2018 Master Plan for the Consolidation of the U.S. FDA Headquarters at the Federal Research Center at White Oak Located in Silver Spring, Maryland

September 2018

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PROJECT TEAM

Contract Holder

GSA Contract Holder

Client Agency

FDA U.S. FOOD & DRUG ADMINISTRATION

Project Management

GBR | Architects

Master Planning

CALLISONRTKL
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Civil/ Environmental/ Transportation

Stantec

Historic Preservation

QUINN EVANS PRESERVATION

Cost Estimating

MGAC

NOMENCLATURE

The following terms and abbreviations may be used throughout this report:

- **ALC:** Adelphi Laboratory Center (Army Research Center)
- **AEDC:** Arnold Engineering Development Complex (Air Force Wind Tunnel Facility)
- **BRT:** Bus Rapid Transit
- **CUP:** Central Utility Plant
- **DUP:** District Utility Plant
- **EIS:** Environmental Impact Statement
- **FAR:** Floor Area Ratio
- **FDA:** Food and Drug Administration
- **FRC:** Federal Research Center
- **GSA:** General Services Administration
- **GSF:** Gross Square Footage
- **Housing:** In the context of FDA, housing refers to provision of employee work location
- **LUFS:** Land Use Feasibility Study
- **M-NCPPC:** Maryland National Capital Park and Planning Commission
- **MRC:** Muirkirk Road Campus
- **NCPC:** National Capital Planning Commission
- **NOL:** Naval Ordnance Laboratory
- **NSWC:** Naval Surface Warfare Center
- **NSF:** Net Square Footage
- **SF, sf, ft2:** Square Feet
- **SQM, m2:** Square Meters
- **SP:** Parking Spaces
- **SW:** Stormwater
- **SWM:** Stormwater Management
- **SVB:** Stream Valley Buffer

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FDA Mission

The Food and Drug Administration is responsible for protecting the public health by ensuring the safety, efficacy, and security of human and veterinary drugs, biological products, and medical devices; and by ensuring the safety of our nation's food supply, cosmetics, and products that emit radiation.

FDA also has responsibility for regulating the manufacturing, marketing, and distribution of tobacco products to protect the public health and to reduce tobacco use by minors.

FDA is responsible for advancing the public health by helping to speed innovations that make medical products more effective, safer, and more affordable and by helping the public get the accurate, science-based information they need to use medical products and foods to maintain and improve their health.

FDA also plays a significant role in the Nation's counterterrorism capability. FDA fulfills this responsibility by ensuring the security of the food supply and by fostering development of medical products to respond to deliberate and naturally emerging public health threats.

FDA Facilities

To effectively support the FDA mission, FDA's facilities must promote internal collaboration across multiple functional areas and facilitate advanced operational models that spur innovation by interdisciplinary teams. The location and configuration of FDA's facilities directly affect FDA's ability to collaborate across scientific disciplines and product centers and realize the innovation and efficiencies that collaboration spurs. These innovations and efficiencies are particularly important as the products that the FDA regulates are becoming increasingly complex. Strategically locating and configuring facilities to improve opportunities for collaboration supports the function of integrated scientific teams, while, conversely, dispersing scientific expertise reinforces individual silos. Facilities that promote collaboration stimulate innovation and enhance FDA's ability to tackle critical public health challenges, such as combating the national opioid epidemic and fostering increased medical product choice and competition for patients.

1 OVERVIEW & EXISTING CONDITIONS

1. OVERVIEW & EXISTING CONDITIONS

1.1 Executive Summary

The2018 Master Plan for the Consolidation of the U.S. FDA Headquarters at the Federal Research Center at White Oak Located in Silver Spring, Maryland is a comprehensive master plan that prepares the FDA Headquarters for additional capacity. The U.S. General Services Administration (GSA) is continuing to consolidate the U.S. Food and Drug Administration (FDA) Headquarters facilities at the Federal Research Center (FRC) in the area of Silver Spring, Maryland known as White Oak. White Oak is a consensus-designated place and unincorporated area in Montgomery County that extends well beyond the FRC. Within White Oak and surrounding the FRC site are a variety of uses, including a suburban shopping center that will eventually be redeveloped; garden apartments; parks; Viva White Oak, a major mixed-use planning initiative; a major army research laboratory; and suburban housing developments.

The FRC is occupied by both the FDA and Air Force's Wind Tunnel. FDA currently encompasses 130 acres of the 662-acre FRC and is the largest tenant. The Air Force's Wind Tunnel occupies approximately 40 acres within the FRC. Except for a few miscellaneous structures, most of which are abandoned, much of the FRC is undeveloped as it is an environmentally sensitive site with steep stream valley buffers that feed into the Paint Branch Creek.

Plans to house FDA at FRC began in the mid-1990's after GSA took over what was formerly the Naval Ordnance Laboratory through the Base Realignment and Closure (BRAC) process. The first Master Plan was approved by the National Capital Planning Commission (NCPC) in 1997. There have been 3 updates to that Master Plan. The updates occurred in 2002, 2006 and 2009. Currently, there is 10,982 FDA and GSA support staff assigned to the FDA headquarters at the FRC housed in approximately 5.9 million GSF of offices, labs, parking garages, tunnels and pedestrian bridges.

