1929 as a bakery and garage. (History Matters, LLC, October 2009))

Photo 4-10: Former Corby Brothers Bakery, built in sections between 1911 and 1922 Wonder Plaza – Tech Center). (History Matters, LLC, October 2009.)

Photo 4-13: Former PEPCo service building, garage & shops. Built 1930 and 1937, now Howard University Service Center). (History Matters, LLC, October 2009)

CAMPUS CONTEXT

(CONTINUED)

University Campus (2801-2805 Georgia Avenue, NW)that was greatly expanded in 1937 with construction of a large garage and shops where the company's fleet of trucks were stored and serviced.

In 1929, the General Baking Company, makers of Bond Bread, built a three-story brick bakery and garage on the west side of Georgia Avenue just south of W Street, NW One year later and just south of General Baking's plant, the Washington Railway and Electric Company erected a bus garage on the former site of the first Brightwood Railway Car. Also in 1930, the Potomac Electric Power Company (PEPCo) constructed a service building two blocks west of Georgia Avenue.

Just south of General Baking's plant, the Washington Railway and Electric Company erected a bus garage on the former site of the first Brightwood Railway Car. Also in 1930, the Potomac Electric Power Company (PEPCo) constructed a service building two blocks west of Georgia Avenue.

The Pleasant Plains and Park View neighborhoods straddle Georgia Avenue to the north and west of Howard. They contain many intact rows of historic row houses that were largely built in the first quarter of the 20th century. A few pockets of late-19th century row houses and commercial buildings also exist along Georgia Avenue, including the row of three Victorian-era brick buildings that stand on the west side of Georgia Avenue north of Harvard Street.

Typical early 20th century residential rows are found on the east side of Georgia Avenue between Girard Street and Harvard Street, NW. North of Euclid Street, similar blocks of early 20th century row houses extend west along many of the side streets that feed Georgia Avenue.

In 1942, the federal government, under the direction of the Defense Homes Corporation, erected Slowe and Carver Halls as dormitories to house African American war workers. Slowe housed female workers and Carver housed male workers.

After World War II ended, Howard University bought both buildings to use as student housing, a purpose that they continue to serve today. Because it was built in 1942, outside the Period of Significance of the LeDroit Park Historic District, Slowe Hall does not contribute to the district. Carver Hall is not located within a designated district, nor is it individually listed. Both Slowe and Carver Halls retain exterior integrity and possess historical and architectural significance as World War II workers' housing built specifically to house African Americans.

Photo: 4-14 View of Pleasant Plains neighborhood. View looking west from Georgia Avenue down Gresham Place, showing in tact residential blocks of attached row houses. (History Matters, LLC, October 2009.)

Photo 4-15: Carver Hall, 211 Elm Street. Built 1942 (History Matters, LLC, November 2009.)

Photo 4-16: Slowe Hall, 1919 3rd Street, NW Built 1942 (History Matters, LLC, November 2009.)

CAMPUS CONTEXT

ZONING DISTRICTS

Howard University property lies within a variety of zone classifications. The underlying zone on the majority of the Campus is R-5-B Zone which allows all university uses with the special exception approval of the Zoning Commission and requires the University to submit an overall Campus plan for approval by the Zoning Commission., Amendments to the plan are submitted as necessary. .

The underlying R-5-B zone allows moderate density residential uses and is intended to permit flexibility of design by permitting all types of urban residential development as well as compatible institutional uses. Universities and Colleges are permitted in the R-5-B zone by special exception. Such institutions are to be located so as not be objectionable to neighboring properties.

The University also owns property in the following districts:

- R-4 – Located on the southern end of Campus, all single-family residential uses (including detached, semi-detached, row dwellings, and flats), churches and public schools are permitted as a matter of right.
- R-5-E – Located along Barry Place; permits matter-of-right high density development of general residential uses, including single-family dwellings, flats, and apartment buildings,
- SP-2 - Located in an area between 4th, 6th, College and W Streets this zone permits medium/high density development including all kinds of residential uses, and offices if approved as a special exception by the Board of Zoning Adjustment.
- C-2-A - Located on the east side of Georgia Avenue – Fairmont to Gresham. The zone permits office employment centers, shopping centers, medium-bulk mixed use centers, and housing at a low density.
- C-M-2 - Located along the east side of Georgia Avenue between Bryant Street and Barry Place, this zone is intended for medium bulk commercial and light manufacturing activities employing large numbers of people and requiring some heavy machinery. The zone does not permit new residential uses.
- C-M-3 - Located along the east side of Georgia Avenue, from Florida Avenue to Bryant Street, this zone is intended for high bulk commercial and light manufacturing uses, and does not allow new residential uses.
- C-R - Located on the west side of Georgia Avenue between V Street and Barry Place, residential, commercial, recreational and light industrial development are permitted as a matter-of-right.

Table 4-1: Zoning Breakdown

ZONING SUMMARY			
Current Zoning Occupancy	Allowable FAR	Allowable Height (ft)	Maximum Lot
C-2-A	2.5 Res/1.5 Other	50	60% Res./100% Other
C-R	6.0 (3.0 Non-Res.)	90	75% Res./100% Other
SP-2	6.0 (3.5 Non-Res.)	90	80% Res./40% Other
C-M-2	4.0	60	n/a
C-M-3	4.0	90	n/a
R-4	n/a	60	40%-60%
R-5-B	1.8	60	60%
R-5-E	6.0 (5.0 Res.)	90	75%

CAMPUS CONTEXT

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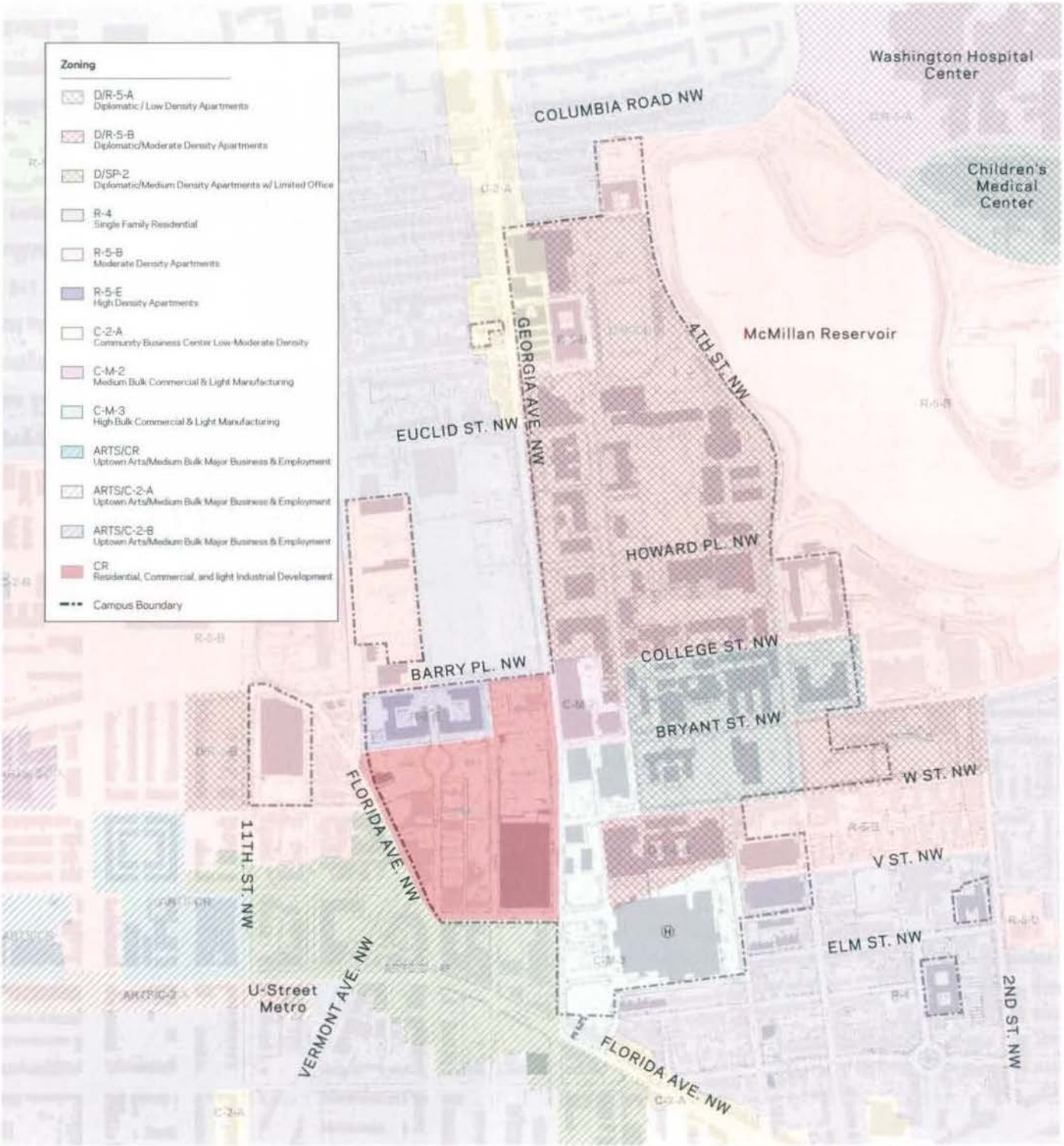

Figure 4-4: Zoning Classifications within Campus boundaries

CAMPUS CONTEXT

CAMPUS SETTING

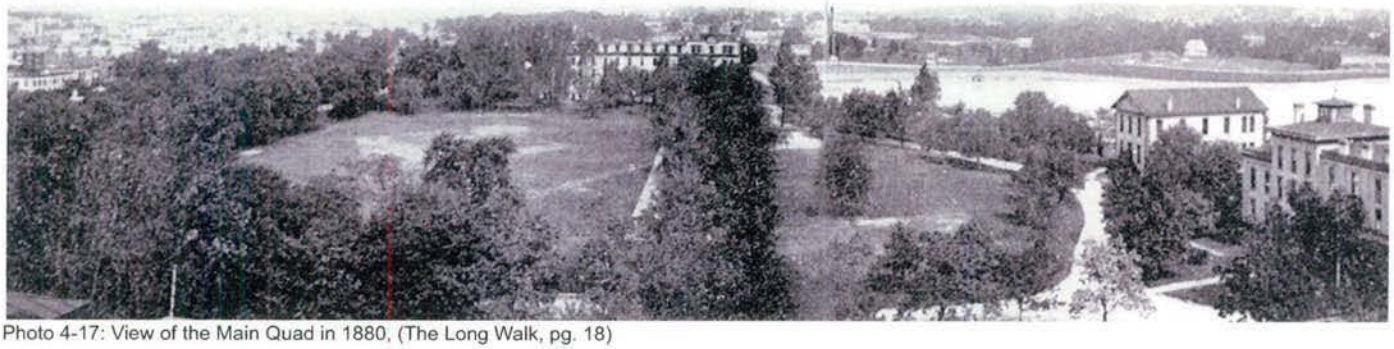

Photo 4-17: View of the Main Quad in 1880, (The Long Walk, pg. 18)

Since its founding over 144 years ago, Howard University has grown steadily as an academic community and as a Campus. As the University considers the need for new development, it also has a commitment to protect the historic cultural landscape and the spatial qualities that make the Campus a special and memorable place to learn.

This section is intended to trace the history of the Campus development in order to understand the significance of the cultural landscape that provides the setting for Howard University today.

Photo 4-18: View of the "Long Walk" in 1910, (The Long Walk, pg.43)

CAMPUS BEGINNINGS

In 1867, when the land was first purchased for the Campus setting, it was open, hilly pasture land with great views of Washington. The first buildings were constructed on the hill, just north of College Street to take advantage of the views. This is the area that today is known as the 'Yard'.

Much of the life of the Campus took place on the Yard as residence halls for students and houses for professors lined the green open space. As the multi-purpose activity node for the Campus, activities from football games to commencement ceremonies, academic and social events all took place on this central open space.

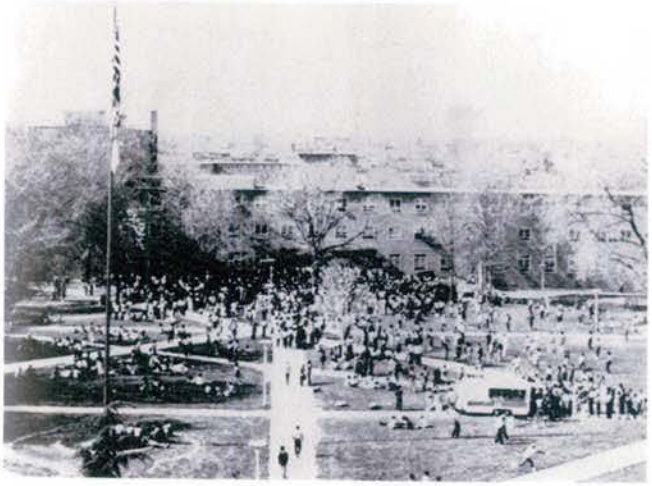

Photo 4-19: View of the Main Quad in 1978 (The Long Walk, pg. 67)

CAMPUS CONTEXT

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Photo 4-20: Aerial view of Howard University, Addison N. Scurlock, Photographer, circa 1950's. Smithsonian Institution, National Museum of American History, Archives Center (SI Scan #AC0618ns0178924-01hu.tif

CAMPUS CONTEXT

The Campus was not formally landscaped in the beginning, but was improved by planting trees. Originally, the central path known as the Long Walk was simply an unpaved road that connected two buildings – the Main Building and Clark Hall - on either side of the Yard. The path was lined with trees on both sides.

Campus quadrangles remain the primary iconic spaces on collegiate Campuses, serving as the forum for everyday Campus life. These open spaces are flexible for formal and informal gatherings, including small groups, informal games and large events.

Howard University is designed in the traditional sense, with views that are oriented into main quadrangles from various points on Campus and are framed by landmark building elements. These active spaces are complemented by multiple points of entry and strong visual connections to the buildings that surround them.

As the Campus evolved from its pastoral beginnings to it's present day urban setting, the quadrangles remain, comprising a total of 5.8 acres out of the 118 acres (4%) occupied by the University. The 'Yard' is 4 acres and the Lower Quadrangle is 1.8 acres.

Photo 4-21: View of the Main Quad in 1954 (The Long Walk, pg. 55)

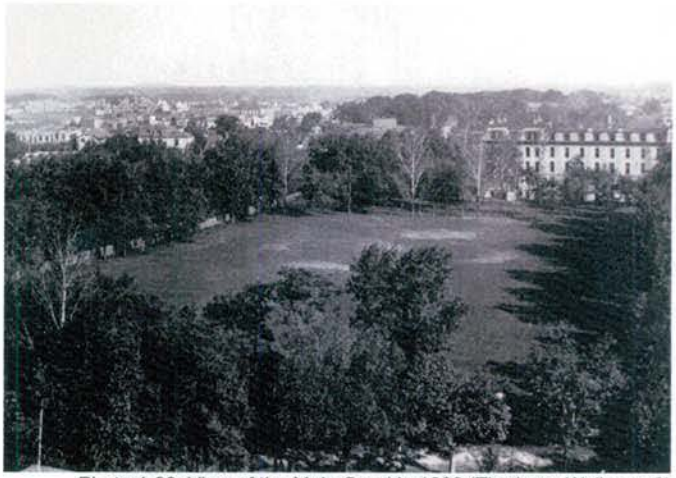

Photo 4-22: View of the Main Quad in 1880 (The Long Walk, pg. 8)

Photo 4-23 View of the Main Quad in winter (The Long Walk, pg. 8)

CAMPUS CONTEXT

(CONTINUED)

The hill side area also provided views of the McMillan Reservoir, built in the 1880's. The land that surrounds the reservoir was originally designed by Frederick Law Olmsted as a large open green space that would double as a public park, but the area is now fenced off and vacant, and is an object of ongoing discussion as to how development plans will proceed.

The reservoir, located on the corner of Michigan and North Capitol Streets in Washington DC was a key part of DC's water filtration from the early 20th century and presently still serves the Downtown and SE Washington areas. It was originally called the Howard University Reservoir or the Washington City Reservoir, and was completed in 1902 by the U.S. Army Corps of Engineers.

