

MEMORANDUM OF AGREEMENT  
BETWEEN THE UNITED STATES GENERAL SERVICES ADMINISTRATION AND  
THE MARYLAND STATE HISTORIC PRESERVATION OFFICER REGARDING  
THE MASTER PLAN FOR CONSOLIDATION OF THE U.S. FOOD AND DRUG  
ADMINISTRATION HEADQUARTERS AT THE FEDERAL RESEARCH CENTER AT  
WHITE OAK, SILVER SPRING, MARYLAND

WHEREAS, this Memorandum of Agreement ("MOA"), inclusive of all exhibits, is made as of this 5<sup>th</sup> day of November, 2018, by the U.S. General Services Administration ("GSA"), as lead agency, and the Maryland State Historic Preservation Officer ("SHPO") (referred to collectively herein as the "Signatories" or individually as a "Signatory"), pursuant to Section 106 of the National Historic Preservation Act ("NHPA") 54 U.S.C. § 306108, and its implementing regulations at 36 CFR Part 800; and

WHEREAS, in accordance with the *Memorandum of Agreement among the General Services Administration, Food and Drug Administration, the Maryland State Historic Preservation Office, and the Advisory Council on Historic Preservation Regarding the Food and Drug Administration Consolidation Project at White Oak, Maryland* (2000), and its amendment and replacement with the same name in 2002 ("2002 MOA"), the U.S. Food and Drug Administration (hereinafter "FDA") completed the initial phase of consolidation of its headquarters onto 130 acres of the Federal Research Center (hereinafter "FRC") at White Oak in Silver Spring, Maryland, located within the former Naval Ordnance Laboratory ("NOL"); and

WHEREAS, in fiscal year 2016, Congress provided funding for FDA to complete a feasibility study and Master Plan for additional development of land inside the FRC to address its expanded workforce and the facilities needed to accommodate them. Also, due to reauthorization of programs in the FDA Reauthorization Act of 2017 (PL 115-52), FDA is projecting future growth and a need for ongoing consolidation; and

WHEREAS, as the federal agency with custody and control of the FRC, GSA has developed the *Master Plan for the Consolidation of the U.S. Food and Drug Administration Headquarters at the Federal Research Center at White Oak* ("FDA Master Plan"). The FDA Master Plan allows for development of additional office buildings, ancillary buildings for support functions such as parking garages and a truck screening facility, and minor reconfiguration of campus roadways. The FDA Master Plan will further consolidate FDA's headquarters facilities to accommodate up to approximately 18,000 employees and support staff, and approximately 11,600 parking spaces within what is known as Area 100 of the FRC along New Hampshire Avenue ("Master Plan Area," attached hereto as Exhibit I) ("Undertaking"); and

WHEREAS, in consultation, GSA determined that the Area of Potential Effect ("APE," attached hereto as Exhibit II) for this Undertaking is the Master Plan Area. The APE contains historic properties, including Building 1, that contribute to the NOL Historic

District, which in 1997 was determined eligible for the National Register of Historic Places ("National Register"), as it served as the Naval Ordnance Laboratory from 1944 to 1993 ("NOL Historic District"). The NOL Historic District is also identified as Maryland Inventory of Historic Properties Number M:33-25; and

WHEREAS, as many other contributing buildings in the NOL Historic District have been demolished under the terms of the *Memorandum of Agreement between the General Services Administration and the Maryland State Historic Preservation Officer Regarding the White Oak Federal Center, Montgomery County, Maryland* (2003), GSA and SHPO agree that the NOL Historic District boundary determined by the U.S. Department of Defense in 1997 should be re-evaluated, and GSA plans to formally re-evaluate the boundary, as stipulated herein; and

WHEREAS, concurrently with execution of this MOA, GSA plans to terminate the 2002 MOA in accordance with its terms, as the undertaking contemplated therein was carried out as stipulated; and

WHEREAS, GSA initiated Section 106 consultation with SHPO on August 18, 2017, and with the Advisory Council on Historic Preservation ("ACHP") on June 26, 2018, and ACHP declined to participate on August 16, 2018. FDA, the tenant at the FRC, is an Invited Signatory ("Invited Signatory") pursuant to 36 C.F.R. § 800.6(c)(2)(i); and

WHEREAS, GSA notified the public and conducted a combined National Environmental Policy Act ("NEPA") Scoping and Section 106 consultation meeting on September 12, 2017, in order to Inform the public of the Undertaking and FDA Master Plan to solicit verbal and written comments, followed by Section 106 consultation meetings held on November 14, 2017, April 4, 2018, and May 21, 2018, to provide opportunities for the consulting parties ("Consulting Parties") to comment on historic preservation concerns; and

WHEREAS, GSA invited the National Capital Planning Commission ("NCPC"), the Maryland Commission on Indian Affairs, the Maryland-National Capital Park and Planning Commission (Montgomery County and Prince George's County), the U.S. Army Research Laboratory, the United States Air Force Arnold Engineering Development Complex, Labquest, the White Oak Laboratory Alumni Association, Inc., the North White Oak Civic Association, the Hillandale Citizens Association, and the Greater Colesville Citizens Association to participate as Consulting Parties; and

WHEREAS, GSA completed archaeological investigations in the Master Plan Area, *Phase I Archaeology Investigation Associated with the U.S. Food and Drug Administration Federal Research Center Master Plan, Montgomery County, Maryland*, and no National Register-eligible historic properties were identified, and SHPO concurred in this conclusion in a letter received by GSA on November 6, 2017; and

WHEREAS, In consultation, GSA determined that the Undertaking would have an adverse effect on the setting of contributing Building 1 in Area 100 of the National

Register-eligible NOL Historic District. As viewed from New Hampshire Avenue, the proposed tall office structure would be visible behind Building 1, which historically is the most visibly prominent building in the NOL and in the NOL Historic District; and

WHEREAS, GSA has conducted an Environmental Impact Statement ("EIS") for the FDA Master Plan and coordinated Section 106 consultation with NEPA in accordance with 36 C.F.R. § 800.8(a), including with regard to public participation; and

