



**Naval Facilities Engineering Systems Command,
Marianas**
PSC 455, Box 195
FPO AP 96540-2937

**MILITARY RELOCATION TO GUAM AND CNMI
PROGRAMMATIC AGREEMENT (PA) MEMO # 1**

Project: P-608 Earth Covered Magazines – Design and Construction	Date: June 15, 2023 Comment Period Open Until: July 29, 2023
Project Location: Naval Base Guam, Ordnance Annex	Prepared By: NAVFAC Pacific

PROJECT SUMMARY:

This project proposes to conduct project design efforts including geotechnical and topographic surveys and subsequently construct six (6) earth covered magazines within the bounds of Naval Base Guam Ordnance Annex (NBGOA) and Orote Point, Naval Base Guam (NBG). The proposed project includes site improvements and related infrastructure systems.

This project was identified after preparation of the Final Environmental Impact Study (FEIS) for the military relocation to Guam and the Commonwealth of the Northern Mariana Islands (CNMI) and Appendix E under various projects of the *2011 Programmatic Agreement (PA) among the Department of Defense, the Advisory Council on Historic Preservation, the Guam State Historic Preservation Officer, and the Commonwealth of the Northern Mariana Islands State Historic Preservation Officer Regarding the Relocation to the Islands of Guam and Tinian.*

In accordance with Stipulation IV.E.2.a., this PA Memo presents information to allow the Guam State Historic Preservation Officer (SHPO) and the public the opportunity to provide comments on the identification and evaluation of historic properties and the finding of effects.

PROJECT LOCATION:

The project is located on NBGOA and Orote Point, NBG. The NBGOA encompasses an area of about 3,577 hectares (8,838 acres) within the inland volcanic hills and valleys of south central Guam. The terrain is mountainous and rugged, dissected by limestone ridges of weathered karst topography. The area includes ravine forest, limestone forest, swordgrass communities, and savannah grasslands.

The NBG Main Base, at Apra Harbor, is primarily located on Orote Peninsula, a Mariana limestone formation that marks the southern edge of the harbor. This area is primarily developed, but contains patches of limestone, secondary ravine, and scrub forests. Some of the traditional Chamorro place names in this vicinity are Tuparao, Orote, and Sumay.

1 8 This PA Memo is required by Stipulation IV.E.2.a. of the PA as a means for interested members of the public to provide comments on the identification and evaluation of historic properties. Stipulation IV.E.1.b. of the 2011 PA requires the DoD to take into account comments received within 45 days of the date of the delivery of this PA memo to the SHPO and public notification via the CRI website.

The area of potential effects (APE) measures 26.8 acres (ac) or 10.84 hectares (ha) at the NBGOA location and 5.1 ac (2.06 ha) at the Orote Point location for a total APE of 31.9 ac (12.9 ha). The APE is depicted in Figures 1-1 and 1-2.

PROJECT DESCRIPTION:

The proposed design and construction activities include various efforts.

Design studies consist of geotechnical investigation and topographic survey. Associated design work may include hand and mechanized vegetation clearing for access and/or line of sight, and munitions and explosives of concern (MEC) support.

The geotechnical investigation generally entails auger boring utilizing a truck-mounted drill rig. Exploratory boring depths vary, but range from 10 - 115 feet (ft) or 3 - 35 meters (m) and 4 inches (10 cm) in diameter. Topographic survey is conducted using conventional land survey equipment throughout the APE. The survey necessitates driving stakes or nails into the ground to establish control points or survey limits.

Construction of the magazines will use reinforced concrete and steel, designed to withstand regional environmental conditions as well as sympathetic blast pressures.

Construction site preparation and improvements associated with the project include clearing and grubbing, green waste recycling and management, earthwork and earthen berms with shotcrete. Additionally, the project requires pavement for driveways and new access roads, concrete for aprons and retaining walls, an approximately 1,000-meter (m) long chain link security fence measuring 2.4 m tall with gates, landscaping, selective site demolition, and upgrades to an existing ammunition storage pad at Orote Point, NBG.

