

3.2.2 Historic Landmark Properties

Howard University Central Campus contains a number of historic and potentially historic buildings and sites that are significant both to the University and the District as a whole. Currently designated historic resources on the campus include one National Historic Landmark (NHL) historic district, two individual NHL buildings, and one building listed in the National Register of Historic Places (National Register).

National Historic Landmarks

National Historic Landmarks are buildings, sites, districts, structures, and objects that have been determined by the U.S. Secretary of the Interior to be nationally significant in American history and culture.

Howard University's central campus includes one National Historic Landmark (NHL) historic district and two individual NHL buildings. The NHL historic district encompasses Frederick Douglass Memorial Hall, Founders Library, Andrew Rankin Memorial Chapel, the Carnegie Building, and their immediate surroundings on the Main Quadrangle ("The Yard) and the Lower Quadrangle ("The Valley").

The district was recognized as an NHL in 2001 because of its association with the development of the US 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 Freedmen's Bureau, 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 within the boundaries of the Central Campus: the Mary Church Terrell House. The Mary Church Terrell

House, located at 326 T Street, NW in the LeDroit Park neighborhood and Historic District, was designated as an NHL in 1975.

National Register of Historic Places

The National Register, created by the National Historic Preservation Act of 1966, as amended, and implemented by 36 CFR Part 60, is the "nation's inventory of historic places and the national repository of documentation on the variety of historic property types, significance, abundance, condition, ownership, needs, and other information." Properties designated NHLs are automatically listed in the National Register.

In addition to the NHLs, Howard University's main campus includes one building that is listed in the National Register: the Miner Normal School (Miner Building). The Miner Building was originally constructed in 1913 as a teacher-training school for African Americans by the Board of Trustees of the Public Schools of the District of Columbia. The building was designed by Washington architect Leon E. Dessez under the supervision of Municipal Architect Snowden Ashford and named for Miss Myrtilla Miner (1815-1864), an educator who fought for the rights of Black teachers and students. The program was a major source of teachers and administrators for the segregated public schools in Washington and other southern communities. The building was individually listed in the National Register of Historic Places in 1991.

DC Inventory of Historic Sites

The DC Inventory of Historic Sites is the official list of historic landmarks and historic districts in the District of Columbia.

Howard University's main campus includes three buildings that are listed in the DC Inventory: Miner Building, Howard Hall, and the Mary Church Terrell House.

The NHL Historic District has not been formally listed in the DC Inventory. As such, only Miner Building, Howard Hall, and the Mary Church Terrell House are protected under DC's Historic Landmark and Historic District Protection Act (DC Law 2-144, as amended)

LEGEND

- - - Campus Boundary
- ▨▨▨▨ Designated National Historic Landmark
- ▨▨▨▨ Historic Landmarks and Districts Listed in the National Register of Historic Places and DC Inventory of Historic Sites.

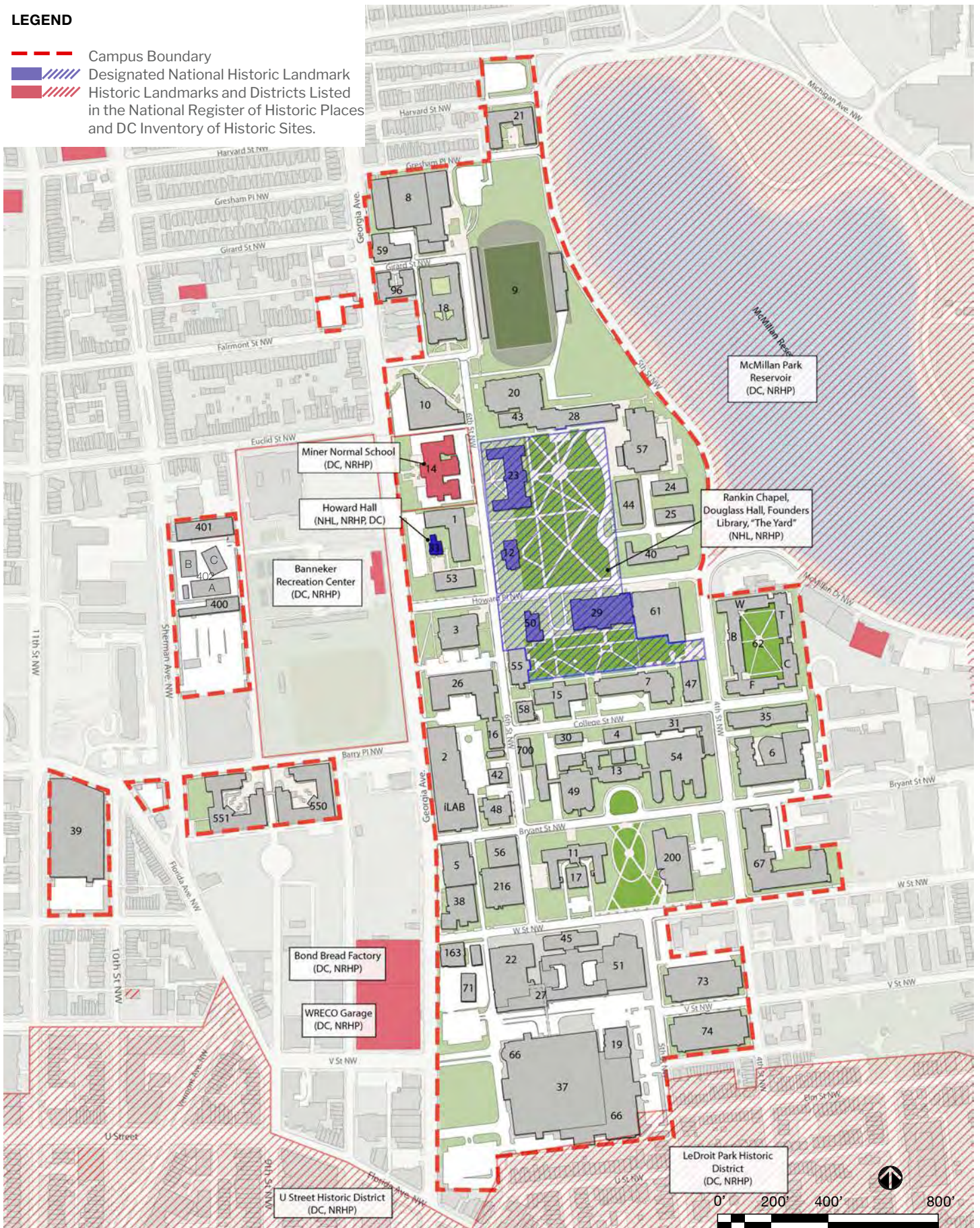


Figure 3.12: Historic Resources

LEGEND

- - - Campus Boundary
- Academic
- Research/Libraries
- Administration
- Athletic/Student Life
- Dormitories
- Service/Support
- HU Hospital
- Parking

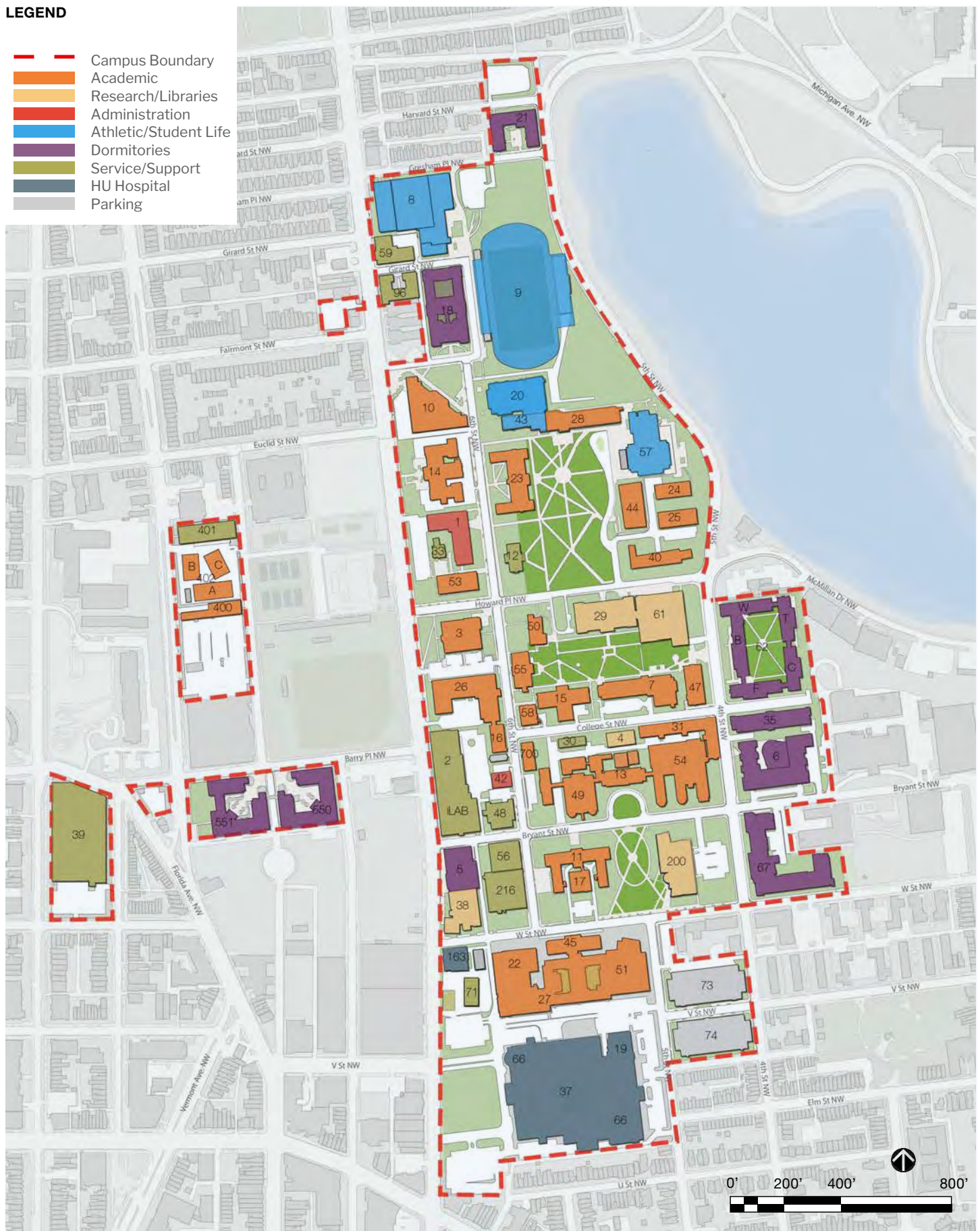


Figure 3.13: Central Campus Buildings by Use

3.3 Existing Buildings by Use

Howard University has over six million square feet of space in seventy-four buildings within its Central Campus boundary. For this campus plan, HU identified space/building typologies that include Academics, Administrative, Athletics, Health Care, Libraries/Research, Residence Halls, Support, Parking, and Other.

Concentrated at the north end of the campus are athletic & recreation functions with the Burr Gymnasium and Greene Stadium located along Georgia Avenue NW and 4th Street NW. Academic and student support/ service functions (library, instructional, student union, and administration facilities) occupy the campus core, from south of the stadium to V Street NW. The upper and lower quadrangles have a high concentration of academic core functions, while engineering, communications, and health sciences facilities are located between College and V streets. The southernmost section of the Central Campus is home to Howard University Hospital.

Academic facilities directly support the schools and colleges and include instructional spaces

as well as officing for units. Administrative facilities include all space dedicated to university administrative functions, while facilities listed as support include student service and support functions – such as the Blackburn University Center, and the Bethune Annex Cafeteria, and university-wide support functions such as the Power Plant, Howard University Service Center, and the radio and television stations. Health care includes the HU Hospital, Cancer Research Center, Mental Health, and Medical Arts Buildings. The library facilities support the curriculum and research of the university faculty and students. Although research endeavors occur across the campus, the facilities identified as research, such as the Interdisciplinary Research Building, focus primarily on research support.

The residence hall facilities provide housing for undergraduate and graduate students. The “other” category covers various facility types that do not easily fit a specific higher education category, such as the Rankin Chapel, the Parsonage, and the HU Community Association facilities. Lastly, included in the total space/building inventory are the two University parking structures that primarily serve HU Hospital complex.

Academic	Research/Libraries	30 People Soft Work Site
3 Howard Mackey Building (Architecture)	29 Founders Library	33 Oliver Otis Howard Hall
4 Chemistry Laser Research	38 Interdisciplinary Research Building	34 Bethune Annex Cafeteria
7 E. E. Just Hall (Biology Building)	61 Undergraduate Library	39 HU Service Center
10 School of Business	Administration	41 HU Security Substation
11 Annex I (Nursing & Allied Health Sciences)	1 M. W. Johnson Administration Building	48 Power Plant
13 C.B. Powell Building (Communications)	42 Ralph Bunche International Affairs Center	49 WHUR - Radio Station
14 Myrtilla Miner Building	Athletic/Student Life	50 Andrew Rankin Memorial Chapel
15 Chemistry Building	8 John Burr Gymnasium	54 WHUT - TV
16 Chemical Engineering Building	9 William Greene Stadium	56 PFM Storage Building
17 Annex II (Allied Health Sciences)	20 Louis Cramton Auditorium	57 Armour J. Blackburn University Center
19 Cancer Research Center	43 Ira Aldridge Theater	58 Early Learning Center
22 Russell Dixon Building (Dentistry)	Dormitories	59 University Warehouse #2
23 Frederick Douglass Memorial Hall	6 Mary McLeod Bethune Annex	71 Data Processing Center
24 Center for Academic Reinforcement	18 George Cook Hall	72 Employee Assistance Center
25 Academic Support Building A (Education)	21 Charles Drew Hall	96 Howard Manor
26 Lewis K. Downing Hall (Engineering)	35 College Hall North	119 MIS Building
27 Old Medical Library	62B Baldwin Hall	216 Old PFM & Old ISAS
28 Lulu Vere Childers Hall (Fine Arts)	62C Crandall Hall	400 Sculpture Studio (Fine Arts)
31 Annex III (Graduate School)	62F Frazier Hall	401 Harrison Brothers Building
40 HU Middle School for Math & Science	62T Truth Hall	Howard University Hospital
43 Ira Aldridge Theatre	62W Wheatly Hall	37 Howard University Hospital
44 Alain Locke Hall (Arts & Science)	67 College Hall South	65 Hospital Towers
45 Seeley G. Mudd (Medicine)	550 Howard Plaza Towers Phase East	66 Hospital Towers Phase II
47 Chauncey L. Cooper Hall (Pharmacy)	551 Howard Plaza Towers Phase West	163 Medical Arts Building
51 Numa Adams Building (Medicine)	Service / Support	Parking
53 Inabel B. Lindsay Hall (Social Work)	2 Wonder Plaza / Technology Center (iLAB)	73 & 74 Parking Structures
55 Wilbur Thirkield Hall (Physics)	5 Axis at Howard	Academic Modular Buildings
200 Louis Stokes Health Sciences Library	12 Carnegie Building	402 - A,B, C
700 Mental Health Clinic		

Table 3.8: Existing Building Names

3.3.1 Existing Building Conditions

In 2019, Howard University conducted a comprehensive Facility Condition Assessment (FCA) for the Central Campus. The overall effort included 57 buildings totaling over 4 million gross square feet of general education, administrative, housing, dining, recreational, athletics, and support space.