WHEREAS, NCPC, in a public meeting and pursuant to the National Capital Planning Act of 1952 (40 U.S.C. § 8722(b)(1)), reviewed GSA's draft 2018 Master Plan on June 7, 2018, and provided comments which GSA has taken into account; and

WHEREAS, GSA has selected Alternative C as its preferred alternative ("Preferred Alternative") and anticipates executing a Record of Decision ("ROD") following execution of this MOA, and submitting the FDA Master Plan to NCPC in Autumn 2018 for its final review; and

WHEREAS, following final review by NCPC of the FDA Master Plan, GSA will notify SHPO, FDA, and the Consulting Parties of GSA's Final FDA Master Plan ("Final FDA Master Plan"), which will be attached hereto as Exhibit III without amendment to the MOA; and

WHEREAS, while there are no federally recognized tribes in Maryland, GSA will coordinate with the Maryland Commission on Indian Affairs in the event of an unanticipated archaeological discovery and will initiate Section 106 consultation with the appropriate tribes with cultural interest if identified; and

NOW, THEREFORE, GSA and SHPO agree that the Undertaking will be implemented in accordance with the following stipulations in order to take into account the effect of the Undertaking on historic properties.

## STIPULATIONS

GSA will ensure that the following measures are carried out:

### I. ADMINISTRATION

All work carried out pursuant to this MOA will be conducted by or under the direct supervision of an individual or individuals who meet, at a minimum, the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-9, September 29, 1983) as amended and annotated ("Qualified Personnel"). The most recent guidance is available at [http://www.nps.gov/history/local-law/arch\\_stnds\\_9.htm](http://www.nps.gov/history/local-law/arch_stnds_9.htm).

## II. DESIGN REVIEW

GSA will notify SHPO, FDA, and the Consulting Parties of the Final FDA Master Plan, which will be attached hereto as Exhibit III without requiring an amendment. Should GSA find that the implementation of projects deviates substantially from the Final FDA Master Plan and/or its Design Guidelines in a manner that would intensify or cause additional adverse effects beyond those contemplated herein, GSA will consult with the SHPO to minimize those adverse effects.

## III. UNANTICIPATED DISCOVERIES

In the event of an unanticipated discovery or an archaeological discovery associated with Area 100 during the Undertaking's construction or excavation, GSA will immediately halt all activity within a 100-foot radius of the discovery, implement interim measures to protect the discovery, and notify SHPO within 48 hours to initiate consultation and proceed in accordance with the *Standards and Guidelines for Archeological Investigations in Maryland* (Shaffer and Cole 1994), and 36 C.F.R. § 800.13(b) to determine the level and type of recording or recovery, as necessary.

## IV. MITIGATION

A. Re-evaluation. GSA will re-evaluate the boundaries of the NOL Historic District in light of the cumulative effects of approved undertakings under previous MOAs (2002 and 2003), including the evaluation of the contributing status of individual buildings, structures, sites, objects, and landscapes. The re-evaluation shall take place in consultation with SHPO. The Building Summary and Matrix is attached hereto as Exhibit IV.

Within six (6) years of the effective date of this MOA, GSA will submit to the SHPO a determination of eligibility ("DOE") form for the re-evaluation of the NOL Historic District. The DOE must be accompanied by supporting materials as described in *General Guidelines for Compliance-Generated Determinations of Eligibility* and *Standards and Guidelines for Architectural and Historical Investigations in Maryland*. The SHPO will review and provide written comments within thirty (30) calendar days after receipt of the DOE.

B. Nomination. If the NOL Historic District or a portion thereof is deemed to retain eligibility, GSA shall nominate the re-evaluated NOL Historic District, or portions of the district as agreed to by GSA and SHPO, for listing in the National Register of Historic Places.

**V. RELATED UNDERTAKINGS**

Any undertakings planned by GSA and not related to the FDA Master Plan but within the NOL Historic District, either prior to or following re-evaluation of the boundary, will be addressed by GSA through separate Section 106 consultation.

**VI. NCPC REVIEW**

GSA will submit projects implementing the Final FDA Master Plan to NCPC. Future site and building plans for Individual projects pursuant to the Final FDA Master Plan will be subject to NCPC's multi-phase public review process for conformance. The Planning Act requires that NCPC use master plans as guides for reviewing proposed development on campuses.

NCPC makes available upcoming agenda items and summaries of future projects on its agency website at [www.ncpc.gov](http://www.ncpc.gov) and notifies its mailing distribution list. Consulting Parties and the public may comment in writing and/or testify on GSA's submissions of proposed projects under the Final FDA Master Plan.

**VII. DURATION**

This MOA shall expire if its terms are not carried out within 15 years from the date of its execution. The anticipated implementation period of the 2018 Master Plan is 12 to 15 years. GSA may consult with SHPO and FDA to reconsider the terms of the MOA and amend it in accordance with Stipulation IX (Amendments) below.

**VIII. DISPUTE RESOLUTION**

Should SHPO or FDA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, GSA will consult with such party to resolve the objection. If GSA determines that such objection cannot be resolved, GSA will:

- A. Forward all documentation relevant to the dispute, including GSA's proposed resolution, to ACHP. ACHP will provide GSA with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, GSA will prepare a written response that takes into account any timely advice or comments regarding the dispute from ACHP, SHPO, and FDA and provide them with a copy of this written response. GSA will then proceed according to its final decision.

- B. If ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, GSA may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, GSA shall prepare a written response that takes into account any timely comments regarding the dispute from SHPO and FDA and provide them and ACHP with a copy of such written response.
- C. GSA's responsibility to carry out all other actions, subject to the terms of this MOA and that are not the subject of the dispute, remain unchanged.

#### **IX. AMENDMENTS**

This MOA may be amended when such an amendment is agreed to in writing by the Signatories and the Invited Signatory. The amendment will be effective on the date a copy, signed by the Signatories and the Invited Signatory, is filed with the ACHP.

#### **X. TERMINATION**

If any Signatory or the Invited Signatory determines that its terms will not or cannot be carried out, that party will immediately consult with the other Signatory and the Invited Signatory to attempt to develop an amendment per Stipulation IX (Amendments) above. If within thirty (30) days (or another time period agreed to by the Signatories and the Invited Signatory) an amendment cannot be reached, any Signatory or the Invited Signatory may terminate the MOA upon written notification to the other Signatories and the Invited Signatory.