The reservoir was built on the site of Smith Spring, one of the springs previously used for drinking water. Washington's earliest residents relied on natural springs but this came to be inadequate as the city's population grew. In 1850, Congress determined that the Potomac River should be the city's principal source of water.

Photo 4-24: View of Sand Filtration Plant Silos at McMillan Reservoir

Photo 4-25: View of McMillan Reservoir

CAMPUS CONTEXT

HISTORICAL DEVELOPMENT OF CAMPUS SPACE

The patterns of existing land use and development on the Central Campus are best understood by considering how the Campus framework has evolved. The earliest university records for graphic master plans are represented in a 1919 drawing.

The University has developed six comprehensive plans and one interim master plan since 1932.

A comparison of the 1919, the 1932 and the 1986 Master Plans represent three periods of significance in the evolution of the Campus - the pastoral, the Georgian Revival and the modern, respectively. (These observations are summarized from The Long Walk: The Placemaking Legacy of Howard University, written by Harry G. Robinson, III and Hazel Ruth Edwards, 1996.)

1919 MASTER PLAN

The 1919 Master Plan document was prepared by the US Department of Agriculture. It's characteristics include:

- Pastoral Landscape with tree-lined streets
- Academic disciplines were arranged in enclaves, buildings were oriented inward to form quadrangles (20 buildings)
- 12 proposed new buildings
- Large open green space punctuated with canopy trees and defined by low buildings
- Buildings are set in a matrix of green with green fronts, sides and backs onto Barry Place and east of Fourth Street on Bryant Street

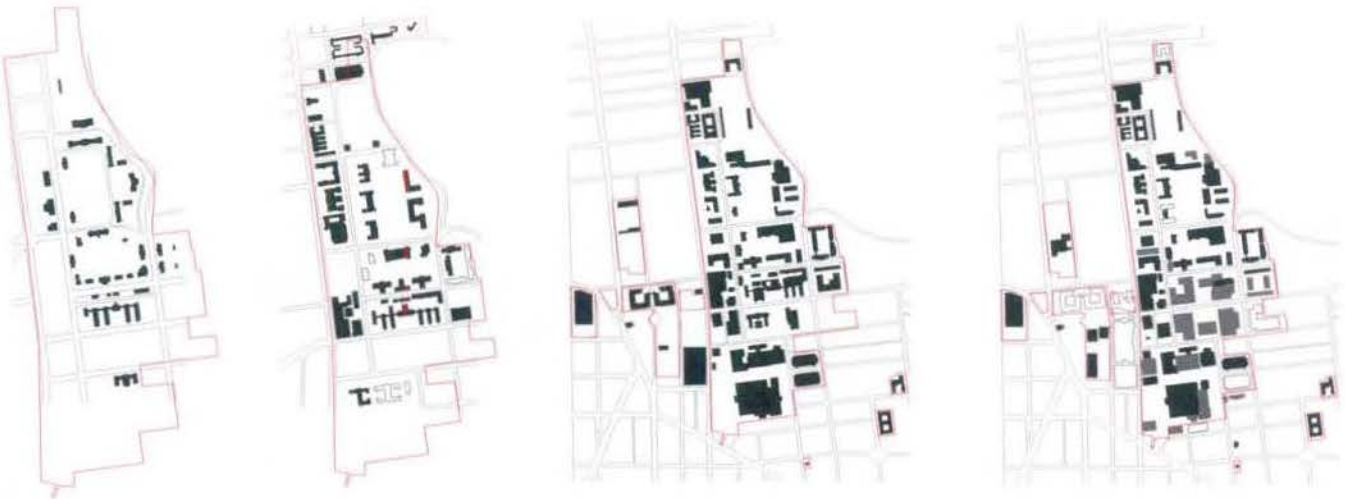

Figure 4-5: Howard Site Plans 1919, 1932, 1986 and Current

CAMPUS CONTEXT

(CONTINUED)

1932 MASTER PLAN

The 1932 plan was prepared by Albert Cassell, Howard University architect with David Williston, Landscape Architect. The plan was to be represented in context to the surrounding community – parks, neighborhoods. It includes:

- Planning forecast to increase enrollment from 1,800 students to 4,500 students
- Founder's Library, situated at the highest point provided a view of the clock tower, unobstructed from distant sites as a city landmark. No buildings were to be as tall or taller.
- 21 existing buildings, 28 proposed new buildings, 10 proposed demolitions, including the President's House, 2 professors houses and Clark Hall (men's dormitory on the north end of the Main Quad)
- The Long Walk disappears, replaced by diagonal pathways that end in building entrances
- The Main and the Lower Quadrangles were delineated and the location of most academic services
- Buildings related spatially and architecturally; formal landscape of gardens and tree-lined pathways
- Established the framework for the present day Campus – delineated academic clusters and spatial relationships of new Georgian buildings facing the Quadrangles
- Emphasis on pedestrian circulation with diagonal pathways to link buildings ; Vehicles were not accommodated – few parking areas were proposed
- Student housing was moved from the Main Quad to sites east of Fourth Street for the women and west of Sixth Street for the men
- Primary Streets – Howard Place and Fairmont Street on the E-W axis linking Georgia Avenue and Fourth Street
- Sixth Street extended to Columbia Road; Hobart Street was closed for proposed student residences

1986 MASTER PLAN

This plan was prepared by HDR-Baker Cooper and Associates and approved in 1988 by the District of Columbia Board of Zoning Adjustment. This plan projected proposed development for the Campus up to 1996. The plan highlights include:

- Conflicts between pedestrian and vehicular movement patterns were a focus of this plan.
- 47 existing buildings, 22 buildings proposed to be demolished, 34 new buildings proposed
- New development included graduate housing west of Georgia Avenue on Barry Place and east of Fourth Street on Bryant Street
- Reconfiguration of Freedmen's Square
- Followed the proposals of plans that came before
- Enlarged stadium and reoriented buildings on northern end
- Proposed reducing vehicles on Campus by closing streets, building bridges at Freedmen's Square and change of movement patterns
- Developed surface parking lots on vacant land west of Georgia Avenue
- Proposed building sites on vacant land and adjacent to turn of the century buildings
- The addition of the Undergraduate Library changed the character of the Lower Quadrangle at Fourth Street. The President's House (built in 1890), was demolished in the early 1980's to make way for this addition
- New dormitories were again proposed on Bryant Street and McMillan Drive
- Proposed development for the Hospital area
- Spatial character of the Campus was changed by the positioning of new buildings near older structures

CAMPUS CONTEXT

ARCHITECTURAL CHARACTER OF THE CAMPUS

Howard University's Central Campus developed in distinct phases; these are reflected in the architectural styles and layout seen today. Its earliest buildings, of which only two pre-date the twentieth century, are Victorian in style. After 1900, the architecture and design of the Campus reflect the influence of the Beaux Arts, Classical Revival, and the Colonial Revival styles.

Starting in the early 1950's, Howard began to construct Modernist-style buildings as the University began to break away from the purely classical architecture of the early 20th century. This break with tradition followed national architectural trends. Two exceptions are Wheatley Hall and Baldwin Hall. Both were built in 1951 in a simplified, Georgian Revival style to complete the 1930's-era Women's Dormitory Quadrangle.

The Central Campus retains a significant collection of mid 20th century, Modernist style institutional architecture. In the years between 1950 and 1960, Howard University experienced an explosion in student enrollment that necessitated the construction of additional facilities. The 1951 Master Development Program called for the construction of 24 new buildings. During the following decade, fifteen buildings were completed.

In 1952, prominent African-American architects Hilyard R. Robinson and Paul R. Williams designed Howard University's first purpose-built Modernist building, the Department of Engineering and Architecture Building (now Lewis King Downing Hall. All subsequent buildings constructed in the 1950's and 1960's employed Modernism in their design. Howard University hired prominent Washington architects like Robinson and Williams along with another well-known DC firm -- Justement, Elam, and Darby -- to design its post-war academic buildings.

As a result of the post World War II construction boom, the Campus began to take on its current urban character. The generous open space that characterized the Campus prior to World War II gave way to a more densely built landscape with buildings set close to the street and minimal distances between buildings.

Photo 4-26: Former Freedman's Hospital, south elevation of central block (History Matters, LLC, October 2009).

Photo 4-27: Lewis K. Downing Hall, east elevation (History Matters, LLC, October 2009).

CAMPUS CONTEXT

(CONTINUED)

HISTORICAL LEGACY

NATIONAL HISTORIC LANDMARK PROPERTIES

Howard University's Central Campus includes one National Historic Landmark (NHL) historic district and one individual NHL building. The Andrew Rankin Memorial Chapel, Frederick Douglass Memorial Hall, and Founders Library. The National Historic Landmark district encompasses Frederick Douglass Memorial Hall, Founders Library, Andrew Rankin Memorial Chapel, the Carnegie Building (Building, and their immediate surroundings on the Main and Lower Quadrangles.

The district was recognized as a NHL in 2001 because of its association with the development of the U.S. Civil Rights Movement during the 1940's and 1950's. During this period, within the buildings of the district, nationally prominent lawyers including Charles Hamilton Houston and Thurgood Marshall developed the legal strategies that would challenge and eventually defeat racial segregation laws in the United States.

In 1974, Howard Hall, was designated a NHL because of its association with General Oliver Otis Howard, one of the founders and an early president of Howard University. Howard served as a general in the Union Army, and between 1865 and 1874, he was commissioner of the Bureau of Refugees, Freedmen, and Abandoned Lands, which was established by Congress to aid former slaves through education, health care, and employment.

Howard University owns one additional NHL-listed property that is not located on the Central Campus and is outside the Master Plan study boundary. It is the Mary Church Terrell House which was designated as a NHL in 1975 and is located at 326 T Street, NW in the LeDroit Park neighborhood.

NATIONAL REGISTER OF HISTORIC PLACES PROPERTIES

Howard University's Main Campus includes two buildings that are listed on the National Register of Historic Places (NR): Miner Normal School and Howard Hall. The Terrell House, also listed on the NR, is located outside the boundary of the Campus.

Photo 4-28: Howard Hall looking northeast from Georgia Avenue (History Matters, LLC, October 2009).

Photo 4-29: Founders Library, South elevation - overlooking Lower Quadrangle (History Matters, LLC, October 2009)

Photo 4-30: Miner Normal School (History Matters, LLC, October 2009)

CAMPUS CONTEXT

NATIONAL HISTORIC LANDMARK BUILDINGS

- Howard Hall
- Mary Church Terrell House

PROPERTIES LOCATED WITHIN A NATIONAL HISTORIC LANDMARK DISTRICT

- Andrew Rankin Memorial Chapel
- Mary Church Terrell House
- Carnegie Building
- Founders Library
- Main and Lower Quadrangles

NATIONAL REGISTER LISTINGS

- Miner Normal School
- Howard Hall
- Mary Church Terrell House

DC INVENTORY LISTINGS

- Miner Normal School
- Howard Hall
- Mary Church Terrell House

Photo 4-31: Photo of Andrew Rankin Memorial Chapel

Photo 4-32: Photo of Douglass Hall , east elevation (History Matters, LLC, October 2009).

Photo 4-33: Photo of Mary Church Terrell House (1979 HABS photo http://en.wikipedia.org/wiki/Mary_Church_Terrell_House)

CAMPUS CONTEXT

(CONTINUED)

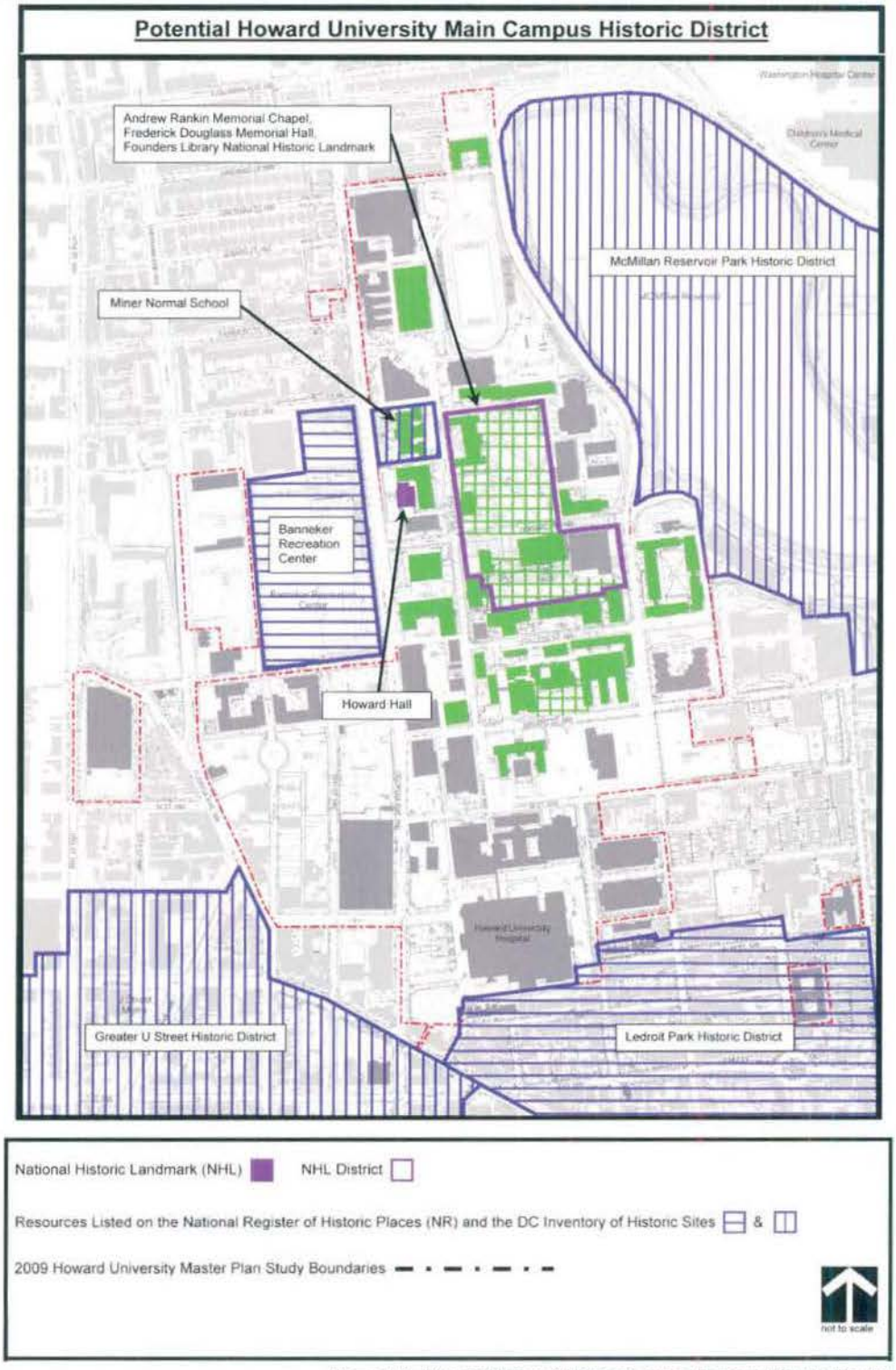

Figure 4-6: Potential Howard University Main Campus Historic District

CAMPUS CONTEXT

GATEWAYS AND STREETS

The primary gateways to Howard University were located at Sixth Street and Howard Place in the 1930's by Albert Cassell, Campus Architect, David Williston, Landscape Architect and Louis Frey, Architect. This group worked together to integrate landscape elements into the development plans.

These impressive gateways were intended to provide visual first impressions of the Campus at strategic locations and offer a sense of welcome and openness.

As the Campus has grown, these gateways are no longer on the perimeter of the Campus and serve as secondary pedestrian gateways to the Main Quad. Important street corridors, such as Georgia Avenue and streets shared with the neighborhoods provide the primary initial impression and public edge for the University.