The average year built for the inspected buildings (weighted by gross square footage) is 1960, for an average age of 59 years old at the time of inspection. New construction projects have been minimal over the 150-year campus history. If the older buildings are to remain a functional part of the campus portfolio, they should be candidates for the next major renovation initiatives.

The Facility Condition Needs Index (FCNI) provides an industry-standard lifecycle cost comparison. It is a ratio of a facility's 10-year renewal needs (including deferred maintenance) to the asset's current replacement value. However, each facility should be examined independently for mitigating factors (i.e., historic structures, temporary structures, facilities with abnormally low replacement costs, such as warehouses).

As of December 2019, The average FCNI of the 57 inspected buildings was 0.33 or "Fair." The low FCNI average suggests that historically, campus facilities have been underfunded relative to the national average. Over the past several decades, the lack of funding allocated to significant capital renovations and new construction (replacing aging assets) has placed the university in a difficult position regarding its facilities.

Howard has numerous aging buildings that have not seen significant renovations or replaced with newer buildings. The table (Table 3.8) and accompanying map (Fig. 3.14) illustrate current FCNI values at the central campus by building.

3.3.2 Instructional Space Utilization Analysis

Current university space utilization must be addressed to establish a space strategy to accommodate projected future enrollment growth and its associated space and facility needs. Two critical drivers are:

1. Expected enrollment increases to 15,000 during the ten-year planning period, and

2. The decommissioning of 13% of existing classrooms and laboratories during the ten-year planning period.

With enrollment growth predicted mostly in STEM programs, Howard University will need to increase

ASSET #	ASSET NAME	USE	YEAR BUILT	SQUARE FEET	FCNI
> 0.60 (Replace)					
50	ANDREW RANKIN MEMORIAL CHAPEL	RF	1894	8,412	0.81
13	C. B. POWELL BUILDING	CL	1908	134,000	0.69
15	CHEMISTRY BUILDING	LB	1936	67,524	0.66
31	FREEDMAN'S ANNEX III	CL	1940	42,000	0.62
19	CANCER RESEARCH CENTER	LB	1980	64,985	0.61
0.60 – 0.51 (Poor)					
51	NUMA ADAMS BUILDING	CL	1935	213,669	0.6
4	CHEMISTRY LASER RESEARCH	LB	1912	6,700	0.58
3	HOWARD MACKAY BUILDING	CL	1956	63,367	0.54
0.50 – 0.31 (Below Avg)					
56	PFM STORAGE BUILDING	OF	1950	34,575	0.49
28	LULU VERE CHILDERS HALL (FINE ARTS)	CL	1960	101,950	0.48
22	DIXON BUILDING	CL	1954	172,924	0.46
54	WHUT TELEVISION STATION	OF	1980	41,658	0.45
96	HOWARD MANOR	DM	1939	75,000	0.45
48	POWER PLANT	ST	1934	18,360	0.44
16	CHEMICAL ENGINEERING BLDG	LB	1977	20,500	0.42
55	WILBUR THIRKFIELD HALL - PHYSICS	LB	1909	30,900	0.42
26	LEWIS K. DOWNING HALL	CL	1952	98,856	0.41
44	ALAIN LOCKE HALL (ARTS AND SCIENCES)	CL	1964	68,821	0.41
355	HOUSTON HALL	CL	1935	79,304	0.41
45	SEELEY G. MUDD	CL	1979	60,000	0.4
59	UNIVERSITY WAREHOUSE 2	WH	1950	47,500	0.39
353	NOTRE DAME HALL	OF	1960	40,274	0.39
7	ERNEST EVERETT JUST HALL	LB	1954	84,777	0.37
34	BETHUNE ANNEX CAFETERIA	FS	1994	10,000	0.37
352	LAW SCHOOL MAINTENANCE BUILDING	ST	1978	4,934	0.36
29	FOUNDERS LIBRARY	LY	1937	121,395	0.34
53	INABEL BURNS LINDSAY HALL (SOCIAL WORK)	CL	1970	33,185	0.34
354	HOLY CROSS HALL	CL	1901	51,032	0.34
25	ACADEMIC SUPPORT BLDG A (SCHOOL OF ED)	OF	1975	20,710	0.33
24	ACADEMIC SUPPORT BUILDING B	OF	1975	20,710	0.33
1	MORDECAI WYATT JOHNSON BUILDING	OF	1956	87,305	0.32
39	HOWARD UNIVERSITY SERVICE CENTER	OF	1903	233,173	0.31
0.30 – 0.21 (Fair)					
2	WONDER PLAZA	OF	1909	110,000	0.29
20	LOUIS CRAMTON AUDITORIUM	TH	1960	37,400	0.29
163	MEDICAL ARTS BUILDING	MC	1979	30,396	0.29
10	SCHOOL OF BUSINESS	CL	1984	130,859	0.28
18	GEORGE COOK HALL	DM	1937	83,444	0.28
43	IRA ALDRIDGE THEATER	TH	1960	8,765	0.28
8	JOHN BURR GYMNASIUM BUILDING	GM	1964	134,356	0.27
12	CARNEGIE BUILDING	OF	1910	14,639	0.23
49	WHUR RADIO STATION	OF	1980	10,300	0.23
47	CHAUNCEY L. COOPER HALL - PHARMACY	LB	1955	37,420	0.22
57	ARMOUR J. BLACKBURN UNIVERSITY CENTER	FS	1979	145,000	0.22
0.20 – 0.11 (Good)					
27	OLD MEDICAL LIBRARY	OF	1981	15,700	0.2
21	CHARLES DREW HALL	DM	1957	88,979	0.19
42	RALPH BUNCHE INTERNATIONAL AFFAIRS CTR	CL	1906	7,500	0.19
200	LOUIS STOKES HEALTH SCIENCES LIBRARY	LY	2001	77,335	0.18
600	HOWARD UNIVERSITY RESEARCH BUILDING #1	OF	2003	50,025	0.17
401	HARRISON BROTHERS BUILDING	WH	1951	25,250	0.16
40	HU MIDDLE SCHOOL FOR MATH AND SCIENCE	SK	1960	39,433	0.13
350	NEW LAW LIBRARY	LY	2001	88,100	0.13
400	SCULPTURE STUDIO (FINE ARTS)	CL	1963	10,098	0.13
6	MARY MCLEOD BETHUNE ANNEX	DM	1994	225,000	0.12
0.10 – 0.00 (Excellent)					
58	EARLY LEARNING CENTER	CL	1970	8,816	0.08
35	COLLEGE HALL NORTH	DM	2014	138,829	0.04
67	COLLEGE HALL SOUTH	DM	2014	254,983	0.04
38	INTERDISCIPLINARY RESEARCH BUILDING	LB	2015	81,670	0.02

$$\text{FCNI} = \frac{\text{Facility Renewal}}{\text{Current Replacement Value}}$$

Table 3.9: Facilities Condition Index Values

LEGEND

	Campus Boundary	
	Excellent	0.0-0.10
	Good	0.11-0.20
	Fair	0.21-0.30
	Below Avg.	0.31-0.50
	Poor	0.51-0.60
	Critical	0.60+
	Not assessed	

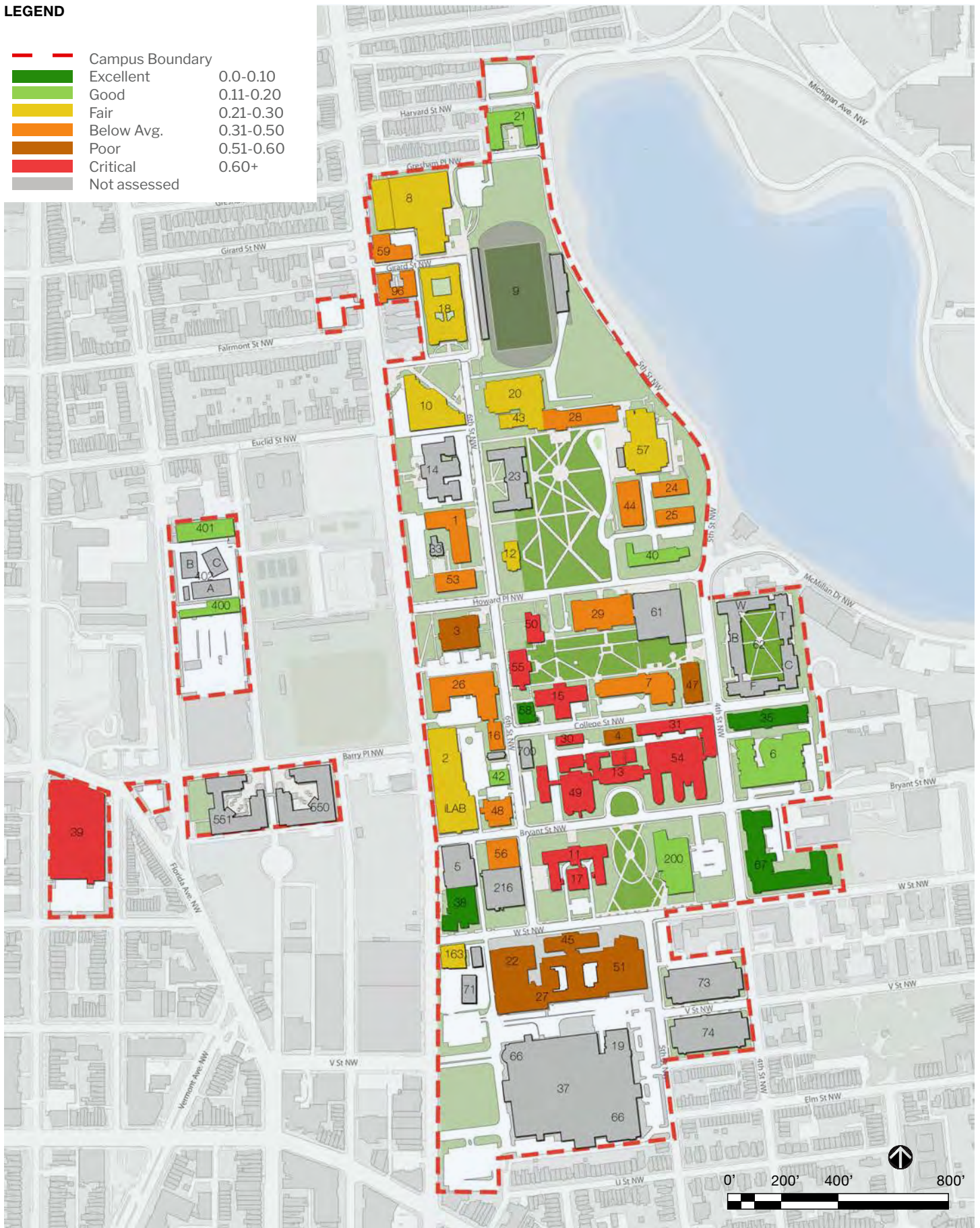


Figure 3.14: Building Conditions

the amount of laboratory space on campus by 43%. Furthermore, additional classrooms, particularly those under 20 seats, will support more individual attention, increased participation, and better communication between instructors and students.

To understand the utilization of existing instructional spaces on campus, we utilized a combination of course curricula, data analytics, and space typologies. Each space's capacity was calculated by taking the net assignable area and dividing by the following industry-standard areas per seat (25 square feet for a classroom), (75 square feet for a lab).

The Campus Plan document contains the utilization analysis of instructional spaces on the Central Campus. The purpose of the analysis is to understand expected future requirements and inform capital planning and the Central Campus Plan. The following table details the existing count of Central Campus instructional space. Buildings in red would be decommissioned or demolished during the 10-year planning period.

3.3.3 Analysis Process Diagram

The adjacent diagram (Table 3.11) details the analysis process, highlighting how each piece of data, assumption, and target utilization contributes to determining the future requirement.

Weekly student contact hours (hours of scheduled instruction given to students in a classroom or Class Laboratory) can be determined from the course schedule and are assumed to increase in proportion to the student population growth. The actual enrollment per course determines a required room size. The total weekly student contact hours, divided by the hours a room can accommodate, determines a total required room count by space type.