The ground improvements will necessitate an infiltration basin drainage system. Electrical utilities include primary and secondary electrical distribution systems, transformers, fire alarm call boxes and transmitters, emergency generators and telecommunications distribution system. Mechanical utilities consist of a storm drainage system.

Demolition includes the removal of unused Armco type magazines past useful design life, unsuitable in design for the planned ammunition storage and beyond repair. The magazines are Building 112NM and Building 113NM, both overhead cover facilities addressed by the Advisory Council on Historic Preservation in a Program Comment For World War II And Cold War Era (1939-1974) Ammunition Storage Facilities.

IDENTIFICATION OF HISTORIC PROPERTIES:

The 2011 PA describes the overall efforts taken to identify historic properties in Stipulation IV, including archival research, oral studies, and interviews. Archaeological surveys have been conducted for the P-608 APE. Regulation does not require survey of an entire APE or identification of all historic properties, and 36 CFR Part 800.4(b)(1) states that a reasonable and good faith effort

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to carry out appropriate identification efforts shall be made. The 2011 PA directs the PA Memo process to allow for members of the public to provide input on the identification and evaluation of historic properties. The input sought includes knowledge on specific historic properties not yet identified by previous efforts, and assistance in identifying issues relating to effects on historic properties.

Enclosure 1 is a list of references supporting identification efforts in and near the APE. Figures 2-1 and 2-2 illustrates the scope of these efforts. Historic properties are present in the APE.

One site, includes a series of abandoned Armco magazines. These 1000-square foot magazines are associated with the establishment of the early Naval Magazine on Guam after the liberation of the island from the Japanese (Criterion A). They are also significant as examples of a quick and economic method of high explosive magazine construction (Criterion C). These magazines are missing their front wall and doors; however, essential features remain, such as the half-cylinder design on concrete slab and corrugated steel construction with earth covering. They retain sufficient integrity to convey their historic character and significance. They are eligible for listing in the National register of Historic Places (NRHP) under criteria A and C. As previously discussed, the ACHP has addressed the magazines in a Program Comment.

The other site is an area designed to store munitions holding vehicles. Constructed in 1944, the truck holding areas have drive-through paved truck parking areas which are isolated from the road and each other by very large earthen berms. Lightning rods are positioned in the parking area to prevent strikes from hitting any laden trucks. For consultation purposes, the site is considered eligible for listing in the NRHP. The construction of the special parking area for ammunitions and explosives holding vehicles at NBGOA is associated with the strategic establishment of the early Naval Magazine on Guam as a hub for military positioning in the Pacific (Criterion A). The components of the site, including the site layout and constructed elements, embody the distinctive characteristics of military explosives storage (Criterion C).

In accordance with Stipulation VI.F. of the 2011 PA, the Department of Defense has retained a full-time archaeologist to provide site checks, oversee coordination and execution of the archaeological mitigation measures in the 2011 PA and to provide quality control. This individual is on-staff at MCBCB, and is designated to respond to and report any inadvertent discoveries to the Signatories, Invited Signatories, and Concurring Parties per Stipulation XII of the 2011 PA.

FINDING OF EFFECTS:

The DON proposes a finding of no adverse effect upon historic properties, because although there are historic properties within the APE, the project has been modified to avoid adverse effects, including ensuring the laydown area is not in a location containing historic property features. The project will avoid those components of the historic properties and will not directly or indirectly alter any of the characteristics that qualify the property for inclusion in the National Register of Historic Places in a manner that would diminish their integrity.

In the event of a post review discovery the DON will follow the procedures outlined in Stipulation XI of the 2011 PA. If comments received during the PA Memo process result in new information regarding historic properties, consultation will continue pursuant to the 2011 PA. Otherwise, PA Memo #2 will not be required as there will be no mitigation proposed for design studies.

4 8 This PA Memo is required by Stipulation IV.E.2.a. of the PA as a means for interested members of the public to provide comments on the identification and evaluation of historic properties. Stipulation IV.E.1.b. of the 2011 PA requires the DoD to take into account comments received within 45 days of the date of the delivery of this PA memo to the SHPO and public notification via the CRI website.