If the MOA is terminated, and prior to work continuing on the undertaking, GSA must either (a) execute an MOA pursuant to 36 CFR § 800.6 or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. GSA shall notify SHPO and FDA as to the course of action it will pursue.

Execution of this MOA and implementation of its terms evidence that GSA has taken into account the effects of this Undertaking on historic properties and afforded ACHP an opportunity to comment.

#### **XI. ANTI-DEFICIENCY ACT**

The GSA's obligations under this MOA are subject to the availability of appropriated funds, and the stipulations of this MOA are subject to the provisions of the Anti-Deficiency Act. GSA will make reasonable and good faith efforts to secure the necessary funds to implement this MOA in its entirety. If compliance with the Anti-Deficiency Act alters or impairs GSA's ability to implement the stipulations of this agreement, GSA will consult in

accordance with the Amendment and Termination procedures found at Stipulations IX and X, respectively, of this MOA.

## **XII. EMERGENCIES**

Should an emergency occur that represents an imminent threat to public health or safety, or creates a hazardous condition, GSA will notify the SHPO and the ACHP as soon as possible of the condition which has initiated the situation and measures taken to respond to the emergency or hazardous condition. Should the SHPO or ACHP wish to provide technical assistance to GSA, they will submit comments with seven (7) calendar days from notification, of the nature of the emergency or hazardous condition allows for such coordination.

### **EXHIBITS:**

**Exhibit I: Master Plan Area**

**Exhibit II: Map of the Area of Potential Effect**

**Exhibit III: Final FDA Master Plan, to be added to the MOA without amendment**

**Exhibit IV: NOL Historic District Building Summary and Matrix**

**INDIVIDUAL SIGNATURES FOLLOW ON SUCCEEDING PAGES**

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ADMINISTRATION HEADQUARTERS AT THE FEDERAL RESEARCH CENTER AT  
WHITE OAK, SILVER SPRING, MARYLAND

FOR THE U.S GENERAL SERVICES ADMINISTRATION

BY:   
Darren J. Blue  
Regional Commissioner  
Public Buildings Service  
National Capital Region

DATE: 10/30/2018

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WHITE OAK, SILVER SPRING, MARYLAND**

**FOR THE U.S GENERAL SERVICES ADMINISTRATION**

BY:  \_\_\_\_\_ DATE: 11/1/2018  
Beth L. Savage  
Director, Center for Historic Buildings  
Federal Preservation Officer

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FOR THE MARYLAND STATE HISTORIC PRESERVATION OFFICE

BY:  DATE: 11.5.2018  
Elizabeth Hughes  
Director/State Historic Preservation Officer  
Maryland Historical Trust

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INVITED:

FOR THE U.S. FOOD AND DRUG ADMINISTRATION

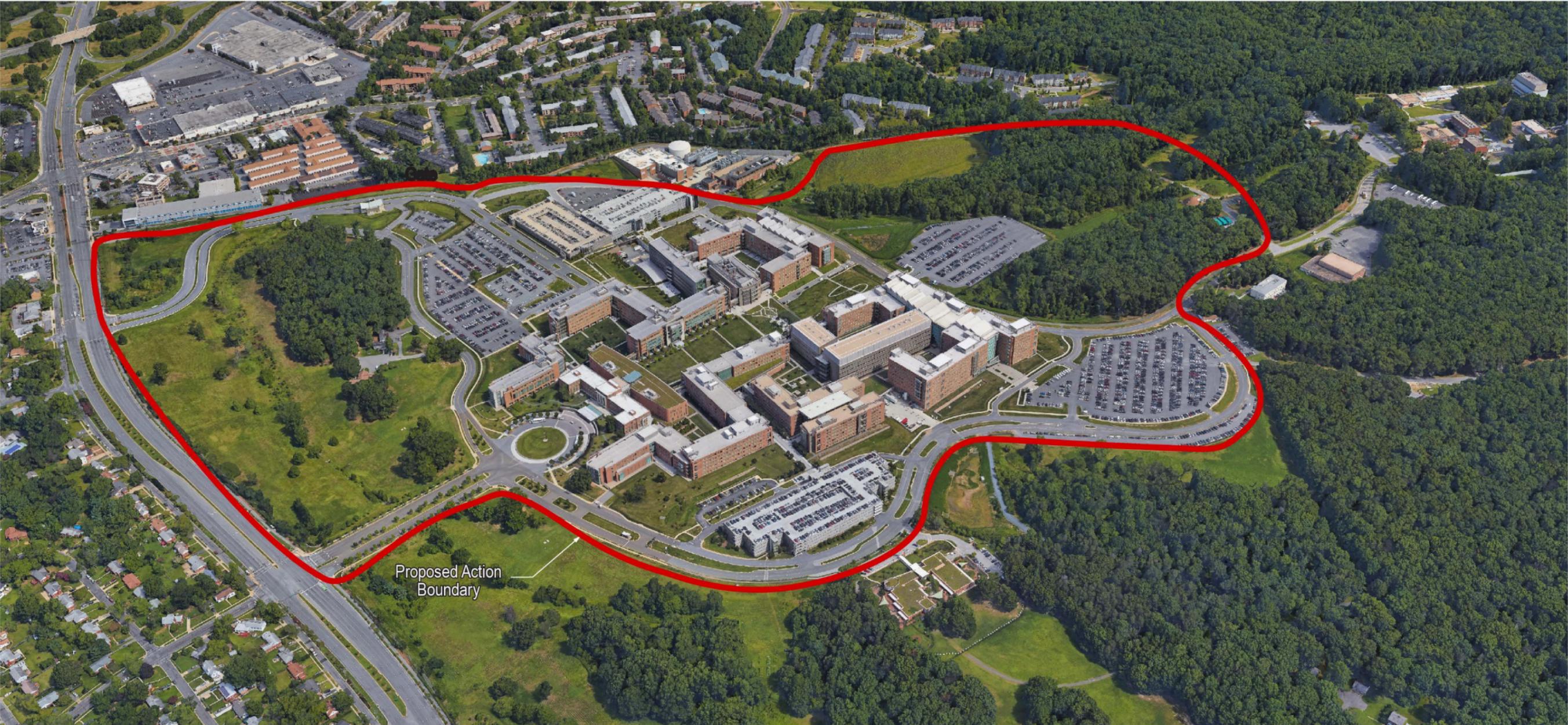
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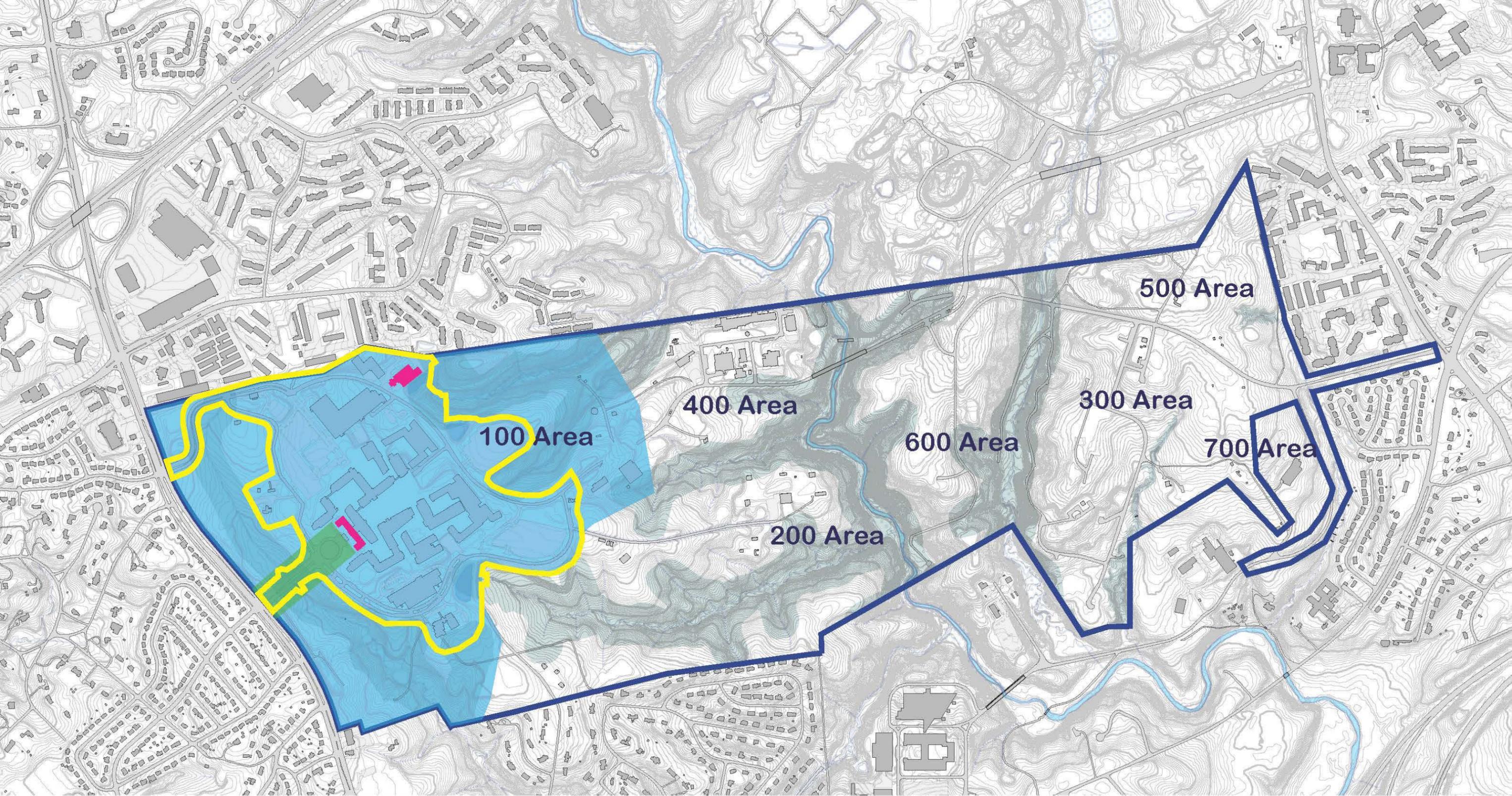
James Sigg

Deputy Commissioner for Operations and  
Chief Operating Officer

DATE: 11/2/18

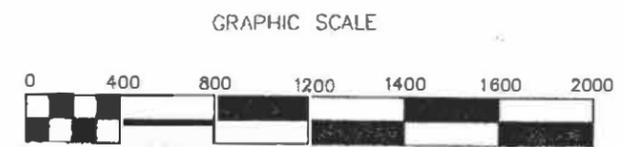
# Master Plan Area





**LEGEND**

- Area of Potential Effect
- Existing FDA Campus Boundary
- Buildings One and One Hundred
- Flagpole Environmental Setting
- Naval Ordnance Laboratory  
National Register-eligible District Boundary



Historic Resources in the Federal Research Center  
August 2018

In 1944, the United States Department of the Navy acquired land in Silver Spring, Maryland to establish the White Oak campus of the Naval Ordnance Laboratory (NOL), originally located in the Washington Navy Yard in southeast Washington, DC. The major construction phase for the facility took place from 1945 to 1954, with other buildings added up to 1994. The facility was renamed the Naval Surface Warfare Center (NSWC) in the 1970s. Following its decommissioning, 662 acres of the 710 acre site were transferred in 1996 to the General Services Administration (GSA) and renamed the Federal Research Center (FRC) at White Oak, with the remaining acres retained by the Department of Defense. The NOL was determined eligible for the National Register of Historic Places in 1997. Beginning in 2001, 130 acres of the western portion of the FRC were redeveloped for the U.S. Food and Drug Administration (FDA).

The Federal Research Center is surrounded by suburban residential suburbs, with a commercial development located to the northwest. Its landscape is characterized by buildings spatially oriented in clusters around the campus, separated by a variety of pine and hardwood forested areas, wooded stream valleys, and grassy meadow areas. The Navy Department deliberately sited buildings in clusters to provide isolation for testing explosives and magnetic materials. With the exception of the administrative (100) area, this heavily wooded character was maintained throughout the campus' history from its initial development beginning in 1945.