For example, a course with an actual enrollment of 16 students could be assigned to a small classroom of 20 seats, achieving the seat utilization target for classrooms of 80%. This classroom can be scheduled for 30 hours a week, achieving the room utilization target for classrooms of 75% of the 40 available hours. Assuming it is a 3-credit course, equivalent to 3 weekly contact hours, this course would use 10% of a classroom's scheduled hours. Ideally, ten of



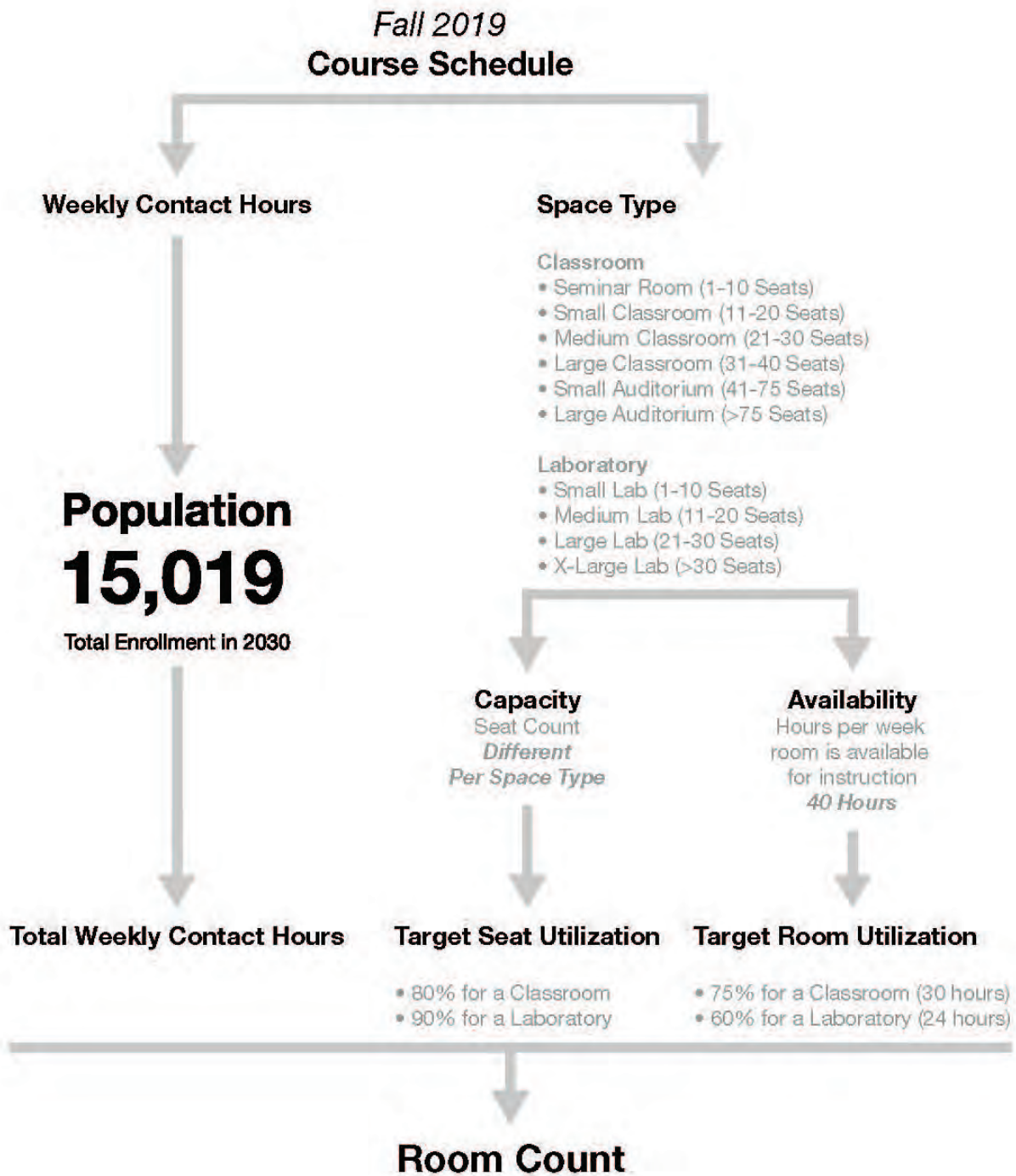


Table 3.10: Analysis Process Diagram

these courses could share a single classroom throughout a week, and an eleventh course would trigger the requirement for an additional classroom.

3.3.4 Instructional Space Inventory

The focus of this analysis is the utilization of spaces used for scheduled instruction. This includes the following two room types as classified in the existing inventory of instructional space provided by Howard University:

Classroom (110)

Definition

A room or space used primarily for instruction classes and that is not tied to a specific subject

or discipline by equipment in the room or the configuration of the space.

Description

Includes rooms or spaces generally used for scheduled instruction that require no special, restrictive equipment or configuration. These spaces may be called lecture rooms, lecture-demonstration rooms, seminar rooms, and general-purpose classrooms. A classroom may be equipped with tablet armchairs (fixed to the floor, joined in groups, or flexible in the arrangement), tables and chairs (as in a seminar room), or similar types of seating. These spaces may contain multimedia or telecommunications equipment. A classroom may be furnished with special equipment (e.g., globes, pianos, maps, computers, network connections)

Space Type →	110 - CLASSROOM						210 - CLASS LAB				Total Count
	Seminar Room	Small Classroom	Medium Classroom	Large Classroom	Small Auditorium	Large Auditorium	Small Lab	Medium Lab	Large Lab	X-Large Lab	
Building ↓											
003 - Howard Mackey Building		2	5	1		1	3	6	1		19
005 - Howard University Center	3						2				5
006 - Bethune Hall Annex			1		1						2
007 - Biology Building			3		1	1	3	2			10
008 - Burr Gymnasium		1	1								2
010 - Business School of	1	4		2	4	6	2	1			20
011 - School of Nursing Allied Health	2	9	4	2	1		12	1			31
012 - Carnegie Building		1									1
013 - Communications School of	7	24	5	1		2	6				45
014 - Miner Building		4			1						5
015 - Chemistry Building		3	2			1	1	7			14
016 - Chem Engr Bldg		5	1	1			4				11
017 - Freedman S Annex II	1										1
019 - Cancer Research Center	4	2					4				10
022 - Dentistry College of	1	3	2		4	1	5			1	17
023 - Douglass Hall	1	11	14	2	1		1	1			31
024 - Academic Support Building A		2	1				2				5
025 - Academic Support Building B		1									1
026 - Engineering College of	1	3	1	1	1	1	10	5			23
027 - Old Med Library								1			1
028 - Fine Arts College of	1	5	3		1		73	4	2		89
029 - Founders Library					1						1
031 - Freedman S Sq Wing I	1	2		1			1				5
044 - Arts And Sciences College of	3	3	7		1		5	4			23
045 - Seeley G Mudd Building		6				2				1	9
047 - Pharmacy College of	3				1		3		2		9
051 - Medicine College of East			1		2	2	19	2		1	27
053 - Social Work School of	1	1	7	1		1					11
055 - Physics Building				2		1	7	3			13
163 - Medical Arts Building	1										1
200 - Health Sciences Library		1	1								2
216 - 2216 Sixth Street		2					2				4
400 - Doors More Building							1		1		2
600 - Hu Research Building #1		2	1		1						4
Ann1 - Annex 1	3	9	4	2	1		12	1			32
Existing Count	34	106	64	16	22	19	178	38	6	3	486
To Be Decommissioned	6	18	11	1	5	3	13	4		2	63
Available Count	28	88	53	15	17	16	165	34	6	1	423

Table 3.11: Instructional Space Count

appropriate to a specific area of study, if this equipment does not render the space unsuitable for use by classes in other areas of study.

Class Laboratory (210)

Definition

A space used primarily for formally or regularly scheduled instruction (including associated mandatory, but non-credit-earning laboratories) that require special-purpose equipment or a specific space configuration for student participation, experimentation, observation, or practice in an academic discipline. A space is considered scheduled if the activities generate weekly student contact hours (WSCHs), the activities fulfill course requirements, and/or there is a formal convener present.

Description

A class laboratory is designed for or furnished with equipment to serve the needs of a particular discipline for group instruction in formally or regularly scheduled classes. This special equipment normally limits or precludes the space's use by other disciplines. Included in this category are spaces generally called teaching laboratories, instructional shops, computer laboratories, drafting rooms, band rooms, choral rooms, (group) music practice rooms, language laboratories, (group) studios, theater stage areas used primarily for instruction, instructional health laboratories, and similar specially designed or equipped rooms, if they are used primarily for group instruction in

formally or regularly scheduled classes. Computer rooms used primarily to instruct students in the use of computers are classified as class laboratories if that instruction is conducted primarily in formally or regularly scheduled classes.

Space use codes represent the recommended central or core concepts for classifying the assignable space, by use, within campus facilities.

The definition and description of each space is quoted from the aforementioned Postsecondary Education Facilities Inventory and Classification Manual.

Instructional Spaces have been categorized into the following space types by capacity:

Types of Classrooms

- Seminar Room (1-10 Seats)
- Small Classroom (11-20 Seats)
- Medium Classroom (21-30 Seats)
- Large Classroom (31-40 Seats)
- Small Auditorium (41-75 Seats)
- Large Auditorium (>75 Seats)

Types of Laboratories

- Small Lab (1-10 Seats)
- Medium Lab (11-20 Seats)
- Large Lab (21-30 Seats)
- X-Large Lab (>30 Seats)

Space Type	Existing Count	To Be Decommissioned	Available Count	Total Future Requirement	To Be Constructed
Classroom					
Seminar Room (1-10 Seats)	34	6	28	90	62
Small Classroom (11-20 Seats)	106	18	88	41	-
Medium Classroom (21-30 Seats)	64	11	53	50	-
Large Classroom (31-40 Seats)	16	1	15	32	17
Small Auditorium (41-75 Seats)	22	5	17	38	21
Large Auditorium (>75 Seats)	19	3	16	13	-
	261	44	217	284	100
Laboratory					
Small Lab (1-10 Seats)	178	13	165	117	-
Medium Lab (11-20 Seats)	38	4	34	49	15
Large Lab (21-30 Seats)	6		6	54	48
X-Large Lab (>30 Seats)	3	2	1	17	16
	225	19	206	237	79
	486	63	423	501	179

Table 3.12: Projected Future Instructional Space Count by Type

Howard University – Existing Inventory		
Residence Halls	Unit Type	Design Capacity
Bethune Annex	Suite Style	550
College Hall North	Suite Style	495
College Hall South	Suite Style	894
George Cook Hall	Suite Style	200
Charles Drew Hall	Traditional	330
Harriet Tubman Quad	Traditional	650
Howard Plaza Towers, East	Apartments	910
Howard Plaza Towers, West	Apartments	890
Axis at Howard	Apartments	176
Total Beds (Design Capacity)		5,095

LEGEND

- Campus Boundary
- Academic
- Research/Libraries
- Administration
- Athletic/Student Life
- **Dormitories**
- Service/Support
- HU Hospital
- Parking

Table 3.13: Residence Hall Bed Count



Dormitories

- 6 Mary McLeod Bethune Annex
- 18 George Cook Hall
- 21 Charles Drew Hall
- 35 College Hall North
- 62B Baldwin Hall
- 62C Crandall Hall
- 62F Frazier Hall
- 62T Truth Hall
- 62W Wheatly Hall
- 67 College Hall South
- 550 Howard Plaza Towers Phase East
- 551 Howard Plaza Towers Phase West

3.3.5 Residence Life Inventory

Howard's Residence Life system currently has a design capacity of 5,095 beds. Shared occupancy options allow the system to accommodate 5,291 students, which represents roughly 56% of total University enrollment. This is an acceptable percentage for many universities with an urban, residential campus such as Howard University's in Washington, D.C. However, within the Washington D.C context, rental housing in the immediately surrounding neighborhoods is either high priced or of low quality.

The University aspires to provide approximately 2,500 additional beds as part of projects F1, F2 and J to accommodate a projected enrollment of 15,000 eligible students by 2030.

Each residence hall has unique character traits that define the nature of resident interaction with peer groups, the greater Campus culture, and the surrounding community. These characteristics can be explored through a series of expanding spatial relationships influenced by quantitative factors such as unit type configuration and hall size, and qualitative factors such as housing policies, programming opportunities, and student preference.

3.4 Existing Landscape & Open Space

3.4.1 Campus Character

The campus landscape character inspires a sense of community and celebrates the history and legacy of Howard University. The existing building arrangements create formal open spaces and quadrangles, organized by axial pathways, lawn panels, planting beds, legacy trees, and commemorative elements. These flexible spaces facilitate gatherings of students, faculty, staff, alumni and community.

The informal open spaces include entrance plazas, corridors between the buildings, and the streetscape. These spaces also contribute by providing connectivity and areas to gather. . The Master Plan should preserve and enhance these types of spaces throughout the campus.

On-campus athletic facilities and the nearby Banneker Park accommodate sports and fitness activities. The flexible streets around the athletic

facilities should continue to accommodate temporary closures for enhanced pedestrian movement during events.

3.4.2 Open Space

Howard's open spaces, network of pathways, and public realm all form a network and physical environment that creates the backdrop for the overall campus experience. The open space network should continue to support the functional needs of the surrounding built structures, offer flexible spaces for students, faculty and alumni to gather, and serve as a community resource for the surrounding neighbors. The goals for the Open Space Plan include:

- Preserve the iconic views: Founders Library, the McMillian Reservoir, views across the Quadrangles and The Long Walk.
- Preserve the formal gateways and gates to the Upper Quadrangle.
- Promote natural views within the framework of the campus and physical access to nature.
- Preserve significant landscapes sacred to the pride of Howard University's tradition.



- Maintain the formality and flexibility of the Upper and Lower Quadrangles
- Ensure the appropriate treatment of heritage trees.
- Build on the best landscape planning aspects of the existing campus. Ensure that future landscape interventions are context-driven.
- Place open spaces strategically within new developments to create seamless connections and memorable places.
- Create a consistent palette of materials abutting the public realm that offer high aesthetics in a manner that is maintainable when considering life cycle costs.
- Incorporate low impact sustainable technologies to treat stormwater and conserve energy.
- Advance the goal of providing alternative transportation options on campus. Improve pedestrian corridors and implement roadways that promote bicycle and pedestrian circulation.
- Maintain open edges that integrate the campus with the surrounding community.
- Replace, where possible, greenspace areas that are utilized for critical development projects with new landscapes of comparable quality and type.
- Enhance the gateways and streetscape experience along Georgia Avenue and 5th Street NW at McMillan Reservoir.