Enclosure 1

Allen, J., B. Dixon, K. Aronson, L. Gilda, D. Gosser, T. Moorman, C. O'Hare, M. Riford, and J. Toenges
2002 *Archaeological Survey and Excavations at the Naval Ordnance Annex, Territory of Guam*.
Prepared for Naval Facilities Engineering Command, Pacific, Pearl Harbor. Prepared by Ogden
Environmental and Energy Services Co., Inc., Honolulu.

Carrell, Toni

1991 Micronesia Submerged Cultural Resources Assessment. Submerged Cultural Resources Unit, National Park
Service, Santa Fe.

Carucci, J.

1993 *The Archaeology of Orote Peninsula: Phase I and II Archaeological Inventory Survey of Areas Proposed
for Projects to Accommodate Relocation of Navy Activities From the Philippines to Guam, Mariana
Islands*. With contributions by H. David Tuggle, D. Colt Denfeld, J. Stephen Athens, Jerome V. Ward, and
Stephen K. Wickler. Prepared for Belt Collins and Associates, Honolulu, Hawai'i. International
Archaeological Research Institute, Inc., Honolulu.

Craib J. L., R. and Nees

1998 *Archaeological Survey and Subsurface Testing of Prehistoric Inland Chamorro Settlement at U.S. Naval
Activities Guam in Conjunction with the Department of Defense Legacy Resource Management Program:*
Project No. 0895. Prepared for Naval Facilities Engineering Command Pacific, Pearl Harbor. Prepared by
Ogden Environmental and Energy Services Co., Inc., Honolulu.

Dixon, B., D. Gosser, L. Gilda, and T. Torres

2004 *Cultural Resources Survey and Limited Testing at Naval Ordnance Annex and Waterfront Annex, Territory
of Guam*. Ogden Environmental and Energy Services Co., Inc., Honolulu.

Dixon, B., T. Rudolph, A. Jalandoni, I. Nelson, M. Hroncich-Conner, S. Leary, R. Schaefer, E. Lash, M.
Todd

2015a *Final Proposed Guam and CNMI Military Relocation 2012 Roadmap Adjustments SEIS Live-Fire Training
Range Complex Footprint and Main Cantonment Alternatives and Access Route Options In-Fill Cultural
Resource Studies*. Prepared for the Naval Facilities Engineering Command, Pacific Division. Prepared by
Cardno TEC, Inc., Honolulu, HI. 1 March. (GIS labeled 2014a)

2015b *Final Proposed Guam and CNMI Military Relocation 2012 Roadmap Adjustments SEIS Live-Fire Training
Range Complex Surface Danger Zone In-Fill Cultural Resource Studies*. Prepared for the Naval Facilities
Engineering Command, Pacific Division. Prepared by Cardno TEC, Inc., Honolulu, HI. 1 March. (GIS
labeled 2014b)

Henry, J. D., A. Haun, M. Kirkendall, and D. DeFant

1999 *Phase I Archaeological Survey and Subsurface Testing, U.S. Naval Activities Ordnance Annex and Waterfront
Annex*. Prepared for Naval Facilities Engineering Command, Pacific, Pearl Harbor. Prepared by Paul H.
Rosendahl, PhD, Inc., Hilo, Hawaii.

Hunter-Anderson, R. and D. Moore

2002 *Phase I and Phase II Archaeological Survey at Waterfront Annex and Ordnance Annex, Territory of Guam
Volume I: Narrative*. With contributions by J. R. Amesbury, S. K. Collins, D. M. Pearsall, M. W. Kaschko,
G. M. Murakami, C. E. Skinner, J. V. Ward, and E. F. Wells. Prepared for International Archaeological

Research Institute, Inc., and Department of the Navy, Pacific Division, Naval Facilities Engineering Command, Pearl Harbor. Prepared by Micronesian Archaeological Research Services, Barrigada, Guam.

