

**MARYLAND HISTORICAL TRUST
DETERMINATION OF ELIGIBILITY FORM**

NR Eligible: yes ☐
no ☐

Property Name: Ballistics Research Laboratory Historic District Inventory Number: HA-2307
Address: Bounded by Civil Rd, Gillion St, Mauchly St and the WWTP, APG Historic district: ☒ yes ☐ no
City: Aberdeen Zip Code: 21005 County: Harford
USGS Quadrangle(s): Spesutie
Property Owner: US Army Tax Account ID Number: _____
Tax Map Parcel Number(s): _____ Tax Map Number: _____
Project: APG Historic Buildings Inventory, Aberdeen Cantonment Agency: US Army
Agency Prepared By: Environmental Research Group
Preparer's Name: Sherri Marsh Johns Date Prepared: 10/11/2020

Documentation is presented in: Aberdeen Proving Ground Section 110 Historic Buildings Inventory - Determination of Eligibility Forms, Environmental Research Group, 2021. Databases, Photographs, and Location Maps submitted to MHT in June 2022 (edited for clarity by MHT).

Preparer's Eligibility Recommendation: _____ Eligibility recommended ☒ Eligibility not recommended

Criteria: ☐ A ☐ B ☐ C ☐ D Considerations: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G

Complete if the property is a contributing or non-contributing resource to a NR district/property:

Name of the District/Property: _____

Inventory Number: _____ Eligible: ☐ yes Listed: ☐ yes

Site visit by MHT Staff ☐ yes ☒ no Name: _____ Date: _____

Description of Property and Justification: *(Please attach map and photo)*

MHT Comments: With the approval of APG staff, edits to this narrative were made by MHT staff in April 2024 to 1) convert the submitted short DOE form to a full DOE form; 2) correct the district boundary and associated APG building numbers; and 3) clarify the resource under integrity assessment and NR evaluation.

Integrity Assessment: MHT does not agree with the preparer on the integrity of the surveyed buildings within this district, or the district as a whole. Though all of buildings have undergone alterations and some additions, none of these changes remove the integrity of each individual building given their utilitarian design and military research use through the present day. Nor does their modernization through time effect the overall integrity of the district. Though surrounding roads have been widened, and interior roads, parking, and storage areas have been paved, these are not changes that alter the setting and landscape of the historic district as they represent expected changes to circulation networks through time. Given its location within a large military base, new construction outside of the district has not altered its setting. Based on the photographs provided and images available online, the Ballistics Research Laboratory Historic District appears to retain integrity of setting, location, design, feeling, and association.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended ☒ Eligibility not recommended ☐

Criteria: ☒ A ☐ B ☐ C ☐ D Considerations: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G

MHT Comments: *see MHT comments, integrity assessment, NR evaluation, + recommendation for further survey above/narrative.*

Berky Roman

Reviewer, Office of Preservation Services

Jessica French

Reviewer, National Register Program

2/20/2025

Date

3/20/2025

Date

NR Evaluation: The Ballistics Laboratory Historic District is eligible for listing on the NR under Criterion A for its association with APG's core mission of weapons research, development, and testing, including associated technologies that allow for the deployment of weapons during warfare, from WW II through the Cold War Era. It is especially associated with the development of the first digital high speed computer ENIAC, which led to all future computing development during the 20th and 21st century. All buildings at least 50 years in age and the overall layout of the district's landscape contribute to its significance. Further research is needed to refine the boundary of the district and identify contributing elements.

The district is not eligible under Criterion B for association with Leslie Simon. It does not meet the NR thresholds for association with an individual given Simon's role in other facilities across the country, and given that the ENIAC computer is not longer extant. We agree that the district is not eligible under Criterion C given that it developed through time and does not represent a planned campus. We also agree that it is not eligible under Criterion D as it does not hold research potential.

District Background and Description:

The Ballistics Research Laboratory (BRL) was officially organized in 1938 and incorporated into Army Research Laboratory (ARL) in 1992. The proposed BRL Historic District consists of a core of 12 buildings in the Range Planning Area dating from 1942 to 1986 grouped on roughly 15 acres east of Gillon Street, south of Mauchly Street, west of the Waste Water Treatment Plant, and north of Civil Road. Included within the scope of this survey is inventory and evaluation of seven of the 12 facilities: 317, 327, 328, 391, 392, and 394.

Prior to 1938, BRL buildings were located in multiple discontinuous areas at APG, including Building 120 in Swan Creek. Photographs from the 1940s show lawns and landscaping surrounding the buildings and deep setbacks for those fronting the road. Except for the small strips of grass and the few trees and shrubs separating buildings from the aforementioned main roads, most of the 15-acre area between buildings is given over to paved surface, including parking areas, equipment pads, and loading zones. The once ample building setbacks and landscaped surroundings are greatly reduced from road widening and added parking areas and barriers. Perhaps a dozen or so sheds, dumpsters, or other temporary or semi-permanent utilitarian structures are scattered about the area.