3.4.3 Legacy Environments

“The Long Walk,” a reflection of the growth and development individuals face along their journey at Howard, is historically rendered into the landscape as the processional walk along the north-south axis of the Upper Quadrangle from Childers Hall to Founders Library.

Part of the Howard University legacy translated into the campus open space includes the commemorative elements created and placed by different Greek organizations. These elements are found primarily in the Upper Quad and the Lower Quad and range in size and scale.

Four historic gates lead to the Upper Quad. Two vehicular gates on Howard Place and two pedestrian gates on 6th street. Brick pillars support these ornamental iron structures.

3.4.4 Tree Canopy

Trees serve an essential role within the urban campus at Howard University. They provide clean air by removing carbon dioxide and other pollutants; stormwater management by absorbing runoff; create shade that contributes to building energy savings and temperature reduction, habitats for wildlife, enhancements for the outdoor amenity spaces, and contributes to the campus identity.

The tree canopy coverage is the furthest extent of an individual tree’s crown. The extent of the tree dripline identifies the tree’s critical root zone. It is vital to maintain as much canopy coverage and critical root zone as possible to preserve healthy trees. Only 5% of the Campus is covered by tree canopy. A healthy percentage of tree canopy cover should be at least 40% to meet the city-wide goal. The following are the goals for the Howard University tree canopy:

1. Preserve identified trees of high value.
2. Identify areas for additional tree planting.
3. Consider open space function and viewsheds when planting trees within the campus landscape.
4. Prepare and execute tree protection plans during future campus development.
5. Plant new trees and provide healthy soil volumes.
6. Replace trees that are in Poor Condition.
7. Manage pests, diseases and invasive species.
8. Promote species diversity.
9. Tree preservation education for campus organizations.

DC has a City-wide tree canopy goal of 40% canopy coverage by 2032. The following DC laws are in place to protect the existing tree canopy:

- Urban Forestry Preservation Act of 2002
- Tree Canopy Protection Amendment Act of 2016

LEGEND

- - - Campus Boundary
- Existing Buildings
- Open Space
- Formal Landscape
- Athletic Field
- Proposed Trees
- Perceived Space



Figure 3.15: Landscape & Tree Canopy

LEGEND

- - - Campus Boundary
- Topography Lines
- Special Trees - Fair/Excellent
- Heritage Trees
- Special Trees - Fair/Poor
- Trees in Poor Condition
- Trees less than 14 diameter to be removed
- Trees less than 14 diameter to remain



Figure 3.16: Tree Canopy

Map Number	Common Name	Scientific Name	(Trunk Diameter in Inches Measured at 4.5 FT)	Condition	DC Heritage Tree
1	Willow Oak	<i>Quercus phellos</i>	11.9	Good	
2	Pin Oak	<i>Quercus palustris</i>	19.1	Fair	
3	Pin Oak	<i>Quercus palustris</i>	15.8	Fair	
4	Pin Oak	<i>Quercus palustris</i>	12.2	Fair	
5	Pin Oak	<i>Quercus palustris</i>	20.4	Fair	
6	Willow Oak	<i>Quercus phellos</i>	24.3	Good/Fair	
7	Willow Oak	<i>Quercus phellos</i>	23.5	Good/Fair	
8	Willow Oak	<i>Quercus phellos</i>	21.3	Good/Fair	
9	Willow Oak	<i>Quercus phellos</i>	15.2	Good/Fair	
10	Willow Oak	<i>Quercus phellos</i>	17.2	Fair	
11	Northern Red Oak	<i>Quercus rubra</i>	23.1	Poor	
12	Willow Oak	<i>Quercus phellos</i>	24.8	Good/Fair	
13	Pin Oak	<i>Quercus palustris</i>	21.6	Fair	
14	Pin Oak	<i>Quercus palustris</i>	34.7	Excellent	Heritage
15	Water Oak	<i>Quercus nigra</i>	35	Fair	Heritage
16	Pin Oak	<i>Quercus palustris</i>	37.8	Good	Heritage
17	Pin Oak	<i>Quercus palustris</i>	26	Good/Fair	
18	Sugar Maple	<i>Acer saccharum</i>	15.7	Fair/Poor -	
19	Silver Maple	<i>Acer saccharinum</i>	33.7	Poor	Heritage
20	Willow Oak	<i>Quercus phellos</i>	42.3	Good/Fair	Heritage
21	Water Oak	<i>Quercus nigra</i>	38.2	Fair	Heritage
22	Siberian Elm	<i>Ulmus pumila</i>	30.3	Fair/Poor -	
23	Water Oak	<i>Quercus nigra</i>	42	Good/Fair	Heritage
24	Northern Red Oak	<i>Quercus rubra</i>	44.4	Good	Heritage
25	Northern Red Oak	<i>Quercus rubra</i>	36.5	Fair	Heritage
26	Northern Red Oak	<i>Quercus rubra</i>	32.2	Fair/Poor -	Heritage
27	Pin Oak	<i>Quercus palustris</i>	31.5	Good/Fair	
28	American Elm	<i>Ulmus americana</i>	34.9	Fair	Heritage
29	Willow Oak	<i>Quercus phellos</i>	39	Excellent	Heritage
30	Willow Oak	<i>Quercus phellos</i>	39.8	Good/Fair	Heritage
31	Willow Oak	<i>Quercus phellos</i>	24.3	Fair	
32	Willow Oak	<i>Quercus phellos</i>	34	Good/Fair	Heritage

Map Number	Common Name	Scientific Name	(Trunk Diameter in Inches Measured at 4.5 FT)	Condition	DC Heritage Tree
33	Willow Oak	<i>Quercus phellos</i>	35.7	Good/Fair	Heritage
34	Willow Oak	<i>Quercus phellos</i>	26.4	Good/Fair	
35	Southern Magnolia	<i>Magnolia grandiflora</i>	11.6, 15.7 = 19.5	Good/Fair	
36	Pin Oak	<i>Quercus palustris</i>	25	Fair/Poor	
37	Pin Oak	<i>Quercus palustris</i>	21.8	Good/Fair	
38	Pin Oak	<i>Quercus palustris</i>	21.1	Excellent	
39	Deodar Cedar	<i>Cedrus deodara</i>	33.4	Good	Heritage
40	Atlas Cedar	<i>Cedrus atlantica</i>	30.2	Excellent	
41	Atlas Cedar	<i>Cedrus atlantica</i>	28.1	Good/Fair	
42	American Elm	<i>Ulmus americana</i>	43.5	Fair	Heritage
43	Willow Oak	<i>Quercus phellos</i>	37.7	Fair	Heritage
44	Northern Red Oak	<i>Quercus rubra</i>	32.8	Poor	Heritage
45	Northern Red Oak	<i>Quercus rubra</i>	47.9	Excellent	Heritage
46	American Elm	<i>Ulmus americana</i>	38	Fair	Heritage
47	Northern Red Oak	<i>Quercus rubra</i>	41.9	Excellent	Heritage
48	Siberian Elm	<i>Ulmus pumila</i>	38.2	Poor	Heritage
49	Northern Red Oak	<i>Quercus rubra</i>	34.9	Excellent	Heritage
50	Little-Leaf Linden	<i>Tilia cordata</i>	35.9	Excellent	Heritage
51	Pin Oak	<i>Quercus palustris</i>	31.2	Poor	
52	Pin Oak	<i>Quercus palustris</i>	19.8	Fair	
53	Northern Red Oak	<i>Quercus rubra</i>	23.2	Good/Fair	
54	American Beech	<i>Fagus grandifolia</i>	16.5	Good/Fair	
55	American Elm	<i>Ulmus americana</i>	13.0, 16.0, 13.5, 14.0, 11.5 = 30.6	Excellent	
56	Norway Spruce	<i>Picea abies</i>	15	Good/Fair	
57	Pagoda Tree	<i>Styphnolobium japonicum</i>	18.9	Fair	
58	Bradford Pear	<i>Pyrus calleryana</i>	26.3	Fair	
59	Bradford Pear	<i>Pyrus calleryana</i>	29.7	Fair	
60	Scarlet Oak	<i>Quercus coccinea</i>	26	Fair/Poor	
61	Northern Red Oak	<i>Quercus rubra</i>	34.2	Poor	
62	English Oak 'Regal Prince'	<i>Quercus × warei</i> 'Long' REGAL PRINCE	22.3	Fair	
63	Pin Oak	<i>Quercus palustris</i>	25.5	Good	
64	Pin Oak	<i>Quercus palustris</i>	30.1	Good	
65	Red Oak	<i>Quercus rubra</i>	24.1	Good	
66	Pin Oak	<i>Quercus palustris</i>	24.2	Fair	
67	Pin Oak	<i>Quercus palustris</i>	26.7	Good	
68	Pin Oak	<i>Quercus palustris</i>	28.5	Excellent	
69	American sycamore	<i>Platanus occidentalis</i>	39.3	Excellent	Heritage
70	Pin Oak	<i>Quercus palustris</i>	28.8	Good	
71	Sugar maple	<i>Acer saccharum</i>	22	Good	
72	Willow Oak	<i>Quercus phellos</i>	28.5	Fair	
73	Elm	<i>Ulmus</i>	24	Good	
74	Japanese zelkova	<i>Zelkova serrata</i>	25	Good	
75	American elm	<i>Ulmus americana</i>	25	Good	
76	American elm	<i>Ulmus americana</i>	26.2	Good	
77	American elm	<i>Ulmus americana</i>	29	Good	
78	American elm	<i>Ulmus americana</i>	30	Good	

LEGEND:

- Special Trees - Fair/Excellent
- Heritage Trees
- Special Trees - Fair/Poor
- Trees in Poor Condition
- Trees less than 14 diameter to be removed
- Trees less than 14 diameter to remain

Table 3.15: Campus Tree Chart

The Mid-City Planning area has the most diminished tree canopy throughout the study area. Increasing the tree canopy coverage within this area is a key goal of the DC Urban Forestry Division. Within these acts, certain trees on private property are protected from removal.

- Heritage Trees: defined as trees over 100 inches in circumference, cannot be removed without a permit issued by the Mayor.
- Special Trees: defined as trees 44 inches to 99.9 inches in circumference require a Special Tree removal permit.

When developing on campus around the critical root zone of a Heritage Tree, the contractor is required to provide a Tree Preservation and Management Plan that includes Pre-, During, and Post-Construction preservation measures. Table 3.1.2 and Figure 3.16 contain an inventory of significant campus trees and surrounding street trees.

- Trees in Excellent, Good, and Good/Fair Condition should be preserved and monitored as part of the general campus tree maintenance program.
- Trees in Fair Condition should be evaluated by a certified arborist to determine what course of action is needed to protect the tree from further deterioration.
- Trees in Fair/Poor Condition have a high likelihood of needing replacement within the next 10 years. These trees should be evaluated by a certified arborist to determine what course of action is needed to protect the tree from becoming a Hazard. Monitoring on a continuous basis is needed.
- Trees in Poor condition will need to be replaced within the next 5 years.

Trees should be evaluated by a certified arborist to determine if they are currently a hazard and need to be immediately removed. Monitoring on a continuous basis is needed.

3.4.5 Topography & Vistas

The grade change across the campus is an approximately 85-foot change in elevation from the existing Howard University Hospital to the Upper Quad. Founders Library, situated at the

Upper Quad’s edge, overlooks the Lower Quad, the lower campus, and the Nation’s Capital beyond. The clock tower is a visual landmark whose views should be considered as campus development continues. Also, vistas from the Upper Quad to the McMillian Reservoir should be considered for future open space placement and design.

3.4.6 Existing Permeable Surface

Permeable surfaces allow water to percolate into the soil to filter out pollutants and recharge the water table. Impermeable/impervious surfaces are solid surfaces that don’t allow water to penetrate, forcing it to run off.

- Main Campus: 3,896,842 sf
- Existing Impervious Surface: 1,276,648 sf
- Existing Permeable Surface: 33%

LEGEND

- Campus Boundary
- Impervious Surface
- Permeable Surfaces:
- Open Space
- Formal Landscape
- Athletic Field

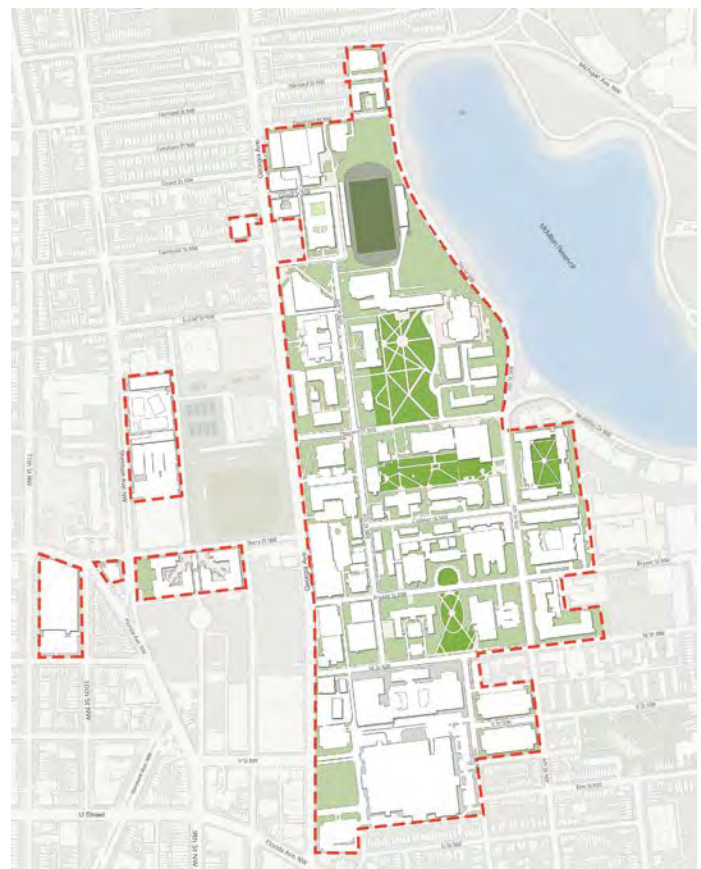


Figure 3.17: Permeable Surface

LEGEND

-  Campus Boundary
-  Topography Lines



Figure 3.18: Topographical Map

3.5 Existing Circulation & Parking

3.5.1 Roadways

The HU campus contains roadways of various types and configurations. DDOT classifies Georgia Avenue as a principal arterial, 4th/5th Street as a minor arterial, Bryant Street as a collector, and all remaining roads as local. Most roadways that cross the campus are one-way. The only two-way roads crossing the campus boundary are Georgia Avenue, 4th/5th Street, College Street, Barry Place, 9th Street, 8th Street, 5th Street, and V Street. All roadways are public except Howard Place between 6th Street and 4th Street, and Bryant Street between 6th Street and 4th Street, which are privately owned by the University. There is no public access on McMillan Drive. The topography rises significantly from south to north toward the “hilltop,” particularly along Georgia Avenue and 6th Street.