Mason Architects and Weitze Research

2010 *Cold War Historic Context and Architectural Inventory for Naval Base Guam: Main Base, Piti Power Station, Drydock Island and Polaris Point*. Prepared for Naval Facilities Engineering Command, Pearl Harbor. Prepared by Mason Architects Inc., and Weitze Research.

McCoy, P., S. Price, and J. Craib

1978 *Archaeological Review of Orote Historical Complex, Orote Point, Guam*. Prepared for the U.S. Department of the Navy. Prepared by Pacific Studies Institute, Micronesian Areas Research Center, University of Guam, Mangilao.

McNeil, J.R. and D.J. Welch

1998 *Military Exercises and Historic Sites in Military Training Area on the Island of Guam: An Archaeological Perspective*. Prepared for Belt Collins Hawai'i, Honolulu, HI, by International Archaeological Research Institute, Inc., Honolulu, HI.

Reinman, F., and R. Nees

1998 *Archaeological Inventory Survey for the Apra Harbor Naval Complex, Guam in Conjunction with the Department of Defense Legacy Resource Management Program*. Project No. 0895. Prepared for Naval Facilities Engineering Command Pacific, Pearl Harbor. Prepared by Ogden Environmental and Energy Services Co., Inc., Honolulu.

Schilz, A. and R. P. Drolett

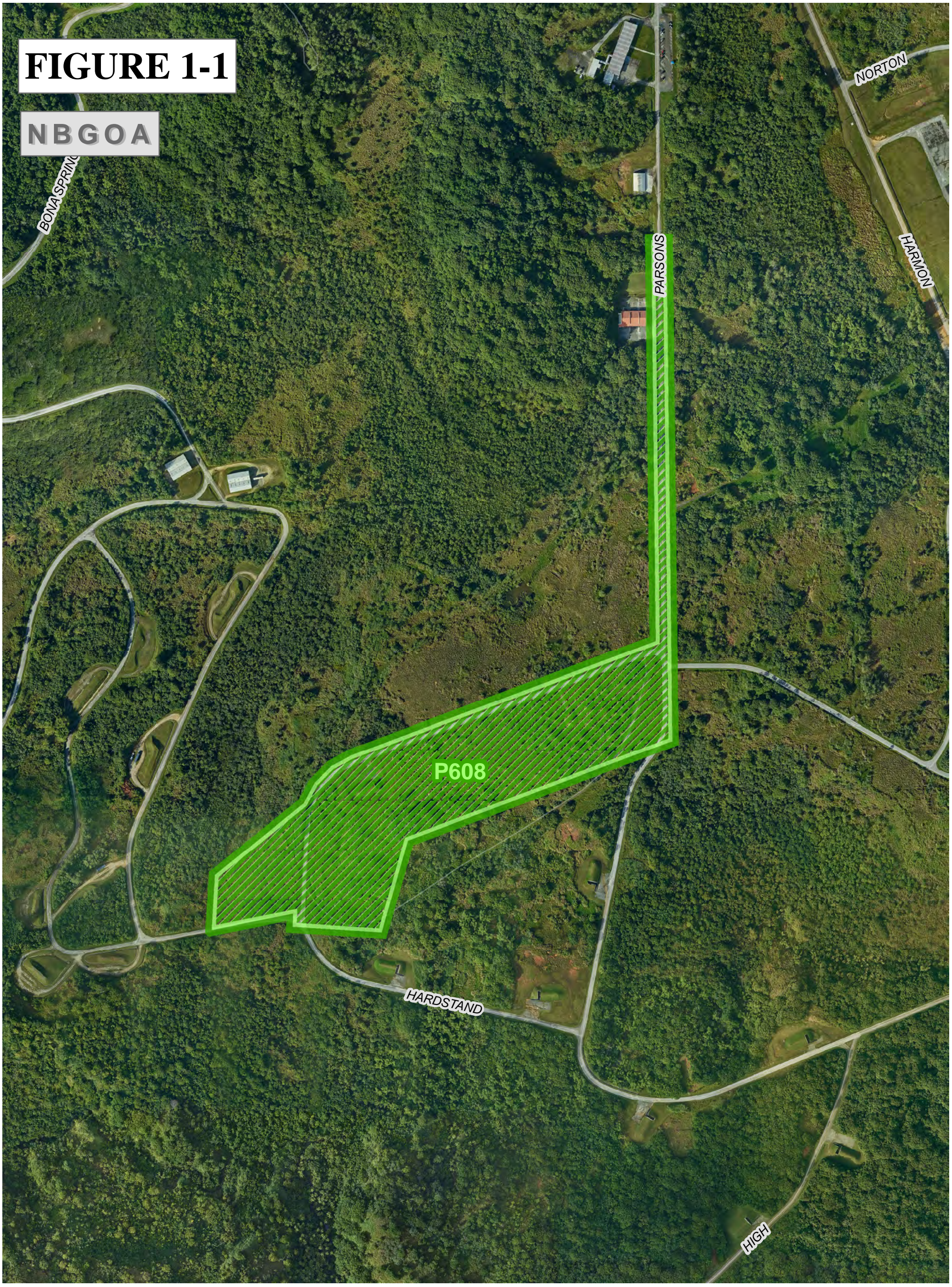
1992 *Preliminary Report. Archaeological Survey and Evaluation, Orote Point, Guam, Mariana Islands*. Prepared for Naval Facilities Engineering Command Pacific, Pearl Harbor, Hawaii.