Due to new Congressional mandates, FDA is projecting a significant increase in employees and campus support staff at the FDA Headquarters. Therefore, the 2018 Master Plan's purpose is to plan for future growth and further consolidate FDA operations. The Master Plan will provide a framework for development at the FRC to accommodate another 7,018 FDA employees and support staff on site for a total population of 18,000 FDA employees and support staff. Preceding the Master Plan, a Land Use Feasibility Study was prepared that studied multiple development strategies within the FRC and a Draft Master Plan that developed three Master Plan Alternatives.

Historical Visual Setting - Entry Roundabout, Building 21 (Left), Building 1 (Center) and Building 31 (Right)

A Master Plan is needed to continue to support the FDA Headquarters consolidation at the FRC and provide the necessary office space to conduct the complex and comprehensive reviews mandated by Congress. To accommodate this increase in personnel, GSA is studying ways to more efficiently use and expand office and related space at the FDA Headquarters. In addition, infrastructure improvements will be needed to serve the increase in office space and campus population.

The implementation of the Master Plan for the FDA Headquarters includes the following:

- Development of an additional 1,550,000 GSF of office space and 280,000 to 350,000 GSF of special use space to support FDA's mission;
- Anticipating the implementation of bus-rapid-transit (BRT), parking would be provided at a ratio of 1 space for every 1.8 employees (1:1.8) for a total of 10,000 parking spaces for FDA employees and campus support staff; Visitor parking would be increased from 1,000 to 1,615 parking spaces; and
- East Loop Road would be configured to allow for ease of access into and out of the FDA Headquarters. In addition there will be off-site road improvements required.

The proposed staff at the headquarters will result in increased demand for electrical, water, sewer, and HVAC services. As a result:

- New feeder lines will be required from PEPCO;
- Incoming water lines are adequate to support the population;
- New sewer service truck will be required and mitigation maybe required downstream; and
- To support HVAC systems, either the Central Utility Plant will need to be expanded, or a new satellite facility will be required in the basement of one of the new buildings, or each individual building will need its own independent HVAC system.

The expanded FDA Headquarters will be compatible with the architectural character and setting of the historic Naval Ordnance Laboratory through the

continuation of the massing and material strategy established under previous Master Plans. The Preferred Development Alternative for this master plan features one 14-story and one 16-story office building located on the eastern end of the FDA Headquarters. In addition, mid-rise buildings, infrastructure, and parking are added. The master plan's extension of the campus frames the view to the east and further activates the public greens, also known as the Commons.

No historic resources will be physically affected by the implementation of the Master Plan. However, construction of high-rise towers under the Preferred Development Alternative will create an adverse effect to the historic visual setting of Building 1. This will be mitigated through a Memorandum of Agreement executed by GSA with the Maryland State Historic Preservation Office.

Like many great campuses, FDA has a large Commons that serves as both as the backbone and focal point for the headquarters. Collaboration and interaction is a core value within FDA, the Commons serves an important role in promoting these values within FDA. To accommodate the growth of the headquarters, the majority of the new development is on the eastern end of the Commons. The development will both extend the Commons, but also create a strong anchor while still framing a view to the natural part of the FRC beyond. The architecture and landscape have an important role in making the space successful. As the architecture define space, it needs to be compatible with the existing buildings, reinforce FDA's image as a leading institution, and embody design excellence. The landscape is what will make the space habitual and inviting to be in, as such it needs carefully executed and ecologically responsive.