3.5.2 Pedestrian Network

The pedestrian network within the central campus is generally well-connected and of high quality. The campus’ internal pathways interact with the sidewalks and the urban street grid within the campus to form a relatively continuous and comfortable pedestrian network. The planned extensions of W Street and Bryant Street between Florida Avenue and Georgia Avenue will further improve pedestrian connectivity and comfort in the area.

A notable exception to the high-quality pedestrian environment surrounding the HU campus is Georgia Avenue. The four-lane configuration and infrequent vehicle stopping points encourage high speeds, making it a barrier for pedestrians. Of particular note is the section of Georgia Avenue between Euclid Street and Gresham Place, which has several non-signalized crosswalks that cross four vehicle lanes. Some intersections lack a crosswalk altogether.

Within the HU campus, 6th Street is the longstanding pedestrian spine and presents ongoing opportunities to create a pedestrian-oriented, campus-like promenade. Most of 6th Street’s existing sidewalks meet DDOT’s width and buffer requirements but do not offer the type of pedestrian comfort and priority seen on many

LEGEND

- Campus Boundary
- Campus Core
- Georgia Ave. Frontage
- HUH Site & Extracted
- 4th St./McMillan
- Planned New Roads

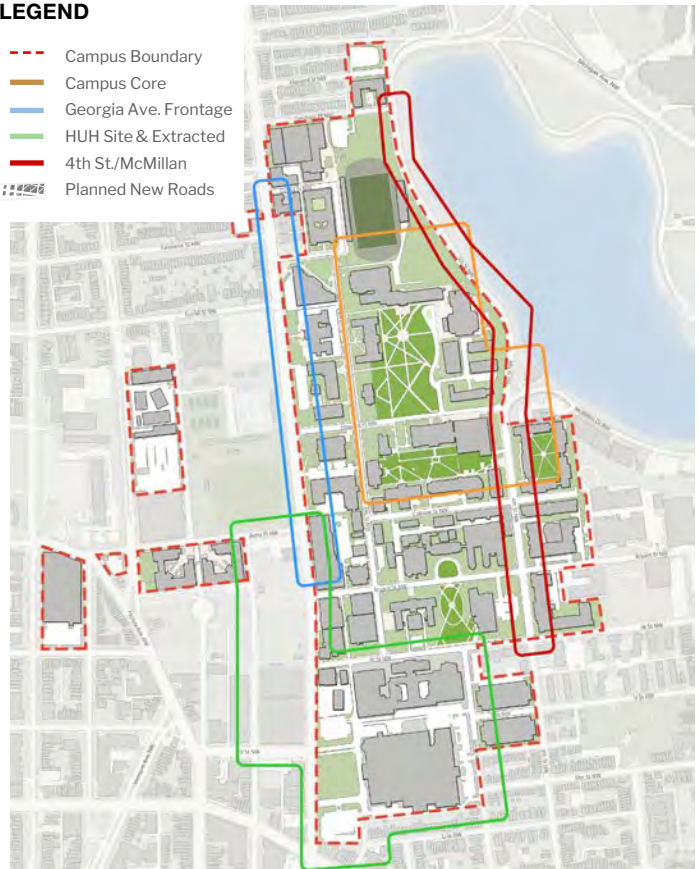


Figure 3.19: Pedestrian Areas of Focus

college campuses. 6th Street currently features curbside parking on both sides. Eliminating some of this parking would allow room for wider sidewalks, a cycle track or other bicycle facility, and other streetscape improvements, all while maintaining 6th Street’s current one-way vehicular travel pattern.

Several new roadways are planned near the HU campus that will improve east-west pedestrian connectivity in the area. These include extensions of Bryant Street between Georgia Avenue and Sherman Avenue and of W Street between Georgia Avenue and Florida Avenue.

LEGEND

- - - Campus Boundary

- ROADWAYS**
- Existing
- Future
- One-way
- Two-way
- Private

- 1,234 Average Annual Daily Traffic over 2,000

- FUNCTIONAL CLASSIFICATION**
- Principal
- Minor
- Collector
- Local

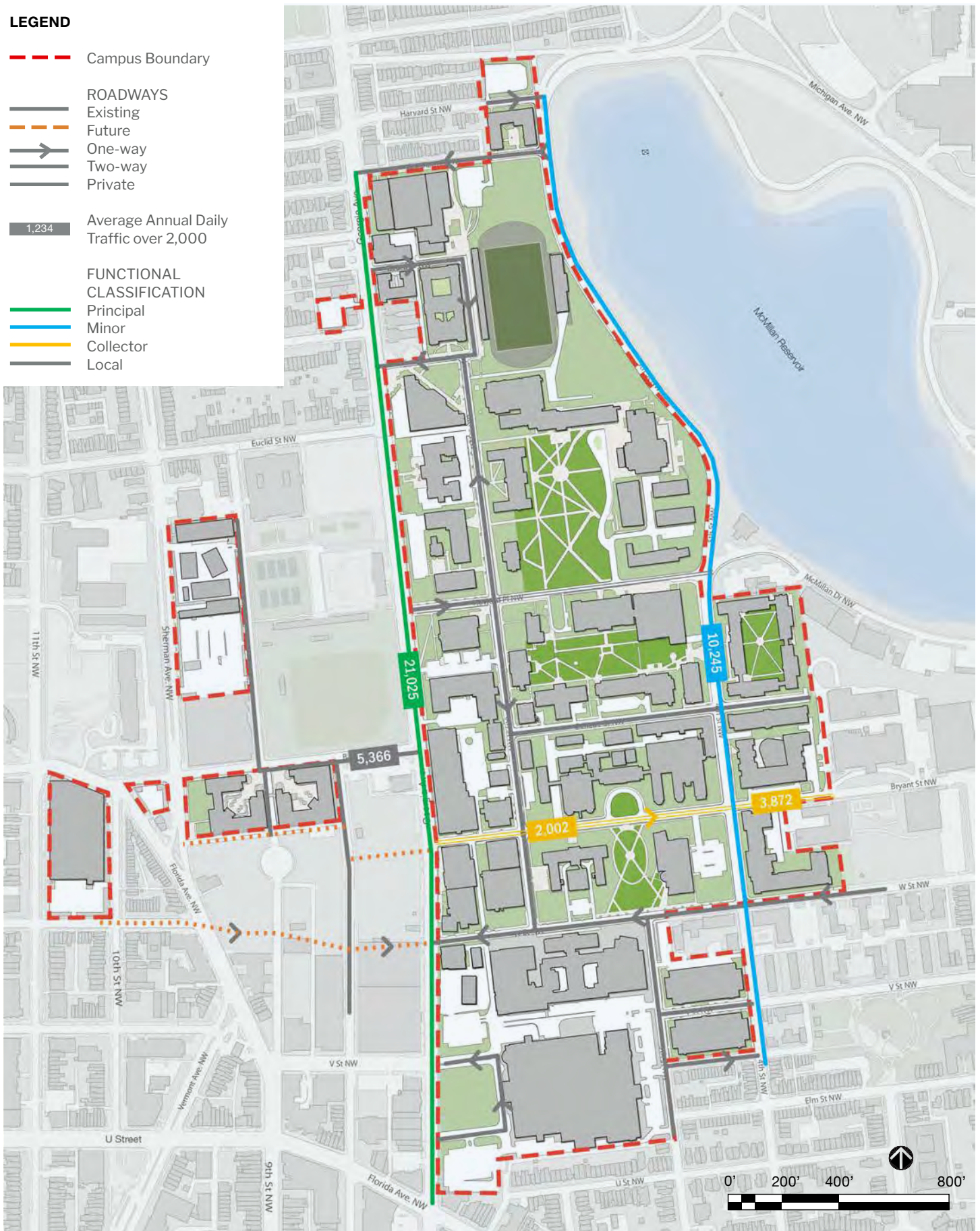


Figure 3.20: Roadways

LEGEND





-  Campus Boundary
-  North/South Roads
-  Campus
-  North/South Loop



Figure 3.21: North/South Roads

LEGEND

- - - Campus Boundary
- East/West Roads
- Campus
- North/South Loop
- Pleasant Plains
- LeDroit



Figure 3.22: East/West Roads

3.5.3 Bicycle Network

Currently, the only on-street bicycle facilities on or adjacent to the HU campus are the north-south bicycle lanes on 4th/5th Street and the north-south shared lanes on Georgia Avenue south of Barry Place. Numerous facilities exist west of the campus, like the bike lanes on W Street, V Street, and 11th Street, but they do not extend onto the campus. No bicycle facilities exist directly east of the campus.

While the generally low-speed streets on campus may offer an acceptable level of comfort and safety for some bicyclists, improvements are necessary to ensure a bicycle network suitable for all ages and abilities. Some recommendations for these improvements include: 1) Constructing a north-south bike facility on 6th Street; 2) Constructing east-west bike facilities on Howard Place, Bryant Street, and/or W Street; 3) Including bike facilities on the planned extensions of Bryant Street and W Street, which would connect the HU campus with the existing bike lanes on W Street and V Street.

3.5.4 HU Shuttles

HU currently operates four campus shuttle routes.

The North Campus route runs Monday through Friday every 15 to 20 minutes between 7:00am and 6:40pm, and every 35 minutes between 6:40pm and 12:30am.

The South Campus route runs Monday through Friday every 15 minutes between 7:00am and 7:00pm, and every 30 minutes between 7:00pm and 12:30am.

The West Campus route runs Monday through Friday every 60 minutes between 7:10am and 10:10pm, and Saturdays every 60 minutes between 10:10am and 5:10pm.

The Weekend route runs Saturday and Sunday every 25 minutes between 12:00pm and 12:00am.

LEGEND

- Campus Boundary
- M Metro Station
- Off-street Bicycle Trail
- Bicycle Lane
- Shared Lane
- Signed Bicycle Route
- Bike Rental

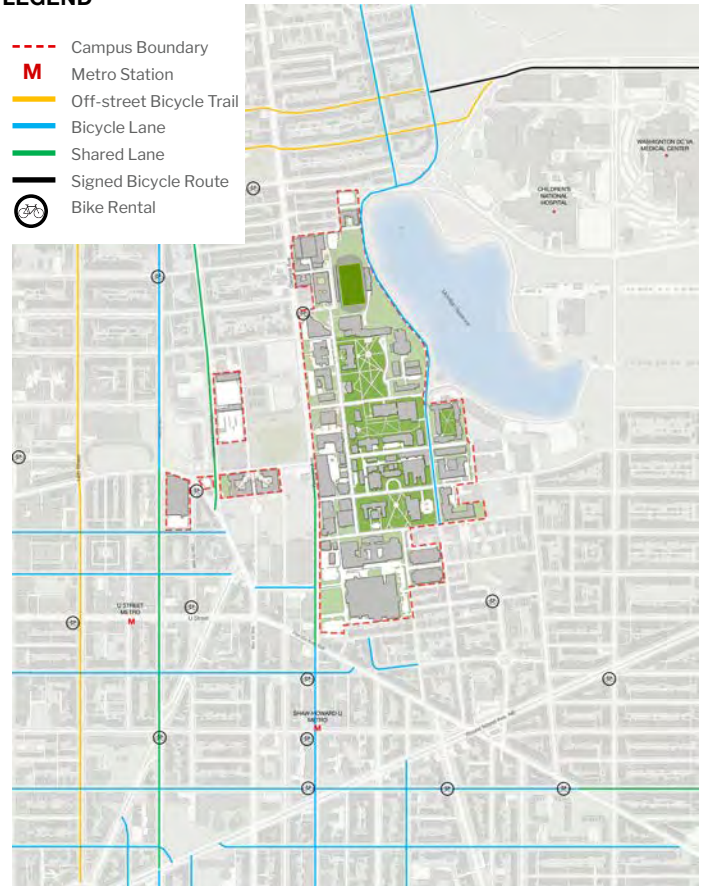


Figure 3.23: Bicycle Routes

LEGEND

- - - Campus Boundary
- M Metro Station
- North Campus Route
- South Campus Route
- - - West Campus Route
- - - Weekend Route
- Shuttle Stop