In order of age, Individual Building Descriptions:

1) Building 328, Leslie E. Simon Building, 6321 Gillon Street, NR Eligible-

Building 328 is the Leslie E. Simon Building built in 1942 and former headquarters of APG's BRL and the building that housed the ENIAC. It is now designated as Information Processing Center. This large west-facing building sits back from the east side of Tower Road, surrounded on the front and south by grass lawn, and access roads and parking lots to the north and east. This two-story flat-roofed brick building displays three 1940s building episodes that create a roughly E-shaped plan with a combined area of 86,443 sq. ft. The largest and oldest section dates to 1942 and contains 54,720 sq. ft. of space. The façade's wide center section projects above the main roofline, with notable features that include a smooth concrete wall surface and a large second-story window bay over the center entrance. Brick quoins and a nearly continuous band of 15, six-over-six windows flank the center space. The band of concrete, situated just above the second-story windows, extends around the building's perimeter. The concrete walls distinguish the partially above-grade basement from the mostly brick upper stories.

The basement's windows are arranged in single units but otherwise match those found above. The façade is interrupted by a full-height, right-of-center, concrete-block, stair and elevator tower. Measuring roughly 20 ft. x 15 in. it was put on ca. 1991 to bring

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended _____

Eligibility not recommended _____

Criteria: ___ A ___ B ___ C ___ D Considerations: ___ A ___ B ___ C ___ D ___ E ___ F ___ G

MHT Comments:

Reviewer, Office of Preservation Services

Date

Reviewer, National Register Program

Date

the building into compliance with the 1990 Americans With Disabilities Act. In the south wall, the two upper floors each contain twenty windows, mostly placed in groups of four. A three-story, concrete-block elevator shaft projects from the wall surface to the right of the last window group. As in the façade, the basement has individually spaced window units. In 1944, a 113 sq. ft. blast chamber was added to the center of the main block's back wall. Pipes and a variety of equipment, set upon platforms, span the back elevation. The brick hyphen and twelve-bay wing extending from the north wall were constructed in 1947. Except for the lack quoins and concrete accents, this section closely matches the main structure's appearance.

Building 328 is now the Information Processing Center, but it originally served as the headquarters and main testing building for the BRL and housed the ENIAC. It was renamed the Leslie E. Simon Building in 1985 to honor Major General Leslie E. Simon (1900-1983). Simon, who served as director of the U.S. Army's then newly created BRL from 1941-1949, was a celebrated and leader in the field of scientific ordnance. Each year the "U.S. Army Simon Award" presented to recognize outstanding scientific achievement. In 1982 the American Society of Mechanical Engineers designated the aerodynamic range in Building 328 as a National Mechanical Engineering Historic Landmark.

ADDED BY MHT - The Leslie E. Simon Building was determined NR listed equivalent by the US Army with the completion of HAER documentation in 1985 (HAER MD-47).

2) Building 327, Exterior Ballistics Laboratory, 6895 Civil Road-

Building 327 is the former Exterior Ballistics building. It stands immediately east of Building 328, surrounded by paved parking areas. Built in 1943 and extensively altered in 1968 and 1991, this is a two-story, hipped-roof, frame and concrete-block structure. It is rectangular in plan, measures 104 ft. 5 in. x 50 ft. 1 in., and has an area of 10,458 sq. ft. The asphalt-shingled roof has overhanging eaves. A small chimney projects from the center of the roof. The vinyl-clad walls rest on a concrete slab foundation. It is ten bays deep and three bays wide. The building's six-over-six windows have faux muntins. The north wall contains two right-of-center, flush-surfaced doors, one of which has a semi-circular awning. Both entrances open at grade level. At the east end, metal and concrete steps lead up to the centrally located second-floor entrances. The door is the same as those in the north wall.

Building 327 was constructed in 1943 for the BLR's Exterior Ballistics group. Its current appearance is the product of a 1991 renovation. Other uses include Electrical Equipment Office, Fire Control Research, Physical Fitness Center and Administration General Purpose.

3) Building 309 Group (309, 309A, 309C, & 309D), Terminal Ballistics Lab (MIHP HA-1869), 6917 Civil Road, NR Eligible -

Not included in this survey. Excerpt from HA-1869 MIHP form- "The structure consists of two stories, twenty-two bays, and a flat roof shape. The overall plan shape for the main building is rectilinear, containing eighty-six windows, four main doors, and three interior stairways. The original type of window found in Building 309 is aluminum multi-paned with a central, awning-type opening. Since its construction, Building 309 has had interior alterations for technical and ventilation purposes."