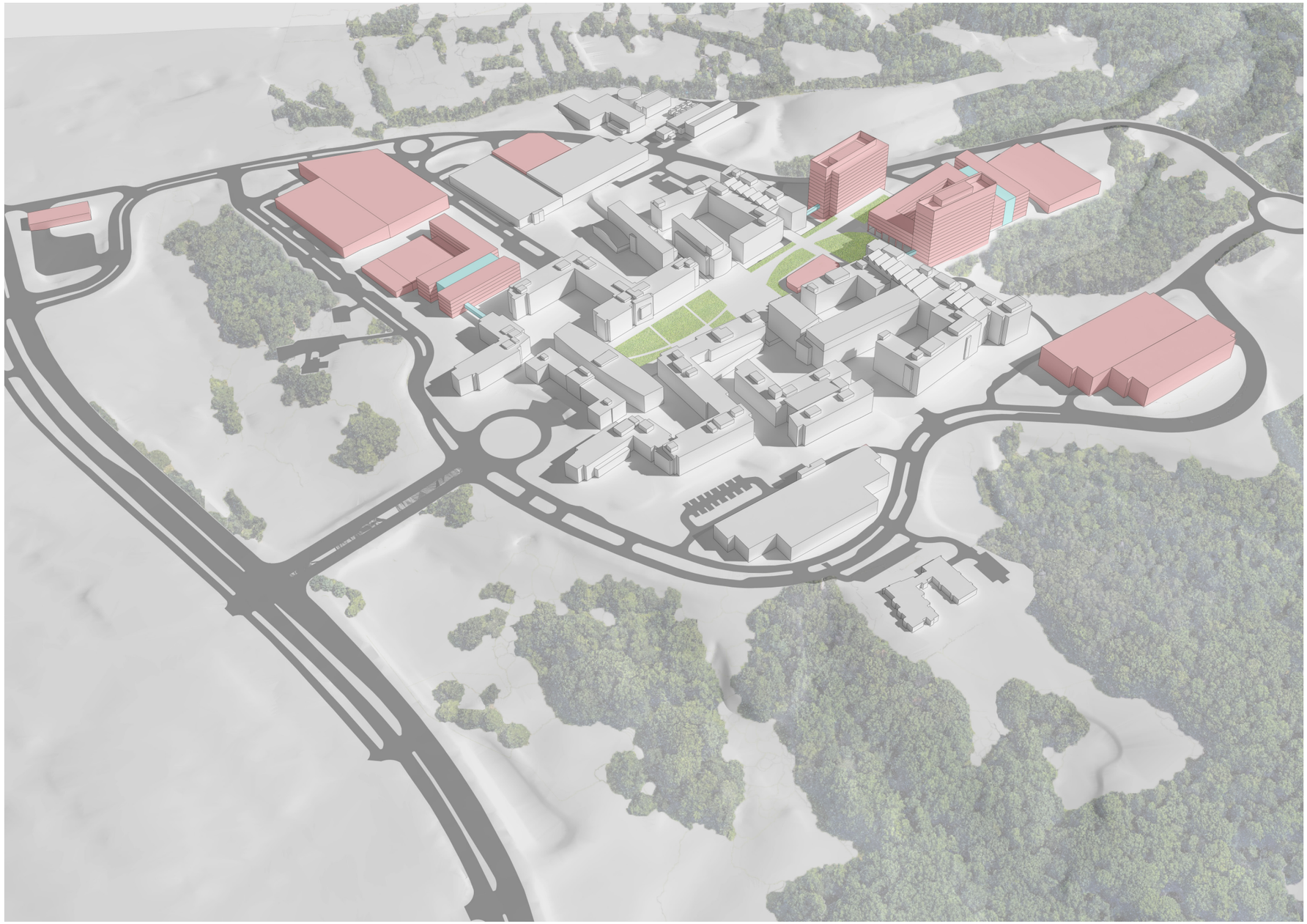

Figure 1-1: Preferred Development Alternative. Refer to Chapter 3 for additional information.

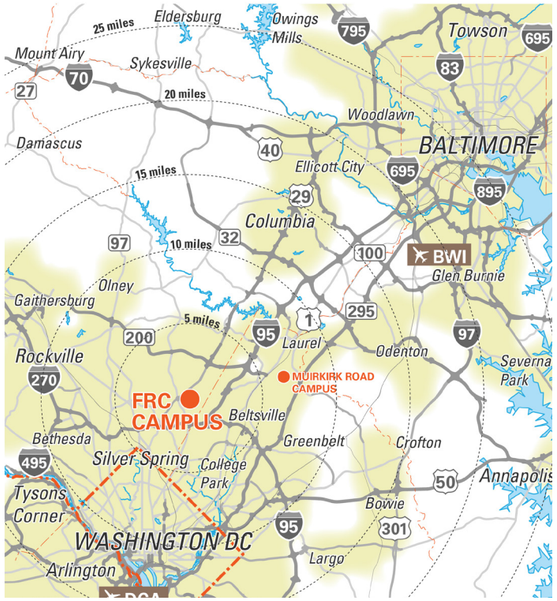

Figure 1-2: FRC Campus Location, housing the FDA Headquarters

WHAT IS THE DIFFERENCE BETWEEN THE FRC AND THE FDA HEADQUARTERS?

The FRC at White Oak is comprised of 662 acres of the former Navel Surface Warfare Center. The NSWC was transferred to GSA in 1996 and was renamed the Federal Research Center at White Oak.

The FDA Headquarters comprised the approximate 130-acre parcel within the FRC that Congress mandated FDA/GSA use to construct a new FDA Headquarters.

In this Master Plan, use of the term "FRC" refers to the entire 662-acre parcel and "FDA Headquarters" refers to the part of the FRC being used for the FDA Headquarters.

Please see Figure 1-10 for a graphic illustration.

1.2 Introduction

The purpose of the proposed action is to provide a Master Plan for the FDA Headquarters at the Federal Research Center (FRC) to support further consolidation of FDA employees and projected growth. Since the 2006 Master Plan was completed, additional authorities have been added to, and original authorities have expanded the FDA's mission. The result is a significant increase in the personnel projected for the FDA Headquarters Program. Currently FDA has 10,987 assigned personnel to the FDA Headquarters with a peak daily population of 7,793. The current projected growth for FDA at the FRC site is approximately 7,018 additional employees and support staff, which includes funded staff vacancies, existing employees currently in leased space in Montgomery and Prince George's counties, FDA support staff, and future growth projected by 2022. The Master Plan is being prepared to guide the development to accommodate a total of 18,000 FDA employees and support staff at the FDA Headquarters. The Master Plan will steer the planning, design, and construction of new buildings; improvements to roadways, utilities, and other infrastructure; and the protection of natural areas.