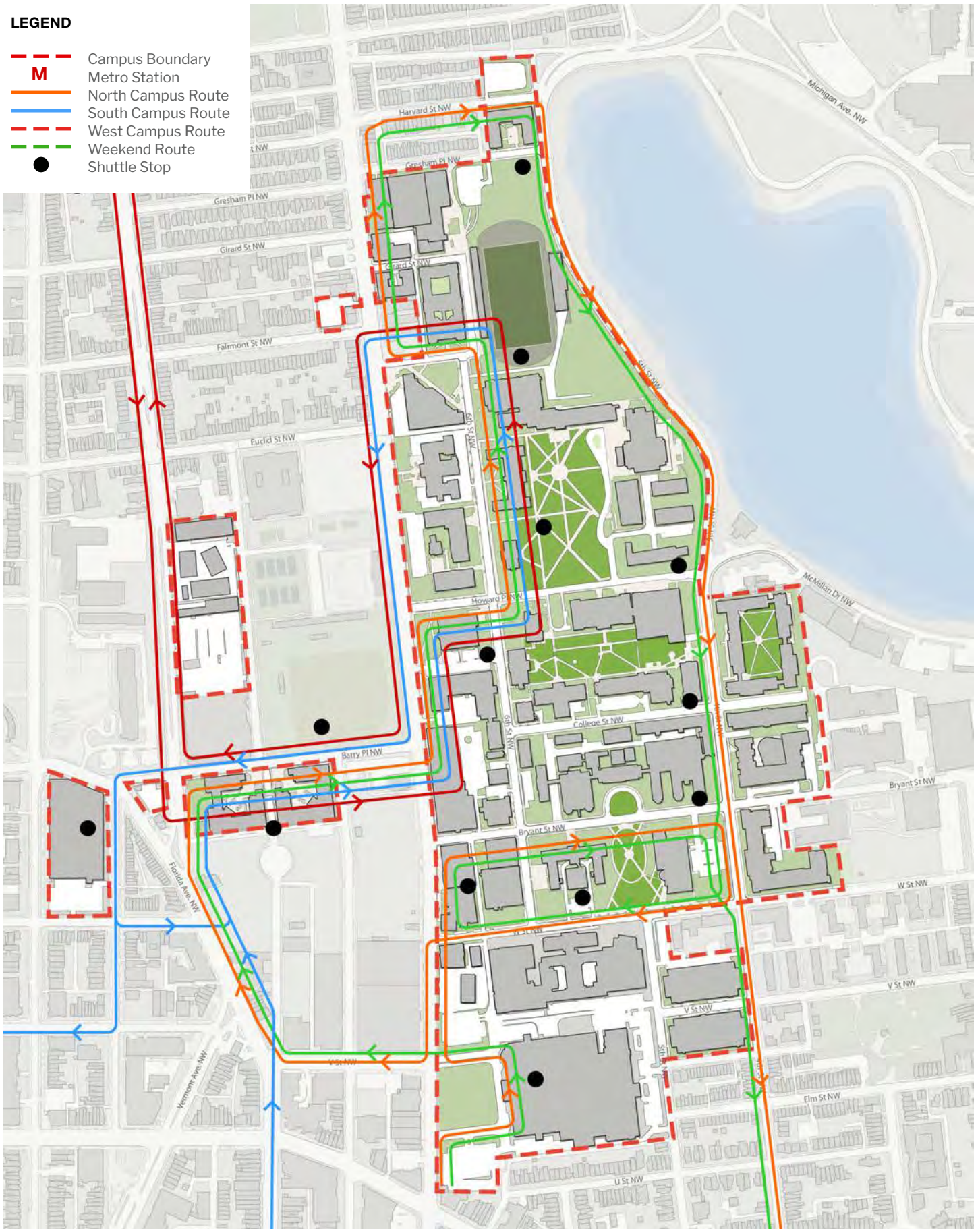


Figure 3.24: HU Shuttle Routes

3.5.5 Public Transit

The HU campus is well-served by existing bus and rail transit. Two Metro stations – U Street and Shaw-Howard University – are within a 0.7 mile (15 minute) walk from The Yard at the campus center. Both stations are served by the Green, and Yellow lines, with scheduled trains arriving every eight minutes during the AM and PM rush, every 15 minutes during midday, every 20 minutes during evenings, and every 15 to 20 minutes on weekends. The Green Line runs between Greenbelt, Maryland, and Branch Avenue, Maryland, by way of downtown Washington, DC. The Yellow Line runs between Greenbelt, Maryland, and Huntington, Virginia, by way of downtown Washington, DC.

The HU campus is also served by frequent Metrobus service. Bus routes, frequencies, and distances from the Yard at the center of campus are shown on the table below (Table 3.13).



Figure 3.25: Main Nodes and Roads

Route Number	Route Name	Typical frequency (minutes)								Walking Distance from The Yard to Nearest Stop
		Early morning	AM rush	Midday	PM rush	Evening	Late night	Saturday	Sunday	
63	Takoma-Petworth Line	25	15	-	15	-	-	30 ¹	30 ¹	0.4 mile (7 min)
64	Fort Totten-Petworth Line	25	15	25	15	25	30	30	30	0.5 mile (9 min)
70	Georgia Avenue-7th Street Line	12	12	12	12	12	12	15	15	0.1 mile (2 min)
79	Georgia Avenue MetroExtra	-	12	12	12	-	-	-	-	0.1 mile (2 min)
90, 92	U Street-Garfield Line	15	10	10	15	15	15	15	15	0.5 mile (10 min)
96	East Capitol St.-Cardozo Line	25	25	25	25	30	45	40	40	0.5 mile (10 min)
G2	P Street-LeDroit Park Line	25	15	30	25	30	40	30	30	0.4 mile (7 min)
H1	Brookland-Potomac Park Line	-	25 ²	-	25 ²	-	-	-	-	0.5 mile (11 min)
H2, H3, H4	Crosstown Line	25	15	20	20	20	30	20	20	0.5 mile (11 min)
X3	Benning Road Line	-	30 ³	-	25 ³	-	-	-	-	0.5 mile (10 min)

¹ At the stop nearest the HU campus (Sherman Ave & Barry Pl), buses only operate from 5:05 to 7:05am and 5:45 to 7:15pm, and only in the peak direction (southbound in the AM, northbound in the PM).
² At the stop nearest the HU campus (Columbia Rd/Irving St & Georgia Ave), buses only operate from 6:35 to 9:07am and 5:30 to 6:38pm, and only in the peak direction (southbound in the AM, northbound in the PM).
³ At the stop nearest the HU campus (Florida Ave & Georgia Ave/7th St), buses only operate from 6:20 to 9:03am and 4:04 to 6:06pm, and only in the peak direction (westbound in the AM, eastbound in the PM).

Table 3.16: Public Transit Routes

LEGEND

- - - Campus Boundary
- M Metro Station
- Metro Rail Line
- BUS ROUTE**
- Frequent
- Less Frequent
- METRO BUS ROUTE**
- XX Major
- XX Extra
- XX Local
- XX Commuter
- BUS STOP**
- Meets all Standards
- Partially meets STD

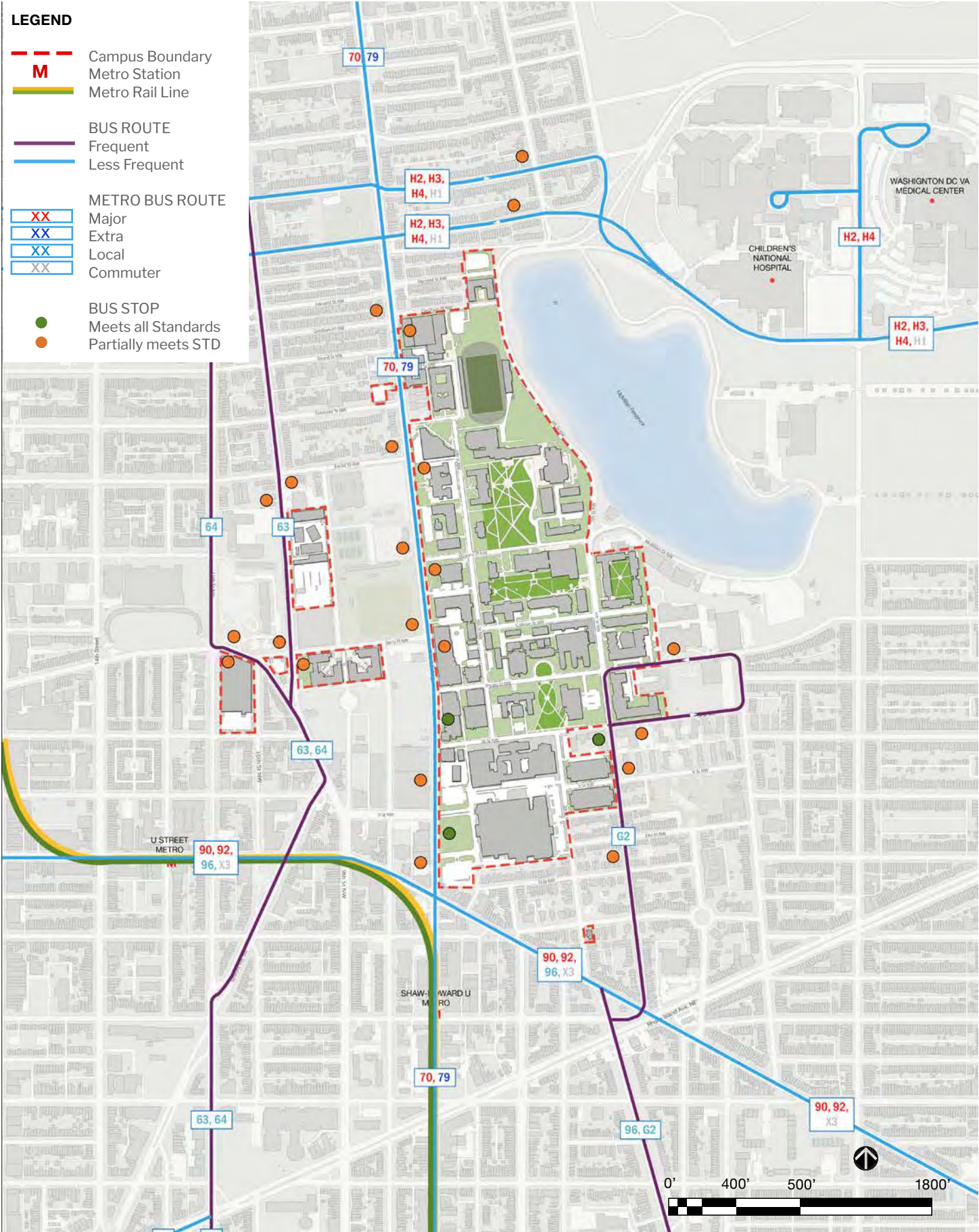


Figure 3.26: Public Transit Routes

LEGEND

- Existing to Remove
Vehicle Access
- To be removed as part of
Campus Plan
Vehicle Access
- To remain during Campus
Plan but be removed with
hospital decommissioning
Vehicle Access



Figure 3.27: Existing Vehicle Access

LEGEND

- Campus Boundary
- Campus Core Analysis
- Core Roadway
- Peripheral Roadway
- Parking facility accessed by core roadway
- Parking facility accessed by peripheral roadway



Figure 3.28: Existing Parking by Core vs. Peripheral Access

3.5.6 Parking

The campus core’s historical parking supply data shows decreased academic parking from approximately 2,300 to 1,960 spaces from 2011 to 2020. The reduction aligns with the overall goals of the ongoing Transportation Demand Management (TDM) Plan. With the HU hospital parking supply’s inclusion, the campus core’s existing parking supply includes approximately 3,580 spaces. The table below (Table 3.17) and accompanying maps (Fig. 3.28-3.30) demonstrate existing parking zones, lot locations, and their respective access points.

Lot Code	Lot Name	Number of Spaces
A	Childers	76
AA	Florida Avenue	23
B	Founders	57
BB	HUSC	26
BB1	HUSC Garage	94
C	Business	36
D	Miner	56
E	Johnson	43
ELC	Early Learning Center	7
F	Mackey	57
G	Downing	35
H	Drew	56
I	Greene	46
J	Burr	12
K	Georgia	34
KK	Wonder Plaza	50
L	Just	23
M	Chem	6
MM	LSHSL	43
O	C.B.P.	55
P	6th Street	11
Q	Power/Bunche	16
R	Bethune	--
RR	Bethune Underground	63
RR	Bethune Annex	12
S	Nursing	62
T	5th & W	26
U	6th & W	16
V	Howard Center	334
W	East Tower	142
WW	East Tower Underground	99
X	9th Street	--
YY	West Tower Underground	99
Z	Banneker	178
1	Howard Center II	--
2	9th & V Street Lot	70
3	Annex I Rear	--
Academic Subtotal		1,963
H1	HU Bryant St Lot	--
H2	HU Medical Arts Lot	30
H3	HUH Permit Only Lot	106
H4	HUH Daily/Visitor Lot	124
H5	HUH Daily/Visitor Lot	57
H6	HUH Permit Only Lot	35
H7	HU A1-Rear Lot	23
H8	HU Hurb1 Lot	50
H9	HUH Garage 1	609
H10	HUH Garage 2	580
Hospital Subtotal		1,614
Total		3,577

Table 3.17: Parking Space Count by Lot

LEGEND

- - - Campus Boundary
- HU Lots
- HU Hospital Lots
- To Be Confirmed
- X Lot Code