Buildings 309, 309A, 309C, 309D, the Terminal Ballistics Lab were determined eligible for listing on the National Register on August 19, 1998.

4) Building 317, General Purpose Lab Building, 6905 Civil Road-

Building 317 stands on the north side of Civil Road, with south and west walls surrounded by paved parking areas and a north wall oriented towards areas of grass and concrete sidewalks. An access road runs along the building's east side. Constructed in 1952,

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended _____

Eligibility not recommended _____

Criteria: ___ A ___ B ___ C ___ D Considerations: ___ A ___ B ___ C ___ D ___ E ___ F ___ G

MHT Comments:

Reviewer, Office of Preservation Services

Date

Reviewer, National Register Program

Date

this heavily modified, one-story, gable-roofed structure has a rectangular plan, measures approximately 90 ft. x 22 ft., and is 2,013 sq. ft. in area. Aluminum-sided walls rest on a low concrete foundation. The asphalt-shingled roof has a low pitch and flush eaves. Fenestration is irregularly spaced. Entrances are located in the east and west ends of the north and south walls. Wood ramps lead up to the doors, all of which are relatively modern replacement units. Shed-roofed porticos overhang the south-side entrances. The one-over-one windows are not original to the building. Security bars cover the north window openings. An air conditioning unit, electrical box, and guttering are mounted in the windowless west gable end.

Building 317 dates to 1952 and is associated with APG and BRL's Cold War-era research. Its present condition dates to a ca. 1980s remodeling. Records provide little information about historic use, but appearance suggests it has always served an administrative purpose.

5) Building 390, Interior Ballistics Lab (HA-2099), 6931 Civil Road-
Built in 1953. Not included in this survey. No documentation in the MIHP file.

6) Building 367, Lab Building, 6908 Mauchly Street-
Built in 1953. Not included in this survey.

7) Building 391, Hollow Charge Building (HA-2100), 6918 Mauchly Street-

Building 391 is located on the south side of Mauchly Street, surrounded by paved parking and adjacent access roads and absent landscape features other than small patches of grass. Dating to 1953, it is a one-story, north-facing, concrete and concrete-block structure with an irregularly shaped plan having a 6,741 sq. ft. area. The flat roof has a stepped profile due to a taller center section that appears original to be part of the original construction. The nine-bay façade has a center entrance flanked by four window openings. A projecting entry vestibule, with nearly flat metal roof and concrete side walls, protects the grade-level pair of metal-and-glass doors and large transom. To the left of the entry vestibule, a massive ventilator pipe extends from the roof and into the building through a window below. The current three-light window units, which probably date to the late 1990s, replace the original eight-light, metal-sash units. The opening's height and width were reduced at the time the new windows were installed. The west wall contains a slightly recessed garage door, located immediately to the right of a flush-surface pedestrian entrance and right of an attached equipment shed.

Historically designated as Physics Lab, Building 391 is currently identified as a General Purpose Lab/Test Building.

8) Building 393, Radiation Application Laboratory (HA-2102), 6941 Magazine Road , NR Eligible -

Not included in this survey. Excerpted from MIHPHA-2102 form- "A concrete foundation supports this masonry-veneer building. Measuring 128 ft. x 81 ft., the building originally served as the Radiation Application Laboratory when constructed in 1963. The building's orientation is west. The majority of the building is a single-story in height, although a two-story mechanical section rises from the rear of the north elevation. Concrete details accent the façade, including wall panels and surrounding the ribbon of three-light windows to the right. Windows also have a continuous concrete sill. The double-leaf aluminum door is also trimmed with concrete details. Three light windows wrap around the right elevation and a double-leaf door is centrally located on this wall. The left elevation contains a single opening; an overhead door accessing the two-story mechanical portion of the building. The building has a flat roof with concrete coped parapet walls. The rear elevation is dominated by a tile chimney with corbelled cap. The building underwent interior renovations in 1996 to convert it to its current designated use as a General Purpose Administration Building.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended _____

Eligibility not recommended _____

Criteria: ___ A ___ B ___ C ___ D Considerations: ___ A ___ B ___ C ___ D ___ E ___ F ___ G

MHT Comments:

Reviewer, Office of Preservation Services

Date

Reviewer, National Register Program

Date

Building 393, the Radiation Application Laboratory, was determined eligible for listing on the National Register on April 2, 2014.