Shun, K.

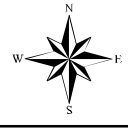
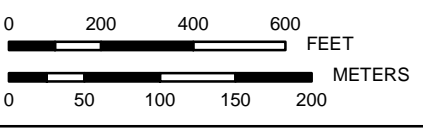
1988 *Archaeological Site Inventory Survey of Two U.S. Navy Land Sections, Orote Peninsula and Naval Magazine, Guam, Mariana Islands*. International Archaeological Research Institute, Inc., Honolulu. Prepared for Commander, Pacific Division, Naval Facilities Engineering Command, Pearl Harbor, Hawaii.

FIGURE 1-1

NBGOA



P-608 Earth Covered Magazines at Naval Base Guam Ordnance Annex - Construction Area



PREPARED BY:
 Naval Facilities Engineering Command Pacific Division
 Guam Program Management Office
 DATE: 12 May 2023



Coordinate System: UTM Zone 55 North
 Projection: Transverse Mercator
 Datum: D WGS 1984

Legend

- P-608 (Earth Covered Magazines (NBGOA)) - APE
- Military Installations



Total APE Area P-608 = 31.9 Acres
NBGOA Area = 26.8 Acres

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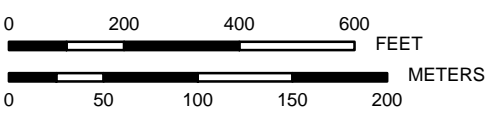
FIGURE 1-2

Orote Point

Apra Harbor



P-608 Earth Covered Magazines at Naval Base Guam Ordnance Annex - Construction Area





PREPARED BY:
Naval Facilities Engineering Command Pacific Division
Guam Program Management Office
DATE: 05 Apr 2023



Coordinate System: UTM Zone 55 North
Projection: Transverse Mercator
Datum: D WGS 1984