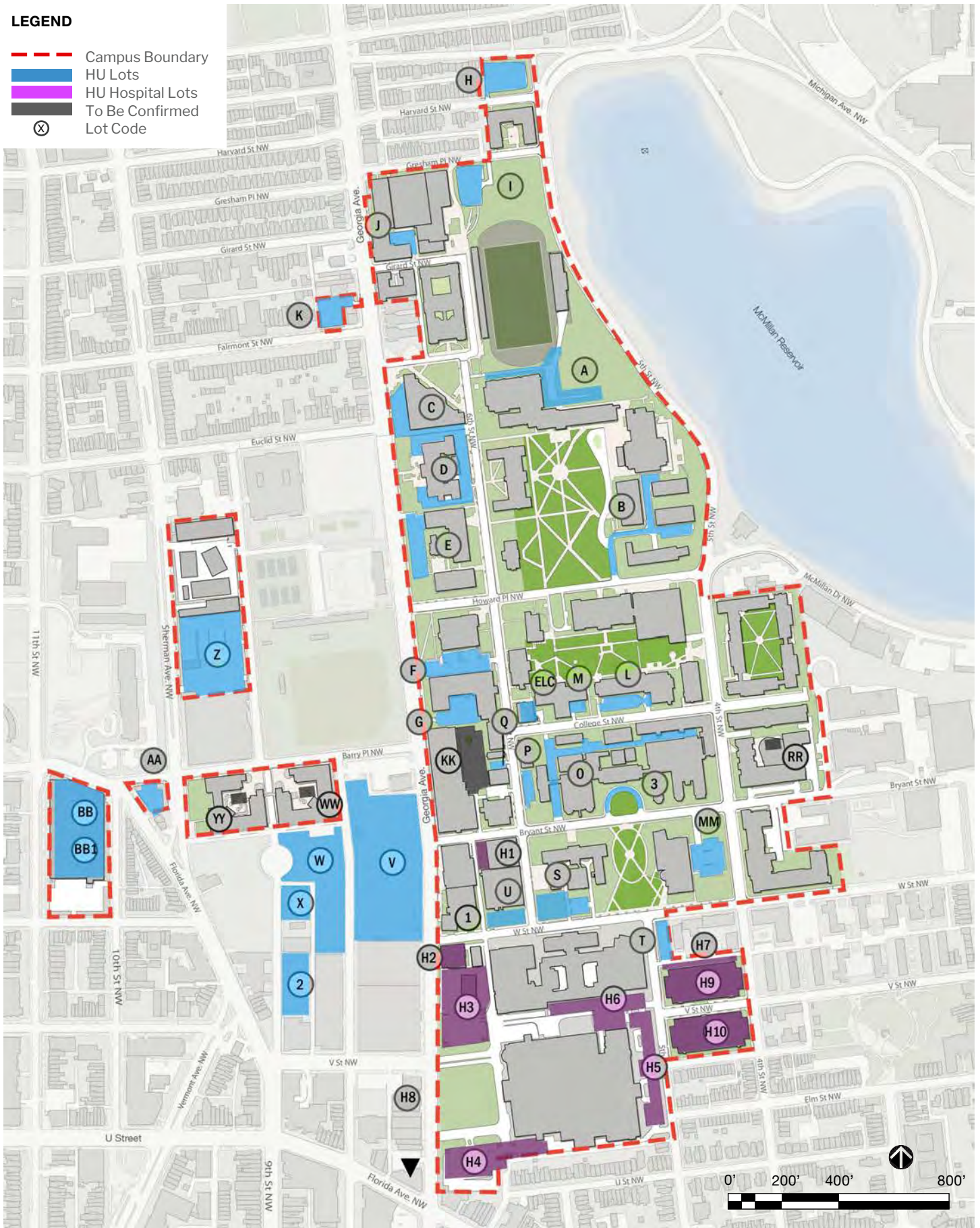


Figure 3.29: Existing Parking

3.6 Infrastructure & Utility Systems

The existing utilities within the public rights-of-way are owned and maintained by various utility providers. The water, electrical, and gas distribution, as well as combined sewer systems are served by their respective primary feeders from respective utility providers. Exceptions to this ownership model include utilities such as water, storm and sanitary mains along privately owned roadways (such as Howard Place and Bryant Street), and the steam distribution system throughout the campus. Both are owned and maintained by Howard University.

Please refer to Figures 3.30-3.36 (pages 94-99) for a series of diagrams which provide a general understanding of how this lattice of systems interfaces with the campus boundary.

WATER DISTRIBUTION

DC WATER SHOULD EXERCISE THE VALVES THEY HAVE ON CAMPUS MORE REGULARLY.
 - KEEP ACTION #1 (12" LINE ALONG HOWARD PLACE)

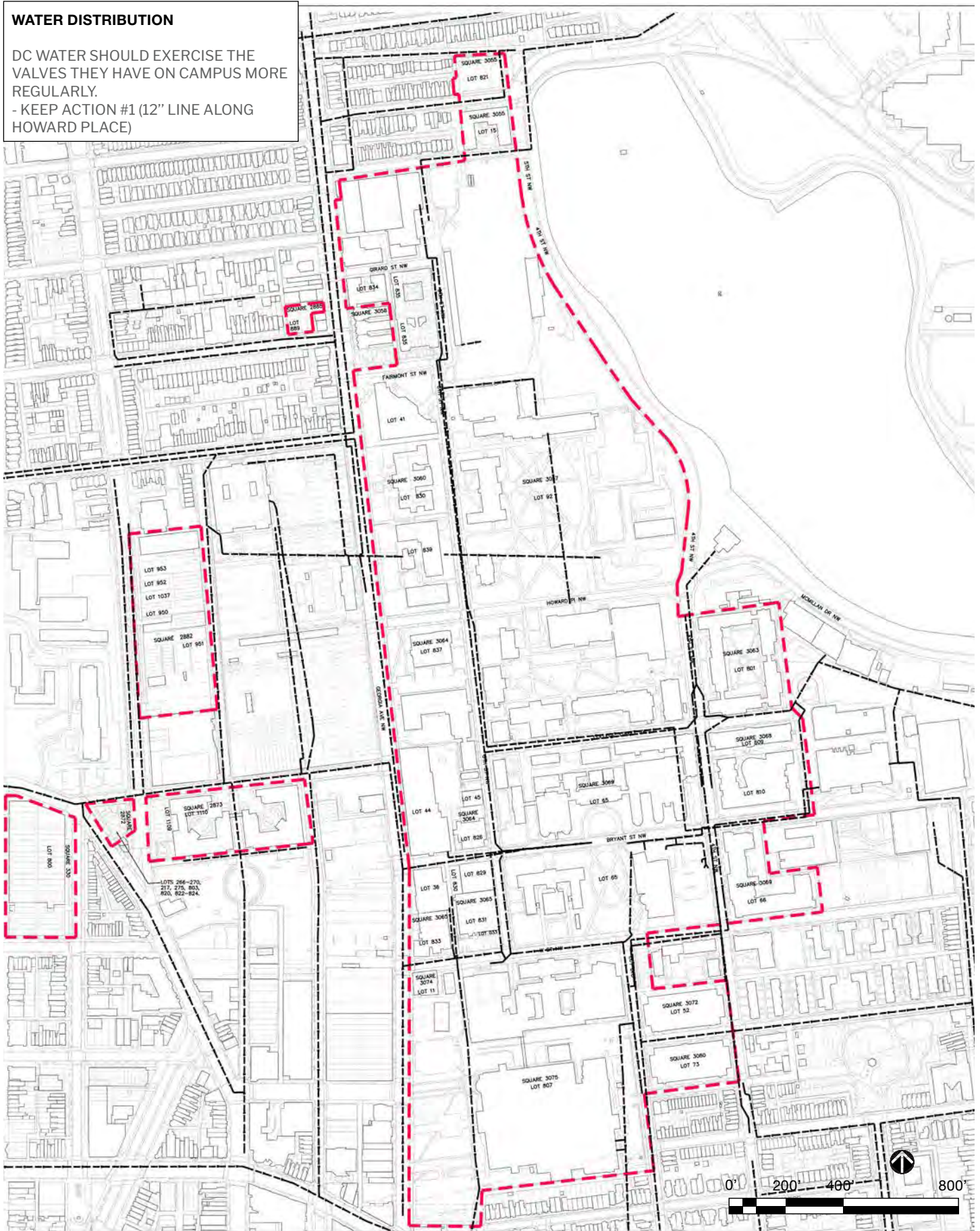


Figure 3.30: Existing Water Distribution

POWER

FLORIDA AVENUE PEPCO
SUBSTATION NEEDS
MAINTENANCE. (IF ISSUES
ARISE, HU IS ASKED TO SHED
LOAD).

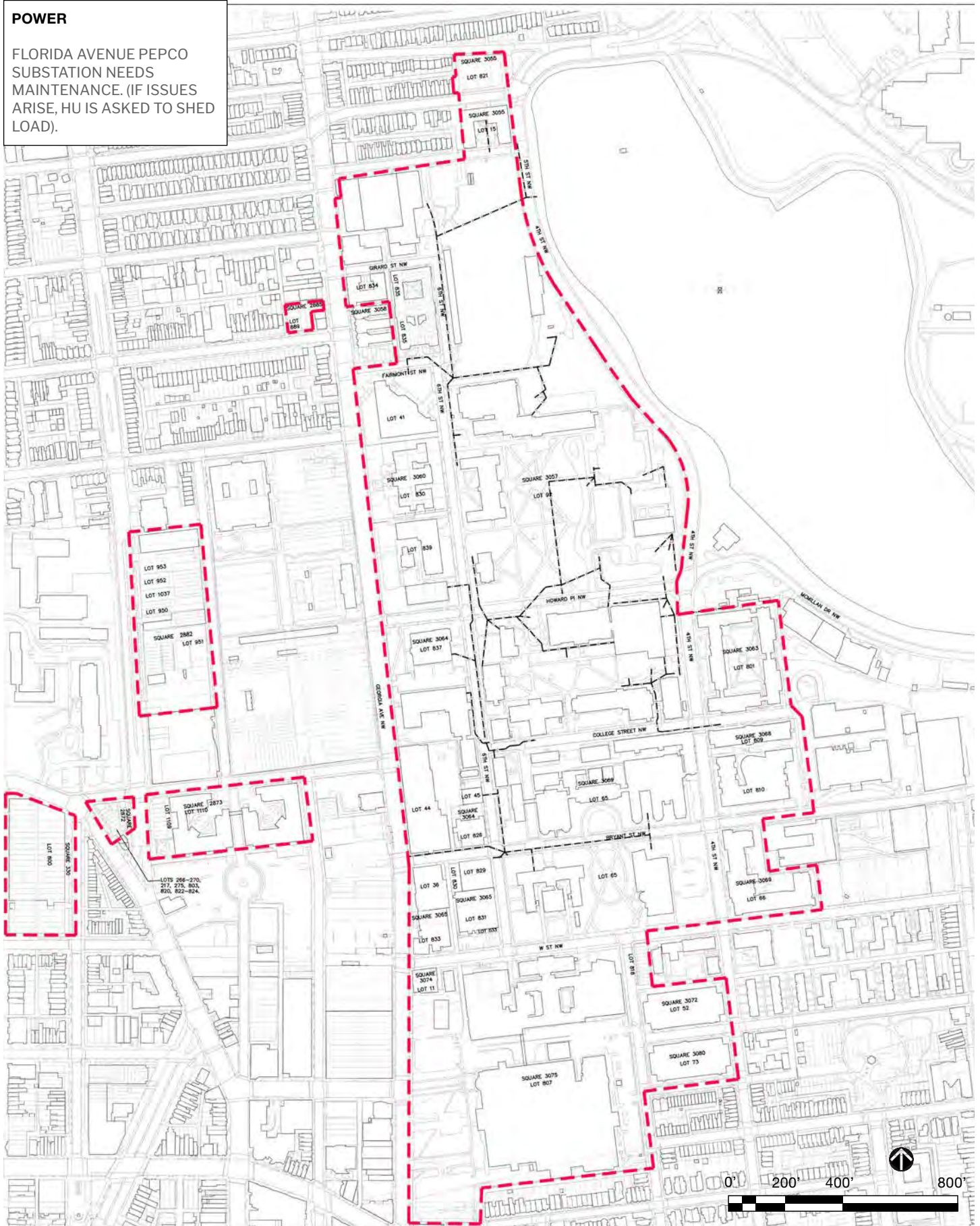


Figure 3.31: Existing Electrical Distribution

STEAM PLANT

TEMP. BOILERS ARE DEPLOYED ACROSS CAMPUS.
- PLANS TO DEMO ALL EXISTING EQUIPMENT
- WILL MODERNIZE TO BECOME A CHP PLANT
- 200K #2 FUEL/ OIL TANK WILL BE DRAINED AND REMOVED, THIS IS AT SE CORNER OF BRYANT AND 6TH STREET.