Photo 4-35: View of Main Gate and Founders Library in 1940s (The Long Walk, pg. 37)

Photo 4-34: View of Main Gate from 1963-1976 (The Long Walk, pg. 177)

Photo 4-36: View of Main Gate from 1963-1976 (The Long Walk, pg. 177)

CAMPUS CONTEXT

(CONTINUED)

WATERSHED CONTEXT

The Campus landscape was analyzed at many levels – from the cultural landscape to the environmental and functional roles that the Campus provides. This study analyzed site, landscape and environmental conditions, their patterns, relative importance and implications for the Campus landscape.

The Campus landscape, if protected and maintained, will continue to provide a green framework for the buildings and related facilities unique to the University.

It also plays a vital role in protecting the water resources in its watershed. Howard University's Central Campus - lies in the D.C. Anacostia River watershed.

In addition to typical urban stormwater pollution problems such as runoff from streets and other impervious surfaces, the creeks of the river have high bacteria levels due to combined sewer overflows (CSOs). The D.C. government, which has a stormwater discharge permit issued by the United States Environmental Protection Agency, is changing its stormwater management programs and regulations to improve water quality in the Anacostia River. In 2009, the District of Columbia Water and Sewer Authority also began a project to replace portions of the combined sewer with separate storm sewers.

Land use and land management decisions provide the starting point for a successful water resource management program within each watershed. The University's investment in resources in those areas of the landscape that contribute the most to maintaining a healthy, functioning ecosystem will be critical.

Traditionally, stormwater management has not been the primary purpose of landscape design and operations. In an integrated Campus plan, the landscape is an important factor not only in sustaining the aesthetic and functional resources of the Campus, but to mitigate the distortions to the hydrologic cycle and to control the more frequent small scale runoff events.

The University's goal is to address how to better use the landscape to manage and treat storm water as a resource - one that should be conserved and reused - as a part of the Campus sustainability efforts.

Within the Campus watershed, impervious surfaces generate increased storm water runoff. Greater runoff means that a greater volume of water is carried to local streams during storms, increasing flooding, the incidence of erosion, and the level of contaminants in these natural water bodies. When storm water runs off impervious surfaces, such as rooftops and paving, very little sinks into the ground to replenish groundwater supplies. Conserving water, whether it falls as rain or snow, is critical to a living, green landscape.

Implementing Low Impact Development (LID) storm water management techniques that infiltrate, store, capture, and reuse rainwater results in less runoff, which in turn reduces sewer pipe sizes, maintenance and energy costs. Sustainable design techniques can produce real benefits in ecological, social and economic terms.

Figure 4-7: Anacostia Watershed boundaries and location of Howard University

CAMPUS CONTEXT

Figure 4-8: Howard University Land Cover Diagram

Photo 4-37: Large Surface parking lots like this one on the west side of Georgia Avenue contribute to stormwater runoff pollution

CAMPUS CONTEXT

(CONTINUED)

Photo 4-38 : Campus landscape on 6th street west of the Main Quad

Tree planting was once an important activity for graduating classes and other groups throughout the history of Howard University, and the activity has provided a legacy of mature canopy trees on the Campus today.

However, only 5% of the Campus is covered by tree canopy. A healthy percentage of tree canopy cover would be at least 40% to mitigate the adverse effects of the urban environment such as polluted run-off, air pollution and heat island effect.

CAMPUS CONTEXT

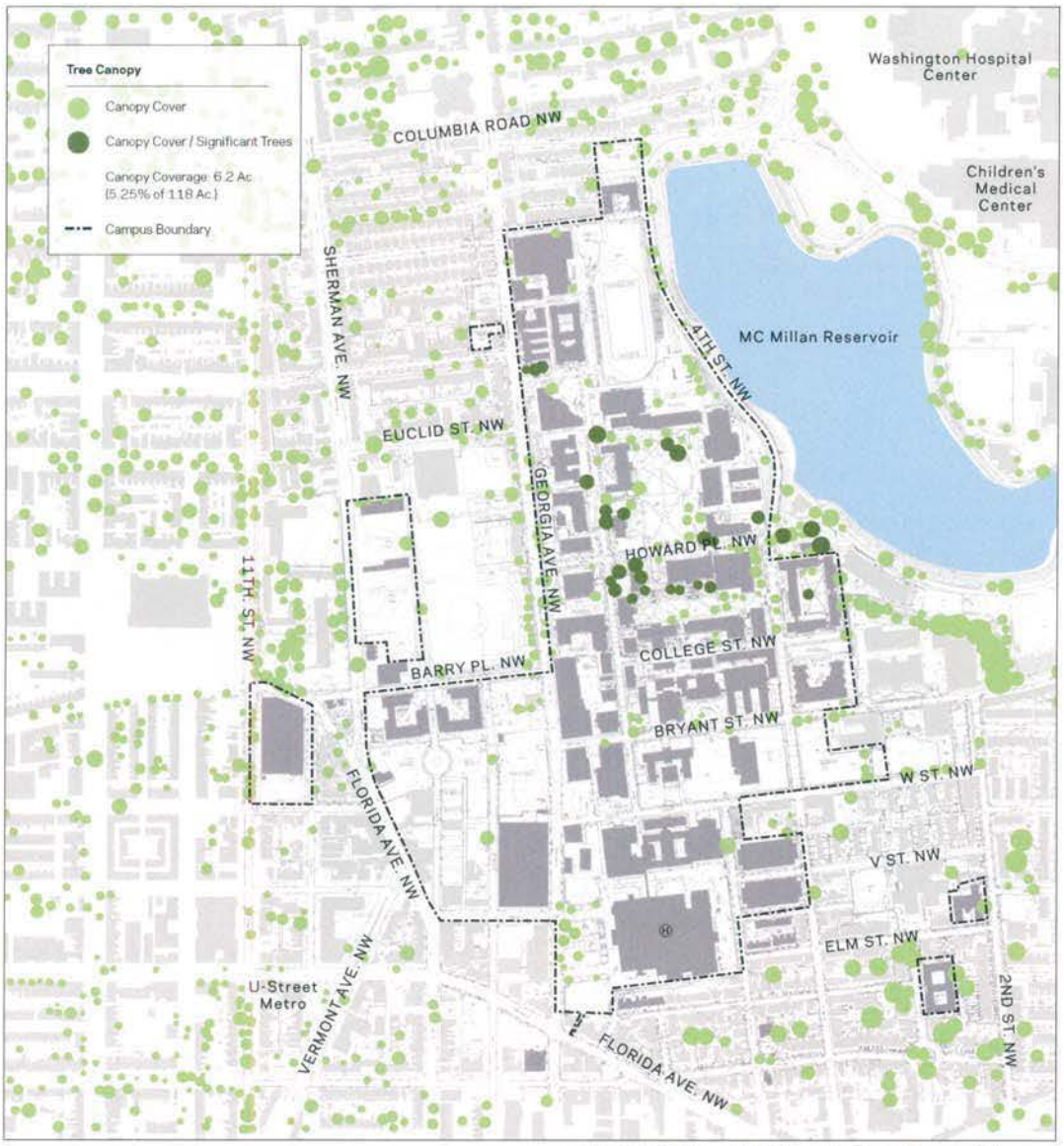

Figure 4-9: Howard University Tree Canopy Diagram

CAMPUS CONTEXT

(CONTINUED)

TRANSPORTATION NETWORK

The transportation network's existing conditions are analyzed in order to identify areas of concern and opportunities for improvement in the system. The existing conditions were determined following traffic counts, including vehicular and pedestrian volumes, performed by Gorove/ Slade at the key study intersections. These traffic counts were performed from 6:00 to 9:00 AM and from 4:00 to 7:00 PM on Tuesday-Thursday, March 31- April 2, 2009.

Additional counts were performed on Tuesday, April 26, 2011. These count dates represent typical weekdays when classes are in session for the University. The details and results of the traffic counts are included in the "Transportation Report".

The existing roadway lane use and traffic controls data were obtained following observations of the study intersections by Gorove/Slade. The existing signal timings were obtained from DDOT.

PEDESTRIAN

Howard University is a compact Campus with good pedestrian conditions throughout. The size of the Campus, pedestrian amenities, and the location of transit stations and parking results in high pedestrian traffic throughout Campus. Campus housing, transit services, and student amenities located on the periphery of the central Campus are the primary sources of pedestrian traffic. Campus shuttle stops and parking lots located within Campus also generate high volumes of pedestrian traffic.

Figure 4-12 identifies the number of lanes of the roadways surrounding the University and the locations of controlled and uncontrolled crosswalks. Figure 4-12 also distinguishes roadways with 1- or 2-lane streets from those with greater than 2-lane cross-sections. This is because a roadway wider than 2-lanes is seen as a mobility barrier for pedestrians, so controlled crosswalks are frequently provided at the intersections.

The primary destination on Campus is the Yard. The quad is located north of Howard Place between 5th and 6th Streets, buffered from adjacent roads by buildings and landscaping. The Yard attracts and concentrates academic and social activities, and it is the primary location for numerous formal and informal outdoor gatherings. Students and staff are frequently seen throughout the quad socializing. Vehicular access to the central core of Campus and the quad is limited by gate access located at 6th Street and Howard Place. However, vehicular traffic throughout this area is still present, with multiple vehicles parked along the periphery of the quad and occasional truck deliveries to the student union. This vehicular access results in pedestrian-vehicle conflicts along access routes to the quad and within the quad along 5th Street and Howard Place.

Between the core and Campus housing, transit stops, and parking lots all streets have sidewalks and most crossings are signal or stopped controlled with crosswalks, curbramps, detectable warning strips and pedestrian countdown signals.

Pedestrian conditions and crossings are fair in most locations. Along some key walking routes, the quality of walking conditions is negatively impacted by the narrow width of sidewalks, obstructions on sidewalks that reduce effective sidewalk widths, such as light poles and parking meters, missing crosswalks and curb ramps, and narrow or missing buffers between sidewalks and the vehicle cartway.

These issues are present along 4th Street, 6th Street and Georgia Avenue and to a lesser extent along W Street, Bryant Street, and Barry Place. These are the primary north-south and east-west pedestrian routes between Campus housing, transit stops, and the quad. Within Campus, pedestrian-vehicle conflicts occur at several mid-block locations where pedestrian desire lines are not aligned with intersections or designated mid-block crossing locations. This is most common where building entrances or pedestrian pathways do not align with crossing facilities. Effective sidewalk widths are sometimes reduced by light poles and parking meters, there may be missing crosswalks and curb ramps, and narrow or missing buffers between sidewalks and the vehicle cartway.

CAMPUS CONTEXT

There are east-west walking routes between off-Campus housing, parking facilities, student amenities, commercial uses, and transit stops and stations that result in heavy pedestrian volumes at crossings along Georgia Avenue and to a lesser extent 4th Street on the east side of Campus and Florida Avenue on the west side of Campus.

Most of these crossings have good pedestrian amenities, including crosswalks, curb ramps, and pedestrian signals.

Jaywalking on Georgia Avenue in the vicinity of Barry Place is an existing issue that results from access routes to and from the east being offset to the north and south of the intersection rather than routing directly to the intersection and the crosswalks.

There are gaps in the pedestrian network and intersections without controlled crosswalks along primary pedestrian routes that increase walk distances or otherwise reduce the quality and attractiveness of walking.

The main area where these issues are common is between Georgia Avenue, Barry Place, Florida Avenue and U Street. In this area, there are large city blocks without through connections that significantly increase walk distances and locations along Florida Avenue that lack adequate crossing facilities or have large gaps between controlled crossing locations. This is primarily an issue along Florida Avenue between Sherman Avenue and U Street where W Street does not connect through from Georgia Avenue to Florida Avenue and where there are connections, such as V Street, that do not have adequate crossing facilities to accommodate through pedestrian traffic.

Overall, the quality of the pedestrian network is good and walking is the primary mode for moving around while on Campus or between Campus and destinations nearby. Addressing deficiencies will result in better walking conditions and encourage more trips to be made by transit, bike and walking by increasing the ease and attractiveness of walking on and adjacent to Campus.

Photo 4-39: View of Bryant Street looking west

CAMPUS CONTEXT

(CONTINUED)