9) Building 392, Weapons System Laboratory (HA-2101) , 6896 Mauchly Street-

Built in 1968, Building 392 stands on the south side of Mauchly Street. The east and west walls abut a small grassy area, while paved parking is found immediately to the north and south. A concrete sidewalk extends around the building's perimeter. The three-story (plus full basement) brick and reinforced-concrete building dates to 1968. It has a flat roof and measures approximately 200 ft. x 50 ft., with an area of 31,217 sq. ft. The brick walls of the equipment penthouse and stair, located on the far east side of the roof, match the main building. The north and south walls have 19 windows in the second story and 16 (divided into two groups of eight) in the first story. The basement's north and east walls are below grade, but the exposed south and west walls contain louvered ventilator windows. In the west end, a flush-surface, metal door provides access to the basement level. The current multi-light, fixed-metal-sash windows probably date to the late 1990s. The opening size remains unaltered and the current windows have a center mullion and multi-light configuration similar to the original units. Double, flush-surface, grade-level metal doors are found in the center of the east elevation and at the east end of the south wall.

Constructed in 1968, Building 392 is one of BRL's later buildings. It was originally housed BRL's Weapons System Laboratory. In 1980 APG reassigned it to the U.S. Army Material Systems Analysis Activity for administrative purposes. It is currently designated as Lab/Test Building General Purpose.

10) Building 394, Concept Analysis Building, 6925 Mauchly Street-

Constructed in 1971, Building 394 stands on the north side of Mauchly Street. It is surrounded by paved parking areas and access roads, except for a small strip of grass and sidewalk, and a large amount of HVAC and mechanical equipment on the east side. The three-story, brick and reinforced-concrete structure has a rectangular plan that measures about 220 ft. x 50 ft., and occupies 31,217 sq. ft. in area. The partial-length, concrete-panel-clad third story and equipment penthouse gives the otherwise flat roof a stepped profile. Deeply recessed, two-story entrances are found in the north and south elevations, flanked on the first and second story by full-length, fixed-light, ribbon windows that seem to be original to the structure. The third story's one-over-one third-story windows appear to be replacement units. An entry vestibule, providing first floor and basement access, extends from the south wall. The metal fire escape is mounted to the vestibule's roof. No windows are found in either this or the east wall.

11) Building 391A, General Use Building, 6928 Mauchly Street-
Built in 1986. Not included in this survey.

12) Building 329, Guard House, Civil Road at Gillion Street-
Age unknown. Not included in this survey.

District History and Significance:

The Ballistic Research Laboratory's contribution to military history through its pioneering advances in U.S. weapons systems and computing, in particular the ENIAC, is well-documented. The MIHP form for Building 393 (MIHP HA-2102) provides a succinct but thorough history of this distinguished research group's accomplishments over a 60 year period. To summarize, the BRL first served as the U.S. Army's headquarters for the development of interior, exterior, and terminal ballistics, and later as the center of operations for research on a variety of state-of-the-art, high-tech military firepower. Historians credit systems developed at BRL for the United States' military dominance over the Axis and, later, Soviet forces.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended _____

Eligibility not recommended _____

Criteria: ___A ___B ___C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G

MHT Comments:

Reviewer, Office of Preservation Services

Date

Reviewer, National Register Program

Date

In 1918, the Army's Chief of Ordnance created a Ballistics Division around the same time that ordnance testing buildings were moved from Sandy Hook to the newly established Aberdeen Proving Ground. In 1935, the Ballistic Research Division was separated from the Gun Testing Division and then renamed the Ballistic Research Laboratory (BRL) in 1938. Under the direction of Major General Leslie Earl Simon, the BRL grew into a world-renowned institution and one of the Army and nation's leading scientific institutions. During the Cold War, BRL's focus expanded beyond ballistics development to include all types of advanced and computer-aided weapon systems. The BRL was disbanded in 1992 when its mission was incorporated into the newly created Army Research Laboratory (ARL). While ARL maintains a presence at APG, its headquarters are in Adelphi, Maryland.

District Integrity:

Of the twelve buildings within the historic district, it is our opinion that those surveyed have alterations that effect the integrity of the district as a whole. Buildings 317 and 327 detract from the district due to their loss of integrity. Building 394 has 1990s alterations which also detract from the district. The widening of the roads surrounding the district, new construction to its north, and the paving over of access roads between buildings, have had a deleterious effect on the environmental setting and feeling of the district.

District NRHP Evaluation:

The BRL Historic District holds significance under Criterion A for its demonstrated and well-documented contributions to weapons development and computing during World War II and the Cold War period. Its work is directly related to APG's core mission; however, it is not recommended as eligible under this Criterion due to loss of integrity.