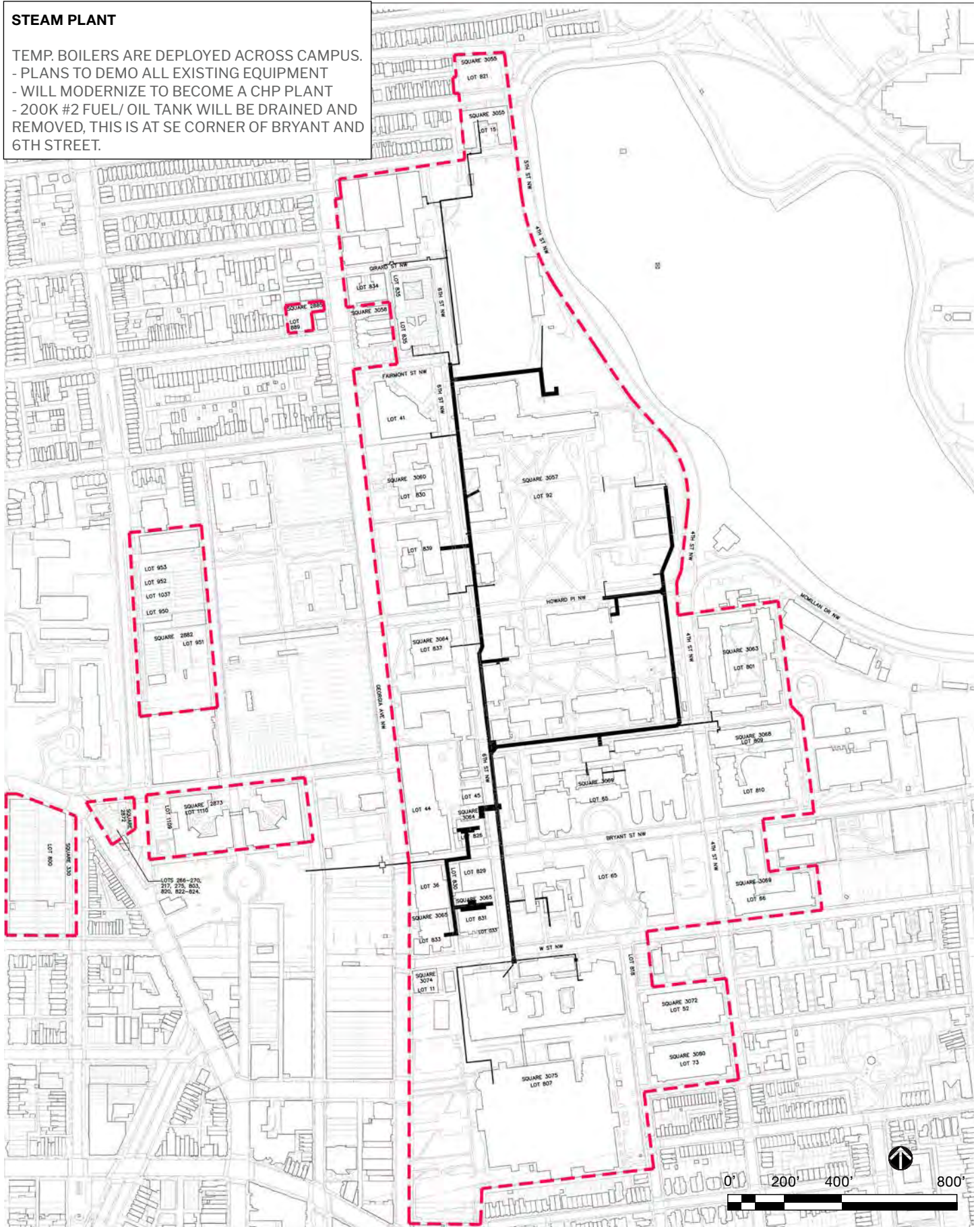


Figure 3.32: Steam Distribution

COMBINED SEWER

THERE IS CURRENTLY A 4'-6" COMBINED SEWER LINE THAT RUNS UNDER SQUARE 2882 (PROPOSED BUILDING F1 & F2). DC WATER WILL LIKELY REQUIRE THAT THIS MAIN BE RELOCATED AND WILL NOT ALLOW THE BUILDING AND GARAGE TO BE PLACED OVER THIS MAIN.

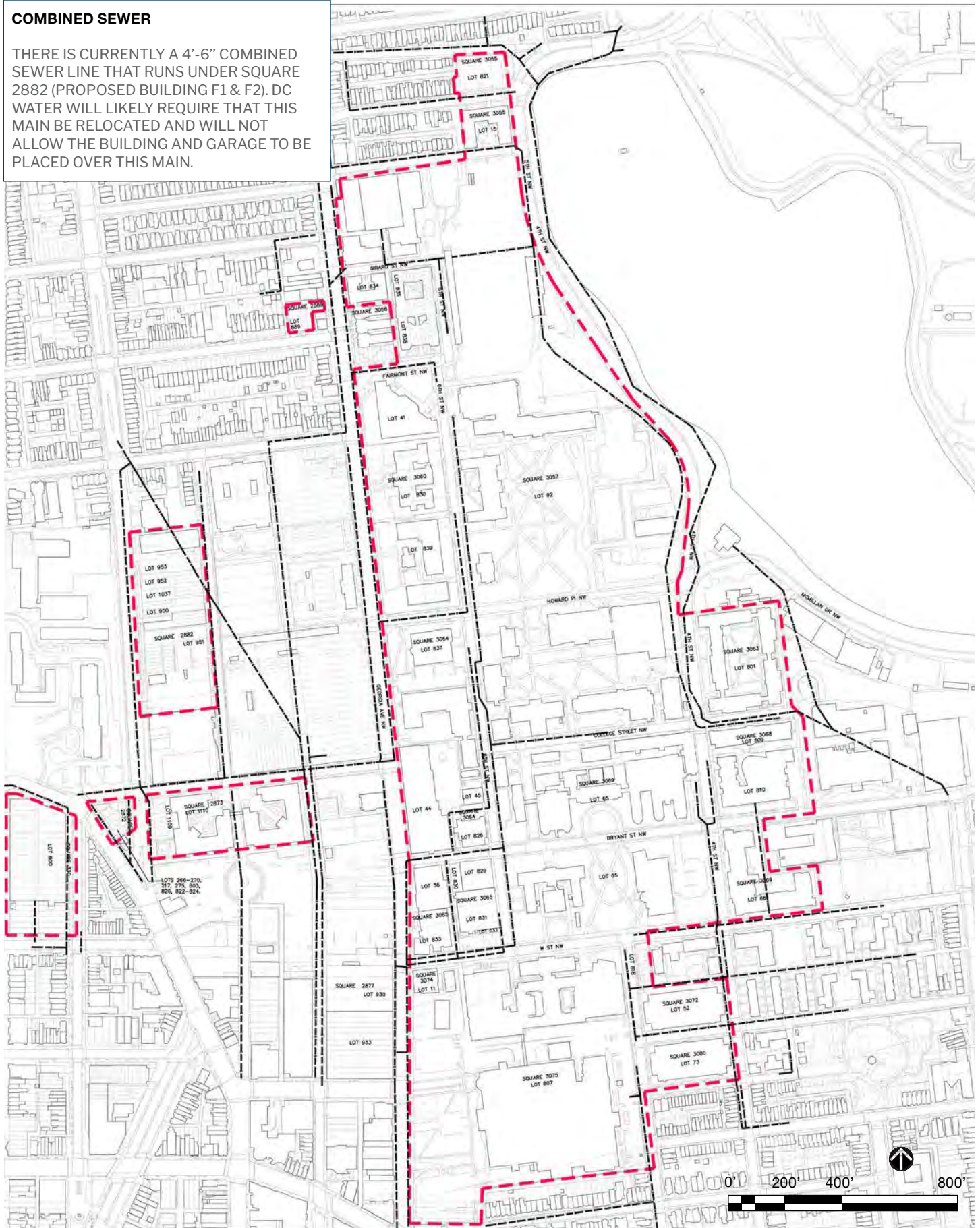


Figure 3.33: Combined Sewer Distribution

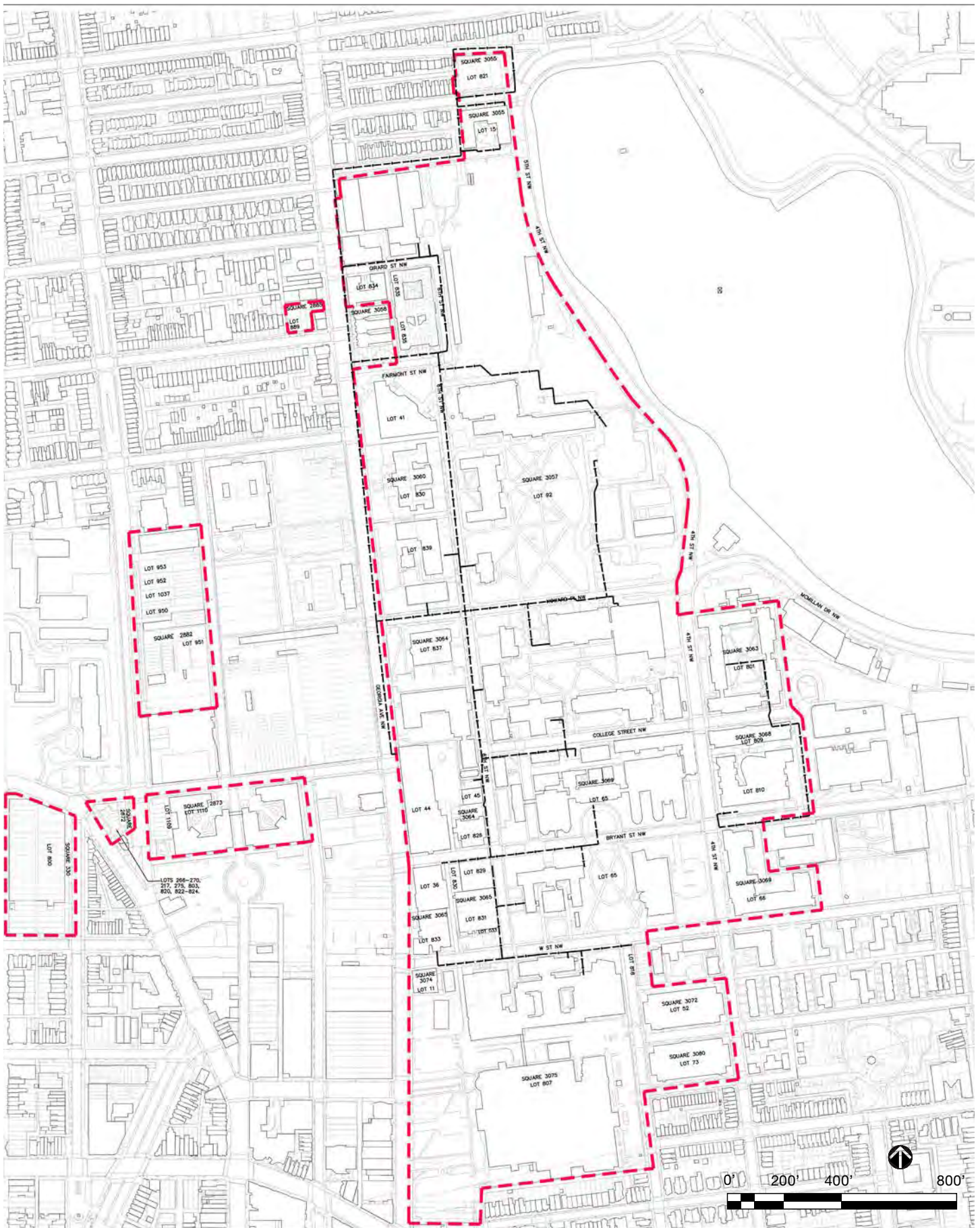


Figure 3.34: Gas Distribution

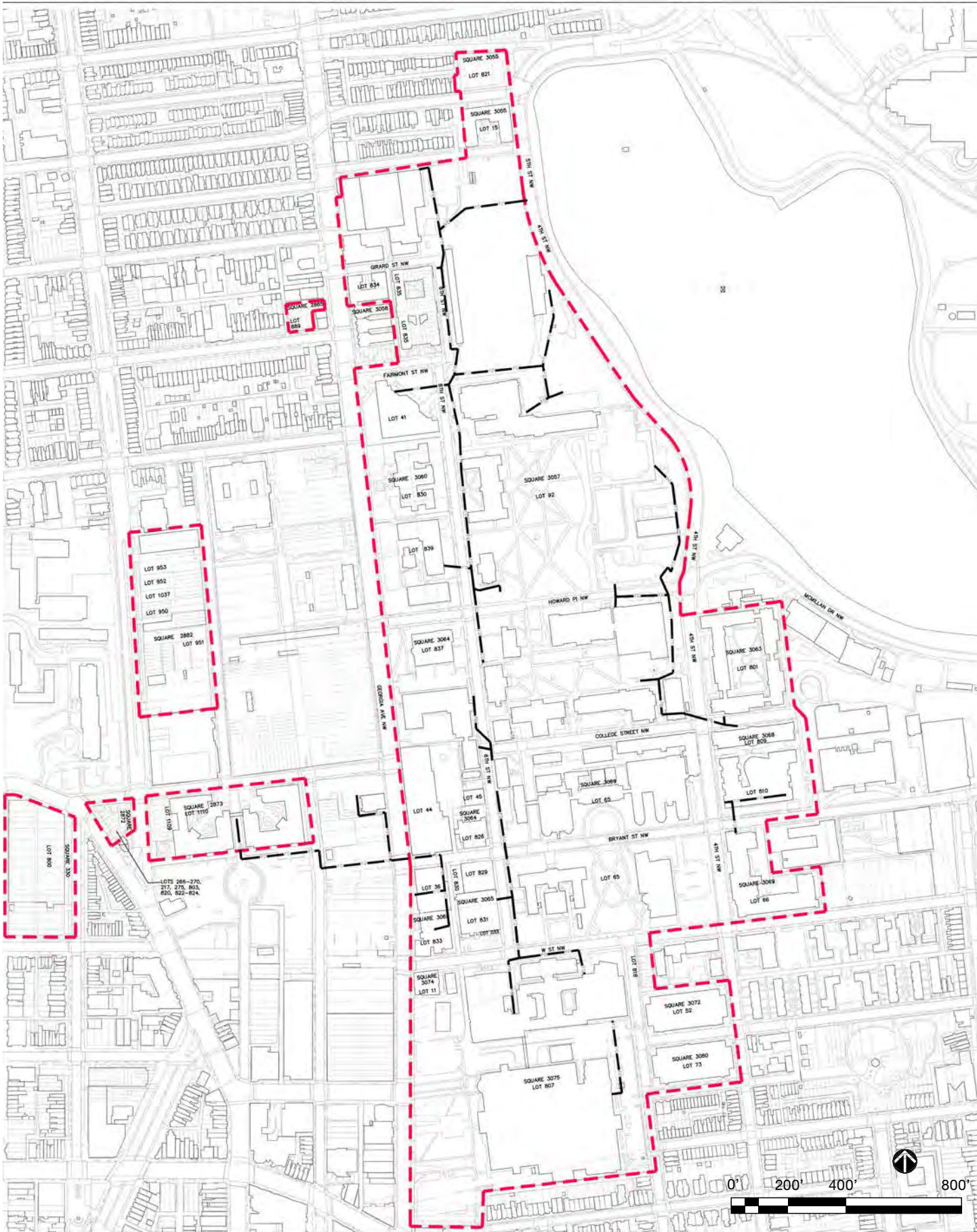


Figure 3.35: Fiber Optic Distribution

Intentionally Blank