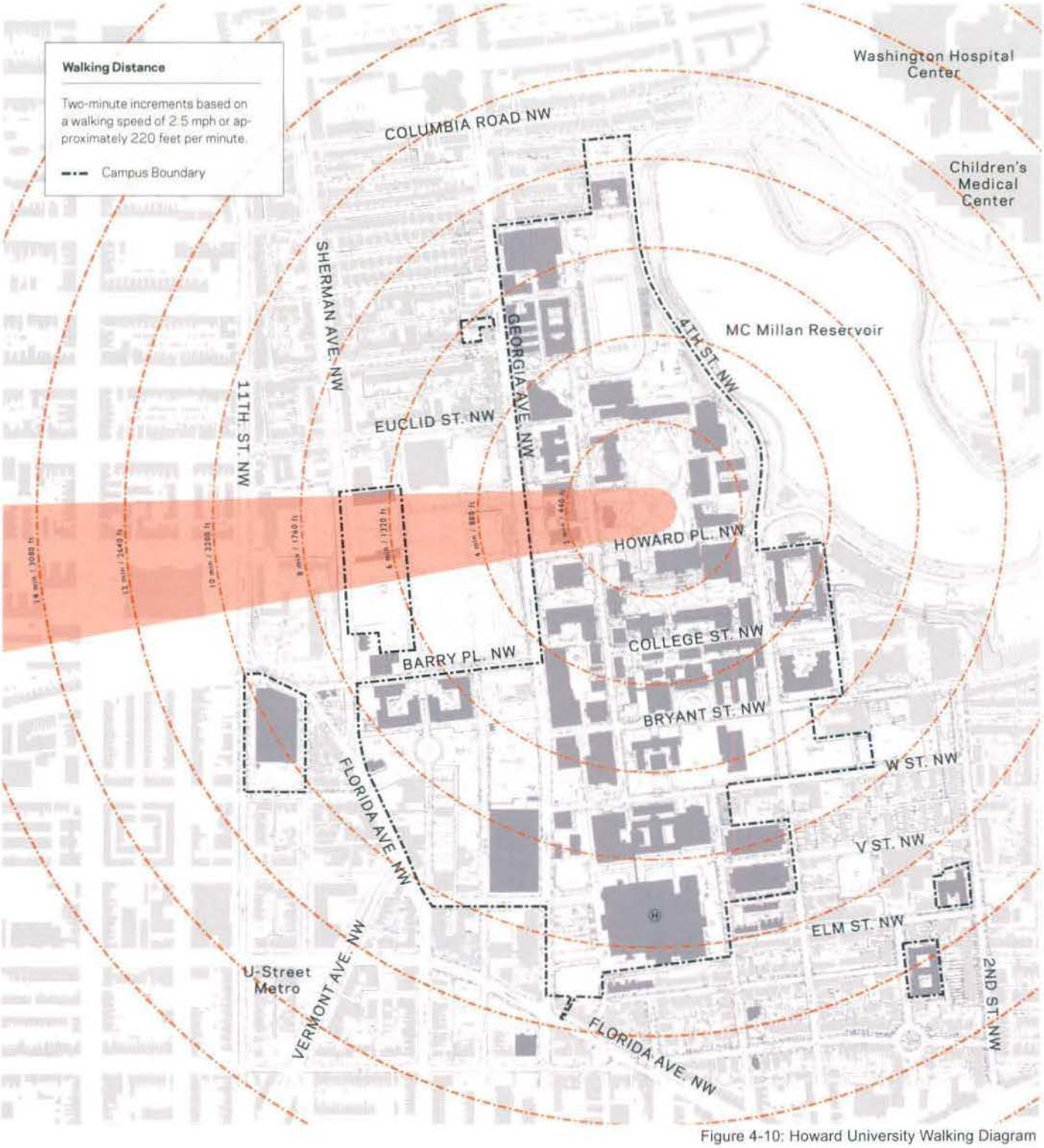

Figure 4-10: Howard University Walking Diagram

CAMPUS CONTEXT

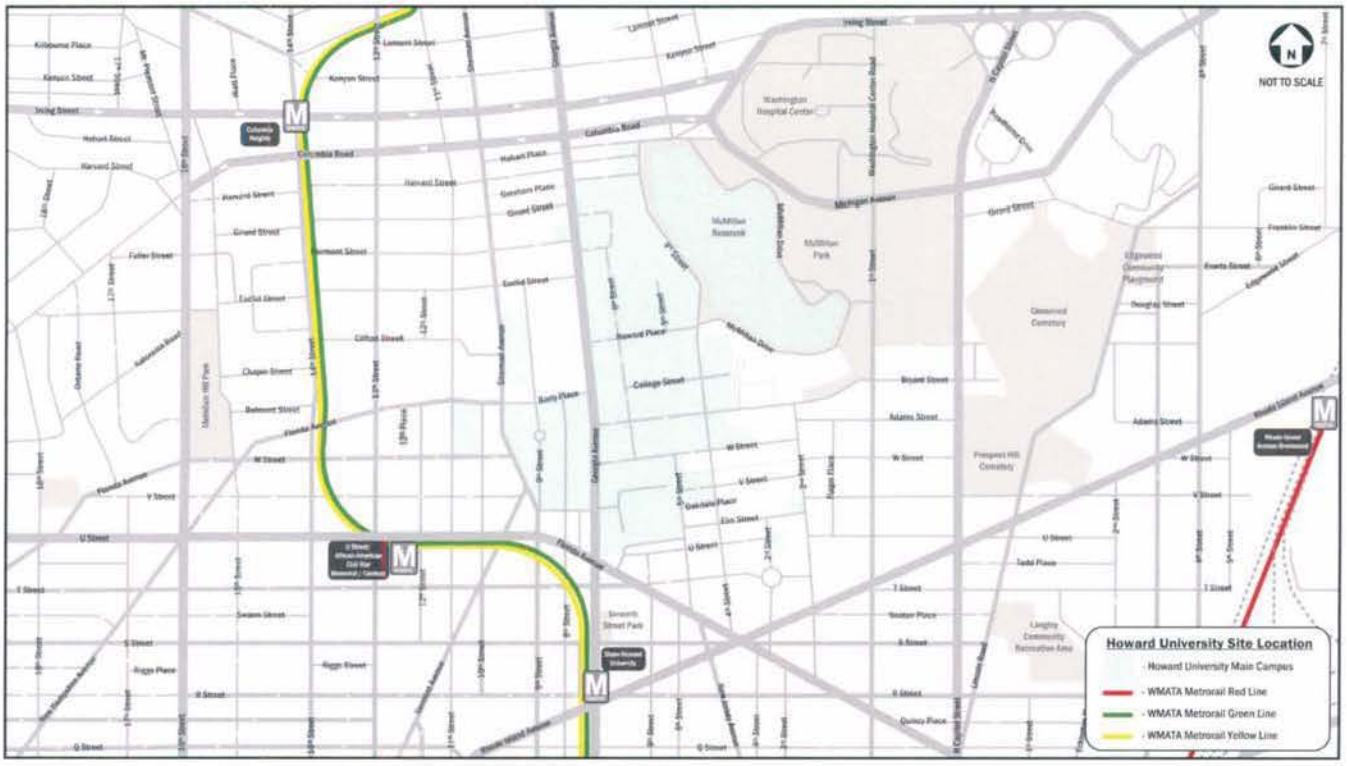

Figure 4-11: Howard University Campus Location (Gorove Slade Associates, Inc.)

CAMPUS CONTEXT

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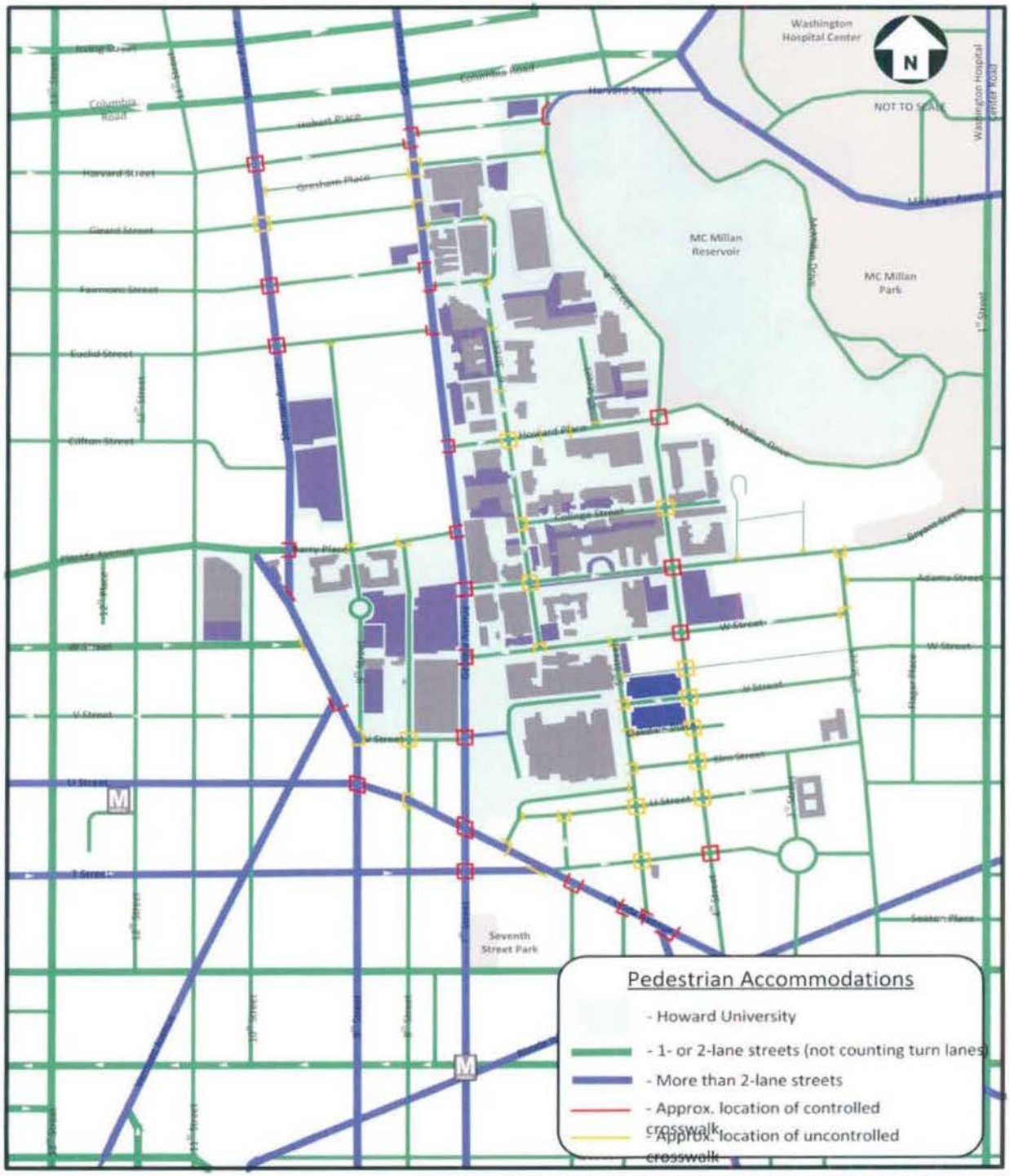

Figure 4-12: Observed Pedestrian Crossings (Gorove Slade Associates, Inc.)

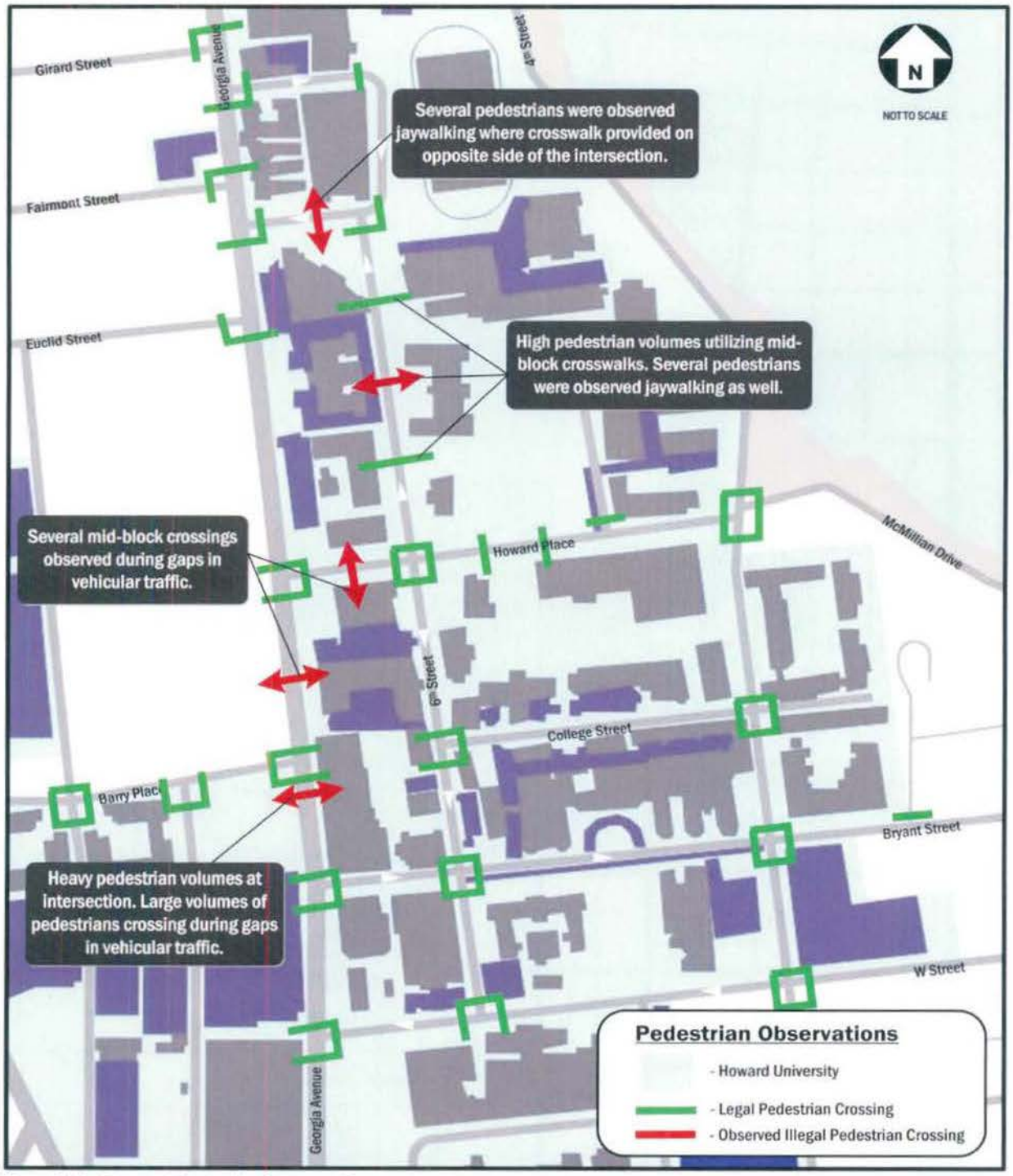

Figure 4-13: Observed Pedestrian Patterns (Gorove Slade Associates, Inc.)

CAMPUS CONTEXT

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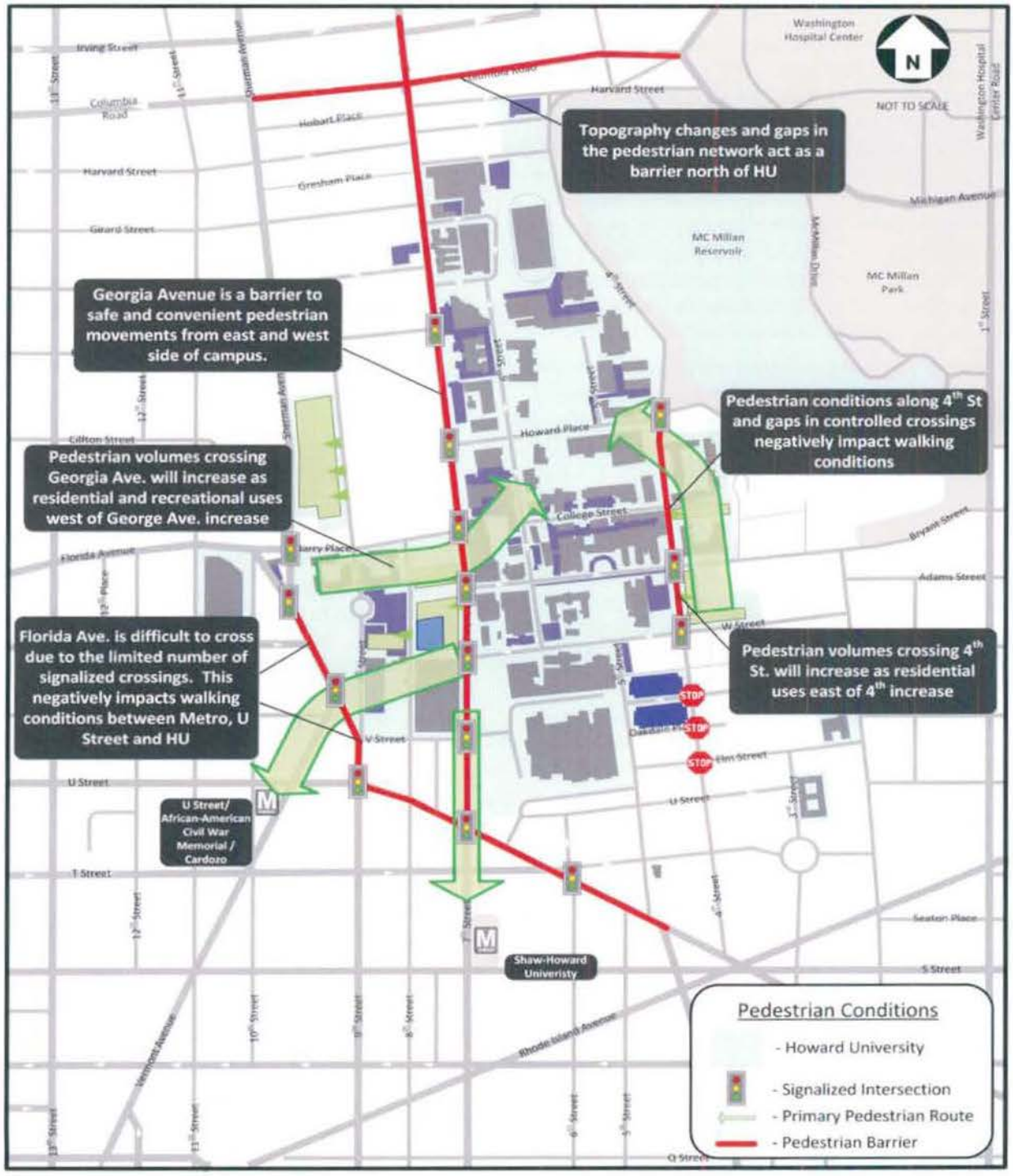

Figure 4-14: Pedestrian Conditions & Concerns (Gorove Slade Associates, Inc.)

CAMPUS CONTEXT

BICYCLE

Bicycle use for commuting, short trips, and recreation is increasing in the District. Increased bicycle traffic can be observed throughout the study area and the limited amount of bicycle parking is frequently occupied during peak periods. On-street bike lanes and signed bike routes have increased in the study area as well. Bike lanes extend to the periphery of Campus to the north, west, south and, to a lesser extent, east. These facilities provide good conditions for cycling in the area around the Campus, but connections to Campus and facilities within Campus are incomplete or missing. Reduced cycling conditions are primarily due to changes in topography and roadway conditions.

To the north, there are topography changes and roadway configurations that reduce traffic between the Campus and the bike lanes on Warder Street and Park Place. To the northwest, topography changes and conditions along Georgia Avenue reduce routing options between Campus and signed bike routes along Kenyon Street and Irving Street. To the west, conditions on Georgia Avenue and lack of roadway connections between Campus and W Street and V Street reduce the ease of using the bike lanes located along these streets. To the south, there are limited options for crossing Florida Avenue to access bike lanes to the south, including those located along 7th Street, 5th Street, T Street, R Street, and Q Street.