Below is a summary of the buildings and landscape in each main area of the campus. The area designations are based on their historic numbers and functions.

*Area 100: Administration*

Also known as the "Front Area," Area 100 was the main administrative area and laboratory complex. It was also the visual landmark for the campus and the most visible area from outside the complex. The main Administration building (Building 1) was the public face of facility, with an approach road centered on the flagpole from the USS Maine. The 100 area had the largest and most close-set group of buildings on the campus, and also the most open area historically. A golf course set between the front of the complex and New Hampshire Avenue provided a physical and visual buffer and also served as a recreational area for employees. The 100 area was redeveloped under the 2000/2002 Memorandum of Agreement for the US Food and Drug Administration. Four contributing historic resources were retained under the MOA: Buildings 1 and 100 (the firehouse), the flagpole, and the historic golf course. The majority of the remaining buildings were documented and removed according to the terms of the MOAs. Some resources designated as contributing in 1997 remain, including the comfort station in the golf course and several in the maintenance area between the 100 and 400 areas. A few non-contributing buildings also remain in the 100 area, primarily in the golf course/buffer and the maintenance area. This area remains relatively open, with scattered trees throughout and more thickly wooded areas at the north and south ends of the golf course.

Facility Number	Facility Name	Year Built	Contributing /Non-Contributing	Documentation	Status
	Golf Course	1952	C		Extant

1	Administration Building-Lab Base	1945	C	HAER 2003	Extant
2	North Laboratory	1945	C	HAER 2003	Removed - Phase 1
3	South Laboratory	1945	C	HAER 2003	Removed - Phase 1
4	East Laboratory	1945	C	HAER 2003	Removed - Phase 1
5	Cafeteria/Auditorium	1949	C	HAER 2003	Removed - Phase 1
6	Flagpoles	1946	C		Extant (in circle)
9	Comfort Station	1960	C		Extant
10	Underground Pumping Station	1966	C		Removed - Phase 1
11	Underground Pumping Station	1970	C		Removed - Phase 1
13	Covered Walkway South	1947	C		Removed - Phase 1
14	Covered Walkway North	1947	C		Removed - Phase 1
16	Sentry House	1948	C		Removed - Phase 1
17	Sentry House	1948	C		Removed - Phase 1
19	Construction Office/Sentry House	1949	C	HAER 2003	Removed - Phase 1
20	Materials Laboratory	1946	C	HAER 2003	Removed - Phase 1
21	Security Office	1948	C	HAER 2003	Removed - Phase 1
22	Scale House	1946	C	HAER 2003	Removed - Phase 1
23	Sentry House	1948	C		Removed - Phase 1
24	Magnetic Materials Lab	1950	C	HAER 2003	Removed - Phase 1
25	Technical-Public Works Shop	1947	C	HAER 2003	Removed - Phase 1
26	Rubber Processing Lab	1946	C	HAER 2003	Removed - Phase 1
27	Storage/Packaging	1951	C		Removed - Phase 1
28	Underwater Weapons Assembly	1954	C		Removed - Phase 1
29	Ordnance Assembly Building	1952	C		Removed - Phase 1
30	Explosive Laboratory	1947	C	HAER 2003	Removed - Phase 1
35	Sot Storage Area	1967	C		Removed/Not found
36	Storage Pad	1967	C		Removed - Phase 1
40	Fuze-Wave Trace Laboratory	1950	C	HAER 2003	Removed - Phase 1
41	Acoustics Laboratory	1950	C	HAER 2003	Removed - Phase 1
45	Softball Field	1951	C		Removed/Not found
47	Tennis Court	1948	C		Removed/Not found

70	X-Ray and Plastics Lab	1947	C	HAER 2003	Removed - Phase 1
71	Laboratory-Technical Shop	1946	C	HAER 2003	Removed - Phase 1
72	Lumber Storage	1948	C	HAER 2003	Removed - Phase 1
73	Paint and Oil Storage	1949	C	HAER 2003	Removed - Phase 1
75	Refrigerated Storage	1950	C	HAER 2003	Removed
76	Refrigerated Storage	1950	C		Removed
77	General Storage	1952	C		Removed - Phase 1
78	Solvent Storage Building	1962	C		Removed
90	Underwater Weapons Lab.	1946	C	HAER 2003	Removed - Phase 1
92	Storage	1951	C		Removed
93	Transformer Station for 90	1958	C		Removed - Phase 1
95	Wind Direction Indicator	1972	C		Removed/Not found
100	Garage-Fire House	1946	C	HAER 2003	Extant
101	Boiler Plant	1945	C	HAER 2003	Removed - Phase 1
104	Pest Control Office	1945	C	HAER2003	Extant/Vacant
108	Incinerator Building	1946	C	HAER2003	Extant/In Use
109	Vehicle-Equipment Shed	1949	C	HAER 2003	Removed - Phase 1
110	Vehicle-Equipment Shed	1949	C	HAER 2003	Removed - Phase 1
111	Equipment Shed	1952	C		Removed - Phase 1
112	Storage Building	1951	C		Removed - Phase 1
113	Storage Building	1951	C		Removed - Phase 1
114	Concrete sand and gravel pits. Storage Shed PW	1954	C		Removed/not found
115	Maintenance	1960	C		Removed
116	Transformer Station for 101A	1949	C		Removed
117	Heating Fuel Pump House	1964	C		Removed - Phase 1
101-A	Storage Building	1949	C	HAER 2003	Removed - Phase 1
T14	Salvage Shed	1946	C	HAER 2003	Removed - Phase 1
T30	Storage Building	1947	C	HAER 2003	Removed - Phase 1
T32	Pest Control Building	1948	C	HAER 2003	Extant/Vacant
T48	Welding Shed	1960	C		Removed - Phase 1

**Area 200: Magnetics Testing**

Located west of Area 100, the Magnetics Testing area is a small complex of historic buildings and structures flanked by tributaries of the Paint Branch, with a smaller cluster uphill south of the 400 area. This area was isolated in order to prevent interference with the magnetic and radio wave testing that took place here. Constructed entirely of earthen blocks to prevent metallic interference, the buildings were designed both for utility in housing equipment and testing functions and to present a uniform appearance. The majority of the historic buildings and structures remain in the 200 area. Historically the area was heavily wooded, with access via one road (Bowditch Road), and it retains this quality, although trees are encroaching farther into the core of the complex than they did while it was a working facility.