Legend

-  P-608 (Earth Covered Magazines (NBGOA)) - APE
-  Military Installations

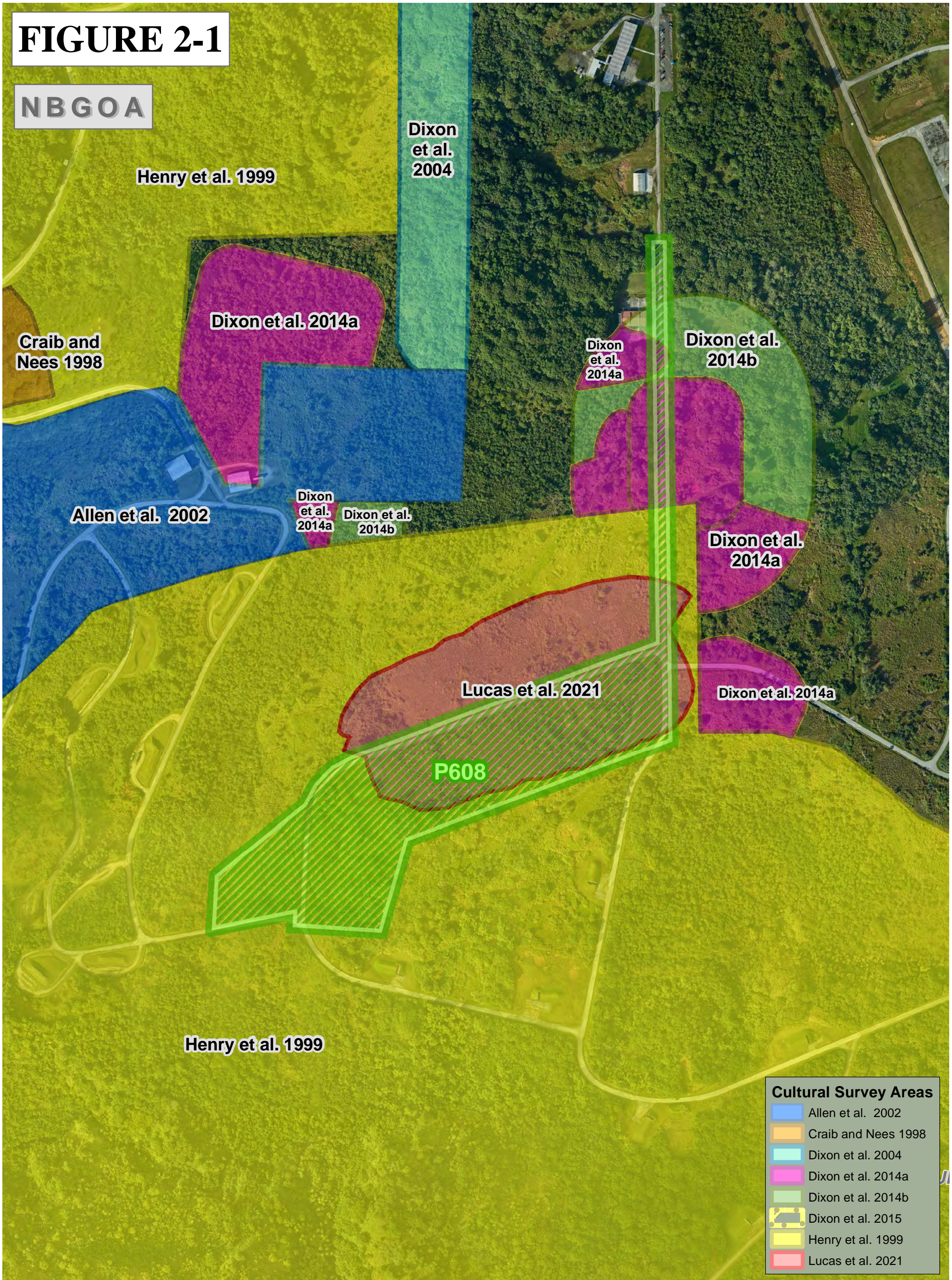


Total APE Area P-608 = 31.9 Acres
Orote Pt. Area = 5.1 Acres

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FIGURE 2-1

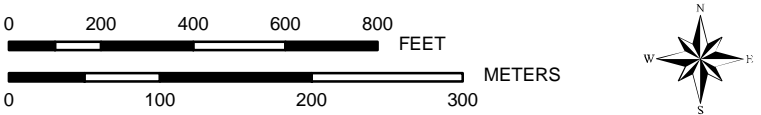
NBGOA



Cultural Survey Areas

- Allen et al. 2002
- Craib and Nees 1998
- Dixon et al. 2004
- Dixon et al. 2014a
- Dixon et al. 2014b
- Dixon et al. 2015
- Henry et al. 1999
- Lucas et al. 2021