In fiscal year 2016, Congress provided funding "for FDA to complete a feasibility study and Master Plan for land inside and contiguous to the White Oak campus to address its expanded workforce and the facilities needed to accommodate them." On August 3, 2017, Congress passed the FDA Reauthorization Act (FDARA) of 2017. This new legislation reauthorized the user fee programs necessary for continued support of the agency's pre-market evaluation of prescription drugs, medical devices, generic drugs, and biosimilar products. Due to these Congressional mandates, FDA is projecting that there would need to be an increase in employees and campus support staff at the FDA Headquarters.

1997 Master Plan (NCPC Approval - June 26, 1997)

2002 Master Plan (NCPC Approval - July 7, 2002)

2006 Master Plan (NCPC Approval - July 6, 2006)

2009 Master Plan (NCPC Approval - December 3, 2009)

1.2.1 Project and Surrounding Areas

The FRC at White Oak is located at 10903 New Hampshire Avenue, Silver Spring, Maryland. The FRC is located east of New Hampshire Avenue (MD 650) and west of Cherry Hill Road in Montgomery and Prince George's counties. The site is bounded to the north by commercial and residential properties, the Paint Branch Stream Valley Park, and the Percontee Quarry. To the south of the FRC lie the U.S. Army's Adelphi Laboratory, residential properties, and the Powder Mill Community Park.

The 130-acre FDA Headquarters is located at the west end of the FRC. Figure 1-2 shows the location of the FRC location and the FDA Headquarters.

1.2.2 FDA Headquarters History

Master Plan History & Evolution

GSA helps Federal agencies build and acquire office space, products and other workspace services, and oversees the preservation of historic Federal properties. In this role, GSA has been consolidating the FDA Headquarters at the FRC at White Oak since 1997. The FDA Headquarters at the FRC currently

Figure 1-3: 2009 Master Plan

consists of the following components:

- Office of the Commissioner (OC)
- Center for Biologics Evaluation and Research (CBER)
- Center for Drug Evaluation and Research (CDER)
- Center for Devices and Radiological Health (CDRH)
- Center for Tobacco Products (CTP)

The 2018 Master Plan is the fifth iteration of the Master Plan for the Food and Drug Administration Consolidation at White Oak, Maryland. Outlined below is brief history of the site.

Original Site - 1948: Acquired by the Navy in 1944, White Oak became the new home of the expanded Naval Ordnance Laboratory. The original campus was planned and designed for the site in 1946 and construction of the laboratory was completed in 1949. During the 1950s, 60s, and 70s, the campus population reached 4,000 employees before slowly declining in the 1980s and early 90s. In 1993, the site was transferred to GSA and the Navy research facility was reorganized and moved to another site.

1997: After site and building analysis, the former Naval Ordnance Laboratory site in White Oak, Maryland was selected to be the new home for the United States Food and Drug Administration. The original 1997 Master Plan outlined the consolidation of five FDA departments, 5,947 employees, which occupied forty-eight leased buildings in twenty various locations across the Washington metropolitan area to the White Oak site.

2002: The Master Plan of the FDA consolidation adapted the original NOL main building, Building One, as the FDA Office of Commissioner and the original fire station building as part of the new Central Utility Plant. All the other office and laboratory buildings were planned as new construction projects. The population was established at 6,256.

2006: By 2006, construction for phases I, II, and IIIA of the implementation plan had been completed. During these phases CDER I office building, Life Science Laboratory, and Central Shared Use building were completed and occupied by 1,896 employees. The North Garage with 831 parking spaces was also completed.

CDRH laboratory and CDER II office building were under construction.

The 2006 Master Plan Update increased the population from 6,256 to 7,719 and set new building footprints for office and laboratory.

2008: Prior to the 2009 Master Plan Update, the CDRH Laboratory, CDER II office building, CDRH office building, and Building One renovation were completed and over 4,300 employees worked on the headquarters. The Southwest Garage with 1,229 parking spaces was also completed. The OC/ORA office building was under construction along with the Northeast Garage that provides 1,158 parking spaces.

2009: The 2009 Master Plan Update included the following:

- A population increase from 7,719 to 8,889 FDA employees
- Updated phasing/implementation plans including updated building footprints and locations, status of occupancy, and revised future phases
- An updated Transportation Management Plan, including public transit approach and increased parking requirements because of the population increase and the NCPC required employee parking ratio of 1 parking space for every 1.5 employees
- An updated headquarters-wide security plan, including revised Truck Screening Facility and Distribution Center
- Relocation of the Child Care Center and Fitness Center to the SW quadrant
- A revised Landscape Master Plan
- An updated utility distribution concept due to the status of utility capacities and future capacity requirements.
- An updated approach to environmental issues, including energy efficiency, sustainability, stormwater management, and tree/forest conservation
- Increased visitor parking from 500 spaces to 1,000 spaces based on updated demand projections and increased density

The 2009 Master Plan Update maintained the vision of the original Master Plan and previous updates in terms of overall campus design and architectural character and served to guide the project toward its final completion within the established framework. Since the 2009 Update, driven by a Presidential Directive, the population of the headquarters has increased to 10,987. This figure includes not only FDA employees, but also GSA support staff. The increase in density has been accomplished not by adding buildings but lowering the utilization rate to 170 net square footage per person for office

space only. In fact, several buildings approved in the 2009 Master Plan Update have not been built. See figure 1-9. While the overall employee count is higher than the 2009 Master Plan Update, the peak population on campus is below 8,000. This has been accomplished through FDA's TMP that includes robust telecommuting.