The BRL Historic District hold significance under Criterion B for its association with Maj. Gen. Leslie E. Simon. Simon's obituary, published by the United States Military Academy at West Point, credits him with leading the institution to world-renowned for, among other achievements, creating the country's first super-sonic wind tunnels and the world's first long-range tracking telescopes for guided missiles. Furthermore, he is credited with the very early embrace and advancement of computer technology. During his tenure, BRL created the ENIAC, the first high-speed digital computer, which led to the "electronic brains" and present-day electronic computing and accounting industry. The Army annually presents the Leslie Earl Simon Award, given in recognition of scientific achievement. In 1985, Building 328, historically known as BRL headquarters, was renamed the Leslie E. Simon Building. It is not recommended as eligible under this Criterion due to loss of integrity.

The BRL Historic District is recommended not eligible for the National Register under Criterion C. The District's resources are altered and/or architecturally undistinguished examples of common building types that lack either individual or collective significance.

The BRL Historic District recommended not eligible for the National Register under Criterion D as it is unlikely to yield information important in history or prehistory.

Sources:

Aberdeen Proving Ground

n.d Real Property Records and Drawing Files, on file at Directorate of Public Works, APG, Maryland.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended _____ Eligibility not recommended _____

Criteria: ___ A ___ B ___ C ___ D Considerations: ___ A ___ B ___ C ___ D ___ E ___ F ___ G

MHT Comments:

Reviewer, Office of Preservation Services

Date

Reviewer, National Register Program

Date

Ballistic Research Laboratories, Aberdeen Proving Ground, Maryland. Washington, D.C.: Department of the Army Ordnance Corps, 1955.

Doerrfeld, Dean, Maryland Historical Trust NR-Eligibility Review Form (HA-2102), Building 393, December, 2006. On file at the Maryland Historical Trust, Crownsville, Maryland.

Green, Constance McLaughlin, Harry C. Thompson and Peter C. Roots, The United States Army in World War II: The Technical Services: The Ordnance Department Planning Munitions for War. Washington, D.C.: Center for Military History: U.S. Army, 1990.

Leslie E. Simon, Obituary, Assembly: Volume 45. West Point, NY: United States Military Academy Association of Graduates, January 1986.

MARYLAND HISTORICAL TRUST REVIEW

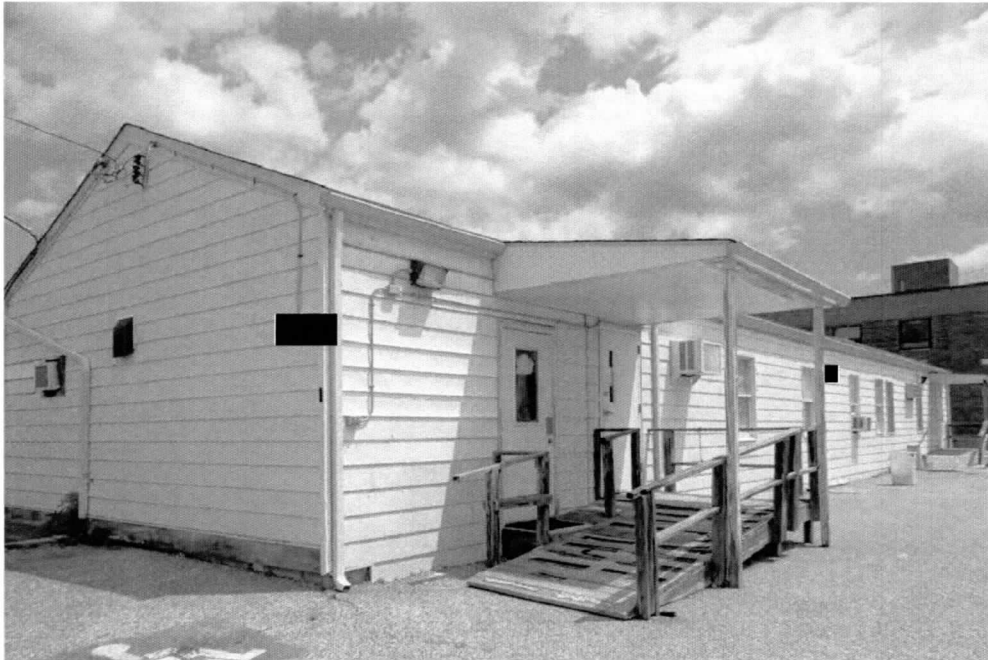
Eligibility recommended _____ Eligibility not recommended _____

Criteria: ___ A ___ B ___ C ___ D Considerations: ___ A ___ B ___ C ___ D ___ E ___ F ___ G

MHT Comments:

Reviewer, Office of Preservation Services_____
Date_____
Reviewer, National Register Program_____
Date