Facility Number	Facility Name	Year Built	Contributing /Non-Contributing	Documentation	Status
202	Standard Lab	1946	C	HAER 2003	Extant
203	Spherical Field Lab	1946	C	HAER 2003	Extant
204	Long Field Laboratory	1946	C	HAER 2003	Extant
205	Large Projects Laboratory	1945	C	HAER 2003	Extant
206	Model Laboratory	1945	C	HAER 2003	Extant
207	Antenna Range Building	1945	C	HAER 2003	Extant
208	Solenoid Lab	1947	C	HAER 2003	Extant
209	Gradhelm Laboratory	1947	C		Extant
210	Balance Lab	1947	C	HAER 2003	Extant
212	Antenna Range	1952	C		Removed
213	Transformer Station for 201	1945	C		Removed
214	Test Equip Storage Shed	1961	C		Extant
215	Test Equip Storage Shed	1946	C	HAER 2003	Removed
217	Hydroacoustics Facility	1973	C:IE*	HAER 2003	Extant
219	Transformer Station for 217	1973	C		Removed
201-1	Heating Fuel Storage	1945	C		Removed

\*Denotes a building evaluated in the 1997 DOE as potentially individually eligible

**Area 300: Explosives Area**

Much of the eastern end of the NOL was occupied by the Explosive Testing facilities. Of the 372 documented buildings and structures on the campus in 1997, just under half (160) were located in the 300 area. These included explosive magazines, fabrication and testing facilities, and various support structures. Two main roads, Isherwood and Monroe Loop, wound through the facility, with spur roads and turnouts along both. Unsurprisingly, the buildings and structures in this area were widely spaced to provide safety while testing was underway. The explosives testing facilities utilized the steeply sloping topography in this area to nestle explosive magazines into hillsides for further protection. Spatially, the area was historically composed of larger open building areas separated by wooded clumps.

The majority of the buildings and structures in the 300 area were removed under the provisions of a 2003 Memorandum of Agreement. Several non-contributing buildings remain as well as remnants of contributing buildings and landscape features. Vegetation has encroached into many of the formerly open areas, although traces of roads and building areas are still evident in parts of the landscape.

Facility Number	Facility Name	Year Built	Contributing /Non-Contributing	Documentation	Status
301	Repetitive Impact Test Facility	1946	C	HAER 2003	Removed under 2003 MOA
302	Storage	1946	C	HAER 2003	Removed under 2003 MOA
303	Temp & Humidity Test Facility	1945	C	HAER 2003	Removed under 2003 MOA
304	Explosives Pressing/Mechanical Properties Lab	1948	C	HAER 2003	Removed under 2003 MOA
305	Explosives Casting/Physical Properties Lab	1948	C	HAER 2003	Removed under 2003 MOA
306	Vibration Test Facility	1948	C	HAER 2003	Removed under 2003 MOA
307	Warheads Operations	1948	C		Removed under 2003 MOA
308	Countermeasure Development	1948	C		Removed under 2003 MOA
311	Explosives Chemistry Lab	1948	C	HAER 2003	Removed under 2003 MOA
312	XPL Quality Control Lab	1948	C		Removed under 2003 MOA
313	Health Physics Building/Receiving	1948	C		Removed under 2003 MOA
315	Bombproof: Detonation Physics/Warhead Research.	1948	C	HAER 2003	Removed under 2003 MOA
316	Charge Assembly Building	1948	C	HAER 2003	Removed under 2003 MOA
317	Bombproof: Fragment Impact Lab	1948	C	HAER 2003	Removed under 2003 MOA
318	Explosives Pressing/Machining Building	1948	C	HAER 2003	Removed under 2003 MOA
319	Detonation Research Operations	1948	C		Removed under 2003 MOA
321	Fracture Studies Laboratory	1949	C	HAER 2003	Removed under 2003 MOA
323	Explosives/Warheads Operations	1951	C	HAER 2003	Removed under 2003 MOA
324	Bombproof Detonation Physics	1950	C	HAER 2003	Removed under 2003 MOA
325	Bombproof: Sensitivities Studies	1951	C		Removed under 2003 MOA
327	Bombproof Initiation Research	1984	C;IE*	HAER 2003	Partially demolished, portions still extant
328	Ignition Research lab	1951	C		Removed under 2003 MOA
331	Bombproof booster tests	1950	C	HAER 2003	Removed under 2003 MOA
332	Bombproof: Control Building	1956	C		Removed under 2003 MOA

333	Propellant Research Building	1950	C	HAER 2003	Removed under 2003 MOA
334	Vacuum Tank Facility	1950	C	HAER 2003	Removed under 2003 MOA
336	Explosion Damage/Nuclear Effects Lab	1949	C;IE*	HAER 2003	Removed under 2003 MOA
338	Explosive Magazine	1950	C	HAER 2003	Removed under 2003 MOA
339	Detonator/Lead Test Facility	1950	C	HAER 2003	Removed under 2003 MOA
340	HI Press Physics & Spec Lab	1953	C		Removed under 2003 MOA
343	Chemical Laboratory	1953	C		Removed under 2003 MOA
344	Physical Properties Lab	1953	C		Removed under 2003 MOA
348	Sensitivities Study Operations	1948	C		Removed under 2003 MOA
351	Explosives Magazine	1951	C		Removed under 2003 MOA
352	Explosives Magazine	1951	C		Removed under 2003 MOA
353	Explosives Magazine	1951	C		Removed under 2003 MOA
356	Explosives Magazine	1945	C		Removed under 2003 MOA
357	Explosives Magazine	1945	C		Removed under 2003 MOA
358	Explosives Magazine	1945	C		Removed under 2003 MOA
359	Explosives Magazine	1945	C		Removed under 2003 MOA
360	Explosives Magazine	1945	C		Removed under 2003 MOA
362	Explosives Magazine	1953	C	HAER 2003	Removed under 2003 MOA
363	Fuse Evaluation Facility	1952	C		Removed under 2003 MOA
364	Explosives Magazine	1949	C	HAER 2003	Removed under 2003 MOA
365	Building 365 Transformer Station	1952	C		Unknown/Not found
366	Explosives Magazine	1954	C		Removed under 2003 MOA
367	Well House	1945	C	HAER 2003	Removed under 2003 MOA
368	Boiler House	1953	C		Removed under 2003 MOA
369	Temp & Humidity Test Facility	1963	C		Removed under 2003 MOA
372	Mechanical Output Test Building	1955	C		Removed under 2003 MOA
373	Control House for 372	1955	C		Removed under 2003 MOA
375	Altitude Blast Chamber	1959	C		Removed under 2003 MOA
379	V T Fuze Instrumentation Lab	1959	C		Removed under 2003 MOA
381	Transformer Station for 301	1946	C		Removed under 2003 MOA