1.2.3 Planning Process

The planning process resulting in this Master Plan for the FDA Headquarters at the FRC began in early 2017. The development of the Master Plan was supported by three major project components:

1. The Land Use Feasibility Study (LUFS) was completed in Spring 2017 and provided a high level assessment on the feasibility of the FRC site and infrastructure to accommodate additional FDA staff. It put forward a series of development options and identified related costs.
2. Through the National Environmental Policy Act (NEPA) compliance process, development of the master plan in relation to environmental considerations occurred. A public scoping period occurred in the Fall of 2017. Scoping helped to identify issues that should be addressed in the Environmental Impact Statement (EIS). At the same time, technical studies were conducted. The technical studies were used to help assess the impacts that would occur from implementation of the Master Plan. A Draft EIS was issued in March 2018 and a Final EIS will be issued in August 2018.
3. Compliance with Section 106 of the National Historic Preservation Act (NHPA) was coordinated with the NEPA compliance process to identify, assess and resolve potential adverse effects to historic structures or landscapes. A Memorandum of Agreement (MOA) among the GSA, Maryland State Historic Preservation Office, with input from other Consulting Parties, was executed in advance of the Final Master Plan. The Advisory Council on Historic Preservation participated in consultations, but is not a signatory.

The planning process considered a range of options for proposed development at the FRC leading to four Draft Development Alternatives presented in the Master Plan. Other options for development have not been further studied due to various environmental constraints, loss of collegial atmosphere, and connectivity to the existing headquarters.

Comments received on the draft Master Plan and through consultation with Federal, state, and county agencies informed the GSA planning process. In compliance with NEPA, at the conclusion of the Final Environmental Impact Statement, a Record of Decision (ROD) outlined the selected alternative for the Master Plan and described measures to mitigate any potential environmental impacts from implementation of the Master Plan.

1.2.4 Related Studies

- Phase 1 Archaeological investigations Associated with the U.S. Food and Drug Administration Federal Research Center Master Plan, Montgomery County Maryland, September 2017
- Wetland Investigation Report, Fall 2017
- Forest Stand Delineation Report, Fall 2017
- Water System Capacity Evaluation, Stantec, January 2018
- Draft 2018 FDA Federal Research Center Master Plan, March 2, 2018
- Transportation Management Plan (TMP), June 2018
- Traffic Technical Report, June 2018
- FDA White Oak Campus Visitor Parking Demand Memo from Stantec to GSA, July 2018
- Final Environmental Impact Statement (EIS), August 2018
- Final Land Use Feasibility Study (LUFS), August 2018
- Air Quality Technical Report, Winter 2018
- Traffic Technical Report, Winter 2018

1.3 Master Plan Goals & Objectives

Image & Mission. Reinforce FDA's image as a leading scientific institution, foster retention and attraction by:

- Creating a compact walkable campus
- Adding places for creative interchange & collaboration to spur administrative and scientific innovation
- Creating architecture that is both compatible and iconic
- Reinforcing and extending the campus/courtyard concept
- Creating state-of-art-work spaces that attract world-class scientists and stimulate public confidence in FDA's operations and science
- Providing barrier free accessibility to campus facilities for persons with disabilities

Economics. Create a more efficient and cost-effective agency by:

- Maximizing on site population to streamline operations
- Reducing dependencies on leased facilities
- Utilization of shared facilities
- Reducing travel times to and from meetings and conferences

Environmental Stewardship. Protect the site's tree canopy, maintain bio-diversity, minimize runoff, and create sustainable campus by:

- Maintaining the historic green buffer along New Hampshire Avenue
- Minimizing land coverage
- Converting surface parking lots into building pads
- Creating both zero net energy & zero net water facilities
- Utilizing innovative stormwater practices

Transportation. Foster effective transportation solutions to minimize traffic and parking problems. Reinforce the innovative existing policies, and respond to potential benefits of autonomous vehicles by:

- Welcoming bus-rapid-transit on site
- Creating an on site transit hub
- Continuing to subsidize van and car pools
- Phasing future parking based on the impact of autonomous vehicles

1.4 Master Plan Compliance

1.4.1 Overview

The Master Plan for the Consolidation of the U.S. Food and Drug Administration Headquarters is subject to review by the National Capital Planning Commission (NCPC) to ensure the plan is consistent with the Federal Elements of the NCPC Comprehensive Plan for the National Capital. The Federal Elements related to the FDA Master Plan include:

- **Federal Workplace** – The Federal Workplace Element aims to strategically locate the Federal workforce in a consolidated, efficient manner that encourages higher productivity and collaboration while emphasizing the National Capital Region's importance in the federal workforce.
- **Transportation** – The Transportation Element promotes a diverse transportation network that meets the needs of commuters while protecting and preventing environmental degradation. The element encourages the use of public transit and other alternative modes of transportation to improve traffic and air quality conditions in the region.
- **Federal Environment** – The Federal Environment Element encourages the federal government to

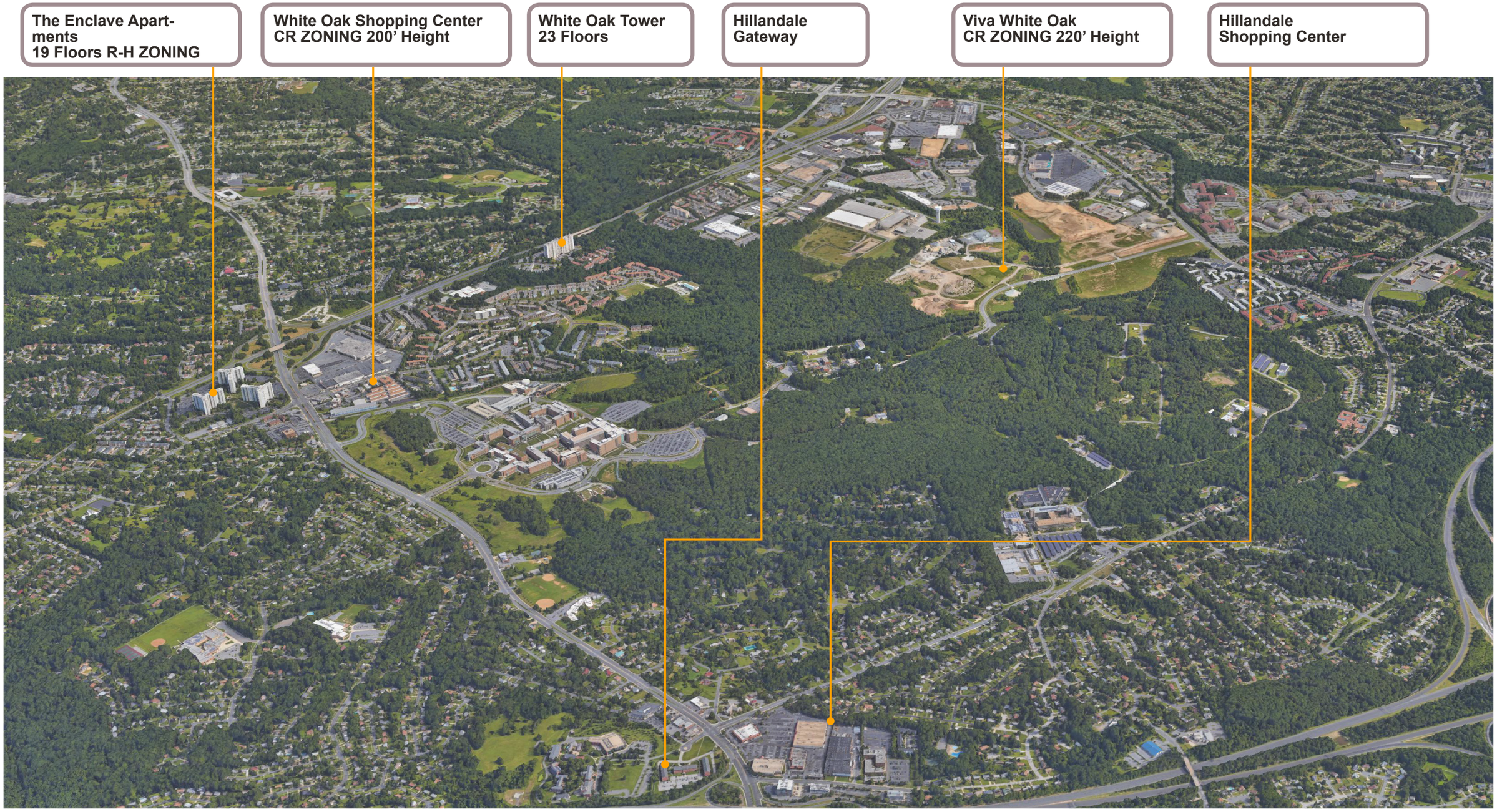

Figure 1-4: SURROUNDING COMMUNITY & CONTEXT

be a leader in environmental stewardship and sustainability (NCPC, 2016).

The consolidated expansion of the headquarters will encourage efficiency, higher productivity, and collaboration, which is consistent with the goals outlined in the Federal Workplace Federal Element. As part of the expansion, a Transportation Management Plan (TMP) would be developed and would encourage employees to use alternative means of transportation to commute to the headquarters such as car-pooling or public transit. This would help alleviate congestion on area roadways and improve air quality which is consistent with both the Transportation and Federal Environment Federal Elements.

Additionally, all Action Alternatives would be constructed and operated in an energy efficient and sustainable manner, meeting LEED® Gold certification and net zero energy and water usage, which is consistent with the Federal Environment Element.

The Preferred Development Alternative, developed for the 2018 Final Master Plan, maintains and enhances these guiding principles.