P-608 Earth Covered Magazines at Naval Base Guam Ordnance Annex - Construction Area



PREPARED BY:
Naval Facilities Engineering Command Pacific Division
Guam Program Management Office

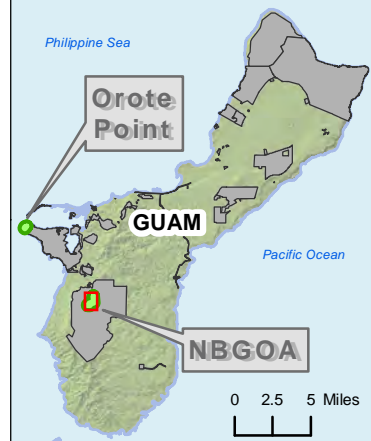
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Projection: Transverse Mercator
Datum: D WGS 1984

Legend

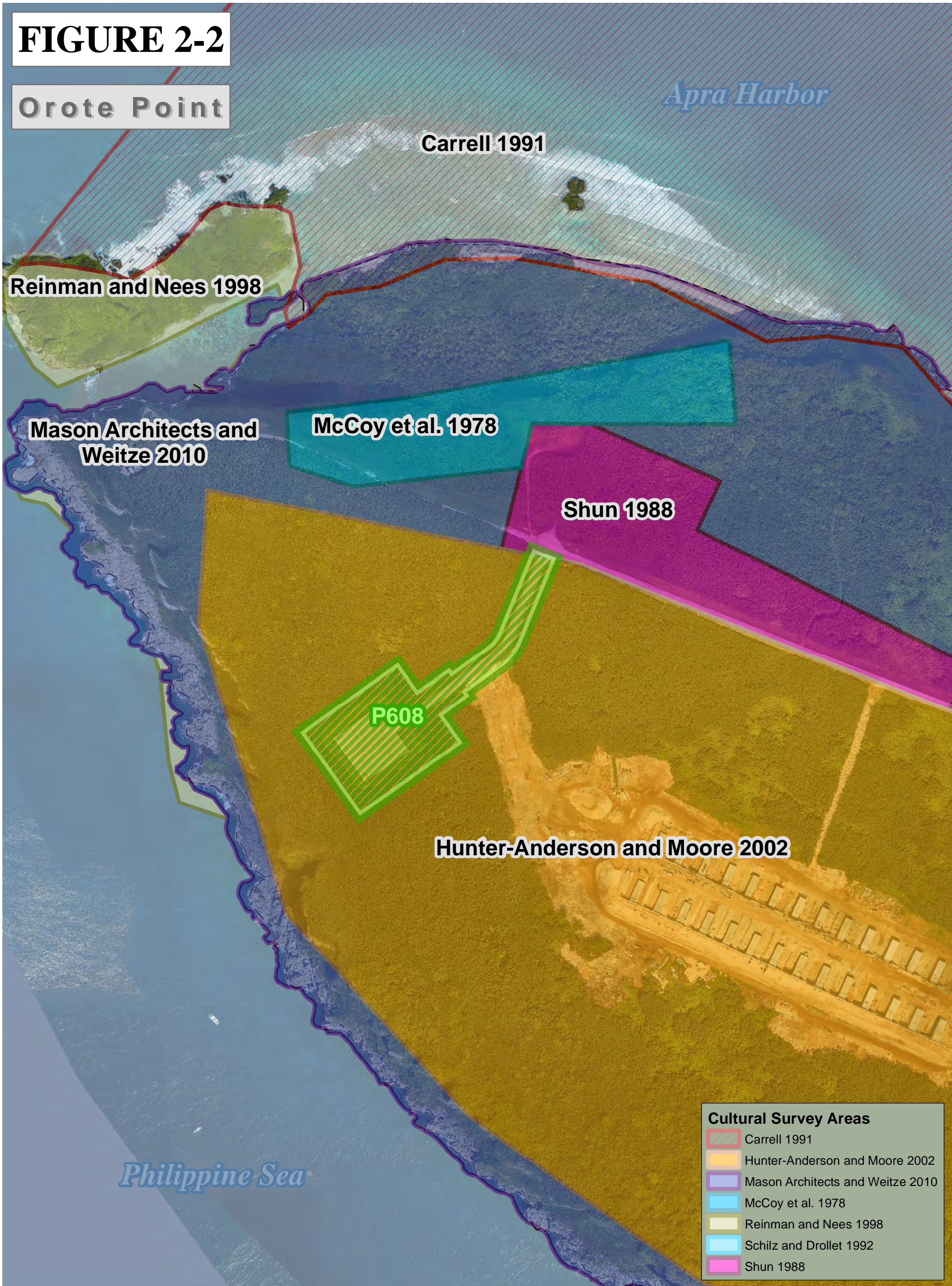
- ▨ P-608 (Earth Covered Magazines (NBGOA)) - APE
- Military Installations