Several streets adjacent to Campus also act as barriers between the Campus and the surrounding area. In particular, Georgia Avenue and Florida Avenue have narrow lane widths and high traffic volumes that discourage cycling. The District Department of Transportation (DDOT) indicates that Georgia Avenue has poor traffic conditions for bicycling between Florida Avenue and Euclid Street, the portion of Georgia Avenue that borders the main Campus. This is also true of Florida Avenue between Barry Place and V Street.

On Campus one-ways impede circulation within Campus and require cyclists to uses off-Campus roads for circulation that do not provide good cycling conditions, including 4th Street and Georgia Avenue. For example, it is not possible to enter Campus at Girard Street and travel south down 6th Street without riding on the sidewalk or cycling in the wrong direction down a one-way street.

The newly created DC bike-sharing system, Capital Bikeshare, which premiered in September 2010, has three stations located near Campus. One station is on Campus at Georgia Avenue and Fairmont Street. A secondary station is located adjacent to the Metrorail station portal located at 10th Street and U Street and another is located at 7th and T Streets NW. These stations provide connections between the Campus and adjacent transit stations and commercial uses to the south and west as well as connections throughout the District. The existing Bikeshare stations experience high usage rates and demand for bikes and docks exceed supply during peak periods.

Memberships to the Capital Bikeshare system are available on a yearly, monthly, weekly, or daily basis for a $75, $25, $15, or $5 fee, respectively. Additionally, the first 30 minutes of each trip on Capital Bikeshare is free, with an additional fee paid for each 30 minute period thereafter.

Bicycle parking does not appear to be provided on Campus at most Campus buildings. During site visits and observations, some bicyclists were noted within Campus. The Campus Police use bicycle patrolmen on Campus, which seems to be the majority of bicycle users currently on Campus. Based on interviews with students and faculty, there is a desire for bicycle racks to be provided on Campus. The limited amount of bicycle parking in the study area acts as an additional barrier to cycling.

CAMPUS CONTEXT

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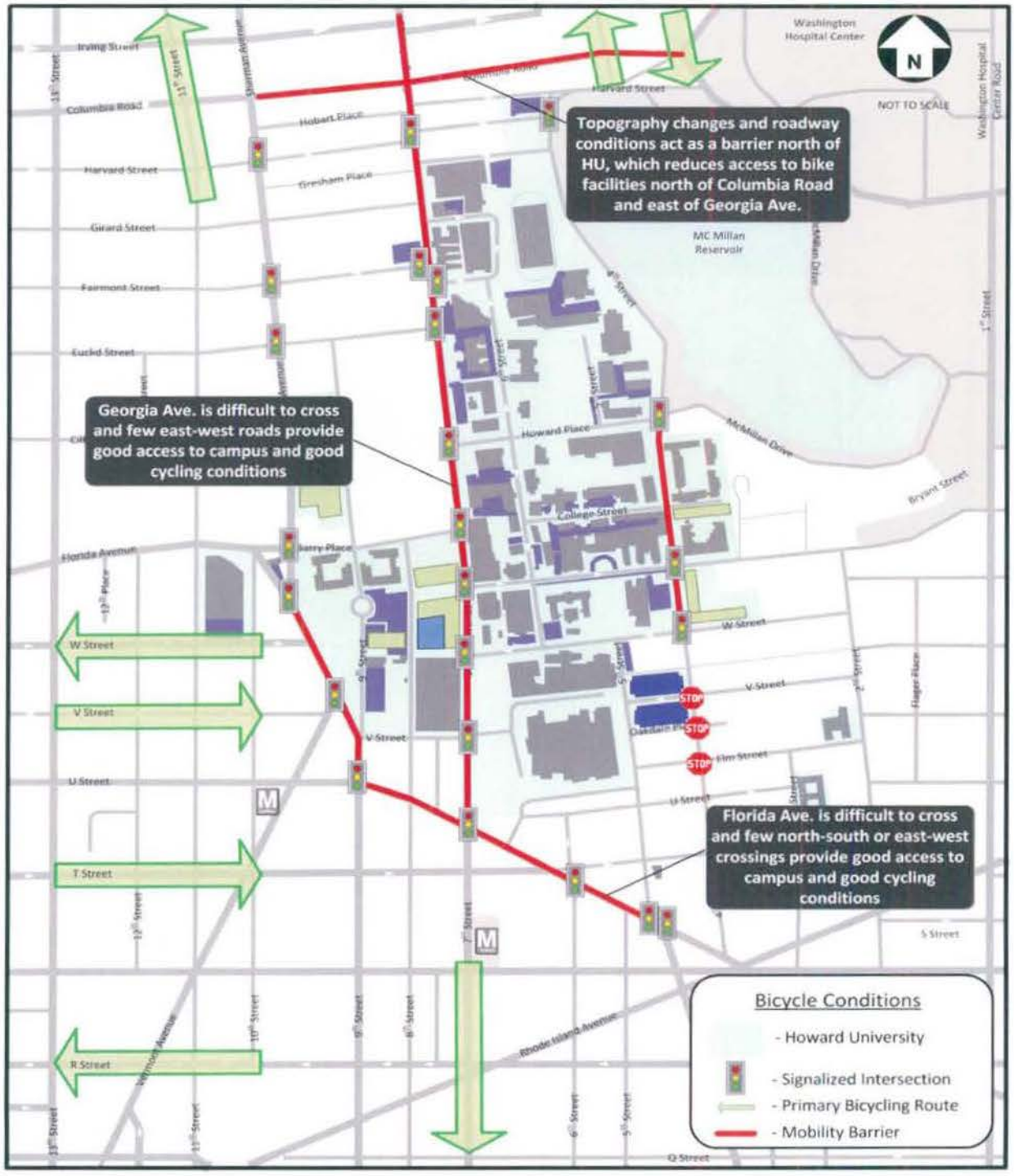

Figure 4-15: Bicycle Conditions & Concerns (Gorove Slade Associates, Inc.)

CAMPUS CONTEXT

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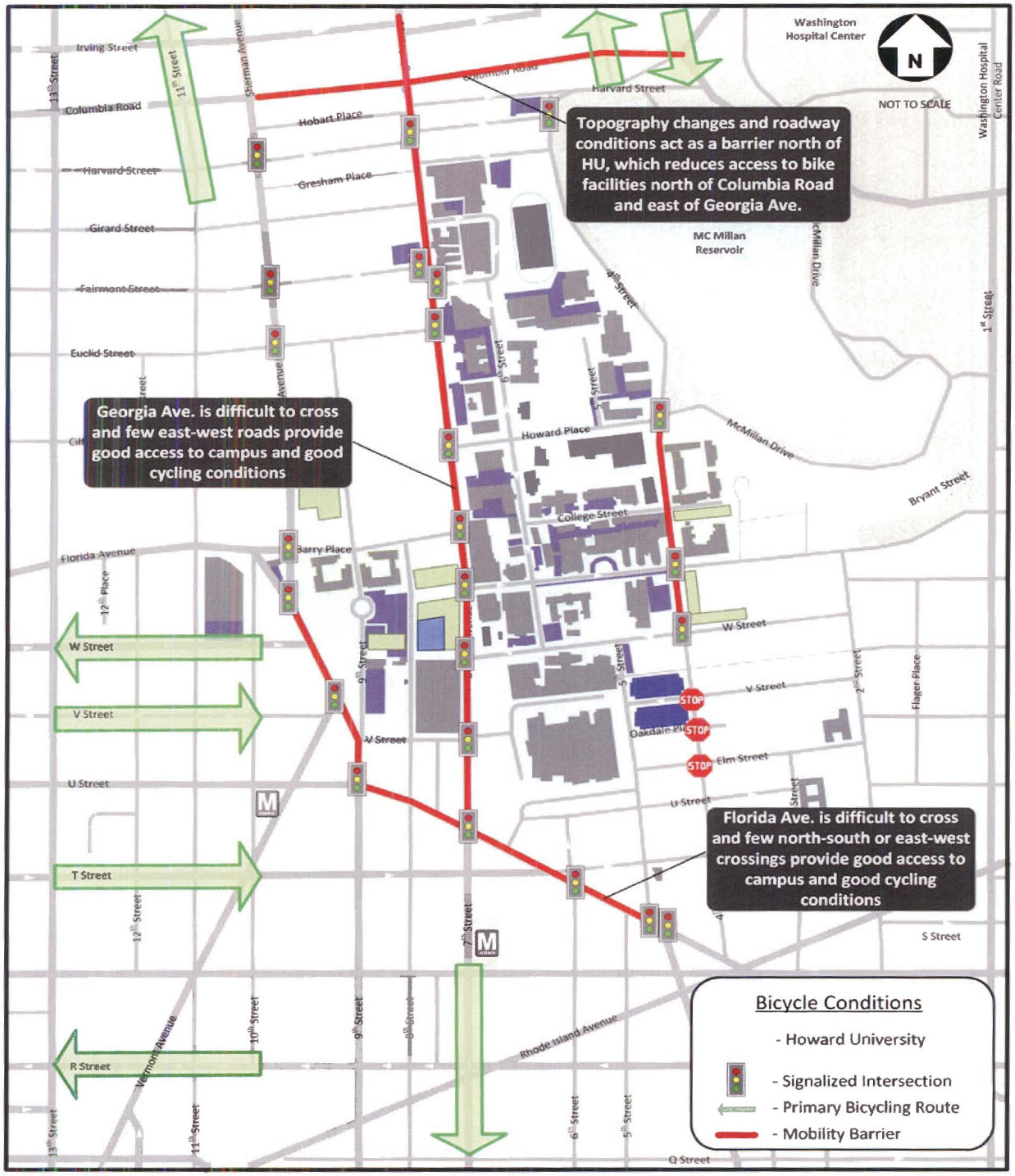

Figure 4-15: Bicycle Conditions & Concerns (Gorove Slade Associates, Inc.)

CAMPUS CONTEXT

(CONTINUED)

HU SHUTTLE SERVICE

Howard University provides a free shuttle service with five routes running throughout the day and an additional route running on the weekends. HU shuttle service is an essential transportation service provided by the Campus. The weekday shuttle service provides access around the central Campus, to the Meridian Hill Residence Hall, to the Shaw/Howard University Metro station, to the Law School/West Campus, and to the Divinity School/East Campus. The weekend route provides daytime and Saturday late night service around the central Campus, to the Meridian Hill Residence Hall, and to the Shaw/Howard University Metro station. Figure 4-17, Figure 4-18, Figure 4-19, and Figure 4-20 identify shuttle routes and stop locations.

The HU shuttle service is managed by Auxiliary Services. It was established to reduce Campus vehicle trips and parking demand. The North, South, Law School/West Campus, and Divinity School/East Campus routes operate on weekdays during the fall and spring semesters. The weekend route operates on Saturday and Sunday during the fall and spring semesters and on weekdays during the summer semester. Ridership data provided by the University shows that approximately 962,500 riders utilized the HU shuttle system between January and October 2009.

Shuttle routes travel through Campus with multiple stops located near Campus buildings. The convergence point and most heavily used shuttle stop is provided at 6th Street and Fairmont Street near the School of Business and the Cramton Auditorium. This stop is a major source of pedestrian traffic and high volumes of passengers waiting, boarding and alighting.

The review of HU shuttle operations shows that several improvements to the shuttle service could be further investigated. The shuttle routes provided around the University have many loops and turns and no direct service between specific origins and destinations on Campus (i.e. between the Shaw/Howard University Metro Station and the Quad). The North and South routes could be further studied in order to provide more efficient service to students and faculty/staff.

In addition to improving shuttle routes, shuttle stops might be enhanced by adding amenities such as shelter, seating, and route information.

Next Bus technology currently exists which has improved shuttle service. In addition, Intelligent Transportation Systems (ITS) technology could be installed at shuttle stops that could provide information on the time remaining until the next bus arrives. This information could also be synchronized with or replace existing technology and made available on the internet, which would help passengers plan their trip before departing for the shuttle stop.

More comprehensive information can be provided online for access by students and faculty/staff, including shuttle maps and timetables. Further study of the number and routing of HU shuttle routes are areas of operation that will help to determine the most efficient routing and stop locations given ridership trends and available resources.

Photo 4-40: A HU shuttle at Fairmont and Georgia Avenue

Photo 4-41: The HU shuttle waiting area and the conditions at the 6th & Fairmont shuttle stop

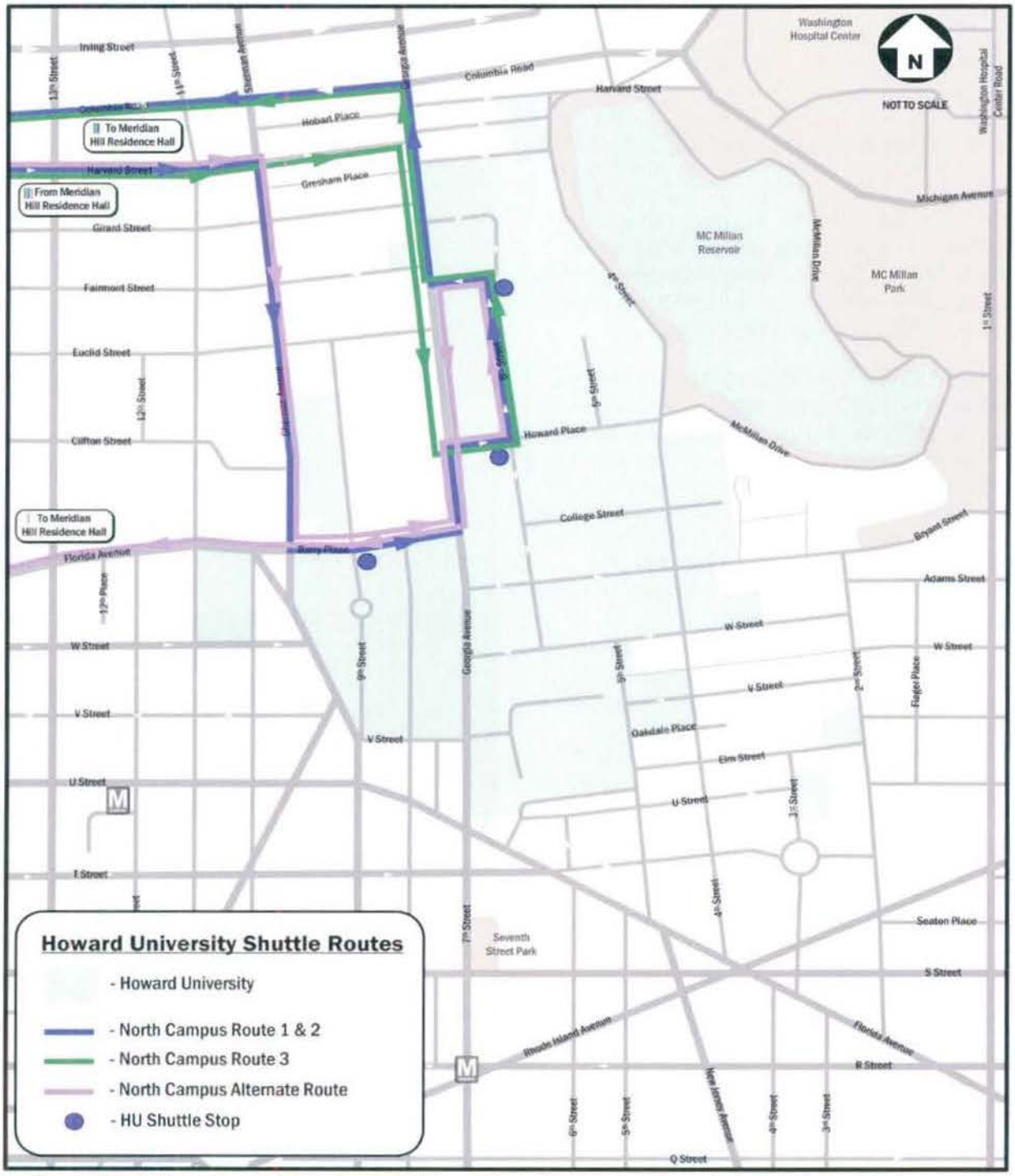

Figure 4-17: HU North Campus Shuttle Routes and Stops (Gorove Slade Associates, Inc.)