On June 7, 2018, the National Capital Planning Commission (NCPC) approved Draft Master Plan comments in the Executive Director's Recommendation report. The report confirmed that the Master Plan is consistent with the Comprehensive Plan for the National Capital (p.7-8 Executive Director's Recommendation, NCPC June 7, 2018).

1.5 Regional Context

The FDA Headquarters' context is a clustering of structures to inspire employees to continually innovate while serving the public. The previous Master Plans and the proposed 2018 Master Plan support the goal of creating timeless and enduring structures and spaces. For the existing headquarters context, refer to figures 1-4 & 1-5 and section 1.6.

The surrounding community and context includes the White Oak Shopping Center and White Oak Tower, the Enclave Apartments, Viva White Oak, Hillandale Shopping Center and Hillandale Gateway.

1.5.1 Local Plans and Requirements

Development areas are defined by the following man-made and natural boundaries:

- Site boundary,
- Stream Valley Buffer,
- The flood plane,
- Paint Branch Creek and its tributaries,
- Security setbacks, and
- Other non-buildable areas.

Refer to figure 1-6.

1.5.2 Land Use and Development

Montgomery County Land Use Planning

The FRC is primarily located within Montgomery County's White Oak Master Plan area. The White Oak Master Plan, adopted in 1997, was developed to guide future growth of the area. The White Oak Master Plan area is bordered by the Capital Beltway (I-495) to the south, the Northwest Branch Anacostia River to the west, the Paint Branch to the east, and the ICC (MD 200) to the north. Development zones in Montgomery County are single-family residential, multi-family residential, commercial-retail, and industrial. Current land use within the planning area is predominately residential (Montgomery County, 2017b).

In July 2014, M-NCPPC adopted the White Oak Science Gateway (WOSG) Master Plan which amends portions of the 1997 White Oak Master Plan in the area immediately adjacent to and including the FRC. The WOSG Master Plan area spans nearly

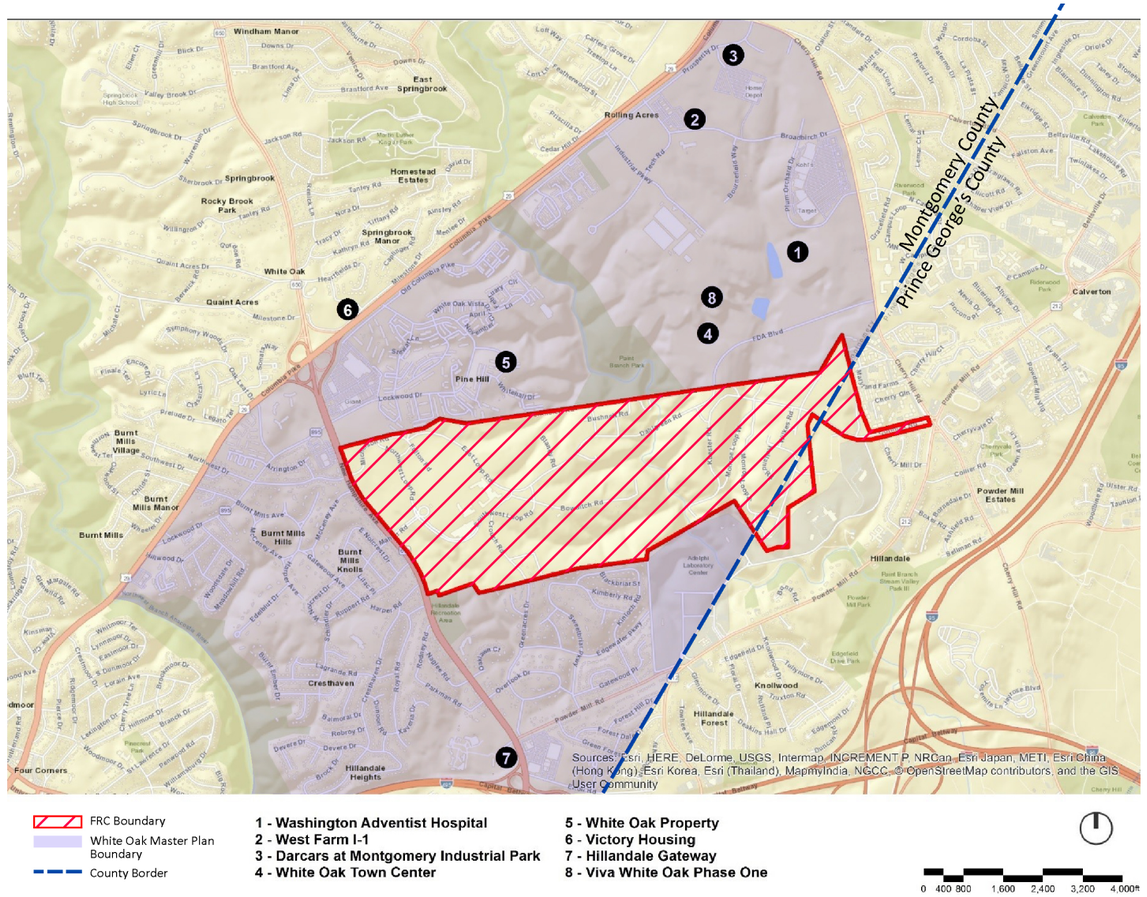

Figure 1-5: Planned Developments Near FRC

3,000 acres and is bordered by I-495 to the south, Northwest Branch Anacostia River to the west, US 29 and Cherry Hill Road to the north and the Montgomery County/Prince George's County boundary to the east. The FDA Headquarters is the centerpiece of the WOSG Master Plan, viewed as a gateway and opportunity to attract employers in the health care, pharmaceuticals, life sciences, and other advanced technology fields. Existing land use within the WOSG Master Plan area include single and multi-family residential, commercial, parkland, and industrial.