382	Target Preparation lab	1960	C		Removed under 2003 MOA
383	Conical Shock Tube	1961	C		Removed under 2003 MOA
385	Storage Building	1945	C	HAER 2003	Removed under 2003 MOA
386	Charge Assembly & Conditioning Building	1962	C		Removed under 2003 MOA
387	Hi/Gravity/Tank Centrifuge Pit	1963	C		Removed under 2003 MOA
388	Hi/Gravity/Tank Centrifuge Control	1963	C		Unknown/could not access area
389	Hi/Gravity/Tank Centrifuge Storage	1963	C		Unknown/could not access area
390	Explosive Conditioning	1948	C		Removed under 2003 MOA
391	Storage Building	1964	C		Removed under 2003 MOA
392	Firing Shield	1948	C	HAER 2003	Removed under 2003 MOA
304-1	Storage Shed 304	1959	C		Removed under 2003 MOA
304-3	Chemical Storage Shed	1950	C	HAER 2003	Removed under 2003 MOA
304-4	Chemical Storage Shed	1950	C		Removed under 2003 MOA
305-3	Test Equip Storage 305	1965	C		Removed under 2003 MOA
305-A	Boiler House	1948	C		Removed under 2003 MOA
306-A	Storage	1949	C	HAER 2003	Removed under 2003 MOA
306-B	Boiler House	1948	C		Removed under 2003 MOA
307-A	Boiler House	1948	C		Removed under 2003 MOA
308-A	Boiler House	1948	C		Removed under 2003 MOA
309-A	Boiler House	1948	C		Removed under 2003 MOA
310-A	Chemical Laboratory	1948	C	HAER 2003	Removed under 2003 MOA
310-B	Instrument Laboratory	1948	C	HAER2003	Removed under 2003 MOA
310-C	Chemical Storage/Boiler	1948	C		Removed under 2003 MOA
310-D	Chemical/Equipment Storage	1948	C	HAER 2003	Removed under 2003 MOA
311-1	Test Equip Storage 311	1949	C	HAER 2003	Removed under 2003 MOA
312-1	Storage Shed	1958	C		Removed under 2003 MOA
312-2	Chemical Chamber-312	1958	C		Removed under 2003 MOA
312-3	Storage Shed	1958	C		Removed under 2003 MOA
312-A	Compressor Building	1948	C	HAER 2003	Removed under 2003 MOA
312-B	Boiler House	1952	C		Removed under 2003 MOA

313-1	Storage	1948	C		Removed under 2003 MOA
313-A	Boiler House	1955	C		Removed under 2003 MOA
314-2	Storage Trailer	1968	C		Removed under 2003 MOA
315-A	Boiler House	1948	C		Removed under 2003 MOA
317-1	Component Fabrication Storage	1948	C		Removed under 2003 MOA
318-1	Explosives Temp Controlled Magazine	1958	C		Removed under 2003 MOA
319-1	Storage Shed	1950	C	HAER 2003	Removed under 2003 MOA
319-A	Boiler House	1948	C		Removed under 2003 MOA
321-1	Test Equip Storage 324	1950	C	HAER 2003	Removed under 2003 MOA
324-1	Storage Shed (503)	1948	C	HAER 2003	Removed under 2003 MOA
324-A	Boiler House	1950	C		Removed under 2003 MOA
328-3	Service Magazine	1951	C		Removed under 2003 MOA
332-1	Chemical Chamber-332	1950	C	HAER 2003	Removed under 2003 MOA
333-1	Office Annex to Building 333	1968	C		Removed under 2003 MOA
335-1	Explosive Processing Bays	1950	C		Removed under 2003 MOA
335-2	Explosive Processing Bays	1950	C		Removed under 2003 MOA
335-3	Inert Storage	1950	C		Removed under 2003 MOA
335-A	Boiler House-335-1-2	1950	C		Removed under 2003 MOA
336-1	Storage for 336	1966	C		Removed under 2003 MOA
339-1	Bottle Storage Shelter-339	1962	C	HAER 2003	Removed under 2003 MOA
339-2	Bottle Gas Storage	1950	C		Removed under 2003 MOA
348-1	Shop	1950	C	HAER 2003	Removed under 2003 MOA
348-2	Sensitivities Study Operations Trailer	C.1970	C		Removed under 2003 MOA
369-1	Hi-Cap Surveillance Barricade	1951	C		Removed under 2003 MOA
387-1	Battery Storage	1963	C		Removed under 2003 MOA
T27	Storage XPL	1947	C	HAER 2003	Removed under 2003 MOA
T28	Preparation/Packing/Gatehouse Explosives receiving and shipping.	1946	C	HAER 2003	Removed under 2003 MOA
T35		1949	C	HAER 2003	Removed under 2003 MOA

\*Denotes a building evaluated in the 1997 DOE as potentially individually eligible