CAMPUS CONTEXT

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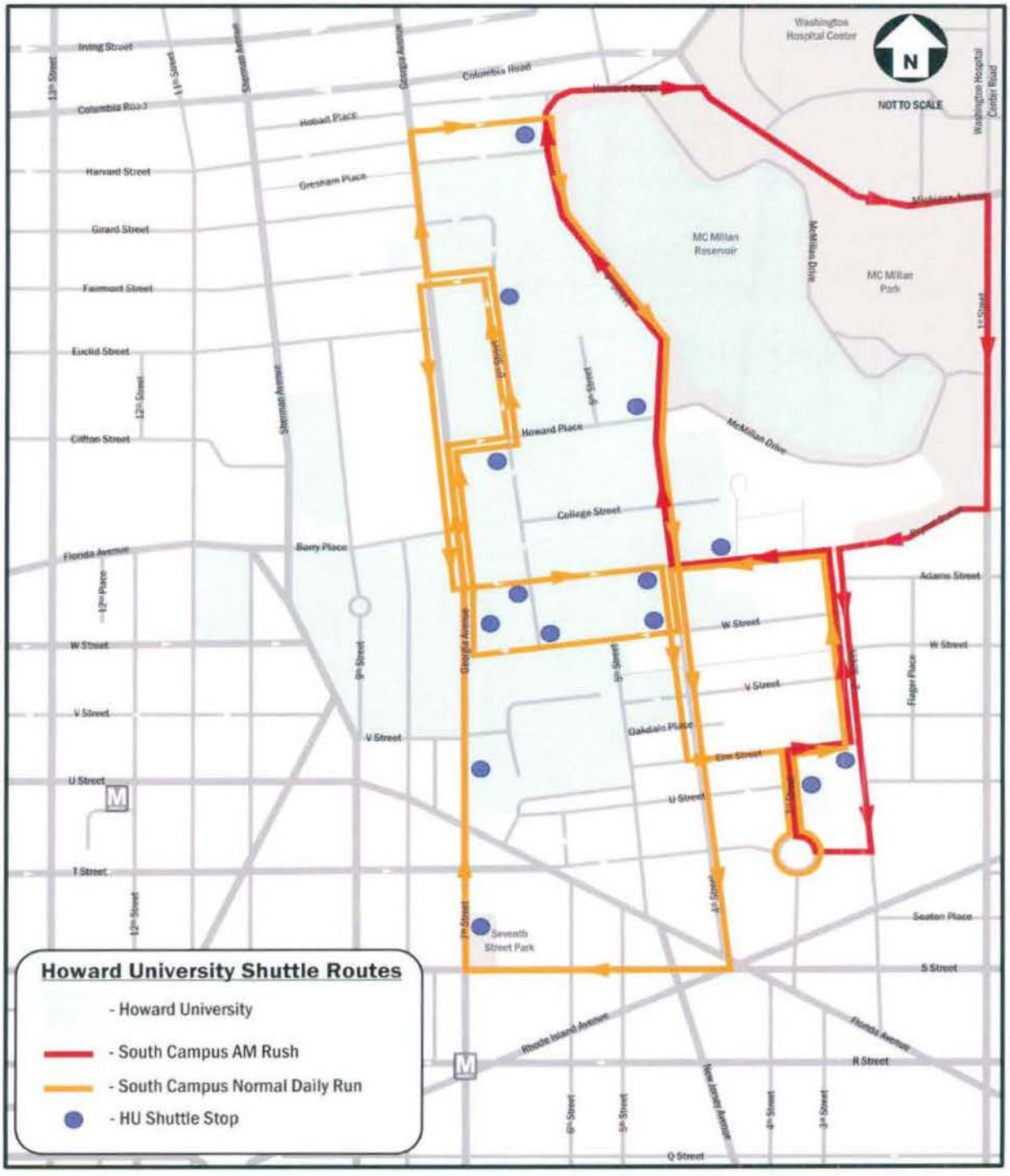

Figure 4-18: HU South Campus Shuttle Routes and Stops (Gorove Slade Associates, Inc.)

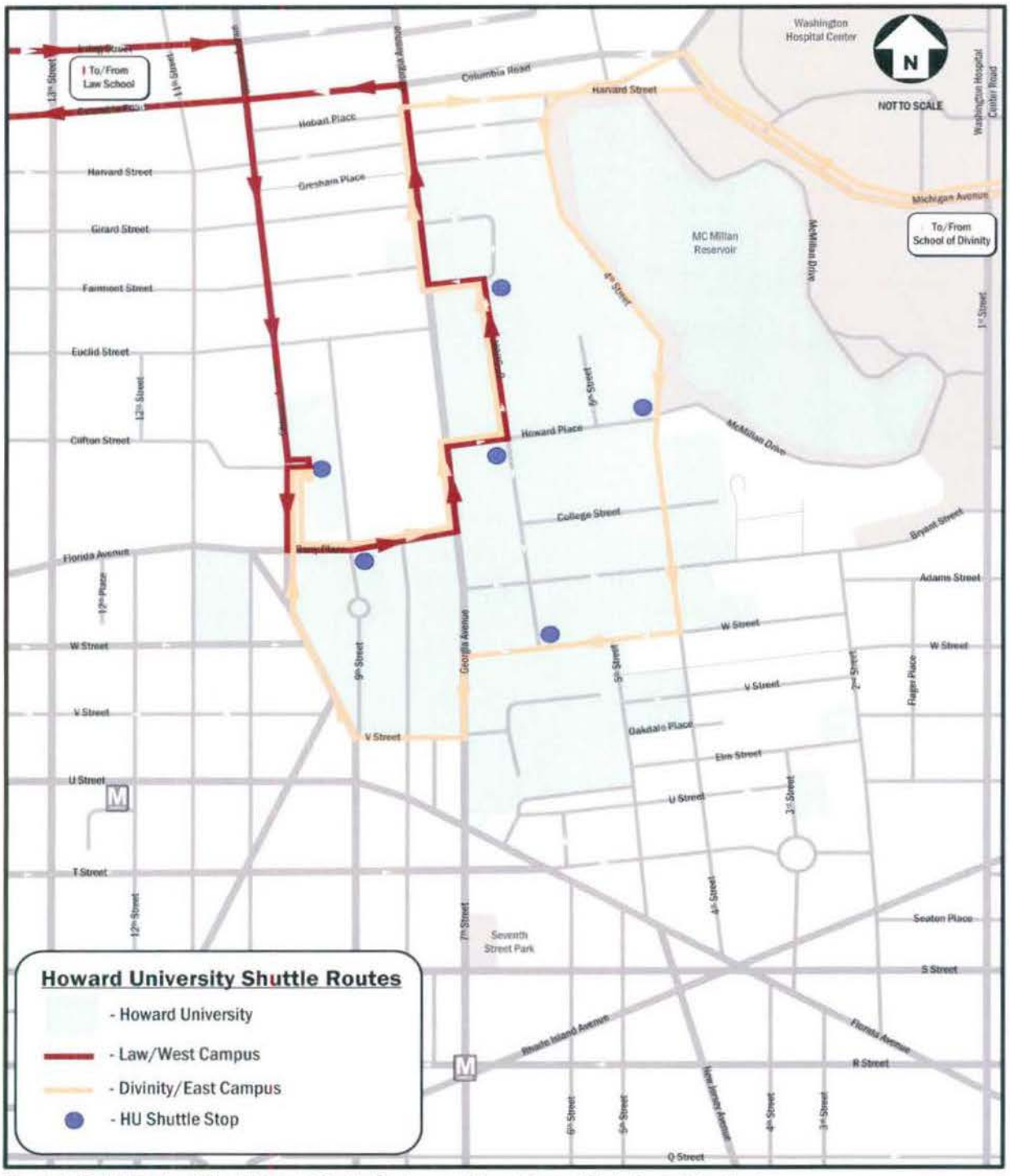

Figure 4-19: HU East and West Campus Shuttle Routes and Stops (Gorove Slade Associates, Inc.)

CAMPUS CONTEXT

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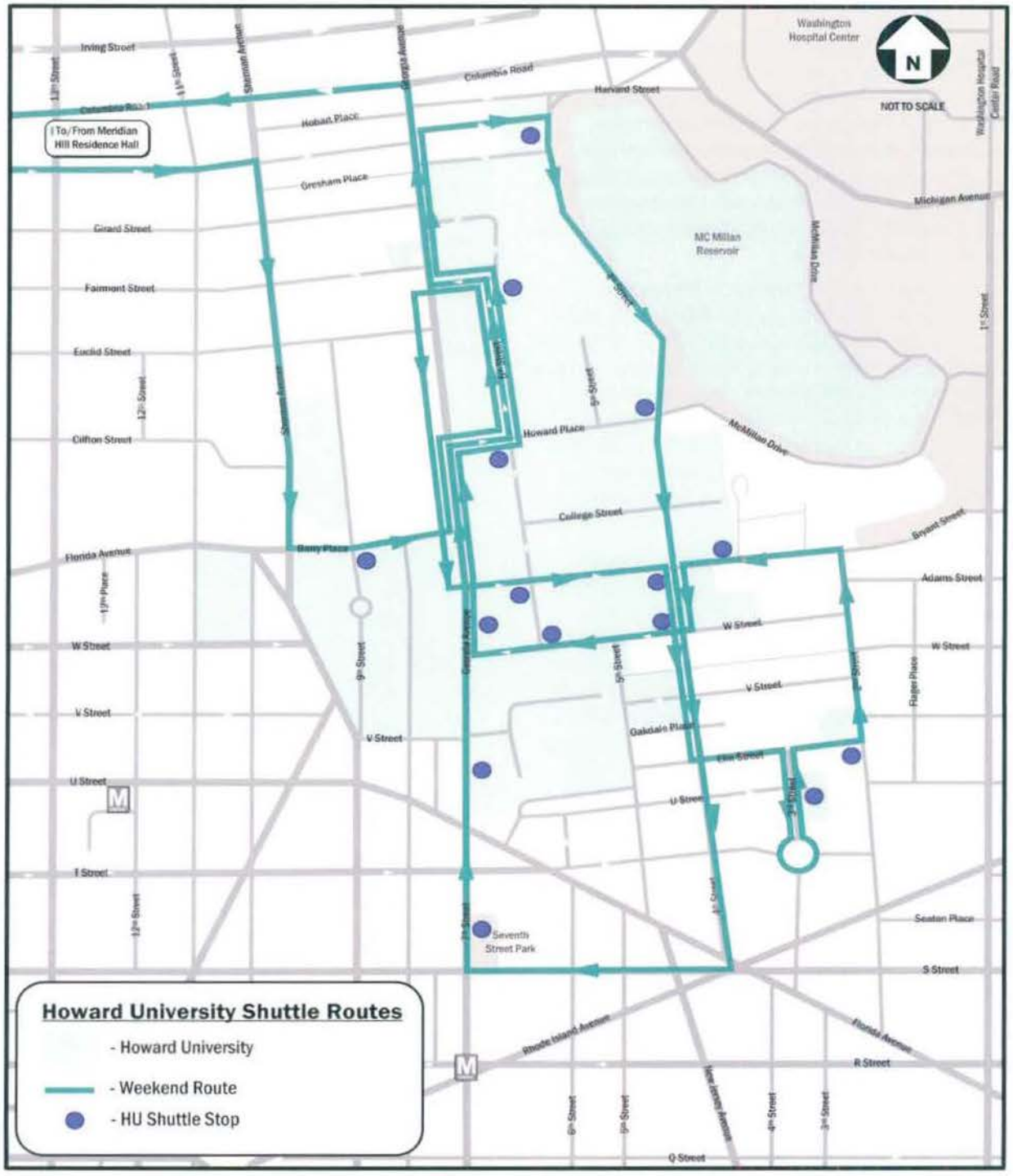

Figure 4-20: HU Weekend Shuttle Route and Stops (Gorove Slade Associates, Inc.)

CAMPUS CONTEXT

TRANSIT

Howard University is directly served by Metrobus and linked with Metrorail Stations located on the Green and Yellow Lines by HU Shuttles and Metrobus. Figure 4-21 identifies Metrobus routes and stops and the nearest Metrorail station locations that serve HU. This includes service along Georgia Avenue and 4th Street adjacent to Campus with multiple stops provided along each transit corridor. Transit connects the Campus to destinations throughout the District, Maryland and Virginia.

Metrobus ridership data from WMATA indicates that approximately 10,200 riders board and alight at the stops adjacent to HU. The data was collected in 2003, 2005, and 2007 and reflects conditions on a typical weekday. Metrorail ridership data from WMATA indicated that approximately 22,350 riders enter and exit the Metro stations near the HU Campus on a typical weekday. This data includes the Shaw/Howard University and U Street/African-American Civil War Memorial/Cardozo stations and was collected in May 2009.

Due to growth of population, jobs, and retail in several neighborhoods in the District and the potential for growth in other neighborhoods, the District's infrastructure is challenged with the need for transportation investments to support that growth and further strengthen neighborhoods. In order to meet these challenges and capitalize on future opportunities, the District Department of Transportation (DDOT) has developed a plan to identify transit challenges and opportunities and to recommend investments. This is outlined in the DC's Transit Future System Plan report published by DDOT in April 2010. This plan includes the reestablishment of streetcar service in the District and the implementation of limited-stop bus service along major corridors in the vicinity of the Howard University Main Campus.

The proposed streetcar system element of the plan, as shown on Figure 4-22, includes four routes that travel near the University. The streetcar system will consist of modern low-floor vehicles that operate on surface tracks embedded in the roadways, which will mostly operate in travel lanes that are shared with automobiles. Stops will generally be located every ¼- to ½-mile along the routes. The future planned routes serving the study area will connect the University to several areas in the District including Rhode Island Avenue, Washington Circle, Buzzard Point, Woodley Park/Adams Morgan, Congress Heights, Brookland, and Takoma.

The Metro Express limited-stop bus element of the plan includes several routes that travel near the University. The new limited-stop bus service will consist of high-frequency busses using specially marked vehicles, operated by WMATA, which will supplement the four existing Metro Express routes that operate along Georgia Avenue, 16th Street, Wisconsin Avenue, and Pennsylvania Avenue. Stops will generally be located every ¼- to ½-mile along the routes. The Metro Express bus services will also include traffic signal priority and real-time Next Bus arrival displays. The future planned corridors near the University include 16th Street, 14th Street, Georgia Avenue, North Capitol Street, Columbia Road/Michigan Avenue, U Street/Florida Avenue, and Rhode Island Avenue.

CAMPUS CONTEXT

(CONTINUED)

Figure 4-21: Area Transit Services (Gorove Slade Associates, Inc.)

Figure 4-22: Future Transit Plan – Streetcar Element (Gorove Slade Associates, Inc.)

CAMPUS CONTEXT

Figure 4-23: Future Transit Plan – Metro Express Bus Element (Gorove Slade Associates, Inc.)

CAMPUS CONTEXT

(CONTINUED)

PARKING

Howard University requires all students, faculty, staff, visitors and guests to park on-Campus. To accommodate demand for parking, the university has multiple surface parking lots and on-street parking spaces located throughout the Campus. HU has a total of 2,295 parking spaces on the central Campus, with an additional 1,495 parking spaces for the HU Hospital. Parking management is provided by the Office of Parking and Shuttle Operations (OPSO), which is managed by Auxiliary Services. Parking spaces provided under Bethune and the East and West Towers are managed by Residence Life.

HU requires that all vehicles parked on University property display a valid hangtag or parking permit for the appropriate parking lot or area. Vehicles parking without a valid permit are subject to ticketing, towing, and/or immobilization. Personnel from Parking Enforcement, Campus Police, and Hospital Security enforce University parking regulations.

Faculty and staff parking assignments are made through departmental allocations. The department head, dean, or vice president makes all parking assignments for each department. Employees must fill out forms from their departmental parking coordinator, which are processed by OPSO. 400 reserved parking spaces are distributed to departments for allocation as they believe best fit their needs. All other parking spaces are non-reserved. Parking permits and expiration stickers are provided for an annual parking fee of $400 for a reserved space or $300 for a non-reserved space. Faculty and staff may pay their parking fees by payroll deduction or by advance payment. Employees who are unable to obtain a parking assignment must find alternatives to driving to Campus.