Currently, a 300-acre parcel of land located northeast of the FRC is in the planning phase of being developed (see Figure 1-4). The development, named Viva White Oak, would consist of mixed uses featuring office space, residences, and retail businesses. Developers of this property would like to attract life science businesses that would benefit from close proximity to the FDA Headquarters. Also in the planning phase are several bus rapid transit (BRT) routes along U.S. Route 29 and New Hampshire Avenue which would improve public transit connections to the FDA Headquarters and the surrounding area. The WOSG Master Plan has

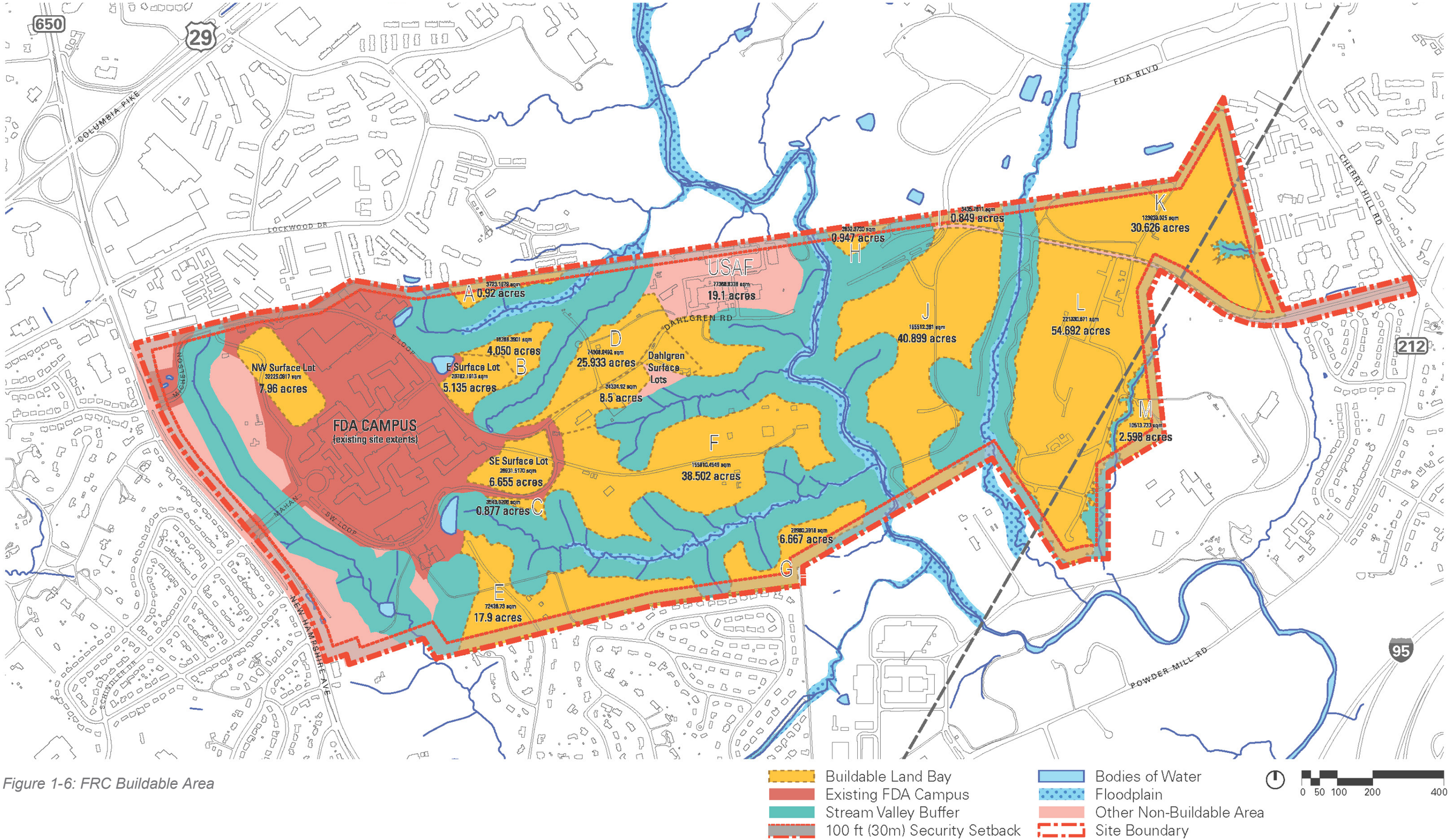

Figure 1-6: FRC Buildable Area