2020 PHOTOGRAPHS



APG Building 317, View E, Building 309 at rear right of view



APG Building 317, View NW, Buildings 328, 392 & 367 in rear of view

**Ballistics Research Laboratory
Historic District
MIHP # HA-2307**

2020 PHOTOGRAPHS



APG Building 327, View SW, Building 328 at rear of view

2020 PHOTOGRAPHS

**Ballistics Research Laboratory
Historic District
MIHP # HA-2307**



Leslie E. Simon / Ballistics Research Lab Building
(APG Building 328, MIHP # HA-2307-1)
West & South elevations, View NE



Leslie E. Simon / Ballistics Research Lab Building
(APG Building 328, MIHP # HA-2307-1)
North elevation, View SW

**Ballistics Research Laboratory
Historic District
MIHP # HA-2307**

2020 PHOTOGRAPHS



Hollow Charge Building
(APG Building 391, MIHP # HA-2100)
South & East elevations, View N



Hollow Charge Building
(APG Building 391, MIHP # HA-2100)
East & North elevations, View WNW

**Ballistics Research Laboratory
Historic District
MIHP # HA-2307**

2020 PHOTOGRAPHS



Weapons Systems Laboratory
(APG Building 392, MIHP # HA-2101)
East & North elevations, View SW



Weapons Systems Laboratory
(APG Building 392, MIHP # HA-2101)
South & East elevations, View NW
APG Building 327 at rear of view