Student parking is determined through a Parking Registration system at HU that operates on a first-come, first-serve basis. The registration is held following the spring semester of each year. Students must register for a parking permit by the deadline and pick up their parking permits the following fall semester. Unclaimed parking assignments are sold via an automated random selection process. Student permits are provided for an annual fee of $240. Howard Plaza Towers and Bethune Annex residents apply through the residence manager's office if they wish to park in the underground parking facilities. Parking is very limited and students are encouraged to rideshare or use alternatives to driving to Campus.

To effectively manage this limited resource, freshmen (First Time In College) students are not eligible for parking privileges on University lots. Freshmen are discouraged from bringing a car to Campus as street parking is limited and aggressively enforced by District of Columbia authorities.

Visitor parking is very limited, and daily parking permits are available from OPSO for $4. Visitors are allowed to park in any open lot with a daily parking permit. On-street parking spaces are also available throughout the Campus. Hospital parking is managed by OPSO. There are a total of 1,495 parking spaces provided for hospital staff, patients, and visitors.

During summer sessions, monthly parking permits are available for faculty/staff and students. Parking for students is $24 per month, and students must be registered for summer school in order to qualify for parking. Parking for faculty/staff is $30 per month during the summer session.

Contracted security officers are stationed at select University parking lots in order to enforce parking policies. These officers are managed by the Campus Police. Parking enforcement is also provided by the Campus Police. There are currently four parking enforcement officers who are responsible for ticketing vehicles without valid permits. Collection of parking fines is handled by OPSO. HU relies on ticketing and towing to keep parking spaces open on Campus, though the current program still results in an unacceptable amount of illegal parking on Campus.

Table 4-2 presents observations of the existing parking supply and demand. The data was collected by inventorying the existing lots and performing observations on their occupancy over several times during a typical weekday when classes were in session. Figure 4-24 shows a key to the parking lot locations.

Generally, a parking supply is considered at capacity when demand reaches 90% of the supply. Thus, the existing Campus parking situation is under capacity. This is contrary to some of the comments from University staff, who have consistently referred to on-Campus parking as insufficient.

This is likely due to the location of the lots with available spaces relative to where people want to be on Campus. Figure 4-25 summarizes the amount of parking and percent occupied at peak times by zones within Campus. The figure shows how the lots in the middle of Campus are over-capacity (occupancy higher than 90%), and that the further a zone is from the center of Campus, the lower the peak occupancy. The existing demand of approximately 1,750 spaces requires a supply of 1,925 spaces to meet it, given a proper distribution of demand to the lots on Campus.

The observed demand at the Hospital parking facilities is over 90%, indicating a parking supply operating over capacity. The Hospital parking data is presented for informational purposes only, as it is separate from the Campus Master Plan process.

In addition to the parking provided on Campus, several of the streets on and near Campus provide parking. This includes metered parking and free time-limited parking with residential parking permit exceptions.

The majority of the streets located outside the Campus have time-restricted on-street parking, mainly consisting of two-hour limits, with no time-limit in place for vehicles with residential parking permits. Several of the streets located within the Campus, including Georgia Avenue, 6th Street, 4th Street, Fairmont Street, and W Street have metered parking spaces provided on-street. Several of these on-street spaces (time-restricted and metered) are utilized by both faculty/staff and students that do not obtain parking permits. Available spaces may also be used by HU visitors that cannot find parking within the University or do not wish to pay for a visitor permit.

CAMPUS CONTEXT

(CONTINUED)

Table 4-2: Existing Parking Supply and Demand

Lot Code	Lot Name	Existing Parking Supply				Peak Occupancy on Typical Weekday*	
		Student Spaces	*Faculty& Staff Spaces*	*H/C Spaces*	*Total Spaces*	**Percentage**	**Parked Cars**
A	Childers	0	66	6	72	99%	71
AA	Florida Avenue	0	22	1	23	83%	19
B	Founders	0	48	8	56	70%	39
BB	HUSC	0	37	0	37	100%	37
C	Business	0	34	2	36	100%	36
D	Miner	0	50	2	52	104%	54
E	Johnson	0	42	1	43	100%	43
EE	LSHSL	0	41	2	43	44%	19
F	Mackey	0	63	0	63	90%	57
G	Downing	0	33	2	35	97%	34
H	Drew	47	4	3	54	83%	45
I	Greene	0	44	2	46	96%	44
J	Burr	0	11	1	12	75%	9
K	Georgia	0	33	1	34	85%	29
L	Just	0	22	1	23	70%	16
M	Chem	0	8	0	8	75%	6
N	Early Learning Center	0	0	0	0	N/A	N/A
O	C.B.P.	0	49	4	53	79%	42
P	6th Street	0	10	0	10	50%	5
Q	Power/Bunche	0	11	1	12	25%	3
R	Bethune	100	111	7	218	96%	210
RR	Bethune Underground	57	4	2	63	38%	24
RR	Bethune Annex	0	10	2	12	117%^	14^
S	Nursing	0	58	3	61	74%	45
T	5th & W	0	26	0	26	38%	10
U	6th & W	0	17	1	18	56%	10
V	Howard Center	100	209	6	315	89%	281
W	East Tower	100	34	4	138	81%	112
WW	East Tower Underground	100	2	1	103	80%	82
X	9th Street	33	0	0	33	67%	22
YY	West Tower Underground	99	3	1	103	56%	58
Z	Banneker	240	71	3	314	55%	173
1	Howard Center II	0	44	3	47	62%	29
2	9th & V Street Lot	40	25	3	68	29%	20
3	Annex I Rear	0	10	2	12	92%	11
4	Wonder Plaza	0	48	4	52	75%	39
Total Academic		**916**	**1,300**	**79**	**2,295**	**76%**	**1,748**
HUH-A	Hospital Lot A	0	124	0	124	91%	113
HUH-B	Hospital Lot B	0	120	4	124	114%~	141~
HUH-C	Hospital Lot C	0	11	0	11	100%	11
HUH-D	Hospital Lot D	0	42	5	47	130%^	61^
HUH-E	Hospital Garage E	0	593	16	609	89%	544
HUH-F	Hospital Garage F	0	552	28	580	88%	508
Total Hospital		**0**	**1,442**	**53**	**1,495**	**92%**	**1,378**

** - Observations performed on a weekday when classes were in session, at several times in the morning and afternoon. Peak occupancy listed is the highest observed occupancy at each lot among all times*

^ - Illegal parking observed, leading to occupancy greater than 100%.

~ - Lot is stacked parking by valet, leading to occupancy greater than 100%

(Gorove Slade Associates, Inc.)

CAMPUS CONTEXT

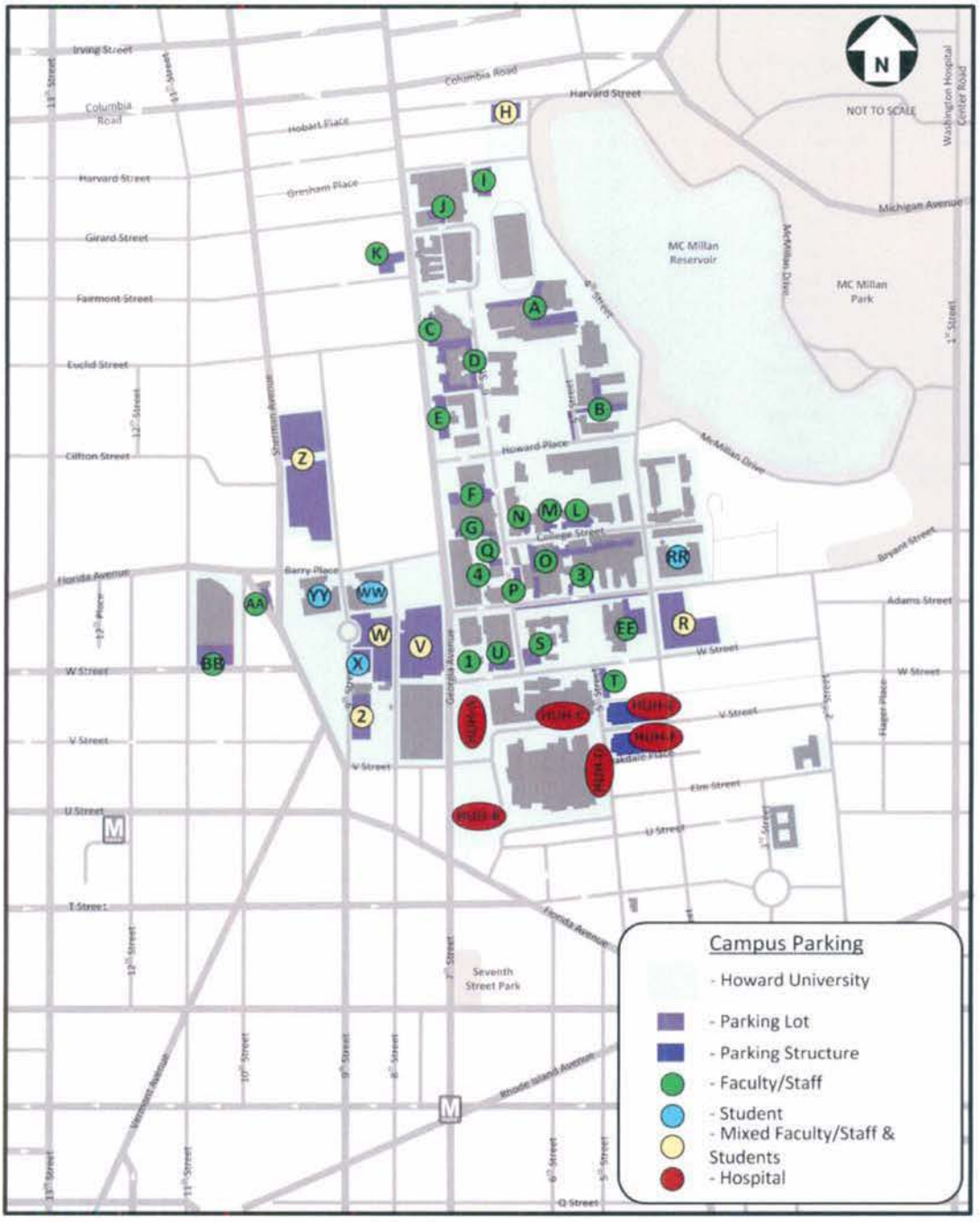

Figure 4-24: Campus Parking Lots (Gorove Slade Associates, Inc.)

CAMPUS CONTEXT

(CONTINUED)

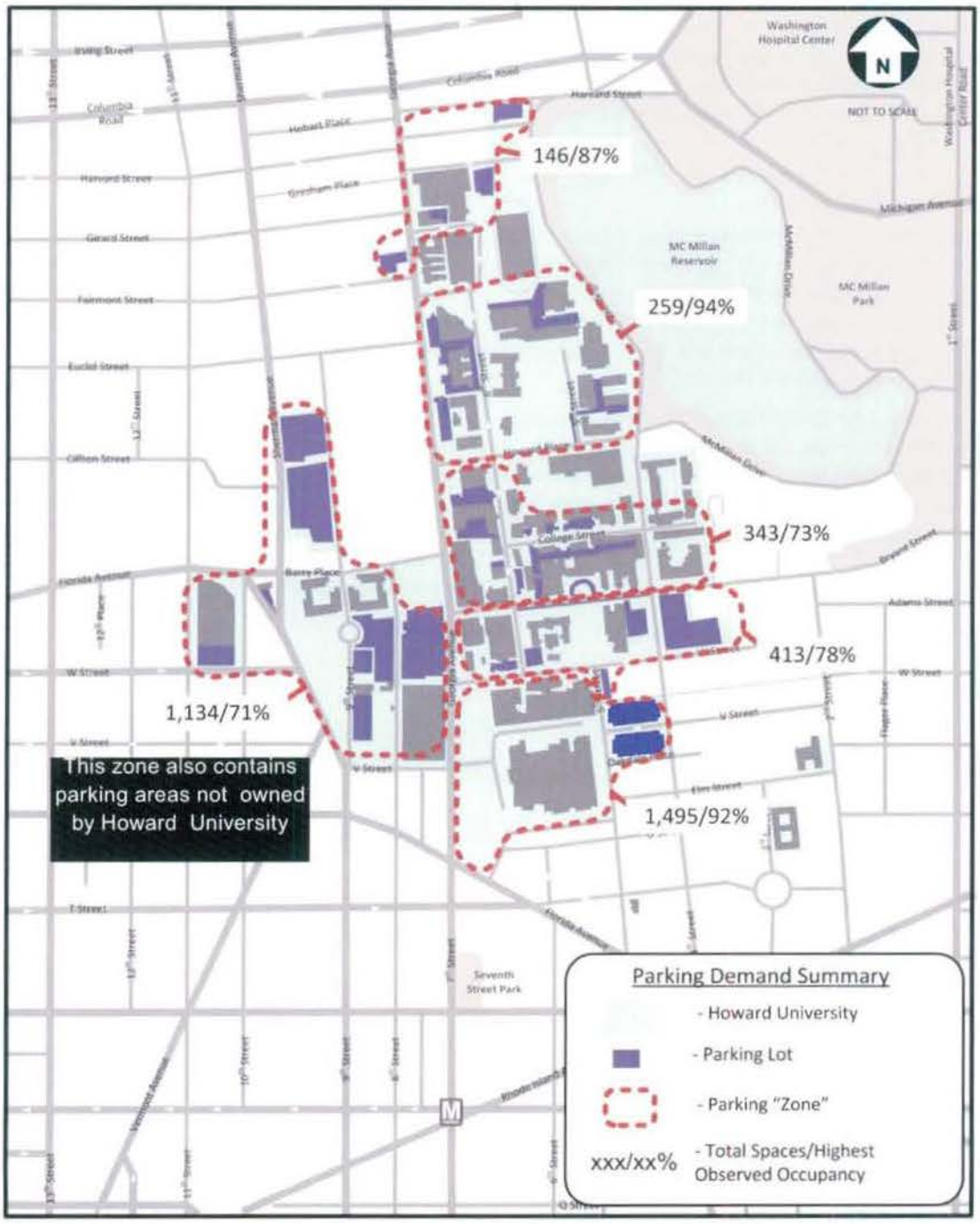

Figure 4-25: Parking Demand Summary (Gorove Slade Associates, Inc.)

CAMPUS CONTEXT

ROADWAYS

SITE ACCESS AND CIRCULATION

Site access for the main Campus is provided by multiple access points around the Campus. The primary Campus entrance is ornamentally designated at the intersection of Georgia Avenue and Fairmont Street, though it is not the primary vehicular access point due to the one-way configuration of Fairmont Street. Secondary access points to the main Campus and parking lots are dispersed along the roadways bordering Campus.

Gated entrances/exits for the central portion of Campus are provided along Howard Place. The gate at 4th Street and Howard Place is closed in order to decrease traffic cutting through the central Campus. Access is provided along 4th Street into Campus at College Street and W Street and out of Campus at College Street and Bryant Street.

The primary entrance for the HU Hospital is located along Georgia Avenue north of the intersection with Florida Avenue. The primary exit is located along Georgia Avenue at the intersection with V Street. Secondary access points are also provided along W Street and 5th Street.

INTERSECTION SAFETY

A safety analysis was performed to determine if there were an abnormally high accident rate at any study area intersection. The District Department of Transportation (DDOT) provided the last four years of intersection accident data; from 2004 to 2007 (2008 data had not been compiled yet). This data set included all intersections adjacent to Howard University except for intersections at University gates and parking lot entrances.

This data was reviewed and analyzed to determine the accident rate at each location. For intersections, the accident rate is measured in accidents per million-entering vehicles (MEV). The accident rates per intersection are shown in Table 4-3.

According to the Institute of Transportation Engineer's Transportation Impact Analysis for Site Development, an accident rate of 1.0 or higher is an indication that further study is required. Several intersections in the study area meet this criteria (as shown in red in Table 4-3). The Central Campus Master Plan needs to be developed in a manner to help alleviate, or at minimum not add to, the conflicts at these intersections.