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FIGURE 2-2

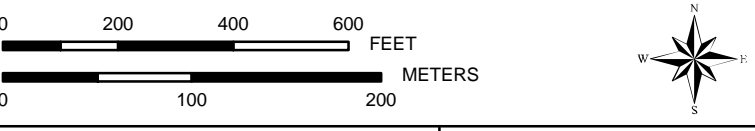
Orote Point



Cultural Survey Areas

- Carrell 1991
- Hunter-Anderson and Moore 2002
- Mason Architects and Weitze 2010
- McCoy et al. 1978
- Reinman and Nees 1998
- Schilz and Drollet 1992
- Shun 1988

P-608 Earth Covered Magazines at Naval Base Guam - Orote Point - Construction Area



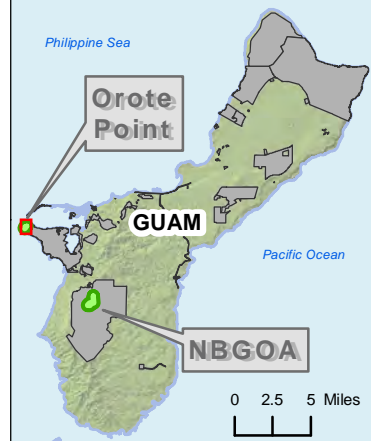
PREPARED BY:
Naval Facilities Engineering Command Pacific Division
Guam Program Management Office
DATE: 13 Jun 2023



Coordinate System: UTM Zone 55 North
Projection: Transverse Mercator
Datum: D WGS 1984

Legend

- P-608 (Earth Covered Magazines (NBGOA)) - APE
- Military Installations



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Military Relocation PA Memo Comment Form

2023

If submitting via **e-mail**, scan and send to: criwebcomment@navy.mil

If submitting via **postal mail**, send to:

Attn: CRI Web Comments
Code EV23, NAVFAC Pacific
258 Makalapa Drive, Suite 100
JBPHH, Hawaii 96860-3134

Submitted comments will be posted on the Navy's Cultural Resources Information (CRI) web site. Information presented on the CRI web site is considered public. The sections highlighted in **red** are required to be completed in order for a comment to be posted.

Privacy Act Statement

Personal information will only be used to contact you regarding the comments you submit. This information will only be shared with another government agency if your inquiry relates to that agency, or as otherwise required by law. We will not create individual profiles or give your information to any private organization. While you must provide a valid e-mail address or postal address, please **DO NOT** include personally identifying information such as a social security number.

By submitting this comment form, you agree not to include content that is offensive in nature, such as profanity, personal attacks on individuals, and racist or abusive language.

PROJECT: P-608 Earth Covered Magazines – Design and Construction

SUBJECT: PA Memo#1

Date: _____

Name: _____

CRI User Name (if you don't want your real name to be posted with your comment on the CRI web site):

E-Mail Address: _____

and/or

Postal Mail Address: _____

COMMENTS: _____