**Ballistics Research Laboratory
Historic District
MIHP # HA-2307**

2020 PHOTOGRAPHS

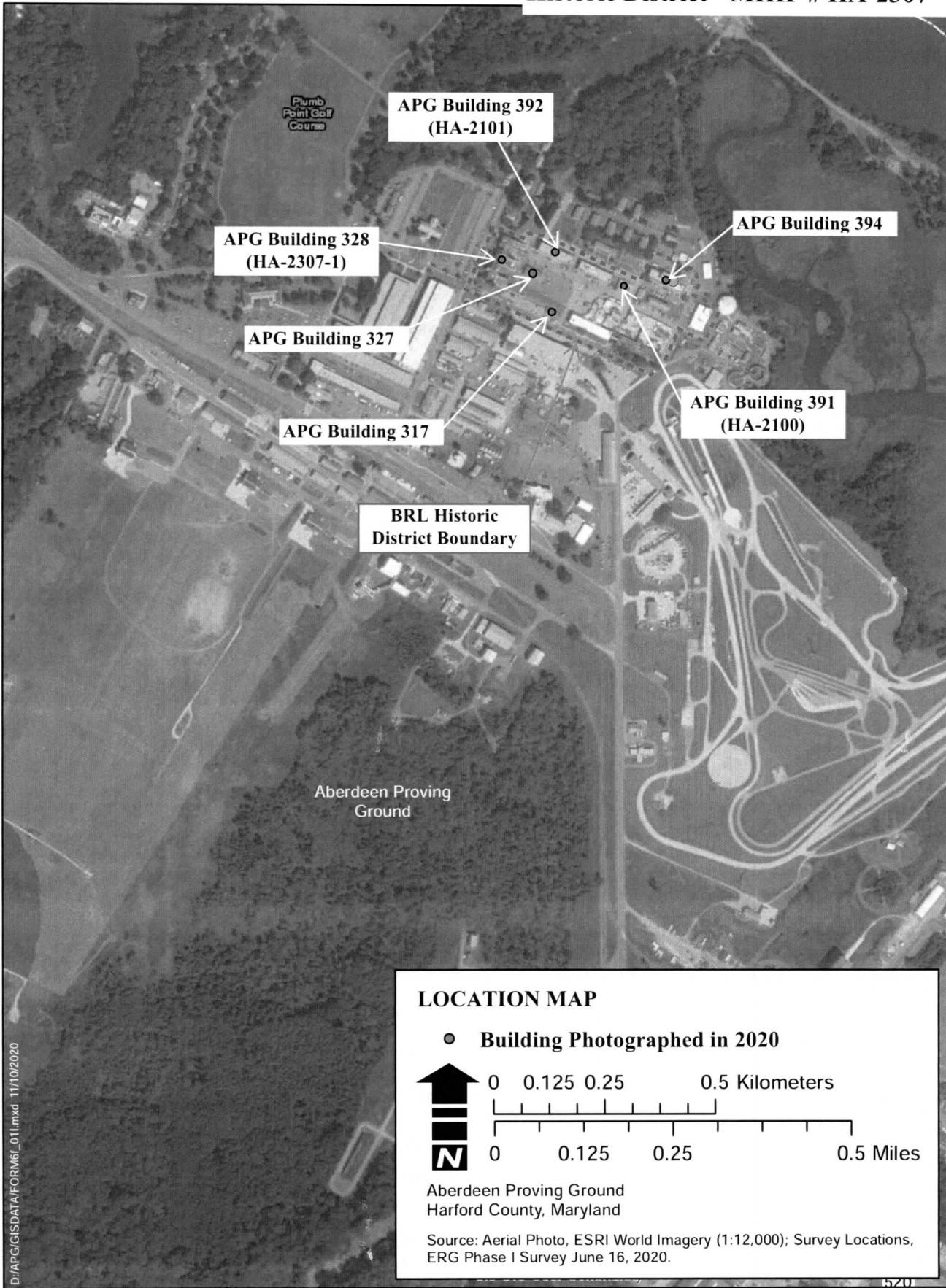


Concept Analysis Building (APG Building 394)
South elevation, View NE, APG Building 393 at rear of view