Table 4-3: Intersection Accident Rates

Location	Total Accidents (2004 to 2007)	Accident Rate (per million-entering vehicles*)
Georgia Avenue & Girard Street	25	0.95
Georgia Avenue & Fairmont Street	35	1.25
Georgia Avenue & Howard Place	26	0.95
6th Street & Howard Place	7	1.78
Sherman Avenue & Barry Place	36	1.23
Georgia Avenue & Barry Place	75	2.62
Georgia Avenue & Bryant Street	50	1.78
4th Street & Bryant Street	16	0.85
Georgia Avenue & W Street	21	0.72
4th Street & W Street	22	1.43
Georgia Avenue & V Street	30	1.09
Georgia Avenue & Florida Avenue	41	0.84

** - Volumes estimated based on turning movement count data*

(Gorove Slade Associates, Inc.)

CAMPUS CONTEXT

(CONTINUED)

EXISTING UTILITY DISTRIBUTION SYSTEMS

In preparing the existing utility distribution report for the Howard University Central Campus Master Plan, Delon Hampton & Associates, Chartered (DHA) collected data from various sources, namely:

- Howard University as-built records;
- The District of Columbia water and sewer authority (DC Water), counter maps and as-built records for water, sanitary sewer and storm sewer;
- Interviews with Howard University Maintenance Managers; and
- Field visits.
- The utility drawings obtained from the University and from the District of Columbia are neither current nor complete . The level of records maintenance has varied with the federal and private entities which have supported the University.

The Central Campus is located in the Northwest quadrant of the District of Columbia and is bordered by Hobart Place on the north, 4th Street on the east, Florida Avenue on the south and Florida, Sherman and Georgia Avenues on the west. The Campus is approximately 11 city blocks long by 5 city blocks wide.

The existing utilities within the public right-of-ways are owned and maintained by various public utility companies.

Two exceptions to public ownership include the water, storm and sanitary mains within Howard Place and Bryant Street - between 6th Street and 4th Street, and the steam distribution system throughout the Campus each of which is owned and maintained by Howard University Facility Maintenance.

These utility systems are served by their respective primary feeders from the various public utility companies.

- Water Distribution System
- Sanitary and Storm Sewer Collection System
- Electrical Distribution System
- Steam Distribution System
- Gas Distribution System
- Telecommunication System

WATER DISTRIBUTION SYSTEM

The District of Columbia's water and sewer authority (DC Water) is responsible for the maintenance of the water mains within the Campus, with the exception those within Howard Place and Bryant Street between 6th and 4th Streets.

In 1995 Delon Hampton and Associates, (DHA) conducted an analysis of the water supply system of the Howard University main Campus. The report indicates water pressure problems throughout the Campus. Details and recommendations can be found in the report titled "Howard University Water Supply Upgrade Report, revised April 1995" and are summarized below. In conducting the 1995 study, the KY-Pipe computer Program (developed by the University of Kentucky) was used to create a model simulation of the water distribution system.

Water distribution pipes within the Campus are contained within the DC Water "first high" and "second high" designated distribution systems. These two systems are fed from separate pumping substations which are both fed from the Bryant Street pumping station. The Bryant Street pumping station is the origin of service to two substations that the city has designated the First High and Second High System.

The northern or upper part of the Campus is served by the Second High System, which is bounded on the north by Hobart Street, west by Georgia Avenue, east by 5th Street, and south by Bryant Street. The lower part of the Campus is served by the First High System, which is bounded on the north by Bryant Street, east by the 4th Street, west by Georgia Avenue and south by U Street. The Second High pipe segments are identified by their number in a rectangle and the First High pipe segments by number in a triangle on system maps..

CAMPUS CONTEXT

UPPER PART OF CENTRAL CAMPUS (SECOND HIGH SYSTEM)

Problems

1. Low Pressures at –

- School of Business Administration
- Founders Library
- Howard Manor
- Mordecal Wyatt Johnson Building
- Burr Gymnasium
- Cook Hall
- Locke Hall

Actions Needed/Taken:

1. Installation of a 12" line along Howard Place between 6th Street and 4th Street is needed. The proposed line would be tied to the 20" line in 6th Street and the 8" line in 4th Street. This is needed to provide redundancy and to accommodate future Campus expansion.

2. Installation of the upper quad distribution network as identified in the DHA 1995 study is needed to provide the required capacity for domestic water supply and fire protection for the adjacent facilities.

3. Replacement of the existing 4" service to Founders Library from 6th street with a new 8" service off the new 12" line in Howard Place was required. This improvement has been completed.

4. Investigation of lower pressure issues at the Howard Plaza Tower buildings is required.

LOWER PART (FIRST HIGH SYSTEM)

Actions Needed/Taken:

The Howard University building service lines are connected directly to the City mains. Therefore, the City will be requested to conduct an independent study to validate the following requirements and then make the necessary replacements:

1. Replacement of a 6" line along W street between the 4th Street Pumping Station and Georgia Avenue with a 12" line;

2. Replacement of a 6" line along 6th Street between Bryant Street and W Street with a 12" line; and

3. Replacement of a 6" line along 5th Street between W and Florida Avenue with a 12" line. Subsequent to the 1995 study, a 12" line was installed along 6th Street between Howard Place and Fairmont St.; tie-ins to the buildings along this street would improve the pressure in the buildings.

Areas not included in 1995 study (areas West of Georgia Avenue):

Buildings in this category include the Howard University Service Center, Banneker North and Banneker South buildings, and the Howard Plaza Towers buildings.

Information on existing water mains was obtained from records of DC Water counter maps and some dates have been interpreted to the decade in which they were built as they are typically listed with two digits. Additional research will be needed on any specific area to be impacted.

Existing service water mains in this area are generally greater than 100 years old; DC Water will require replacement of lines of this age as part of the requirement for a service connection permit. Plans for new water service connections in this area will require the replacement of approximately three to five blocks length of water main, with the exception of the Banneker building and Service Center building areas.

CAMPUS CONTEXT

(CONTINUED)

Possible connection points include:

1. Sherman Avenue - a section of 12" main which extends from Euclid Street to a point North of the Banneker South building, this was built in 1960.

2. Florida Avenue, Barry Place, and 10th Street intersection – an 8" service main to the Northeast of the Service Center building. This line was built in 1939.

3. W Street and Florida Avenue intersection – an 8" main which was built in 1938.

4. Transmission main along W Street, Florida Avenue, and V streets – this is a 24" and 20" transmission main which would require a special permission from DC Water for a service connection. There is a branch connection assembly between this transmission main and the two 6" (old) service mains along Florida Avenue; this connection assembly may be a possible connection point. This line was built in 1988.

5. Georgia Avenue and Bryant Street – a 16" transmission main tees off to a 12" service main at this intersection. This was built in 1964.

Further study of the adequacy of the water supply for Phase One and subsequent phases of the Campus Master Plan will take place prior to their implementation. In addition, the installation of building fire and domestic booster pumps may still be required depending on the proposed buildings to be erected..

ELECTRICAL DISTRIBUTION SYSTEM

PEPCO is responsible for providing power to the central Campus, primarily through an electrical substation built in 1995 near Bryant and 6th Streets. This substation provides power for the majority of the buildings through a network of underground cables. In some instances, as with the Howard Center, there are direct feeds to buildings not served through this substation. Provisions are in place to serve the School of Nursing, and the Wonder Bread warehouse from the substation but this was never completed. The substation currently provides 6 feeders with an incoming voltage of 13.8kV.

The Campus distribution system including switches and transformers are managed by the University. The annual usage of power is approximately 100,000,000 kwh and the peak power is about 11Mw. The majority of buildings are supplied with redundancies in the event of a failure of one feeder. A notable exception to this is the Louis Stokes Health Sciences Library.

During the last year the University has undertaken a significant underground fiber installation that has the capability of supporting IT, HVAC controls, Fire Alarm and Power Management. With the addition of a new "blown" fiber network throughout significant portions of the Campus there is potential for power management at individual buildings which potentially could lead to significant savings. This work remains in progress and the eventual cutovers to accommodate the new equipment will not be an expensive undertaking.

The capacity of the existing electrical system has the capability of accommodating significant Campus growth through the distribution system and without additional feeder capacity from PEPCO. The location of additional buildings would dictate the cost of extending power to those specific locations. However, even though there is capacity, a significant number of the underground conductors are close to twenty years of age and therefore have exceeded their anticipated life span. Comprehensive testing with a view to progressively replacing those that have become degraded and obsolete conductors will take place to ensure adequate electric availability exists

CAMPUS CONTEXT

STEAM DISTRIBUTION SYSTEM

POWER PLANT

The steam plant is located at 6th and Bryant streets and provides steam/hot water to all the Campus facilities, with the exception of the residential towers. Currently there are three boilers available for operation but under normal loads only one boiler (Boiler#1) is required. (The changeover of the hospital from steam absorption to electric chillers has significantly reduced the demand for steam and provided this additional capacity).

Presently the high pressure steam is generated at 150 psi. The information for the boilers is as follows:

- Boiler No.1 (Installed in 1984)
  90,000#/hr
- Boiler#3 (installed in 1995)
  110,000#/hr
- Boiler#4 (installed in 1995)
  110,000#/hr

Though natural gas is the primary source of fuel, a 200,000 gal storage tank of no. 2 fuel is available as a backup redundant fuel source. It has not been necessary to use the redundant fuel source in the previous four years.

The steam is supplied to the Campus through a network of underground concrete tunnels and direct burial pipe, some of which has cathodic protection.

In the past few years there has been a project to replace the old steam traps throughout the Campus funded through an Energy Performance Contract. This has led to significant efficiencies and hence cost savings in the system. The average amount of natural gas used by the plant per year is 500,000 dtherms.

CENTRAL CHILLER PLANT

The University is currently constructing a Central Chiller Plant that will serve the HUH, School of Medicine and School of Dentistry. The installed capacity of the new plant will be 5400 tons. This facility has the potential to be expanded by adding another 1200 tons of cooling. This capacity can likely serve some of the new development proposed.

SANITARY AND STORM SEWER COLLECTION SYSTEM

The Central Campus is within a DC Water combined sewer collection system, where both storm water and sanitary flows are collected in the same pipe network and treated at the Blue Plains Sewage Treatment facility.

The system on Campus is divided into two subareas. Flow north of College Street discharges into a 2' x 3' trunk line which traverses the Campus generally following 4th Street, southeasterly direction and ties into a 6' x 9' collector trunk system at the eastern end of College Street. Flow south of College Street discharges into a large trunk line 6'-6"x9'-3" along Florida Avenue. Runoff on the West side of Georgia is collected and distributed to a 6' trunk sewer running South along 8th Street. The capacity of the main line collector system for both sanitary and storm seems adequate.

There has been one reported case of a deteriorated concrete sewer line at the School of Pharmacy which has since been repaired. However, based on this past problem it would be prudent to do selective video inspection of sewer mains in order to determine how widespread these issues may be.

The University's stormwater management practices are not in keeping with the current City's requirements because construction on the Campus predates current practices. Such stormwater management issues may be contributing to issues at the lower Campus with buildings such as C.B. Powell which has had an ongoing groundwater problem in the basement.

All modern development within the city is required to provide stormwater quality treatment for stormwater runoff from impervious areas along with the following, recommendations where applicable:

- Separation of stormwater lines and sanitary lines in a combined system network, and
- Stormwater quantity control if the proposed development causes an increase in the existing storm runoffs.

CAMPUS CONTEXT

(CONTINUED)

For any future development, stormwater management is a requirement. Since the Central Campus is in a watershed with combined sewer systems, both stormwater quality and quantity will be required by District of Columbia regulations.

In preparation for future development, an investigation and analysis of the on-site sanitary and stormwater system will need to be undertaken to evaluate its integrity and adequacy for all new projects.

GAS DISTRIBUTION SYSTEM

The Washington Gas Light Company is responsible for the maintenance of all the gas mains at the Central Campus. There are several individually metered buildings on the Campus but the bulk of the natural gas usage is at the power plant.

TELECOMMUNICATIONS SYSTEM

Several vendors including Verizon are responsible for bringing voice and WAN service to the Campus. Recent upgrades of the Campus network distribution system include the following.

DATA NETWORK

Howard University is installing an Air Blown Fiber (ABF) infrastructure. The initial phase of this infrastructure will provide capacity to support voice, data, video and security communications throughout all buildings on the main Campus excluding the Service Center. Twenty four strands of single mode fiber connect all buildings to the Technology Center and nineteen buildings connect to the Administration Building to provide redundant connectivity to all residence halls on the Main Campus and the Blackburn Center. The University has also purchased network gear to provide an infrastructure to support proposed voice over IP application, data and security networks. The installation of the network is to be completed in 2011.

WIRELESS NETWORK

Howard University is installing a Campus-wide wireless network for east, west and main Campuses. The wireless network will have the capacity to support data network, cellular phone services and Campus security applications.

A strategic plan for the development of the Campus network infrastructure is being developed presently and will address issues related to the location of the present data center, backup data centers and any other matters related to the state-of-the-art, and economical delivery of voice and data services to the Campus.

EXISTING CAMPUS SIGNAGE AND WAYFINDING

Howard University currently uses a standardized system of signage on campus for the main campus entrance, building and parking locations and general University identity. The University's official red, white and blue color scheme are used in the current signs, which are typically blue with white lettering. The logo represents the signature Founders Library clock tower in white with the 1867 date of founding, the University's name and red striping. Main entrance, building and parking signs are constructed of metal. Street banners and retail signs are made of a canopy fabric. The accompanying photographs are typical representations of the campus' signage program.

- Main campus entrance sign located at Georgia Avenue and Howard Place is a post and panel metal sign with the University's logo and name.
- Bookstore banner signage highlights the University's campus identity in the retail area and is mounted on a fabric canopy with banners above.
- Typical building identification sign seen here in front of the Howard University Middle School of Mathematics and Science is a metal blade sign with the building name, address and building number.
- Typical building identification sign seen here in front of the Howard University MIddle School of Mathematics and Science is a metal blade sign with the building name, address and building number.

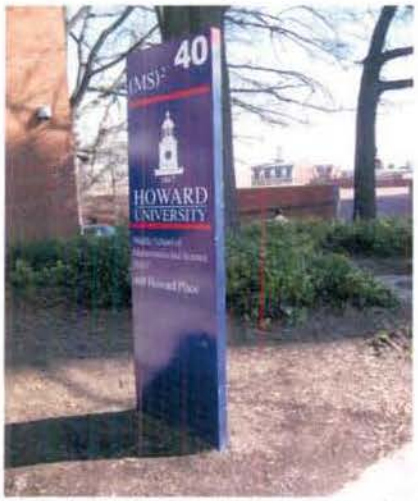

Photo 4-42: Middle School of Mathematics and Science $(MS)^2$ building sign

Photo 4-43: Howard University entrance sign on Howard Place

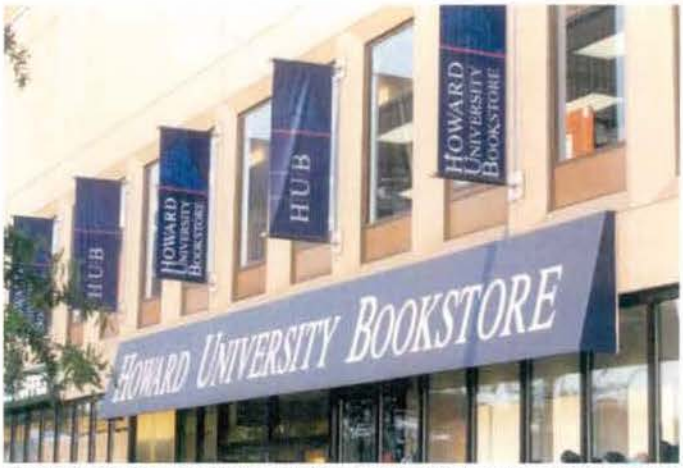

Photo 4-44: Howard University banners located on Howard Center on Georgia Avenue

Photo 4-45: C.B. Powell Building Parking Lot sign