**Area 400: Ballistics Area**

East of the 100 area and north of the 200 area lies Area 400, a densely packed cluster of buildings and structures. Constructed largely between the 1950s and 1970s, this largely intact group of historic resources housed technical facilities related to hydro- and aerodynamic testing, including underwater tanks and wind tunnels. Historically, the area was relatively open between the adjacent Perimeter and Dahlgren Roads. There were wooded areas to the east and south, including the Paint Branch, but to the west an open corridor visually connected this area to the main administrative complex (Area 100). Currently leased by the United States Air Force as the Arnold Engineering Development Center (AEDC)-White Oak, the 400 area remains relatively open at its core, but has lost the visual connection with Area 100 (now the FDA complex) and has more wooded vegetation at its perimeter. Dahlgren Road has been realigned in several places in the 400 area; it formerly curved north at the tank filtration plant (410) and then took another sharper turn east at the hydroballistics water storage tank (428), crossing over a steel bridge (422) before continuing on past the 600, 300, and 500 areas to Cherry Hill Road. Around 2009, the road was straightened past the tank filtration plant to connect to the newly constructed FDA Boulevard, which provided a more direct connection to Cherry Hill Road, bypassing the residential neighborhoods at the east end of the FRC. A new connector was built from the new Dahlgren Road/FDA Boulevard to the old Dahlgren Road, which was renamed Coffman Road.

Facility Number	Facility Name	Year Built	Contributing /Non-Contributing	Documentation	Removed
401	1000Ft Hyperballistics Range	1958	C		Unknown/Not found
402	Supersonic Wind Tunnel Building	1947	C	HAER 2003	Extant
403	Continuous Wind Tunnel Building	1950	C	HAER 2003	Extant
404	Substation Building	1949	C		Extant
405	Combat Systems Integration Lab	1948	C	HAER 2003	Extant
407	HP Vertical Bottle Pit	1955	C		Extant
408	HP Horizontal Bottle Pit	1955	C		Extant
409	Undersea Weapons Tank	1956	C	HAER 2003	Unknown/Not found
410	Tank Filtration Plant	1956	C		Extant
411	ACFT/Flight RD&T Building	1958	C		Extant
416	Building 406 Transformer Station	1957	C		Extant
417	Air Conditioning Pad	C.1970	C		Unknown/Not found
418	Air Conditioning Plant for 402 & 40	1946	C		Extant
419	Transformer Station for 402	1949	C		Extant
420	Transformer Station for 403	1950	C		Unknown/Not found
421	Transformer Station for 409	1956	C		Unknown/Not found
422	Dahlgren Rd Bridge Steel	1916	C		Extant
423	Bridge Wooden	1945	C		Extant/Collapsed
424	3 Megawatt Arc Tunnel	1961	C		Extant
425	Substation	1949	C	HAER 2003	Extant
426	Transformer Station for 424	1961	C		Extant
427	Hydroballistics Tank	1966	C	HAER 2003	Extant
428	Hydroballistics Water Storage T	1966	C	HAER 2003	Extant
429	Sup Nit Facility Bottle Pit	1965	C		Extant
430	Hypervelocity Wind Tunnel #9	1972	C;IE*	HAER 2003	Extant
431	Tunnel 9 Vacuum Sphere	1970	C;IE*	HAER 2003	Extant
433	Shelter Grass Cutting	1972	C		Removed

435	Substation Building	1970	C	HAER 2003	Extant
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\*Denotes a building evaluated in the 1997 DOE as potentially individually eligible

**Area 500: Hazardous Storage and Disposal**

At the extreme northeastern edge of the FRC campus and just north of the 300 area is Area 500. Historically, the NOL used this area for the storage and disposal of hazardous materials and chemicals. The landscape was characterized by several large open areas surrounded by woods; successional growth is now moving into the formerly open areas. Of the five buildings and structures in this area listed on the 1997 DOE, only two buildings were classified as contributing. One was removed soon after, and the second was reclassified as non-contributing due to lack of integrity. There are no historic resources in the 500 area.

**Area 600: Shock Testing**

The 600 area is located between Area 300 to the east and the Paint Branch just to the west. Its facilities were located in clusters set in small open areas aligned along Kuester Road, the largest of which was at the southern end of the road. The remainder of the area was heavily wooded. Historically, the 600 area was used for shock testing of weapons.

All of the approximately 25 buildings and structures in the 600 area were removed under the provisions of a 2003 Memorandum of Agreement. Vegetation has encroached into many of the formerly open areas, although traces of roads and building areas are still evident in parts of the landscape.

Facility Number	Facility Name	Year Built	Contributing /Non-Contributing	Documentation	Status
613	Hi Energy Materials Process Development	1965	C		Removed under 2003 MOA
614	Transformer Station for 613	1965	C		Removed under 2003 MOA
615	Hazardous Machining/Blending	1966	C		Removed under 2003 MOA
620	Explosives Casting Building	1973	C		Removed under 2003 MOA
613-1	Fuel Storage for 613	1966	C		Removed under 2003 MOA
613-2	Oxidizer Storage for 613	1966	C		Removed under 2003 MOA
613-3	Solvent Storage for 613	1966	C		Removed under 2003 MOA
613-5	Curing Test Equip for 613	1966	C		Removed under 2003 MOA
619-1	Fuels Storage Building	1973	C		Removed under 2003 MOA
619-2	Oxidizer Storage Building	1973	C		Removed under 2003 MOA
620-1	Transformer For Building 620	1973	C		Removed under 2003 MOA
T26	Storage	1947	C		Removed under 2003 MOA

*Area 700: Hazardous Storage and Disposal*

At the extreme southeastern edge of the NOL campus was Area 700. Like the 500 area, historically the NOL used this area for the storage and disposal of hazardous materials and chemicals. The landscape was characterized by a large open areas surrounded by woods. The buildings and structures in the 700 area were all built after the period of significance and were classified as non-contributing in the 1997 DOE. Most of the 700 area is now outside the FRC boundaries and portions have been redeveloped. There are no historic resources in the 700 area.

*Miscellaneous*

Several resources were listed in the 1998 inventory as contributing. They do not have facility numbers, are not included in the 1997 DOE inventory, and it is unclear where they are located and what their current status is. These include:

Facility Number	Facility Name	Year Built	Contributing /Non-Contributing	Documentation	Status
	"Doghouse"	ca. 1950	C		Unknown/Not found
	Small Arms Firing Test Range	Unknown	C		Unknown/Not found
	Pond	1951	C		Unknown/Not found
	Un-numbered building near Pond	ca. 1950	C		Unknown/Not found