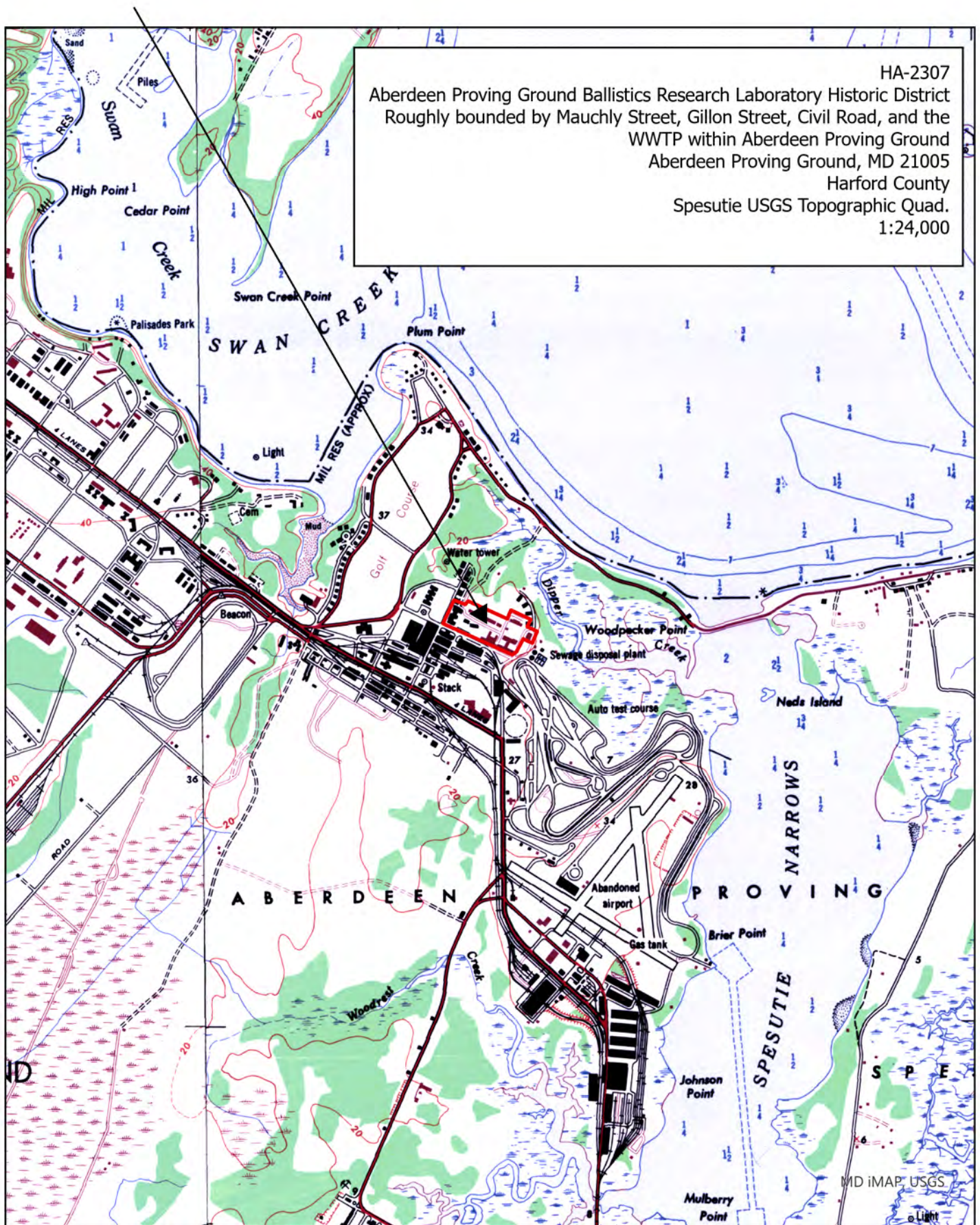


Concept Analysis Building (APG Building 394)
South & East elevations, View NW

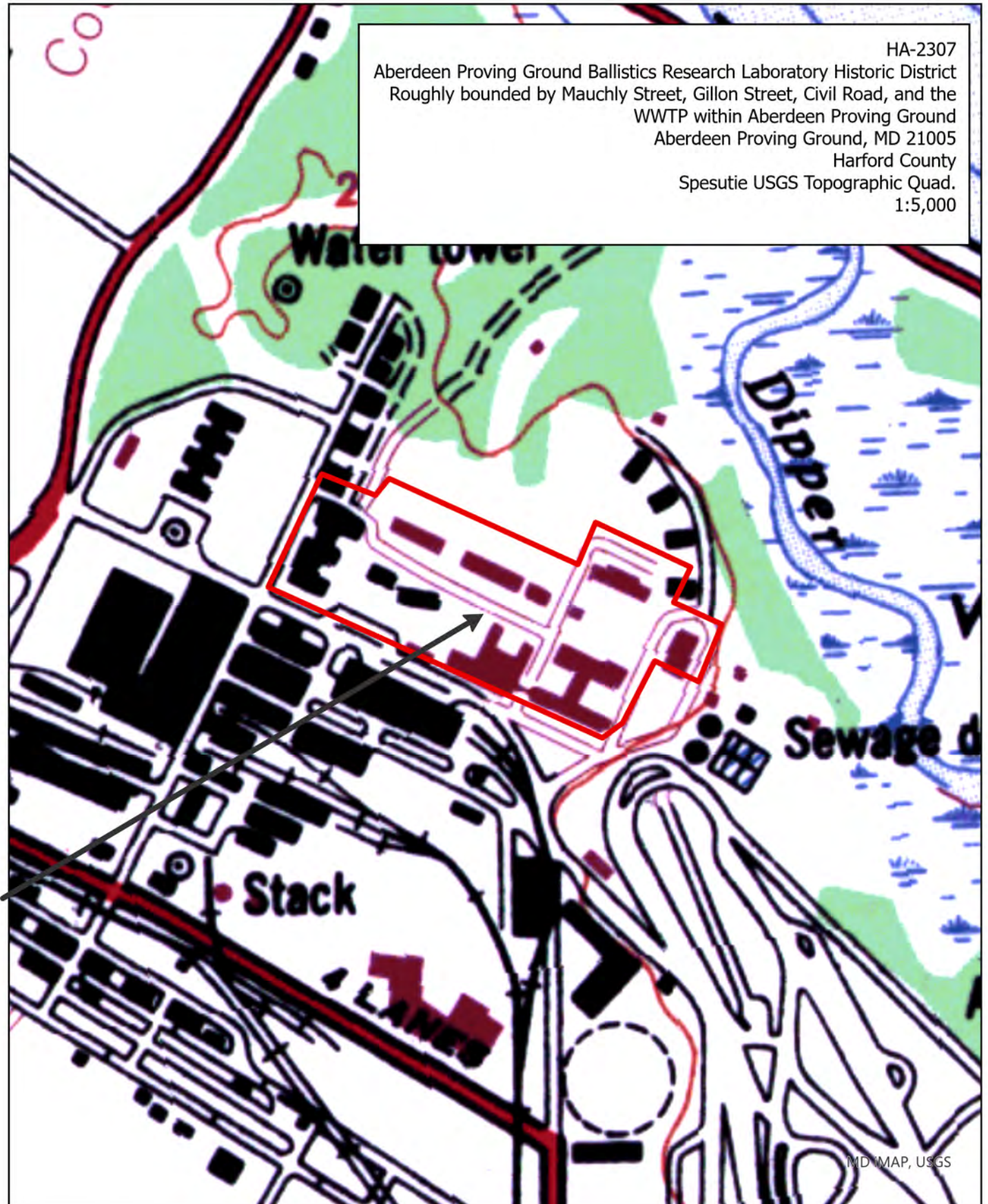
Ballistics Research Laboratory
Historic District - MIHP # HA-2307



HA-2307
Aberdeen Proving Ground Ballistics Research Laboratory Historic District
Roughly bounded by Mauchly Street, Gillon Street, Civil Road, and the
WWTP within Aberdeen Proving Ground
Aberdeen Proving Ground, MD 21005
Harford County
Spesutie USGS Topographic Quad.
1:24,000



HA-2307
Aberdeen Proving Ground Ballistics Research Laboratory Historic District
Roughly bounded by Mauchly Street, Gillon Street, Civil Road, and the
WWTP within Aberdeen Proving Ground
Aberdeen Proving Ground, MD 21005
Harford County
Spesutie USGS Topographic Quad.
1:5,000



MD MAP, USGS

